

PROJECT BID PACKAGE

for

ECP Gate 7 Apron Repair

at



NORTHWEST FLORIDA
BEACHES INTERNATIONAL AIRPORT

NORTHWEST FLORIDA BEACHES INTERNATIONAL AIRPORT

Prepared by:

ZHA

**601 N. Magnolia Avenue
Suite 100
Orlando, FL 32801
407.422.7487**

In Collaboration with:



AVCON, INC.

320 Bayshore Dr, Ste A
Niceville, Florida 32578
Phone: 850.678.0050

October 26, 2021

AVCON Project Number: 2021.0073.01

TABLE OF CONTENTS

FRONT END DOCUMENTS

Invitation to Bid..... Pages 1 to 4

BID DOCUMENTS

Bid Proposal Pages 1 to 7
Bid Bond Pages 1 to 2
Public Entity Crimes Statement Pages 1 to 3
Disadvantaged Business Enterprise Program Pages 1 to 4
Davis Bacon Certification Pages 1 to 1
Drug Free Workplace Certification Pages 1 to 1
Certification of Non-Segregated Facilities Pages 1 to 1
Buy American Certificate Pages 1 to 1
Trench Safety Act Certification Pages 1 to 1
Form of Non-collusion Affidavit..... Pages 1 to 1
E-Verify Compliance Certification Pages 1 to 1
Construction Contract..... Pages 1 to 4
Payment and Performance Bond Forms..... Pages 1 to 7
Certificate of Attorney Pages 1 to 1
Contractor’s Release of Liens..... Pages 1 to 1
Advertisement of Completion Pages 1 to 1

ADDENDA

GENERAL CONDITIONS Pages 1 to 15

SPECIAL CONDITIONS Pages 1 to 14

GENERAL PROVISIONS..... Pages 1 to 64

SPECIAL PROVISIONS

SP No. 1: Utilities..... Pages 1 to 2
SP No. 2: Airport Safety and Security Requirements..... Pages 1 to 3
SP No. 3: Protection of Airport Cables, NAVAIDS and Other Facilities Pages 1 to 1
SP No. 4: Staging and Phasing Provisions for Contractor Operations..... Pages 1 to 1
SP No. 5: Visible Warning Markers for Taxiways and Aircraft Operations Areas Pages 1 to 1
SP No. 6: Time of Completion Pages 1 to 1
SP No. 7: Airport Project Procedures..... Pages 1 to 16
SP No. 8: Vehicle Operation on the AOA Pages 1 to 2
SP No. 9: Federal Labor and EEO Provisions Pages 1 to 22

TECHNICAL SPECIFICATIONS

C-100 Contractor Quality Control Program (CQCP) Pages 1 to 8
C-102 Temporary Air and Water Pollution, Soil Erosion, and Siltation Control Pages 1 to 4
C-105 Mobilization..... Pages 1 to 2
P-101 Preparation/Removal of Existing Pavements Pages 1 to 5
P-152 Excavation, Subgrade and Embankment Pages 1 to 9
P-306 Lean Concrete Base Course Pages 1 to 9

P-501 Cement Concrete Pavement..... Pages 1 to 35
P-605 Joint Sealants for Pavements..... Pages 1 to 3
P-620 Runway and Taxiway Marking Pages 1 to 6

CONTRACT

PROJECT DOCUMENTS

Release for Bid – ECP Gate 7 Apron Repair..... Pages 1 to 11

FRONT END DOCUMENTS

INVITATION TO BID

ECP GATE 7 APRON REPAIR PROJECT

at the

Northwest Florida Beaches International Airport
6300 West Bay Parkway
Panama City, Florida 32409
Phone: 850-763-6751

October 26, 2021

Bid Submittal

Sealed bids, subject to the conditions herein, will be ***received until 2:00pm, Central Time, on November 16, 2021 at the Board Room for the Northwest Florida Beaches International Airport***, 6300 West Bay Parkway, 2nd Floor, Airport Terminal, Panama City, Florida 32409, (850) 763-6751, at which time bids will be publicly opened and read, for furnishing all labor and materials and performing all work connected with the ECP Gate 7 Apron Repair project.

General Scope of Work

The project includes repairs to the existing pavement that has developed cracks and ruts, as follows:

1. Remove 780 SY of asphalt pavement and base material.
2. Replace pavement with 16" Portland Cement Concrete (PCC) and specified base material.

Bidding and Project Documents

Official copies of the Bidding and Project Documents and Bid Package are available for download from the Business Opportunities section of the Airport's website and may be inspected at:

Administration Offices

**Northwest Florida Beaches International Airport
2nd Floor Airport Terminal
6300 West Bay Parkway,
Panama City, Florida 32409
(850) 763-6751
<https://www.iflybeaches.com>**

Neither the Owner nor its Representative shall assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bid and Project Documents.

Pre-Bid

A non-mandatory Pre-bid meeting will be held on **Tuesday, November 2, 2021, at 2:00 pm CT** in the downstairs conference room at the Airport Terminal Building.

Proposed Schedule

October 26, 2021	Release of Invitation To Bid.
November 2, 2021	Pre-Bid Meeting at 2:00 pm.
November 5, 2021	Deadline to submit questions up to 5:00 pm.
November 9, 2021	Final Addendum issued.
November 16, 2021	Bids due prior to 2:00 pm. Opening will occur at this time. *
November 17, 2021	Request for Board authorization of contract. *
December 6, 2021	Anticipated start date (no later than).

*Denotes a public meeting. All meetings will be held at Airport Board Room, Panama City, Florida, and all times denote Local Time.

Questions

Questions may be submitted in written form to the Owner’s Representative at the following address during the bid period between 8:00am and 5:00pm CT via email or fax or mail up and until **5:00pm CT, Friday, November 5, 2021**, after which time no questions or clarifications will be received.

David Scruggs
Gate 7 Apron Repair Project Representative
Northwest Florida Beaches International Airport
6300 West Bay Parkway, Box A
Panama City, Florida 32409
Via facsimile: [\(850\) 785-5674](tel:8507855674) or via email: David.Scruggs@zhaintl.com

It is preferred that all communications with the airport’s contact be in written form. However, if verbal communications are utilized, written confirmation of any verbal response shall dictate. All contact shall be documented and any response given shared with all potential bidders by addendum.

Addendum

Should revisions to the bidding and project documents become necessary, addenda information will be provided to those interested bidders who have requested an official copy of the Contract Documents and Bid Package. The last date for issuance of a final addendum will be on or before **Tuesday, November 9, 2021 by 5:00pm CT**.

Bid Proposal Documents

The bid proposal must be made on the forms provided with the contract documents and submitted in the number of copies indicated in the bid forms. All blank spaces shall be filled in and no interlineations, alterations, or erasures of the text shall be made. Bidders must supply all required information prior to the time of bid openings.

Partial or incomplete bid proposals will not be considered. Each bid proposal shall show the full legal name and business address of the Bidder, including its street address if it differs from its mailing address and shall be signed with the usual signature of the person or persons authorized to bind the Bidder and shall be dated.

The preparation of a bid proposal shall be by and at the expense of the Bidder.

Bid proposals shall be publicly opened and read. If a Bidder’s proposal contains a discrepancy between bid prices written in words and bid prices written in numbers, the price written in words shall govern.

Bid Security

Guarantee will be required with each bid as a certified check on a solvent bank or a bid bond in the amount of five (5) percent of the total amount of the bid, made payable to the Panama City–Bay County Airport and Industrial District.

Bonding Requirements

The successful bidder will be required to furnish separate performance and payment bonds each in an amount equal to 100% of the contract price.

Performance and Payment Securities

The successful Bidder shall deliver to the Owner or the Owner’s Authorized Representative no later than ten (10) calendar days after contract award and prior to commencing the Work or entering the Project Site, a Performance and Payment Bond in the form supplied in the bid and project documents and executed, as surety, by a corporation acceptable to the Owner and authorized to issue such bonds in the jurisdiction of Bay County, Florida. Such Performance Bond and Payment Bond shall each be for one hundred percent (100%) of the total as set forth in Bidder’s proposal. The cost of such Performance Bond and Payment Bond shall be included in the Guaranteed Maximum Price submitted in the Bidder’s Proposal.

Insurance Certificates

The successful Bidder shall deliver to the Owner or the Owner’s Authorized Representative no later than ten (10) calendar days after contract award and prior to commencing the Work or entering the Project Site, certificates of insurance, in the form supplied in the bid and project documents and executed, attesting to the fact that the policies of insurance required by the Bid and Project Documents have been obtained.

Sales and Use Taxes

Work under this contract is subject to the provisions of Chapter 212, Florida Statutes, Tax on State, Use and Other Transactions. Other state, local or federal taxes may be applicable. The Bidder is responsible to remit to the appropriate governmental entity all applicable taxes. Any applicable tax shall be included in the total bid price by Bidder. Owner is a public body and eligible for certain sales tax exemptions and intends to implement a Sales Tax Savings Program and the successful Bidder shall be obligated to comply with such a program.

The successful Bidder shall coordinate with the Owner relative to the direct purchase of major material items by the Owner when applicable.

Award of Contract

After consideration of price and other factors, the contract will be awarded to the Bidder whose bid proposal is determined to be the lowest responsive and responsible Bidder as determined by the Owner.

Owner reserves the right, as the interest of the Owner may require, to reject any or all bid proposals and to waive any informality in Bid Proposals received.

If the Owner intends to accept the successful Bidder’s Proposal and enter into the Contract with them, Bidder acknowledges and agrees that unless and until the Owner executes the contract and returns the executed copy to the Bidder, no contract or agreement between the Owner and the Bidder shall exist. If the Owner fails to execute the contract within thirty (30) calendar days of the bid opening, the contract will be deemed withdrawn and Bidder shall be released from its Bid Proposal. The Owner shall issue a Notice to Proceed (NTP), in accordance with Florida law, within thirty (30) calendar days of the Owner’s execution of the contract.

Bidder's Return of Documents

All bid and project documents which are the property of the Owner shall be returned by the unsuccessful Bidders to the submittal address shown in the bid proposal invitation or these documents should be destroyed.

ATTACHMENTS

Attachment 1: Bid Document Forms

1. Bid Proposal
2. Bid Bond Form
3. Public Entity Crimes Statement
4. DBE Program
5. Davis Bacon Certification
6. Drug Free Workplace Certification
7. Non-Segregated Facilities Certification
8. Buy American Clause
9. Trench Safety Act Certification
10. Form of Non-Collusion Affidavit
11. E-Verify Compliance Certification
12. Construction Contract
13. Payment & Performance Bond Forms
14. Certification of Attorney
15. Release of Liens
16. Advertisement of Completion

Attachment 2: Insurance Certificate

PROJECT DOCUMENTS

General Conditions

Special Conditions

Technical Specifications

Contract Drawings

BID DOCUMENTS

**NORTHWEST FLORIDA BEACHES INTL. AIRPORT
PANAMA CITY–BAY COUNTY AIRPORT AND INDUSTRIAL DISTRICT**

ECP Gate 7 Apron Repair

In response to the Bid and Project Documents dated **26 day of October 2021**, and in accordance with the “Notice and Instructions to Bidders”, the undersigned hereby proposes to furnish all plant, labor, technical and professional services, supervision, materials and equipment, and to perform all operations necessary and required to construct the **ECP Gate 7 Apron Repair** at Northwest Florida Beaches International Airport located in Bay County, Florida, in accordance with provisions of the Request for Bid and Project Documents and any addenda thereto, and at the prices stated opposite the respective items set forth in the Schedule of Prices attached hereto.

The undersigned agrees that this Bid Proposal constitutes a firm offer to Owner which cannot be withdrawn for **120** calendar days from and after the due date or until a contract for the Work is executed by the undersigned and Owner, whichever is earlier. The undersigned’s execution of the Bid Affidavit (copy attached), the Non-Collusion Affidavit (copy attached), the Sworn Statement under Section 287.133 (3)(A), Florida Statutes, ON Public Entity Crimes (copy attached), must be witnessed and notarized by a Notary and returned with this Bid Proposal in order that the Bid Proposal be considered. Further, the Drug Free Workplace Certification (copy attached), Certification of Non-Segregated Facilities (copy attached), and Buy America Certification (copy attached) must also be completed and returned as part of the Bid Proposal.

The undersigned certifies that it has examined and is fully familiar with all of the provisions of the Bid and Project Documents and any addenda thereto; that it has carefully checked all the words and figures shown in its Schedule of Prices, if any required; that it has carefully reviewed the accuracy of all statements in this Bid Proposal and attachments hereto; and that it has by careful examination of the Bid and Project Documents and any addenda thereto and by examination of the actual site conditions, satisfied itself as to the nature and location of all work, the general and local conditions to be encountered in the performance of any work, the requirements of the Contract and all other matters which can in any way affect the Work or the cost thereof. The undersigned hereby agrees Owner shall not be responsible for any errors or omissions on the part of the undersigned in preparing this Bid Proposal.

If awarded a Contract, the undersigned agrees to execute the Contract and deliver it to Owner within ten (10) calendar days after contract award with the Certificates of Insurance and Payment Securities as required.

The undersigned hereby acknowledges that any contract resulting from this Bid Proposal will represent the entire agreement and that any exceptions taken in this Bid Proposal, may be a basis for Owner rejecting such Bid Proposal.

The undersigned also acknowledges receipt, understanding and full consideration of the following addenda to the Bid and Project Documents. (Contractor shall enter Addenda number and initial next to addenda received.)

Addendum No. _____ Signature _____

Addendum No. _____ Signature _____

Addendum No. _____ Signature _____

Addendum No. _____ Signature _____

Bidder: _____

Signed by: _____

Typed Name: _____

Title: _____

Bidder's Address: _____

State/Country of Incorporation (if applicable): _____

Bidder's Contractor License No. _____

License Expiration Date: _____

Bid Proposal Date: _____

If Bidder is a corporation, enter State/Country of Incorporation in addition to Business Address. Evidence of the authority of the person signing on behalf of the bidding entity shall be attached to the Bid Proposal. If a joint venture, consortia or partnership attach evidence of the signatory's authority signed by and listing the full names of all partners or joint venture(s) that shall be jointly and severally liable.

BID AFFIDAVIT

The following affidavit must be executed in order that your Bid Proposal may be considered.

State of _____, County of _____
of lawful age, being first duly sworn, upon his oath deposes and says: That he executed the accompanying Bid Proposal on behalf of the Contractor therein named, and that he had lawful authority so to do, and said Contractor has not directly or indirectly, entered into any agreement, expressed or implied, with any Contractor or Contractors, having to its object the controlling of the price or amount of such quotation or any quotations, the limiting of the Bid Proposal or Contractors, the parceling or farming out to any Contractor or Contractors, to other persons of any part of the contract or any of the subject matter or the Bid Proposals, or of the profits thereof, and that he has not and will not divulge the sealed Bid Proposal to any person whomsoever, except those having a partnership or other financial interest with him in said Bid Proposal or Proposals, until after the sealed Bid Proposal or Proposals are opened.

Signature: _____

Date: _____

State of _____ County of _____

PERSONALLY APPEARED BEFORE ME, the undersigned authority,

_____ (name of individual signing)

Who, after first being sworn by me, affixed his/her signature in the space provided above on this

_____ day of _____, 2021.

Subscribed and sworn to before me this _____ day of _____, 2021.

My Commission Expires: _____

Notary Public

BID SCHEDULE - UNIT PRICES

CONTRACTOR: _____ **DATE:** _____

AIRPORT NAME: Northwest Florida Beaches International Airport
PROJECT DESCRIPTION: ECP Gate 7 Apron Repair

BID SCHEDULE

Base Bid: ECP Gate 7 Apron Repair

Bid Item No.	Pay Item No.	Item Description & Unit Price In Words	Unit	Estimated Quantity	Unit Price	Total Amt./ Item
1	C-102-1	Erosion & Pollution Control _____ dollars and _____ cents	LS	1		
2	C-105-1	Mobilization _____ dollars and _____ cents	LS	1		
3	C-105-2	Maintenance of Traffic _____ dollars and _____ cents	LS	1		
4	P-101-1	Demolition of Asphalt and Base _____ dollars and _____ cents	SY	780		
5	P-152-1	Subgrade Preparation _____ dollars and _____ cents	SY	780		
6	P-306-1	6" Lean Concrete Base Course _____ dollars and _____ cents	SY	780		

Bid Item No.	Pay Item No.	Item Description & Unit Price In Words	Unit	Estimated Quantity	Unit Price	Total Amt./ Item
7	P-501-1	16" PCC (Includes joints and joint seal) _____ dollars and _____ cents	SY	780		
8	P-620-1	Yellow Paint with Type III Reflective Beads _____ dollars and _____ cents	SF	55		
9	P-620-2	White Paint with Type III Reflective Beads _____ dollars and _____ cents	SF	45		
10	P-620-3	Red Paint with Type III Reflective Beads _____ dollars and _____ cents	SF	45		
11	D-620-4	Black Paint without Reflective Beads _____ dollars and _____ cents	SF	150		

FOR ALL WORK REQUIRED IN ACCORDANCE WITH THE CONSTRUCTION DRAWINGS, SPECIFICATIONS AND OTHER CONTRACT DOCUMENTS, INCLUDING ALL COSTS RELATED TO THE WORK, AND ANY REQUIRED PERMITS, TAXES, BONDS AND INSURANCE, THE UNDERSIGNED SUBMITS A TOTAL BASE BID: TRANSIENT APRON PHASE 1 EXTENSION BID AMOUNT OF:

TOTAL BASE BID: ECP GATE 7 APRON REPAIR BID (amount in words):

_____ dollars and
 _____ cents

(\$ _____)

amount in numbers

Note: Total Base Bid: Gate 7 Apron Repair Bid amount shall equal the sum of the totals for Bid Items No. 1 through 11.

Work To Be Performed: The Work to be performed by Contractor comprises the furnishing of all professional and technical services, labor, equipment, materials, and all other functions and operations including, but not limited to, temporary construction facilities, equipment, materials and supplies and related services, and surveying as necessary and required to accomplish the Transient Apron Phase 1 Extension work all strictly in accordance with all requirements of the Bid and Project Documents.

BID SUMMARY:

A. Total Bid Amount

_____ (\$ _____)

The Bidder represents that it has examined the site of the Work and informed itself fully in regard to all conditions pertaining to the place where the work is to be done; that it has examined the plans and specifications for the work and other Contract Documents relative thereto and has read all of the Addenda furnished prior to the opening of the Bids, as acknowledged below; and that it has otherwise fully informed itself regarding the nature, extent, scope and details of the Work to be performed.

Unit Prices, if any:

Unit prices for changes shall be full and complete compensation for the work or changes to the work. Prices will be inclusive of all costs including, but not limited to, labor, materials, services, overhead, and profit.

Unit Pricing: (written pricing for areas noted per unit) Adjustments:

All prices are fixed for the duration of the Contract and are not subject to escalation for any cause. Payment of the Total Contract Price shall constitute full payment for performance of the Work and covers all costs of whatever nature incurred by Contractor in accomplishing the Work in accordance with the provisions of the Contract.

Contractor shall maintain all work in progress until it is accepted. Contractor shall repair, rework, or replace as necessary any work damaged or lost due to normal wear and tear, anticipated events, or conditions within its control. No separate payment shall be made for such maintenance costs which are deemed included in the original contract price. Any failure to maintain the Work shall be considered a defect in accordance with the General Conditions.

If provided with a Notice of Intent to Award the Contract by the Owner, the Bidder shall execute and deliver to the Owner all of the documents required by the Contract Documents, including but not limited to, the Addendum to the Agreement and the Performance and Payment Bonds in the form contained in the Contract Documents, furnish the required evidence of the specified insurance coverages, furnish all necessary permits, license, materials, equipment, machinery, maintenance, tools, apparatus, means of transportation and labor necessary to complete the Work.

Required Submittals: The following submittals are a prerequisite to the initial payment:

1. Contract Schedule,
2. Payment Securities,
3. Insurance Certificates,
4. Schedule of Values,
5. Maintenance Plan.

Bidders' Representations: The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bid and Project Documents; to complete all Work as specified or indicated in the Project Documents for the Contract Price and within the Contract Time indicated in the Agreement and in accordance with the Project Documents.

SIGNATURE/EXECUTION

Dated and signed at _____, this _____ day of _____, 2021.

(Name of Bidder)

(Authorized Signature)

(Title)

(Mailing Address)

(City, State, Zip)

(Federal ID No. or SS No.)

State of _____ County of _____

PERSONALLY APPEARED BEFORE ME, the undersigned authority,

_____ (name of individual signing)

Who, after first being sworn by me, affixed his/her signature in the space provided above on this

_____ day of _____, 2021.

Subscribed and sworn to before me this _____ day of _____, 2021.

My Commission Expires: _____

Notary Public

ATTACH BID FORMS

BID BOND

CONTRACTOR (Name and Address):

SURETY (Name and Address of Principal Place of Business):

OWNER (Name and Address):

Owner: Panama City – Bay County Airport and Industrial District
Address: 6300 West Bay Parkway
Panama City Beach, FL 32409

BID:

BID DUE DATE: November 16, 2021 at 2:00pm
PROJECT (Brief Description Including Location): The Work to be performed by Contractor comprises the furnishing of all professional and technical services, labor, equipment, materials, and all other functions and operations including, but not limited to, temporary construction facilities, equipment, safety, materials and supplies and related services, and surveying as necessary and required to accomplish the ECP Gate 7 Apron Repair project strictly in accordance with all requirements of the Bid Package and Contract Documents.
Northwest Florida Beaches International Airport, Panama City, Florida

BOND:

BOND NUMBER: _____
DATE: (Not later than Bid Due Date): _____
PENAL SUM: _____

IN WITNESS WHEREOF, Surety and Contractor, intending to be legally bound hereby, subject to the terms printed on the reverse side hereof, do each cause this Bid Bond to be duly executed on its behalf by its authorized officer, agent, or representative.

CONTRACTOR

SURETY

(Seal)
Contractor's Name and Corporate Seal

(Seal)
Surety's Name and Corporate Seal

By: _____
Signature and Title

By: _____
Signature and Title
(Attach Power of Attorney)

Attest: _____
Signature and Title

Attest: _____
Signature and Title

- Note:
- (1) Above addresses are to be used for giving required notice.
 - (2) Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

EJCDC NO. 1910-28-C (1990 Edition)

1. Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to pay to OWNER upon default of Contractor the penal sum set forth on the face of this Bond.
2. Default of Contractor shall occur upon the failure of Contractor to deliver within the time required by the Project Documents the executed Agreement required by the Project Documents and any performance and payment bonds required by the Project Documents and Contract Documents.
3. This obligation shall be null and void if:
 - 3.1. OWNER accepts Contractor's Bid and Contractor delivers within the time required by the Project Documents (or any extension thereof agreed to in writing by OWNER) the executed Agreement required by the Project Documents and any performance and payment bonds required by the Project Documents and Contract Documents, or
 - 3.2. All Bids are rejected by OWNER, or
 - 3.3. OWNER fails to issue a notice of award to Contractor within the time specified in the Project Documents (or any extension thereof agreed to in writing by Contractor and, if applicable, consented to by Surety when required by paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Contractor and within 30 calendar days after receipt by Contractor and Surety of written notice of default from OWNER, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of and any and all defenses based on or arising out of any time extension to issue notice of award agreed to in writing by OWNER and Contractor, provided that the time for issuing notice of award including extensions shall not in the aggregate exceed 120 days from Bid Due Date without Surety's written consent.
6. No suit or action shall commence under this Bond prior to 30 calendar days after the notice of default required in paragraph 4 above is received by Contractor and Surety, and in no case later than one year after Bid Due Date.
7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notice required hereunder shall be in writing and sent to Contractor and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal deliver, commercial courier or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent or representative who executed this Bond on behalf of Surety to execute, seal and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of any Bond conflicts with any applicable provision of any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

**SWORN STATEMENT UNDER SECTION 287.133 (3)(a)
FLORIDA STATUTES ON PUBLIC ENTITY CRIMES**

THIS FORM MUST BE SIGNED AND SWORN IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICIAL AUTHORIZED TO ADMINISTER OATH.

1. This sworn statement is submitted to Panama City – Bay County Airport and Industrial

District by _____ (print individuals name and title)

for _____ (print name

of entity submitting sworn statement) whose business is _____

_____ and (if applicable) its Federal Employer Identification No. (FEIN) is _____ (if entity has no FEIN, include the Social Security No. of the individual signing this sworn statement).

2. I understand that a “public entity crime” as defined in Paragraph 287.133(1)(g), Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or of the United States, including, but not limited to, any bid or contract for goods or services to be provided to any public entity or an agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, or material misrepresentation.

3. I understand that “convicted” or “conviction” as defined in Paragraph 287.133(1)(b), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment or information after July 1, 1989, as a result of a jury verdict, non-jury trial, or entry of a plea of guilty or nolo contendere.

4. I understand that an “affiliate” as defined in Paragraph 287.133(1)(a), Florida Statutes, means:

A. A predecessor or successor of a person convicted of a public entity crime; or

B. An entity under the control of any natural person, who is active in the management of the entity and who has been convicted of a public entity crime. The “affiliate” includes those officers, directors, executives, partners, shareholders, employees, members and agents who are active in the management of an affiliate. The ownership by one person of shares constituting a controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm’s length agreement, shall be a prima facie case that one person controls another person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.

5. I understand that a "person" as defined in Paragraph 287.133 (1)(e), Florida Statutes, means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or applies to bid on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with a public entity. The term "person" includes those officers, directors, executives, partners, shareholders, and employees, members, and agents who are active in management or an entity.

6. Based on information and belief, the statement which I have marked below is true and in relation to the entity submitting this sworn statement. **(Indicate which statement applies.)**

____ Neither the entity submitting this sworn statement, nor any of its officers, directors, executives, partners, shareholders, employees, members or agents who are active in the management of the entity, nor any affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

____ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members or agents who are active in the management of the entity, or any affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989.

____ The entity submitting this sworn statement, or one or more of its officers, directors, executives, partners, shareholders, employees, members or agents who are active in the management of the entity, or any affiliate of the entity has been charged with and convicted of a public entity crime subsequent to July 1, 1989. However, there has been a subsequent proceeding before a Hearing Officer of the State of Florida, Division of Administrative Hearings and the Final Order entered by the Hearing Officer determined that it was not in the public interest to place the submitting this sworn statement on the convicted vendor list. **(Attach a copy of the final order).**

I UNDERSTAND THAT THE SUBMISSION OF THIS FORM TO THE CONTRACTING OFFICER FOR THE PUBLIC ENTITY IDENTIFIED IN PARAGRAPH 1 (ONE) ABOVE IS FOR THAT PUBLIC ENTITY ONLY AND, THAT HIS FORM IS VALID THROUGH DECEMBER 31 OF THE CALENDAR YEAR IN WHICH IT IS FILED. I ALSO UNDERSTAND THAT I AM REQUIRED TO INFORM THE PUBLIC ENTITY PRIOR TO ENTERING INTO A CONTRACT IN EXCESS OF THE THRESHOLD AMOUNT PROVIDED IN SECTION 287.107, FLORIDA STATUTES FOR CATEGORY TWO ON ANY CHANGE IN THE INFORMATION CONTAINED IN THIS FORM.

(Signature)

(Date)

STATE OF _____ COUNTY OF _____

PERSONALLY APPEARED BEFORE ME, the undersigned authority,

(Name of individual signing)

Who, after first being sworn by me, affixed his/her signature in the space provided above on this _____ day of _____, 202__.

Subscribed and sworn to before me this _____ day of _____, 202__.

My Commission Expires:

Notary Public

DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

The following bid condition applies to this U.S. Department of Transportation (DOT) assisted contract. Submission of a bid/proposal by a prospective contractor shall constitute full acceptance of these bid conditions.

1. **DEFINITION** - Disadvantaged Business Enterprise (DBE) as used in this contract shall have the same meaning as defined in 49 CFR Part 26.
2. **POLICY** - It is the policy of DOT that DBE's as defined in 49 CFR Part 26 shall have the maximum opportunity to participate in the performance of contracts and subcontracts financed in whole or in part with Federal funds. Consequently, the DBE requirements of 49 CFR Part 26 apply to this contract.
3. **OBLIGATION** - The contractor agrees to ensure that DBE's as defined in 49 CFR Part 26 have the maximum opportunity to participate in the performance of contracts and subcontracts financed in whole or in part with Federal funds. In this regard, all contractors shall take all necessary and reasonable steps in accordance with 49 CFR Part 26 to ensure that DBE's have the maximum opportunity to compete for and perform contracts. Contractors shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of DOT assisted contracts.
4. **COMPLIANCE** - All bidders, potential contractors, or subcontractors for this DOT assisted contract are hereby notified that failure to carry out the DOT policy and the DBE obligation, as set forth above, shall constitute a breach of contract which may result in termination of the contract or such other remedy as deemed appropriate by the owner.
5. **CONTRACT CLAUSE** - All bidders and potential contractors hereby assure that they will include the above clauses in all subcontracts, which offer further subcontracting opportunities.
6. **CONTRACT AWARD** - Bidders are hereby advised that meeting the DBE subcontract goal or making an acceptable good faith effort to meet said goal are conditions of being awarded this DOT assigned contract.

The owner proposes to award the contract to the lowest responsive and responsible bidder submitting a reasonable bid provided he has met the goal for DBE participation or, if failing to meet the goal, he has made an acceptable good faith effort to meet the established goal for DBE participation. Bidder is advised that the owner reserves the right to reject any or all bids submitted.

7. **DBE PARTICIPATION GOAL** - The attainment of the goal established for this contract is to be measured as a percentage of the total dollar value of the contract. The DBE goal established for this contract is **6.92%**.
8. **AVAILABLE DBE'S** - The owner has on file a DBE program pending approved by the Federal Aviation Administration. This program contains a listing of DBE's (certified and uncertified). Bidders are encouraged to inspect this list to assist in locating DBE's for the work. Other DBE's may be added to the list in accordance with the owner's approved DBE program. Credit toward the DBE goal will not be counted unless the DBE to be used can be certified by the owner.
9. **CONTRACTOR'S REQUIRED SUBMISSION** - The owner requires the submission of the following information with the bid:

DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

MBEs

MBE Subcontractors <u>Names/Addresses/ Identity</u>	<u>Subcontract Work Item</u>	Dollar Value of <u>Subcontract Work</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

WBEs

Women Subcontractors <u>Names/Addresses/ Identity</u>	<u>Subcontract Work Item</u>	Dollar Value of <u>Subcontract Work</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

OSEs

Other Socially and Economically Disadvantaged Subcontractors within the DBE Group <u>Names/Addresses/ Identity</u>	<u>Subcontract Work Item</u>	Dollar Value of <u>Subcontract Work</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

Total Dollar Value of Subcontract Work	_____
Total Dollar Value of Basic Bid	_____
Total DBE Percent	% _____

*(Black, Hispanic, Asian American, American Indian, and other economically disadvantaged.)

If the Contractor fails to meet the contract goal established in Section 7 above, the following information must be submitted prior to contract award to assist the owner in determining whether or not the contractor made acceptable good faith efforts to meet the contract goal. This information (when applicable), as well as the DBE information, should be submitted as specified in Section 9 above.

Suggested guidance for use in determining if good faith efforts were made by a contractor are included in 49 CFR Part 26.

A list of the efforts that a contractor may make, and the owner may use, in making a determination as to the acceptability of a contractor's efforts to meet the goal as included in 49 CFR Part 26 are as follows:

- a. Whether the contractor attended any pre-solicitation or pre-bid meetings that were scheduled by the recipient to inform DBE's of contracting and subcontracting opportunities;
 - b. Whether the contractor advertised in general circulation, trade association, and minority-focus media concerning the subcontracting opportunities;
 - c. Whether the contractor provided written notice to a reasonable number of specific DBE's that their interest in the contract was being solicited in sufficient time to allow the DBE's to participate effectively;
 - d. Whether the contractor followed up initial solicitations of interest by contacting DBE's to determine with certainty whether the DBE's were interested;
 - e. Whether the contractor selected portions of work to be performed by DBE's in order to increase the likelihood of meeting the DBE goal (including, where appropriate, breaking down contracts into economically feasible units to facilitate DBE participation);
 - f. Whether the contractor provided interested DBE's with adequate information about the plans, specifications, and requirements of the contract;
 - g. Whether the contractor negotiated in good faith with interested DBE's, not rejecting DBE's as unqualified without sound reasons based on a thorough investigation of their capabilities.
 - h. Whether the contractor made efforts to assist interested DBE's in obtaining bonding, lines of credit, or insurance required by the recipient or contractor;
- and
- i. Whether the contractor effectively used the services of available minority community organizations; minority contractors' groups; local and state Federal Minority Business Assistance Offices; and other organizations that provide assistance in the recruitment and placement of DBE's.

NOTE: The nine items set forth above are merely suggested criteria and the owner may specify that you submit information on certain other actions a contractor took to secure DBE participation in an effort to meet the goals. A contractor may also submit to the owner other information on efforts to meet the goals.

10. CONTRACTOR ASSURANCE - The bidder hereby assures that he will meet one of the following as appropriate:

- a. The DBE participation goal as established in the General Conditions.
- b. The DBE participation percentage as shown in Section 9, which was submitted as a condition of contract award.

Agreements between bidder/proposer and a DBE in which the DBE promises not to provide subcontracting quotations to other bidders/proposers are prohibited. The bidder shall make a good faith effort to replace a DBE subcontract that is unable to perform successfully with another DBE subcontractor. Substitution must be coordinated and approved by the owner.

The bidder shall establish and maintain records and submit regular reports, as required, which will identify and assess progress in achieving DBE subcontract goals and other DBE affirmative action efforts.

- 11. PROMPT PAYMENT** - The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than **10** days from the receipt of each payment the prime contractor receives from the owner. The prime contractor agrees further to return retainage payments to each subcontractor within **10** days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the owner. This clause applies to both DBE and non-DBE subcontractors.



**PANAMA CITY-BAY COUNTY AIRPORT & INDUSTRIAL DISTRICT
MONTHLY REPORT OF SUBCONTRACTOR PARTICIPATION**

Name of Prime Contractor _____ Contract Name/Number/Description _____
 Original Contract Amount _____ Payments Received _____
 Current Contract Amount _____ Retainage Withheld _____
 Original Contract DBE Participation _____ Invoice Period From: _____ To: _____
 Actual DBE Participation to Date _____ Percentage Original Contracted DBE _____
 Current Scheduled DBE Participation _____ Participation Date Report Submitted _____

PLEASE COMPLETE INFORMATION BELOW. ATTACH ADDITIONAL SHEETS IF NECESSARY.

#	SUBCONTRACTOR NAME & ADDRESS	BRIEF DESCRIPTION OF WORK	NAICS CODE	D B E *	M B E	S B E	W B E	O T H E R	ORIGINAL SUBCONTRACT AMOUNT	CURRENT SUBCONTRACT AMOUNT	TOTAL PAYMENTS TO DATE	AMOUNT INVOICED THIS MONTH	TOTAL INVOICED TO DATE THIS PROJECT	PERCENT COMPLETE	PERCENT OF PAYMENTS TO DBE
DBEs SUBCONTRACTORS ONLY															
1															
				Comments:											
2															
				Comments:											
3															
				Comments:											
4															
				Comments:											
5															
				Comments:											
SUBTOTAL - DBEs															
NON-DBE SUBCONTRACTORS															
1															
				Comments:											
2															
				Comments:											
3															
				Comments:											
4															
				Comments:											
5															
				Comments:											
SUBTOTAL - NON-DBEs															
ALL SUBCONTRACTOR TOTALS															

* CHECK THIS COLUMN ONLY IF SUBCONTRACTOR IS A CERTIFIED DBE UNDER FEDERAL REGULATIONS, 49 CFR PART 26.

I certify that the information furnished above is correct to the best of my knowledge and represents the current status of the firm's (Prime Contractor) subcontract(s) with the listed firms (Subcontracts) for the designated period covered by this report.

Signed: _____

Title: _____

Print Name: _____

Date: _____

**PANAMA CITY-BAY COUNTY AIRPORT & INDUSTRIAL DISTRICT
INSTRUCTIONS AND FORM FOR COMPLETING THE
MONTHLY REPORT OF SUBCONTRACTOR PARTICIPATION**

I. USE AUTHORIZED FORMS

These instructions and the approved form "Monthly Report of Subcontractor Participation" are to be used to file monthly reports of subcontractor participation. Do not change or amend the instructions or form in any manner. These documents are available in hard copy or electronically from the Commission's DBELO, Darlene Nelson.

II. TOP PORTION OF FORM

Original Contract Amount. Enter the original amount of the Prime's Contract.

Current Contract Amount. Enter the current amount of the Prime's Contract. If this amount is the same as the entry in "Original Contract Amount", enter it. If this amount is different than the amount entered in "Original Contract Amount", enter the new contract amount.

Invoice Period. Enter the monthly period being reported (e.g., January 1, 20xx to January 31, 20xx). Each report must cover a full month.

Actual DBE Participation to Date. Enter the sum of "Total Payments to Date" made to DBEs as of the date of the report.

Current Scheduled DBE Participation. Enter the sum of "Current Subcontract Amounts" reported for **DBEs only**, i.e, do NOT include current subcontract amounts for non-DBEs even though they appear in the ledger portion of the report.

Total Original Contracted DBE Participation. Enter the original dollar amount of DBE participation. This must be the same dollar amount submitted on the Original Letter of Intent and approved by the District, and that is reported in the ledger portion of the report under "Original Subcontract Amount".

Payments Received. Enter the sum of total of payments received by the Prime Contractor as of the date of the report.

Retainage Withheld. Enter the amount of retainage withheld as of the date of the report. If none, enter 0.

Date Submitted. Enter the date the report is submitted to the District.

Percentage Original Contracted Participation. Enter the original percentage of DBE participation for this contract. This must be the same percentage committed to in the Prime Contractor's proposal and approved by the District.

IMPORTANT NOTE: The Monthly Report of Subcontractor Participation must be attached to each invoice submitted by the Prime Contractor. If an invoice is not being submitted in a particular month, the Monthly Report of Subcontractor Participation must still be submitted each month. The due date of the monthly report is the 15th day of the following month.

III. LEDGER PORTION

Report all subcontractors every month and complete all required information. Please note that some entries

apply only to the sum of DBE contracts. To facilitate accuracy in reporting, the DBE subcontractors section is listed first along with a subtotal and the Non-DBE contracts appear in the second section of the report. If there is no invoice activity for a DBE in any given month, enter "0" in the column, "Amount This Invoice". All other information must be entered, and must be current and correct.

Subcontractor Name and Address. For all subcontractors, enter the subcontractor's name and business address (street address, city, state and zip code). For DBEs, these entries must be the same as comparable information appearing on the original Letter of Intent and the Contract Participation Form/DBE Program Form submitted with the prime contractor's proposal.

Description of Work and NAICS Code. Enter a brief description (e.g., painting, electrical, survey, etc.) of the work each subcontractor is performing and the associated NAICS Code for that work. For DBEs, these entries must be the same as comparable information appearing on the Letter of Intent and the Contract Participation Form/DBE Program Form submitted with the prime contractor's proposal.

Classification of Subcontractor(s). Assign classifications as follows:

DBE-Place an "X" in this column only if the subcontractor has been DBE certified by the Florida Department of Transportation ("FDOT"). Only those subcontractors who have meet the DBE eligibility requirements of 49 CFR Part 26 may be classified as DBEs.

MBE-Place an "X" in this column if the subcontractor is also an FDOT certified minority-owned company. This classification should also be used for subcontractors who have submitted a DBE certification application but have not yet been certified as a DBE. Once DBE certification has been achieved, such firms should be classified as both MBE and DBE.

SBE-Place an "X" in this column if the subcontractor is an FDOT certified small business that has 250 or fewer employees and meets the definition of the Small Business Administration regulations (13 CFR Part 121). This classification should also be used for subcontractors who have submitted a SBE certification application but have not yet been SBE certified. Once certification has been achieved, such firms should be classified only as SBE.

WBE-Place an "X" in this column if the subcontractor is an FDOT certified woman-owned company. This classification should also be used for subcontractors who have submitted a DBE certification application but have not yet been certified as a DBE. Once DBE certification has been achieved, such firms should be classified as both WBE and DBE.

OTHER-Place an "X" in this column for all subcontractors who cannot be classified as either DBE, MBE, WBE or SBE.

Original Subcontract Amount. Enter the original subcontract amount for each subcontractor. For DBEs, this must be the **amount listed on the Original Letter of Intent or the Contract Participation Form/DBE Program Form** submitted for DBEs with the prime contractor's proposal, or the amount listed on the proposal in the Disadvantaged Business Enterprise Program, and approved by the District.

Current Subcontract Amount. Enter the current subcontract amount. If this amount is the same as the entry in "Original Subcontract Amount", enter it. For DBEs, **if this amount is different** than the amount entered in "Original Subcontract Amount", a **Revised Letter of Intent must be on file with and approved by the District.** It is recommended that Revised Letters of Intent be submitted with the Monthly Report of Subcontractor Participation that initially reports the new contract amount.

Total Payments to Date. Enter the sum of payments that have been made to each subcontractor as of the date of the report. This column should not contain diminishing amounts, i.e., a succeeding month's entry lower than the preceding month's entry. If this occurs, the District may request an examination of additional records to verify the correct amount.

Amount of This Invoice. Enter the amount of the subcontractor's invoice being submitted with this report.

Total Invoiced to Date. Enter the total amount invoiced as of the date of the report. This column should not contain diminishing amounts, i.e., a succeeding month's entry lower than the preceding month's entry. If this occurs, the District may request an examination of additional records to verify the correct amount.

Percentage Complete. Enter the percentage that equals the progress of that subcontractor's work.

Percent DBE. This entry depends upon the type of contract and terms stated in the solicitation. The **percentage for non-DBEs is always "0"**. Thus, if the subcontractor does not meet the requirements stated above to be classified as a DBE, the percentage entered in this column **must be "0"**.

DAVIS-BACON CERTIFICATION

This is to certify that I have reviewed the minimum rate wages contained in Special Provision No. 9, which were predetermined for this project by the Secretary of Labor, and I have used these rates in the preparation of this proposal. Furthermore, I agree to abide by these wages and all other provisions of the Davis-Bacon Act as it associates to this project.

Bidder's Signature

Date

Title

Notary Public

DRUG-FREE WORKPLACE CERTIFICATION

THE BELOW SIGNED BIDDER CERTIFIES that it has implemented a drug-free workplace program. In order to have a drug-free workplace program, a business shall:

1. Publish a statement notifying employees that the unlawful manufacture, distributing, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibition.
2. Inform employees about the dangers of drug abuse in the workplace, the business's policy of maintaining a drug-free workplace, any available drug counseling, rehabilitation and employee assistance programs, and the penalties that may be imposed upon employees for drug abuse violations.
3. Give each employee engaged in providing the commodities or contractual services that are under bid a copy of the statement specified in subsection 1.
4. In the statement specified in subsection 1, notify the employees that, as a condition of working on the commodities or contractual services that are under bid, the employee will abide by the terms of the statement and will notify the employer of any conviction of, or plea of guilty or nolo contendere to, to any violation of Chapter 893 or of any controlled substance law of the United States or any state, for a violation occurring in the workplace no later than five (5) days after such conviction.
5. Impose a sanction on or require the satisfactory participation in drug abuse assistance or rehabilitation program if such is available in the employee's community, by any employee who is convicted.
6. Make a good faith effort to continue to maintain a drug-free workplace through implementation of this section.

As the person authorized to sign this statement, I certify that this firm complies fully with the above requirements.

DATE: _____

COMPANY: _____

SIGNATURE: _____

ADDRESS: _____

NAME: _____

(Typed or Printed)

TITLE: _____

PHONE #: _____

CERTIFICATION OF NON-SEGREGATED FACILITIES

(Must be completed and submitted with the Bid)

The Bidder certifies that it does not maintain or provide for its employee any segregated facilities at any segregated facilities at any of its establishments, and that it does not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Bidder certifies further that it will not maintain or provide for its employees segregated facilities at any of its establishments, and that it will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. The Bidder agrees that a breach of this certification is a violation of the equal opportunity clause in this contract. As used in this certification, the term “segregated facilities” means any waiting room, work areas, restrooms and washrooms, restaurants and other eating areas, parking lots, drinking fountains, recreation or entertainment areas, transportation and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated basis of race, color, religion, or national origin, because of habit, local customs, or any other reason. The Bidder agrees that (except where it has obtained identical certification from proposed subcontractors for the specific time period) it will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the equal opportunity clause, and that it will retain such certification in its files.

(Name of Bidder)

(Signature)

(Title)

(Dated)

BUY AMERICAN CERTIFICATION

Except for those items listed by the Bidder below or on a separate and clearly identified attachment to this Bid, the Bidder hereby certifies that steel and each manufactured product, is produced in the United States (as defined in the Special Provisions under this section entitle Buy American-Steel and Manufactured Products) and that components of unknown origin are considered to have been produced or manufactured outside the United States.

PRODUCT

COUNTY OF ORIGIN

(Name of Bidder)

By: _____

Title: _____

Dated: _____

TRENCH SAFETY ACT CERTIFICATION
(Under Chapter 553, Florida Statutes)

Bidder recognizes that this Contract includes work for trench excavation in excess of five feet deep. Bidder acknowledges the requirement set forth in Section 553.63 of the Florida Statutes titled Trench Safety Act. Bidder certifies that the required trench safety standards will be in effect during the period of construction of the Project and Bidder agrees to comply with all such required trench safety standards.

The amount of _____ dollars (\$) has been separately identified for the cost of compliance with the required trench safety standards; said amount is included within the Contract Price.

FORM OF NON-COLLUSION AFFIDAVIT

State of _____

County of _____

_____ being first duly

sworn, deposes and says that he/she is _____

(Sole owner, a partner, president, secretary, etc.) of _____, the party making the foregoing Bid, that such Bid is genuine and not collusive or sham; that said Bidder has not colluded, conspired, connived, or agreed, directly or indirectly, with any Bidder or person, to put in a sham Bid, or that such other person shall refrain from bidding, and has not in any manner, directly or indirectly sought by agreement or collusion, or communications or conference, with any person, to fix the Bid Price, or of that of any other Bidder, or to secure any advantage against Owner any person interested in the proposed Contract; and that all statements in said Bid Proposal or Bid are true; and further, that such Bidder has not, directly or indirectly submitted this Bid, or the contents thereof, or divulged information or data relative thereto to any association or to any member or agent thereof.

_____(Bidder)

Sworn to and subscribed before me this [_____] day of _____, 202__.

Notary Public – State of _____

(NOTARY SEAL)

(Name typed, printed or stamped)

My Commission Expires: _____

E-VERIFY COMPLIANCE CERTIFICATION

In accordance with Executive Order Number 11-116 from the office of the Governor of the State of Florida, Bidder hereby certifies that the U.S. Department of Homeland Security’s E-Verify system will be used to verify the employment eligibility of all new employees hired by the contractor during the contract term, and shall expressly require any subcontractors performing work or providing services pursuant to the contract to likewise utilize the U.S. Department of Homeland Security’s E-Verify system to verify the employment eligibility of all new employees hired by the subcontractor during the contract term; and shall provide documentation of such verification to the OWNER upon request.

As the person authorized to sign this statement, I certify that this company complies/will comply fully with the above requirements.

DATE: _____

SIGNATURE: _____

COMPANY: _____

NAME: _____
(Typed or Printed)

ADDRESS: _____

TITLE: _____

E-MAIL: _____

PHONE NO.: _____

**NORTHWEST FLORIDA BEACHES INTERNATIONAL AIRPORT
PANAMA CITY – BAY COUNTY AIRPORT AND INDUSTRIAL DISTRICT
CONSTRUCTION CONTRACT**

Contractor: (TBD)
Address: (TBD)
Contact: (TBD)
Telephone: (TBD)
Facsimile: (TBD)

Contact Title: ECP Gate 7 Apron Repair Project
Work Location: Northwest Florida Beaches International Airport
Owner: Panama City – Bay County Airport and Industrial District
Address: 6300 West Bay Parkway
Panama City Beach, FL 32409
Telephone: (850) 763-6751

This construction contract (hereinafter the “Contract”) is effective as of the ____ day of _____, 2021 between Owner and the above-named Contractor who hereby agree that all Work specified below shall be performed by the Contractor in accordance with all provisions of this Contract, consisting of the following Project Documents:

1. Contract Form of Agreement, along with all addenda issued prior to execution of this Contract and modifications issued after execution of this Contract, including but not limited to duly issued Change Notices/Orders (as such term is defined in the General Conditions) and Amendments.
2. Exhibit “A” – Bid Proposal dated _____, General Conditions, Special Conditions
3. Exhibit “B” – Scope of Work
4. Exhibit “C” – Drawings and Technical Specifications

Contractor shall commence the Work within ten (10) calendar days after the Notice to Proceed is issued by the Owner, which shall be issued within ninety (30) calendar days (or such longer period of time the Owner and Contractor may mutually agree to in writing) of the execution of this Contract, Owner shall issue a Notice to Proceed to Contractor.

The Owner’s issuance of the Notice to Proceed is expressly conditioned upon the satisfaction of the following condition precedents:

1. The Performance Bond has been delivered and is acceptable to the Owner,
2. The Payment Bond has been delivered and is acceptable to the Owner,
3. The Insurance Certificate has been delivered and is acceptable to the Owner,
4. A Project Schedule for the Work has been delivered and is acceptable to the Owner, and
5. A Schedule of Values for the Work has been delivered and is acceptable to the Owner.

Owner shall determine, in its sole discretion, whether these condition precedents have been satisfied, shall be final and binding on the Contractor. Should Owner determine that all such condition precedents have not been satisfied (or otherwise waived in writing by Owner, in its sole discretion), then Owner may send Contractor written notice that Owner has elected to terminate this Contract, in which event this Contract shall automatically be terminated and neither party shall have any further liability or obligation hereunder whatsoever to the other party. In the event of any such termination prior to issuance of the Notice to Proceed, Contractor acknowledges and agrees that it shall not be entitled to and Owner shall not be liable for any payments to Contractor arising out of or relating to this Contract.

Work to Be Performed: Except as specified elsewhere in the contract, Contractor shall furnish all plant; labor; materials; tools; supplies; equipment; transportation; supervision; safety; technical; professional; and other services; and shall perform all operations necessary and required to satisfactorily accomplish the Work all strictly in accordance with all requirements of the Bid and Project Documents.

Security: If awarded a Contract, undersigned may be required to obtain security clearance and SIDA badges for all workers on site.

Schedule: The Work shall be performed and completed within _____ of the date of the Notice to Proceed, which should occur on or around _____, 2021, and in accordance with the Project Schedule accepted by the Owner as a precedent to the issuance of the Notice to Proceed.

Compensation: As full consideration for the satisfactory performance by Contractor of this Contract, Owner shall pay to Contractor compensation in accordance with the prices set forth in the "Bid Proposal" included in Exhibit 'A' and the payment provisions of the Project Documents.

Payment Procedures

The successful Bidder shall be required as a pre-requisite of the Notice to Proceed to provide the Owner a "Schedule of Values", a statement allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing "Contractor's Application for Payment". Only a Contractor's Application for Payment that corresponds directly with the "Schedule of Values" approved by the Owner or its representative will be acceptable for payment consideration.

The Contractor shall submit three (3) signed and notarized original copies of each Application of Payment (AIA Document G702 and G703) on a monthly basis for Work completed and/or stored to date along with waivers of lien, schedule updates and other pertinent information. The Owner's Representative will review the Application for Payment, evaluate the status of the Work and recommend the amount to be authorized for payment less 10% retained by the Owner until the project is complete.

The amount authorized for payment will be made to the Contractor by the Owner within forty-five (45) days of the date of the Application of Payment. Retained amounts shall be

released to the Contractor within thirty (30) calendar days of final acceptance of the Work by the Owner or its representative.

Insurance: The Contractor shall procure and maintain the following described insurance, except for coverage(s) specifically waived by Owner, on policies and with insurers acceptable to Owner. These insurance requirements shall not limit the liability of Contractor.

The insurance coverage(s) and limits required of Contractor under this Contract are designed to meet the minimum requirements of Owner and the Owner does not represent these types or amounts of insurance to be sufficient or adequate to protect the Contractor's interests or liabilities. Contractor alone shall be responsible to the sufficiency of its own insurance program.

The Contractor and the Contractor's subcontractors and sub-subcontractors shall be solely responsible for all of their property, including but not limited to any materials, temporary facilities, equipment and vehicles, and for obtaining adequate and appropriate insurance covering any damage or loss to such property. The Contractor and the Contractor's subcontractors and sub-subcontractors shall expressly waive any claim against the Owner arising out of or relating to any damage or loss of such property, even if such damage or loss is due to the fault or neglect of the Owner or anyone for whom the Owner is responsible. The Contractor is obligated to include, or cause to be included, provisions similar to this paragraph in all of the Contractor's subcontracts and its subcontractor's contracts with their sub-subcontractors.

The Contractor's deductibles/self insurance retention's must be disclosed to Owner and are subject to Owner's approval. The Contractor is responsible of the amount of any deductible or self-insured retention. Any deductible or retention applicable to any claim or loss shall be the responsibility of Contractor and shall not be greater than \$25,000, unless otherwise agreed to, in writing, by Owner.

Insurance required of the Contractor or any other insurance of the Contractor shall be considered primary, and insurance of Owner shall be considered excess, as may be applicable to claims or losses which arise out of or relate to the Work or this Project.

A. Workers' Compensation and Employers' Liability Insurance Coverage: The Contractor shall purchase and maintain workers' compensation and employers' liability insurance for all employees engaged in the Work, in accordance with the laws of the State of Florida. Limits of coverage shall not be less than:

\$500,000	Limit Each Accident
\$500,000	Limit Disease Aggregate
\$250,000	Limit Disease Each Employee

B. Commercial General Liability Coverage: Contractor shall purchase and maintain commercial general liability insurance on a full occurrence form. Coverage shall include, but not be limited to, Premises and Operations, Personal Injury, Contractual for this Contract, Independent Contractors, Broad Form Property

Damage, Products and Completed Operation Liability Coverage(s) and shall not exclude coverage for the “X” (Explosion), “C” (Collapse) and “U” (Underground) Property Damage Liability exposures. Limits of coverage shall not be less than:

\$1,000,000	Combined Single Limit Each Occurrence
\$2,000,000	Aggregate Limit

Contractor shall add Owner as an additional insured through the use of Insurance Service Office Endorsements No. CG 20.20.22.85 wording or equivalent, or broader, an executed copy of which shall be attached to or incorporated by reference on the Certificate of Insurance to be provided by Contractor pursuant to the requirements of the Project Documents.

C. Business Automobile Liability Coverage: The Contractor shall purchase and maintain Business Automobile Liability Insurance as to ownership, maintenance, use, loading and unloading of all of Contractor’s owned, non-owned, leased, rented or hired vehicles with limits not less than:

\$1,000,000	Combined Single Limit Each Accident
-------------	-------------------------------------

D. Excess or Umbrella Liability Coverage: Contractor shall purchase and maintain Excess Umbrella Liability Insurance or Excess Liability Insurance on a full occurrence form providing the same continuous coverage(s) as required for the underlying Commercial General, Business Automobile and Employers’ Liability Coverage(s) with no gaps in continuity of coverage(s) or limits with Owner added by endorsement to the policy as an additional insured in the same manner as is required under the primary policies, and shall not be less than:

\$4,000,000	Each Occurrence/Accident
-------------	--------------------------

This Contract embodies the entire agreement between Owner and Contractor and supersedes all other writings. The parties shall not be bound by or be liable for any statement, representation, promise, inducement, or understanding not set forth herein.

OWNER
**Panama City – Bay County Airport
and Industrial District**

CONTRACTOR
(TBD)

By:

By:

**Authorized
Signature:** _____

**Authorized
Signature:** _____

Print Name: _____

Print Name: _____

ATTACHMENT 1

BOND NO. _____

PUBLIC PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: That _____ as Principal, and _____, as Surety, located at _____ (Business Address) are held and firmly bound to _____, as Obligee in the sum of (\$ _____) for the payment whereof we bind ourselves, our heirs, executors, personal representatives, successors and assigns, jointly and severally.

WHEREAS, Principal has entered into a contract dated as of the ____ day of _____, 202__, with Obligee for _____, which contract is incorporated by reference and made a part hereof, and is referred to herein as the Contract.

THE CONDITION OF THIS BOND is that if Principal:

1. Promptly makes payment to all claimants as defined in Section 255.05(1), Florida Statutes, supplying Principal with labor, services, materials or supplies, used directly or indirectly by Principal in the prosecution of the Work provided for in the Contract, then this bond is void; otherwise it remains in full force; and
2. Any changes in or under the Contract and compliance or noncompliance with any formalities connected with the Contract or the changes do not affect Surety's obligation under this Bond. The Surety and the Principal further agree that any modifications, additions or alterations which may be made in the terms of the Contract or in the work to be done thereunder, or any extensions of the Contract, or other forbearance on the part of either Obligee or the Principal to the other, shall not in any way release the Principal and the Surety or either of them, their heirs, assigns, executors, administrators and successors, from their liability hereunder, notice to Surety of any such modifications, additions, extensions or forbearance being hereby expressly waived; and
3. Any action instituted by a claimant under this Payment Bond for payment must be in accordance with the notice and time limitation provisions in Section 255.05(2), Florida Statutes; and
4. The penal sum of this Payment Bond is in addition to the penal sum of the Performance Bond being executed concurrently herewith.

IN WITNESS WHEREOF, the above parties have executed this instrument this ____ day of _____, 202__, the name of each party being affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Signed, sealed and delivered

PRINCIPAL:

Witnessed as to Principal

By: _____

Name: _____

Its: _____

STATE OF _____

COUNTY OF _____

This foregoing instrument was acknowledged before me this ____ day of _____, 202__, by _____, as _____ of _____, a _____ corporation, on behalf of the corporation. He/she is personally known to me OR has produced _____ as identification.

My Commission Expires:

Notary Public (Signature)

(AFFIX NOTARY SEAL)

(Printed Name)

(Title or Rank)

(Serial Number, if any)

ATTEST:

SURETY:

(Printed Name)

(Business Address)

(Authorized Signature)

(Printed Name)

(Witnessed as to Surety)

OR

Witnesses

As Attorney in Fact
(Attach Power of Attorney)

As Attorney in Fact
(Attach Power of Attorney)

(Business Address)

(Printed Name)

(Telephone Number)

STATE OF _____
COUNTY OF _____

This foregoing instrument was acknowledged before me this ____ day of _____,
202__, by _____, as _____
of _____, a _____ corporation, on
behalf of the corporation. He/she is personally known to me OR has produced
_____ as identification.

My Commission Expires:

Notary Public (Signature)

(AFFIX NOTARY SEAL)

(Printed Name)

(Title or Rank)

(Serial Number, if any)

ATTACHMENT 2

BOND NO. _____

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: That _____ as Principal, and _____, as Surety, located at _____ (Business Address) are held and firmly bound to _____, as Obligee in the sum of (\$ _____) for the payment whereof we bind ourselves, our heirs, executors, personal representatives, successors and assigns, jointly and severally.

WHEREAS, Principal has entered into a contract dated as of the ____ day of _____, 20__, with Obligee for _____, which contract is incorporated by reference and made a part hereof, and is referred to herein as the Contract.

THE CONDITION OF THIS BOND is that if Principal:

1. Performs the Contract at the times and in the manner prescribed in the Contract; and
2. Pays Obligee any and all losses, damages, expenses, costs and attorneys' fees, including appellate proceedings, that Obligee sustains because of any default by Principal under the Contract, including, but not limited to, all delay damages, whether liquidated or actual, incurred by Obligee; and
3. Performs the guarantee of all work and materials furnished under this Contract for the time specified in the Contract, then this bond is void; otherwise it remains in full force.

Any changes in or under the Contract and compliance or noncompliance with any formalities connected with the Contract or the changes do not affect Surety's obligation under this Bond.

The Surety further agrees that whenever the Principal shall be, and is declared by Obligee to be, in default under the Contract and said default shall be construed to be any breach of any of the provisions of the Contract on the part of the Principal, as directed by Obligee, the Surety shall promptly remedy the default and will complete the Contract in accordance with its terms and conditions and shall fully indemnify and hold harmless Obligee from all costs, damages, and expenses which may arise thereafter (including reasonable attorneys' fees) and which the Obligee may suffer by reason of Surety's failure to so do.

The Surety and the Principal further agree that any modifications, additions, or alternations which may be made in the terms of the Contract or in the work to be performed thereunder, or any extensions of the Contract, or other forbearance on the

part of either Obligee or the Principal to the other, shall not in any way release the Principal and the Surety, or either of them, their heirs, assigns, executors, administrators and successors, from their liability hereunder, notice to the Surety of any such modifications, additions, extensions or forbearance being hereby expressly waived.

The penal sum of this Performance Bond is in addition to the penal sum of the Payment Bond being executed concurrently herewith.

This instrument shall be construed in all respects as a common law bond. It is expressly understood that the time provisions and statute of limitations under Section 255.05, Florida Statutes, shall not apply to this bond.

IN WITNESS WHEREOF, the above parties have executed this instrument this ____ day of _____, 202__, the name of each party being affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Signed, sealed and delivered

PRINCIPAL:

Witnessed as to Principal

By: _____

Name: _____

Its: _____

STATE OF _____

COUNTY OF _____

This foregoing instrument was acknowledged before me this ____ day of _____, 202__, by _____, as _____ of _____, a _____ corporation, on behalf of the corporation. He/she is personally known to me OR has produced _____ as identification.

My Commission Expires:

Notary Public (Signature)

(AFFIX NOTARY SEAL)

(Printed Name)

(Title or Rank)

(Serial Number, if any)

ATTEST:

(Witnessed as to Surety)

Witnesses

SURETY:

(Printed Name)

(Business Address)

(Authorized Signature)

(Printed Name)

OR

As Attorney in Fact
(Attach Power of Attorney)

As Attorney in Fact
(Attach Power of Attorney)

(Business Address)

(Printed Name)

(Telephone Number)

STATE OF _____
COUNTY OF _____

This foregoing instrument was acknowledged before me this ____ day of _____,
20__, by _____, as _____ of
_____, a _____ corporation, on behalf
of the corporation. He/she is personally known to me OR has produced
_____ as identification.

My Commission Expires:

Notary Public (Signature)

(AFFIX NOTARY SEAL)

(Printed Name)

(Title or Rank)

(Serial Number, if any)

CERTIFICATE OF ATTORNEY – OWNER

I, the undersigned,

the duly authorized and acting legal representative of

PANAMA CITY-BAY COUNTY AIRPORT AND INDUSTRIAL DISTRICT

do hereby certify that I have examined the foregoing contract and the Surety Bond attached thereto and the manner of execution thereof, and that I am of the opinion that each of the aforesaid agreements has been executed by the proper representatives, and that said representatives have respectively the full power and authority to execute said agreements on behalf of the respective parties named therein, and that the foregoing agreements constitute valid and legally binding obligations upon the parties executing the same in accordance with the terms, conditions and provisions thereof.

Signed: _____

Title: _____

Date: _____

RELEASE OF LIENS

STATE OF: _____

COUNTY OF: _____

Before me, the undersigned Notary Public in and for the said County and State personally appeared _____, representing the Contractor _____, who being duly sworn according to law deposes and says that all labor, materials, and outstanding claims and indebtedness of whatever nature arising out of the performance of the Contract with _____ (Owner) for _____ (Contract No.) have been paid in full and that for the final payment in the amount of \$ _____, the Contractor releases and discharges the Owner and his authorized representatives from any liens or claims or any nature because of or arising from this Contract and/or its performance, which it has had, has or may have in the future.

By: _____

Sworn to and subscribed before me this ____ day of _____, 202__.

Notary Public – State of _____

(NOTARY SEAL)

(Name typed, printed or stamped)

My Commission Expires: _____

ADVERTISEMENT OF COMPLETION

_____ (Contractor)
_____ (Address)
gives notice of completion of _____ (Project)
and sets _____ as the date of final settlement.

All persons and firms should file all claims for payment to the below address prior to the settlement date:

**Northwest Florida Beaches International Airport
Panama City – Bay County Airport and Industrial District (Owner)
6300 West Bay Parkway
Panama City Beach, FL 32409**

By: _____ (Name)
_____ (Title)
Leg: _____ (Publication Dates)

GENERAL CONDITIONS



NORTHWEST FLORIDA BEACHES INTERNATIONAL AIRPORT

NORTHWEST FLORIDA BEACHES INTERNATIONAL AIRPORT

GENERAL CONDITIONS

GC-1 Independent Contractor

Contractor represents that it is fully experienced, properly qualified, registered, licensed, equipped, organized, and financed to perform the Work under this contract. Contractor shall act as an independent contractor and is not an agent of the Owner in performing this contract, maintaining complete control over its employees and all its suppliers and subcontractors of any tier. Nothing contained in this contract or any lower-tier purchase orders or subcontracts awarded by the Contractor shall create any contractual relationship with the Owner and/or its representative. Contractor shall perform the Work hereunder in accordance with its own methods subject to compliance with the Contract.

GC-2 Authorized Representatives

Before starting the Work, Contractor shall designate in writing an authorized representative acceptable to the Owner or its representative to represent and act for Contractor and shall specify any and all limitations of such representative's authority.

GC-3 Notices

Any notices required hereunder shall be in writing and may be served either personally on the authorized representative of the receiving party at the Jobsite, by facsimile, by courier or express delivery, or by certified mail to the facsimile number or address of that party, or at such facsimile number or address as may have been directed by written notice.

GC-4 Contract Interpretations

All questions concerning interpretation or clarification of this Contract or applicable standards and codes, including the discovery of conflicts, discrepancies, errors or omissions, or the acceptable performance thereof by contractor, shall be immediately submitted in writing to the Owner or its representative for resolution. At all times Contractor shall proceed with the Work in accordance with the determinations, instructions, and clarifications of the Owner or its representative. Contractor shall be solely responsible for requesting instructions, interpretations or clarifications and shall be solely liable for any costs and expense arising from its failure to do so.

GC-5 Order of Precedence

All Project Documents and subsequently issued Change Orders and Amendments are essential parts of this Contract and a requirement occurring in one is binding as though occurring in all. In resolving conflicts, discrepancies, errors or omissions the following order of precedence shall be used

1. Invitation to Bid
2. Special Conditions
3. General Conditions
4. Scope of Work
5. Specifications

GC-6 Standards and Codes

Wherever references are made in this contract to standards or codes in accordance with which the Work under this Contract is to be performed, the edition or revision of the standards or codes current on the effective date of this contract shall apply unless otherwise expressly stated. In case of conflict between any referenced standards and codes and any Project Documents, the Project Documents shall govern.

GC-7 Laws and Regulations

All applicable laws, ordinances, statutes, rules, regulations, orders or decrees, including Owner's Airport Security Program and other formally adopted rules and regulations, in effect at the time the Work under this Contract is performed shall apply to Contractor and its employees, representative, its subcontractors, sub-subcontractors, material suppliers and others under Contractor's Contract for the Work.

GC-8 Permits

Except as otherwise specified, Contractor shall procure and pay for all permits, licenses, certifications and other applicable governing authority requirements and inspections, other than inspection performed by the Owner or its representative and shall furnish any documentation, bonds, security, or deposits required to permit performance of the Work. Owner shall submit drawings and specifications to Bay County Builder Services on January 5, 2015 to initiate review and expedite review process. Contractor, upon award, shall immediately follow up, submit, secure, procure and pay for required permits with agencies.

GC-9 Taxes

Contractor shall pay all taxes, levies, duties and assessments of every nature due in connection with the Work under this Contract and shall make any and all payroll deductions and withholdings required by law, an hereby indemnifies and holds harmless the Owner and its representative from any liability on account of any and all such taxes, levies, duties, assessments, and deductions.

GC-10 Labor, Personnel and Work Rules

Contractor shall employ only competent and skilled personnel to perform the Work and shall remove from the Jobsite any Contractor personnel determined to be unfit or to be acting in violation of any provision of this Contract. Contractor is responsible for maintaining labor relations in such manner that there is harmony among workers and shall comply with and enforce Project and Jobsite procedures, regulations, work rules, and work hours established by the Owner or its representative.

The Owner may, at its sole discretion, directly or through its representative deny access to the Jobsite to any individual by written notice to Contractor and Contractor shall promptly replace such individual with another who is fully competent and skilled to perform the Work.

Contractor shall, to the extent permissible under applicable law, comply with the provisions of all labor agreement(s) which apply to the Work performed under this Contract. Unless other methods are established by Owner, the rules, regulations, and procedures of the Plan for Settlement of Jurisdictional Disputes in the Construction Industry, or any successor agreement thereto, shall be used to determine work assignments and to resolve jurisdictional disputes on work covered by this Contract.

GC-11 Commercial Activities

Neither Contractor nor its employees shall establish any commercial activity or issue concessions or permits of any kind to third parties for establishing commercial activities on the Jobsite or any other lands owned or controlled by Owner.

GC-12 Publicity and Advertising

Contractor shall not make any announcement, take any photographs, or release any information concerning this Contract, or Project, or any part thereof to any member of the public, press, business entity, or any official body unless prior written consent is obtained from the Owner.

GC-13 Safety and Health

Contractor shall be solely responsible for conducting operations under this Contract to avoid risk of harm to the health and safety of persons and property and for inspecting and monitoring all its equipment, materials and work practices to ensure compliance with its obligations under this contract. Contractor shall assume all responsibility and liability with respect to all matters regarding safety and health of its employees and the employees of Contractor's suppliers and subcontractors of any tier, with respect to the risks under this Contract.

GC-14 Environmental Requirements

Throughout performance of the Work, Contractor shall conduct all operations in such a way as to minimize impact upon the natural environment and prevent any spread or release of contaminated or hazardous substances and comply with all applicable laws, regulations, ordinances, statutes, rules, and codes governing environmental requirements and conduct the Work based on the requirements of this Contract including compliance with permit requirements and Project plans and approvals. Contractor shall indemnify Owner for any penalties, fines, and costs incurred, including costs for environmental studies and remediation, that arise due to Contractor's improper performance of the Work or Contractor's negligence.

GC-15 Site Conditions and Natural Resources

Contractor shall have the sole responsibility for satisfying itself concerning the nature and location of the Work and the general and local conditions, including but not limited to, transportation, access, disposal, handling/storage materials, labor availability, water, electrical power, road conditions, climatic conditions, soil conditions, seasons, hydrology, physical site condition, project area, topography, ground surface conditions, equipment and facilities needed preliminary to and during the performance of the Work. The failure of Contractor to acquaint itself with any applicable conditions will not relieve Contractor of the responsibility for properly estimating the difficulties, time or cost of successfully performing Contractor's obligations under this Contract.

GC-16 Differing Site Conditions

Where the Owner or its representative has made investigations of subsurface, surface and soil conditions in areas where work is to be performed under this Contract, such investigations are made by Owner or its representative for the purpose of study and design. If such records of such investigations are included in the Project Documents, the interpretation of such records shall be the sole responsibility of Contractor and the Owner or its representative assumes any responsibility whatsoever in respect to the sufficiency or accuracy of such investigations, the records thereof, or the interpretations set forth and there is no warranty or guarantee, either express or implied, that the conditions indicated by such investigations or records thereof are representative of those existing throughout such areas, or any part thereof, or that unforeseen developments may not occur, or that materials other than or in proportions different from those indicated may not be encountered.

GC-17 Contractor's Work Area

Contractor shall confine its operations to the areas designated in the plans as the areas of Work or access to the Work or areas designated for storage. Contractor shall coordinate with Owner any planned disruption of operations at, or adjacent to, Worksite. Contractor shall, at all times, keep its work areas in neat, clean and safe conditions. Upon completion of any portion of the Work, Contractor shall promptly remove from the work area all its equipment, storage, temporary structures, surplus materials not to be used at or near the same location during later stages of the Work. Upon completion of the Work and prior to final payment, Contractor shall at its expense satisfactorily dispose of all rubbish, remove all plant, equipment, and materials and leave the premises in a neat, clean and safe condition. If Contractor fails to comply with these foregoing requirements, Owner may accomplish same at Contractor's expense.

GC-18 Cooperation with Others

The Owner may have its employees, representatives, other contractors and other subcontractors working at the Jobsite during the performance of this Contract and Contractor's work or use of certain facilities may be interfered with as a result of such concurrent activities. Owner reserves the right to require Contractor to schedule the order of performance of the Work in such a manner as will minimize the interference with work of any of the parties involved.

GC-19 Responsibility for Work, Security and Property

Contractor shall be responsible for and shall bear any and all risk of loss or damage to work in progress and, pursuant to the Special Condition titled "Title and Risk of Loss," to equipment and materials. Contractor shall be responsible for all receiving and unloading of materials for the Work, storing of materials and equipment subject to degradation by the elements and secure same from other damage or loss. Contractor shall at all times conduct all operations under this Contract in a manner to avoid the risk of loss, theft, or damage by vandalism, sabotage or any other means to any equipment, materials, work or other property at the Jobsite. Contractor shall plan and conduct its operations so as not to enter into lands in their natural state unless pre-authorized by the Owner, damage, close, obstruct or otherwise interfere with any utility installation, ditch, highway, road, structure or other property, and if necessary to do so, receive the Owner's pre-permission prior to such obstruction or interference.

GC-20 Cleaning Up

Contractor shall, at all times, keep its work areas in a neat, clean and safe condition. Upon completion of any portion of the Work, Contractor shall promptly remove from the work area all its equipment, construction plant, temporary structures and surplus materials not to be used at or near the same location during later stages of the Work.

Upon completion of the Work and prior to final payment, Contractor shall at its expense satisfactorily dispose of all rubbish, remove all plant, buildings, equipment and materials belonging to Contractor and return to Owner's warehouse or Jobsite storage area all salvageable Owner supplied materials. Contractor shall leave the premises in a neat, clean and safe condition.

In event of Contractor's failure to comply with the foregoing requirements, Owner may accomplish same at Contractor's expense.

GC-21 Contractor's Plant, Equipment and Facilities

Contractor shall provide and use for the Work only such construction plant and equipment as are capable of producing the quality and quantity of work and materials required by this contract and within the time or times specified in the Contract Documents.

Before proceeding with the Work, Contractor shall furnish Owner's Representative and Owner with information and drawings relative to such equipment, plant and facilities as Owner's Representative or Owner may request. Upon written order of Owner or Owner's Representative, Contractor shall discontinue operation of unsatisfactory plant, equipment or facilities and shall either modify the unsatisfactory items or remove such items from the Jobsite.

GC-22 Use of Completed Portions of Work

Whenever, as determined by Owner, any portion of the Work performed by Contractor is suitable for use, Owner may, upon written notice, occupy and use such portion. Use shall not constitute acceptance, relieve Contractor of its responsibilities, or act as a waiver by Owner of any terms of this contract.

Contractor shall not be liable for normal wear and tear or for repair of damage caused by any misuse during such occupancy or use by Owner. If such use increases the cost or time of performance of remaining portions of the Work, Contractor shall, pursuant to the General Condition titled "Changes," be entitled to an equitable adjustment in its compensation or schedule under this contract.

If, as a result of Contractor's failure to comply with the provisions of this contract, such use proves to be unsatisfactory to Owner, Owner shall have the right to continue such use until such portion of the Work can, without injury to Owner, be taken out of service for correction of defects, errors, omissions or replacement of unsatisfactory materials or equipment as necessary for such portion of the Work to comply with the contract; provided that the period of such operation or use pending completion of appropriate remedial action shall not exceed twelve (12) months unless otherwise mutually agreed in writing between the parties.

Contractor shall not use any permanently installed equipment until such use is approved in writing by Owner. When such use is approved, Contractor shall, at Contractor's expense properly use and maintain and, upon completion of such use, recondition such equipment as required to meet specifications.

If Owner's Representative or Owner furnishes an operator for such permanently installed equipment, all services performed shall be under the complete direction and control of Contractor, and such operator shall be considered Contractor's employee for all purposes other than payment of such operator's wages, Worker's Compensation Insurance or other benefits.

GC-23 Inspection, Quality Surveillance, Rejection of Materials and Workmanship

All material and equipment furnished and work performed shall be properly inspected by Contractor at its expense, and shall at all times be subject to quality surveillance and quality audit by Owner's Representative, Owner or their authorized representatives who, upon reasonable notice, shall be afforded full and free access to the shops, factories or other places of business of Contractor and its suppliers and subcontractors of any tier for such quality surveillance or audit. Contractor shall provide safe and adequate facilities, drawings, documents and samples as requested, and shall provide assistance and cooperation including stoppage of work to perform such examination as may be necessary to determine compliance with the requirements of this contract. Any work covered prior to any quality surveillance or test by Owner's Representative or Owner shall be uncovered and replaced at the expense of contractor if such covering interferes with or obstructs such inspection or test. Failure of Owner's Representative or Owner to make such quality surveillance or to discover defective design, equipment, materials or workmanship shall not relieve Contractor of its obligations under this contract nor prejudice the rights of Owner thereafter to reject or require the correction of defective work in accordance with the provisions of this contract.

If any work is determined by Owner's Representative or Owner to be defective or not in conformance with this contract the provisions of the General Condition titled "Warranty" shall apply.

GC-24 Testing

Unless otherwise provided in the Contract, testing of soils, equipment, materials or work shall be performed by Contractor at its expense and in accordance with the Project Documents. Should tests in addition to those required by this Contract be desired by the Owner or its representative, Contractor will be given reasonable notice by the Owner or its representative for such testing and at the Owner's expense.

GC-25 Expediting

The equipment and materials furnished and work performed under this contract shall be subject to expediting by Owner's Representative and/or Owner or their representative who shall be afforded full and free access to the shops, factories, and other places of business of Contractor and its suppliers and subcontractors of any tier for expediting purposes. As required by Owner's Representative or Owner, Contractor shall provide detailed schedules and progress reports for use in expediting and shall cooperate with Owner's Representative and/or Owner in expediting activities.

GC-26 Excusable Delays

If Contractor's performance of this Contract is prevented or delayed by any unforeseeable cause, existing or future, which is beyond the reasonable control of the parties and without the fault or negligence of Contractor, Contractor shall, within twenty-four (24) hours of the commencement of any such delay, give the Owner or its representative written notice thereof and within seven (7) calendar days of commencement of the delay, a written description of the anticipated impact of the delay on performance of the Work. Delays attributable to within the control of Contractor's suppliers or subcontractors of any tier shall be deemed delays within the control of Contractor. Contractor expressly acknowledges and agrees that it shall receive no damages for delay and Contractor's sole remedy, if any, against Owner will be the right to seek an extension of time.

GC-27 Changes

Owner may at any time, without notice to the sureties if any, by written Change Order unilaterally make any change in the Work within the general scope of this Contract, including but not limited to changes in the method, manner

and sequence of Contractor work, in Owner furnished facilities, equipment, materials services or site(s) and directing acceleration or deceleration in performance of the Work and modifying the Contract Schedule or the Contract Milestones.

If the Owner and Contractor are unable to agree on a Change Order for the requested change, Contractor shall, nevertheless, promptly perform the change as directed by the Owner in a written Construction Change Directive. In that event, the Contract Price and Contract Time shall be adjusted in the Construction Change Directive as determined by the Owner. If Contractor disagrees with the Owner's adjustment determination, Contractor must make a claim strictly in accordance with the terms of this General Condition or else be deemed to have waived any claim it might otherwise have had on that matter.

In addition, in the event of an emergency which Owner determines endangers life or property, Owner may use oral orders to Contractor for any work required by reason of such emergency. Contractor shall commence and complete such emergency work as directed by the Owner or its representative and such orders will be confirmed by written Change Order.

If at any time Contractor believes that acts or omissions of Owner or its representative constitute a change to the Work not covered by a Change Order or requirements of the Project Documents, Contractor shall within seven (7) calendar days of discovery of such act or omission submit a written Change Order Request explaining in detail the basis for the request. The Owner will either issue a Change Order or deny the request in writing.

If Contractor intends to assert a claim for an equitable adjustment under this clause it must, within ten (10) calendar days after receipt of a Change Order or denial of same provide written notification of such intent and within a further twenty (20) calendar days, submit to Owner or its representative a written proposal setting forth the nature, schedule, impact and monetary extent of such claim in sufficient detail to permit thorough analysis and negotiations.

Change Order Requests from the Contractor shall be presented to the Owner in sufficient detail to allow for evaluation. Minimum information shall include Contractor, Sub-contractor and Sub-sub-contractor itemization of Labor, Materials and Equipment costs included in the Change Order. Labor shall include labor-hours and hourly rates. Hourly rates will be the direct hourly rate of the personnel performing the work plus an allowable labor burden. The labor burden shall either be an audited labor burden or 0.5%, if an audited rate is not available. Material and Equipment shall be included at their direct costs, which shall be supported by itemized invoices for billing. If equipment is rented thru a related company, the rental rate shall be no greater than the average rental rate for similar equipment in Bay County. Related company shall mean a company owned or controlled by any owner or officer of the Contractor and Subcontractor.

Subcontractor's and Sub-sub-contractor's allowable mark-up for overhead and profit on Labor, Material and Equipment in the Change Order shall be individually no greater than 10% and in aggregate no greater than 15%.

Contractor's allowable mark-up for overhead and profit on Labor, Material and Equipment in the Change Order shall be 10%.

Additional General Conditions shall not be included in a Change Order unless the Change Order changes effects the critical path and changes the Time of Completion. Any change order request affecting the critical path shall include a detailed schedule show the change effect on the critical path.

Any delay by Contractor in giving notice or presenting a proposal for adjustment under this clause shall be grounds for rejection and waiver of the claim and in no case shall a claim by Contractor be considered if asserted after final payment under this Contract.

Contractor shall proceed diligently with performance of the Work, pending final resolution of any request for relief, dispute, claim, appeal, or action arising under the Contract, and comply with any direction from the Owner or its representative.

GC-28 Disputes

Contractor shall not be entitled to claim and neither Owner nor its representative shall be liable to Contractor or its suppliers or subcontractors of any tier in tort (including negligence), or contract except as specifically provided in this Contract. Any claim arising out of or attributable to the interpretation or performance of this Contract which cannot be resolved by negotiation shall be considered a dispute within the meaning of this clause. If for any reason Owner and Contractor are unable to resolve a claim for an adjustment, Contractor shall notify Owner or its representative in writing that a dispute exists and request a final determination by Owner. Owner shall, within thirty (30) calendar days of its receipt of any written request by Contractor, provide a written final determination setting for the contractual basis for its decision and defining what contract adjustments it considers equitable. Upon Contractor's written acceptance of Owner's determination, the Contract will be modified and the determination implemented accordingly or, failing agreement, the dispute resolution procedures as set forth in the Special Conditions titled "Dispute Resolution" shall be complied with.

GC-29 Records and Audit

The Contractor shall maintain an acceptable cost accounting system. The Contractor agrees to provide the Sponsor, the Federal Aviation Administration and the Comptroller General of the United States or any of their duly authorized representatives' access to any books, documents, papers, and records of the contractor which are directly pertinent to the specific contract for the purpose of making audit, examination, excerpts and transcriptions. The Contractor agrees to maintain all books, records and reports required under this contract for a period of not less than three years after final payment is made and all pending matters are closed.

Contractor shall maintain records and accounts in connection with the performance of this Contract which will accurately document incurred costs, both direct and indirect, of whatever nature for a period of three (3) years from the Final Acceptance of the Work unless a longer period of time is otherwise specified by applicable law. Owner or its representative shall have the right to examine and copy, at all reasonable times and with advance notification, such records and accounts for the purpose of verifying payments or requests for payment when costs are the basis of such payment and to evaluate the reasonableness of proposed contract price adjustments and claims.

GC-30 Warranty

Contractor warrants to Owner that materials furnished under this contract shall be of clear title and of the most suitable grade of their respective kinds for their intended uses, unless otherwise specified and shall also conform to the requirements of this Contract. All workmanship shall be first class and performed in accordance with sound construction practices acceptable to Owner or its representative.

If at any time prior to Final Acceptance or after Final Acceptance in cases of latent defects, fraud or such gross mistakes as amount to fraud, Owner, Owner's Representative, or Contractor discover any defect in the equipment, materials, workmanship, or Contractor-provided design, immediate written notice shall be given to the other parties. Contractor shall within a reasonable time propose corrective actions to cure such defects.

Owner may at its sole discretion, or through Owner's Representative, direct Contractor in writing and Contractor agrees to:

1. Rework, repair, or remove and replace defective equipment and materials or re-perform defective workmanship to acceptable quality at a time and in a manner acceptable to Owner;
2. Cooperate with others assigned by Owner to correct such defects and pay to Owner all actual costs reasonably incurred by Owner in performing or in having performed corrective actions; or
3. Propose and negotiate in good faith an equitable reduction in the Contract price in lieu of corrective action.

The warranty described by this General Condition is in addition to any more specific warranty required by the Invitation to Bid, the Scope of Work, the Specifications, or provided by the Contractor as part of its bid or as a separate document.

GC-31 Backcharges

Owner may, in addition to any other amounts to be retained as defined in the Contract, retain from any sums otherwise owing to Contractor amounts sufficient to cover the full costs of any Contractor failure to comply with provisions of this Contract or Contractor acts or omissions in the performance of any part of this Contract, including but not limited to, violation of any applicable law, order, rule, or regulation, including those regarding safety, hazardous materials or environmental requirements; correction of defective or nonconforming work by repair, rework, replacement or other appropriate means when Contractor states, or by its actions indicates, that it is unable or unwilling to proceed with corrective action in a reasonable time; and/or the Owner is required to take action or perform work for Contractor, such as cleanup, off-loading or completion of incomplete work.

Owner may also backcharge against Contractor for work done or cost incurred to remedy these or any other Contractor defaults, errors, omissions or failures to perform or observe any part of this Contract. Owner may, but shall not be required to, give Contractor written notice before performing such actions or work or incurring such cost. Cost of backcharge work shall include labor costs including payroll additives, incurred net delivered material costs, incurred lower-tier supplier and subcontractor costs directly related to performing the corrective action, equipment and tool rentals are prevailing rates in the Jobsite area and a factor, determined by the Owner, but not greater than sixty percent (60%), shall be applied to the total of these items for Owner's overhead, supervision, administrative and other related costs.

Owner shall separately invoice or deduct and retain from payments otherwise due to Contractor the cost as provided herein. Owner's right to backcharge is in addition to any and all other rights and remedies provided in this Contract or by law. The performance of backcharge work by Owner shall not relieve Contractor of any of its responsibilities under this Contract including but not limited to express or implied warranties, specified standards for quality, contractual liabilities an indemnifications, and meeting the milestones of the Special Condition titled "Commencement, Progress and Completion of the Work."

GC-32 Indemnity

To the maximum extent permitted by Florida law, Contractor shall indemnify and hold harmless Owner and its officers and employees and its representatives from any and all liabilities, claims, damages, penalties, demands, judgments, actions, proceedings, losses or costs, including, but not limited to, reasonable attorneys' fees and paralegals' fees, whether resulting from (1) any claimed breach of this Contract by Contractor or (2) from personal injury, property damage, direct or consequential damages, or economic loss, to the extent caused by the negligence, recklessness, or intentional wrongful misconduct of Contractor or anyone employed or utilized by the Contractor in the performance of this Contract.

GC-33 Consequential Damages

Except as expressly provided below in the second paragraph of this Section GC-33, Contractor and Owner shall waive all claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes damages incurred by Owner for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work. This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination in accordance with the requirements herein.

Notwithstanding anything in this Section GC-33 or any other term of the Project Documents to the contrary, it is acknowledged and agreed by Contractor that expressly excluded from the above referenced waiver of consequential damages provisions are any consequential damages arising out of or relating to this Contract suffered by Owner for which Contractor otherwise would be liable as provided in the following three (3) sentences. Consequential damages are not waived by Owner to the extent such consequential damages would be covered and paid for by any applicable insurance. Further, with respect to such consequential damages incurred by Owner that are not paid by any applicable insurance, Owner does not waive and Contractor shall be liable to Owner for such consequential damages up to the total cumulative amount of those reasonable amounts expected by Contractor as

profit. Further still, with respect to any consequential damages incurred by Owner that are due to the gross negligence or intentional wrongful acts or omissions of Contractor or anyone for whom Contractor is responsible, Owner does not waive and Contractor shall be liable to Owner for all such consequential damages. Nothing herein shall be construed as a cap or limitation on any liquidated damages Contractor may owe Owner pursuant to the terms of the Project Documents.

GC-34 Assignments and Subcontracts

Any assignment of this Contract or rights hereunder, in whole or part, without the prior written consent of Owner shall be void, except that upon ten (10) calendar days written notice to Owner or its representative, Contractor may assign monies due or to become due under this Contract, provided that any assignment of monies shall be subject to proper set-offs in favor of Owner and any deductions provided for in this Contract. Purchase orders and subcontracts of any tier must include provisions to secure all rights and remedies of Owner provided under this Contract and must impose upon the lower-tier supplier and subcontractor all of the duties and obligations required to fulfill this Contract. No assignment or subcontract shall relieve Contractor or its sureties of the responsibilities under this Contract.

GC-35 Suspension

Owner or its representative may by written notice to Contractor suspend at any time the performance of all or any portion of the Work to be performed under the Contract. After receipt of such notice, Contractor shall immediately discontinue work on the date and to the extent specified in the notice, place no further orders or subcontracts for material, services, or facilities with respect to the suspended work other than to the extent required in the notice, continue to protect and maintain the Work including those portions on which work has been suspended, and take any other reasonable steps to minimize cost associated with such suspension.

Upon receipt of notice to resume suspended work, Contractor shall immediately resume performance under this Contract to the extent required in the notice.

GC-36 Termination for Default

Notwithstanding any other provisions of this contract, Contractor shall be considered in default of its contractual obligations under this Contract if it performs work which fails to conform to the requirements of this Contract; fails to make progress so as to endanger performance of this contract within the required time periods; abandons or refuses to proceed with any of the Work, including modifications or changes directed pursuant to the General Conditions titled "Changes;" fails to fulfill or comply with any of the terms of this Contract; engages in behavior that is dishonest, fraudulent or constitutes a conflict of interest with Contractor's obligations under this Contract; or Contractor becomes insolvent or makes a general assignment for the benefit of creditors or reasonable grounds for insecurity arise with respect to Contractor's performance.

Upon the occurrence of any of the foregoing, Owner shall notify Contractor in writing of the nature of the failure and of Owner's intention to terminate the Contract for default. If Contractor does not cure such failure within seven (7) calendar days from receipt of notification, or sooner if safety is involved, or fails to provide satisfactory evidence that such default will be corrected within a reasonable time, Owner may, by written notice to Contractor, and without notice to Contractor's sureties, if any, terminate in whole or in part Contractor's right to proceed with the Work and Owner may prosecute the Work to completion by contract or by any other method deemed expedient. Owner may take possession of and utilize any data, designs, licenses, equipment, materials, plant, tools, and property to any kind furnished by Contractor and necessary to complete the Work.

Contractor and its sureties, if any, shall be liable for all costs in excess of the Contract price for such terminated work incurred by Owner in the completion of the Work, including cost of administration of any purchase order or subcontract awarded to others for completion.

Upon termination for default, Contractor shall immediately discontinue work on the date and to the extent specified in the notice and place no further purchase orders or subcontracts to the extent that they relate to the performance of the terminated work; inventory, maintain and turn over to Owner all data, designs, licenses, equipment, materials, plant, tools, and property furnished by Contractor or provided by Owner for performance of the terminated work;

promptly obtain cancellation upon terms satisfactory to Owner of all purchase orders, subcontracts, rentals, or any other agreements existing for performance of the terminated work or assign those agreements as directed by Owner or its representative; cooperate with Owner or its representative in the transfer of data, designs, licenses, and information and disposition of work in progress so as to mitigate damages; comply with other reasonable requests from Owner or its representative regarding the terminated work; and continue to perform in accordance with all of the terms and conditions of this Contract such portion of the Work that is not terminated.

If, after termination pursuant to this clause, it is determined for any reason that Contractor was not in default, the rights and obligations of the parties shall be the same as if the notice of termination had been issued pursuant to the General Condition entitled Optional Termination.

GC-37 Optional Termination

Owner may, at its option, terminate for convenience any of the Work under this Contract in whole or, from time to time, in part, at any time by written notice to Contractor. Such notice shall specify the extent to which the performance of the Work is terminated and the effective date of such termination.

Upon receipt of such notice Contractor shall immediately discontinue the Work on the date and to the extent specified in the notice and place no further purchase orders or subcontracts for materials, services, or facilities, other than as may be required for completion of such portion of the Work that is not terminated; promptly obtain assignment or cancellation upon terms satisfactory to Owner of all purchase orders, subcontracts, rentals, or any other agreements existing for the performance of the terminated work or assign those agreements as directed by Owner or its representative; assist Owner or its representative in the maintenance, protection and disposition of work in progress, plant, tools, equipment, property and materials acquired by Contractor or furnished by Owner or its representative under this Contract; and complete performance of such portion of the Work which is not terminated.

Upon any such termination, Contractor shall waive any claims for damages including loss of anticipated profits; on account thereof, but as the sole right and remedy of Contractor, Owner shall pay in accordance with (1) the Contract price corresponding to the work performed in accordance with this Contract prior to such notice of termination; (2) all reasonable costs for work thereafter performed as specified in such notice; (3) reasonable administrative costs of settling and paying claims arising out of the termination of work under purchase orders or subcontracts; (4) reasonable increased costs incurred in demobilization and the disposition of residual material, plant, and equipment; and (5) reasonable overhead and profit on items 2 through 4.

Contractor shall submit with thirty (30) calendar days after receipt of notice of termination, a written statement setting forth its proposal for an adjustment to the Contract price to include only the incurred costs described in this clause. Owner and its representative shall review, analyze, and verify such proposal, and negotiate an equitable adjustment, and the Contract shall be modified accordingly.

GC-38 Final Inspection and Acceptance

When Contractor considers the Work, or any Owner identified independent portion of the Work under this Contract to be complete and ready for acceptance, Contractor shall notify Owner or its representative in writing. Owner and its representative, with Contractor's cooperation, will conduct such reviews, inspections and tests as may be reasonably required to satisfy the Owner and its representative that the Work, or identified portion of the Work, conforms to all requirements of the Contract. If all or any part of the Work covered by Contractor's notice does not conform to contract requirements, Owner or its representative shall notify Contractor of such nonconformance and Contractor shall take corrective action and then have the nonconforming work re-inspected until all contract requirements are satisfied.

Owner's written Certification of Final Acceptance of the Work under this Contract shall be final and conclusive except with regard to latent defects, fraud or such gross mistake as amount to fraud, or with regard to Owner's rights under the General Conditions titled "Warranty".

GC-39 Non-Waiver

Failure by Owner to insist upon strict performance of any terms or conditions of this contract, or failure or delay to exercise any rights or remedies herein or by law, or failure to properly notify Contractor in the event of breach, or the acceptance of or payment for any goods or services, hereunder, or the review or failure to review designs shall not release Contractor from any of the warranties or obligations of this Contract and shall not be deemed a waiver of any right of Owner to insist upon strict performance hereof or any of its rights or remedies as to any prior or subsequent default hereunder nor shall any termination of work under this contract by Owner operate as a waiver of any of the terms hereof.

GC-40 Government Restricted Parties and Commodities

Contractor acknowledges that all applicable export rules and regulations of the origin countries shall apply to the exports of commodities, software and technology (technical data and assistance) under this contract. Contractor also acknowledges that other rules and regulations may restrict the use of certain parties under this contract. Such rules and regulations are generally described below.

1. Restricted Parties Lists

Country governments and international organizations such as the United Nations and European Union publish Restricted Parties List (“Lists”) that identify parties (such as known or suspected terrorists, money launderers and drug traffickers) restricted from certain or all types of transactions. Contractor shall review all applicable Lists prior to initiating transactions with any third party for the performance of all or any portion of the Work to ensure such third party is not identified on any applicable Lists. Contractor shall not enter into any transactions with any third party identified on any applicable Lists.

2. Licensing Requirements

(a) General: Each country has export regulations that control commodities, software and technology for various reasons, such as national security, foreign policy, anti-terrorism, and to avoid the proliferation of weapons and potential weapons, e.g. certain nuclear, chemical or biological agents. Numerous countries have export regulations that specifically address dual-use items, meaning commercial items with the potential to be applied to military and/or weapon proliferation uses. Contractor shall ensure that all necessary export licenses are obtained, or license exceptions confirmed, prior to the export of any commodity, software, or technology.

(b) United States of America (USA) Export Licensing Requirements: Contractor is solely responsible for obtaining any required USA export licenses for all commodities, software, and technology being supplied in the performance of the Work, except for any commodity, software or technology supplied by Owner. A copy of the export license, or rationale as to why a license is not required, shall be provided to Owner’s Representative or Owner upon request.

Contractor shall be responsible for any delay resulting from Contractor’s failure to comply fully and timely with any such rule or regulation described above.

Contractor hereby agrees to indemnify, defend and hold Owner’s Representative, Owner, each of their respective affiliates and the respective directors, officers, employees and representatives of each harmless from and against any and all claims, legal or regulatory actions, final judgments, reasonable attorneys’ fees, civil fines and any other losses which any of them may incur as a result of Contractor’s failure to comply with its obligations under this clause.

GC-41 Equal Employment Opportunity

Contractor is aware of and is fully informed of Contractor’s obligation under Executive Order 11246 and, where applicable, shall comply with the requirements of such Order and all orders, rules, and regulations promulgated thereunder unless exempted therefrom.

Without limitation of the foregoing, Contractor's attention is directed to 41 Code of Federal Regulations (CFR), Section 60-1.4, and the clause titled "Equal Opportunity Clause" which, by this reference, is incorporated herein.

Contractor is aware of and is fully informed of Contractor's responsibilities under Executive Order No. 11701 "List of Job Openings for Veterans" and, where applicable, shall comply with the requirements of such Order and all orders, rules and regulations promulgated thereunder unless exempted therefrom.

Without limitation of the foregoing, Contractor's attention is directed to 41 CFR section 60-250 et seq. and the clause therein titled "Affirmative Action Obligations of Contractors and Subcontractors for Disabled Veterans and Veterans of the Vietnam Era," which by this reference, is incorporated herein.

Contractor certifies that segregated facilities, including but not limited to washrooms, work areas and locker rooms, are not and will not be maintained or provided for Contractor's employees. Where applicable, Contractor shall obtain a similar certification from any of its subcontractors, vendors, or suppliers performing the Work under this contract.

Contractor is aware of and is fully informed of Contractor's responsibilities under the Rehabilitation Act of 1973 and the Americans with Disabilities Act and, where applicable, shall comply with the provisions of each Act and the regulations promulgated thereunder unless exempted therefrom.

Without limitation of the foregoing, Contractor's attention is directed to 41 CFR Section 60-741 and the clause therein titled "Affirmative Action Obligations of Contractors and Subcontractors for Handicapped Workers," which by this reference, is incorporated herein.

GC-42 Disadvantaged Business Enterprises Program

Contractor shall support Owner's policy and commitment to maximizing, where practical, business opportunities for Disadvantaged Business Enterprises (as identified in the Special Conditions) by actively identifying, encouraging and assisting in their participation and otherwise making a good faith effort to achieve the DBA goals established for this project.

GC-43 Authority of Owner's Representative

The Owner's Representative shall decide any and all questions which may arise as to the quality and acceptability of materials furnished, work performed, and as to the manner of performance and rate of progress of the Work. The Owner's Representative also shall decide all questions that may arise as to the interpretation of the specifications or plans relating to the Work. The Owner's Representative shall determine the amount and quality of the several kinds of Work performed and materials furnished which are to be paid for under the contract.

GC-44 Conformity with Plans and Specifications

All Work and all materials furnished shall be in conformity with the dimensions, quality, quantity, material, and testing requirements that are specified (including specified tolerances) in the Contract Documents.

If the Owner's Representative finds the materials furnished, Work performed, match or the finished product not within conformity with the Contract Documents but that the portion of the Work affected will, in its opinion, result in a finished project having a level of safety, economy, durability, and workmanship acceptable to the Owner, it will advise the Owner of its recommendation that the affected Work be accepted and remain in place. In this event, the Owner's Representative will document its determination and recommend to the Owner a basis of acceptance that will provide for an adjustment in the contract price for the affected portion of the Work. The Owner's Representative determination and recommended contract price adjustments will be based on the Owner's Representative's reasonable judgment and such test or retests of the affected Work as are, in its opinion, needed. Owner may accept or reject the Owner's Representative's recommendation (including any price adjustment recommendation) in its sole discretion. Changes in the contract price shall be covered by Change Order or supplemental agreement, as applicable.

If the Owner's Representative finds the materials furnished, Work performed, or the finished product are not in conformity with the Contract Documents and which Owner has not decided to accept with a price adjustment as provided above, the affected Work or materials shall be removed and replaced or otherwise corrected by and at the expense of Contractor in accordance with the Owner's Representative's written orders.

For the purpose of this subsection, nothing herein shall be construed as waiving Contractor's responsibility to complete the Work in accordance with the Invitation to Bid or Bid Specifications.

Neither Owner's Representative nor Owner will be responsible for the Contractor's means, methods, techniques, sequences, or procedures of construction or the safety precautions incident thereto.

GC-45 Authority and Duties of Inspectors

Inspectors employed by the Owner or Owner's Representative shall be authorized to inspect all Work done and all materials furnished. Such inspection may extend to all or any part of the Work and to the preparation, fabrication, or manufacture of the materials used. Inspectors are not authorized to revoke, alter, or waive any provision of the contract. Inspectors are not authorized to issue instructions contrary to the plans and specifications or to act as foreman for the Contractor.

Inspectors employed by the Owner or Owner's Representative are authorized to notify the Contractor or its representatives of any failure of the Work or materials to conform to the requirements of the contract, plans, or specifications and to reject such nonconforming materials in question until such issues can be referred to the Owner's Representative for its initial decision.

GC-46 Source of Supply and Quality Requirements

The materials used in the Work shall conform to the requirements of the Contract Documents. Unless otherwise specified, such materials that are manufactured or processed shall be new (as compared to used or reprocessed).

In order to expedite the inspection and testing of materials, Contractor shall furnish complete statements to the Owner's Representative as to the origin, composition, and manufacture of all materials to be used in the Work. Such statements shall be furnished promptly after execution of the contract but, in all cases, prior to delivery of such materials.

At the Owner's Representative's option, materials may be approved at the source of supply before delivery is stated. If it is found after trial that sources of supply for previously approved materials do not produce specified products, the Contractor shall furnish materials from other sources.

GC-47 Samples, Tests, and Cited Specifications

Except for those tests to be performed by Contractor pursuant to the Contract Documents, all materials used in the Work may be inspected, tested, and approved or denied by the Owner's Representative at any time before incorporation in the Work, its decision. Any Work in which untested materials are used at the Contractor's risk. Any untested materials used in the Work and are found to not comply with requirements of the Contract Documents, such materials shall be removed and replaced with materials tested and approved by the Owner's Representative at the Contractor's expense. Materials found to be unacceptable will not be paid for.

Unless otherwise designated in the Contract Documents, tests in accordance with the cited standard methods of ASTM, AASHTO, Federal Specifications, Commercial Item Descriptions, and all other cited methods, which are current on the date of advertisement of the bids, will be made by the Owner's Representative or Owner at the Owner's expense. The testing organizations performing on site field tests shall have copies of all referenced standards on the construction site for use by all technicians and other personnel including the Contractor's representative at its request. Unless otherwise designated, samples will be taken by a qualified representative of the Owner's Representative. All materials being used are subject to inspection, test, or rejection at any time prior to or after incorporation into the Work. Copies of all tests will be furnished to the Contractor's representative at its request.

The Contractor shall employ a testing organization to perform all Contractor required tests. The Contractor shall submit to the Owner's Representative resumes on all testing organizations and individual persons who will be performing the tests. The Owner's Representative shall have the right, following review of such credentials, to reject any organization or individual persons performing the tests at its decision and require the Contractor to find alternative organizations or individuals acceptable to the Owner's Representative. All the test data shall be reported to the Owner's Representative after the results are known. Legible, printed reports of all test data shall be given to the Owner's Representative within five (5) business days of such tests. After completion of the Work, and prior to final payment, Contractor shall submit a final report to the Owner's Representative showing all test data reports, plus an analysis of all results showing ranges, averages, and corrective action taken on all failing tests.

GC-48 Certification of Compliance

The Owner's Representative may permit the use, prior to sampling and testing, of certain materials or assemblies when accompanied by manufacturer's certificates of compliance stating that such materials or assemblies fully comply with the requirements of the contract. The certificate shall be signed by the manufacturer. Each lot of such materials or assemblies delivered to the work must be accompanied by a certificate of compliance in which the lot is clearly identified.

Materials or assemblies used on the basis of certificates of compliance may be sampled and tested at any time and if found not to be in conformity with contract requirements will be subject to rejection whether in place or not.

The form and distribution of certificates of compliance shall be as approved by the Owner's Representative.

When a material or assembly is specified by "brand name or equal" and the Contractor elects to furnish the specified "brand name," the Contractor shall be required to furnish the manufacturer's certificate of compliance for each lot of such material or assembly delivered to the Work. Such certificates of compliance shall clearly identify each lot delivered and shall certify as to:

- a. Conformance to the specified performance, testing, quality or dimensional requirements; and
- b. Suitability of the material or assembly for the use intended in the Work.

Should the Contractor propose to furnish an "or equal" material or assembly, it shall furnish the manufacturer's certificates of compliance as hereinbefore described for the specified brand name material or assembly prior to and be approved by the Owner's Representative prior to its order and delivery to the Work. Any material or assembly furnished "or equal" not prior approved shall be removed from the Work at the Contractor's cost and shall not be paid for.

GC-49 Payment for Materials On-Hand

Partial payments may be made to the extent of the delivered cost of materials to be incorporated in the Work, provided that such materials meet the requirements of the Contract Documents and are delivered to acceptable sites on the airport property or at other sites in the vicinity that are acceptable to the Owner. Such delivered costs of stored or stockpiled materials may be included in the next partial payment after the following conditions are met:

- a. The material has been stored or stockpiled in a manner acceptable to the Owner's Representative or Owner at or on an Owner approved site,
- b. The Contractor has furnished the Owner's Representative with acceptable evidence of the quantity and quality of such stored or stockpiled materials,
- c. The Contractor has furnished the Owner's Representative with satisfactory evidence that the material and transportation costs have been paid,
- d. The Contractor has furnished the Owner legal title (free of liens or encumbrances of any kind) to the material so stored or stockpiled,
- e. The Contractor has furnished the Owner evidence that the material so stored or stockpiled is insured against loss by damage to or disappearance of such materials at any time prior to use in the Work,

It is understood and agreed that the transfer of title and the Owner's payment for such stored or stockpiled materials shall in no way relieve the Contractor of its responsibility for furnishing and placing such materials in accordance with the requirements of the Contract Documents.

In no case will the amount of partial payments for materials on hand exceed the allocated portion of the contract price for such materials or the contract price for the contract item in which the material is intended to be used, less any applicable retained portions. The Contractor shall bear all costs associated with the partial payment of stored or stockpiled materials in accordance with the provisions of this subsection.

GC-50 Bid Security

Guarantee will be required with each bid as a certified check on a solvent bank or a bid bond in the amount of five (5) percent of the total amount of the bid, made payable to the Panama City–Bay County Airport and Industrial District.

GC-51 Bonding Requirements

The successful bidder will be required to furnish separate performance and payment bonds each in an amount equal to 100% of the contract price.

GC-52 Performance and Payment Securities

The successful Bidder shall deliver to the Owner or the Owner's Authorized Representative no later than ten (10) calendar days after contract award and prior to commencing the Work or entering the Project Site, a Performance and Payment Bond in the form supplied in the bid and project documents and executed, as surety, by a corporation acceptable to the Owner and authorized to issue such bonds in the jurisdiction of Bay County, Florida. Such Performance Bond and Payment Bond shall each be for one hundred percent (100%) of the total as set forth in Bidder's proposal. The cost of such Performance Bond and Payment Bond shall be included in the Guaranteed Maximum Price submitted in the Bidder's Proposal

END OF GENERAL CONDITION

SPECIAL CONDITIONS



NORTHWEST FLORIDA BEACHES INTERNATIONAL AIRPORT

NORTHWEST FLORIDA BEACHES INTERNATIONAL AIRPORT

SPECIAL CONDITIONS

SC-1 Definitions

Whenever the following terms are used, the intent and meaning shall be interpreted as follows:

AIR OPERATIONS AREA (AOA) means any area of the airport used or intended to be used for the landing, takeoff, or surface maneuvering of aircraft including paved and unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiways and/or aprons.

AIRPORT TICKET OFFICE (ATO) means any area of the airport terminal used or intended to be used for the ticketing and baggage check for passengers. This area includes staff work and break areas.

CALENDAR DAY means every day shown on the calendar.

CHANGE ORDER means a written order to the Contactor signed by Owner and its representative covering changes in the plans, specifications, or proposed quantities and establishing a basis of payment and contract time adjustment, if any, for the work affected by such changes.

CONTRACT DOCUMENTS mean all the written and drawn documents comprising the Contract for the Project.

CONTACT SCHEDULE means the Work execution schedule developed by Contactor and approved by Owner for implementation of the Work.

CONTRACTOR means the individual, partnership, Limited Liability Company or corporation, its authorized representatives, successors, and permitted assigns as identified in the Contract.

FAA means the Federal Aviation Administration of the U.S. Dept. of Transportation.

INSPECTOR means authorized representative of Owner assigned to make all necessary inspections and/or tests of the work performed or being performed, or the materials furnished or being furnished by Contractor.

JOBSITE means the designated site for the Project where the Work will be performed by the Contractor.

NOTICE TO PROCEED (NTP) means a written notice to Contractor to begin the actual work for the designated portion thereof by a specified date and date on which the Contract begins.

OWNER means Panama City–Bay County Airport and Industrial District dba Northwest Florida Beaches International Airport.

OWNER'S REPRESENTATIVE means the designated agent of the Owner to administer this Contract for the Owner, which shall be the Owner, unless a change is provided by written notice from Owner to Contractor.

PROJECT means the scope of work (Work) under this **ECP Gate 7 Apron Repairs** at Northwest Florida Beaches International Airport (ECP), Panama City Beach, Florida.

SPECIFICATIONS mean a part of the Invitation to Bid containing the written directions and requirements for completing the Contract Work.

WORK means all the stated or implied activities to be performed by Contractor as required by the Project Documents.

SC-2 Insurance

The Contractor shall procure and maintain the following described insurance, except for coverage(s) specifically waived by Owner, on policies and with insurers acceptable to Owner. These insurance requirements shall not limit the liability of Contractor.

The insurance coverage(s) and limits required of Contractor under this Invitation to Bid are designed to meet the minimum requirements of Owner and the Owner does not represent these types or amounts of insurance to be sufficient or adequate to protect the Contractor's interests or liabilities. Contractor alone shall be responsible to the sufficiency of its own insurance program.

The Contractor and the Contractor's subcontractors and sub-subcontractors shall be solely responsible for all of their property, including but not limited to any materials, temporary facilities, equipment and vehicles, and for obtaining adequate and appropriate insurance covering any damage or loss to such property. The Contractor and the Contractor's subcontractors and sub-subcontractors shall expressly waive any claim against the Owner arising out of or relating to any damage or loss of such property, even if such damage or loss is due to the fault or neglect of the Owner or anyone for whom the Owner is responsible. The Contractor is obligated to include, or cause to be included, provisions similar to this paragraph in all of the Contractor's subcontracts and its subcontractor's contracts with their sub-subcontractors.

The Contractor's deductibles/self-insurance retention's must be disclosed to Owner and are subject to Owner's approval. The Contractor is responsible of the amount of any deductible or self-insured retention. Any deductible or retention applicable to any claim or loss shall be the responsibility of Contractor and shall not be greater than \$25,000, unless otherwise agreed to, in writing, by Owner.

Insurance required of the Contractor or any other insurance of the Contractor shall be considered primary, and insurance of Owner shall be considered excess, as may be applicable to claims or losses which arise out of or relate to the Work or this Project.

A. Workers' Compensation and Employers' Liability Insurance Coverage: The Contractor shall purchase and maintain workers' compensation and employers' liability insurance for all employees engaged in the Work, in accordance with the laws of the State of Florida. Limits of coverage shall not be less than:

- \$500,000 Limit Each Accident
- \$500,000 Limit Disease Aggregate
- \$250,000 Limit Disease Each Employee

B. Commercial General Liability Coverage: Contractor shall purchase and maintain commercial general liability insurance on a full occurrence form. Coverage shall include, but not be limited to, Premises and Operations, Personal Injury, Contractual for this Contract, Independent Contractors, Broad Form Property Damage, Products and Completed Operation Liability Coverage(s) and shall not exclude coverage for the "X" (Explosion), "C" (Collapse) and "U" (Underground) Property Damage Liability exposures. Limits of coverage shall not be less than:

- \$1,000,000 Combined Single Limit Each Occurrence
- \$2,000,000 Aggregate Limit

Contractor shall add Owner as an additional insured through the use of Insurance Service Office Endorsements No. CG 20.20.22.85 wording or equivalent, or broader, an executed copy of which shall be attached to or incorporated by reference on the Certificate of Insurance to be provided by Contractor pursuant to the requirements of the Project Documents.

C. Business Automobile Liability Coverage: The Contractor shall purchase and maintain Business Automobile Liability Insurance as to ownership, maintenance, use, loading and unloading of all of Contractor's owned, non-owned, leased, rented or hired vehicles with limits not less than:

\$1,000,000 Combined Single Limit Each Accident

D. Excess or Umbrella Liability Coverage: Contractor shall purchase and maintain Excess Umbrella Liability Insurance or Excess Liability Insurance on a full occurrence form providing the same continuous coverage(s) as required for the underlying Commercial General, Business Automobile and Employers' Liability Coverage(s) with no gaps in continuity of coverage(s) or limits with Owner added by endorsement to the policy as an additional insured in the same manner as is required under the primary policies, and shall not be less than:

\$4,000,000 Each Occurrence/Accident

SC-3 Owner Furnished Drawings and Specifications

Owner's Representative will furnish specifications and/or design drawings of the Project for each part of the Work under this contract. Such drawings and specifications will give the information required for the preparation of shop detail drawings by Contractor.

Contractor shall, upon receipt thereof, check promptly all specifications and/or drawings furnished and shall notify Owner's Representative and Owner of any omissions or discrepancies in such specifications or drawings found.

All specifications and/or drawings for the Work are identified as the Passenger Boarding Bridges (PBB). Should any addenda be issued or other modifications to the specifications and/or drawings occur prior to NTP of the contract, Owner's Representative will prepare a consolidated and conformed set of specifications and/or drawings marked "Issued for Bid" and issued by Owner's Representative. Contractor shall perform the Work in accordance with the "Issued for Bid" specifications and/or drawings. Contractor shall immediately review the "Issued for Construction" specifications and/or drawings and promptly notify the Owner's Representative and Owner in writing if Contractor believes anything in the "Issued for Bid" specifications and/or drawings represents a material change from what was reflected in the bid documents, addenda, and changes/modifications thereafter accepted by the Contractor with the Contract and prior to the NTP and identify any effects on cost and schedule.

SC-4 Owner Furnished Utilities, Facilities, Materials and Equipment

Owner will not furnish to Contractor any utilities, facilities, materials and/or equipment. Owner shall designate in the Project Documents or in written form to Contractor's request for such designation the location where Contractor facilities for storage may be temporarily placed.

SC-5 Permits

Any required permits shall be provided by Contractor. Except as otherwise specified, Contractor shall procure and pay for all permits, licenses, certifications and other applicable governing authority requirements and inspections, other than inspection performed by the Owner or its representative and shall furnish any documentation, bonds, security, or deposits required to permit performance of the Work. Owner shall submit drawings and specifications to Bay County Builder Services to initiate review and expedite review process. Contractor, upon award, shall immediately follow up, submit, secure, procure and pay for required permits.

SC-6 Contractor Furnished Drawings, Data and Samples

Owner's Representative and Owner's permission to proceed with the Work does not constitute acceptance or approval of submittals including, but not limited to, design details, calculations, analyses, test methods, construction methods, certificates or materials developed or selected by Contractor and does not relieve Contractor from full compliance with the Contract Documents. Drawings required of the Contractor if not specifically identified in the specifications shall include drawings for fabrication of Contractor furnished equipment or materials, installation of Contractor furnished equipment or materials, planning and performance of the Work under this contract, material samples, material certificates and other appropriate data.

DRAWINGS: All drawings required to be submitted by Contractor shall be certified by Contractor to be correct, shall show the contract number and shall be furnished in accordance with the contract drawings and data requirements and forms. The Owner's Representative or its representative shall review Contractor's drawings and a reproducible drawing marked with one of the following codes will be returned to Contractor:

- a. Reviewed, No Comments,
- b. Reviewed, Comments as Noted (Work May Proceed),
- c. Rejected, Revise and Resubmit,
- d. No Review Required.

All drawings submitted by Contractor shall be submitted to the Owner's Representative for review at least thirty (30) calendar days before fabrication, installation, or performance is commenced and at Contractor's expense.

SAMPLES: All samples required to be submitted by Contractor shall be certified by Contractor to be representative of materials to be incorporated in the Work, shall show the contract number and shall be furnished in accordance with the contract drawings and data requirements and forms. All samples submitted by Contractor shall be submitted to the Owner's Representative for review at least fifteen (15) calendar days before materials are incorporated into the Work and at Contractor's expense. The Owner's Representative or its representative shall review the sample and return the Contractor's submittal form marked as noted for drawings.

CERTIFICATES AND DATA: Where certificates are required, one (1) copy of each certificate and one (1) computer file of same shall be submitted by and at the expense of Contractor. Such submittal shall be made not less than thirty (30) calendar days prior to the time that the materials represented by such certificates are needed for incorporation into the Work. Certificates shall be subject to review and material represented by such certificates shall not be fabricated, delivered to the Jobsite or incorporated into the Work without such review.

Certificates shall clearly identify the material being certified and shall include, but not be limited to, providing the following information: Contractor's name, project name, contract number, name of item, manufacturer's name, and reference to the appropriate drawing, technical specification section and paragraph number, all as applicable.

AS-BUILT DRAWINGS AND SPECIFICATIONS: During construction, Contractor shall keep a current marked-up controlled set of as-built drawings on the Jobsite as an accurate record of all deviations between work as shown on the drawings and work as installed. These drawings shall be available to the Owner's Representative, Owner or their representatives for inspection at any time during regular business hours. Contractor shall at its expense and no later than thirty (30) calendar days after final acceptance and before final payment furnish to the Owner's Representative a complete set of signed marked-up as-built reproducible (bond paper) drawings with "As-Built" clearly printed on each sheet and a PDF electronic copy of same. Contractor will keep a current marked-up controlled set of as-built specifications on the Jobsite annotated to clearly indicate all substitutions that are incorporated into the Work. Where the selection of more than one product is specified, annotation shall show which product was installed.

SC-7 Commencement, Progress, Completion of the Work and Project Schedule

Gate 7 is critical to the airport's operations and must be closed the minimum time possible. To accommodate this, the following schedule will be maintained:

- 1) An award recommendation will be made to the Airport board November 17th
- 2) Upon approval, the Contract will be forwarded to the low bidder for execution.
- 3) A Pre-con meeting will be held on November 23rd and an Administrative NTP will be issued for the processing of required submittals.
- 4) Submittals will be submitted no later than December 3rd.
- 5) A Construction NTP will be issued upon approval of submittals.
- 6) Contractor shall Substantially Complete the work within fourteen (14) days of the Construction Notice to Proceed. Substantial Completion shall mean all materials, other than gate markings, are installed and approved.
- 7) Gate marking will be installed no earlier than twenty-one (21) and no later twenty-three (23) days of Substantial Completion.
- 8) Final Completion, to include all Closeout Documentation, shall be within 45 days after Substantial Completion unless otherwise negotiated, and approved, by the Owner.

Contractor will provide, in a form acceptable to Owner and/or its representative, a project schedule in sufficient detail to clearly outline the Work to be performed under this Contract and milestone dates for major work events such as the start and completion of major components of the Project, as one of the prerequisites to issuance of the Notice to Proceed after the execution of the Contract. The Owner's Representative shall review the Project Schedule and shall accept, accept with comment, or reject with comment. Contractor shall revise the schedule as required by the Owner's Representative and resubmit until accepted.

Contractor shall periodically update the Project Schedule as required and no less than weekly to support the pay-application to promptly reflect the progress of the Work. Should any of the work not be performed as indicated and be later than originally planned to perform, a recovery plan shall be presented to the Owner or its representative for approval.

SC-8 Temporary Access and Haul Roads

Access to Secured Areas will be granted in accordance with the Owner's TSA-approved Airport Security Program. Haul roads and routes will be identified during a scheduled pre-construction meeting with the Contractor.

SC-9 Safety, Health and Security Requirements

Contractor will comply with all applicable federal, state and local laws, ordinances, statutes, rules, regulations, orders or decrees, including the Airport Safety Program and other rules and regulations adopted by Owner, in effect at the time the Work under this Contract is performed shall apply to Contractor and its employees, representative, its subcontractors, sub-subcontractors, material suppliers and others under Contractor's Contract for the Work.

SC-10 Applicable Law

This contract shall be governed by and construed in accordance with the laws of State of Florida excluding its conflict of law rules which may apply the laws of any other jurisdiction, and each party hereto agrees not to assert as a defense in any proceeding that it is not subject to the laws of State of Florida.

SC-11 Invoicing and Payment

Contractor shall prepare and submit invoices monthly or at some other pre-approved interval with estimates submitted for review by Owner and its representative at least ten (10) calendar days prior to formal submittal period for review and field inspection to verify estimated payment amounts requested. Following review and Owner's and its representative's approvals, Contractor will submit invoice (form as specified in the Project Documents) for payment. Owner pays Contractor undisputed amounts submitted and approved, in accordance with the terms of the Project Documents, within forty-five (45) days of the date of submission of the submitted invoice.

Contractor shall certify in each invoice that no known outstanding mechanic's or material-men liens and all due and payable bills have been paid or are included in the application for payment.

Each invoice shall be accompanied by a submission of information regarding Disadvantaged Business Enterprise (DBE) goals and accomplishments during the period covered by the payment application in a format acceptable to OWNER. CONTRACTOR'S payment application shall include the amounts authorized for payment to each DBE firm and its certification number. Failure to submit DBE-related information with the request for payment will result in the payment application being returned to the CONTRACTOR for correction.

Owner shall retain ten percent (10%) of that portion of the gross amount of each payment request submitted to Owner for payment, until fifty percent (50%) completion of the Work. Owner reserves the right, at its sole discretion, to further release any portion of such retainage prior to final payment and prior to such release, require Contractor to submit for itself, its subcontractors of all tiers, and all material suppliers, vendors, laborers and other parties acting through or under it, complete waivers and releases of all claims against Owner or its representative arising under or by virtue of this Contract to the extent of payments made and Contractor, upon request by Owner or its representative, shall in addition furnish acceptable evidence that all such claims have been satisfied.

Any amounts otherwise payable under this Contract may be withheld, in whole or in part, to the extent reasonably necessary to protect Owner's interest, if any claims are filed against Owner for which Contractor is or may become liable, Contractor is in material default of any Contract condition including, but not limited to, the schedule, quality assurance and health and safety requirements, Contractor has not submitted a Project Schedule or required updates or proper insurance certificates and continuous coverage(s) as required by the Project Documents and proof thereof of any required Performance and Payment Bonds, any adjustments that are due from previous overpayment or audit results, or offsets in favor of Owner in other transactions are asserted. Owner will pay such withheld payments if Contractor pays, satisfies or discharges any claim of Owner against Contractor under or by virtue of this Contract or cures all defaults in the performance of this Contract.

Contractor agrees to pay each of its subcontractors under this contract for satisfactory performance of its subcontract no later than ten (10) days from the receipt of each payment Contractor receives from Owner except any applicable retainage required by Owner of Contractor.

Owner shall make final payment to Contractor in accordance with Section 218.735, Fla. Stat. following Final Acceptance of the Work and after submittal of such final invoice, provided that Contractor shall have furnished Owner or its representative for itself, its subcontractors of all tiers, and all material suppliers, vendors, laborers and other parties acting through or under it, waivers and releases of all claims against Owner arising under or by virtue of this Contract, except such claims, if any, as may with the consent of Owner be specifically excepted by Contractor from the operation of the release in stated amounts to be set forth therein.

SC-12 Owner's Representative

Owner has designated a Representative to act for and on behalf of Owner for carrying out certain contract activities as expressly designated herein and may, by contract change order, modify its representative authority, replace the representative or dispense with the representative's services without relieving Contractor of any of its obligations under this Contract. Contractor acknowledges and agrees that the Owner's Representative has no authority to authorize or approve changes to the Contract.

Owner, after consultation with the Owner's Representative, shall decide any and all questions which may arise as to the quality and acceptability of materials furnished, work performed, and as to the matter of performance and rate of progress of the Work. Owner, after consultation with the Owner's Representative shall decide all questions which may arise as to the interpretation of the specifications and drawings relating to the Work, the fulfillment of the contract on the part of Contractor, and the rights of different contractors on the Project. Owner, after consultation with the Owner's Representative shall determine the amount and quality of the several kinds of work performed and materials furnished which are to be paid for under this contract.

SC-13 Nondisclosure

Contractor agrees not to divulge to third parties, without the written consent of Owner, any information obtained from or through Owner or its representative in connection with the performance of this Contract unless the information is (1) known to Contractor prior to obtaining the same from Owner or its representative, (2) disclosed to Contractor in the public domain, or (3) obtained by Contractor from a third party who did not receive same, directly or indirectly from Owner or its representative and who has no obligation of secrecy with respect thereto.

SC-14 Dispute Resolution

In the event of a dispute between the parties arising out of or relating to their responsibilities under this Contract, the party claiming the dispute shall provide the other party promptly written notice of such dispute, as required by the terms of the Contract. The parties hereby agree that they shall first negotiate dispute to resolve the dispute in good faith in an attempt to prevent the need for mediation or litigation. Accordingly, within seven (7) calendar days of receipt of the initial written dispute notice, the parties shall commence discussions between the on-site project managers. In the event the parties are unable to reach a resolution of the dispute within seven (7) calendar days after such commencement of the discussions between the on-site managers, the parties shall commence discussions between Contractor's President and the Owner's Executive Director. In the event that such parties are unable to reach a resolution of the dispute within fourteen (14) calendar days after such commencement of the discussions between the President and Executive Director, the parties shall submit the dispute to non-binding mediation before a mutually agreed mediator who shall conduct such mediation proceedings. All costs of mediation shall be shared equally by the parties, except that each party shall be responsible for its own attorney's fees.

If the parties are unable to resolve the dispute through mediation and litigation proves necessary, either party may initiate such litigation. In the event of any such litigation, the prevailing party shall be entitled to recover its reasonable attorneys' fees and costs through all trial and appellate levels of such litigation. Any litigation between Owner and Contractor (which term for the purposes of this subparagraph shall include Contractor's surety), whether arising out of any claim or arising out of the Contract or any breach thereof, shall be brought, maintained and pursued only in the appropriate State of Florida Courts for Bay County, Florida, and Owner and Contractor each hereby waive and renounce any and all rights and options which they, or either of them, have or might have to bring or maintain any such litigation or action in the Federal Court system of the United States or in any United States Federal District Court. Owner and Contractor expressly waive all rights to trial by jury regarding any such litigation.

In the event of a dispute between the parties arising out of or relating to their responsibilities under this Contract, the party claiming the dispute shall provide the other party promptly written notice of such dispute, as required by the terms of the Contract. The parties hereby agree that they shall first negotiate dispute to resolve the dispute in good faith in an attempt to prevent the need for mediation or litigation. Accordingly, within seven (7) calendar days of receipt of the initial written dispute notice, the parties shall commence discussions between the on-site project managers. In the event the parties are unable to reach a resolution of the dispute within seven (7) calendar days after such commencement of the discussions between the on-site managers, the parties shall commence discussions between Contractor's President and the Owner's Executive Director. In the event that such parties are unable to reach a resolution of the dispute within fourteen (14) calendar days after such commencement of the discussions between the President and Executive Director, either party may initiate such litigation. In the event of any such litigation, the prevailing party shall be entitled to recover its reasonable attorneys' fees and costs through all trial and appellate levels of such litigation, including the fees and costs incurred to litigate the amount of attorney's fees and costs due under said action. Any litigation between Owner and Contractor (which term for the purposes of this subparagraph shall include Contractor's surety), whether arising out of any claim or arising out of the Contract or any breach thereof, shall be brought, maintained and pursued only in the appropriate State of Florida Courts for Bay County, Florida, and Owner and Contractor each hereby waive and renounce any and all rights and options which they, or either of them, have or might have to bring or maintain any such litigation or action in the Federal Court system of the United States or in any United States Federal District Court. Owner and Contractor expressly waive all rights to trial by jury regarding any such litigation.

A company that, at the time of bidding or submitting a proposal for a new contract or renewal of an existing contract, is on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the

Iran Petroleum Energy Sector List, created pursuant to s. 215.473, or is engaged in business operations in Cuba or Syria, is ineligible for, and may not bid on, submit a proposal for, or enter into or renew a contract with an agency or local governmental entity for goods or services of \$1 million or more.

SC-15 Liquidated Damages

The parties hereby agree that the damages which Owner will sustain as a result of Contractor's failure to meet the Project Schedule are difficult or impossible to determine with certainty and therefore, have in good faith estimated as fair compensation (and not as a penalty) the liquidated damages of Two Thousand dollars (\$2,000.00) per calendar day. If the Contractor fails to deliver the Work within the time specified in the Contract, or any extensions evidenced by Change Order or duly executed contract Amendment, Contractor shall pay Owner as fixed, agreed and liquidated damages for each calendar day of delay. If the Project is not yet complete, Owner shall offset such liquidated damages from subsequent payment to Contractor. Nothing in this clause operates to restrict any other rights and remedies available to Owner at law or under this Contract.

SC-16 Drugs, Alcohol and Weapons

Contractor's personnel, subcontractor's personnel at any tier, material supplier's personnel or any other's personnel at any time shall not bring onto the Jobsite, or any other location where the provisions of this Contract apply any firearm of whatsoever nature or any other object which in the judgment of the Owner or its representative is determined to be a potential weapon, or alcoholic beverages of any nature, illegal or Owner prohibited non-prescription drugs of any nature without exception.

SC-17 Owner Directed Purchase (ODP)

Contractor agrees that Owner at its sole election **may** have Contractor assign some or all of its purchase orders and subcontracts directly to Owner in accordance with the provisions set forth herein.

Material suppliers shall be selected by Contractor using competitive bidding/proposals. Supply contracts shall be awarded by Contractor to the supplier whose bid/proposal is most advantageous to Owner, price and other factors considered. Contractor shall include the price of all materials in his bid and shall include all Florida State sales and other taxes normally applicable to such material and equipment. Owner may consider purchasing any item but does not expect to issue purchase orders to less than five thousand dollars (\$5,000.00). Owner purchase of selected materials and equipment will be administered on a deductive Change Order basis.

Contractor shall provide Owner a list of all intended suppliers, vendors and material men for consideration as ODP. Contractor shall submit price quotes from the vendors, as well as a description of the materials to be supplied, estimated quantities and prices.

Upon request from Owner, and in a timely manner, Contractor shall prepare Purchasing Requisition Request Form which shall, in form and detail acceptable to Owner, specifically identify the materials which Owner may, in its discretion, elect to purchase directly. The Purchasing Requisition Request Form shall include:

- a. the name, address, telephone number and contact person for the material supplier,
- b. manufacturer or brand, model or specification number of the item,
- c. quantity needed as estimated by Contractor,
- d. the price quoted by the supplier for the materials identified therein,
- e. any sales tax associated with such quote,
- f. delivery dates as established by Contractor,
- g. any reduction in Contractor's cost for both the Payment Bond and Performance Bond,
- h. shipping, handling and insurance costs,
- i. detail concerning bonds or letters of credit provided by the supplier if included in his/her proposal,
- j. special terms and conditions which have been negotiated with the supplier relative to payment terms, discounts, rebates, warranty, credits or other terms and conditions which revert to Owner.

Contractor shall include copies of vendors' quotations and specifically reference any terms and conditions, which have been negotiated with the vendors concerning letters of credit, terms, discounts or special payments.

After receipt of the Purchasing Requisition Request Form, Owner shall prepare a Purchase Order for all items of material, which Owner chooses to purchase directly. The purchase order shall be sent to the vendor with a copy sent to Contractor. Pursuant to the Purchase Order, the vendor will provide the required quantities of material at the price established in the vendor's quote to Contractor, excluding any sales tax associated with such price. The Purchase Order shall also require the delivery of the ODP on the delivery dates provided by Contractor in the Purchasing Requisition Request Form.

In conjunction with the execution of the Purchase orders by the suppliers, Contractor shall execute and deliver to Owner one or more deductive Change Orders, referencing the full value of all ODP to be provided by each supplier from whom Owner elected to purchase material directly, plus all sales taxes associated with such materials in Contractor's bid to Owner, plus any savings to Contractor in the cost of Payment and Performance Bonds associated with such ODP. To compensate Contractor for the warranty enforcement obligation Contractor's overhead and profit associated with ODP shall not be deducted from the Contract.

Contractor shall be fully responsible for all matters relating to the procurement of materials furnished by and incorporated into the Project in accordance with these Supplementary Conditions including, but not limited to, assuring the correct quantities, placing the order in a timely manner, and assuring coordination of purchases, providing and obtaining all warranties and guarantees required by the Project Documents, inspection and acceptance of the goods at the time of delivery. Contractor shall coordinate delivery schedules, sequence of delivery, loading orientation, and other arrangements normally required by Contractor for the particular materials furnished. Contractor shall provide all services required for the unloading, handling and storage of materials through installation.

Owner assumes the risk of loss of materials through their incorporation into the installation.

As ODP are delivered to the Jobsite, Contractor shall visually inspect all shipments from the suppliers, and sign off on the receiving reports for material delivered. Contractor shall assure that each delivery of ODP is accompanied by documentation adequate to identify the Purchase Order against which the purchase is made. This documentation may consist of a delivery ticket and an invoice from the supplier conforming to the Purchase Order together with such additional information as Owner may require. Contractor will then forward the receiving report to Owner to match up with invoice for payment.

Contractor shall insure that ODP conform to the Specifications, and determine prior to incorporation in to the Work if such materials are patently defective, and whether such materials are identical to the materials ordered and match the description on the bill of lading. If Contractor discovers defective or non-conformities in ODP upon such visual inspection, Contractor shall not utilize such nonconforming or defective materials in the Work and instead shall promptly notify Owner of the defective or nonconforming condition so that repair or replacement of those materials can occur without any undue delay or interruption to the Project. If Contractor fails to perform such inspection and otherwise incorporates into the work such defective or nonconforming ODP, the condition of which it either knew or should have known by performance of an inspection, Contractor shall be responsible for all damages to Owner resulting from Contractor's incorporation of such materials into the Project including liquidated or delay damages.

Contractor shall maintain records of all ODP it incorporates into the Work from the stock of ODP in its possession. Contractor shall account monthly to Owner for any ODP delivered into Contractor's possession, indicating portions of all such materials which have been incorporated into the Work.

Contractor shall be responsible for obtaining and managing all warranties and guarantees for all materials and products as required by the Project Documents. All repair, maintenance or damage-repair calls shall be forwarded to Contractor for resolution with the appropriate supplier, vendor, or subcontractor. Additionally,

ODP items shall be warranted by Contractor as part of Contractor's warranty. Contractor agrees and understands that it shall undertake all warranty enforcement and other related duties of Owner for its ODP equipment and materials. To that end, Contractor expressly agrees it shall make no distinction in discharging such warranty duties between ODP equipment and materials and equipment and materials otherwise supplied by Contractor.

Notwithstanding the transfer of ODP by Owner to Contractor's possession, Owner shall retain legal and equitable title to any and all ODP.

The transfer of possession of ODP from Owner to Contractor shall constitute a bailment for the mutual benefit of Owner and Contractor. Owner shall be considered the bailor and Contractor the bailee of the ODP. ODP shall be considered returned to Owner for purposes of their bailment at such time as they are incorporated into the Project.

Owner shall purchase and maintain builder's risk insurance sufficient to protect against any loss of or damage to ODP. Such insurance shall cover the full value of any ODP not yet incorporated into the Project during the period between the time the Owner first takes title to any of such ODP and the time when the last of such is incorporated into the Project. Contractor shall purchase and maintain builder's risk, all risk, insurance based on the completed value of Project, less the Owner's ODP values. Contractor must name Owner as additional insured on its policy.

Owner shall in no way be liable for any interruption or delay in the Project, for any defects or other problems with the Project, or for any extra costs resulting from any delay in the delivery of, or defects in, ODP. Contractor's sole or exclusive remedy shall be an extension of the Contract Time for such reasonable time as determined by Owner or its representative.

Contractor shall be required to review invoices submitted by all suppliers of ODP delivered to the project site and either concur or object to Owner's issuance of payment to the suppliers, based upon Contractor's records of materials delivered to the site and any defects detected in such materials.

In order to arrange for the prompt payment to the supplier, prompt submittal of a copy of the applicable Purchase Order as receiving report, invoices, delivery tickets, written acceptance of the delivered items, and such other documentation as may be reasonably required by Owner. Upon receipt of the appropriate documentation, Owner shall prepare a check drawn to the supplier based upon the data provided. This check will be released and remitted directly to the supplier. Contractor agrees to assist Owner to immediately obtain partial or final release of waivers as appropriate.

At the end of the Project, Contractor will be provided with a deductive Change Order for the costs incurred by Owner to provide all ODP, not covered by previous change orders. Salvage materials shall be stored or removed from the site at Owner or its representative's direction or may be turned over to Contractor by Owner for salvage or disposal at Owner's option.

SC-18 Risk of Loss

Contractor shall be responsible for risk of loss or damage in progress and all goods furnished until Final Acceptance, including any losses resulting from inclement weather or erosion.

SC-19 Component Warranties

In addition to the General Condition title "WARRANTY," Contractor shall obtain and provide, for the benefit of owner and its successors in interest, warranties or guarantees for the equipment, materials, and work furnished by suppliers and subcontractors of any tier for the period customarily provided by the supplier. Contractor shall use its best efforts to enforce such lower-tier warranties or guarantees on its own behalf or, if requested by Owner or Owner's Representative, on behalf of Owner. Contractor shall provide warranty documentation by Final Acceptance or as otherwise required by this contract.

SC-20 Procedures to Minimize Risk to Stormwater System and Environment

Contractor acknowledges GC-14 Environmental Requirements and will have no significant impact on the stormwater system or environment while completing the Work.

SC-21 Miscellaneous Federal Provisions

The work performed under this Contract shall be governed by the following Federal provisions, statutes and regulations:

Disadvantaged Business Enterprise – 49 CFR Part 26: Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of this DOT-assisted contract. In accordance with 49 CFR Part 26.45, the sponsor has established a contract goal of **6.92%** participation for small business concerns owned and controlled by certified socially and economically disadvantaged enterprise (DBE). Contractor shall make and document good faith efforts, as defined in Appendix A of 19 CFR Part 26, to meet his established goal.

Davis-Bacon Act, as amended – 29 CFR Part 5: Contractor is required to comply with wage and labor provisions and to pay minimum wages in accordance with the current schedule of wage rates established by the United States Department of Labor.

Debarment, Suspension, Ineligibility and Voluntary Exclusion – 49 CFT Part 29: Contractor certifies, by submission of a proposal or acceptance of a contract, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency. Individuals or companies listed in the General Services Administration’s “Excluded Parties Listing System” will not be considered for award of contract.

Certification Regarding Debarment and Suspension (Non-Procurement) – Title 2 CFR Part 180 & Title 2 CFR Part 1200: This Agreement is a “covered transaction” as defined by Title 2 CFR Part 180. Contractor has agreed that at the time it submitted its proposal and throughout the duration of this Agreement that neither it nor its principals are presently debarred or suspended by any Federal department or agency from participation in this transaction. Contractor further agrees to comply with Title 2 CFR Part 1200 and Title 2 CFR Part 180, Subpart C by administering each lower tier subcontract that exceeds \$25,000 as a “covered transaction”.

Certification Regarding Debarment and Suspension (Non-Procurement) – Title 2 CFR Part 1200 and Title 2 CFR Part 180, Subpart C: Contractor by administering each lower tier subcontract that exceeds \$25,000 as a “covered transaction” must verify each lower tier participant of a “covered transaction” under the project is not presently debarred or otherwise disqualified from participation in this federally assisted project. Contractor shall accomplish this by:

- i.* Checking the System for Award Management at website: <http://www.sam.gov>
- ii.* Collecting a certification statement similar to paragraph a.
- iii.* Inserting a clause or condition in the covered transaction with the lower tier contract

If the FAA later determines that an individual failed to tell a higher tier that they were excluded or disqualified at the time they entered the covered transaction with that person, the FAA may pursue any available remedy, including suspension and debarment

Foreign Trade Restrictions – 49 CFR Part 30: Contractor and its subcontractors shall not be owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms published by the Office of the United States Representative (USTR)’ shall not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country on said list, or is owned or controlled directly or indirectly by one or more citizens or nationals of a foreign country on said list; and shall not procure any product nor subcontract for the supply of any product for use on the project that is produced in a foreign country on said list.

Buy American Certificate – Aviation Safety and Capacity Act of 1990: This contract is subject to the “Buy American Preferences” of the Aviation Safety and Capacity Act of 1990.

SC-22 Certifications

Contractor shall execute, in the presence of a Notary Public (where required), and return the certifications noted below:

1. Bid Affidavit
2. Non-Collusion Affidavit
3. Sworn Statement under Section 287.133(3)(A), Florida Statutes, On Public Entity Crimes
4. DBE Certificate of Compliance Affidavit
5. Davis Bacon Certification
6. Drug Free Workplace Certification
7. Certification of Non-Segregated Facilities
8. Buy American Certification
9. Trench Safety Act Certification under Chapter 553, Florida Statutes

SC-23 Clean Air and Water Pollution Control

Contractors and subcontractors agree:

- a. That any facility to be used in the performance of the contract or subcontract or to benefit from the contract is not listed on the Environmental Protection Agency (EPA) List of Violating Facilities;
- b. To comply with all the requirements of Section 114 of the Clean Air Act, as amended, 42 U.S.C. 1857 et seq. and Section 308 of the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq. relating to inspection, monitoring, entry, reports, and information, as well as all other requirements specified in Section 114 and Section 308 of the Acts, respectively, and all other regulations and guidelines issued thereunder;
- c. That, as a condition for the award of this contract, the contractor or subcontractor will notify the awarding official of the receipt of any communication from the EPA indicating that a facility to be used for the performance of or benefit from the contract is under consideration to be listed on the EPA List of Violating Facilities; and
- d. To include or cause to be included in any construction contract or subcontract which exceeds \$ 100,000 the aforementioned criteria and requirements.

SC-24 Airport and Airway Improvement Act of 1982, Section 520 - General Civil Rights Provisions

The contractor assures that it will comply with pertinent statutes, Executive orders and such rules as are promulgated to assure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or handicap be excluded from participating in any activity conducted with or benefiting from Federal assistance. This provision obligates the tenant/concessionaire/lessee or its transferee for the period during which Federal assistance is extended to the airport a program, except where Federal assistance is to provide, or is in the form of personal property or real property or interest therein or structures or improvements thereon. In these cases, the provision obligates the party or any transferee for the longer of the following periods:

- (a) The period during which the property is used by the airport sponsor or any transferee for a purpose for which Federal assistance is extended, or for another purpose involving the provision of similar services or benefits or
- (b) The period during which the airport sponsor or any transferee retains ownership or possession of the property. In the case of contractors, this provision binds the contractors from the bid solicitation period through the completion of the contract. This provision is in addition to that required of Title VI of the Civil Rights Act of 1964.

SC-25 Lobbying and Influencing Federal Employees

- (1) No Federal appropriated funds shall be paid, by or on behalf of the contractor, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or

employee of Congress, or an employee of a Member of Congress in connection with the making of any Federal grant and the amendment or modification of any Federal grant.

- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any Federal grant, the contractor shall complete and submit Standard Form-LLL, "Disclosure of Lobby Activities," in accordance with its instructions.

SC-26 Energy Conservation Requirements

The contractor agrees to comply with mandatory standards and policies relating to energy efficiency that are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Public Law 94-163).

SC-27 Rights to Inventions

All rights to inventions and materials generated under this contract are subject to regulations issued by the FAA and the Sponsor of the Federal grant under which this contract is executed.

SC-28 Trade Restriction Clause

The contractor or subcontractor, by submission of an offer and/or execution of a contract, certifies that it:

- a. is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms published by the Office of the United States Trade Representative (USTR);
- b. has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country on said list, or is owned or controlled directly or indirectly by one or more citizens or nationals of a foreign country on said list;
- c. has not procured any product nor subcontracted for the supply of any product for use on the project that is produced in a foreign country on said list.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to a contractor or subcontractor who is unable to certify to the above. If the contractor knowingly procures or subcontracts for the supply of any product or service of a foreign country on said list for use on the project, the Federal Aviation Administration may direct through the Sponsor cancellation of the contract at no cost to the Government.

Further, the contractor agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in each contract and in all lower tier subcontracts. The contractor may rely on the certification of a prospective subcontractor unless it has knowledge that the certification is erroneous.

The contractor shall provide immediate written notice to the sponsor if the contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The subcontractor agrees to provide written notice to the contractor if at any time it learns that its certification was erroneous by reason of changed circumstances.

This certification is a material representation of fact upon which reliance was placed when making the award. If it is later determined that the contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration may direct through the Sponsor cancellation of the contract or subcontract for default at no cost to the Government.

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

END OF SPECIAL CONDITIONS

GENERAL PROVISIONS

GENERAL PROVISIONS

Section 10 Definition of Terms

Whenever the following terms are used in these specifications, in the contract, or in any documents or other instruments pertaining to construction where these specifications govern, the intent and meaning shall be interpreted as follows:

10-01 AASHTO. The American Association of State Highway and Transportation Officials, the successor association to AASHO.

10-02 Access Road. The right-of-way, the roadway and all improvements constructed thereon connecting the airport to a public highway.

10-03 Advertisement. A public announcement, as required by local law, inviting bids for work to be performed and materials to be furnished.

10-04 Airport Improvement Program (AIP). A grant-in-aid program, administered by the Federal Aviation Administration (FAA).

10-05 Air Operations Area (AOA). For the purpose of these specifications, the term air operations area (AOA) shall mean any area of the airport used or intended to be used for the landing, takeoff, or surface maneuvering of aircraft. An air operation area shall include such paved or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiway, or apron.

10-06 Airport. Airport means an area of land or water which is used or intended to be used for the landing and takeoff of aircraft; an appurtenant area used or intended to be used for airport buildings or other airport facilities or rights of way; and airport buildings and facilities located in any of these areas, and includes a heliport.

10-07 ASTM International (ASTM). Formerly known as the American Society for Testing and Materials (ASTM).

10-08 Award. The Owner's notice to the successful bidder of the acceptance of the submitted bid.

10-09 Bidder. Any individual, partnership, firm, or corporation, acting directly or through a duly authorized representative, who submits a proposal for the work contemplated.

10-10 Building Area. An area on the airport to be used, considered, or intended to be used for airport buildings or other airport facilities or rights-of-way together with all airport buildings and facilities located thereon.

10-11 Calendar Day. Every day shown on the calendar.

10-12 Change Order. A written order to the Contractor covering changes in the plans, specifications, or proposal quantities and establishing the basis of payment and contract time adjustment, if any, for the work affected by such changes. The work, covered by a change order, must be within the scope of the contract.

10-13 Contract. The written agreement covering the work to be performed. The awarded contract shall include, but is not limited to: Advertisement, Contract Form, Proposal, Performance Bond, Payment Bond, any required insurance certificates, Specifications, Plans, and any addenda issued to bidders.

10-14 Contract Item (pay item). A specific unit of work for which a price is provided in the contract.

10-15 Contract Time. The number of calendar days or working days, stated in the proposal, allowed for completion of the contract, including authorized time extensions. If a calendar date of completion is stated in the proposal, in lieu of a number of calendar or working days, the contract shall be completed by that date.

10-16 Contractor. The individual, partnership, firm, or corporation primarily liable for the acceptable performance of the work contracted and for the payment of all legal debts pertaining to the work who acts directly or through lawful agents or employees to complete the contract work.

10-17 Contractor's Laboratory. The Contractor's quality control organization in accordance with the Contractor Quality Control Program.

10-18 Construction Safety and Phasing Plan (CSPP). 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.

10-19 Drainage System. The system of pipes, ditches, and structures by which surface or subsurface waters are collected and conducted from the airport area.

10-20 Engineer. The individual, partnership, firm, or corporation duly authorized by the Owner to be responsible for engineering of the contract work and acting directly or through an authorized representative.

10-21 Equipment. All machinery, together with the necessary supplies for upkeep and maintenance, and also all tools and apparatus necessary for the proper construction and acceptable completion of the work.

10-22 Extra Work. An item of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, but which is found by the Engineer to be necessary to complete the work within the intended scope of the contract as previously modified.

10-23 FAA. The Federal Aviation Administration of the U.S. Department of Transportation. When used to designate a person, FAA shall mean the Administrator or his or her duly authorized representative.

10-24 Federal Specifications. The Federal Specifications and Standards, Commercial Item Descriptions, and supplements, amendments, and indices thereto are prepared and issued by the General Services Administration of the Federal Government.

10-25 Force Account. Force account work is planning, engineering, or construction work done by the Sponsor's employees.

10-26 Inspector. An authorized representative of the Engineer assigned to make all necessary inspections and observation of tests of the work performed or being performed, or of the materials furnished or being

furnished by the Contractor.

10-27 Intention of Terms. Whenever, in these specifications or on the plans, the words “directed,” “required,” “permitted,” “ordered,” “designated,” “prescribed,” or words of like import are used, it shall be understood that the direction, requirement, permission, order, designation, or prescription of the Engineer is intended; and similarly, the words “approved,” “acceptable,” “satisfactory,” or words of like import, shall mean approved by, or acceptable to, or satisfactory to the Engineer, subject in each case to the final determination of the Owner.

Any reference to a specific requirement of a numbered paragraph of the contract specifications or a cited standard shall be interpreted to include all general requirements of the entire section, specification item, or cited standard that may be pertinent to such specific reference.

10-28 Laboratory. The official testing laboratories of the Owner or such other laboratories as may be designated by the Engineer. Also referred to as “Engineer’s Laboratory” or “quality assurance laboratory.”

10-29 Lighting. A system of fixtures providing or controlling the light sources used on or near the airport or within the airport buildings. The field lighting includes all luminous signals, markers, floodlights, and illuminating devices used on or near the airport or to aid in the operation of aircraft landing at, taking off from, or taxiing on the airport surface.

10-30 Major and Minor Contract Items. A major contract item shall be any item that is listed in the proposal, the total cost of which is equal to or greater than 20% of the total amount of the award contract. All other items shall be considered minor contract items.

10-31 Materials. Any substance specified for use in the construction of the contract work.

10-32 Notice to Proceed (NTP). A written notice to the Contractor to begin the actual contract work on a previously agreed to date. If applicable, the Notice to Proceed shall state the date on which the contract time begins.

10-33 Owner. The term “Owner” shall mean the party of the first part or the contracting agency signatory to the contract. Where the term “Owner” is capitalized in this document, it shall mean airport Sponsor only.

10-34 Passenger Facility Charge (PFC). Per 14 CFR Part 158 and 49 USC § 40117, a PFC is a charge imposed by a public agency on passengers enplaned at a commercial service airport it controls.”

10-35 Pavement. The combined surface course, base course, and subbase course, if any, considered as a single unit.

10-36 Payment Bond. The approved form of security furnished by the Contractor and his or her surety as a guaranty that the Contractor will pay in full all bills and accounts for materials and labor used in the construction of the work.

10-37 Performance Bond. The approved form of security furnished by the Contractor and his or her surety as a guaranty that the Contractor will complete the work in accordance with the terms of the contract.

10-38 Plans. The official drawings or exact reproductions which show the location, character, dimensions and details of the airport and the work to be done and which are to be considered as a part of the contract,

supplementary to the specifications.

10-39 Project. The agreed scope of work for accomplishing specific airport development with respect to a particular airport.

10-40 Proposal. The written offer of the bidder (when submitted on the approved proposal form) to perform the contemplated work and furnish the necessary materials in accordance with the provisions of the plans and specifications.

10-41 Proposal Guaranty. The security furnished with a proposal to guarantee that the bidder will enter into a contract if his or her proposal is accepted by the Owner.

10-42 Runway. The area on the airport prepared for the landing and takeoff of aircraft.

10-43 Specifications. A part of the contract containing the written directions and requirements for completing the contract work. Standards for specifying materials or testing which are cited in the contract specifications by reference shall have the same force and effect as if included in the contract physically.

10-44 Sponsor. A Sponsor is defined in 49 USC § 47102(24) as a public agency that submits to the FAA for an AIP grant; or a private Owner of a public-use airport that submits to the FAA an application for an AIP grant for the airport.

10-45 Structures. Airport facilities such as bridges; culverts; catch basins, inlets, retaining walls, cribbing; storm and sanitary sewer lines; water lines; underdrains; electrical ducts, manholes, handholes, lighting fixtures and bases; transformers; flexible and rigid pavements; navigational aids; buildings; vaults; and, other manmade features of the airport that may be encountered in the work and not otherwise classified herein.

10-46 Subgrade. The soil that forms the pavement foundation.

10-47 Superintendent. The Contractor's executive representative who is present on the work during progress, authorized to receive and fulfill instructions from the Engineer, and who shall supervise and direct the construction.

10-48 Supplemental Agreement. A written agreement between the Contractor and the Owner covering (1) work that would increase or decrease the total amount of the awarded contract, or any major contract item, by more than 25%, such increased or decreased work being within the scope of the originally awarded contract; or (2) work that is not within the scope of the originally awarded contract.

10-49 Surety. The corporation, partnership, or individual, other than the Contractor, executing payment or performance bonds that are furnished to the Owner by the Contractor.

10-50 Taxiway. For the purpose of this document, the term taxiway means the portion of the air operations area of an airport that has been designated by competent airport authority for movement of aircraft to and from the airport's runways, aircraft parking areas, and terminal areas.

10-51 Work. The furnishing of all labor, materials, tools, equipment, and incidentals necessary or convenient to the Contractor's performance of all duties and obligations imposed by the contract, plans, and specifications.

10-52 Working day. A working day shall be any day other than a legal holiday, Saturday, or Sunday on which the normal working forces of the Contractor may proceed with regular work for at least six (6) hours toward completion of the contract. When work is suspended for causes beyond the Contractor's control, it will not be counted as a working day. Saturdays, Sundays and holidays on which the Contractor's forces engage in regular work will be considered as working days.

END OF SECTION 10

GENERAL PROVISIONS (AIP)

Section 20 Proposal Requirements and Conditions

20-01 Advertisement (Notice to Bidders).

The Panama City-Bay County Airport and Industrial District dba Northwest Florida Beaches International Airport is seeking sealed bids from qualified firms for all work and materials necessary to complete the Gate 7 Apron Repairs Project detailed on the Bid Package and Project Manual (Contract Documents) dated October 22, 2021. Interested Bidders may obtain the Contract Documents from the Business Opportunities section of the Airport's website: www.iflybeaches.com.

The work consists of repairs to the existing pavement that has developed cracks and ruts by a full removal of 780 SY of asphalt pavement and base material, and replacement with 16" Portland Cement Concrete (PCC) and specified base material.

A non-mandatory Pre-Bid meeting will be held November 2, 2021 at 2:00 pm (CT) at the north conference room, 1st floor of Terminal, Northwest Florida Beaches International Airport, 6300 West Bay Parkway. Call in number for this non-mandatory meeting is (712)-432-0900 (access code 225872). Sealed Bids must be submitted to the office above no later than November 16, 2021 at 2:00 pm (CT). Bids shall be made on the Bid Proposal Forms furnished in the Contract Documents.

Date October 21, 2021.

20-02 Qualification of bidders. Each bidder shall furnish the Owner satisfactory evidence of his or her competency to perform the proposed work. Such evidence of competency, unless otherwise specified, shall consist of statements covering the bidder's past experience on similar work, a list of equipment that would be available for the work, and a list of key personnel that would be available. In addition, each bidder shall furnish the Owner satisfactory evidence of his or her financial responsibility. Such evidence of financial responsibility, unless otherwise specified, shall consist of a confidential statement or report of the bidder's financial resources and liabilities as of the last calendar year or the bidder's last fiscal year. Such statements or reports shall be certified by a public accountant. At the time of submitting such financial statements or reports, the bidder shall further certify whether his or her financial responsibility is approximately the same as stated or reported by the public accountant. If the bidder's financial responsibility has changed, the bidder shall qualify the public accountant's statement or report to reflect the bidder's true financial condition at the time such qualified statement or report is submitted to the Owner.

Unless otherwise specified, a bidder may submit evidence that he or she is prequalified with the State Highway Division and is on the current "bidder's list" of the state in which the proposed work is located. Such evidence of State Highway Division prequalification may be submitted as evidence of financial responsibility in lieu of the certified statements or reports specified above.

Each bidder shall submit "evidence of competency" and "evidence of financial responsibility" to the Owner at the time of bid opening.

20-03 Contents of proposal forms. The Owner shall furnish bidders with proposal forms. All papers bound with or attached to the proposal forms are necessary parts and must not be detached.

The plans, specifications, and other documents designated in the proposal form shall be considered a part of the proposal whether attached or not.

20-04 Issuance of proposal forms. The Owner reserves the right to refuse to issue a proposal form to a prospective bidder should such bidder be in default for any of the following reasons:

- a. Failure to comply with any prequalification regulations of the Owner, if such regulations are cited, or otherwise included, in the proposal as a requirement for bidding.
- b. Failure to pay, or satisfactorily settle, all bills due for labor and materials on former contracts in force with the Owner at the time the Owner issues the proposal to a prospective bidder.
- c. Documented record of Contractor default under previous contracts with the Owner.
- d. Documented record of unsatisfactory work on previous contracts with the Owner.

20-05 Interpretation of estimated proposal quantities. An estimate of quantities of work to be done and materials to be furnished under these specifications is given in the proposal. It is the result of careful calculations and is believed to be correct. It is given only as a basis for comparison of proposals and the award of the contract. The Owner does not expressly, or by implication, agree that the actual quantities involved will correspond exactly therewith; nor shall the bidder plead misunderstanding or deception because of such estimates of quantities, or of the character, location, or other conditions pertaining to the work. Payment to the Contractor will be made only for the actual quantities of work performed or materials furnished in accordance with the plans and specifications. It is understood that the quantities may be increased or decreased as hereinafter provided in the subsection 40-02 titled ALTERATION OF WORK AND QUANTITIES of Section 40 without in any way invalidating the unit bid prices.

20-06 Examination of plans, specifications, and site. The bidder is expected to carefully examine the site of the proposed work, the proposal, plans, specifications, and contract forms. Bidders shall satisfy themselves as to the character, quality, and quantities of work to be performed, materials to be furnished, and as to the requirements of the proposed contract. The submission of a proposal shall be prima facie evidence that the bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to the requirements of the proposed contract, plans, and specifications.

See the Project Manual, Miscellaneous Documents for the Nova Geotechnical Report.

20-07 Preparation of proposal. The bidder shall submit his or her proposal on the forms furnished by the Owner. All blank spaces in the proposal forms must be correctly filled in where indicated for each and every item for which a quantity is given. The bidder shall state the price (written in ink or typed) both in words and numerals for which they propose to do for each pay item furnished in the proposal. In case of conflict between words and numerals, the words, unless obviously incorrect, shall govern.

The bidder shall sign the proposal correctly and in ink. If the proposal is made by an individual, his or her name and post office address must be shown. If made by a partnership, the name and post office address of each member of the partnership must be shown. If made by a corporation, the person signing the proposal shall give the name of the state under the laws of which the corporation was chartered and the name, titles, and business address of the president, secretary, and the treasurer. Anyone signing a proposal as an agent shall file evidence of his or her authority to do so and that the signature is binding upon the firm or

corporation.

20-08 Responsive and responsible bidder. A responsive bid conforms to all significant terms and conditions contained in the Sponsor's invitation for bid. It is the Sponsor's responsibility to decide if the exceptions taken by a bidder to the solicitation are material or not and the extent of deviation it is willing to accept.

A responsible bidder has the ability to perform successfully under the terms and conditions of a proposed procurement, as defined in 49 CFR § 18.36(b)(8). This includes such matters as Contractor integrity, compliance with public policy, record of past performance, and financial and technical resources.

20-09 Irregular proposals. Proposals shall be considered irregular for the following reasons:

- a. If the proposal is on a form other than that furnished by the Owner, or if the Owner's form is altered, or if any part of the proposal form is detached.
- b. If there are unauthorized additions, conditional or alternate pay items, or irregularities of any kind that make the proposal incomplete, indefinite, or otherwise ambiguous.
- c. If the proposal does not contain a unit price for each pay item listed in the proposal, except in the case of authorized alternate pay items, for which the bidder is not required to furnish a unit price.
- d. If the proposal contains unit prices that are obviously unbalanced.
- e. If the proposal is not accompanied by the proposal guaranty specified by the Owner.

The Owner reserves the right to reject any irregular proposal and the right to waive technicalities if such waiver is in the best interest of the Owner and conforms to local laws and ordinances pertaining to the letting of construction contracts.

20-10 Bid guarantee. Each separate proposal shall be accompanied by a certified check, or other specified acceptable collateral, in the amount specified in the proposal form. Such check, or collateral, shall be made payable to the Owner.

20-11 Delivery of proposal. Each proposal submitted shall be placed in a sealed envelope plainly marked with the project number, location of airport, and name and business address of the bidder on the outside. When sent by mail, preferably registered, the sealed proposal, marked as indicated above, should be enclosed in an additional envelope. No proposal will be considered unless received at the place specified in the advertisement or as modified by Addendum before the time specified for opening all bids. Proposals received after the bid opening time shall be returned to the bidder unopened.

20-12 Withdrawal or revision of proposals. A bidder may withdraw or revise (by withdrawal of one proposal and submission of another) a proposal provided that the bidder's request for withdrawal is received by the Owner in writing or by email before the time specified for opening bids. Revised proposals must be received at the place specified in the advertisement before the time specified for opening all bids.

20-13 Public opening of proposals. Proposals shall be opened, and read, publicly at the time and place specified in the advertisement. Bidders, their authorized agents, and other interested persons are invited to attend. Proposals that have been withdrawn (by written or telegraphic request) or received after the time specified for opening bids shall be returned to the bidder unopened.

20-14 Disqualification of bidders. A bidder shall be considered disqualified for any of the following reasons:

- a. Submitting more than one proposal from the same partnership, firm, or corporation under the same or different name.
- b. Evidence of collusion among bidders. Bidders participating in such collusion shall be disqualified as bidders for any future work of the Owner until any such participating bidder has been reinstated by the Owner as a qualified bidder.
- c. If the bidder is considered to be in “default” for any reason specified in the subsection 20-04 titled ISSUANCE OF PROPOSAL FORMS of this section.

END OF SECTION 20

GENERAL PROVISIONS

Section 30 Award and Execution of Contract

30-01 Consideration of proposals. After the proposals are publicly opened and read, they will be compared on the basis of the summation of the products obtained by multiplying the estimated quantities shown in the proposal by the unit bid prices. If a bidder's proposal contains a discrepancy between unit bid prices written in words and unit bid prices written in numbers, the unit price written in words shall govern.

Until the award of a contract is made, the Owner reserves the right to reject a bidder's proposal for any of the following reasons:

- a. If the proposal is irregular as specified in the subsection 20-09 titled IRREGULAR PROPOSALS of Section 20.
- b. If the bidder is disqualified for any of the reasons specified in the subsection 20-14 titled DISQUALIFICATION OF BIDDERS of Section 20.

In addition, until the award of a contract is made, the Owner reserves the right to reject any or all proposals, waive technicalities, if such waiver is in the best interest of the Owner and is in conformance with applicable state and local laws or regulations pertaining to the letting of construction contracts; advertise for new proposals; or proceed with the work otherwise. All such actions shall promote the Owner's best interests.

30-02 Award of contract. The award of a contract, if it is to be awarded, shall be made within 120 calendar days of the date specified for publicly opening proposals, unless otherwise specified herein.

Award of the contract shall be made by the Owner to the lowest, qualified bidder whose proposal conforms to the cited requirements of the Owner.

30-03 Cancellation of award. The Owner reserves the right to cancel the award without liability to the bidder, except return of proposal guaranty, at any time before a contract has been fully executed by all parties and is approved by the Owner in accordance with the subsection 30-07 titled APPROVAL OF CONTRACT of this section.

30-04 Return of proposal guaranty. All proposal guaranties, except those of the two lowest bidders, will be returned immediately after the Owner has made a comparison of bids as specified in the subsection 30-01 titled CONSIDERATION OF PROPOSALS of this section. Proposal guaranties of the two lowest bidders will be retained by the Owner until such time as an award is made, at which time, the unsuccessful bidder's proposal guaranty will be returned. The successful bidder's proposal guaranty will be returned as soon as the Owner receives the contract bonds as specified in the subsection 30-05 titled REQUIREMENTS OF CONTRACT BONDS of this section.

30-05 Requirements of contract bonds. At the time of the execution of the contract, the successful bidder shall furnish the Owner a surety bond or bonds that have been fully executed by the bidder and the surety guaranteeing the performance of the work and the payment of all legal debts that may be incurred by reason of the Contractor's performance of the work. The surety and the form of the bond or bonds shall be acceptable to the Owner. Unless otherwise specified in this subsection, the surety bond or bonds shall be in a sum equal to the full amount of the contract.

30-06 Execution of contract. The successful bidder shall sign (execute) the necessary agreements for entering into the contract and return the signed contract to the Owner, along with the fully executed surety bond or bonds specified in the subsection 30-05 titled REQUIREMENTS OF CONTRACT BONDS of this section, within 15 calendar days from the date mailed or otherwise delivered to the successful bidder.

30-07 Approval of contract. Upon receipt of the contract and contract bond or bonds that have been executed by the successful bidder, the Owner shall complete the execution of the contract in accordance with local laws or ordinances, and return the fully executed contract to the Contractor. Delivery of the fully executed contract to the Contractor shall constitute the Owner's approval to be bound by the successful bidder's proposal and the terms of the contract.

30-08 Failure to execute contract. Failure of the successful bidder to execute the contract and furnish an acceptable surety bond or bonds within the 15 calendar day period specified in the subsection 30-06 titled EXECUTION OF CONTRACT of this section shall be just cause for cancellation of the award and forfeiture of the proposal guaranty, not as a penalty, but as liquidation of damages to the Owner.

END OF SECTION 30

GENERAL PROVISIONS

Section 40 Scope of Work

40-01 Intent of contract. The intent of the contract is to provide for construction and completion, in every detail, of the work described. It is further intended that the Contractor shall furnish all labor, materials, equipment, tools, transportation, and supplies required to complete the work in accordance with the plans, specifications, and terms of the contract.

40-02 Alteration of work and quantities. The Owner reserves and shall have the right to make such alterations in the work as may be necessary or desirable to complete the work originally intended in an acceptable manner. Unless otherwise specified herein, the Engineer shall be and is hereby authorized to make such alterations in the work as may increase or decrease the originally awarded contract quantities, provided that the aggregate of such alterations does not change the total contract cost or the total cost of any major contract item by more than 25% (total cost being based on the unit prices and estimated quantities in the awarded contract). Alterations that do not exceed the 25% limitation shall not invalidate the contract nor release the surety, and the Contractor agrees to accept payment for such alterations as if the altered work had been a part of the original contract. These alterations that are for work within the general scope of the contract shall be covered by "Change Orders" issued by the Engineer. Change orders for altered work shall include extensions of contract time where, in the Engineer's opinion, such extensions are commensurate with the amount and difficulty of added work.

Should the aggregate amount of altered work exceed the 25% limitation hereinbefore specified, such excess altered work shall be covered by supplemental agreement. If the Owner and the Contractor are unable to agree on a unit adjustment for any contract item that requires a supplemental agreement, the Owner reserves the right to terminate the contract with respect to the item and make other arrangements for its completion.

Supplemental agreements shall be approved by the FAA and shall include all applicable Federal contract provisions for procurement and contracting required under AIP. Supplemental agreements shall also require consent of the Contractor's surety and separate performance and payment bonds.

40-03 Omitted items. The Engineer may, in the Owner's best interest, omit from the work any contract item, except major contract items. Major contract items may be omitted by a supplemental agreement. Such omission of contract items shall not invalidate any other contract provision or requirement.

Should a contract item be omitted or otherwise ordered to be non-performed, the Contractor shall be paid for all work performed toward completion of such item prior to the date of the order to omit such item. Payment for work performed shall be in accordance with the subsection 90-04 titled PAYMENT FOR OMITTED ITEMS of Section 90.

40-04 Extra work. Should acceptable completion of the contract require the Contractor to perform an item of work for which no basis of payment has been provided in the original contract or previously issued change orders or supplemental agreements, the same shall be called "Extra Work." Extra Work that is within the general scope of the contract shall be covered by written change order. Change orders for such Extra Work shall contain agreed unit prices for performing the change order work in accordance with the requirements specified in the order, and shall contain any adjustment to the contract time that, in the Engineer's opinion, is necessary for completion of such Extra Work.

When determined by the Engineer to be in the Owner's best interest, the Engineer may order the Contractor to proceed with Extra Work as provided in the subsection 90-05 titled PAYMENT FOR EXTRA WORK of Section 90. Extra Work that is necessary for acceptable completion of the project, but is not within the general scope of the work covered by the original contract shall be covered by a Supplemental Agreement as defined in the subsection 10-48 titled SUPPLEMENTAL AGREEMENT of Section 10.

Any claim for payment of Extra Work that is not covered by written agreement (change order or supplemental agreement) shall be rejected by the Owner.

40-05 Maintenance of traffic. It is the explicit intention of the contract that the safety of aircraft, as well as the Contractor's equipment and personnel, is the most important consideration.

- a. It is understood and agreed that the Contractor shall provide for the free and unobstructed movement of aircraft in the air operations areas (AOAs) of the airport with respect to his or her own operations and the operations of all subcontractors as specified in the subsection 80-04 titled LIMITATION OF OPERATIONS of Section 80. It is further understood and agreed that the Contractor shall provide for the uninterrupted operation of visual and electronic signals (including power supplies thereto) used in the guidance of aircraft while operating to, from, and upon the airport as specified in the subsection 70-15 titled CONTRACTOR'S RESPONSIBILITY FOR UTILITY SERVICE AND FACILITIES OF OTHERS in Section 70.
- b. With respect to his or her own operations and the operations of all subcontractors, the Contractor shall provide marking, lighting, and other acceptable means of identifying personnel, equipment, vehicles, storage areas, and any work area or condition that may be hazardous to the operation of aircraft, fire-rescue equipment, or maintenance vehicles at the airport.
- c. When the contract requires the maintenance of vehicular traffic on an existing road, street, or highway during the Contractor's performance of work that is otherwise provided for in the contract, plans, and specifications, the Contractor shall keep such road, street, or highway open to all traffic and shall provide such maintenance as may be required to accommodate traffic. The Contractor shall be responsible for the repair of any damage caused by the Contractor's equipment and personnel. The Contractor shall furnish, erect, and maintain barricades, warning signs, flag person, and other traffic control devices in reasonable conformity with the Manual on Uniform Traffic Control Devices (MUTCD) (<http://mutcd.fhwa.dot.gov/>), unless otherwise specified. The Contractor shall also construct and maintain in a safe condition any temporary connections necessary for ingress to and egress from abutting property or intersecting roads, streets or highways.

40-06 Removal of existing structures. All existing structures encountered within the established lines, grades, or grading sections shall be removed by the Contractor, unless such existing structures are otherwise specified to be relocated, adjusted up or down, salvaged, abandoned in place, reused in the work or to remain in place. The cost of removing such existing structures shall not be measured or paid for directly, but shall be included in the various contract items.

Should the Contractor encounter an existing structure (above or below ground) in the work for which the disposition is not indicated on the plans, the Engineer shall be notified prior to disturbing such structure. The disposition of existing structures so encountered shall be immediately determined by the Engineer in accordance with the provisions of the contract.

Except as provided in the subsection 40-07 titled RIGHTS IN AND USE OF MATERIALS FOUND IN THE WORK

of this section, it is intended that all existing materials or structures that may be encountered (within the lines, grades, or grading sections established for completion of the work) shall be used in the work as otherwise provided for in the contract and shall remain the property of the Owner when so used in the work.

40-07 Rights in and use of materials found in the work. Should the Contractor encounter any material such as (but not restricted to) sand, stone, gravel, slag, or concrete slabs within the established lines, grades, or grading sections, the use of which is intended by the terms of the contract to be either embankment or waste, the Contractor may at his or her option either:

- a. Use such material in another contract item, providing such use is approved by the Engineer and is in conformance with the contract specifications applicable to such use; or,
- b. Remove such material from the site, upon written approval of the Engineer; or
- c. Use such material for the Contractor's own temporary construction on site; or,
- d. Use such material as intended by the terms of the contract.

Should the Contractor wish to exercise option a., b., or c., the Contractor shall request the Engineer's approval in advance of such use.

Should the Engineer approve the Contractor's request to exercise option a., b., or c., the Contractor shall be paid for the excavation or removal of such material at the applicable contract price. The Contractor shall replace, at his or her own expense, such removed or excavated material with an agreed equal volume of material that is acceptable for use in constructing embankment, backfills, or otherwise to the extent that such replacement material is needed to complete the contract work. The Contractor shall not be charged for use of such material used in the work or removed from the site.

Should the Engineer approve the Contractor's exercise of option a., the Contractor shall be paid, at the applicable contract price, for furnishing and installing such material in accordance with requirements of the contract item in which the material is used.

It is understood and agreed that the Contractor shall make no claim for delays by reason of his or her exercise of option a., b., or c.

The Contractor shall not excavate, remove, or otherwise disturb any material, structure, or part of a structure which is located outside the lines, grades, or grading sections established for the work, except where such excavation or removal is provided for in the contract, plans, or specifications.

40-08 Final cleanup. Upon completion of the work and before acceptance and final payment will be made, the Contractor shall remove from the site all machinery, equipment, surplus and discarded materials, rubbish, temporary structures, and stumps or portions of trees. The Contractor shall cut all brush and woods within the limits indicated and shall leave the site in a neat and presentable condition. Material cleared from the site and deposited on adjacent property will not be considered as having been disposed of satisfactorily, unless the Contractor has obtained the written permission of such property Owner.

END OF SECTION 40

GENERAL PROVISIONS

Section 50 Control of Work

50-01 Authority of the Engineer. The Engineer shall decide any and all questions which may arise as to the quality and acceptability of materials furnished, work performed, and as to the manner of performance and rate of progress of the work. The Engineer shall decide all questions that may arise as to the interpretation of the specifications or plans relating to the work. The Engineer shall determine the amount and quality of the several kinds of work performed and materials furnished which are to be paid for the under contract.

The Engineer does not have the authority to accept pavements that do not conform to FAA specification requirements.

50-02 Conformity with plans and specifications. All work and all materials furnished shall be in reasonably close conformity with the lines, grades, grading sections, cross-sections, dimensions, material requirements, and testing requirements that are specified (including specified tolerances) in the contract, plans or specifications.

If the Engineer finds the materials furnished, work performed, or the finished product not within reasonably close conformity with the plans and specifications but that the portion of the work affected will, in his or her opinion, result in a finished product having a level of safety, economy, durability, and workmanship acceptable to the Owner, the Engineer will advise the Owner of his or her determination that the affected work be accepted and remain in place. In this event, the Engineer will document the determination and recommend to the Owner a basis of acceptance that will provide for an adjustment in the contract price for the affected portion of the work. The Engineer's determination and recommended contract price adjustments will be based on sound engineering judgment and such tests or retests of the affected work as are, in the Engineer's opinion, needed. Changes in the contract price shall be covered by contract change order or supplemental agreement as applicable.

If the Engineer finds the materials furnished, work performed, or the finished product are not in reasonably close conformity with the plans and specifications and have resulted in an unacceptable finished product, the affected work or materials shall be removed and replaced or otherwise corrected by and at the expense of the Contractor in accordance with the Engineer's written orders.

For the purpose of this subsection, the term "reasonably close conformity" shall not be construed as waiving the Contractor's responsibility to complete the work in accordance with the contract, plans, and specifications. The term shall not be construed as waiving the Engineer's responsibility to insist on strict compliance with the requirements of the contract, plans, and specifications during the Contractor's execution of the work, when, in the Engineer's opinion, such compliance is essential to provide an acceptable finished portion of the work.

For the purpose of this subsection, the term "reasonably close conformity" is also intended to provide the Engineer with the authority, after consultation with the FAA, to use sound engineering judgment in his or her determinations as to acceptance of work that is not in strict conformity, but will provide a finished product equal to or better than that intended by the requirements of the contract, plans and specifications.

The Engineer will not be responsible for the Contractor's means, methods, techniques, sequences, or procedures of construction or the safety precautions incident thereto.

50-03 Coordination of contract, plans, and specifications. The contract, plans, specifications, and all referenced standards cited are essential parts of the contract requirements. A requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work. In case of discrepancy, calculated dimensions will govern over scaled dimensions; contract technical specifications shall govern over contract general provisions, plans, cited standards for materials or testing, and cited advisory circulars (ACs); contract general provisions shall govern over plans, cited standards for materials or testing, and cited ACs; plans shall govern over cited standards for materials or testing and cited ACs. If any paragraphs contained in the Special Provisions conflict with General Provisions or Technical Specifications, the Special Provisions shall govern.

From time to time, discrepancies within cited testing standards occur due to the timing of the change, edits, and/or replacement of the standards. If the Contractor discovers any apparent discrepancy within standard test methods, the Contractor shall immediately ask the Engineer for an interpretation and decision, and such decision shall be final.

LIST OF SPECIAL PROVISIONS

- Special Provision No. 1: Utilities
- Special Provision No. 2: Airport Safety and Security Requirements
- Special Provision No. 3: Protection of Airport Cables, NAVAIDS and Other Facilities
- Special Provision No. 4: Staging and Phasing Provisions for Contractor Operations
- Special Provision No. 5: Visible Warning Markers for Taxiways and Aircraft Operations Areas
- Special Provision No. 6: Time of Completion
- Special Provision No. 7: Airport Project Procedures
- Special Provision No. 8: Vehicle Operation on the AOA
- Special Provision No. 9: Federal Labor and EEO Provisions
- ~~Special Provision No. 10: General Provisions and Requirements for Electrical Work~~
- ~~Special Provision No. 11: General Electrical Safety Requirements and Temporary Airfield Lighting~~
- ~~Special Provision No. 12: Alterations, Removal and Demolition~~
- ~~Special Provision No. 13: Submittals, Record Documents and Maintenance Manuals~~
- ~~Special Provision No. 14: Airfield Electrical Installation Testing~~

50-04 Cooperation of Contractor. The Contractor will be supplied with five copies each of the plans and specifications. The Contractor shall have available on the work at all times one copy each of the plans and specifications. Additional copies of plans and specifications may be obtained by the Contractor for the cost of reproduction.

The Contractor shall give constant attention to the work to facilitate the progress thereof, and shall cooperate with the Engineer and his or her inspectors and with other contractors in every way possible. The Contractor shall have a competent superintendent on the work at all times who is fully authorized as his or her agent on the work. The superintendent shall be capable of reading and thoroughly understanding the plans and specifications and shall receive and fulfill instructions from the Engineer or his or her authorized representative.

50-05 Cooperation between contractors. The Owner reserves the right to contract for and perform other or additional work on or near the work covered by this contract.

When separate contracts are let within the limits of any one project, each Contractor shall conduct the work so as not to interfere with or hinder the progress of completion of the work being performed by other

Contractors. Contractors working on the same project shall cooperate with each other as directed. Each Contractor involved shall assume all liability, financial or otherwise, in connection with his or her contract and shall protect and save 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.

The Contractor shall arrange his or her work and shall place and dispose of the materials being used so as not to interfere with the operations of the other Contractors within the limits of the same project. The Contractor shall join his or her work with that of the others in an acceptable manner and shall perform it in proper sequence to that of the others.

50-06 Construction layout and stakes. The Engineer shall establish horizontal and vertical control only. The Contractor must establish all layout required for the construction of the work. Such stakes and markings as the Engineer may set for either their own or the Contractor's guidance shall be preserved by the Contractor. In case of negligence on the part of the Contractor, or their employees, resulting in the destruction of such stakes or markings, an amount equal to the cost of replacing the same may be deducted from subsequent estimates due the Contractor at the discretion of the Engineer.

The Contractor will be required to furnish all lines, grades and measurements from the control points necessary for the proper execution and control of the work contracted for under these specifications.

The Contractor must give copies of survey notes to the Engineer for each area of construction and for each placement of material as specified to allow the Engineer to make periodic checks for conformance with plan grades, alignments and grade tolerances required by the applicable material specifications. All surveys must be provided to the Engineer prior to commencing work items that will cover or disturb the survey staking as set by the Contractor's surveyor. Survey(s) and notes shall be provided in the following format(s): DWG and PDF. In the case of error, on the part of the Contractor, their surveyor, employees or subcontractors, resulting in established grades, alignment or grade tolerances that do not concur with those specified or shown on the plans, the Contractor is solely responsible for correction, removal, replacement and all associated costs at no additional cost to the Owner.

No direct payment will be made, unless otherwise specified in contract documents, for this labor, materials, or other expenses. The cost shall be included in the price of the bid for the various items of the Contract.

Construction Staking and Layout includes but is not limited to:

- a. Clearing and Grubbing perimeter staking
- b. Rough Grade slope stakes at 100-foot (30-m) stations
- c. Drainage Swales slope stakes and flow line blue tops at 50-foot (15-m) stations

Subgrade blue tops at 25-foot (7.5-m) stations and 25-foot (7.5-m) offset distance (maximum) for the following section locations:

- a. Runway – minimum five (5) per station
- b. Taxiways – minimum three (3) per station

- c. Holding apron areas – minimum three (3) per station
- d. Roadways – minimum three (3) per station
Base Course blue tops at 25-foot (7.5-m) stations and 25-foot (7.5-m) offset distance (maximum) for the following section locations:
- e. Runway – minimum five (5) per station
- f. Taxiways – minimum three (3) per station
- g. Holding apron areas – minimum three (3) per station

Pavement areas:

- a. Edge of Pavement hubs and tacks (for stringline by Contractor) at 100-foot (30-m) stations.
- b. Between Lifts at 25-foot (7.5-m) stations for the following section locations:
 - 1) Runways – each paving lane width
 - 2) Taxiways – each paving lane width
 - 3) Holding areas – each paving lane width
- c. After finish paving operations at 50-foot (15-m) stations:
 - 1) All paved areas – Edge of each paving lane prior to next paving lot
- d. Shoulder and safety area blue tops at 50-foot (15-m) stations and at all break points with maximum of 50-foot (15-m) offsets.
- e. Fence lines at 100-foot (30-m) stations minimum.
- f. Electrical and Communications System locations, lines and grades including but not limited to duct runs, connections, fixtures, signs, lights, Visual Approach Slope Indicators (VASIs), Precision Approach Path Indicators (PAPIs), Runway End Identifier Lighting (REIL), Wind Cones, Distance Markers (signs), pull boxes and manholes.
- g. Drain lines, cut stakes and alignment on 25-foot (7.5-m) stations, inlet and manholes.
- h. Painting and Striping layout (pinned with 1.5 inch PK nails) marked for paint Contractor. (All nails shall be removed after painting).
- i. Laser, or other automatic control devices, shall be checked with temporary control point or grade hub at a minimum of once per 400 feet (120 m) per pass (that is, paving lane).

The establishment of Survey Control and/or reestablishment of survey control shall be by a State Licensed Land Surveyor.

Controls and stakes disturbed or suspect of having been disturbed shall be checked and/or reset as directed by the Engineer without additional cost to the Owner.

50-07 Automatically controlled equipment. Whenever batching or mixing plant equipment is required to be operated automatically under the contract and a breakdown or malfunction of the automatic controls occurs, the equipment may be operated manually or by other methods for a period 48 hours following the breakdown or malfunction, provided this method of operations will produce results which conform to all other requirements of the contract.

50-08 Authority and duties of inspectors. Inspectors shall be authorized to inspect all work done and all material furnished. Such inspection may extend to all or any part of the work and to the preparation, fabrication, or manufacture of the materials to be used. Inspectors are not authorized to revoke, alter, or waive any provision of the contract. Inspectors are not authorized to issue instructions contrary to the plans and specifications or to act as foreman for the Contractor.

Inspectors are authorized to notify the Contractor or his or her representatives of any failure of the work or materials to conform to the requirements of the contract, plans, or specifications and to reject such nonconforming materials in question until such issues can be referred to the Engineer for a decision.

50-09 Inspection of the work. All materials and each part or detail of the work shall be subject to inspection. The Engineer shall be allowed access to all parts of the work and shall be furnished with such information and assistance by the Contractor as is required to make a complete and detailed inspection.

If the Engineer requests it, the Contractor, at any time before acceptance of the work, shall remove or uncover such portions of the finished work as may be directed. After examination, the Contractor shall restore said portions of the work to the standard required by the specifications. Should the work thus exposed or examined prove acceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be paid for as extra work; but should the work so exposed or examined prove unacceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be at the Contractor's expense.

Any work done or materials used without supervision or inspection by an authorized representative of the Owner may be ordered removed and replaced at the Contractor's expense unless the Owner's representative failed to inspect after having been given reasonable notice in writing that the work was to be performed.

Should the contract work include relocation, adjustment, or any other modification to existing facilities, not the property of the (contract) Owner, authorized representatives of the Owners of such facilities shall have the right to inspect such work. Such inspection shall in no sense make any facility owner a party to the contract, and shall in no way interfere with the rights of the parties to this contract.

50-10 Removal of unacceptable and unauthorized work. All work that does not conform to the requirements of the contract, plans, and specifications will be considered unacceptable, unless otherwise determined acceptable by the Engineer as provided in the subsection 50-02 titled CONFORMITY WITH PLANS AND SPECIFICATIONS of this section.

Unacceptable work, whether the result of poor workmanship, use of defective materials, damage through carelessness, or any other cause found to exist prior to the final acceptance of the work, shall be removed immediately and replaced in an acceptable manner in accordance with the provisions of the subsection 70-14 titled CONTRACTOR'S RESPONSIBILITY FOR WORK of Section 70.

No removal work made under provision of this subsection shall be done without lines and grades having been established by the Engineer. Work done contrary to the instructions of the Engineer, work done

beyond the lines shown on the plans or as established by the Engineer, except as herein specified, or any extra work done without authority, will be considered as unauthorized and will not be paid for under the provisions of the contract. Work so done may be ordered removed or replaced at the Contractor's expense.

Upon failure on the part of the Contractor to comply with any order of the Engineer made under the provisions of this subsection, the Engineer will have authority to cause unacceptable work to be remedied or removed and replaced and unauthorized work to be removed and to deduct the costs incurred by the Owner from any monies due or to become due the Contractor.

50-11 Load restrictions. The Contractor shall comply with all legal load restrictions in the hauling of materials on public roads beyond the limits of the work. A special permit will not relieve the Contractor of liability for damage that may result from the moving of material or equipment.

The operation of equipment of such weight or so loaded as to cause damage to structures or to any other type of construction will not be permitted. Hauling of materials over the base course or surface course under construction shall be limited as directed. No loads will be permitted on a concrete pavement, base, or structure before the expiration of the curing period. The Contractor shall be responsible for all damage done by his or her hauling equipment and shall correct such damage at his or her own expense.

50-12 Maintenance during construction. The Contractor shall maintain the work during construction and until the work is accepted. Maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and forces so that the work is maintained in satisfactory condition at all times.

In the case of a contract for the placing of a course upon a course or subgrade previously constructed, the Contractor shall maintain the previous course or subgrade during all construction operations.

All costs of maintenance work during construction and before the project is accepted shall be included in the unit prices bid on the various contract items, and the Contractor will not be paid an additional amount for such work.

50-13 Failure to maintain the work. Should the Contractor at any time fail to maintain the work as provided in the subsection 50-12 titled MAINTENANCE DURING CONSTRUCTION of this section, the Engineer shall immediately notify the Contractor of such noncompliance. Such notification shall specify a reasonable time within which the Contractor shall be required to remedy such unsatisfactory maintenance condition. The time specified will give due consideration to the exigency that exists.

Should the Contractor fail to respond to the Engineer's notification, the Owner may suspend any work necessary for the Owner to correct such unsatisfactory maintenance condition, depending on the exigency that exists. Any maintenance cost incurred by the Owner, shall be deducted from monies due or to become due the Contractor.

50-14 Partial acceptance. If at any time during the execution of the project the Contractor substantially completes a usable unit or portion of the work, the occupancy of which will benefit the Owner, the Contractor may request the Engineer to make final inspection of that unit. If the Engineer finds upon inspection that the unit has been satisfactorily completed in compliance with the contract, the Engineer may accept it as being complete, and the Contractor may be relieved of further responsibility for that unit. Such partial acceptance and beneficial occupancy by the Owner shall not void or alter any provision of the contract.

50-15 Final acceptance. Upon due notice from the Contractor of presumptive completion of the entire project, the Engineer and Owner will make an inspection. If all construction provided for and contemplated by the contract is found to be complete in accordance with the contract, plans, and specifications, such inspection shall constitute the final inspection. The Engineer shall notify the Contractor in writing of final acceptance as of the date of the final inspection.

If, however, the inspection discloses any work, in whole or in part, as being unsatisfactory, the Engineer will give the Contractor the necessary instructions for correction of same and the Contractor shall immediately comply with and execute such instructions. Upon correction of the work, another inspection will be made which shall constitute the final inspection, provided the work has been satisfactorily completed. In such event, the Engineer will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of final inspection.

50-16 Claims for adjustment and disputes. If for any reason the Contractor deems that additional compensation is due for work or materials not clearly provided for in the contract, plans, or specifications or previously authorized as extra work, the Contractor shall notify the Engineer in writing of his or her intention to claim such additional compensation before the Contractor begins the work on which the Contractor bases the claim. If such notification is not given or the Engineer is not afforded proper opportunity by the Contractor for keeping strict account of actual cost as required, then the Contractor hereby agrees to waive any claim for such additional compensation. Such notice by the Contractor and the fact that the Engineer has kept account of the cost of the work shall not in any way be construed as proving or substantiating the validity of the claim. When the work on which the claim for additional compensation is based has been completed, the Contractor shall, within 10 calendar days, submit a written claim to the Engineer who will present it to the Owner for consideration in accordance with local laws or ordinances.

Nothing in this subsection shall be construed as a waiver of the Contractor's right to dispute final payment based on differences in measurements or computations.

50-17 Cost reduction incentive. NOT USED.

END OF SECTION 50

GENERAL PROVISIONS

Section 60 Control of Materials

60-01 Source of supply and quality requirements. The materials used in the work shall conform to the requirements of the contract, plans, and specifications. Unless otherwise specified, such materials that are manufactured or processed shall be new (as compared to used or reprocessed).

In order to expedite the inspection and testing of materials, the Contractor shall furnish complete statements to the Engineer as to the origin, composition, and manufacture of all materials to be used in the work. Such statements shall be furnished promptly after execution of the contract but, in all cases, prior to delivery of such materials.

At the Engineer's option, materials may be approved at the source of supply before delivery is stated. If it is found after trial that sources of supply for previously approved materials do not produce specified products, the Contractor shall furnish materials from other sources.

The Contractor shall furnish airport lighting equipment that conforms to the requirements of cited materials specifications. In addition, where an FAA specification for airport lighting equipment is cited in the plans or specifications, the Contractor shall furnish such equipment that is:

- a. Listed in advisory circular (AC) 150/5345-53, Airport Lighting Equipment Certification Program, and Addendum that is in effect on the date of advertisement; and,
- b. Produced by the manufacturer as listed in the Addendum cited above for the certified equipment part number.

The following airport lighting equipment is required for this contract and is to be furnished by the Contractor in accordance with the requirements of this subsection:

L-110-1	1 Way 2" Schedule 40 PVC Direct Earth Buried Duct
L-125-1	TAXIWAY EDGE LIGHT (CAN ONLY W/ CAPS)

60-02 Samples, tests, and cited specifications. Unless otherwise designated, all materials used in the work shall be inspected, tested, and approved by the Engineer before incorporation in the work. Any work in which untested materials are used without approval or written permission of the Engineer shall be performed at the Contractor's risk. Materials found to be unacceptable and unauthorized will not be paid for and, if directed by the Engineer, shall be removed at the Contractor's expense.

Unless otherwise designated, quality assurance tests in accordance with the cited standard methods of ASTM, American Association of State Highway and Transportation Officials (AASHTO), Federal Specifications, Commercial Item Descriptions, and all other cited methods, which are current on the date of advertisement for bids, will be made by and at the expense of the Engineer.

The testing organizations performing on-site quality assurance field tests shall have copies of all referenced standards on the construction site for use by all technicians and other personnel, including the Contractor's representative at his or her request. Unless otherwise designated, samples for quality assurance will be taken by a qualified representative of the Engineer. All materials being used are subject to inspection, test, or rejection at any time prior to or during incorporation into the work. Copies of all tests will be furnished to the Contractor's representative at their request after review and approval of the Engineer.

The Contractor shall employ a testing organization to perform all Contractor required Quality Control tests. The Contractor shall submit to the Engineer resumes on all testing organizations and individual persons who will be performing the tests. The Engineer will determine if such persons are qualified. All the test data shall be reported to the Engineer after the results are known. A legible, handwritten copy of all test data shall be given to the Engineer daily, along with printed reports, in an approved format, on a weekly basis. After completion of the project, and prior to final payment, the Contractor shall submit a final report to the Engineer showing all test data reports, plus an analysis of all results showing ranges, averages, and corrective action taken on all failing tests.

60-03 Certification of compliance. The Engineer may permit the use, prior to sampling and testing, of certain materials or assemblies when accompanied by manufacturer's certificates of compliance stating that such materials or assemblies fully comply with the requirements of the contract. The certificate shall be signed by the manufacturer. Each lot of such materials or assemblies delivered to the work must be accompanied by a certificate of compliance in which the lot is clearly identified.

Materials or assemblies used on the basis of certificates of compliance may be sampled and tested at any time and if found not to be in conformity with contract requirements will be subject to rejection whether in place or not.

The form and distribution of certificates of compliance shall be as approved by the Engineer.

When a material or assembly is specified by "brand name or equal" and the Contractor elects to furnish the specified "brand name," the Contractor shall be required to furnish the manufacturer's certificate of compliance for each lot of such material or assembly delivered to the work. Such certificate of compliance shall clearly identify each lot delivered and shall certify as to:

- a. Conformance to the specified performance, testing, quality or dimensional requirements; and,
- b. Suitability of the material or assembly for the use intended in the contract work.

Should the Contractor propose to furnish an "or equal" material or assembly, the Contractor shall furnish the manufacturer's certificates of compliance as hereinbefore described for the specified brand name material or assembly. However, the Engineer shall be the sole judge as to whether the proposed "or equal" is suitable for use in the work.

The Engineer reserves the right to refuse permission for use of materials or assemblies on the basis of certificates of compliance.

60-04 Plant inspection. The Engineer or his or her authorized representative may inspect, at its source, any specified material or assembly to be used in the work. Manufacturing plants may be inspected from time to time for the purpose of determining compliance with specified manufacturing methods or materials to be used in the work and to obtain samples required for acceptance of the material or assembly.

Should the Engineer conduct plant inspections, the following conditions shall exist:

- a. The Engineer shall have the cooperation and assistance of the Contractor and the producer with whom the Engineer has contracted for materials.
- b. The Engineer shall have full entry at all reasonable times to such parts of the plant that concern the manufacture or production of the materials being furnished.
- c. If required by the Engineer, the Contractor shall arrange for adequate office or working space that may be reasonably needed for conducting plant inspections. Office or working space should be conveniently located with respect to the plant.

It is understood and agreed that the Owner shall have the right to retest any material that has been tested and approved at the source of supply after it has been delivered to the site. The Engineer shall have the right to reject only material which, when retested, does not meet the requirements of the contract, plans, or specifications.

60-05 Engineer's field office. NOT USED.

60-06 Storage of materials. Materials shall be so stored as to assure the preservation of their quality and fitness for the work. Stored materials, even though approved before storage, may again be inspected prior to their use in the work. Stored materials shall be located to facilitate their prompt inspection. The Contractor shall coordinate the storage of all materials with the Engineer. Materials to be stored on airport property shall not create an obstruction to air navigation nor shall they interfere with the free and unobstructed movement of aircraft. Unless otherwise shown on the plans, the storage of materials and the location of the Contractor's plant and parked equipment or vehicles shall be as directed by the Engineer. Private property shall not be used for storage purposes without written permission of the Owner or lessee of such property. The Contractor shall make all arrangements and bear all expenses for the storage of materials on private property. Upon request, the Contractor shall furnish the Engineer a copy of the property Owner's permission.

All storage sites on private or airport property shall be restored to their original condition by the Contractor at his or her entire expense, except as otherwise agreed to (in writing) by the Owner or lessee of the property.

60-07 Unacceptable materials. Any material or assembly that does not conform to the requirements of the contract, plans, or specifications shall be considered unacceptable and shall be rejected. The Contractor shall remove any rejected material or assembly from the site of the work, unless otherwise instructed by the Engineer.

Rejected material or assembly, the defects of which have been corrected by the Contractor, shall not be returned to the site of the work until such time as the Engineer has approved its use in the work.

60-08 Owner furnished materials. The Contractor shall furnish all materials required to complete the work,

except those specified, if any, to be furnished by the Owner. Owner-furnished materials shall be made available to the Contractor at the location specified.

All costs of handling, transportation from the specified location to the site of work, storage, and installing Owner-furnished materials shall be included in the unit price bid for the contract item in which such Owner-furnished material is used.

After any Owner-furnished material has been delivered to the location specified, the Contractor shall be responsible for any demurrage, damage, loss, or other deficiencies that may occur during the Contractor's handling, storage, or use of such Owner-furnished material. The Owner will deduct from any monies due or to become due the Contractor any cost incurred by the Owner in making good such loss due to the Contractor's handling, storage, or use of Owner-furnished materials.

END OF SECTION 60

GENERAL PROVISIONS

Section 70 Legal Regulations and Responsibility to Public

70-01 Laws to be observed. The Contractor shall keep fully informed of all Federal and state laws, all local laws, ordinances, and regulations and all orders and decrees of bodies or tribunals having any jurisdiction or authority, which in any manner affect those engaged or employed on the work, or which in any way affect the conduct of the work. The Contractor shall at all times observe and comply with all such laws, ordinances, regulations, orders, and decrees; and shall protect and indemnify the Owner and all his or her officers, agents, or servants against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by the Contractor or the Contractor's employees.

70-02 Permits, licenses, and taxes. The Contractor shall procure all permits and licenses, pay all charges, fees, and taxes, and give all notices necessary and incidental to the due and lawful execution of the work.

70-03 Patented devices, materials, and processes. If the Contractor is required or desires to use any design, device, material, or process covered by letters of patent or copyright, the Contractor shall provide for such use by suitable legal agreement with the Patentee or Owner. The Contractor and the surety shall indemnify and hold harmless the Owner, any third party, or political subdivision from any and all claims for infringement by reason of the use of any such patented design, device, material or process, or any trademark or copyright, and shall indemnify the Owner for any costs, expenses, and damages which it may be obliged to pay by reason of an infringement, at any time during the execution or after the completion of the work.

70-04 Restoration of surfaces disturbed by others. The Owner reserves the right to authorize the construction, reconstruction, or maintenance of any public or private utility service, FAA or National Oceanic and Atmospheric Administration (NOAA) facility, or a utility service of another government agency at any time during the progress of the work. To the extent that such construction, reconstruction, or maintenance has been coordinated with the Owner, such authorized work (by others) is indicated as follows: NONE.

Except as listed above, the Contractor shall not permit any individual, firm, or corporation to excavate or otherwise disturb such utility services or facilities located within the limits of the work without the written permission of the Engineer.

Should the Owner of public or private utility service, FAA, or NOAA facility, or a utility service of another government agency be authorized to construct, reconstruct, or maintain such utility service or facility during the progress of the work, the Contractor shall cooperate with such Owners by arranging and performing the work in this contract to facilitate such construction, reconstruction or maintenance by others whether or not such work by others is listed above. When ordered as extra work by the Engineer, the Contractor shall make all necessary repairs to the work which are due to such authorized work by others, unless otherwise provided for in the contract, plans, or specifications. It is understood and agreed that the Contractor shall not be entitled to make any claim for damages due to such authorized work by others or for any delay to the work resulting from such authorized work.

70-05 Federal aid participation. For Airport Improvement Program (AIP) contracts, the United States Government has agreed to reimburse the Owner for some portion of the contract costs. Such reimbursement is made from time to time upon the Owner's request to the FAA. In consideration of the United States Government's (FAA's) agreement with the Owner, the Owner has included provisions in this contract pursuant to the requirements of Title 49 of the USC and the Rules and Regulations of the FAA that

pertain to the work.

As required by the USC, the contract work is subject to the inspection and approval of duly authorized representatives of the FAA Administrator, and is further subject to those provisions of the rules and regulations that are cited in the contract, plans, or specifications.

No requirement of the USC, the rules and regulations implementing the USC, or this contract shall be construed as making the Federal Government a party to the contract nor will any such requirement interfere, in any way, with the rights of either party to the contract.

70-06 Sanitary, health, and safety provisions. The Contractor shall provide and maintain in a neat, sanitary condition such accommodations for the use of his or her employees as may be necessary to comply with the requirements of the state and local Board of Health, or of other bodies or tribunals having jurisdiction.

Attention is directed to Federal, state, and local laws, rules and regulations concerning construction safety and health standards. The Contractor shall not require any worker to work in surroundings or under conditions that are unsanitary, hazardous, or dangerous to his or her health or safety.

70-07 Public convenience and safety. The Contractor shall control his or her operations and those of his or her subcontractors and all suppliers, to assure the least inconvenience to the traveling public. Under all circumstances, safety shall be the most important consideration.

The Contractor shall maintain the free and unobstructed movement of aircraft and vehicular traffic with respect to his or her own operations and those of his or her subcontractors and all suppliers in accordance with the subsection 40-05 titled MAINTENANCE OF TRAFFIC of Section 40 hereinbefore specified and shall limit such operations for the convenience and safety of the traveling public as specified in the subsection 80-04 titled LIMITATION OF OPERATIONS of Section 80 hereinafter.

70-08 Barricades, warning signs, and hazard markings. The Contractor shall furnish, erect, and maintain all barricades, warning signs, and markings for hazards necessary to protect the public and the work. When used during periods of darkness, such barricades, warning signs, and hazard markings shall be suitably illuminated. Unless otherwise specified, barricades, warning signs, and markings for hazards that are in the air operations area (AOAs) shall be a maximum of 18 inches (0.5 m) high. Unless otherwise specified, barricades shall be spaced not more than 4 feet (1.2 m) apart. Barricades, warning signs, and markings shall be paid for under subsection 40-05.

For vehicular and pedestrian traffic, the Contractor shall furnish, erect, and maintain barricades, warning signs, lights and other traffic control devices in reasonable conformity with the Manual on Uniform Traffic Control Devices.

When the work requires closing an air operations area of the airport or portion of such area, the Contractor shall furnish, erect, and maintain temporary markings and associated lighting conforming to the requirements of advisory circular (AC) 150/5340-1, Standards for Airport Markings.

The Contractor shall furnish, erect, and maintain markings and associated lighting of open trenches, excavations, temporary stock piles, and the Contractor's parked construction equipment that may be hazardous to the operation of emergency fire-rescue or maintenance vehicles on the airport in reasonable conformance to AC 150/5370-2, Operational Safety on Airports During Construction.

The Contractor shall identify each motorized vehicle or piece of construction equipment in reasonable conformance to AC 150/5370-2.

The Contractor shall furnish and erect all barricades, warning signs, and markings for hazards prior to commencing work that requires such erection and shall maintain the barricades, warning signs, and markings for hazards until their removal is directed by the Engineer.

Open-flame type lights shall not be permitted.

70-09 Use of explosives. When the use of explosives is necessary for the execution of the work, the Contractor shall exercise the utmost care not to endanger life or property, including new work. The Contractor shall be responsible for all damage resulting from the use of explosives.

All explosives shall be stored in a secure manner in compliance with all laws and ordinances, and all such storage places shall be clearly marked. Where no local laws or ordinances apply, storage shall be provided satisfactory to the Engineer and, in general, not closer than 1,000 feet (300 m) from the work or from any building, road, or other place of human occupancy.

The Contractor shall notify each property Owner and public utility company having structures or facilities in proximity to the site of the work of his or her intention to use explosives. Such notice shall be given sufficiently in advance to enable them to take such steps as they may deem necessary to protect their property from injury.

The use of electrical blasting caps shall not be permitted on or within 1,000 feet (300 m) of the airport property.

70-10 Protection and restoration of property and landscape. The Contractor shall be responsible for the preservation of all public and private property, and shall protect carefully from disturbance or damage all land monuments and property markers until the Engineer has witnessed or otherwise referenced their location and shall not move them until directed.

The Contractor shall be responsible for all damage or injury to property of any character, during the execution of the work, resulting from any act, omission, neglect, or misconduct in manner or method of executing the work, or at any time due to defective work or materials, and said responsibility shall not be released until the project has been completed and accepted.

When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work, or in consequence of the non-execution thereof by the Contractor, the Contractor shall restore, at his or her own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, or otherwise restoring as may be directed, or the Contractor shall make good such damage or injury in an acceptable manner.

70-11 Responsibility for damage claims. The Contractor shall indemnify and save harmless the Engineer and the Owner and their officers, and employees from all suits, actions, or claims, of any character, brought because of any injuries or damage received or sustained by any person, persons, or property on account of the operations of the Contractor; or on account of or in consequence of any neglect in safeguarding the work; or through use of unacceptable materials in constructing the work; or because of any act or omission, neglect, or misconduct of said Contractor; or because of any claims or amounts recovered from any

infringements of patent, trademark, or copyright; or from any claims or amounts arising or recovered under the "Workmen's Compensation Act," or any other law, ordinance, order, or decree. Money due the Contractor under and by virtue of his or her contract considered necessary by the Owner for such purpose may be retained for the use of the Owner or, in case no money is due, his or her surety may be held until such suits, actions, or claims for injuries or damages shall have been settled and suitable evidence to that effect furnished to the Owner, except that money due the Contractor will not be withheld when the Contractor produces satisfactory evidence that he or she is adequately protected by public liability and property damage insurance.

70-12 Third party beneficiary clause. It is specifically agreed between the parties executing the contract that it is not intended by any of the provisions of any part of the contract to create for the public or any member thereof, a third party beneficiary or to authorize anyone not a party to the contract to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of the contract.

70-13 Opening sections of the work to traffic. Should it be necessary for the Contractor to complete portions of the contract work for the beneficial occupancy of the Owner prior to completion of the entire contract, such "phasing" of the work shall be specified herein and indicated on the plans. When so specified, the Contractor shall complete such portions of the work on or before the date specified or as otherwise specified. The Contractor shall make his or her own estimate of the difficulties involved in arranging the work to permit such beneficial occupancy by the Owner as described below:

Per the phasing plan in the contract documents.

Upon completion of any portion of the work listed above, such portion shall be accepted by the Owner in accordance with the subsection 50-14 titled PARTIAL ACCEPTANCE of Section 50.

No portion of the work may be opened by the Contractor for public use until ordered by the Engineer in writing. Should it become necessary to open a portion of the work to public traffic on a temporary or intermittent basis, such openings shall be made when, in the opinion of the Engineer, such portion of the work is in an acceptable condition to support the intended traffic. Temporary or intermittent openings are considered to be inherent in the work and shall not constitute either acceptance of the portion of the work so opened or a waiver of any provision of the contract. Any damage to the portion of the work so opened that is not attributable to traffic which is permitted by the Owner shall be repaired by the Contractor at his or her expense.

The Contractor shall make his or her own estimate of the inherent difficulties involved in completing the work under the conditions herein described and shall not claim any added compensation by reason of delay or increased cost due to opening a portion of the contract work.

Contractor shall be required to conform to safety standards contained AC 150/5370-2 (see Special Provisions).

Contractor shall refer to the approved Construction Safety Phasing Plan (CSPP) to identify barricade requirements and other safety requirements prior to opening up sections of work to traffic.

70-14 Contractor's responsibility for work. Until the Engineer's final written acceptance of the entire completed work, excepting only those portions of the work accepted in accordance with the subsection 50-14 titled PARTIAL ACCEPTANCE of Section 50, the Contractor shall have the charge and care thereof and shall take every precaution against injury or damage to any part due to the action of the elements or from

any other cause, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the work occasioned by any of the above causes before final acceptance and shall bear the expense thereof except damage to the work due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God such as earthquake, tidal wave, tornado, hurricane or other cataclysmic phenomenon of nature, or acts of the public enemy or of government authorities.

If the work is suspended for any cause whatever, the Contractor shall be responsible for the work and shall take such precautions necessary to prevent damage to the work. The Contractor shall provide for normal drainage and shall erect necessary temporary structures, signs, or other facilities at his or her expense. During such period of suspension of work, the Contractor shall properly and continuously maintain in an acceptable growing condition all living material in newly established planting, seeding, and sodding furnished under the contract, and shall take adequate precautions to protect new tree growth and other important vegetative growth against injury.

70-15 Contractor's responsibility for utility service and facilities of others. As provided in the subsection 70-04 titled RESTORATION OF SURFACES DISTURBED BY OTHERS of this section, the Contractor shall cooperate with the Owner of any public or private utility service, FAA or NOAA, or a utility service of another government agency that may be authorized by the Owner to construct, reconstruct or maintain such utility services or facilities during the progress of the work. In addition, the Contractor shall control their operations to prevent the unscheduled interruption of such utility services and facilities.

To the extent that such public or private utility services, FAA, or NOAA facilities, or utility services of another governmental agency are known to exist within the limits of the contract work, the approximate locations have been indicated on the plans and the Owners are indicated as follows: NONE.

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 the responsibility to protect such existing features from damage or unscheduled interruption of service.

It is further understood and agreed that the Contractor shall, upon execution of the contract, notify the Owners of all utility services or other facilities of his or her plan of operations. Such notification shall be in writing addressed to THE PERSON TO CONTACT as provided in this subsection and subsection 70-04 titled RESTORATION OF SURFACES DISTURBED BY OTHERS of this section. A copy of each notification shall be given to the Engineer.

In addition to the general written notification provided, it shall be the responsibility of the Contractor to keep such individual Owners advised of changes in their plan of operations that would affect such Owners.

Prior to beginning the work in the general vicinity of an existing utility service or facility, the Contractor shall again notify each such Owner of their plan of operation. If, in the Contractor's opinion, the Owner's assistance is needed to locate the utility service or facility or the presence of a representative of the Owner is desirable to observe the work, such advice should be included in the notification. Such notification shall be given by the most expeditious means to reach the utility owner's PERSON TO CONTACT no later than two normal business days prior to the Contractor's commencement of operations in such general vicinity. The Contractor shall furnish a written summary of the notification to the Engineer.

The Contractor's failure to give the two days' notice shall be cause for the Owner to suspend the Contractor's operations in the general vicinity of a utility service or facility.

Where the outside limits of an underground utility service have been located and staked on the ground, the Contractor shall be required to use hand excavation methods within 3 feet (1 m) of such outside limits at such points as may be required to ensure protection from damage due to the Contractor's operations.

Should the Contractor damage or interrupt the operation of a utility service or facility by accident or otherwise, the Contractor 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 their operations whether due to negligence or accident. The Owner reserves the right to deduct such costs from any monies due or which may become due the Contractor, or his or her surety.

70-15.1 FAA facilities and cable runs. NOT USED.

70-16 Furnishing rights-of-way. The Owner will be responsible for furnishing all rights-of-way upon which the work is to be constructed in advance of the Contractor's operations.

70-17 Personal liability of public officials. In carrying out any of the contract provisions or in exercising any power or authority granted by this contract, there shall be no liability upon the Engineer, his or her authorized representatives, or any officials of the Owner either personally or as an official of the Owner. It is understood that in such matters they act solely as agents and representatives of the Owner.

70-18 No waiver of legal rights. Upon completion of the work, the Owner will expeditiously make final inspection and notify the Contractor of final acceptance. Such final acceptance, however, shall not preclude or stop the Owner from correcting any measurement, estimate, or certificate made before or after completion of the work, nor shall the Owner be precluded or stopped from recovering from the Contractor or his or her surety, or both, such overpayment as may be sustained, or by failure on the part of the Contractor to fulfill his or her obligations under the contract. A waiver on the part of the Owner of any breach of any part of the contract shall not be held to be a waiver of any other or subsequent breach.

The Contractor, without prejudice to the terms of the contract, shall be liable to the Owner for latent defects, fraud, or such gross mistakes as may amount to fraud, or as regards the Owner's rights under any warranty or guaranty.

70-19 Environmental protection. The Contractor shall comply with all Federal, state, and local laws and regulations controlling pollution of the environment. The Contractor shall take necessary precautions to prevent pollution of streams, lakes, ponds, and reservoirs with fuels, oils, bitumens, chemicals, or other harmful materials and to prevent pollution of the atmosphere from particulate and gaseous matter.

70-20 Archaeological and historical findings. Unless otherwise specified in this subsection, the Contractor is advised that the site of the work is not within any property, district, or site, and does not contain any building, structure, or object listed in the current National Register of Historic Places published by the United States Department of Interior.

Should the Contractor encounter, during his or her operations, any building, part of a building, structure, or

object that is incongruous with its surroundings, the Contractor shall immediately cease operations in that location and notify the Engineer. The Engineer will immediately investigate the Contractor's finding and the Owner will direct the Contractor to either resume operations or to suspend operations as directed.

Should the Owner order suspension of the Contractor's operations in order to protect an archaeological or historical finding, or order the Contractor to perform extra work, such shall be covered by an appropriate contract change order or supplemental agreement as provided in the subsection 40-04 titled EXTRA WORK of Section 40 and the subsection 90-05 titled PAYMENT FOR EXTRA WORK of Section 90. If appropriate, the contract change order or supplemental agreement shall include an extension of contract time in accordance with the subsection 80-07 titled DETERMINATION AND EXTENSION OF CONTRACT TIME of Section 80.

END OF SECTION 70

GENERAL PROVISIONS

Section 80 Execution and Progress

80-01 Subletting of contract. The Owner will not recognize any subcontractor on the work. The Contractor shall at all times when work is in progress be represented either in person, by a qualified superintendent, or by other designated, qualified representative who is duly authorized to receive and execute orders of the Engineer.

The Contractor shall provide copies of all subcontracts to the Engineer. The Contractor shall perform, with his organization, an amount of work equal to at least 25% percent of the total contract cost.

Should the Contractor elect to assign his or her contract, said assignment shall be concurred in by the surety, shall be presented for the consideration and approval of the Owner, and shall be consummated only on the written approval of the Owner.

80-02 Notice to proceed. The notice to proceed shall state the date on which it is expected the Contractor will begin the construction and from which date contract time will be charged. The Contractor shall begin the work to be performed under the contract within 10 days of the date set by the Engineer in the written notice to proceed, but in any event, the Contractor shall notify the Engineer at least 24 hours in advance of the time actual construction operations will begin. The Contractor shall not commence any actual construction prior to the date on which the notice to proceed is issued by the Owner.

80-03 Execution and progress. Unless otherwise specified, the Contractor shall submit their progress schedule for the Engineer's approval within 10 days after the effective date of the notice to proceed. The Contractor's progress schedule, when approved by the Engineer, may be used to establish major construction operations and to check on the progress of the work. The Contractor shall provide sufficient materials, equipment, and labor to guarantee the completion of the project in accordance with the plans and specifications within the time set forth in the proposal.

If the Contractor falls significantly behind the submitted schedule, the Contractor shall, upon the Engineer's request, submit a revised schedule for completion of the work within the contract time and modify their operations to provide such additional materials, equipment, and labor necessary to meet the revised schedule. Should the execution of the work be discontinued for any reason, the Contractor shall notify the Engineer at least 24 hours in advance of resuming operations.

The Contractor shall not commence any actual construction prior to the date on which the notice to proceed is issued by the Owner.

80-04 Limitation of operations. The Contractor shall control his or her operations and the operations of his or her subcontractors and all suppliers to provide for the free and unobstructed movement of aircraft in the air operations areas (AOA) of the airport.

When the work requires the Contractor to conduct his or her operations within an AOA of the airport, the work shall be coordinated with airport operations (through the Engineer) at least 48 hours prior to commencement of such work. The Contractor shall not close an AOA until so authorized by the Engineer and until the necessary temporary marking and associated lighting is in place as provided in the subsection 70-08 titled BARRICADES, WARNING SIGNS, AND HAZARD MARKINGS of Section 70.

When the contract work requires the Contractor to work within an AOA of the airport on an intermittent basis (intermittent opening and closing of the AOA), the Contractor shall maintain constant communications

as specified; immediately obey all instructions to vacate the AOA; immediately obey all instructions to resume work in such AOA. Failure to maintain the specified communications or to obey instructions shall be cause for suspension of the Contractor's operations in the AOA until the satisfactory conditions are provided. The following AOA cannot be closed to operating aircraft to permit the Contractor's operations on a continuous basis and will therefore be closed to aircraft operations intermittently as follows:

Per phasing plan in contract documents.

Contractor shall be required to conform to safety standards contained in AC 150/5370-2, Operational Safety on Airports During Construction (see Special Provisions).

80-04.1 Operational safety on airport during construction. All Contractors' operations shall be conducted in accordance with the project Construction Safety and Phasing Plan (CSPP) and the provisions set forth within the current version of AC 150/5370-2. The CSPP included within the contract documents conveys minimum requirements for operational safety on the airport during construction activities. The Contractor shall prepare and submit a Safety Plan Compliance Document that details how it proposes to comply with the requirements presented within the CSPP.

The Contractor shall implement all necessary safety plan measures prior to commencement of any work activity. The Contractor shall conduct routine checks to assure compliance with the safety plan measures.

The Contractor is responsible to the Owner for the conduct of all subcontractors it employs on the project. The Contractor shall assure that all subcontractors are made aware of the requirements of the CSPP and that they implement and maintain all necessary measures.

No deviation or modifications may be made to the approved CSPP unless approved in writing by the Owner or Engineer.

80-05 Character of workers, methods, and equipment. The Contractor shall, at all times, employ sufficient labor and equipment for prosecuting the work to full completion in the manner and time required by the contract, plans, and specifications.

All workers shall have sufficient skill and experience to perform properly the work assigned to them. Workers engaged in special work or skilled work shall have sufficient experience in such work and in the operation of the equipment required to perform the work satisfactorily.

Any person employed by the Contractor or by any subcontractor who violates any operational regulations or operational safety requirements and, in the opinion of the Engineer, does not perform his work in a proper and skillful manner or is intemperate or disorderly shall, at the written request of the Engineer, be removed forthwith by the Contractor or subcontractor employing such person, and shall not be employed again in any portion of the work without approval of the Engineer.

Should the Contractor fail to remove such persons or person, or fail to furnish suitable and sufficient personnel for the proper execution of the work, the Engineer may suspend the work by written notice until compliance with such orders.

All equipment that is proposed to be used on the work shall be of sufficient size and in such mechanical condition as to meet requirements of the work and to produce a satisfactory quality of work. Equipment used on any portion of the work shall be such that no injury to previously completed work, adjacent

property, or existing airport facilities will result from its use.

When the methods and equipment to be used by the Contractor in accomplishing the work are not prescribed in the contract, the Contractor is free to use any methods or equipment that will accomplish the work in conformity with the requirements of the contract, plans, and specifications.

When the contract specifies the use of certain methods and equipment, such methods and equipment shall be used unless others are authorized by the Engineer. If the Contractor desires to use a method or type of equipment other than specified in the contract, the Contractor may request authority from the Engineer to do so. The request shall be in writing and shall include a full description of the methods and equipment proposed and of the reasons for desiring to make the change. If approval is given, it will be on the condition that the Contractor will be fully responsible for producing work in conformity with contract requirements. If, after trial use of the substituted methods or equipment, the Engineer determines that the work produced does not meet contract requirements, the Contractor shall discontinue the use of the substitute method or equipment and shall complete the remaining work with the specified methods and equipment. The Contractor shall remove any deficient work and replace it with work of specified quality, or take such other corrective action as the Engineer may direct. No change will be made in basis of payment for the contract items involved nor in contract time as a result of authorizing a change in methods or equipment under this subsection.

80-06 Temporary suspension of the work. The Owner shall have the authority to suspend the work wholly, or in part, for such period or periods as the Owner may deem necessary, due to unsuitable weather, or such other conditions as are considered unfavorable for the execution of the work, or for such time as is necessary due to the failure on the part of the Contractor to carry out orders given or perform any or all provisions of the contract.

In the event that the Contractor is ordered by the Owner, in writing, to suspend work for some unforeseen cause not otherwise provided for in the contract and over which the Contractor has no control, the Contractor may be reimbursed for actual money expended on the work during the period of shutdown. No allowance will be made for anticipated profits. The period of shutdown shall be computed from the effective date of the Engineer's order to suspend work to the effective date of the Engineer's order to resume the work. Claims for such compensation shall be filed with the Engineer within the time period stated in the Engineer's order to resume work. The Contractor shall submit with his or her claim information substantiating the amount shown on the claim. The Engineer will forward the Contractor's claim to the Owner for consideration in accordance with local laws or ordinances. No provision of this article shall be construed as entitling the Contractor to compensation for delays due to inclement weather, for suspensions made at the request of the Owner, or for any other delay provided for in the contract, plans, or specifications.

If it should become necessary to suspend work for an indefinite period, the Contractor shall store all materials in such manner that they will not become an obstruction nor become damaged in any way. The Contractor shall take every precaution to prevent damage or deterioration of the work performed and provide for normal drainage of the work. The Contractor shall erect temporary structures where necessary to provide for traffic on, to, or from the airport.

80-07 Determination and extension of contract time. The number of calendar or working days allowed for completion of the work shall be stated in the proposal and contract and shall be known as the CONTRACT TIME.

Should the contract time require extension for reasons beyond the Contractor's control, it shall be adjusted as follows:

- a. CONTRACT TIME based on WORKING DAYS shall be calculated weekly by the Engineer. The Engineer will furnish the Contractor a copy of his or her weekly statement of the number of working days charged against the contract time during the week and the number of working days currently specified for completion of the contract (the original contract time plus the number of working days, if any, that have been included in approved CHANGE ORDERS or SUPPLEMENTAL AGREEMENTS covering EXTRA WORK).

The Engineer shall base his or her weekly statement of contract time charged on the following considerations:

- 1) No time shall be charged for days on which the Contractor is unable to proceed with the principal item of work under construction at the time for at least six (6) hours with the normal work force employed on such principal item. Should the normal work force be on a double-shift, 12 hours shall be used. Should the normal work force be on a triple-shift, 18 hours shall apply. Conditions beyond the Contractor's control such as strikes, lockouts, unusual delays in transportation, temporary suspension of the principal item of work under construction or temporary suspension of the entire work which have been ordered by the Owner for reasons not the fault of the Contractor, shall not be charged against the contract time.
 - 2) The Engineer will not make charges against the contract time prior to the effective date of the notice to proceed.
 - 3) The Engineer will begin charges against the contract time on the first working day after the effective date of the notice to proceed.
 - 4) The Engineer will not make charges against the contract time after the date of final acceptance as defined in the subsection 50-15 titled FINAL ACCEPTANCE of Section 50.
 - 5) The Contractor will be allowed one (1) week in which to file a written protest setting forth his or her objections to the Engineer's weekly statement. If no objection is filed within such specified time, the weekly statement shall be considered as acceptable to the Contractor. The contract time (stated in the proposal) is based on the originally estimated quantities as described in the subsection 20-05 titled INTERPRETATION OF ESTIMATED PROPOSAL QUANTITIES of Section 20. Should the satisfactory completion of the contract require performance of work in greater quantities than those estimated in the proposal, the contract time shall be increased in the same proportion as the cost of the actually completed quantities bears to the cost of the originally estimated quantities in the proposal. Such increase in contract time shall not consider either the cost of work or the extension of contract time that has been covered by change order or supplemental agreement and shall be made at the time of final payment.
- b. Contract Time based on calendar days shall consist of the number of calendar days stated in the contract counting from the effective date of the notice to proceed and including all Saturdays, Sundays, holidays, and non-work days. All calendar days elapsing between the effective dates of the Owner's orders to suspend and resume all work, due to causes not the fault of the Contractor, shall be excluded.

At the time of final payment, the contract time shall be increased in the same proportion as the cost of the actually completed quantities bears to the cost of the originally estimated quantities in the proposal. Such increase in the contract time shall not consider either cost of work or the extension of contract time that has been covered by a change order or supplemental agreement. Charges against the contract time will cease as of the date of final acceptance.

- c. When the contract time is a specified completion date, it shall be the date on which all contract work shall be substantially complete.

If the Contractor finds it impossible for reasons beyond his or her control to complete the work within the contract time as specified, or as extended in accordance with the provisions of this subsection, the Contractor may, at any time prior to the expiration of the contract time as extended, make a written request to the Owner for an extension of time setting forth the reasons which the Contractor believes will justify the granting of his or her request. Requests for extension of time on calendar day projects, caused by inclement weather, shall be supported with National Weather Bureau data showing the actual amount of inclement weather exceeded what could normally be expected during the contract period. The Contractor's plea that insufficient time was specified is not a valid reason for extension of time. If the supporting documentation justify the work was delayed because of conditions beyond the control and without the fault of the Contractor, the Owner may extend the time for completion by a change order that adjusts the contract time or completion date. The extended time for completion shall then be in full force and effect, the same as though it were the original time for completion.

80-08 Failure to complete on time. For each calendar day or working day, as specified in the contract, that any work remains uncompleted after the contract time (including all extensions and adjustments as provided in the subsection 80-07 titled DETERMINATION AND EXTENSION OF CONTRACT TIME of this Section) the sum specified in the contract and proposal as liquidated damages will be deducted from any money due or to become due the Contractor or his or her surety. Such deducted sums shall not be deducted as a penalty but shall be considered as liquidation of a reasonable portion of damages including but not limited to additional engineering services that will be incurred by the Owner should the Contractor fail to complete the work in the time provided in their contract.

Schedule	Liquidated Damages Cost	Allowed Construction Time

The maximum construction time allowed for the Schedule will be 59 days. Permitting the Contractor to continue and finish the work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, will in no way operate as a wavier on the part of the Owner of any of its rights under the contract.

80-09 Default and termination of contract. The Contractor shall be considered in default of his or her contract and such default will be considered as cause for the Owner to terminate the contract for any of the following reasons if the Contractor:

- a. Fails to begin the work under the contract within the time specified in the Notice to Proceed, or
- b. Fails to perform the work or fails to provide sufficient workers, equipment and/or materials to assure completion of work in accordance with the terms of the contract, or

- c. Performs the work unsuitably or neglects or refuses to remove materials or to perform anew such work as may be rejected as unacceptable and unsuitable, or
- d. Discontinues the execution of the work, or
- e. Fails to resume work which has been discontinued within a reasonable time after notice to do so, or
- f. Becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency, or
- g. Allows any final judgment to stand against the Contractor unsatisfied for a period of 10 days, or
- h. Makes an assignment for the benefit of creditors, or
- i. For any other cause whatsoever, fails to carry on the work in an acceptable manner.

Should the Engineer consider the Contractor in default of the contract for any reason above, the Engineer shall immediately give written notice to the Contractor and the Contractor's surety as to the reasons for considering the Contractor in default and the Owner's intentions to terminate the contract.

If the Contractor or surety, within a period of 10 days after such notice, does not proceed in accordance therewith, then the Owner will, upon written notification from the Engineer of the facts of such delay, neglect, or default and the Contractor's failure to comply with such notice, have full power and authority without violating the contract, to take the execution of the work out of the hands of the Contractor. The Owner may appropriate or use any or all materials and equipment that have been mobilized for use in the work and are acceptable and may enter into an agreement for the completion of said contract according to the terms and provisions thereof, or use such other methods as in the opinion of the Engineer will be required for the completion of said contract in an acceptable manner.

All costs and charges incurred by the Owner, together with the cost of completing the work under contract, will be deducted from any monies due or which may become due the Contractor. If such expense exceeds the sum which would have been payable under the contract, then the Contractor and the surety shall be liable and shall pay to the Owner the amount of such excess.

80-10 Termination for national emergencies. The Owner shall terminate the contract or portion thereof by written notice when the Contractor is prevented from proceeding with the construction contract as a direct result of an Executive Order of the President with respect to the execution of war or in the interest of national defense.

When the contract, or any portion thereof, is terminated before completion of all items of work in the contract, payment will be made for the actual number of units or items of work completed at the contract price or as mutually agreed for items of work partially completed or not started. No claims or loss of anticipated profits shall be considered.

Reimbursement for organization of the work, and other overhead expenses, (when not otherwise included in the contract) and moving equipment and materials to and from the job will be considered, the intent being that an equitable settlement will be made with the Contractor.

Acceptable materials, obtained or ordered by the Contractor for the work and that are not incorporated in the work shall, at the option of the Contractor, be purchased from the Contractor at actual cost as shown by

received bills and actual cost records at such points of delivery as may be designated by the Engineer.

Termination of the contract or a portion thereof shall neither relieve the Contractor of his or her responsibilities for the completed work nor shall it relieve his or her surety of its obligation for and concerning any just claim arising out of the work performed.

80-11 Work area, storage area and sequence of operations. The Contractor shall obtain approval from the Engineer prior to beginning any work in all areas of the airport. No operating runway, taxiway, or air operations area (AOA) shall be crossed, entered, or obstructed while it is operational. The Contractor shall plan and coordinate his or her work in such a manner as to ensure safety and a minimum of hindrance to flight operations. All Contractor equipment and material stockpiles shall be stored a minimum of **1000** feet from the centerline of an active runway. No equipment will be allowed to park within the approach area of an active runway at any time. No equipment shall be within **1000** feet of an active runway at any time.

END OF SECTION 80

GENERAL PROVISIONS

Section 90 Measurement and Payment

90-01 Measurement of quantities. All work completed under the contract will be measured by the Engineer, or his or her authorized representatives, using United States Customary Units of Measurement or the International System of Units.

The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice.

Unless otherwise specified, longitudinal measurements for area computations will be made horizontally, and no deductions will be made for individual fixtures (or leave-outs) having an area of 9 square feet (0.8 square meters) or less. Unless otherwise specified, transverse measurements for area computations will be the neat dimensions shown on the plans or ordered in writing by the Engineer.

Structures will be measured according to neat lines shown on the plans or as altered to fit field conditions.

Unless otherwise specified, all contract items which are measured by the linear foot such as electrical ducts, conduits, pipe culverts, underdrains, and similar items shall be measured parallel to the base or foundation upon which such items are placed.

In computing volumes of excavation the average end area method or other acceptable methods will be used.

The thickness of plates and galvanized sheet used in the manufacture of corrugated metal pipe, metal plate pipe culverts and arches, and metal cribbing will be specified and measured in decimal fraction of inch.

The term "ton" will mean the short ton consisting of 2,000 lb (907 kg) avoirdupois. All materials that are measured or proportioned by weights shall be weighed on accurate, approved scales by competent, qualified personnel at locations designed by the Engineer. If material is shipped by rail, the car weight may be accepted provided that only the actual weight of material is paid for. However, car weights will not be acceptable for material to be passed through mixing plants. Trucks used to haul material being paid for by weight shall be weighed empty daily at such times as the Engineer directs, and each truck shall bear a plainly legible identification mark.

Materials to be measured by volume in the hauling vehicle shall be hauled in approved vehicles and measured therein at the point of delivery. Vehicles for this purpose may be of any size or type acceptable for the materials hauled, provided that the body is of such shape that the actual contents may be readily and accurately determined. All vehicles shall be loaded to at least their water level capacity, and all loads shall be leveled when the vehicles arrive at the point of delivery.

When requested by the Contractor and approved by the Engineer in writing, material specified to be measured by the cubic yard (cubic meter) may be weighed, and such weights will be converted to cubic yards (cubic meters) for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the Engineer and shall be agreed to by the Contractor before such method of measurement of pay quantities is used.

Bituminous materials will be measured by the gallon (liter) or ton (kg). When measured by volume, such volumes will be measured at 60°F (16°C) or will be corrected to the volume at 60°F (16°C) using ASTM D1250 for asphalts or ASTM D633 for tars.

Net certified scale weights or weights based on certified volumes in the case of rail shipments will be used as a basis of measurement, subject to correction when bituminous material has been lost from the car or the distributor, wasted, or otherwise not incorporated in the work.

When bituminous materials are shipped by truck or transport, net certified weights by volume, subject to correction for loss or foaming, may be used for computing quantities.

Cement will be measured by the ton (kg) or hundredweight (km).

Timber will be measured by the thousand feet board measure (MFBM) actually incorporated in the structure. Measurement will be based on nominal widths and thicknesses and the extreme length of each piece.

The term "lump sum" when used as an item of payment will mean complete payment for the work described in the contract.

When a complete structure or structural unit (in effect, "lump sum" work) is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories.

Rental of equipment will be measured by time in hours of actual working time and necessary traveling time of the equipment within the limits of the work. Special equipment ordered by the Engineer in connection with force account work will be measured as agreed in the change order or supplemental agreement authorizing such force account work as provided in the subsection 90-05 titled PAYMENT FOR EXTRA WORK of this section.

When standard manufactured items are specified such as fence, wire, plates, rolled shapes, pipe conduit, etc., and these items are identified by gauge, unit weight, section dimensions, etc., such identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved will be accepted.

Scales for weighing materials which are required to be proportioned or measured and paid for by weight shall be furnished, erected, and maintained by the Contractor, or be certified permanently installed commercial scales.

Scales shall be accurate within 1/2% of the correct weight throughout the range of use. The Contractor shall have the scales checked under the observation of the inspector before beginning work and at such other times as requested. The intervals shall be uniform in spacing throughout the graduated or marked length of the beam or dial and shall not exceed one-tenth of 1% of the nominal rated capacity of the scale, but not less than 1 pound (454 grams). The use of spring balances will not be permitted.

Beams, dials, platforms, and other scale equipment shall be so arranged that the operator and the inspector can safely and conveniently view them.

Scale installations shall have available ten standard 50-pound (2.3 km) weights for testing the weighing equipment or suitable weights and devices for other approved equipment.

Scales must be tested for accuracy and serviced before use at a new site. Platform scales shall be installed and maintained with the platform level and rigid bulkheads at each end.

Scales “overweighing” (indicating more than correct weight) will not be permitted to operate, and all materials received subsequent to the last previous correct weighting-accuracy test will be reduced by the percentage of error in excess of one-half of 1%.

In the event inspection reveals the scales have been underweighing (indicating less than correct weight), they shall be adjusted, and no additional payment to the Contractor will be allowed for materials previously weighed and recorded.

All costs in connection with furnishing, installing, certifying, testing, and maintaining scales; for furnishing check weights and scale house; and for all other items specified in this subsection, for the weighing of materials for proportioning or payment, shall be included in the unit contract prices for the various items of the project.

When the estimated quantities for a specific portion of the work are designated as the pay quantities in the contract, they shall be the final quantities for which payment for such specific portion of the work will be made, unless the dimensions of said portions of the work shown on the plans are revised by the Engineer. If revised dimensions result in an increase or decrease in the quantities of such work, the final quantities for payment will be revised in the amount represented by the authorized changes in the dimensions.

90-02 Scope of payment. The Contractor shall receive and accept compensation provided for in the contract as full payment for furnishing all materials, for performing all work under the contract in a complete and acceptable manner, and for all risk, loss, damage, or expense of whatever character arising out of the nature of the work or the execution thereof, subject to the provisions of the subsection 70-18 titled NO WAIVER OF LEGAL RIGHTS of Section 70.

When the “basis of payment” subsection of a technical specification requires that the contract price (price bid) include compensation for certain work or material essential to the item, this same work or material will not also be measured for payment under any other contract item which may appear elsewhere in the contract, plans, or specifications.

90-03 Compensation for altered quantities. When the accepted quantities of work vary from the quantities in the proposal, the Contractor shall accept as payment in full, so far as contract items are concerned, payment at the original contract price for the accepted quantities of work actually completed and accepted. No allowance, except as provided for in the subsection 40-02 titled ALTERATION OF WORK AND QUANTITIES of Section 40 will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor which results directly from such alterations or indirectly from his or her unbalanced allocation of overhead and profit among the contract items, or from any other cause.

90-04 Payment for omitted items. As specified in the subsection 40-03 titled OMITTED ITEMS of Section 40, the Engineer shall have the right to omit from the work (order nonperformance) any contract item, except major contract items, in the best interest of the Owner.

Should the Engineer omit or order nonperformance of a contract item or portion of such item from the work, the Contractor shall accept payment in full at the contract prices for any work actually completed and acceptable prior to the Engineer’s order to omit or non-perform such contract item.

Acceptable materials ordered by the Contractor or delivered on the work prior to the date of the Engineer’s

order will be paid for at the actual cost to the Contractor and shall thereupon become the property of the Owner.

In addition to the reimbursement hereinbefore provided, the Contractor shall be reimbursed for all actual costs incurred for the purpose of performing the omitted contract item prior to the date of the Engineer's order. Such additional costs incurred by the Contractor must be directly related to the deleted contract item and shall be supported by certified statements by the Contractor as to the nature and the amount of such costs.

90-05 Payment for extra work. Extra work, performed in accordance with the subsection 40-04 titled EXTRA WORK of Section 40, will be paid for at the contract prices or agreed prices specified in the change order or supplemental agreement authorizing the extra work.

90-06 Partial payments. Partial payments will be made to the Contractor at least once each month as the work progresses. Said payments will be based upon estimates, prepared by the Engineer, of the value of the work performed and materials complete and in place, in accordance with the contract, plans, and specifications. Such partial payments may also include the delivered actual cost of those materials stockpiled and stored in accordance with the subsection 90-07 titled PAYMENT FOR MATERIALS ON HAND of this section. No partial payment will be made when the amount due to the Contractor since the last estimate amounts to less than five hundred dollars.

The Contractor is required to pay all subcontractors for satisfactory performance of their contracts no later than 30 days after the Contractor has received a partial payment. The Owner must ensure prompt and full payment of retainage from the prime Contractor to the subcontractor within 30 days after the subcontractor's work is satisfactorily completed. A subcontractor's work is satisfactorily completed when all the tasks called for in the subcontract have been accomplished and documented as required by the Owner. When the Owner has made an incremental acceptance of a portion of a prime contract, the work of a subcontractor covered by that acceptance is deemed to be satisfactorily completed.

From the total of the amount determined to be payable on a partial payment, 10% percent of such total amount will be deducted and retained by the Owner until the final payment is made, except as may be provided (at the Contractor's option) in the subsection 90-08 titled PAYMENT OF WITHHELD FUNDS of this section. The balance of the amount payable, less all previous payments, shall be certified for payment. Should the Contractor exercise his or her option, as provided in the subsection 90-08 titled PAYMENT OF WITHHELD FUNDS of this section, no such percent retainage shall be deducted.

When at least 95% of the work has been completed, the Engineer shall, at the Owner's discretion and with the consent of the surety, prepare estimates of both the contract value and the cost of the remaining work to be done.

The Owner may retain an amount not less than twice the contract value or estimated cost, whichever is greater, of the work remaining to be done. The remainder, less all previous payments and deductions, will then be certified for payment to the Contractor.

It is understood and agreed that the Contractor shall not be entitled to demand or receive partial payment based on quantities of work in excess of those provided in the proposal or covered by approved change orders or supplemental agreements, except when such excess quantities have been determined by the Engineer to be a part of the final quantity for the item of work in question.

No partial payment shall bind the Owner to the acceptance of any materials or work in place as to quality or quantity. All partial payments are subject to correction at the time of final payment as provided in the

subsection 90-09 titled ACCEPTANCE AND FINAL PAYMENT of this section.

The Contractor shall deliver to the Owner a complete release of all claims for labor and material arising out of this contract before the final payment is made. If any subcontractor or supplier fails to furnish such a release in full, the Contractor may furnish a bond or other collateral satisfactory to the Owner to indemnify the Owner against any potential lien or other such claim. The bond or collateral shall include all costs, expenses, and attorney fees the Owner may be compelled to pay in discharging any such lien or claim.

90-07 Payment for materials on hand. Partial payments may be made to the extent of the delivered cost of materials to be incorporated in the work, provided that such materials meet the requirements of the contract, plans, and specifications and are delivered to acceptable sites on the airport property or at other sites in the vicinity that are acceptable to the Owner. Such delivered costs of stored or stockpiled materials may be included in the next partial payment after the following conditions are met:

- a. The material has been stored or stockpiled in a manner acceptable to the Engineer at or on an approved site.
- b. The Contractor has furnished the Engineer with acceptable evidence of the quantity and quality of such stored or stockpiled materials.
- c. The Contractor has furnished the Engineer with satisfactory evidence that the material and transportation costs have been paid.
- d. The Contractor has furnished the Owner legal title (free of liens or encumbrances of any kind) to the material so stored or stockpiled.
- e. The Contractor has furnished the Owner evidence that the material so stored or stockpiled is insured against loss by damage to or disappearance of such materials at any time prior to use in the work.

It is understood and agreed that the transfer of title and the Owner's payment for such stored or stockpiled materials shall in no way relieve the Contractor of his or her responsibility for furnishing and placing such materials in accordance with the requirements of the contract, plans, and specifications.

In no case will the amount of partial payments for materials on hand exceed the contract price for such materials or the contract price for the contract item in which the material is intended to be used.

No partial payment will be made for stored or stockpiled living or perishable plant materials.

The Contractor shall bear all costs associated with the partial payment of stored or stockpiled materials in accordance with the provisions of this subsection.

90-08 Payment of withheld funds. At the Contractor's option, if an Owner withholds retainage in accordance with the methods described in subsection 90-06 PARTIAL PAYMENTS, the Contractor may request that the Owner deposit the retainage into an escrow account. The Owner's deposit of retainage into an escrow account is subject to the following conditions

- a. The Contractor shall bear all expenses of establishing and maintaining an escrow account and escrow agreement acceptable to the Owner.

- b. The Contractor shall deposit to and maintain in such escrow only those securities or bank certificates of deposit as are acceptable to the Owner and having a value not less than the retainage that would otherwise be withheld from partial payment.
- c. The Contractor shall enter into an escrow agreement satisfactory to the Owner.
- d. The Contractor shall obtain the written consent of the surety to such agreement.

90-09 Acceptance and final payment. When the contract work has been accepted in accordance with the requirements of the subsection 50-15 titled FINAL ACCEPTANCE of Section 50, the Engineer will prepare the final estimate of the items of work actually performed. The Contractor shall approve the Engineer's final estimate or advise the Engineer of the Contractor's objections to the final estimate which are based on disputes in measurements or computations of the final quantities to be paid under the contract as amended by change order or supplemental agreement. The Contractor and the Engineer shall resolve all disputes (if any) in the measurement and computation of final quantities to be paid within 30 calendar days of the Contractor's receipt of the Engineer's final estimate. If, after such 30-day period, a dispute still exists, the Contractor may approve the Engineer's estimate under protest of the quantities in dispute, and such disputed quantities shall be considered by the Owner as a claim in accordance with the subsection 50-16 titled CLAIMS FOR ADJUSTMENT AND DISPUTES of Section 50.

After the Contractor has approved, or approved under protest, the Engineer's final estimate, and after the Engineer's receipt of the project closeout documentation required in subsection 90-11 Project Closeout, final payment will be processed based on the entire sum, or the undisputed sum in case of approval under protest, determined to be due the Contractor less all previous payments and all amounts to be deducted under the provisions of the contract. All prior partial estimates and payments shall be subject to correction in the final estimate and payment.

If the Contractor has filed a claim for additional compensation under the provisions of the subsection 50-16 titled CLAIMS FOR ADJUSTMENTS AND DISPUTES of Section 50 or under the provisions of this subsection, such claims will be considered by the Owner in accordance with local laws or ordinances. Upon final adjudication of such claims, any additional payment determined to be due the Contractor will be paid pursuant to a supplemental final estimate.

90-10 Construction warranty.

- a. In addition to any other warranties in this contract, the Contractor warrants that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, workmanship, or design furnished, or performed by the Contractor or any subcontractor or supplier at any tier.
- b. This warranty shall continue for a period of one year from the date of final acceptance of the work. If the Owner takes possession of any part of the work before final acceptance, this warranty shall continue for a period of one year from the date the Owner takes possession. However, this will not relieve the Contractor from corrective items required by the final acceptance of the project work.
- c. The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to Owner real or personal property, when that damage is the result of:

- 1) The Contractor's failure to conform to contract requirements; or
 - 2) Any defect of equipment, material, workmanship, or design furnished by the Contractor.
- d. The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for one year from the date of repair or replacement.
 - e. The Owner will notify the Contractor, in writing, within seven (7) days after the discovery of any failure, defect, or damage.
 - f. If the Contractor fails to remedy any failure, defect, or damage within 14 days after receipt of notice, the Owner shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.
 - g. With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall: (1) Obtain all warranties that would be given in normal commercial practice; (2) Require all warranties to be executed, in writing, for the benefit of the Owner, as directed by the Owner, and (3) Enforce all warranties for the benefit of the Owner.
 - h. This warranty shall not limit the Owner's rights with respect to latent defects, gross mistakes, or fraud.

90-11 Project closeout. Approval of final payment to the Contractor is contingent upon completion and submittal of the items listed below. The final payment will not be approved until the Engineer approves the Contractor's final submittal. The Contractor shall:

- a. Provide two (2) copies of all manufacturers warranties specified for materials, equipment, and installations.
- b. Provide weekly payroll records (not previously received) from the general Contractor and all subcontractors.
- c. Complete final cleanup in accordance with subsection 40-08, FINAL CLEANUP.
- d. Complete all punch list items identified during the Final Inspection.
- e. Provide complete release of all claims for labor and material arising out of the Contract.
- f. Provide a certified statement signed by the subcontractors, indicating actual amounts paid to the Disadvantaged Business Enterprise (DBE) subcontractors and/or suppliers associated with the project.
- g. When applicable per state requirements, return copies of sales tax completion forms.
- h. Manufacturer's certifications for all items incorporated in the work.
- i. All required record drawings, as-built drawings or as-constructed drawings.

- j. Project Operation and Maintenance (O&M) Manual.
- k. Security for Construction Warranty.
- l. Equipment commissioning documentation submitted, if required.

END OF SECTION 90

GENERAL PROVISIONS

Section 100 Contractor Quality Control Program

100-01 General. When the specification requires a Contractor Quality Control Program, the Contractor shall establish, provide, and maintain an effective Quality Control Program that details the methods and procedures that will be taken to assure that all materials and completed construction required by this contract conform to contract plans, technical specifications and other requirements, whether manufactured by the Contractor, or procured from subcontractors or vendors. Although guidelines are established and certain minimum requirements are specified here and elsewhere in the contract technical specifications, the Contractor shall assume full responsibility for accomplishing the stated purpose.

The intent of this section is to enable the Contractor to establish a necessary level of control that will:

- a. Adequately provide for the production of acceptable quality materials.
- b. Provide sufficient information to assure both the Contractor and the Engineer that the specification requirements can be met.
- c. Allow the Contractor as much latitude as possible to develop his or her own standard of control.

The Contractor shall be prepared to discuss and present, at the preconstruction conference, their understanding of the quality control requirements. The Contractor shall not begin any construction or production of materials to be incorporated into the completed work until the Quality Control Program has been reviewed and accepted by the Engineer. No partial payment will be made for materials subject to specific quality control requirements until the Quality Control Program has been reviewed.

The quality control requirements contained in this section and elsewhere in the contract technical specifications are in addition to and separate from the acceptance testing requirements. Acceptance testing requirements are the responsibility of the Engineer.

Paving projects over \$500,000 shall have a Quality Control (QC)/Quality Assurance (QA) workshop with the Engineer, Contractor, subcontractors, testing laboratories, and Owner's representative at start of construction. The workshop shall address QC and QA requirements of the project specifications. The Contractor shall coordinate with the Airport and the Engineer on time and location of the QC/QA workshop.

100-02 Description of program.

- a. **General description.** The Contractor shall establish a Quality Control Program to perform quality control inspection and testing of all items of work required by the technical specifications, including those performed by subcontractors. This Quality Control Program shall ensure conformance to applicable specifications and plans with respect to materials, workmanship, construction, finish, and functional performance. The Quality Control Program shall be effective for control of all construction work performed under this Contract and shall specifically include surveillance and tests required by the technical specifications, in addition to other requirements of this section and any other activities deemed necessary by the Contractor to establish an effective level of quality control.
- b. **Quality Control Program.** The Contractor shall describe the Quality Control Program in a written document that shall be reviewed and approved by the Engineer prior to the start of any production, construction, or off-site fabrication. The written Quality Control Program shall be submitted to the Engineer for review and approval at least 5 calendar days before the Pre-Construction Conference.

The Contractor's Quality Control Plan and Quality Control testing laboratory must be approved in writing by the Engineer prior to the Notice to Proceed (NTP).

The Quality Control Program shall be organized to address, as a minimum, the following items:

- a. Quality control organization
- b. Project progress schedule
- c. Submittals schedule
- d. Inspection requirements
- e. Quality control testing plan
- f. Documentation of quality control activities
- g. Requirements for corrective action when quality control and/or acceptance criteria are not met

The Contractor is encouraged to add any additional elements to the Quality Control Program that is deemed necessary to adequately control all production and/or construction processes required by this contract.

100-03 Quality control organization. The Contractor Quality Control Program shall be implemented by the establishment of a separate quality control organization. An organizational chart shall be developed to show all quality control personnel and how these personnel integrate with other management/production and construction functions and personnel.

The organizational chart shall identify all quality control staff by name and function, and shall indicate the total staff required to implement all elements of the Quality Control Program, including inspection and testing for each item of work. If necessary, different technicians can be used for specific inspection and testing functions for different items of work. If an outside organization or independent testing laboratory is used for implementation of all or part of the Quality Control Program, the personnel assigned shall be subject to the qualification requirements of paragraph 100-03a and 100-03b. The organizational chart shall indicate which personnel are Contractor employees and which are provided by an outside organization.

The quality control organization shall, as a minimum, consist of the following personnel:

- a. **Program Administrator.** The Program Administrator shall be a full-time on-site employee of the Contractor, or a consultant engaged by the Contractor. The Program Administrator shall have a minimum of five (5) years of experience in airport and/or highway construction and shall have had prior quality control experience on a project of comparable size and scope as the contract.

Additional qualifications for the Program Administrator shall include at least one of the following requirements:

- 1) Professional Engineer with one (1) year of airport paving experience.
- 2) Engineer-in-training with two (2) years of airport paving experience.

- 3) An individual with three (3) years of highway and/or airport paving experience, with a Bachelor of Science Degree in Civil Engineering, Civil Engineering Technology or Construction.
- 4) Construction materials technician certified at Level III by the National Institute for Certification in Engineering Technologies (NICET).
- 5) Highway materials technician certified at Level III by NICET.
- 6) Highway construction technician certified at Level III by NICET.
- 7) A NICET certified engineering technician in Civil Engineering Technology with five (5) years of highway and/or airport paving experience.

The Program Administrator shall have full authority to institute any and all actions necessary for the successful implementation of the Quality Control Program to ensure compliance with the contract plans and technical specifications. The Program Administrator shall report directly to a responsible officer of the construction firm. The Program Administrator may supervise the Quality Control Program on more than one project provided that person can be at the job site within two (2) hours after being notified of a problem.

- b. **Quality control technicians.** A sufficient number of quality control technicians necessary to adequately implement the Quality Control Program shall be provided. These personnel shall be either Engineers, engineering technicians, or experienced craftsman with qualifications in the appropriate field equivalent to NICET Level II or higher construction materials technician or highway construction technician and shall have a minimum of two (2) years of experience in their area of expertise.

The quality control technicians shall report directly to the Program Administrator and shall perform the following functions:

- 1) Inspection of all materials, construction, plant, and equipment for conformance to the technical specifications, and as required by subsection 100-06.
- 2) Performance of all quality control tests as required by the technical specifications and subsection 100-07.
- 3) Performance of density tests for the Engineer when required by the technical specifications.

Certification at an equivalent level, by a state or nationally recognized organization will be acceptable in lieu of NICET certification.

- c. **Staffing levels.** The Contractor shall provide sufficient qualified quality control personnel to monitor each work activity at all times. Where material is being produced in a plant for incorporation into the work, separate plant and field technicians shall be provided at each plant and field placement location. The scheduling and coordinating of all inspection and testing must match the type and pace of work activity. The Quality Control Program shall state where different technicians will be required for different work elements.

100-04 Project progress schedule. The Contractor shall submit a coordinated construction schedule for all

work activities. The schedule shall be prepared as a network diagram in Critical Path Method (CPM), Program Evaluation and Review Technique (PERT), or other format, or as otherwise specified in the contract. As a minimum, it shall provide information on the sequence of work activities, milestone dates, and activity duration.

The Contractor shall maintain the work schedule and provide an update and analysis of the progress schedule on a twice monthly basis, or as otherwise specified in the contract. Submission of the work schedule shall not relieve the Contractor of overall responsibility for scheduling, sequencing, and coordinating all work to comply with the requirements of the contract.

100-05 Submittals schedule. The Contractor shall submit a detailed listing of all submittals (for example, mix designs, material certifications) and shop drawings required by the technical specifications. The listing can be developed in a spreadsheet format and shall include:

- a. Specification item number
- b. Item description
- c. Description of submittal
- d. Specification paragraph requiring submittal
- e. Scheduled date of submittal

100-06 Inspection requirements. Quality control inspection functions shall be organized to provide inspections for all definable features of work, as detailed below. All inspections shall be documented by the Contractor as specified by subsection 100-07.

Inspections shall be performed daily to ensure continuing compliance with contract requirements until completion of the particular feature of work. These shall include the following minimum requirements:

- a. During plant operation for material production, quality control test results and periodic inspections shall be used to ensure the quality of aggregates and other mix components, and to adjust and control mix proportioning to meet the approved mix design and other requirements of the technical specifications. All equipment used in proportioning and mixing shall be inspected to ensure its proper operating condition. The Quality Control Program shall detail how these and other quality control functions will be accomplished and used.
- b. During field operations, quality control test results and periodic inspections shall be used to ensure the quality of all materials and workmanship. All equipment used in placing, finishing, and compacting shall be inspected to ensure its proper operating condition and to ensure that all such operations are in conformance to the technical specifications and are within the plan dimensions, lines, grades, and tolerances specified. The Program shall document how these and other quality control functions will be accomplished and used.

100-07 Quality control testing plan. As a part of the overall Quality Control Program, the Contractor shall implement a quality control testing plan, as required by the technical specifications. The testing plan shall include the minimum tests and test frequencies required by each technical specification Item, as well as any additional quality control tests that the Contractor deems necessary to adequately control production

and/or construction processes.

The testing plan can be developed in a spreadsheet fashion and shall, as a minimum, include the following:

- a. Specification item number (for example, P-401)
- b. Item description (for example, Plant Mix Bituminous Pavements)
- c. Test type (for example, gradation, grade, asphalt content)
- d. Test standard (for example, ASTM or American Association of State Highway and Transportation Officials (AASHTO) test number, as applicable)
- e. Test frequency (for example, as required by technical specifications or minimum frequency when requirements are not stated)
- f. Responsibility (for example, plant technician)
- g. Control requirements (for example, target, permissible deviations)

The testing plan shall contain a statistically-based procedure of random sampling for acquiring test samples in accordance with ASTM D3665. The Engineer shall be provided the opportunity to witness quality control sampling and testing.

All quality control test results shall be documented by the Contractor as required by subsection 100-08.

100-08 Documentation. The Contractor shall maintain current quality control records of all inspections and tests performed. These records shall include factual evidence that the required inspections or tests have been performed, including type and number of inspections or tests involved; results of inspections or tests; nature of defects, deviations, causes for rejection, etc.; proposed remedial action; and corrective actions taken.

These records must cover both conforming and defective or deficient features, and must include a statement that all supplies and materials incorporated in the work are in full compliance with the terms of the contract. Legible copies of these records shall be furnished to the Engineer daily. The records shall cover all work placed subsequent to the previously furnished records and shall be verified and signed by the Contractor's Program Administrator.

Specific Contractor quality control records required for the contract shall include, but are not necessarily limited to, the following records:

- a. **Daily inspection reports.** Each Contractor quality control technician shall maintain a daily log of all inspections performed for both Contractor and subcontractor operations. These technician's daily reports shall provide factual evidence that continuous quality control inspections have been performed and shall, as a minimum, include the following:
 - 1) Technical specification item number and description
 - 2) Compliance with approved submittals

- 3) Proper storage of materials and equipment
- 4) Proper operation of all equipment
- 5) Adherence to plans and technical specifications
- 6) Review of quality control tests
- 7) Safety inspection.

The daily inspection reports shall identify inspections conducted, results of inspections, location and nature of defects found, causes for rejection, and remedial or corrective actions taken or proposed.

The daily inspection reports shall be signed by the responsible quality control technician and the Program Administrator. The Engineer shall be provided at least one copy of each daily inspection report on the work day following the day of record.

b. Daily test reports. The Contractor shall be responsible for establishing a system that will record all quality control test results. Daily test reports shall document the following information:

- 1) Technical specification item number and description
- 2) Test designation
- 3) Location
- 4) Date of test
- 5) Control requirements
- 6) Test results
- 7) Causes for rejection
- 8) Recommended remedial actions
- 9) Retests

Test results from each day's work period shall be submitted to the Engineer prior to the start of the next day's work period. When required by the technical specifications, the Contractor shall maintain statistical quality control charts. The daily test reports shall be signed by the responsible quality control technician and the Program Administrator.

100-09 Corrective action requirements. The Quality Control Program shall indicate the appropriate action to be taken when a process is deemed, or believed, to be out of control (out of tolerance) and detail what action will be taken to bring the process into control. The requirements for corrective action shall include both general requirements for operation of the Quality Control Program as a whole, and for individual items of work contained in the technical specifications.

The Quality Control Program shall detail how the results of quality control inspections and tests will be used for determining the need for corrective action and shall contain clear sets of rules to gauge when a process is out of control and the type of correction to be taken to regain process control.

When applicable or required by the technical specifications, the Contractor shall establish and use statistical quality control charts for individual quality control tests. The requirements for corrective action shall be linked to the control charts.

100-10 Surveillance by the Engineer. All items of material and equipment shall be subject to surveillance by the Engineer at the point of production, manufacture or shipment to determine if the Contractor, producer, manufacturer or shipper maintains an adequate quality control system in conformance with the requirements detailed here and the applicable technical specifications and plans. In addition, all items of materials, equipment and work in place shall be subject to surveillance by the Engineer at the site for the same purpose.

Surveillance by the Engineer does not relieve the Contractor of performing quality control inspections of either on-site or off-site Contractor's or subcontractor's work.

100-11 Noncompliance.

- a. The Engineer will notify the Contractor of any noncompliance with any of the foregoing requirements. The Contractor shall, after receipt of such notice, immediately take corrective action. Any notice, when delivered by the Engineer or his or her authorized representative to the Contractor or his or her authorized representative at the site of the work, shall be considered sufficient notice.
- b. In cases where quality control activities do not comply with either the Contractor Quality Control Program or the contract provisions, or where the Contractor fails to properly operate and maintain an effective Quality Control Program, as determined by the Engineer, the Engineer may:
 - 1) Order the Contractor to replace ineffective or unqualified quality control personnel or subcontractors.
 - 2) Order the Contractor to stop operations until appropriate corrective actions are taken.

END OF SECTION 100

GENERAL PROVISIONS

Section 105 Mobilization

105-1 Description. This item shall consist of work and operations, but is not limited to, work and operations necessary for the movement of personnel, equipment, material and supplies to and from the project site for work on the project except as provided in the contract as separate pay items.

105-1.1 Posted notices. Prior to commencement of construction activities the Contractor must post the following documents in a prominent and accessible place where they may be easily viewed by all employees of the prime Contractor and by all employees of subcontractors engaged by the prime Contractor: Equal Employment Opportunity (EEO) Poster "Equal Employment Opportunity is the Law" in accordance with the Office of Federal Contract Compliance Programs Executive Order 11246, as amended; Davis Bacon Wage Poster (WH 1321) - DOL "Notice to All Employees" Poster; and Applicable Davis-Bacon Wage Rate Determination. These notices must remain posted until final acceptance of the work by the Owner.

105-2 Basis of measurement and payment. Based upon the contract lump sum price for "Mobilization" partial payments will be allowed as follows:

- a. With first pay request, 25%.
- b. When 25% or more of the original contract is earned, an additional 25%.
- c. When 50% or more of the original contract is earned, an additional 40%.
- d. After Final Inspection, Staging area clean-up and delivery of all Project Closeout materials as required by 90-11, the final 10%.

END OF SECTION 105

GENERAL PROVISIONS

Section 110 Method of Estimating Percentage of Material Within Specification Limits (PWL)

110-01 General. When the specifications provide for acceptance of material based on the method of estimating percentage of material within specification limits (PWL), the PWL will be determined in accordance with this section. All test results for a lot will be analyzed statistically to determine the total estimated percent of the lot that is within specification limits. The PWL is computed using the sample average (\bar{X}) and sample standard deviation (S_n) of the specified number (n) of sublots for the lot and the specification tolerance limits, L for lower and U for upper, for the particular acceptance parameter. From these values, the respective Quality index, Q_L for Lower Quality Index and/or Q_U for Upper Quality Index, is computed and the PWL for the lot for the specified n is determined from Table 1. All specification limits specified in the technical sections shall be absolute values. Test results used in the calculations shall be to the significant figure given in the test procedure.

There is some degree of uncertainty (risk) in the measurement for acceptance because only a small fraction of production material (the population) is sampled and tested. This uncertainty exists because all portions of the production material have the same probability to be randomly sampled. The Contractor's risk is the probability that material produced at the acceptable quality level is rejected or subjected to a pay adjustment. The Owner's risk is the probability that material produced at the rejectable quality level is accepted.

It is the intent of this section to inform the Contractor that, in order to consistently offset the Contractor's risk for material evaluated, production quality (using population average and population standard deviation) must be maintained at the acceptable quality specified or higher. In all cases, it is the responsibility of the Contractor to produce at quality levels that will meet the specified acceptance criteria when sampled and tested at the frequencies specified.

110-02 Method for computing PWL. The computational sequence for computing PWL is as follows:

- a. Divide the lot into n sublots in accordance with the acceptance requirements of the specification.
- b. Locate the random sampling position within the subplot in accordance with the requirements of the specification.
- c. Make a measurement at each location, or take a test portion and make the measurement on the test portion in accordance with the testing requirements of the specification.
- d. Find the sample average (\bar{X}) for all subplot values within the lot by using the following formula:

$$\bar{X} = (x_1 + x_2 + x_3 + \dots + x_n) / n$$

Where: \bar{X} = Sample average of all subplot values within a lot
 x_1, x_2 = Individual subplot values
 n = Number of sublots

- e. Find the sample standard deviation (S_n) by use of the following formula:

$$S_n = [(d_1^2 + d_2^2 + d_3^2 + \dots + d_n^2)/(n-1)]^{1/2}$$

Where: S_n = Sample standard deviation of the number of subplot values in the set
 d_1, d_2 = Deviations of the individual subplot values x_1, x_2, \dots from the average value X
that is: $d_1 = (x_1 - X), d_2 = (x_2 - X) \dots d_n = (x_n - X)$
 n = Number of sublots

- f. For single sided specification limits (that is, L only), compute the Lower Quality Index Q_L by use of the following formula:

$$Q_L = (X - L) / S_n$$

Where: L = specification lower tolerance limit

Estimate the percentage of material within limits (PWL) by entering Table 1 with Q_L , using the column appropriate to the total number (n) of measurements. If the value of Q_L falls between values shown on the table, use the next higher value of PWL.

- g. For double-sided specification limits (that is, L and U), compute the Quality Indexes Q_L and Q_U by use of the following formulas:

$$Q_L = (X - L) / S_n \text{ and } Q_U = (U - X) / S_n$$

Where: L and U = specification lower and upper tolerance limits

Estimate the percentage of material between the lower (L) and upper (U) tolerance limits (PWL) by entering Table 1 separately with Q_L and Q_U , using the column appropriate to the total number (n) of measurements, and determining the percent of material above P_L and percent of material below P_U for each tolerance limit. If the values of Q_L fall between values shown on the table, use the next higher value of P_L or P_U . Determine the PWL by use of the following formula:

$$PWL = (P_U + P_L) - 100$$

Where: P_L = percent within lower specification limit
 P_U = percent within upper specification limit

EXAMPLE OF PWL CALCULATION

Project: Example Project

Test Item: Item P-401, Lot A.

A. PWL Determination for Mat Density.

- 1) Density of four random cores taken from Lot A.

A-1 = 96.60

A-2 = 97.55

A-3 = 99.30

A-4 = 98.35

$$n = 4$$

- 2) Calculate average density for the lot.

$$X = (x_1 + x_2 + x_3 + \dots + x_n) / n$$

$$X = (96.60 + 97.55 + 99.30 + 98.35) / 4$$

$$X = 97.95\% \text{ density}$$

- 3) Calculate the standard deviation for the lot.

$$S_n = [((96.60 - 97.95)^2 + (97.55 - 97.95)^2 + (99.30 - 97.95)^2 + (98.35 - 97.95)^2) / (4 - 1)]^{1/2}$$

$$S_n = [(1.82 + 0.16 + 1.82 + 0.16) / 3]^{1/2}$$

$$S_n = 1.15$$

- 4) Calculate the Lower Quality Index Q_L for the lot. ($L=96.3$)

$$Q_L = (X - L) / S_n$$

$$Q_L = (97.95 - 96.30) / 1.15$$

$$Q_L = 1.4348$$

- 5) Determine PWL by entering Table 1 with $Q_L=1.44$ and $n=4$.

$$\text{PWL} = 98$$

B. PWL Determination for Air Voids.

- 1) Air Voids of four random samples taken from Lot A.

$$A-1 = 5.00$$

$$A-2 = 3.74$$

$$A-3 = 2.30$$

$$A-4 = 3.25$$

- 2) Calculate the average air voids for the lot.

$$X = (x_1 + x_2 + x_3 \dots + x_n) / n$$

$$X = (5.00 + 3.74 + 2.30 + 3.25) / 4$$

$$X = 3.57\%$$

- 3) Calculate the standard deviation S_n for the lot.

$$S_n = [((3.57 - 5.00)^2 + (3.57 - 3.74)^2 + (3.57 - 2.30)^2 + (3.57 - 3.25)^2) / (4 - 1)]^{1/2}$$

$$S_n = [(2.04 + 0.03 + 1.62 + 0.10) / 3]^{1/2}$$

$$S_n = 1.12$$

- 4) Calculate the Lower Quality Index Q_L for the lot. ($L = 2.0$)

$$Q_L = (X - L) / S_n$$

$$Q_L = (3.57 - 2.00) / 1.12$$

$$Q_L = 1.3992$$

- 5) Determine P_L by entering Table 1 with $Q_L = 1.41$ and $n = 4$.

$$P_L = 97$$

- 6) Calculate the Upper Quality Index Q_U for the lot. ($U = 5.0$)

$$Q_U = (U - X) / S_n$$

$$Q_U = (5.00 - 3.57) / 1.12$$

$$Q_U = 1.2702$$

- 7) Determine P_U by entering Table 1 with $Q_U = 1.29$ and $n = 4$.

$$P_U = 93$$

- 8) Calculate Air Voids PWL

$$PWL = (P_L + P_U) - 100$$

$$PWL = (97 + 93) - 100 = 90$$

EXAMPLE OF OUTLIER CALCULATION (REFERENCE ASTM E178)

Project: Example Project

Test Item: Item P-401, Lot A.

A. Outlier Determination for Mat Density.

- 1) Density of four random cores taken from Lot A arranged in descending order.

$$A-3 = 99.30$$

$$A-4 = 98.35$$

$$A-2 = 97.55$$

$$A-1 = 96.60$$

- 2) Use $n=4$ and upper 5% significance level of to find the critical value for test criterion = 1.463.
- 3) Use average density, standard deviation, and test criterion value to evaluate density measurements.

a. For measurements greater than the average:

If $(\text{measurement} - \text{average}) / (\text{standard deviation})$ is less than test criterion, then the measurement is not considered an outlier

For A-3, check if $(99.30 - 97.95) / 1.15$ is greater than 1.463.
Since 1.174 is less than 1.463, the value is not an outlier.

b. For measurements less than the average:

If $(\text{average} - \text{measurement}) / (\text{standard deviation})$ is less than test criterion, then the measurement is not considered an outlier.

For A-1, check if $(97.95 - 96.60) / 1.15$ is greater than 1.463.
Since 1.435 is less than 1.463, the value is not an outlier.

Note: In this example, a measurement would be considered an outlier if the density were:

Greater than $(97.95 + 1.463 \times 1.15) = 99.63\%$

OR

less than $(97.95 - 1.463 \times 1.15) = 96.27\%$.

Table 1. Table for Estimating Percent of Lot Within Limits (PWL)

Percent Within Limits (P _L and P _U)	Positive Values of Q (Q _L and Q _U)							
	n=3	n=4	n=5	n=6	n=7	n=8	n=9	n=10
99	1.1541	1.4700	1.6714	1.8008	1.8888	1.9520	1.9994	2.0362
98	1.1524	1.4400	1.6016	1.6982	1.7612	1.8053	1.8379	1.8630
97	1.1496	1.4100	1.5427	1.6181	1.6661	1.6993	1.7235	1.7420
96	1.1456	1.3800	1.4897	1.5497	1.5871	1.6127	1.6313	1.6454
95	1.1405	1.3500	1.4407	1.4887	1.5181	1.5381	1.5525	1.5635
94	1.1342	1.3200	1.3946	1.4329	1.4561	1.4717	1.4829	1.4914
93	1.1269	1.2900	1.3508	1.3810	1.3991	1.4112	1.4199	1.4265
92	1.1184	1.2600	1.3088	1.3323	1.3461	1.3554	1.3620	1.3670
91	1.1089	1.2300	1.2683	1.2860	1.2964	1.3032	1.3081	1.3118
90	1.0982	1.2000	1.2290	1.2419	1.2492	1.2541	1.2576	1.2602
89	1.0864	1.1700	1.1909	1.1995	1.2043	1.2075	1.2098	1.2115
88	1.0736	1.1400	1.1537	1.1587	1.1613	1.1630	1.1643	1.1653
87	1.0597	1.1100	1.1173	1.1192	1.1199	1.1204	1.1208	1.1212
86	1.0448	1.0800	1.0817	1.0808	1.0800	1.0794	1.0791	1.0789
85	1.0288	1.0500	1.0467	1.0435	1.0413	1.0399	1.0389	1.0382
84	1.0119	1.0200	1.0124	1.0071	1.0037	1.0015	1.0000	0.9990
83	0.9939	0.9900	0.9785	0.9715	0.9671	0.9643	0.9624	0.9610
82	0.9749	0.9600	0.9452	0.9367	0.9315	0.9281	0.9258	0.9241
81	0.9550	0.9300	0.9123	0.9025	0.8966	0.8928	0.8901	0.8882
80	0.9342	0.9000	0.8799	0.8690	0.8625	0.8583	0.8554	0.8533
79	0.9124	0.8700	0.8478	0.8360	0.8291	0.8245	0.8214	0.8192
78	0.8897	0.8400	0.8160	0.8036	0.7962	0.7915	0.7882	0.7858
77	0.8662	0.8100	0.7846	0.7716	0.7640	0.7590	0.7556	0.7531
76	0.8417	0.7800	0.7535	0.7401	0.7322	0.7271	0.7236	0.7211
75	0.8165	0.7500	0.7226	0.7089	0.7009	0.6958	0.6922	0.6896
74	0.7904	0.7200	0.6921	0.6781	0.6701	0.6649	0.6613	0.6587
73	0.7636	0.6900	0.6617	0.6477	0.6396	0.6344	0.6308	0.6282
72	0.7360	0.6600	0.6316	0.6176	0.6095	0.6044	0.6008	0.5982
71	0.7077	0.6300	0.6016	0.5878	0.5798	0.5747	0.5712	0.5686
70	0.6787	0.6000	0.5719	0.5582	0.5504	0.5454	0.5419	0.5394
69	0.6490	0.5700	0.5423	0.5290	0.5213	0.5164	0.5130	0.5105
68	0.6187	0.5400	0.5129	0.4999	0.4924	0.4877	0.4844	0.4820
67	0.5878	0.5100	0.4836	0.4710	0.4638	0.4592	0.4560	0.4537
66	0.5563	0.4800	0.4545	0.4424	0.4355	0.4310	0.4280	0.4257
65	0.5242	0.4500	0.4255	0.4139	0.4073	0.4030	0.4001	0.3980
64	0.4916	0.4200	0.3967	0.3856	0.3793	0.3753	0.3725	0.3705
63	0.4586	0.3900	0.3679	0.3575	0.3515	0.3477	0.3451	0.3432
62	0.4251	0.3600	0.3392	0.3295	0.3239	0.3203	0.3179	0.3161
61	0.3911	0.3300	0.3107	0.3016	0.2964	0.2931	0.2908	0.2892
60	0.3568	0.3000	0.2822	0.2738	0.2691	0.2660	0.2639	0.2624
59	0.3222	0.2700	0.2537	0.2461	0.2418	0.2391	0.2372	0.2358
58	0.2872	0.2400	0.2254	0.2186	0.2147	0.2122	0.2105	0.2093

Percent Within Limits (P _L and P _U)	Positive Values of Q (Q _L and Q _U)							
	n=3	n=4	n=5	n=6	n=7	n=8	n=9	n=10
57	0.2519	0.2100	0.1971	0.1911	0.1877	0.1855	0.1840	0.1829
56	0.2164	0.1800	0.1688	0.1636	0.1607	0.1588	0.1575	0.1566
55	0.1806	0.1500	0.1406	0.1363	0.1338	0.1322	0.1312	0.1304
54	0.1447	0.1200	0.1125	0.1090	0.1070	0.1057	0.1049	0.1042
53	0.1087	0.0900	0.0843	0.0817	0.0802	0.0793	0.0786	0.0781
52	0.0725	0.0600	0.0562	0.0544	0.0534	0.0528	0.0524	0.0521
51	0.0363	0.0300	0.0281	0.0272	0.0267	0.0264	0.0262	0.0260
50	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Percent Within Limits (P _L and P _U)	Negative Values of Q (Q _L and Q _U)							
	n=3	n=4	n=5	n=6	n=7	n=8	n=9	n=10
49	-0.0363	-0.0300	-0.0281	-0.0272	-0.0267	-0.0264	-0.0262	-0.0260
48	-0.0725	-0.0600	-0.0562	-0.0544	-0.0534	-0.0528	-0.0524	-0.0521
47	-0.1087	-0.0900	-0.0843	-0.0817	-0.0802	-0.0793	-0.0786	-0.0781
46	-0.1447	-0.1200	-0.1125	-0.1090	-0.1070	-0.1057	-0.1049	-0.1042
45	-0.1806	-0.1500	-0.1406	-0.1363	-0.1338	-0.1322	-0.1312	-0.1304
44	-0.2164	-0.1800	-0.1688	-0.1636	-0.1607	-0.1588	-0.1575	-0.1566
43	-0.2519	-0.2100	-0.1971	-0.1911	-0.1877	-0.1855	-0.1840	-0.1829
42	-0.2872	-0.2400	-0.2254	-0.2186	-0.2147	-0.2122	-0.2105	-0.2093
41	-0.3222	-0.2700	-0.2537	-0.2461	-0.2418	-0.2391	-0.2372	-0.2358
40	-0.3568	-0.3000	-0.2822	-0.2738	-0.2691	-0.2660	-0.2639	-0.2624
39	-0.3911	-0.3300	-0.3107	-0.3016	-0.2964	-0.2931	-0.2908	-0.2892
38	-0.4251	-0.3600	-0.3392	-0.3295	-0.3239	-0.3203	-0.3179	-0.3161
37	-0.4586	-0.3900	-0.3679	-0.3575	-0.3515	-0.3477	-0.3451	-0.3432
36	-0.4916	-0.4200	-0.3967	-0.3856	-0.3793	-0.3753	-0.3725	-0.3705
35	-0.5242	-0.4500	-0.4255	-0.4139	-0.4073	-0.4030	-0.4001	-0.3980
34	-0.5563	-0.4800	-0.4545	-0.4424	-0.4355	-0.4310	-0.4280	-0.4257
33	-0.5878	-0.5100	-0.4836	-0.4710	-0.4638	-0.4592	-0.4560	-0.4537
32	-0.6187	-0.5400	-0.5129	-0.4999	-0.4924	-0.4877	-0.4844	-0.4820
31	-0.6490	-0.5700	-0.5423	-0.5290	-0.5213	-0.5164	-0.5130	-0.5105
30	-0.6787	-0.6000	-0.5719	-0.5582	-0.5504	-0.5454	-0.5419	-0.5394
29	-0.7077	-0.6300	-0.6016	-0.5878	-0.5798	-0.5747	-0.5712	-0.5686
28	-0.7360	-0.6600	-0.6316	-0.6176	-0.6095	-0.6044	-0.6008	-0.5982
27	-0.7636	-0.6900	-0.6617	-0.6477	-0.6396	-0.6344	-0.6308	-0.6282
26	-0.7904	-0.7200	-0.6921	-0.6781	-0.6701	-0.6649	-0.6613	-0.6587
25	-0.8165	-0.7500	-0.7226	-0.7089	-0.7009	-0.6958	-0.6922	-0.6896
24	-0.8417	-0.7800	-0.7535	-0.7401	-0.7322	-0.7271	-0.7236	-0.7211
23	-0.8662	-0.8100	-0.7846	-0.7716	-0.7640	-0.7590	-0.7556	-0.7531
22	-0.8897	-0.8400	-0.8160	-0.8036	-0.7962	-0.7915	-0.7882	-0.7858
21	-0.9124	-0.8700	-0.8478	-0.8360	-0.8291	-0.8245	-0.8214	-0.8192
20	-0.9342	-0.9000	-0.8799	-0.8690	-0.8625	-0.8583	-0.8554	-0.8533
19	-0.9550	-0.9300	-0.9123	-0.9025	-0.8966	-0.8928	-0.8901	-0.8882
18	-0.9749	-0.9600	-0.9452	-0.9367	-0.9315	-0.9281	-0.9258	-0.9241
17	-0.9939	-0.9900	-0.9785	-0.9715	-0.9671	-0.9643	-0.9624	-0.9610
16	-1.0119	-1.0200	-1.0124	-1.0071	-1.0037	-1.0015	-1.0000	-0.9990
15	-1.0288	-1.0500	-1.0467	-1.0435	-1.0413	-1.0399	-1.0389	-1.0382
14	-1.0448	-1.0800	-1.0817	-1.0808	-1.0800	-1.0794	-1.0791	-1.0789
13	-1.0597	-1.1100	-1.1173	-1.1192	-1.1199	-1.1204	-1.1208	-1.1212
12	-1.0736	-1.1400	-1.1537	-1.1587	-1.1613	-1.1630	-1.1643	-1.1653
11	-1.0864	-1.1700	-1.1909	-1.1995	-1.2043	-1.2075	-1.2098	-1.2115
10	-1.0982	-1.2000	-1.2290	-1.2419	-1.2492	-1.2541	-1.2576	-1.2602
9	-1.1089	-1.2300	-1.2683	-1.2860	-1.2964	-1.3032	-1.3081	-1.3118
8	-1.1184	-1.2600	-1.3088	-1.3323	-1.3461	-1.3554	-1.3620	-1.3670
7	-1.1269	-1.2900	-1.3508	-1.3810	-1.3991	-1.4112	-1.4199	-1.4265

Percent Within Limits (P _L and P _U)	Negative Values of Q (Q _L and Q _U)							
	n=3	n=4	n=5	n=6	n=7	n=8	n=9	n=10
6	-1.1342	-1.3200	-1.3946	-1.4329	-1.4561	-1.4717	-1.4829	-1.4914
5	-1.1405	-1.3500	-1.4407	-1.4887	-1.5181	-1.5381	-1.5525	-1.5635
4	-1.1456	-1.3800	-1.4897	-1.5497	-1.5871	-1.6127	-1.6313	-1.6454
3	-1.1496	-1.4100	-1.5427	-1.6181	-1.6661	-1.6993	-1.7235	-1.7420
2	-1.1524	-1.4400	-1.6016	-1.6982	-1.7612	-1.8053	-1.8379	-1.8630
1	-1.1541	-1.4700	-1.6714	-1.8008	-1.8888	-1.9520	-1.9994	-2.0362

END OF SECTION 110

SPECIAL PROVISIONS

**SPECIAL PROVISION NO. 1
UTILITIES**

A. Description

The Contractor shall be responsible for the coordination and associated costs to protect existing facilities, utilities and features that may be impacted by the project.

B. General

Existing facilities, utilities and features depicted on the construction plans are not guaranteed to be accurate with respect to location, depth, condition or characteristics. Also, there may be additional facilities and features existing that could affect the construction of this project, which are not depicted or described in the construction plans. Prior to bidding, the Contractor shall make a thorough investigation of the project area to satisfy himself/herself as to the location, condition and characteristics of any and all facilities and features, which may affect the work. No additional compensation will be made for any extra expense relating to an existing facility or feature. The Contractor hereby agrees to make no claims against the Owner, the Engineer, and their representatives relating to the existence or lack thereof, location, condition and/or characteristics of any existing facilities or features

C. Protection of Existing Utilities

Airfield lighting cables; electric power lines; telephone lines; computer cables; airport power and control cables; transmission and distribution water lines; and sanitary force mains may be located in the areas of construction. Disruption of these utilities could seriously disrupt the operation of the airport. Actual locations are uncertain, and the Contractor is required to verify all locations.

Power and control cables leading to and from any Navaids and other facilities shall be protected from any possible damage, including crossing with unauthorized equipment, etc. No grading will be permitted over the cables under any conditions unless shown on the drawings or approved by the Engineer. These provisions intend to make perfectly clear the need for protection of Navaids and other facility cables by the Contractor at all times.

If damage occurs to any utilities, the Contractor may be assessed a fee of \$2,000 liquidated damages per cut, which shall only represent the expense incurred by the Owner in coordinating the repair, and which shall not prevent the Owner or others from recovering from the Contractor costs or expenses of any other nature due to damages to utilities. The Contractor will also reimburse the appropriate utility owner for all material and labor costs to repair damaged utilities.

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 exhibits or encountered in the work. Any inaccuracy or omission in such information will not relieve Contractor of his responsibility to protect such existing features from damage or unscheduled interruption of service.

It is further understood and agreed that the Contractor shall, upon execution of the contract, notify the Owner of all utility services or other facilities of his plan of operations. Such notification shall be in writing addressed to the appropriate point-of-contact as provided herein. A copy of each notification shall be given to the Engineer.

In addition to the general written notification provided, it shall be the responsibility of the Contractor to keep such individual Owners advised of changes in his plan of operation that would affect such Owners.

Prior to commencing the work in the general vicinity of an existing utility service or facility, the Contractor shall again notify each such Owner in writing, through the Project Manager, of the plan of operations. If, in the Contractor's opinion, the Owner's assistance is needed to locate the utility service or facility or the presence of a representative of the Owner is desirable to observe the work, such advice should be included in the written notification. Such notification shall be given through the Project Manager by the most expeditious means to reach the utility Owners point-of-contact no later than two normal business days prior to the Contractor's commencement of operations in such general vicinity. The Contractor's failure to give two (2) days notice shall be cause for the Project Manager to suspend construction operations in the general vicinity of a utility service or facility.

Where the outside limits of an underground utility service have been located and staked on the ground, the Contractor shall be required to use excavation methods acceptable to the Project Manager within three (3) feet of the outside limits, at such points as may be required to insure protection from damage due to the Contractors operations. Excavation methods could include the use of hand digging tools, the use of non-ferrous hand tools and could exclude the use of long-handled metal spades.

Should the Contractor damage or interrupt the operation of a utility service or facility by accident or otherwise, he shall immediately notify the proper utility company and the Project Manager 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 Project Manager continuously until such damage has been repaired and service restored to the satisfaction of the utility or facility Owner.

The Contractor shall bear all direct and indirect costs of damage and restoration of service to any utility service or facility due to his operations, whether or not due to negligence or accident. The Owner reserves the right to deduct such costs from any monies due or which may become due the Contractor or his surety.

Airport owned facilities and properties and privately owned facilities located on airport property, including underground cables, pavements, piping, buildings, turfed areas, vehicles and other facilities/improvements, that are damaged by the Contractor shall, at the election of the Owner, (1) be replaced/repared by the Contractor to the satisfaction of the Owner or (2) be replaced/repared by the Owner at the Contractor's expense.

All utilities not shown in the plans and found by the Contractor shall be recorded by the Contractor and submitted to the Airport Manager or Project Manager as Record Drawings. Refer to Special Provision No. 7 for additional requirements for Record Drawings.

END OF SP-1

SPECIAL PROVISION NO. 2
AIRPORT SAFETY AND SECURITY REQUIREMENTS

A. General

The provisions of this safety and security plan and associated procedures are applicable within the boundaries of Northwest Florida Beaches International Airport. A complete understanding of all procedures and requirements contained herein is required to ensure safety and security during construction. Satisfying these safety and security requirements is a part of this contract and deviations from the requirements established herein will be sufficient cause for contract termination.

Required reference material associated with this safety plan includes:

FAA AC 150/5200-18C (or latest edition), Airport Safety Self Inspection
FAA AC 150/5370-2G (or latest edition), Operational Safety on Airport During Construction
FAA AC 150/5210-5D (or latest edition), Painting, Marking, and Lighting of Vehicles Used on an Airport

Copies of each of these documents may be examined through coordination with the Engineer.

B. Airport Safety and Security Coordinator

A qualified individual shall act as the duly authorized representative of the Contractor to coordinate safety and security issues for the duration of the contract. This individual will be responsible for the overall coordination of safety and security matters during construction and ensuring that all procedures and requirements are followed. The individual shall be physically present on the airport at all times during the period of construction when activity related to fulfilling the Contractor's responsibilities is taking place.

The individual shall be the Owner's point of contact and is also responsible for coordinating all construction activity with any organizations prior to the start of construction at any location within the Project Area, at any time the construction schedule or procedure that would affect safety or security is altered and upon completion of work. In addition, the Owner's point of contact shall maintain a file of all advisories issued; periodically review advisories issued to assure currency and appropriately cancel portions of previously issued advisories when construction covered by that advisory is completed or otherwise terminated.

C. Contractor Safety and Security Coordinator

The Contractor shall appoint a qualified individual as its duly authorized representative to coordinate safety and security issues for the duration of the contract. The Contractor's point of contact shall thoroughly understand the safety and security requirements of the contract and shall have sufficient authority to implement its provisions without significant deviation.

The Contractor shall be accountable for safety and security requirement compliance. The Contractor's point of contact for safety and security shall be especially knowledgeable regarding the requirements of FAA AC's 150/5200-18C and 150/5370-2G, Airport Self Inspection Guide and Operational Safety on Airports During Construction, respectively. The Contractor shall be thoroughly familiar with all contract requirements relevant to the handling of hazardous materials and all applicable trade practices related to maintain safety and security during construction.

D. Construction Sequence

The construction sequence defined in the plans and specifications has been developed to minimize possible adverse safety and security impacts. The Contractor may deviate from this sequence provided the Engineer authorizes the deviation in writing.

E. Traffic Control

1. Vehicle Identification - The Contractor shall establish and maintain a list of the minimum number of vehicles believed to be necessary for completing the work required in each area of construction. This list shall be submitted to the Owner for permission to operate each vehicle on the list. To be authorized to operate on Northwest Florida Beaches International Airport each vehicle shall:

- a. be marked/flagged for high daytime visibility and lighted for nighttime operations. These vehicles shall display in full view above the vehicle a 3'x3' or larger orange and white checkerboard flag, each check being 1' square, for daytime identification. For nighttime identification, each vehicle shall be equipped with a flashing amber (yellow) dome light, mounted on top of the vehicle and have an intensity that conforms to the requirement for maintenance or emergency vehicles. Vehicles that are not marked and/or lighted shall be escorted by a vehicle appropriately marked and/or lighted.

In addition, vehicles authorized to operate on any portion of the airport operations area other than the approved haul route for this contract shall also be equipped with a two-way radio capable of communicating on the Airport frequency.

All marking, lighting, installation of radios and similar safety and/or security measures including providing escort vehicles and properly trained radio operators shall be provided by the Contractor.

- b. be identified with the name and/or logo of the Contractor and be of sufficient size to be identified at a distance. Vehicles needing intermittent identification could be marked with tape or with commercially available magnetically attached markers. Vehicles that are not appropriately identified shall be escorted by a vehicle that conforms to this requirement. Vehicles requiring an escort shall be identified on the list.

- c. be operated in a manner that does not compromise the safety of either landside or airside airport operations. If, in the opinion of Airport staff or the Engineer, any vehicle is operated in a manner not fully consistent with these requirements, the Owner has the right to restrict operation of the vehicle or prohibit its use on the airport.

2. Access to the Site of Construction

- a. General Construction - the Contractor's access to the airport, employee parking and marshalling area(s) and route across the airport to the construction sites shall be as designated by the Owner. No other airport access point or cross-airport route shall be permitted unless approved in advance by the Owner. In addition, the following requirements are applicable:

- (1) All Contractor traffic authorized to travel on the airport shall have been briefed as part of the Contractor's construction safety and security orientation program, be thoroughly familiar with the access procedures and route for travel or be escorted by personnel authorized by the Owner.
 - (2) The Contractor shall install work site identification signs at the authorized access point(s) if required by the Owner. If in the opinion of the Owner, directional signs are needed for clarity they shall be installed along the route authorized for access to each construction site.
 - (3) Under no circumstance will Contractor personnel be permitted to drive their individually owned vehicles to any construction on the airport. All vehicles must be parked in the area designated for employee parking; transportation to the work site shall be provided by the Contractor for those employees that are not otherwise occupying authorized vehicles.
 - (4) In addition to the periodic cleanup of the site, the Contractor is responsible for the immediate cleanup of any debris generated along the construction site access route(s) as a result of construction related traffic or operations whether or not created by Contractor personnel.
 - (5) There shall be no travel by foot within an active aircraft operational area. The Contractor shall arrange transportation for all employees between the designated marshalling area and each construction site, as necessary.
3. Material Suppliers, Subcontractors and Visitors - All material suppliers, subcontractors and visitors to the work site are obligated to follow the same safety and security operating procedures as the prime contractor. All material suppliers shall make their deliveries using the same access points and routes as the Contractor and shall be advised of the appropriate delivery procedures at the time the materials order is placed. If it is not practical to conform to the vehicle identification and/or safety and security orientation program requirements, the Contractor shall be prepared to escort all suppliers, subcontractors and visitors while they are on the work site or within a secured area.

F. Basis of Payment

No separate payment shall be made for airport safety and security measures or personnel or materials related to this item and incidentally required to satisfy the specified objective(s). Adequate compensation shall be included by the Contractor in the lump sum price for Mobilization. This compensation shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item. This compensation shall also be full compensation for adhering to Northwest Florida Beaches International Airport access requirements which include application for badges, time to procure a badge, and time required to badge subcontractors.

END OF SP-2

**SPECIAL PROVISION NO. 3
PROTECTION OF AIRPORT CABLES, NAVAIDS AND OTHER FACILITIES**

- A. The Contractor is hereby informed that there are FAA NAVAID facilities installed on the Airport including, without limitation, ASR, UHF and VHF and VHF receivers and transmitters; U.S. Weather Bureau facilities; airfield lighting systems; electric cables and controls relating to such NAVAIDS and facilities. Such NAVAIDS, weather bureau and other facilities, and electric and control cables must be fully protected during the entire construction time. Work under this contract can be accomplished in the vicinity of these facilities and cables only at pre-approved periods of time.

Approval is subject to withdrawal at any time because of changes in the weather, emergency conditions on the airfield areas, anticipation of emergency conditions, and for any other reason determined by the Engineer acting under the orders and instructions of the airport management and the designated FAA representative. Any instruction to the Contractor to clear any given area, at any time, by the Engineer, the Airport Management, or the FAA (by radio or other means) shall be immediately executed. Construction work will be commenced in the cleared area only when additional instructions are issued by the Engineer.

- B. Power and control cables leading to and from any FAA NAVAIDS, Weather Bureau, and other facilities, will be marked in the field by the local FAA Airway Facilities Sector personnel for the information of the Contractor, before starting any work in their general vicinity. Thereafter, through the entire time of this construction, the Contractor shall not allow any construction equipment to cross these cables without first protecting the cable with steel boiler plate, or similar structural devices, for three feet (3') either side of the marked cable route. All excavation within three feet (3') of existing cables shall be accomplished by hand digging only.
- C. This Special Provision is included to make perfectly clear the need for protection of FAA NAVAIDS, Weather Bureau and other facilities and cables by the Contractor at all times.
- D. At the option of the FAA, the Contractor shall either immediately repair, with identical material by skilled workmen, and at his own expense, any underground multi-conductor control cables serving FAA NAVAIDS, weather reporting equipment and other airport facilities which are damaged by its workmen or equipment. The FAA may repair the cable at the expense of the Contractor as verified by time and material expense records provided by FAA.
- E. Prior approval from the Engineer and the FAA must be obtained for the materials, workmen, time of day or night and method of repairs for any temporary or permanent repairs the Contractor proposes to make to any FAA NAVAID or facility damaged by the Contractor. This also applies to any other airport facilities and/or cables damaged by the Contractor.
- F. Should the repair require splicing, it shall be the discretion of the local FAA Airway Facilities Sector Manager as to who shall perform the work. Where the FAA performs the work, it shall be at the Contractor's expense.
- G. No repair or splice work shall be backfilled or covered prior to final operational approval by the Airway Facilities Sector Manager.

END OF SP-3

**SPECIAL PROVISION NO. 4
STAGING AND PHASING PROVISIONS FOR CONTRACTOR OPERATIONS**

The Contractor shall prepare a written plan for his staging and phasing procedures in conformance with the Contract Drawings for all work. It shall be understood that the outline requirements presented are the minimum requirements. The Contractor is expected to provide added detailing as appropriate to fully inform the Project Manager of his/her intended method of operations and his/her schedules for proposed work.

The Engineer reserves the right to make changes to this plan to facilitate changes to the airport operations, which are in the best interest of the airport.

All costs associated with preparing the storage and staging area site shall be borne by the Contractor. This includes, but is not limited to, clearing, and grading of the site, desired stabilization of the work yard surface, construction of any temporary utilities, access roads, all security fencing, etc.

END OF SP-4

**SPECIAL PROVISION NO. 5
VISIBLE WARNING MARKERS FOR TAXIWAYS
AND AIRCRAFT OPERATIONS AREAS**

The Contractor shall furnish and maintain visible warning markers whenever any aircraft operations area (AOA) is closed to air traffic.

The Contractor shall place or remove the markers, at such times as the Engineer may direct, to allow the maximum use of the aircraft operations area by air traffic.

Contractor is responsible for maintaining markers in good condition at all times. Contractor shall repair and/or repaint markers as necessary or as directed by the Engineer.

Closed taxiways may be marked by appropriately placed barricades of the type shown on the contract drawings and as directed by the Engineer. Barricade lighting shall be red and shall be capable of being powered by battery or by connection to the runway, apron, or taxiway edge light circuit.

Cost of markers and barricades shall be incidental to construction costs for the project. Contractor shall provide his method and plan for markings to the Project Manager, in writing, for approval prior to mobilizing.

END OF SP-5

**SPECIAL PROVISION NO. 6
TIME OF COMPLETION**

A. General

This project consists of several project elements, which are defined throughout the contract documents. The specific details pertaining to contract sequence and time are an important aspect of the project for planning of the various operational requirements of the airport. The Contractor shall be required to comply with the general intent of the phasing, scheduling and duration of the project as outlined in the contract documents or as otherwise approved by submittals allowed by the documents.

B. Construction Time

1. The construction plans and specifications set forth the time allocated to each of the elements of work required as part of this contract. The work shall be completed within the times established or as otherwise approved or liquidated damages in the amounts specified hereafter shall be assessed.
2. The Contractor must request and receive written approval from the Project Manager for acceptance of the work included in each of the phases or work prior to satisfying the requirements of being "complete."
3. The specified times for each of the project phases shall be outlined in these specifications or as otherwise agreed to in writing among the Owner, Project Manager and Contractor based upon the actual contract work awarded.

Substantial Completion contract time = 14 **Calendar Days** (This is a calendar day contract);
Total contract time = **59 Calendar Days**

C. Construction Schedule

1. The Contractor shall prepare and submit a detailed schedule for his operations within the general limits and phasing restrictions included in the contract documents. This schedule shall be based upon the actual work ultimately awarded. This schedule shall be reviewed with the County, Project Manager and Contractor in order to establish the final approved schedule as it relates to this Special Provision.

END OF SP-6

**SPECIAL PROVISION NO. 7
AIRPORT PROJECT PROCEDURES**

A. Permits

Contractor shall be required to procure and pay for all construction permits if required and arrange for all inspections and similar procedural items as required by the code enforcement authorities having jurisdiction.

B. Airport Operations

Airport operations shall be maintained throughout this Contract. The Contractor shall in no way curtail or handicap normal operational characteristics of the airport facility except as specifically indicated and specified in these Contract Documents.

C. Limits of Construction

Any surface graded or disturbed outside the construction limits as shown on the plans will be restored and sodded or seeded and mulched as directed by the Engineer at the Contractor's expense.

D. Construction Layout and Stakes

Contractor shall furnish all lines, grades and measurements necessary for the proper prosecution and control of the work and contracted for under these specifications. The Contractor will establish horizontal and vertical control points only. Contractor is thereafter responsible to maintain these control points for use by subsequent contractors.

E. Verification of Existing Conditions

Prior to bidding and commencing with construction, the Contractor shall familiarize himself as to the existing conditions. Should the Contractor discover any inaccuracies, errors or omissions between the actual existing conditions and the Contract Documents, he shall within seven (7) calendar days prior to Bid Opening, notify the Engineer in writing. Submission of Bid by the Contractor shall be held as an acceptance of the existing conditions by the Contractor.

F. Safety and Protection

1. Safety: Inasmuch as each work area will be accessible to and used by the public, the Owner and other companies doing business at the Airport during the construction period, it is the Contractor's responsibility to maintain each work area in a safe, hazard free condition at all times. Should the Owner find the area unsafe at any time, they will notify the Contractor, and the Contractor shall take whatever steps necessary to remedy the unsafe condition. Should the Contractor not be immediately available for corrective action, the Owner will remedy the problem and the Contractor shall reimburse the Owner for the expense of such correction.
2. Protection of Property: Fixed structures, equipment, paving, landscaping and vehicles (automobiles, trucks, etc.) shall be protected with drop cloths, shielding and other appropriate measures to ensure maximum protection of all property and vehicles.

G. Pre-Construction Conference

Before beginning work at the site, the Contractor shall attend a pre-construction conference and bring with him the superintendent employed for this project. In the event the Contractor is unable to attend, he shall send a letter of introduction with the superintendent in which he advises the superintendent's full name and states that he is assigned to the project and will be in full responsible charge. This conference will be called by the Engineer, who will arrange for the Owner's representative and other interested parties to be present.

At this time, all parties will discuss the project under contract and prepare a program of procedure in keeping with requirements of the drawings and specifications. The superintendent will henceforth make every effort to expeditiously coordinate all phases of the work, including the required reporting procedure, to obtain the end result within the full purpose and intent of the drawings and specifications for the project.

H. Coordination and Progress Meetings

1. Weekly Coordination and Progress Meetings: The Contractor / Engineer will hold weekly general project coordination and progress meetings at regularly scheduled times convenient for all parties involved. These meetings are in addition to specific meetings held for other purposes, such as special project meetings and special pre-installation meetings. The Engineer will require representation at each meeting by every party currently involved in coordination or planning for the work of the entire project. Meetings will be conducted in a manner which will resolve coordination problems.
2. The Engineer will record results of the meeting and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

I. Administrative/Supervisory Personnel

The Contractor shall provide a full-time Project Management Team consisting of a Contractor's Engineer, Project Superintendent, and other supervisory personnel for the duration of the Project. The names and qualifications of this team for this work shall be submitted to the Owner as part of the Bidder Qualification Form. They shall have a minimum of five (5) years of experience on suitable projects of equal difficulty. Either the Contractor's Engineer or the Project Superintendent shall be at the construction site at all periods when work is in progress. This person shall have full authority to act in the Contractor's behalf. It is agreed and understood that, if requested in writing by the Owner, the Contractor shall replace any member of the team with another meeting the required qualifications within three (3) days of the receipt of the request.

J. Special Reports

1. Reporting Unusual Events: When an event of an unusual and significant nature occurs at the site, the Contractor shall prepare and submit a special report to the Engineer. List chain of events, persons participating, response by the Contractor's personnel, an evaluation of the results or effects and similar pertinent information. Advise the Owner and Engineer as soon as possible when such events are known.
2. Submit special reports directly to the Owner within one day of occurrence. Submit a copy of the report to the Engineer and other entities that are affected by the occurrence within one day of the occurrence.

K. Schedule of Work

1. Prepare and submit, in triplicate, for the Engineer's information, progress schedules for the work.
2. Progress schedules shall relate to the entire project to the extent required by the Contract Documents and shall provide for expeditious and practicable execution of the work.
3. Progress schedules shall be updated monthly.
4. Percent complete shall be based on actual construction in place or dollar volume of the work. If dollar volume of the work reflects the greater percent complete, the maximum percent complete shall in no case exceed 5 percent of the value of the in-place construction.

L. Progress Schedule

1. Preliminary Schedule: Within 15 days after date of Notice of Award and Acceptance or at the Pre-Construction Conference, whichever is earlier, the Contractor shall submit his preliminary network phasing diagram (Preliminary Schedule) indicating a comprehensive overview of the Project including an activity line for each of the work segments to be performed at the site.
 - a. Arrange the schedule to indicate required sequencing of work and to show time allowances for submittals, inspections, and similar time margins.
 - b. The submitted schedule will be reviewed by the Engineer and Owner for conformance to Critical Dates and overall project completion time criteria. Lack of this information will be cause for rejection of the schedule.
 - c. Following initial submittal of the schedule to and response by the Engineer, print and distribute the Progress Schedule to entities with a need-to-know responsibility, including three (3) copies to the Engineer. Revise at intervals matching payment requests and redistribute and repost. Provide the copies required with payment requests.

M. Maintenance of Schedule

The Contractor's Progress Schedule must be updated on a weekly basis, and a copy thereof submitted with each of the Contractor's Applications for Payment. The updated Progress Schedule shall not only indicate revisions to the Schedule for upcoming work but show "as-built" schedule progress data. The Engineer will not recommend for payment by the Owner an Application for Payment without the Contractor's submission of the Weekly Schedule Updates.

1. If the Contractor's Weekly Schedule Updates reflect, or the Engineer determines, that the Contractor is at least ten percent (10%) behind the original Progress Schedule or fourteen (14) or more calendar days behind the original Progress Schedule for:
 - a. the work as a whole;
 - b. a major Contract item;

- c. an item of work which is on the critical path; or
 - d. an item of work not on the original critical path that, because of the delay or anticipated delay became a critical path item; then the Contractor must submit with the Monthly Schedule Update his proposed plan for bringing the work back on schedule and completing the Work within the Contract time.
2. The Progress Schedule shall be coordinated by the Owner's Project Administrator with the overall schedule for the Airport Projects. The Contractor is required to revise the Progress Schedule promptly in accordance with the conditions of the work, subject to approval by the Owner's Project Coordinator and the Engineer.
 3. The Contractor shall comply fully with all time and other requirements of the Contract Documents. Recommendation of an Application of Payment by the Engineer and payment thereon by the Owner, without the submission of a Monthly Schedule Update, shall not constitute a waiver of the requirements of such updates, nor shall it relieve the Contractor from the obligation to complete the Work within the Contract Time.
 4. Should a review of work indicate a critical path (milestone) item has fallen behind the approved schedule, at the option of the Engineer, funds equal to the established liquidated damages for the number of calendar days behind schedule will be withheld until that critical path item is brought back on schedule.

N. Changes in the Schedule

1. Minor Changes: Each week, prior to the weekly coordination meeting during the time of the contract, the Contractor shall notify the Engineer and Engineer of any minor changes that are anticipated in the schedule for the following week.
2. Major Changes: If for any reason a major change in the approved schedule is anticipated, the Contractor shall make the necessary changes to the schedule and resubmit the revised schedule for approval.

Copies of the approved schedule shall be posted in the Contractor's field office with completed work identified in colored pencil.

O. Maintenance of Traffic

1. The Contractor shall not obstruct nor create a hazard to any traffic during the prosecution of the work and shall be responsible for repair of all damage to existing pavement or facilities caused by his operations.
2. Beginning date of Contractor's Responsibility: The Contractor's responsibility for maintenance of traffic shall begin on the day he starts the work and continue until Final Completion and Acceptance of the Project.
3. Sections Not Requiring Traffic Maintenance: The Contractor will not be required to maintain traffic over those portions of the Project where no work is to be accomplished or where

construction operations will not affect aircraft operations. The Contractor, however, shall not obstruct nor create a hazard to any traffic during the prosecution of the work and shall be responsible for repair of any damage to existing pavement or facilities caused by his operations.

4. Traffic During Construction: All construction vehicles are required to use existing traffic routes. Normal traffic lanes are not to be used as staging areas for arriving delivery vehicles. The Contractor's employees shall utilize the designated Contractor employee parking area.
5. Contractor Signing: The Contractor may furnish and install construction traffic directional signs along the existing traffic route. The signs shall depict Contractor's logo or name, directional arrows and "deliveries". Signs shall be of sufficient size to have 6" high message and shall be located at each decision point. All signs and their locations shall be approved by the Engineer. NO OTHER SIGNS ARE PERMITTED.
6. Material Deliveries: The Contractor shall make his own material and equipment deliveries. No deliveries shall be made by vendors or suppliers without escort by a representative of the Contractor.
7. Notification: On days when construction traffic is expected to be extra heavy or when oversized pieces of equipment are to be delivered, give minimum forty-eight (48) hours notice to the Engineer.
8. All Contractor material orders for the work site shall be delivered to the areas designated as the Contractor's receiving area. All deliveries shall be made only during the Contractor's working hours.
9. Interference Request:
 - a. The Contractor shall be responsible for notifying the Owner in writing and securing approval for any and all interruptions or interference with traffic (pedestrian, automobile or other necessary function of the Airport).
 - b. The request shall include a traffic control plan indicating barricades, lighting and flagger where required.
 - c. Such notification shall be made as soon as possible but in no case less than 48 hours prior to interference.
 - d. It is suggested that the Contractor utilize a standard form addressed to the Owner with a blank space for a description of the interference, the exact area affected, the exact times and dates the interference will take place and blanks for the Owner's approval. The forms shall be submitted in duplicate. No interference will be allowed until the Contractor has received back a copy of the approved interference request form.

10. Personnel Traffic:

- a. General: All construction personnel shall be restricted to construction areas. They shall wear shirts with sleeves and long pants at all times.
- b. Use of Public Areas: The Contractor's workmen shall not utilize public areas for taking their "work breaks" or "lunch breaks." Areas for this purpose can be designated by the Owner upon request. No Public Toilets shall be used by any workmen at any time.

P. Daily Clean-Up and Trash Removal

1. Debris from this work shall be promptly removed from the site at least daily. It shall not be allowed to become a hazard to the safety of the public.
2. The Contractor shall be responsible for clean-up and trash removal. Accumulation of trash and debris will not be allowed, and the Engineer may at any time direct the Contractor to immediately remove his trash and debris from the site of the work when in the opinion of the Owner such trash constitutes a nuisance or in any way hinders the work or the Airports operations. If the Contractor should fail to remove his trash and debris from the site of the work in a timely manner, the Owner may have this work performed and deduct the cost of such from Contractor's payment.

Q. Cleaning and Protection

1. General: During handling and installation of work at the project site, clean and protect work in progress and adjoining work on the basis of continuous daily maintenance. Apply protective covering on installed work to ensure freedom from damage or deterioration.
2. Clean and perform maintenance on installed work as frequently as necessary through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.
3. Limiting Exposures of Work: To the extent possible through appropriate control and protection methods, supervise performance of the work in such a manner and by such means which will ensure that none of the work, whether completed or in progress, will be subjected to harmful, dangerous, damaging or otherwise deleterious exposure during the construction period. Such exposures include, where applicable, but not by way of limitation the following:
 - a. Excessive static or dynamic loading
 - b. Excessive internal or external pressures
 - c. Solvents
 - d. Chemicals
 - e. Light
 - f. Puncture
 - g. Abrasion

- h. Heavy Traffic
 - i. Soiling
 - j. Combustion
 - k. High speed operation, improper lubrication, unusual wear
 - l. Improper shipping or handling
 - m. Theft
 - n. Vandalism
4. Protection at Openings: The Contractor shall provide protection at all openings in structures and finishes to maintain the building weather and dust tight. All protection shall be of solid material and substantial so that it will not be disturbed by wind and weather normal to the area and season, and also tight fitting to prevent noise infiltration.
5. Protection of Improvements:
- a. Damage to Existing Facilities: Existing surfaces and materials of the Owner's property not requiring work by the Contract Documents that is damaged by the Contractor's operations shall be immediately repaired. Repaired surfaces and materials shall match existing adjacent undamaged surfaces and materials. Repair work shall be coordinated with the Engineer and Owner with regard to time and method.
 - b. Accidental Demolition: All structures or parts thereof that may become damaged due to accident or Contractor's error shall be restored to their original condition at no cost to the Owner. Materials and equipment being used in the repair or replacement resulting from damage shall be new and shall perform at the manufacturer's published capacities. If the existing equipment or materials cannot be identified, or if unavailable, the selection of the replacement will be subject to approval by the Engineer in writing.
6. Overhead Protection
- a. No cranes or other construction equipment shall cross over non-construction personnel, their travel ways or ride systems.
 - b. The plan of operation of cranes and other hoisting equipment shall be established in writing by the Contractor. This plan of operation shall be subject to approval by the Engineer.
- R. Conservation and Salvage
- 1. General: It is a requirement for supervision and administration of the Work that construction operations be carried out with the maximum possible consideration given to conservation of energy, water and materials. In addition, maximum consideration shall be given to salvaging materials and equipment involved in performance of the work but not incorporated therein. Refer to other sections for required disposition of salvaged materials which are the Owner's property.

S. Testing Cost Borne by Owner

Unless otherwise specified herein, all initial construction "Quality Assurance" testing costs shall be borne by the Owner. An independent testing laboratory selected and responsible to the Engineer shall perform all "Quality Assurance" testing required by the technical specifications or as directed by the Owner and/or the Engineer.

T. Testing Cost Borne by Contractor

The Contractor shall bear the cost of all "Quality Control" testing to include the following conditions:

1. If substitute materials or equipment are proposed by the Contractor, he shall pay the cost of all tests which may be necessary to satisfy the Engineer that specification requirements are satisfied. The Contractor shall pay for the Engineer's time spent in review and administrating such proposed substitution.
2. If materials or workmanship are used which fail to meet specification requirements, the Contractor shall pay the cost of all re-testing, including laboratory costs, deemed necessary by the Engineer to determine the safety or suitability of the material or element. The Contractor shall make arrangements with the Owner's Testing Laboratory to have all re-testing costs billed directly to the Contractor, or deducted from amounts due to the Contractor unless otherwise directed by the Engineer in writing. The Contractor shall take prompt action to insure that all re-testing costs are paid in a reasonable time period.
3. The Contractor shall pay for all testing costs including, but not limited to, power, fuel, and equipment cost, which may be required for complete testing of all equipment and systems for proper operation.
4. The Contractor shall pay for all testing required for materials, job mix designs, equipment, structures and related items included in all shop drawings and other submittals as required by the Technical Specifications to be submitted and approved by the Engineer prior to construction.
5. The Contractor shall bear all costs necessary for the Quality Control testing as stipulated in General Provisions Section 100.

U. Project Documentation

1. Project Drawings: The successful Contractor will be furnished, at no charge, four (4) copies of drawings and specifications. Additional copies may be purchased at actual cost of reproduction.

A field set of drawings and specifications shall remain on the job site at all times and shall be available at all times to the Engineer. The field set shall be continuously updated to reflect the "as-built" condition of all work included in this Contract.

The Contractor shall immediately include plainly and conspicuously on the field set of drawings, and at appropriate paragraphs in the specifications, all changes or corrections made by addenda and change orders as they are issued.

Approved copies of all shop drawings and other submittals are to be kept on the job site at all times and shall be available at all times to the Engineer.

Changes and deviations from the existing conditions shall be submitted in writing for approval prior to installation. In no case shall any unspecified equipment or materials be installed without prior approval by the Engineer.

2. Record Documents:

- a. Definition: Record copies are defined to include those documents or copies relating directly to performance of the work, which the Contractor is required to prepare or maintain for the Owner's records, recording the work as actually performed. In particular, record copies show changes in the work in relation to the way in which work was shown and specified by the original contract documents and show additional information of value to the Owner's records but not indicated by the original Contract Documents.

Record copies include newly-prepared drawings (if any are specified), marked-up copies of contract drawings, shop drawings, specifications, addenda and change orders, marked-up product data submittals, record samples, field records for variable and concealed conditions such as excavations and foundations, and miscellaneous record information on work which is otherwise recorded only schematically or not at all.

- b. Record Drawings: The Contractor shall maintain a set of Record Drawings at the job site. These shall be kept legible and current and shall be available for inspection at all times by the Engineer. Show all changes or work added on these Record Drawings in a contrasting color.

- (1) Mark-up Procedure: During progress of the work, maintain a white-print set (blue-line or black-line) of contract drawings and shop drawings, with mark-up of actual installations which vary substantially from the work as originally shown. Mark whatever drawing is most capable of showing actual physical condition, fully and accurately. Where shop drawings are marked up, mark cross-reference on contract drawings at corresponding location. Mark with erasable colored pencil, using separate colors where feasible to distinguish between changes for different categories of work at the same general location. Mark-up important additional information, which was either shown schematically or omitted from original drawings. Give particular attention to information on work concealed, which would be difficult to identify or measure and record at a later date. Note alternate numbers, change order numbers and similar identification.

Require each person preparing the mark-up to initial and date the mark-up and indicate the name of the firm. Label each sheet "PROJECT RECORD" in 1-1/2 inch high letters.

In showing changes in the work, use the same legends as used on the original drawings. Indicate exact locations by dimensions and exact elevations by job datum. Give dimensions from a permanent point.

(2) Preparation of Transparencies: In preparation for certification of substantial completion on the last major portion of the work, review the completed mark-up of record drawings and shop drawings with the Engineer. The Engineer will then proceed with preparation of a full set of corrected transparencies for contract drawings. The Engineer will date each updated drawing and label each sheet "PROJECT RECORD" in 1-1/2 inch high letters. Printing as required herein is the responsibility of the Engineer.

(3) Copies, Distribution: Upon completion of transparency record drawings, the Engineer shall prepare three blueline or blackline prints of each drawing, regardless of whether changes and additional information were recorded thereon. The Engineer shall then organize each of the three copies into manageable sets, bind with durable paper cover sheets, and print suitable titles and dates. The mark-up set of prints maintained during the construction period shall be bound in the same manner. The Engineer will retain one copy set. At the completion of the project, the Engineer shall submit one set of mylars and one set of prints with changes noted thereon to the Owner.

c. Record Drawings shall contain the names, addresses and phone numbers of the General Contractor and the major subcontractors.

d. The Engineer shall be the sole judge of the acceptability of the Record Drawings. Receipt and acceptance of the As-Built drawings is a pre-requisite for Final Payment.

3. Record Specifications

a. During the progress of the work, maintain one copy of specifications, including addenda, change orders and similar modifications issued in printed form during construction. Mark-up variations (of substance) in actual work in comparison with text of specifications and modifications as issued. Give particular attention to substitutions, selection of options, and similar information on work where it is concealed or cannot otherwise be readily discerned at a later date by direct observation. Note related record drawing information and product data where applicable. Upon completion of the mark-up, submit to the Engineer for the Owner's records. Label the front cover "PROJECT RECORD" in 1-1/2 inch high letters.

- b. Where the manual is printed on one side of the page only, mark variations on the blank left-hand pages of the Project Manual, facing printed right-hand pages containing original text affected by variation.

4. **Record Product Data**
During progress of the work, maintain one copy of each product data submittal and mark up significant variations in the actual work in comparison with submitted information. Include both variations in product as delivered to site and variations from the manufacturer's instructions and recommendations for installation. Give particular attention to concealed products and portions of the work which cannot otherwise be readily discerned at a later date by direct observation. Note related change orders and mark-ups of record drawings and specifications. Upon completion of the mark-up, submit a complete set of product data submittals to the Engineer for the Owner's records. Label each data submittal "PROJECT RECORD" in 1-1/2 inch high letters.

5. **Record Sample Submittal**
Immediately prior to the date(s) of substantial completion, the Engineer and Owner's personnel will meet with the Contractor on site and will determine if any of the submitted samples maintained by the Contractor during progress of the work are to be transmitted to the Owner for record purposes. Comply with the Engineer's instructions for packaging, identification marking and delivery to the Owner's sample storage space. Dispose of other samples in the manner specified for disposal of surplus and waste materials, unless otherwise indicated by the Engineer.

6. **Miscellaneous Record Submittals**
Refer to other sections of these specifications for requirements of miscellaneous record-keeping and submittals in connection with actual performance of the work. Immediately prior to the date(s) of substantial completion, complete miscellaneous records and place in good order, properly identified and bound or filed, ready for continued use and reference. Submit to the Engineer for the Owner's records. Categories of requirements resulting in miscellaneous work records are recognized to include, but are not limited to, the following:
 - a. Required field records on excavations, foundations, underground construction, wells and similar work.
 - b. Accurate survey showing locations and elevations of underground lines, including invert elevations of drainage piping, valves, tanks and manholes.
 - c. Surveys by a Registered Land Surveyor establishing lines and levels of finished construction.
 - d. Soil treatment certification.
 - e. Inspection and Test Reports: Where not processed as shop drawings or product data.

- f. Asphalt or PCC concrete pavement or structural mix design record.
 - g. Concrete block certification.
7. Project Closeout
- Closeout is hereby defined to include general requirements near end of Contract Time, in preparation for final acceptance, final payment, normal termination of contract, occupancy by the Owner and similar actions evidencing completion of the work. Specific requirements for individual units of work are specified in other sections. Time of closeout is directly related to substantial completion, and therefore may be a single time period for the entire work or a series of time periods for individual parts of the work which have been certified as substantially complete at different dates. The time variation, if any, shall be applicable to other provisions of this section.
8. Prerequisites to Substantial Completion
- a. Prior to requesting the Engineer's inspection for certification of substantial completion, for either the entire work or portions thereof, complete the following and list known exceptions in request:
 - (1) In the progress payment request coincident with or first following the date claimed, show 100% completion for the portion of work claimed as "substantially completed", or list incomplete items, value of incompleteness, and reasons for being incomplete.
 - (2) Include supporting documentation for completion as indicated in the Contract Documents.
 - (3) Submit statement showing accounting of changes to the Contract Sum.
 - (4) Advise the Owner of pending insurance change-over requirements.
 - (5) Obtain and submit releases enabling the Owner's full and unrestricted use of the work and access to services and utilities, including, where required, occupancy permits, operating certificates, and similar releases.
 - (6) Deliver tools, spare parts, extra stocks of materials, and similar physical items to the Owner.
 - (7) Make the final change-over of locks and transmit keys to the Owner and advise Owner's personnel of change-over in security provisions.
 - (8) Complete start-up testing of systems and instructions of Owner's operating-maintenance personnel. Discontinue or change over and remove from the project site, temporary facilities and services, along with construction tools and facilities, mock-ups and similar elements.

- b. Inspection Procedures: Upon receipt of the Contractor's request, the Engineer will proceed with inspection or advise the Contractor of prerequisites not fulfilled. Following initial inspection, the Engineer will prepare a Certificate of Substantial Completion or advise the Contractor of the work which must be performed prior to issuance of the Certificate and will perform a repeat inspection when requested and assured by the Contractor that the work has been substantially completed. Results of the completed inspection will form the initial "punchlist" for final acceptance.

9. Prerequisites to Final Acceptance

- a. Prior to requesting the Engineer's final inspection for certification of final acceptance as required by the General Provisions, the Contractor shall complete the following and list known exceptions in the request:
 - (1) Submit a certified copy of the Engineer's final punchlist of itemized work to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance, endorsed and dated by the Engineer.
 - (2) Submit final meter readings for utilities, measured record of stored fuel, and similar data as of time of substantial completion or when the Owner took possession of and responsibility for corresponding elements of the work.
 - (3) Complete final cleaning up requirements, including touch-up of marred surfaces.
 - (4) Touch up and otherwise repair and restore marred exposed finishes.
- b. Re-inspection Procedures: Following Substantial Completion, the Contractor shall correct or remedy all Punchlist items to the satisfaction of the Engineer and Owner within a two (2) week period after the Date of Substantial Completion. If subsequent inspections are necessary after the two week period in order to eliminate all deficiencies, the cost of all subsequent inspections with respect to the Owner and Engineer's time shall be paid by the Contractor. When ready, the Contractor shall request in writing a final inspection of the work. Upon completion of re-inspection, the Engineer will prepare a Certificate of Final Acceptance or advise the Contractor of work not completed or obligations not fulfilled as required for Final Acceptance. If necessary, the procedures will be repeated.

10. Prerequisites to Final Payment

- a. Final Payment: Final Payment will be made after final acceptance of the project by the Engineer and Owner upon request by the Contractor on condition that the Contractor:

- (1) Furnish properly executed complete releases of lien from all materialmen and subcontractors who have furnished materials or labor for the Work and submit supporting documentation not previously submitted and accepted. Include certificates of insurance for products and completed operations where required.
- (2) Furnish the Contractor's Affidavit of Release of Liens (2 copies) that all materialmen and subcontractors have been paid in full. In the event they have not been paid in full, the Owner shall retain a sufficient sum to pay them in full and at his option may make direct payment as provided in Chapter 84, Florida Statutes, as amended, to obtain complete releases of lien.
- (3) Furnish Contractor's Affidavit of Debts and Claims (2 copies).
- (4) Furnish required sets of record drawings and maintenance and operating instructions of new mechanical equipment.
- (5) Furnish guarantees signed by subcontractors, material suppliers, and countersigned by the Contractor for operating equipment.
- (6) Submit specific warranties, workmanship-maintenance bonds, maintenance agreements, final certifications and similar documents.
- (7) Furnish a signed guarantee, in form acceptable to the Engineer and Owner agreeing to repair or replace as decided by the Engineer, all work and materials that prove defective within one (1) year (or more) from the date of final acceptance, including restoration of all other work damaged in making such repairs or replacements.
- (8) Furnish Consent of Surety to final payment.
- (9) Submit updated final statement, accounting for final changes to Contract Sum.
- (10) Submit evidence of final, continuing insurance coverage complying with insurance requirements.
- (11) Certify that all Social Security, Unemployment and all other taxes (City, State, Federal Government) have been paid.
- (12) Provide receipt, as applicable, of affidavits certifying all labor standards of local, State, or Federal requirements have been complied with by the Contractor.
- (13) Submit actual DBE participation percentages.

11. Record Document Submittals

Specific requirements for record documents are shown in the section, PROJECT RECORD DOCUMENTS. Other requirements are indicated in the General Provisions. General submittal requirements are indicated in "Submittals" sections. Do not use record documents for construction purposes; protect from deterioration and loss in a secure, fire-resistive location; provide access to record documents for the Engineer's reference during normal working hours.

- a. Record Drawings: The Engineer shall organize record drawing sheets into manageable sets, bind with durable paper cover sheets and print suitable titles, dates and other identification on the cover of each set.
- b. Record Specifications: Upon completion of mark-ups, submit to the Engineer for the Owner's records.
- c. Record Product Data: Upon completion of mark-ups, submit complete sets to the Engineer for the Owner's records.
- d. Record Sample Submittal: Comply with the Engineer's instructions for packaging, identification, marking and delivery to the Owner's sample storage space.
- e. Miscellaneous Record Submittals: Complete miscellaneous records and place in good order, properly identified and bound or filed, ready for continued use and reference. Submit to the Engineer for the Owner's records.
- f. Maintenance Manuals: Complete, place in order, properly identify and submit to the Engineer for the Owner's records.

12. Closeout Procedures

General Operating and Maintenance Instructions: Arrange for each installer of work requiring continuing maintenance or operation, to meet with the Owner's personnel at the project site to provide basic instructions needed for proper operation and maintenance of the entire work. Include instructions by manufacturer's representatives where installers are not expert in the required procedures. Review maintenance manuals, record documentation, tools, spare parts and materials, lubricants, fuel, identification system, control sequences, hazards, cleaning and similar procedures and facilities. For operational equipment, demonstrate start-up, shut-down, emergency operations, noise and vibration adjustments, safety, economy, efficiency adjustments, and similar operations. Review maintenance and operations in relation with applicable warranties, agreements to maintain bonds, and similar continuing commitments.

V. Final Cleaning

1. Provide final cleaning of the work, at the time indicated, consisting of cleaning each surface or unit of work to normal "clean" condition in a manner acceptable to the Engineer and Owner.

2. Removal of Protection: Remove temporary protection devices and facilities which were installed during the course of the work to protect previous completed work during the remainder of the construction period.

3. Compliances: Comply with safety standards and governing regulations for cleaning operations. Do not burn waste materials at site, bury debris or excess materials on the Owner's property. Do not discharge volatile or other harmful or dangerous materials into drainage systems. Remove waste materials from site and dispose of in a lawful manner.

Where extra materials of value remaining after the completion of the associated work have become the Owner's property, dispose of these as directed by the Owner.

END OF SP-7

**SPECIAL PROVISION NO. 8
VEHICLE OPERATION ON THE AOA**

A. Authorization of Vehicles/Equipment

All vehicles that enter the Air Operations Area of Northwest Florida Beaches International Airport shall comply with the following:

1. All vehicles shall be limited to designated access routes and/or construction areas unless specifically authorized by the Owner.
3. All construction vehicles/mechanized equipment authorized within the construction area, the Movement Area, or related safety areas shall be marked with a 3' x 3' orange and white checkered flag with each box being 1' square, located on the upper most portion of the vehicle/motorized equipment, or be escorted by a vehicle so equipped.
4. All vehicles authorized to operate on the Movement Area or associated object free areas are required to announce their intentions on the Unicom frequency before entering those areas and to monitor the frequency.
5. During nighttime hours, all equipment operating or parked on the Airport exceeding 20 feet in height shall be lit with a red obstruction light in accordance with Advisory Circular 70/7460-1. This light is to be located on the uppermost portion of the equipment.

B: Vehicle/Equipment Restrictions

1. Bicycles, motorcycles and two-wheel scooters are prohibited on the AOA.
2. All vehicles/equipment must be appropriately secured such that neither aircraft nor wind blast will result in their movement.

C. Right-of-Way

Vehicles/equipment shall be operated in a manner that does not interfere with aircraft operations. All vehicles/equipment shall yield right of way to all aircraft and emergency vehicles.

D. Vehicle/Equipment Operating Rules

The Contractor shall be responsible for ensuring compliance with the following rules by all individuals authorized to drive outside the construction area:

1. Vehicle/mechanized equipment operators shall obey all traffic signs.
2. The established speed limit within the AOA -10 m.p.h.
3. At no time shall the operator of a vehicle/mechanized equipment drive under any portion of an aircraft.
4. A vehicle/equipment shall not stop or be parked:

- a. so as to block a driveway, AOA access gate, fire lane, or aircraft;
- b. in areas other than those prearranged and approved by the Owner;
- c. within 15 feet of a fire hydrant, unless authorized by the Owner.

5. Vehicles/mechanized equipment shall not be operated in a careless or negligent manner within the AOA.
6. Vehicles/equipment shall not be operated by individuals under the influence of any substance which impairs the ability to do so in a safe manner.

E. Night or Low Visibility Operation

1. Vehicle/mechanized equipment operators are not permitted to move about the airport, outside the designated construction area at night unless the vehicle has operating headlights, taillights, brake lights or under the escort of a properly lighted vehicle. Headlights shall be set on dim when moving about the airport at night.
2. Vehicle/mechanized equipment authorized on the Movement Area and/or associated safety areas shall be equipped with an electrically powered, amber color, 360-degree omni-direction, rotating light, mounted on the vehicle such that it is conspicuous from any direction.

F. Runway/Taxiway Access

At no time shall a vehicle enter the Movement Area and/or associated safety areas unless it is authorized by the Owner.

G. Vehicle/Equipment Accidents

All accidents which involve bodily injury or property damage must be reported immediately to the Owner at 850-763-6751. Emergency 911 should be called where applicable.

H. Removal of Vehicle/Equipment

The Owner may remove or impound, at the owner's expense, any vehicle/equipment which is disabled, abandoned, improperly parked, or represents an operational hazard.

I. Insurance

All vehicles authorized driving privileges on the Airport are required to maintain vehicle liability coverage as established by the contract.

END OF SP-8

SPECIAL PROVISION NO. 9
FEDERAL LABOR AND EEO PROVISIONS
LABOR PROVISIONS FOR CONTRACTS

1.1 Minimum Wages:

1.1.1 All laborers and mechanics employed or working upon the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics, are considered wages paid to such laborers and mechanics, subject to the provisions of Paragraph A.(4) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in Paragraph 1.1.4 of this Special Provision. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: PROVIDED, that the Contractor's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under Paragraph 1.1.2 of this Special Provision) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the Contractor and its Subcontractors at the site of the Work in a prominent and accessible place where it can be easily seen by the workers. (29CFR5.5(a)(1)(i))

1.1.2 The contracting officer shall require that any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the Contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

- (a) The Work to be performed by the classification requested is not performed by a classification in the wage determination; and
- (b) The classification is utilized in the area by the construction industry; and
- (c) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

1.1.3 If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and

wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 30320. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

- 1.1.4 In the event the Contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

The wage rate (including fringe benefits where appropriate) determined pursuant to Paragraphs 1.1.3 and 1.1.4 of this Special Provision, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification. (29CFR5.5(a)(1)(ii))

- 1.1.5 Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the Contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof. (29CFR5.5(a)(1)(iii))
- 1.1.6 If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, PROVIDED, that the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account, assets for the meeting of obligations under the plan or program. (29CFR5.5(a)(1)(iv))

1.2 Withholding:

- 1.2.1 The Federal Aviation Administration (FAA) shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the Contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contractor subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any Subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentices, trainees and helpers, employed by the Contractor or any Subcontractor the full amount of wages required by the Contract, or in the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper employed or working on the site of the Work (or under the United States Housing Act of 1937 or under the Housing Act of 1949) on the construction or development of the

Project), all or part of the wages required by the Contract, the FAA may, after written notice to the Contractor, sponsor, applicant or Owner, take such action as may be necessary to cause the suspension of any further payment, advance or guarantee of funds until such violations have ceased. (29CFR5.5(a)(2))

1.3 Payroll and Basic Records:

1.3.1 Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949, in the construction or development of the project). Such records shall contain the name, address and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (29CFR5.5(a)(3)(i))

1.3.2 The Contractor shall submit weekly for each week in which any Contract Work is performed a copy of all payrolls to the FAA if the FAA is a party to the Contract. The Contractor will submit the payrolls to the applicant, sponsor, or owner, as the case may be, for transmission to the FAA. The payrolls submitted shall set out accurately and completely all of the information required to be contract, but if the agency is not such a party, then maintained under Paragraph 5.5(a)(3)(i) of Regulations 29 CFR Part 5. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal Stock Number 029-005-00014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or its agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

- (a) That the payroll for the payroll period contains the information required to be maintained under Paragraph 5.5(a)(3)(i) of the Regulations, 29 CFR Part 5 and that such information is correct and complete.
- (b) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions

have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR Part 3.

- (c) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph C.(2)(b) of this section.

The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code. (29CFR5.5(a)(3)(ii))

- 1.3.3 The contractor or subcontractor shall make the records required under Paragraph 1.3.1 of this section available for inspection, copying, or transcription by authorized representatives of the FAA or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12. (29CFR5.5(a)(3)(iii))

1.4 Apprentices and Trainees:

- 1.4.1 Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program

for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate acceptable program is approved. (29CFR5.5(a)(4)(i))

1.4.2 Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U. S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid in full benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved. (29CFR5.5(a)(4)(ii))

1.4.3 Equal Employment Opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30. (29CFR5.5(a)(4)(iii))

1.5 Compliance with Copeland Act Requirements: The contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this contract. (29CFR5.5(a)(5))

1.6 Subcontractors: The contractor or subcontractor shall insert in any subcontracts the clauses contained in Paragraphs 1.1 through 1.10 of this Special Provision [29CFR5.5(a)(1) through (10)] and such other clauses as the Federal Aviation Administration may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier

subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5. (29CFR5.5(a)(6))

1.7 Contract Termination: Debarment: A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12. (29CFR5.5(a)(7))

1.8 Compliance with Davis-Bacon and Related Act Requirements: All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1,3 and 5 are herein incorporated by reference in this contract. (29CFR5.5(a)(8))

1.9 Disputes Concerning Labor Standards: Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6 and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U. S. Department of Labor, or the employees or their representatives. (29CFR5.5(a)(9))

1.10 Certification of Eligibility:

1.10.1 By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

1.10.2 No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act CFR 5.12(a)(1).

1.10.3 The penalty for making false statements is prescribed in the U. S. Criminal Code, 18 U.S.C. 1001. (29CFR5.5(a)(10))

1.11 Contract Work Hours and Safety Standards Act: (29CFR5.5(b))

1.11.1 Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

1.11.2 Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in Paragraph 1.11.1 of this Special Provision, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph (1) of this paragraph, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of

the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in Paragraph 1.11.1 of this Special Provision.

1.11.3 Withholding for unpaid wages and liquidated damages. The Federal Aviation Administration shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clauses set forth in Paragraph 1.11.2 of this Special Provision.

1.11.4 Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in Paragraphs 1.11.1 through 1.11.4 of this Special Provision and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in Paragraphs 1.11.1 through 1.11.4 of this Special Provision.

VETERANS PREFERENCE

2.1 ~~In the employment of labor (except in executive, administrative and supervisory positions), the Contractor shall give preference to veterans of the Vietnam era and disabled veterans as defined in Section 515(c)(1) and (2) of the Airport and Airway Improvement Act of 1982.~~

Veteran's Preference shall be included in all contracts for work on any project funded under this grant agreement which involves labor. Such provisions are necessary to insure that, in the employment of labor (except in executive, administrative, and supervisory positions), preference shall be given to Vietnam era veterans, Persian Gulf veterans, Afghanistan-Iraq war veterans, disabled veterans, and small business concerns owned and controlled by disabled veterans as defined in Title 49 United States Code, Section 47112. However, this preference shall apply only where the individuals are available and qualified to perform the work to which the employment relates.

GENERAL WAGE DECISION

3.1 A copy of the current Davis-Bacon Wage Determination applicable to the Project is provided as follows:

**Davis-Bacon Wage Rates
(General Decision County Index 1/4/13)**

General Decision Number: FL130206 01/04/2013 FL206

Superseded General Decision Number: FL20120206

State: Florida

Construction Type: Highway

County: Bay County in Florida.

HIGHWAY CONSTRUCTION PROJECTS

Modification Number Publication Date
0 01/04/2013

SUFL2009-202 08/05/2009

	Rates	Fringes
CARPENTER.....	\$ 13.03	1.05
CEMENT MASON/CONCRETE FINISHER....	\$ 10.06	0.00
ELECTRICIAN.....	\$ 17.12	0.00
FORM WORKER.....	\$ 12.29	0.00
HIGHWAY/PARKING LOT STRIPING: Operator (Striping Machine).....	\$ 11.97	2.23
HIGHWAY/PARKING LOT STRIPING: Painter.....	\$ 13.31	0.00
IRONWORKER, REINFORCING.....	\$ 14.50	1.37
IRONWORKER, STRUCTURAL.....	\$ 16.75	3.88
LABORER: Asphalt Shoveler.....	\$ 10.70	0.00
LABORER: Common or General.....	\$ 8.30	0.00
LABORER: Flagger.....	\$ 10.10	3.37
LABORER: Grade Checker.....	\$ 10.50	0.55
LABORER: Landscape and Irrigation.....	\$ 8.77	0.00
LABORER: Luteman.....	\$ 10.32	0.00
LABORER: Mason Tender - Cement/Concrete.....	\$ 12.00	1.80
LABORER: Pipelayer.....	\$ 12.13	2.59

LABORER: Power Tool Operator (Hand Held Drills/Saws, Jackhammer and Power Saws.....	\$ 11.23	1.96
OPERATOR: Asphalt Plant.....	\$ 12.20	0.00
OPERATOR: Asphalt Spreader.....	\$ 10.76	0.00
OPERATOR: Auger.....	\$ 19.40	0.44
OPERATOR: Backhoe Loader Combo.....	\$ 15.33	0.97
OPERATOR: Backhoe/Excavator.....	\$ 10.70	0.00
OPERATOR: Boom.....	\$ 16.61	0.00
OPERATOR: Bulldozer.....	\$ 14.18	2.56
OPERATOR: Crane.....	\$ 15.50	1.86
OPERATOR: Distributor.....	\$ 11.47	0.00
OPERATOR: Drill.....	\$ 13.00	1.59
OPERATOR: Grader/Blade.....	\$ 15.41	3.60
OPERATOR: Loader.....	\$ 9.66	0.00
OPERATOR: Mechanic.....	\$ 16.20	3.25
OPERATOR: Milling Machine.....	\$ 11.91	1.96
OPERATOR: Oiler.....	\$ 13.08	2.27
OPERATOR: Paver.....	\$ 9.78	0.00
OPERATOR: Piledriver.....	\$ 15.59	4.00
OPERATOR: Roller.....	\$ 8.82	0.00
OPERATOR: Scraper.....	\$ 10.70	1.60
OPERATOR: Screed.....	\$ 11.59	0.00
OPERATOR: Tractor.....	\$ 9.05	0.00
OPERATOR: Trencher.....	\$ 13.41	0.49

PAINTER: Spray and Steel.....\$ 16.62	0.00
TRUCK DRIVER: Distributor.....\$ 11.30	2.26
TRUCK DRIVER: Dump Truck.....\$ 8.66	0.00
TRUCK DRIVER: Lowboy Truck.....\$ 12.19	0.00
TRUCK DRIVER: Material Truck....\$ 12.76	9.80
TRUCK DRIVER: Tractor Haul Truck.....\$ 10.64	0.00
TRUCK DRIVER: Water Truck.....\$ 10.50	0.00
TRUCK DRIVER: 10 Yard Haul Away.....\$ 12.50	0.00

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

=====

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is union or non-union.

Union Identifiers

An identifier enclosed in dotted lines beginning with characters other than "SU" denotes that the union classification and rate have found to be prevailing for that classification. Example: PLUM0198-005 07/01/2011. The first four letters, PLUM, indicate the international union and the four-digit number, 0198, that follows indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2011, following these characters is the effective date of the most current negotiated rate/collective bargaining agreement which would be July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any changes in the collective bargaining agreements governing the rates.

0000/9999: weighted union wage rates will be published annually each January.

Non-Union Identifiers

Classifications listed under an "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007 5/13/2010. SU indicates the rates are not union majority rates, LA indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. A 1993 or later date, 5/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on a wage determination matter
- * a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISION

EQUAL EMPLOYMENT REQUIREMENTS

4.1 Requirement for Certification of Non-segregated Facilities:

4.1.1 Notice to Prospective Construction Contractors:

- (a) The Certification of Non-segregated Facilities contained in the Bid Documents must be submitted with the Bid for a construction contract exceeding Ten Thousand Dollars (\$10,000.00) which is not exempt from the provisions of the Equal Opportunity Clause.
- (b) Contractors receiving contract awards exceeding Ten Thousand Dollars (\$10,000.00) which are not exempt from the provisions of the forwarding of this notice to prospective subcontractors for supplies and construction contracts where the subcontracts exceed Ten Thousand Dollars (\$10,000.00) and are not exempt from the provisions of the Equal Opportunity Clause.

4.1.2 Notice to Prospective Subcontractors of Requirement for Certification of Non-segregated Facilities:

- (a) A Certification of Non-segregated Facilities must be submitted prior to the award of a subcontract exceeding Ten Thousand Dollars (\$10,000.00) which is not exempt from the provisions of the Equal Opportunity Clause.
- (b) The Certification of Non-segregated Facilities Form is located in the Bid Package of the Contract Documents.

4.2.1 Standard Federal Equal Employment Construction Contract Specifications (Executive Order 11246, as amended):

.1 As used in these specifications:

- (a) "Covered area" means the geographical area described in the solicitation from which this contract resulted;

- (b) "Director" means Director, Office of Federal Contract Compliance Programs (OFCCP), U.S. Department of Labor, or any person to whom the Director delegates authority;
- (c) "Employer identification number" means the federal social security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941;
- (d) "Minorities" includes:
 - (1) Black (all persons having origins in any of the black African racial groups not of Hispanic origin);
 - (2) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin regardless of race);
 - (3) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - (4) American Indian or Alaskan native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

4.2.2 Whenever the Contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of Ten Thousand Dollars (\$10,000.00) the provisions of these specifications and the notice which contains the applicable goals for minority and women participation and which is set forth in the solicitations from which this contract resulted.

4.2.3 If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the plan area (including goals and timetables) shall be in accordance with that plan for those trades which have unions participating in the plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each contractor or subcontractor participating in an approved plan is individually required to comply with its obligations under the EEO clause and to make a good faith effort to achieve each goal under the plan in each trade which it has employees. The overall good faith performance by other contractors or subcontractors toward a goal in an approved plan does not excuse any covered contractor's or subcontractor's failure to take good faith efforts to achieve the plan goals and timetables.

4.2.4 The Contractor shall implement the specific affirmative action standards provided in Paragraphs 4.2.7.1 through 4.2.7.16 of this Special Provision. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and women utilization the Contractor should

reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction contractors performing construction work in geographical areas where they do not have a federal or federally assisted construction contract shall apply the minority and women goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Federal Contract Compliance Programs office or from Federal Procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

4.2.5 Neither the provisions of any collective bargaining agreement nor the failure by a union with whom the Contractor has a collective bargaining agreement to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, as amended, or the regulations promulgated pursuant thereto.

4.2.6 In order for the non-working training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

4.2.7 The Contractor shall take specific affirmative actions to ensure EEO. The evaluation of the Contractor's compliance with these specifications shall be based upon its efforts to achieve maximum results from its actions. The Contractor shall document these efforts fully and shall implement affirmative action steps at least as extensive as the following:

1. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minorities or women individuals working at such sites or in such facilities.
2. Establish and maintain a current list of minority and women recruitment sources, provide written notification to minority and women recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organization's responses.
3. Maintain a current file of the names, addresses and telephone numbers of each minority and women off-the-street applicant and minority or women referral from a union, a recruitment source, a community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefore along with whatever additional actions the Contractor may have taken.

4. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.
5. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly includes minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under Paragraph 4.2.7.2 of this Special Provision.
6. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and women employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
7. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as superintendents, general foremen, etc., prior to the initiation of construction work at any jobsite. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
8. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and women news media, and providing written notification to and discussing the Contractor's EEO policy with other contractors and subcontractors with whom the Contractor does or anticipates doing business.
9. Direct its recruitment efforts, both oral and written, to minority, women and community organizations, to schools with minority and women students; and to minority and women recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one (1) month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations, such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
10. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and

vacation employment to minority and women youth, both on the site and in other areas of a contractor's work force.

11. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
12. Conduct, at least annually, an inventory and evaluation, at least of all minority and women personnel, for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
13. Ensure that seniority practices, job classifications, work assignments, and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
14. Ensure that all facilities and company activities are non-segregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
15. Document and maintain a record of all solicitations of offers for subcontractors from minority and women construction contractors and suppliers, including circulation of solicitations to minority and women contractor associations and other business associations.
16. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

4.2.8 Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (Paragraphs 4.2.7 through 4.2.7.16 of this Special Provision). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar groups of which the Contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under Paragraphs 4.2.7 through 4.2.7.16 of this Special Provision of these specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female work force participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's--failure of such a group to fulfill an obligation shall not be a defense for the Contractor's non-compliance.

4.2.9 A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide EEO and to make affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor

has achieved its goal for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is under-utilized).

- 4.2.10 The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex or national origin.
- 4.2.11 The Contractor shall not enter into any subcontract with any person or firm debarred from government contracts pursuant to Executive Order 11246, as amended.
- 4.2.12 The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination, and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the OFCCP. Any contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.
- 4.2.13 The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in Paragraph 4.2.7 of this Special Provision, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
- 4.2.14 The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the government, and to keep records. Records shall at least include for each employee, the name, address, telephone number, construction trade, union affiliation, if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice, trainee, helper or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.
- 4.2.15 Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Grant Program).

4.3 Contractor Contractual Requirements:

During the performance of this contract, the Contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "Contractor") agrees as follows:

- 4.3.1 Compliance with Regulations: The Contractor shall comply with the Regulations relative to non-discrimination in federally assisted programs of the Department of Transportation (hereinafter, "DOT") Title 49, Code of Federal Regulations, Part 21, as they may be amended

from time-to-time (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this Contract.

- 4.3.2 Non-discrimination: The Contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor shall not participate either directly or indirectly in the discrimination prohibited by Section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.
- 4.3.3 Solicitations for Subcontracts, including Procurement of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the Contractor of the Contractor's obligation under this Contract and the Regulations relative to non-discrimination on the grounds of race, color or national origin.
- 4.3.4 Information and Reports: The Contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the sponsor or the Federal Aviation Administration (FAA) to be pertinent to ascertain compliance with such regulations, orders and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information, the Contractor shall so certify to the sponsor or the FAA, as appropriate, and shall set forth what efforts it has made to obtain the information.
- 4.3.5 Sanctions for Non-compliance: In the event of the Contractor's non-compliance with the non-discrimination provisions of this contract, the sponsor shall impose such contract sanctions as it or the FAA may determine to be appropriate, including but not limited to:
- .1 Withholding of payments to the Contractor under the Contract until the Contractor complies, and/or
 - .2 Cancellation, termination or suspension of the Contract, in whole or in part.
- 4.3.6 Incorporation of Provisions: The Contractor shall include the provisions of Paragraphs 4.2 through 4.7 of this Special Provision in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations or directives issued pursuant thereto. The Contractor shall take such action with respect to any subcontract or procurement as the sponsor or the FAA may direct as a means of enforcing such provisions including, sanctions for non-compliance. Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a Subcontractor or supplier as a result of such direction, the Contractor may request the sponsor to enter into such litigation to protect the interests of the sponsor and, in addition, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.
- 4.4 Equal Employment Opportunity Clause:

During the performance of this Contract the Contractor agrees as follows:

- 4.4.1 The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin. The Contractor will take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their race, color, religion, sex or national origin. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination, rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places available to employees and applicants for employment, notices (see Paragraph 15.4) setting forth the provisions of this nondiscrimination clause.
- 4.4.2 The Contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.
- 4.4.3. The contractor will send, to each labor union or representative of workers with which he had a collective bargaining agreement or other contract or understanding, a notice (see Section 4.5) advising that said labor union or workers' representatives of the contractor's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
- 4.4.4. The contractor will comply with all provisions of Executive Order 11246, as amended, of September 24, 1965, and of the rules, regulations and relevant orders of the Secretary of Labor.
- 4.4.5. The contractor will furnish all information and reports required by Executive Order 11246, as amended, of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the FAA and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders.**
- 4.4.6. In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled; terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246, as amended, of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246, as amended, of September 24, 1965, or by rule, regulation, or order of the Secretary of State, or as otherwise provided by law.
- 4.4.7. The contractor will include the portion of the sentence immediately preceding paragraph 1 and the provisions of paragraphs 1 through 7 in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246, as amended, of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontractor or purchase order as the FAA may direct as a means of enforcing such provisions, including sanctions for noncompliance: provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the FAA, the contractor may

request the United States to enter into such litigation to protect the interests 'of the United States.

4.5 Notices to be Posted:

The "Equal Employment Opportunity is the Law" poster is to be posted by the Contractor in a conspicuous place available to employees and applicants for employment as required by Paragraphs 4.2 and 4.4 of this Special Provision of the EEO Clause. Copies of this poster will be furnished to contractors at the pre-construction conference.

4.6 Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246), as Amended:

4.6.1 The Contractor's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

4.6.2 The goals and timetables for minority and women participation, expressed in percentage terms for the Contractor's aggregate work force in each trade on all construction work in the covered area are as follows:

Timetables:

**Goal for DBE
Participation
6.92%**

These goals are applicable to all the Contractor's construction work (whether or not it is federal or federally assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its federally involved and non-federally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and women employment and training must be substantially uniform throughout the length of the Contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor-to-contractor or from project-to-project, for the sole purpose of meeting the Contractor's goals, shall be a violation of the Contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

4.6.3 The Contractor shall provide written notification to the Director, OFCCP, within ten (10) working days of award of any construction subcontract in excess of Ten Thousand Dollars (\$10,000.00) at any tier of construction work under the Contract resulting from this solicitation. The notification shall list the name, address, telephone number of the Subcontractor; employer identification number of the Subcontractor; estimated dollar

amount of the subcontracts; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

4.7 Required Reports:

4.7.1 **Annual EEO-1 Report:** Contractors/Subcontractors working on federally assisted airport construction projects are required to file annually, on or before March 31st, complete and accurate reports on Standard Form 100 (Employee Information Report, EEO-1). The first such report is required within thirty (30) days after award unless the Contractor/Subcontractor has submitted such a report within twelve (12) months preceding the date of award (the FAA or Department of Labor OFCCP can designate other intervals). This form is normally furnished based on a mailing list, but can be obtained from the Joint Reporting Committee, 1800 G Street, N.W., Washington, D.C. 20506. This report is required if a contractor or subcontractor meets all of the following conditions:

- .1 Non-exempt: Contractors/subcontractors are not exempt based on 41 CFR 60-1.5, and
- .2 Number of Employees: Has fifty (50) or more employees, and
- .3 Contractor/Subcontractor: Is a prime contractor or first tier subcontractor, and
- .4 Dollar Level: There is a contract, subcontract or purchase order amounting to Fifty Thousand Dollars (\$50,000.00) or more or serves as a depository of government funds in any amount, or is a financial institution which is an issuing and paying agent for U.S. savings bonds and savings notes. Some subcontractors below the first tier who work at the site are required to file if they meet the requirements of 41 CFR 60-1.7.

4.7.2 **Records:** The FAA or Department of Labor OFCCP may require a contractor to keep employment or other records and to furnish, in the form requested within reasonable limits, such information as necessary.

4.8 MBE Required Statements

4.8.1 **Policy.** It is the policy of the Department of Transportation that minority business enterprises as defined in 49 CFR Part 26 shall have the maximum opportunity to participate in the performance of contracts financed in whole or in part with Federal funds under this agreement. Consequently, the MBE requirements of 49 CFR Part 26 apply to this agreement.

4.8.2 **MBE Obligation.** The recipient or its contractor agrees to ensure that minority business enterprises as defined in 49 CFR Part 26 have the maximum opportunity to participate in the performance of contracts financed in whole or in part with Federal funds provided under this agreement. In this regard all recipients or contractors shall take all necessary and reasonable steps in accordance with 49 CFR Part 26 to ensure that minority business enterprises have the maximum opportunity to compete for and perform contracts. Recipients and their contractors shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of DOT-assisted contracts.

5. Contract Assurance Required by 49 CFR Part 26

The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the owner deems appropriate.

END OF SPECIAL PROVISION NO. 9

TECHNICAL SPECIFICATIONS

ITEM C-100

CONTRACTOR QUALITY CONTROL PROGRAM (CQCP)

ITEM C-100, "CONTRACTOR QUALITY CONTROL PROGRAM (CQCP)" is a technical specification contained in Federal Aviation Administration Advisory Circular – 150/5370-10H, "Standard Specifications for Construction of Airports."

This item has been modified to make allowances for local materials, methods and requirements. This item has been updated and modified to comply with the latest editions of other applicable codes, from knowledge gained on other airport construction projects and valuable lessons learned from airport maintenance staffs.

Deletions are noted by the ~~striketrough~~ method.

Changes and additions are noted by the ***bold italic*** method.

ITEM C-100

CONTRACTOR QUALITY CONTROL PROGRAM (CQCP)

100-1 General. Quality is more than test results. Quality is the combination of proper materials, testing, workmanship, equipment, inspection, and documentation of the project. Establishing and maintaining a culture of quality is key to achieving a quality project. The Contractor shall establish, provide, and maintain an effective Contractor Quality Control Program (CQCP) that details the methods and procedures that will be taken to assure that all materials and completed construction required by this contract conform to contract plans, technical specifications and other requirements, whether manufactured by the Contractor, or procured from subcontractors or vendors. Although guidelines are established and certain minimum requirements are specified here and elsewhere in the contract technical specifications, the Contractor shall assume full responsibility for accomplishing the stated purpose.

The Contractor shall establish a CQCP that will:

- a. Provide qualified personnel to develop and implement the CQCP.
- b. Provide for the production of acceptable quality materials.
- c. Provide sufficient information to assure that the specification requirements can be met.
- d. Document the CQCP process.

The Contractor shall not begin any construction or production of materials to be incorporated into the completed work until the CQCP has been reviewed and approved by the Resident Project Representative (RPR). No partial payment will be made for materials subject to specific quality control (QC) requirements until the CQCP has been reviewed and approved.

The QC requirements contained in this section and elsewhere in the contract technical specifications are in addition to and separate from the quality assurance (QA) testing requirements. QA testing requirements are the responsibility of the RPR or Contractor as specified in the specifications.

A Quality Control (QC)/Quality Assurance (QA) workshop with the Engineer, Resident Project Representative (RPR), Contractor, subcontractors, testing laboratories, and Owner's representative must be held prior to start of construction. The QC/QA workshop will be facilitated by the Contractor. The Contractor shall coordinate with the Airport and the RPR on time and location of the QC/QA workshop. Items to be addressed, at a minimum, will include:

- a. Review of the CQCP including submittals, QC Testing, Action & Suspension Limits for Production, Corrective Action Plans, Distribution of QC reports, and Control Charts.
- b. Discussion of the QA program.
- c. Discussion of the QC and QA Organization and authority including coordination and information exchange between QC and QA.
- d. Establish regular meetings to discuss control of materials, methods and testing.

- e. Establishment of the overall QC culture.

100-2 Description of program.

- a. **General description.** The Contractor shall establish a CQCP to perform QC inspection and testing of all items of work required by the technical specifications, including those performed by subcontractors. The CQCP shall ensure conformance to applicable specifications and plans with respect to materials, off-site fabrication, workmanship, construction, finish, and functional performance. The CQCP shall be effective for control of all construction work performed under this Contract and shall specifically include surveillance and tests required by the technical specifications, in addition to other requirements of this section and any other activities deemed necessary by the Contractor to establish an effective level of QC.
- b. **Contractor Quality Control Program (CQCP).** The Contractor shall describe the CQCP in a written document that shall be reviewed and approved by the RPR prior to the start of any production, construction, or off-site fabrication. The written CQCP shall be submitted to the RPR for review and approval at least 10 calendar days before the CQCP Workshop. The Contractor's CQCP and QC testing laboratory must be approved in writing by the RPR prior to the Notice to Proceed (NTP).

The CQCP shall be organized to address, as a minimum, the following:

1. QC organization and resumes of key staff
2. Project progress schedule
3. Submittals schedule
4. Inspection requirements
5. QC testing plan
6. Documentation of QC activities and distribution of QC reports
7. Requirements for corrective action when QC and/or QA acceptance criteria are not met
8. Material quality and construction means and methods. Address all elements applicable to the project that affect the quality of the pavement structure including subgrade, subbase, base, and surface course. Some elements that must be addressed include, but is not limited to mix design, aggregate grading, stockpile management, mixing and transporting, placing and finishing, quality control testing and inspection, smoothness, laydown plan, equipment, and temperature management plan.

The Contractor must add any additional elements to the CQCP that is necessary to adequately control all production and/or construction processes required by this contract.

100-3 CQCP organization. The CQCP shall be implemented by the establishment of a QC organization. An organizational chart shall be developed to show all QC personnel, their authority, and how these personnel integrate with other management/production and construction functions and personnel.

The organizational chart shall identify all QC staff by name and function, and shall indicate the total staff required to implement all elements of the CQCP, including inspection and testing for each item of work. If necessary, different technicians can be used for specific inspection and testing functions for different items of work. If an outside organization or independent testing laboratory is used for implementation of all or part of the CQCP, the personnel assigned shall be subject to the qualification requirements of paragraphs 100-03a and 100-03b. The organizational chart shall indicate which personnel are Contractor employees and which are provided by an outside organization.

The QC organization shall, as a minimum, consist of the following personnel:

- a. **Program Administrator.** The Contractor Quality Control Program Administrator (CQCPA) must be a full-time employee of the Contractor, or a consultant engaged by the Contractor. The CQCPA must have a minimum of five (5) years of experience in QC pavement construction with prior QC experience on a project of comparable size and scope as the contract.

Included in the five (5) years of paving/QC experience, the CQCPA must meet at least one of the following requirements:

- (1) Professional Engineer with one (1) year of airport paving experience.
- (2) Engineer-in-training with two (2) years of airport paving experience.
- (3) National Institute for Certification in Engineering Technologies (NICET) Civil Engineering Technology Level IV with three (3) years of airport paving experience.
- (4) An individual with four (4) years of airport paving experience, with a Bachelor of Science Degree in Civil Engineering, Civil Engineering Technology or Construction.

The CQCPA must have full authority to institute any and all actions necessary for the successful implementation of the CQCP to ensure compliance with the contract plans and technical specifications. The CQCPA authority must include the ability to immediately stop production until materials and/or processes are in compliance with contract specifications. The CQCPA must report directly to a principal officer of the construction firm. The CQCPA may supervise the Quality Control Program on more than one project provided that person can be at the job site within two (2) hours after being notified of a problem.

- b. **QC technicians.** A sufficient number of QC technicians necessary to adequately implement the CQCP must be provided. These personnel must be either Engineers, engineering technicians, or experienced craftsman with qualifications in the appropriate field equivalent to NICET Level II in Civil Engineering Technology or higher, and shall have a minimum of two (2) years of experience in their area of expertise.

The QC technicians must report directly to the CQCPA and shall perform the following functions:

- (1) Inspection of all materials, construction, plant, and equipment for conformance to the technical specifications, and as required by paragraph 100-6.
- (2) Performance of all QC tests as required by the technical specifications and paragraph 100-8.

(3) Performance of tests for the RPR when required by the technical specifications.

Certification at an equivalent level of qualification and experience by a state or nationally recognized organization will be acceptable in lieu of NICET certification.

- c. **Staffing levels.** The Contractor shall provide sufficient qualified QC personnel to monitor each work activity at all times. Where material is being produced in a plant for incorporation into the work, separate plant and field technicians shall be provided at each plant and field placement location. The scheduling and coordinating of all inspection and testing must match the type and pace of work activity. The CQCP shall state where different technicians will be required for different work elements.

100-4 Project progress schedule. Critical QC activities must be shown on the project schedule as required by Section 80, paragraph 80-03, *Execution and Progress*.

100-5 Submittals schedule. The Contractor shall submit a detailed listing of all submittals (for example, mix designs, material certifications) and shop drawings required by the technical specifications. The listing can be developed in a spreadsheet format and shall include as a minimum:

- a. Specification item number
- b. Item description
- c. Description of submittal
- d. Specification paragraph requiring submittal
- e. Scheduled date of submittal

100-6 Inspection requirements. QC inspection functions shall be organized to provide inspections for all definable features of work, as detailed below. All inspections shall be documented by the Contractor as specified by paragraph 100-9.

Inspections shall be performed as needed to ensure continuing compliance with contract requirements until completion of the particular feature of work. Inspections shall include the following minimum requirements:

- a. During plant operation for material production, QC test results and periodic inspections shall be used to ensure the quality of aggregates and other mix components, and to adjust and control mix proportioning to meet the approved mix design and other requirements of the technical specifications. All equipment used in proportioning and mixing shall be inspected to ensure its proper operating condition. The CQCP shall detail how these and other QC functions will be accomplished and used.
- b. During field operations, QC test results and periodic inspections shall be used to ensure the quality of all materials and workmanship. All equipment used in placing, finishing, and compacting shall be inspected to ensure its proper operating condition and to ensure that all such operations are in conformance to the technical specifications and are within the plan dimensions, lines, grades,

and tolerances specified. The CQCP shall document how these and other QC functions will be accomplished and used.

100-7 Contractor QC testing facility.

- a. For projects that include Item P-401, Item P-403, and Item P-404, the Contractor shall ensure facilities, including all necessary equipment, materials, and current reference standards, are provided that meet requirements in the following paragraphs of ASTM D3666, *Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials*:
 - 8.1.3 Equipment Calibration and Checks;
 - 8.1.9 Equipment Calibration, Standardization, and Check Records;
 - 8.1.12 Test Methods and Procedures
- b. For projects that include P-501, the Contractor shall ensure facilities, including all necessary equipment, materials, and current reference standards, are provided that meet requirements in the following paragraphs of ASTM C1077, *Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation*:
 - 7 Test Methods and Procedures
 - 8 Facilities, Equipment, and Supplemental Procedures

100-8 QC testing plan. As a part of the overall CQCP, the Contractor shall implement a QC testing plan, as required by the technical specifications. The testing plan shall include the minimum tests and test frequencies required by each technical specification Item, as well as any additional QC tests that the Contractor deems necessary to adequately control production and/or construction processes.

The QC testing plan can be developed in a spreadsheet fashion and shall, as a minimum, include the following:

- a. Specification item number (e.g., P-401)
- b. Item description (e.g., Hot Mix Asphalt Pavements)
- c. Test type (e.g., gradation, grade, asphalt content)
- d. Test standard (e.g., ASTM or American Association of State Highway and Transportation Officials (AASHTO) test number, as applicable)
- e. Test frequency (e.g., as required by technical specifications or minimum frequency when requirements are not stated)
- f. Responsibility (e.g., plant technician)
- g. Control requirements (e.g., target, permissible deviations)

The QC testing plan shall contain a statistically-based procedure of random sampling for acquiring test samples in accordance with ASTM D3665. The RPR shall be provided the opportunity to witness QC sampling and testing.

All QC test results shall be documented by the Contractor as required by paragraph 100-9.

100-9 Documentation. The Contractor shall maintain current QC records of all inspections and tests performed. These records shall include factual evidence that the required QC inspections or tests have been performed, including type and number of inspections or tests involved; results of inspections or tests; nature of defects, deviations, causes for rejection, etc.; proposed remedial action; and corrective actions taken.

These records must cover both conforming and defective or deficient features, and must include a statement that all supplies and materials incorporated in the work are in full compliance with the terms of the contract. Legible copies of these records shall be furnished to the RPR daily. The records shall cover all work placed subsequent to the previously furnished records and shall be verified and signed by the COCPA.

Contractor QC records required for the contract shall include, but are not necessarily limited to, the following records:

- a. **Daily inspection reports.** Each Contractor QC technician shall maintain a daily log of all inspections performed for both Contractor and subcontractor operations. These technician's daily reports shall provide factual evidence that continuous QC inspections have been performed and shall, as a minimum, include the following:
 - (1) Technical specification item number and description
 - (2) Compliance with approved submittals
 - (3) Proper storage of materials and equipment
 - (4) Proper operation of all equipment
 - (5) Adherence to plans and technical specifications
 - (6) Summary of any necessary corrective actions
 - (7) Safety inspection.
 - (8) [Photographs and/or video]

The daily inspection reports shall identify all QC inspections and QC tests conducted, results of inspections, location and nature of defects found, causes for rejection, and remedial or corrective actions taken or proposed.

The daily inspection reports shall be signed by the responsible QC technician and the COCPA. The RPR shall be provided at least one copy of each daily inspection report on the work day following

the day of record. When QC inspection and test results are recorded and transmitted electronically, the results must be archived.

b. **Daily test reports.** The Contractor shall be responsible for establishing a system that will record all QC test results. Daily test reports shall document the following information:

- (1) Technical specification item number and description
- (2) Test designation
- (3) Location
- (4) Date of test
- (5) Control requirements
- (6) Test results
- (7) Causes for rejection
- (8) Recommended remedial actions
- (9) Retests

Test results from each day's work period shall be submitted to the RPR prior to the start of the next day's work period. When required by the technical specifications, the Contractor shall maintain statistical QC charts. When QC daily test results are recorded and transmitted electronically, the results must be archived.

100-10 Corrective action requirements. The CQCP shall indicate the appropriate action to be taken when a process is deemed, or believed, to be out of control (out of tolerance) and detail what action will be taken to bring the process into control. The requirements for corrective action shall include both general requirements for operation of the CQCP as a whole, and for individual items of work contained in the technical specifications.

The CQCP shall detail how the results of QC inspections and tests will be used for determining the need for corrective action and shall contain clear rules to gauge when a process is out of control and the type of correction to be taken to regain process control.

When applicable or required by the technical specifications, the Contractor shall establish and use statistical QC charts for individual QC tests. The requirements for corrective action shall be linked to the control charts.

100-11 Inspection and/or observations by the RPR. All items of material and equipment are subject to inspection and/or observation by the RPR at the point of production, manufacture or shipment to determine if the Contractor, producer, manufacturer or shipper maintains an adequate QC system in conformance with the requirements detailed here and the applicable technical specifications and plans. In addition, all items of materials, equipment and work in place shall be subject to inspection and/or observation by the RPR at the site for the same purpose.

Inspection and/or observations by the RPR does not relieve the Contractor of performing QC inspections of either on-site or off-site Contractor's or subcontractor's work.

100-12 Noncompliance.

- a. The Resident Project Representative (RPR) will provide written notice to the Contractor of any noncompliance with their CQCP. After receipt of such notice, the Contractor must take corrective action.
- b. When QC activities do not comply with either the CQCP or the contract provisions or when the Contractor fails to properly operate and maintain an effective CQCP, and no effective corrective actions have been taken after notification of non-compliance, the RPR will recommend the Owner take the following actions:
 - (1) Order the Contractor to replace ineffective or unqualified QC personnel or subcontractors and/or
 - (2) Order the Contractor to stop operations until appropriate corrective actions are taken.

METHOD OF MEASUREMENT

100-13 Basis of measurement and payment. Not Used

BASIS OF PAYMENT

100-14 Payment will be made under:

There is no separate payment for this item. This shall be incidental to the cost of Pay Item C-105-1 Mobilization.

REFERENCES

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

National Institute for Certification in Engineering Technologies (NICET)

ASTM International (ASTM)

- | | |
|------------|--|
| ASTM C1077 | Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation |
| ASTM D3665 | Standard Practice for Random Sampling of Construction Materials |
| ASTM D3666 | Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials |

END OF ITEM C-100

ITEM C-102

TEMPORARY AIR AND WATER POLLUTION, SOIL EROSION, AND SILTATION CONTROL

ITEM C-102, "TEMPORARY AIR AND WATER POLLUTION SOIL EROSION, AND SILTATION CONTROL" is a technical specification contained in Federal Aviation Administration Advisory Circular – 150/5370-10H, "Standard Specifications for Construction of Airports."

This item has been modified to make allowances for local materials, methods and requirements. This item has been updated and modified to comply with the latest editions of other applicable codes, from knowledge gained on other airport construction projects and valuable lessons learned from airport maintenance staffs.

Deletions are noted by the ~~striketrough~~ method.

Changes and additions are noted by the ***bold italic*** method.

SP-01

TEMPORARY AIR AND WATER POLLUTION, SOIL EROSION, AND SILTATION CONTROL

DESCRIPTION

102-1.1 This item shall consist of temporary control measures as shown on the plans or as ordered by the Resident Project Representative (RPR) during the life of a contract to control pollution of air and water, soil erosion, and siltation through the use of silt fences, berms, dikes, dams, sediment basins, fiber mats, gravel, mulches, grasses, slope drains, and other erosion control devices or methods.

Temporary erosion control shall be in accordance with the approved erosion control plan; the approved Construction Safety and Phasing Plan (CSPP) and AC 150/5370-2, *Operational Safety on Airports During Construction*. The temporary erosion control measures contained herein shall be coordinated with the permanent erosion control measures specified as part of this contract to the extent practical to assure economical, effective, and continuous erosion control throughout the construction period.

Temporary control may include work outside the construction limits such as borrow pit operations, equipment and material storage sites, waste areas, and temporary plant sites.

Temporary control measures shall be designed, installed and maintained to minimize the creation of wildlife attractants that have the potential to attract hazardous wildlife on or near public-use airports.

MATERIALS

102-2.1 Grass. Grass that will not compete with the grasses sown later for permanent cover per Item T-901 shall be a quick-growing species (such as ryegrass, Italian ryegrass, or cereal grasses) suitable to the area providing a temporary cover. Selected grass species shall not create a wildlife attractant.

102-2.2 Mulches. Mulches may be hay, straw, fiber mats, netting, bark, wood chips, or other suitable material reasonably clean and free of noxious weeds and deleterious materials per Item T-908. Mulches shall not create a wildlife attractant.

102-2.3 Fertilizer. Fertilizer shall be a standard commercial grade and shall conform to all federal and state regulations and to the standards of the Association of Official Agricultural Chemists.

102-2.4 Slope drains. Slope drains may be constructed of pipe, fiber mats, rubble, concrete, asphalt, or other materials that will adequately control erosion.

102-2.5 Silt fence. Silt fence shall consist of polymeric filaments which are formed into a stable network such that filaments retain their relative positions. Synthetic filter fabric shall contain ultraviolet ray inhibitors and stabilizers to provide a minimum of six months of expected usable construction life. Silt fence shall meet the requirements of ASTM D6461.

102-2.6 Other. All other materials shall meet commercial grade standards and shall be approved by the RPR before being incorporated into the project.

CONSTRUCTION REQUIREMENTS

102-3.1 General. In the event of conflict between these requirements and pollution control laws, rules, or regulations of other federal, state, or local agencies, the more restrictive laws, rules, or regulations shall apply.

The RPR shall be responsible for assuring compliance to the extent that construction practices, construction operations, and construction work are involved.

102-3.2 Schedule. Prior to the start of construction, the Contractor shall submit schedules in accordance with the approved Construction Safety and Phasing Plan (CSPP) and the plans for accomplishment of temporary and permanent erosion control work for clearing and grubbing; grading; construction; paving; and structures at watercourses. The Contractor shall also submit a proposed method of erosion and dust control on haul roads and borrow pits and a plan for disposal of waste materials. Work shall not be started until the erosion control schedules and methods of operation for the applicable construction have been accepted by the RPR.

102-3.3 Construction details. The Contractor will be required to incorporate all permanent erosion control features into the project at the earliest practicable time as outlined in the plans and approved CSPP. Except where future construction operations will damage slopes, the Contractor shall perform the permanent seeding and mulching and other specified slope protection work in stages, as soon as substantial areas of exposed slopes can be made available. Temporary erosion and pollution control measures will be used to correct conditions that develop during construction that were not foreseen during the design stage; that are needed prior to installation of permanent control features; or that are needed temporarily to control erosion that develops during normal construction practices, but are not associated with permanent control features on the project.

Where erosion may be a problem, schedule and perform clearing and grubbing operations so that grading operations and permanent erosion control features can follow immediately if project conditions permit. Temporary erosion control measures are required if permanent measures cannot immediately follow grading operations. The RPR shall limit the area of clearing and grubbing, excavation, borrow, and embankment operations in progress, commensurate with the Contractor's capability and progress in keeping the finish grading, mulching, seeding, and other such permanent control measures current with the accepted schedule. If seasonal limitations make such coordination unrealistic, temporary erosion control measures shall be taken immediately to the extent feasible and justified as directed by the RPR.

The Contractor shall provide immediate permanent or temporary pollution control measures to minimize contamination of adjacent streams or other watercourses, lakes, ponds, or other areas of water impoundment as directed by the RPR. If temporary erosion and pollution control measures are required due to the Contractor's negligence, carelessness, or failure to install permanent controls as a part of the work as scheduled or directed by the RPR, the work shall be performed by the Contractor and the cost shall be incidental to this item.

The RPR may increase or decrease the area of erodible earth material that can be exposed at any time based on an analysis of project conditions.

The erosion control features installed by the Contractor shall be maintained by the Contractor during the construction period.

Provide temporary structures whenever construction equipment must cross watercourses at frequent intervals. Pollutants such as fuels, lubricants, bitumen, raw sewage, wash water from concrete mixing operations, and other harmful materials shall not be discharged into any waterways, impoundments or into natural or manmade channels.

102-3.4 Installation, maintenance and removal of silt fence. Silt fences shall extend a minimum of 16 inches (41 cm) and a maximum of 34 inches (86 cm) above the ground surface. Posts shall be set no more than 10 feet (3 m) on center. Filter fabric shall be cut from a continuous roll to the length required minimizing joints where possible. When joints are necessary, the fabric shall be spliced at a support post with a minimum 12-inch (300-mm) overlap and securely sealed. A trench shall be excavated approximately 4 inches (100 mm) deep by 4 inches (100 mm) wide on the upslope side of the silt fence. The trench shall be backfilled and the soil compacted over the silt fence fabric. The Contractor shall remove and dispose of silt that accumulates during construction and prior to establishment of permanent erosion control. The fence shall be maintained in good working condition until permanent erosion control is established. Silt fence shall be removed upon approval of the RPR.

METHOD OF MEASUREMENT

102-4.1 Temporary erosion and pollution control work required will be performed as scheduled or directed by the RPR. Completed and accepted work will be measured as follows:

- ~~a. Temporary seeding and mulching will be measured by the square yard (square meter).~~
- ~~b. Temporary slope drains will be measured by the linear foot (meter).~~
- ~~c. Temporary benches, dikes, dams, and sediment basins will be measured by the cubic yard (cubic meter) of excavation performed, including necessary cleaning of sediment basins, and the cubic yard (cubic meter) of embankment placed as directed by the RPR.~~
- ~~d. All fertilizing will be measured by the ton (kg).~~
- ~~e. Installation and removal of silt fence will be measured by the Lump sum.~~

Temporary erosion control shall be a lump sum item and measured based on percentage of completion of the project.

102-4.2 Control work performed for protection of construction areas outside the construction limits, such as borrow and waste areas, haul roads, equipment and material storage sites, and temporary plant sites, will not be measured and paid for directly but shall be considered as a subsidiary obligation of the Contractor.

BASIS OF PAYMENT

102-5.1 Accepted quantities of temporary water pollution, soil erosion, and siltation control work ordered by the RPR and measured as provided in paragraph 102-4.1 will be paid for under:

- ~~Item C-102-5.1a Temporary seeding and mulching per square yard (square meter)~~
- ~~Item C-102-5.1b Temporary slope drains per linear foot (meter)~~

Item C-102-5.1c	Temporary benches, dikes, dams and sediment basins	per cubic yard (cubic meter)
Item C-102-5.1d	Fertilizing	per ton (kg)
Item C-102-5.1e	Installation and removal of silt fence	lump sum
Item C-102-1	Erosion & Pollution Control	- per Lump Sum (LS)

Where other directed work falls within the specifications for a work item that has a contract price, the units of work shall be measured and paid for at the contract unit price bid for the various items.

Temporary control features not covered by contract items that are ordered by the RPR will be paid for in accordance with Section 90, paragraph 90-05 *Payment for Extra Work*.

REFERENCES

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

Advisory Circulars (AC)

AC 150/5200-33 *Hazardous Wildlife Attractants on or Near Airports*

AC 150/5370-2 *Operational Safety on Airports During Construction*

ASTM International (ASTM)

ASTM D6461 *Standard Specification for Silt Fence Materials*

United States Department of Agriculture (USDA)

FAA/USDA Wildlife Hazard Management at Airports, A Manual for Airport Personnel

END OF ITEM C-102

ITEM C-105

MOBILIZATION

ITEM C-105, "MOBILIZATION" is a technical specification contained in Federal Aviation Administration Advisory Circular – 150/5370-10H, "Standard Specifications for Construction of Airports."

This item has been modified to make allowances for local materials, methods and requirements. This item has been updated and modified to comply with the latest editions of other applicable codes, from knowledge gained on other airport construction projects and valuable lessons learned from airport maintenance staffs.

Deletions are noted by the ~~strike through~~ method.

Changes and additions are noted by the ***bold italic*** method.

ITEM C-105

MOBILIZATION

DESCRIPTION

105-1.1 This item of work shall consist of, but is not limited to, work and operations necessary for the movement of personnel, equipment, material and supplies to and from the project site for work on the project except as provided in the contract as separate pay items.

MOBILIZATION LIMIT

105-2.1 Mobilization shall be limited to 10 percent of the total project cost.

POSTED NOTICES

105-3.1 Prior to commencement of construction activities, the Contractor must post the following documents in a prominent and accessible place where they may be easily viewed by all employees of the prime Contractor and by all employees of subcontractors engaged by the prime Contractor: Equal Employment Opportunity (EEO) Poster "Equal Employment Opportunity is the Law" in accordance with the Office of Federal Contract Compliance Programs Executive Order 11246, as amended; Davis Bacon Wage Poster (WH 1321) - DOL "Notice to All Employees" Poster; and Applicable Davis-Bacon Wage Rate Determination. These notices must remain posted until final acceptance of the work by the Owner.

ENGINEER/RPR FIELD OFFICE

105-4.1 An Engineer/RPR field office is not required.

MEETHOD OF MEASUREMENT

105-5.1 Based upon the contract lump sum price for "Mobilization" partial payments will be allowed as follows:

- a. With first pay request, 25%.
- b. When 25% or more of the original contract is earned, an additional 25%.
- c. When 50% or more of the original contract is earned, an additional 40%.
- d. After Final Inspection, staging area clean-up and delivery of all Project Closeout materials as required by Section 90, paragraph 90-11, *Contractor Final Project Documentation*, the final 10%.

BASIS OF PAYMENT

101-6.1 Payment will be made under:

<i>Item C-105-1</i>	<i>Mobilization</i>	<i>-per Lump Sum (LS)</i>
<i>Item C-105-2</i>	<i>Maintenance of Traffic</i>	<i>-per Lump Sum (LS)</i>

<i>Item C-105-1</i>	<i>Mobilization</i>	<i>-per Lump Sum (LS)</i>
<i>Item C-105-2</i>	<i>Maintenance of Traffic</i>	<i>-per Lump Sum (LS)</i>

REFERENCES

101-7.1 The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Office of Federal Contract Compliance Programs (OFCCP)
Executive Order 11246, as amended

EEOC-P/E-1 – Equal Employment Opportunity is the Law Poster

END OF SECTION C-105

ITEM P-101

PREPARATION/REMOVAL OF EXISTING PAVEMENTS

ITEM P-101, "PREPARATION/REMOVAL OF EXISTING PAVEMENTS" is a technical specification contained in Federal Aviation Administration Advisory Circular – 150/5370-10H, "Standard Specifications for Construction of Airports."

This item has been modified to make allowances for local materials, methods and requirements. This item has been updated and modified to comply with the latest editions of other applicable codes, from knowledge gained on other airport construction projects and valuable lessons learned from airport maintenance staffs.

Deletions are noted by the ~~striketrough~~ method.

Changes and additions are noted by the ***bold italic*** method.

ITEM P-101

PREPARATION/REMOVAL OF EXISTING PAVEMENTS

DESCRIPTION

101-1.1 This item shall consist of preparation of existing pavement surfaces for overlay, surface treatments, removal of existing pavement, and other miscellaneous items. The work shall be accomplished in accordance with these specifications and the applicable plans.

EQUIPMENT AND MATERIALS

101-2.1 All equipment and materials shall be specified here and in the following paragraphs or approved by the Resident Project Representative (RPR). The equipment shall not cause damage to the pavement to remain in place.

CONSTRUCTION

101-3.1 Removal of existing pavement. The Contractor's removal operation shall be controlled to not damage adjacent pavement structure, and base material, cables, utility ducts, pipelines, or drainage structures which are to remain under the pavement.

- a. **Concrete pavement removal.** Full depth saw cuts shall be made perpendicular to the slab surface. The Contractor shall saw through the full depth of the slab including any dowels at the joint, removing the pavement and installing new dowels as shown on the plans and per the specifications. Where the perimeter of the removal limits is not located on the joint and there are no dowels present, the perimeter shall be saw cut the full depth of the pavement. The pavement inside the saw cut shall be removed by methods which will not cause distress in the pavement which is to remain in place. If the material is to be wasted on the airport site, it shall be reduced to a maximum size of. Concrete slabs that are damaged by under breaking shall be repaired or removed and replaced as directed by the RPR.

The edge of existing concrete pavement against which new pavement abuts shall be protected from damage at all times. Spall and underbreak repair shall be in accordance with the plans. Any underlying material that is to remain in place, shall be recompact and/or replaced as shown on the plans. Adjacent areas damaged during repair shall be repaired or replaced at the Contractor's expense.

- b. **Asphalt pavement removal.** Asphalt pavement to be removed shall be cut to the full depth of the asphalt pavement around the perimeter of the area to be removed. If the material is to be incorporated into embankment, it shall be broken to a maximum size of 1 inches (25 mm).
- c. **Repair or removal of Base, Subbase, and/or Subgrade.** All failed material including surface, base course, subbase course, and subgrade shall be removed and repaired as shown on the plans or as directed by the RPR. Materials and methods of construction shall comply with the applicable sections of these specifications. Any damage caused by Contractor's removal process shall be repaired at the Contractor's expense.

101-3.2 Preparation of joints and cracks prior to overlay/surface treatment. Remove all vegetation and debris from cracks to a minimum depth of 1 inch (25 mm). If extensive vegetation exists, treat the specific area with a concentrated solution of a water-based herbicide approved by the RPR. Fill all cracks greater than 1/4 inch (6 mm) wide) with a crack sealant. The crack sealant, preparation, and application shall be compatible with the surface treatment/overlay to be used. To minimize contamination of the asphalt with the crack sealant, underfill the crack sealant a minimum of 1/8 inch (3 mm), not to exceed ¼ inch (6 mm). Any excess joint or crack sealer shall be removed from the pavement surface.

101-3.3 Removal of Foreign Substances/contaminates prior remarking. Removal of foreign substances/contaminates from existing pavement that will affect the bond of the new treatment shall consist of removal of rubber, fuel spills, oil, crack sealer, at least 90% of paint, and other foreign substances from the surface of the pavement. Areas that require removal are designated on the plans and as directed by the RPR in the field during construction.

High-pressure water or rotary grinding may be used. If chemicals are used, they shall comply with the state's environmental protection regulations. Removal methods used shall not cause major damage to the pavement, or to any structure or utility within or adjacent to the work area. Major damage is defined as changing the properties of the pavement, removal of asphalt causing the aggregate to ravel, or removing pavement over 1/8 inch (3 mm) deep. If it is deemed by the RPR that damage to the existing pavement is caused by operational error, such as permitting the application method to dwell in one location for too long, the Contractor shall repair the damaged area without compensation and as directed by the RPR.

Removal of foreign substances shall not proceed until approved by the RPR. Water used for high-pressure water equipment shall be provided by the Contractor at the Contractor's expense. No material shall be deposited on the pavement shoulders. All wastes shall be disposed of in areas indicated in this specification or shown on the plans.

101-3.4 Concrete spall or failed asphaltic concrete pavement repair.

- a. **Repair of concrete spalls in areas to be overlaid with asphalt.** The Contractor shall repair all spalled concrete as shown on the plans or as directed by the RPR. The perimeter of the repair shall be saw cut a minimum of 2 inches (50 mm) outside the affected area and 2 inches (50 mm) deep. The deteriorated material shall be removed to a depth where the existing material is firm or cannot be easily removed with a geologist pick. The removed area shall be filled with asphalt mixture with aggregate sized appropriately for the depth of the patch. The material shall be compacted with equipment approved by the RPR until the material is dense and no movement or marks are visible. The material shall not be placed in lifts over 4 inches (100 mm) in depth. This method of repair applies only to pavement to be overlaid.
- b. **Asphalt pavement repair.** The Contractor shall repair all spalled concrete as shown on the plans or as directed by the RPR. The failed areas shall be removed as specified in paragraph 101-3.1b. All failed material including surface, base course, subbase course, and subgrade shall be removed. Materials and methods of construction shall comply with the applicable sections of these specifications.

101-3.5 Cold milling. Milling shall be performed with a power-operated milling machine or grinder, capable of producing a uniform finished surface. The milling machine or grinder shall operate without tearing or gouging the underlying surface. The milling machine or grinder shall be equipped with grade

and slope controls, and a positive means of dust control. All millings shall be removed and disposed off Airport property. If the Contractor mills or grinds deeper or wider than the plans specify, the Contractor shall replace the material removed with new material at the Contractor's Expense.

- A. **Patching.** The milling machine shall be capable of cutting a vertical edge without chipping or spalling the edges of the remaining pavement and it shall have a positive method of controlling the depth of cut. The RPR shall layout the area to be milled with a straightedge in increments of 1-foot (30 cm) widths. The area to be milled shall cover only the failed area. Any excessive area that is milled because the Contractor doesn't have the appropriate milling machine, or areas that are damaged because of his negligence, shall be repaired by the Contractor at the Contractor's Expense.
- B. **Profiling, grade correction, or surface correction.** The milling machine shall have a minimum width of 7 feet (2 m) and it shall be equipped with electronic grade control devices that will cut the surface to the grade specified. The tolerances shall be maintained within +0 inch and -1/4 inch (+0 mm and -6mm) of the specified grade. The machine must cut vertical edges and have a positive method of dust control. The machine must have the ability to remove the millings or cuttings from the pavement and load them into a truck. All millings shall be removed and disposed of off the airport.
- C. **Clean-up.** The Contractor shall sweep the milled surface daily and immediately after the milling until all residual materials are removed from the pavement surface. Prior to paving, the Contractor shall wet down the milled pavement and thoroughly sweep and/or blow the surface to remove loose residual material. Waste materials shall be collected and removed from the pavement surface and adjacent areas by sweeping or vacuuming. Waste materials shall be removed and disposed off Airport property.

101-3.6. Preparation of asphalt pavement surfaces prior to surface treatment. Existing asphalt pavements to be treated with a surface treatment shall be prepared as follows:

- A. Patch asphalt pavement surfaces that have been softened by petroleum derivatives or have failed due to any other cause. Remove damaged pavement to the full depth of the damage and replace with new asphalt pavement similar to that of the existing pavement in accordance with paragraph 101-3.4b.
- B. Repair joints and cracks in accordance with paragraph 101-3.2.
- C. Remove oil or grease that has not penetrated the asphalt pavement by scrubbing with a detergent and washing thoroughly with clean water. After cleaning, treat these areas with an oil spot primer.
- D. Clean pavement surface immediately prior to placing the surface treatment so that it is free of dust, dirt, grease, vegetation, oil or any type of objectionable surface film.

101-3.7 Maintenance. The Contractor shall perform all maintenance work necessary to keep the pavement in a satisfactory condition until the full section is complete and accepted by the RPR. The surface shall be kept clean and free from foreign material. The pavement shall be properly drained at all times. If cleaning is necessary or if the pavement becomes disturbed, any work repairs necessary shall be performed at the Contractor's expense.

101-3.8 Preparation of Joints in Rigid Pavement prior to resealing. Prior to application of sealant material, clean and dry the joints of all scale, dirt, dust, old sealant, curing compound, moisture and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method used cleans the joint and does not damage the joint.

101-3.8.1 Removal of Existing Joint Sealant. All existing joint sealants will be removed by plowing or use of hand tools. Any remaining sealant and or debris will be removed by use of wire brushes or other tools as necessary. Resaw joints removing no more than 1/16 inch (2 mm) from each joint face. Immediately after sawing, flush out joint with water and other tools as necessary to completely remove the slurry.

101-3.8.2 Cleaning prior to sealing. Immediately before sealing, joints shall be cleaned by removing any remaining laitance and other foreign material. Allow sufficient time to dry out joints prior to sealing. Joint surfaces will be surface-dry prior to installation of sealant.

101-3.8.3 Joint sealant. Joint material and installation will be in accordance with Item P-604.

101-3.9 Preparation of Cracks in Flexible Pavement prior to sealing. Prior to application of sealant material, clean and dry the joints of all scale, dirt, dust, old sealant, curing compound, moisture and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method used cleans the cracks and does not damage the pavement.

101-3.9.1 Preparation of Crack. Widen crack with by removing a minimum of 1/16 inch (2 mm) from each side of crack. Immediately before sealing, cracks will be blown out with a hot air lance combined with oil and water-free compressed air.

101-3.9.2 Removal of Existing Crack Sealant. Existing sealants will be removed by random crack saw. Following sawing any remaining debris will be removed by use of a hot lance combined with oil and water-free compressed air.

101-3.9.3 Crack Sealant. Crack sealant material and installation will be in accordance with Item P-605.

101-3.9.4 Removal of Pipe and other Buried Structures.

- a. **Removal of Existing Pipe Material.** Remove the types of pipe as indicated on the plans. The pipe material shall be legally disposed of off-site in a timely manner following removal. Trenches shall be backfilled with material equal to or better in quality than adjacent embankment. Trenches under paved areas must be compacted to 95% of ASTM D698.
- b. **Removal of Inlets/Manholes.** Where indicated on the plans or as directed by the RPR, inlets and/or manholes shall be removed and legally disposed of off-site in a timely fashion after removal. Excavations after removal shall be backfilled with material equal or better in quality than adjacent embankment. When under paved areas must be compacted to 95% of ASTM D698, when outside of paved areas must be compacted to 95% of ASTM D698. Not used.
- c. **Removal of Runway Lights and PAPIs.** Remove the existing runway threshold lights and PAPIs as indicated on the plans. The PAPIs and lights shall be protected from damage as to allow for reuse as indicated on the plans.

METHOD OF MEASUREMENT

101-4.1 Pavement removal. The unit of measurement for pavement removal shall be the number of square yards (square meters) removed by the Contractor. Any pavement removed outside the limits of removal because the pavement was damaged by negligence on the part of the Contractor shall not be included in the measurement for payment. No direct measurement or payment shall be made for saw cutting. Saw cutting shall be incidental to pavement removal. Dowel bar installation shall be incidental to pavement removal.

BASIS OF PAYMENT

101-5.1 Payment. Payment shall be made at contract unit price for the unit of measurement as specified above. This price shall be full compensation for furnishing all materials and for all preparation, hauling, and placing of the material and for all labor, equipment, tools, and incidentals necessary to complete this item.

Item P-101-1 Demolition of Asphalt and Base - per Square Yard (SY)

REFERENCES

101-6.1 The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

AC 150/5380-6 Guidelines and Procedures for Maintenance of Airport Pavements.

ASTM International (ASTM)

ASTM D6690 Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements

END OF ITEM P-101

ITEM P-152

EXCAVATION, SUBGRADE, AND EMBANKMENT

ITEM P-152, "EXCAVATION, SUBGRADE, AND EMBANKMENT" is a technical specification contained in Federal Aviation Administration Advisory Circular – 150/5370-10H, "Standard Specifications for Construction of Airports."

This item has been modified to make allowances for local materials, methods and requirements. This item has been updated and modified to comply with the latest editions of other applicable codes, from knowledge gained on other airport construction projects and valuable lessons learned from airport maintenance staffs.

Deletions are noted by the ~~striketrough~~ method.

Changes and additions are noted by the ***bold italic*** method.

ITEM P-152

EXCAVATION, SUBGRADE, AND EMBANKMENT

DESCRIPTION

152-1.1 This item covers excavation, disposal, placement, and compaction of all materials within the limits of the work required to construct safety areas, runways, taxiways, aprons, and intermediate areas as well as other areas for drainage, building construction, parking, or other purposes in accordance with these specifications and in conformity to the dimensions and typical sections shown on the plans.

152-1.2 Classification. All material excavated shall be classified as defined below:

- a. **Unclassified Excavation.** Unclassified excavation shall consist of the excavation and disposal of all material, regardless of its nature, which is not otherwise classified and paid for under the following items.
- b. **Rock Excavation.** Rock excavation shall include all solid rock in ledges, in bedded deposits, in unstratified masses, and conglomerate deposits which are so firmly cemented they cannot be removed without blasting or using rippers. All boulders containing a volume of more than 1/2 cubic yard (0.4 cubic meter) will be classified as "rock excavation".
- c. **Muck Excavation:** Muck excavation shall consist of the removal and disposal of deposits or mixtures of soils and organic matter not suitable for foundation material. Muck shall include materials that will decay or produce subsidence in the embankment. It may be made up of decaying stumps, roots, logs, humus, or other material not satisfactory for incorporation in the embankment.
- d. **Drainage Excavation:** Drainage excavation shall consist of all the excavation made for the primary purpose of drainage and includes drainage ditches, such as intercepting, inlet or outlet, temporary levee construction, or any other type as shown on the plans.
- e. **Borrow Excavation.** Borrow excavation shall consist of approved material required for the construction of embankment or for other portions of the work in excess of the quantity of usable material available from required excavations. Borrow material shall be obtained from areas within the limits of the airport property but outside the normal limits of necessary grading, or from areas outside the airport.

152-1.3 Unsuitable Excavation. Unsuitable material shall be disposed in designated waste areas as shown on the plans. Materials containing vegetable or organic matter, such as muck, peat, organic silt, or sod shall be considered unsuitable for use in embankment construction. Material suitable for topsoil may be used on the embankment slope when approved by the RPR.

CONSTRUCTION METHODS

152-2.1 General. Before beginning excavation, grading, and embankment operations in any area, the area shall be cleared or cleared and grubbed in accordance with Item P-151.

The suitability of material to be placed in embankments shall be subject to approval by the RPR. All unsuitable material shall be disposed of in waste areas as shown on the plans. All waste areas shall be graded to allow positive drainage of the area and adjacent areas. The surface elevation of waste areas shall be specified on the plans or approved by the RPR.

When the Contractor's excavating operations encounter artifacts of historical or archaeological significance, the operations shall be temporarily discontinued and the RPR notified per Section 70, paragraph 70-20. At the direction of the RPR, the Contractor shall excavate the site in such a manner as to preserve the artifacts encountered and allow for their removal. Such excavation will be paid for as extra work.

Areas outside the limits of the pavement areas where the top layer of soil has become compacted by hauling or other Contractor activities shall be scarified and disked to a depth of 4 inches (100 mm), to loosen and pulverize the soil. Stones or rock fragments larger than 4 inches (100 mm) in their greatest dimension will not be permitted in the top 6 inches (150 mm) of the subgrade.

If it is necessary to interrupt existing surface drainage, sewers or under-drainage, conduits, utilities, or similar underground structures, the Contractor shall be responsible for and shall take all necessary precautions to preserve them or provide temporary services. When such facilities are encountered, the Contractor shall notify the RPR, who shall arrange for their removal if necessary. The Contractor, at their own expense, shall satisfactorily repair or pay the cost of all damage to such facilities or structures that may result from any of the Contractor's operations during the period of the contract.

- a. **Blasting.** Blasting shall not be allowed.

152-2.2 Excavation. No excavation shall be started until the work has been staked out by the Contractor and the RPR has obtained from the Contractor, the survey notes of the elevations and measurements of the ground surface. The Contractor and RPR shall agree that the original ground lines shown on the original topographic mapping are accurate, or agree to any adjustments made to the original ground lines.

All areas to be excavated shall be stripped of vegetation and topsoil. Topsoil shall be stockpiled for future use in areas designated on the plans or by the RPR. All suitable excavated material shall be used in the formation of embankment, subgrade, or other purposes as shown on the plans. All unsuitable material shall be disposed of as shown on the plans.

The grade shall be maintained so that the surface is well drained at all times.

When the volume of the excavation exceeds that required to construct the embankments to the grades as indicated on the plans, the excess shall be used to grade the areas of ultimate development or disposed as directed by the RPR. When the volume of excavation is not sufficient for constructing the embankments to the grades indicated, the deficiency shall be obtained from borrow areas.

- a. **Selective grading.** When selective grading is indicated on the plans, the more suitable material designated by the RPR shall be used in constructing the embankment or in capping the pavement subgrade. If, at the time of excavation, it is not possible to place this material in its final location, it shall be stockpiled in approved areas until it can be placed. The more suitable material shall then be placed and compacted as specified. Selective grading shall be considered incidental to the work involved. The cost of stockpiling and placing the material shall be included in the various pay items of work involved.

- b. **Undercutting.** Rock, shale, hardpan, loose rock, boulders, or other material unsatisfactory for safety areas, subgrades, roads, shoulders, or any areas intended for turf shall be excavated to a minimum depth of 12 inches (300 mm) below the subgrade or to the depth specified by the RPR. Muck, peat, matted roots, or other yielding material, unsatisfactory for subgrade foundation, shall be removed to the depth specified. Unsuitable materials shall be disposed off the airport. The cost is incidental to this item. This excavated material shall be paid for at the contract unit price per cubic yard (per cubic meter) for Excavation, Subgrade and Embankment. The excavated area shall be backfilled with suitable material obtained from the grading operations or borrow areas and compacted to specified densities. The necessary backfill will constitute a part of the embankment. Where rock cuts are made, backfill with select material. Any pockets created in the rock surface shall be drained in accordance with the details shown on the plans. Undercutting will be paid as unclassified excavation.
- c. **Over-break.** Over-break, including slides, is that portion of any material displaced or loosened beyond the finished work as planned or authorized by the RPR. All over-break shall be graded or removed by the Contractor and disposed of as directed by the RPR. The RPR shall determine if the displacement of such material was unavoidable and their own decision shall be final. Payment will not be made for the removal and disposal of over-break that the RPR determines as avoidable. Unavoidable over-break will be classified as "Unclassified Excavation."
- d. **Removal of utilities.** The removal of existing structures and utilities required to permit the orderly progress of work will be accomplished by the Contractor as indicated on the plans. All existing foundations shall be excavated at least 2 feet (60 cm) below the top of subgrade or as indicated on the plans, and the material disposed of as directed by the RPR. All foundations thus excavated shall be backfilled with suitable material and compacted as specified for embankment or as shown on the plans.

152-2.3 Borrow excavation. Borrow areas within the airport property are indicated on the plans. Borrow excavation shall be made only at these designated locations and within the horizontal and vertical limits as staked or as directed by the RPR. All unsuitable material shall be disposed of by the Contractor as shown on the plans. All borrow pits shall be opened to expose the various strata of acceptable material to allow obtaining a uniform product. Borrow areas shall be drained and left in a neat, presentable condition with all slopes dressed uniformly. Borrow areas shall not create a hazardous wildlife attractant.

152-2.4 Drainage excavation. Drainage excavation shall consist of excavating drainage ditches including intercepting, inlet, or outlet ditches; or other types as shown on the plans. The work shall be performed in sequence with the other construction. Ditches shall be constructed prior to starting adjacent excavation operations. All satisfactory material shall be placed in embankment fills; unsuitable material shall be placed in designated waste areas or as directed by the RPR. All necessary work shall be performed true to final line, elevation, and cross-section. The Contractor shall maintain ditches constructed on the project to the required cross-section and shall keep them free of debris or obstructions until the project is accepted.

152-2.5 Preparation of cut areas or areas where existing pavement has been removed. In those areas on which a subbase or base course is to be placed, the top 12 inches (300 mm) of subgrade shall be compacted to not less than ~~100%~~ **95%** of maximum density for non-cohesive soils, and ~~95%~~ **90%** of maximum density for cohesive soils as determined by ASTM D1557. As used in this specification, "non-cohesive" shall mean those soils having a plasticity index (PI) of less than 3 as determined by ASTM D4318.

152-2.6 Preparation of embankment area. All sod and vegetative matter shall be removed from the surface upon which the embankment is to be placed. The cleared surface shall be broken up by plowing or scarifying to a minimum depth of 6 inches (150 mm) and shall then be compacted per paragraph 152-2.10.

Sloped surfaces steeper than one (1) vertical to four (4) horizontal shall be plowed, stepped, benched, or broken up so that the fill material will bond with the existing material. When the subgrade is part fill and part excavation or natural ground, the excavated or natural ground portion shall be scarified to a depth of 12 inches (300 mm) and compacted as specified for the adjacent fill.

No direct payment shall be made for the work performed under this section. The necessary clearing and grubbing and the quantity of excavation removed will be paid for under the respective items of work.

152-2.7 Control Strip. The first half-day of construction of subgrade and/or embankment shall be considered as a control strip for the Contractor to demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of this specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. The maximum compacted thickness may be increased to a maximum of 12 inches (300 mm) upon the Contractor's demonstration that approved equipment and operations will uniformly compact the lift to the specified density. The RPR must witness this demonstration and approve the lift thickness prior to full production.

Control strips that do not meet specification requirements shall be reworked, re-compacted, or removed and replaced at the Contractor's expense. Full operations shall not begin until the control strip has been accepted by the RPR. The Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved in advance by the RPR.

152-2.8 Formation of embankments. The material shall be constructed in lifts as established in the control strip, but not less than 6 inches (150 mm) nor more than 12 inches (300 mm) of compacted thickness.

When more than one lift is required to establish the layer thickness shown on the plans, the construction procedure described here shall apply to each lift. No lift shall be covered by subsequent lifts until tests verify that compaction requirements have been met. The Contractor shall rework, re-compact and retest any material placed which does not meet the specifications.

The lifts shall be placed, to produce a soil structure as shown on the typical cross-section or as directed by the RPR. Materials such as brush, hedge, roots, stumps, grass and other organic matter, shall not be incorporated or buried in the embankment.

Earthwork operations shall be suspended at any time when satisfactory results cannot be obtained due to rain, freezing, or other unsatisfactory weather conditions in the field. Frozen material shall not be placed in the embankment nor shall embankment be placed upon frozen material. Material shall not be placed on surfaces that are muddy, frozen, or contain frost. The Contractor shall drag, blade, or slope the embankment to provide surface drainage at all times.

The material in each lift shall be within $\pm 2\%$ of optimum moisture content before rolling to obtain the prescribed compaction. The material shall be moistened or aerated as necessary to achieve a uniform

moisture content throughout the lift. Natural drying may be accelerated by blending in dry material or manipulation alone to increase the rate of evaporation.

The Contractor shall make the necessary corrections and adjustments in methods, materials or moisture content to achieve the specified embankment density.

The RPR will take samples of excavated materials which will be used in embankment for testing and develop a Moisture-Density Relations of Soils Report (Proctor) in accordance with ASTM D1557. A new Proctor shall be developed for each soil type based on visual classification.

Density tests will be taken by the RPR for every 3,000 square yards of compacted embankment for each lift which is required to be compacted, or other appropriate frequencies as determined by the RPR.

If the material has greater than 30% retained on the 3/4-inch (19.0 mm) sieve, follow AASHTO T-180 Annex Correction of maximum dry density and optimum moisture for oversized particles.

Rolling operations shall be continued until the embankment is compacted to not less than ~~100%~~ **95%** of maximum density for non-cohesive soils, and ~~95%~~ **90%** of maximum density for cohesive soils as determined by ASTM D1557. Under all areas to be paved, the embankments shall be compacted to a depth of and to a density of ~~not less than percent of the maximum density~~ **as specified on the plans** as determined by ASTM D1557. As used in this specification, "non-cohesive" shall mean those soils having a plasticity index (PI) of less than 3 as determined by ASTM D4318.

On all areas outside of the pavement areas, no compaction will be required on the top 4 inches (100 mm) which shall be prepared for a seedbed in accordance with Item T-901.

The in-place field density shall be determined in accordance with ASTM D1556. The RPR shall perform all density tests. If the specified density is not attained, the area represented by the test or as designated by the RPR shall be reworked and/or re-compacted and additional random tests made. This procedure shall be followed until the specified density is reached.

Compaction areas shall be kept separate, and no lift shall be covered by another lift until the proper density is obtained.

During construction of the embankment, the Contractor shall route all construction equipment evenly over the entire width of the embankment as each lift is placed. Lift placement shall begin in the deepest portion of the embankment fill. As placement progresses, the lifts shall be constructed approximately parallel to the finished pavement grade line.

When rock, concrete pavement, asphalt pavement, and other embankment material are excavated at approximately the same time as the subgrade, the material shall be incorporated into the outer portion of the embankment and the subgrade material shall be incorporated under the future paved areas. Stones, fragmentary rock, and recycled pavement larger than 4 inches (100 mm) in their greatest dimensions will not be allowed in the top 12 inches (300 mm) of the subgrade. Rockfill shall be brought up in lifts as specified or as directed by the RPR and the finer material shall be used to fill the voids forming a dense, compact mass. Rock, cement concrete pavement, asphalt pavement, and other embankment material shall not be disposed of except at places and in the manner designated on the plans or by the RPR.

When the excavated material consists predominantly of rock fragments of such size that the material cannot be placed in lifts of the prescribed thickness without crushing, pulverizing or further breaking down the pieces, such material may be placed in the embankment as directed in lifts not exceeding 2 feet (60 cm) in thickness. Each lift shall be leveled and smoothed with suitable equipment by distribution of spalls and finer fragments of rock. The lift shall not be constructed above an elevation 4 feet (1.2 m) below the finished subgrade.

There will be no separate measurement of payment for compacted embankment. All costs incidental to placing in lifts, compacting, discing, watering, mixing, sloping, and other operations necessary for construction of embankments will be included in the contract price for excavation, borrow, or other items.

152-2.9 Proof rolling. The purpose of proof rolling the subgrade is to identify any weak areas in the subgrade and not for compaction of the subgrade. After compaction is completed, the subgrade area shall be proof rolled with a 15 ton (18.1 metric ton) Tandem axle Dual Wheel Dump Truck loaded to the legal limit with tires inflated to 125 psi (/0.862 MPa) in the presence of the RPR. Apply a minimum of 2,000 square yards coverage, or as specified by the RPR, under pavement areas. A coverage is defined as the application of one tire print over the designated area. Soft areas of subgrade that deflect more than 1 inch (25 mm) or show permanent deformation greater than 1 inch (25 mm) shall be removed and replaced with suitable material or reworked to conform to the moisture content and compaction requirements in accordance with these specifications. Removal and replacement of soft areas is incidental to this item.

152-2.10 Compaction requirements. The subgrade under areas to be paved shall be compacted to a depth of and to a density of not less than ~~percent of the maximum dry density~~ **those specified in the plans and the approved foundation design**, as determined by ASTM D1557. The subgrade in areas outside the limits of the pavement areas shall be compacted to a depth of 12 inches (300 mm) and to a density of not less than 90 percent of the maximum density as determined by ASTM D698.

The material to be compacted shall be within $\pm 2\%$ of optimum moisture content before being rolled to obtain the prescribed compaction (except for expansive soils). When the material has greater than 30 percent retained on the $\frac{3}{4}$ inch (19.0 mm) sieve, follow the methods in ASTM D1557. Tests for moisture content and compaction will be taken at a minimum of 3,000 S.Y. of subgrade. All quality assurance testing shall be done by the RPR.

The in-place field density shall be determined in accordance with ASTM D1556 or ASTM D6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938 within 12 months prior to its use on this contract. The gage shall be field standardized daily.

Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

If the specified density is not attained, the entire lot shall be reworked and/or re-compacted and additional random tests made. This procedure shall be followed until the specified density is reached.

All cut-and-fill slopes shall be uniformly dressed to the slope, cross-section, and alignment shown on the plans or as directed by the RPR and the finished subgrade shall be maintained.

152-2.11 Finishing and protection of subgrade. Finishing and protection of the subgrade is incidental to this item. Grading and compacting of the subgrade shall be performed so that it will drain readily. All low

areas, holes or depressions in the subgrade shall be brought to grade. Scarifying, blading, rolling and other methods shall be performed to provide a thoroughly compacted subgrade shaped to the lines and grades shown on the plans. All ruts or rough places that develop in the completed subgrade shall be graded, re-compacted, and retested. The Contractor shall protect the subgrade from damage and limit hauling over the finished subgrade to only traffic essential for construction purposes.

The Contractor shall maintain the completed course in satisfactory condition throughout placement of subsequent layers. No subbase, base, or surface course shall be placed on the subgrade until the subgrade has been accepted by the RPR.

152-2.12 Haul. All hauling will be considered a necessary and incidental part of the work. The Contractor shall include the cost in the contract unit price for the pay of items of work involved. No payment will be made separately or directly for hauling on any part of the work.

The Contractor's equipment shall not cause damage to any excavated surface, compacted lift or to the subgrade as a result of hauling operations. Any damage caused as a result of the Contractor's hauling operations shall be repaired at the Contractor's expense.

The Contractor shall be responsible for providing, maintaining and removing any haul roads or routes within or outside of the work area, and shall return the affected areas to their former condition, unless otherwise authorized in writing by the Owner. No separate payment will be made for any work or materials associated with providing, maintaining and removing haul roads or routes.

152-2.13 Surface Tolerances. In those areas on which a subbase or base course is to be placed, the surface shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches (75 mm), reshaped and re-compacted to grade until the required smoothness and accuracy are obtained and approved by the RPR. The Contractor shall perform all final smoothness and grade checks in the presence of the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor's expense.

- a. **Smoothness.** The finished surface shall not vary more than +/- 1/2 inch (12 mm) when tested with a 12-foot (3.7-m) straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved continuously forward at half the length of the 12-foot (3.7-m) straightedge for the full length of each line on a 50-foot (15-m) grid.
- b. **Grade.** The grade and crown shall be measured on a 50-foot (15-m) grid and shall be within +/- 0.05 feet (15 mm) of the specified grade.

On safety areas, turfed areas and other designated areas within the grading limits where no subbase or base is to be placed, grade shall not vary more than 0.10 feet (30 mm) from specified grade. Any deviation in excess of this amount shall be corrected by loosening, adding or removing materials, and reshaping.

152-2.14 Topsoil. When topsoil is specified or required as shown on the plans or under Item T-905, it shall be salvaged from stripping or other grading operations. The topsoil shall meet the requirements of Item T-905. If, at the time of excavation or stripping, the topsoil cannot be placed in its final section of finished construction, the material shall be stockpiled at approved locations. Stockpiles shall be located as shown on the plans and the approved CSPP, and shall not be placed on areas that subsequently will require any excavation or embankment fill. If, in the judgment of the RPR, it is practical to place the salvaged topsoil

at the time of excavation or stripping, the material shall be placed in its final position without stockpiling or further re-handling.

Upon completion of grading operations, stockpiled topsoil shall be handled and placed as shown on the plans and as required in Item T-905. Topsoil shall be paid for as provided in Item T-905. No direct payment will be made for topsoil under Item P-152.

METHOD OF MEASUREMENT

152-3.1 The quantity of excavation to be paid for shall be the number of cubic yards (cubic meters) measured in its original position. Measurement shall not include the quantity of materials excavated without authorization beyond normal slope lines, or the quantity of material used for purposes other than those directed.

152-3.2 Borrow material shall be paid for on the basis of the number of cubic yards (cubic meters) measured in its original position at the borrow pit.

152-3.3 Stockpiled material shall be paid for on the basis of the number of cubic yards (cubic meters) measured in the stockpiled position.

152-3.5 The quantity of embankment in place shall be the number of cubic yards (cubic meters) measured in its final position.

BASIS OF PAYMENT

152-4.1 *Excavation, Subgrade, and Embankment* payment shall be made at the contract unit price per cubic yard (cubic meter). This price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

<i>Item P-152-1</i>	<i>Subgrade Preparation</i>	<i>-per Square Yard (SY)</i>
---------------------	-----------------------------	------------------------------

REFERENCES

152-5.1 The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

American Association of State Highway and Transportation Officials (AASHTO)

AASHTO T-180	Standard Method of Test for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop
--------------	---

ASTM International (ASTM)

ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft ³ (600 kN-m/m ³))
-----------	--

ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
------------	---

ASTM D1557 Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2700 kN-m/m³))

ASTM D6938 Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

Advisory Circulars (AC)

AC 150/5370-2 Operational Safety on Airports During Construction Software

Software

FAARFIELD – FAA Rigid and Flexible Iterative Elastic Layered Design

U.S. Department of Transportation

FAA RD-76-66 Design and Construction of Airport Pavements on Expansive Soils

END OF ITEM P-152

ITEM P-306

LEAN CONCRETE BASE COURSE

ITEM P-306, "LEAN CONCRETE BASE COURSE" is a technical specification contained in Federal Aviation Administration Advisory Circular – 150/5370-10H, "Standard Specifications for Construction of Airports."

This item has been modified to make allowances for local materials, methods and requirements. This item has been updated and modified to comply with the latest editions of other applicable codes, from knowledge gained on other airport construction projects and valuable lessons learned from airport maintenance staffs.

Deletions are noted by the ~~strike through~~ method.

Changes and additions are noted by the ***bold italic*** method.

ITEM P-306

LEAN CONCRETE BASE COURSE

DESCRIPTION

306-1.1 This item shall consist of a lean concrete subbase material that is composed of aggregate and cement uniformly blended together and mixed with water. The mixture may also include approved cementitious additives, in the form of fly ash or slag, and chemical admixtures. The mixed material shall be spread, shaped, and consolidated using concrete paving equipment in accordance with these specifications and in conformity to the lines, grades, dimensions, and typical cross-sections shown on the plans.

MATERIALS

306-2.1 Aggregate. The coarse aggregate fraction shall be crushed stone, crushed or uncrushed gravel, crushed and adequately seasoned, air-cooled, iron blast furnace slag, crushed recycled concrete, or a combination thereof. The fine aggregate fraction may be part of the natural aggregate blend as obtained from the borrow source or it may be natural sand that is added at the time of mixing. The aggregate shall meet the gradation and material requirements in the tables below.

Aggregate Material Requirements

Material Test	Requirement	Standard
Coarse Aggregate Portion (retained on the No. 4 (4.75 mm) sieve)		
Resistance to Degradation	Loss: 40% maximum	ASTM C131
Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate	Loss after 5 cycles: 10% maximum using Sodium sulfate - or - 15% maximum using magnesium sulfate	ASTM C88
Flat Particles, Elongated Particles, or Flat and Elongated Particles ¹	10% maximum, by weight, for fraction retained on the ½ inch (12.5mm) sieve and 10% maximum, by weight, for the fraction passing the 1/2-inch (12.5 mm) sieve	ASTM D4791
Clay lumps and friable particles	Less than or equal to 3 percent	ASTM C142
Fine Aggregate Portion (passing the No. 40 (425µm) sieve)		
Clay lumps and friable particles	Less than or equal to 3 percent	ASTM C142
Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate	Loss after 5 cycles: 10% maximum using Sodium sulfate - or - 15% maximum using magnesium sulfate	ASTM C88

¹ A flat particle is one having a ratio of width to thickness greater than five (5); an elongated particle is one having a ratio of length to width greater than five (5).

Aggregate Gradation for Lean Concrete

Sieve Size (square openings)	Percentage by Weight Passing Sieves	
	Gradation A	Gradation B
1-1/2 inch (37.5 mm)	100	--
1 inch (25.0 mm)	70 - 95	100
3/4 inch (19.0 mm)	55 - 85	70 - 100
No. 4 (4.75 mm)	30 - 60	35 - 65
No. 40 (425 µm)	10 - 30	15 - 30
No. 200 (75 µm)	0 - 15	0 - 15

306-2.2 Sampling and testing.

- a. **Aggregate base materials.** The Contractor shall take samples of the aggregate base stockpile in accordance with ASTM D75 to verify initial aggregate base requirements and gradation. Material shall meet the requirements in paragraphs 306-2.1 and 306-2.2. This sampling and testing will be the basis for approval of the aggregate base quality requirements.

306-2.4 Cementitious additives. Pozzolan and slag cement may be added to the lean concrete mix. If used, each material must meet the following requirements:

- a. **Pozzolan.** Pozzolan materials must meet the requirements of ASTM C618, Class F, or N with the exception of loss of ignition, where the maximum shall be less than 6%. The supplementary optional physical requirements of Table 3 contained in ASTM C618 shall apply.
- b. **Slag cement (ground granulated blast furnace (GGBF) slag).** Slag shall conform to ASTM C989, Grade 100 or 120.

306-2.5 Chemical admixtures. The Contractor shall submit certificates indicating that the material to be furnished meets all the requirements listed below. In addition, the RPR may require the Contractor to submit complete test data showing that the material to be furnished meets all the requirements of the cited specification.

- a. **Air-entraining admixtures.** Air-entraining admixtures shall meet the requirements of ASTM C260.
- b. **Water-reducing admixtures.** Water-reducing, set-controlling admixtures shall meet the requirements of ASTM C494, Type A, D, E, F, or G. Water-reducing admixtures shall be added at the mixer separately from air-entraining admixtures in accordance with the manufacturer's printed instructions. The air entrainment agent and the water-reducing admixture shall be compatible.
- c. **Retarding admixtures.** Retarding admixtures shall meet the requirements of ASTM C494, Type B or D.
- d. **Accelerating admixtures.** Accelerating admixtures shall meet the requirements of ASTM C494, Type C.

306-2.6 Water. Water used in mixing or curing shall be from potable water sources. Other sources shall be tested in accordance with ASTM C1602 prior to use.

306-2.7 Curing materials. For curing lean concrete, use white-pigmented, liquid membrane-forming compound conforming to ASTM C309, Type 2, Class B, or clear or translucent Type 1-D, Class B with white fugitive dye.

306-2.8 Bond Breaker. Fabric shall meet the requirements of AASHTO M 288 Class I fabric with elongation not less than 50% at the specified strengths, and a minimum weight of 14.5 oz/sy. A certificate of compliance (COC) shall be provided by the fabric manufacturer that the material may be used as a bond breaker.

COMPOSITION OF MIXTURE

306-3.1 Mix design. The lean concrete mix design shall be based on trial batch results conducted in the laboratory. The lean concrete shall be designed to meet the criteria in this section.

Compressive strength shall not be less than 500 pounds per square inch (3,445 kPa) nor greater than 800 pounds per square inch (5,516 kPa) at seven (7) days. Compressive strengths shall be taken as the average of two compressive strength test results. All compressive strength specimens shall be prepared and tested in accordance with ASTM C192 and ASTM C39, respectively.

The percentage of air entrainment shall be 6%, $\pm 1/2\%$. Air content shall be determined by testing in accordance with ASTM C231 for gravel and stone coarse aggregate and ASTM C173 for slag and other highly porous coarse aggregate.

If there is a change in aggregate sources, type of cement used, or pozzolanic materials, a new mix design must be submitted

306-3.2 Submittals. At least 30 days prior to the placement of the lean concrete, the Contractor shall submit certified test reports to the RPR for those materials proposed for use during construction, as well as the mix design information for the lean concrete material. The certification shall identify the specifications and test standard, the name of the testing laboratory, the date of the tests, and a statement that the materials comply with the applicable specifications. Tests older than six (6) months shall not be used. The submittal package shall include the following:

- a. Sources of materials, including aggregate, cement, admixtures, and curing and bond breaking materials.
- b. Physical properties of the aggregates, cement, admixtures, curing and bond breaking materials.
- c. Mix design:
 - Mix identification number
 - Weight of saturated surface-dry aggregates (fine and coarse)
 - Combined aggregate gradation
 - Cement factor
 - Water content

- Water-cementitious material ratio (by weight)
- Volume of admixtures and yield for one cubic yard (cubic meter) of lean concrete
- Laboratory test results:
 - Slump
 - Unit weight
 - Air content
- Compressive strength at 3, 7, and 28 days (average values)

Where applicable, the Contractor shall submit a jointing plan for transverse joints in the lean concrete layer for approval by the RPR.

During production, the Contractor shall submit batch tickets for each delivered load.

EQUIPMENT

306-4.1 All equipment necessary to mix, transport, place, compact, and finish the lean concrete material shall be furnished by the Contractor and is subject to inspection and approval by the RPR. The Contractor shall provide certification that all equipment conforms to the requirements of ASTM C94.

306-4.2 Forms. Straight side forms shall be made of steel and shall be furnished in sections not less than 10 feet (3 m) in length. Forms shall have a depth equal to the pavement thickness at the edge. Flexible or curved forms of proper radius shall be used for curves of 100 feet (30 m) radius or less. Forms shall be provided with adequate devices for secure settings so that when in place they will withstand, without visible spring or settlement, the impact and vibration of the consolidating and finishing equipment. Forms with battered top surfaces and bent, twisted or broken forms shall not be used. Built-up forms shall not be used, except as approved by the RPR. The forms shall contain provisions for locking the ends of abutting sections together tightly for secure setting. Wood forms may be used under special conditions, when accepted by the RPR.

306-4.3 Concrete pavers. A fixed form or slip-form concrete paver may be used to place lean concrete. The paver shall be fully energized, self-propelled and capable of spreading, consolidating, and finishing the lean concrete material, true to grade, tolerances, and cross-sections. The paver shall be of sufficient weight and power to construct the maximum specified concrete paving lane width, at adequate forward speed, without transverse, longitudinal or vertical instability or without displacement. Slip-form pavers shall be equipped with electronic or hydraulic horizontal and vertical control devices. Bridge deck pavers are approved as paver-finishing machines for lean concrete, provided they are capable of handling the amount of lean concrete required for the full-lane width specified, and capable of spreading, consolidating, and finishing the lean concrete material, true to grade, tolerances, and cross-sections.

306-4.4 Vibrators. For fixed-form construction, vibrators may be either the surface pan type or internal type with either immersed tube or multiple spuds for the full width of the slab. They may be attached to the spreader, the finishing machine, or mounted on a separate carriage. They shall not come in contact with the subgrade or forms.

For slip-form construction, the paver shall be accomplished by internal vibrators for the full width and depth of the pavement being placed. The number, spacing, frequency, and eccentric weights of vibrators shall be provided to achieve acceptable consolidation without segregation and finishing quality. Internal vibrators may be supplemented by vibrating screeds operating on the surface of the lean concrete.

Vibrators and screeds shall automatically stop operation when forward motion ceases. An override switch shall be provided.

Hand held vibrators may be used in irregular areas.

306-4.5 Joint saws. The Contractor shall provide a sufficient number of saws with adequate power to cut contraction or construction joints to the required dimensions as shown on the plans. The Contractor shall provide at least one standby saw in good working order.

CONSTRUCTION METHODS

306-5.1 Control Strip. The first half-day of construction shall be considered the control strip. The Contractor shall demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of the specification. Control strips that do not meet specification requirements shall be removed and replaced at the Contractor's expense. Full operations shall not continue until the control strip has been accepted by the RPR. Upon acceptance of the control strip by the RPR, the Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved in advance by the RPR.

306-5.2 Weather limitations. The Contractor shall follow the recommended practices in American Concrete Institute (ACI) 306R, Guide to Cold Weather Concreting. The temperature of the mixed lean concrete shall not be less than 50°F (10°C) at the time of placement. The lean concrete shall not be placed when the ambient temperature is below 40°F (4°C) or when conditions indicate that the temperature may fall below 35°F (2°C) within 24 hours. The lean concrete shall not be placed on frozen underlying courses. The Contractor shall follow the recommended practices in ACI 305R, Guide to Hot Weather Concreting. The lean concrete temperature from initial mixing through final cure shall not exceed 90°F (32°C). When the maximum daily air temperature exceeds 85°F (30°C), the forms and/or the underlying material shall be sprinkled with water before placing the lean concrete.

The Contractor should stop operations prior to and during rain allowing time to cover and protect any plastic lean concrete. Areas damaged by rain shall be refinished or replaced at the Contractor's expense.

306-5.3 Maintenance. The Contractor shall protect the lean concrete from environmental or mechanical damage. Traffic shall not be allowed on the pavement until test specimens made per ASTM C31 have attained a compressive strength of 500 psi (3445 kPa) when tested per ASTM C39. The Contractor shall maintain continuity of the applied curing method for the entire curing period.

306-5.4 Form setting. Form sections shall be tightly locked and shall be free from play or movement in any direction. The forms shall not deviate from true line by more than 1/4 inch (6 mm) at any joint. The top face of the form shall not vary from a true plane more than 1/8 inch (3 mm) in 10 feet (3 m), and the upstanding leg shall not vary more than 1/4 inch (6 mm). Forms shall be cleaned and oiled prior to the placing of lean concrete.

306-5.5 Preparation of underlying course. The underlying course shall be checked and accepted by the RPR before placing operations begin. Prior to placing the material, the final grade should be firm, moist and free of frost. Use of chemicals to eliminate frost will not be permitted. The underlying course shall be wetted in advance of placing the lean concrete base course.

306-5.6 Grade control. Grade control shall be as necessary to construct the layer to the profile and cross-sections as shown on the plans.

306-5.7 Mixing. The batch plant site, layout, equipment, and provisions for transporting material shall assure a continuous supply of material to the work. Stockpiles shall be constructed in a manner that prevents segregation and intermixing of deleterious materials.

All lean concrete shall be mixed and delivered to the site per the requirements of ASTM C94. The mixing time should be adequate to produce lean concrete that is uniform in appearance, with all ingredients evenly distributed. Mixing time shall be measured from the time all materials are emptied into the drum (provided all the water is added before one-fourth the preset mixing time has elapsed) and continues until the time the discharge chute is opened to deliver the lean concrete.

If mixing in a batch plant, the mixing time shall not be less than 50 or greater than 90 seconds. If mixing in a truck mixer, the mixing time shall not be less than 70 or more than 125 truck-drum revolutions at a mixing speed of not less than six (6) or more than 18 truck-drum revolutions per minute.

The elapsed time from the addition of cementitious material to the mix until the lean concrete is deposited in place at the work site shall not exceed 45 minutes when the concrete is hauled in non-agitating trucks, or 90 minutes when it is hauled in truck mixers or truck agitators.

Re-tempering lean concrete will not be permitted, except when delivered in truck mixers. With truck mixers, additional water may be added to the batch materials if the addition of water is added within 45 minutes after the initial mixing operations and the water/cement ratio specified in the mix design is not exceeded.

306-5.8 Placing. The lean concrete material shall be placed continuously at a uniform rate on the underlying course minimizing segregation and handling of the mix. Rakes shall not be allowed for spreading the lean concrete.

306-5.9 Finishing. Shape the finished surface of the lean concrete base layer to the specified lines, grades, and cross-section. Hand finishing will not be permitted except in areas where the mechanical finisher cannot operate.

306-5.10 Construction limitations. All placement and finishing operations shall be completed within two (2) hours from the start of mixing. Material not completed within the 2-hour time limit shall be removed and replaced at the Contractor's expense.

At the end of each day's construction and/or when operations are interrupted for more than 30 minutes, a straight transverse construction joint shall be formed by a header or by cutting back into the compacted material to form a true vertical face.

Completed portions may be opened to light traffic when it has achieved its 7-day strength and the curing is not damaged.

306-5.11 Joints. Locate all longitudinal and transverse construction joints as shown on the plans. Longitudinal joints shall be within 6 inches (150 mm) of planned joints in the overlaying concrete pavement and transverse joints shall be within 3 inches (75 mm) the planned joints of the overlaying

concrete surface. Joints shall be sawn as soon as the base can support the saws without damage to the lean concrete base. Joints shall be constructed by sawing the hardened lean concrete to a depth of at least one-third the thickness of the lean concrete base, or 1/5th the depth of the lean concrete base when constructed using early entry saws.

306-5.12 Curing. Immediately after the finishing operations are complete and within two (2) hours of placement of the lean concrete, the entire surface and edges of the newly placed lean concrete shall be sprayed uniformly with white pigmented, liquid membrane forming curing compound conforming to ASTM C309, Type 2, Class B or clear or translucent Type 1-D, Class B with white fugitive dye in accordance with paragraph 306-2.7. The layer should be kept moist using a moisture-retaining cover or a light application of water until the curing material is applied. The curing compound shall not be applied during rainfall.

The curing material shall be applied at a maximum coverage of 200 square feet per gallon (5.0 m²/l) using pressurized mechanical sprayers. The spraying equipment shall be a fully atomizing type equipped with a tank agitator. At the time of use, the curing compound in the tank shall be thoroughly and uniformly mixed with the pigment. During application, the curing compound shall be continuously stirred by mechanical means. Edges of the lean concrete layer shall be sprayed with curing compound immediately following placement with slip-form pavers or when side-forms are removed. Hand spraying of odd widths or shapes and lean concrete surfaces exposed by the removal of forms is permitted.

The lean concrete temperature during curing shall be in accordance with paragraph 306-5.2.

If the curing material becomes damaged from any cause, including sawing operations, within the required 7-day curing period or until the overlying course is constructed, the Contractor shall immediately repair the damaged areas by application of additional curing compound or other means approved by the RPR.

306-5.13 Surface tolerance. The Contractor shall perform smoothness and grade checks daily. Any area not meeting smoothness and grade shall be corrected by the Contractor at the Contractor's expense. The Contractor shall provide smoothness and grade data to the RPR on a daily basis.

- a. **Smoothness.** The finished surface shall not vary more than $\pm 3/8$ -inch (9 mm) when tested with a 12-foot (3.7-m) straightedge applied parallel with and at right angles to the centerline and moved continuously forward at half the length of the 12-foot (3.7-m) straightedge for the full length of each line on a 50-foot (15-m) grid. The Contractor shall correct any high spots more than $3/8$ inch (9 mm) in 12-foot (3.7-m) with a grinding machine or remove and replace the material at the Contractor's expense. Any areas that have been ground shall have curing compound reapplied.
- b. **Grade.** The grade shall be measured on a 50-foot (15-m) grid and shall be within $\pm .05$ feet (15 mm) of the specified grade. When the surface is more than $1/2$ inch (12 mm) above the grade shown in the plans, the surface shall be corrected at the Contractor's expense to an elevation that falls within a tolerance of $1/4$ inch (6 mm).

306-5.14 Bond-breaker. Fabric per paragraph 306-2.8 shall be placed on the surface of the lean concrete to prevent bonding. The fabric shall be placed with a minimum 1 foot (0.3 m) of overlap where adjoining sections of fabric come together.

MATERIAL ACCEPTANCE

306-6.1 Sampling and testing. Acceptance sampling and testing to determine conformance with the requirements specified in this section will be performed by the RPR for each 1200 square yards (1000 square meters). Sampling locations will be determined by the RPR on a random basis per ASTM D3665.

- a. **Compressive Strength.** One sample of freshly delivered lean concrete will be taken for compressive strength for each 1200 square yards (1000 square meters) in accordance with ASTM C172 and air content tests in accordance with ASTM C231. Two test cylinders will be made and cured from the sample per ASTM C31 and the 7-day compressive strength of each cylinder determined per ASTM C39. The compressive strength will be computed by averaging the two 7-day compressive strengths.

The Contractor shall provide for the initial curing of cylinders in accordance with ASTM C31 during the 24 hours after molding.

- b. **Thickness.** Cores shall be drilled by the Contractor at two different sampling locations for thickness determination for each 1200 square yards (1000 square meters). Thickness will be determined by measuring the depth of core holes and computed by averaging the thickness determination of the two locations.

Core holes shall be filled by the Contractor with lean concrete base or non-shrink grout.

306-6.2 Acceptance.

- a. **Strength.** If the lean concrete fails to meet the minimum compressive strength requirements, the Contractor shall remove and replaced the material at the Contractor's expense.
- b. **Thickness.** If the average thickness is not deficient by more than 1/2 inch (12 mm) from the plan thickness, full payment shall be made. When such measurement is deficient by more than 1/2 inch (12 mm) but less than one inch (25 mm) from the plan thickness, the area **represented by the test** shall be removed and replaced at the Contractor's expense or shall be permitted to remain in-place at an adjusted payment of 75% of the contract unit price.

METHOD OF MEASUREMENT

306-7.1 The quantity of lean concrete base course will be determined by the number of square yard (m²) of lean concrete actually constructed and accepted by the RPR as complying with the plans and specifications.

BASIS OF PAYMENT

306-8.1 The accepted quantities of lean concrete will be paid for at the contract unit price per square yard (m²) for lean concrete base. The price and payment shall be full compensation for furnishing and placing all materials, provided; however, for any pavement found deficient in thickness as specified in paragraph 306-6.2b, the reduced unit price shall be paid.

~~Item P-306-8.1 Payment will be made for lean concrete base course per square yard (SY)~~

Item P-306-1 6" Lean Concrete Base -per Square Yard (SY)

REFERENCES

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

ASTM International (ASTM)

ASTM C31	Standard Practice for Making and Curing Concrete Test Specimens in the Field
ASTM C33	Standard Specification for Concrete Aggregates
ASTM C39	Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
ASTM C94	Standard Specification for Ready-Mixed Concrete
ASTM C136	Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates
ASTM C150	Standard Specification for Portland Cement
ASTM C172	Standard Practice for Sampling Freshly Mixed Concrete
ASTM C173	Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method
ASTM C174	Standard Test Method for Measuring Thickness of Concrete Elements Using Drilled Concrete Cores
ASTM C192	Standard Practice for Making and Curing Concrete Test Specimens in the Laboratory
ASTM C231	Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C260	Standard Specification for Air-Entraining Admixtures for Concrete
ASTM C1260	Standard Test Method for Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)
ASTM C309	Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete
ASTM C494	Standard Specification for Chemical Admixtures for Concrete
ASTM C595	Standard Specification for Blended Hydraulic Cements
ASTM C618	Specification for Coal Fly Ash and Raw and Calcined Natural Pozzolans for Use in Concrete
ASTM C989	Standard Specification for Slag Cement for Use in Concrete and Mortars
ASTM C1567	Standard Test Method for Determining the Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials and Aggregates (Accelerated Mortar-Bar Method)
ASTM C1602	Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete American Association of State Highway and Transportation Officials (AASHTO)
AASHTO T136	Standard Method of Test for Freezing-and-Thawing Tests of Compacted Soil-Cement Mixtures
ASTM D3665	Standard Practice for Random Sampling of Construction Materials American Concrete Institute (ACI)
ACI 305R	Guide to Hot Weather Concreting
ACI 306R	Guide to Cold Weather Concreting

END OF ITEM P-306

ITEM P-501

CEMENT CONCRETE PAVEMENT

ITEM P-603, "CEMENT CONCRETE PAVEMENT" is a technical specification contained in Federal Aviation Administration Advisory Circular – 150/5370-10H, "Standard Specifications for Construction of Airports."

This item has been modified to make allowances for local materials, methods and requirements. This item has been updated and modified to comply with the latest editions of other applicable codes, from knowledge gained on other airport construction projects and valuable lessons learned from airport maintenance staffs.

Deletions are noted by the ~~striketrough~~ method.

Changes and additions are noted by the ***bold italic*** method.

**ITEM P-501
CEMENT CONCRETE PAVEMENT**

DESCRIPTION

501-1.1 This work shall consist of pavement composed of cement concrete with reinforcement constructed on a prepared underlying surface in accordance with these specifications and shall conform to the lines, grades, thickness, and typical cross-sections shown on the plans. The terms cement concrete, hydraulic cement concrete, and concrete are interchangeable in this specification.

MATERIALS

501-2.1 Aggregates.

- a. **Reactivity.** Fine and Coarse aggregates to be used in PCC on this project shall be tested and evaluated by the Contractor for alkali-aggregate reactivity in accordance with both ASTM C1260 and ASTM C1567. Tests must be representative of aggregate sources which will be providing material for production. ASTM C1260 and ASTM C1567 tests may be run concurrently.

(1) Coarse aggregate and fine aggregate shall be tested separately in accordance with ASTM C1260, however, the length of test shall be extended to 28 days (30 days from casting). Tests must have been completed within 6 months of the date of the concrete mix submittal.

(2) The combined coarse and fine aggregate shall be tested in accordance with ASTM C1567, modified for combined aggregates, using the proposed mixture design proportions of aggregates, cementitious materials, and/or specific reactivity reducing chemicals. If the expansion does not exceed 0.10% at 28 days, the proposed combined materials will be accepted. If the expansion is greater than 0.10% at 28 days, the aggregates will not be accepted unless adjustments to the combined materials mixture can reduce the expansion to less than 0.10% at 28 days, or new aggregates shall be evaluated and tested.

(3) If lithium nitrate is proposed for use with or without supplementary cementitious materials, the aggregates shall be tested in accordance with Corps of Engineers (COE) Concrete Research Division (CRD) C662 in lieu of ASTM C1567. If lithium nitrate admixture is used, it shall be nominal 30% \pm 0.5% weight lithium nitrate in water. If the expansion does not exceed 0.10% at 28 days, the proposed combined materials will be accepted. If the expansion is greater than 0.10% at 28 days, the aggregates will not be accepted unless adjustments to the combined materials mixture can reduce the expansion to less than 0.10% at 28 days, or new aggregates shall be evaluated and tested.

- b. **Fine aggregate.** Grading of the fine aggregate, as delivered to the mixer, shall conform to the requirements of ASTM C33 and the parameters identified in the fine aggregate material requirements below. Fine aggregate material requirements and deleterious limits are shown in the table below.

Fine Aggregate Material Requirements*

Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate	Loss after 5 cycles: 10% maximum using Sodium sulfate - or - 15% maximum using magnesium sulfate	ASTM C88
Sand Equivalent	45 minimum	ASTM D2419
Fineness Modulus (FM)	$2.50 \leq FM \leq 3.40$	ASTM C136
Limits for Deleterious Substances in Fine Aggregate for Concrete		
Clay lumps and friable particles	1.0% maximum	ASTM C142
Coal and lignite	0.5% using a medium with a density of Sp. Gr. of 2.0	ASTM C123
Total Deleterious Material	1.0% maximum	

*Aggregate meeting FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION Sections 902-2.1 fine aggregate meeting gradation is acceptable.

- c. **Coarse aggregate.** The maximum size coarse aggregate shall be 1-1/2".

Aggregates delivered to the mixer shall be clean, hard, uncoated aggregates consisting of crushed stone, crushed or uncrushed gravel, air-cooled iron blast furnace slag, crushed recycled concrete pavement, or a combination. The aggregates shall have no known history of detrimental pavement staining. Steel blast furnace slag shall not be permitted. Coarse aggregate material requirements and deleterious limits are shown in the table below; washing may be required to meet aggregate requirements.

Coarse Aggregate Material Requirements

Material Test	Requirement	Standard
Resistance to Degradation	Loss: 40% maximum	ASTM C131
Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate	Loss after 5 cycles: 12% maximum using Sodium sulfate - or - 18% maximum using magnesium sulfate	ASTM C88
Flat, Elongated, or Flat and Elongated Particles	8% maximum, by weight, of flat, elongated, or flat and elongated particles at 5:1 for any size group coarser than 3/8 (9.5 mm) sieve ¹	ASTM D4791
Bulk density of slag ²	Weigh not less than 70 pounds per cubic foot (1.12 Mg/cubic meter)	ASTM C29

¹ A flat particle is one having a ratio of width to thickness greater than five (5); an elongated particle is one having a ratio of length to width greater than five (5).

² Only required if slag is specified.

The amount of deleterious material in the coarse aggregate shall not exceed the following limits:

Limits for Deleterious Substances in Coarse Aggregate

Deleterious material	ASTM	Percentage by Mass
Clay Lumps and friable particles	ASTM C142	1.0
Material finer than No. 200 sieve (75 µm)	ASTM C117	1.0 ¹
Lightweight particles	ASTM C123 using a medium with a density of Sp. Gr. of 2.0	0.5
Chert ² (less than 2.40 Sp Gr.)	ASTM C123 using a medium with a density of Sp. Gr. of 2.40)	0.1 ³

¹ The limit for material finer than 75-µm is allowed to be increased to 1.5% for crushed aggregates consisting of dust of fracture that is essentially free from clay or shale. Test results supporting acceptance of increasing limit to 1.5% with statement indicating material is dust of fracture must be submitted with Concrete mix. Acceptable techniques to characterizing these fines include methylene blue adsorption or X-ray diffraction analysis.

² Chert and aggregates with less than 2.4 specific gravity.

³ The limit for chert may be increased to 1.0 percent by mass in areas not subject to severe freeze and thaw.

d. Combined aggregate gradation. This specification is targeted for a combined aggregate gradation developed following the guidance presented in United States Air Force Engineering Technical Letter (ETL) 97-5: Proportioning Concrete Mixtures with Graded Aggregates for Rigid Airfield Pavements. Base the aggregate grading upon a combination of all the aggregates (coarse and fine) to be used for the mixture proportioning. Three aggregate sizes may be required to achieve an optimized combined gradation that will produce a workable concrete mixture for its intended use. Use aggregate gradations that produce concrete mixtures with well-graded or optimized aggregate combinations. The Contractor shall submit complete mixture information necessary to calculate the volumetric components of the mixture. The combined aggregate grading shall meet the following requirements:

(1) The materials selected and the proportions used shall be such that when the Coarseness Factor (CF) and the Workability Factor (WF) are plotted on a diagram as described in paragraph 501-2.1d(4) below, the point thus determined shall fall within the parallelogram described therein.

(2) The CF shall be determined from the following equation:

$$CF = \frac{\text{cumulative percent retained on the } \frac{3}{8}\text{-in. (9.5 mm) sieve} \times 100}{\text{cumulative percent retained on the No.8 (2.36 mm) sieve}}$$

(3) The WF is defined as the percent passing the No. 8 (2.36 mm) sieve based on the combined gradation. However, WF shall be adjusted, upwards only, by 2.5 percentage points for each 94 pounds (42 kg) of cementitious material per cubic meter yard greater than 564 pounds per cubic yard (335 kg per cubic meter).

(4) A diagram shall be plotted using a rectangular scale with WF on the Y-axis with units from 20 (bottom) to 45 (top), and with CF on the X-axis with units from 80 (left side) to 30 (right side). On this diagram a parallelogram shall be plotted with corners at the following coordinates (CF-75, WF-28), (CF-75, WF-40), (CF-45, WF-32.5), and (CF-45, WF-44.5). If the point

determined by the intersection of the computed CF and WF does not fall within the above parallelogram, the grading of each size of aggregate used and the proportions selected shall be changed as necessary. The point determined by the plotting of the CF and WF may be adjusted during production ± 3 WF and ± 5 CF. Adjustments to gradation may not take the point outside of the parallelogram.

- e. **Contractors combined aggregate gradation.** The Contractor shall submit their combined aggregate gradation using the following format:

Contractor’s Combined Aggregate Gradation

Sieve Size	Contractor’s Concrete mix Gradation (Percent passing by weight)
2 inch (50 mm)	
1-1/2 inch (37.5 mm)	
1 inch (25.0 mm)	
3/4 inch (19.0 mm)	
1/2 inch (12.5 mm)	
3/8 inch (9.5 mm)	
No. 4 (4.75 mm)	
No. 8 (2.36 mm)	
No. 16 (1.18 mm)	
No. 30 (600 μ m)	
No. 50 (300 μ m)	
No. 100 (150 μ m)	

501-2.2 Cement. Cement shall conform to the requirements of ASTM 150 Type 1.

501-2.3 Cementitious materials.

- a. **Fly ash.** Fly ash shall meet the requirements of ASTM C618, with the exception of loss of ignition, where the maximum shall be less than 6%. Fly ash shall have a Calcium Oxide (CaO) content of less than 15% and a total alkali content less than 3% per ASTM C311. The Contractor shall furnish the previous three most recent, consecutive ASTM C618 reports for each source of fly ash proposed in the concrete mix, and shall furnish each additional report as they become available during the project. The reports can be used for acceptance or the material may be tested independently by the Resident Project Representative (RPR).
- b. **Slag cement (ground granulated blast furnace (GGBF)).** Slag cement shall conform to ASTM C989, Grade 100 or Grade 120. Slag cement shall be used only at a rate between 25% and 55% of the total cementitious material by mass.
- c. **Raw or calcined natural pozzolan.** Natural pozzolan shall be raw or calcined and conform to ASTM C618, Class N, including the optional requirements for uniformity and effectiveness in controlling Alkali-Silica reaction and shall have a loss on ignition not exceeding 6%. Class N pozzolan for use in mitigating Alkali-Silica Reactivity shall have a total available alkali content less than 3%.
- d. **Ultrafine fly ash and ultrafine pozzolan.** UltraFine Fly Ash (UFFA) and UltraFine Pozzolan (UFP) shall conform to ASTM C618, Class F or N, and the following additional requirements:
 - (1) The strength activity index at 28 days of age shall be at least 95% of the control specimens.

(2) The average particle size shall not exceed 6 microns.

501-2.4 Joint seal. The joint seal for the joints in the concrete pavement shall meet the requirements of Item P-605 and shall be of the type specified in the plans.

501-2.5 Isolation joint filler. Pre-molded joint filler for isolation joints shall conform to the requirements of ASTM D1751 or ASTM D1752 and shall be where shown on the plans. The filler for each joint shall be furnished in a single piece for the full depth and width required for the joint, unless otherwise specified by the RPR. When the use of more than one piece is required for a joint, the abutting ends shall be fastened securely and held accurately to shape by stapling or other positive fastening means satisfactory to the RPR.

501-2.6 Steel reinforcement. Reinforcing shall consist of welded steel wire fabric furnished in flat sheets conforming to the requirements of ASTM A1064.

501-2.7 Dowel and tie bars. Dowel bars shall be plain steel bars conforming to ASTM A615 and shall be free from burring or other deformation restricting slippage in the concrete.

- a. **Dowel Bars.** Before delivery to the construction site each dowel bar shall be epoxy coated per ASTM A1078, Type 1, with a coating thickness after curing greater than 10 mils. Patched ends are not required for Type 1 coated dowels. The dowels shall be coated with a bond-breaker recommended by the manufacturer. Dowel sleeves or inserts are not permitted. Grout retention rings shall be fully circular metal or plastic devices capable of supporting the dowel until the grout hardens.
- b. **Tie Bars.** Tie bars shall be deformed steel bars and conform to the requirements of ASTM A615. Tie bars designated as Grade 60 in ASTM A615 or ASTM A706 shall be used for construction requiring bent bars.

501-2.8 Water. Water used in mixing or curing shall be potable. If water is taken from other sources considered non-potable, it shall meet the requirements of ASTM C1602.

501-2.9 Material for curing concrete. Curing materials shall conform to one of the following specifications:

- a. Liquid membrane-forming compounds for curing concrete shall conform to the requirements of ASTM C309, Type 2, Class A, or Class B.
- b. White polyethylene film for curing concrete shall conform to the requirements of ASTM C171.
- c. White burlap-polyethylene sheeting for curing concrete shall conform to the requirements of ASTM C171.
- d. Waterproof paper for curing concrete shall conform to the requirements of ASTM C171.

501-2.10 Admixtures. Admixtures shall conform to the following specifications:

- a. **Air-entraining admixtures.** Air-entraining admixtures shall meet the requirements of ASTM C260 and shall consistently entrain the air content in the specified ranges under field conditions. The air-entraining agent and any water reducer admixture shall be compatible.

- b. **Water-reducing admixtures.** Water-reducing admixture shall meet the requirements of ASTM C494, Type A, B, or D.
- c. **Other admixtures.** The use of set retarding and set-accelerating admixtures shall be approved by the RPR prior to developing the concrete mix. Retarding admixtures shall meet the requirements of ASTM C494, Type A, B, or D and set-accelerating admixtures shall meet the requirements of ASTM C494, Type C. Calcium chloride and admixtures containing calcium chloride shall not be used.
- d. **Lithium Nitrate.** The lithium admixture shall be a nominal 30% aqueous solution of Lithium Nitrate, with a density of 10 pounds/gallon (1.2 kg/L), and shall have the approximate chemical form as shown below:

Lithium Admixture	
Constituent	Limit (Percent by Mass)
LiNO ₃ (Lithium Nitrate)	30 ±0.5
SO ₄ (Sulfate Ion)	0.1 (max)
Cl (Chloride Ion)	0.2 (max)
Na (Sodium Ion)	0.1 (max)
K (Potassium Ion)	0.1 (max)

The lithium nitrate admixture dispensing and mixing operations shall be verified and certified by the lithium manufacturer’s representative.

501-2.11 Epoxy-resin. All epoxy-resin materials shall be two-component materials conforming to the requirements of ASTM C881, Class as appropriate for each application temperature to be encountered, except that in addition, the materials shall meet the following requirements:

- a. Material for use for embedding dowels and anchor bolts shall be Type IV, Grade 3.
- b. Material for use as patching materials for complete filling of spalls and other voids and for use in preparing epoxy resin mortar shall be Type III, Grade as approved.
- c. Material for use for injecting cracks shall be Type IV, Grade 1.
- d. Material for bonding freshly mixed Portland cement concrete or mortar or freshly mixed epoxy resin concrete or mortar to hardened concrete shall be Type V, Grade as approved.

501-2.12 Bond Breaker. Choke stone shall be an ASTM C33 Number 89 stone.

CONCRETE MIX

501-3.1. General. No concrete shall be placed until an acceptable concrete mix has been submitted to the RPR for review and the RPR has taken appropriate action. The RPR’s review shall not relieve the Contractor of the responsibility to select and proportion the materials to comply with this section.

501-3.2 Concrete Mix Laboratory. The laboratory used to develop the concrete mix shall be accredited in accordance with ASTM C1077. The laboratory accreditation must be current and listed on the accrediting authority’s website. All test methods required for developing the concrete mix must be included in the

lab accreditation. A copy of the laboratory's current accreditation and accredited test methods shall be submitted to the RPR prior to start of construction.

501-3.3 Concrete Mix Proportions. Develop the mix using the procedures contained in Portland Cement Association (PCA) publication, "Design and Control of Concrete Mixtures." Concrete shall be proportioned to achieve a 28-day flexural strength that meets or exceeds the acceptance criteria contained in paragraph 501-6.6 for a flexural strength of 700 psi per ASTM C78.

The minimum cementitious material shall be adequate to ensure a workable, durable mix. The minimum cementitious material (cement plus fly ash, or slag cement) shall be 470 pounds per cubic yard (279 kg per cubic meter). The ratio of water to cementitious material, including free surface moisture on the aggregates but not including moisture absorbed by the aggregates shall be between 0.38 – 0.45 by weight.

Flexural strength test specimens shall be prepared in accordance with ASTM C192 and tested in accordance with ASTM C78. At the start of the project, the Contractor shall determine an allowable slump as determined by ASTM C143 not to exceed 2 inches (50 mm) for slip-form placement. For fixed-form placement, the slump shall not exceed 3 inches (75 mm). For hand placement, the slump shall not exceed 4 inches (100 mm).

The results of the concrete mix shall include a statement giving the maximum nominal coarse aggregate size and the weights and volumes of each ingredient proportioned on a one cubic yard (meter) basis. Aggregate quantities shall be based on the mass in a saturated surface dry condition.

If a change in source(s) is made, or admixtures added or deleted from the mix, a new concrete mix must be submitted to the RPR for approval.

The RPR may request samples at any time for testing, prior to and during production, to verify the quality of the materials and to ensure conformance with the applicable specifications.

501-3.4 Concrete Mix submittal. The concrete mix shall be submitted to the RPR at least 30 days prior to the start of operations. The submitted concrete mix shall not be more than 180 days old and must use the materials to be used for production for the project. Production shall not begin until the concrete mix is approved in writing by the RPR.

Each of the submitted concrete mixes (i.e., slip form, side form machine finish and side form hand finish) shall be stamped or sealed by the responsible professional Engineer of the laboratory and shall include the following items and quantities as a minimum:

- Certified material test reports for aggregate in accordance with paragraph 501-2.1. Certified reports must include all tests required; reporting each test, test method, test result, and requirement specified (criteria).
- Combined aggregate gradations and analysis; and including plots of the fine aggregate fineness modulus.
- Reactivity Test Results.
- Coarse aggregate quality test results, including deleterious materials.
- Fine aggregate quality test results, including deleterious materials.

- Mill certificates for cement and supplemental cementitious materials.
- Certified test results for all admixtures, including Lithium Nitrate if applicable.
- Specified flexural strength, slump, and air content.
- Recommended proportions/volumes for proposed mixture and trial water-cementitious materials ratio, including actual slump and air content.
- Flexural and compressive strength summaries and plots, including all individual beam and cylinder breaks.
- Correlation ratios for acceptance testing and Contractor QC testing, when applicable.
- Historical record of test results documenting production standard deviation, when applicable.

501-3.5 Cementitious materials.

- a. **Fly ash.** When fly ash is used as a partial replacement for cement, the replacement rate shall be determined from laboratory trial mixes, and shall be between 20 and 30% by weight of the total cementitious material. If fly ash is used in conjunction with slag cement the maximum replacement rate shall not exceed 10% by weight of total cementitious material.
- b. **Slag cement (ground granulated blast furnace (GGBF)).** Slag cement may be used. The slag cement, or slag cement plus fly ash if both are used, may constitute between 25 to 55% of the total cementitious material by weight.
- c. **Raw or calcined natural pozzolan.** Natural pozzolan may be used in the concrete mix. When pozzolan is used as a partial replacement for cement, the replacement rate shall be determined from laboratory trial mixes, and shall be between 20 and 30% by weight of the total cementitious material. If pozzolan is used in conjunction with slag cement the maximum replacement rate shall not exceed 10% by weight of total cementitious material.

501-3.6 Admixtures.

- a. **Air-entraining admixtures.** Air-entraining admixture are to be added in such a manner that will ensure uniform distribution of the agent throughout the batch. The air content of freshly mixed air-entrained concrete shall be based upon trial mixes with the materials to be used in the work adjusted to produce concrete of the required plasticity and workability. The percentage of air in the mix shall be 2.5%. Air content shall be determined by testing in accordance with ASTM C231 for gravel and stone coarse aggregate and ASTM C173 for slag and other highly porous coarse aggregate.
- b. **Water-reducing admixtures.** Water-reducing admixtures shall be added to the mix in the manner recommended by the manufacturer and in the amount necessary to comply with the specification requirements. Tests shall be conducted with the materials to be used in the work, in accordance with ASTM C494.
- c. **Other admixtures.** Set controlling, and other approved admixtures shall be added to the mix in the manner recommended by the manufacturer and in the amount necessary to comply with the

specification requirements. Tests shall be conducted with the materials to be used in the work, in accordance with ASTM C494.

- d. **Lithium nitrate.** Lithium nitrate shall be added to the mix in the manner recommended by the manufacturer and in the amount necessary to comply with the specification requirements in accordance with paragraph 501-2.10d.

CONSTRUCTION METHODS

501-4.1 Control Strip. The control strip(s) shall be to the next planned joint after the initial 250 feet (75 m) of each type of pavement construction (slip-form pilot lane, slip-form fill-in lane, or fixed form). The Contractor shall demonstrate, in the presence of the RPR, that the materials, concrete mix, equipment, construction processes, and quality control processes meet the requirements of the specifications. The concrete mixture shall be extruded from the paver meeting the edge slump tolerance and with little or no finishing. Pilot, fill-in, and fixed-form control strips will be accepted separately. Minor adjustments to the mix design may be required to place an acceptable control strip. The production mix will be the adjusted mix design used to place the acceptable control strip. Upon acceptance of the control strip by the RPR, the Contractor must use the same equipment, materials, and construction methods for the remainder of concrete paving. Any adjustments to processes or materials must be approved in advance by the RPR. The acceptable control strip shall be paid for in accordance with paragraph 501-6.6.

501-4.2 Equipment. The Contractor is responsible for the proper operation and maintenance of all equipment necessary for handling materials and performing all parts of the work to meet this specification.

- a. **Plant and equipment.** The plant and mixing equipment shall conform to the requirements of ASTM C94 and/or ASTM C685. Each truck mixer shall have attached in a prominent place a manufacturer's nameplate showing the capacity of the drum in terms of volume of mixed concrete and the speed of rotation of the mixing drum or blades. The truck mixers shall be examined daily for changes in condition due to accumulation of hard concrete or mortar or wear of blades. The pickup and throw-over blades shall be replaced when they have worn down 3/4 inch (19 mm) or more. The Contractor shall have a copy of the manufacturer's design on hand showing dimensions and arrangement of blades in reference to original height and depth.

Equipment for transferring and spreading concrete from the transporting equipment to the paving lane in front of the finishing equipment shall be provided. The equipment shall be specially manufactured, self-propelled transfer equipment which will accept the concrete outside the paving lane and will spread it evenly across the paving lane in front of the paver and strike off the surface evenly to a depth which permits the paver to operate efficiently.

- b. **Finishing equipment.**

- (1) **Slip-form.** The standard method of constructing concrete pavements shall be with an approved slip-form paving equipment designed and operated to spread, consolidate, screed, and finish the freshly placed concrete in one complete pass of the machine so that the end result is a dense and homogeneous pavement which is achieved with a minimum of hand finishing. The paver-finisher shall be a heavy duty, self-propelled machine designed specifically for paving and finishing high quality concrete pavements.

- (2) **Fixed-form.** On projects requiring less than 10,000 cubic yards (7650 cubic meters) of concrete pavement or irregular areas at locations inaccessible to slip-form paving equipment,

concrete pavement may be placed with equipment specifically designed for placement and finishing using stationary side forms. Methods and equipment shall be reviewed and accepted by the RPR. Hand screeding and float finishing may only be used on small irregular areas as allowed by the RPR.

- c. **Vibrators.** Vibrator shall be the internal type. The rate of vibration of each vibrating unit shall be sufficient to consolidate the pavement without segregation or voids. The number, spacing, and frequency shall be as necessary to provide a dense and homogeneous pavement and meet the recommendations of American Concrete Institute (ACI) 309R, Guide for Consolidation of Concrete. Adequate power to operate all vibrators shall be available on the paver. The vibrators shall be automatically controlled so that they shall be stopped as forward motion ceases. The Contractor shall provide an electronic or mechanical means to monitor vibrator status. The checks on vibrator status shall occur a minimum of two times per day or when requested by the RPR.

Hand-held vibrators may only be used in irregular areas and shall meet the recommendations of ACI 309R, Guide for Consolidation of Concrete.

- d. **Concrete saws.** The Contractor shall provide sawing equipment adequate in number of units and power to complete the sawing to the required dimensions. The Contractor shall provide at least one standby saw in good working order and a supply of saw blades at the site of the work at all times during sawing operations.
- e. **Fixed forms.** Straight side fixed forms shall be made of steel and shall be furnished in sections not less than 10 feet (3 m) in length. Forms shall be provided with adequate devices for secure settings so that when in place they will withstand, without visible spring or settlement, the impact and vibration of the consolidating and finishing equipment. Forms with battered top surfaces and bent, twisted or broken forms shall not be used. Built-up forms shall not be used, except as approved by the RPR. The top face of the form shall not vary from a true plane more than 1/8 inch (3 mm) in 10 feet (3 m), and the upstanding leg shall not vary more than 1/4 inch (6 mm). The forms shall contain provisions for locking the ends of abutting sections together tightly for secure setting. Wood forms may be used under special conditions, when approved by the RPR. The forms shall extend the full depth of the pavement section.

501-4.3 Form setting. Forms shall be set to line and grade as shown on the plans, sufficiently in advance of the concrete placement, to ensure continuous paving operation. Forms shall be set to withstand, without visible spring or settlement, the impact and vibration of the consolidating and finishing equipment. Forms shall be cleaned and oiled prior to the concrete placement.

501-4.4 Base surface preparation prior to placement. Any damage to the prepared base, subbase, and subgrade shall be corrected full depth by the Contractor prior to concrete placement. The underlying surface shall be entirely free of frost when concrete is placed. The prepared grade shall be moistened with water, without saturating, immediately ahead of concrete placement to prevent rapid loss of moisture from concrete. Bond breaker shall be applied in accordance with 501-2.12.

501-4.5 Handling, measuring, and batching material. Aggregate stockpiles shall be constructed and managed in such a manner that prevents segregation and intermixing of deleterious materials. Aggregates from different sources shall be stockpiled, weighed and batched separately at the concrete batch plant. Aggregates that have become segregated or mixed with earth or foreign material shall not be used. All aggregates produced or handled by hydraulic methods, and washed aggregates, shall be stockpiled or binned for draining at least 12 hours before being batched. Store and maintain all aggregates at a uniform

moisture content prior to use. A continuous supply of materials shall be provided to the work to ensure continuous placement.

501-4.6 Mixing concrete. The concrete may be mixed at the work site, in a central mix plant or in truck mixers. The mixer shall be of an approved type and capacity. Mixing time shall be measured from the time all materials are placed into the drum until the drum is emptied into the truck. All concrete shall be mixed and delivered to the site in accordance with the requirements of ASTM C94 or ASTM C685.

Mixed concrete from the central mixing plant shall be transported in truck mixers, truck agitators, or non-agitating trucks. The elapsed time from the addition of cementitious material to the mix until the concrete is discharged from the truck should not exceed 30 minutes when the concrete is hauled in non-agitating trucks, nor 90 minutes when the concrete is hauled in truck mixers or truck agitators. In no case shall the temperature of the concrete when placed exceed 90°F (32°C). Re-tempering concrete by adding water or by other means will not be permitted. With transit mixers additional water may be added to the batch materials and additional mixing performed to increase the slump to meet the specified requirements provided the addition of water is performed within 45 minutes after the initial mixing operations and provided the water/cementitious ratio specified is not exceeded.

501-4.7 Weather Limitations on mixing and placing. No concrete shall be mixed, placed, or finished when the natural light is insufficient, unless an adequate and approved artificial lighting system is operated.

- a. **Cold weather.** Unless authorized in writing by the RPR, mixing and concreting operations shall be discontinued when a descending air temperature in the shade and away from artificial heat reaches 40°F (4°C) and shall not be resumed until an ascending air temperature in the shade and away from artificial heat reaches 35°F (2°C).

The aggregate shall be free of ice, snow, and frozen lumps before entering the mixer. The temperature of the mixed concrete shall not be less than 50°F (10°C) at the time of placement. Concrete shall not be placed on frozen material nor shall frozen aggregates be used in the concrete.

When concreting is authorized during cold weather, water and/or the aggregates may be heated to not more than 150°F (66°C). The apparatus used shall heat the mass uniformly and shall be arranged to preclude the possible occurrence of overheated areas which might be detrimental to the materials.

Curing during cold weather shall be in accordance with paragraph 501-4.13d.

- b. **Hot weather.** During periods of hot weather when the maximum daily air temperature exceeds 85°F (30°C), the following precautions shall be taken.

The forms and/or the underlying surface shall be sprinkled with water immediately before placing the concrete. The concrete shall be placed at the coolest temperature practicable, and in no case shall the temperature of the concrete when placed exceed 90°F (32°C). The aggregates and/or mixing water shall be cooled as necessary to maintain the concrete temperature at or not more than the specified maximum.

The concrete placement shall be protected from exceeding an evaporation rate of 0.2 psf (0.98 kg/m² per hour) per hour. When conditions are such that problems with plastic cracking can be expected, and particularly if any plastic cracking begins to occur, the Contractor shall immediately

take such additional measures as necessary to protect the concrete surface. If the Contractor's measures are not effective in preventing plastic cracking, paving operations shall be immediately stopped.

Curing during hot weather shall be in accordance with paragraph 501-4.13e.

- c. **Temperature management program.** Prior to the start of paving operation for each day of paving, the Contractor shall provide the RPR with a Temperature Management Program for the concrete to be placed to assure that uncontrolled cracking is avoided. (Federal Highway Administration HIPERPAV 3 is one example of a temperature management program.) As a minimum, the program shall address the following items:
- (1) Anticipated tensile strains in the fresh concrete as related to heating and cooling of the concrete material.
 - (2) Anticipated weather conditions such as ambient temperatures, wind velocity, and relative humidity; and anticipated evaporation rate using Figure 19-9, PCA, Design and Control of Concrete Mixtures.
 - (3) Anticipated timing of initial sawing of joint.
 - (4) Anticipated number and type of saws to be used.
- d. **Rain.** The Contractor shall have available materials for the protection of the concrete during inclement weather. Such protective materials shall consist of rolled polyethylene sheeting at least 4 mils (0.1 mm) thick of sufficient length and width to cover the plastic concrete slab and any edges. The sheeting may be mounted on either the paver or a separate movable bridge from which it can be unrolled without dragging over the plastic concrete surface. When rain appears imminent, all paving operations shall stop and all available personnel shall begin covering the surface of the unhardened concrete with the protective covering.

501-4.8 Concrete Placement. At any point in concrete conveyance, the free vertical drop of the concrete from one point to another or to the underlying surface shall not exceed 3 feet (1 m). The finished concrete product must be dense and homogeneous, without segregation and conforming to the standards in this specification. Backhoes and grading equipment shall not be used to distribute the concrete in front of the paver. Front end loaders will not be used. All concrete shall be consolidated without voids or segregation, including under and around all load-transfer devices, joint assembly units, and other features embedded in the pavement. Hauling equipment or other mechanical equipment can be permitted on adjoining previously constructed pavement when the concrete strength reaches a flexural strength of 550 psi (3.8 MPa), based on the average of four field cured specimens per 2,000 cubic yards (1,530 cubic meters) of concrete placed. The Contractor must determine that the above minimum strengths are adequate to protect the pavement from overloads due to the construction equipment proposed for the project.

The Contractor shall have available materials for the protection of the concrete during cold, hot and/or inclement weather in accordance with paragraph 501-4.7.

- a. **Slip-form construction.** The concrete shall be distributed uniformly into final position by a self-propelled slip-form paver without delay. The alignment and elevation of the paver shall be regulated from outside reference lines established for this purpose. The paver shall vibrate the concrete for the full width and depth of the strip of pavement being placed and the vibration

shall be adequate to provide a consistency of concrete that will stand normal to the surface with sharp well-defined edges. The sliding forms shall be rigidly held together laterally to prevent spreading of the forms. The plastic concrete shall be effectively consolidated by internal vibration with transverse vibrating units for the full width of the pavement and/or a series of equally placed longitudinal vibrating units. The space from the outer edge of the pavement to longitudinal unit shall not exceed 9 inches (23 cm) for slipform and at the end of the dowels for the fill-in lanes. The spacing of internal units shall be uniform and shall not exceed 18 inches (0.5 m).

The term internal vibration means vibrating units located within the specified thickness of pavement section.

The rate of vibration of each vibrating unit shall be sufficient to consolidate the pavement without, segregation, voids, or vibrator trails and the amplitude of vibration shall be sufficient to be perceptible on the surface of the concrete along the entire length of the vibrating unit and for a distance of at least one foot (30 cm). The frequency of vibration or amplitude should be adjusted proportionately with the rate of travel to result in a uniform density and air content. The paving machine shall be equipped with a tachometer or other suitable device for measuring and indicating the actual frequency of vibrations.

The concrete shall be held at a uniform consistency. The slip-form paver shall be operated with as nearly a continuous forward movement as possible and all operations of mixing, delivering, and spreading concrete shall be coordinated to provide uniform progress with stopping and starting of the paver held to a minimum. If for any reason, it is necessary to stop the forward movement of the paver, the vibratory and tamping elements shall also be stopped immediately. No tractive force shall be applied to the machine, except that which is controlled from the machine.

When concrete is being placed adjacent to an existing pavement, that part of the equipment which is supported on the existing pavement shall be equipped with protective pads on crawler tracks or rubber-tired wheels on which the bearing surface is offset to run a sufficient distance from the edge of the pavement to avoid breaking the pavement edge.

Not more than 15% of the total free edge of each 500-foot (150 m) segment of pavement, or fraction thereof, shall have an edge slump exceeding 1/4 inch (6 mm), and none of the free edge of the pavement shall have an edge slump exceeding 3/8 inch (9 mm). (The total free edge of 500 feet (150 m) of pavement will be considered the cumulative total linear measurement of pavement edge originally constructed as nonadjacent to any existing pavement; that is, 500 feet (150 m) of paving lane originally constructed as a separate lane will have 1,000 feet (300 m) of free edge, 500 feet (150 m) of fill-in lane will have no free edge, etc.). The area affected by the downward movement of the concrete along the pavement edge shall be limited to not more than 18 inches (0.5 m) from the edge.

When excessive edge slump cannot be corrected before the concrete has hardened, the area with excessive edge slump will be removed the full width of the slip form lane and replaced at the expense of the Contractor as directed by the RPR.

- b. **Fixed-form construction.** Forms shall be drilled in advance of being placed to line and grade to accommodate tie bars / dowel bars where these are specified.

Immediately in advance of placing concrete and after all subbase operations are completed, side forms shall be trued and maintained to the required line and grade for a distance sufficient to prevent delay in placing.

Side forms shall remain in place at least 12 hours after the concrete has been placed, and in all cases until the edge of the pavement no longer requires the protection of the forms. Curing compound shall be applied to the concrete immediately after the forms have been removed.

Side forms shall be thoroughly cleaned and coated with a release agent each time they are used and before concrete is placed against them.

Concrete shall be spread, screed, shaped and consolidated by one or more self-propelled machines. These machines shall uniformly distribute and consolidate concrete without segregation so that the completed pavement will conform to the required cross-section with a minimum of handwork.

The number and capacity of machines furnished shall be adequate to perform the work required at a rate equal to that of concrete delivery. The equipment must be specifically designed for placement and finishing using stationary side forms. Methods and equipment shall be reviewed and accepted by the RPR.

Concrete for the full paving width shall be effectively consolidated by internal vibrators. The rate of vibration of each vibrating unit shall be sufficient to consolidate the pavement without segregation, voids, or leaving vibrator trails.

Power to vibrators shall be connected so that vibration ceases when forward or backward motion of the machine is stopped.

- c. **Consolidation.** Concrete shall be consolidated with the specified type of lane-spanning, gang-mounted, mechanical, immersion type vibrating equipment mounted in front of the paver, supplemented, in rare instances as specified, by hand-operated vibrators. The vibrators shall be inserted into the concrete to a depth that will provide the best full-depth consolidation but not closer to the underlying material than 2 inches (50 mm). Vibrators shall not be used to transport or spread the concrete. For each paving train, at least one additional vibrator spud, or sufficient parts for rapid replacement and repair of vibrators shall be maintained at the paving site at all times. Any evidence of inadequate consolidation (honeycomb along the edges, large air pockets, or any other evidence) or over-consolidation (vibrator trails, segregation, or any other evidence) shall require the immediate stopping of the paving operation and adjustment of the equipment or procedures as approved by the RPR.

If a lack of consolidation of the hardened concrete is suspected by the RPR, referee testing may be required. Referee testing of hardened concrete will be performed by the RPR by cutting cores from the finished pavement after a minimum of 24 hours curing. The RPR shall visually examine the cores for evidence of lack of consolidation. Density determinations will be made by the RPR based on the water content of the core as taken. ASTM C642 shall be used for the determination of core density in the saturated-surface dry condition. When required, referee cores will be taken at the minimum rate of one for each 500 cubic yards (382 m²) of pavement, or fraction. The Contractor shall be responsible for all referee testing cost if they fail to meet the required density.

The average density of the cores shall be at least 97% of the original concrete mix density, with no cores having a density of less than 96% of the original concrete mix density. Failure to meet the referee tests will be considered evidence that the minimum requirements for vibration are inadequate for the job conditions. Additional vibrating units or other means of increasing the effect of vibration shall be employed so that the density of the hardened concrete conforms to the above requirements.

501-4.9 Strike-off of concrete and placement of reinforcement. Following the placing of the concrete, it shall be struck off to conform to the cross-section shown on the plans and to an elevation that when the concrete is properly consolidated and finished, the surface of the pavement shall be at the elevation shown on the plans. When reinforced concrete pavement is placed in two layers, the bottom layer shall be struck off to such length and depth that the sheet of reinforcing steel fabric or bar mat may be laid full length on the concrete in its final position without further manipulation. The reinforcement shall then be placed directly upon the concrete, after which the top layer of the concrete shall be placed, struck off, and screed. If any portion of the bottom layer of concrete has been placed more than 30 minutes without being covered with the top layer or if initial set has taken place, it shall be removed and replaced with freshly mixed concrete at the Contractor's expense. When reinforced concrete is placed in one layer, the reinforcement may be positioned in advance of concrete placement or it may be placed in plastic concrete by mechanical or vibratory means after spreading.

Reinforcing steel, at the time concrete is placed, shall be free of mud, oil, or other organic matter that may adversely affect or reduce bond. Reinforcing steel with rust, mill scale or a combination of both will be considered satisfactory, provided the minimum dimensions, weight, and tensile properties of a hand wire-brushed test specimen are not less than the applicable ASTM specification requirements.

501-4.10 Joints. Joints shall be constructed as shown on the plans and in accordance with these requirements. All joints shall be constructed with their faces perpendicular to the surface of the pavement and finished or edged as shown on the plans. Joints shall not vary more than 1/2-inch (12 mm) from their designated position and shall be true to line with not more than 1/4-inch (6 mm) variation in 10 feet (3 m). The surface across the joints shall be tested with a 12-foot (3 m) straightedge as the joints are finished and any irregularities in excess of 1/4 inch (6 mm) shall be corrected before the concrete has hardened. All joints shall be so prepared, finished, or cut to provide a groove of uniform width and depth as shown on the plans.

- a. **Construction.** Longitudinal construction joints shall be slip-formed or formed against side forms as shown in the plans.

Transverse construction joints shall be installed at the end of each day's placing operations and at any other points within a paving lane when concrete placement is interrupted for more than 30 minutes or it appears that the concrete will obtain its initial set before fresh concrete arrives. The installation of the joint shall be located at a planned contraction or expansion joint. If placing of the concrete is stopped, the Contractor shall remove the excess concrete back to the previous planned joint.

- b. **Contraction.** Contraction joints shall be installed at the locations and spacing as shown on the plans. Contraction joints shall be installed to the dimensions required by forming a groove or cleft in the top of the slab while the concrete is still plastic or by sawing a groove into the concrete surface after the concrete has hardened. When the groove is formed in plastic concrete the sides of the grooves shall be finished even and smooth with an edging tool. If an insert material is used, the installation and edge finish shall be according to the manufacturer's instructions. The groove

shall be finished or cut clean so that spalling will be avoided at intersections with other joints. Grooving or sawing shall produce a slot at least 1/8 inch (3 mm) wide and to the depth shown on the plans.

- c. **Isolation (expansion).** Isolation joints shall be installed as shown on the plans. The pre-molded filler of the thickness as shown on the plans, shall extend for the full depth and width of the slab at the joint. The filler shall be fastened uniformly along the hardened joint face with no buckling or debris between the filler and the concrete interface, including a temporary filler for the sealant reservoir at the top of the slab. The edges of the joint shall be finished and tooled while the concrete is still plastic

d. **Dowels and Tie Bars for Joints**

(1) **Tie bars.** Tie bars shall consist of deformed bars installed in joints as shown on the plans. Tie bars shall be placed at right angles to the centerline of the concrete slab and shall be spaced at intervals shown on the plans. They shall be held in position parallel to the pavement surface and in the middle of the slab depth and within the tolerances in paragraph 501-4.10(f.). When tie bars extend into an unpaved lane, they may be bent against the form at longitudinal construction joints, unless threaded bolt or other assembled tie bars are specified. Tie bars shall not be painted, greased, or enclosed in sleeves. When slip-form operations call for tie bars, two-piece hook bolts can be installed.

(2) **Dowel bars.** Dowel bars shall be placed across joints in the proper horizontal and vertical alignment as shown on the plans. The dowels shall be coated with a bond-breaker or other lubricant recommended by the manufacturer and approved by the RPR. Dowel bars at longitudinal construction joints shall be bonded in drilled holes.

(3) **Placing dowels and tie bars.** Horizontal spacing of dowels shall be within a tolerance of $\pm 3/4$ inch (19 mm). The vertical location on the face of the slab shall be within a tolerance of $\pm 1/2$ inch (12 mm). The method used to install dowels shall ensure that the horizontal and vertical alignment will not be greater than 1/4 inch per feet (6 mm per 0.3 m), except for those across the crown or other grade change joints. Dowels across crowns and other joints at grade changes shall be measured to a level surface. Horizontal alignment shall be checked perpendicular to the joint edge. The portion of each dowel intended to move within the concrete or expansion cap shall be wiped clean and coated with a thin, even film of lubricating oil or light grease before the concrete is placed. Dowels shall be installed as specified in the following subparagraphs.

- (a). **Contraction joints.** Dowels and tie bars in longitudinal and transverse contraction joints within the paving lane shall be held securely in place by means of rigid metal frames or basket assemblies of an approved type. The basket assemblies shall be held securely in the proper location by means of suitable pins or anchors. Do not cut or crimp the dowel basket tie wires.

At the Contractor's option, dowels and tie bars in contraction joints may be installed by insertion into the plastic concrete using approved equipment and procedures per the paver manufacturer's design. Approval of installation methods will be based on the results of the control strip showing that the dowels and tie bars are installed within specified tolerances as verified by cores or non-destructive rebar location devices approved by the RPR.

- (b). **Construction joints.** Install dowels and tie bars by the cast-in-place or the drill-and-dowel method. Installation by removing and replacing in preformed holes will not be permitted. Dowels and tie bars shall be prepared and placed across joints where indicated, correctly aligned, and securely held in the proper horizontal and vertical position during placing and finishing operations, by means of devices fastened to the forms.
- (c). **Joints in hardened concrete.** Install dowels in hardened concrete by bonding the dowels into holes drilled into the concrete. The concrete shall have cured for seven (7) days or reached a minimum flexural strength of 450 psi (3.1 MPa) before drilling begins. Holes 1/8 inch (3 mm) greater in diameter than the dowels shall be drilled into the hardened concrete using rotary-core drills. Rotary-percussion drills may be used, provided that excessive spalling does not occur. Spalling beyond the limits of the grout retention ring will require modification of the equipment and operation. Depth of dowel hole shall be within a tolerance of $\pm 1/2$ inch (12 mm) of the dimension shown on the drawings. On completion of the drilling operation, the dowel hole shall be blown out with oil-free, compressed air. Dowels shall be bonded in the drilled holes using epoxy resin. Epoxy resin shall be injected at the back of the hole before installing the dowel and extruded to the collar during insertion of the dowel so as to completely fill the void around the dowel. Application by buttering the dowel will not be permitted. The dowels shall be held in alignment at the collar of the hole by means of a suitable metal or plastic grout retention ring fitted around the dowel.
- e. **Sawing of joints.** Sawing shall commence, without regard to day or night, as soon as the concrete has hardened sufficiently to permit cutting without chipping, spalling, or tearing and before uncontrolled shrinkage cracking of the pavement occurs and shall continue without interruption until all joints have been sawn. All slurry and debris produced in the sawing of joints shall be removed by vacuuming and washing. Curing compound or system shall be reapplied in the initial saw-cut and maintained for the remaining cure period.

Joints shall be cut in locations as shown on the plans. The initial joint cut shall be a minimum 1/8 inch (3 mm) wide and to the depth shown on the plans. Prior to placement of joint sealant or seals, the top of the joint shall be widened by sawing as shown on the plans.

501-4.11 Finishing. Finishing operations shall be a continuing part of placing operations starting immediately behind the strike-off of the paver. Initial finishing shall be provided by the transverse screed or extrusion plate. The sequence of operations shall be transverse finishing, longitudinal machine floating if used, straightedge finishing, edging of joints, and then texturing. Finishing shall be by the machine method. The hand method shall be used only on isolated areas of odd slab widths or shapes and in the event of a breakdown of the mechanical finishing equipment. Supplemental hand finishing for machine finished pavement shall be kept to an absolute minimum. Any machine finishing operation which requires appreciable hand finishing, other than a moderate amount of straightedge finishing, shall be immediately stopped and proper adjustments made or the equipment replaced. Equipment, mixture, and/or procedures which produce more than 1/4 inch (6 mm) of mortar-rich surface shall be immediately modified as necessary to eliminate this condition or operations shall cease. Compensation shall be made for surging behind the screeds or extrusion plate and settlement during hardening and care shall be taken to ensure that paving and finishing machines are properly adjusted so that the finished surface of the concrete (not just the cutting edges of the screeds) will be at the required line and grade. Finishing equipment and tools shall be maintained clean and in an approved condition. At no time shall water be added to the surface of the slab with the finishing equipment or tools, or in any other way. Fog (mist)

sprays or other surface applied finishing aids specified to prevent plastic shrinkage cracking, approved by the RPR, may be used in accordance with the manufacturer's requirements.

- a. **Machine finishing with slipform pavers.** The slipform paver shall be operated so that only a very minimum of additional finishing work is required to produce pavement surfaces and edges meeting the specified tolerances. Any equipment or procedure that fails to meet these specified requirements shall immediately be replaced or modified as necessary. A self-propelled non-rotating pipe float may be used while the concrete is still plastic, to remove minor irregularities and score marks. Only one pass of the pipe float shall be allowed. Equipment, mixture, and/or procedures which produce more than 1/4 inch (6 mm) of mortar-rich surface shall be immediately modified as necessary to eliminate this condition or operations shall cease. Remove excessive slurry from the surface with a cutting straightedge and wipe off the edge. Any slurry which does run down the vertical edges shall be immediately removed by hand, using stiff brushes or scrapers. No slurry, concrete or concrete mortar shall be used to build up along the edges of the pavement to compensate for excessive edge slump, either while the concrete is plastic or after it hardens.
- b. **Machine finishing with fixed forms.** The machine shall be designed to straddle the forms and shall be operated to screed and consolidate the concrete. Machines that cause displacement of the forms shall be replaced. The machine shall make only one pass over each area of pavement. If the equipment and procedures do not produce a surface of uniform texture, true to grade, in one pass, the operation shall be immediately stopped and the equipment, mixture, and procedures adjusted as necessary.
- c. **Other types of finishing equipment.** Clary screeds, other rotating tube floats, or bridge deck finishers are not allowed on mainline paving but may be allowed on irregular or odd-shaped slabs, and near buildings or trench drains, subject to the RPR's approval.

Bridge deck finishers shall have a minimum operating weight of 7500 pounds (3400 kg) and shall have a transversely operating carriage containing a knock-down auger and a minimum of two immersion vibrators. Vibrating screeds or pans shall be used only for isolated slabs where hand finishing is permitted as specified, and only where specifically approved.

- d. **Hand finishing.** Hand finishing methods will not be permitted, except under the following conditions: (1) in the event of breakdown of the mechanical equipment, hand methods may be used to finish the concrete already deposited on the grade and (2) in areas of narrow widths or of irregular dimensions where operation of the mechanical equipment is impractical.
- e. **Straightedge testing and surface correction.** After the pavement has been struck off and while the concrete is still plastic, it shall be tested for trueness with a 12-foot (3.7-m) finishing straightedge swung from handles capable of spanning at least one-half the width of the slab. The straightedge shall be held in contact with the surface in successive positions parallel to the centerline and the whole area gone over from one side of the slab to the other, as necessary. Advancing shall be in successive stages of not more than one-half the length of the straightedge. Any excess water and laitance in excess of 1/8 inch (3 mm) thick shall be removed from the surface of the pavement and wasted. Any depressions shall be immediately filled with freshly mixed concrete, struck off, consolidated, and refinished. High areas shall be cut down and refinished. Special attention shall be given to assure that the surface across joints meets the smoothness requirements. Straightedge testing and surface corrections shall continue until the entire surface is found to be free from observable departures from the straightedge and until the slab conforms

to the required grade and cross-section. The use of long-handled wood floats shall be confined to a minimum; they may be used only in emergencies and in areas not accessible to finishing equipment.

501-4.12 Surface texture. The surface of the pavement shall be finished as designated below for all newly constructed concrete pavements. It is important that the texturing equipment not tear or unduly roughen the pavement surface during the operation. The texture shall be uniform in appearance and approximately 1/16 inch (2 mm) in depth. Any imperfections resulting from the texturing operation shall be corrected to the satisfaction of the RPR.

- a. **Brush or broom finish.** Shall be applied when the water sheen has practically disappeared. The equipment shall operate transversely across the pavement surface.
- b. **Burlap drag finish.** Not used.
- c. **Artificial turf finish.** Not used.

501-4.13 Curing. Immediately after finishing operations are completed and bleed water is gone from the surface, all exposed surfaces of the newly placed concrete shall be cured for a 7-day cure period in accordance with one of the methods below. Failure to provide sufficient cover material of whatever kind the Contractor may elect to use, or lack of water to adequately take care of both curing and other requirements, shall be cause for immediate suspension of concreting operations. The concrete shall not be left exposed for more than 1/2 hour during the curing period.

When a two-saw-cut method is used to construct the contraction joint, the curing compound shall be applied to the saw-cut immediately after the initial cut has been made. The sealant reservoir shall not be sawed until after the curing period has been completed. When the one cut method is used to construct the contraction joint, the joint shall be cured with wet rope, wet rags, or wet blankets. The rags, ropes, or blankets shall be kept moist for the duration of the curing period.

- a. **Impervious membrane method.** Curing with liquid membrane compounds should not occur until bleed and surface moisture has evaporated. All exposed surfaces of the pavement shall be sprayed uniformly with white pigmented curing compound immediately after the finishing of the surface and before the set of the concrete has taken place. The curing compound shall not be applied during rainfall. Curing compound shall be applied by mechanical sprayers under pressure at the rate of one gallon (4 liters) to not more than 150 square feet (14 sq m). The spraying equipment shall be of the fully atomizing type equipped with a tank agitator. At the time of use, the compound shall be in a thoroughly mixed condition with the pigment uniformly dispersed throughout the vehicle. During application, the compound shall be stirred continuously by mechanical means. Hand spraying of odd widths or shapes and concrete surfaces exposed by the removal of forms will be permitted. When hand spraying is approved by the RPR, a double application rate shall be used to ensure coverage. Should the film become damaged from any cause, including sawing operations, within the required curing period, the damaged portions shall be repaired immediately with additional compound or other approved means. Upon removal of side forms, the sides of the exposed slabs shall be protected immediately to provide a curing treatment equal to that provided for the surface.
- b. **White burlap-polyethylene sheets.** The surface of the pavement shall be entirely covered with the sheeting. The sheeting used shall be such length (or width) that it will extend at least twice the thickness of the pavement beyond the edges of the slab. The sheeting shall be placed so that

the entire surface and both edges of the slab are completely covered. The sheeting shall be placed and weighted to remain in contact with the surface covered, and the covering shall be maintained fully saturated and in position for seven (7) days after the concrete has been placed.

- c. **Water method.** The entire area shall be covered with burlap or other water absorbing material. The material shall be of sufficient thickness to retain water for adequate curing without excessive runoff. The material shall be kept wet at all times and maintained for seven (7) days. When the forms are stripped, the vertical walls shall also be kept moist. It shall be the responsibility of the Contractor to prevent ponding of the curing water on the subbase.
- d. **Concrete protection for cold weather.** Maintain the concrete at a temperature of at least 50°F (10°C) for a period of 72 hours after placing and at a temperature above freezing for the remainder of the 7-day curing period. The Contractor shall be responsible for the quality and strength of the concrete placed during cold weather; and any concrete damaged shall be removed and replaced at the Contractor's expense.
- e. **Concrete protection for hot weather.** Concrete should be continuous moisture cured for the entire curing period and shall commence as soon as the surfaces are finished and continue for at least 24 hours. However, if moisture curing is not practical beyond 24 hours, the concrete surface shall be protected from drying with application of a liquid membrane-forming curing compound while the surfaces are still damp. Other curing methods may be approved by the RPR.

501-4.14 Removing forms. Unless otherwise specified, forms shall not be removed from freshly placed concrete until it has hardened sufficiently to permit removal without chipping, spalling, or tearing. After the forms have been removed, the sides of the slab shall be cured in accordance with paragraph 501-4.13.

If honeycombed areas are evident when the forms are removed, materials, placement, and consolidation methods must be reviewed and appropriate adjustments made to assure adequate consolidation at the edges of future concrete placements. Honeycombed areas that extend into the slab less than approximately 1 inch (25 mm), shall be repaired with an approved grout, as directed by the RPR. Honeycombed areas that extend into the slab greater than a depth of 1 inch (25 mm) shall be considered as defective work and shall be removed and replaced in accordance with paragraph 501-4.19.

501-4.15 Saw-cut grooving. If shown on the plans, grooved surfaces shall be provided in accordance with the requirements of Item P-621.

501-4.16 Sealing joints. The joints in the pavement shall be sealed in accordance with Item P-605.

501-4.17 Protection of pavement. The Contractor shall protect the pavement and its appurtenances against both public traffic and traffic caused by the Contractor's employees and agents until accepted by the RPR. This shall include watchmen to direct traffic and the erection and maintenance of warning signs, lights, pavement bridges, crossovers, and protection of unsealed joints from intrusion of foreign material, etc. Any damage to the pavement occurring prior to final acceptance shall be repaired or the pavement replaced at the Contractor's expense.

Aggregates, rubble, or other similar construction materials shall not be placed on airfield pavements. Traffic shall be excluded from the new pavement by erecting and maintaining barricades and signs until the concrete is at least seven (7) days old, or for a longer period if directed by the RPR.

In paving intermediate lanes between newly paved pilot lanes, operation of the hauling and paving equipment will be permitted on the new pavement after the pavement has been cured for seven (7) days, the joints are protected, the concrete has attained a minimum field cured flexural strength of 450 psi (3100 kPa), and the slab edge is protected.

All new and existing pavement carrying construction traffic or equipment shall be kept clean and spillage of concrete and other materials shall be cleaned up immediately.

Damaged pavements shall be removed and replaced at the Contractor's expense. Slabs shall be removed to the full depth, width, and length of the slab.

501-4.18 Opening to construction traffic. The pavement shall not be opened to traffic until test specimens molded and cured in accordance with ASTM C31 have attained a flexural strength of 450 pounds per square inch (3100 kPa) when tested in accordance with ASTM C78. If such tests are not conducted, the pavement shall not be opened to traffic until 14 days after the concrete was placed. Prior to opening the pavement to construction traffic, all joints shall either be sealed or protected from damage to the joint edge and intrusion of foreign materials into the joint. As a minimum, backer rod or tape may be used to protect the joints from foreign matter intrusion.

501-4.19 Repair, removal, or replacement of slabs. New pavement slabs that are broken or contain cracks or are otherwise defective or unacceptable as defined by acceptance criteria in paragraph 501-6.6 shall be removed and replaced or repaired, as directed by the RPR, at the Contractor's expense. Spalls along joints shall be repaired as specified. Removal of partial slabs is not permitted. Removal and replacement shall be full depth, shall be full width of the slab, and the limit of removal shall be normal to the paving lane and to each original transverse joint. The RPR will determine whether cracks extend full depth of the pavement and may require cores to be drilled on the crack to determine depth of cracking. Such cores shall be have a diameter of 2 inches (50 mm) to 4 inches (100 mm), shall be drilled by the Contractor and shall be filled by the Contractor with a well consolidated concrete mixture bonded to the walls of the hole with a bonding agent, using approved procedures. Drilling of cores and refilling holes shall be at no expense to the Owner. Repair of cracks as described in this section shall not be allowed if in the opinion of the RPR the overall condition of the pavement indicates that such repair is unlikely to achieve an acceptable and durable finished pavement. No repair of cracks shall be allowed in any panel that demonstrates segregated aggregate with an absence of coarse aggregate in the upper 1/8 inch (3 mm) of the pavement surface.

- a. **Shrinkage cracks.** Shrinkage cracks which do not exceed one-third of the pavement depth shall be cleaned and either high molecular weight methacrylate (HMWM) applied; or epoxy resin (Type IV, Grade 1) pressure injected using procedures recommended by the manufacturer and approved by the RPR. Sandblasting of the surface may be required following the application of HMWM to restore skid resistance. Care shall be taken to ensure that the crack is not widened during epoxy resin injection. All epoxy resin injection shall take place in the presence of the RPR. Shrinkage cracks which exceed one-third the pavement depth shall be treated as full depth cracks in accordance with paragraphs 501-4.19b and 501-19c.
- b. **Slabs with cracks through interior areas.** Interior area is defined as that area more than 6 inches (150 mm) from either adjacent original transverse joint. The full slab shall be removed and replaced at no cost to the Owner, when there are any full depth cracks, or cracks greater than one-third the pavement depth, that extend into the interior area.

- c. **Cracks close to and parallel to joints.** All full-depth cracks within 6 inches (150 mm) either side of the joint and essentially parallel to the original joints, shall be treated as follows.

- (1) **Full depth cracks and original joint not cracked.** The full-depth crack shall be treated as the new joint and the original joint filled with an epoxy resin.

(a). **Full-depth crack.** The joint sealant reservoir for the crack shall be formed by sawing to a depth of 3/4 inches (19 mm), $\pm 1/16$ inch (2 mm), and to a width of 5/8 inch (16 mm), $\pm 1/8$ inch (3 mm). The crack shall be sawed with equipment specially designed to follow random cracks. Any equipment or procedure which causes raveling or spalling along the crack shall be modified or replaced to prevent raveling or spalling. The joint shall be sealed with sealant in accordance with P-605 or as directed by the RPR.

(b). **Original joint.** If the original joint sealant reservoir has been sawed out, the reservoir and as much of the lower saw cut as possible shall be filled with epoxy resin, Type IV, Grade 2, thoroughly tooled into the void using approved procedures.

If only the original narrow saw cut has been made, it shall be cleaned and pressure injected with epoxy resin, Type IV, Grade 1, using approved procedures.

Where a parallel crack goes part way across paving lane and then intersects and follows the original joint which is cracked only for the remained of the width, it shall be treated as specified above for a parallel crack, and the cracked original joint shall be prepared and sealed as originally designed.

- (2) **Full depth cracks and original joint cracked.** If there is any place in the lane width where a parallel crack and a cracked portion of the original joint overlap, the entire slab containing the crack shall be removed and replaced.

- d. **Removal and replacement of full slabs.** Make a full depth cut perpendicular to the slab surface along all edges of the slab with a concrete saw cutting any dowels or tie-bars. Remove damaged slab protecting adjacent pavement from damage. Damage to adjacent slabs may result in removal of additional slabs as directed by the RPR at the Contractor's expense.

The underlying material shall be repaired, re-compacted and shaped to grade.

Dowels of the size and spacing specified for other joints in similar pavement on the project shall be installed along all four (4) edges of the new slab in accordance with paragraph 501-4.10d.

Placement of concrete shall be as specified for original construction. The joints around the new slab shall be prepared and sealed as specified for original construction.

- e. **Spalls along joints.**

(1) Spalls less than one inch wide and less than the depth of the joint sealant reservoir, shall be filled with joint sealant material.

(2) Spalls larger than one inch and/or deeper than the joint reservoir, but less than 1/2 the slab depth, and less than 25% of the length of the adjacent joint shall be repaired as follows:

- (a). Make a vertical saw cut at least one inch (25 mm) outside the spalled area and to a depth of at least 2 inches (50 mm). Saw cuts shall be straight lines forming rectangular areas surrounding the spalled area.
 - (b). Remove unsound concrete and at least 1/2 inch (12 mm) of visually sound concrete between the saw cut and the joint or crack with a light chipping hammer.
 - (c). Clean cavity with high-pressure water jets supplemented with compressed air as needed to remove all loose material.
 - (d). Apply a prime coat of epoxy resin, Type III, Grade I, to the dry, cleaned surface of all sides and bottom of the cavity, except any joint face.
 - (e). Fill the cavity with low slump concrete or mortar or with epoxy resin concrete or mortar.
 - (f). An insert or other bond-breaking medium shall be used to prevent bond at all joint faces.
 - (g). A reservoir for the joint sealant shall be sawed to the dimensions required for other joints, or as required to be routed for cracks. The reservoir shall be thoroughly cleaned and sealed with the sealer specified for the joints.
- (3) Spalls deeper than 1/2 of the slab depth or spalls longer than 25% of the adjacent joint require replacement of the entire slab.
- f. **Diamond grinding of Concrete surfaces.** Diamond grinding shall be completed prior to pavement grooving. Diamond grinding of the hardened concrete should not be performed until the concrete is at least 14 days old and has achieved full minimum strength. Equipment that causes ravels, aggregate fractures, spalls or disturbance to the joints will not be permitted. The depth of diamond grinding shall not exceed 1/2 inch (13 mm) and all areas in which diamond grinding has been performed will be subject to the final pavement thickness tolerances specified.

Diamond grinding shall be performed with a machine specifically designed for diamond grinding capable of cutting a path at least 3 feet (0.9 m) wide. The saw blades shall be 1/8-inch (3-mm) wide with sufficient number of flush cut blades that create grooves between 0.090 and 0.130 inches (2 and 3.5 mm) wide; and peaks and ridges approximately 1/32 inch (1 mm) higher than the bottom of the grinding cut. The Contractor shall determine the number and type of blades based on the hardness of the aggregate. Contractor shall demonstrate to the RPR that the grinding equipment will produce satisfactory results prior to making corrections to surfaces.

Grinding will be tapered in all directions to provide smooth transitions to areas not requiring grinding. The slurry resulting from the grinding operation shall be continuously removed and the pavement left in a clean condition. All grinding shall be at the expense of the Contractor.

CONTRACTOR QUALITY CONTROL (CQC)

501-5.1 Quality control program. The Contractor shall develop a Quality Control Program in accordance with Item C-100. No partial payment will be made for materials that are subject to specific quality control requirements without an approved quality control program.

501-5.2 Contractor Quality Control (CQC). The Contractor shall provide or contract for testing facilities in accordance with Item C-100. The RPR shall be permitted unrestricted access to inspect the Contractor's QC facilities and witness QC activities. The RPR will advise the Contractor in writing of any noted deficiencies concerning the QC facility, equipment, supplies, or testing personnel and procedures. When the deficiencies are serious enough to be adversely affecting the test results, the incorporation of the materials into the work shall be suspended immediately and will not be permitted to resume until the deficiencies are satisfactorily corrected.

501-5.3 Contractor QC testing. The Contractor shall perform all QC tests necessary to control the production and construction processes applicable to this specification and as set forth in the CQCP. The testing program shall include, but not necessarily be limited to, tests for aggregate gradation, aggregate moisture content, slump, and air content. A QC Testing Plan shall be developed and approved by the RPR as part of the CQCP.

The RPR may at any time, notwithstanding previous plant acceptance, reject and require the Contractor to dispose of any batch of concrete mixture which is rendered unfit for use due to contamination, segregation, or improper slump. Such rejection may be based on only visual inspection. In the event of such rejection, the Contractor may take a representative sample of the rejected material in the presence of the RPR, and if it can be demonstrated in the laboratory, in the presence of the RPR, that such material was erroneously rejected, payment will be made for the material at the contract unit price.

a. Fine aggregate.

- (1) Gradation.** A sieve analysis shall be made at least twice daily in accordance with ASTM C136 from randomly sampled material taken from the discharge gate of storage bins or from the conveyor belt.
- (2) Moisture content.** If an electric moisture meter is used, at least two direct measurements of moisture content shall be made per week to check the calibration. If direct measurements are made in lieu of using an electric meter, two tests shall be made per day. Tests shall be made in accordance with ASTM C70 or ASTM C566.
- (3) Deleterious substances.** Fine aggregate as delivered to the mixer shall be tested for deleterious substances in fine aggregate for concrete as specified in paragraph 501-2.1b, prior to production of the control strip, and a minimum of every 30-days during production or more frequently as necessary to control deleterious substances.

b. Coarse Aggregate.

- (1) Gradation.** A sieve analysis shall be made at least twice daily for each size of aggregate. Tests shall be made in accordance with ASTM C136 from randomly sampled material taken from the discharge gate of storage bins or from the conveyor belt.
- (2) Moisture content.** If an electric moisture meter is used, at least two direct measurements of moisture content shall be made per week to check the calibration. If direct measurements are made in lieu of using an electric meter, two tests shall be made per day. Tests shall be made in accordance with ASTM C566.
- (3) Deleterious substances.** Coarse aggregate as delivered to the mixer shall be tested for deleterious substances in coarse aggregate for concrete as specified in paragraph 501-2.1c, prior to production of the control strip, and a minimum of every 30-days during production or more frequently as necessary to control deleterious substances.

- c. **Slump.** One test shall be made for each subplot. Slump tests shall be performed in accordance with ASTM C143 from material randomly sampled from material discharged from trucks at the paving site. Material samples shall be taken in accordance with ASTM C172.
- d. **Air content.** One test shall be made for each subplot. Air content tests shall be performed in accordance with ASTM C231 for gravel and stone coarse aggregate and ASTM C173 for slag or other porous coarse aggregate, from material randomly sampled from trucks at the paving site. Material samples shall be taken in accordance with ASTM C172.
- e. **Unit weight and Yield.** One test shall be made for each subplot. Unit weight and yield tests shall be in accordance with ASTM C138. The samples shall be taken in accordance with ASTM C172 and at the same time as the air content tests.
- f. **Temperatures.** Temperatures shall be checked at least four times per lot at the job site in accordance with ASTM C1064.
- g. **Smoothness for Contractor Quality Control.** The Contractor shall perform smoothness testing in transverse and longitudinal directions daily to verify that the construction processes are producing pavement with variances less than ¼ inch in 12 feet, identifying areas that may pond water which could lead to hydroplaning of aircraft. If the smoothness criteria is not met, appropriate changes and corrections to the construction process shall be made by the Contractor before construction continues

The Contractor may use a 12-foot (3.7 m) "straightedge, a rolling inclinometer meeting the requirements of ASTM E2133 or rolling external reference device that can simulate a 12-foot (3.7m) straightedge approved by the RPR. Straight-edge testing shall start with one-half the length of the straightedge at the edge of pavement section being tested and then moved ahead one-half the length of the straightedge for each successive measurement. Testing shall be continuous across all joints. The surface irregularity shall be determined by placing the freestanding (unleveled) straightedge on the pavement surface and allowing it to rest upon the two highest spots covered by its length, and measuring the maximum gap between the straightedge and the pavement surface in the area between the two high points. If the rolling inclinometer or external reference device is used, the data may be evaluated using the FAA profile program, Pro FAA, using the 12-foot straightedge simulation function.

Smoothness readings shall not be made across grade changes or cross slope transitions. The transition between new and existing pavement shall be evaluated separately for conformance with the plans.

- (1) **Transverse measurements.** Transverse measurements shall be taken for each day's production placed. Transverse measurements shall be taken perpendicular to the pavement centerline each 50 feet (15 m) or more often as determined by the RPR. The joint between lanes shall be tested separately to facilitate smoothness between lanes.
- (2) **Longitudinal measurements.** Longitudinal measurements shall be taken for each day's production placed. Longitudinal tests shall be parallel to the centerline of paving; at the center of paving lanes when widths of paving lanes are less than 20 feet (6 m); and at the third points of paving lanes when widths of paving lanes are 20 ft (6 m) or greater.

Deviations on the final surface course in either the transverse or longitudinal direction that will trap water greater than 1/4 inch (6 mm) shall be corrected with diamond grinding per paragraph 501-4.19f or by removing and replacing the surface course to full depth. Grinding shall be tapered in all directions to provide smooth transitions to areas not requiring grinding. All areas in which diamond grinding has been performed shall be subject to the final pavement thickness tolerances specified in paragraph 501-6.6.

Control charts shall be kept to show area of each day's placement and the percentage of corrective grinding required. Corrections to production and placement shall be initiated when corrective grinding is required. If the Contractor's machines and/or methods produce significant areas that need corrective actions in excess of 10 percent of a day's production, production shall be stopped until corrective measures are implemented by the Contractor.

- h. Grade.** Grade will be evaluated prior to and after placement of the concrete surface.

Measurements will be taken at appropriate grade lines (as a minimum at center and edges of paving lane) and longitudinal spacing as shown on cross-sections and plans. The final surface of the pavement will not vary from the grade line elevations and cross-sections shown on the plans by more than 1/2 inch (12 mm) vertically and 0.1 feet (30 mm) laterally. The documentation will be provided by the Contractor to the RPR by the end of the following working day.

Areas with humps or depression that exceed grade or smoothness and that retain water on the surface must be ground off provided the course thickness after grinding is not more than 1/2 inch (12 mm) less than the thickness specified on the plans. If these areas cannot be corrected with grinding then the slabs that are retaining water must be removed and replaced in accordance with paragraph 501-4.19d. Grinding shall be in accordance with paragraph 501-4.19f. All corrections will be at the Contractor's expense.

501-5.4 Control charts. The Contractor shall maintain linear control charts for fine and coarse aggregate gradation, slump, and air content. The Contractor shall also maintain a control chart plotting the coarseness factor/workability factor from the combined gradations in accordance with paragraph 501-2.1d.

Control charts shall be posted in a location satisfactory to the RPR and shall be kept up to date at all times. As a minimum, the control charts shall identify the project number, the contract item number, the test number, each test parameter, the Action and suspension Limits, or Specification limits, applicable to each test parameter, and the Contractor's test results. The Contractor shall use the control charts as part of a process control system for identifying potential problems and assignable causes before they occur. If the Contractor's projected data during production indicates a potential problem and the Contractor is not taking satisfactory corrective action, the RPR may halt production or acceptance of the material.

- a. Fine and coarse aggregate gradation.** The Contractor shall record the running average of the last five gradation tests for each control sieve on linear control charts. Superimposed on the control charts shall be the action and suspension limits. Gradation tests shall be performed by the Contractor per ASTM C136. The Contractor shall take at least two samples per lot to check the final gradation. Sampling shall be per ASTM D75 from the flowing aggregate stream or conveyor belt.

- b. **Slump and air content.** The Contractor shall maintain linear control charts both for individual measurements and range (that is, difference between highest and lowest measurements) for slump and air content in accordance with the following Action and Suspension Limits.
- c. **Combined gradation.** The Contractor shall maintain a control chart plotting the coarseness factor and workability factor on a chart in accordance with paragraph 501-2.1d.

Control Chart Limits¹

Control Parameter	Individual Measurements	
	Action Limit	Suspension Limit
Gradation ²	*3	*3
Coarseness Factor (CF)	±3.5	±5
Workability Factor (WF)	±2	±3
Slump	+0.5 to -1 inch (+13 to -25 mm)	+1 to -1.5 inch (+25 to -38 mm)
Air Content	±1.5%	±2.0%

¹ Control charts shall developed and maintained for each control parameter indicated.

² Control charts shall be developed and maintained for each sieve size.

³ Action and suspension limits shall be determined by the Contractor.

501-5.5 Corrective action at Suspension Limit. The CQCP shall indicate that appropriate action shall be taken when the process is believed to be out of control. The CQCP shall detail what action will be taken to bring the process into control and shall contain sets of rules to gauge when a process is out of control. As a minimum, a process shall be deemed out of control and corrective action taken if any one of the following conditions exists.

- a. Fine and coarse aggregate gradation. When two consecutive averages of five tests are outside of the suspension limits, immediate steps, including a halt to production, shall be taken to correct the grading.
- b. Coarseness and Workability factor. When the CF or WF reaches the applicable suspension limits, the Contractor, immediate steps, including a halt to production, shall be taken to correct the CF and WF.
- c. Fine and coarse aggregate moisture content. Whenever the moisture content of the fine or coarse aggregate changes by more than 0.5%, the scale settings for the aggregate batcher and water batcher shall be adjusted.
- d. Slump. The Contractor shall halt production and make appropriate adjustments whenever:
 - (1) one point falls outside the Suspension Limit line for individual measurements

OR

 - (2) two points in a row fall outside the Action Limit line for individual measurements.
- e. Air content. The Contractor shall halt production and adjust the amount of air-entraining admixture whenever:
 - (1) one point falls outside the Suspension Limit line for individual measurements

OR

- (2) two points in a row fall outside the Action Limit line for individual measurements.

MATERIAL ACCEPTANCE

501-6.1 Quality Assurance (QA) Acceptance sampling and testing. All acceptance sampling and testing necessary to determine conformance with the requirements specified in this section, with the exception of coring for thickness determination, will be performed by the RPR. The Contractor shall provide adequate facilities for the initial curing of beams. The Contractor shall bear the cost of providing initial curing facilities and coring and filling operations, per paragraph 501-6.5b(1).

The samples will be transported while in the molds. The curing, except for the initial cure period, will be accomplished using the immersion in saturated lime water method. During the 24 hours after molding, the temperature immediately adjacent to the specimens must be maintained in the range of 60° to 80°F (16° to 27°C), and loss of moisture from the specimens must be prevented. The specimens may be stored in tightly constructed wooden boxes, damp sand pits, temporary buildings at construction sites, under wet burlap in favorable weather, or in heavyweight closed plastic bags, or using other suitable methods, provided the temperature and moisture loss requirements are met.

501-6.2 Quality Assurance (QA) testing laboratory. Quality assurance testing organizations performing these acceptance tests will be accredited in accordance with ASTM C1077. The quality assurance laboratory accreditation must be current and listed on the accrediting authority's website. All test methods required for acceptance sampling and testing must be listed on the lab accreditation. A copy of the laboratory's current accreditation and accredited test methods will be submitted to the RPR prior to start of construction.

501-6.3 Lot size. Concrete will be accepted for strength and thickness on a lot basis. A lot will consist of a day's production not to exceed ~~2,000 cubic yards (1530 cubic meters)~~ **2,000 square yards (1670 square meters)**. Each lot will be divided into approximately equal sublots with individual sublots between 400 to 600 cubic yards. Where three sublots are produced, they will constitute a lot. Where one or two sublots are produced, they will be incorporated into the previous or next lot. Where more than one plant is simultaneously producing concrete for the job, the lot sizes will apply separately for each plant.

501-6.4 Partial lots. When operational conditions cause a lot to be terminated before the specified number of tests have been made for the lot or for overages or minor placements to be considered as partial lots, the following procedure will be used to adjust the lot size and the number of tests for the lot.

Where three sublots have been produced, they will constitute a lot. Where one or two sublots have been produced, they will be incorporated into the next lot or the previous lot and the total number of sublots will be used in the acceptance criteria calculation, that is, n=5 or n=6.

501-6.5 Acceptance Sampling and Testing.

a. Strength.

- (1) **Sampling.** One sample will be taken for each subplot from the concrete delivered to the job site. Sampling locations will be determined by the RPR in accordance with random sampling procedures contained in ASTM D3665. The concrete will be sampled in accordance with ASTM C172.

- (2) **Test Specimens.** The RPR will be responsible for the casting, initial curing, transportation, and curing of specimens in accordance with ASTM C31. Two (2) specimens will be made from each sample and slump, air content, unit weight, and temperature tests will be conducted for each set of strength specimens. Within 24 to 48 hours, the samples will be transported from the field to the laboratory while in the molds. Samples will be cured in saturated lime water.

The strength of each specimen will be determined in accordance with ASTM C78 The strength for each subplot will be computed by averaging the results of the two test specimens representing that subplot.

- (3) **Acceptance.** Acceptance of pavement for strength will be determined by the RPR in accordance with paragraph 501-6.6b(1). All individual strength tests within a lot will be checked for outliers in accordance with ASTM E178, at a significance level of 5%. Outliers will be discarded and the remaining test values will be used to determine acceptance in accordance with paragraph 501-6.5b.

b. Pavement thickness.

- (1) **Sampling.** One core will be taken by the Contractor for each subplot in the presence of the RPR. Sampling locations will be determined by the RPR in accordance with random sampling procedures contained in ASTM D3665. Areas, such as thickened edges, with planned variable thickness, will be excluded from sample locations.

Cores shall be a minimum 4 inch (100 mm) in diameter neatly cut with a core drill. The Contractor will furnish all tools, labor, and materials for cutting samples and filling the cored hole. Core holes will be filled by the Contractor with a non-shrink grout approved by the RPR within one day after sampling.

- (2) **Testing.** The thickness of the cores will be determined by the RPR by the average caliper measurement in accordance with ASTM C174. Each core shall be photographed and the photograph included with the test report.

- (3) **Acceptance.** Acceptance of pavement for thickness will be determined by the RPR in accordance with paragraph 501-6.6.

501-6.6 Acceptance criteria.

- a. **General.** Acceptance will be based on the following characteristics of the completed pavement discussed in paragraph 501-6.5b:

- (1) Strength
- (2) Thickness
- (3) Grade
- (4) Profilograph smoothness - **Not used.**
- (5) Adjustments for repairs

Acceptance for strength, thickness, and grade, will be based on the criteria contained in accordance with paragraph 501-6.6b(1), 501-6.6b(2), and 501-6.6b(3), respectively.

Production quality must achieve 90 PWL or higher to receive full payment.

Strength and thickness will be evaluated for acceptance on a lot basis using the method of estimating PWL. Production quality must achieve 90 PWL or higher to receive full pavement. The PWL will be determined in accordance with procedures specified in Item C-110.

The lower specification tolerance limit (L) for strength and thickness will be:

Lower Specification Tolerance Limit (L)

Strength	0.93 ´ strength specified in paragraph 501-3.3
Thickness	Lot Plan Thickness in inches, - 0.50 in

b. Acceptance criteria.

- (1) **Strength.** If the PWL of the lot equals or exceeds 90%, the lot will be acceptable. Acceptance and payment for the lot will be determined in accordance with paragraph 501-8.1.
- (2) **Thickness.** If the PWL of the lot equals or exceeds 90%, the lot will be acceptable. Acceptance and payment for the lot will be determined in accordance with paragraph 501-8.1.
- (3) **Grade.** The final finished surface of the pavement of the completed project will not vary from the grade line elevations and cross-sections shown on the plans by more than 1/2 inch (12 mm) vertically or 0.1 feet (30 mm) laterally. The documentation, stamped and signed by a licensed surveyor, shall be in accordance with paragraph 501-5.3h. Payment for sublots that do not meet grade for over 25% of the subplot shall reduced by 5% and not be more than 95%.
- (4) **Profilograph roughness for QA Acceptance.** Not used.
- (5) **Adjustments for repair.** Sublots with spall repairs, crack repairs, or partial panel replacement, will be limited to no more than 95% payment.
- (6) **Adjustment for grinding.** For sublots with grinding over 25% of a subplot, payment will be reduced 5%.

METHOD OF MEASUREMENT

501-7.1 Concrete pavement shall be measured by the number of square yards (square meters) reinforced pavement as specified in-place, completed and accepted.

BASIS OF PAYMENT

501-8.1 Payment. Payment for concrete pavement meeting all acceptance criteria as specified in paragraph 501-6.6. Acceptance Criteria shall be based on results of strength and thickness tests. Payment for acceptable lots of concrete pavement shall be adjusted in accordance with paragraph 501-8.1a for strength and thickness; 501-8.1b for repairs; 501-8.1c for grinding; and 501-8.1d for smoothness, subject to the limitation that:

The total project payment for concrete pavement shall not exceed 100 percent of the product of the contract unit price and the total number of square yards (square meters) of concrete pavement used in the accepted work (See Note 1 under the Price Adjustment Schedule table below).

Payment shall be full compensation for all labor, materials, tools, equipment, and incidentals required to complete the work as specified herein and on the drawings.

- a. **Basis of adjusted payment.** The pay factor for each individual lot shall be calculated in accordance with the Price Adjustment Schedule table below. A pay factor shall be calculated for both strength and thickness. The lot pay factor shall be the higher of the two values when calculations for both strength and thickness are 100% or higher. The lot pay factor shall be the product of the two values when only one of the calculations for either strength or thickness is 100% or higher. The lot pay factor shall be the lower of the two values when calculations for both strength and thickness are less than 100%.

Price Adjustment Schedule¹

Percentage of Materials Within Specification Limits (PWL)	Lot Pay Factor (Percent of Contract Unit Price)
96 – 100	106
90 – 95	PWL + 10
75 – 90	0.5 PWL + 55
55 – 74	1.4 PWL – 12
Below 55	Reject ²

¹ Although it is theoretically possible to achieve a pay factor of 106% for each lot, actual payment in excess of 100% shall be subject to the total project payment limitation specified in paragraph 501-8.1.

² The lot shall be removed and replaced unless, after receipt of FAA concurrence, the Owner and Contractor agree in writing that the lot will remain; the lot paid at 50% of the contract unit price; and the total project payment limitation reduced by the amount withheld for that lot.

For each lot accepted, the adjusted contract unit price shall be the product of the lot pay factor for the lot and the contract unit price. Payment shall be subject to the total project payment limitation specified in paragraph 501-8.1. Payment in excess of 100% for accepted lots of concrete pavement shall be used to offset payment for accepted lots of concrete pavement that achieve a lot pay factor less than 100%; except for rejected lots which remain in place and/or sublots with adjustments for repairs.

- b. **Adjusted payment for repairs.** The PWL lot pay factor shall be reduced by 5% and be no higher than 95% for sublots which contain repairs in accordance with paragraph 501-4.19 on more than 20% of the slabs within the subplot. Payment factors greater than 100 percent for the strength and thickness cannot be used to offset adjustments for repairs.
- c. **Adjusted payment for grinding.** The PWL lot pay factor shall be reduced by 5% and be no higher than 95% for sublots with grinding over 25% of a subplot.
- d. **Profilograph Roughness.** Not used.
- e. **Payment.** Payment shall be made under:

Item P-501-8.1 Concrete Pavement.	-per square yard (square meter)
Item P-501-1 16" Portland Cement Concrete	-per Square Yard (SY)

REFERENCES

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

ASTM International (ASTM)

ASTM A184	Standard Specification for Welded Deformed Steel Bar Mats for Concrete Reinforcement
ASTM A615	Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
ASTM A704	Standard Specification for Welded Steel Plain Bar or Rod Mats for Concrete Reinforcement
ASTM A706	Standard Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement
ASTM A775	Standard Specification for Epoxy-Coated Steel Reinforcing Bars
ASTM A884	Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement
ASTM A934	Standard Specification for Epoxy-Coated Prefabricated Steel Reinforcing Bars
ASTM A996	Standard Specification for Rail-Steel and Axle-Steel Deformed Bars for Concrete Reinforcement
ASTM A1035	Standard Specification for Deformed and Plain, Low-Carbon, Chromium, Steel Bars for Concrete Reinforcement
ASTM A1064	Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete
ASTM A1078	Standard Specification for Epoxy-Coated Steel Dowels for Concrete Pavement
ASTM C29	Standard Test Method for Bulk Density ("Unit Weight") and Voids in Aggregate
ASTM C31	Standard Practice for Making and Curing Concrete Test Specimens in the Field
ASTM C33	Standard Specification for Concrete Aggregates
ASTM C39	Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
ASTM C70	Standard Test Method for Surface Moisture in Fine Aggregate
ASTM C78	Standard Test Method for Flexural Strength of Concrete (Using Simple Beam with Third-Point Loading)
ASTM C88	Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate

ASTM C94	Standard Specification for Ready-Mixed Concrete
ASTM C114	Standard Test Methods for Chemical Analysis of Hydraulic Cement
ASTM C117	Standard Test Method for Materials Finer than 75- μ m (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C123	Standard Test Method for Lightweight Particles in Aggregate
ASTM C136	Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
ASTM C131	Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C136	Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates
ASTM C138	Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
ASTM C142	Standard Test Method for Clay Lumps and Friable Particles in Aggregates
ASTM C143	Standard Test Method for Slump of Hydraulic-Cement Concrete
ASTM C150	Standard Specification for Portland Cement
ASTM C171	Standard Specification for Sheet Materials for Curing Concrete
ASTM C172	Standard Practice for Sampling Freshly Mixed Concrete
ASTM C173	Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method
ASTM C174	Standard Test Method for Measuring Thickness of Concrete Elements Using Drilled Concrete Cores
ASTM C227	Standard Test Method for Potential Alkali Reactivity of Cement-Aggregate Combinations (Mortar-Bar Method)
ASTM C231	Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C260	Standard Specification for Air-Entraining Admixtures for Concrete
ASTM C295	Standard Guide for Petrographic Examination of Aggregates for Concrete
ASTM C309	Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete
ASTM C311	Standard Test Methods for Sampling and Testing Fly Ash or Natural Pozzolans for Use in Portland Cement Concrete

ASTM C494	Standard Specification for Chemical Admixtures for Concrete
ASTM C566	Standard Test Method for Total Evaporable Moisture Content of Aggregates by Drying
ASTM C595	Standard Specification for Blended Hydraulic Cements
ASTM C618	Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
ASTM C642	Standard Test Method for Density, Absorption, and Voids in Hardened Concrete
ASTM C666	Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing
ASTM C685	Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing
ASTM C881	Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete
ASTM C989	Standard Specification for Slag Cement for Use in Concrete and Mortars
ASTM C1017	Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete
ASTM C1064	Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete
ASTM C1077	Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation
ASTM C1157	Standard Performance Specification for Hydraulic Cement
ASTM C1260	Standard Test Method for Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)
ASTM C1365	Standard Test Method for Determination of the Proportion of Phases in Portland Cement and Portland-Cement Clinker Using X-Ray Powder Diffraction Analysis
ASTM C1567	Standard Test Method for Determining the Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortar-Bar Method)
ASTM C1602	Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete
ASTM D75	Standard Practice for Sampling Aggregates
ASTM D1751	Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Non-extruding and Resilient Bituminous Types)
ASTM D1752	Standard Specification for Preformed Sponge Rubber and Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction

ASTM D2419	Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate
ASTM D3665	Standard Practice for Random Sampling of Construction Materials
ASTM D4791	Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
ASTM E178	Standard Practice for Dealing with Outlying Observations
ASTM E1274	Standard Test Method for Measuring Pavement Roughness Using a Profilograph
ASTM E2133	Standard Test Method for Using a Rolling Inclinometer to Measure Longitudinal and Transverse Profiles of a Traveled Surface
American Concrete Institute (ACI)	
ACI 305R	Guide to Hot Weather Concreting
ACI 306R	Guide to Cold Weather Concreting
ACI 309R	Guide for Consolidation of Concrete
Advisory Circulars (AC)	
AC 150/5320-6	Airport Pavement Design and Evaluation
Federal Highway Administration (FHWA)	
HIPERPAV 3, version 3.2	
Portland Concrete Association (PCA)	
PCA	Design and Control of Concrete Mixtures, 16 th Edition
U.S. Army Corps of Engineers (USACE) Concrete Research Division (CRD)	
CRD C662	Determining the Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials, Lithium Nitrate Admixture and Aggregate (Accelerated Mortar-Bar Method)
United States Air Force Engineering Technical Letter (ETL)	
ETL 97-5	Proportioning Concrete Mixtures with Graded Aggregates for Rigid Airfield Pavements

END ITEM P-501

ITEM P-605
JOINT SEALANTS FOR PAVEMENTS

ITEM P-605, "JOINT SEALANTS FOR PAVEMENTS" is a technical specification contained in Federal Aviation Administration Advisory Circular – 150/5370-10H, "Standard Specifications for Construction of Airports."

This item has been modified to make allowances for local materials, methods and requirements. This item has been updated and modified to comply with the latest editions of other applicable codes, from knowledge gained on other airport construction projects and valuable lessons learned from airport maintenance staffs.

Deletions are noted by the ~~striketrough~~ method.

Changes and additions are noted by the ***bold italic*** method.

**ITEM P-605
JOINT SEALANTS FOR PAVEMENTS**

DESCRIPTION

605-1.1 This item shall consist of providing and installing a resilient and adhesive joint sealing material capable of effectively sealing joints in pavement; joints between different types of pavements; and cracks in existing pavement.

MATERIALS

605-2.1 Joint sealants. Joint sealant materials shall meet the requirements of ASTM D5893, Standard Specifications for Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements.

Each lot or batch of sealant shall be delivered to the jobsite in the manufacturer's original sealed container. Each container shall be marked with the manufacturer's name, batch or lot number, the safe heating temperature, and shall be accompanied by the manufacturer's certification stating that the sealant meets the requirements of this specification.

605-2.2 Backer rod. The material furnished shall be a compressible, non-shrinking, non-staining, non-absorbing material that is non-reactive with the joint sealant in accordance with ASTM D5249. The backer-rod material shall be $25\% \pm 5\%$ larger in diameter than the nominal width of the joint.

605-2.3 Bond breaking tapes. Provide a bond breaking tape or separating material that is a flexible, non-shrinkable, non-absorbing, non-staining, and non-reacting adhesive-backed tape. The material shall have a melting point at least 5°F (3°C) greater than the pouring temperature of the sealant being used when tested in accordance with ASTM D789. The bond breaker tape shall be approximately 1/8 inch (3 mm) wider than the nominal width of the joint and shall not bond to the joint sealant.

CONSTRUCTION METHODS

605-3.1 Time of application. Joints shall be sealed as soon after completion of the curing period as feasible and before the pavement is opened to traffic, including construction equipment. The pavement temperature shall be 50°F (10°C) and rising at the time of application of the poured joint sealing material. Do not apply sealant if moisture is observed in the joint.

605-3.2 Equipment. Machines, tools, and equipment used in the performance of the work required by this section shall be approved before the work is started and maintained in satisfactory condition at all times. Submit a list of proposed equipment to be used in performance of construction work including descriptive data, 30 days prior to use on the project.

- a. **Concrete saw.** Provide a self-propelled power saw, with water-cooled diamond or abrasive saw blades, for cutting joints to the depths and widths specified.
- b. **Sandblasting equipment.** Sandblasting is not allowed.
- c. **Cold-applied, single-component sealing equipment.** The equipment for installing ASTM D5893 single component joint sealants shall consist of an extrusion pump, air compressor, following plate, hoses, and nozzle for transferring the sealant from the storage container into the joint

opening. The dimension of the nozzle shall be such that the tip of the nozzle will extend into the joint to allow sealing from the bottom of the joint to the top. Maintain the initially approved equipment in good working condition, serviced in accordance with the supplier's instructions, and unaltered in any way without obtaining prior approval. Small hand-held air-powered equipment (i.e., caulking guns) may be used for small applications.

605-3.3 Preparation of joints. Pavement joints for application of material in this specification must be dry, clean of all scale, dirt, dust, curing compound, and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method cleans the joint and does not damage the joint.

- a. **Sawing.** All joints shall be sawed in accordance with specifications and plan details. Immediately after sawing the joint, the resulting slurry shall be completely removed from joint and adjacent area by flushing with a jet of water, and by use of other tools as necessary.
- b. **Sealing.** Immediately before sealing, the joints shall be thoroughly cleaned of all remaining laitance, curing compound, filler, protrusions of hardened concrete, old sealant and other foreign material from the sides and upper edges of the joint space to be sealed. Cleaning shall be accomplished by concrete saw as specified in paragraph 605-3.2. The newly exposed concrete joint faces and the pavement surface extending a minimum of 1/2 inch (12 mm) from the joint edge shall be sandblasted clean. Sandblasting shall be accomplished in a minimum of two passes. One pass per joint face with the nozzle held at an angle directly toward the joint face and not more than 3 inches (75 mm) from it. After final cleaning and immediately prior to sealing, blow out the joints with compressed air and leave them completely free of debris and water. The joint faces shall be surface dry when the seal is applied.
- c. **Backer Rod.** When the joint opening is of a greater depth than indicated for the sealant depth, plug or seal off the lower portion of the joint opening using a backer rod in accordance with paragraph 605-2.2 to prevent the entrance of the sealant below the specified depth. Take care to ensure that the backer rod is placed at the specified depth and is not stretched or twisted during installation.
- d. **Bond-breaking tape.** Where inserts or filler materials contain bitumen, or the depth of the joint opening does not allow for the use of a backup material, insert a bond-separating tape breaker in accordance with paragraph 605-2.3 to prevent incompatibility with the filler materials and three-sided adhesion of the sealant. Securely bond the tape to the bottom of the joint opening so it will not float up into the new sealant.

605-3.4 Installation of sealants. Joints shall be inspected for proper width, depth, alignment, and preparation, and shall be approved by the RPR before sealing is allowed. Sealants shall be installed in accordance with the following requirements:

Immediately preceding, but not more than 50 feet (15 m) ahead of the joint sealing operations, perform a final cleaning with compressed air. Fill the joints from the bottom up to 1/4 inch (6 mm) \pm 1/16 inch (2 mm) below the top of pavement surface; or bottom of groove for grooved pavement. Remove and discard excess or spilled sealant from the pavement by approved methods. Install the sealant in such a manner as to prevent the formation of voids and entrapped air. In no case shall gravity methods or pouring pots be used to install the sealant material. Traffic shall not be permitted over newly sealed pavement until authorized by the RPR. When a primer is recommended by the manufacturer, apply it evenly to the joint

faces in accordance with the manufacturer's instructions. Check the joints frequently to ensure that the newly installed sealant is cured to a tack-free condition within the time specified.

605-3.5 Inspection. The Contractor shall inspect the joint sealant for proper rate of cure and set, bonding to the joint walls, cohesive separation within the sealant, reversion to liquid, entrapped air and voids. Sealants exhibiting any of these deficiencies at any time prior to the final acceptance of the project shall be removed from the joint, wasted, and replaced as specified at no additional cost to the airport.

605-3.6 Clean-up. Upon completion of the project, remove all unused materials from the site and leave the pavement in a clean condition.

METHOD OF MEASUREMENT

~~605-4.1~~ Joint sealing material shall be measured by the linear foot (meter) of sealant in place, completed, and accepted.

No separate measurement shall be made for Joint Sealing. Payment for this item shall be incidental to PCC surface course.

BASIS OF PAYMENT

~~605-5.1~~ Payment for joint sealing material shall be made at the contract unit price per linear foot (meter). The price shall be full compensation for furnishing all materials, for all preparation, delivering, and placing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

No separate payment shall be made for Joint Sealing. Payment for this item shall be incidental to PCC surface course.

Payment will be made under:

Item P-605-5.1 Joint Sealing Filler, _____ per linear foot (meter)

REFERENCES

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

ASTM International (ASTM)

- | | |
|------------|---|
| ASTM D789 | Standard Test Method for Determination of Relative Viscosity of Polyamide (PA) |
| ASTM D5249 | Standard Specification for Backer Material for Use with Cold- and Hot-Applied Joint Sealants in Portland-Cement Concrete and Asphalt Joints |
| ASTM D5893 | Standard Specification for Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements |

Advisory Circulars (AC)

- | | |
|----------------|---|
| AC 150/5340-30 | Design and Installation Details for Airport Visual Aids |
|----------------|---|

END ITEM P-605

ITEM P-620

RUNWAY AND TAXIWAY MARKING

ITEM P-620, "RUNWAY AND TAXIWAY MARKING" is a technical specification contained in Federal Aviation Administration Advisory Circular – 150/5370-10H, "Standards Specifications for Construction of Airports."

This item has been modified to make allowances for local materials, methods and requirements. This item has been updated and modified to comply with the latest editions of other applicable codes, from knowledge gained on other airport construction projects and valuable lessons learned from airport maintenance staffs.

Deletions are noted by the ~~striketrough~~ method.

Changes and additions are noted by the ***bold italic*** method.

ITEM P-620

RUNWAY AND TAXIWAY MARKING

DESCRIPTION

620-1.1 This item shall consist of the preparation and painting of numbers, markings, and stripes on the surface of runways, taxiways, and aprons, in accordance with these specifications and at the locations shown on the plans, or as directed by the Engineer. The terms “paint” and “marking material” as well as “painting” and “application of markings” are interchangeable throughout this specification.

MATERIALS

620-2.1 Materials Acceptance. The Contractor shall furnish manufacturer’s certified test reports, for materials shipped to the project. The certified test reports shall include a statement that the materials meet the specification requirements. This certification along with a copy of the paint manufacturer’s surface preparation; marking materials, including adhesion, flow promoting and/or floatation additive; and application requirements must be submitted and approved by the Resident Project Representative (RPR) prior to the initial application of markings. The reports can be used for material acceptance or the RPR may perform verification testing. The reports shall not be interpreted as a basis for payment. The Contractor shall notify the RPR upon arrival of a shipment of materials to the site. All material shall arrive in sealed containers that are easily quantifiable for inspection by the RPR.

620-2.2 Marking Materials.

Table 1. Marking Materials

Paint ¹				Glass Beads ²	
Type	Color	Fed Std. 595 Number	Application Rate Maximum	Type	Application Rate Minimum
Waterborne Type III	White	37925	90 ft ² /gal (2.2 m ² /l)	III	8 lb/gal (1.0 kg/l)
Waterborne Type III	Yellow	33538	90 ft ² /gal (2.2 m ² /l)	III	8 lb/gal (1.0 kg/l)
Waterborne Type III	Red	31136	55 ft ² /gal (1.4 m ² /l)	IV	3 lb/gal (0.36 kg/l)
Waterborne Type III	Black	37038	90 ft ² /gal (2.2 m ² /l)	No beads	No beads
Temporary Waterborne Type II	White	37925	230 ft ² /gal (5.6 m ² /l)	No beads	No beads
Temporary Waterborne Type II	Yellow	33538	230 ft ² /gal (5.6 m ² /l)	No beads	No beads
Temporary Waterborne Type II	Black	37038	230 ft ² /gal (5.6 m ² /l)	No beads	No beads

¹ See Paragraph 620-2.2a

² See Paragraph 620-2.2b

- a. **Paint.** Paint shall be waterborne in accordance with the requirements of this paragraph. Paint colors shall comply with Federal Standard No. 595.
1. **Waterborne.** Paint shall meet the requirements of Federal Specification TT-P-1952F, Type III. The non-volatile portion of the vehicle for all paint types shall be composed of a 100% acrylic polymer as determined by infrared spectral analysis. The acrylic resin used for Type III shall be 100% cross-linking acrylic as evidenced by infrared peaks at wavelengths 1568, 1624, and 1672 cm⁻¹ with intensities equal to those produced by an acrylic resin known to be 100% cross-linking.
- b. **Reflective Media.** Glass beads for white and yellow paint shall meet the requirements for Federal Specification TT-B-1325D Type III.

Glass beads for red and pink paint shall meet the requirements for Type IV, Gradation A.

Glass beads shall be treated with all compatible coupling agents recommended by the manufacturers of the paint and reflective media to ensure adhesion and embedment.

Glass beads shall not be used in black and green paint.

Type III glass beads shall not be used in red and pink paint.

CONSTRUCTION METHODS

620-3.1 Weather Limitations. Painting shall only be performed when the surface is dry, and the ambient temperature and the pavement surface temperature meet the manufacturer's recommendations in accordance with paragraph 620-2.1. Painting operations shall be discontinued when the ambient or surface temperatures does not meet the manufacturer's recommendations. Markings shall not be applied when the wind speed exceeds 10 mph unless windscreens are used to shroud the material guns. Markings shall not be applied when weather conditions are forecasts to not be within the manufacturers' recommendations for application and dry time.

620-3.2 Equipment. Equipment shall include the apparatus necessary to properly clean the existing surface, a mechanical marking machine, a bead dispensing machine, and such auxiliary hand-painting equipment as may be necessary to satisfactorily complete the job.

The mechanical marker shall be an atomizing spray-type or airless type marking machine with automatic glass bead dispensers suitable for application of traffic paint. It shall produce an even and uniform film thickness and appearance of both paint and glass beads at the required coverage and shall apply markings of uniform cross-sections and clear-cut edges without running or spattering and without over spray. The marking equipment for both paint and beads shall be calibrated daily.

620-3.3 Preparation of Surfaces. Immediately before application of the paint, the surface shall be dry and free from dirt, grease, oil, laitance, or other contaminants that would reduce the bond between the paint and the pavement. Use of any chemicals or impact abrasives during surface preparation shall be approved in advance by the RPR. After the cleaning operations, sweeping, blowing, or rinsing with pressurized water shall be performed to ensure the surface is clean and free of grit or other debris left from the cleaning process.

- a. **Preparation of New Pavement Surfaces.** The area to be painted shall be cleaned by broom, blower, water blasting, or by other methods approved by the RPR to remove all contaminants, including PCC curing compounds, minimizing damage to the pavement surface.
- b. **Preparation of Pavement to Remove Existing Markings.** Existing pavement markings shall be removed by rotary grinding, water blasting, or by other methods approved by the RPR minimizing damage to the pavement surface. The removal area may need to be larger than the area of the markings to eliminate ghost markings. After removal of markings on asphalt pavements, apply a fog seal or seal coat to 'block out' the removal area to eliminate 'ghost' markings.
- c. **Preparation of Pavement Markings Prior to Remarkings.** Prior to remarking existing markings, loose existing markings must be removed minimizing damage to the pavement surface, with a method approved by the RPR. After removal, the surface shall be cleaned of all residue or debris.

Prior to the application of markings, the Contractor shall certify in writing that the surface is dry and free from dirt, grease, oil, laitance, or other foreign material that would prevent the bond of the paint to the pavement or existing markings. This certification along with a copy of the paint manufactures application and surface preparation requirements must be submitted to the RPR prior to the initial application of markings.

620-3.4 Layout of Markings. The proposed markings shall be laid out in advance of the paint application. The locations of markings to receive glass beads shall be shown on the plans.

620-3.5 Application. A period of 30 days shall elapse between placement of surface course or seal coat and application of the permanent paint markings. Paint shall be applied at the locations and to the dimensions and spacing shown on the plans. Paint shall not be applied until the layout and condition of the surface has been approved by the RPR.

The edges of the markings shall not vary from a straight line more than 1/2 inch (12 mm) in 50 feet (15 m), and marking dimensions and spacing shall be within the following tolerances:

Marking Dimensions and Spacing Tolerance

Dimension and Spacing	Tolerance
36 inch (910 mm) or less	±1/2 inch (12mm)
greater than 36 inch to 6 feet (910 mm to 1.85m)	±1 inch (25mm)
Greater than 6 feet to 60 feet (1.85m to 18.3m)	±2 inch (50mm)
Greater than 60 feet (18.3m)	±3 inch (76 mm)

The paint shall be mixed in accordance with the manufacturer’s instructions and applied to the pavement with a marking machine at the rate shown in Table 1. The addition of thinner will not be permitted.

Glass beads shall be distributed upon the marked areas at the locations shown on the plans to receive glass beads immediately after application of the paint. A dispenser shall be furnished that is properly designed for attachment to the marking machine and suitable for dispensing glass beads. Glass beads shall be applied at the rate shown in Table 1. Glass beads shall not be applied to black paint or green paint. Glass beads shall adhere to the cured paint or all marking operations shall cease until corrections are made. Different bead types shall not be mixed. Regular monitoring of glass bead embedment and distribution should be performed.

620-3.6 Application--Preformed Thermoplastic Airport Pavement Markings. Preformed thermoplastic pavement markings not used.

620-3.7 Control Strip. Prior to the full application of airfield markings, the Contractor shall prepare a control strip in the presence of the RPR. The Contractor shall demonstrate the surface preparation method and all striping equipment to be used on the project. The marking equipment must achieve the prescribed application rate of paint and population of glass beads (per Table 1) that are properly embedded and evenly distributed across the full width of the marking. Prior to acceptance of the control strip, markings must be evaluated during darkness to ensure a uniform appearance.

620-3.8 Retro-Reflectance. Reflectance shall be measured with a portable retro-reflectometer meeting ASTM E1710 (or equivalent). A total of 6 reading shall be taken over a 6 square foot area with 3 readings taken from each direction. The average shall be equal to or above the minimum levels of all readings which are within 30% of each other.

Minimum Retro-Reflectance Values

Material	Retro-reflectance mcd/m ² /lux		
	White	Yellow	Red
Initial Type I	300	175	35
Initial Type III	600	300	35
Initial Thermoplastic	225	100	35
All materials, remark when less than ¹	100	75	10

¹ Prior to remarking determine if removal of contaminants on markings will restore retro-reflectance

620-3.9 Protection and Cleanup. After application of the markings, all markings shall be protected from damage until dry. All surfaces shall be protected from excess moisture and/or rain and from disfiguration by spatter, splashes, spillage, or drippings. The Contractor shall remove from the work area all debris, waste, loose reflective media, and by-products generated by the surface preparation and application operations to the satisfaction of the RPR. The Contractor shall dispose of these wastes in strict compliance with all applicable state, local, and federal environmental statutes and regulations.

METHOD OF MEASUREMENT

620-4.1a The quantity of surface preparation shall be measured by lump sum.

620-4.1b The quantity of markings shall be paid for shall be measured by lump sum.

620-4.1c The quantity of reflective media shall be paid for by lump sum.

620-4.1d The quantity of temporary markings to be paid for shall be lump sum.

BASIS OF PAYMENT

620-5.1 This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item complete in place and accepted by the RPR in accordance with these specifications.

620-5.1a Payment for surface preparation shall be made at the contract price for lump sum.

620-5.2b Payment for markings shall be made at the contract price for lump sum.

620-5.3c Payment for reflective media shall be made at the contract unit price for lump sum.

620-5.4d Payment for temporary markings shall be made at the contract price for lump sum.
Payment will be made under:

Item P-620-5.1a	Surface Preparation	-per square foot (square meter)
Item P-620-5.2b	Marking	-per square foot (square meter)
Item P-620-5.3c	Reflective Media	-per pound (km)
Item P-620-5.4d	Temporary runway and taxiway marking	-per square foot (square meter)
Item P-620-1	Yellow Paint with Type III Reflective Beads	-per Square Foot (SF)
Item P-620-2	White Paint with Type III Reflective Beads	-per Square Foot (SF)
Item P-620-3	Red Paint with Type III Reflective Beads	-per Square Foot (SF)
Item P-620-4	Black Paint without Reflective Beads	-per Square Foot (SF)

REFERENCES

620-6.1 The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM D476	Standard Classification for Dry Pigmentary Titanium Dioxide Products
ASTM D968	Standard Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive
ASTM D1652	Standard Test Method for Epoxy Content of Epoxy Resins
ASTM D2074	Standard Test Method for Total, Primary, Secondary, and Tertiary Amine Values of Fatty Amines by Alternative Indicator Method
ASTM D2240	Standard Test Method for Rubber Property - Durometer Hardness

ASTM D7585	Standard Practice for Evaluating Retroreflective Pavement Markings Using Portable Hand-Operated Instruments
ASTM E303	Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester
ASTM E1710	Standard Test Method for Measurement of Retroreflective Pavement Marking Materials with CEN-Prescribed Geometry Using a Portable Retroreflectometer
ASTM E2302	Standard Test Method for Measurement of the Luminance Coefficient Under Diffuse Illumination of Pavement Marking Materials Using a Portable Reflectometer
ASTM G154	Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials

Code of Federal Regulations (CFR)

40 CFR Part 60, Appendix A-7, Method 24

Determination of volatile matter content, water content, density, volume solids, and weight solids of surface coatings

29 CFR Part 1910.1200 Hazard Communication

Federal Specifications (FED SPEC)

FED SPEC TT-B-1325D Beads (Glass Spheres) Retro-Reflective

FED SPEC TT-P-1952FPaint, Traffic and Airfield Marking, Waterborne

FED STD 595 Colors used in Government Procurement

Commercial Item Description

A-A-2886B Paint, Traffic, Solvent Based

Advisory Circulars (AC)

AC 150/5340-1 Standards for Airport Markings

AC 150/5320-12 Measurement, Construction, and Maintenance of Skid Resistant Airport Pavement Surfaces

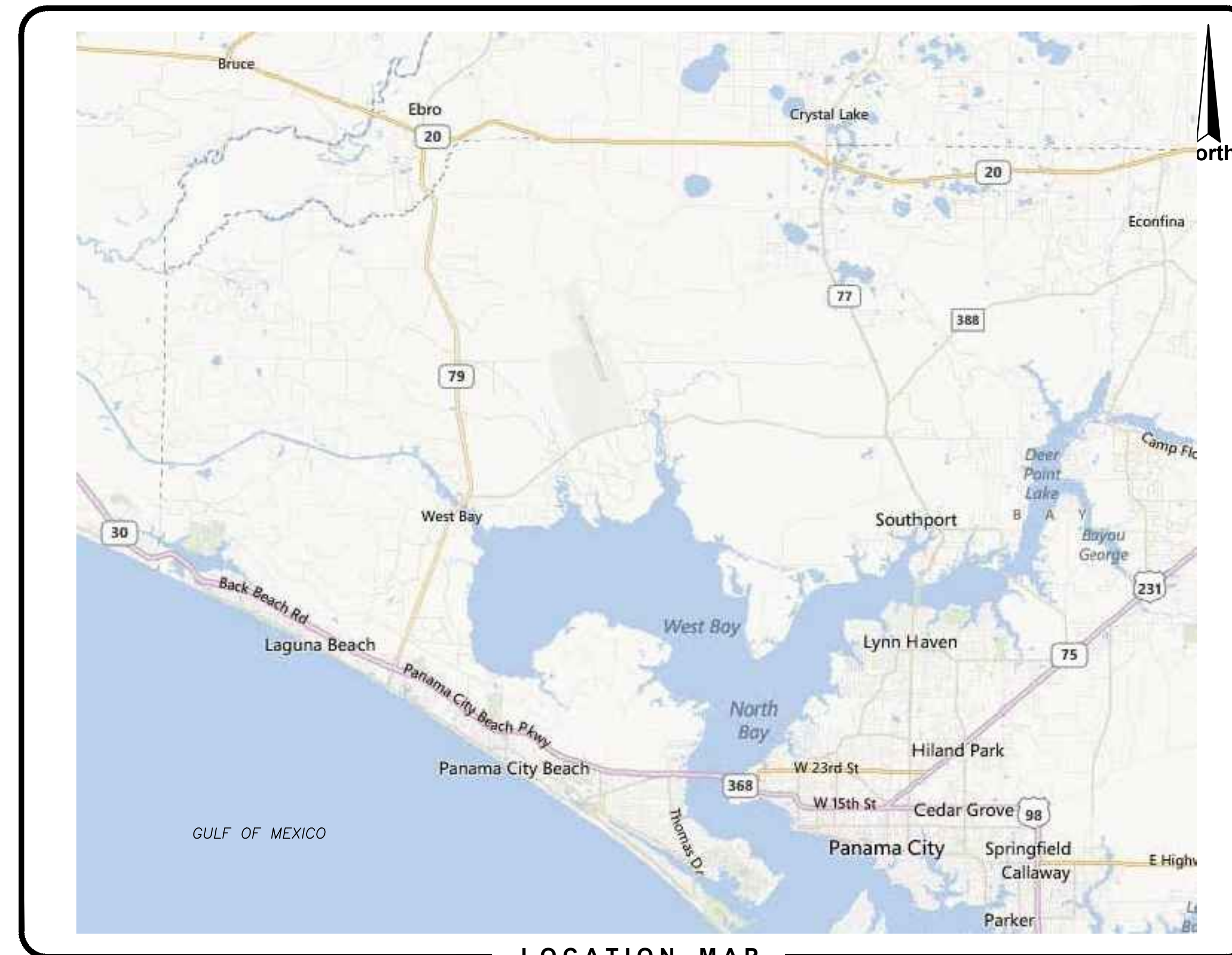
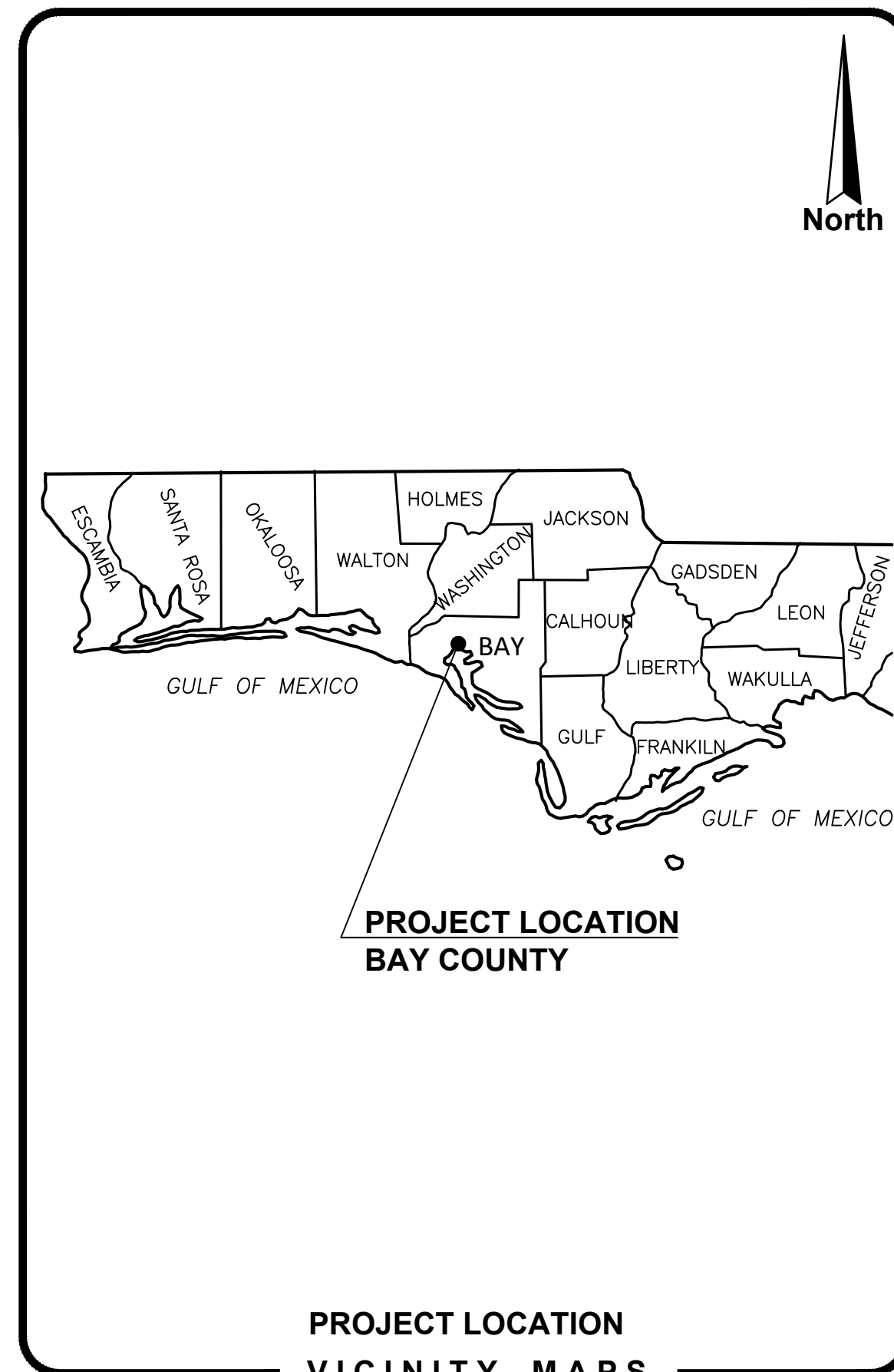
END OF ITEM P-620

CONTRACT

PROJECT DOCUMENTS

DESIGN DRAWINGS FOR: ECP GATE 7 APRON REPAIR

NORTHWEST FLORIDA BEACHES INTERNATIONAL AIRPORT
PANAMA CITY, FLORIDA



Sheet List Table	
SHEET NUMBER	SHEET TITLE
G-1	COVER SHEET
G-2	GENERAL NOTES
G-3	SAFETY AND SECURITY NOTES
G-4	SAFETY DURING CONSTRUCTION PLAN (1 OF 2)
G-5	SAFETY DURING CONSTRUCTION PLAN (2 OF 2)
C-1	EXISTING CONDITIONS & DEMOLITION PLAN
C-2	SITE PLAN
C-3	MISCELLANEOUS DETAILS (1 OF 2)
C-4	MISCELLANEOUS DETAILS (2 OF 2)
C-5	MARKING PLAN
C-6	MARKING DETAILS



CLIENT:
NORTHWEST FLORIDA BEACHES INTERNATIONAL AIRPORT
NORTHWEST FLORIDA BEACHES INTERNATIONAL AIRPORT
6300 WEST BAY PARKWAY, SUITE A
PANAMA CITY, FLORIDA 32405
TELEPHONE: (850) 636-8965

EXECUTIVE DIRECTOR:
PARKER W. McCLELLAN, JR. A.A.E.

AIRPORT AUTHORITY BOARD OF DIRECTORS

RUSS MATHIS, CHAIRMAN
DEL LEE, VICE CHAIRMAN
JAMES JOHNSON
GLEN McDONALD
KEN NELSON
SANDY SIMS
JAY TUSA



ZHA INTERNATIONAL
601 N. MAGNOLIA AVE, SUITE 100
ORLANDO, FLORIDA 32801
TELEPHONE: (407) 422-7487

ENGINEER:



AVCON, INC.
ENGINEERS & PLANNERS
320 BAYSHORE DRIVE, SUITE A -
NICEVILLE, FL 32578-2425
OFFICE: (850) 678-0050
CORPORATE CERTIFICATE OF AUTHORIZATION NUMBER: 5057
www.avconinc.com



TONIA D. NATION
FL LICENSE NO.: 64631
FBPR CERTIFICATE OF AUTHORIZATION NO. 5057

NO.	DATE	REVISION	BY

COVER SHEET
RELEASE FOR BID

ECP GATE 7 APRON REPAIR
PREPARED FOR
NORTHWEST FLORIDA BEACHES INTERNATIONAL AIRPORT

DESIGNED BY: C.A.P.T.D.N.
DRAWN BY: C.A.P.
CHECKED BY: T.D.N.
APPROVED BY: V.C.L.
PROJECT NO: 2021.073.01
DATE: OCTOBER 2021

SHEET NUMBER
G-1

RELEASE FOR BID

N:\NICEVILLE-PROJECTS\073-ZHA\2019\0073.01-GATE 6 & 7 FEB DESIGN\000 CAD\GATE 7 APRON REPAIR PROJECT\2107301_COVR-DET.DWG 10/25/2021 5:34 PM

THIS DOCUMENT CONTAINS PRIVILEGED AND PROPRIETARY INFORMATION. ALL OF WHICH IS EXPRESSLY PROVIDED BY AVCON, INC. FOR USE BY THE INTENDED RECIPIENT, AND FOR A SPECIFIC PURPOSE. WITHOUT THE EXPRESS WRITTEN CONSENT OF AVCON, INC. ANY DISTRIBUTION, REPRODUCTION, OR OTHER USE OF THIS DOCUMENT, IN WHOLE OR IN PART, IS STRICTLY PROHIBITED.

GENERAL NOTES

- 1. UNLESS OTHERWISE SPECIFIED, ALL WORK SHALL BE PERFORMED CONSISTENT WITH THE FOLLOWING SPECIFICATIONS: BAY COUNTY, FAA, AND FDOT.
- 2. NOT USED.
- 3. NOT USED.
- 4. ALL QUALITY CONTROL TESTING WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AS SPECIFIED IN THE SPECIFICATIONS.
- 5. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL QUALITY ACCEPTANCE TESTING REQUIRED IN THE CONTRACT SPECIFICATIONS. THE ENGINEER RESERVES THE RIGHT TO CONDUCT QUALITY ACCEPTANCE TESTING TO CHECK THE CONTRACTOR'S TEST RESULTS.
- 6. THE CONTRACTOR SHALL PREPARE A WRITTEN QUALITY CONTROL / QUALITY ACCEPTANCE PLAN THAT DESCRIBES THE CONTRACTOR QUALITY CONTROL PROGRAM AND THE CONTRACTOR'S QUALITY ACCEPTANCE TESTING REQUIREMENTS. THIS WRITTEN PLAN MUST BE SUBMITTED PRIOR TO ISSUANCE OF THE NOTICE-TO-PROCEED.
- 7. THE PROJECT PAY ITEMS ARE PROVIDED TO BE INCLUSIVE OF ALL WORK TO BE PERFORMED AS SHOWN IN THESE PLANS. ALL WORK NOT IDENTIFIED UNDER A SPECIFIC PAY ITEM SHALL BE CONSIDERED REQUIRED AND IS INCIDENTAL TO THE COST OF THE PROJECT PAY ITEMS PROVIDED.
- 8. CONTRACTOR SHALL PROTECT ALL EXISTING LANDSCAPING, SIDEWALKS, PAVEMENTS, CURBS, SEEDING, AND SOD NOT SPECIFIED FOR REMOVAL IN THESE PLANS. ANY DAMAGE TO THE EXISTING IMPROVEMENTS SHALL BE RESTORED BY THE CONTRACTOR AT NO COST TO THE OWNER, UNLESS OTHERWISE SPECIFIED HEREIN.
- 9. CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE SITE, INCLUDING ALL SURFACE AND SUB-SURFACE CONDITIONS, THE WORK REQUIRED AND ALL OTHER CONDITIONS THAT MAY AFFECT THE SUCCESSFUL COMPLETION OF THE JOB PRIOR TO COMMENCEMENT OF WORK.
- 10. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND PERMIT CONDITIONS BEARING ON THE CONDUCT OF THE WORK, AS DRAWN AND SPECIFIED. IF THE CONTRACTOR OBSERVES THAT THE DRAWINGS AND SPECIFICATIONS ARE IN VARIANCE THEREWITH, HE SHALL PROMPTLY NOTIFY THE ENGINEER, IN WRITING, AND ANY NECESSARY CHANGES SHALL BE ADJUSTED, AS PROVIDED IN THE AGREEMENT FOR CHANGES IN THE WORK.
- 11. THE CONTRACTOR SHALL BE RESPONSIBLE TO THE OWNER AND THE ENGINEER FOR THE ACTS AND OMISSIONS OF CONTRACTOR'S EMPLOYEES AND ALL HIS SUBCONTRACTORS AND THEIR AGENTS AND EMPLOYEES AND OTHER PERSONS PERFORMING ANY OF THE WORK UNDER A CONTRACT WITH THE CONTRACTOR.
- 12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL NECESSARY ARRANGEMENTS WITH GOVERNMENTAL DEPARTMENTS, PUBLIC UTILITIES, PUBLIC CARRIERS, SERVICE COMPANIES, AND CORPORATIONS OWNING OR CONTROLLING ROADWAYS, WATER, SEWER, GAS, ELECTRICAL, AND TELEPHONE FACILITIES SUCH AS PAVEMENTS, PIPING, WIRES, CABLES, CONDUITS, POLES, GUYS, OR OTHER SIMILAR FACILITIES, INCLUDING INCIDENTAL STRUCTURES CONNECTED THEREWITH THAT ARE ENCOUNTERED IN THE WORK IN ORDER THAT SUCH ITEMS MAY BE PROPERLY SUPPORTED, PROTECTED OR LOCATED.
- 13. UNLESS OTHERWISE SPECIFIED IN THE GENERAL CONDITIONS, ALL CONSTRUCTION IS TO BE GOVERNED BY THE PLANS, APPLICABLE PERMITS, AND SPECIFICATIONS HEREIN, AND ALL APPLICABLE FEDERAL, STATE AND LOCAL BUILDING AND SAFETY CODES, SPECIFICATIONS, LAWS AND ORDINANCES. TO INCLUDE BUT NOT LIMITED TO THE FAA, THE FDOT, THE FLORIDA BUILDING CODE, AND THE BAY COUNTY CODES.
- 14. PRIOR TO PERFORMING ANY WORK WITHIN ANY PUBLIC RIGHT-OF-WAY, CONTRACTOR SHALL DEVELOP AND IMPLEMENT A TRAFFIC CONTROL PLAN CONSISTENT WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" PUBLISHED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION.
- 15. PRIOR TO PERFORMING ANY WORK WITHIN ANY UTILITY RIGHT-OF-WAY, CONTRACTOR SHALL OBTAIN AUTHORIZATION AND PERMIT FROM JURISDICTION RESPONSIBLE FOR SUCH RIGHT-OF-WAY.
- 16. IN THE EVENT THE CONTRACTOR DISCOVERS ANY ERRORS OR OMISSIONS IN THE PLANS, HE SHALL IMMEDIATELY NOTIFY THE ENGINEER.
- 17. CONTRACTOR SHALL PRESERVE AND PROTECT ALL PERMANENT REFERENCE MONUMENTS, PERMANENT CONTROL POINTS, PERMANENT BENCH MARKS AND PROPERTY CORNERS. IN THE EVENT THE MONUMENTS, POINTS OR MARKERS ARE DISTURBED THE CONTRACTOR SHALL EMPLOY A FLORIDA REGISTERED LAND SURVEYOR TO RESET OR REPLACE THEM. CERTIFICATION OF THE RESET OR REPLACEMENT SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
- 18. THE OWNER, OWNER'S AGENT AND INSPECTORS OF APPLICABLE GOVERNMENT JURISDICTIONS, SHALL AT ALL TIMES HAVE ACCESS TO THE WORK WHEREVER AND WHENEVER IT IS IN PREPARATION OR PROGRESS; AND THE CONTRACTOR SHALL PROVIDE PROPER FACILITIES FOR SUCH ACCESS AND FOR THE INSPECTION.
- 19. IT IS THE CONTRACTOR'S RESPONSIBILITY TO TAKE ALL REASONABLE AND PRUDENT PRECAUTIONS TO INSURE THAT ALL COMPLETED WORK, MATERIALS AND EQUIPMENT STORED ON SITE ARE SAFE AND SECURED FROM UNAUTHORIZED ACCESS OR USE UNTIL SUCH TIME THAT THE OWNER TAKES WRITTEN OWNERSHIP OF THE COMPLETED PROJECT. SUCH PRECAUTIONS MAY INCLUDE INSTALLATION OF SIGNS, FENCES, OR POSTING OF SECURITY GUARDS.
- 20. CONTRACTOR SHALL, AT ALL TIMES, UTILIZE ALL NORMALLY ACCEPTED AND REASONABLY EXPECTED SAFETY PRACTICES AND COMPLY WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES AND GUIDELINES PERTAINING TO SAFE UTILIZATION OF EQUIPMENT OR MATERIALS AS PUBLISHED BY THE MANUFACTURER.
- 21. PRIOR TO INITIATING ANY EXCAVATION (INCLUDING BUT NOT LIMITED TO TUNNELS, DITCHES, STORMWATER PONDS, CANALS) CONTRACTOR SHALL INSTALL FENCES AND TAKE ALL OTHER REASONABLE AND PRUDENT STEPS TO ENSURE THAT ACCESS TO EXCAVATION BY UNAUTHORIZED PERSONNEL IS PREVENTED.
- 22. THE CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS FOR THE SAFETY OF, AND SHALL PROVIDE ALL REASONABLE PROTECTION TO PREVENT DAMAGE, INJURY OR LOSS TO:
 - 22.1. ALL EMPLOYEES ON THE WORK SITE AND ALL OTHER PERSONS WHO MAY BE AFFECTED THEREBY;
 - 22.2. ALL WORK AND ALL MATERIALS AND EQUIPMENT TO BE INCORPORATED THEREIN, WHETHER IN STORAGE ON OR OFF THE SITE, UNDER THE CARE, CUSTODY OR CONTROL OF THE CONTRACTOR OR ANY OF ITS SUBCONTRACTORS;
 - 22.3. ANY OTHER PROPERTY AT THE SITE OR ADJACENT THERETO, INCLUDING TREES, SHRUBS, LAWN, WALKS, PAVEMENTS, ROADWAY, STRUCTURES AND UTILITIES NOT DESIGNATED FOR DEMOLITION IN THE COURSE OF CONSTRUCTION.
- 23. CONTRACTOR SHALL MAINTAIN PUBLIC ACCESS ON MAIN AIRPORT ENTRANCE ACCESS ROAD, ON GENERAL AVIATION ACCESS ROAD, AND ON THE AIRSIDE AIRPORT ACCESS ROAD AT ALL TIMES.
- 24. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SAFETY CODES AND WITH ALL APPLICABLE LAWS,

- ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC, QUASI-PUBLIC OR OTHER AUTHORITY HAVING JURISDICTION FOR THE SAFETY OF PERSONS OR PROPERTY OR FOR THEIR PROTECTION AGAINST DAMAGE, INJURY OR LOSS, OR DESIGNED TO PROTECT THE ENVIRONMENT. THE CONTRACTOR SHALL ERECT AND MAINTAIN, AS REQUIRED BY EXISTING CONDITIONS AND PROGRESS OF THE WORK, ALL REASONABLE SAFEGUARDS FOR SAFETY AND PROTECTION, INCLUDING POSTING DANGER SIGNS AND OTHER WARNINGS AGAINST HAZARDS, PROMULGATING SAFETY REGULATIONS AND NOTIFYING OWNERS AND USERS OF ADJACENT UTILITIES OF THE EXISTENCE OF HAZARDS AND OF THE SAFETY REGULATIONS.
- 25. ALL DAMAGE OR LOSS TO ANY PROPERTY REFERRED TO IN CLAUSES 22.1 AND 22.3 CAUSED IN WHOLE OR IN PART BY THE CONTRACTOR, A SUBCONTRACTOR, OR BY ANYONE FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE, SHALL BE REMEDIED BY THE CONTRACTOR, EXCEPT DAMAGE OR LOSS PROPERLY ATTRIBUTABLE SOLELY TO THE ACTS OR OMISSIONS OF THE OWNER, OR THE ENGINEER OR ANYONE EMPLOYED BY THEM, OR FOR WHOSE ACTS ANY OF THEM MAY BE LIABLE, AND NOT PROPERLY ATTRIBUTABLE IN WHOLE OR IN PART, TO THE FAULT OR NEGLIGENCE OF THE CONTRACTOR.
- 26. UNTIL FINAL ACCEPTANCE OF THE WORK BY OWNER, THE CONTRACTOR SHALL HAVE THE CHARGE AND CARE OF AND SHALL BEAR THE RISK OF INJURY OR DAMAGE, LOSS OR EXPENSE TO ANY PART THEREOF, OR TO ANY MATERIALS STORED ON SITE, BY THE ACTION OF THE ELEMENTS OR FROM ANY OTHER CAUSE WHETHER ARISING FROM THE EXECUTION OR NON-EXECUTION OF THE WORK. THE CONTRACTOR SHALL REBUILD, REPAIR, RESTORE AND MAKE GOOD ALL INJURIES OR DAMAGES TO ANY PORTION OF THE WORK OCCASIONED BY ANY OF THE ABOVE CAUSES BEFORE FINAL ACCEPTANCE AND SHALL BEAR THE EXPENSES THEREOF.
- 27. THOSE PARTS OF WORK IN PLACE WHICH ARE SUBJECT TO DAMAGE BECAUSE OF OPERATIONS BEING CARRIED ON ADJACENT THERETO SHALL BE COVERED, BOARDED UP OR SUBSTANTIALLY ENCLOSED WITH ADEQUATE PROTECTION BY THE CONTRACTOR AT CONTRACTOR'S EXPENSE.
- 28. ADEQUATE TRAFFIC CONTROL, BARRICADES AND FLAGMAN SERVICES SHALL BE FURNISHED AND MAINTAINED BY THE CONTRACTOR AT ALL POINTS WHERE CONVEYING EQUIPMENT ENGAGED ON THE WORK REGULARLY ENTERS ONTO OR CROSSES TRAFFIC-CARRYING ROADS.
- 29. THE CONTRACTOR SHALL COMPLY IN EVERY RESPECT WITH THE FEDERAL OCCUPATIONAL HEALTH AND SAFETY ACT OF 1970 AND ALL RULES AND REGULATIONS NOW OR HEREAFTER IN EFFECT UNDER SAID ACT, AND THE CONTRACTOR FURTHER AGREES TO COMPLY WITH ANY AND ALL APPLICABLE STATE LAWS AND REGULATIONS PERTAINING TO JOB SAFETY AND HEALTH.
- 30. THE CONTRACTOR SHALL PROTECT AND KEEP OWNER (INCLUDING THEIR AGENTS AND EMPLOYEES) FREE AND HARMLESS FROM ANY AND ALL LIABILITY, PUBLIC OR PRIVATE, PENALTIES, CONTRACTUAL OR OTHERWISE, LOSSES, DAMAGES, COSTS, ATTORNEY'S FEES, EXPENSES, CAUSES OF ACTION, CLAIMS OR JUDGMENTS RESULTING FROM THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AS AMENDED OR ANY RULE OR REGULATION PROMULGATED THEREUNDER OR OF ANY STATE LAWS OR REGULATIONS PERTAINING TO JOB SAFETY AND HEALTH ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE PERFORMANCE OF WORK OR WORK TO BE PERFORMED UNDER THIS CONTRACT, AND CONTRACTOR SHALL INDEMNIFY OWNER FROM ANY SUCH CLAIMS, PENALTIES, SUITS OR ACTIONS, PUBLIC OR PRIVATE, ADMINISTRATIVE OR JUDICIAL, INCLUDING ATTORNEY'S FEES PAID OR INCURRED BY OR ON BEHALF OF OWNER, JOINTLY OR SEVERALLY, AND/OR THEIR AGENTS AND EMPLOYEES. THE CONTRACTOR FURTHER AGREES, IN THE EVENT OF A CLAIMED VIOLATION OF ANY FEDERAL OR STATE SAFETY AND HEALTH LAW OR REGULATION ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE PERFORMANCE OF WORK OR WORK TO BE PERFORMED UNDER THIS CONTRACT, OWNER MAY IMMEDIATELY TAKE WHATEVER ACTION IS DEEMED NECESSARY BY OWNER TO REMEDY THE CLAIMED VIOLATION. ANY AND ALL COSTS OR EXPENSES PAID OR INCURRED BY OWNER IN TAKING SUCH ACTION SHALL BE BORNE BY CONTRACTOR, AND CONTRACTOR AGREES TO PROTECT, HOLD HARMLESS AND INDEMNIFY OWNER AGAINST ANY AND ALL SUCH COSTS OR EXPENSES.
- 31. ALL WORK PERFORMED UNDER THE CONTRACT, AND ALL EQUIPMENT, APPLIANCES, TOOLS AND LIKE ITEMS USED IN THE WORK SHALL CONFORM TO APPLICABLE SAFETY CODES AND REGULATIONS OF ANY PUBLIC OR OTHER AUTHORITY HAVING JURISDICTION. IN THE EVENT OF CONFLICTING REQUIREMENTS, THE MORE STRINGENT INTERPRETATION OR REGULATION SHALL GOVERN.
- 32. THE CONTRACTOR SHALL DEVELOP AND IMPLEMENT AN EROSION CONTROL PLAN TO MINIMIZE EROSION AND ENSURE FUNCTIONING OF STORMWATER MANAGEMENT SYSTEM UPON COMPLETION OF CONSTRUCTION. EROSION CONTROL PLAN SHALL INCLUDE PROVISIONS TO STABILIZE DISTURBED AREAS WITHIN 14 CALENDAR DAYS OF THE DISTURBANCE WITH A WRITTEN LOG OF THE EVENTS. CONTRACTOR SHALL SUBMIT EROSION CONTROL PLAN TO ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.
- 33. CONTRACTOR AND ITS SUBCONTRACTORS SHALL USE, HANDLE, TRANSPORT, AND DISPOSE OF ALL HAZARDOUS MATERIALS (AS DEFINED PARAGRAPH 4.0.) IN COMPLIANCE WITH ALL PRESENT FEDERAL, STATE AND LOCAL ENVIRONMENTAL, HEALTH OR SAFETY LAW, INCLUDING, BUT NOT LIMITED TO, ALL SUCH STATUTES, REGULATIONS, RULES, ORDINANCES, CODES, AND RULES OF COMMON LAW.
- 34. CONTRACTOR FURTHER AGREES THAT CONTRACTOR AND ITS SUBCONTRACTORS SHALL NOT CAUSE THE DISCHARGE, RELEASE OR DISPOSAL OF ANY HAZARDOUS MATERIAL CREATED BY ITS WORK ON OR ABOUT THE JOB SITE. IN THE EVENT OF ANY SPILL, RELEASE OR ANY OTHER REPORTABLE OCCURRENCE, CONTRACTOR SHALL NOTIFY THE APPROPRIATE GOVERNMENTAL AGENCY AND SHALL TAKE SUCH ACTION AS MAY BE NECESSARY TO MINIMIZE THE DELETERIOUS EFFECT OF SUCH SPILL ON PERSONS OR PROPERTY.
- 35. CONTRACTOR AND ITS SUBCONTRACTORS SHALL, UPON COMPLETION OF PERFORMANCE OF ALL DUTIES UNDER THIS CONTRACT, REMOVE ALL SUPPLIES, MATERIALS, AND WASTE CONTAINING AND HAZARDOUS MATERIAL FROM THE JOB SITE. CONTRACTOR SHALL BEAR FULL FINANCIAL RESPONSIBILITY, AS BETWEEN THE PARTIES OF THIS CONTRACT, FOR THE COMPLIANCE OF CONTRACTOR AND ITS SUBCONTRACTORS WITH THE PROVISIONS OF THIS PARAGRAPH.
- 36. CONTRACTOR AGREES TO INDEMNIFY, DEFEND, PROTECT AND HOLD THE OWNER HARMLESS FROM AND AGAINST ANY CLAIMS INCLUDING, WITHOUT LIMITATION, ACTUAL ATTORNEY'S FEES AND ANY COSTS OF INVESTIGATION, SOILS TESTING, GOVERNMENTAL APPROVALS, REMEDIATION AND CLEAN-UP ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE FAILURE OF CONTRACTOR OR ITS SUBCONTRACTORS, OR THEIR AGENTS, EMPLOYEES, OFFICERS, OR REPRESENTATIVES, TO COMPLY WITH THE TERMS OF THIS ARTICLE.
- 37. SHOULD CONTRACTOR OR ITS SUBCONTRACTORS DISCHARGE, RELEASE OR DISPOSE OF ANY HAZARDOUS MATERIAL ON OR ABOUT THE JOB SITE IN VIOLATION OF REGULATIONS, CONTRACTOR SHALL IMMEDIATELY SO INFORM OWNER IN WRITING.
- 38. IN THE EVENT OF ANY SPILL, RELEASE OR ANY OTHER REPORTABLE OCCURRENCE, CONTRACTOR SHALL NOTIFY THE APPROPRIATE GOVERNMENTAL AGENCY AND SHALL TAKE SUCH ACTION AS MAY BE NECESSARY TO MINIMIZE THE DELETERIOUS EFFECT OF SUCH SPILL ON PERSONS OR PROPERTY. IN THE EVENT CONTRACTOR OR ITS SUBCONTRACTORS ENCOUNTER ON THE PREMISES ANY PIPELINE, UNDERGROUND STORAGE TANK OR OTHER CONTAINER, OF ANY KIND, THAT MAY CONTAIN A HAZARDOUS MATERIAL, OR ENCOUNTER MATERIAL REASONABLY BELIEVED TO BE A HAZARDOUS MATERIAL, CONTRACTOR SHALL IMMEDIATELY STOP WORK IN THE AREA AFFECTED AND REPORT THE CONDITION TO OWNER IN WRITING.
- 39. IF CONTRACTOR OR ITS SUBCONTRACTORS DO NOT COMPLY WITH FEDERAL AND STATE REQUIREMENTS, OWNER MAY, BUT IS NOT OBLIGATED TO, GIVE WRITTEN NOTICE OF VIOLATION TO CONTRACTOR. SHOULD CONTRACTOR OR ITS SUBCONTRACTORS FAIL TO COMPLY WITH THE REQUIREMENTS WITHIN TWENTY-FOUR (24) HOURS FROM THE TIME OWNER ISSUES SUCH WRITTEN NOTICE OF NONCOMPLIANCE OR WITHIN THE TIME OF AN ABATEMENT PERIOD SPECIFIED BY ANY GOVERNMENTAL AGENCY, WHICHEVER PERIOD IS SHORTER, CONTRACTOR SHALL BE IN MATERIAL DEFAULT OF THIS CONTRACT.
- 40. "HAZARDOUS MATERIAL" MEANS ANY SUBSTANCE: (A) THE PRESENCE OF WHICH REQUIRES INVESTIGATION OR

REMEDiation UNDER ANY PRESENT FEDERAL, STATE OR LOCAL STATUTE, REGULATION, ORDINANCE, RULE, CODE, ORDER, ACTION, POLICY OR COMMON LAW, OR (B) WHICH IS OR BECOMES DEFINED AS A "HAZARDOUS WASTE," "HAZARDOUS SUBSTANCE," POLLUTANT OR CONTAMINANT UNDER ANY PRESENT FEDERAL, STATE OR LOCAL STATUTE, REGULATION, RULE OR ORDINANCE OR AMENDMENTS THERETO INCLUDING, WITHOUT LIMITATION, THE COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY ACT (42 U.S.C. SECTIONS 9601 ET SEQ.) AND/OR THE RESOURCE CONSERVATION AND RECOVERY ACT (42 U.S.C. SECTIONS 6901 ET SEQ.), OR (C) WHICH IS TOXIC, EXPLOSIVE, CORROSIVE, FLAMMABLE, INFECTIOUS, RADIOACTIVE, CARCINOGENIC, MUTAGENIC, OR OTHERWISE HAZARDOUS AND IS REGULATED BY ANY GOVERNMENTAL AUTHORITY, AGENCY, DEPARTMENT, COMMISSION, BOARD, AGENCY OR INSTRUMENTALITY OF THE UNITED STATES, THE STATE IN WHICH THE PREMISES ARE LOCATED OR ANY POLITICAL SUBDIVISION THEREOF, OR (D) THE PRESENCE OF WHICH ON THE PREMISES CAUSES OR THREATENS TO CAUSE A NUISANCE UPON THE PREMISES OR TO ADJACENT PROPERTIES OR POSSES OR THREATENS TO POSE A HAZARD TO THE HEALTH OR SAFETY OF PERSONS ON OR ABOUT THE PREMISES, OR (E) WHICH CONTAINS GASOLINE, DIESEL FUEL OR OTHER PETROLEUM HYDROCARBONS, OR (F) WHICH CONTAINS POLYCHLORINATED BIPHENYLS (PCBS), ASBESTOS, LEAD OR UREA FORMALDEHYDE FOAM INSULATION.

- 41. THE EXISTING UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD LOCATE ALL EXISTING UTILITIES AS TO SIZE, LOCATION, AND ELEVATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY AND ALL CONFLICTS PRIOR TO BEGINNING CONSTRUCTION.
- 42. IF ANY TESTING, INSPECTION OR APPROVAL REVEAL DEFECTIVE WORK, CONTRACTOR SHALL NOT BE ENTITLED TO RECEIVE ANY ASSOCIATED COSTS AND THE OWNER SHALL BE ENTITLED TO DEDUCT FROM THE CONTRACT PRICE, BY ISSUING A CHANGE ORDER, OWNER'S COSTS ARISING OUT OF THE DEFECTIVE WORK, INCLUDING COSTS OF REPEATED PROCEDURES, COMPENSATION FOR OWNER AUTHORIZED REPRESENTATIVE, DESIGN ENGINEER'S SERVICES, FIELD REPRESENTATIVE SERVICES, AND OTHER RELATED COSTS.
- 43. ENGINEER SHALL REVIEW RED LINE (AS-BUILT) DRAWINGS MONTHLY AT ALTERNATE BI-WEEKLY JOB COORDINATION MEETINGS. THE DRAWINGS CAN BE PROVIDED BY THE OWNER'S AUTHORIZED REPRESENTATIVE OR THE CONTRACTOR. NO PERIODIC PAY REQUESTS WILL BE PROCESSED UNTIL THIS PROVISION IS MET.
- 44. TYPE AND HEIGHT (NOT-TO-EXCEED) OF CONSTRUCTION EQUIPMENT:
TRUCKS (DUMP, FLATBED, PANEL, PICKUP, CONCRETE) – 35 FEET
FRONT END LOADERS – 35 FEET
DOZERS – 35 FEET
CRANE – 50 FEET*
ROLLERS AND COMPACTORS – 35 FEET

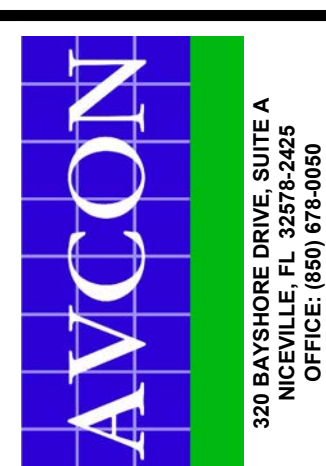
*NOTE – CONSTRUCTION EQUIPMENT LOCATIONS SHALL NOT VIOLATE RUNWAY 7 TO 1 TRANSITIONAL SURFACES AND RUNWAY APPROACH ZONE HEIGHT LIMITATIONS PER SAFETY DURING CONSTRUCTION PLAN EXCEPT UNDER SPECIAL WAIVER CONDITIONS. APPROPRIATE WAIVERS MUST BE OBTAINED BY THE OWNER FROM FAA.
- 44. THE FOLLOWING FAA ADVISORY CIRCULARS SHALL APPLY TO THIS PROJECT, CURRENT EDITION:
AC 150/5300-13A-CHANGE 1 AIRPORT DESIGN
AC 150/5340-18F STANDARDS FOR AIRPORT SIGN SYSTEMS
AC 150/5340-30J DESIGN AND INSTALLATION DETAILS FOR VISUAL AIDS
AC 150/5370-10H STANDARDS FOR SPECIFYING CONSTRUCTION OF AIRPORTS
AC 150/5345-44K SPECIFICATION FOR RUNWAY AND TAXIWAY SIGNS
AC 150/5340-1L STANDARD FOR AIRPORT MARKINGS
AC 150/5345-46E SPECIFICATION FOR RUNWAY AND TAXIWAY LIGHT FIXTURES
- 45. CONTRACTOR SHALL ABIDE BY FEDERAL BUY AMERICAN REQUIREMENTS.

PERMITS:

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND PAYING FOR ALL NECESSARY PERMITS. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE, AND LOCAL REGULATIONS IN REGARD TO NOISE CONTROL, EROSION CONTROL, DUST CONTROL, WATERSHED, EMISSIONS, AND OPEN-AIR BURNING DURING CONSTRUCTION WHICH PERTAIN TO CONSTRUCTION ACTIVITIES. COPIES OF ALL PERMITS SHALL BE SUBMITTED TO THE ENGINEER FOR THEIR RECORDS.
- 2. AS REQUIRED UNDER ACT OF THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES), THE CONTRACTOR SHALL PREPARE AND SUBMIT A NOTICE OF INTENT (NOI) AND A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) TO THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION. A COPY OF THE NOI AND SWPPP SHALL BE SUBMITTED TO THE ENGINEER FOR THEIR RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THE SWPPP CURRENT UNTIL PROJECT COMPLETION AND FINAL ACCEPTANCE OF THE WORK.

SUMMARY OF QUANTITIES

ITEM NUMBER	BID ITEM	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY
1	C-102-1	EROSION & POLLUTION CONTROL	LS	1
2	C-105-1	MOBILIZATION	LS	1
3	C-105-2	MAINTENANCE OF TRAFFIC	LS	1
4	P-101-1	DEMOLITION OF ASPHALT AND BASE	SY	780
5	P-152-1	SUBGRADE PREPARATION	SY	780
6	P-306-1	6" LEAN CONCRETE BASE COURSE	SY	780
7	P-501-1	16" PCC (INCLUDES JOINTS AND JOINT SEAL)	SY	780
8	P-620-1	YELLOW PAINT WITH TYPE III REFLECTIVE BEADS	SF	55
9	P-620-2	WHITE PAINT WITH TYPE III REFLECTIVE BEADS	SF	45
10	P-620-3	RED PAINT WITH TYPE III REFLECTIVE BEADS	SF	45
11	P-620-4	BLACK PAINT WITHOUT REFLECTIVE BEADS	SF	150



TONIA D. NATION
FL LICENSE NO.: 64631
FBPR CERTIFICATE OF
AUTHORIZATION NO. 5057

REVISION		DATE		BY

GENERAL NOTES
& SUMMARY OF
QUANTITIES

RELEASE FOR BID

ECP GATE 7 APRON REPAIR

PREPARED FOR
NORTHWEST FLORIDA BEACHES
INTERNATIONAL AIRPORT

DESIGNED BY: C.A.P.T.D.N
DRAWN BY: C.A.P.
CHECKED BY: T.D.N.
APPROVED BY: V.C.L.
PROJECT NO: 2021.073.01
DATE: OCTOBER 2021

SHEET NUMBER
G-2

N:\NICEVILLE-PROJECTS\073-ZHA\2019.0073.01-GATE 6 & 7 FBB DESIGN\000 CAD\GATE 7 APRON REPAIR PROJECT\2107301_COVR-BTL.DWG 10/25/2021 9:34 PM

THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION. ALL OF WHICH IS EXPRESSLY PROVIDED BY AVCON, INC. FOR USE BY THE INTENDED RECIPIENT, AND FOR A SPECIFIC PURPOSE. WITHOUT THE EXPRESS WRITTEN CONSENT OF AVCON, INC. ANY DISTRIBUTION, REPRODUCTION, OR OTHER USE OF THIS DOCUMENT, IN WHOLE OR IN PART, IS STRICTLY PROHIBITED.

SAFETY NOTES (AIRFIELD):

- SAFETY GUIDELINES – IN THE INTEREST OF SAFETY, THE CONTRACTOR IS ALSO DIRECTED TO ACQUAINT HIS/HER EMPLOYEES WITH THE PROVISIONS OF THE FOLLOWING FEDERAL AVIATION ADMINISTRATION ADVISORY CIRCULARS, CURRENT EDITION:
 - 150/5370–2F – OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION.
 - 150/5210–5D – PAINTING, MARKING AND LIGHTING OF VEHICLES USED ON AN AIRPORT
 - 150/5200–18C – AIRPORT SAFETY SELF–INSPECTION
 - 150/5340–1K – STANDARDS FOR AIRPORT MARKINGS
- AFTER COMPLETION OF WORK, THE CONTRACTOR SHALL RE–STRIPE ALL/ANY EXISTING RUNWAY, TAXIWAY, OR TAXILANE CENTERLINE MARKINGS WHICH WERE TEMPORARILY REMOVED FOR CONSTRUCTION OR DAMAGED DURING CONSTRUCTION, MATCHING ORIGINAL CONDITION TO THE SATISFACTION OF THE OWNER OR OWNER’S REPRESENTATIVE.
- CONTRACTOR SHALL RELOCATE AND RESTORE AFTER COMPLETION OF CONSTRUCTION, ANY TAXIWAY CENTER LIGHTS, EDGE LIGHTS, OR GUIDANCE SIGNS THAT MAY EXIST WITHIN THE CONSTRUCTION AREA, IF REMOVED OR RELOCATED. CONTRACTOR SHALL PROVIDE “JUMPER CABLES” TO KEEP ELECTRICAL CIRCUITS IN OPERATION.
- AIRPORT OPERATIONS – THE CONTRACTOR SHALL APPOINT SAFETY OFFICERS IN ACCORDANCE WITH THE PROJECT MANUAL. THE CONTRACTOR SHALL ALSO ACQUAINT ALL SUPERVISORS AND EMPLOYEES WITH THE ACTIVITIES OF THE NORTHWEST FLORIDA BEACHES INTERNATIONAL AIRPORT AND OPERATIONS THAT ARE INHERENT AT THIS ACTIVE AIRPORT AND SHALL CONDUCT CONSTRUCTION ACTIVITIES TO CONFORM TO ALL ROUTINE AND EMERGENCY AIR TRAFFIC REQUIREMENTS AND GUIDELINES ON SAFETY SPECIFIED IN THE PROJECT MANUAL AND AS SPECIFIED BY THE FIELD REPRESENTATIVE AND THE FAA.
- VEHICLE IDENTIFICATION – ALL CONTRACTOR VEHICLES THAT ARE AUTHORIZED TO OPERATE ON THE AIRPORT SHALL DISPLAY IN FULL VIEW ABOVE THE VEHICLE A 3’ X 3’ OR LARGER ORANGE AND WHITE CHECKERED FLAG, EACH CHECK BEING 1’ SQUARE. COMPANY DECALS WITH NOT LESS THAN 6” LETTERS MAY BE SUBSTITUTED FOR FLAGS ON SUPERVISORY VEHICLES AND LIGHT TRUCKS. ALL VEHICLES OPERATING IN THE ACTIVE AIRPORT OPERATIONS AREA (AOA) DURING THE HOURS OF DARKNESS SHALL BE EQUIPPED WITH A FLASHING YELLOW DOME – TYPE LIGHT MOUNTED ON TOP OF THE VEHICLE AND OF SUCH INTENSITY TO CONFORM TO LOCAL CODES FOR MAINTENANCE AND EMERGENCY VEHICLES.
- GROUND CONTROL – NO CONTRACTOR VEHICLES OR EQUIPMENT SHALL ACCESS OR CROSS ACTIVE RUNWAYS, TAXIWAYS, OBJECT FREE AREAS AND APPROACH CLEAR ZONES. ACCESS ONTO THE WORK AREA SHALL BE LIMITED TO THE JOHNNY REAVER ROAD GATE.
- WORK REQUIRING PAVEMENT CLOSURE SHALL BE PERFORMED IN ACCORDANCE WITH THE SAFETY PLANS AND THE PROJECT MANUAL. NO RUNWAY, TAXIWAY, APRON OR AIRPORT ROADWAY SHALL BE CLOSED WITHOUT APPROVAL OF AIRPORT MANAGEMENT. TO ENABLE NECESSARY NOTICES TO ARMEN (NOTAMS) OR ADVISORIES TO AIRPORT SERVICES OR TENANTS, A MINIMUM OF SEVENTY–TWO (72) HOURS WRITTEN NOTICE OF REQUESTED CLOSING SHALL BE DIRECTED TO THE ENGINEER, WHO WILL COORDINATE THE REQUEST WITH AIRPORT OPERATIONS.
- OPEN TRENCHES – ANY CONSTRUCTION ABOVE 3” OR OPEN TRENCHES IN EXCESS OF 3” WITHIN 150’ OF AN ACTIVE RUNWAY CENTERLINE OR WITHIN 48’ FROM AN ACTIVE TAXIWAY CENTERLINE WILL REQUIRE CLOSURE OF THE AFFECTED RUNWAY OR TAXIWAY, UNLESS OTHERWISE APPROVED BY THE OWNER. (SEE NOTE 4 ABOVE). ALL TRENCHING MUST BE CONSTRUCTED TO MEET ALL FEDERAL, STATE (FLORIDA TRENCH SAFETY ACT) AND LOCAL LAWS (INCLUDES OSHA STANDARDS).
- TRENCH MARKING – OPEN TRENCHES AND EXCAVATIONS LOCATED WITHIN 200’ FROM AN ACTIVE TAXIWAY CENTERLINE SHALL BE PROMINENTLY MARKED WITH FLAGS AND LIGHTED BY APPROVED LIGHT UNITS (FLARE POTS NOT ALLOWED) DURING HOURS OF RESTRICTED VISIBILITY AND DARKNESS. THE CONTRACTOR WILL ENSURE THAT AN EMPLOYEE REMAINS ON–CALL TWENTY–FOUR (24) HOURS PER DAY FOR EMERGENCY MAINTENANCE OF HAZARD LIGHTING AND BARRICADES. NO OPEN TRENCHES ARE PERMITTED ADJACENT TO ACTIVE AOA, UNLESS APPROVED BY AIRSIDE OPERATIONS. THESE TRENCHES SHALL BE BACKFILLED WHEN THE CONTRACTOR IS NOT PERFORMING CONSTRUCTION IN THESE TRENCHES. DITCHES OR EXCAVATIONS PERMITTED TO REMAIN OPEN SHALL BE COMPLETELY ENCLOSED WITHIN AIRPORT–TYPE BARRICADES AND PROPERLY LIGHTED. INDIVIDUAL FLAGS AND/OR LIGHTS WILL NOT BE PERMITTED AROUND OPEN TRENCHES/EXCAVATIONS DURING NIGHTTIME HOURS.
- OPEN FLAME – OPEN FLAME, WELDING OR TORCH–CUTTING OPERATIONS ARE PROHIBITED UNLESS ADEQUATE FIRE AND SAFETY PRECAUTIONS HAVE BEEN TAKEN AND THE PROCEDURE APPROVED BY AIRPORT OPERATIONS.
- STOCKPILE EROSION AND DUST CONTROL – STOCKPILED MATERIAL AND OPEN EXCAVATIONS SHALL BE TREATED IN SUCH A MANNER AS TO PREVENT MOVEMENT RESULTING FROM AIRCRAFT BLAST OR WIND CONDITIONS IN EXCESS OF 10 KNOTS. STOCKPILED MATERIALS SHALL NOT BE PERMITTED WITHIN 250’ OF AN ACTIVE RUNWAY CENTERLINE OR 65.5’ FROM AN ACTIVE TAXIWAY CENTERLINE.
- DEBRIS CONTROL – DEBRIS, WASTE AND LOOSE MATERIAL SHALL NOT BE ALLOWED ON ACTIVE AIRCRAFT MOVEMENT AREAS OR APRONS. IF OBSERVED TO BE ON ACTIVE AIRCRAFT MOVEMENT AREAS OR APRONS, THE MATERIAL WILL BE REMOVED IMMEDIATELY BY THE CONTRACTOR. THE FIELD REPRESENTATIVE MAY DIRECT THAT DEBRIS PROBLEMS DURING CONSTRUCTION NOT CORRECTED BY THE CONTRACTOR BE CORRECTED BY OTHERS AT THE EXPENSE OF CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE TO KEEP THE PAVEMENTS ADJACENT TO THE WORK AREA CLEAR OF DEBRIS AND FOD AT ALL TIMES.
- INSPECTION BY OPERATIONS – PRIOR TO OPENING FOR AIRCRAFT USE AND THE DEPARTURE OF THE CONTRACTOR’S WORK CREWS, THE FIELD REPRESENTATIVE WILL ARRANGE FOR INSPECTION BY AIRPORT OPERATIONS OF ANY RUNWAY, TAXIWAY SAFETY AREA, OR APRON THAT HAS BEEN CLOSED FOR WORK, OR THAT HAS BEEN USED FOR A CROSSING POINT OR HAUL ROUTE BY THE CONTRACTOR. THESE AREAS MUST COMPLY WITH THE SAFETY REQUIREMENTS DEFINED BY FEDERAL AVIATION REGULATIONS PART 139 AND INSPECTED BY THE DESIGNATED OPERATION’S INSPECTOR BEFORE PERMISSION FOR THE CONTRACTOR’S WORK CREWS TO DEPART WILL BE GRANTED.
- NO SMOKING SHALL BE ALLOWED WITHIN THE AOA.
- DESIGNATED AIRPORT REPRESENTATIVE SHALL HAVE THE AUTHORITY TO DISCONTINUE CONSTRUCTION OPERATIONS AT ANY TIME, FOR ANY REASON. THE AIRPORT REPRESENTATIVE CAN REQUIRE THE CONTRACTOR TO LEAVE THE AIRSIDE AOA AND/OR AIRPORT PROPERTY AND EVACUATE THE WORK AREA WITHIN THIRTY (30) MINUTES AFTER RECEIVING NOTICE.
- ALL BARRICADE LIGHTING, TEMPORARY SIGNAGE AND COVERS SHALL BE VERIFIED BY THE CONTRACTOR FOR PROPER OPERATION AT THE END OF EACH DAY BEFORE THE CONTRACTOR CEASES OPERATION. THE INTENSITY OF THE LIGHTS AND THE SPACING FOR BARRICADES, SHALL BE ADEQUATE TO DELINEATE THE HAZARDOUS AREA WITHOUT AMBIGUITY. NO MORE THAN 10% OF THE LIGHTS FOR BARRICADES SHALL BE INOPERABLE AT ANY TIME, AND AT NO TIME SHALL TWO (2) CONSECUTIVE LIGHTS BE INOPERABLE. THE CONTRACTOR SHALL IMMEDIATELY REPLACE ANY BARRICADES, LIGHTS OR FLAGS WHICH IN THE OPINION OF THE FIELD REPRESENTATIVE OR AIRPORT OPERATIONS ARE NOT ADEQUATE.
- THE CONTRACTOR SHALL AT ALL TIMES MAINTAIN VEHICLES, EQUIPMENT AND MATERIALS OUTSIDE THE AIRCRAFT CONTAINMENT LINE DURING CONSTRUCTION. THE CONTRACTOR MAY BE REQUIRED TO WORK 24 HOURS EACH DAY IN DESIGNATED AREAS IN ORDER TO MINIMIZE THE SHUT DOWN TIME. NO ADDITIONAL CONTRACT COST SHALL BE ALLOWED FOR WORK TO BE ACCOMPLISHED “AROUND THE CLOCK” (24 HOURS PER DAY).
- ALL MARKINGS WITHIN THE CONSTRUCTION AREA IN CONFLICT WITH THE SAFETY PLANS SHALL BE REMOVED & REPLACED AS REQUIRED AND IN ACCORDANCE WITH P–620 OF THE PROJECT MANUAL.
- ALL EQUIPMENT, MATERIAL AND CONSTRUCTION PERSONNEL SHALL BE KEPT AT LEAST 250’ FROM CENTERLINE OF ACTIVE RUNWAY, 65.5’ FROM AN ACTIVE TAXIWAY AT ALL TIMES.
- CONTRACTOR IS REQUIRED TO MONITOR RADIO COMMUNICATIONS AT ALL TIMES. GROUND CONTROL FREQUENCY: 121.65 AND CTAF 118.95.
- EQUIPMENT OR MATERIALS SHALL NOT EXCEED A HEIGHT OF 35 FT WITHOUT PRIOR APPROVAL FROM ENGINEER.
- CONTRACTOR SHALL MAINTAIN CONSTANT CONTACT WITH ATCT BEFORE AND DURING ANY OPERATIONS IN THE AOA.
- CONTRACTOR SHALL REMOVE ALL EQUIPMENT FROM OBJECT FREE AREAS DURING HOURS OF AIRCRAFT OPERATIONS.
- THE FINAL LIFT OF ASPHALT SHALL BE CONSTRUCTED DURING DAYLIGHT HOURS, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- CONTRACTOR SHALL COORDINATE WITH THE OWNER AND DESIGNATED AIRPORT REPRESENTATIVES FOR THE ISSUANCE OF NOTAMS BEFORE CONSTRUCTION BEGINS; HEIGHT RESTRICTIONS IN ANY AREAS OF CONSTRUCTION THAT WILL NECESSITATE THE CLOSURE OF A RUNWAY OR TAXIWAY WILL REQUIRE THAT WORK BE PERFORMED DURING NIGHTTIME ONLY (10:00PM–7:00AM). PRIOR TO THE END OF THE WORK SHIFT, THE CONTRACTOR SHALL REMOVE ALL EQUIPMENT, MATERIALS AND STOCK PILES FROM THE CONSTRUCTION AREA, AND SHALL SWEEP THE AREA FOR ALL LOOSE PARTICLES THAT MAY BE INGESTED BY JET ENGINES.

SECURITY NOTES (ACTIVE AIRFIELD):

- GENERAL – THE CONTRACTOR SHALL COMPLY WITH ALL SECURITY REQUIREMENTS SPECIFIED IN THE CONTRACT MANUAL. THE CONTRACTOR SHALL DESIGNATE IN WRITING TO THE FIELD REPRESENTATIVE, THE NAME OF THE “CONTRACTOR SECURITY OFFICER”. THE CONTRACTOR SECURITY OFFICER SHALL REPRESENT THE CONTRACTOR ON THE SECURITY REQUIREMENTS OF THE CONTRACT.
- CONSTRUCTION SECURITY COMMITTEE – A COMMITTEE SHALL BE ESTABLISHED CONCURRENT WITH THE LIFE OF THIS CONTRACT TO MONITOR AND COORDINATE SECURITY PROVISIONS, ADOPT NEW SECURITY PROVISIONS IF REQUIRED AND REVIEW AND APPROVE ALL MATTERS OF AIRPORT SECURITY RELATING TO THIS CONTRACT. MEETINGS SHALL BE SCHEDULED BY THE FIELD REPRESENTATIVE. COMMITTEE MEMBERSHIP SHALL INCLUDE THE CONTRACTOR SECURITY OFFICER, FIELD REPRESENTATIVE AND AIRPORT OPERATIONS.
- CONTRACTOR PERSONNEL SECURITY ORIENTATION – THE CONTRACTOR SECURITY OFFICER SHALL BE RESPONSIBLE FOR BRIEFING ALL CONTRACTOR PERSONNEL ON THESE REQUIREMENTS AND, FROM TIME TO TIME, OTHER SECURITY PROVISIONS ADOPTED BY THE CONSTRUCTION SECURITY COMMITTEE. ALL NEW CONTRACTOR EMPLOYEES SHALL BE BRIEFED ON THESE REQUIREMENTS PRIOR TO WORKING IN THE CONSTRUCTION AREA.
- ACCESS TO THE SITE – CONTRACTOR’S ACCESS TO THE SITE SHALL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE FIELD REPRESENTATIVE. THE CONTRACTOR SHALL NOT PERMIT ANY UNAUTHORIZED PERSONNEL OR TRAFFIC ON THE SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRAFFIC CONTROL TO AND FROM THE VARIOUS CONSTRUCTION AREAS ON THE SITE. THE CONTRACTOR IS RESPONSIBLE FOR THE IMMEDIATE CLEANUP OF ANY DEBRIS DEPOSITED ALONG ANY ACCESS ROAD AS A RESULT OF THE CONSTRUCTION TRAFFIC. DIRECTIONAL SIGNING AT THE ACCESS GATE AND ALONG THE DELIVERY ROUTE TO THE STORAGE AREA OR WORK SITE SHALL NOT BE PERMITTED.
- MATERIALS DELIVERY TO THE SITE – ALL CONTRACTOR’S MATERIAL ORDERS FOR DELIVERY TO THE SITE WILL USE THE ACCESS POINT AT THE CONTRACTOR’S STAGING AREA AS A DELIVERY ADDRESS AT THE AIRPORT. ALL ASSOCIATED COSTS SHALL BE INCIDENTAL TO VARIOUS OTHER BID ITEMS.
- CONSTRUCTION AREA LIMITS – THE LIMITS OF CONSTRUCTION, MATERIAL STORAGE AREAS, EQUIPMENT STORAGE AREA, PARKING AREA AND OTHER AREAS REQUIRED FOR THE CONTRACTOR’S EXCLUSIVE USE DURING CONSTRUCTION SHALL BE MARKED BY THE CONTRACTOR AND APPROVED BY THE FIELD REPRESENTATIVE. THE CONTRACTOR SHALL ERECT AND MAINTAIN SUITABLE FENCING, SIGNAGE AND WARNING DEVICES VISIBLE FOR BOTH DAY/NIGHT USE TO DELINEATE THE PERIMETER OF ALL SUCH AREAS.
- VEHICLE IDENTIFICATION – THE CONTRACTOR, THROUGH THE CONTRACTOR SECURITY OFFICER, SHALL ESTABLISH AND MAINTAIN A LIST OF CONTRACTOR AND SUBCONTRACTOR VEHICLES AUTHORIZED TO OPERATE ON THE SITE. THE CONTRACTOR SECURITY OFFICER WILL REQUIRE EACH VEHICLE TO DISPLAY A LARGE COMPANY SIGN (WITH NOT LESS THAN 6” LETTERING) ON BOTH SIDES OF THE VEHICLE. THE CONTRACTOR SHALL PROVIDE A CURRENT LISTING OF VEHICLES AND COMPANIES AUTHORIZED TO ENTER AND CONDUCT WORK ON THE AIRPORT TO THE FIELD REPRESENTATIVE. CONTRACTOR’S EMPLOYEE PERSONAL VEHICLES SHALL BE RESTRICTED TO THE CONTRACTOR’S STAGING AREA OR CONTRACTOR’S EMPLOYEE PARKING AREA AND ARE NOT ALLOWED ON THE AIRFIELD AT ANY TIME.
- OPERATORS OF VEHICLES MUST POSSESS A VALID DRIVER’S LICENSE, FOR THE VEHICLE BEING OPERATED. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EMPLOYEES DRIVING WITHIN THE AOA, AND SHALL LIMIT EMPLOYEE ACCESS TO RUNWAY AND TAXIWAY OBJECT FREE AREAS TO THOSE WHOSE FUNCTIONS ARE ABSOLUTELY NECESSARY. DRIVERS SHALL MONITOR NORTHWEST FLORIDA BEACHES INTERNATIONAL AIRPORT GROUND CONTROL FREQUENCY AT ALL TIMES WHEN DRIVING WITHIN ANY RUNWAY OR TAXIWAY OBJECT FREE AREA, AND SHALL BE PREPARED TO LEAVE THE AREA IMMEDIATELY IF NECESSARY.
- ALL ACCESS GATES SHALL REMAIN LOCKED OR MONITORED AT ALL TIMES. THE COST OF PROVIDING FLAGGER AND SECURITY GUARDS, IF NEEDED, SHALL BE INCIDENTAL AND INCLUDED IN THE VARIOUS CONTRACT ITEMS.

N:\NICEVILLE–PROJECTS\073–ZHA\2019.0073.01– GATE 6 & 7 PBB DESIGN\000 CAD\GATE 7 APRON REPAIR PROJECT\2107301_C00V6–DET.DWG 10/25/2021 8:54 PM

ZHA
AVCON
 3200 W. US HWY 90, SUITE A
 TUCULUMCINE, FL 34561-2400
 OFFICE: (850) 878-0050
 www.avconinc.com

TONIA D. NATION
 FL LICENSE NO.: 64631
 FBPR CERTIFICATE OF
 AUTHORIZATION NO. 5057

NO.	DATE	REVISION	BY

SAFETY AND SECURITY NOTES
RELEASE FOR BID

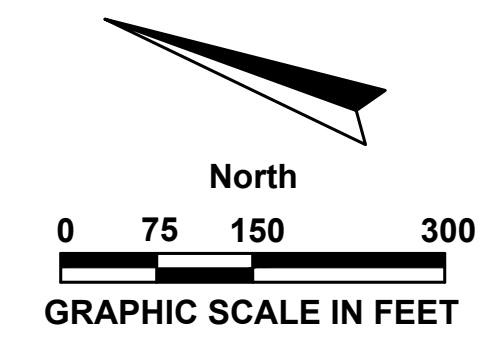
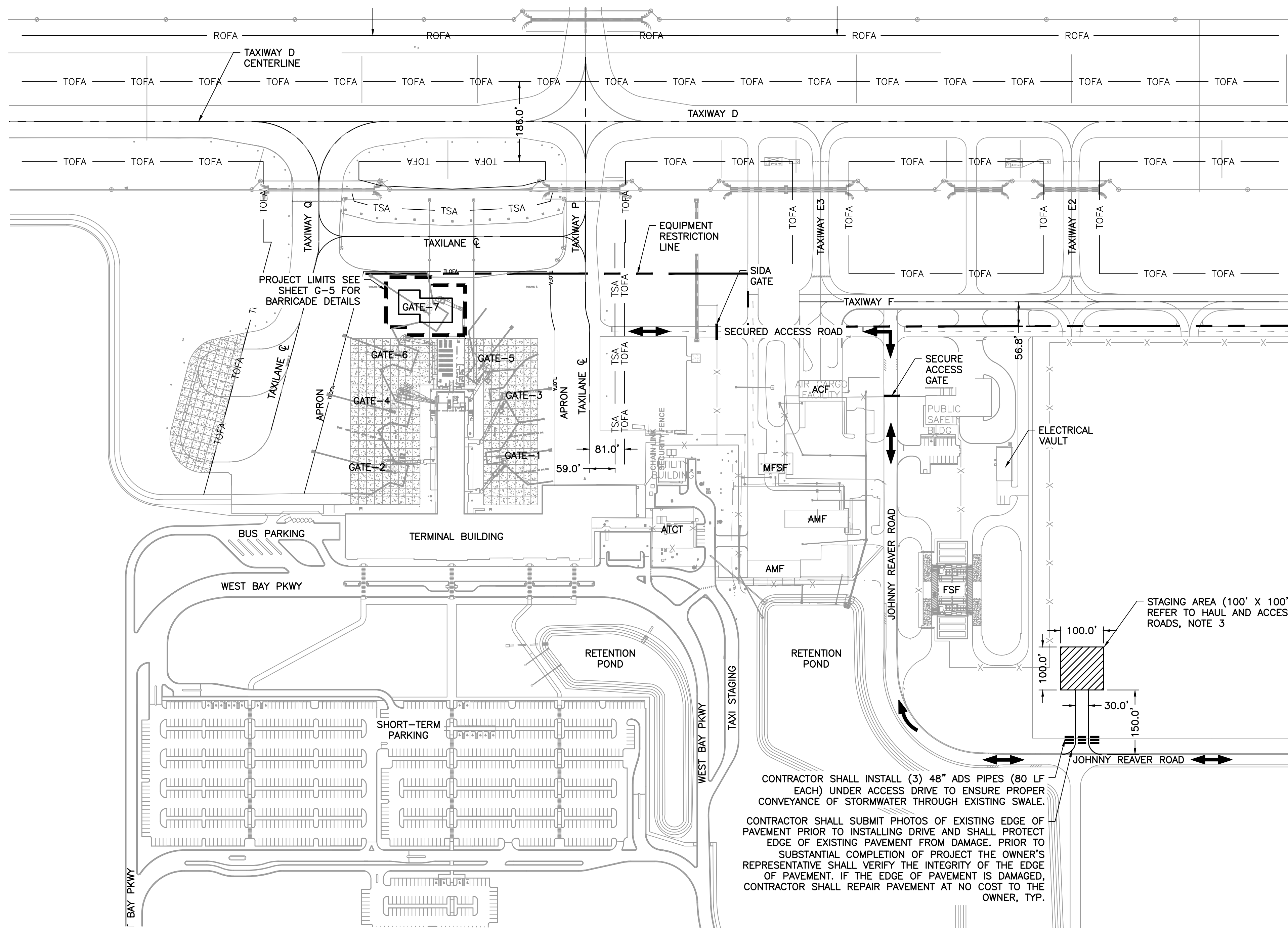
ECP GATE 7 APRON REPAIR
 PREPARED FOR
 NORTHWEST FLORIDA BEACHES
 INTERNATIONAL AIRPORT

DESIGNED BY: C.A.P/T.D.N
 DRAWN BY: C.A.P.
 CHECKED BY: T.D.N.
 APPROVED BY: V.C.L.
 PROJECT NO: 2021.073.01
 DATE: OCTOBER 2021

SHEET NUMBER
G-3

THIS DOCUMENT CONTAINS PRIVILEGED AND PROPRIETARY INFORMATION, ALL OF WHICH IS EXPRESSLY PROVIDED BY AVCON, INC. FOR USE BY THE INTENDED RECIPIENT, AND FOR A SPECIFIC PURPOSE. WITHOUT THE EXPRESS WRITTEN CONSENT OF AVCON, INC. ANY DISTRIBUTION, REPRODUCTION OR OTHER USE OF THIS DOCUMENT, IN WHOLE OR IN PART, IS STRICTLY PROHIBITED.

N:\NICEVILLE-PROJECTS\073-ZHA\2019\0073.01-GATE 6 & 7 PBB DESIGN\000 CAD\GATE 7 APRON REPAIR PROJECT\2107301_C0WR-DTL.DWG 10/25/2021 9:34 PM



NOTES:

GENERAL:

1. CONTRACTOR'S EQUIPMENT AND VEHICLES SHALL REMAIN 56.8' FEET OR GREATER FROM TAXIWAY F CENTERLINE (EXTENDED) AT ALL TIMES.
2. CONTRACTOR SHALL YIELD TO AIRCRAFT AT ALL TIMES. CONTRACTOR SHALL YIELD RIGHT-OF-WAY IN AREAS LEASED BY OTHERS AT ALL TIMES.
3. EQUIPMENT HEIGHT SHALL NOT EXCEED 35 FEET ABOVE GROUND LEVEL UNLESS SPECIFICALLY REQUESTED BY CONTRACTOR AND APPROVED BY THE AIRPORT.
4. RESTRICTIONS INDICATED ON THIS SHEET SHALL APPLY AT ALL TIMES.
5. BARRICADE PLACEMENT (SHEET C-XX) TO BE COORDINATED WITH OWNER'S FIELD REPRESENTATIVE, 2 FEET FROM THE EDGE OF ALL EXISTING AFFECTED PAVEMENTS, UNLESS OTHERWISE SHOWN. BARRICADES SHALL BE CONTINUOUS (NO SPACES).
6. BARRICADE SECTIONS SHALL BE WHITE WITH ORANGE REFLECTIVE MEDIA. ALL INCIDENTAL CONNECTORS, SPACERS, SPLICE PLATES, ETC. SHALL BE PAINTED WHITE.
7. ALL BARRICADES SHALL BE CHECKED VISUALLY FOR SIGNS OF WEAR AND TEAR ON A WEEKLY BASIS AND SHALL BE REPAINTED WHEN DEEMED APPROPRIATE BY THE ENGINEER. THE CONDITIONS OF LIGHTING UNITS SHALL BE CHECKED DAILY. ALL LIGHT FIXTURES SHALL BE VERIFIED OPERATING BY THE CONTRACTOR ON A DAILY BASIS BEFORE THE CONTRACTOR CEASES OPERATION FOR THE DAY.
8. ALL BARRICADES SHALL BE MOVED AT LEAST ONCE EACH WEEK AND THE CONTRACTOR SHALL SWEEP THE DEBRIS WHICH HAS ACCUMULATED AND REMOVE FROM THE SITE. THE BARRICADES SHALL THEN BE REPLACED AT THE APPROPRIATE LOCATION.
9. THE CONTRACTOR SHALL INSTALL, MAINTAIN, AND REMOVE BARRICADES. BARRICADES SHALL BE CHECKED DAILY FOR PROPER PLACEMENT.
10. REFER TO SHEET G-4 FOR ADDITIONAL INFORMATION ON SAFETY AND SECURITY.

STAGING/STORAGE AREAS:

1. THE EXACT LIMITS OF THE CONTRACTOR'S STAGING AND STORAGE AREA SHALL BE ESTABLISHED BY THE CONTRACTOR WITH THE APPROVAL OF THE ENGINEER IN THE AREAS GENERALLY AS SHOWN ON THE PLANS. ANY AND ALL REQUIRED UTILITIES FOR THE CONTRACTOR'S OPERATIONS SHALL BE ARRANGED FOR AND PAID FOR BY THE CONTRACTOR DIRECTLY WITH THE APPROPRIATE UTILITY AGENCIES. UTILITY ARRANGEMENTS SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL PROVIDE PROPER AND SANITARY TOILET FACILITIES FOR HIS/HER EMPLOYEES.
2. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL RESTORE ALL GRASSED, GRAVELED AND PAVED AREAS USED FOR STAGING AND STORAGE TO A CLEAN AND NEAT CONDITION ACCEPTABLE TO THE OWNER. THE TERRAIN SHALL BE LEFT IN A SMOOTH, WELL GROOMED, AND GRADED-TO-DRAIN CONDITION INCLUDING THE REFILLING OF ANY RUTS, HOLES, OR OTHER DEPRESSIONS OR THE LEVELING OF BERMS OR OTHER SIMILAR EMBANKMENTS AS MAY BE APPLICABLE. UPON ACCEPTANCE OF THE RESTORED STAGING OR STORAGE AREAS, THE CONTRACTOR SHALL SOD THESE AREAS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. NO DIRECT MEASUREMENT OR PAYMENT WILL BE MADE FOR THE CONSTRUCTION, MAINTENANCE, RESTORATION, REPAIR, AND SODDING OF STAGING AND STORAGE AREAS.
3. CONTRACTOR SHALL USE NON-GRAVEL STABILIZATION, TO MINIMIZE FOREIGN OBJECT DEBRIS (FOD) DURING CONSTRUCTION ACTIVITIES AND PREVENT ALL OFFSITE SEDIMENT TRACKING. CONTRACTOR SHALL INSTALL TYPE "III" SILT FENCE 5' OUTSIDE THE PERIMETER OF THE STAGING AREA. SEE SHEET C-XX FOR SILT FENCE DETAIL.

HAUL AND ACCESS ROADS:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTING AND MAINTAINING HAUL AND ACCESS ROADS WITHIN THE LIMITS OF CONSTRUCTION, STAGING AREAS, AND BETWEEN CONSTRUCTION AREAS, AND FOR THE DUST CONTROL OF THESE ROADS. ALL COSTS ASSOCIATED WITH CONSTRUCTING AND MAINTAINING HAUL ROADS SHALL BE CONSIDERED A SUBSIDIARY OBLIGATION OF THE PROJECT AND SHALL NOT BE PAID FOR SEPARATELY.
2. ANY ADDITIONAL HAUL OR ACCESS ROADS REQUESTED BY THE CONTRACTOR FOR HIS OPERATIONS OUTSIDE THE LIMITS OF CONSTRUCTION SHALL BE CONSTRUCTED BY THE CONTRACTOR AT LOCATIONS WHERE AND IF APPROVED BY THE ENGINEER AT NO ADDITIONAL COMPENSATION.
3. THE ENGINEER RESERVES THE RIGHT TO SHIFT THE LOCATION OF CONTRACTOR HAUL AND ACCESS ROUTES AS MAY BE DEEMED NECESSARY FOR THE ORDERLY PROGRESS OF THE OVERALL AIRPORT DEVELOPMENT PROJECT AT NO ADDITIONAL COMPENSATION.
4. PRIOR TO BEGINNING THE WORK, THE CONDITION OF APPLICABLE ROADWAYS SHALL BE JOINTLY INSPECTED AND AGREED UPON BY THE CONTRACTOR AND ENGINEER. ANY DAMAGE TO EXISTING ROADWAYS USED AS A HAUL OR ACCESS ROUTE SHALL BE CONSIDERED THE RESPONSIBILITY OF THE CONTRACTOR AND HE OR SHE SHALL PROMPTLY REPAIR ANY DAMAGED ROADWAYS TO THEIR ORIGINAL CONDITION TO THE SATISFACTION OF THE ENGINEER WITH NO ADDITIONAL COMPENSATION.
5. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL RESTORE ALL GRASSED, GRAVELED AND PAVED AREAS USED FOR HAUL ROADS TO A CLEAN AND NEAT CONDITION ACCEPTABLE TO THE OWNER. THE TERRAIN SHALL BE LEFT IN A SMOOTH, WELL GROOMED, AND GRADED-TO-DRAIN CONDITION INCLUDING THE REFILLING OF ANY HOLES OR DEPRESSIONS OR THE LEVELING OF ANY RUTS AS MAY BE APPLICABLE. THE REFILLED MATERIAL SHALL BE SUITABLE TO THE AREA BEING RESTORED (GRAVEL IF AN EXISTING GRAVEL ROAD IS BEING RESTORED, SOIL IF A TURF AREA IS BEING RESTORED, ETC.). UPON ACCEPTANCE OF A HAUL ROAD RESTORED WITHIN A PREEXISTING TURF AREA, THE CONTRACTOR SHALL SOD THESE AREAS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. NO DIRECT MEASUREMENT OR PAYMENT WILL BE MADE FOR THE CONSTRUCTION, MAINTENANCE, RESTORATION, REPAIR, GRAVELING, SODDING OF HAUL ROADS.
6. WORK BY OTHERS: ADDITIONAL CONTRACTORS MAY BE WORKING WITHIN THE LIMITS OF CONSTRUCTION FOR THIS PROJECT. CLOSE COORDINATION OF WORK BETWEEN THE CONTRACTOR AND OTHER WORK IN THE AREA WILL BE REQUIRED. THE CONTRACTOR SHALL COOPERATE WITH THE ENGINEER IN COORDINATING SCHEDULES IN ORDER TO MINIMIZE CONFLICTS AND COMPLETE THE PROJECTS IN A TIMELY MANNER. THE CONTRACTOR SHALL COORDINATE HIS WORK SO AS NOT TO DISRUPT OR INTERFERE WITH WORK BEING ACCOMPLISHED BY OTHER CONTRACTORS. THE ENGINEER RESERVES THE RIGHT TO ADJUST PROJECT LIMITS AS MAY BE DEEMED NECESSARY TO ACCOMMODATE ADJACENT WORK BY OTHERS. ANY SUCH NECESSARY ADJUSTMENT WHICH IMPACTS THE SCHEDULE OF THE CONTRACTOR MAY BE THE BASIS FOR A REQUEST FOR EXTRA TIME. HOWEVER, IT SHALL NOT BE THE BASIS FOR A CLAIM FOR EXTRA COSTS.

LEGEND			
— TOFA —	TAXIWAY/TAXILANE OBJECT FREE AREA	— — — —	EQUIPMENT RESTRICTION LINE
- - - -	RUNWAY/TAXIWAY CENTERLINE	— — — —	EXISTING PAVEMENT
←	CONTRACTORS HAUL ROUTE	▨	100' X 100' STAGING AREA
- - - -	PROJECT LIMITS		



TONIA D. NATION
FL LICENSE NO.: 64631
FBPR CERTIFICATE OF
AUTHORIZATION NO. 5057

NO.	DATE	REVISION	BY

SAFETY DURING CONSTRUCTION PLAN (1 OF 2)

ECP GATE 7 APRON REPAIR

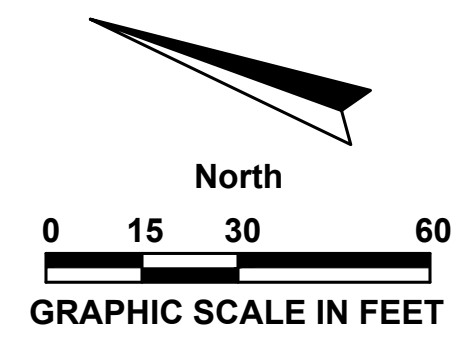
PREPARED FOR
NORTHWEST FLORIDA BEACHES
INTERNATIONAL AIRPORT

DESIGNED BY: C.A.P.T.D.N
DRAWN BY: C.A.P.
CHECKED BY: T.D.N.
APPROVED BY: V.C.L.
PROJECT NO: 2021.073.01
DATE: OCTOBER 2021

SHEET NUMBER
G-4

THIS DOCUMENT CONTAINS PRIVILEGED AND PROPRIETARY INFORMATION. ALL OF WHICH IS EXPRESSLY PROVIDED BY AVCON, INC. FOR USE BY THE INTENDED RECIPIENT, AND FOR A SPECIFIC PURPOSE. WITHOUT THE EXPRESS WRITTEN CONSENT OF AVCON, INC. ANY DISTRIBUTION, REPRODUCTION, OR OTHER USE OF THIS DOCUMENT, IN WHOLE OR IN PART, IS STRICTLY PROHIBITED.

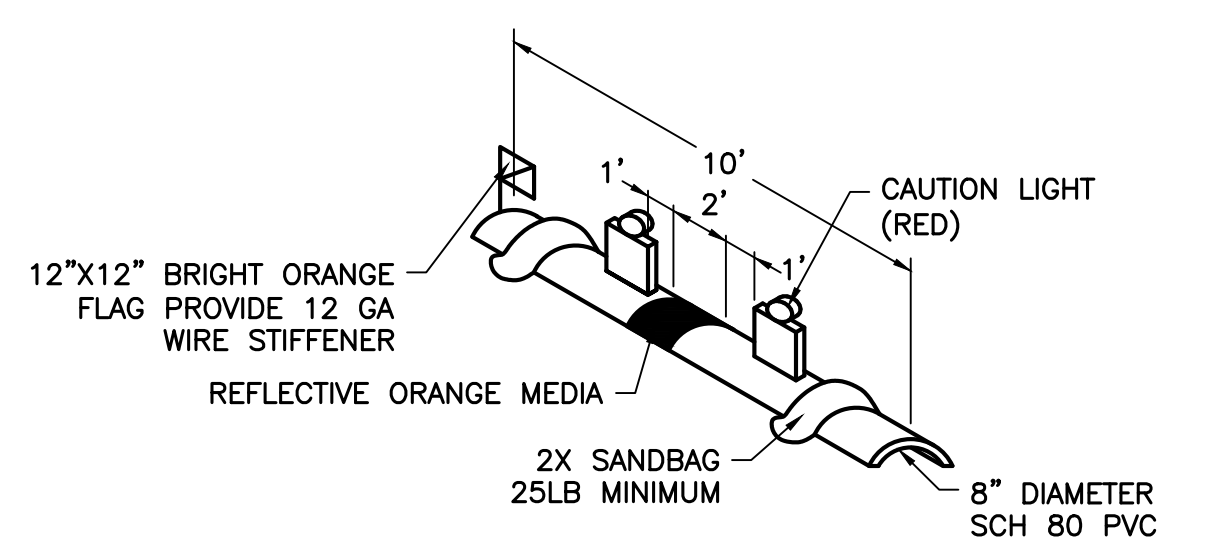
N:\NICEVILLE-PROJECTS\073-ZHA\2019\0073.01-GATE 6 & 7 PBB DESIGN\000 CAD\GATE 7 APRON REPAIR PROJECT\2107301_COVR-DET.DWG 10/25/2021 9:35 PM



LEGEND	
— TOFA —	TAXIWAY/TAXILANE OBJECT FREE AREA
	CONSTRUCTION BARRICADE

NOTES:

1. CONTRACTOR TO PROVIDE ALL, FUEL, EQUIPMENT, TOOLS AND ALL/ANY OTHER INCIDENTALS TO COMPLETE THE WORK.
2. CONTRACTOR'S QUALIFIED PERSONNEL SHALL MONITOR ECP GROUND CONTROL 121.65 MHz (BETWEEN 0600 AND 2300) AND CTAF 118.95 (BETWEEN 2300 AND 0600) DURING CONSTRUCTION IN ORDER TO BE AWARE OF AIRCRAFT OPERATIONS IN AND AROUND THE AIRFIELD.
3. THE CONTRACTOR SHALL NOTIFY THE AIRPORT PRIOR TO ENTERING THE WORK AREA AT THE BEGINNING OF EACH WORK DAY AND WHEN DEPARTING THE WORK AREA AT THE END OF THE DAY.
4. AIRPORT'S NORMAL WORK WEEK IS MONDAY THROUGH FRIDAY. THE CONTRACTOR SHOULD PLAN ON COMPLETING THE WORK DURING THIS SCHEDULE. OTHER WORK DAY REQUESTS MUST BE SUBMITTED IN WRITING AND APPROVED BY THE AIRPORT, ON A CASE BY CASE BASIS.
5. SEE SHEETS C-1 THROUGH C-2 FOR EXACT LIMITS OF WORK.
6. CONTRACTOR SHALL PLACE BARRICADES PRIOR TO COMMENCING CONSTRUCTION ACTIVITIES.
7. CONTRACTOR SHALL COORDINATE GATE DAILY SCHEDULE WITH AIRPORT. CONTRACTOR SHALL CLEAR THE OBJECT FREE AREAS PRIOR TO ARRIVAL AND DEPARTURES TO GATE DURING CONSTRUCTION.
8. OWNER MAY MAKE FIELD MODIFICATIONS TO CONSTRUCTION BARRICADES TO ENSURE OPERATIONS ARE MAINTAINED.



CAUTION LIGHTS TO BE RED IN COLOR AND FLASHING DURING HOURS OF DARKNESS OR REDUCED VISIBILITY. UNITS TO BE PLACED ADJACENT TO EACH OTHER. ALTERNATE TYPES OF BARRICADES MAY BE APPROVED ON A CASE BY CASE BASIS. PAYMENT FOR BARRICADES SHALL BE INCIDENTAL TO PAY ITEM M-101-1.

CONSTRUCTION BARRICADE DETAIL
N.T.S.

3248 AVCON DRIVE, SUITE A
NICEVILLE, FL 32578-2400
OFFICE: (850) 878-0050
www.avconinc.com

TONIA D. NATION
FL LICENSE NO.: 64631
FBPR CERTIFICATE OF
AUTHORIZATION NO. 5057

NO.	DATE	REVISION	BY

**SAFETY DURING
CONSTRUCTION
PLAN (2 OF 2)**

RELEASE FOR BID

ECP GATE 7 APRON REPAIR

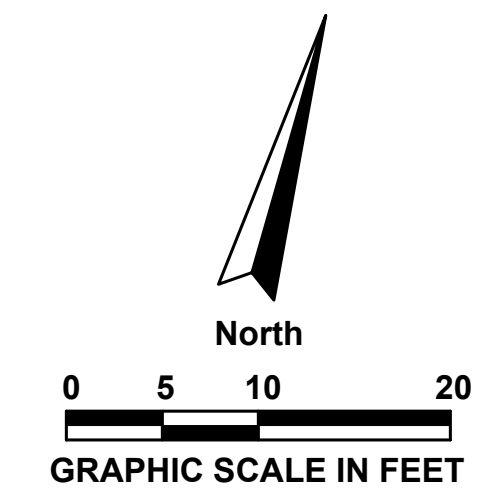
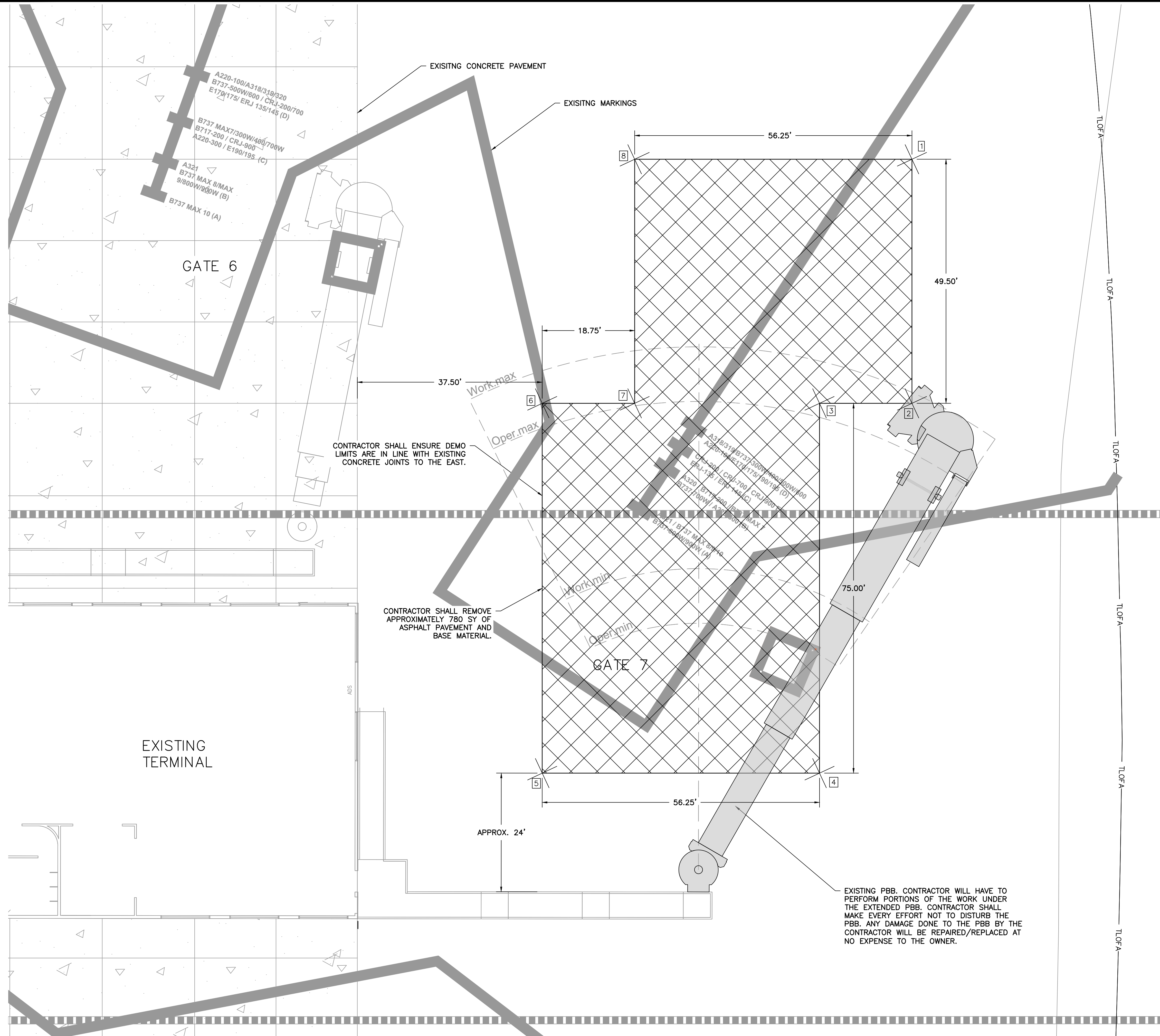
PREPARED FOR
NORTHWEST FLORIDA BEACHES
INTERNATIONAL AIRPORT

DESIGNED BY: C.A.P/T.D.N
DRAWN BY: C.A.P.
CHECKED BY: T.D.N.
APPROVED BY: V.C.L.
PROJECT NO: 2021.073.01
DATE: OCTOBER 2021

SHEET NUMBER
G-5

THIS DOCUMENT CONTAINS PRIVILEGED AND PROPRIETARY INFORMATION, ALL OF WHICH IS EXPRESSLY PROVIDED BY AVCON, INC. FOR USE BY THE INTENDED RECIPIENT, AND FOR A SPECIFIC PURPOSE. WITHOUT THE EXPRESS WRITTEN CONSENT OF AVCON, INC. ANY DISTRIBUTION, REPRODUCTION, OR OTHER USE OF THIS DOCUMENT, IN WHOLE OR IN PART, IS STRICTLY PROHIBITED.

N:\NICEVILLE-PROJECTS\073-ZHA\2019\0073.01-GATE 6 & 7 PBB DESIGN\000 CAD\GATE 7 APRON REPAIR PROJECT\2107301_DEMO.DWG 10/25/2021 5:35 PM



LEGEND	
	LIMITS OF ASPHALT PAVEMENT DEMOLITION AND BASE MATERIAL
	EXISTING 14" THICK PORTLAND CEMENT CONCRETE

DEMO NOTES:

1. SAW-CUT CLEAN EDGES AND MATCH EXISTING GRADE FOR ALL DEMOLITION TIE-IN LOCATIONS. SEE SHEET C-4 FOR DOUBLE SAW CUT ASPHALT/CONCRETE DEMOLITION DETAIL.
2. CONTRACTOR SHALL KEEP AREA SWEEPED AND FREE OF DEBRIS TO PREVENT FOD FROM ENTERING ACTIVE AIRFIELD.

DEMO POINT TABLE		
POINT #	NORTHING	EASTING
1	495482.4781	1559112.8029
2	495435.9633	1559129.7329
3	495429.5505	1559112.1137
4	495359.0735	1559137.7652
5	495339.8349	1559084.9075
6	495410.3118	1559059.2560
7	495416.7247	1559076.8752
8	495463.2395	1559059.9452



TONIA D. NATION
FL LICENSE NO.: 64631
FBPR CERTIFICATE OF
AUTHORIZATION NO. 5057

NO.	DATE	REVISION	BY

EXISTING CONDITIONS & DEMOLITION PLAN
RELEASE FOR BID

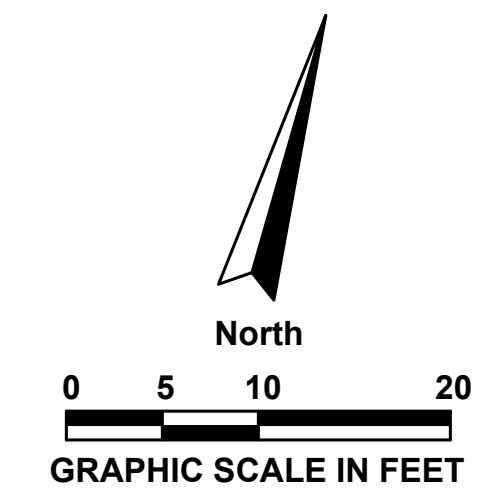
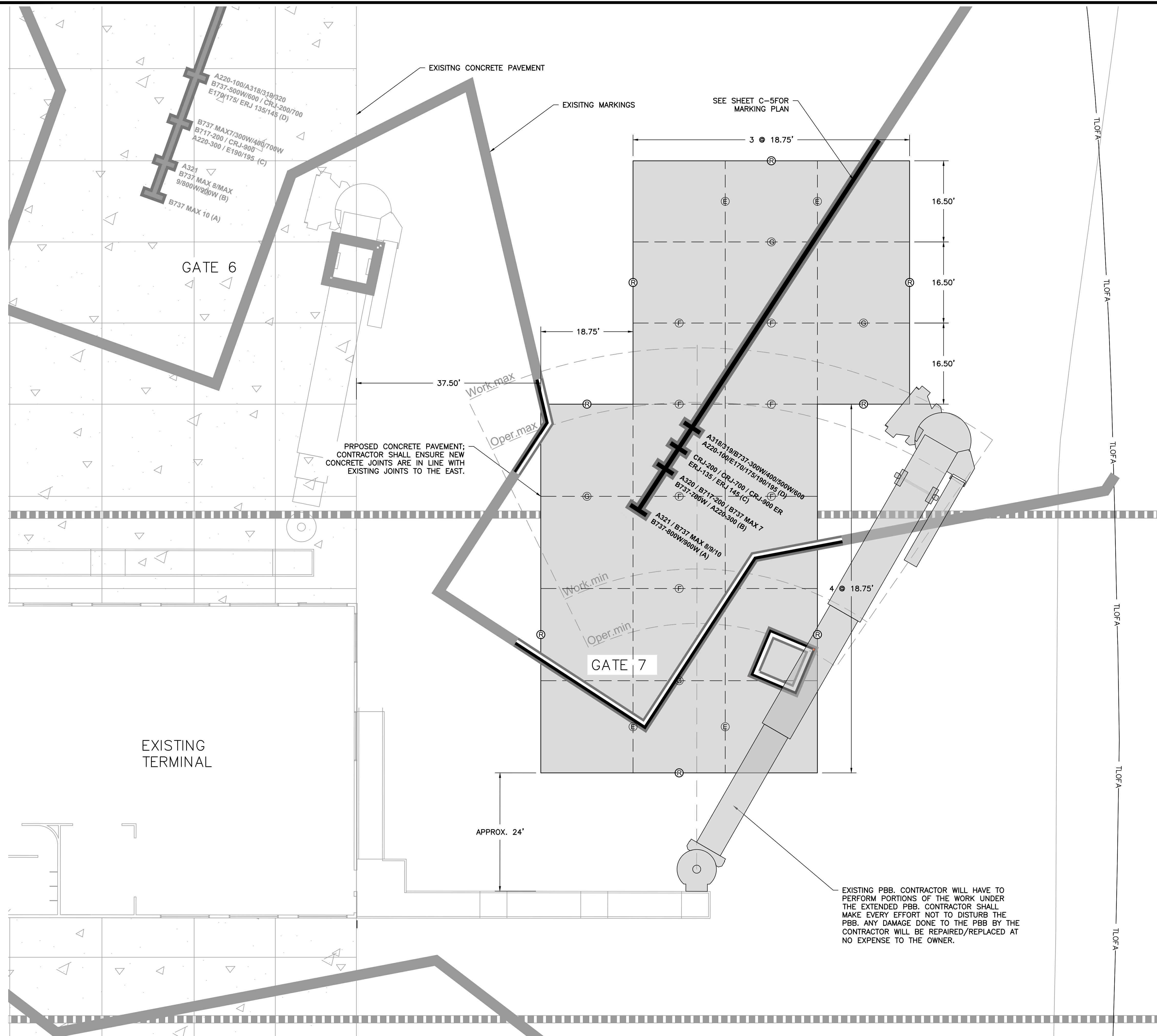
ECP GATE 7 APRON REPAIR
PREPARED FOR
NORTHWEST FLORIDA BEACHES
INTERNATIONAL AIRPORT

DESIGNED BY: C.A.P/T.D.N
DRAWN BY: C.A.P.
CHECKED BY: T.D.N.
APPROVED BY: V.C.L.
PROJECT NO: 2021.073.01
DATE: OCTOBER 2021

SHEET NUMBER
C-1

THIS DOCUMENT CONTAINS PRIVILEGED AND PROPRIETARY INFORMATION, ALL OF WHICH IS EXPRESSLY PROVIDED BY AVCON, INC. FOR USE BY THE INTENDED RECIPIENT, AND FOR A SPECIFIC PURPOSE. WITHOUT THE EXPRESS WRITTEN CONSENT OF AVCON, INC. ANY DISTRIBUTION, REPRODUCTION, OR OTHER USE OF THIS DOCUMENT, IN WHOLE OR IN PART, IS STRICTLY PROHIBITED.

N:\NICEVILLE-PROJECTS\073-ZHA\2019\0073.01-GATE 6 & 7 PBB DESIGN\000 CAD\GATE 7 APRON REPAIR PROJECT\2107301_SITE.DWG 10/25/2021 5:36 PM



LEGEND	
	PROPOSED 16" THICK PORTLAND CEMENT CONCRETE
	EXISTING 14" THICK PORTLAND CEMENT CONCRETE
	EXISTING CONDITIONS
	TYPE D DOWELED OR TYPE E DEFORMED DOWELED LONGITUDINAL CONSTRUCTION JOINT
	TYPE F DOWELED OR TYPE G DEFORMED DOWELED TRANSVERSE CONTRACTION JOINT
	TYPE R PCC TO AC JOINT

NOTES

- 1) SEE SHEET C-3 FOR TYPICAL SECTION.
- 2) SEE SHEET C-5 FOR MARKING PLAN.
- 3) CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD PRIOR TO PLACING CONCRETE TO INSPECT THE ASPHALT/PCC JOINTS PRIOR TO PCC PLACEMENT.
- 4) SEE SHEETS C-3 AND C-4 FOR JOINT DETAILS.



TONIA D. NATION
FL LICENSE NO.: 64631
FBPR CERTIFICATE OF
AUTHORIZATION NO. 5057

NO.	DATE	REVISION	BY

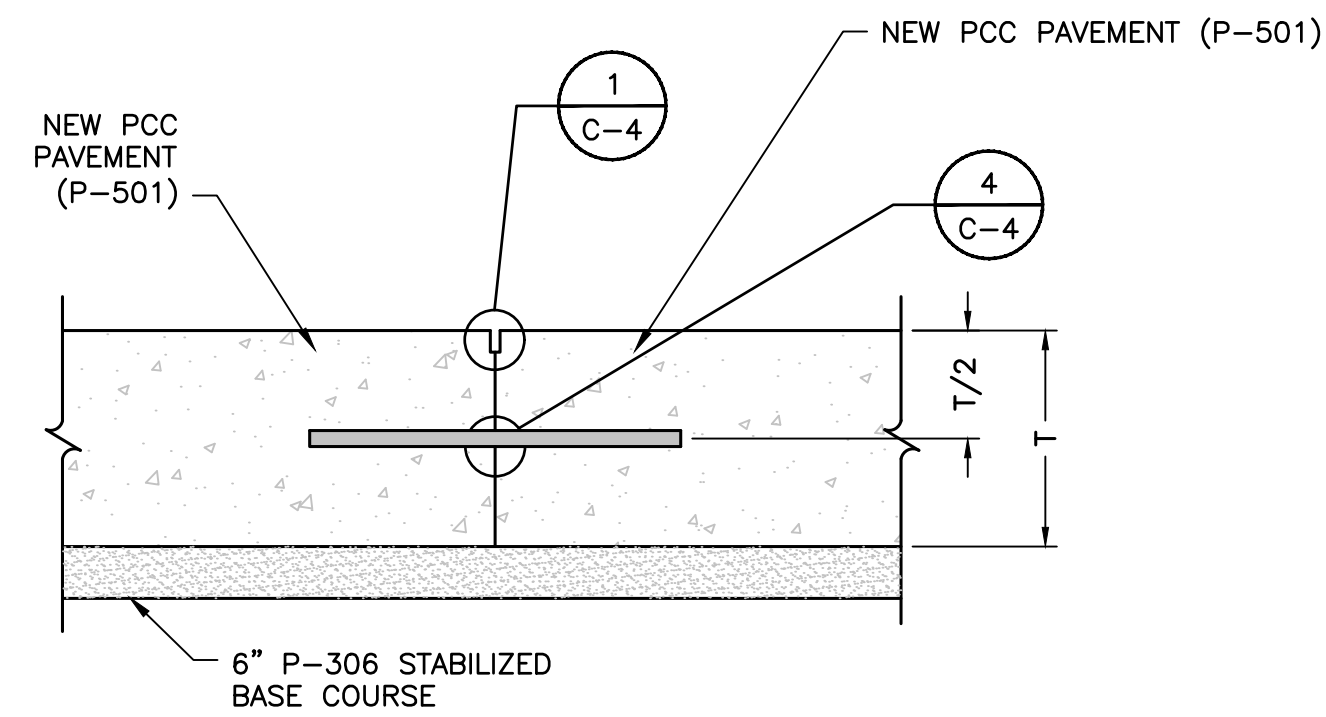
SITE PLAN
RELEASE FOR BID

ECP GATE 7 APRON REPAIR
PREPARED FOR
NORTHWEST FLORIDA BEACHES
INTERNATIONAL AIRPORT

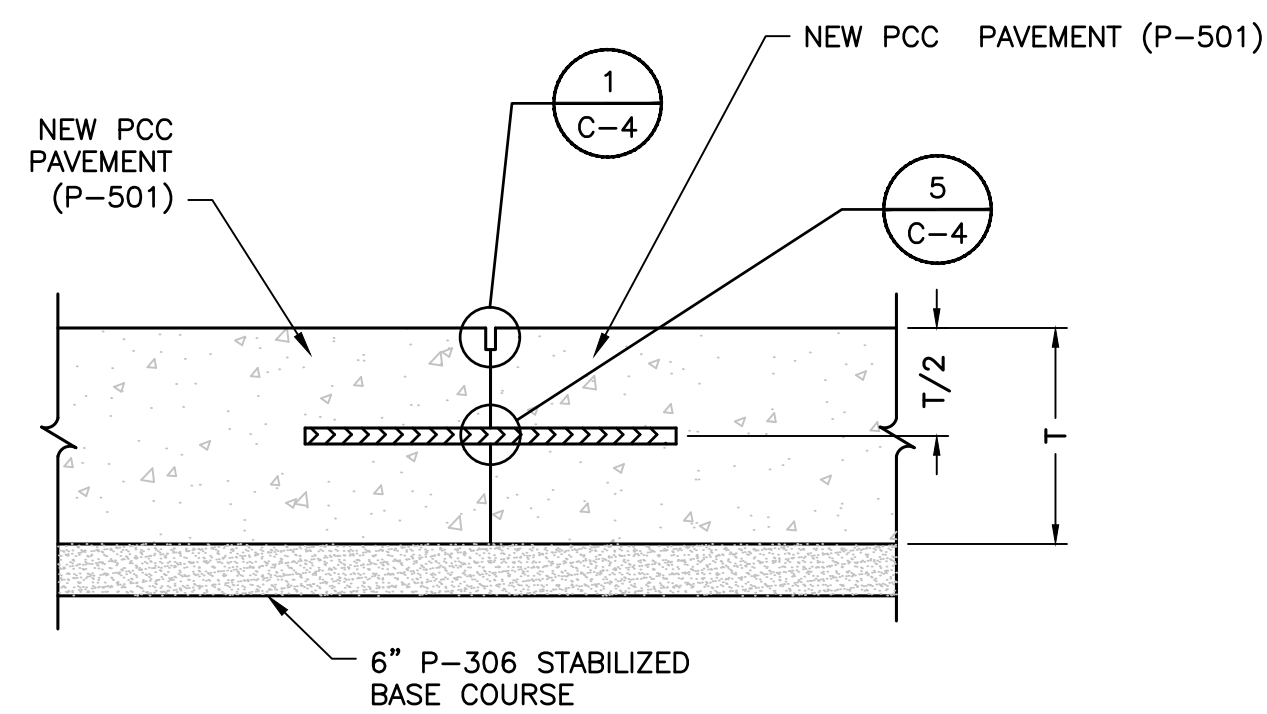
DESIGNED BY: C.A.P./T.D.N
DRAWN BY: C.A.P.
CHECKED BY: T.D.N.
APPROVED BY: V.C.L.
PROJECT NO: 2021.073.01
DATE: OCTOBER 2021

SHEET NUMBER
C-2

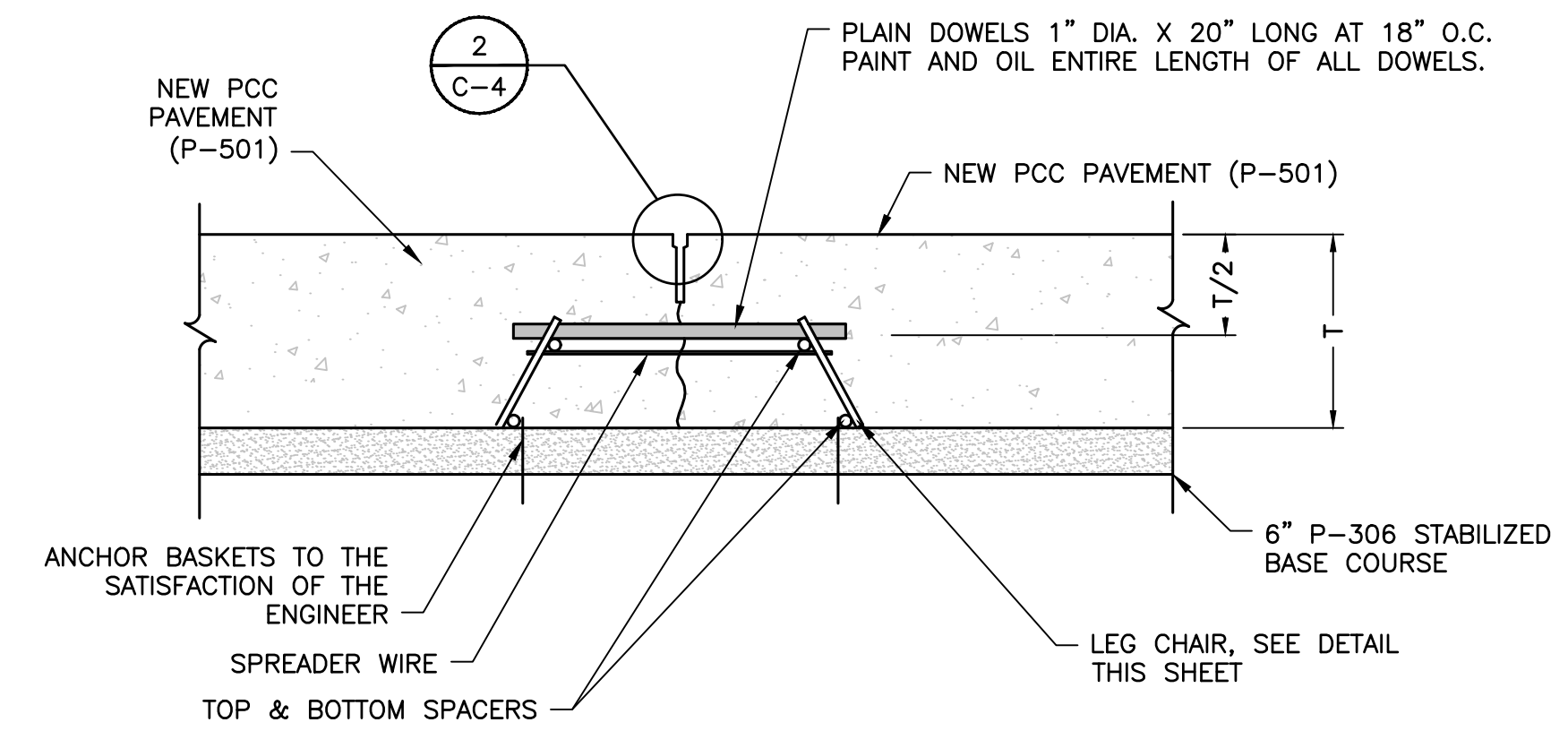
THIS DOCUMENT CONTAINS PRIVILEGED AND PROPRIETARY INFORMATION, ALL OF WHICH IS EXPRESSLY PROVIDED BY AVCON, INC. FOR USE BY THE INTENDED RECIPIENT, AND FOR A SPECIFIC PURPOSE. WITHOUT THE EXPRESS WRITTEN CONSENT OF AVCON, INC. ANY DISTRIBUTION, REPRODUCTION, OR OTHER USE OF THIS DOCUMENT, IN WHOLE OR IN PART, IS STRICTLY PROHIBITED.



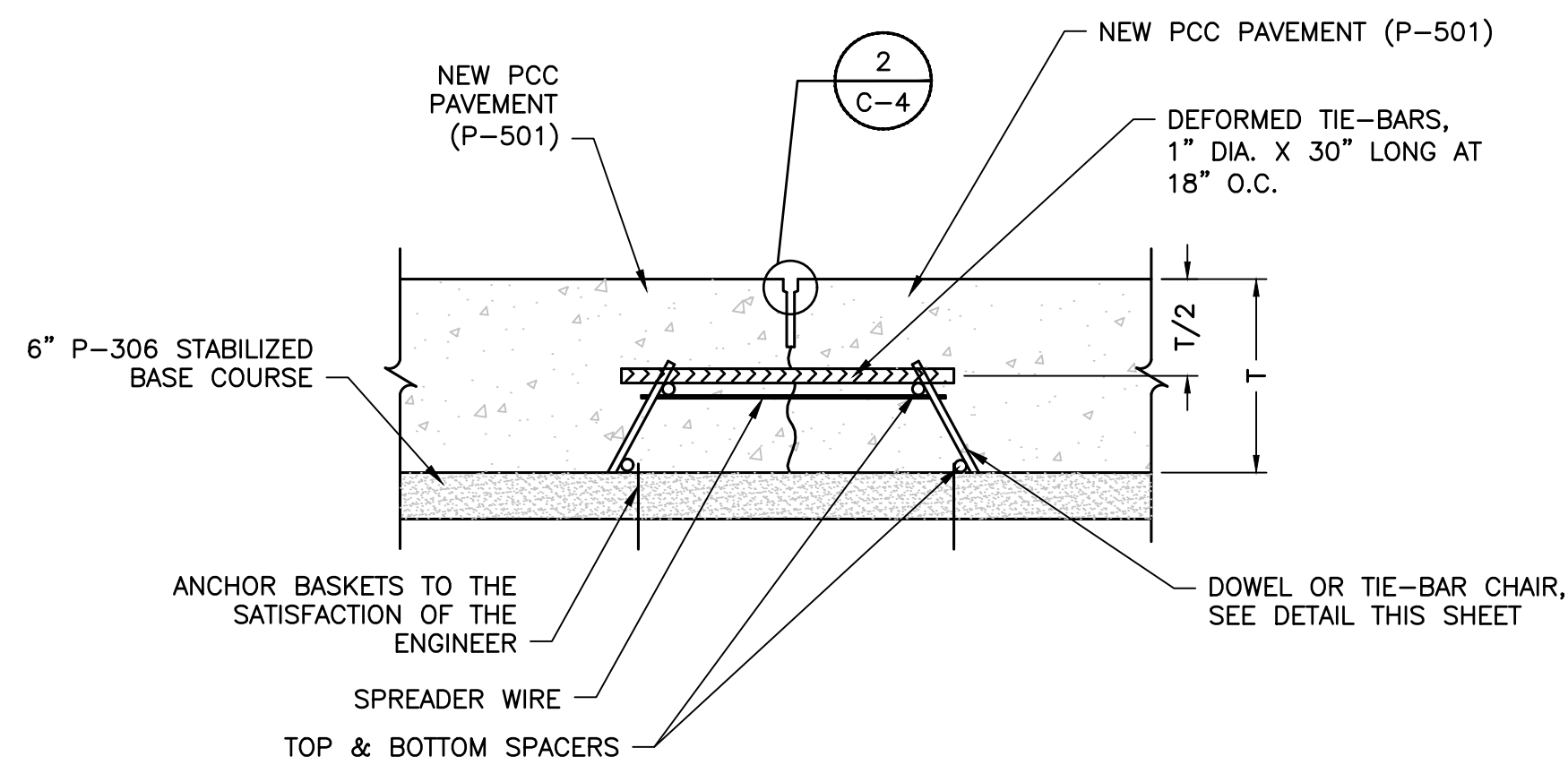
**TYPE D DOWELED
CONSTRUCTION JOINT DETAIL**
N.T.S.



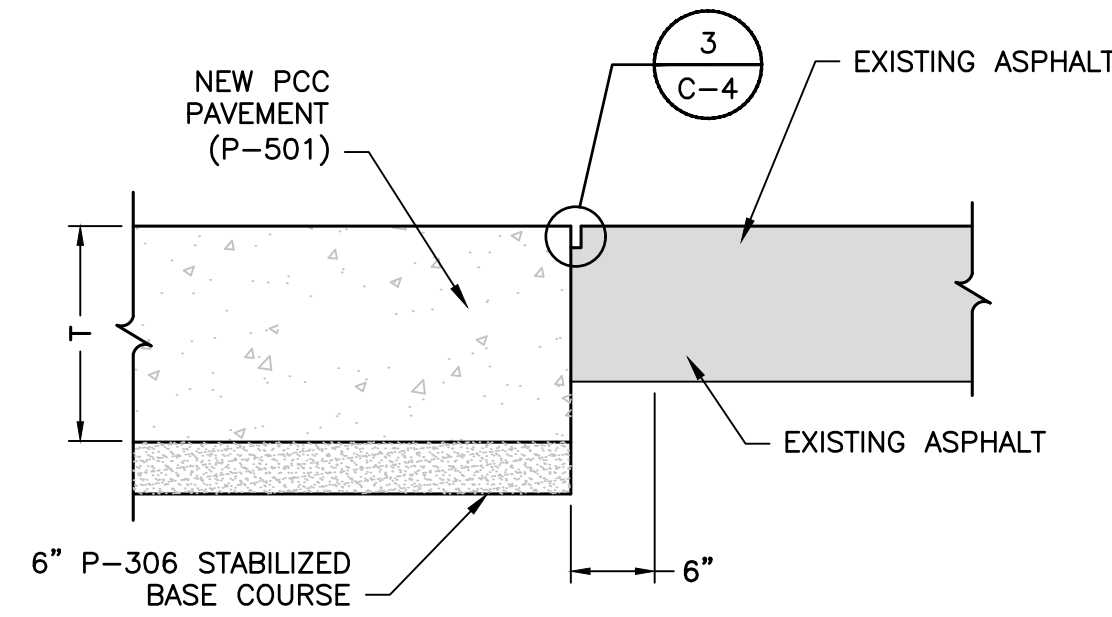
**TYPE E DEFORMED DOWELED
CONSTRUCTION JOINT DETAIL**
N.T.S.



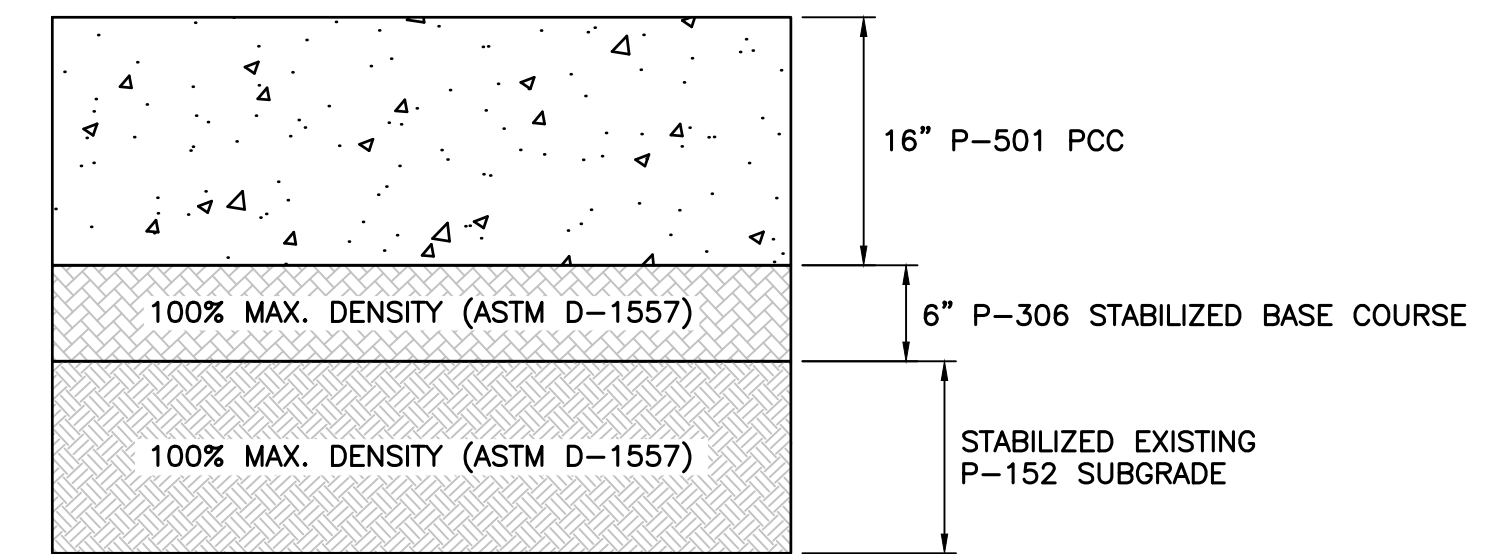
**TYPE F DOWELED
CONTRACTION JOINT DETAIL**
N.T.S.



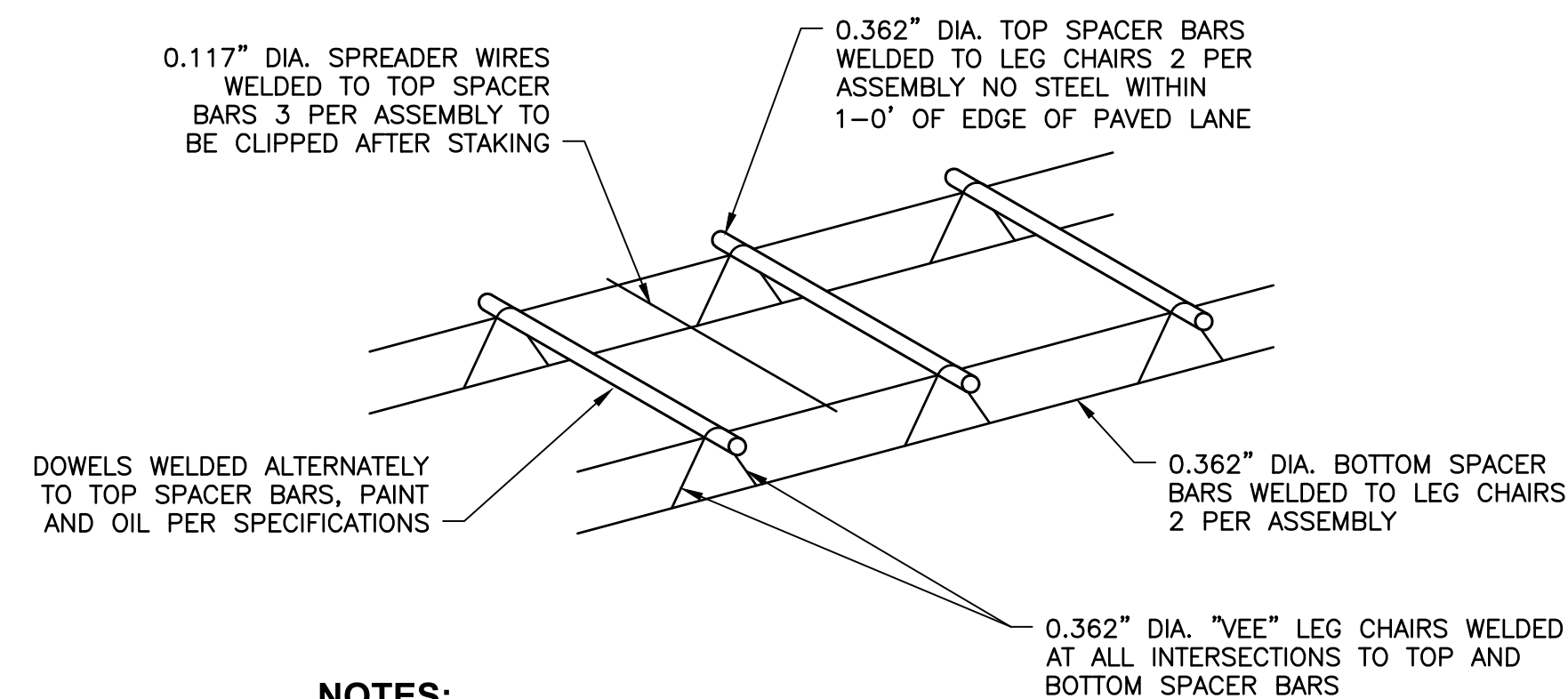
**TYPE G DEFORMED DOWELED
CONTRACTION JOINT DETAIL**
N.T.S.



TYPE R PCC-AC JOINT DETAIL
N.T.S.



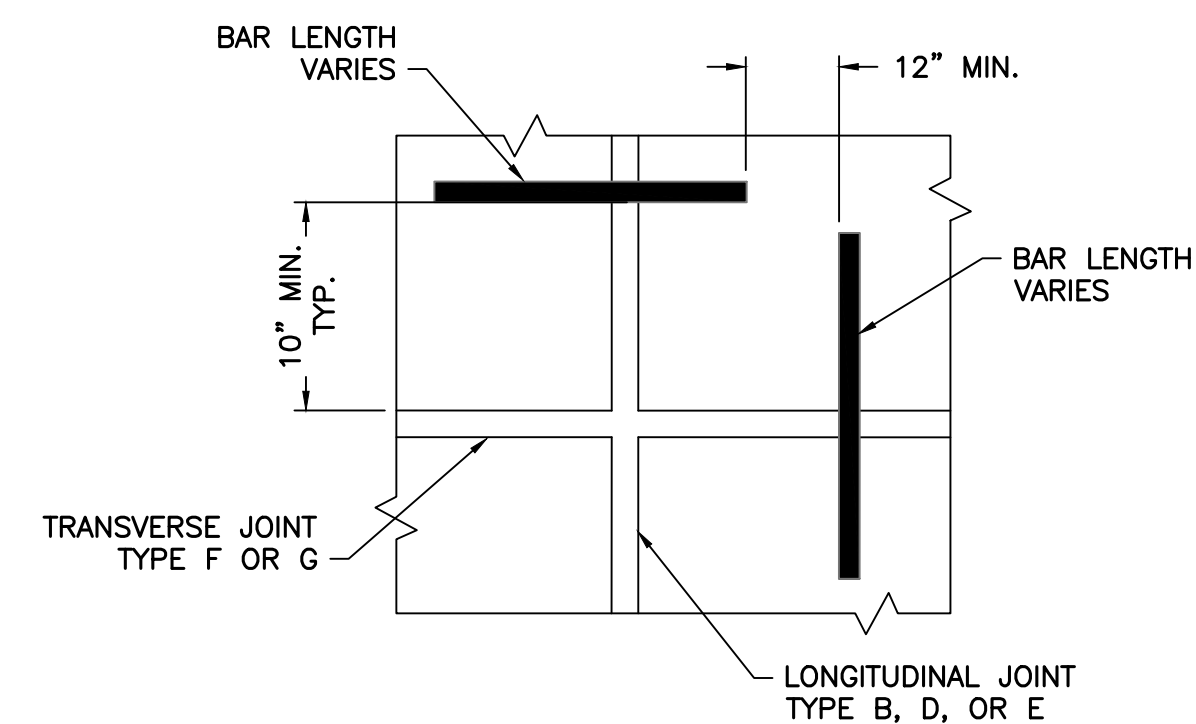
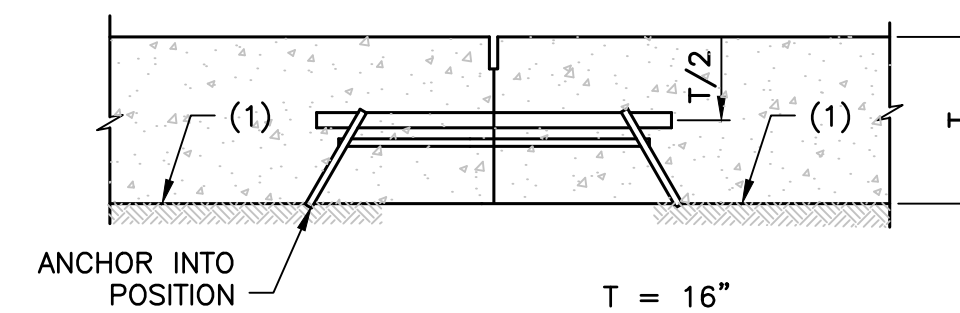
TYPICAL PCC APRON SECTION
N.T.S.



NOTES:

1. BASKET MUST BE FIRMLY ATTACHED TO EXISTING OR NEW BASE.
2. ALL WIRE SIZES SHOWN ARE MINIMUM SIZE.
3. DOWELS SHALL BE HELD FIRMLY IN THE ABOVE WELDED ASSEMBLY.

TYPICAL DOWELED AND TIE-BAR BASKET
N.T.S.



DOWEL POSITION AT INTERSECTION OF JOINTS

NOTE:

ELIMINATE DOWEL, OR TIE BAR, FROM LONGITUDINAL JOINT AS NECESSARY TO MAINTAIN 12 INCH FROM END OF TRAVERSE DOWEL BARS.

N:\NICEVILLE-PROJECTS\073-ZHA\2019.0073.01-GATE 6 & 7 PBB DESIGN\000 CAD\GATE 7 APRON REPAIR PROJECT\2107301_JOINT.DWG 10/25/2021 5:36 PM

ZHA

AVCON

3245 W. US HWY 90, SUITE 100
MUNICIPALITY OF TAMPA
OFFICE: (850) 878-0050
www.avconinc.com

TONIA D. NATION
FL LICENSE NO.: 64631
FBPR CERTIFICATE OF
AUTHORIZATION NO. 5057

NO.	DATE	REVISION	BY

**MISCELLANEOUS
DETAILS (1 OF 2)**

RELEASE FOR BID

ECP GATE 7 APRON REPAIR

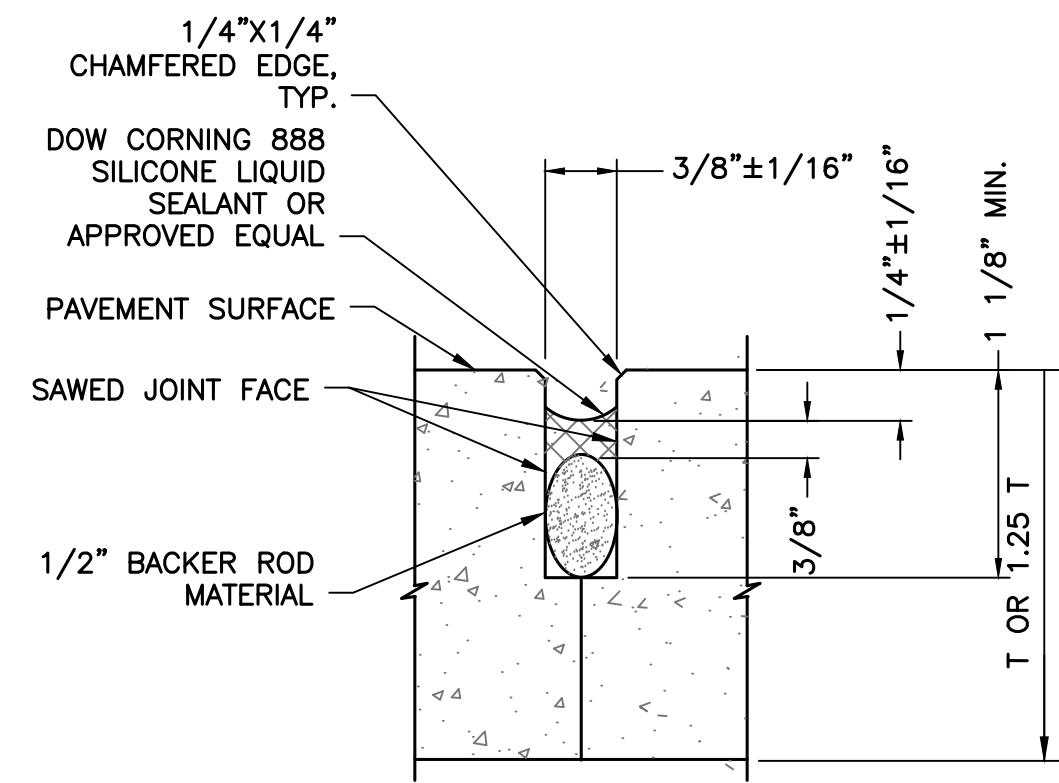
PREPARED FOR
NORTHWEST FLORIDA BEACHES
INTERNATIONAL AIRPORT

DESIGNED BY: C.A.P/T.D.N
DRAWN BY: C.A.P.
CHECKED BY: T.D.N.
APPROVED BY: V.C.L.
PROJECT NO: 2021.073.01
DATE: OCTOBER 2021

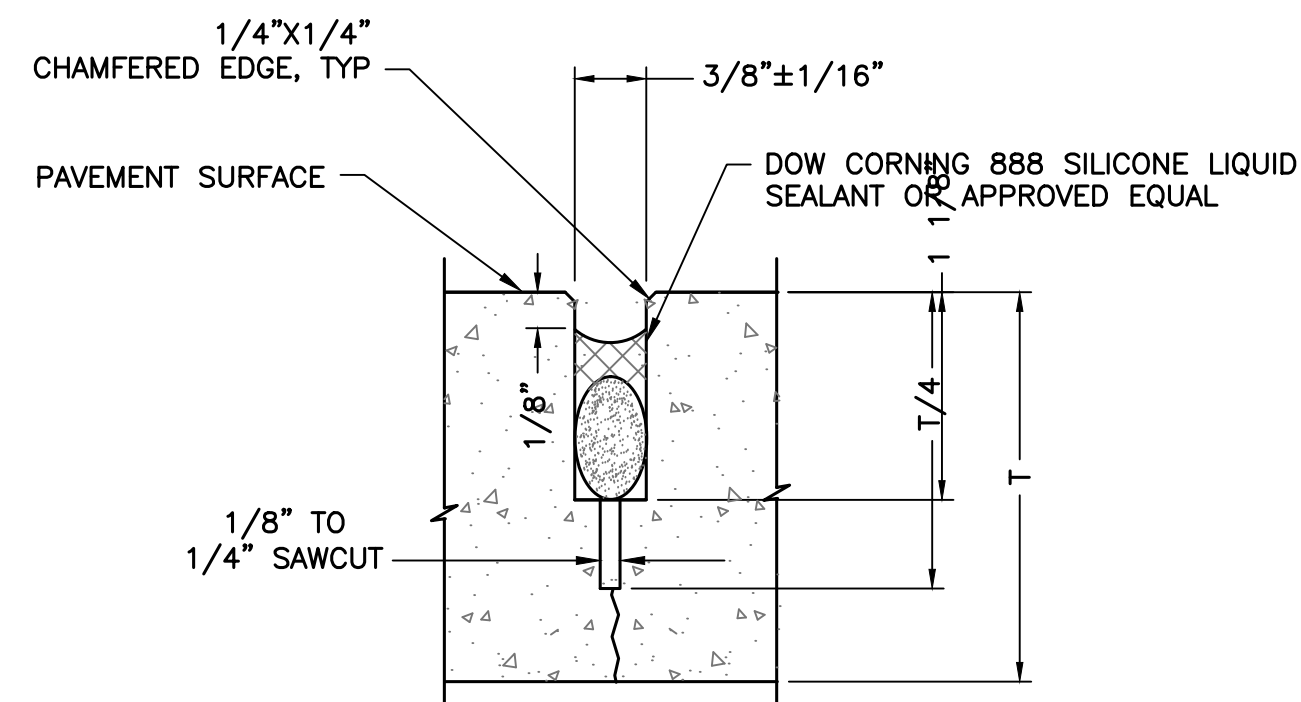
SHEET NUMBER

C-3

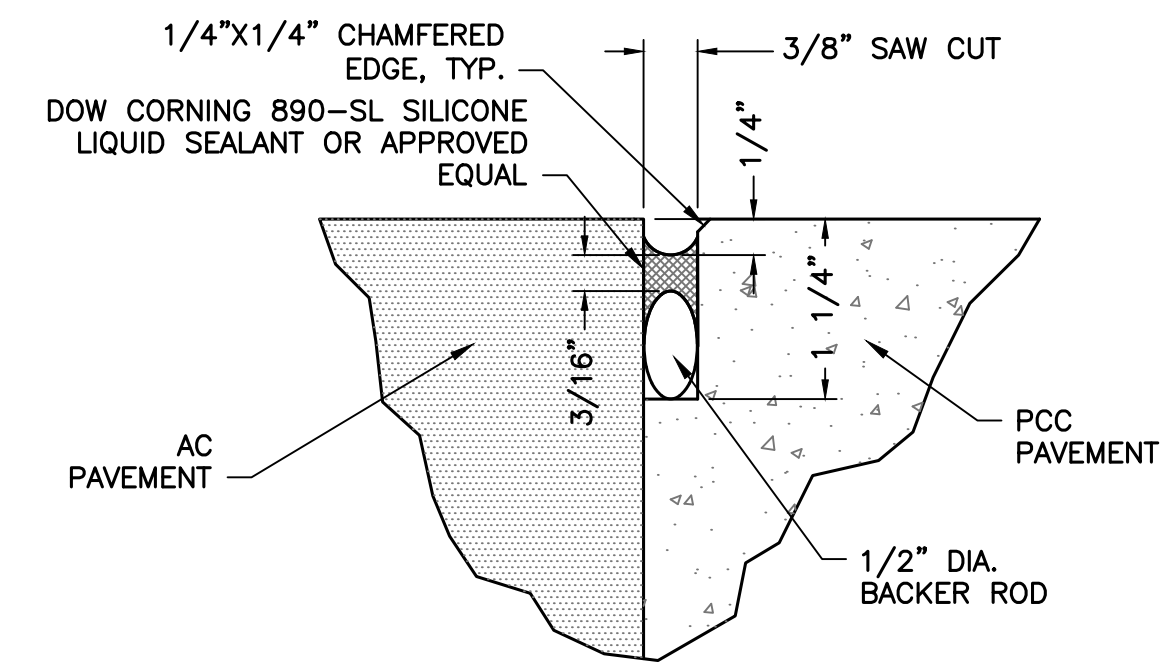
THIS DOCUMENT CONTAINS PRIVILEGED AND PROPRIETARY INFORMATION, ALL OF WHICH IS EXPRESSLY PROVIDED BY AVCON, INC. FOR USE BY THE INTENDED RECIPIENT, AND FOR A SPECIFIC PURPOSE. WITHOUT THE EXPRESS WRITTEN CONSENT OF AVCON, INC. ANY DISTRIBUTION, REPRODUCTION, OR OTHER USE OF THIS DOCUMENT, IN WHOLE OR IN PART, IS STRICTLY PROHIBITED.



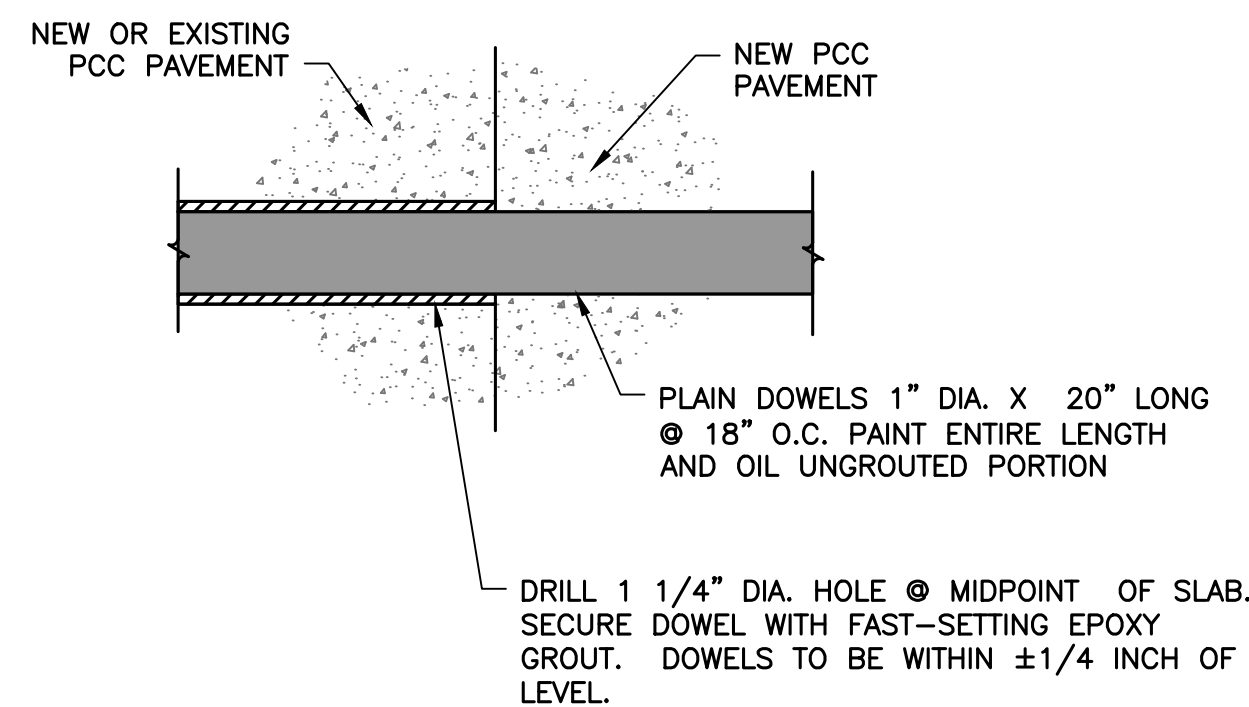
CONSTRUCTION JOINT ①
NTS



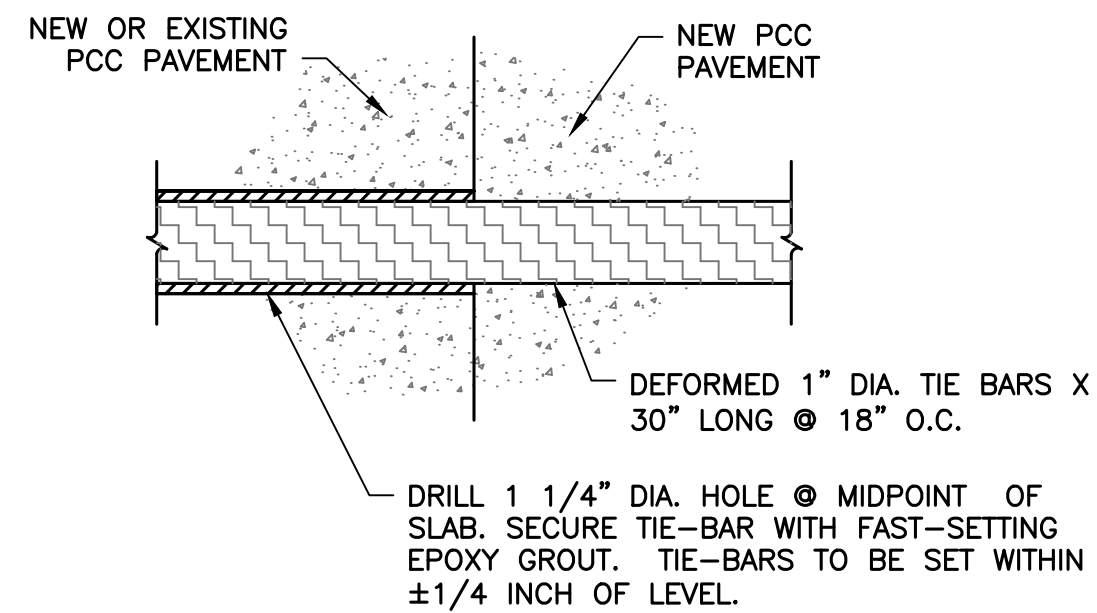
CONTRACTION JOINT ②
NTS



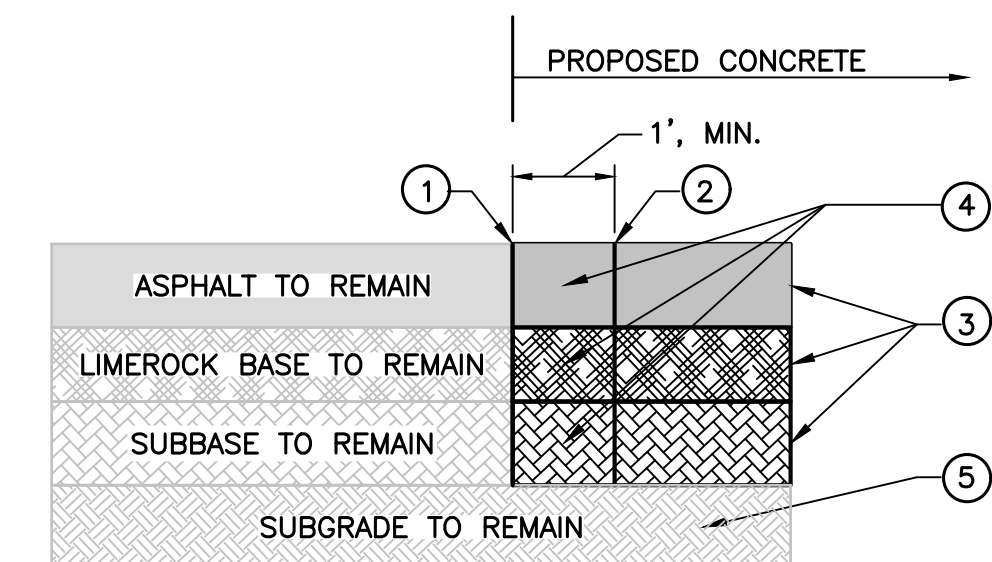
PCC-AC JOINT SEAL ③
NTS



DOWEL DETAIL ④
NTS



TIE-BAR DETAIL ⑤
NTS



⑥ ⑦ ⑧ NOT SHOWN FOR CLARITY
DOUBLE SAW CUT - ASPHALT / CONCRETE DEMOLITION DETAIL
N.T.S.

JOINT NOTES:

1. COLD APPLIED SEALANTS: A BACKER ROD SHALL BE INSTALLED AS SHOWN ON THE PLANS AND THE PRIMER SHALL BE APPLIED IN THE CORRECT SEQUENCE IN ACCORDANCE WITH THE SEALANT MANUFACTURER'S INSTRUCTIONS PRIOR TO PLACEMENT OF THE JOINT SEALER. THE SEALANT SHALL BE APPLIED IN CONTINUOUS OPERATION WITH AN APPROVED MECHANICAL DRIVE THAT WILL FORCE THE SEALANT TO THE BOTTOM OF THE JOINT AND COMPLETELY FILL THE JOINT WITHOUT SPILLING THE MATERIAL ON THE SURFACE OF THE PAVEMENT AND SHALL ADHERE TO THE CONCRETE AND BE FREE OF VOIDS. THE SEALANT SHALL THEN BE TOOLED WITH AN APPROPRIATE TOOL TO PRODUCE A SLIGHTLY CONCAVE SURFACE APPROXIMATE 3/8" BELOW THE SURFACE. THE SEALANT SHALL HAVE A MINIMUM THICKNESS OF 3/8". TOOLING SHALL BE ACCOMPLISHED BEFORE A SKIN FORMS ON THE SURFACE, USUALLY WITHIN TEN MINUTES OF APPLICATION. THE SEALANT SHALL BE TOOLED IN BOTH DIRECTIONS TO ENSURE A VOID-FREE INSTALLATION. SEALANT WHICH DOES NOT BOND TO THE SURFACE OF THE JOINT WALLS, CONTAINS VOIDS, OR FAILS TO SET TO A TACK-FREE CONDITION, WILL BE REJECTED AND REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST. BEFORE SEALING THE JOINTS THE CONTRACTOR SHALL DEMONSTRATE THAT THE EQUIPMENT AND PROCEDURES FOR PREPARING, MIXING, AND PLACING THE SEALANT WILL PRODUCE A SATISFACTORY JOINT SEAL. THIS SHALL INCLUDE THE PREPARATION OF TWO SMALL BATCHES AND THE APPLICATION OF THE RESULTING MATERIAL.
2. A MANUFACTURER'S REPRESENTATIVE(S) IS TO CONDUCT THE DEMONSTRATION(S), TRAIN THE CONTRACTOR'S PERSONNEL, AND ENSURE THE INSTALLATION PROCEDURES ARE IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS PRIOR TO THE START OF THE SEALING OPERATIONS. THE REPRESENTATIVE(S) SHALL VISIT THE JOB-SITE AT LEAST ONE (1) TIME DURING THE SEALING OPERATION FOR EACH TYPE OF SEALANT, AND AFTER THE SEALING IS COMPLETE. THE REPRESENTATIVE IS TO CONDUCT A GENERAL INSPECTION OF THE WORK AND PERFORM MORE EXTENSIVE INSPECTIONS AND/OR TESTING ON A RANDOM BASIS TO REASONABLY ASSURE THAT THE CONSTRUCTION IS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED CONSTRUCTION METHODS AND PROCEDURES. A REPORT OUTLINING THE FINDINGS IS TO BE SUBMITTED AT THE COMPLETION OF THE INSPECTION.
3. IN ORDER TO ENSURE THAT SUPERIOR WORKMANSHIP IS ACHIEVED THROUGHOUT THE CONTRACT, THE CONTRACTOR SHALL BE REQUIRED TO CONSTRUCT A TEST SECTION PER CREW ON A PORTION OF THE CONTRACT SITE PRIOR TO COMMENCING THE CONTRACT WORK IN ORDER TO EVALUATE WORKMANSHIP OF EACH OF THE CONTRACTOR'S CREWS. IF THE TEST SITES ARE COMPLETED TO THE SATISFACTION OF THE OAR, THE CONTRACTOR SHALL THEN RECEIVE NOTICE TO PROCEED WITH THE APPROVED CREWS FOR THE REMAINDER OF THE CONTRACT WORK. HOWEVER, TO MAINTAIN AN ACCEPTABLE LEVEL OF PRODUCTIVITY, THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN THE SAME CREW MEMBERS PER CREW WHO PERFORMED WORK IN THE TEST AREA TOGETHER THROUGHOUT THE DURATION OF THE CONTRACT. IF ANY PERSONNEL CHANGES ARE ANTICIPATED BY THE CONTRACTOR, EITHER REDUCING THE WORK FORCE OR CHANGING SPECIFIC INDIVIDUALS, THE OWNER'S AUTHORIZED REPRESENTATIVE IS TO BE NOTIFIED. IF, AT ANY POINT DURING THE CONSTRUCTION PERIOD AFTER A PERSONNEL CHANGE HAS BEEN MADE, THE OAR BELIEVES THE WORKMANSHIP HAS DIMINISHED, THE CREW SHALL BE ORDERED TO HALT ALL CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL THEN BE REQUIRED TO REINSTATE THE ORIGINAL WORK CREW OF SET-UP WITH THE PROJECT MANAGER TO PERFORM IN ANOTHER TEST AREA TO RE-QUALIFY THE NEW CREW. A NEW TEST AREA WILL THEN BE DEVELOPED BY THE OWNER'S AUTHORIZED REPRESENTATIVE. UPON A SUCCESSFUL EVALUATION OF THE NEW TEST AREA, THE EVALUATED CREW MAY PROCEED WITH THE CONTRACT CONSTRUCTION.

SEQUENCING OF ASPHALT PAVEMENT DEMOLITION:

- ① FINAL FOOTPRINT OF NEW SLAB. CONTRACTOR SHALL SAW CUT AROUND THE FINAL FOOT PRINT TO THE FULL DEPTH OF THE ASPHALT PAVEMENT STRUCTURE.
- ② THE CONTRACTOR SHALL THEN OFFSET 1' (ONE FOOT) MINIMUM TO THE INTERIOR SIDES OF THE PROPOSED SLABS AND SAW CUT THE FULL DEPTH OF THE ASPHALT PAVEMENT.
- ③ CONTRACTOR SHALL REMOVE ASPHALT PAVEMENT ON THE INTERIOR OF CUT 2, BUT LEAVE REMAINING 1' OF ASPHALT BETWEEN CUTS 1 AND 2 FOR PROTECTION OF ASPHALT TO REMAIN.
- ④ CONTRACTOR MAY THEN REMOVE REMAINING ASPHALT STRIP BY BREAKING IT DOWN INTO SMALLER MORE MANAGEABLE SIZED PIECES FOR REMOVAL.
- ⑤ REMOVE SUBGRADE MATERIAL SUFFICIENT TO PLACE REQUIRED AMOUNT OF SUBBASE, BASE, AND CONCRETE PER PLAN. COMPACT SUBGRADE TO 100% OF THE MODIFIED PROCTOR VALUE AT OPTIMUM MOISTURE PER P-152.
- ⑥ PLACE NEW P-306 BASE MATERIAL.
- ⑦ PLACE NECESSARY FORMS, DOWEL BASKETS AND DOWELS AT REQUIRED SPACING AND PAVE, FINISHED SURFACES TO MATCH EXISTING ASPHALT GRADES AT ALL COMMON EDGES (SEE GRADING PLANS).
- ⑧ PLACE CURING COMPOUND AND PROCEED WITH CUTTING OF ALL THE CONTRACTION JOINTS AT THE TIME REQUIRED IN THE SPECIFICATIONS. COMPLETE SEALING IS REQUIRED OF ALL JOINTS PER SPECIFICATION P-605.

N:\NICEVILLE-PROJECTS\073-ZHA\2019\0073-01-GATE 6 & 7 PEB DESIGN\000 CAD\GATE 7 APRON REPAIR PROJECT\2107301_JOINT.DWG 10/25/2021 5:36 PM

3240 N. US HWY 90, SUITE A
MUNICIPAL CENTER
OFFICE: (850) 878-0050
www.avconinc.com

TONIA D. NATION
FL LICENSE NO.: 64631
FBPR CERTIFICATE OF
AUTHORIZATION NO. 5057

NO.	DATE	REVISION	BY

MISCELLANEOUS
DETAILS (2 OF 2)
RELEASE FOR BID

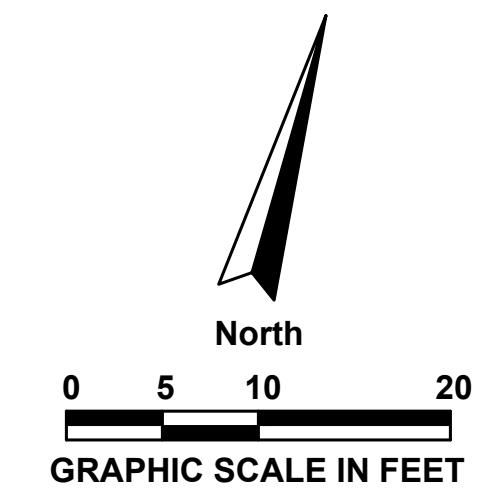
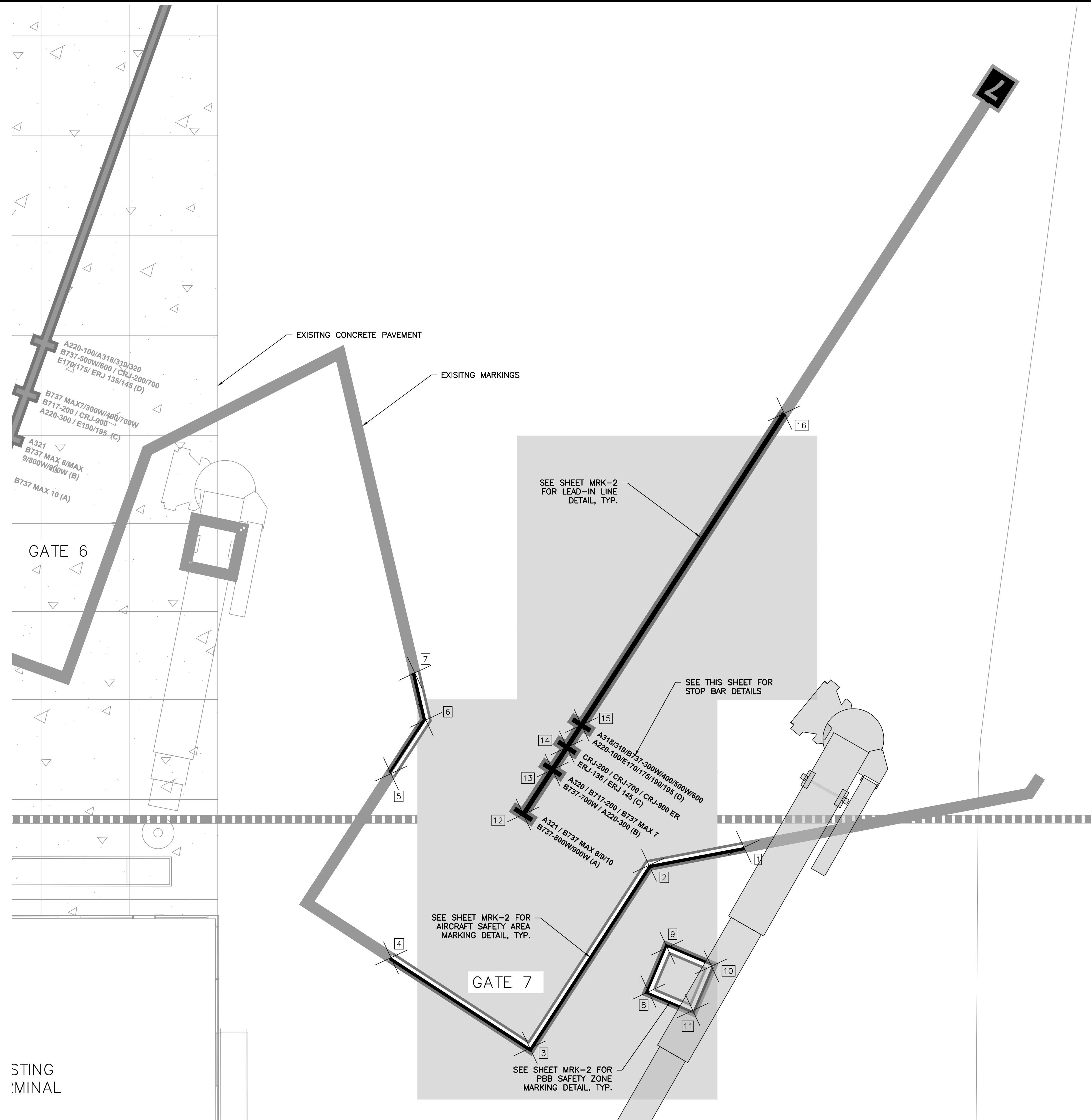
ECP GATE 7 APRON REPAIR
PREPARED FOR
NORTHWEST FLORIDA BEACHES
INTERNATIONAL AIRPORT

DESIGNED BY: C.A.P.T.D.N
DRAWN BY: C.A.P.
CHECKED BY: T.D.N.
APPROVED BY: V.C.L.
PROJECT NO: 2021.073.01
DATE: OCTOBER 2021

SHEET NUMBER
C-4

THIS DOCUMENT CONTAINS PRIVILEGED AND PROPRIETARY INFORMATION, ALL OF WHICH IS EXPRESSLY PROVIDED BY AVCON, INC. FOR USE BY THE INTENDED RECIPIENT, AND FOR A SPECIFIC PURPOSE. WITHOUT THE EXPRESS WRITTEN CONSENT OF AVCON, INC. ANY DISTRIBUTION, REPRODUCTION, OR OTHER USE OF THIS DOCUMENT, IN WHOLE OR IN PART, IS STRICTLY PROHIBITED.

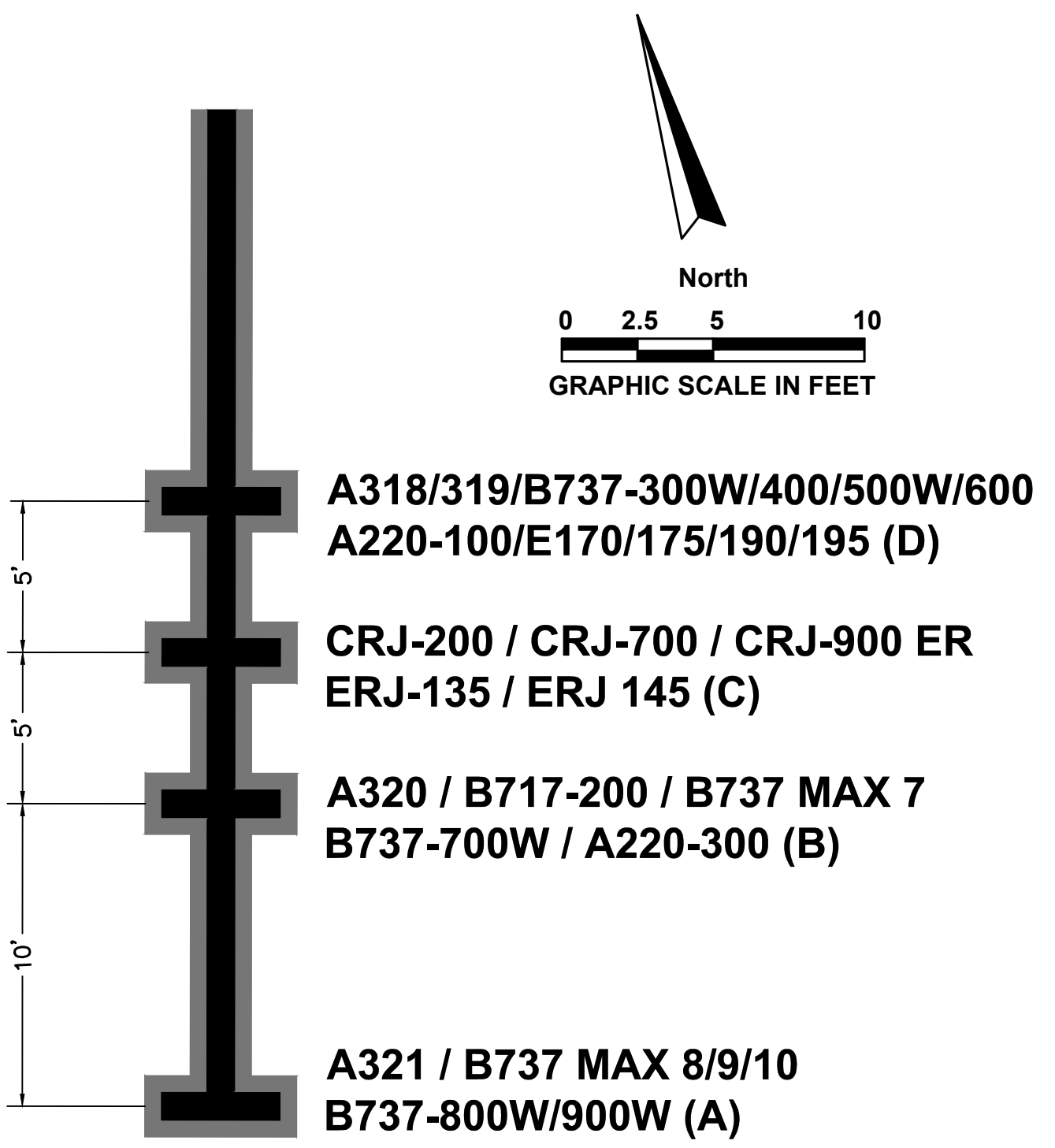
N:\NICEVILLE-PROJECTS\073-ZHA\2019.0073.01-GATE 6 & 7 PBB DESIGN\000 CAD\GATE 7 APRON REPAIR PROJECT\2107301_MRK6-DET.DWG 10/25/2021 5:36 PM



LEGEND	
	PROPOSED 14" THICK PORTLAND CEMENT CONCRETE
	EXISTING 14" THICK PORTLAND CEMENT CONCRETE
	PROPOSED AIRCRAFT SAFETY BOX MARKINGS
	PROPOSED LEAD-IN LINE

NOTES

- 1) SEE SHEET MRK-2 FOR MARKING DETAILS AND COORDINATES.
- 2) WHITE AND YELLOW MARKINGS ARE TO BE WATERBORNE TYPE III PAINT WITH TYPE III GLASS BEADS. RED MARKINGS ARE TO BE WATERBORNE TYPE III MARKINGS WITH TYPE IV, GRADATION A GLASS BEADS. BLACK MARKINGS ARE TO BE WATERBORNE TYPE III MARKINGS AND SHALL NOT HAVE GLASS BEADS.
- 3) CONTRACTOR SHALL REMOVE AND REPAINT MARKINGS 5' OUTSIDE OF PAVEMENT REMOVAL AREA.
- 4) CONTRACTOR SHALL REPAIR ALL MARKINGS THAT ARE DAMAGED OUTSIDE OF CONSTRUCTION UNIT AT NO COST TO OWNER.



GATE 7 STOP BAR MARKING DIMENSIONS
SCALE: 1" = 5'

3240 AVCON DRIVE, SUITE A
NICEVILLE, FL 32578-2400
OFFICE: (850) 878-0050
www.avconinc.com

TONIA D. NATION
FL LICENSE NO.: 64631
FBPR CERTIFICATE OF
AUTHORIZATION NO. 5057

NO.	DATE	REVISION	BY

MARKING PLAN

RELEASE FOR BID

ECP GATE 7 APRON REPAIR

PREPARED FOR
NORTHWEST FLORIDA BEACHES
INTERNATIONAL AIRPORT

DESIGNED BY: C.A.P/T.D.N
DRAWN BY: C.A.P.
CHECKED BY: T.D.N.
APPROVED BY: V.C.L.
PROJECT NO: 2021.073.01
DATE: OCTOBER 2021

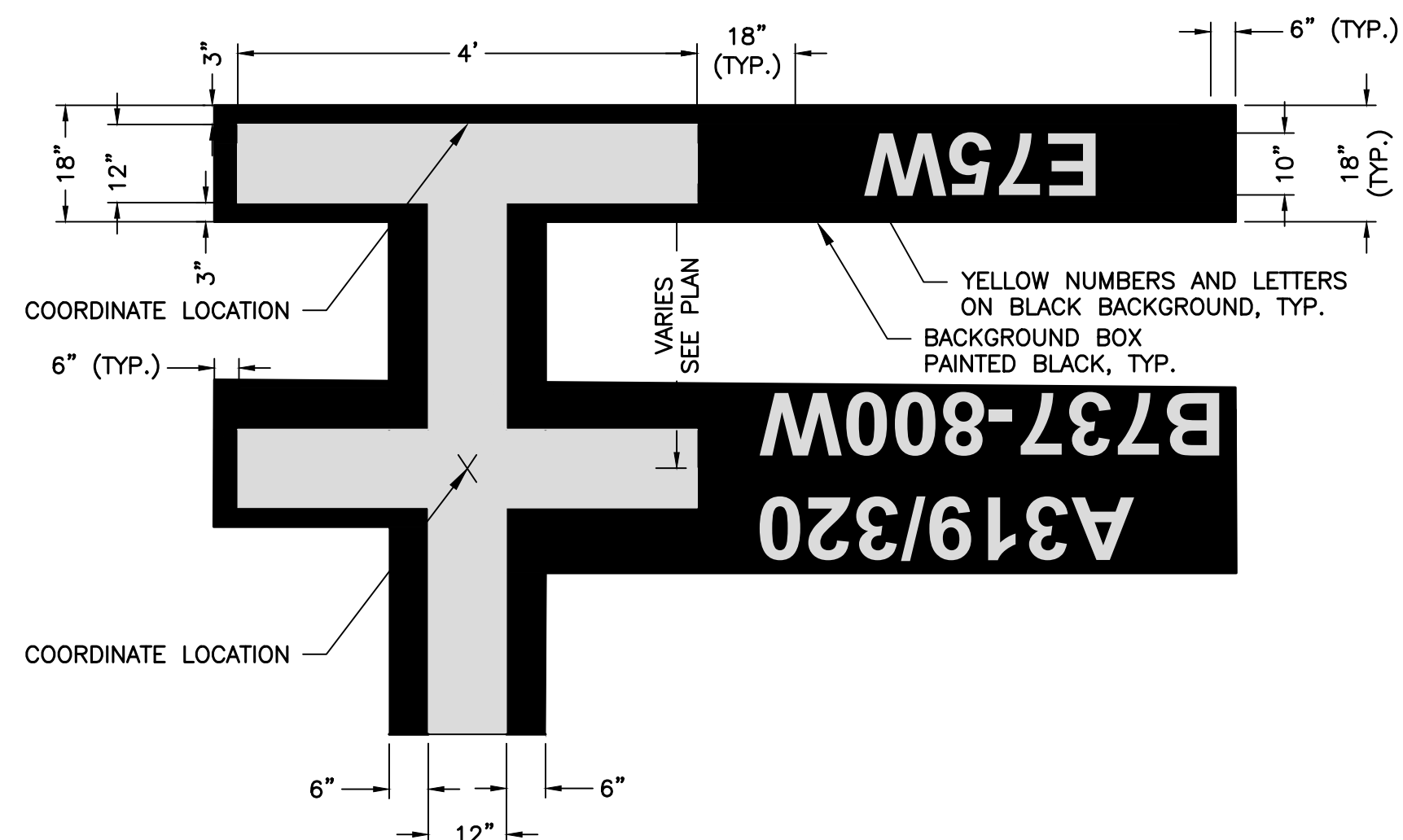
SHEET NUMBER

C-5

THIS DOCUMENT CONTAINS PRIVILEGED AND PROPRIETARY INFORMATION, ALL OF WHICH IS EXPRESSLY PROVIDED BY AVCON, INC. FOR USE BY THE INTENDED RECIPIENT, AND FOR A SPECIFIC PURPOSE. WITHOUT THE EXPRESS WRITTEN CONSENT OF AVCON, INC. ANY DISTRIBUTION, REPRODUCTION, OR OTHER USE OF THIS DOCUMENT, IN WHOLE OR IN PART, IS STRICTLY PROHIBITED.

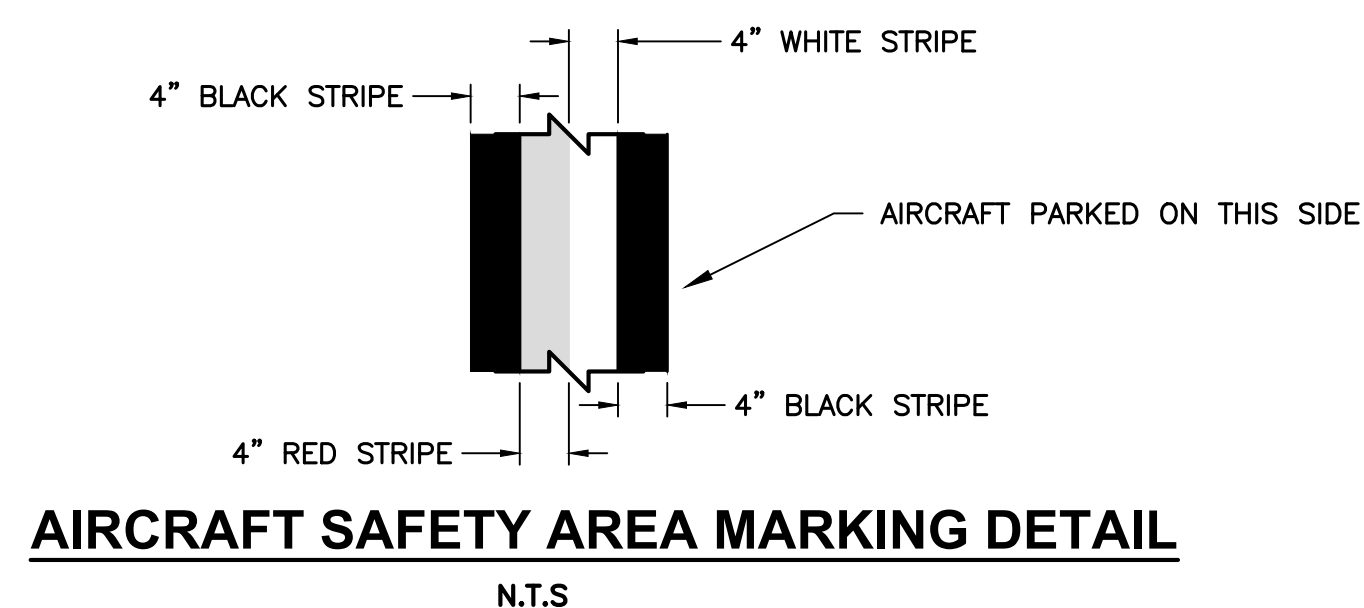
N:\NICEVILLE-PROJECTS\073-ZHA\2019\0073.01-GATE 6 & 7 PBB DESIGN\000 CAD\GATE 7 APRON REPAIR PROJECT\2107301_MRKG-DET.DWG 10/25/2021 5:36 PM

POINT TABLE		
POINT #	NORTHING	EASTING
1	495405.2098	1559126.2939
2	495395.9546	1559110.7100
3	495356.0642	1559101.4489
4	495363.1012	1559071.1180
5	495395.5437	1559059.3112
6	495407.2452	1559062.0217
7	495414.8340	1559057.0615
8	495373.6306	1559118.7422
9	495382.6193	1559119.1943
10	495382.1671	1559128.1830
11	495373.1785	1559127.7309
12	495396.8592	1559085.2744
13	495406.6006	1559087.5337
14	495411.4714	1559088.6633
15	495416.3421	1559089.7929
16	495484.2991	1559105.5536



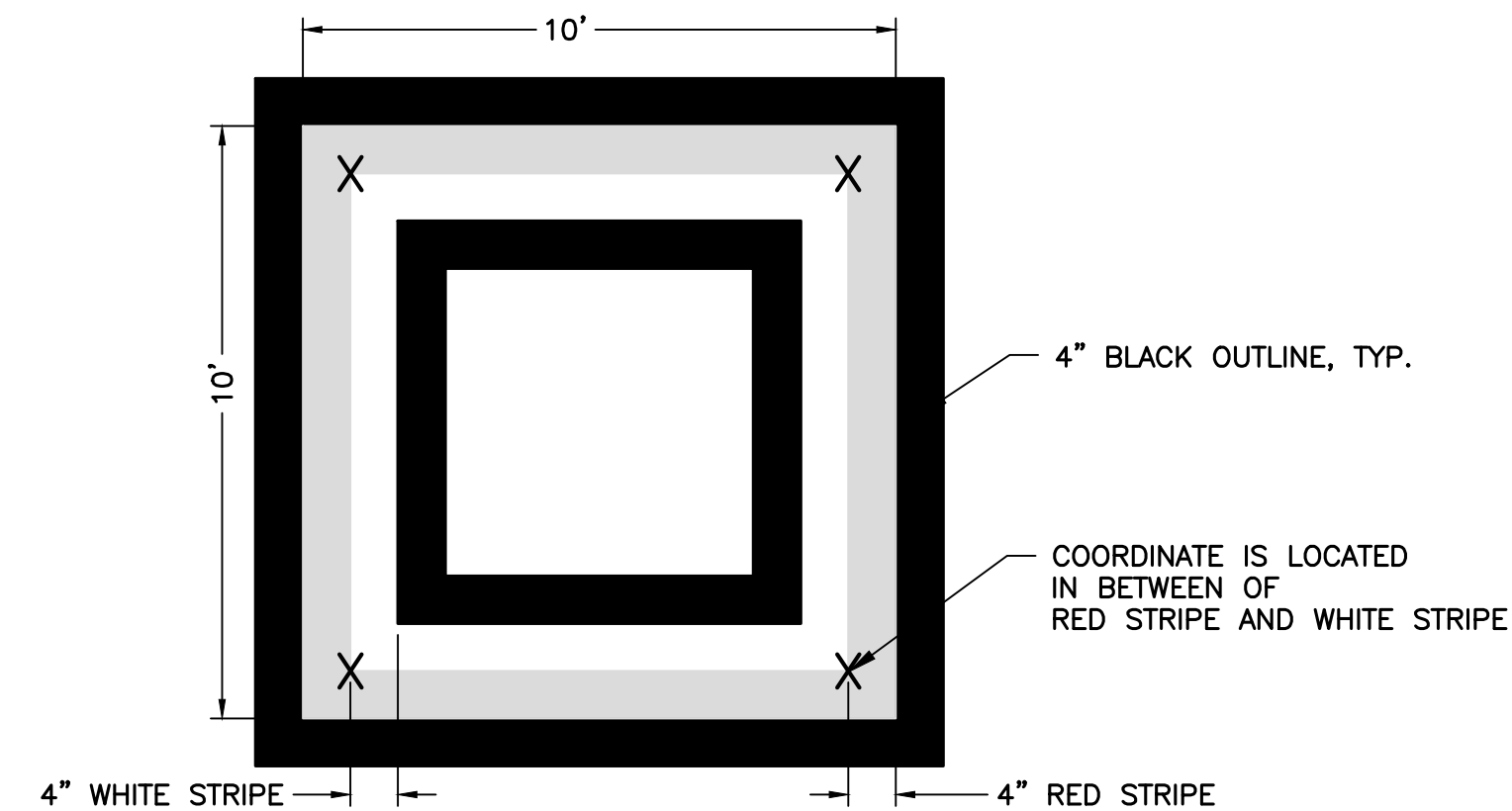
MULTIPLE AIRCRAFT DESIGNATION DETAIL

N.T.S



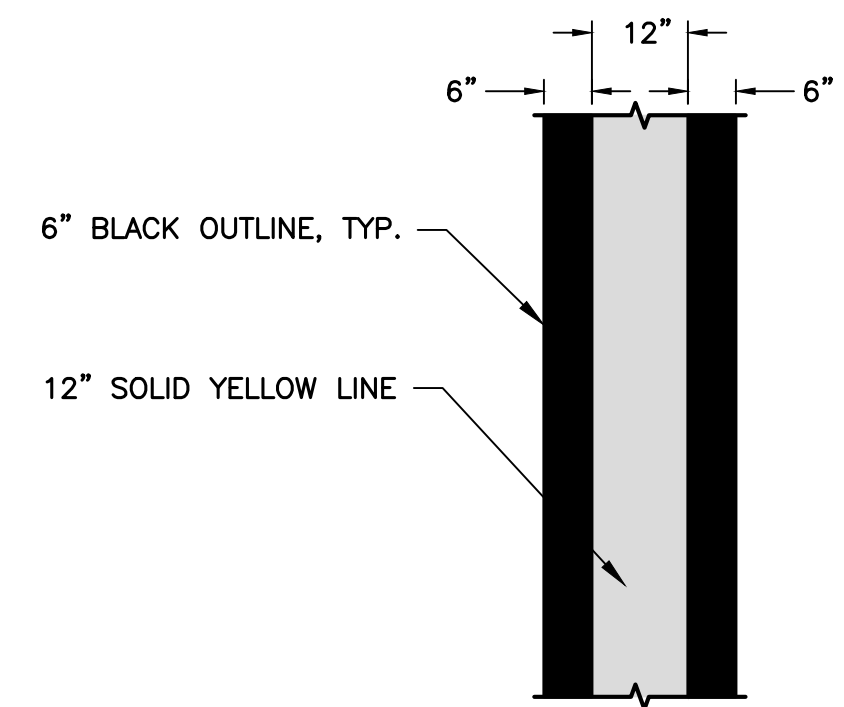
AIRCRAFT SAFETY AREA MARKING DETAIL

N.T.S



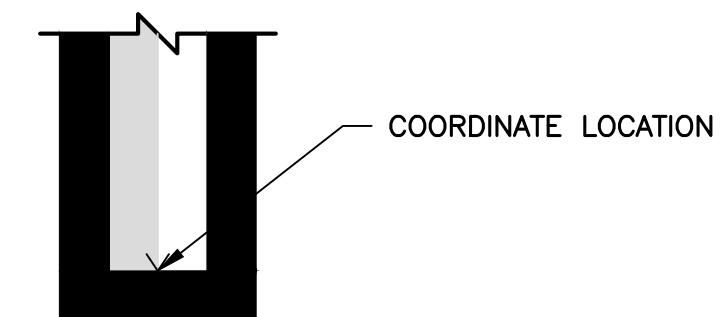
PASSENGER BOARDING BRIDGE (PBB) SAFETY ZONE MARKING DETAIL

N.T.S



LEAD-IN LINE DETAIL

N.T.S



TYPICAL AIRCRAFT SAFETY AREA COORDINATE LOCATION DETAIL

N.T.S

ZHA

AVCON

3261 PALM BLVD, SUITE A
MIDDLEBURGH, FL 32078-3400
OFFICE: (850) 878-0050
www.avconinc.com

TONIA D. NATION
FL LICENSE NO.: 64631
FBPR CERTIFICATE OF AUTHORIZATION NO. 5057

NO.	DATE	REVISION	BY

MARKING DETAILS

RELEASE FOR BID

ECP GATE 7 APRON REPAIR

PREPARED FOR
NORTHWEST FLORIDA BEACHES
INTERNATIONAL AIRPORT

DESIGNED BY: C.A.P./T.D.N
DRAWN BY: C.A.P.
CHECKED BY: T.D.N.
APPROVED BY: V.C.L.
PROJECT NO: 2021.073.01
DATE: OCTOBER 2021

SHEET NUMBER

C-6

THIS DOCUMENT CONTAINS PRIVILEGED AND PROPRIETARY INFORMATION. ALL OF WHICH IS EXPRESSLY PROVIDED BY AVCON, INC. FOR USE BY THE INTENDED RECIPIENT, AND FOR A SPECIFIC PURPOSE. WITHOUT THE EXPRESS WRITTEN CONSENT OF AVCON, INC. ANY DISTRIBUTION, REPRODUCTION, OR OTHER USE OF THIS DOCUMENT, IN WHOLE OR IN PART, IS STRICTLY PROHIBITED.