

# **SPECIFICATIONS AND CONTRACT DOCUMENTS**

**FOR**

## **Mid-Carolina Regional Airport Landscaping Improvements**

**Mid-Carolina Regional Airport  
Salisbury, North Carolina**

Prepared For:

**Mid-Carolina Regional Airport**

**Aaron Church  
Rowan County Manager**

By:

**TALBERT, BRIGHT & ELLINGTON, INC.**  
ENGINEERING & PLANNING CONSULTANTS

*Charlotte, North Carolina  
September 2022*

*TBE No. 3708-1901*

*North Carolina License No. C-1163*

**SET NO.:**\_\_\_\_\_



## **Table of Contents**

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# **SPECIFICATIONS AND CONTRACT DOCUMENTS**

## **LANDSCAPING IMPROVEMENTS**

### **MID-CAROLINA REGIONAL AIRPORT**

<b>ADVERTISEMENT FOR BIDS</b>	ADV-1 to ADV-2
<b>ITEMIZED PROPOSAL</b>	PRO-1 to PRO-26
<b>DRUG FREE WORKPLACE</b>	DFW-1 to DFW-2
<b>GENERAL CONDITIONS</b>	
Section 10    Definition of Terms .....	10-1 to 10-8
Section 20    Proposal Requirements and Conditions.....	20-1 to 20-4
Section 30    Award and Execution of Contract .....	30-1 to 30-2
Section 40    Scope of Work .....	40-1 to 40-4
Section 50    Control of Work.....	50-1 to 50-6
Section 60    Control of Materials.....	60-1 to 60-4
Section 70    Legal Regulations and Responsibility to Public .....	70-1 to 70-6
Section 80    Prosecution and Progress.....	80-1 to 80-6
Section 90    Measurement and Payment.....	90-1 to 90-8
<b>GENERAL CONSTRUCTION ITEMS</b>	
Section 102    Temporary Air and Water Pollution, Soil Erosion, and Siltation Control .....	C-102-1 to C-102-4
Section 105    Mobilization.....	C-105-1 to C-105-2
<b>PROJECT SPECIAL PROVISIONS</b>	PSP-1 to PSP-16
<b>SAFETY AND SECURITY REQUIREMENTS</b>	SAFE-1 to SAFE-6
<b>TECHNICAL SPECIFICATIONS</b>	
32 9200    Turf and Grasses .....	32 9200-1 to 32 9200-10
32 9300    Plants .....	32 9300-1 to 32 9300-20

## Table of Contents

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### APPENDICES

Appendix “A” Standard Form Construction Contract .....	A-1 to A-14
Appendix “B” Forms .....	B-1 to B-8

## **ADVERTISEMENT FOR BIDS**



## ADVERTISEMENT FOR BIDS

Pursuant to Section 143-129 of the General Statutes of North Carolina, sealed bids for “Landscaping Improvements” at the Mid-Carolina Regional Airport will be received by the County of Rowan until 2:00 P.M. (*local time*), Tuesday, October 11, 2022. Immediately thereafter, the bids will be publicly opened and read aloud in the Conference Room of the Rowan County Purchasing Department, located at 130 West Innes Street, Salisbury, North Carolina 28144.

All Contractors are hereby notified that they shall have proper Contractor's licenses as required by the state laws governing their respective trade in the state where this Project is located.

Bidding Documents may be examined at the Airport and on plan room websites as follows:

Dodge Data & Analytics – [www.construction.com](http://www.construction.com)

Construct Connect (f/k/a iSqFt + bidclerk) – [www.iSqFt.com](http://www.iSqFt.com)

Bidders may obtain a complete set of bidding documents from Richa Graphics, 704-331-9744, 800 North College Street, Charlotte, North Carolina 28206, [www.richa.com](http://www.richa.com). All bid documents including addendum(s) are non-refundable. Contact Richa Graphics for document and shipping costs. Please note: Richa Graphics is the official Plan Room provider. Bidders must be listed on the plan holder's list held by Richa Graphics in order to receive any Bid Documents.

Notice is hereby given to all bidders that Executive Order 11246 and Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C. 2000d to 2000d-4 and Title 49, Code of Federal Regulations, Department of Transportation, Subtitle A, Part 21, are applicable to this contract.

Each bid must be accompanied by a Bid Bond, or by a certified check payable to Rowan County, Salisbury, North Carolina, and drawn on some bank or trust company authorized to do business in the State of North Carolina, for an amount equal to five percent (5%) of the total bid.

A performance bond and a labor and material payment bond are required.

All bids will be awarded by Rowan County.

No bid may be withdrawn for a period of ninety (90) days after the closing time for the receipt of bids. Rowan County reserves the right to reject any and all bids and to waive any and all technical defects in the execution of the submission of any bid.

Envelopes containing proposals must be sealed and addressed to Rowan County Purchasing Department, Attn: Purchasing Department, 130 West Innes Street, Suite 31, Salisbury, NC 28144. Envelopes must be marked as follows: “Landscaping Improvements”, with contractor's name, address, and license number listed on the envelope.

Jody Farrow-Bennett  
Rowan County Purchasing Dept.

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## **ITEMIZED PROPOSAL**



## **PROPOSAL REQUIREMENTS AND CONDITIONS**

### **LANDSCAPING IMPROVEMENTS**

#### **MID-CAROLINA REGIONAL AIRPORT – SALISBURY, NORTH CAROLINA**

DATE: \_\_\_\_\_

In compliance with the Advertisement (Notice to Bidders), the undersigned hereby proposes to furnish the materials and perform the work for completion of all items listed in the schedule for which the proposal is completed below in strict accordance with the Advertisement (Notice to Bidders), Plans, and General Provisions, Special Provisions of the Specifications, and all contract documents for the consideration of the price quoted in the following items and agrees, upon receipt of written notice of the acceptance of this Proposal, that within ninety (90) days after the date of the opening of the Proposals, it will execute a contract in accordance with the Proposal as accepted and give the required Performance and Payment Bond with good and sufficient surety or sureties, within fifteen (15) days after receipt of notice of formal award of contract and presentation of the prescribed forms.

The board or governing body shall award the contract to the lowest responsible base bid or any combination of the base bid and additive alternatives, taking into consideration quality, performance and the time specified in the proposals for the performance of the contract. The OWNER reserves the right to reject any and all bids and to waive any and all technical defects in the execution and submission of any bid.

The undersigned agrees that if awarded the contract, it will commence work not later than the date set by the ENGINEER in the Notice(s) to Proceed and that it will complete the work within the time specified and in accordance with the Specifications. It is understood that all workmanship and materials under all items of work are guaranteed for one year from the date of final acceptance, unless otherwise specified.

It is understood that the quantities of work to be done are approximate only and are intended principally to serve as a guide in evaluating Proposals.

The Bidder shall complete all line items and total amount of Bid. Failure to submit prices for each item shall be cause for rejection of Bid.

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### BID SCHEDULE - BASE BID

ITEM NO.	SPEC. NO.	DESCRIPTION & UNIT PRICE IN WORDS	QTY	UNIT	UNIT PRICE	EXTENDED TOTAL
1	C-102	TEMPORARY FILTER SOCK @ (Write Unit Price In Words) _____ _____ _____	60	LF	_____	_____
2	C-102	TEMPORARY EXCELSIOR MATTING @ (Write Unit Price In Words) _____ _____ _____	600	SY	_____	_____
3	C-102	TEMPORARY FILTER SOCK INLET PROTECTION @ (Write Unit Price In Words) _____ _____ _____	4	EA	_____	_____
4	C-105	MOBILIZATION @ (Write Unit Price In Words) _____ _____ _____	1	LS	_____	_____
5	SPEC.	ARMSTRONG FREEMAN MAPLE @ (Write Unit Price In Words) _____ _____ _____	2	EA	_____	_____
6	SPEC.	HERITAGE RIVER BIRCH MULTI-TRUNK @ (Write Unit Price In Words) _____ _____ _____	4	EA	_____	_____
7	SPEC.	CHEROKEE CRAPE MYRTLE @ (Write Unit Price In Words) _____ _____ _____	2	EA	_____	_____
8	SPEC.	SLENDER SILHOUETTE SWEET GUM @ (Write Unit Price In Words) _____ _____ _____	4	EA	_____	_____

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9	SPEC.	NUTTALL OAK @ (Write Unit Price In Words)	3	EA	_____	_____
<hr/> <hr/> <hr/> <hr/>						
10	SPEC.	BLACK MOUNTAIN SPLITBEARD BLUESTEM @ (Write Unit Price In Words)	80	EA	_____	_____
<hr/> <hr/> <hr/> <hr/>						
11	SPEC.	FIBER OPTICS BUTTONBUSH @ (Write Unit Price In Words)	24	EA	_____	_____
<hr/> <hr/> <hr/> <hr/>						
12	SPEC.	RUBY SLIPPERS OAKLEAF HYDRANGEA @ (Write Unit Price In Words)	21	EA	_____	_____
<hr/> <hr/> <hr/> <hr/>						
13	SPEC.	PARSONI JUNIPER @ (Write Unit Price In Words)	40	EA	_____	_____
<hr/> <hr/> <hr/> <hr/>						
14	SPEC.	PURPLE DIAMOND LOROPETALUM @ (Write Unit Price In Words)	50	EA	_____	_____
<hr/> <hr/> <hr/> <hr/>						
15	SPEC.	MONDO GRASS @ (Write Unit Price In Words)	18	EA	_____	_____
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16	SPEC.	GIANT PLUME GRASS @ (Write Unit Price In Words)	57	EA	_____	_____
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17	SPEC.	AUTUMN JAZZ ARROWOOD VIBURNUM @ (Write Unit Price In Words)	29	EA	_____	_____
		_____				
		_____				
		_____				
		_____				
18	SPEC.	REGAL MIST PINK MUHLY GRASS @ (Write Unit Price In Words)	50	EA	_____	_____
		_____				
		_____				
		_____				
		_____				
19	SPEC.	BLUE RUG JUNIPER @ (Write Unit Price In Words)	225	EA	_____	_____
		_____				
		_____				
		_____				
		_____				
20	SPEC.	PLANTING BED @ (Write Unit Price In Words)	12,000	SF	_____	_____
		_____				
		_____				
		_____				
		_____				
21	SPEC.	RIVERSTONE @ (Write Unit Price In Words)	2,400	SF	_____	_____
		_____				
		_____				
		_____				
		_____				
22	SPEC.	WHITEWASHING OF BUILDING @ (Write Unit Price In Words)	1,800	SF	_____	_____
		_____				
		_____				
		_____				
		_____				
23	329200	SEEDING @ (Write Unit Price In Words)	2	AC	_____	_____
		_____				
		_____				
		_____				
		_____				

BASE BID AMOUNT: \$ \_\_\_\_\_

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**CONTRACT TIME**

**BASE BID TOTAL CONTRACT TIME:**

**60 CALENDAR DAYS**

**CONTRACT TIME LIQUIDATED DAMAGES:**

**\$1,000.00 PER CALENDAR DAY**

Enclosed is security in the amount of five percent (5%) of the total base bid, consisting of (Cash, Certified Check, or Bid Bond) \_\_\_\_\_ payable to Rowan County.

\_\_\_\_\_  
Name of Bidder

BY: \_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Name and Title of Signing Official)

(Seal)

Contractor's License No. \_\_\_\_\_

**Acknowledgment of Receipt of Addendum**

Addendum No. \_\_\_\_\_ Date \_\_\_\_\_ Initial \_\_\_\_\_

Addendum No. \_\_\_\_\_ Date \_\_\_\_\_ Initial \_\_\_\_\_

Addendum No. \_\_\_\_\_ Date \_\_\_\_\_ Initial \_\_\_\_\_

Addendum No. \_\_\_\_\_ Date \_\_\_\_\_ Initial \_\_\_\_\_



For Corporation, provide name and post office address for the President, Secretary, and Treasurer.

**President**

Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

**Secretary**

Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

**Treasurer**

Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

For Partnership, provide name and address for each partner.

Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

For individual, provide name and post office address.

Name \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

*Note: Failure to complete blank spaces may be grounds for rejection of Bid.*



### PERFORMANCE OF WORK BY SUBCONTRACTORS

The Bidder hereby states that he proposes, if awarded the Contract, to use the following Subcontractors on this project. List below all proposed Subcontractors and trade specialties. (List only one Subcontractor for each item). The Bidder shall obtain prior written permission of the OWNER should he choose to add or substitute other Subcontractor(s) not shown herein.

<u>Items</u>	<u>Subcontractors</u>

Estimated total cost of items that Bidder states will be performed by Subcontractor:

(\$\_\_\_\_\_).





## FORM OF NON-COLLUSION AFFIDAVIT

(This Affidavit is Part of the Bid)

The undersigned of lawful age, being first duly sworn on oath, affirms and says:

1. The undersigned is the Bidder or the duly authorized agent of the Bidder submitting this competitive bid and as the lawful authority to execute this Affidavit and the attached Bid.

For the purpose of certifying the facts pertaining to the existence of collusion among bidders and between bidders and City or Trust officials or employees, as well as facts pertaining to the giving or offering of things of value to government personnel in return for special consideration in the letting of any contract pursuant to the Bid to which this statement is attached:

2. The undersigned is fully aware of the facts and circumstances surrounding the making of the Bid to which this statement is attached and has been personally and directly involved in the proceedings leading to the submission of such Bid; and
3. Neither the Bidder nor anyone subject to the Bidder's direction or control has been a party:
  - a. to any collusion among bidders in restraint of freedom of competition by agreement to bid at a fixed price or to refrain from bidding;
  - b. to any collusion with any City or Trust official, agent or employee as to quantity, quality or price in the prospective contract, or as to any other terms of such prospective contract; nor
  - c. in any discussion between bidders and any City or Trust official, agent or employee concerning exchange of money or other thing of value for special consideration in the letting of a contract.
4. The undersigned certifies, if awarded this contract, whether competitively bid or not, neither the Bidder nor anyone subject to Bidder's direction or control has paid, given, or donated or agreed to pay, give or donate to any officer or employee of the City or Trust any money or other thing of value, either directly or indirectly, in procuring this contract.

***This Bid will not be considered unless  
this form has been fully completed and signed and certified by the Bidder.***

---

Name of Individual, Partnership, Limited Liability Company, or Corporation herein called Bidder

---

Type Name of Authorized Agent

---

Title of Authorized Agent

(Complete Notary Statement on next page)



NOTARY STATEMENT

STATE OF

COUNTY OF

I, \_\_\_\_\_ Notary Public in and for said County and State, do

(Name of Notary Public)

hereby certify that on this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, \_\_\_\_\_

\_\_\_\_\_ personally known to me to be the same person and

(Type Name of Authorized Agent)

official who executed the above and foregoing instrument as \_\_\_\_\_

(Type Name of Authorized Agent)

appeared before me in person and acknowledged that, as such official, he/she executed the above instrument as his/her free and voluntary act on behalf of

\_\_\_\_\_ pursuant to authority conferred and for the uses and (Type Name of Bidder)

purposes therein set forth.

**IN WITNESS THEREOF**, I have hereunto set my hand and seal the day and year last above written.

\_\_\_\_\_  
Name of Notary Public

My commission expires:

My commission #:

\_\_\_\_\_

\_\_\_\_\_



## **CERTIFICATION OF OFFERER/BIDDER REGARDING TAX DELINQUENCY AND FELONY CONVICTIONS**

The applicant must complete the following two certification statements. The applicant must indicate its current status as it relates to tax delinquency and felony conviction by inserting a checkmark (☐) in the space following the applicable response. The applicant agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification in all lower tier subcontracts.

### **Certifications**

- 1) The applicant represents that it is (☐) is not (☐) a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.
- 2) The applicant represents that it is (☐) is not (☐) is not a corporation that was convicted of a criminal violation under any Federal law within the preceding 24 months.

---

Date

---

Signature

---

Company Name

---

Title



### **CERTIFICATION OF OFFERER/BIDDER REGARDING DEBARMENT**

By submitting a bid/proposal under this solicitation, the bidder or offeror certifies that neither it nor its principals are presently debarred or suspended by any Federal department or agency from participation in this transaction.

### **CERTIFICATION OF LOWER TIER CONTRACTORS REGARDING DEBARMENT**

The successful bidder, 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. The successful bidder will accomplish this by:

1. Checking the System for Award Management at website: <http://www.sam.gov>
2. Collecting a certification statement similar to the Certificate Regarding Debarment and Suspension (Bidder or Offeror), above.
3. Inserting a clause or condition in the covered transaction with the lower tier contract

If the FAA later determines that a lower tier participant failed to disclose to a higher tier participant that it was excluded or disqualified at the time it entered the covered transaction, the FAA may pursue any available remedies, including suspension and debarment of the non-compliant participant.

NAME OF BIDDER: \_\_\_\_\_

IRS NUMBER: \_\_\_\_\_

BY: \_\_\_\_\_

TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_





### **CERTIFICATE OF PROMPT PAYMENT**

The prime contractor agrees to pay each subcontractor under this prime contract, less 5% retainage for satisfactory performance of its contract no later than seven (7) calendar 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 seven (7) calendar 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 all subcontractors.

NAME OF BIDDER: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

NAME: \_\_\_\_\_

TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_



## **TRADE RESTRICTION CERTIFICATION**

By submission of an offer, the Offeror certifies that with respect to this solicitation and any resultant contract, the Offeror -

- 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 as published by the Office of the United States Trade Representative (U.S.T.R.);
- 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 included on the list of countries that discriminate against U.S. firms as published by the U.S.T.R; and
- c. has not entered into any subcontract for any product to be used on the Federal on the project that is produced in a foreign country included on the list of countries that discriminate against U.S. firms published by the U.S.T.R.

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.

The Offeror/Contractor must provide immediate written notice to the Owner if the Offeror/Contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The Contractor must require subcontractors provide immediate written notice to the Contractor if at any time it learns that its certification was erroneous by reason of changed circumstances.

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 an Offeror or subcontractor:

- (1) who is owned or controlled by one or more citizens or nationals of a foreign country included on the list of countries that discriminate against U.S. firms published by the U.S.T.R. or
- (2) whose subcontractors are owned or controlled by one or more citizens or nationals of a foreign country on such U.S.T.R. list or
- (3) who incorporates in the public works project any product of a foreign country on such U.S.T.R. list;

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.

The Offeror agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in in all lower tier subcontracts. The contractor may rely on the certification of a prospective subcontractor that it is not a firm from a foreign country included on the list of countries that discriminate against U.S. firms as published by U.S.T.R, unless the Offeror has knowledge that the certification is erroneous.

This certification is a material representation of fact upon which reliance was placed when making an award. If it is later determined that the Contractor or subcontractor knowingly rendered an erroneous

certification, the Federal Aviation Administration may direct through the Owner cancellation of the contract or subcontract for default at no cost to the Owner or the FAA.

NAME OF BIDDER: \_\_\_\_\_

IRS NUMBER: \_\_\_\_\_

BY: \_\_\_\_\_

TITLE: \_\_\_\_\_

DATE: \_\_\_\_\_

**END OF PROPOSAL SECTION**

## **DRUG FREE WORKPLACE**



## **DRUG-FREE WORKPLACE**

The contractor shall provide a drug-free workplace during the performance of this contract.

This obligation is met by:

- A.** notifying employees that the unlawful manufacture, distribution, dispensation, possession, or use of controlled substance is prohibited in the contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition;
- B.** establishing a drug-free awareness program to inform employees about (i) the dangers of drug abuse in the workplace, (ii) the contractor's policy of maintaining a drug-free workplace, (iii) any available drug counseling, rehabilitation, and employee assistance programs, and (iv) the penalties that may be imposed upon employees for drug abuse violations;
- C.** notifying each employee that as a condition of employment, the employee will (i) abide by the terms of the prohibition outlined in (a) above, and (ii) notify the contractor of any criminal drug statute conviction for a violation occurring in the workplace not later than five days after such conviction;
- D.** notifying Rowan County within ten (10) days after receiving from an employee a notice of criminal drug statute conviction or after otherwise receiving actual notice of such conviction;
- E.** imposing a sanction on, or requiring the satisfactory participation in a drug counseling, rehabilitation or abuse program by an employee convicted of drug crime;
- F.** making a good faith effort to continue to maintain a drug-free workplace for employees; and
- G.** requiring any party to which it subcontracts any portion of the work under the contract to comply with the provisions of (a) - (f).

If the proposed contractor is an individual, the requirement is met by not engaging in the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance in the performance of the contract.

Failure to comply with the above drug-free workplace during the performance of the contract shall be grounds for suspension, termination or debarment.

**END OF DFW**

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## **GENERAL CONTRACT PROVISIONS**



## Section 10 Definition of Terms

When 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 defined as follows:

<b>Paragraph Number</b>	<b>Term</b>	<b>Definition</b>
<b>10-01</b>	<b>AASHTO</b>	The American Association of State Highway and Transportation Officials.
<b>10-02</b>	<b>Access Road</b>	The right-of-way, the roadway and all improvements constructed thereon connecting the airport to a public roadway.
<b>10-03</b>	<b>Advertisement</b>	A public announcement, as required by local law, inviting bids for work to be performed and materials to be furnished.
<b>10-04</b>	<b>Airport</b>	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; airport buildings and facilities located in any of these areas, and a heliport.
<b>10-05</b>	<b>Airport Improvement Program (AIP)</b>	A grant-in-aid program, administered by the Federal Aviation Administration (FAA).
<b>10-06</b>	<b>Air Operations Area (AOA)</b>	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.
<b>10-07</b>	<b>Apron</b>	Area where aircraft are parked, unloaded or loaded, fueled and/or serviced.
<b>10-08</b>	<b>ASTM International (ASTM)</b>	Formerly known as the American Society for Testing and Materials (ASTM).
<b>10-09</b>	<b>Award</b>	The Owner's notice to the successful bidder of the acceptance of the submitted bid.

<b>Paragraph Number</b>	<b>Term</b>	<b>Definition</b>
<b>10-10</b>	<b>Bidder</b>	Any individual, partnership, firm, or corporation, acting directly or through a duly authorized representative, who submits a proposal for the work contemplated.
<b>10-11</b>	<b>Building Area</b>	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.
<b>10-12</b>	<b>Calendar Day</b>	Every day shown on the calendar.
<b>10-13</b>	<b>Certificate of Analysis (COA)</b>	The COA is the manufacturer's Certificate of Compliance (COC) including all applicable test results required by the specifications.
<b>10-14</b>	<b>Certificate of Compliance (COC)</b>	The manufacturer's certification stating that materials or assemblies furnished fully comply with the requirements of the contract. The certificate shall be signed by the manufacturer's authorized representative.
<b>10-15</b>	<b>Change Order</b>	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 work within the scope of the contract and necessary to complete the project.
<b>10-16</b>	<b>Contract</b>	<p>A written agreement between the Owner and the Contractor that establishes the obligations of the parties including but not limited to performance of work, furnishing of labor, equipment and materials and the basis of payment.</p> <p>The awarded contract includes but may not be limited to: Advertisement, Contract form, Proposal, Performance bond, payment bond, General provisions, certifications and representations, Technical Specifications, Plans, Supplemental Provisions, standards incorporated by reference and issued addenda.</p>
<b>10-17</b>	<b>Contract Item (Pay Item)</b>	A specific unit of work for which a price is provided in the contract.
<b>10-18</b>	<b>Contract Time</b>	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

<b>Paragraph Number</b>	<b>Term</b>	<b>Definition</b>
		calendar or working days, the contract shall be completed by that date.
<b>10-19</b>	<b>Contractor</b>	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.
<b>10-20</b>	<b>Contractors Quality Control (QC) Facilities</b>	The Contractor's QC facilities in accordance with the Contractor Quality Control Program (CQCP).
<b>10-21</b>	<b>Contractor Quality Control Program (CQCP)</b>	Details the methods and procedures that will be taken to assure that all materials and completed construction required by the contract conform to contract plans, technical specifications and other requirements, whether manufactured by the Contractor, or procured from subcontractors or vendors.
<b>10-22</b>	<b>Control Strip</b>	A demonstration by the Contractor that the materials, equipment, and construction processes results in a product meeting the requirements of the specification.
<b>10-23</b>	<b>Construction Safety and Phasing Plan (CSPP)</b>	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.
<b>10-24</b>	<b>Drainage System</b>	The system of pipes, ditches, and structures by which surface or subsurface waters are collected and conducted from the airport area.
<b>10-25</b>	<b>Engineer</b>	The individual, partnership, firm, or corporation duly authorized by the Owner to be responsible for engineering, inspection, and/or observation of the contract work and acting directly or through an authorized representative.
<b>10-26</b>	<b>Equipment</b>	All machinery, together with the necessary supplies for upkeep and maintenance; and all tools and apparatus necessary for the proper construction and acceptable completion of the work.
<b>10-27</b>	<b>Extra Work</b>	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 Owner's Engineer or Resident Project Representative (RPR) to be necessary to

<b>Paragraph Number</b>	<b>Term</b>	<b>Definition</b>
		complete the work within the intended scope of the contract as previously modified.
<b>10-28</b>	<b>FAA</b>	The Federal Aviation Administration. When used to designate a person, FAA shall mean the Administrator or their duly authorized representative.
<b>10-29</b>	<b>Federal Specifications</b>	The federal specifications and standards, commercial item descriptions, and supplements, amendments, and indices prepared and issued by the General Services Administration.
<b>10-30</b>	<b>Force Account</b>	<p><b>a.</b> Contract Force Account - A method of payment that addresses extra work performed by the Contractor on a time and material basis.</p> <p><b>b.</b> Owner Force Account - Work performed for the project by the Owner's employees.</p>
<b>10-31</b>	<b>Intention of Terms</b>	<p>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 and/or Resident Project Representative (RPR) 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 and/or RPR, subject in each case to the final determination of the Owner.</p> <p>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.</p>
<b>10-32</b>	<b>Lighting</b>	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.
<b>10-33</b>	<b>Major and Minor Contract Items</b>	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.

<b>Paragraph Number</b>	<b>Term</b>	<b>Definition</b>
<b>10-34</b>	<b>Materials</b>	Any substance specified for use in the construction of the contract work.
<b>10-35</b>	<b>Modification of Standards (MOS)</b>	Any deviation from standard specifications applicable to material and construction methods in accordance with FAA Order 5300.1.
<b>10-36</b>	<b>Notice to Proceed (NTP)</b>	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.
<b>10-37</b>	<b>Owner</b>	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. The Owner for this project is Rowan County.
<b>10-38</b>	<b>Passenger Facility Charge (PFC)</b>	Per 14 Code of Federal Regulations (CFR) Part 158 and 49 United States Code (USC) § 40117, a PFC is a charge imposed by a public agency on passengers enplaned at a commercial service airport it controls.
<b>10-39</b>	<b>Pavement Structure</b>	The combined surface course, base course(s), and subbase course(s), if any, considered as a single unit.
<b>10-40</b>	<b>Payment bond</b>	The approved form of security furnished by the Contractor and their own 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.
<b>10-41</b>	<b>Performance bond</b>	The approved form of security furnished by the Contractor and their own surety as a guaranty that the Contractor will complete the work in accordance with the terms of the contract.
<b>10-42</b>	<b>Plans</b>	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. Plans may also be referred to as 'contract drawings.'
<b>10-43</b>	<b>Project</b>	The agreed scope of work for accomplishing specific airport development with respect to a particular airport.

<b>Paragraph Number</b>	<b>Term</b>	<b>Definition</b>
<b>10-44</b>	<b>Proposal</b>	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.
<b>10-45</b>	<b>Proposal guaranty</b>	The security furnished with a proposal to guarantee that the bidder will enter into a contract if their own proposal is accepted by the Owner.
<b>10-46</b>	<b>Quality Assurance (QA)</b>	Owner's responsibility to assure that construction work completed complies with specifications for payment.
<b>10-47</b>	<b>Quality Control (QC)</b>	Contractor's responsibility to control material(s) and construction processes to complete construction in accordance with project specifications.
<b>10-48</b>	<b>Quality Assurance (QA) Inspector</b>	An authorized representative of the Engineer and/or Resident Project Representative (RPR) assigned to make all necessary inspections, observations, tests, and/or observation of tests of the work performed or being performed, or of the materials furnished or being furnished by the Contractor.
<b>10-49</b>	<b>Quality Assurance (QA) Laboratory</b>	The official quality assurance testing laboratories of the Owner or such other laboratories as may be designated by the Engineer or RPR. May also be referred to as Engineer's, Owner's, or QA Laboratory.
<b>10-50</b>	<b>Resident Project Representative (RPR)</b>	The individual, partnership, firm, or corporation duly authorized by the Owner to be responsible for all necessary inspections, observations, tests, and/or observations of tests of the contract work performed or being performed, or of the materials furnished or being furnished by the Contractor, and acting directly or through an authorized representative.
<b>10-51</b>	<b>Runway</b>	The area on the airport prepared for the landing and takeoff of aircraft.
<b>10-52</b>	<b>Runway Safety Area (RSA)</b>	A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to aircraft. See the construction safety and phasing plan (CSPP) for limits of the RSA.
<b>10-53</b>	<b>Safety Plan Compliance Document (SPCD)</b>	Details how the Contractor will comply with the CSPP.



<b>Paragraph Number</b>	<b>Term</b>	<b>Definition</b>
<b>10-54</b>	<b>Specifications</b>	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.
<b>10-55</b>	<b>Sponsor</b>	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.
<b>10-56</b>	<b>Structures</b>	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; navigational aids; buildings; vaults; and, other manmade features of the airport that may be encountered in the work and not otherwise classified herein.
<b>10-57</b>	<b>Subgrade</b>	The soil that forms the pavement foundation.
<b>10-58</b>	<b>Superintendent</b>	The Contractor's executive representative who is present on the work during progress, authorized to receive and fulfill instructions from the RPR, and who shall supervise and direct the construction.
<b>10-59</b>	<b>Supplemental Agreement</b>	A written agreement between the Contractor and the Owner that establishes the basis of payment and contract time adjustment, if any, for the work affected by the supplemental agreement. A supplemental agreement is required if: (1) in scope work would increase or decrease the total amount of the awarded contract by more than 25%; (2) in scope work would increase or decrease the total of any major contract item by more than 25%; (3) work that is not within the scope of the originally awarded contract; or (4) adding or deleting of a major contract item.
<b>10-60</b>	<b>Surety</b>	The corporation, partnership, or individual, other than the Contractor, executing payment or performance bonds that are furnished to the Owner by the Contractor.
<b>10-61</b>	<b>Taxilane</b>	A taxiway designed for low speed movement of aircraft between aircraft parking areas and terminal areas.
<b>10-62</b>	<b>Taxiway</b>	The portion of the air operations area of an airport that has been designated by competent airport authority for

<b>Paragraph Number</b>	<b>Term</b>	<b>Definition</b>
		movement of aircraft to and from the airport's runways, aircraft parking areas, and terminal areas.
<b>10-63</b>	<b>Taxiway/Taxilane Safety Area (TSA)</b>	A defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an aircraft. See the construction safety and phasing plan (CSPP) for limits of the TSA.
<b>10-64</b>	<b>Work</b>	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.
<b>10-65</b>	<b>Working day</b>	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**

## Section 20 Proposal Requirements and Conditions

**20-01 Advertisement (Notice to Bidders).** See “Advertisement/Notice to Bidders”.

**20-02 Qualification of bidders.** Each bidder shall submit evidence of competency and evidence of financial responsibility to perform the work to the Owner at the time of bid opening.

Evidence of competency, unless otherwise specified, shall consist of statements covering the bidder’s past experience on similar work, and a list of equipment and a list of key personnel that would be available for the work.

Each bidder shall furnish the Owner satisfactory evidence of their financial responsibility. 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 their 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 they are prequalified with the State Highway Division and are on the current “bidder’s list” of the state in which the proposed work is located. Evidence of State Highway Division prequalification may be submitted as evidence of financial responsibility in lieu of the certified statements or reports specified above.

Contractor must be a General Contractor licensed in the state of North Carolina

**20-03 Contents of proposal forms.** The Owner's proposal forms state the location and description of the proposed construction; the place, date, and time of opening of the proposals; and the estimated quantities of the various items of work to be performed and materials to be furnished for which unit bid prices are asked. The proposal form states the time in which the work must be completed, and the amount of the proposal guaranty that must accompany the proposal. The Owner will accept only those Proposals properly executed on physical forms or electronic forms provided by the Owner. Bidder actions that may cause the Owner to deem a proposal irregular are given in paragraph 20-09 *Irregular proposals*.

Mobilization is limited to 10 percent of the total project cost.

A prebid conference will be held for this project to discuss as a minimum, the following items: material requirements; submittals; Quality Control/Quality Assurance requirements; the construction safety and phasing plan including airport access and staging areas; and unique airfield paving construction requirements. See “Notice to Bidders” for the location, time and date.

**20-04 Issuance of proposal forms.** The Owner reserves the right to refuse to issue a proposal form to a prospective bidder if the bidder is 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 provided in the Section 40, paragraph 40-02, Alteration of Work and Quantities, 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 to the character, quality, and quantities of work to be performed, materials to be furnished, and 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 to the conditions to be encountered in performing the work and the requirements of the proposed contract, plans, and specifications.

Boring logs and other records of subsurface investigations and tests are available for inspection of bidders. It is understood and agreed that such subsurface information, whether included in the plans, specifications, or otherwise made available to the bidder, was obtained and is intended for the Owner's design and estimating purposes only. Such information has been made available for the convenience of all bidders. It is further understood and agreed that each bidder is solely responsible for all assumptions, deductions, or conclusions which the bidder may make or obtain from their own examination of the boring logs and other records of subsurface investigations and tests that are furnished by the Owner.

**20-07 Preparation of proposal.** The bidder shall submit their proposal on the forms furnished by the Owner. All blank spaces in the proposal forms, unless explicitly stated otherwise, 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 which they propose 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 correctly sign the proposal in ink. If the proposal is made by an individual, their 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 where 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 their 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 Owner's invitation for bid. It is the Owner'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 2 CFR § 200.318(h). 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.
- f. If the applicable Disadvantaged Business Enterprise information is incomplete.

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 bid bond, certified check, or other specified acceptable collateral, in the amount specified in the proposal form. Such bond, 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 paragraph 20-04, *Issuance of Proposal Forms*, of this section.

**20-15 Discrepancies and Omissions.** A Bidder who discovers discrepancies or omissions with the project bid documents shall immediately notify the Owner's Engineer of the matter. A bidder that has doubt as to the true meaning of a project requirement may submit to the Owner's Engineer a written request for interpretation no later than seven days prior to bid opening.

Any interpretation of the project bid documents by the Owner's Engineer will be by written addendum issued by the Owner. The Owner will not consider any instructions, clarifications or interpretations of the bidding documents in any manner other than written addendum.

**END OF SECTION 20**  
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## 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 bid 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 Section 20, paragraph 20-09, *Irregular Proposals*.
- b. If the bidder is disqualified for any of the reasons specified Section 20, paragraph 20-14, *Disqualification of Bidders*.

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.

If the Owner elects to proceed with an award of contract, the Owner will make award to the responsible bidder whose bid, conforming with all the material terms and conditions of the bid documents, is the lowest in price.

**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 paragraph 30-07 *Approval of Contract*.

**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 paragraph 30-01, *Consideration of Proposals*. 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 paragraph 30-05, *Requirements of Contract Bonds*.

**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 paragraph 30-05, *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 period specified in paragraph 30-06, *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 liquidated damages to the Owner.

**END OF SECTION 30**



## 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 the right to make such changes in quantities and work as may be necessary or desirable to complete, in a satisfactory manner, the original intended work. Unless otherwise specified in the Contract, the Owner's Engineer or RPR shall be and is hereby authorized to make, in writing, such in-scope alterations in the work and variation of quantities as may be necessary to complete the work, provided such action does not represent a significant change in the character of the work.

For purpose of this section, a significant change in character of work means: any change that is outside the current contract scope of work; any change (increase or decrease) in the total contract cost by more than 25%; or any change in the total cost of a major contract item by more than 25%.

Work alterations and quantity variances that do not meet the definition of significant change in character of work shall not invalidate the contract nor release the surety. Contractor agrees to accept payment for such work alterations and quantity variances in accordance with Section 90, paragraph 90-03, *Compensation for Altered Quantities*.

Should the value of altered work or quantity variance meet the criteria for significant change in character of work, such altered work and quantity variance shall be covered by a supplemental agreement. Supplemental agreements shall also require consent of the Contractor's surety and separate performance and payment bonds. 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.

**40-03 Omitted items.** The Owner, the Owner's Engineer or the RPR may provide written notice to the Contractor to omit from the work any contract item that does not meet the definition of major contract item. 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 Section 90, paragraph 90-04, *Payment for Omitted Items*.

**40-04 Extra work.** Should acceptable completion of the contract require the Contractor to perform an item of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, Owner may issue a Change Order to cover the necessary extra work. Change orders for 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 RPR's opinion, is necessary for completion of the extra work.

When determined by the RPR to be in the Owner's best interest, the RPR may order the Contractor to proceed with extra work as provided in Section 90, paragraph 90-05, *Payment for Extra Work*. 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 Section 10, paragraph 10-59, *Supplemental Agreement*.

If extra work is essential to maintaining the project critical path, RPR may order the Contractor to commence the extra work under a Time and Material contract method. Once sufficient detail is available to establish the level of effort necessary for the extra work, the Owner shall initiate a change order or supplemental agreement to cover the extra work.

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. The Contractor shall maintain traffic in the manner detailed in the Construction Safety and Phasing Plan (CSPP).

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 their own operations and the operations of all subcontractors as specified in Section 80, paragraph 80-04, *Limitation of Operations*. 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 Section 70, paragraph 70-15, *Contractor's Responsibility for Utility Service and Facilities of Others*.

b. With respect to their 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 in accordance with the construction safety and phasing plan (CSPP) and the safety plan compliance document (SPCD).

c. When the contract requires the maintenance of 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 the road, street, or highway open to all traffic and shall provide maintenance as may be required to accommodate traffic. The Contractor, at their expense, shall be responsible for the repair to equal or better than preconstruction conditions 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. Unless otherwise specified herein, the Contractor will not be required to furnish snow removal for such existing road, street, or highway.

**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 Resident Project Representative (RPR) shall be notified prior to disturbing such structure. The disposition of existing structures so encountered shall be immediately determined by the RPR in accordance with the provisions of the contract.

Except as provided in Section 40, paragraph 40-07, *Rights in and Use of Materials Found in the Work*, 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 embankment, the Contractor may at their own option either:

- a. Use such material in another contract item, providing such use is approved by the RPR 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 RPR; 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 RPR's approval in advance of such use.

Should the RPR 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 their 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 RPR 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 their own 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 the property Owner.

## **END OF SECTION 40**

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## Section 50 Control of Work

**50-01 Authority of the Resident Project Representative (RPR).** The RPR has final authority regarding the interpretation of project specification requirements. The RPR shall determine acceptability of the quality of materials furnished, method of performance of work performed, and the manner and rate of performance of the work. The RPR does not have the authority to accept work that does not conform to 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 RPR 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 their opinion, result in a finished product having a level of safety, economy, durability, and workmanship acceptable to the Owner, the RPR will advise the Owner of their determination that the affected work be accepted and remain in place. The RPR 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. Changes in the contract price must be covered by contract change order or supplemental agreement as applicable.

If the RPR 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 RPR's written orders.

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 RPR'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 RPR's opinion, such compliance is essential to provide an acceptable finished portion of the work.

The term "reasonably close conformity" is also intended to provide the RPR with the authority, after consultation with the Sponsor and FAA, to use sound engineering judgment in their determinations to accept work that is not in strict conformity, but will provide a finished product equal to or better than that required by the requirements of the contract, plans and specifications.

The RPR 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. If electronic files are provided and used on the project and there is a conflict between the electronic files and hard copy plans, the hard copy plans shall govern. 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 RPR for an interpretation and decision, and such decision shall be final.

The Contractor shall not take advantage of any apparent error or omission on the plans or specifications. In the event the Contractor discovers any apparent error or discrepancy, Contractor shall immediately notify the Owner or the designated representative in writing requesting their written interpretation and decision.

**50-04 List of Special Provisions. See Project Special Provisions Section.**

**50-05 Cooperation of Contractor.** The Contractor shall be supplied with three hard copies or an electronic PDF of the plans and specifications. The Contractor shall have available on the construction site at all times one hardcopy each of the plans and specifications. Additional hard 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 RPR and their 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 their 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 RPR or their authorized representative.

**50-06 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 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 their own contract and shall protect and hold harmless the Owner from any and all damages or claims that may arise because of inconvenience, delays, or loss experienced because of the presence and operations of other Contractors working within the limits of the same project.

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

**50-07 Construction layout and stakes.** The Engineer/RPR shall establish necessary horizontal and vertical control. The establishment of Survey Control and/or reestablishment of survey control shall be by a State Licensed Land Surveyor. Contractor is responsible for preserving integrity of horizontal and vertical controls established by Engineer/RPR. In case of negligence on the part of the Contractor or their employees, resulting in the destruction of any horizontal and vertical control, the resulting costs will be deducted as a liquidated damage against the Contractor.

Prior to the start of construction, the Contractor will check all control points for horizontal and vertical accuracy and certify in writing to the RPR that the Contractor concurs with survey control established for the project. All lines, grades and measurements from control points necessary for the proper execution and control of the work on this project will be provided to the RPR. The Contractor is responsible to establish all layout required for the construction of the project.

Copies of survey notes will be provided to the RPR for each area of construction and for each placement of material as specified to allow the RPR to make periodic checks for conformance with plan grades, alignments and grade tolerances required by the applicable material specifications. Surveys will be provided

to the RPR prior to commencing work items that cover or disturb the survey staking. Survey(s) and notes shall be provided in the following format(s): **AutoCAD, PDF and ASCII Text files.**

Laser, GPS, String line, or other automatic control shall be checked with temporary control as necessary. 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.

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

QA Inspectors are authorized to notify the Contractor or their 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 RPR 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 RPR 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 RPR 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.

Provide advance written notice to the RPR of work the Contractor plans to perform each week and each day. Any work done or materials used without written notice and allowing opportunity for inspection by the RPR may be ordered removed and replaced at the Contractor's expense.

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 RPR as provided in paragraph 50-02, *Conformity with Plans and Specifications*.

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 Section 70, paragraph 70-14, *Contractor's Responsibility for Work*.

No removal work made under provision of this paragraph shall be done without lines and grades having been established by the RPR. Work done contrary to the instructions of the RPR, work done beyond the lines shown on the plans or as established by the RPR, 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 RPR made under the provisions of this subsection, the RPR will have authority to cause unacceptable work to be remedied or removed and replaced; and unauthorized work to be removed and recover the resulting costs as a liquidated damage against 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, at their own expense, shall be responsible for the repair to equal or better than preconstruction conditions of any damage caused by the Contractor's equipment and personnel.

**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 paragraph 50-12, *Maintenance during Construction*, the RPR 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 RPR'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 recovered as a liquidated damage against 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 RPR to make final inspection of that unit. If the RPR finds upon inspection that the unit has been satisfactorily completed in compliance with the contract, the RPR 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 RPR 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 RPR 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 RPR will notify the Contractor and the Contractor shall correct the unsatisfactory work. 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 RPR 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 RPR in writing of their 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 RPR 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 RPR 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 RPR 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.

#### **END OF SECTION 50**

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## 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 documentation to the RPR as to the origin, composition, and manufacture of all materials to be used in the work. Documentation shall be furnished promptly after execution of the contract but, in all cases, prior to delivery of such materials.

At the RPR's option, materials may be approved at the source of supply before delivery. 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 meets the requirements of the specifications; and is listed in AC 150/5345-53, *Airport Lighting Equipment Certification Program* and *Addendum*, that is in effect on the date of advertisement.

**60-02 Samples, tests, and cited specifications.** All materials used in the work shall be inspected, tested, and approved by the RPR before incorporation in the work unless otherwise designated. Any work in which untested materials are used without approval or written permission of the RPR 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 RPR, shall be removed at the Contractor's expense.

Unless otherwise designated, quality assurance tests will be made by and at the expense of the Owner 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.

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. Unless otherwise designated, samples for quality assurance will be taken by a qualified representative of the RPR. 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 RPR.

A copy of all Contractor QC test data shall be provided to the RPR 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 RPR showing all test data reports, plus an analysis of all results showing ranges, averages, and corrective action taken on all failing tests.

~~The Contractor shall employ a Quality Control (QC) testing organization to perform all Contractor required QC tests in accordance with Item C-100 Contractor Quality Control Program (CQCP).~~

**60-03 Certification of compliance/analysis (COC/COA).** The RPR may permit the use, prior to sampling and testing, of certain materials or assemblies when accompanied by manufacturer's COC 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. The COA is the manufacturer's COC and includes all applicable test results.

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 RPR.

When a material or assembly is specified by “brand name or equal” and the Contractor elects to furnish the specified “or equal,” 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.

The RPR shall be the sole judge as to whether the proposed “or equal” is suitable for use in the work.

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

**60-04 Plant inspection.** The RPR or their 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 RPR conduct plant inspections, the following conditions shall exist:

- a. The RPR shall have the cooperation and assistance of the Contractor and the producer with whom the Contractor has contracted for materials.
- b. The RPR 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 RPR, the Contractor shall arrange for adequate office or working space that may be reasonably needed for conducting plant inspections. Place office or working space in a convenient location 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 RPR 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/ Resident Project Representative (RPR) field office.** An Engineer/RPR field office is not required.

**60-06 Storage of materials.** Materials shall be stored 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 RPR. 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 and/or CSPP, the storage of materials and the location of the Contractor’s plant and parked equipment or vehicles shall be as directed by the RPR. 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 RPR 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 their 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 RPR.

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 RPR 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**

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## 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 their 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) must be shown on the plans and is indicated as follows: **See Project Special Provisions Section.**

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 RPR.

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 RPR, 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 Participation.** The United States Government has agreed to reimburse the Owner for some portion of the contract costs. The contract work is subject to the inspection and approval of duly authorized representatives of the FAA Administrator. No requirement of this contract shall be construed as making the United States 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's worksite and facilities shall comply with applicable federal, state, and local requirements for health, safety and sanitary provisions.

**70-07 Public convenience and safety.** The Contractor shall control their operations and those of their 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 their own operations and those of their own subcontractors and all suppliers in accordance with Section 40, paragraph 40-05, *Maintenance of Traffic*, and shall limit such operations for the convenience and safety of the traveling public as specified in Section 80, paragraph 80-04, *Limitation of Operations*.

The Contractor shall remove or control debris and rubbish resulting from its work operations at frequent intervals, and upon the order of the RPR. If the RPR determines the existence of Contractor debris in the work site represents a hazard to airport operations and the Contractor is unable to respond in a prompt and reasonable manner, the RPR reserves the right to assign the task of debris removal to a third party and recover the resulting costs as a liquidated damage against the Contractor.

**70-08 Construction Safety and Phasing Plan (CSPP).** The Contractor shall complete the work in accordance with the approved Construction Safety and Phasing Plan (CSPP) developed in accordance with AC 150/5370-2, Operational Safety on Airports During Construction. The CSPP is on sheet(s) 2 of the project plans.

**70-09 Use of explosives.** The use of explosives is not permitted on this project.

**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/RPR 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 their 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 hold harmless the Engineer/RPR and the Owner and their officers, agents, 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 their own 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, their own 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.** If it is 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 must be specified below and indicated on the approved Construction Safety and Phasing Plan (CSPP) and the project plans. When so specified, the Contractor shall complete such portions of the work on or before the date specified or as otherwise specified.

- **Work Shown on the Construction Safety and Phasing Plan Sheets**
- **In accordance with the Construction Safety and Phasing Report included in these specifications.**

Upon completion of any portion of work listed above, such portion shall be accepted by the Owner in accordance with Section 50, paragraph 50-14, *Partial Acceptance*.

No portion of the work may be opened by the Contractor until directed by the Owner in writing. Should it become necessary to open a portion of the work to traffic on a temporary or intermittent basis, such openings shall be made when, in the opinion of the RPR, 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 their expense.

The Contractor shall make their 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.

The Contractor must conform to safety standards contained AC 150/5370-2 and the approved CSPP.

Contractor shall refer to the plans, specifications, and the approved CSPP to identify barricade requirements, temporary and/or permanent markings, airfield lighting, guidance signs and other safety requirements prior to opening up sections of work to traffic.

**70-14 Contractor’s responsibility for work.** Until the RPR’s final written acceptance of the entire completed work, excepting only those portions of the work accepted in accordance with Section 50, paragraph 50-14, *Partial Acceptance*, 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 their own 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 paragraph 70-04, *Restoration of Surfaces Disturbed by Others*, 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/or in the contract documents.

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 their plan of operations. Such notification shall be in writing addressed to "The Person to Contact" as provided in this paragraph and paragraph 70-04, *Restoration of Surfaces Disturbed By Others*. A copy of each notification shall be given to the RPR.

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 RPR.

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 RPR 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 RPR 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 their own surety.

**70-15.1 FAA facilities and cable runs.** The Contractor is hereby advised that the construction limits of the project include existing facilities and buried cable runs that are owned, operated and maintained by the FAA. The Contractor, during the execution of the project work, shall comply with the following:

- a. The Contractor shall permit FAA maintenance personnel the right of access to the project work site for purposes of inspecting and maintaining all existing FAA owned facilities.

- b. The Contractor shall provide notice to the FAA Air Traffic Organization (ATO)/Technical Operations/System Support Center (SSC) Point-of-Contact through the airport Owner a minimum of seven (7) calendar days prior to commencement of construction activities in order to permit sufficient time to locate and mark existing buried cables and to schedule any required facility outages.
- c. If execution of the project work requires a facility outage, the Contractor shall contact the FAA Point-of-Contact a minimum of 72 hours prior to the time of the required outage.
- d. Any damage to FAA cables, access roads, or FAA facilities during construction caused by the Contractor's equipment or personnel whether by negligence or accident will require the Contractor to repair or replace the damaged cables, access road, or FAA facilities to FAA requirements. The Contractor shall not bear the cost to repair damage to underground facilities or utilities improperly located by the FAA.
- e. If the project work requires the cutting or splicing of FAA owned cables, the FAA Point-of-Contact shall be contacted a minimum of 72 hours prior to the time the cable work commences. The FAA reserves the right to have a FAA representative on site to observe the splicing of the cables as a condition of acceptance. All cable splices are to be accomplished in accordance with FAA specifications and require approval by the FAA Point-of-Contact as a condition of acceptance by the Owner. The Contractor is hereby advised that FAA restricts the location of where splices may be installed. If a cable splice is required in a location that is not permitted by FAA, the Contractor shall furnish and install a sufficient length of new cable that eliminates the need for any splice.

**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, RPR, their 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 their surety, or both, such overpayment as may be sustained, or by failure on the part of the Contractor to fulfill their 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, asphalts, 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 their 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 RPR. The RPR 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 Section 40, paragraph 40-04, *Extra Work*, and Section 90, paragraph 90-05, *Payment for Extra Work*. If appropriate, the contract change order or supplemental agreement shall include an extension of contract time in accordance with Section 80, paragraph 80-07, *Determination and Extension of Contract Time*.

**70-21 Insurance Requirements.** See **Project Special Provisions and Appendix 'A'** for insurance requirements for this project.

**END OF SECTION 70**

## **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 Resident Project Representative (RPR).

The Contractor shall perform, with his organization, an amount of work equal to at least forty (40) percent of the total contract cost.

Should the Contractor elect to assign their 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.

**The Contractor shall provide copies of all subcontracts to the RPR 14 days prior to being utilized on the project. As a minimum, the information shall include the following:**

- Subcontractor's legal company name.
- Subcontractor's legal company address, including County name.
- Principal contact person's name, telephone and fax number.
- Complete narrative description, and dollar value of the work to be performed by the subcontractor.
- Copies of required insurance certificates in accordance with the specifications.
- Minority/ non-minority status.

**80-02 Notice to proceed (NTP).** The Owners notice to proceed will state the date on which contract time commences. The Contractor is expected to commence project operations within ten (10) calendar days of the NTP date. The Contractor shall notify the RPR at least 24 hours in advance of the time contract operations begins. The Contractor shall not commence any actual operations 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 coordinated construction schedule showing all work activities for the RPR's review and acceptance at least 10 days prior to the start of work. The Contractor's progress schedule, once accepted by the RPR, will represent the Contractor's baseline plan to accomplish the project in accordance with the terms and conditions of the Contract. The RPR will compare actual Contractor progress against the baseline schedule to determine that status of the Contractor's performance. 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 RPR'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 RPR at least 24 hours in advance of resuming operations.

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

The project 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. It shall include information on the sequence of work activities, milestone dates, and activity duration. The schedule shall show all work items identified in the project proposal for each work area and shall include the project start date and end date.

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.

**80-04 Limitation of operations.** The Contractor shall control their operations and the operations of their 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 their operations within an AOA of the airport, the work shall be coordinated with airport operations (through the RPR) at least 48 hours prior to commencement of such work. The Contractor shall not close an AOA until so authorized by the RPR and until the necessary temporary marking, signage and associated lighting is in place as provided in Section 70, paragraph 70-08, *Construction Safety and Phasing Plan (CSPP)*.

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; and 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 satisfactory conditions are provided. The areas of the AOA identified in the Construction Safety Phasing Plan (CSPP) and as listed below, 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:

- **Work Shown on the Construction Safety and Phasing Plan Sheets**
- **In accordance with the Construction Safety and Phasing Report included in these specifications.**

The Contractor shall be required to conform to safety standards contained in AC 150/5370-2, Operational Safety on Airports During Construction and the approved CSPP.

**80-04.1 Operational safety on airport during construction.** All Contractors' operations shall be conducted in accordance with the approved project Construction Safety and Phasing Plan (CSPP) and the Safety Plan Compliance Document (SPCD) and the provisions set forth within the current version of AC 150/5370-2, Operational Safety on Airports During Construction. 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 SPCD 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 SPCD and that they implement and maintain all necessary measures.

No deviation or modifications may be made to the approved CSPP and SPCD unless approved in writing by the Owner. The necessary coordination actions to review Contractor proposed modifications to an approved CSPP or approved SPCD can require a significant amount of time.

**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 RPR, does not perform his work in a proper and skillful manner or is intemperate or disorderly shall, at the written request of the RPR, be removed immediately by the Contractor or subcontractor employing such person, and shall not be employed again in any portion of the work without approval of the RPR.

Should the Contractor fail to remove such person or persons, or fail to furnish suitable and sufficient personnel for the proper execution of the work, the RPR 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 not cause injury to previously completed work, adjacent property, or existing airport facilities due to 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 otherwise authorized by the RPR. 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 RPR 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 RPR 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 RPR 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 paragraph.

**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 the Owner may deem necessary, due to unsuitable weather, or other conditions considered unfavorable for the execution of the work, or for such time 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 written order to suspend work to the effective date of the written order to resume the work. Claims for such compensation shall be filed with the RPR within the time period stated in the RPR's order to resume work. The Contractor shall submit with their own claim information substantiating the amount shown on the claim. The RPR 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 or for any other delay provided for in the contract, plans, or specifications.

If it becomes 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 days shall be stated in the proposal and contract and shall be known as the Contract Time.

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

**80-07.1 Contract time based on calendar days.** 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.

**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 paragraph 80-07, *Determination and Extension of Contract Time*) the sum specified in the contract and proposal as liquidated damages (LD) will be deducted from any money due or to become due the Contractor or their own 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
Base Bid	\$1,200 per Calendar Day	60 Calendar Days
Alternate Bid	\$1,200 per Calendar Day	75 Calendar Days

The maximum construction time allowed for the Base Bid will be as shown in the table above. The maximum construction time allowed for the Alternate Bid will be as shown in the table above. For a description of the scope for both the Base Bid and Alternate Bid, see the Construction Safety and Phasing Plan in the plan set. 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 waiver 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 their 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 Owner consider the Contractor in default of the contract for any reason above, the Owner 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 RPR 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 RPR 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 receipted bills and actual cost records at such points of delivery as may be designated by the RPR.

Termination of the contract or a portion thereof shall neither relieve the Contractor of their responsibilities for the completed work nor shall it relieve their 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 RPR 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 work in accordance with the approved CSPP and SPCD.

**END OF SECTION 80**

## Section 90 Measurement and Payment

**90-01 Measurement of quantities.** All work completed under the contract will be measured by the RPR, or their authorized representatives, using United States Customary Units of Measurement.

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 RPR.

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.

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.

When requested by the Contractor and approved by the RPR 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 RPR and shall be agreed to by the Contractor before such method of measurement of pay quantities is used.

### Measurement and Payment Terms

Term	Description
<b>Excavation and Embankment Volume</b>	In computing volumes of excavation, the average end area method will be used unless otherwise specified.
<b>Measurement and Proportion by Weight</b>	The term “ton” will mean the short ton consisting of 2,000 pounds (907 kg) avoirdupois. All materials that are measured or proportioned by weights shall be weighed on accurate, independently certified scales by competent, qualified personnel at locations designated by the RPR. 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 RPR directs, and each truck shall bear a plainly legible identification mark.
<b>Measurement by Volume</b>	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

<b>Term</b>	<b>Description</b>
	capacity, and all loads shall be leveled when the vehicles arrive at the point of delivery.
<b>Asphalt Material</b>	Asphalt 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. 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 asphalt material has been lost from the car or the distributor, wasted, or otherwise not incorporated in the work. When asphalt materials are shipped by truck or transport, net certified weights by volume, subject to correction for loss or foaming, will be used for computing quantities.
<b>Cement</b>	Cement will be measured by the ton (kg) or hundredweight (km).
<b>Structure</b>	Structures will be measured according to neat lines shown on the plans or as altered to fit field conditions.
<b>Timber</b>	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.
<b>Plates and Sheets</b>	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.
<b>Miscellaneous Items</b>	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.
<b>Scales</b>	<p>Scales must be tested for accuracy and serviced before use. 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. Platform scales shall be installed and maintained with the platform level and rigid bulkheads at each end.</p> <p>Scales shall be accurate within 0.5% of the correct weight throughout the range of use. The Contractor shall have the scales checked under the observation of the RPR 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 0.1% of the nominal rated capacity of the scale, but not less than one pound (454 grams). The use of spring balances will not be permitted.</p> <p>In the event inspection reveals the scales have been “overweighing” (indicating more than correct weight) they will be immediately adjusted. All materials</p>

Term	Description
	<p>received subsequent to the last previous correct weighting-accuracy test will be reduced by the percentage of error in excess of 0.5%.</p> <p>In the event inspection reveals the scales have been under-weighting (indicating less than correct weight), they shall be immediately adjusted. No additional payment to the Contractor will be allowed for materials previously weighed and recorded.</p> <p>Beams, dials, platforms, and other scale equipment shall be so arranged that the operator and the RPR can safely and conveniently view them.</p> <p>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.</p> <p>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.</p>
<b>Rental Equipment</b>	<p>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 in connection with extra work will be measured as agreed in the change order or supplemental agreement authorizing such work as provided in paragraph 90-05 <i>Payment for Extra Work</i>.</p>
<b>Pay Quantities</b>	<p>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 RPR. 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.</p>

**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 Section 70, paragraph 70-18, *No Waiver of Legal Rights*.

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 Section 40, paragraph 40-02, *Alteration of Work and Quantities*, 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 their own unbalanced allocation of overhead and profit among the contract items, or from any other cause.

**90-04 Payment for omitted items.** As specified in Section 40, paragraph 40-03, *Omitted Items*, the RPR 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 RPR 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 RPR'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 RPR'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 RPR'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 the amount of such costs.

**90-05 Payment for extra work.** Extra work, performed in accordance with Section 40, paragraph 40-04, *Extra Work*, 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 RPR, 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 paragraph 90-07, *Payment for Materials on Hand*. No partial payment will be made when the amount due to the Contractor since the last estimate amounts to less than five hundred dollars.

a. From the total of the amount determined to be payable on a partial payment, five (5) percent of such total amount will be deducted and retained by the Owner for protection of the Owner's interests. Unless otherwise instructed by the Owner, the amount retained by the Owner will be in effect until the final payment is made except as follows:

(1) Contractor may request release of retainage on work that has been partially accepted by the Owner in accordance with Section 50-03. Contractor must provide a certified invoice to the RPR that supports the value of retainage held by the Owner for partially accepted work.

(2) In lieu of retainage, the Contractor may exercise at its option the establishment of an escrow account per paragraph 90-08.

b. 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. Contractor must provide the Owner evidence of prompt and full payment of retainage held by 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.

c. When at least 95% of the work has been completed to the satisfaction of the RPR, the RPR 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 RPR 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 paragraph 90-09, *Acceptance and Final Payment*.

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 RPR at or on an approved site.
- b. The Contractor has furnished the RPR with acceptable evidence of the quantity and quality of such stored or stockpiled materials.
- c. The Contractor has furnished the RPR 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 stored or stockpiled.
- e. The Contractor has furnished the Owner evidence that the material 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 their 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 paragraph.

**90-08 Payment of withheld funds.** At the Contractor's option, if an Owner withholds retainage in accordance with the methods described in paragraph 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 Section 50, paragraph 50-15, *Final Acceptance*, the RPR will prepare the final estimate of the items of work actually performed. The Contractor shall approve the RPR's final estimate or advise the RPR 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 RPR 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 RPR's final estimate. If, after such 30-day period, a dispute still exists, the Contractor may approve the RPR'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 Section 50, paragraph 50-16, *Claims for Adjustment and Disputes*.

After the Contractor has approved, or approved under protest, the RPR's final estimate, and after the RPR's receipt of the project closeout documentation required in paragraph 90-11, *Contractor Final Project Documentation*, 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 Section 50, paragraph 50-16, *Claims for Adjustments and Disputes*, or under the provisions of this paragraph, 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, except as noted. 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 the Contractor's failure to conform to contract requirements; or 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 fourteen (14) days after the discovery of any failure, defect, or damage.
- f. If the Contractor fails to remedy any failure, defect, or damage within fourteen (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 Contractor Final Project Documentation.** 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 RPR approves the Contractor's final submittal. The Contractor shall:

- a. Provide two (2) copies of all manufacturer's 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 Section 40, paragraph 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 by submitting executed Contractors Affidavit of Payment of Debts and Claims.
- 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(s).
- k. Security for Construction Warranty.
- l. Equipment commissioning documentation submitted, if required.
- m. Submit executed Consent of Surety to Final Payment.
- n. Submit executed Affidavit of Release (Waiver) of Liens for Contractor and all subcontractors.
- o. Submit DBE Commitments and Payments form.

## END OF SECTION 90

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## **GENERAL CONSTRUCTION ITEMS**



## Item C-102 Temporary Air and Water Pollution, Soil Erosion, and Siltation Control

### DESCRIPTION

**102-1.** 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. Temporary erosion control features shall be removed once the site has been stabilized as directed by the RPR. Maintenance and removal of temporary features shall be considered incidental to the respective item.

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 18 inches and a maximum of 24 inches above the ground surface. Posts shall be set no more than 8 feet 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 overlap and securely sealed. A trench shall be excavated approximately 8 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 filter sock will be measured by the linear foot
- b. Temporary excelsior matting will be measured by the square yard
- c. Temporary filter sock inlet protection will be measured per each

**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 filter sock – per linear foot
Item C-102-5.1b	Temporary excelsior matting – per square yard
Item C-102-5.1c	Temporary filter sock inlet protection – per each

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	<i>Hazardous Wildlife Attractants on or Near Airports</i>
AC 150/5370-2	<i>Operational Safety on Airports During Construction</i>

##### **ASTM International (ASTM)**

ASTM D6461	<i>Standard Specification for Silt Fence Materials</i>
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##### **United States Department of Agriculture (USDA)**

FAA/USDA Wildlife Hazard Management at Airports, A Manual for Airport Personnel

#### **END OF ITEM C-102**

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## **Item C-105 Mobilization**

**105-1 Description.** 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.

**105-2 Mobilization limit.** Mobilization shall be limited to 10 percent of the total project cost.

**105-3 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. Links to the posters available at: <https://www.faa.gov/airports/engineering/>

**105-4 Engineer/RPR field office.** An Engineer/RPR field office is not required.

### **METHOD OF MEASUREMENT**

**105-5 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 Section 90, paragraph 90-11, *Contractor Final Project Documentation*, the final 10%.

### **BASIS OF PAYMENT**

**105-6 Payment will be made under:**

Item C-105 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.

Office of Federal Contract Compliance Programs (OFCCP)

Executive Order 11246, as amended

EEOC-P/E-1 – Equal Employment Opportunity is the Law Poster

United States Department of Labor, Wage and Hour Division (WHD)

WH 1321 – Employee Rights under the Davis-Bacon Act Poster

### **END OF ITEM C-105**

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## **PROJECT SPECIAL PROVISIONS**



## PROJECT SPECIAL PROVISIONS

### PSP-1 INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS

Bidders shall take no advantage of any apparent error or omission in the Bidding or Contract Documents. In the event the Bidders discover such an error or omission, they shall immediately notify the OWNER. The OWNER will then make such corrections and interpretations as may be deemed necessary for fulfilling the intent of the Bidding Documents.

Bidders shall promptly notify the OWNER in writing of any concerns or problems they discover upon examination of the Site and local conditions.

Bidders requiring clarification or interpretation of the Bidding Documents shall make a written request for clarification and forward the same to the appropriate address below. Spoken questions will not be answered; only written questions will be answered. Any interpretation, correction or change of the Bidding Documents will be made only by Addenda. Interpretations, corrections or changes of the Bidding Documents made in any other manner will not be binding, and Bidders shall not rely upon such interpretations, corrections and changes.

**The deadline for submitting written requests for clarification shall be close of business on Thursday, September 29, 2022.**

Address questions to:

Andy Shook, P.E.  
Talbert, Bright & Ellington, Inc.  
3525 Whitehall Park Drive  
Suite 210  
Charlotte, NC 28273  
Fax: (704) 426-6080  
[ashook@tbeclt.com](mailto:ashook@tbeclt.com)

### PSP-2 GENERAL REQUIREMENTS - SCHEDULE OF WORK

It is the intent of the OWNER and these specifications that the Mid-Carolina Regional Airport be impacted to a minimum during the work accomplished under this project. For this reason, ***the Contractor will be required to submit for approval a detailed Schedule of Work to the ENGINEER five (5) days prior to the Preconstruction Conference for each schedule(s) of work.*** After the ENGINEER approves the progress schedule, the Contractor will be required to follow the approved schedule of work unless deviations therefrom are approved by the ENGINEER.

The Contractor's attention is directed to the following requirements in developing his Schedule of Work:

1. The purpose of the Schedule of Work is to assure a safe area of operation for the Contractor and Airport traffic, maintenance of traffic on the taxiways and runways adjacent to the construction areas, and performance of the construction in an acceptable manner and time frame.

2. The Contractor shall make his own estimate of the difficulties involved in arranging the work to comply with the above requirements and shall not claim any added compensation by reason of delay or increased cost due to these requirements.
3. The schedule shall include, but is not limited to, approximate dates and exact time intervals for performing each work task, sub-schedules for shop drawing submittals, review times, procurement schedules, and delivery dates.

### **PSP-3 CONTRACT TIME AND LIQUIDATED DAMAGES**

Contract Time: The work as described by the contract specifications and as shown on the plans shall be completed and ready for use by the Owner within the following number of days after the date of Notice-to-Proceed. The time schedule for completion of this project is critical and liquidated damages as prescribed in the Contract will be enforced.

Base Bid Project Contract Time – Sixty (60) consecutive calendar days

Liquidated Damages: Owner and Contractor recognize that time is of the essence and that Owner will suffer financial loss if the work is not substantially complete in accordance with the time(s) specified herein. They also recognize the delays, expenses and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by Owner if the work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty) Contractor shall pay Owner the amounts stipulated herein below.

Contractor further understands and hereby expressly agrees that in addition to liquidated damages specified herein below, to pay the Owner the actual costs to Owner for any inspector or inspectors necessarily employed by Owner on the work and the actual costs to Owner for the Engineer's observation of construction and project representative services including all travel and subsistence expenses after the date specified for Project completion until the work is completed and ready for final payment. Further, the Contractor agrees that the sums to be paid the Owner may be deducted from the sum due the Contractor for work performed as provided in Section 90 of the General Provisions.

One Thousand Dollars (\$1,000.00) per consecutive calendar day

The Contractor shall complete all punch list items determined by the Owner and the Engineer within fourteen (14) consecutive calendar days from the date of the Final Inspection, unless otherwise agreed in writing. Failure to do so will result in liquidated damages of one thousand six hundred dollars (\$1,600.00) per day beyond the fourteen (14) day period.

### **PSP-4 NOTAMS**

The OWNER will issue the necessary NOTAMS to reflect hazardous conditions. The Contractor shall work with the ENGINEER and OWNER to schedule NOTAM issuance and Airport Operations Area (AOA) closures, and shall provide the OWNER and ENGINEER with advance notice of the need to issue or close a NOTAM. It is important that NOTAMS be kept current and reflect the actual conditions with respect to construction situations. Active NOTAMS shall be reviewed periodically and revised to reflect the current conditions.

## **PSP-5 CONSTRUCTION LAYOUT AND CONTROL**

The ENGINEER has furnished control points for horizontal control and bench marks for vertical control as shown on the plans. It shall be the Contractor's responsibility to layout the work from these points and to provide all other measurements to ensure positive horizontal and vertical control of the work. All survey work shall be performed under the supervision of a Registered Land Surveyor or a Registered Professional Engineer, in the State of North Carolina, by a qualified instrument man, rodman, and chainman with instruments and equipment subject to the approval of the ENGINEER.

## **PSP-6 RECORD DRAWINGS**

The Contractor will also be required to maintain a set of as constructed plans on the project at all times, noting any changes, deviations, etc., with the responsibility to furnish the OWNER, at the completion of the project, a set of as constructed plans. These as constructed plans shall be delivered to the ENGINEER prior to final acceptance.

## **PSP-7 HAUL ROADS**

Haul roads to be used under this Contract shall be those designated and approved by the ENGINEER. In general, the Contractor shall confine his equipment and hauling where practical to existing roads on the Airport, as shown in the plans. If existing pavement is damaged by the Contractor's hauling operations, it shall be repaired to its original condition at the Contractor's expense. Haul roads across turfed areas shall be repaired, scarified, seeded, mulched, and fertilized at the Contractor's expense. Metal track vehicles will not be permitted to operate on or across existing pavement without protective matting to prevent marring of the pavement surface. Access roads shall be constructed as required. All costs associated with supplying, constructing, maintaining and restoring temporary haul roads shall be included in the lump sum price bid for "Mobilization."

## **PSP-8 TEMPORARY CONSTRUCTION ZONE FLAGGING**

The Contractor is responsible for supplying, erecting, and maintaining temporary construction zone flagging, fencing, etc. in the areas shown on the plans, as directed by the ENGINEER, or at the Contractor's discretion based on the Contractor's company safety plan. This flagging, fencing, etc. shall be continuous and fluorescent and define construction areas outside limits of temporary security fence. All costs associated with supplying, erecting, relocating, and maintaining temporary construction zone flagging, fencing, etc. shall be included in the lump sum bid price for "Mobilization".

## **PSP-9 SITE CLEANUP**

All spillage in active air operation areas shall be cleaned up immediately. The contractor shall have a power broom available on site at all times. During any operation involving work with equipment or hauling on runways or taxiways, Contractor shall also have a vacuum/sweeper truck on site.

The Contractor shall keep all active airfield pavements clear of all debris, stones, etc., during construction. Contractor shall visually inspect active airfield pavement after each crossing by vehicles during hauling operations.

The acceptability of pavement cleanup is at the sole discretion of the Airport. The Contractor shall sweep and vacuum pavement areas until the cleanup is satisfactory to the Airport. The Contractor shall be prepared to assign necessary manpower and equipment to complete cleanup prior to the scheduled re-opening of the active area.

#### **PSP-10            ENGINEER'S FIELD OFFICE**

No field office is required for this project.

#### **PSP-11            DUST CONTROL**

It is the intent of these specifications that the Contractor will, by watering, chemicals, vegetation, or other means, prevent the occurrence of dust which will be objectionable to the residents of the area or violate existing laws or regulation or cause hazards to air traffic. The Contractor shall immediately implement dust control procedures when requested or as directed by the ENGINEER or OWNER. The contractor shall have at least one operable water distribution truck on site at all times.

#### **PSP-12            TESTING – GENERAL**

All testing required by the Contract specifications for acceptance of the work (except as noted in the individual specification sections and as explained below) will be initiated by the ENGINEER with the full cooperation of the Contractor. Testing will be scheduled after the Contractor confirms to the ENGINEER that an area is ready for testing. An independent testing laboratory will be used on the project, which laboratory technicians will be under the direction of the Resident Project Representative. There is no cost to the Contractor for testing under this heading (except as noted in the individual specifications section and as explained below).

The Contractor will be required, at his expense, to furnish proposed job mix formulas for the asphalt pavement, and structural concrete to the ENGINEER for his approval at least thirty (30) days prior to the proposed date for use. The Contractor may utilize another independent testing laboratory or the testing laboratory designated for this project, at his discretion, to develop the job mix formulas. If the testing laboratory designated for this project is not used for the development of the job mix formulas, the Contractor may be requested to submit the necessary materials to the designated laboratory for verification and *will be* required to furnish all required test data, graphs, etc., as required and specified in the item specifications. The cost for the materials and delivery of these items shall be included in the unit costs for the applicable items under this Contract.

The Contractor will also be required to furnish a nuclear density gauge for use on this project during paving. This gauge shall be operated by a trained laboratory technician to provide for continuous monitoring of paving operations and their conformance with the specifications. The cost of furnishing the nuclear density gauge and trained laboratory technician shall be borne by the Contractor. The nuclear gauge is to be used as an aid in construction operations; the OWNER will not use nuclear gauge test results to determine acceptance and/or rejection of the material.



**NOTE:** *The Contractor will be required to pay for all retests of failing quality control tests taken throughout the project which are performed by the testing laboratory after the ENGINEER has been notified by the Contractor that the item is ready for testing.*

Testing to be done during construction is indicated for each bid item in the individual sections.

### **PSP-13            PROGRESS MEETING**

A Progress Meeting will be held throughout the project. The purpose of this meeting will be scheduling and coordination of the work between Contractors, review of the project schedule, and discussion of project issues. The Contractor will be required to have a qualified representative at each of these meetings. The Owner or Engineer reserves the right to schedule additional meetings if deemed necessary.

### **PSP-14            SHOP DRAWINGS**

The Contractor is responsible for the preparation of detailed shop drawings necessary for the fabrication, erection and construction of all parts of the work in conformity with the Contract Documents. *Six (6) copies of shop drawings shall be submitted to the ENGINEER in accordance with the procedures herein described. The Contractor may elect to email shop drawings, via PDF format, which would require one copy attached to the email.*

“Shop Drawings,” wherever referred to, shall be defined as drawings, diagrams, illustrations, schedules, catalog cuts, performance charts, brochures, and other data prepared by the Contractor or any subcontractor, manufacturer, supplier or distributor, which illustrate how specific portions of the work shall be fabricated and/or installed.

Where it is difficult to provide shop drawing transparencies such as for “catalog cuts,” “brochures” or “photographs,” the Contractor shall submit a minimum of six (6) copies of such “cuts,” “brochures” or “photographs.” Additional copies shall be supplied when required by the ENGINEER.

All submissions of shop drawings, brochures and catalog cuts shall be accompanied by a transmittal letter listing the drawings submitted by number and title.

Each reproducible shop drawing shall contain title block with the following information provided:

- A.**     Number and title of drawing, including contract number.
- B.**     Date of drawing or revisions.
- C.**     Name of Contractor or subcontractor submitting drawings.
- D.**     Project number.
- E.**     Specification section title and number.
- F.**     Space above the title block for ENGINEER'S stamp.

**G. Submission number (whether first, second, third, etc.).**

Each shop drawing shall have listed on it all contract references, drawing number, plus shop drawing numbers on related work by other subcontractors, if available.

Non-reproducible shop drawings shall be submitted with a cover sheet containing all of the information required on reproducible shop drawings.

Shop drawings shall be complete in every detail, including a location plan relating the work to space identification and column numbers. Material, gauges, method of fastening, size and spacing of fastenings, connections with other work, cutting, fitting, drilling, and any and all other necessary information as per usual trade practice or as required for any specific purpose must be clearly shown.

***The Contractor shall check and approve all shop drawings to make sure that they conform to the drawings, specifications, and other contract requirements, and correct the drawings found to be inaccurate or otherwise in error. The Engineer will not accept any submittal or shop drawing sent directly from a supplier or subcontractor. All submittals and shop drawings shall be transmitted to the Engineer from the Contractor after he has made a thorough review of each one and determined to be ready for review by the Engineer.***

The Contractor shall verify all field dimensions and criteria and shall be responsible for the coordination of work by all subcontractors.

Shop drawings, at the time of submission, shall bear the signature of the Contractor's checker, date and stamp of approval for submission to the ENGINEER as evidence that such drawings and/or details have been reviewed, checked and approved by the Contractor. Drawings submitted without such stamp of approval will be returned to the Contractor unapproved and will require resubmission. In such event, it will be deemed that the Contractor has not complied with the requirements of this subsection and shall bear the risks of delays as if no drawings or details had been submitted. Both sepia and prints must bear Contractor's stamp.

The Contractor, by approving and submitting shop drawings, represents that he has determined and verified all field measurements and quantities, field construction criteria, materials, catalog numbers, and similar data, and that he has reviewed and coordinated the information in the shop drawings with the requirements of the work and the contract documents.

At the time of submission, the Contractor shall inform the ENGINEER in writing of any deviation in the shop drawings or samples from the requirements of the contract documents.

The ENGINEER will review and approve shop drawings and samples with reasonable promptness so as to minimize delay, but only for conformance with the design concept of the contract and with the information given in the contract documents. The ENGINEER'S approval of a separate item shall not indicate approval of an assembly in which the item functions. The ENGINEER will return the shop drawings transparency/sepia to the Contractor for his use and distribution.

The ENGINEER'S approval of shop drawings or samples shall not relieve the Contractor of responsibility for any deviation from the requirements of the contract documents unless the Contractor has informed the ENGINEER in writing of such deviation at the time of submission and the ENGINEER has given written approval to the specific deviation, nor shall the ENGINEER'S approval relieve the Contractor from responsibility for errors or omissions in the shop drawings or samples.

No materials shall be ordered and no portion of the work requiring shop drawings or sample submission shall be commenced until the submission has been approved by the ENGINEER. All such materials and portions of work shall be in accordance with approved shop drawings and samples.

The Contractor shall, when requested by the ENGINEER in writing, submit additional shop drawings to those required by the technical specifications or special provisions.

Prior to final acceptance of the work, the Contractor shall deliver to the ENGINEER three (3) copies of all approved shop drawings incorporating all notations made on the approved submittal.

The Contractor shall deliver to the ENGINEER three (3) complete sets of all maintenance manuals, parts list, operating instructions and other necessary documents required for all installed materials, equipment, or machinery. Such documents shall be furnished concurrently with the installations of the respective materials, equipment, or machinery. All shop drawings submitted by the Contractor and approved by the ENGINEER become part of the contract documents.

#### **PSP-15          ADDENDA**

All Addenda will be available through Richa Graphics' plan room, and be on file in the Airport Manager's office at the Mid-Carolina Regional Airport. It shall be the Bidder's responsibility to make inquiry as to the Addenda issued. All such Addenda shall become part of the contract and all Bidders shall be bound by such Addenda whether or not received or acknowledged by the Bidder.

#### **PSP-16          SUBSURFACE INVESTIGATION**

A subsurface investigation has not been completed for this project. The Contractor shall make his own assumptions and complete his own subsurface investigations, if necessary, to satisfy himself as to the character, quality and quantities of work to be performed.

#### **PSP-17          AWARDING OF CONTRACT**

The OWNER shall award the contract or contracts conditioned upon funds being available for construction and other governmental approvals as may be required. The contract will be awarded to the lowest responsible, responsive Bidder of Bidders, as required by North Carolina General Statutes. Consideration will be given only to proposals from Contractors who are properly licensed, bonded, experienced in the class of work proposed and who can refer to projects of similar magnitude and character that have been completed by them. The Owner reserves the right to reject any and all bids and to waive any and all technical defects in the execution and submission of any bid. The Owner also reserves the right to reject any and all proposals and to waive informalities and technicalities as it may deem to be in its best interest.

## **PSP-18            CONTRACT BONDS**

Within ten days of notification of award of the contract, the Contractor shall secure and post a Performance Bond and Labor and Material Bond, each in the amount of 100% of the Total Contract Sum. All such bonds shall be issued by a surety acceptable to the Owner. The Owner shall be named as the beneficiary. Cash bonds will not be accepted.

## **PSP-19            NOTICE TO PROCEED**

A Notice to Proceed will be issued to the Contractor upon receipt of the executed Contract, bonds, insurance certificates, receipt of approval by other governmental agencies (if required) and any other documentation required by the ENGINEER. Any delay in issuance of the Notice to Proceed due to the Contractor's failure to provide the required documentation and consequently not being allowed to begin work on the project will not be sufficient grounds for an extension of the Contract Period.

## **PSP-20            MATERIALS AND EQUIPMENT STORAGE**

The Contractor shall be responsible for locating and providing storage areas for construction materials and equipment. The material and equipment storage shall comply with all local and state ordinances throughout the construction period. The Contractor shall restore the storage area to its original condition upon completion of the project. Such restoration shall be at no additional cost to the Owner.

The Contractor shall be responsible for the safeguarding of materials and equipment against fire, theft and vandalism and shall not hold the Owner responsible in any way for occurrences of same.

## **PSP-21            EXISTING UTILITIES**

The Contractor is responsible for contacting all involved utility owners and advising them of the effect of this project on their respective utility. Construction plans and anticipated construction schedules shall be provided to the utility owners. Each utility owner will be requested to attend the preconstruction conference to discuss potential conflicts and their schedule for relocation where required. All adjustments or relocations will be made by the utility owner unless otherwise indicated in the Contract Documents.

Most major utilities with underground facilities in the State subscribe to North Carolina 811 service. For calls originating in North Carolina, the telephone number is 811. For calls originating outside of North Carolina, the number is (800) 632-4949. The Contractor shall include the cost of any coordination and cooperation of utilities in his bid. No additional compensation shall be allowed for delays or inconveniences sustained by the Contractors due to utility relocation or adjustments. No additional payment will be made for re-mobilization required by a utility's failure to relocate utility at the request of the Contractor.

All existing facilities will be carefully protected by the Contractor. Any facilities damaged by the Contractor will be repaired immediately and restored to original condition. The contractor shall be required to provide a private utility locating firm for all private utility locations. All runway lights, taxiway lights, signs, and concrete surfaces to remain exposed shall be protected from asphalt and paint spray by suitable means. These and any other above-ground facilities shall be cleaned, if asphalt or paint is deposited on them, to the satisfaction of the ENGINEER. It is understood and agreed that the OWNER does not guarantee the accuracy or the completeness of the location information relating to existing utility services, facilities or

structures that may be shown on the plans or encountered in the work. Any inaccuracy or omission in such information shall not relieve the Contractor of his/her responsibility to protect such existing features from damage or unscheduled interruption of service.

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

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

Where changes to utility facilities are to be made solely for the convenience of the Contractor, it shall be the Contractor's responsibility to arrange for such changes, and the Contractor shall bear all costs of such changes.

#### **PSP-22                    EXAMINATION OF PLANS, SPECIFICATIONS, AND SITE**

The bidder is expected to carefully examine the site of the proposed work, the proposal, plan, specifications, and Contract forms. He shall satisfy himself 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 Contractor shall bid this project in its entirety. The cost for all elements described within the plans and specifications shall be included in the contract bid proposal at the time of bid opening. The intent of the contract is to provide for construction and completion, in every detail, of the work described within these plans and specifications. The list of quantities does not list incidental items of work. The Contractor shall determine what line items incidentals are bid. Questions regarding incidentals or items of work not specifically called out in the list of quantities shall be addressed to the Engineer prior to submission of bid. The submission of a bid 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. Site visits can be arranged by contacting the Mid-Carolina Regional Airport at (704) 216-7749.

#### **PSP-23                    EROSION AND SEDIMENTATION CONTROL MEASURES**

The Contractor shall install and maintain all erosion and sedimentation control measures and devices necessary to comply with the Erosion and Sedimentation Control Plan and applicable local and state ordinances and laws. All erosion and sedimentation control measures and devices shall be installed prior to beginning clearing or grading operations. Such devices shall be maintained in proper working condition from installation throughout the duration of the project.

The Contractor shall indemnify and hold harmless the Owner for any penalties imposed against the Owner by any local or state agency for the Contractor's failure to install and properly maintain erosion and sedimentation control devices. The Contractor shall immediately correct any deficiencies in erosion and sedimentation measures identified by the Owner or local or state agency. If the Contractor fails to correct

the deficiencies within 24 hours after notification, the Owner will have such corrections performed and assess the cost of these corrections plus a 100% surcharge against the Contractor.

The costs for installing, maintaining for the duration of the project, and removing erosion and sedimentation devices shall be included in the respective items of work provided in the Contract.

#### **PSP-24           HAZARDOUS, CONTAMINATED, AND/OR TOXIC MATERIAL**

When the Contractor's operations encounter or expose any abnormal condition that may indicate the presence of a hazardous, contaminated, and/or toxic material, such operations shall be discontinued in the vicinity of the abnormal condition and the Owner shall be notified immediately. Upon notification by the Contractor, the Owner will investigate the work, and if hazardous, contaminated, and/or toxic materials are found, suspend the work in accordance with Section 80-07. The presence of barrels; old or abandoned underground storage tanks, and discolored earth, metal, wood, etc.; visible fumes; abnormal odors; excessively hot earth; smoke; or anything else that appears abnormal may be indicators of hazardous, contaminated, and/or toxic materials and shall be treated with extraordinary caution as they are evidence of abnormal conditions. The Contractor's operations shall not resume until so directed by the Engineer.

#### **PSP-25           OSHA REQUIREMENTS**

The Contractor shall comply with OSHA 1926, regulations applicable to the work.

#### **PSP-26           ADJUSTMENT OF CONTRACT TIME**

Contract time for this project may be adjusted only by change order, when requested by the Contractor in writing and approved by the ENGINEER and OWNER, for reasons outside of the Contractor's control, as follows:

1. Strikes, lockouts, or other labor actions which delay delivery of critical materials or performance of critical segments of work.
2. Natural disasters affecting the project site.
3. Excessive rainfall during an entire calendar month, defined as total monthly rainfall in excess of the normal rainfall for that calendar month as determined by NOAA and total number of days with more than 0.1" of rainfall in excess of the normal number of such days for that calendar month. Standard Baseline established for this Contract is as follows:

January – 5 days	July – 8 days
February – 5 days	August – 6 days
March – 6 days	September – 5 days
April – 5 days	October – 5 days
May – 8 days	November – 5 days
June – 7 days	December – 5 days

4. Extreme low temperatures, defined as the average daily temperatures falling below the normal average daily temperature for that date and below the minimum allowable temperature specified for a critical component of the work, for 15 days or more in a calendar month. Average daily temperature and normal average daily temperature values shall be as reported by the National Weather Services, the Southeast Regional Climate Center, or other reliable source provided by the Contractor and acceptable to the ENGINEER.
5. Suspension of the work as ordered by the ENGINEER or OWNER.
6. Delays in critical work by others.
7. Significant additions to the scope of work.

The Contractor shall bear the burden of proof that a delay has been caused by factors outside his control, shall clearly demonstrate how the delay impacts the critical path of the work as shown on his work schedule as last revised, and shall demonstrate that he has made reasonable and prudent efforts to overcome the impact of the delay on the critical path.

Refer also to Section 80 of the General Conditions

#### **PSP-27            INSURANCE REQUIREMENTS**

The Contractor shall purchase and maintain insurance in the amounts and coverage listed in Appendix A of the contract documents. The Contractor shall at the time of execution of the contract, file with the Owner, the Certificate of Insurance showing proof of coverage as required by this contract. All Certificates supplied in accordance with this provision shall contain a cancellation clause that in the event of a material change or cancellation, thirty (30) days prior written notice shall be given to the Owner. **A statement shall appear on the Certificate of Insurance and shall read: "Rowan County is to be added as an additional insured as evidence by an endorsement attached to this certificate."**

To the fullest extent permitted by law, the Contractor shall indemnify and hold harmless the Owner and its agents and employees from and against all claims, damages, losses and expenses, including but not limited to attorney's fees, arising out of or resulting from the performance of the Work provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom, and (2) is caused in whole or in part directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether or not it is caused in part by a party indemnified hereunder. In any and all claims against the Owner (or the ENGINEER) or any of its agents or employees, by any employee of the Contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the compensation or benefits payable by or for the Contractor or any subcontractor under Worker's Compensation Acts, Disability Benefit Acts or other employee benefits acts. The insurance required by this provision shall be acquired by the Contractor for not less than the limits specified in the specifications.

The Contractor is advised that if any part of the work under the Contract is sublet, he should require the subcontractor(s) to carry insurance as required above. However, this will in no way relieve the Contractor from providing full insurance coverage on all phases of the project, including any that are sublet.

When certain work is to be performed inside rights-of-way owned by railroads, North Carolina Department of Transportation or other agencies, both the Contractor and any subcontractor may be required to furnish individual insurance certificates made in favor by the controlling agency, with limits established by that agency.

## **PSP-28 MATERIAL AND EQUIPMENT**

Material, Equipment, and Products Incorporated into the Work shall conform to applicable specifications and standards; shall comply with size, make, type and quality specified, or as specifically approved in writing by the Engineer; and shall not be used for any purpose other than that for which it is designed or is specified.

Manufactured and Fabricated Products shall be designed, fabricated and assembled in accordance with the best engineering and shop practices. Like parts of duplicate units shall be manufactured to standard sizes and gages, to be interchangeable. Products shall be suitable for service conditions. Equipment capacities, sizes and dimensions shown or specified shall be adhered to unless variations are specifically approved by Engineer in writing.

Related Requirements in Other Parts of the Project Manual: Conditions of the Contract.

Standardization: Unless otherwise approved by the Engineer, items and equipment of a similar type and function shall be furnished by one manufacturer to standardize on replacement parts, service calls, operation and maintenance matters, and to avoid a division of responsibility among several manufacturers.

A single supplier shall be used on principal items of equipment and systems where one or more components are not manufactured by the principal supplier; this is required to place performance and service responsibilities for the entire unit or system with only one supplier or manufacturer.

Contractor shall submit a complete list of products to be incorporated into the work (with the name of the installing contractor) at the Preconstruction Conference required by these specifications.

For products specified only by reference standard, select any product meeting that standard.

For products specified by naming several products or manufacturers, select any one of the products or manufacturers named, which complies with the specifications.

Airport lighting equipment covered by FAA specifications require certification under the Airport Lighting Equipment Certification Program described in Advisory Circular 150/5345-53B, latest edition. Select equipment from the Certified Airport Lighting Equipment list appended to the Advisory Circular. An updated list is published biannually.

For product substitutions the Contractor shall submit, at the Preconstruction Conference, all requests for product substitutions. No requests for substitutions will be accepted from manufacturers or suppliers.

Submit a separate written request for each product, supported with complete data, with drawings and samples as appropriate, including:

1. Comparison of the qualities of the proposed substitution with that specified.
2. Changes required in other elements of the work because of the substitution.



3. Effect on the construction schedule.
4. Cost data comparing the proposed substitution with the product specified.
5. Any required license fees or royalties.
6. Availability of maintenance service, and source of replacement materials.

Engineer shall be the judge of the equality and acceptability of the proposed substitution. If Engineer determines the proposed substitute product is not "equal" to the specified product, the Contractor must provide the specified product, subject to Engineer's shop drawing review and approval.

No further requests for substitutions will be considered after Preconstruction Conference.

#### **PSP-29 PRECONSTRUCTION CONFERENCE**

A pre-construction conference will be scheduled as soon as practicable after the award of the Contract. The Contractor will be expected to attend the conference along with any anticipated major subcontractors and major material suppliers, a proposed progress schedule in a form satisfactory to the ENGINEER and a statement of the anticipated monthly progress payments showing the percent of progress each month. The Contractor shall also provide at least two (2) telephone numbers which may be used to contact the Contractor or his authorized representative in the event of an emergency after normal business hours. Upon receipt of the required documentation, a Notice to Proceed will be issued by the ENGINEER.

The Contractor is also required to have the prospective job superintendent attend the preconstruction conference.

#### **PSP-30 CONTRACTOR REQUIRED INFORMATION**

The Contractor is required to submit a resume for any and all superintendents to be over the project throughout the duration of the project. The resumes shall be submitted to the Engineer and Airport at the preconstruction meeting.

At any time a new superintendent is used for the project which a resume was not submitted, a resume shall be submitted to the Engineer and Airport prior to his/her work on the project.

A list of all employees and subcontractors to work on the project site shall be submitted to the Engineer and Airport. The list should include all subcontractors working directly or indirectly for the prime Contractor and the amount each subcontractor is being paid. This list shall be provided to the Engineer and Airport at the preconstruction conference. The Contractor shall maintain a list of all employees and subcontractors working on the project for the duration of the project.

At any time a new employee or subcontractor is used for the project, an updated list shall be submitted to the Engineer and Airport prior to that employee or subcontractors working starting on Airport property.

## **PSP-31 CONTRACTOR COMMUNICATION - CONSTRUCTION OBSERVATION OF WORK**

The Contractor shall be responsible for the duration of the project to maintain communication with the Engineer and Resident Project Representative on construction work activities for this project. During single-day or multiple-day periods, when the Contractor determines work will not occur for any reason other than forecasted precipitation, he/she shall notify the Engineer and Resident Project Representative in writing a minimum of twenty-four (24) hours in advance of no work occurring. Failure on the part of the Contractor to provide such minimum advance notice will be grounds for assessment of additional liquidated damages by the Owner as follows.

***An amount of \$1,500.00 per calendar day shall be deducted from any money due the Contractor for each calendar day of advance notification failure described above, or if no money is due the Contractor, the Owner shall have the right to recover said sum or sums from the Contractor, from the surety, or from both. The amount of these deductions is to liquidate damages incurred by the Owner for additional Construction Observation services caused by the Contractor, and such deductions are not to be considered as penalties. These deductions are in addition to any other liquidated damages that may be assessed by the Owner provided for elsewhere in the Contract.***

## **PSP-32 QUANTITY TICKETS**

Quantity tickets for items not measurable in place shall be submitted to the Resident Project Representative within seventy-two (72) hours after receipt of the material on the job. Each ticket shall indicate the date, contractor, job location and name, quantity of material, truck number, and signature of the contractor or his authorized representative. No tickets will be accepted after seventy-two (72) hours have elapsed between the time of delivery and submittal of tickets to the Resident Project Representative.

## **PSP-33 GUARANTEE**

The Contractor shall guarantee all materials and workmanship for a period of one (1) year from the date of acceptance by the Owner and shall replace any portions that fail because of faulty materials or workmanship at no additional cost to the Owner. A six (6) month and eleven (11) month inspection will be held during the warranty period. The Contractor shall immediately repair all defective items upon notification. Items repaired under the warranty provisions shall have an extended warranty period of twelve (12) months for repair of the item.

## **PSP-34 PROJECT CLOSEOUT DOCUMENTS**

The Contractor shall provide the following documents with the final payment request, and any additional documents required by the FAA or NCDOT-DOA:

1. Notarized Consent of Surety to Final Payment (See Appendix "B")
2. Contractor's Affidavit of Payment of Debts and Claims (See Appendix "B")
3. Contractor's Affidavit Of Release (Waiver) Of Liens (See Appendix "B")

4. Sub-Contractor's Affidavit Of Release (Waiver) Of Liens
5. North Carolina and County Sales or Use Tax Statements and Certifications (See Appendix "C")
6. Contractor Warranty Statement
7. Project Record Drawings
8. Any remaining reports required by the NPDES General Stormwater Permit NCGO1000 (Construction Activities) between the last partial payment request and the final payment request.

No final payment will be authorized until these documents have been properly completed and submitted by the Contractor.

#### **PSP-35 GROUND COVER REQUIREMENTS**

All disturbed areas on this project shall be provided temporary or permanent stabilization with ground cover as soon as practicable but in any event within fourteen (14) calendar days from the last land-disturbing activity.

All perimeter swales, ditches, perimeter slopes and all slopes steeper than 3' horizontal to 1' vertical (3:1), shall be provided temporary or permanent stabilization as soon as practicable but in any event within seven (7) calendar days from the last land-disturbing activity.

#### **PSP-36 NPDES GENERAL CONSTRUCTION PERMIT REQUIREMENTS**

The Contractor will be provided a copy of the NPDES General Stormwater Permit NCGO1000 (Construction Activities) prior to starting construction activities on the project. The Contractor, including supervisor and personnel responsible for completing paperwork, shall attend a training session at the Airport. The Contractor shall be required to comply with all applicable requirements of the Permit, and maintain all required paperwork for review by the OWNER and the North Carolina Department of Natural Resources upon request, including but not limited to the form "STORMWATER INSPECTIONS FOR GENERAL PERMIT NCG010000 – LAND DISTURBING ACTIVITIES". The Contractor shall provide and maintain a rain gauge onsite for the duration of the project. These requirements shall remain in full force and effect until the North Carolina Department of Natural Resources releases the site and formally closes the sediment and erosion control permit in writing for this project.

#### **PSP-37 WINTER WEATHER SHUTDOWN**

In the event inclement winter weather causes the Contractor's progress to become unsatisfactory in the opinion of the Engineer and Owner, the Owner maintains the right to issue one or more temporary winter weather shut downs until weather conditions improve over a significant enough time period to allow satisfactory progress to be made by the Contractor.

If the Owner issues a temporary winter weather shut down, the Contractor shall re-open any temporarily closed airfield areas, shall provide any temporary measures to ensure safe movement and operation on the airfield by aircraft, and shall then cease any further work after being notified in writing of the shut down.

The contract time will be stopped by the Owner during the temporary winter weather shut down, and will not re-start until the temporary winter weather shut down is terminated by the Owner in writing and the Contractor resumes work.

The Contractor will not be paid separately for any de-mobilization, re-mobilization or idle equipment/personnel costs as a result of the temporary winter weather shut down. The Contractor shall also be responsible for all required maintenance of sediment and erosion control measures during the temporary winter weather shut down at no additional cost to the Owner. All such costs and other incidentals incurred by the Contractor during the temporary winter weather shut down shall be incidental to the Contract and shall be included in the Contractor's bid proposal.

#### **END OF PROJECT SPECIAL PROVISIONS**

## **SAFETY AND SECURITY REQUIREMENTS**



## **SAFETY AND SECURITY REQUIREMENTS**

### **SAFETY REQUIREMENTS**

#### **GENERAL**

The Contractor shall familiarize themselves with AC 150/5370-2 (current edition) "Operational Safety on Airport During Construction. This AC sets forth guidelines for operation safety on airports during construction. This AC can be found at:

[http://www.faa.gov/documentLibrary/media/Advisory\\_Circular/150-5370-2G.pdf](http://www.faa.gov/documentLibrary/media/Advisory_Circular/150-5370-2G.pdf).

#### **CONSTRUCTION ACTIVITY AND AIRCRAFT MOVEMENTS:**

During the time that the Contractor is performing the work under this contract, the existing terminal ramps, taxiways, and runways at the airport will remain in use by aircraft, except as provided herein. To the extent feasible and convenient, in the opinion of the Owner's Engineer and to the extent permitted by the Federal Aviation Administration, the use by aircraft of runways and taxiways adjacent to areas where the Contractor is working will be so scheduled as to reduce disturbance to the Contractor's operations. Aircraft operations, unless otherwise specified in the contract specifications, shall always have priority over any and all of the Contractor's operations, and the Contractor shall not allow his employees, subcontractors, material men, and suppliers, or any other persons over whom he has control to enter or remain upon or allow any plant or materials to be brought on or to remain upon any part of the airport which, in the opinion of the Engineer, would be a hazardous location. Should ramps, runways, or taxiways be required for use by aircraft, and should the Engineer deem the Contractor to be too close to the portion used by aircraft for safety, he may, at his sole discretion, order the Contractor to suspend his operations; remove his personnel, plant, equipment, and materials to a safe distance; and stand by until the runway and taxiways are no longer required for use by aircraft.

The Contractor shall not allow his/her employees, subcontractors, material suppliers, or any other persons under the Contractor's control to cross any active runway, by foot or in a vehicle, without permission of the Owner or Engineer. The Contractor will be subject to a fine of up to \$10,000 for any unauthorized crossing of an active runway by any such person under the Contractor's control.

#### **CONSTRUCTION ACTIVITY IN THE VICINITY OF NAVIGATIONAL AIDS**

Construction activity in the vicinity of the FAA navigational aids (i.e., ILS, VOR) requires special consideration. Prospective bidders shall be alerted to this fact by the incorporating language requiring close coordination with the local Airway Facilities Sector as a condition of bid.

#### **ADDITIONAL SAFETY REQUIREMENTS**

The Contractor will adhere to the following requirements when working in close proximity to aircraft:

- A. The Contractor shall brief each equipment and vehicle operator to thoroughly acquaint him with the absolute necessity of exercising discretion and proper judgment while in the vicinity to aircraft operations.
- B. Assist the Engineer and the Owner in monitoring the conduct of each operator. All of the Contractor's employees and subcontractors shall be easily identifiable, and shall clothing as required by OSHA. All of the Contractor's employees and subcontractors shall wear shirts at all times.

- C. Require all operators to maintain a safe and reasonable speed and to utilize equipment strictly in accordance with prevailing weather conditions.
- D. At the direction of the Engineer, dismiss from the project any person operating unauthorized vehicles or equipment in an unauthorized area, or operating vehicles or equipment in a reckless and unreasonable manner.
- E. Shall not allow trash or debris to accumulate in his work or operations area. Extreme caution will be taken to keep all trash and debris from taxiways, runways, and ramp areas.
- F. Shall not allow his vehicles or equipment to be operated within 65.5 feet of the centerline of an active taxiway or within 250 feet of the centerline of an active runway, unless they are using a designated haul route or have the express consent of the Engineer.
- G. Immediately cease and remove his operations from any operations or work area at any time he is instructed to do so by the Engineer, or by the Airport Manager. The Contractor will not allow his operations to return to the area until he has received permission to do so by the Engineer.
- H. Shall provide, erect, and maintain all necessary barricades, signs, danger signals, and lights for the protection of the work and the safety of the public for both land and air traffic. Obstructions shall be illuminated as required by the Engineer.

## **MARKING OF REQUIRED CLEARANCES**

The Contractor will establish a system of visual aids for marking and delineating the limits of required clearances adjacent to active runways, taxiways, and NAVAIDS during the process of construction under this contract. The system shall be easily distinguishable during both day and night time work. A detailed plan of materials and procedures the Contractor proposes to use will be submitted to the Engineer for approval prior to the start of any work under this contract. Any deviations from the plan must be requested and approved by the Engineer. The Engineer may request changes to the established plan whenever it is necessary for the protection of airport operations. The approved system of marking and delineation shall be installed, maintained, and protected at all times by the Contractor.

## **SECURITY REQUIREMENTS**

### **CONSTRUCTION SECURITY REQUIREMENTS**

- A. The Contractor shall mark each of his vehicles and his/her subcontractor's vehicles and pieces of equipment with a company name or logo on the sides of the vehicles and equipment. (For the purpose of this specification, a vehicle shall be defined as any device, including cars, trucks, buses, or other conveyances, which is required to carry a state license tag. All other devices which are primarily used in construction activities will be classified as equipment).
- B. **All** vehicles and equipment shall be marked as required by section “4. Vehicle Marking” of FAA Advisory Circular 150/5210-5 (current edition) while being operated in the Aircraft Operations Area (AOA).
- C. **All** vehicles and equipment shall be lighted as required by section “5. Vehicle Lighting” of FAA Advisory Circular 150/5210-5 (current edition) while being operated in the Aircraft Operations Area (AOA).



## **GENERAL CONSTRUCTION REQUIREMENTS**

### **PROTECTION OF CABLES, CONTROLS, NAVAIDS, AND WEATHER BUREAU FACILITIES**

- A. The Contractor is hereby informed that there are installed on the airport, FAA NAVAIDS, U.S. Weather Bureau facilities, and other electric power cables serving other facilities. Such NAVAIDS, Weather Bureau, and other facilities and electric 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 approved periods of time, which approval is subject to withdrawal at any time because of changes in the weather, emergency conditions on the existing airfield areas, anticipation of emergency conditions, and for any other reason as determined by the Engineers acting under the orders and instructions of the Owner and/or the designated FAA representative. Any instructions to this Contractor to clear any given area, at any time, by the Engineer or, the Owner, shall be immediately executed. Construction work will be recommended in the cleared areas only when additional instructions are issued by the proper authorities.
- 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 OWNER for the information of the Contractor, before any work in their general vicinity is started. Thereafter, through the entire time of this construction, the cables shall be protected from any possible damage, including crossing with unauthorized equipment, etc. All known facilities and buried cables, and the approximate location thereof in the construction area, are shown on the plans.
- C. These special provisions intend to make perfectly clear the need for protection of FAA NAVAIDS, Weather Bureau, and other facilities and cables by this Contractor at all times.
- D. The Contractor shall immediately repair, with identical material by skilled workmen, any underground cables serving FAA NAVAIDS, Weather Bureau, and other airport facilities which are damaged by his workmen, equipment, or work. Prior approval of 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 NAVAIDS, Weather Bureau facilities, or other cables and controls serving such NAVAIDS and facilities damaged by the Contractor. Prior approval of the Engineer or of the representative designated by the Owner 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 other airport facilities and cables damaged by this Contractor.
- E. It is recognized that the Owner will incur costs for employees' salaries, engineering fees, and otherwise in connection with the damage, inspection, and repair of any such damage caused by the Contractor; and, consequently, the Owner may incur loss of income by reason of the diversion of aircraft traffic from the airport resulting from interruption of the use of airport facilities, and that such expenses and loss of income are not measurable now and may not be reasonably ascertainable at the time of any incident caused by this Contractor. The Owner and the Contractor hereby agree to the assessment of liquidated damages in lieu of such expenses or other damages incurred by the Owner. In addition to the obligation of this Contractor to immediately repair any cables or facilities damaged by the Contractor, as set forth above, for each incident where cables are located within five feet of the position defined on the ground and are cut or damaged and the facility served by cables which are cut or damaged is not able to perform its required function, resulting in the diversion of aircraft or the interruption of the normal flow of air traffic and aircraft operations on the airport, the sum of \$2,000.00 shall be deducted from any money due the Contractor, or if no money is due the Contractor, the Owner shall have the right to recover said sum or sums from the Contractor, from the surety, or from both if concurrence is received by the FAA. The amount of

these deductions is to cover liquidated damages to the Owner incurred by additional and other expenses and damages arising from the incident or incidents caused by the Contractor, and such deductions are not to be considered as penalties.

## **PROTECTION OF UTILITIES**

- A. The Contractor shall be responsible for the safety, protection, maintenance, and final restoration to all surface and subsurface utilities (together with all parts and appurtenances thereof). Utilities, as referred to in this section, shall be understood to mean public utilities and other privately-owned utilities.
- B. The Contractor shall not proceed with his work until he has made diligent inquiry at the offices of the utility companies or other owners involved, of the nature and scope of the project, and of his operations that may affect their facilities. The Contractor shall notify the Engineer of his operations affecting utilities at the same time the utility companies are notified.
- C. Before the Contractor begins any work or operations in the vicinity or subsurface structures, he shall carefully locate such structures and conduct his operations so as to avoid any damage to them.
- D. The Contractor shall permit the owners of utilities, and personnel engaged by them, access to the site of the work at all times in order to protect or relocate their facilities, and he shall cooperate with them in performing this work.
- E. The Contractor shall maintain, at no expense to the Owner, all access roads in a condition suitable for use by the Owner's normal equipment.
- F. The Contractor shall be responsible for the continuity of service of all overhead, surface, and subsurface utilities affected by his operations, and shall maintain them in a safe and satisfactory operating condition. The Engineer shall be notified at the time of all contracts with any utility company or other owner to ensure proper coordination between Contractor, Engineer, and utility company.
- G. The Contractor shall carry out his work carefully and skillfully, and shall support and secure utility structures so as to avoid damage to them. He shall not move any utility structures without the owner's written consent, and at the completion of the work, their condition shall be as safe and permanent as before.
- H. The Contractor shall, at his own expense, make good any direct or indirect damage that may be done in the course of construction to any utility structure or property through or by reason of the prosecution of the work. The liability of the Contractor under this covenant is absolute and is not dependent upon any questions of negligence on his part, or on the part of his agent, servants, employees, subcontractors, or suppliers, and the neglect of the Owner or the Engineer to direct the Contractor to take any particular precaution or to refrain from doing any particular thing shall not excuse the Contractor of any such damage in any case.
- I. When utility structures, facilities, or equipment are damaged by the Contractor, he shall notify their owners, who may cause the damage to be repaired at the Contractor's expense. If the cost thereof is not paid by the Contractor within 30 days after repairs have been completed, the Owner may retain an amount sufficient to cover the cost from any monies due or that may become due the Contractor under the contract.
- J. It is understood and agreed that the Contractor has considered in his bid all of the permanent and

temporary utility appurtenances in their present or relocated positions and that no additional compensation will be allowed for normal delays, inconvenience, or damage sustained by him due to any interference from the said utility appurtenances or the operation of moving them.

- K. It is anticipated that the following utilities, as indicated on the plans, may be encountered by the Contractor while performing his operations under this contract, and which will remain in active service as indicated on the plans. (The Owner does not guarantee the accuracy of this list nor shall it be responsible for any additions thereto or deletions therefrom due to abandonment).
1. Water lines as generally shown on the drawings.
  2. Telephone ductbank, manholes and cable.
  3. Storm and Sanitary Sewer lines.
  4. Gas and fuel transmission lines as generally shown on the drawings.
  5. Electrical services as generally shown on the drawings.
  6. All airfield electrical cables, light fixtures, and appurtenances as generally shown on the plans.

**END OF SAFE**

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# **TECHNICAL SPECIFICATIONS**



**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

**1.2 SUMMARY**

- A. Section Includes:
  - 1. Sodding.
- B. Related Sections:
  - 1. Division 31 Section "Site Clearing" for topsoil stripping and stockpiling.
  - 2. Division 31 Section "Earth Moving" for excavation, filling and backfilling, and rough grading.
  - 3. Division 32 Section "Plants" for border edgings.

**1.3 DEFINITIONS**

- A. Duff Layer: The surface layer of native topsoil that is composed of mostly decayed leaves, twigs, and detritus.
- B. Finish Grade: Elevation of finished surface of planting soil.
- C. Manufactured Topsoil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.
- D. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. This includes insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. It also includes substances or mixtures intended for use as a plant regulator, defoliant, or desiccant.
- E. Pests: Living organisms that occur where they are not desired or that cause damage to plants, animals, or people. These include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.
- F. Planting Soil: Standardized topsoil; existing, native surface topsoil; existing, in-place surface soil; imported topsoil; or manufactured topsoil that is modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth.
- G. Subgrade: Surface or elevation of subsoil remaining after excavation is complete, or top surface of a fill or backfill before planting soil is placed.
- H. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.

- I. Surface Soil: Soil that is present at the top layer of the existing soil profile at the Project site. In undisturbed areas, the surface soil is typically topsoil, but in disturbed areas such as urban environments, the surface soil can be subsoil.

#### **1.4 ACTION SUBMITTALS**

- A. Product Data: For each type of product indicated.
  - 1. Pesticides and Herbicides: Include product label and manufacturer's application instructions specific to this Project.

#### **1.5 INFORMATION SUBMITTALS**

- A. Certification of Grass Seed: From seed vendor for each grass-seed monostand or mixture stating the botanical and common name, percentage by weight of each species and variety, and percentage of purity, germination, and weed seed. Include the year of production and date of packaging.
  - 1. Certification of each seed mixture for turfgrass sod. Include identification of source and name and telephone number of supplier.
- B. Qualification Data: For qualified landscape Installer.
- C. Product Certificates: For soil amendments and fertilizers from manufacturer.
- D. Material Test Reports: For standardized ASTM D 5268 topsoil, existing native surface topsoil, existing in-place surface soil, and imported or manufactured topsoil.
- E. Maintenance Instructions: Recommended procedures to be established by Owner for maintenance of turf and meadows during a calendar year. Submit before expiration of required initial maintenance periods.

#### **1.6 QUALITY ASSURANCE**

- A. Installer Qualifications: A qualified landscape Installer whose work has resulted in successful turf establishment.
  - 1. Professional Membership: Installer shall be a member in good standing of either the Professional Landcare Network or the American Nursery and Landscape Association.
  - 2. Experience: Three years' experience in turf installation in addition to requirements in Division 01 Section "Quality Requirements."
  - 3. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when work is in progress.
  - 4. Personnel Certifications: Installer's field supervisor shall have certification in all of the following categories from the Professional Landcare Network:
    - a. Certified Landscape Technician - Exterior, with installation and maintenance specialty area(s), designated CLT-Exterior.
    - b. Certified Turfgrass Professional, designated CTP.
  - 5. Maintenance Proximity: Not more than two hours' normal travel time from Installer's place of business to Project site.



6. Pesticide Applicator: State licensed, commercial.
- B. Soil-Testing Laboratory Qualifications: An independent laboratory or university laboratory, recognized by the State Department of Agriculture, with the experience and capability to conduct the testing indicated and that specializes in types of tests to be performed.
- C. Soil Analysis: For each unamended soil type, furnish soil analysis and a written report by a qualified soil-testing laboratory stating percentages of organic matter; gradation of sand, silt, and clay content; cation exchange capacity; deleterious material; pH; and mineral and plant-nutrient content of the soil.
  1. Testing methods and written recommendations shall comply with USDA's Handbook No. 60.
  2. The soil-testing laboratory shall oversee soil sampling, with depth, location, and number of samples to be taken per instructions from Landscape Architect. A minimum of three representative samples shall be taken from varied locations for each soil to be used or amended for planting purposes.
  3. Report suitability of tested soil for turf growth.
    - a. Based on the test results, state recommendations for soil treatments and soil amendments to be incorporated. State recommendations in weight per 1000 sq. ft. (92.9 sq. m) or volume per cu. yd. (0.76 cu. m) for nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce satisfactory planting soil suitable for healthy, viable plants.
    - b. Report presence of problem salts, minerals, or heavy metals, including aluminum, arsenic, barium, cadmium, chromium, cobalt, lead, lithium, and vanadium. If such problem materials are present, provide additional recommendations for corrective action.

#### **1.7 DELIVERY, STORAGE, AND HANDLING**

- A. Seed and Other Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of conformance with state and federal laws, as applicable.
- B. Sod: Harvest, deliver, store, and handle sod according to requirements in "Specifications for Turfgrass Sod Materials" and "Specifications for Turfgrass Sod Transplanting and Installation" in TPI's "Guideline Specifications to Turfgrass Sodding." Deliver sod in time for planting within 24 hours of harvesting. Protect sod from breakage and drying.
- C. Bulk Materials:
  1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
  2. Provide erosion-control measures to prevent erosion or displacement of bulk materials, discharge of soil-bearing water runoff, and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
  3. Accompany each delivery of bulk fertilizers, lime, and soil amendments with appropriate certificates.

## **1.8 PROJECT CONDITIONS**

- A. Planting Restrictions: Plant during one of the following periods unless otherwise approved by Landscape Architect and Owner. Coordinate planting periods with initial maintenance periods to provide required maintenance from date of planting completion.
  - 1. Spring Planting: March 1 through June 1
  - 2. Fall Planting: September 15 through December 15
- B. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions.

## **1.9 MAINTENANCE**

- A. Initial Turf Maintenance Service: Provide full maintenance by skilled employees of landscape Installer. Maintain as required in Part 3. Begin maintenance immediately after each area is planted and continue until acceptable turf is established but for not less than the following periods:
  - 1. Sodded Turf: 90 days from date of planting completion of end of first full growing season, whichever is later.
    - a. When initial maintenance period has not elapsed before end of planting season, or if turf is not fully established, continue maintenance during next planting season.

## **PART 2 - PRODUCTS**

### **2.1 TURFGRASS**

- A. Turfgrass Sod: Certified, complying with "Specifications for Turfgrass Sod Materials" in TPI's "Guideline Specifications to Turfgrass Sodding." Furnish viable sod of uniform density, color, and texture, strongly rooted, and capable of vigorous growth and development when planted.
- B. Turfgrass Species: Sod of grass species as provided for on plans, with not less than 90 percent germination, not less than 85 percent pure seed, and not more than 0.5 percent weed seed:

### **2.2 INORGANIC SOIL AMENDMENTS**

- A. Lime: ASTM C 602, agricultural liming material containing a minimum of 80 percent calcium carbonate equivalent and as follows:
  - 1. Class: T, with a minimum of 99 percent passing through No. 8 (2.36-mm) sieve and a minimum of 75 percent passing through No. 60 (0.25-mm) sieve.
  - 2. Class: O, with a minimum of 95 percent passing through No. 8 (2.36-mm) sieve and a minimum of 55 percent passing through No. 60 (0.25-mm) sieve.
  - 3. Provide lime in form of ground dolomitic limestone
- B. Sulfur: Granular, biodegradable, containing a minimum of 90 percent sulfur, and with a minimum of 99 percent passing through No. 6 (3.35-mm) sieve and a maximum of 10 percent passing through No. 40 (0.425-mm) sieve.

- C. Iron Sulfate: Granulated ferrous sulfate containing a minimum of 20 percent iron and 10 percent sulfur.
- D. Aluminum Sulfate: Commercial grade, unadulterated.
- E. Perlite: Horticultural perlite, soil amendment grade.
- F. Agricultural Gypsum: Minimum 90 percent calcium sulfate, finely ground with 90 percent passing through No. 50 (0.30-mm) sieve.
- G. Sand: Clean, washed, natural or manufactured, and free of toxic materials.
- H. Diatomaceous Earth: Calcined, 90 percent silica, with approximately 140 percent water absorption capacity by weight.
- I. Zeolites: Mineral clinoptilolite with at least 60 percent water absorption by weight.

## **2.3 ORGANIC SOIL AMENDMENTS**

- A. Compost: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 3/4-inch (19-mm) sieve; soluble salt content of 5 to 10 decisiemens/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
  - 1. Organic Matter Content: 50 to 60 percent of dry weight.
  - 2. Feedstock: Agricultural, food, or industrial residuals; biosolids; yard trimmings; or source-separated or compostable mixed solid waste
- B. Sphagnum Peat: Partially decomposed sphagnum peat moss, finely divided or of granular texture, with a pH range of 3.4 to 4.8.
- C. Muck Peat: Partially decomposed moss peat, native peat, or reed-sedge peat, finely divided or of granular texture, with a pH range of 6 to 7.5, and having a water-absorbing capacity of 1100 to 2000 percent.
- D. Wood Derivatives: Decomposed, nitrogen-treated sawdust, ground bark, or wood waste; of uniform texture and free of chips, stones, sticks, soil, or toxic materials.
  - 1. In lieu of decomposed wood derivatives, mix partially decomposed wood derivatives with ammonium nitrate at a minimum rate of 0.15 lb/cu. ft. (2.4 kg/cu. m) of loose sawdust or ground bark, or with ammonium sulfate at a minimum rate of 0.25 lb/cu. ft. (4 kg/cu. m) of loose sawdust or ground bark.
- E. Manure: Well-rotted, unleached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, and material harmful to plant growth.

## **2.4 FERTILIZERS**

- A. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:

1. Composition: 1 lb/1000 sq. ft. (0.45 kg/92.9 sq. m) of actual nitrogen, 4 percent phosphorous, and 2 percent potassium, by weight.
  2. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing laboratory.
- B. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
1. Composition: 20 percent nitrogen, 10 percent phosphorous, and 10 percent potassium, by weight.
  2. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing laboratory.

## **2.5 PLANTING SOILS**

- A. Planting Soil: ASTM D 5268 topsoil, with pH range of 5.5 to 7, a minimum of 6 percent organic material content; free of stones 0.5" inch (13 mm) or larger in any dimension and other extraneous materials harmful to plant growth. Mix ASTM D 5268 topsoil with the following soil amendments and fertilizers in the following quantities to produce planting soil:
1. Ratio of Loose Compost to Topsoil by Volume: 1:3
  2. Weight of Commercial Fertilizer per 1000 Sq. Ft. (92.9 Sq. m): 20 lbs. Retain first paragraph below if existing, on-site topsoil will be reused.

## **2.6 PESTICIDES**

- A. General: Pesticide, registered and approved by EPA, acceptable to authorities having jurisdiction, and of type recommended by manufacturer for each specific problem and as required for Project conditions and application. Do not use restricted pesticides unless authorized in writing by authorities having jurisdiction.
- B. Pre-Emergent Herbicide (Selective and Non-Selective): Effective for controlling the germination or growth of weeds within planted areas at the soil level directly below the mulch layer.
- C. Post-Emergent Herbicide (Selective and Non-Selective): Effective for controlling weed growth that has already germinated.

## **PART 3 - EXECUTION**

### **3.1 EXAMINATION**

- A. Examine areas to be planted for compliance with requirements and other conditions affecting performance.
1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
  2. Do not mix or place soils and soil amendments in frozen, wet, or muddy conditions.
  3. Suspend soil spreading, grading, and tilling operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
  4. Uniformly moisten excessively dry soil that is not workable and which is too dusty.

- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Landscape Architect and replace with new planting soil.

### **3.2 PREPARATION**

- A. Protect structures, utilities, sidewalks, pavements, and other facilities, trees, shrubs, and plantings from damage caused by planting operations.
  - 1. Protect adjacent and adjoining areas from hydroseeding and hydromulching overspray.
  - 2. Protect grade stakes set by others until directed to remove them.
- B. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.

### **3.3 TURF AREA PREPARATION**

- A. Limit turf subgrade preparation to areas to be planted.
- B. Newly Graded Subgrades: Loosen subgrade to a minimum depth of 8 inches (150 mm). Remove stones larger than 1 inch (25 mm) in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
  - 1. Apply commercial fertilizer directly to subgrade before loosening.
  - 2. Thoroughly blend planting soil off-site before spreading.
    - a. Delay mixing fertilizer with planting soil if planting will not proceed within a few days.
    - b. Mix lime with dry soil before mixing fertilizer.
  - 3. Spread planting soil to a depth of 4 inches (100 mm) but not less than required to meet finish grades after light rolling and natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.
    - a. Spread approximately 1/2 the thickness of planting soil over loosened subgrade. Mix thoroughly into top 4 inches (100 mm) of subgrade. Spread remainder of planting soil.
    - b. Reduce elevation of planting soil to allow for soil thickness of sod.
- C. Finish Grading: Grade planting areas to a smooth, uniform surface plane with loose, uniformly fine texture. Grade to within plus or minus 1/2 inch (13 mm) of finish elevation. Roll and rake, remove ridges, and fill depressions to meet finish grades. Limit finish grading to areas that can be planted in the immediate future.
- D. Moisten prepared area before planting if soil is dry. Water thoroughly and allow surface to dry before planting. Do not create muddy soil.
- E. Before planting, obtain Landscape Architect's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.

### **3.4 SODDING**

- A. Lay sod within 24 hours of harvesting. Do not lay sod if dormant or if ground is frozen or muddy.
- B. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod; do not stretch or overlap. Stagger sod strips or pads to offset joints in adjacent courses. Avoid damage to subgrade or sod during installation. Tamp and roll lightly to ensure contact with subgrade, eliminate air pockets, and form a smooth surface. Work sifted soil or fine sand into minor cracks between pieces of sod; remove excess to avoid smothering sod and adjacent grass.
  - 1. Lay sod across angle of slopes exceeding 1:3.
  - 2. Anchor sod on slopes exceeding 1:6 with wood pegs or steel staples spaced as recommended by sod manufacturer but not less than 2 anchors per sod strip to prevent slippage.
- C. Saturate sod with fine water spray within two hours of planting. During first week after planting, water daily or more frequently as necessary to maintain moist soil to a minimum depth of 1-1/2 inches (38 mm) below sod.

### **3.5 TURF MAINTENANCE**

- A. Maintain and establish turf by watering, fertilizing, weeding, mowing, trimming, replanting, and performing other operations as required to establish healthy, viable turf. Roll, regrade, and replant bare or eroded areas and remulch to produce a uniformly smooth turf. Provide materials and installation the same as those used in the original installation.
  - 1. Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace materials and turf damaged or lost in areas of subsidence.
  - 2. In areas where mulch has been disturbed by wind or maintenance operations, add new mulch and anchor as required to prevent displacement.
  - 3. Apply treatments as required to keep turf and soil free of pests and pathogens or disease. Use integrated pest management practices whenever possible to minimize the use of pesticides and reduce hazards.
- B. Watering: Install and maintain temporary piping, hoses, and turf-watering equipment to convey water from sources and to keep turf uniformly moist to a depth of 4 inches (100 mm).
  - 1. Schedule watering to prevent wilting, puddling, erosion, and displacement of seed or mulch. Lay out temporary watering system to avoid walking over muddy or newly planted areas.
  - 2. Water turf with fine spray at a minimum rate of 1 inch (25 mm) per week unless rainfall precipitation is adequate.
- C. Mow turf as soon as top growth is tall enough to cut. Repeat mowing to maintain specified height without cutting more than 1/3 of grass height. Remove no more than 1/3 of grass-leaf growth in initial or subsequent mowings. Do not delay mowing until grass blades bend over and become matted. Do not mow when grass is wet. Schedule initial and subsequent mowings to maintain the following grass height:
  - 1. Mow turf-type tall fescue to a height of 2 to 3 inches (50 to 75 mm).
  - 2. Mow turf-type Bermuda to a height of 1 to 2 inches (25 to 50 mm).

- D. Turf Postfertilization: Apply fertilizer after initial mowing and when grass is dry.
  - 1. Use fertilizer that will provide actual nitrogen of at least 1 lb/1000 sq. ft. (0.45 kg/92.9 sq. m) to turf area.

### **3.6 SATISFACTORY TURF**

- A. Turf installations shall meet the following criteria as determined by Landscape Architect:
  - 1. Satisfactory Sodded Turf: At end of maintenance period, a healthy, well-rooted, even-colored, viable turf has been established, free of weeds, open joints, bare areas, and surface irregularities for an areas of not less than 90% of the total turf areas. Bare spots shall not exceed 6"x6".
- B. Use specified materials to reestablish turf that does not comply with requirements and continue maintenance until turf is satisfactory.

### **3.7 PESTICIDE APPLICATION**

- A. Apply pesticides and other chemical products and biological control agents in accordance with requirements of authorities having jurisdiction and manufacturer's written recommendations. Coordinate applications with Owner's operations and others in proximity to the Work. Notify Owner before each application is performed.
- B. Post-Emergent Herbicides (Selective and Non-Selective): Apply only as necessary to treat already-germinated weeds and in accordance with manufacturer's written recommendations.

### **3.8 CLEANUP AND PROTECTION**

- A. Promptly remove soil and debris created by turf work from paved areas. Clean wheels of vehicles before leaving site to avoid tracking soil onto roads, walks, or other paved areas.
- B. Erect temporary fencing or barricades and warning signs as required to protect newly planted areas from traffic. Maintain fencing and barricades throughout initial maintenance period and remove after plantings are established.
- C. Remove nondegradable erosion-control measures after grass establishment period.

END OF SECTION

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<b>ISSUED</b>	<b>DATE</b>
ISSUED FOR CONSTRUCTION	9/16/2022



## **PART 1 - GENERAL**

### **1.1 RELATED DOCUMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

### **1.2 SUMMARY**

- A. Section Includes:
  - 1. Plants
  - 2. Planting Soils
  - 3. Tree Stabilization
  - 4. Landscape Edgings
  - 5. Tree Grates
- B. Related Sections:
  - 1. Division 01 Section "Temporary Tree and Plant Protection" for protecting, trimming, pruning, repairing, and replacing existing trees to remain that interfere with, or are affected by, execution of the Work.
  - 2. Division 31 Section "Site Clearing" for protection of existing trees and plantings, topsoil stripping and stockpiling, and site clearing.
  - 3. Division 31 Section "Earth Moving" for excavation, filling, and rough grading and for subsurface aggregate drainage and drainage backfill materials.
  - 4. Division 32 Section "Turf and Grasses" for turf (lawn) planting.
  - 5. Division 33 Section "Subdrainage" for below-grade drainage of landscaped areas, paved areas, and wall perimeters.

### **1.3 ALLOWANCES**

- A. Allowances for plants are specified in Division 01 Section "Allowances"
  - 1. Perform planting work under quantity allowances and only as authorized. Authorized work includes work required by Drawings and the Specifications and work authorized in writing by Landscape Architect.
  - 2. Notify Landscape Architect weekly of extent of work performed that is attributable to quantity allowances.
  - 3. Perform work that exceeds quantity allowances only as authorized by Change Orders.
- B. Furnish trees as part of tree allowance.
- C. Furnish shrubs, groundcovers, grasses, vines, bulbs, and annuals as part of plant allowance.

### **1.4 UNIT PRICES**

- A. Work of this Section is affected by unit prices specified in Division 01 Section "Unit Prices."
  - 1. Unit prices apply to authorized work covered by quantity allowances.

2. Unit prices apply to additions to and deletions from Work as authorized by Change Orders.

## 1.5 DEFINITIONS

- A. Backfill: The earth used to replace or the act of replacing earth in an excavation.
- B. Balled and Burlapped Stock: Plants dug with firm, natural balls of earth in which they were grown, with ball size not less than diameter and depth recommended by ANSI Z60.1 for type and size of plant required; wrapped with burlap, tied, rigidly supported, and drum laced with twine with the root flare visible at the surface of the ball as recommended by ANSI Z60.1.
- C. Balled and Potted Stock: Plants dug with firm, natural balls of earth in which they are grown and placed, unbroken, in a container. Ball size is not less than diameter and depth recommended by ANSI Z60.1 for type and size of plant required.
- D. Bare-Root Stock: Plants with a well-branched, fibrous-root system developed by transplanting or root pruning, with soil or growing medium removed, and with not less than minimum root spread according to ANSI Z60.1 for type and size of plant required.
- E. Container-Grown Stock: Healthy, vigorous, well-rooted plants grown in a container, with a well-established root system reaching sides of container and maintaining a firm ball when removed from container. Container shall be rigid enough to hold ball shape and protect root mass during shipping and be sized according to ANSI Z60.1 for type and size of plant required.
- F. Duff Layer: The surface layer of native topsoil that is composed of mostly decayed leaves, twigs, and detritus.
- G. Fabric Bag-Grown Stock: Healthy, vigorous, well-rooted plants established and grown in-ground in a porous fabric bag with well-established root system reaching sides of fabric bag. Fabric bag size is not less than diameter, depth, and volume required by ANSI Z60.1 for type and size of plant.
- H. Finish Grade: Elevation of finished surface of planting soil.
- I. Manufactured Topsoil: Soil produced off-site by homogeneously blending mineral soils or sand with stabilized organic soil amendments to produce topsoil or planting soil.
- J. Pesticide: A substance or mixture intended for preventing, destroying, repelling, or mitigating a pest. This includes insecticides, miticides, herbicides, fungicides, rodenticides, and molluscicides. It also includes substances or mixtures intended for use as a plant regulator, defoliant, or desiccant.
- K. Pests: Living organisms that occur where they are not desired, or that cause damage to plants, animals, or people. These include insects, mites, grubs, mollusks (snails and slugs), rodents (gophers, moles, and mice), unwanted plants (weeds), fungi, bacteria, and viruses.
- L. Planting Area: Areas to be planted.

- M. Planting Soil: Standardized topsoil; existing, native surface topsoil; existing, in-place surface soil; imported topsoil; or manufactured topsoil that is modified with soil amendments and perhaps fertilizers to produce a soil mixture best for plant growth.
- N. Plant; Plants; Plant Material: These terms refer to vegetation in general, including trees, shrubs, vines, ground covers, ornamental grasses, bulbs, corms, tubers, or herbaceous vegetation.
- O. Root Flare: Also called "trunk flare." The area at the base of the plant's stem or trunk where the stem or trunk broadens to form roots; the area of transition between the root system and the stem or trunk.
- P. Stem Girdling Roots: Roots that encircle the stems (trunks) of trees below the soil surface.
- Q. Subgrade: Surface or elevation of subsoil remaining after excavation is complete, or the top surface of a fill or backfill before planting soil is placed.
- R. Subsoil: All soil beneath the topsoil layer of the soil profile, and typified by the lack of organic matter and soil organisms.
- S. Surface Soil: Soil that is present at the top layer of the existing soil profile at the Project site. In undisturbed areas, the surface soil is typically topsoil; but in disturbed areas such as urban environments, the surface soil can be subsoil.

## 1.6 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated, including soils.
  - 1. Plant Materials: Include quantities, sizes, quality, and sources for plant materials.
  - 2. Pesticides and Herbicides: Include product label and manufacturer's application instructions specific to the Project.
  - 3. Plant Photographs: Include color photographs in digital format of each required species and size of plant material as it will be furnished to the Project. Take photographs from an angle depicting true size and condition of the typical plant to be furnished. Include a scale rod or other measuring device in each photograph. For species where more than 20 plants are required, include a minimum of three photographs showing the average plant, the best quality plant, and the worst quality plant to be furnished. Identify each photograph with the full scientific name of the plant, plant size, and name of the growing nursery.
- B. Samples for Verification: For each of the following:
  - 1. Trees and Shrubs: Three samples of each variety and size delivered to the site for review. Maintain approved samples on-site as a standard for comparison.
  - 2. Organic Mulch: 1-quart (1-liter) volume of each organic mulch required; in sealed plastic bags labeled with composition of materials by percentage of weight and source of mulch. Each Sample shall be typical of the lot of material to be furnished; provide an accurate representation of color, texture, and organic makeup.
  - 3. Planting Soil: 1-quart (1-liter) volume of planting soil; in sealed plastic bags labeled with composition of materials by percentage of weight and source of soil. Each sample shall be typical of the lot of material to be furnished.

4. Intensive Green Roof Planting Media: 1-quart (1-liter) volume of planting media; in sealed plastic bags labeled with composition of materials by percentage of weight and source of soil. Each sample shall be typical of the lot of material to be furnished.
5. Edging Materials and Accessories: Manufacturer's standard size, to verify color selected.

#### 1.7 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified landscape Installer. Include list of similar projects completed by Installer demonstrating Installer's capabilities and experience. Include project names, addresses, and year completed, and include names and addresses of owners' contact persons.
- B. Product Certificates: For each type of manufactured product, from manufacturer, and complying with the following:
  1. Manufacturer's certified analysis of standard products.
  2. Analysis of other materials by a recognized laboratory made according to methods established by the Association of Official Analytical Chemists, where applicable.
- C. Material Test Reports: For existing native surface topsoil, existing in-place surface soil, and imported or manufactured topsoil.
- D. Maintenance Instructions: Recommended procedures to be established by Owner for maintenance of plants during a calendar year. Submit before start of required maintenance periods.
- E. Warranty: Sample of special warranty.

#### 1.8 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified landscape Installer whose work has resulted in successful establishment of plants.
  1. Professional Membership: Installer shall be a member in good standing of either the Professional Landcare Network or the American Nursery and Landscape Association.
  2. Experience: Five years' experience in landscape installation in addition to requirements in Division 01 Section "Quality Requirements."
  3. Installer's Field Supervision: Require Installer to maintain an experienced full-time supervisor on Project site when work is in progress.
  4. Personnel Certifications: Installer's field supervisor shall have certification in all of the following categories from the Professional Landcare Network:
    - a. Certified Landscape Technician - Exterior, with installation specialty area(s), designated CLT-Exterior.
    - b. Certified Ornamental Landscape Professional, designated COLP.
  5. Pesticide Applicator: State licensed, commercial.
- B. Soil-Testing Laboratory Qualifications: An independent or university laboratory, recognized by the State Department of Agriculture, with the experience and capability to conduct the testing indicated and that specializes in types of tests to be performed.

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Section 32 9300 – Page 5 of 20

- C. Soil Analysis: For each unamended soil type, furnish soil analysis and a written report by a qualified soil-testing laboratory stating percentages of organic matter; gradation of sand, silt, and clay content; cation exchange capacity; deleterious material; pH; and mineral and plant-nutrient content of the soil.
1. Testing methods and written recommendations shall comply with USDA's Handbook No. 60.
  2. The soil-testing laboratory shall oversee soil sampling; with depth, location, and number of samples to be taken per instructions from Architect. A minimum of three representative samples shall be taken from varied locations for each soil to be used or amended for planting purposes.
  3. Report suitability of tested soil for plant growth.
    - a. Based upon the test results, state recommendations for soil treatments and soil amendments to be incorporated. State recommendations in weight per 1000 sq. ft. (92.9 sq. m) or volume per cu. yd. (0.76 cu. m) for nitrogen, phosphorus, and potash nutrients and soil amendments to be added to produce satisfactory planting soil suitable for healthy, viable plants.
    - b. Report presence of problem salts, minerals, or heavy metals, including aluminum, arsenic, barium, cadmium, chromium, cobalt, lead, lithium, and vanadium. If such problem materials are present, provide additional recommendations for corrective action.
- D. Provide quality, size, genus, species, and variety of plants indicated, complying with applicable requirements in ANSI Z60.1.
1. Selection of plants purchased under allowances will be made by Architect, who will tag plants at their place of growth before they are prepared for transplanting.
- E. Measurements: Measure according to ANSI Z60.1. Do not prune to obtain required sizes.
1. Trees and Shrubs: Measure with branches and trunks or canes in their normal position. Take height measurements from or near the top of the root flare for field-grown stock and container grown stock. Measure main body of tree or shrub for height and spread; do not measure branches or roots tip to tip. Take caliper measurements 6 inches (150 mm) above the root flare for trees up to 4-inch (100-mm) caliper size, and 12 inches (300 mm) above the root flare for larger sizes.
  2. Other Plants: Measure with stems, petioles, and foliage in their normal position.
- F. Plant Material Observation: Architect may observe plant material either at place of growth or at site before planting for compliance with requirements for genus, species, variety, cultivar, size, and quality. Architect retains right to observe trees and shrubs further for size and condition of balls and root systems, pests, disease symptoms, injuries, and latent defects and to reject unsatisfactory or defective material at any time during progress of work. Remove rejected trees or shrubs immediately from Project site.
1. Notify Architect of sources of planting materials fourteen days in advance of delivery to site.
- G. Preinstallation Conference: Conduct conference at Project site.

## 1.9 DELIVERY, STORAGE, AND HANDLING

- A. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, certified analysis, name and address of manufacturer, and indication of conformance with state and federal laws if applicable.
- B. Bulk Materials:
  - 1. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
  - 2. Provide erosion-control measures to prevent erosion or displacement of bulk materials, discharge of soil-bearing water runoff, and airborne dust reaching adjacent properties, water conveyance systems, or walkways.
  - 3. Accompany each delivery of bulk fertilizers, lime, and soil amendments with appropriate certificates.
- C. Deliver bare-root stock plants freshly dug. Immediately after digging up bare-root stock, pack root system in wet straw, hay, or other suitable material to keep root system moist until planting.
- D. Do not prune trees and shrubs before delivery. Protect bark, branches, and root systems from sun scald, drying, wind burn, sweating, whipping, and other handling and tying damage. Do not bend or bind-tie trees or shrubs in such a manner as to destroy their natural shape. Provide protective covering of plants during shipping and delivery. Do not drop plants during delivery and handling.
- E. Handle planting stock by root ball.
- F. Store bulbs, corms, and tubers in a dry place at 60 to 65 deg F (16 to 18 deg C) until planting.
- G. Deliver plants after preparations for planting have been completed, and install immediately. If planting is delayed more than six hours after delivery, set plants and trees in their appropriate aspect (sun, filtered sun, or shade), protect from weather and mechanical damage, and keep roots moist.
  - 1. Heel-in bare-root stock. Soak roots that are in dry condition in water for two hours. Reject dried-out plants.
  - 2. Set balled stock on ground and cover ball with soil, peat moss, sawdust, or other acceptable material.
  - 3. Do not remove container-grown stock from containers before time of planting.
  - 4. Water root systems of plants stored on-site deeply and thoroughly with a fine-mist spray. Water as often as necessary to maintain root systems in a moist, but not overly-wet condition.

## 1.10 PROJECT CONDITIONS

- A. Field Measurements: Verify actual grade elevations, service and utility locations, irrigation system components, and dimensions of plantings and construction contiguous with new plantings by field measurements before proceeding with planting work.
- B. Interruption of Existing Services or Utilities: Do not interrupt services or utilities to facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary services or utilities according to requirements indicated:

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Section 32 9300 – Page 7 of 20

1. Notify Architect, Construction Manager, and Owner no fewer than two days in advance of proposed interruption of each service or utility.
  2. Do not proceed with interruption of services or utilities without Architect's, Construction Manager's, and Owner's written permission.
- C. Planting Restrictions: Plant during one of the following periods. Coordinate planting periods with maintenance periods to provide required maintenance from date of Substantial Completion.
1. Spring Planting: March 1 through June 1.
  2. Fall Planting: October 1 through December 15.
- D. Weather Limitations: Proceed with planting only when existing and forecasted weather conditions permit planting to be performed when beneficial and optimum results may be obtained. Apply products during favorable weather conditions according to manufacturer's written instructions and warranty requirements.
- E. Coordination with Turf Areas (Lawns): Plant trees, shrubs, and other plants after finish grades are established and before planting turf areas unless otherwise indicated.
1. When planting trees, shrubs, and other plants after planting turf areas, protect turf areas, and promptly repair damage caused by planting operations.

#### 1.11 WARRANTY

- A. Special Warranty: Installer agrees to repair or replace plantings and accessories that fail in materials, workmanship, or growth within specified warranty period.
1. Failures include, but are not limited to, the following:
    - a. Death and unsatisfactory growth, except for defects resulting from abuse, lack of adequate maintenance, or neglect by Owner, or incidents that are beyond Contractor's control.
    - b. Structural failures including plantings falling or blowing over.
    - c. Faulty performance of tree stabilization and edgings.
    - d. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
  2. Warranty Periods from Date of Planting Completion:
    - a. Trees, Shrubs, Vines, and Ornamental Grasses: 12 months.
    - b. Ground Covers, Biennials, Perennials, and Other Plants: 12 months.
    - c. Annuals: Three months.
  3. Include the following remedial actions as a minimum:
    - a. Immediately remove dead plants and replace unless required to plant in the succeeding planting season.
    - b. Replace plants that are more than 25 percent dead or in an unhealthy condition at end of warranty period.
    - c. A limit of one replacement of each plant will be required except for losses or replacements due to failure to comply with requirements.
    - d. Provide extended warranty for period equal to original warranty period, for replaced plant material.

## 1.12 MAINTENANCE SERVICE

- A. Initial Maintenance Service for Trees and Shrubs: Provide maintenance by skilled employees of landscape Installer. Maintain as required in Part 3. Begin maintenance immediately after plants are installed and continue until plantings are acceptably healthy and well established but for not less than maintenance period below.
  - 1. Maintenance Period: 12 months from date of planting completion.
- B. Initial Maintenance Service for Ground Cover and Other Plants: Provide maintenance by skilled employees of landscape Installer. Maintain as required in Part 3. Begin maintenance immediately after plants are installed and continue until plantings are acceptably healthy and well established but for not less than maintenance period below.
  - 1. Maintenance Period: Six months from date of planting completion.
- C. Continuing Maintenance Proposal: From Installer to Owner, in the form of a standard yearly (or other period) maintenance agreement, starting on date initial maintenance service is concluded. State services, obligations, conditions, and terms for agreement period and for future renewal options.

## PART 2 - PRODUCTS

### 2.1 PLANT MATERIAL

- A. General: Furnish nursery-grown plants true to genus, species, variety, cultivar, stem form, shearing, and other features indicated in Plant Schedule or Plant Legend shown on Drawings and complying with ANSI Z60.1; and with healthy root systems developed by transplanting or root pruning. Provide well-shaped, fully branched, healthy, vigorous stock, densely foliated when in leaf and free of disease, pests, eggs, larvae, and defects such as knots, sun scald, injuries, abrasions, and disfigurement.
  - 1. Trees with damaged, crooked, or multiple leaders; tight vertical branches where bark is squeezed between two branches or between branch and trunk ("included bark"); crossing trunks; cut-off limbs more than 3/4 inch (19 mm) in diameter; or with stem girdling roots will be rejected.
  - 2. Collected Stock: Do not use plants harvested from the wild, from native stands, from an established landscape planting, or not grown in a nursery unless otherwise indicated.
- B. Provide plants of sizes, grades, and ball or container sizes complying with ANSI Z60.1 for types and form of plants required. Plants of a larger size may be used if acceptable to Architect, with a proportionate increase in size of roots or balls.
- C. Root-Ball Depth: Furnish trees and shrubs with root balls measured from top of root ball, which shall begin at root flare according to ANSI Z60.1. Root flare shall be visible before planting.
- D. Labeling: Label at least one plant of each variety, size, and caliper with a securely attached, waterproof tag bearing legible designation of common name and full scientific name, including genus and species. Include nomenclature for hybrid, variety, or cultivar, if applicable for the plant as shown on Drawings.



- E. If formal arrangements or consecutive order of plants is shown on Drawings, select stock for uniform height and spread, and number the labels to assure symmetry in planting.
- F. Annuals: Provide healthy, disease-free plants of species and variety shown or listed, with well-established root systems reaching to sides of the container to maintain a firm ball, but not with excessive root growth encircling the container. Provide only plants that are acclimated to outdoor conditions before delivery.

## 2.2 INORGANIC SOIL AMENDMENTS

- A. Lime: ASTM C 602, agricultural liming material containing a minimum of 80 percent calcium carbonate equivalent and as follows:
  - 1. Class: T, with a minimum of 99 percent passing through No. 8 (2.36-mm) sieve and a minimum of 75 percent passing through No. 60 (0.25-mm) sieve.
  - 2. Class: O, with a minimum of 95 percent passing through No. 8 (2.36-mm) sieve and a minimum of 55 percent passing through No. 60 (0.25-mm) sieve.
  - 3. Provide lime in form of ground dolomitic limestone.
- B. Sulfur: Granular, biodegradable, and containing a minimum of 90 percent sulfur, with a minimum of 99 percent passing through No. 6 (3.35-mm) sieve and a maximum of 10 percent passing through No. 40 (0.425-mm) sieve.
- C. Iron Sulfate: Granulated ferrous sulfate containing a minimum of 20 percent iron and 10 percent sulfur.
- D. Aluminum Sulfate: Commercial grade, unadulterated.
- E. Perlite: Horticultural perlite, soil amendment grade.
- F. Agricultural Gypsum: Minimum 90 percent calcium sulfate, finely ground with 90 percent passing through No. 50 (0.30-mm) sieve.
- G. Sand: Clean, washed, natural or manufactured, and free of toxic materials
- H. Diatomaceous Earth: Calcined, 90 percent silica, with approximately 140 percent water absorption capacity by weight.
- I. Zeolites: Mineral clinoptilolite with at least 60 percent water absorption by weight.

## 2.3 ORGANIC SOIL AMENDMENTS

- A. Compost: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 3/4-inch (19-mm) sieve; soluble salt content of 5 to 10 decisiemens/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
  - 1. Organic Matter Content: 50 to 60 percent of dry weight.
  - 2. Feedstock: Agricultural, food, or industrial residuals; biosolids; yard trimmings; or source-separated or compostable mixed solid waste.

- B. Sphagnum Peat: Partially decomposed sphagnum peat moss, finely divided or granular texture, with a pH range of 3.4 to 4.8.
- C. Wood Derivatives: Decomposed, nitrogen-treated sawdust, ground bark, or wood waste; of uniform texture and free of chips, stones, sticks, soil, or toxic materials.
  - 1. In lieu of decomposed wood derivatives, mix partially decomposed wood derivatives with ammonium nitrate at a minimum rate of 0.15 lb/cu. ft. (2.4 kg/cu. m) of loose sawdust or ground bark, or with ammonium sulfate at a minimum rate of 0.25 lb/cu. ft. (4 kg/cu. m) of loose sawdust or ground bark.
- D. Manure: Well-rotted, unleached, stable or cattle manure containing not more than 25 percent by volume of straw, sawdust, or other bedding materials; free of toxic substances, stones, sticks, soil, weed seed, debris, and material harmful to plant growth.

## 2.4 FERTILIZERS

- A. Commercial Fertilizer: Commercial-grade complete fertilizer of neutral character, consisting of fast- and slow-release nitrogen, 50 percent derived from natural organic sources of urea formaldehyde, phosphorous, and potassium in the following composition:
  - 1. Composition: 1 lb/1000 sq. ft. (0.45 kg/92.9 sq. m) of actual nitrogen, 4 percent phosphorous, and 2 percent potassium, by weight.
  - 2. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing laboratory.
- B. Slow-Release Fertilizer: Granular or pelleted fertilizer consisting of 50 percent water-insoluble nitrogen, phosphorus, and potassium in the following composition:
  - 1. Composition: 20 percent nitrogen, 10 percent phosphorous, and 10 percent potassium, by weight.
  - 2. Composition: Nitrogen, phosphorous, and potassium in amounts recommended in soil reports from a qualified soil-testing laboratory.

## 2.5 PLANTING SOILS

- A. Planting Soil: ASTM D 5268 topsoil, with pH range of 5.5 to 7, a minimum of 6 percent organic material content; free of stones 1 inch (25 mm) or larger in any dimension and other extraneous materials harmful to plant growth. Mix ASTM D 5268 topsoil with the following soil amendments and fertilizers in the following quantities to produce planting soil:
  - 1. Ratio of Loose Compost to Topsoil by Volume: 1:3.
  - 2. Weight of Commercial Fertilizer per 1000 Sq. Ft. (92.9 Sq. m): 20 lbs.

## 2.6 MULCHES

- A. Organic Mulch: Free from deleterious materials and suitable as a top dressing of trees and shrubs, consisting of one of the following:
  - 1. Type: Shredded hardwood.
  - 2. Size Range: 3 inches (76 mm) maximum, 1/2 inch (13 mm) minimum.

3. Color: Natural.
- B. Compost Mulch: Well-composted, stable, and weed-free organic matter, pH range of 5.5 to 8; moisture content 35 to 55 percent by weight; 100 percent passing through 1-inch (25-mm) sieve; soluble salt content of 2 to 5 decisiemens/m; not exceeding 0.5 percent inert contaminants and free of substances toxic to plantings; and as follows:
1. Organic Matter Content: 50 to 60 percent of dry weight.
  2. Feedstock: Agricultural, food, or industrial residuals; biosolids; yard trimmings; or source-separated or compostable mixed solid waste.

## 2.7 PESTICIDES

- A. General: Pesticide registered and approved by EPA, acceptable to authorities having jurisdiction, and of type recommended by manufacturer for each specific problem and as required for Project conditions and application. Do not use restricted pesticides unless authorized in writing by authorities having jurisdiction.
- B. Pre-Emergent Herbicide (Selective and Non-Selective): Effective for controlling the germination or growth of weeds within planted areas at the soil level directly below the mulch layer.
- C. Post-Emergent Herbicide (Selective and Non-Selective): Effective for controlling weed growth that has already germinated.

## 2.8 TREE STABILIZATION MATERIALS

- A. Stakes and Guys:
1. Flexible Ties: Wide rubber or elastic bands or straps of length required to reach stakes or turnbuckles.
  2. Guys and Tie Wires: ASTM A 641/A 641M, Class 1, galvanized-steel wire, two-strand, twisted, 0.106 inch (2.7 mm) in diameter.
  3. Tree-Tie Webbing: UV-resistant polypropylene or nylon webbing with brass grommets.
  4. Guy Cables: Five-strand, 3/16-inch- (4.8-mm-) diameter, galvanized-steel cable, with zinc-coated turnbuckles, a minimum of 3 inches (75 mm) long, with two 3/8-inch (10-mm) galvanized eyebolts.
  5. Flags: Standard surveyor's plastic flagging tape, white, 6 inches (150 mm) long.
  6. Proprietary Staking-and-Guying Devices: Proprietary stake and adjustable tie systems to secure each new planting by plant stem; sized as indicated and per manufacturer's written recommendations.
    - a. Products: Subject to compliance with requirements, provide one of the following:
      - 1) Arborbrace; ArborBrace Tree Guying System.
      - 2) Decorations for Generations, Inc.; Reddy Stake System.
      - 3) Foresight Products, LLC; Duckbill Tree Guy
- B. Root-Ball Stabilization Materials:
1. Upright Stakes and Horizontal Hold-Down: Rough-sawn, sound, new hardwood or softwood, free of knots, holes, cross grain, and other defects, 2-by-2-inch nominal (38-by-38-mm actual) by length indicated; stakes pointed at one end.
  2. Wood Screws: ASME B18.6.1.

3. Proprietary Root-Ball Stabilization Devices: Proprietary at- or below-grade stabilization systems to secure each new planting by root ball; sized per manufacturer's written recommendations unless otherwise indicated.
  - a. Products: Subject to compliance with requirements, provide one of the following:
    - 1) Border Concepts, Inc.; Tomahawk Tree Stabilizers.
    - 2) Foresight Products, LLC; Duckbill Rootball Fixing System.
    - 3) Tree Staple, Inc.; Tree Staples.

## 2.9 LANDSCAPE EDGINGS

- A. Steel Edging: Standard commercial-steel edging, rolled edge, fabricated in sections of standard lengths, with loops stamped from or welded to face of sections to receive stakes.
  1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. Border Concepts, Inc.
    - b. Collier Metal Specialties, Inc.
    - c. Russell, J. D. Company (The).
    - d. Sure-Loc Edging Corporation.
  2. Edging Size: 1/8 inch (3.2 mm) wide by 4 inches (100 mm) deep.
  3. Stakes: Tapered steel, a minimum of 12 inches (300 mm) long.
  4. Accessories: Standard tapered ends, corners, and splicers.
  5. Finish: Standard paint.
  6. Paint Color: Brown.

## 2.10 MISCELLANEOUS PRODUCTS

- A. Antidesiccant: Water-insoluble emulsion, permeable moisture retarder, film forming, for trees and shrubs. Deliver in original, sealed, and fully labeled containers and mix according to manufacturer's written instructions.
- B. Burlap: Non-synthetic, biodegradable.
- C. Planter Drainage Gravel: Washed, sound, crushed stone or gravel complying with ASTM D 448 for Size No. 8.
- D. Planter Filter Fabric: Woven geotextile manufactured for separation applications and made of polypropylene, polyolefin, or polyester fibers or combination of them.
- E. Mycorrhizal Fungi: Dry, granular inoculant containing at least 5300 spores per lb (0.45 kg) of vesicular-arbuscular mycorrhizal fungi and 95 million spores per lb (0.45 kg) of ectomycorrhizal fungi, 33 percent hydrogel, and a maximum of 5.5 percent inert material.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine areas to receive plants for compliance with requirements and conditions affecting installation and performance.

1. Verify that no foreign or deleterious material or liquid such as paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, or acid has been deposited in soil within a planting area.
  2. Do not mix or place soils and soil amendments in frozen, wet, or muddy conditions.
  3. Suspend soil spreading, grading, and tilling operations during periods of excessive soil moisture until the moisture content reaches acceptable levels to attain the required results.
  4. Uniformly moisten excessively dry soil that is not workable and which is too dusty.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. If contamination by foreign or deleterious material or liquid is present in soil within a planting area, remove the soil and contamination as directed by Landscape Architect and replace with new planting soil.

### 3.2 PREPARATION

- A. Protect structures, utilities, sidewalks, pavements, and other facilities and turf areas and existing plants from damage caused by planting operations.
- B. Install erosion-control measures to prevent erosion or displacement of soils and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways.
- C. Lay out individual tree and shrub locations and areas for multiple plantings. Stake locations, outline areas, adjust locations when requested, and obtain Landscape Architect's acceptance of layout before excavating or planting. Make minor adjustments as required.
- D. Lay out plants at locations directed by Landscape Architect. Stake locations of individual trees and shrubs and outline areas for multiple plantings.
- E. Apply antidesiccant to trees and shrubs using power spray to provide an adequate film over trunks (before wrapping), branches, stems, twigs, and foliage to protect during digging, handling, and transportation.
1. If deciduous trees or shrubs are moved in full leaf, spray with antidesiccant at nursery before moving and again two weeks after planting.
- F. Wrap trees and shrubs with burlap fabric over trunks, branches, stems, twigs, and foliage to protect from wind and other damage during digging, handling, and transportation.

### 3.3 PLANTING AREA ESTABLISHMENT

- A. Loosen subgrade of planting areas to a minimum depth of 12 inches (300 mm). Remove stones larger than 1-1/2 inches (38 mm) in any dimension and sticks, roots, rubbish, and other extraneous matter and legally dispose of them off Owner's property.
1. Apply commercial fertilizer directly to subgrade before loosening.
  2. Thoroughly blend planting soil off-site before spreading.
    - a. Delay mixing fertilizer with planting soil if planting will not proceed within a few days.
    - b. Mix lime with dry soil before mixing fertilizer.

3. Spread planting soil to a depth of 8 inches (150 mm) but not less than required to meet finish grades after natural settlement. Do not spread if planting soil or subgrade is frozen, muddy, or excessively wet.
  - a. Spread approximately one-half the thickness of planting soil over loosened subgrade. Mix thoroughly into top 4 inches (100 mm) of subgrade. Spread remainder of planting soil.
- B. Finish Grading: Grade planting areas to a smooth, uniform surface plane with loose, uniformly fine texture. Roll and rake, remove ridges, and fill depressions to meet finish grades.
- C. Before planting, obtain Landscape Architect's acceptance of finish grading; restore planting areas if eroded or otherwise disturbed after finish grading.
- D. Application of Mycorrhizal Fungi: At time directed by Landscape Architect, broadcast dry product uniformly over prepared soil at application rate indicated by manufacturer's recommendations.

### 3.4 EXCAVATION FOR TREES AND SHRUBS

- A. Planting Pits and Trenches: Excavate circular planting pits with sides sloping inward at a 45-degree angle. Excavations with vertical sides are not acceptable. Trim perimeter of bottom leaving center area of bottom raised slightly to support root ball and assist in drainage away from center. Do not further disturb base. Ensure that root ball will sit on undisturbed base soil to prevent settling. Scarify sides of planting pit smeared or smoothed during excavation.
  1. Excavate approximately three times as wide as ball diameter for balled and burlapped and container-grown stock.
  2. Excavate at least 12 inches (300 mm) wider than root spread and deep enough to accommodate vertical roots for bare-root stock.
  3. Do not excavate deeper than depth of the root ball, measured from the root flare to the bottom of the root ball.
  4. If area under the plant was initially dug too deep, add soil to raise it to the correct level and thoroughly tamp the added soil to prevent settling.
  5. Maintain required angles of repose of adjacent materials as shown on the Drawings. Do not excavate subgrades of adjacent paving, structures, hardscapes, or other new or existing improvements.
  6. Maintain supervision of excavations during working hours.
  7. Keep excavations covered or otherwise protected when unattended by Installer's personnel.
  8. If drain tile is shown on Drawings or required under planting areas, excavate to top of porous backfill over tile.
- B. Subsoil and topsoil removed from excavations may be used when mixed at a ratio of 1:1 with planting soil.
- C. Obstructions: Notify Landscape Architect if unexpected rock or obstructions detrimental to trees or shrubs are encountered in excavations.
  1. Hardpan Layer: Drill 6-inch- (150-mm-) diameter holes, 24 inches (600 mm) apart, into free-draining strata or to a depth of 10 feet (3 m), whichever is less, and backfill with free-draining material.

- D. Drainage: Notify Landscape Architect if subsoil conditions evidence unexpected water seepage or retention in tree or shrub planting pits.
- E. Fill excavations with water and allow to percolate away before positioning trees and shrubs.

### 3.5 TREE, SHRUB, AND VINE PLANTING

- A. Before planting, verify that root flare is visible at top of root ball according to ANSI Z60.1. If root flare is not visible, remove soil in a level manner from the root ball to where the top-most root emerges from the trunk. After soil removal to expose the root flare, verify that root ball still meets size requirements.
- B. Remove stem girdling roots and kinked roots. Remove injured roots by cutting cleanly; do not break.
- C. Set balled and burlapped stock plumb and in center of planting pit or trench with root flare 1 inch (25 mm) above adjacent finish grades.
  - 1. Use planting soil for backfill.
  - 2. After placing some backfill around root ball to stabilize plant, carefully cut and remove burlap, rope, and wire baskets from tops of root balls and from sides, but do not remove from under root balls. Remove pallets, if any, before setting. Do not use planting stock if root ball is cracked or broken before or during planting operation.
  - 3. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
  - 4. Place planting tablets in each planting pit when pit is approximately one-half filled; in amounts recommended in soil reports from soil-testing laboratory. Place tablets beside the root ball about 1 inch (25 mm) from root tips; do not place tablets in bottom of the hole.
  - 5. Continue backfilling process. Water again after placing and tamping final layer of soil.
- D. Set container-grown stock plumb and in center of planting pit or trench with root flare 1 inch (25 mm) above adjacent finish grades.
  - 1. Use planting soil for backfill.
  - 2. Carefully remove root ball from container without damaging root ball or plant.
  - 3. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
  - 4. Place planting tablets in each planting pit when pit is approximately one-half filled; in amounts recommended in soil reports from soil-testing laboratory. Place tablets beside the root ball about 1 inch (25 mm) from root tips; do not place tablets in bottom of the hole.
  - 5. Continue backfilling process. Water again after placing and tamping final layer of soil.
- E. Set fabric bag-grown stock plumb and in center of planting pit or trench with root flare 1 inch (25 mm) above adjacent finish grades.
  - 1. Use planting soil for backfill.
  - 2. Carefully remove root ball from fabric bag without damaging root ball or plant. Do not use planting stock if root ball is cracked or broken before or during planting operation.

3. Backfill around root ball in layers, tamping to settle soil and eliminate voids and air pockets. When planting pit is approximately one-half filled, water thoroughly before placing remainder of backfill. Repeat watering until no more water is absorbed.
  4. Place planting tablets in each planting pit when pit is approximately one-half filled; in amounts recommended in soil reports from soil-testing laboratory. Place tablets beside the root ball about 1 inch (25 mm) from root tips; do not place tablets in bottom of the hole.
  5. Continue backfilling process. Water again after placing and tamping final layer of soil.
- F. Set and support bare-root stock in center of planting pit or trench with root flare 1 inch (25 mm) above adjacent finish grade.
1. Use planting soil for backfill.
  2. Spread roots without tangling or turning toward surface, and carefully work backfill around roots by hand. Puddle with water until backfill layers are completely saturated. Plumb before backfilling, and maintain plumb while working backfill around roots and placing layers above roots.
  3. Place planting tablets in each planting pit when pit is approximately one-half filled; in amounts recommended in soil reports from soil-testing laboratory. Place tablets beside soil-covered roots about 1 inch (25 mm) from root tips; do not place tablets in bottom of the hole or touching the roots.
  4. Continue backfilling process. Water again after placing and tamping final layer of soil.
- G. When planting on slopes, set the plant so the root flare on the uphill side is flush with the surrounding soil on the slope; the edge of the root ball on the downhill side will be above the surrounding soil. Apply enough soil to cover the downhill side of the root ball.

### **3.6 TREE, SHRUB, AND VINE PRUNING**

- A. Remove only dead, dying, or broken branches. Do not prune for shape.
- B. Prune, thin, and shape trees, shrubs, and vines as directed by Landscape Architect.
- C. Prune, thin, and shape trees, shrubs, and vines according to standard professional horticultural and arboricultural practices. Unless otherwise indicated by Landscape Architect, do not cut tree leaders; remove only injured, dying, or dead branches from trees and shrubs; and prune to retain natural character.
- D. Do not apply pruning paint to wounds.

### **3.7 TREE STABILIZATION**

- A. Install trunk stabilization as follows unless otherwise indicated:
  1. Upright Staking and Tying: Stake trees of 2- through 5-inch (50- through 125-mm) caliper. Stake trees of less than 2-inch (50-mm) caliper only as required to prevent wind tip out. Use a minimum of two stakes of length required to penetrate at least 18 inches (450 mm) below bottom of backfilled excavation and to extend at least 72 inches (1830 mm) above grade. Set vertical stakes and space to avoid penetrating root balls or root masses.



2. Use two stakes for trees up to 12 feet (3.6 m) high and 2-1/2 inches (63 mm) or less in caliper; three stakes for trees less than 14 feet (4.2 m) high and up to 4 inches (100 mm) in caliper. Space stakes equally around trees.
  3. Support trees with bands of flexible ties at contact points with tree trunk. Allow enough slack to avoid rigid restraint of tree.
  4. Support trees with two strands of tie wire, connected to the brass grommets of tree-tie webbing at contact points with tree trunk. Allow enough slack to avoid rigid restraint of tree.
- B. Staking and Guying: Stake and guy trees more than 14 feet (4.2 m) in height and more than 3 inches (75 mm) in caliper unless otherwise indicated. Securely attach no fewer than three guys to stakes 30 inches (760 mm) long, driven to grade.
1. Site-Fabricated Staking-and-Guying Method:
    - a. For trees more than 6 inches (150 mm) in caliper, anchor guys to wood deadmen buried at least 36 inches (900 mm) below grade. Provide turnbuckle for each guy wire and tighten securely.
    - b. Support trees with bands of flexible ties at contact points with tree trunk and reaching to turnbuckle. Allow enough slack to avoid rigid restraint of tree.
    - c. Support trees with strands of cable or multiple strands of tie wire, connected to the brass grommets of tree-tie webbing at contact points with tree trunk and reaching to turnbuckle. Allow enough slack to avoid rigid restraint of tree.
    - d. Attach flags to each guy wire, 30 inches (760 mm) above finish grade.
    - e. Paint turnbuckles with luminescent white paint.
  2. Proprietary Staking and Guying Device: Install staking and guying system sized and positioned as recommended by manufacturer unless otherwise indicated and according to manufacturer's written instructions.
- C. Root-Ball Stabilization: Install at- or below-grade stabilization system to secure each new planting by the root ball unless otherwise indicated.
1. Wood Hold-Down Method: Place vertical stakes against side of root ball and drive them into subsoil; place horizontal wood hold-down stake across top of root ball and screw at each end to one of the vertical stakes.
    - a. Install stakes of length required to penetrate at least 18 inches (450 mm) below bottom of backfilled excavation. Saw stakes off at horizontal stake.
    - b. Install screws through horizontal hold-down and penetrating at least 1 inch (25 mm) into stakes. Predrill holes if necessary to prevent splitting wood.
    - c. Install second set of stakes on other side of root trunk for larger trees as indicated.
  2. Proprietary Root-Ball Stabilization Device: Install root-ball stabilization system sized and positioned as recommended by manufacturer unless otherwise indicated and according to manufacturer's written instructions.

### 3.8 PLANTING IN PLANTERS

- A. Place a layer of drainage gravel extending at least 12 inches (100 mm) out from planter drain and extending to top of drain structure. Wrap gravel with filter fabric and secure ensuring 6 inch overlap at all seams.

- B. Fill planter with Intensive Green Roof Media. Place soil in lightly compacted layers to an elevation of 1 inch below top of planter. Preset the media by thoroughly watering the entire planting area. Fill settled areas low areas with the media and repeat the compaction and filling process until settlement ceases

### **3.9 GROUND COVER AND PLANT PLANTING**

- A. Set out and space ground cover and plants other than trees, shrubs, and vines as indicated in even rows with triangular spacing.
- B. Use planting soil for backfill.
- C. Dig holes large enough to allow spreading of roots.
- D. For rooted cutting plants supplied in flats, plant each in a manner that will minimally disturb the root system but to a depth not less than two nodes.
- E. Work soil around roots to eliminate air pockets and leave a slight saucer indentation around plants to hold water.
- F. Water thoroughly after planting, taking care not to cover plant crowns with wet soil.
- G. Protect plants from hot sun and wind; remove protection if plants show evidence of recovery from transplanting shock.

### **3.10 PLANTING AREA MULCHING**

- A. Mulch backfilled surfaces of planting areas and other areas indicated.
  - 1. Trees and Tree-like Shrubs in Turf Areas: Apply organic mulch ring of 3-inch (75-mm) average thickness, with 36-inch (900-mm) radius around trunks or stems. Do not place mulch within 3 inches (75 mm) of trunks or stems.
  - 2. Organic Mulch in Planting Areas: Apply 3-inch (75-mm) average thickness of organic mulch extending 12 inches (300 mm) beyond edge of individual planting pit or trench and over whole surface of planting area, and finish level with adjacent finish grades. Do not place mulch within 3 inches (75 mm) of trunks or stems.

### **3.11 EDGING INSTALLATION**

- A. Steel Edging: Install steel edging where indicated according to manufacturer's written instructions. Anchor with steel stakes spaced approximately 30 inches (760 mm) apart, driven below top elevation of edging.

### **3.12 PLANT MAINTENANCE**

- A. Maintain plantings by pruning, cultivating, watering, weeding, fertilizing, mulching, restoring planting saucers, adjusting and repairing tree-stabilization devices, resetting to proper grades or vertical position, and performing other operations as required to establish healthy, viable plantings. Spray or treat as required to keep trees and shrubs free of insects and disease.

- B. Fill in as necessary soil subsidence that may occur because of settling or other processes. Replace mulch materials damaged or lost in areas of subsidence.
- C. Apply treatments as required to keep plant materials, planted areas, and soils free of pests and pathogens or disease. Use integrated pest management practices whenever possible to minimize the use of pesticides and reduce hazards. Treatments include physical controls such as hosing off foliage, mechanical controls such as traps, and biological control agents.

### **3.13 PESTICIDE APPLICATION**

- A. Apply pesticides and other chemical products and biological control agents in accordance with authorities having jurisdiction and manufacturer's written recommendations. Coordinate applications with Owner's operations and others in proximity to the Work. Notify Owner before each application is performed.
- B. Pre-Emergent Herbicides (Selective and Non-Selective): Apply to tree, shrub, and ground-cover areas in accordance with manufacturer's written recommendations. Do not apply to seeded areas.
- C. Post-Emergent Herbicides (Selective and Non-Selective): Apply only as necessary to treat already-germinated weeds and in accordance with manufacturer's written recommendations.

### **3.14 CLEANUP AND PROTECTION**

- A. During planting, keep adjacent paving and construction clean and work area in an orderly condition.
- B. Protect plants from damage due to landscape operations and operations of other contractors and trades. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged plantings.
- C. After installation and before Substantial Completion, remove nursery tags, nursery stakes, tie tape, labels, wire, burlap, and other debris from plant material, planting areas, and Project site.

### **3.15 DISPOSAL**

- A. Remove surplus soil and waste material including excess subsoil, unsuitable soil, trash, and debris and legally dispose of them off Owner's property.

END OF SECTION

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ISSUED	DATE
ISSUED FOR CONSTRUCTION	09/16/2022

## **APPENDICES**



**APPENDIX A**  
**STANDARD FORM CONSTRUCTION CONTRACT**





**NORTH CAROLINA  
ROWAN COUNTY**

**CONTRACT**

**THIS CONTRACT**, made and entered into this \_\_\_\_ day of \_\_\_\_\_, 2021, by and between Rowan County, North Carolina (hereinafter referred to as "COUNTY"), party of the first part; and \_\_\_\_\_ (hereinafter referred to as "CONTRACTOR"), party of the second part;

**WITNESSETH:**

For the purpose and subject to the terms and conditions hereinafter set forth, the COUNTY hereby contracts for the services of the CONTRACTOR, and the CONTRACTOR hereby agrees to provide the services to the COUNTY in accordance with the terms of this Contract, time being of the essence.

**SERVICES TO BE PROVIDED**

The CONTRACTOR shall furnish and deliver all the materials and perform all the work in the manner and form as provided in the following enumerated Plans, Specifications and Contract Documents which are attached hereto and made a part hereof as if fully contained herein:

**LANDSCAPING IMPROVEMENTS  
MID-CAROLINA REGIONAL AIRPORT**

**Specifications and Contract Documents:**

- a. Project Plans prepared by Talbert, Bright & Ellington, Inc. dated September 2022
- b. Instructions to Bidders
- c. General Conditions, including any Supplementary General Conditions
- d. Project Special Provisions
- e. Technical Provisions (Construction Details)
- f. Proposal Accepted as modified in the amount of \_\_\_\_\_ \$
- g. Performance and Payment Bond
- h. Addendum Nos. 1 through x
- i. Contract
- j. Contract Modifications

Hereinbefore and hereinafter, the above-listed plans, specifications, and contract documents shall be collectively referred to as "Contract."

**SUBCONTRACTING AND ASSIGNMENT**

CONTRACTOR shall not sub-contract all or any part of the services provided for in this Contract without prior written approval of the COUNTY. Additionally, CONTRACTOR

shall not assign all or any portion of this Contract, including rights to payments, to any other party without the prior written consent of the COUNTY.

#### **TERM OF CONTRACT**

The term of this contract shall be as outlined in the Project Plans and Specifications.

The CONTRACTOR shall commence the work to be performed under the Contract not later than the date set by the COUNTY in written notice to proceed, said date to be not less than ten (10) days after issuance of notice.

#### **PAYMENT TO CONTRACTOR**

The amount to be paid by the COUNTY shall not exceed the following:

ORIGINAL PROPOSAL: \$ \_\_\_\_\_

TOTAL ADDITIONS: \$ \_\_\_\_\_

TOTAL DEDUCTIONS: \$ \_\_\_\_\_

CURRENT CONTRACT AMOUNT: \$ \_\_\_\_\_

The COUNTY hereby agrees to pay to the CONTRACTOR for the faithful performance of this Contract, subject to additions and deductions as provided in the specifications or proposal, in lawful money of the United States, such unit and/or lump sum prices as are set forth in the accepted proposal for quantities of each item actually accomplished.

The COUNTY shall make partial payments to the CONTRACTOR on a basis of a duly certified and approved estimate of work performed during the preceding calendar month by the CONTRACTOR within twenty (20) calendar days after receipt of a correct payment request, less ten percent (10%) of the amount of such estimate which is to be retained by the COUNTY until all work has been performed strictly in accordance with this Contract and until such work has been accepted by the COUNTY.

Neither final payment nor any remaining retained percentage shall become due until thirty (30) days after all the following have occurred:

- b. The CONTRACTOR completes all work covered by this Contract;
- c. The COUNTY accepts such work; and
- d. The CONTRACTOR submits to the COUNTY evidence satisfactory to the COUNTY that all payrolls, bills for materials and equipment, and other indebtedness/costs connected with the construction have been paid or otherwise satisfied. COUNTY may require other data establishing payment or satisfaction of obligations, such as receipts, releases and waivers of liens, claims, security interests, or encumbrances arising out of the Contract, to the extent and in such form as may be designated by the COUNTY. If a Subcontractor refuses to

furnish a release or waiver required by the COUNTY, the CONTRACTOR may furnish a bond satisfactory to the COUNTY to indemnify the COUNTY against such lien. If such lien remains unsatisfied after payments are made, the CONTRACTOR shall refund to the AUTHORITY all money that the COUNTY may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

- e. The CONTRACTOR submits to COUNTY a certificate evidencing that insurance required by the Contract Documents is to remain in full force and effect, and will not be cancelled or allowed to expire until at least thirty (30) days' prior written notice has been given to the COUNTY;
- f. The CONTRACTOR submits a written statement that the CONTRACTOR knows of no substantial reason that the insurance will not be renewable to cover the period required by the Contract Documents; and
- g. The surety, if any, consents to final payment.

It is further mutually agreed between the CONTRACTOR and the COUNTY hereto if, at any time after the execution of this Contract and the Performance and Payment Bond hereto attached for its faithful performance, the second party shall deem the surety or sureties upon such bond to be unsatisfactory; or if, for any reason such bond ceases to be adequate to cover the performance of such work, the CONTRACTOR shall, at its expense, within five days after the receipt of notice from the COUNTY to do so, furnish an additional bond or bonds in such form and amount, and with such surety or sureties as shall be satisfactory to the OWNER. In such event, no further payment to the CONTRACTOR shall be deemed to be due under this Contract until such new or additional security for the faithful performance of the work shall be furnished in a manner and form satisfactory to the COUNTY.

#### **WARRANTY**

The CONTRACTOR hereby guarantees all materials and workmanship for a period of one (1) year from the date at final acceptance of all items of work set forth under this Contract.

#### **RELATIONSHIP OF THE PARTIES**

The CONTRACTOR shall operate as an Independent Contractor. COUNTY shall not be responsible for any of the CONTRACTOR'S acts or omissions. The CONTRACTOR shall not be treated as an employee with respect to the services performed hereunder for federal or state tax, unemployment or workers' compensation purposes. The CONTRACTOR understands that neither federal, nor state, nor payroll tax of any kind shall be withheld or paid by the COUNTY on behalf of the CONTRACTOR or the employees of the CONTRACTOR. The CONTRACTOR further agrees that the CONTRACTOR is fully responsible for the payment of any and all taxes arising from the payment of monies under this Contract. The CONTRACTOR shall not be treated as an employee with respect to the services performed hereunder for purposes of eligibility for, or participation in, any employee pension, health, or other fringe benefit plan of the COUNTY. The COUNTY shall not be liable to the CONTRACTOR for any expenses paid or incurred by the

CONTRACTOR unless otherwise agreed in writing. The CONTRACTOR shall supply, at its sole expense, all equipment, tools, materials, and supplies required to provide the contracted services unless otherwise agreed in writing.

### **CONFIDENTIALITY**

The CONTRACTOR shall use any and all information obtained as a result of its Performance of its duties under this Contract solely in furtherance of said Performance. CONTRACTOR shall ensure that it, its agents or assigns, or subcontractors initiate appropriate safeguards to prevent the use or disclosure of any confidential information for any purpose other than Performance of this Contract. CONTRACTOR ensures that every reasonable attempt to mitigate any such disclosure of confidential information is made.

### **LICENSURE AND CERTIFICATION**

The CONTRACTOR shall comply with all federal, state and local laws regarding business permits, certificates and licenses that may be required to carry out the services to be performed under this Contract. The CONTRACTOR shall insure that all personnel engaged in work under this Contract shall be fully qualified and shall be authorized under state and local law to perform the services under this Contract. The CONTRACTOR shall further obtain and file with COUNTY the appropriate IRS form W-9.

### **INSURANCE**

The CONTRACTOR shall obtain, at its sole expense, all insurance required in the following paragraphs and shall not commence work until such insurance is in effect and certification thereof has been received by the Rowan County Finance Director. Should said Certificate of Insurance expire prior to the termination of this contract, CONTRACTOR shall supply to the COUNTY an updated certification prior to the expiration of the Certificate initially provided.

Workers' Compensation Insurance, with limits for Coverage A Statutory - State of North Carolina and Coverage B Employers Liability \$500,000 bodily injury, \$500,000 bodily injury by disease, and \$500,000 by disease policy limit.

Commercial General Liability of not less than \$1,000,000 General Aggregate Limit (Other than Products-Completed Operations), \$1,000,000 Products-Completed Operations Aggregate Limit, \$1,000,000 Personal and Advertising Injury Limit, \$500,000 Each Occurrence Limit, and \$100,000 Fire Damage Limit, and shall not contain an exclusion for contractual liability.

For Automobile Liability the limits shall not be less than \$1,000,000 each person, \$1,000,000 each occurrence of bodily injury liability, \$1,000,000 each occurrence of property damage liability, and \$1,000,000 uninsured/underinsured motorist coverage. Policies with a single combined limit must be not less than \$2,000,000 or \$1,000,000 with an umbrella policy of \$1,000,000 per occurrence.

Professional Liability Insurance shall not be less than \$1,000,000 per occurrence and shall hold Rowan County, its departments, agents, employees or assigns harmless from any claim, including claims for attorneys fees or other legal expenses, which

may arise as a result of the sole negligence or malpractice of an employee of the CONTRACTOR in providing services.

All insurance companies must be licensed in North Carolina and be acceptable to the COUNTY. Insurance policies, **EXCEPT** Workers' Compensation and Professional Liability, shall be endorsed (1) to show Rowan County as additional insured, as their interests may appear and (2) to amend cancellation notice to thirty (30) days, pursuant to North Carolina law. Certificates of Insurance shall be signed by a licensed North Carolina agent and be amended to show "thirty (30) days' notice of change or cancellation will be given to Rowan County Finance Director by certified mail."

Copies or originals of correspondence, certificates, endorsements or other items pertaining to insurance shall be sent to:

Valerie Steele, Airport Director  
3670 Airport Loop Road  
Salisbury, NC 28147

If the CONTRACTOR does not meet the insurance requirements of the specifications, alternate insurance coverage satisfactory to the COUNTY may be considered.

Failure of the COUNTY to demand such certificates or other evidence of full compliance with these insurance requirements or failure of the COUNTY to identify a deficiency from evidence provided shall not be construed as a waiver of CONTRACTOR's obligation to maintain such insurance.

#### **INDEMNIFICATION**

The CONTRACTOR agrees to defend, indemnify, and hold harmless Rowan County from all loss, liability, claims or expense (including reasonable attorney's fees) arising from bodily injury, including death, to any person or persons or property damage caused in whole or in part by the negligence or misconduct of the CONTRACTOR or his/her subcontractors, agents and employees, except to the extent same are caused by the negligence or willful misconduct of Rowan County. It is the intent of this section to require the CONTRACTOR to indemnify Rowan County to the extent permitted under North Carolina law.

#### **NON-APPROPRIATION**

CONTRACTOR acknowledges that COUNTY is a governmental entity, and the contract validity is based upon the availability of public funding under the authority of its statutory mandate.

In the event that public funds are unavailable and not appropriated for the performance of COUNTY's obligations under this contract, then this contract shall automatically expire without penalty to COUNTY thirty (30) days after written notice to CONTRACTOR of the unavailability and non-appropriation of public funds. It is expressly agreed that COUNTY shall not activate this non-appropriation provision for its convenience

or to circumvent the requirements of this contract, but only as an emergency fiscal measure during a substantial fiscal crisis, which affects generally its governmental operations.

In the event of a change in the COUNTY's statutory authority, mandate and mandated functions, by state and federal legislative or regulatory action, which adversely affects COUNTY 's authority to continue its obligations under this contract, then this contract shall automatically terminate without penalty to COUNTY upon written notice to CONTRACTOR of such limitation or change in COUNTY 's legal authority.

### **TERMINATION**

Should the COUNTY be notified by, or reasonably determine that, the CONTRACTOR is unable to substantially comply with the terms of this Contract the COUNTY may, at its discretion, immediately terminate this Contract and withhold any and all monies owed to the CONTRACTOR except those owing up to the date of termination. Either Party may cancel this Contract should the other party be in Breach of the Contract if, after a sufficient period of time has passed and the Breaching Party has been notified of such Breach, the Breach has not been cured by the Breaching Party.

Further, COUNTY shall, upon thirty (30) days written notice to CONTRACTOR, be permitted to withdraw from and cancel this Contract.

### **ACCESS TO AND RECORD RETENTION**

CONTRACTOR agrees to maintain all records of or related to the SERVICES set out in this Contract and shall, upon the COUNTY 's request, provide the COUNTY with, or access to, said records.

### **SEVERABILITY**

If any provision of the Contract shall be declared invalid or unenforceable, the remainder of the Contract shall continue in full force and effect.

### **FORCE MAJEURE**

Neither Party shall incur any liability to the other if its performance of any obligation under this Contract is delayed or prevented by any of the following events: a change in any law, rule, regulation or ordinance; any new law, rule, regulation or ordinance; the requirements of any government or governmental entity or authority; war, riot, civil disorder or other hostilities; hurricanes, typhoons or other severe weather conditions; fire; earthquakes, floods and other natural disasters; damage to or destruction of a party's facilities.

If either party's performance under this Contract is delayed or prevented by any of the events described in the paragraph above, that party will notify the other in writing of the event, of its expected effect on that party's performance, and of when that party resumes its performance under and in accordance with the terms of this Contract. If the performance by a party of any [material] obligation under this Contract is delayed by any of the events described in the paragraph above, then if the total of all delays so caused exceeds a period of 10 days, the other party may terminate this Contract by giving written notice of termination

to the affected party at any time prior to the affected party's notifying the other party in writing that it has resumed its performance under and in accordance with this Contract.

### **HEALTH AND SAFETY**

The CONTRACTOR shall be responsible for initiating, maintaining and supervision of all safety precautions and programs in connection with the work. The CONTRACTOR shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to all employees from the work and other persons who may be affected thereby.

### **NON-DISCRIMINATION IN EMPLOYMENT**

The CONTRACTOR shall not discriminate against any employee or applicant for employment because of age, sex, race, creed, or national origin. The CONTRACTOR shall take affirmative action to ensure that applicants are employed and that employees are treated during employment without regard to their age, sex, race, creed, or national origin. In the event the CONTRACTOR is determined by the final order of an appropriate agency or court to be in violation of any non-discrimination provision of Federal, State or local law or this provision, this Contract may be cancelled, terminated or suspended in whole or in part by the COUNTY, and the CONTRACTOR may be declared ineligible for further COUNTY contracts.

### **NON-WAIVER**

The failure of either party to exercise, or a delay in either party's exercising of, any right or remedy provided under this Contract or by law shall not constitute a waiver of that or any other right or remedy, nor shall it preclude or restrict any further exercise of that or any other right or remedy.

### **GOVERNING LAW**

This Contract shall be governed by and in accordance with the laws of the State of North Carolina. Unless prohibited by law, all actions relating in any way to this Contract shall be brought solely in the General Court of Justice of the State of North Carolina sitting in Rowan County or, where applicable, the United States District Court of the Middle District of North Carolina.

### **E-VERIFY COMPLIANCE**

If CONTRACTOR is a person, business entity, or other organization that transacts business and employs 25 or more people in North Carolina, it agrees to comply with the E-Verify requirements found in Article 2 of Chapter 64 of the North Carolina General Statutes. CONTRACTOR also agrees that any and all its current or subsequently hired subcontractors shall comply with said E-Verify requirements if said subcontractors employ 25 or more employees in North Carolina.

### **IRAN DIVESTMENT ACT CERTIFICATION**

Pursuant to North Carolina General Statute § 147-86.59, CONTRACTOR hereby certifies that, as of the date listed below, it is not identified on the Final Divestment List created by the North Carolina State Treasurer pursuant to N.C.G.S. § 147-86.58 (hereinafter

referred to as "List"). Additionally, CONTRACTOR hereby certifies that it shall not utilize any subcontractor in the performance of this Contract that is identified on said List.

**ENTIRE AGREEMENT**

The CONTRACTOR and the COUNTY agree that this document constitutes the entire agreement between the two parties and may only be modified by a written mutual agreement signed by the parties. Modifications may be evidenced by tele-facsimile signatures of the parties to this Contract. Unless and until further modified, this Contract shall consist of this document and the following attachments or addenda:

**IN WITNESS WHEREOF**, the COUNTY and the CONTRACTOR have set their hands as of the day and year first above written and state that they have read and understand the terms herein and freely and voluntarily enter into this Contract and that without further proof or accounting thereof, it shall be deemed an original contract.

**ROWAN COUNTY  
(COUNTY)**

**XXXXXXXXXXXXXXXXXXXX  
(CONTRACTOR)**

By: \_\_\_\_\_

By: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

(Mailing Address)

(Mailing Address)

130 W. Innes Street  
Salisbury, NC 28144

XXXXXXXXXX  
XXXXXXXXXX

Federal Tax ID#: \_\_\_\_\_

**This instrument has been pre-audited in the manner required by the Local Government Budget and Fiscal Control Act.**

\_\_\_\_\_  
FINANCE DIRECTOR



**PERFORMANCE BOND**  
100% of the Contract Amount

KNOW ALL MEN BY THESE PRESENT: that

**[CONTRACTOR]**  
**[ADDRESS]**  
**[CITY, STATE]**

as Principal, hereinafter called Contractor and \_\_\_\_\_, a  
corporation duly organized under the laws of the State of \_\_\_\_\_  
as Surety, hereinafter called Surety, are held firmly bound unto:

**COUNTY OF ROWAN**  
**130 WEST INNES STREET**  
**SALISBURY, NC 28144**

hereinafter called OWNER, in the amount of  
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX (\$XXX,XXX.XX), for the  
payment whereof Contractor and Surety bind themselves, their heirs, executors,  
administrators, successors and assigns, jointly and severally, firm by these present.

WHEREAS, Contractor has by written agreement dated \_\_\_\_\_, 2022  
entered into a Contract with OWNER for the **Landscaping Improvements** in accordance  
with drawings and specifications prepared by:

**TALBERT, BRIGHT & ELLINGTON, INC.**  
**3525 WHITEHALL PARK DRIVE**  
**SUITE 210**  
**CHARLOTTE, NORTH CAROLINA 28273**

which contract is by reference made a part hereof, and is hereinafter referred to as the  
CONTRACT.

NOW, THEREFORE, THE CONDITIONS OF THIS OBLIGATION is such that, if  
Contractor shall promptly and faithfully perform said Contract, then this obligation shall be  
null and void; otherwise it shall remain in full force and effect.

The Surety hereby waives notice of any alteration or extension of time made by the  
OWNER.

Whenever Contractor shall be, and declared by OWNER to be in default under the Contract, the OWNER having performed OWNER'S obligations thereunder, the Surety may promptly remedy the defaults, or shall promptly:

1. Complete the Contract in accordance with its terms and conditions, or
2. Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by Surety of the lowest responsible bidder, or, if the OWNER elects, upon determination by the OWNER and the Surety jointly of the lowest responsible bidder, arrange for a Contract between such bidder and OWNER, and make available as work progresses (even though there should be a default or a succession of defaults under the Contract or Contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term "balance of contract price" as used in paragraph, shall mean the total amount payable to OWNER to Contractor under the Contract and any amendment thereto, less the amount properly paid by OWNER to Contractor.

Any suit this bond must be instituted before the expiration of two (2) years from the date on which final payment under the Contract falls due.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the OWNER names herein or the heirs, executors, administrators or successors of the OWNER.

***REMAINDER OF PAGE LEFT BLANK INTENTIONALLY.***

Signed and sealed this \_\_\_\_ day of \_\_\_\_\_, 2022.

**BY:**

\_\_\_\_\_  
Contractor

\_\_\_\_\_  
Name (Seal)

\_\_\_\_\_  
Title

**WITNESS:**

\_\_\_\_\_

**BY:**

\_\_\_\_\_  
Principal  
Surety

\_\_\_\_\_  
Name (Seal)

\_\_\_\_\_  
Title

**WITNESS:**

\_\_\_\_\_

**BY:**

\_\_\_\_\_  
(Signature)  
Licensed Resident Agent

\_\_\_\_\_  
(Typed)  
Licensed Resident Agent

\_\_\_\_\_  
(Street Address)

\_\_\_\_\_  
(City / State / Zip Code)

\_\_\_\_\_  
(Telephone Number)

**LABOR AND MATERIAL PAYMENT BOND**

100% of the Contract Amount

KNOW ALL MEN BY THESE PRESENT: that

**XXXXXXXXXXXXXXXXXX  
XXXXXXXX STREET  
XXXXXXX, NC XXXXX**

as Principal, hereinafter called Principal, and \_\_\_\_\_, a corporation  
duly organized under the laws of the State of \_\_\_\_\_  
as Surety, hereinafter called Surety, are held firmly bound unto:

**COUNTY OF ROWAN  
130 WEST INNES STREET  
SALISBURY, NC 28144**

as Oblige, hereinafter called OWNER, for the use and benefit of claimants as  
hereinbelow defined, in the amount of XXXXXXXXXXXXXXXXXXXXXXXXXXXX  
XXXXXXXX(\$XXX,XXX.XX), for the payment whereof Principal and Surety bind  
themselves, their heirs, executors, administrators, successors and assigns, jointly and  
severally, firm by these present.

WHEREAS,

Principal has by written agreement dated \_\_\_\_\_, 2022 entered into a contract  
with OWNER for the **Landscaping Improvements** in accordance with drawings and  
specifications prepared by:

**TALBERT, BRIGHT & ELLINGTON, INC.  
3525 WHITEHALL PARK DRIVE  
SUITE 210  
CHARLOTTE, NORTH CAROLINA 28273**

which contract is by reference made a part hereof, and is hereinafter referred to as the  
CONTRACT.

NOW, THEREFORE, THE CONDITIONS OF THIS OBLIGATION is such that, if  
Principal shall promptly make payment to all claimants as hereinafter defined, for all labor  
and material used or reasonably required for the use in the performance of the Contract, then  
this obligation shall be void; otherwise it shall remain in full force and effect, subject,  
however, to the following conditions:

1. A claimant is defined as one having a direct contract with the Principal or with a subcontractor of the Principal for labor, material, or both, used or reasonably required for use in the performance of the Contract, labor and material being construed to include that part of water gas, power, light, heat, oil, gasoline, telephone service or rental of equipment directly applicable to the Contractor.
2. The above named Principal and Surety hereby jointly and severally agree with the OWNER that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgment for such sums or sums as may be justly due claimant, and have execution thereon. The OWNER shall not be liable for the payment of any costs or expenses of any such suit.
3. No suit or action shall be commenced hereunder by any claimant.
  - a. Unless claimant, other than one having a direct contract with the Principal, shall have given written notice to any two of the following; the Principal, the OWNER, or the Surety above named, within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to who the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal, OWNER, or surety, at any place where an office is regularly maintained for the transaction of business, or served in the state in which the aforesaid project is located, save that such service need not be made by public officer.
  - b. After the expiration of one (1) year following the date of which Principal ceased work on said Contract, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.
  - c. Other than in a state court of competent jurisdiction in and for the county or other political subdivision of the state in which the Project, or any part thereof, is situated or in the United States District Court for the district in which the Project, or any part thereof, is situated, and not elsewhere.

4. The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed of record against said improvement, whether or not claim for the amount of such lien be presented under and against this bond.

***REMAINDER OF PAGE LEFT BLANK INTENTIONALLY.***

Signed and sealed this \_\_\_\_ day of \_\_\_\_\_, 2022.

**BY:**

\_\_\_\_\_  
Contractor

\_\_\_\_\_  
Name (Seal)

\_\_\_\_\_  
Title

**WITNESS:**

\_\_\_\_\_

**BY:**

\_\_\_\_\_  
Principal  
Surety

\_\_\_\_\_  
Name (Seal)

\_\_\_\_\_  
Title

**WITNESS:**

\_\_\_\_\_

**BY:**

\_\_\_\_\_  
Licensed Resident Agent (Signature)

\_\_\_\_\_  
Licensed Resident Agent (Typed)

\_\_\_\_\_  
(Street Address)

\_\_\_\_\_  
(City / State / Zip Code)

\_\_\_\_\_  
(Telephone Number)

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## **APPENDIX B**

### **FORMS**

## ESTIMATE FOR PARTIAL PAYMENT

No: \_\_\_\_\_

Owner's Project No.: \_\_\_\_\_

TBE Project No.: \_\_\_\_\_

Project Name: \_\_\_\_\_

Contractor: \_\_\_\_\_

Contract Date: \_\_\_\_\_

Contract For: \_\_\_\_\_

Application Date: \_\_\_\_\_

For Period Ending: \_\_\_\_\_

Original Contract Price: \_\_\_\_\_  
Net Change Orders: \_\_\_\_\_  
Current Contract Price: \_\_\_\_\_  
Total Amount Earned (Col. 9): \_\_\_\_\_  
Retained Percentage ( \_\_\_\_%): \_\_\_\_\_  
Total Earned Less Retained: \_\_\_\_\_  
Total Previously Approved: \_\_\_\_\_  
Amount Due This Estimate: \_\_\_\_\_  
Total Amount Due: \_\_\_\_\_

## CERTIFICATE OF CONTRACTOR

The undersigned certifies to the best of his knowledge and belief that all items, units, quantities and prices for work and material herein are correct; that all work has been performed and materials supplied in accordance with the terms and conditions of the Construction Contract and all authorized changes thereto; that the above is a true and correct statement of the contract up to and including the last day of the period of the estimate; that all previous payments received from the Owner for work performed under the Construction Contract have been applied to discharge all obligations incurred by the undersigned in connection with work covered by prior estimates for partial payment; and that all materials and equipment incorporated in the above project are free and clear of all liens, security interests and encumbrances.

Contractor: \_\_\_\_\_

Title: \_\_\_\_\_

By: \_\_\_\_\_

Date: \_\_\_\_\_

## CERTIFICATE OF OWNER'S ENGINEERS

I certify that I have verified this Estimate for Partial Payment and that to the best of my knowledge and belief it is a true and correct statement of work performed materials supplied under the Contract.

TALBERT, BRIGHT & Ellington, INC., CHARLOTTE, NORTH CAROLINA

**Resident Observer**

**Project Engineer**

Name: \_\_\_\_\_  
Date

Name: \_\_\_\_\_  
Date

## OWNER'S RECOMMENDATION FOR PAYMENT

Approved and Payment Recommended: \_\_\_\_\_, OWNER

BY: \_\_\_\_\_ TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_

Sheet ____ of ____ Sheets									
No. and Description of Unit		Contract			Work Done This Period		Work Completed To Date		
Item #	Detailed Estimate	Quantity	Unit Price	Cost Estimate	No. of Units	Amount Earned	No. of Units	Amount Earned	% Complete
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

## STATE AND COUNTY SALES/USE TAX STATEMENT

Contractor (or Subcontractor's) Name\_\_\_\_\_

Job: \_\_\_\_\_

Sheet No. \_\_\_\_\_ of \_\_\_\_\_

INVOICE	INVOICE DATES FROM _____ 20____ THRU _____ 20____	VENDOR'S NAME	TYPE OF MATERIAL	TOTAL AMOUNT OF INVOICE	SALES/USE TAX	
					STATE %	COUNTY %

SUBTOTAL THIS PAGE: \_\_\_\_\_

TOTAL ALL INVOICES: \_\_\_\_\_

### TAX STATEMENT AND CERTIFICATION

This is to certify that the foregoing or attached statement is a true and complete statement of all North Carolina and Local Sales or Use Tax paid by the undersigned Contractor from \_\_\_\_\_, 20\_\_\_\_ to \_\_\_\_\_, 20\_\_\_\_, inclusive for the materials and equipment that were or will become a part of the construction of the:

\_\_\_\_\_  
Landscaping Improvements at Mid-Carolina Regional Airport, Salisbury, NC  
\_\_\_\_\_

#### (THE FOLLOWING PORTION TO BE FILLED OUT BY THE GENERAL CONTRACTOR ONLY)

It is further certified that:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

are the subcontractors that are engaged by this Contractor in the performance of this Contract whose tax statements are also enclosed herewith.

\_\_\_\_\_  
CONTRACTOR OR SUBCONTRACTOR

*Sworn and subscribed before me this*

\_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

\_\_\_\_\_  
NOTARY PUBLIC

(SEAL)

**CONSENT OF SURETY COMPANY TO FINAL PAYMENT**

OWNER	<input type="checkbox"/>
ENGINEER	<input type="checkbox"/>
CONTRACTOR	<input type="checkbox"/>
SURETY	<input type="checkbox"/>
OTHER	<input type="checkbox"/>

---

PROJECT (Name and Address): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

TO (Owner): \_\_\_\_\_

Engineer's Project No.: \_\_\_\_\_  
Contract for: \_\_\_\_\_  
Contract Date: \_\_\_\_\_

CONTRACTOR: \_\_\_\_\_

---

In accordance with the provisions of the Contract between the Owner and the Contractor as indicated above, the  
(insert name and address of Surety Company here)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_, Surety Company

on bond of (here insert name and address of Contractor)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_, Contractor

hereby approves of the final payment to the Contractor, and agrees that final payment to the Contractor shall not  
relieve the Surety Company of its obligations to (here insert name and address of Owner)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_, Owner

as set forth in the said Surety Company's bond.

IN WITNESS WHEREOF,

the Surety Company has hereunto set its hand this \_\_\_\_ day of \_\_\_\_\_ 20\_\_.

Surety Company  
Signature of Authorized Representative

Attest:  
(Seal):

\_\_\_\_\_  
Title

**CONTRACTOR'S AFFIDAVIT OF RELEASE OF LIENS**

OWNER ☐  
ENGINEER ☐  
CONTRACTOR ☐  
SURETY ☐  
OTHER ☐

---

TO (Owner): \_\_\_\_\_ Engineer's Project No.: \_\_\_\_\_  
Contract for: \_\_\_\_\_  
Contract Date: \_\_\_\_\_

PROJECT (Name and Address): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

---

State of: \_\_\_\_\_

County of: \_\_\_\_\_

The undersigned, pursuant to the General Conditions of the Contract for Construction, hereby certifies that to the best of his knowledge, information and belief, except as listed below, the Releases or Waivers of Lien attached hereto include the Contractor, all Subcontractors, all suppliers of materials and equipment, and all performers of Work, labor or services, who have or may have liens against any property of the Owner arising in any manner out of the performance of the Contract referenced above.

EXCEPTIONS: (If none, write "None". If required by the Owner, the Contractor shall furnish bond satisfactory to the Owner for each exception.)

CONTRACTOR: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Subscribed and sworn to before me this \_\_\_\_\_

Day of \_\_\_\_\_, 20\_\_\_\_

Notary Public: \_\_\_\_\_

My Commission Expires: \_\_\_\_\_ (Seal)

**AFFIDAVIT OF PAYMENTS OF DEBTS AND CLAIMS**

OWNER ☐  
ENGINEER ☐  
CONTRACTOR ☐  
SURETY ☐  
OTHER ☐

---

TO (Owner): \_\_\_\_\_ Engineer's Project No.: \_\_\_\_\_  
Contract for: \_\_\_\_\_

PROJECT (Name and Address): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

---

State of: \_\_\_\_\_

County of: \_\_\_\_\_

The undersigned, pursuant to the General Conditions of the Contract for Construction, hereby certifies that, except as listed below, he has paid in full or has otherwise satisfied all obligations for all materials and equipment furnished, for all work, labor, and services performed, and for all known indebtedness and claims against the Contractor for damages arising in any manner in connection with the performance of the Contract referenced above for which the Owner or his property might in any way be held responsible.

EXCEPTIONS: (If none, write "None". If required by the Owner, the Contractor shall furnish bond satisfactory to the Owner for each exception.)

CONTRACTOR: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

By: \_\_\_\_\_

Subscribed and sworn to before me this \_\_\_\_\_

Day of \_\_\_\_\_, 20\_\_\_\_

Notary Public: \_\_\_\_\_

My Commission Expires: \_\_\_\_\_ (Seal)



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