



CONTRACT AGREEMENT

THE STATE OF TEXAS)
)
 COUNTIES OF DALLAS/TARRANT)

THIS CONTRACT dated the [REDACTED] and effective when signed by all parties, is entered into by the DALLAS-FORT WORTH INTERNATIONAL AIRPORT BOARD, a public body, established under the laws of the State of Texas and hereunto duly authorized by contract between the CITY OF DALLAS, a municipal corporation of Dallas County, Texas, and the CITY OF FORT WORTH, a municipal corporation of Tarrant County, Texas, herein called "Board", and **NAME OF CONTRACTOR a STATE OF INCORPORATION OR REGISTRATION KIND OF BUSINESS**, with offices at **ADDRESS OF CONTRACTOR** herein called "Contractor".

WITNESSETH

1. CONTRACT AMOUNT

That for and in consideration of the payments and agreement hereinafter mentioned to be made and performed by the Board, the Contractor hereby agrees with the Board to commence and complete the construction of certain improvements herein referred to as the "Work" as further defined herein as follows: **"Rehabilitate Airfield Lighting FY16 - Vault Modifications "** Project, for the of **CONTRACT AMOUNT SPELLED IN WORDS (\$CONTRACT AMOUNT NUMERICAL)**. The actual amount due the Contractor for the Work shall be determined in accordance with the Contract Documents.

2. COMMENCEMENT OF WORK

The Contractor hereby agrees and binds himself to commence the construction of the Work within ten (10) calendar days of the date set forth in the written Notice to Proceed, diligently proceed with the Work, and complete the Work within the specified one hundred eighty-one (181) consecutive calendar days of the date set forth in the Notice To Proceed for Substantial Completion with an additional sixty (60) consecutive calendar days for Final Completion, for a total of one hundred and ninety (241) consecutive calendar days.

3. SURETY BOND

The Contractor agrees, that within ten (10) days after Notice of Award, and before beginning the Work, to make, execute, and deliver to the BOARD, a good and sufficient Surety Bond for the faithful performance of the terms and stipulations of the Contract, and agrees to make, execute, and deliver to the BOARD a good and sufficient Surety Bond as a guarantee that he will pay in full all bills and accounts for materials and labor used in the construction of the Work as provided by law in accordance with the BOARD's requirements set forth in "Contract". The Surety Company shall be a Surety company duly and legally authorized to do business in the State of Texas and acceptable to the BOARD.

4. VENUE

It is mutually agreed and understood that this agreement is made and entered into by the parties hereto in accordance with the existing laws of the State of Texas with reference to and governing all matters affecting this Contract, and the Contractor agrees to fully comply with all the provisions of the same. Venue of any action brought under this Contract shall lie in Dallas or Tarrant County exclusively.

5. ENTIRE AGREEMENT

This Contract, the documents issued hereunder, and the accompanying Special Provisions, General Provisions, Required Contract Provisions for Airport Improvement Program and for Obligated Sponsors, Plans, Technical Specifications, Addenda, Bid Documents, any required Performance Bond and Payment Bond and any required Insurance Certificates as identified on Attachment A hereto and other instruments specifically referred to

herein constitute the entire agreement between the parties, and no prior or contemporaneous written or oral agreement exists now which can be deemed to alter the provisions hereof.

6. EXECUTION OF AGREEMENT

EXECUTED on behalf of the DALLAS-FORT WORTH INTERNATIONAL AIRPORT BOARD as duly authorized by Resolution No. 2017-05-xxx of said BOARD, approved on _____ specifying the payment of the consideration herein provided from the account of the Joint Airport Fund designated in said Resolution, and on behalf of **CONTRACTOR FIRM NAME** by the duly authorized officer whose name is subscribed below.

Contractor: CONTRACTOR FIRM NAME

Typed Name Title

Approved As To Form:

LEGAL COUNSEL TO THE DALLAS/FORT
WORTH INTERNATIONAL AIRPORT BOARD

Dallas/Fort Worth International Airport Board:



ATTACHMENT A
SCHEDULE OF CONTRACT PROVISIONS, PLANS,
SPECIFICATIONS, ADDENDA AND OTHER ITEMS
(To be Incorporated into Contract by Reference)

Plans:

Incorporated into Contract No. 9500594 are the plans titled Rehabilitate Airfield Lighting FY16 - Vault Modifications, prepared by CH2M issued on 06/04/17.

Specifications:

Incorporated into Contract No. 9500594 are the Technical Specifications titled Rehabilitate Airfield Lighting FY16 - Vault Modifications prepared by CH2M issued on 06/04/17.

Addenda:

Addendum No. 1 issued _____, 2017.
Addendum No. 2 issued _____, 2017.
Addendum No. 3 issued _____, 2017.
Addendum No. 4 issued _____, 2017.

Exhibits:

Exhibit 1 – Performance Bond
Exhibit 2 – Payment Bond
Exhibit 3 – Request for Bid (RFB)
Exhibit 4 – Insurance Certificates
Exhibit 5 – Special Provisions
Exhibit 6 – General Provisions
Exhibit 7 – Technical Specifications & Plans
Exhibit 8 – Required Contract Provisions for Airport Improvement Program and for Obligated Sponsors



Exhibit 1 – PERFORMANCE BOND

THE STATE OF TEXAS)
COUNTY OF DALLAS AND)
COUNTY OF TARRANT)

KNOW ALL MEN BY THESE PRESENTS: That _____,
of _____, hereinafter called Principal, and _____,
a corporation organized and existing under the laws of the State of _____ and fully authorized to
transact business in the State of Texas, as Surety, are held and firmly bound unto the Dallas/Fort Worth
International Airport Board, acting on behalf of the Cities of Dallas and Fort Worth, municipal corporations
organized and existing under the laws of the
State of Texas, hereinafter called Board, in the penal sum of _____

_____ DOLLARS
(\$ _____) in lawful money of the United States, to be paid in Dallas County or
Tarrant County, Texas, for the payment of which sum well and truly to be made, we hereby bind ourselves, our
heirs, executors, administrators, and successors, jointly and severally, firmly by these presents. This Bond shall
automatically be increased by the amount of any Change Order which increases the Contract price, but in no
event shall a Change Order which reduces the Contract price decrease such obligations.

THE OBLIGATION TO PAY SAME is conditioned as follows:
Whereas, the Principal entered into a certain Contract designated as **Contract Number 9500594**, with the
Dallas/Fort Worth International Airport Board, the Board, dated _____, a copy of which is hereto attached
and made a part hereof, for the **“Rehabilitate Airfield Lighting FY16 - Vault Modifications”** Project.

NOW, THEREFORE, if the Principal shall well, truly, and faithfully perform and fulfill all of the
undertakings, covenants, terms, conditions, and agreements of said Contract in accordance with the plans,
specifications, and Contract documents during the original term thereof and any extension thereof which may be
granted by the Board, with or without notice to the Surety, and during the life of any guaranty or warranty required
under this Contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms,
conditions, and agreements of any and all duly authorized modifications of said Contract that may hereafter be
made, notice of which modifications to the Surety being hereby waived; and, if the Principal shall repair and/or
replace all defects due to faulty materials and workmanship that appear within a period of one (1) year from the
date of final completion and final acceptance of the Work by Board; and, if the Principal shall fully indemnify and
save harmless the Board from all costs and damages which Board may suffer by reason of failure to so perform
herein and shall fully reimburse and repay Board all outlay and expense which the Board may incur in making
good any default or deficiency, then this obligation shall be void; otherwise, it shall remain in full force and effect.

PROVIDED FURTHER, that if any legal action be filed upon this Bond, venue shall lie in Tarrant or Dallas
County, State of Texas.

AND PROVIDED FURTHER, that the said Surety, for value received, hereby stipulates and agrees that
no change, extension of time, alteration or addition to the terms of the Contract or to the Work to be performed
thereunder or the Specifications accompanying the same shall in anyway affect its obligation on this Bond, and it
does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract
or to the Work or to the Specifications.

This Bond is given pursuant to the provisions of Chapter 2253, Public Work Performance and Payment
Bond, Texas Government Code Title 10, and any other applicable statutes of the State of Texas.

The undersigned and designated agent is hereby designated by the Surety herein as the Resident Agent
in Dallas or Tarrant County to whom any requisite notices may be delivered and on whom service of process may
be had in matters arising out of such suretyship, as provided by Article 7.19-1 of the Insurance Code, Vernon's
Annotated Civil Statutes of the State of Texas.

IN WITNESS WHEREOF, this instrument is executed in two copies, each one of which shall be deemed an original, this the [redacted].

Principal:

BY: _____

Typed Name

Title

Surety:

By: _____

Typed Name

Title

The Resident Agent of the Surety in Dallas or Tarrant County, Texas, for delivery of notice and service of process is:

NAME: _____

STREET ADDRESS: _____

PHONE NUMBER: _____

(Note: Date of Performance Bond must be date of Contract. If Resident Agent is a corporation, give a person's name.)



Exhibit 2 – PAYMENT BOND

THE STATE OF TEXAS)
 COUNTY OF DALLAS AND)
 COUNTY OF TARRANT)

KNOW ALL MEN BY THESE PRESENTS: That _____,
 of _____, hereinafter called Principal, and _____,
 a corporation organized and existing under the laws of the State of _____ and fully
 authorized to transact business in the State of Texas, as Surety, are held and firmly bound unto the
 Dallas/Fort Worth International Airport Board, acting on behalf of the Cities of Dallas and Fort Worth,
 municipal corporations organized and existing under the laws of the State of Texas, hereinafter called
 Board, in the penal sum of _____

_____ DOLLARS (\$ _____) in lawful money of the United States, to be paid in
 Dallas County or Tarrant County, Texas, for the payment of which sum well and truly to be made, we
 hereby bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by
 these presents. This Bond shall automatically be increased by the amount of any Change Order which
 increases the Contract price, but in no event shall a Change Order which reduces the Contract price
 decrease such obligations.

THE OBLIGATION TO PAY SAME is conditioned as follows:

Whereas, the Principal entered into a certain Contract designated as **Contract Number 9500594**, with the
 Dallas/Fort Worth International Airport Board, the Board, dated the _____, a copy of which is hereto
 attached and made a part hereof, for the "**Rehabilitate Airfield Lighting FY16 - Vault Modifications**"
 Project.

NOW, THEREFORE, if the Principal shall well, truly, and faithfully perform its duties and make
 prompt payment to all persons, firms, subcontractors, corporations, and claimants supplying labor and/or
 materials in the prosecution of the Work provided for in said Contract and any and all duly authorized
 modifications of said Contract that may hereafter be made, notice of which modification to the Surety is
 hereby expressly waived, then this obligation shall be void; otherwise it shall remain in full force and effect.

PROVIDED FURTHER, that if any legal action be filed on this Bond, venue shall lie in Tarrant or
 Dallas County, Texas.

AND PROVIDED FURTHER, that the said Surety, for value received, hereby stipulates and agrees
 that no change, extension of time, alteration, or addition to Contract, or to the Work performed thereunder,
 or the Plans, Specifications, Drawings, etc., accompanying the same, shall in anyway affect its obligations
 on this Bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition
 to the terms of the Contract, or to the Work to be performed thereunder.

This Bond is given pursuant to the provisions of Chapter 2253, Public Work Performance and
 Payment Bond, Texas Government Code Title 10, and any other applicable statutes of the State of Texas.

The undersigned and designated agent is hereby designated by the Surety herein as the Resident
 Agent in Dallas or Tarrant County to whom any requisite notices may be delivered and on whom service of
 process may be had in matters arising out of such suretyship, as provided by Article 7.19-1 of the Insurance
 Code, Vernon's Annotated Civil Statutes of the State of Texas.

IN WITNESS WHEREOF, this instrument is executed in two copies, each one of which shall be deemed an original, this, the [redacted].

Principal:

BY: _____

Typed Name Title

Surety:

By: _____

Typed Name Title

The Resident Agent of the Surety in Dallas or Tarrant County, Texas, for delivery of notice and service of process is:

NAME: _____

STREET ADDRESS: _____

PHONE NUMBER: _____

(Note: Date of Payment Bond must be date of Contract. If Resident Agent is a corporation, give a person's name.)



Exhibit 3 – Request for Bids (RFB)

As provided on www.DFWAirport.com/business/solicitations



Exhibit 4 – Insurance Certificates

Insert Insurance Certificates here



Exhibit 5 – Special Provisions



Exhibit 6 – General Provisions

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GENERAL PROVISIONS

SECTION 10 - DEFINITION OF TERMS

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

- 10-1 **ACCESS ROAD.** The right-of-way, the roadway and all improvements constructed thereon connecting the airport to a public highway.
- 10-2 **ADMINISTRATION BUILDING.** The principal office of the Dallas-Fort Worth International Airport Board, located on the Airport site, 3200 East Airfield Drive, Dallas-Fort Worth Airport, Texas.
- 10-3 **ADVERTISEMENT.** A public announcement, as required by local law, inviting bids for work to be performed and/or materials to be furnished.
- 10-4 **AIP.** The Airport Improvement Program, a grant-in-aid program, administered by the Federal Aviation Administration.
- 10-5 **AIR OPERATIONS AREA (AOA).** For the purpose of these specifications, the term air operations area shall mean any area of the airport used or intended to be used for the landing, takeoff, or surface maneuvering of aircraft. An air operation area shall include such paved or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiway, or apron.
- 10-6 **AIRPORT.** Airport means the Dallas/Fort Worth International Airport.
- 10-7 **ASTM.** The American Society for Testing and Materials.
- 10-8 **AWARD.** The acceptance, by the OWNER, of the successful bidder's proposal.
- 10-9 **BIDDER.** Any individual, partnership, firm, or corporation, acting directly or through a duly authorized representative, who submits a proposal for the work contemplated.
- 10-10 **BOARD.** Shall mean the Dallas-Fort Worth International Airport Board (BOARD), a public body, established under the laws of the State of Texas and hereunto duly authorized by contract between the City of Dallas, a municipal corporation of Dallas County, Texas, and the City of Fort Worth, a municipal corporation of Tarrant County, Texas, or its Authorized Representatives.
- 10-11 **BUILDING AREA.** An area on the Airport to be used, considered, or intended to be used for airport buildings or other airport facilities or rights-of-way together with all airport buildings and facilities located thereon.
- 10-12 **CALENDAR DAY.** Every day shown on the calendar.
- 10-13 **CHANGE ORDER.** A written order to the Contractor covering changes in the plans, specifications, or proposal quantities and establishing the basis of payment and contract time adjustment, if any, for the work affected by such changes. Work covered by a change order shall be considered to be within the scope of the contract.
- 10-14 **CITIES.** The term "Cities" will refer to Dallas, Texas and Fort Worth, Texas.
- 10-15 **CONSTRUCTION MANAGER (CM).** Is the person or entity designated by the OWNER to provide construction management services during design and construction of the Work, and may include OWNER employees or firms under contract with the OWNER. The Construction Manager is an Authorized Representative of the OWNER for monitoring, coordination, and inspection of the Work.
- 10-16 **CONTRACT.** The written agreement covering the work to be performed. The awarded contract shall include, but is not limited to: The Contract Form; Special Provisions, General Provisions, Plans, Technical Provisions or Specifications, The Proposal; The Performance Bond; The Payment Bond; any required insurance certificates; and any addenda issued to bidders.
- 10-17 **CONTRACT ITEM (PAY ITEM).** A specific unit of work for which a price is provided in the contract.
- 10-18 **CONTRACT TIME.** The number of calendar days or working days, stated in the Contract, allowed for completion of the contract, including authorized time extensions. If a calendar date of completion is stated in the Contract, in lieu of a number of calendar or working days, the contract shall be completed by that date.
- 10-19 **CONTRACTOR.** The individual, partnership, firm, or corporation primarily liable for the acceptable performance of the work contracted and for the payment of all legal debts pertaining to the work who acts directly or through lawful agents or employees to complete the contract work.
- 10-20 **DRAINAGE SYSTEM.** The system of pipes, ditches, and structures by which surface or subsurface waters are collected and conducted from the airport area.
- 10-21 **ENGINEER.** The individual, partnership, firm, or corporation duly authorized by the Owner to be responsible for engineering inspection of the contract work and acting directly or through an authorized representative. May include OWNER employees or firms under contract with the OWNER.

10-22 EQUIPMENT. All machinery, together with the necessary supplies for upkeep and maintenance, and also all tools and apparatus necessary for the proper construction and acceptable completion of the work.

10-23 EXTRA WORK. An item of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, but which is found by the Engineer to be necessary to complete the work within the intended scope of the contract as previously modified.

10-24 FAA. The Federal Aviation Administration of the U.S. Department of Transportation. When used to designate a person, FAA shall mean the Administrator or his/her duly authorized representative.

10-25 FEDERAL SPECIFICATIONS. The Federal Specifications and Standards, Commercial Item Descriptions, and supplements, amendments, and indices thereto are prepared and issued by the General Services Administration of the Federal Government.

10-26 FORCE ACCOUNT. Force account construction work is construction that is accomplished through the use of material, equipment, labor, and supervisions provided by the Owner or by another public agency pursuant to an agreement with the Owner.

10-27 INSPECTOR. An authorized representative of the Owner or Engineer assigned to make all necessary inspections and/or tests of the work performed or being performed, or of the materials furnished or being furnished by the Contractor.

10-28 INTENTION OF TERMS. Whenever, in these specifications or on the plans, the words "directed," "required," "permitted," "ordered," "designated," "prescribed," or words of the like import are used, it shall be understood that the direction, requirement, permission, order, designation, or prescription of the Engineer is intended; and similarly, the words "approved," "acceptable," "satisfactory," or words of like import, shall mean approved by, or acceptable to, or satisfactory to the Engineer, subject in each case to the final determination of the Owner.

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

10-29 LABORATORY. The official testing laboratories of the Owner or such other laboratories as may be designated by the Engineer.

10-30 LIGHTING. A system of fixtures providing or controlling the light sources used on or near the airport or within the airport buildings. The field lighting includes all luminous signals, markers, floodlights, and illuminating devices used on or near the airport or to aid in the operation of aircraft landing at, taking off from, or taxiing on the airport surface.

10-31 MAJOR AND MINOR CONTRACT ITEMS. A major contract item shall be any item that is listed in the proposal, the total cost of which is equal to or greater than 20 percent of the total amount of the award contract. All other items shall be considered minor contract items.

10-32 MATERIALS. Any substance specified or required for use in the construction of the contract work.

10-33 NOTICE TO PROCEED. A written notice to the Contractor to begin the work under contract by a specified date. If applicable, the Notice to Proceed shall state the date on which the contract time begins.

10-34 OWNER. Shall mean the Dallas-Fort Worth International Airport Board (BOARD), a public body, established under the laws of the State of Texas and hereunto duly authorized by contract between the City of Dallas, a municipal corporation of Dallas County, Texas, and the City of Fort Worth, a municipal corporation of Tarrant County, Texas, or its Authorized Representatives. Authorized Representatives shall be designated in writing with specific limits of authority, and may be employees of the OWNER or employees of firms under contract (Owner's Representatives) with the OWNER to provide specific services.

For AIP contracts, the term "Sponsor" shall have the same meaning as the term "Owner".

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

10-36 PAYMENT BOND. The approved form of security furnished by the Contractor and his/her surety as a guaranty that he will pay in full all bills and accounts for materials and labor used in the construction of the work. Said security shall be in accordance with the provisions of Chapter 2253, Government Code.

10-37 PERFORMANCE BOND. The approved form of security furnished by the Contractor and his/her surety as a guaranty that the Contractor will complete the work in accordance with the terms of the contract, and that the Contractor will maintain the Work constructed by it in good condition for the period of time required; said security shall be in accordance with the provisions of Chapter 2253, Government Code.

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

10-39 PROPOSAL/BID FORM. The written offer of the bidder (when submitted on the approved proposal form) to perform the contemplated work and furnish the necessary materials in accordance with the provisions of the plans and specifications.

10-40 PROPOSAL GUARANTY/BID GUARANTY. The security furnished with a proposal to guarantee that the bidder will enter into a contract if his/her proposal is accepted by the Owner.

10-41 QUALITY ASSURANCE. For all tests needed to ensure specification compliance of in-place work, the Owner shall appoint, and employ, the services of an independent materials testing agency of its choosing. The payment for these services shall be borne by the Owner. The costs for any retesting, brought about by the indicated failure of performance in the initial test, shall be borne exclusively by the Contractor. The Quality Assurance tests shall be the basis for determining payment and/or adjustments to payment.

10-46 QUALITY CONTROL. All materials testing services relative to engineering and selection of design components, such as herein required for paving and concrete design mixes, as well as in-process testing, shall be performed by a duly qualified and certified materials testing agency of the Contractor's choosing. The testing shall be as necessary to comply with General Provision Section 100 - Contractor Quality Control Program. The costs of these services shall be paid directly by the Contractor.

10-47 RUNWAY. The area on the airport prepared for the landing and takeoff of aircraft.

10-48 SPECIFICATIONS. A part of the contract containing the written directions and requirements for completing the contract work. Standards for specifying materials or testing which are cited in the contract specifications by reference shall have the same force and effect as if included in the contract physically.

10-49 STRUCTURES. Airport facilities such as bridges; culverts; catch basins, inlets, retaining walls, cribbing; storm and sanitary sewer lines; water lines; underdrains; electrical ducts, manholes, handholes, lighting fixtures and bases; transformers; flexible and rigid pavements; navigational aids; buildings; vaults; and, other manmade features of the airport that may be encountered in the work and not otherwise classified herein.

10-50 SUBGRADE. The soil which forms the pavement foundation.

10-51 SUPERINTENDENT. The Contractor's executive representative who is present on the work during progress, authorized to receive and fulfill instructions from the Owner or Engineer, and who shall supervise and direct the construction.

10-52 SUPPLEMENTAL AGREEMENT. A written agreement between the Contractor and the Owner covering: (1) work that would increase or decrease the total amount of the awarded contract, or any major contract item, by more than 25 percent, such increased or decreased work being within the scope of the originally awarded contract; or (2) work that is not within the scope of the originally awarded contract.

10-53 SURETY. The corporation, partnership, or individual, other than the Contractor, executing payment or performance bonds which are furnished to the Owner by the Contractor.

10-54 TAXIWAY. For the purpose of this document, the term taxiway means the portion of the air operations area of an airport that has been designated by competent airport authority for movement of aircraft to and from the airport's runways or aircraft parking areas.

10-55 WORK. The furnishing of all labor, materials, tools, equipment, and incidentals necessary or convenient to the Contractor's performance of all duties and obligations imposed by the contract, plans, and specifications.

10-56 WORKING DAY. A working day is any calendar day scheduled for active performance of Contract requirements.

END OF SECTION 10

SECTION 20 - PROPOSAL REQUIREMENTS AND CONDITIONS

20-1 **ADVERTISEMENT (Notice to Bidders).** A copy of the advertisement is posted on the DFW website, www.dfairport.com.

20-2 **QUALIFICATION OF BIDDERS.** Upon request, the two lowest bidders shall furnish the Owner satisfactory evidence of his/her competency to perform the proposed work. Such evidence of competency, unless otherwise specified, shall consist of statements covering the bidder's past experience on similar work, a list of equipment that would be available for the work, and a list of key personnel that would be available. In addition, each bidder shall furnish the Owner satisfactory evidence of his/her financial responsibility. Such evidence of financial responsibility, unless otherwise specified, shall consist of a confidential statement or report of the bidder's financial resources and liabilities as of the last calendar year or the Contractor's last fiscal year. Such statements or reports shall be certified by a public accountant. At the time of submitting such financial statements or reports, the bidder shall further certify whether his/her financial responsibility is approximately the same as stated or reported by the public accountant. If the bidder's financial responsibility has changed, the bidder shall qualify the public accountant's statement or report to reflect his/her (bidder's) true financial condition at the time such qualified statement or report is submitted to the Owner.

If requested, the two lowest bidders shall submit "evidence of competency" and "evidence of financial responsibility" to the Owner no later than 48 hours after the opening of bids. The Owner reserves the right to reject any bid if the evidence submitted by, or investigation of such bid fails to satisfy the Owner that such bidder is properly qualified to carry out the obligations of the Contract and to complete the Work contemplated therein.

20-3 **CONTENTS OF PROPOSAL FORMS.** The Owner shall furnish bidders with proposal forms. All papers bound with or attached to the proposal forms are necessary parts and must not be detached. The plans, specifications, and other documents designated in the proposal form shall be considered a part of the proposal whether attached or not.

20-4 **ISSUANCE OF PROPOSAL FORMS.** The Owner reserves the right to refuse to issue a proposal form to a prospective bidder should such bidder be in default for any of the following reasons:

- a. Failure to comply with any qualification 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. Contractor default under previous contracts with the Owner.
- d. Unsatisfactory work on previous contracts with the Owner.

20-5 **INTERPRETATION OF ESTIMATED PROPOSAL QUANTITIES.** For unit price contracts, an estimate of quantities of work to be done and materials to be furnished under these specifications is given in the proposal. It is the result of careful calculations and is believed to be correct. It is given only as a basis for comparison of proposals and the award of the contract. The Owner does not expressly or by implication agree that the actual quantities involved will correspond exactly therewith; nor shall the bidder plead misunderstanding or deception because of such estimates of quantities, or of the character, location, or other conditions pertaining to the work. Payment to the Contractor will be made only for the actual quantities of work performed or materials furnished in accordance with the plans and specifications. It is understood that the quantities may be increased or decreased as hereinafter provided in the subsection titled ALTERATION OF WORK AND QUANTITIES of Section 40 without in any way invalidating the unit bid prices.

20-6 **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. 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 submission of a proposal shall be prima facie evidence that the bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to the requirements of the proposed contract, plans, and specifications.

Boring logs and other records of subsurface investigations and tests are available for inspection of bidders, if applicable. 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 he may make or obtain from his/her examination of the boring logs and other records of subsurface investigations and tests that are furnished by the Owner.

20-7 PREPARATION OF PROPOSAL. The bidder shall submit his/her proposal on the forms furnished by the Owner. All blank spaces in the proposal forms must be correctly filled in where indicated for each and every item for which a quantity is given. The bidder shall state the price (written in ink or typed) both in words and numerals for which he proposes to do each pay item furnished in the proposal. In case of conflict between words and numerals, the words, unless obviously incorrect, shall govern.

In the case of any discrepancy between the proper addition and / or multiplication of the individual unit prices bid (using the stated / estimated quantities), and the bidder's total bid, as stated on the summary page, the Board's proper addition and / or multiplication of the unit prices bid (using the stated / estimated quantities) shall constitute the bid amount but prevail over the bidder's stated (and mathematically incorrect) bid total.

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

20-8 IRREGULAR PROPOSALS. Proposals shall be considered irregular for the following reasons:

- a. If the proposal is on a form other than that furnished or allowed 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 which make the proposal incomplete, indefinite, or otherwise ambiguous.
- c. If the proposal does not contain a unit price for each pay item listed in the proposal, except in the case of authorized alternate pay items, for which the bidder is not required to furnish a unit price.
- d. If the proposal contains unit prices that are obviously unbalanced.
- e. If the proposal is not accompanied by the proposal guaranty specified by the Owner.

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

20-9 BID GUARANTEE. No Bid will be considered unless it is accompanied by a cashier's check on any State or National Bank in Dallas or Tarrant County, Texas, or acceptable Bid Bond, payable unconditionally to the Dallas-Fort Worth International Airport Board. The cashier's check or Bidder's Bond shall be five percent (5%) of the amount of the Bid. In the case of bid alternates, the Bid Bond amount shall be based on the highest total bid. The Bid Guaranty is required by the OWNER as evidence of good faith and as a guarantee that if awarded the Contract, the Bidder will execute the Contract and furnish certificates of insurance and the required bonds within ten (10) calendar days after the award of the Contract. The Bid Bond shall be conditioned that if the Bid is withdrawn after the bids have been opened or the successful Bidder refuses to enter into and execute a Contract with the OWNER under the terms of the Contract attached hereto, and deliver to the OWNER a copy of a payment bond, a performance bond, and certificates of insurance as required hereby, the successful Bidder and the surety shall become liable to the OWNER for the amount of the Bid Bond. If a Bid Bond is used, the surety thereon shall designate a resident agent in Dallas or Tarrant County, Texas, to whom requisite notices may be delivered and upon whom service of process may be had. Individual sureties will not be accepted. In the event a cashier's check is submitted along with the Bid, and the successful Bidder does not execute the Contract within fifteen (15) calendar days after award of said Contract or withdraws its Bid after Bids have been opened, the OWNER shall be entitled to the proceeds of such check. Attorneys-in-Fact who sign bid bonds or contract bonds must file with each bond a certified and effectively dated copy of their power of attorney.

20-10 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 before the time specified for opening all bids. Proposals received after the bid opening time shall be returned to the bidder unopened.

20-11 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 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. Withdrawal by telephone or facsimile will not be permitted.

20-12 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 request) or received after the time specified for opening bids, shall be returned to the bidder unopened.

20-13 DISQUALIFICATION OF BIDDERS. A bidder shall be considered disqualified for any of the following reasons:

- a. Submitting more than one proposal from the same partnership, firm, or corporation under the same or different name.
- b. Evidence of collusion among bidders. Bidders participating in such collusion shall be disqualified as bidders for any future work of the Owner until any such participating bidder has been reinstated by the Owner as a qualified bidder.
- c. If the bidder is considered to be in "default" for any reason specified in the subsection titled ISSUANCE OF PROPOSAL FORMS of this section.
- d. Where the Bidder, any subcontractor or supplier, or the surety on any bond given, or to be given is in litigation with the Owner, or with either the Cities of Dallas or Fort Worth, or where such litigation is contemplated or imminent, in the sole opinion of the Owner.

END OF SECTION 20

SECTION 30 - AWARD AND EXECUTION OF CONTRACT

30-1 CONSIDERATION OF PROPOSALS. After the proposals are publicly opened and read, they will be compared on the basis of price. If there is a discrepancy between the price written in words and the price written in numbers, the price written in words shall govern.

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

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

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

30-2 AWARD OF CONTRACT. The award of a contract, if it is to be awarded, shall be made within 120 calendar days of the date specified for publicly opening proposals, unless otherwise specified herein.

Award of the contract shall be made by the Owner to the lowest responsive and responsible bidder whose proposal conforms to the cited requirements of the Owner.

30-3 CANCELLATION OF AWARD. The Owner reserves the right to cancel the award without liability to the bidder, except return of proposal guaranty, at any time before a contract has been fully executed by all parties and is approved by the Owner in accordance with the subsection titled APPROVAL OF CONTRACT of this section.

30-4 RETURN OF PROPOSAL/BID GUARANTY. As soon as the bid prices have been compared, the OWNER may, at its discretion, return the security accompanying the bids which, in its judgment, would not be considered in making the award. The Security of the three (3) lowest bidders may be retained by the OWNER until after the Contract has been awarded, executed, and bonds and insurance requirements have been submitted by the successful Bidder. The OWNER will return all cashier's check type bid guaranties as soon as practicable upon determination that bidder will not be considered in making award or upon receipt of bonds and insurance from the successful bidder.

30-5 REQUIREMENTS OF CONTRACT BONDS. Within ten (10) calendar days after notice of award (which will be delivered with execution originals of contract), the Contractor shall furnish the Owner the executed contract and a surety bond or bonds which have been fully executed by the Contractor 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.

No sureties will be accepted by the OWNER who are now in default or delinquent on any bonds or who are actively interested in any litigation against the Cities or the OWNER. All bonds shall be made on forms furnished by the OWNER, and shall be executed by not less than one corporate surety admitted to do business in the State of Texas or be listed by the U.S. Department of the Treasury as an acceptable surety. Individual sureties will not be accepted. Each bond shall be executed by the Contractor and the surety. Each surety shall designate an agent resident in Dallas or Tarrant County, Texas, to whom any requisite notices may be delivered and on whom service of process may be had in matters arising out of such suretyship. If a change in Resident Agent occurs, this change must be reported to the Airport Development & Engineering Department immediately.

Surety bonds shall be in accordance with applicable law. These bonds shall automatically be increased by the amount of any Change Order or Supplemental Agreement which increases the Contract Amount, but in no event shall a Change Order or Supplemental Agreement which reduces the Contract Amount decrease such obligation.

- a. Performance Bonds are required on all contracts which exceed \$100,000.00 - A good and sufficient bond in an amount equal to the total amount of the Contract, as evidenced by the proposal tabulation, or otherwise, guaranteeing the full and faithful execution of the Work and

- performance of the Contract in accordance with the Contract Documents, including any extensions thereof, for the protection of the OWNER. This bond shall provide for the repair and/or replacement of all defects due to faulty materials and workmanship that appear within a period of one (1) year from the date of acceptance of the improvement by the OWNER.
- b. Payment Bonds are required on all contracts which exceed \$50,000.00 - A good and sufficient bond in an amount equal to the total amount of the contract, as evidenced by the proposed tabulation, or otherwise, guaranteeing the full and proper protection of all claimants supplying labor and material in the prosecution of the Work provided for in said Contract and for the use of each such claimant.

30-6 EXECUTION OF CONTRACT. The successful bidder shall sign (execute) the necessary agreements for entering into the contract and return such signed contract to the Owner, along with the fully executed surety bond or bonds specified in the subsection titled REQUIREMENTS OF CONTRACT BONDS of this section within ten (10) calendar days. If the contract is mailed, special handling is recommended.

30-7 APPROVAL OF CONTRACT. Upon receipt of evidence of adequate insurance coverage, 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.

30-8 FAILURE TO EXECUTE CONTRACT. Failure of the successful bidder to execute the contract and furnish an acceptable surety bond or bonds and evidence of adequate insurance coverage within the ten (10) calendar day period specified in the subsection titled REQUIREMENTS OF CONTRACT BONDS of this section shall be just cause for cancellation of the award and forfeiture of the proposal guaranty, not as a penalty, but as liquidation of damages to the Owner. In the event the OWNER should re-advertise for bids, the defaulting Contractor shall not be eligible to bid.

END OF SECTION 30

SECTION 40 - SCOPE OF WORK

40-1 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 necessary superintendence, labor, machinery, equipment, tools, materials, transportation and supplies required to complete the work in accordance with the plans, specifications, and terms of the contract.

These specifications contain detailed instructions and descriptions covering the major items of construction and workmanship necessary for building and completing the various units or elements of the work. The specifications are intended to be so written that only first class material, workmanship, and finish of the best grade and quality will result. The fact that these specifications may fail to be so complete as to cover all details will not relieve the Contractor of full responsibility for providing a completed work of high quality, first class finish and appearance, and satisfactory for operation, all within the apparent intent of the Plans and Specifications.

40-2 ALTERATION OF WORK AND QUANTITIES. The Owner reserves and shall have the right to make such alterations in the work as may be necessary or desirable to complete the work originally intended in an acceptable manner. Unless otherwise specified herein, the Owner shall be and is hereby authorized to make such alterations in the work as may increase or decrease the originally awarded contract quantities, provided that the aggregate of such alterations does not change the total cost of any major contract item by more than 25 percent (total cost being based on the unit prices and estimated quantities in the awarded contract). Alterations which do not exceed the 25 percent limitation shall not invalidate the contract nor release the surety, and the Contractor agrees to accept payment for such alterations as if the altered work had been a part of the original contract. These alterations which are for work within the general scope of the contract shall be covered by "Change Orders" issued by the Owner. Change orders for altered work shall include extensions of contract time where, in the Owner's opinion, such extensions are commensurate with the amount and difficulty of added work.

40-3 OMITTED ITEMS. The Owner reserves and shall have the right to omit from the work any contract item, except major contract items. Major contract items may be omitted by a supplemental agreement. Such omission of contract items shall not invalidate any other contract provision or requirement.

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

40-4 EXTRA WORK. Should acceptable completion of the contract require the Contractor to perform an item of work for which no basis of payment has been provided in the original contract or previously issued change orders or supplemental agreements, the same shall be called Extra Work. Extra Work that is within the general scope of the contract shall be covered by written change order. Change orders for such extra work shall contain agreed 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 Owner's opinion, is necessary for completion of such extra work.

When determined to be in the Owner's best interest, the Owner may order the Contractor to proceed with extra work by force account as provided in the subsection titled PAYMENT FOR EXTRA AND FORCE ACCOUNT WORK of Section 90.

Extra work that is necessary for acceptable completion of the project, but is not within the general scope of the work covered by the original contract shall be covered by a Supplemental Agreement as hereinbefore defined in the subsection titled SUPPLEMENTAL AGREEMENT of Section 10.

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

40-5 MAINTENANCE OF TRAFFIC. It is the explicit intention of the contract is that safety is the most important consideration. It is understood and agreed that the Contractor shall provide for the free and unobstructed movement of aircraft in the air operations areas of the airport with respect to his/her own operations and the operations of all his/her subcontractors as specified in the subsection titled LIMITATION OF OPERATIONS of Section 80. It is further understood and agreed that the Contractor shall provide for the uninterrupted operations of visual and electronic signals (including power supplies thereto) used in the guidance

of aircraft while operating to, from, and upon the airport as specified in the subsection titled CONTRACTOR'S RESPONSIBILITY FOR UTILITY SERVICE AND FACILITIES OF OTHERS in Section 70.

With respect to his/her own operations and the operations of all his/her 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.

When the contract requires the maintenance of vehicular traffic on an existing road, street, or highway during the Contractor's performance of work that is otherwise provided for in the contract, plans, and specifications, the Contractor shall keep such road, street, or highway open to all traffic and shall provide such maintenance as may be required to accommodate traffic. The Contractor shall furnish erect, and maintain barricades, warning signs, flagmen, and other traffic control devices in reasonable conformity with the Manual of Uniform Traffic Control Devices for Streets and Highways (published by the United States Government Printing Office), unless otherwise specified herein. 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.

The Contractor shall make his/her own estimate of all labor, materials, equipment, and incidentals necessary for providing the maintenance of aircraft and vehicular traffic as specified in this subsection.

The cost of maintaining the aircraft and vehicular traffic specified in this subsection shall not be measured or paid for directly, but shall be included in the various contract items.

40-6 REMOVAL OF EXISTING STRUCTURES. All existing structures encountered within the established lines, grades, or grading sections shall be removed by the Contractor, unless such existing structures are otherwise specified to be relocated, adjusted up or down, salvaged, abandoned in place, reused in the work or to remain in place. The cost of removing such existing structures shall not be measured or paid for directly, but shall be included in the various contract items.

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

Except as provided in the subsection titled RIGHTS IN AND USE OF MATERIALS FOUND IN THE WORK of this section, it is intended that all existing materials or structures that may be encountered (within the lines, grades, or grading sections established for completion of the work) shall be utilized in the work as otherwise provided for in the contract and shall remain the property of the Owner when so utilized in the work.

40-7 RIGHTS IN AND USE OF MATERIALS FOUND IN THE WORK. Should the Contractor encounter any material such as (but not restricted to) sand, stone, gravel, slag, or concrete slabs within the established lines, grades, or grading sections, the use of which is intended by the terms of the contract to be either embankment or waste, he may at his/her option either:

- a. Use such material in another contract item, providing such use is approved by the Owner 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 Owner; or
- c. Use such material for his/her 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., he shall request the Owner's approval in advance of such use.

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

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

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

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

40-8 FINAL CLEAN UP. 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. All brush and woods within the limits indicated shall be cut and the site shall be left in a neat and presentable condition. Material cleared from the site and deposited on adjacent property will not be considered as having been disposed of satisfactorily, unless the Contractor has obtained the written permission of such property owner.

END OF SECTION 40

SECTION 50 - CONTROL OF WORK

50-1 AUTHORITY OF THE ENGINEER. The Engineer shall decide any and all questions which may arise as to the quality and acceptability of materials furnished, work performed, and as to the manner of performance and rate of progress of the work. The Engineer shall decide all questions which may arise as to the interpretation of the specifications or plans relating to the work, the fulfillment of the contract on the part of the Contractor, and the rights of different Contractors on the project. The Engineer shall determine the amount and quality of the several kinds of work performed and materials furnished which are to be paid for the under contract.

For AIP contracts, the Engineer does not have the authority to accept pavements that do not conform to FAA specification requirements.

50-2 CONFORMITY WITH PLANS AND SPECIFICATIONS. All work and all materials furnished shall be in reasonably close conformity with the lines, grades, grading sections, cross sections, dimensions, material requirements, and testing requirements that are specified (including specified tolerances) in the contract, plans or specifications.

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

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

All quality assurance costs associated with replacing or otherwise correcting any work item determined to be unacceptable shall be borne by the Contractor.

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

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

If it is found that the material furnished, work performed, or the finished product is not in close conformity with the plans and specifications, the Contractor shall bear all the expenses of such recovery, exposure, observation, inspection and testing and of satisfactory reconstruction including compensation for additional professional services and retesting, and an appropriate deductive change order shall be issued.

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

50-3 COORDINATION OF CONTRACT, PLANS, AND SPECIFICATIONS. The Contract Form, Contract Special Provisions, Contract General Provisions, Plans, Technical Specifications and Provisions, and all referenced standards cited are essential parts of the Contract requirements. A requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete Work. In case of discrepancy, calculated dimensions will govern over scaled dimensions; Contract Forms shall govern over Contract Special Provisions, Contract Special Provisions shall govern over Contract

General Provisions, Contract General Provisions shall govern over Plans, Plans shall govern over Technical Specifications and Provisions, Technical Specifications and Provisions shall govern over cited standards for materials or testing, and cited FAA advisory circulars (if applicable.)

The Contractor shall not take advantage of any apparent error or omission on the plans or specifications or in test results relating to the Work hereunder. In the event the Contractor discovers any apparent error or discrepancy, he shall immediately call upon the Owner for his/her interpretation and decision, and such decision shall be final.

50-4 COOPERATION OF CONTRACTOR. The Contractor will be supplied with one copy each of the plans and specifications. The Contractor shall have available on the work at all times one copy each of the plans and specifications. Additional copies of plans and specifications may be obtained by the Contractor for the cost of reproduction.

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

50-5 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 his/her work so as not to interfere with or hinder the progress of completion of the work being performed by other Contractors. Contractors working on the same project shall cooperate with each other as directed.

Each Contractor involved shall assume all liability, financial or otherwise, in connection with his/her contract and shall protect and save harmless the Owner from any and all damages or claims that may arise because of inconvenience, delays, or loss experienced by him because of the presence and operations of other Contractors working within the limits of the same project.

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

50-6 CONSTRUCTION LAYOUT AND STAKES. When applicable, the Engineer shall establish horizontal and vertical control only. The Contractor must establish all layout required for the construction of the work. Such stakes and markings as the Engineer may set for either his/her own or the Contractor's guidance shall be preserved by the Contractor. In case of negligence on the part of the Contractor, or his/her employees, resulting in the destruction of such stakes or markings, an amount equal to the cost of replacing the same may be deducted from subsequent estimates due the Contractor at the discretion of the Engineer.

50-7 AUTOMATICALLY CONTROLLED EQUIPMENT. Whenever batching or mixing plant equipment is required to be operated automatically under the contract and a breakdown or malfunction of the automatic controls occurs, the equipment may be operated manually or by other methods for a period of 48 hours following the breakdown or malfunction, provided this method of operations will produce results which conform to all other requirements of the contract.

50-8 AUTHORITY AND DUTIES OF INSPECTORS. Inspectors employed by the Owner shall be authorized to inspect all work done and all material furnished. Such inspection may extend to all or any part of the work and to the preparation, fabrication, or manufacture of the materials to be used. Inspectors are not authorized to revoke, alter, or waive any provision of the contract. Inspectors are not authorized to issue instructions contrary to the plans and specifications or to act as foreman for the Contractor.

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

No act by the inspector on behalf of the Owner shall relieve the Contractor of its obligation to comply with all requirements of the Contract.

50-9 INSPECTION OF THE WORK. All materials and each part or detail of the work shall be subject to inspection by the Engineer. The Engineer shall be allowed access to all parts of the work and shall be furnished with such information and assistance by the Contractor as is required to make a complete and detailed inspection. If the Engineer requests it, the Contractor, at any time before acceptance of the work, shall remove or uncover such portions of the finished work as may be directed. After examination, the Contractor shall restore said portions of the work to the standard required by the specifications. Should the work thus exposed or examined prove acceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be paid for as extra work; but should the work so exposed or examined prove unacceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be at the Contractor's expense.

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

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

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

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

Work done contrary to the instructions of the Engineer, work done beyond the lines shown on the plans or as given, 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 forthwith with any order of the Engineer made under the provisions of this subsection, the Engineer will have authority to cause unacceptable work to be remedied or removed and replaced and unauthorized work to be removed and to deduct the costs (incurred by the owner) from any monies due or to become due the Contractor.

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

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

50-12 MAINTENANCE DURING CONSTRUCTION. The Contractor shall maintain the work during construction and until the work is accepted. This maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and forces so that the work is maintained in satisfactory condition at all times. In the case of a contract for the placing of a course upon a course or subgrade previously constructed, the Contractor shall maintain the previous course or subgrade during all construction operations.

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

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

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

50-14 SUBSTANTIAL COMPLETION. The Date of Substantial Completion of the Work is the date the OWNER determines construction is sufficiently complete, in accordance with the Contract Documents, so the OWNER may occupy or use the Work, or designated portion thereof, for its intended purpose, without restriction. Substantial Completion date(s), if any, are specified elsewhere in the Contract documents.

When the Contractor considers that the Work, or a designated portion thereof which is acceptable to the OWNER is substantially complete as defined above, the Contractor shall prepare for submission to the OWNER a list of items to be completed or corrected. The failure to include any items on such list does not alter the responsibility of the Contractor to complete the Work in accordance with the Contract Documents. When the OWNER determines that the Work or designated portion thereof is substantially complete, it will issue a written notice to the Contractor establishing the date of Substantial Completion. The notice shall state the responsibilities of the OWNER and the Contractor for (but not limited to) security, maintenance, heat, utilities, damage to the Work, and insurance, and shall list remaining items to be corrected or completed. The Work not fully completed or corrected shall be completed to the satisfaction of the OWNER within the time period allowed by the Contract Documents. In the event the Contractor fails to complete or correct the remaining items within the allotted time, the OWNER may complete or correct the items and deduct the cost thereof from the Contract amount.

50-15 PARTIAL ACCEPTANCE. If at any time during the prosecution of the project the Contractor substantially completes a usable unit or portion of the work, the occupancy of which will benefit the owner, he may request the Engineer to make final inspection of that unit. If the Engineer finds upon inspection that the unit has been satisfactorily completed in compliance with the contract, he may accept it as being completed, 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.

50-16 FINAL COMPLETION/FINAL ACCEPTANCE. The Contractor will have sixty (60) calendar days, after Substantial Completion, to complete the Work not fully completed or corrected to the satisfaction of the OWNER. The Contractor shall give notice of Final Completion to the OWNER upon completion of all items of Work. Upon written notice of Final Completion from the Contractor that all work has been completed, the OWNER will make an inspection. If all work provided for and contemplated by the Contract Documents is found to be completed in accordance with the Contract documents, plans and specifications, such inspection shall constitute the final inspection and OWNER shall make final acceptance of the Work (Final Acceptance). The OWNER shall notify the Contractor in writing of Final Acceptance as of the date of the final inspection.

If, however, the inspection discloses that the Work, or any part thereof, is not in compliance with the Contract Documents, plans and specifications, the OWNER will give the Contractor the necessary instructions for correction of same and the Contractor shall immediately comply with and execute such instructions. Upon correction of the Work, another inspection will be made which, if the Work is corrected as instructed, shall constitute the final inspection. Once all Work is corrected as instructed, the OWNER will make the Final Acceptance and notify the Contractor in writing of this Acceptance as of the date of the final inspection. Warranties required by the Contract shall commence on the date of Final Acceptance of the Work unless otherwise stated in the Notice of Substantial Completion. Each project as a whole shall have a single warranty date. If portions of the work are completed before others, the warranty period will be extended to coincide with the project warranty date identified in the Notice of Substantial Completion.

50-17 CLAIMS FOR ADJUSTMENT AND DISPUTES. If for any reason the Contractor deems that additional compensation is due for work or materials not clearly provided for in the contract, plans, or specifications or previously authorized as extra work, the Contractor shall notify the Engineer in writing of his/her intention to claim such additional compensation before beginning the work on which the claim is based. If such notification is not given or the Engineer is not afforded proper opportunity by the Contractor for keeping strict account of actual cost as required, then the Contractor hereby agrees to waive any claim for such additional compensation. Such notice by the Contractor and the fact that the Engineer has kept account of the cost of the work shall not in any way be construed as proving or substantiating the validity of the claim. When the work on which the claim for additional compensation is based has been completed, the Contractor shall, within five (5) calendar days, submit his/her written claim to the Engineer who will present it to the owner for consideration in accordance with local laws or ordinances. Contractor will submit proposal within ten (10) days.

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

50-18 CONTRACTOR COST REDUCTION PROPOSALS. The provisions of this subsection will apply only to contracts awarded to the lowest bidder pursuant to competitive bidding.

On projects with original contract amounts in excess of \$100,000, the Contractor may submit, in writing, proposals for modifying the plans, specifications or other requirements of the contract for the sole purpose of reducing the cost of construction. The cost reduction proposal shall not impair, in any manner, the essential functions or characteristics of the project, including but not limited to service life, economy of operation, ease of maintenance, desired appearance, design and safety standards. This provision shall not apply unless the proposal submitted is specifically identified by the Contractor as being presented for consideration as a value engineering proposal. Not eligible for cost reduction proposals are changes in the basic design of a pavement type, runway and taxiway lighting, visual aids, hydraulic capacity of drainage facilities, or changes in grade or alignment that reduce the geometric standards of the project.

As a minimum, the following information shall be submitted by the Contractor with each proposal:

- a. A description of both existing contract requirements for performing the work and the proposed changes, with a discussion of the comparative advantages and disadvantages of each;
- b. An itemization of the contract requirements that must be changed if the proposal is adopted;
- c. A detailed estimate of the cost of performing the work under the existing contract and under the proposed changes;
- d. A statement of the time by which a change order adopting the proposal must be issued;
- e. A statement of the effect adoption of the proposal will have on the time for completion of the contract; and
- f. The contract items of work affected by the proposed changes, including any quantity variation attributable to them.

The Contractor may withdraw, in whole or in part, any cost reduction proposal not accepted, within the period specified in the proposal. The provisions of this subsection shall not be construed to require the Engineer to consider any cost reduction proposal that may be submitted.

The Contractor shall continue to perform the work in accordance with the requirements of the contract until a change order incorporating the cost reduction proposal has been issued. If a change order has not been issued by the date upon which the Contractor's cost reduction proposal specifies that a decision should be made, or such other date as the Contractor may subsequently have requested in writing, such cost proposal shall be deemed rejected.

The Engineer shall be the sole judge of the acceptability of a cost reduction proposal and of the estimated net savings from the adoption of all or any part of such proposal. In determining the estimated new savings, the Engineer may disregard the contract bid prices if, in the Engineer's judgment such prices do not represent a fair measure of the value of the work to be performed or deleted.

The OWNER will not be liable for any delay in acting upon, or for any failure to act upon, any proposal submitted pursuant to this Article. The decision of the OWNER as to acceptance of any such proposal under the Contract shall be final. The submission of a proposal by the Contractor shall not in itself affect the rights or obligations of either party under the Contract.

The OWNER may accept in whole or in part any proposal submitted pursuant to this Article by issuing a Contract Change Order which will identify the proposal on which it is based. The Contract Change Order will provide for an equitable adjustment in the Contract Amount and will revise any other affected provisions of the Contract Documents. The equitable adjustment in the Contract Amount shall be established by determining the net savings resulting from the accepted change. The net savings resulting from the change shall be shared between the Contractor and the OWNER on the basis of fifty percent (50%) for the Contractor and fifty percent (50%) for the OWNER. Net savings shall be determined by deducting from the estimated gross savings, the Contractor's costs of developing and implementing the proposal (including any amount attributable to a subcontractor) and the estimated amount of increased costs to the OWNER resulting from the change, such as implementation, inspection, related items, and OWNER-furnished material. Estimated gross savings shall include Contractor's labor, material, equipment, overhead, profit, and bond. The Contract Amount shall be reduced by the sum of the OWNER's costs and share of the net savings and shall constitute full compensation to the Contractor for the cost reduction proposal and performance of the work.

Acceptance of the cost-reduction proposal and performance of the cost-reduction work shall not extend the time of completion of the contract unless specifically provided for in the change order.

END OF SECTION 50

SECTION 60 - CONTROL OF MATERIALS

60-1 SOURCE OF SUPPLY AND QUALITY REQUIREMENTS. The materials used on the work shall conform to the requirements of the contract, plans, and specifications. Unless otherwise specified, such materials that are manufactured or processed shall be new (as compared to used or reprocessed).

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

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

60-2 SAMPLES, TESTS, AND CITED SPECIFICATIONS. All materials used in the work shall be inspected, tested, and approved by the Owner before incorporation in the work. Any work in which untested materials are used without approval or written permission of the Owner 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 Owner, shall be removed at the Contractor's expense. Unless otherwise designated, quality assurance tests in accordance with the cited standard methods of AASHTO or ASTM which are current on the date of advertisement for bids will be made by and at the expense of the Owner.

Samples will be taken by a qualified representative of the Owner. 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 his/her request.

60-3 CERTIFICATION OF COMPLIANCE. The Owner may permit the use, prior to sampling and testing, of certain materials or assemblies when accompanied by manufacturer's certificates of compliance stating that such materials or assemblies fully comply with the requirements of the contract. The certificate shall be signed by the manufacturer. Each lot of such materials or assemblies delivered to the work must be accompanied by a certificate of compliance in which the lot is clearly identified.

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

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

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

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

Should the Contractor propose to furnish an "or equal" material or assembly, he shall furnish the manufacturer's vendor data that includes detailed performance data for the specified brand name material or assembly. The Owner shall be the sole judge as to whether the proposed "or equal" is suitable for use in the work.

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

60-4 PLANT INSPECTION. The Owner or his/her authorized representative may inspect, at its source, any specified material or assembly to be used in the work. Manufacturing plants may be inspected from time to time for the purpose of determining compliance with specified manufacturing methods or materials to be used in the work and to obtain samples required for his/her acceptance of the material or assembly.

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

- a. The Owner shall have the cooperation and assistance of the Contractor and the producer with whom he has contracted for materials.

- b. The Owner 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 Owner, the Contractor shall arrange for adequate office or working space that may be reasonably needed for conducting plant inspections. Office or working space should be conveniently located with respect to the plant.

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

60-5 FIELD OFFICE AND LABORATORY. When specified and provided for as a contract item, the Contractor shall furnish a building for the exclusive use of the Owner as a field office and field testing laboratory. The building shall be furnished and maintained by the Contractor as specified herein and shall become property of the Contractor when the contract work is completed. Not applicable for this contract.

60-6 STORAGE OF MATERIALS. Materials shall be stored so as to assure the preservation of their quality and fitness for the work. Stored materials, even though approved before storage, may again be inspected prior to their use in the work. Stored materials shall be located so as to facilitate their prompt inspection. The Contractor shall coordinate the storage of all materials with the Owner. Materials to be stored on airport property shall not create an obstruction to air navigation nor shall they interfere with the free and unobstructed movement of aircraft. Unless otherwise shown on the plans, the storage of materials and the location of the Contractor's plant and parked equipment or vehicles shall be as directed by the Owner. 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 Owner a copy of the property owner's permission.

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

60-7 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 Owner. 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 Owner has approved its use in the work.

60-8 OWNER-FURNISHED MATERIALS. The Contractor shall furnish all materials required to complete the work, except those specified herein (if any) to be furnished by the Owner. Owner-furnished materials shall be made available to the Contractor at the location specified herein.

All costs of handling, including transportation from the specified location to the site of work, storage, and installing Owner-furnished materials shall be included in the price(s) bid for the contract 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 which 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

SECTION 70 - LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC

70-1 LAWS TO BE OBSERVED. The Contractor shall keep fully informed of all Federal and state laws, all local laws, ordinances, and regulations and all orders and decrees of bodies or tribunals having any jurisdiction or authority, which in any manner affect those engaged or employed on the work, or which in any way affect the conduct of the work. The Contractor shall at all times observe and comply with all such laws, ordinances, regulations, orders, and decrees; and shall protect and indemnify the Owner and all his/her officers, agents, or servants against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by the Contractor or his/her employees.

70-2 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 prosecution of the work.

70-2.1 The OWNER is exempt from State and Local Sales and use Taxes pursuant to Section 151.309 of the Texas State Tax Code.

However, for the Contractor to be relieved of the Sales Tax liability, the contract must be a "separated contract", i.e., costs of materials incorporated into the project must be separated from all other costs of the project. As a seller, Contractor must issue a resale certificate (must hold a sales tax permit to do this) to the supplier in lieu of the sales tax at the time of the purchase. The OWNER will issue to the Contractor an exemption certificate for the Contractor's records in substantiating materials "resold" to the OWNER by the Contractor's incorporation of said materials on the OWNER project(s).

70-3 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 save 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 prosecution or after the completion of the work.

70-4 RESTORATION OF SURFACES DISTURBED BY OTHERS. The Owner reserves the right to authorize the construction, reconstruction, or maintenance of any public or private utility service, FAA or National Oceanic and Atmospheric Administration (NOAA) facility, or a utility service of another Government agency at any time during the progress of the work. To the extent that such construction, reconstruction, or maintenance has been coordinated with the Owner, such authorized work (by others) is indicated in the special conditions, or on the plans.

Except as described 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 Owner.

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 so as 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 Owner, 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.

70-5 FEDERAL AID PARTICIPATION. For AIP contracts, the United States Government has agreed to reimburse the Owner for some portion of the contract costs. Such reimbursement is made from time to time upon the Owner's (Sponsor's) request to the FAA. In consideration of the United States Government's (FAA's) agreement with the Owner, the Owner has included provisions in this contract pursuant to the requirements of the

Airport Improvement Act of 1982, as amended by the Airport and Airway Safety and Capacity Expansion Act of 1987, and the Rules and Regulations of the FAA that pertain to the work.

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

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

70-6 SANITARY, HEALTH, AND SAFETY PROVISIONS. The Contractor shall provide and maintain in a neat, sanitary condition such accommodations for the use of his/her employees as may be necessary to comply with the requirements of the state and local Board of Health, or of other bodies or tribunals having jurisdiction. Attention is directed to Federal, state, and local laws, rules and regulations concerning construction safety and health standards. The Contractor shall not require any worker to work in surroundings or under conditions that are unsanitary, hazardous, or dangerous to his/her health or safety.

70-7 PUBLIC CONVENIENCE AND SAFETY. The Contractor shall control his/her operations and those of his/her subcontractors and all suppliers, to assure the least inconvenience to the traveling public. Under all circumstances, safety shall be the most important consideration. The Contractor shall maintain the free and unobstructed movement of aircraft and vehicular traffic with respect to his/her own operations and those of his/her subcontractors and all suppliers in accordance with the subsection titled MAINTENANCE OF TRAFFIC of Section 40 hereinbefore specified and shall limit such operations for the convenience and safety of the traveling public as specified in the subsection titled LIMITATION OF OPERATIONS of Section 80 hereinafter.

70-8 BARRICADES, WARNING SIGNS, AND HAZARD MARKINGS. The Contractor shall furnish, erect, and maintain all barricades, warning signs, and markings for hazards necessary to protect the public and the work. When used during periods of darkness, such barricades, warning signs, and hazard markings shall be suitably illuminated.

For vehicular and pedestrian traffic, the Contractor shall furnish, erect, and maintain barricades, warning signs, lights and other traffic control devices in reasonable conformity with the Manual of Uniform Traffic Control Devices for Streets and Highways (published by the United States Government Printing Office).

When the work requires closing an air operations area of the airport or portion of such area, the Contractor shall furnish, erect, and maintain temporary markings and associated lighting conforming to the requirements of AC 150/5340-1, Marking of Paved Areas on Airports.

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

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

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

Open-flame type lights shall not be permitted within the air operations areas of the airport.

70-9 USE OF EXPLOSIVES. When the use of explosives is necessary for the prosecution of the work, the Contractor shall exercise the utmost care not to endanger life or property, including new work. The Contractor shall be responsible for all damage resulting from the use of explosives.

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

The Contractor shall notify each property Owner and public utility company having structures or facilities in proximity to the site of the work of his/her intention to use explosives. Such notice shall be given sufficiently in advance to enable them to take such steps as they may deem necessary to protect their property from injury. The use of electrical blasting caps shall not be permitted on or within 1,000 feet (300 m) of the airport property.

70-10 PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPE. The Contractor shall be responsible for the preservation of all public and private property, and shall protect carefully from disturbance or damage all land monuments and property markers until the Owner 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 prosecution of the work, resulting from any act, omission, neglect, or misconduct in his/her manner or method of executing the work, or at any time due to defective work or materials, and said responsibility will not be released until the project shall have 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 nonexecution thereof by the Contractor, he shall restore, at his/her own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, or otherwise restoring as may be directed, or he shall make good such damage or injury in an acceptable manner.

70-11 RESPONSIBILITY FOR DAMAGE CLAIMS. THE CONTRACTOR SHALL INDEMNIFY AND SAVE HARMLESS THE ENGINEER AND THE OWNER AND THEIR OFFICERS, AND EMPLOYEES FROM ALL SUITS, ACTIONS, OR CLAIMS OF ANY CHARACTER BROUGHT BECAUSE OF ANY INJURIES OR DAMAGE RECEIVED OR SUSTAINED BY ANY PERSON, PERSONS, OR PROPERTY ON ACCOUNT OF THE OPERATIONS OF THE CONTRACTOR; OR ON ACCOUNT OF OR IN CONSEQUENCE OF ANY NEGLIGENCE IN SAFEGUARDING THE WORK; OR THROUGH USE OF UNACCEPTABLE MATERIALS IN CONSTRUCTING THE WORK; OR BECAUSE OF ANY ACT OR OMISSION, NEGLIGENCE, OR MISCONDUCT OF SAID CONTRACTOR; OR BECAUSE OF ANY CLAIMS OR AMOUNTS RECOVERED FROM ANY INFRINGEMENTS OF PATENT, TRADEMARK, OR COPYRIGHT; OR FROM ANY CLAIMS OR AMOUNTS ARISING OR RECOVERED UNDER THE "WORKMEN'S COMPENSATION ACT," OR ANY OTHER LAW, ORDINANCE, ORDER, OR DECREE. MONEY DUE THE CONTRACTOR UNDER AND BY VIRTUE OF HIS/HER CONTRACT AS MAY BE CONSIDERED NECESSARY BY THE OWNER FOR SUCH PURPOSE MAY BE RETAINED FOR THE USE OF THE OWNER OR, IN CASE NO MONEY IS DUE, HIS/HER SURETY MAY BE HELD UNTIL SUCH SUIT OR SUITS, ACTION OR ACTIONS, CLAIM OR CLAIMS FOR INJURIES OR DAMAGES AS AFORESAID 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 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 the public or any member thereof a third party beneficiary or to authorize anyone not a party to the contract to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of the contract.

70-13 OPENING SECTIONS OF THE WORK TO TRAFFIC. Should it be necessary for the Contractor to complete portions of the contract work for the beneficial occupancy of the Owner prior to completion of the entire contract, such "phasing" of the work shall be specified herein and indicated on the plans. When so specified, the Contractor shall complete such portions of the work on or before the date specified or as otherwise specified. The Contractor shall make his/her own estimate of the difficulties involved in arranging his/her work to permit such beneficial occupancy by the Owner as described in the special conditions, or on the plans. Upon completion of any portion of the work listed above, such portion shall be accepted by the Owner in accordance with the subsection titled PARTIAL ACCEPTANCE of Section 50.

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

of the contract. Any damage to the portion of the work so opened that is not attributable to traffic which is permitted by the Owner shall be repaired by the Contractor at his/her expense.

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

70-14 CONTRACTOR'S RESPONSIBILITY FOR WORK. Until the Owner's final written acceptance of the entire completed work, excepting only those portions of the work accepted in accordance with the subsection titled PARTIAL ACCEPTANCE of Section 50, the Contractor shall have the charge and care thereof and shall take every precaution against injury or damage to any part due to the action of the elements or from any other cause, whether arising from the execution or from the nonexecution of the work. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the work occasioned by any of the above causes before final acceptance and shall bear the expense thereof except damage to the work due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God such as earthquake, tidal wave, tornado, hurricane or other cataclysmic phenomenon of nature, or acts of the public enemy or of Government authorities.

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

Neither the final certificate of payment nor any provision in the Contract nor partial or entire use of the Improvements embraced in this contract by the Sponsor or the public shall constitute an acceptance of work not done in accordance with the Contract or relieve the Contractor of liability in respect to any express warranties or responsibility for faulty materials or workmanship. The Contractor shall promptly remedy any defects in the work and pay for any damage to other work resulting therefrom which appear within a period of twelve (12) months from the date of final acceptance of the work, unless otherwise stated in the Substantial Completion Notice(s) from Owner.

70-15 CONTRACTOR'S RESPONSIBILITY FOR UTILITY SERVICE AND FACILITIES OF OTHERS (Revised March 2007). As provided in the subsection titled RESTORATION OF SURFACES DISTURBED BY OTHERS of this section, the Contractor shall cooperate with the provider of any public or private utility service to construct, reconstruct or maintain its utility services, facilities or structures during the progress of the Work. In addition, the Contractor shall control their operations to prevent the unscheduled interruption of such utility services or damage to such facilities or structures.

To the extent that such public or private utility services, facilities or structures are known to exist within the limits of the Work, the approximate locations have been indicated on the plans and the owners are indicated in the special conditions, or on the plans.

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 locate and protect such existing facilities and structures from damage or the service from unscheduled interruption.

It is further understood and agreed that the Contractor shall, upon execution of the Contract, notify the providers of all identified utility services, facilities or structures of the Contractor's plan of operations. Such notification shall be in writing addressed to the PERSON TO CONTACT as provided in the appropriate plans and specifications. A copy of each notification shall be given to the OWNER prior to commencement of work. Should additional utility services, facilities or structures be discovered during the course of the Work, the Contractor shall notify the Owner within 24 hours and the providers within two business days of the discovery.

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

Prior to commencing the Work in the general vicinity of an existing utility service, facility or structure, the Contractor shall again notify each such provider of the Contractor's plan of operation. If, in the Contractor's opinion, the provider's assistance is needed to locate the utility service, facility or structure or if the presence of a representative of the provider 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 provider's PERSON TO CONTACT no later than two business days prior to the Contractor's commencement of operations in such general vicinity. The Contractor shall simultaneously, and likewise in the most expeditious manner, furnish a copy of such notice or a written summary of it to the OWNER

The Contractor's failure to give the two day's notice hereinabove provided shall be cause for the OWNER to suspend the Contractor's operations in the general vicinity of a utility service, facility or structure until proper, timely notice can first be provided as required above.

Where the outside limits of an underground utility service, facility or structure have been located and staked on the ground, or otherwise identified, the Contractor shall be required to use manual, non-destructive daylighting to locate the utility visually and with certainty within twenty feet (vertically and horizontally) of such outside limits or other identification, prior to commencement of automated (heavy equipment) excavation.

Should the Contractor damage a provider's facility or structure or interrupt the operation of a utility service, by accident or otherwise, the Contractor shall immediately notify the proper authorities, including the Airport Operations Center (AOC), the OWNER's Project Manager and the utility service provider and shall take all reasonable measures to prevent further damage or interruption of service and to protect the general public. The Contractor, in such events, shall cooperate with the utility service, facility or structure provider and the OWNER continuously until such damage has been repaired and service restored to the satisfaction of the utility service, facility or structure provider.

The Contractor shall bear all costs of repair of damage to utility facilities or structures and of restoration of interrupted utility service, including, without limitation, operational impacts and costs incurred by the OWNER for response and mitigation of the incident, due to the Contractor's operations whether or not due to negligence or accident. The OWNER reserves the right to deduct such costs from any monies due or which may become due the Contractor under this Contract or under any other contract between Contractor and OWNER, or his/her surety hereunder.

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

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

70-18 ENVIRONMENTAL PROTECTION. The Contractor shall comply with all Federal, state, and local laws and regulations controlling pollution of the environment. The Contractor shall take necessary precautions to prevent pollution of streams, lakes, ponds, and reservoirs with fuels, oils, bitumens, chemicals, or other harmful materials and to prevent pollution of the atmosphere from particulate and gaseous matter.

70-19 ARCHAEOLOGICAL AND HISTORICAL FINDINGS. Unless otherwise specified in this subsection, the Contractor is advised that the site of the work is not within any property, district, or site, and does not contain any building, structure, or object listed in the current National Register of Historic Places published by the United States Department of Interior.

Should the Contractor encounter, during his/her operations, any building, part of a building, structure, or object which is incongruous with its surroundings, he shall immediately cease operations in that location and notify the Owner. The Owner will immediately investigate the Contractor's finding and will direct the Contractor to either resume his/her 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 modification (change order or supplemental agreement) as provided in the subsection titled EXTRA WORK of Section 40 and the subsection titled PAYMENT FOR EXTRA AND FORCE ACCOUNT WORK of Section 90. If appropriate, the contract modification shall include an extension of contract time in accordance with the subsection titled DETERMINATION AND EXTENSION OF CONTRACT TIME of Section 80.

70-20 PERSONAL LIABILITY OF PUBLIC OFFICIALS. In carrying out any of the Contract provisions or in exercising any power or authority granted to it by this Contract, there shall be no liability upon any officer or employee of the Owner or the Cities of Dallas and Fort Worth (Cities), either personally or as an official or employee of the Owner or the Cities. It is understood that in such matters they act solely as agents and representatives of the Owner or the Cities.

10-42 END OF SECTION 70

SECTION 80 - PROSECUTION AND PROGRESS

80-1 PRIVACY OF CONTRACT & ASSIGNMENT OF RIGHTS. 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 Owner.

Should the Contractor elect to assign his/her contract, said assignment shall be concurred in by the surety, shall be presented for the consideration and approval of the Owner, and shall be consummated only on the written approval of the Owner. In case of approval, the Contractor shall file copies of all subcontracts with the Owner.

80-2 NOTICE TO PROCEED. The notice to proceed shall state the date on which it is expected the Contractor will begin the construction and from which date contract time will be charged. The Contractor shall begin the work to be performed under the contract within 10 days of the date set by the Owner in the written notice to proceed, but in any event, the Contractor shall notify the Owner at least 24 hours in advance of the time actual construction operations will begin.

80-3 PROJECT PROGRESS SCHEDULE. The Contractor shall submit a coordinated construction schedule for all work activities. The schedule shall be prepared as a network diagram in Critical Path Method (CPM), Primavera P3 or P6 format. At a minimum, it shall provide information on the sequence of work activities, interdependence of activities, milestone dates, and activity duration.

The contractor shall submit an interim schedule followed by a baseline schedule, or only a baseline schedule, depending on when the contractor starts work. Generate the baseline schedule using Primavera P3 or P6 format. The Contractor shall submit a baseline schedule within 30 days of the execution of the Contract or within 10 days after the effective date of the notice to proceed, whichever is sooner. Any revisions shall be submitted within 10 days after the initial review.

The Contractor shall maintain the work schedule and provide an update and analysis of the progress schedule on a monthly basis, or as otherwise specified in the contract. A monthly update schedule is a schedule in which only progress is updated from the prior data date to the current data date. 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.

The Contractor shall be responsible for assuring all work, including all subcontractor work, is included in the schedule. The Contractor shall be responsible for assuring that all work sequences are logical and that the schedule indicates a coordinated plan.

80-4 PROGRAM MANAGEMENT SOFTWARE. The Owner utilizes Program Management Software on its computer system, to efficiently and effectively manage construction projects. This system allows many project management functions to be conducted electronically. The Contractor may be directed by the Owner to enter specific project related information directly into the Owner's Program Management Software in the Owner's computer system on a day-to-day basis. Some project management functions that are executed within the system the Contractor may be responsible for include (but are not limited to) Potential Change Order information, Meeting Minutes, Requests for Information (RFIs), Submittal Register, Submittal Packages, Daily Details, and Daily Work Journals.

Unless otherwise specified, the Contractor will use Owner supplied software licenses when using the Owner's system.

80-5 PROSECUTION AND PROGRESS. Unless otherwise specified, the Contractor shall submit his/her progress schedule for the Owner's approval within 10 days after the effective date of the notice to proceed. The Contractor's progress schedule, when approved by the Owner, may be used to establish major construction operations and to check on the progress of the work. The Contractor shall provide sufficient materials, equipment, and labor to guarantee the completion of the project in accordance with the plans and specifications within the time set forth in the proposal.

If the Contractor falls significantly behind the submitted schedule, the Contractor shall, upon the Owner's request, submit a revised schedule for completion of the work within the contract time and modify his/her operations to

provide such additional materials, equipment, and labor necessary to meet the revised schedule. Should the prosecution of the work be discontinued for any reason, the Contractor shall notify the Owner at least 24 hours in advance of resuming operations.

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

80-6 LIMITATION OF OPERATIONS. When the work requires the Contractor to conduct his/her operations within an AIR OPERATIONS AREA of the Airport, the Contractor shall control his/her operations and the operations of his/her subcontractors and all suppliers so as to provide for the free and unobstructed movement of aircraft in the AIR OPERATIONS AREAS of the airport.

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

When the contract work requires the Contractor to work within an AIR OPERATIONS AREA of the airport on an intermittent basis (intermittent opening and closing of the AIR OPERATIONS AREA), the Contractor shall maintain constant communications as hereinafter specified; immediately obey all instructions to vacate the AIR OPERATIONS AREA; immediately obey all instructions to resume work in such AIR OPERATIONS AREA. Failure to maintain the specified communications or to obey instructions shall be cause for suspension of the Contractor's operations in the AIR OPERATIONS AREA until the satisfactory conditions are provided. The AIR OPERATIONS AREA (AOA) cannot be closed to operating aircraft to permit the Contractor's operations on a continuous basis and will therefore be closed to aircraft operations intermittently as described in the special conditions, or on the plans.

80-7 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.

All equipment which is proposed to be used on the work shall be of sufficient size and in such mechanical condition as to meet requirements of the work and to produce a satisfactory quality of work. Equipment used on any portion of the work shall be such that no injury to previously completed work, adjacent property, or existing airport facilities will result from its use.

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

When the contract specifies the use of certain methods and equipment, such methods and equipment shall be used unless others are authorized by the Owner. If the Contractor desires to use a method or type of equipment other than specified in the contract, he may request authority from the Owner 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 Owner 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 Owner may direct. No change will be made in basis of payment for the contract items involved nor in contract time as a result of authorizing a change in methods or equipment under this subsection.

80-8 TEMPORARY SUSPENSION OF THE WORK. The Owner shall have the authority to suspend the work wholly, or in part, for such period or periods as he may deem necessary, due to unsuitable weather, or such other conditions as are considered unfavorable for the prosecution of the work, or for such time as is necessary due to the failure on the part of the Contractor to carry out orders given or perform any or all provisions of the contract.

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

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

80-9 DETERMINATION AND EXTENSION OF CONTRACT TIME. The number of calendar or working days allowed for completion of the Work shall be stated in the contract and shall be known as the CONTRACT TIME.

- a. CONTRACT TIME based on CALENDAR DAYS shall consist of the number of calendar days stated in the Contract counting from the date of the notice to proceed and including all Saturdays, Sundays, holidays, and nonworking 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.
- b. Any claim for extension of time or additional compensation for delay (including, but not limited to, compensation for extended overhead or general conditions costs) shall be made as soon as possible in writing to the OWNER but not more than ten days after the commencement of the delay. In case of continuing delay, only one claim notice per calendar month is necessary. The Contractor shall provide an estimate of the probable effect of such delay on the progress of the Work. Furthermore, within ten (10) business days after the end of each calendar month for which the Contractor (or a subcontractor at any level) has claimed a delay for which the Contractor will ultimately seek additional compensation from the OWNER, the Contractor shall submit to the OWNER a detailed and fully-supported document listing the costs claimed for the preceding calendar month by the Contractor and any impacted subcontractors, pursuant to the delay. It is understood (and the Contractor shall ensure) that these same provisions flow down to subcontractors working under the Contract. In the event that the Contractor does not comply with the requirements of this section, the Contractor shall not be entitled to any mark-up for fee (profit) on any compensation ultimately approved by the OWNER for the delay.
- c. Seasonal weather conditions shall be considered and included in the planning and scheduling of all Work influenced by high or low ambient temperatures, precipitation and/or saturated soil to ensure completion of all Work within the Contract time. Average historical climatic conditions for the proceeding ten (10) years are published by the National Oceanographic and Atmospheric Administration (NOAA) and entitled "Local Climatological Data-Dallas/Fort Worth, Texas."
- d. For planning purposes, the following shall be considered average workdays lost per month due to weather conditions:

Month	Lost Time in Workdays
January	5
February	4
March	5
April	6
May	6
June	4
July	4
August	4
September	5
October	4
November	4
December	4

- e. Contract time extensions (for calendar-day-based Contracts) for abnormal weather conditions will be granted on a day for day basis only to the extent the actual time lost during a particular month exceeds the average lost time indicated in the above table. Days on which no activity has been planned or scheduled are not considered workdays.
- F. WHEN THE CONTRACT TIME IS A SPECIFIED COMPLETION DATE, IT SHALL BE THE DATE ON WHICH ALL CONTRACT WORK SHALL BE COMPLETE ACCORDING TO THE PROPOSAL DOCUMENTS, REGARDLESS OF ACTUAL OR CLAIMED DELAYS (WEATHER RELATED OR OTHERWISE).**
- g. A time extension to the Contract will extend the Contract Time as referenced here.

80-10 FAILURE TO COMPLETE ON TIME. For each calendar day or working day, as specified in the contract, that any work remains uncompleted after the contract time (including all extensions and adjustments as provided in the subsection titled DETERMINATION AND EXTENSION OF CONTRACT TIME of this Section) the sum specified in the contract Special Provisions as liquidated damages will be deducted from any money due or to become due the Contractor or his/her surety. Such deducted sums shall not be deducted as a penalty but shall be considered as liquidation of a reasonable portion of damages that will be incurred by the Owner should the Contractor fail to complete the work in the time provided in his/her contract.

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.

80-11 DEFAULT AND TERMINATION OF CONTRACT. The Contractor shall be considered in default of his/her contract and such default will be considered as cause for the Owner to terminate the contract for any of the following reasons if the Contractor:

- a. Fails to begin the work under the contract within the time specified in the "Notice to Proceed," or
- b. Fails to perform the work or fails to provide sufficient workers, equipment 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 prosecution 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 him 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 hereinbefore, he 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 have full power and authority without violating the contract, to take the prosecution 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 Owner 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.

80-12 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 prosecution 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 Owner.

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

END OF SECTION 80

SECTION 90 - MEASUREMENT AND PAYMENT

90-1 MEASUREMENT OF QUANTITIES. All work completed under the contract will be measured by the Engineer, or his/her 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 or less. Unless otherwise specified, transverse measurements for area computations will be the neat dimensions shown on the plans or ordered in writing by the Engineer.

Structures will be measured according to neat lines shown on the plans or as altered to fit field conditions. Unless otherwise specified, all contract items which are measured by the linear foot such as electrical ducts, conduits, pipe culverts, underdrains, and similar items shall be measured parallel to the base or foundation upon which such items are placed.

In computing volumes of excavation the average end area method or other acceptable methods will be used. The thickness of plates and galvanized sheet used in the manufacture of corrugated metal pipe, metal plate pipe culverts and arches, and metal cribbing will be specified and measured in decimal fraction of inches.

The term "ton" will mean the short ton consisting of 2,000 pounds avoirdupois. All materials which are measured or proportioned by weights shall be weighed on accurate, approved scales by competent, qualified personnel at locations designed by the Engineer. If material is shipped by rail, the car weight may be accepted provided that only the actual weight of material be paid for. However, car weights will not be acceptable for material to be passed through mixing plants. Trucks used to haul material before paid for by weight shall be weighed empty daily at such times as the Engineer directs, and each truck shall bear a plainly legible identification mark. Materials to be measured by volume in the hauling vehicle shall be hauled in approved vehicles and measured therein at the point of delivery. Vehicles for this purpose may be of any size or type acceptable to the Engineer, provided that the body is of such shape that the actual contents may be readily and accurately determined. All vehicles shall be loaded to at least their water level capacity, and all loads shall be leveled when the vehicles arrive at the point of delivery.

When requested by the Contractor and approved by the Engineer in writing, material specified to be measured by the cubic yard may be weighed, and such weights will be converted to cubic yards for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the Engineer and shall be agreed to by the Contractor before such method of measurement of pay quantities is used. Bituminous materials will be measured by the gallon or ton. When measured by volume, such volumes will be measured at 60_F (15_C) or will be corrected to the volume at 60_F (15_C) using ASTM D 1250 for asphalts or ASTM D 633 for tars.

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

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

Timber will be measured by the thousand feet board measure (M.F.B.M.) actually incorporated in the structure. Measurement will be based on nominal widths and thicknesses and the extreme length of each piece. The term "lump sum" when used as an item of payment will mean complete payment for the work described in the contract.

When a complete structure or structural unit (in effect, "lump sum" work) is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories. Rental of equipment will be measured by time in hours of actual working time and necessary traveling time of the equipment within the limits of the work. Special equipment ordered by the Engineer in connection with force

account work will be measured as agreed in the change order or supplemental agreement authorizing such force account work as provided in the subsection titled PAYMENT FOR EXTRA AND FORCE ACCOUNT WORK of this section.

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

Scales for weighing materials which are required to be proportioned or measured and paid for by weight shall be furnished, erected, and maintained by the Contractor, or be certified permanently installed commercial scales. Scales shall be accurate within 1/2 percent of the correct weight throughout the range of use. The Contractor shall have the scales checked under the observation of the inspector before beginning work and at such other times as requested. The intervals shall be uniform in spacing throughout the graduated or marked length of the beam or dial and shall not exceed 1/10 of 1 percent of the nominal rated capacity of the scale, but not less than 1 pound. The use of spring balances will not be permitted.

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

Scale installations shall have available 10 standard 50-pound weights for testing the weighing equipment or suitable weights and devices for other approved equipment.

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

Scales "overweighing" (indicating more than correct weight) will not be permitted to operate, and all materials received subsequent to the last previous correct weighing-accuracy test will be reduced by the percentage of error in excess of 1/2 of 1 percent.

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

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

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

90-2 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 prosecution thereof, subject to the provisions of the subsection titled NO WAIVER OF LEGAL RIGHTS of Section 70.

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

90-3 COMPENSATION FOR ALTERED QUANTITIES. When the accepted quantities of work vary from the quantities in the proposal, the Contractor shall accept as payment in full, so far as contract items are concerned, payment at the original contract price for the accepted quantities of work actually completed and accepted. No allowance, except as provided for in the subsection titled ALTERATION OF WORK AND QUANTITIES of Section 40 will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor which results directly from such alterations or indirectly from his/her unbalanced allocation of overhead and profit among the contract items, or from any other cause.

90-4 PAYMENT FOR OMITTED ITEMS. As specified in the subsection titled OMITTED ITEMS of Section 40, the Engineer shall have the right to omit from the work (order nonperformance) any contract item, except major contract items, in the best interest of the Owner.

Should the Engineer omit or order nonperformance of a contract item or portion of such item from the work, the Contractor shall accept payment in full at the contract prices for any work actually completed and acceptable prior to the Engineer's order to omit or nonperform such contract item.

Acceptable materials ordered by the Contractor or delivered on the work prior to the date of the Engineer's order will be paid for at the actual cost to the Contractor and shall thereupon become the property of the Owner. In addition to the reimbursement hereinbefore provided, the Contractor shall be reimbursed for all actual costs incurred for the purpose of performing the omitted contract item prior to the date of the Engineer's order. Such additional costs incurred by the Contractor must be directly related to the deleted contract item and shall be supported by certified statements by the Contractor as to the nature of the amount of such costs.

90-5 PAYMENT FOR EXTRA AND FORCE ACCOUNT WORK. Extra work, performed in accordance with the subsection titled EXTRA WORK of Section 40, will be paid for at the contract prices or agreed prices specified in the change order or supplemental agreement authorizing the extra work. When the change order or supplemental agreement authorizing the extra work requires that it be done by force account, such force account shall be measured and paid for based on expended labor, equipment, and materials plus overhead and profit.

- a. Miscellaneous. No additional allowance will be made for general superintendence, the use of small tools, or other costs for which no specific allowance is herein provided.
- b. Comparison of Record. The Contractor and the Engineer shall compare records of the cost of force account work at the end of each day. Agreement shall be indicated by signature of the Contractor and the Engineer or their duly authorized representatives.
- c. Statement. No payment will be made for work performed on a force account basis until the Contractor has furnished the Engineer with duplicate itemized statements of the cost of such force account work detailed as follows:
 1. Name, classification, date, daily hours, total hours, rate and extension for each laborer and foreman.
 2. Designation, dates, daily hours, total hours, rental rate, and extension for each unit of machinery and equipment.
 3. Quantities of materials, prices, and extensions.
 4. Transportation of materials.
 5. Cost of property damage, liability and workman's compensation insurance premiums, unemployment insurance contributions, and social security tax.

Statements shall be accompanied and supported by a receipted invoice for all materials used and transportation charges. However, if materials used on the force account work are not specifically purchased for such work but are taken from the Contractor's stock, then in lieu of the invoices the Contractor shall furnish an affidavit certifying that such materials were taken from his/her stock, that the quantity claimed was actually used, and that the price and transportation claimed represent the actual cost to the Contractor.

Contractor-owned trucks, machinery and equipment will be paid at the rates agreed by CM or at the rates specified in the current issue of the Association of General Contractors (AGC) Contractor Equipment Cost Guide published by Data Quest, San Jose, CA 95131. Such payment will be only for the time actually used on such changed work and will be full compensation for the use of the trucks, machinery and equipment including fuel, lubricants, water, depreciation and similar operating expenses. For leased or rented trucks, machinery, and equipment, payment will be limited to reasonable actual and verifiable costs.

The markups for extra work and force account work for overhead and profit are limited to ten percent (10%) and five percent (5%), respectively, for work performed by prime or subcontractors.

In the event the extra work or force account work is accomplished by a subcontractor (or subcontractors), the Prime Contractor shall be limited to five percent (5%) of the work accomplished by a subcontractor (or subcontractors) as total markup to cover and compensate the Prime Contractor for overhead and profit. Total markup for overhead and profit is limited to twenty percent (20%), distribution to be determined at the discretion of the prime contractor, subject to the limitations described above.

90-6 PARTIAL PAYMENTS. Partial payments will be made no more than once each month as the work progresses and must be requested on forms and in a format approved by the Owner, including a Prior Period Activity Report (PPAR). Requests for Payment will be prepared by the Contractor, based upon the Contractor's estimate of the value of Work performed and materials complete-in-place in accordance with the Contract plans, and specifications. The Contractor's Pay Request will be reviewed by the OWNER (and if necessary, adjusted accordingly) based upon the OWNER's estimate of the value of Work performed and materials complete-in-place in accordance with the Contract plans and specifications. Such partial payments may also include the delivered actual cost of those materials stockpiled and stored in accordance with the sub-section titled PAYMENT FOR MATERIALS ON HAND of this Section.

No partial payment will be made when the amount due the Contractor since the last estimate amounts to less than five hundred dollars.

From the total of the amount determined to be payable on a partial payment, 5 percent of such total amount will be deducted and retained by the Owner until the final payment is made. The balance (95 percent) of the amount payable, less all previous payments, shall be certified for payment.

When approximately 95 percent of the work has been completed the OWNER may, at its discretion and with the consent of the surety, prepare an estimate from which will be retained an amount not less than the estimated cost of the work remaining to be done. The remainder, less all previous payments and deductions, will then be certified for payment to the Contractor. The OWNER will consider releasing retainage withheld on subcontractor's work at various stages during the Contract, at its discretion and with the consent of the surety. The Contractor will be required to make such request in writing for early release of retainage for subcontractor's that have completed their portion of the work, to be reviewed on a case by case basis. Such requests may be made with the pay request, once each month. The OWNER reserves the right to reject any such request that is not in the best interest of the OWNER. If such requests are granted the Contractor will be responsible for notifying its surety of any such reductions in retainage withheld under this Contract.

The Contractor agrees to include in its monthly invoice an amount that represents all invoices/bills for services, labor and costs incurred by its subcontractors in the current billing period.

- a. If an Owner receives a written payment request from a Contractor for an amount that is allowed to the Contractor for properly performed work or suitably stored, materials, the Owner shall pay the amount to the Contractor, less any statutory offsets, not later than the 30th day after the owner receives the request.
- b. A Contractor who receives a payment under Paragraph a. (including retainage) or otherwise from an Owner in connection with a contract to improve real property shall pay each of its subcontractors the portion of the Owner's payment, including interest, if any, that is attributable to work performed or materials suitably stored by that subcontractor if payment for stored materials is provided for in the contract, to the extent of that subcontractor's interest in the Owner's payment. The payment required by this must be made not later than the 7th day after the date the Contractor receives the Owner's payment.
- c. A subcontractor who receives a payment under Paragraph b. or otherwise from a Contractor in connection with a contract to improve real property shall pay each of its subcontractors the portion of the payment, including interest, if any, that is attributable to work performed or materials suitably stored by that subcontractor if payment for stored materials is provided for in the contract, to the extent of that subcontractor's interest in the payment. The payment required by this subsection must be made not later than the 7th day after the date the subcontractor receives the Contractor's payment.

The prime Contractor shall promptly request the release of any retainage withheld from subcontractors within seven (7) days after the subcontractor's work is satisfactorily completed and receives partial acceptance, substantial completion or final completion/final acceptance as defined in the General Provisions of the Contract. Further, the prime Contractor shall pay the subcontractor its retainage within seven (7) days after the date the

prime Contractor receives the subcontractor's retainage payment from the OWNER. The prime Contractor will request the release of subcontractor retainage in the next invoice for any subcontractor that has satisfactory completed its work and will submit the required releases with the invoice.

A finding of non-payment may be considered as a material breach of this contract.

The OWNER may, withhold progress payments until the Contractor demonstrates timely payment of sums due subcontractors. The OWNER also reserves the right to exercise other breach of contract remedies. The presence of a "pay when paid" provision in a subcontract shall not preclude the OWNER inquiry into allegations of non-payment. The remedies for non-payment of subcontractors shall not be employed when the Contractor demonstrates that failure to pay results from a bonafide dispute with its subcontractor or supplier. The Contractor shall incorporate this provision into all subcontracts that result from this contract.

No partial payment shall bind the Owner to the acceptance of any materials or work in place as to quality or quantity. All partial payments are subject to correction at the time of final payment as provided in the subsection titled ACCEPTANCE AND FINAL PAYMENT of this section.

90-7 PAYMENT WITHHELD. The OWNER may withhold all or part of any payment otherwise due the Contractor if any one of the following conditions exist:

- a. Defective work or failure to execute the Work in strict accordance with the Contract Documents.
- b. Unauthorized deviations from the Contract Documents.
- c. Damage to another contractor.
- d. Work not fully completed or corrected after Substantial or Final Completion.
- e. Reasonable doubt that the Work will be completed within the Contract Time; and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay.
- f. Failure to keep current as-built records at the Site as specified.
- g. Unpaid amounts owed to the OWNER for fees and charges for services or permits, assessments for damage to OWNER property, or use of OWNER facilities and services.
- h. Failure to comply with the minimum wage rate requirements as specified.
- i. Failure to comply with the requirements of Specifications regarding Project Schedule.
- j. Errors due to any cause that may be discovered in any previous progress payment.
- k. Written request from contractor's surety to withhold payment(s).

When the above reasons for withholding payment are resolved, payment will be made for amounts previously withheld.

All Work covered by progress payments shall, at the time of the payment, become the sole property of the OWNER, but this shall not be construed as relieving the Contractor from the sole responsibility for Work upon which payments have been made or the restoration of any damaged Work, or waiving the right of the OWNER to require the fulfillment of all the terms of this Contract.

Following receipt of proper certified pay requests (as may be adjusted by the Engineer or OWNER), the OWNER shall make monthly progress payments as the Work proceeds and as approved by the OWNER. A proper pay request will be submitted on the DFW Pay Request form and have all appropriate blanks filled in and all documents or information substantiating the Contractor's right to payment required by the OWNER attached. The Contractor shall sign the Contractor's Certification as outlined on the form.

If the OWNER deems a pay request to be improper or defective, the OWNER will return the pay request to the Contractor for correction(s) and resubmission. In the event portions of the pay request are withheld in accordance with this Section, the balance of the eligible charges will be processed for payment.

90-8 PAYMENT FOR MATERIALS ON HAND. Partial payments may be made to the extent of the delivered cost of materials to be incorporated in the work, provided that such materials meet the requirements of the contract, plans, and specifications and are delivered to acceptable sites on the airport property or at other sites in the vicinity that are acceptable to the Owner. Such delivered costs of stored or stockpiled materials may be included in the next partial payment after the following conditions are met:

- a. The material has been stored or stockpiled in a manner acceptable to the Engineer at or on an approved site.
- b. The Contractor has furnished the Engineer with acceptable evidence of the quantity and quality of such stored or stockpiled materials.

- c. The Contractor has furnished the Engineer with satisfactory evidence that the material and transportation costs will be paid.
- d. Title to material so stored or stockpiled shall immediately vest in the OWNER upon the OWNER's payment to the Contractor for such material.
- e. The Contractor has furnished the Owner evidence that the material so stored or stockpiled is insured against loss by damage to or disappearance of such materials at any time prior to use in the work.

It is understood and agreed that the transfer of title and the Owner's payment for such stored or stockpiled materials shall in no way relieve the Contractor of his/her responsibility for furnishing and placing such materials in accordance with the requirements of the contract, plans, and specifications.

In no case will the amount of partial payments for materials on hand exceed the contract price for such materials or the contract price for the contract item in which the material is intended to be used.

No partial payment will be made for stored or stockpiled living or perishable plant materials.

The Contractor shall bear all costs associated with the partial payment of stored or stockpiled materials in accordance with the provisions of this subsection.

90-9 ACCEPTANCE AND FINAL PAYMENT. When the contract work has been accepted in accordance with the requirements of the subsection titled FINAL ACCEPTANCE of Section 50, the Engineer will prepare the final estimate of the items of work actually performed. The Contractor shall approve the Engineer's final estimate or advise the Engineer of his/her objections to the final estimate which are based on disputes in measurements or computations of the final quantities to be paid under the contract as amended by change order or supplemental agreement. The Contractor and the Engineer shall resolve all disputes (if any) in the measurement and computation of final quantities to be paid within 30 calendar days of the Contractor's receipt of the Engineer's final estimate. If, after such 30-day period, a dispute still exists, the Contractor may approve the Engineer's estimate under protest of the quantities in dispute, and such disputed quantities shall be considered by the Owner as a claim in accordance with the subsection titled CLAIMS FOR ADJUSTMENT AND DISPUTES of Section 50.

After the Contractor has approved, or approved under protest, the Engineer's final estimate, final payment will be processed based on the entire sum, or the undisputed sum in case of approval under protest, determined to be due the Contractor less all previous payments and all amounts to be deducted under the provisions of the contract. All prior partial estimates and payments shall be subject to correction in the final estimate and payment. If the Contractor has filed a claim for additional compensation under the provisions of the subsection titled CLAIMS FOR ADJUSTMENTS AND DISPUTES of Section 50 or under the provisions of this subsection, such claims will be considered by the Owner in accordance with local laws or ordinances. Upon final adjudication of such claims, any additional payment determined to be due the Contractor will be paid pursuant to a supplemental final estimate.

Neither the Final Payment nor the remaining retained percentage shall become due until the Contractor submits to the OWNER

- a. An affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which the OWNER or the OWNER's property might in any way be responsible, have been paid or otherwise satisfied.
- b. Consent of surety, if any, to Final Payment.
- c. Other data establishing payment satisfaction of all such obligations, such as receipts, releases, and waivers of all liens arising out of the Contract, to the extent and in such form as may be designated by the OWNER.

Contractor shall obtain affidavits and consent from subcontractors per paragraphs a. and b. above prior to furnishing same to Owner.

If any subcontractor refuses to furnish a release or waiver required by the OWNER, the Contractor may furnish a release or waiver required by the OWNER, and a bond satisfactory to the OWNER, to indemnify the OWNER against any such lien.

If, after Substantial Completion of the Work, Final Completion thereof is materially delayed through no fault of the Contractor or by the issuance of Contract Change Order(s) affecting Final Completion, the OWNER shall, upon application by the Contractor and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance for Work not fully completed or

corrected is less than the retainage stipulated in the Contract Documents, and if bonds have been furnished as provided in the Contract, the written consent of the surety to the payment of the balance due for that portion of the Work fully completed shall be submitted by the Contractor to the OWNER prior to certification of such payment. Such payment shall be made under the terms and conditions governing Final Payment, except that it shall not constitute a waiver of claims.

The acceptance of Final Payment shall constitute a waiver of all claims by the Contractor except those previously made in writing and identified by the Contractor as unsettled at the time of the Final Application for Payment. Neither Substantial Completion nor Final Completion and Final Payment shall occur until final and complete written approval of the Work, if required, has been obtained from the OWNER's Building Inspector, the OWNER's Fire Marshall and any applicable Health Departments.

END OF SECTION 90

SECTION 100 - CONTRACTOR QUALITY CONTROL PROGRAM

100-1 GENERAL. When the specifications require a Contractor Quality Control Program, the Contractor shall establish, provide, and maintain an effective Quality Control Program that details the methods and procedures that will be taken to assure that all materials and completed construction required by this contract conform to contract plans, technical specifications and other requirements, whether manufactured by the Contractor, or procured from subcontractors or vendors. Although guidelines are established and certain minimum requirements are specified herein and elsewhere in the contract technical specifications, the Contractor shall assume full responsibility for accomplishing the stated purpose.

The intent of this section is to enable the Contractor to establish a necessary level of control that will:

- a. Adequately provide for the production of acceptable quality materials.
- b. Provide sufficient information to assure both the Contractor and the Engineer that the specification requirements can be met.
- c. Allow the Contractor as much latitude as possible to develop his or her own standard of control.

The Contractor shall be prepared to discuss and present, at the preconstruction conference, his/her understanding of the quality control requirements. The Contractor shall not begin any construction or production of materials to be incorporated into the completed work until the Quality Control Program has been reviewed by the Engineer. No partial payment will be made for materials subject to specific quality control requirements until the Quality Control Program has been reviewed.

The quality control requirements contained in this section and elsewhere in the contract technical specifications are in addition to and separate from the acceptance testing requirements. Acceptance testing requirements are the responsibility of the Engineer.

100-2 DESCRIPTION OF PROGRAM.

- a. General Description. The Contractor shall establish a Quality Control Program to perform inspection and testing of all items of work required by the technical specifications, including those performed by subcontractors. This Quality Control Program shall ensure conformance to applicable specifications and plans with respect to materials, workmanship, construction, finish, and functional performance. The Quality Control Program shall be effective for control of all construction work performed under this Contract and shall specifically include surveillance and tests required by the technical specifications, in addition to other requirements of this section and any other activities deemed necessary by the Contractor to establish an effective level of quality control.
- b. Quality Control Program. The Contractor shall describe the Quality Control Program in a written document which shall be reviewed by the Engineer prior to the start of any production, construction, or off-site fabrication. The written Quality Control Program shall be submitted to the Engineer for review at least ten (10) calendar days before the start of construction.

The Quality Control Program shall be organized to address, as a minimum, the following items:

1. Quality control organization;
2. Project progress schedule;
3. Submittals schedule;
4. Inspection requirements;
5. Quality control testing plan;
6. Documentation of quality control activities; and
7. Requirements for corrective action when quality control and/or acceptance criteria are not met.

The Contractor is encouraged to add any additional elements to the Quality Control Program that he/she deems necessary to adequately control all production and/or construction processes required by this contract.

100-3 QUALITY CONTROL ORGANIZATION. The Contractor's Quality Control Program shall be implemented by the establishment of a separate quality control organization. An organizational chart shall be developed to show all quality control personnel and how these personnel integrate with other management/production and construction functions and personnel.

The organizational chart shall identify all quality control staff by name and function, and shall indicate the total staff required to implement all elements of the Quality Control Program, including inspection and testing for each item of work. If necessary, different technicians can be utilized for specific inspection and testing functions for different items of work. If an outside organization or independent testing laboratory is used for implementation of all or part of the Quality Control Program, the personnel assigned shall be subject to the qualification requirements of paragraph 100-03a and 100-03b. The organizational chart shall indicate which personnel are Contractor employees and which are provided by an outside organization.

The quality control organization shall consist of the following minimum personnel:

- a. Program Administrator. The Program Administrator shall be a full-time employee of the Contractor, or a consultant engaged by the Contractor. The Program Administrator shall have a minimum of 5 years of experience in airport and/or highway construction and shall have had prior quality control experience on a project of comparable size and scope as the contract. Additional qualifications for the Program Administrator shall include at least 1 of the following requirements:
 1. Professional engineer with 1 year of airport paving experience acceptable to the Engineer.
 2. Engineer-in-training with 2 years of airport paving experience acceptable to the Engineer.
 3. An individual with 3 years of highway and/or airport paving experience acceptable to the Engineer, with a Bachelor of Science Degree in Civil Engineering, Civil Engineering Technology or Construction.
 4. Construction materials technician certified at Level III by the National Institute for Certification in Engineering Technologies (NICET).
 5. Highway materials technician certified at Level III by NICET.
 6. Highway construction technician certified at Level III by NICET.
 7. A NICET certified engineering technician in Civil Engineering Technology with 5 years of highway and/or airport paving experience acceptable to the Engineer.

The Program Administrator shall have full authority to institute any and all actions necessary for the successful implementation of the Quality Control Program to ensure compliance with the contract plans and technical specifications. The Program Administrator shall report directly to a responsible officer of the construction firm. For projects less than \$5 million, The Program Administrator may supervise the Quality Control Program on more than one project provided that person can be at the job site within 2 hours after being notified of a problem. For projects \$5 million and over, the Program Administrator shall be located on site for the project duration unless otherwise directed by the Engineer.

- b. Quality Control Technicians. A sufficient number of quality control technicians necessary to adequately implement the Quality Control Program shall be provided. These personnel shall be either engineers, engineering technicians, or experienced craftsman with qualifications in the appropriate field equivalent to NICET Level II or higher construction materials technician or highway construction technician and shall have a minimum of 2 years of experience in their area of expertise. The quality control technicians shall report directly to the Program Administrator and shall perform the following functions:
 1. Inspection of all materials, construction, plant, and equipment for conformance to the technical specifications, and as required by Section 100-06.
 2. Performance of all quality control tests as required by the technical specifications and Section 100-07.

Certification at an equivalent level, by a state or nationally recognized organization will be acceptable in lieu of NICET certification.

- c. Staffing Levels. The Contractor shall provide sufficient qualified quality control personnel to monitor each work activity at all times. Where material is being produced in a plant for incorporation into the work, separate plant and field technicians shall be provided at each plant and field placement location. The scheduling and coordinating of all inspection and testing must match the type and pace of work activity. The Quality Control Program shall state where different technicians will be required for different work elements.

100-4 SUBMITTALS SCHEDULE. The Contractor shall submit a detailed listing of all submittals (e.g., mix designs, material certifications) and shop drawings required by the technical specifications. The listing can be developed in a spreadsheet format and shall include:

- a. Specification item number;
- b. Item description;
- c. Description of submittal;
- d. Specification paragraph requiring submittal; and
- e. Scheduled date of submittal.

100-5 INSPECTION REQUIREMENTS. Quality control inspection functions shall be organized to provide inspections for all definable features of work, as detailed below. All inspections shall be documented by the Contractor as specified by Section 100-07.

Inspections shall be performed daily to ensure continuing compliance with contract requirements until completion of the particular feature of work. These shall include the following minimum requirements:

- a. During plant operation for material production, quality control test results and periodic inspections shall be utilized to ensure the quality of aggregates and other mix components, and to adjust and control mix proportioning to meet the approved mix design and other requirements of the technical specifications. All equipment utilized in proportioning and mixing shall be inspected to ensure its proper operating condition. The Quality Control Program shall detail how these and other quality control functions will be accomplished and utilized.
- b. During field operations, quality control test results and periodic inspections shall be utilized to ensure the quality of all materials and workmanship. All equipment utilized in placing, finishing, and compacting shall be inspected to ensure its proper operating condition and to ensure that all such operations are in conformance to the technical specifications and are within the plan dimensions, lines, grades, and tolerances specified. The Program shall document how these and other quality control functions will be accomplished and utilized.

100-6 QUALITY CONTROL TESTING PLAN. As a part of the overall Quality Control Program, the Contractor shall implement a quality control testing plan, as required by the technical specifications. The testing plan shall include the minimum tests and test frequencies required by each technical specification Item, as well as any additional quality control tests that the Contractor deems necessary to adequately control production and/or construction processes.

The testing plan can be developed in a spreadsheet fashion and shall, as a minimum, include the following:

- a. Specification item number (e.g., P-401);
- b. Item description (e.g., Plant Mix Bituminous Pavements);
- c. Test type (e.g., gradation, grade, asphalt content);
- d. Test standard (e.g., ASTM or AASHTO test number, as applicable);
- e. Test frequency (e.g., as required by technical specifications or minimum frequency when requirements are not stated);
- f. Responsibility (e.g., plant technician); and
- g. Control requirements (e.g., target, permissible deviations).

The testing plan shall contain a statistically-based procedure of random sampling for acquiring test samples in accordance with ASTM D 3665. The Engineer shall be provided the opportunity to witness quality control sampling and testing.

All quality control test results shall be documented by the Contractor as required by Section 100-07.

100-7 DOCUMENTATION. The Contractor shall maintain current quality control records of all inspections and tests performed. These records shall include factual evidence that the required inspections or tests have been performed, including type and number of inspections or tests involved; results of inspections or tests; nature of defects, deviations, causes for rejection, etc.; proposed remedial action; and corrective actions taken.

These records must cover both conforming and defective or deficient features, and must include a statement that all supplies and materials incorporated in the work are in full compliance with the terms of the contract. Legible copies of these records shall be furnished to the Engineer daily. The records shall cover all work placed

subsequent to the previously furnished records and shall be verified and signed by the Contractor's Program Administrator.

Specific Contractor quality control records required for the contract shall include, but are not necessarily limited to, the following records:

- a. Daily Inspection Reports. Each Contractor quality control technician shall maintain a daily log of all inspections performed for both Contractor and subcontractor operations on a form acceptable to the Engineer. These technician's daily reports shall provide factual evidence that continuous quality control inspections have been performed and shall, as a minimum, include the following:
 1. Technical specification item number and description;
 2. Compliance with approved submittals;
 3. Proper storage of materials and equipment;
 4. Proper operation of all equipment;
 5. Adherence to plans and technical specifications;
 6. Review of quality control tests; and
 7. Safety inspection.

The daily inspection reports shall identify inspections conducted, results of inspections, location and nature of defects found, causes for rejection, and remedial or corrective actions taken or proposed.

The daily inspection reports shall be signed by the responsible quality control technician and the Program Administrator. The Engineer shall be provided at least one copy of each daily inspection report on the work day following the day of record.

- b. Daily Test Reports. The Contractor shall be responsible for establishing a system which will record all quality control test results. Daily test reports shall document the following information:
 1. Technical specification item number and description;
 2. Location;
 3. Date of test;
 4. Control requirements;
 5. Test results;
 6. Causes for rejection;
 7. Recommended remedial actions; and
 8. Retests.

Test results from each day's work period shall be submitted to the Engineer prior to the start of the next day's work period. When required by the technical specifications, the Contractor shall maintain statistical quality control charts. The daily test reports shall be signed by the responsible quality control technician and the Program Administrator.

100-8 CORRECTIVE ACTION REQUIREMENTS. The Quality Control Program shall indicate the appropriate action to be taken when a process is deemed, or believed, to be out of control (out of tolerance) and detail what action will be taken to bring the process into control. The requirements for corrective action shall include both general requirements for operation of the Quality Control Program as a whole, and for individual items of work contained in the technical specifications.

The Quality Control Program shall detail how the results of quality control inspections and tests will be used for determining the need for corrective action and shall contain clear sets of rules to gauge when a process is out of control and the type of correction to be taken to regain process control.

When applicable or required by the technical specifications, the Contractor shall establish and utilize statistical quality control charts for individual quality control tests. The requirements for corrective action shall be linked to the control charts.

100-9 SURVEILLANCE BY THE ENGINEER. All items of material and equipment shall be subject to surveillance by the Engineer at the point of production, manufacture or shipment to determine if the Contractor, producer, manufacturer or shipper maintains an adequate quality control system in conformance with the requirements detailed herein and the applicable technical specifications and plans. In addition, all items of

materials, equipment and work in place shall be subject to surveillance by the Engineer at the site for the same purpose.

Surveillance by the Engineer does not relieve the Contractor of performing quality control inspections of either on-site or off-site Contractor's or subcontractor's work.

100-10 NONCOMPLIANCE.

- a. The Engineer will notify the Contractor of any noncompliance with any of the foregoing requirements. The Contractor shall, after receipt of such notice, immediately take corrective action. Any notice, when delivered by the Engineer or his/her authorized representative to the Contractor or his/her authorized representative at the site of the work, shall be considered sufficient notice.
- b. In cases where quality control activities do not comply with either the Contractor's Quality Control Program or the contract provisions, or where the Contractor fails to properly operate and maintain an effective Quality Control Program, as determined by the Engineer, the Engineer may:
 - (1) Order the Contractor to replace ineffective or unqualified quality control personnel or subcontractors.
 - (2) Order the Contractor to stop operations until appropriate corrective actions is taken.

END OF SECTION 100

**SECTION 110 - METHOD OF ESTIMATING PERCENTAGE OF MATERIAL
WITHIN SPECIFICATION LIMITS (PWL)**

110-1 GENERAL. When the specifications provide for material to be sampled and tested on a statistical basis, the material will be evaluated for acceptance in accordance with this section. All test results for a lot will be analyzed statistically, using procedures to determine the total estimated percent of the lot that is within specification limits. This concept, termed percent within limits (PWL), is a statistically based evaluation method, whereby the PWL is computed on a lot basis, using the average (X) and standard deviation (Sn) of the specified number (n) of subplot tests for the lot and the specification tolerance limits (L for lower and U for upper) for the particular acceptance parameter. From these values, the respective Quality index(s) (QL for Lower Quality Index and/or QU for Upper Quality Index) is computed and the PWL for the specified n is determined from Table 1.

110-2 METHOD FOR COMPUTING PWL. The computational sequence for computing the PWL is as follows:

- a. Divide the lot into n sublots in accordance with the acceptance requirements of the specification.
- b. Locate the sampling position within the subplot in accordance with the random sampling requirements of the specification.
- c. Make a measurement at each location, or take a test portion and make the measurement on the test portion in accordance with the testing requirements of the specification.
- d. Average all subplot values within the lot to find X by using the following formula:

$$X = (x_1 + x_2 + x_3 + \dots + x_n) / n$$

Where:

X = Average of all subplot values within a lot

x1, x2 = Individual subplot values

n = Number of sublots

- e. Find the standard deviation Sn by use of the following formula:

$$S_n = [(d_1^2 + d_2^2 + d_3^2 + \dots + d_n^2) / (n-1)]^{1/2}$$

Where:

Sn = standard deviation of the number of subplot values in the set

d1, d2 = deviations of the individual subplot values X1, X2 . . . from the average value X

that is: d1 = (x1 - X), d2 = (x2 - X) . . dn = (xn - X)

n = number of sublots

- f. For single sided specification limits (i.e., L only), compute the Lower Quality Index QL by use of the following formula:

$$QL = (X - L) / S_n$$

Where:

L = specification lower tolerance limit

Estimate the percentage of material within limits (PWL) by entering Table 1 with QL, using the column appropriate to the total number (n) of measurements. If the value of QL falls between values shown on the table, use the next higher value of PWL.

- g. For double sided specification limits (i.e. L and U), compute the Quality Indexes QL and QU by use of the following formulas:

$$QL = (X - L) / S_n \text{ and } QU = (U - X) / S_n$$

Where:

L and U = specification lower and upper tolerance limits

Estimate the percentage of material between the lower (L) and upper (U) tolerance limits (PWL) by entering Table 1 separately with QL and QU, using the column appropriate to the total number (n) of measurements, and determining the percent of material above PL and percent of material below PU for each tolerance limit. If the values of QL fall between values shown on the table, use the next higher value of PL or PU. Determine the PWL by use of the following formula:

$$PWL = (PU + PL) - 100$$

Where:

PL = percent within lower specification limit

PU = percent within upper specification limit

EXAMPLE OF PWL CALCULATION

Project: Example Project
Test Item: Item P-401, Lot A.

A. PWL Determination for Mat Density.

1. Density of four random cores taken from Lot A.

A-1 96.60
 A-2 97.55
 A-3 99.30
 A-4 98.35

n = 4

2. Calculate average density for the lot.

$$X = (x_1 + x_2 + x_3 + \dots + x_n) / n$$

$$X = (96.60 + 97.55 + 99.30 + 98.35) / 4$$

$$X = 97.95 \text{ percent density}$$

3. Calculate the standard deviation for the lot.

$$S_n = [((96.60 - 97.95)^2 + (97.55 - 97.95)^2 + (99.30 - 97.95)^2 + (98.35 - 97.95)^2) / (4 - 1)]^{1/2}$$

$$S_n = [(1.82 + 0.16 + 1.82 + 0.16) / 3]^{1/2}$$

$$S_n = 1.15$$

4. Calculate the Lower Quality Index QL for the lot. (L = 96.3)

$$QL = (X - L) / S_n$$

$$QL = (97.95 - 96.30) / 1.15$$

$$QL = 1.4384$$

5. Determine PWL by entering Table 1 with QL = 1.44 and n = 4.

$$PWL = 98$$

B. PWL Determination for Air Voids.

1. Air Voids of four random samples taken from Lot A.

A-1 5.00
 A-2 3.74
 A-3 2.30
 A-4 3.25

2. Calculate the average air voids for the lot.

$$X = (x_1 + x_2 + x_3 \dots + x_n) / n$$

$$X = (5.00 + 3.74 + 2.30 + 3.25) / 4$$

$$X = 3.57 \text{ percent}$$

3. Calculate the standard deviation S_n for the lot.

$$S_n = [((3.57 - 5.00)^2 + (3.57 - 3.74)^2 + (3.57 - 2.30)^2 + (3.57 - 3.25)^2) / (4 - 1)]^{1/2}$$

$$S_n = [(2.04 + 0.03 + 1.62 + 0.10) / 3]^{1/2}$$

$$S_n = 1.12$$

4. Calculate the Lower Quality Index QL for the lot. ($L = 2.0$)

$$QL = (X - L) S_n$$

$$QL = (3.57 - 2.00) / 1.12$$

$$QL = 1.3992$$

5. Determine PL by entering Table 1 with $QL = 1.40$ and $n = 4$.

$$PL = 97$$

6. Calculate the Upper Quality Index QU for the lot. ($U = 5.0$)

$$QU = (U - X) / S_n$$

$$QU = (5.00 - 3.57) / 1.12$$

$$QU = 1.2702$$

7. Determine PU by entering Table 1 with $QU = 1.27$ and $n = 4$.

$$PU = 93$$

8. Calculate Air Voids PWL

$$PWL = (PL + PU) - 100$$

$$PWL = (97 + 93) - 100 = 90$$

TABLE 1. TABLE FOR ESTIMATING PERCENT OF LOT WITHIN LIMITS (PWL)

Percent Within Limits (PL and PU)	Positive Values of Q (QL and QU)					
	n=3	n=4	n=5	n=6	n=7	n=8
99	1.1541	1.4700	1.6714	1.8008	1.8888	1.9520
98	1.1524	1.4400	1.6016	1.6982	1.7612	1.8053
97	1.1496	1.4100	1.5427	1.6181	1.6661	1.6993
96	1.1456	1.3800	1.4897	1.5497	1.5871	1.6127
95	1.1405	1.3500	1.4407	1.4887	1.5181	1.5381
94	1.1342	1.3200	1.3946	1.4329	1.4561	1.4716
93	1.1269	1.2900	1.3508	1.3810	1.3991	1.4112
92	1.1184	1.2600	1.3088	1.3323	1.3461	1.3554
91	1.1089	1.2300	1.2683	1.2860	1.2964	1.3032
90	1.0982	1.2000	1.2290	1.2419	1.2492	1.2541
89	1.0864	1.1700	1.1909	1.1995	1.2043	1.2075
88	1.0736	1.1400	1.1537	1.1587	1.1613	1.1630
87	1.0597	1.1100	1.1173	1.1191	1.1199	1.1204
86	1.0448	1.0800	1.0817	1.0808	1.0800	1.0794
85	1.0288	1.0500	1.0467	1.0435	1.0413	1.0399
84	1.0119	1.0200	1.0124	1.0071	1.0037	1.0015
83	0.9939	0.9900	0.9785	0.9715	0.9672	0.9643
82	0.9749	0.9600	0.9452	0.9367	0.9325	0.9281
81	0.9550	0.9300	0.9123	0.9025	0.8966	0.8928
80	0.9342	0.9000	0.8799	0.8690	0.8625	0.8583
79	0.9124	0.8700	0.8478	0.8360	0.8291	0.8245
78	0.8897	0.8400	0.8160	0.8036	0.7962	0.7915
77	0.8662	0.8100	0.7846	0.7716	0.7640	0.7590
76	0.8417	0.7800	0.7535	0.7401	0.7322	0.7271
75	0.8165	0.7500	0.7226	0.7089	0.7009	0.6958
74	0.7904	0.7200	0.6921	0.6781	0.6701	0.6649
73	0.7636	0.6900	0.6617	0.6477	0.6396	0.6344
72	0.7360	0.6600	0.6316	0.6176	0.6095	0.6044
71	0.7077	0.6300	0.6016	0.5878	0.5798	0.5747
70	0.6787	0.6000	0.5719	0.5583	0.5504	0.5454
69	0.6490	0.5700	0.5423	0.5290	0.5213	0.5164
68	0.6187	0.5400	0.5129	0.4999	0.4924	0.4877
67	0.5878	0.5100	0.4836	0.4710	0.4638	0.4592
66	0.5563	0.4800	0.4545	0.4424	0.4354	0.4310
65	0.5242	0.4500	0.4255	0.4139	0.4073	0.4031
64	0.4916	0.4200	0.3967	0.3856	0.3793	0.3753
63	0.4586	0.3900	0.3679	0.3575	0.3515	0.3477
62	0.4251	0.3600	0.3392	0.3295	0.3239	0.3203
61	0.3911	0.3300	0.3107	0.3016	0.2964	0.2931
60	0.3568	0.3000	0.2822	0.2738	0.2691	0.2660
59	0.3222	0.2700	0.2537	0.2461	0.2418	0.2391
58	0.2872	0.2400	0.2254	0.2186	0.2147	0.2122
57	0.2519	0.2100	0.1971	0.1911	0.1877	0.1855
56	0.2164	0.1800	0.1688	0.1636	0.1607	0.1592
55	0.1806	0.1500	0.1408	0.1363	0.1338	0.1322
54	0.1447	0.1200	0.1125	0.1090	0.1070	0.1057
53	0.1087	0.0900	0.0843	0.0817	0.0802	0.0792
52	0.0725	0.0600	0.0562	0.0544	0.0534	0.0528
51	0.0363	0.0300	0.0281	0.0272	0.0267	0.0264
50	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 1. TABLE FOR ESTIMATING PERCENT OF LOT WITHIN LIMITS (PWL)

Percent Within Limits (PL and PU)	Negative Values of Q (QL and QU)					
	n=3	n=4	n=5	n=6	n=7	n=8
49	-0.0363	-0.0300	-0.0281	-0.0272	-0.0267	-0.0264
48	-0.0725	-0.0600	-0.0562	-0.0544	-0.0534	-0.0528
47	-0.1087	-0.0900	-0.0843	-0.0817	-0.0802	-0.0792
46	-0.1447	-0.1200	-0.1125	-0.1090	-0.1070	-0.1057
45	-0.1806	-0.1500	-0.1408	-0.1363	-0.1338	-0.1322
44	-0.2164	-0.1800	-0.1688	-0.1636	-0.1607	-0.1592
43	-0.2519	-0.2100	-0.1971	-0.1911	-0.1877	-0.1855
42	-0.2872	-0.2400	-0.2254	-0.2186	-0.2147	-0.2122
41	-0.3222	-0.2700	-0.2537	-0.2461	-0.2418	-0.2391
40	-0.3568	-0.3000	-0.2822	-0.2738	-0.2691	-0.2660
39	-0.3911	-0.3300	-0.3107	-0.3016	-0.2964	-0.2931
38	-0.4251	-0.3600	-0.3392	-0.3295	-0.3239	-0.3203
37	-0.4586	-0.3900	-0.3679	-0.3575	-0.3515	-0.3477
36	-0.4916	-0.4200	-0.3967	-0.3856	-0.3793	-0.3753
35	-0.5242	-0.4500	-0.4255	-0.4139	-0.4073	-0.4031
34	-0.5563	-0.4800	-0.4545	-0.4424	-0.4354	-0.4310
33	-0.5878	-0.5100	-0.4836	-0.4710	-0.4638	-0.4592
32	-0.6187	-0.5400	-0.5129	-0.4999	-0.4924	-0.4877
31	-0.6490	-0.5700	-0.5423	-0.5290	-0.5213	-0.5164
30	-0.6787	-0.6000	-0.5719	-0.5583	-0.5504	-0.5454
29	-0.7077	-0.6300	-0.6016	-0.5878	-0.5798	-0.5747
28	-0.7360	-0.6600	-0.6316	-0.6176	-0.6095	-0.6044
27	-0.7636	-0.6900	-0.6617	-0.6477	-0.6396	-0.6344
26	-0.7904	-0.7200	-0.6921	-0.6781	-0.6701	-0.6649
25	-0.8165	-0.7500	-0.7226	-0.7089	-0.7009	-0.6958
24	-0.8417	-0.7800	-0.7535	-0.7401	-0.7322	-0.7271
23	-0.8662	-0.8100	-0.7846	-0.7716	-0.7640	-0.7590
22	-0.8897	-0.8400	-0.8160	-0.8036	-0.7962	-0.7915
21	-0.9124	-0.8700	-0.8478	-0.8360	-0.8291	-0.8245
20	-0.9342	-0.9000	-0.8799	-0.8690	-0.8625	-0.8583
19	-0.9550	-0.9300	-0.9123	-0.9025	-0.8966	-0.8928
18	-0.9749	-0.9600	-0.9452	-0.9367	-0.9325	-0.9281
17	-0.9939	-0.9900	-0.9785	-0.9715	-0.9672	-0.9643
16	-1.0119	-1.0200	-1.0124	-1.0071	-1.0037	-1.0015
15	-1.0288	-1.0500	-1.0467	-1.0435	-1.0413	-1.0399
14	-1.0448	-1.0800	-1.0817	-1.0808	-1.0800	-1.0794
13	-1.0597	-1.1100	-1.1173	-1.1191	-1.1199	-1.1204
12	-1.0736	-1.1400	-1.1537	-1.1587	-1.1613	-1.1630
11	-1.0864	-1.1700	-1.1909	-1.1995	-1.2043	-1.2075
10	-1.0982	-1.2000	-1.2290	-1.2419	-1.2492	-1.2541
9	-1.1089	-1.2300	-1.2683	-1.2860	-1.2964	-1.3032
8	-1.1184	-1.2600	-1.3088	-1.3323	-1.3461	-1.3554
7	-1.1269	-1.2900	-1.3508	-1.3810	-1.3991	-1.4112
6	-1.1342	-1.3200	-1.3946	-1.4329	-1.4561	-1.4716
5	-1.1405	-1.3500	-1.4407	-1.4887	-1.5181	-1.5381
4	-1.1456	-1.3800	-1.4897	-1.5497	-1.5871	-1.6127
3	-1.1496	-1.4100	-1.5427	-1.6181	-1.6661	-1.6993
2	-1.1524	-1.4400	-1.6016	-1.6982	-1.7612	-1.8053
1	-1.1541	-1.4700	-1.6714	-1.8008	-1.8888	-1.9520

END OF SECTION 110

SECTION 120 – ENVIRONMENTAL AND SAFETY PROVISIONS

120-1.0 ENVIRONMENTAL DEFINITIONS

BEST MANAGEMENT PRACTICE. Shall mean schedules of activities, prohibition of practices, maintenance procedures, structural controls, local ordinances, and other management practices to prevent or reduce the discharge of pollutants to waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

ENVIRONMENTAL IMPACT CLAIM. Shall mean any claim, suit, judgment, penalty, fine, loss, administrative proceeding, request for information, citation, notice, request, inquiry, or expense (including but not limited to any costs of investigation, study, cleanup, removal, response, remediation, transportation, disposal, restoration, monitoring, consultant's fees, contractor's fees, and attorney's fees) which arises out of, is related to, alleges, or is based on the presence, transportation, handling, treatment, storage, or actual or threatened Release, dispersal, disposal, escape, or migration of any Hazardous Material, Process Water, or Solid Waste, or any other chemical, material, irritant, pollutant, contaminant, regulated substance, or toxic substance (including but not limited to gasoline, diesel fuel, petroleum hydrocarbons, and any by-product or derivative thereof), whether solid, liquid, or gaseous in nature.

ENVIRONMENTAL LAWS. Shall mean all present and future federal, state, and local laws relating to protection of the environment, public health, and welfare, or safety, including, without limitation, all statutes, regulations, ordinances, permits, Best Management Practices, codes, orders, governmental requirements related to discharge of Process Water or other pollutants into the environment, waters of the United States, and/or waters of the State of Texas; and protection of areas of particular environmental concern, including, for example, wetlands, areas inhabited by endangered species, and historic sites.

HAZARDOUS MATERIAL. Shall mean any substance:

- a. the presence of which requires investigation or remediation under any federal, state or local statute, regulation, ordinance, order, action, policy or common law; or
- b. which is or becomes defined as a hazardous waste, hazardous substance, pollutant or contaminant under any federal, state, or local statute, regulation, rule or ordinance or amendments thereto including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act, the Resource Conservation and Recovery Act, the Texas Water Code and/or the Texas Health and Safety Code; or
- c. the presence of which on the Airport causes or threatens to cause a nuisance upon the Airport or to adjacent properties or poses or threatens to pose a hazard to the health or safety of persons on or about the Airport; or
- d. without limitation, which contains gasoline, diesel fuel, other petroleum hydrocarbons, natural gas liquids, polychlorinated biphenyls (PCBs), asbestos, lead paint, or urea formaldehyde foam insulation.
- e.

PROCESS WATER. Means water which contains Hazardous Material from any point source subject to permit requirements or subject to the Texas Pollutant Discharge Elimination System, the National Pollutant Discharge Elimination System, the Clean Water Act, or the Texas Water Code, amendments thereto, and regulations promulgated pursuant thereto.

RELEASE. Means any depositing, spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment or threat of release such that a release may enter the environment;

SAFETY LAWS. Means any applicable law, regulation, standard, or order of any governmental agency relating to worker safety.

SOLID WASTE. Shall have the same meaning as in the Resource Conservation and Recovery Act, the Texas Health and Safety Code, and the Texas Solid Waste Disposal Act, and shall include sewage.

120-2.0 ENVIRONMENTAL PROVISIONS

Contractor represents, warrants, and covenants the following:

- a. Contractor will obtain and maintain all licenses, permits, exemptions, registrations and other authorizations and provide any notices not obtained or provided by the OWNER pursuant to this Contract which is required under Environmental Laws for conducting the Work and Contractor's operations at the Airport.
- b. Contractor shall comply and shall cause all its employees, agents, sub-contractors, and other third parties under Contractor's control to comply, and shall include in all subcontracts a provision requiring the sub-contractor to comply and all employees or other third parties under sub-contractor's control to comply with all Environmental Laws. Not by way of limitation, but as emphasis only, Contractor represents, warrants, and covenants that:
 1. Paints and coatings will comply with 30 Texas Administrative Code Section 115.421 (2000), and any amendments or successor thereto.
 2. Work involving the use of cut-back asphalt will comply with the 30 Texas Administrative Code Section 115.512 (2000), and any amendments or successor thereto. Cut-back asphalt is defined as any asphaltic cement which has been liquefied by blending with petroleum solvents (diluent).
- c. Contractor shall comply and shall cause its employees, agents, sub-contractors, and other third parties under Contractor's control to comply with all OWNER's policies, rules, regulations, and permits, including Chapter 7 of the OWNER's Code of Rules and Regulations (a copy of which is attached hereto as an Exhibit), and to conduct the Work consistent with the OWNER's commitments under the State Implementation Plan and the National Environmental Policy Act.
- d. Contractor shall not cause, contribute to, or permit any Release of any Hazardous Materials, Solid Waste, or Process Water by Contractor or its employees, agents, sub-contractors, or other third parties under Contractor's control into the environment or cause, contribute to, or permit any violation of any Environmental Law.
- e. Contractor shall dispose of and cause its employees, agents, sub-contractors, or any other third party under Contractor's control to dispose of any Solid Waste or Hazardous Materials generated or located at the Airport in compliance with Environmental Laws, and, if not sooner required by Environmental Laws or this Contract, at the termination of this Contract shall remove and dispose of all Solid Wastes and Hazardous Materials not incorporated into the work in accordance with this Contract at its sole expense in a lawful and timely manner.
- f. Contractor shall advise OWNER immediately of any potential or actual non-compliance with any Environmental Law or Safety Law on Airport property by any person.
- g. Contractor shall, immediately upon receipt, provide OWNER with copies of any notice or other document issued to Contractor or its sub-contractors alleging non-compliance or investigating potential non-compliance with any Environmental Law or Safety Law at the Airport.
- h. Contractor shall not initiate the Work unless and until it has submitted a Construction Application to OWNER and a Construction Permit has been issued for the project.
- i. Contractor shall comply with the Construction Application Review Comments of D/FW Environmental Affairs Department. Contractor shall submit a completed Environmental Close-Out Checklist to D/FW Environmental Affairs Department upon completion of the Work.
- j. The OWNER will ensure that the Contractor is notified not to initiate Work beyond the Scope of Work described in the relevant FAA review document issued to OWNER pursuant to the National Environmental Policy Act.
- k. The Contractor shall use construction equipment which has been designed and equipped to prevent or control air pollution in conformance with the regulations of the federal, state, local and airport authorities including any applicable State Implementation Plan and revisions

- thereto as provided by the OWNER. Evidence of such design and equipment will be maintained and made available for inspection by the OWNER'S Authorized Representative.
- l. The Contractor shall monitor collected stormwater as required by OWNER'S Construction Application Review and/or relevant Construction Permit and/or Environmental Close-Out Checklist to insure it meets standards for allowable discharges set by appropriate laws, rules, regulations, ordinances and permits. Records of measurements will be retained by the Contractor for inspection by the OWNER's Representative.
 - m. For sites equal to or greater than 5 acres, Contractor shall submit to D/FW Environmental Affairs a completed and signed original Notice of Intent for coverage under the TPDES General Permit for Storm Water Discharges From Construction Activities for submittal to the governing agency by the OWNER prior to receiving an approved construction permit.
 - n. Spills, leaks, or releases of Hazardous Material shall be reported immediately to the Airport Operations Center (AOC).
 - o. Contractor shall comply with OWNER's Spill Reporting Policy, Clean Air Policy, and Hydrocarbon Spill Recovery for Airport Ramp Area.
 - p. Contractor shall provide a copy of its Storm Water Pollution Prevention Plan (SWPPP) to D/FW Environmental Affairs for review and approval prior to receiving an approved construction permit and the commencement of actual clearing, grading and/or excavation activity.
 - q. Upon final stabilization of all affected Work areas as defined in accordance with the requirements of the TPDES General Permit for Storm Water Discharges From Construction Sites, the following documents must be submitted to D/FW Environmental Affairs Department:
 1. One copy of the final SWPPP, signed and certified in accordance with 30 Texas Administrative Code (TAC) 305.44, including, at a minimum, the following items: all amendments, maintenance records, and inspection reports.
 2. For sites equal to or greater than 5 acres, a completed original Notice Of Termination (NOT) of Coverage Under the TPDES General Permit for Storm Water Discharges Associated with Construction Activity, signed in accordance with 30 TAC 305.44 for submittal by the OWNER to the governing agency.
 - r. While the OWNER may issue instructions to the Contractor concerning the placement and maintenance of erosion and sediment controls, the Contractor shall be solely responsible for complying with all requirements of the SWPPP. The SWPPP shall be reviewed periodically by Contractor for compliance and updated as needed to fit the changing requirements of the Contractor's Work.
 1. From time to time, and in OWNER's sole discretion, OWNER may conduct an inspection, assessment, and/or regulatory compliance audit of the Work and/or Contractor's operations, including operations of Contractor's employees, agents, sub-contractors, or any other third party under Contractor's control. The OWNER may perform testing as needed and may conduct interviews of Contractor or its sub-contractors. Contractor will cooperate and will cause its employees, agents, sub-contractors, or any other third party under Contractor's control to fully cooperate in such inspection, assessment, or audit. Contractor remains solely responsible for its environmental compliance, notwithstanding any OWNER inspection, audit, or assessment.
 2. If the Airport or adjacent property are contaminated or otherwise damaged or injured by any Solid Waste or Hazardous Materials released by Contractor or its employee, agent, sub-contractor, or any other third party under Contractor's control, Contractor agrees to promptly undertake remediation of such contamination or damage to background levels, and to restore the affected property to its condition prior to such contamination or damage in all material respects, or to such condition that no deed recordation will be required; provided that, if Contractor does not promptly and fully remediate and restore the affected property, OWNER may, but is not required to, perform the remediation and restoration, and Contractor shall reimburse OWNER for all costs associated with such contamination, remediation, and restoration, including but not limited to

consultants' fees, contractor's fees, penalties, attorneys' fees, and costs of investigation and remediation, within twenty (20) days after OWNER delivers notice to Contractor of such costs.

3. Failure by Contractor or its subcontractors to comply with any Environmental Provision shall be considered a default for which OWNER may exercise its remedies in accordance with Section 80-11, Default and Termination of Contract.

120-3.0 ASBESTOS-CONTAINING MATERIALS

It is the policy of the D/FW Airport BOARD that all architects, engineers, consultants, general contractors, subcontractors, distributors, suppliers, and others receiving proceeds from this Contract be bound by the OWNER's philosophy toward the use of asbestos within the boundaries of the D/FW Airport. Towards this end, Contractor covenants and agrees that it shall not use or install products containing asbestos in any form as part of this Contract or subsequent addendum or Change Order.

This provision applies to all materials and/or products placed in service within the boundaries of D/FW Airport under conditions and terms of this Contract. Contractor accepts and assumes all responsibility and liability for asbestos-containing products and/or materials installed or provided in performance of the Work. In addition, the Contractor accepts and assumes responsibility and liability for all expenses related to the removal, replacement and reparation of asbestos containing materials put in place under terms of this Contract. Should non-compliance of drawings, notations, and specifications within the asbestos prohibition contained herein be discovered by or on behalf of Contractor, the Contractor must promptly notify OWNER representatives in writing of the non-compliant notation or specification. The Contractor also certifies that a non-asbestos containing material or product of similar kind and quality will be substituted with the approval of the OWNER.

This provision reflects the mandate of the OWNER to promote the health, safety, and welfare of the general public and to establish a standard for response to asbestos within the limits of Airport authority. Contractor shall comply with all Environmental and Safety Laws relating to asbestos-containing materials. This provision supersedes and replaces all other references, specifications, and notations relating to asbestos-containing materials which may appear in this Contract.

If any underground transite pipe or fuel lines are encountered during the course of the project, the Contractor shall immediately notify the Construction Manager.

Any asbestos abatement performed must be conducted in accordance with applicable Environmental and Safety Laws, as well as OWNER standards. Asbestos abatement procedures must be submitted to D/FW Environmental Affairs for review and approval prior to beginning any abatement activity. No asbestos abatement Work may proceed without written authorization from the Airport Development & Engineering Department posted in the field with the Construction Permit.

If requested, manufactures of sealants, adhesives, gasket material, piping, curing materials, and similar building materials shall submit letters of certification to Contractor that their products are free of asbestos.

120-4.0 ENVIRONMENTAL INDEMNITY

NOTWITHSTANDING ANY OTHER PROVISION TO THE CONTRARY, CONTRACTOR AGREES TO INDEMNIFY, DEFEND, AND HOLD HARMLESS OWNER, THE CITIES OF DALLAS AND FORT WORTH, TEXAS, AND THEIR RESPECTIVE OFFICERS, DIRECTORS, EMPLOYEES, AGENTS AND COUNCILS FROM AND AGAINST, AND TO REIMBURSE SAME WITH RESPECT TO, ANY AND ALL CLAIMS, DEMANDS, PENALTIES SUITS, ACTIONS, LOSS, DAMAGES, LIABILITIES, COSTS, AND EXPENSES (INCLUDING BUT NOT LIMITED TO REASONABLE ATTORNEYS' FEES, LITIGATION COSTS, EXPERT WITNESS FEES, AND EXPENSES OF INVESTIGATION AND REMEDIATION) OF ANY AND EVERY KIND OR CHARACTER, KNOWN OR UNKNOWN, FIXED OR CONTINGENT, ASSERTED AGAINST OR INCURRED BY SUCH PARTIES AT ANY TIME BY REASON OF, IN CONNECTION WITH, OR ARISING OUT OF (A) THE BREACH OF ANY REPRESENTATION OR

WARRANTY SET FORTH IN THIS SECTION 100 BY CONTRACTOR OR ANY EMPLOYEES, AGENTS, SUB-CONTRACTORS, OR ANY OTHER THIRD PARTY UNDER CONTRACTOR'S CONTROL, (B) THE FAILURE OF CONTRACTOR TO PERFORM ANY OBLIGATION REQUIRED BY THIS SECTION 120 TO BE PERFORMED BY CONTRACTOR, OR (C) LOSS FROM ANY ENVIRONMENTAL IMPACT CLAIM, AS DEFINED HEREIN, CAUSED IN WHOLE OR IN PART BY OR ARISING IN WHOLE OR IN PART FROM THE ACTS OR OMISSIONS OF CONTRACTOR OR ITS EMPLOYEES, AGENTS, SUB-CONTRACTORS, OR ANY OTHER THIRD PARTY UNDER CONTRACTOR'S CONTROL; OR (D) THE VIOLATION BY CONTRACTOR OR ITS EMPLOYEES, AGENTS, SUB-CONTRACTORS, OR ANY OTHER THIRD PARTY UNDER CONTRACTOR'S CONTROL OF ANY BOARD ENVIRONMENTAL RULE OR REGULATION, BOARD PERMIT, BOARD POLICY, OR ANY ENVIRONMENTAL LAW.

120-5.0 SAFETY PROVISIONS

The Contractor covenants and agrees:

- a. That it shall not cause or permit any hazardous chemical (as defined in 29 C.F.R. 1910.1200) to be brought upon the Airport without the prior written consent of OWNER. Consent may be given via the submittal process as long as all such materials are outlined on the submittal.
- b. That it shall make available to OWNER a Material Safety Data Sheet (MSDS) for each hazardous chemical Contractor or its sub-contractors, employees, or agents five (5) days prior to delivery of material onto the Airport.
- c. That its operations shall at all times remain in compliance with:
 1. OWNER'S written policies and requirements governing the identification and use of hazardous chemicals;
 2. All Safety Laws.
- d. That it shall advise OWNER immediately of any potential or actual non-compliance by any person with any Safety Law on Airport property.
- e. That it shall immediately upon receipt, provide OWNER with copies of any notice or other document issued to Contractor, its sub-contractors, or agents alleging non-compliance or investigating any potential non-compliance with any Safety Law at the Airport.

Neither the requirements of this clause nor any act or failure to act by the OWNER shall relieve the Contractor of responsibility or liability for the safety of the general public or OWNER, tenant, contractor, or subcontractor personnel or property.

120-6.0 SURVIVAL

The provisions of this Section, including the representations, warranties, covenants and indemnities of Contractor, shall expressly survive termination of this Contract.

END OF SECTION

END OF GENERAL PROVISIONS



Exhibit 7 – Technical Specifications & Plans
As provided on www.DFWAirport.com/business/solicitations

Exhibit 8 – Required Contract Provisions for Airport Improvement Program and for Obligated Sponsors

Not used in this Agreement