



CONTRACT NO. 9500697

High Mast Lighting System Replacement PH 1

Technical Specifications

**Issued for Bid
Date: August 16, 2019**


Permit Number: A19-228B

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Document Title: SEALS PAGE

Section: 00 01 07

Name: Steven Darryl Boyd
License #: 58795
Firm Name / Registration #: IEA, Inc. / F-10161

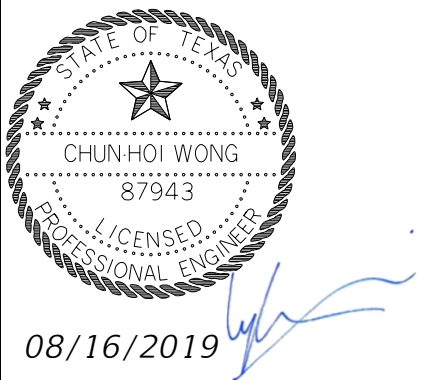
<u>Discipline</u>	<u>Specification Sections</u>	<u>Stamp</u>
Civil	00 01 10 01 11 00 01 29 85 01 55 26 02 41 16 32 92 19 33 05 07 33 71 19.16 33 71 19.43 SP to TxDOT Item 402 SP to TxDOT Item 416 SP to TxDOT Item 423	

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Document Title: SEALS PAGE

Section: 01 01 07

Name: Wilson Wong
License #: 87943
Firm Name / Registration #: IEA, Inc. / F-10161


<u>Discipline</u>	<u>Specification Sections</u>	<u>Stamp</u>
Structural	SP to TXDOT Item 104 SP to TXDOT Item 420 SP to TXDOT Item 421 SP to TXDOT Item 440 SP to TXDOT Item 442 SP to TXDOT Item 449	

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Section: 01 01 07

Name: M. Anees Rahman
License #: 134548
Firm Name / Registration #: Kimley-Horn and Associates / F-928

<u>Discipline</u>	<u>Specification Sections</u>	<u>Stamp</u>
Electrical	26 05 00 26 56 13 SP to TXDOT Item 476 SP to TXDOT Item 610 SP to TXDOT Item 616 SP to TXDOT Item 618 SP to TXDOT Item 620 SP to TXDOT Item 624 SP to TXDOT Item 628	

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Incorporated into the contract documents will be the Dallas Fort Worth International Airport Standard Technical Specification Book: Published December 7, 2018 and can be found at www.dfwairport.com/business/solicitations.

Specifications marked as “Applicable” below will be incorporated into the contract documents. Specifications may be revised and or added to the above published book will be as indicated and dated below. Revised or Added specifications are attached herin.

Section	Description	Applicable	Revised	Added
DIVISION 00	PROCUREMENT AND CONTRACTING REQUIREMENTS (DFW STANDARD SECTIONS)			
00 01 01	Project Title Page	✓	✓	
00 01 07	Seals Page	✓	✓	
00 01 10	Table Of Contents	✓	✓	
DIVISION 01	GENERAL REQUIREMENTS (DFW STANDARD SECTIONS)			
01 10 01	Abbreviations, Acronyms and Definitions	✓		
01 10 02	Reference Standards	✓		
01 11 00	Summary of Work	✓	✓	
01 18 16	Protection of Existing Underground Utilities and Cables	✓		
01 18 16.13	Utility Location Sign-Off Sheet	✓		
01 18 16.14	Underground Utilities Damage Report	✓		
01 21 00	Standby Time Allowance			
01 21 00.01	Standby Time Work Report			
01 25 13	Product Substitution Procedures	✓		
01 25 13.01	Product Substitution Form	✓		
01 26 13	Request for Information	✓		
01 29 00	Payment Procedures	✓		
01 29 73	Schedule of Values	✓		
01 29 85	Wage Rate Requirements	✓	✓	
01 29 85.01	Request for Authorization of Additional Classification and Rate	✓		
01 30 00	Allowances	✓		
01 31 19	Project Meetings	✓		
01 32 16	Schedules	✓		
01 33 23	Shop Drawings, Product Data, and Samples	✓		
01 33 29.06.01	Contaminated Media Management Plan	✓		
01 35 13.13	Minimum Standards for Construction and Maintenance on the AOA			
01 35 13.13.01	Minimum Standards for Construction and Maintenance on the AOA – Forms and Instructions			
01 35 23	Hot Work Operations and Control	✓		
01 35 24	Asbestos Operations and Controls			
01 41 26.10	Construction Air Permitting	✓		
01 41 26.13	Concrete Batch Plant and Hot Mix Asphalt Plant			
01 45 16.13	Contractor Quality Control	✓		
01 45 20	Non-Conformance Report	✓		
01 45 29	Owner’s Testing Laboratory			
01 50 00	Temporary Facilities and Controls	✓		
01 50 00.01	Temporary Facilities and Controls – Water Request Form	✓		
01 50 13	Owner’s Field Office			
01 52 00.01	Construction Signage	✓		

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<u>Section</u>	<u>Description</u>	<u>Applicable</u>	<u>Revised</u>	<u>Added</u>
01 52 13	Dust Control	✓		
01 52 16	Haul Road			
01 55 20	Contractor Use of the Parking Revenue Area	✓		
01 55 20.01	Contractor Use of the Parking Revenue Area – Instructions and Forms	✓		
01 55 26	Traffic Control			✓
01 55 29	Staging Areas	✓		
01 57 13	Temporary Erosion and Sediment Control	✓		
01 57 19	Spill Prevention Control and Countermeasure	✓		
01 57 19.13	Spill Response	✓		
01 57 19.13.01	Spill Response Plan Form	✓		
01 66 00	Product Storage and Handling Requirements	✓		
01 71 13	Mobilization	✓		
01 71 14	Land Use Requirements	✓		
01 71 14.01	Land Use Requirements – Application Procedures	✓		
01 73 29	Cutting And Patching	✓		
01 74 13	Progress Cleaning	✓		
01 74 18	Concrete Waste	✓		
01 74 19	Construction Waste	✓		
01 74 23	Final Cleaning	✓		
01 76 00	Protecting Installed Construction	✓		
01 76 50	Punch List	✓		
01 77 00	Closeout Procedures	✓		
01 77 00.01	Closeout Procedures – System Acceptance	✓		
01 78 23	Operation and Maintenance Data	✓		
01 78 33.36	Bonds and Warranties	✓		
01 78 39	Project Record Documents	✓		
01 78 46	Extra Stock Materials			
01 79 00	Demonstration and Training	✓		
01 81 13	Sustainable Design Requirements			
01 91 00	Commissioning	✓		
DIVISION 02	EXISTING CONDITIONS			
02 41 16	Selective Demolition			✓
DIVISION 26	ELECTRICAL			
26 05 00	Common Work Results for Electrical			✓
26 56 13	Lighting Poles			✓
DIVISION 32	EXTERIOR IMPROVEMENTS			
32 92 19	Seeding and Sodding	✓	✓	
DIVISION 33	UTILITIES			
33 05 07	Directional Boring			✓
33 71 19.16	Pull Box Plazas			✓
33 71 19.43	Ductbank			✓
TXDOT SPECIAL PROVISIONS				
Item 104	Removing Concrete			✓
Item 402	Trench Excavation Protection			✓
Item 416	Drilled Shaft Foundation			✓

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<u>Section</u>	<u>Description</u>	<u>Applicable</u>	<u>Revised</u>	<u>Added</u>
Item 420	Concrete Substructures			✓
Item 421	Hydraulic Cement Concrete			✓
Item 423	Retaining Walls			✓
Item 440	Reinforcement for Concrete			✓
Item 442	Metal for Structures			✓
Item 449	Anchor Bolts			✓
Item 476	Jacking, Boring, or Tunneling Pipe or Box			✓
Item 610	Roadway Illumination Assemblies			✓
Item 616	Performance Testing of Lighting Systems			✓
Item 618	Conduit			✓
Item 620	Electrical Conductors			✓
Item 624	Ground Boxes			✓
Item 628	Electrical Services			✓

- END OF SECTION -

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PART 1 – GENERAL

1.1 WORK COVERED BY CONTRACT DOCUMENTS

- A. Work of this Contract involves replacement of existing High Mast Lighting (HML) poles with new HML poles with internal motor and LED fixtures; select replacement of existing HML poles with new street lighting poles with LED fixtures; and installation of new 6W4 ductbank for project requirements and future airport electrical and communication needs. The work includes new infrastructure such as underground conduit and cable; new power pads and electrical equipment; replacement of electrical equipment at existing power pads; and new infrastructure for Oncor power tie-ins. Construction will be outside the Airport's Air Operations Area (AOA). The Contractor shall be responsible for reviewing all existing conditions associated with the work prior to commencement of work activities.

1.2 FORMS

- A. The Contractor and all subcontractors must obtain and pay for all Airport Operations Area Access Badges and Permits as required by the Airport.
- B. All appropriate forms and applications must be obtained, completed and submitted. A minimum required list of forms and applications is as follows:
 - 1. AOA Access or Parking Revenue Area (PRA) Access Permits Form (1 page). This form can be obtained from Airport Design, Code, and Construction Department (DCC).
 - 2. Access Badge Application (3 pages). This form can be obtained on the DFW website:
<https://www.dfwairport.com/badge/>

1.3 CONTRACT TIME & SCHEDULE MILESTONES

- A. The Contractor shall sequence and stage the Work in accordance with the requirements of the Contract Documents to meet the following interim requirements and Final Completion date.
 - 1. 364 consecutive calendar days for Substantial Completion, from the date set forth in the Notice to Proceed (NTP).
 - 2. 56 consecutive calendar days for Final Completion, from the date set forth for Substantial Completion.
 - 3. Total Contract Time = 420 consecutive calendar days from NTP.
- B. The Owner reserves the right to request the completion of work based on critical Milestones established in the Contract Documents.
- C. The Owner reserves the right to apply Liquidated Damages associated with request the completion of work based on critical Milestones.

1.4 HOURS OF WORK

- A. The Work may be performed in all areas up to 24 hours a day, 7 days a week, as necessary to meet the project completion dates, except as noted below.

B. Exceptions to above work hours:

1. Work activities may be canceled and the work area reopened in the event of airfield emergencies, late airline complexes, and unforeseen conditions that could create significant delays to the airport.
2. There are two types of Holiday Blackout periods. One governs the area within the Air Operations Area (AOA) and the other holiday blackout periods governs the area outside of the Air Operations area. The following construction blackout dates are recognized for the Project:

a. Landside Blackout Dates

The following dates have been established as construction blackout dates in the landside and customer service areas. During the noted landside Holiday blackout dates any work that impacts ramp level operations, roadways, guests inside the terminals and non-emergency utility outage requests, will normally not be approved. Work and utility outages that do not impact stakeholder operations or have limited impact will be evaluated on a case by case basis during the blackout periods. The dates listed are the primary dates and others may follow. Work shall not be performed:

- From 2200 hours, Friday, November 22, 2019; to 2200 hours, Monday, December 2, 2019 (Thanksgiving).
- From 2200 hours, Friday, December 20, 2019; to 2200 hours, Thursday, January 2, 2020 (Christmas/New Year).
- From 0000 hours, Thursday, March 5, 2020; to 2359 hours, Monday, March 23, 2020 (Spring Break).
- From 0000 hours, Thursday, May 21, 2020; to 2359 hours, Tuesday, May 26, 2020 (Memorial Day).
- From 0000 hours, Thursday, July 2, 2020; to 2359 hours, Monday, July 6, 2020 (Independence Day).
- From 0000 hours, Thursday, September 3, 2020; to 2359 hours, Tuesday, September 8, 2020 (Labor Day).
- From 0000 hours, Thursday, November 19, 2020; to 2359 hours, Tuesday, December 1, 2020 (Thanksgiving).
- From 0000 hours, Friday, December 18, 2020; to 2359 hours, Tuesday, January 5, 2021 (Christmas/New Year).

- b. For all utility outages, a Utility Outage Request form must be submitted seven days in advance to:

Poweroutage@dfwairport.com.

For power outage requests, all impacted panel schedules must be submitted with the request. Operations will review and if needed,

coordinate a stakeholder meeting to discuss mitigation plans. One hour prior to all utility outages, the requestor must call the Airport Operations Center at 972-973-3112 one hour prior to the scheduled outage for a final go/no-go. The Utility Outage Request form may be found on:

<https://www.dfwairport.com/operations/>

Or you may request a form from PowerOutage@dfwairport.com.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

PART 4 – MEASUREMENT AND PAYMENT

Not Used.

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WAGE RATE REQUIREMENTS

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PART 1 – GENERAL

1.1 SUMMARY

This Section includes the required forms and schedules necessary to meet the wage rate requirements for the Project.

1.2 FORMS

- A. Request for Authorization of Additional Classification and Rate - Standard Form 1444
- B. General Wage Decision Rates for Tarrant and Dallas County, Texas - <https://www.wdol.gov/dba.aspx>

1.3 WAGE RATES

- A. United State Department of Labor (DOL) provides the required minimum wages and fringe benefits to be paid to all laborers and mechanics employed to work on this Contract, either directly under this Contract or under a related subcontract. The Contractor and all Subcontractors are required to report the actual wages paid to laborers and mechanics performing work under this Contract. The reported wages will be verified by review of the weekly payroll reports and by periodic on-site interviews conducted by the Construction Manager.
- B. The Wage Determination establishes the minimum wages and fringe benefits to be paid to laborers and mechanics throughout the duration of this Contract. In no event shall these minimum wages be modified.
- C. If the Work specified in this Contract requires work performed by laborers or mechanics whose job classification is not listed in the Wage Determination, the Contractor is responsible for preparing the Request for Authorization of Additional Classification and Rate Standard (Form 1444) located in Section 01 29 85.01. The latest version of Form 1444 may also be obtained at the following address: <https://www.gsa.gov/forms-library/request-authorization-additional-classification-and-rate>
- D. Additional copies of the latest Form 1444 may also be obtained from the Owner's Authorized Representative (OAR). The Contractor must complete Items 3 through 15 and submit the request to the OAR prior to issuance of the Notice to Proceed (NTP) or as soon as the need for the additional classification or rate is identified, if the work has been authorized to begin.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

PART 4 – MEASUREMENT AND PAYMENT

Not Used.

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General Decision Number: TX20190025 01/04/2019

Superseded General Decision Number: TX20180035

State: Texas

Construction Type: Highway

Counties: Archer, Callahan, Clay, Collin, Dallas, Delta, Denton, Ellis, Grayson, Hunt, Johnson, Jones, Kaufman, Parker, Rockwall, Tarrant and Wise Counties in Texas.

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Note: Under Executive Order (EO) 13658, an hourly minimum wage of \$10.60 for calendar year 2019 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least \$10.60 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2019. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set

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forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/04/2019

* SUTX2011-007 08/03/2011

	Rates	Fringes
CONCRETE FINISHER (Paving and Structures).....	\$ 14.12	
ELECTRICIAN.....	\$ 19.80	
FORM BUILDER/FORM SETTER		
Paving & Curb.....	\$ 13.16	
Structures.....	\$ 13.84	
LABORER		
Asphalt Raker.....	\$ 12.69	
Flagger.....	\$ 10.06	
Laborer, Common.....	\$ 10.72	

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Laborer, Utility.....\$ 12.32
Pipelayer.....\$ 13.24
Work Zone Barricade
Servicer.....\$ 11.68

POWER EQUIPMENT OPERATOR:

Asphalt Distributor.....\$ 15.32
Asphalt Paving Machine.....\$ 13.99
Broom or Sweeper.....\$ 11.74
Concrete Pavement
Finishing Machine.....\$ 16.05
Concrete Saw.....\$ 14.48
Crane Operator, Lattice
Boom 80 Tons or Less.....\$ 17.27
Crane Operator, Lattice
Boom over 80 Tons.....\$ 20.52
Crane, Hydraulic 80 Tons
or Less.....\$ 18.12
Crawler Tractor.....\$ 14.07
Excavator, 50,000 pounds
or less.....\$ 17.19
Excavator, over 50,000
pounds.....\$ 16.99
Foundation Drill , Truck
Mounted.....\$ 21.07
Foundation Drill, Crawler
Mounted.....\$ 17.99
Front End Loader 3 CY or
Less.....\$ 13.69
Front End Loader, over 3 CY.\$ 14.72
Loader/Backhoe.....\$ 15.18
Mechanic.....\$ 17.68
Milling Machine.....\$ 14.32
Motor Grader, Fine Grade....\$ 17.19

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Motor Grader, Rough.....	\$ 16.02
Pavement Marking Machine....	\$ 13.63
Reclaimer/Pulverizer.....	\$ 11.01
Roller, Asphalt.....	\$ 13.08
Roller, Other.....	\$ 11.51
Scraper.....	\$ 12.96
Small Slipform Machine.....	\$ 15.96
Spreader Box.....	\$ 14.73

Servicer.....\$ 14.58

Steel Worker (Reinforcing).....\$ 16.18

TRUCK DRIVER

Lowboy-Float.....	\$ 16.24
Off Road Hauler.....	\$ 12.25
Single Axle.....	\$ 12.31
Single or Tandem Axle Dump Truck.....	\$ 12.62
Tandem Axle Tractor with Semi Trailer.....	\$ 12.86
Transit-Mix.....	\$ 14.14

WELDER.....\$ 14.84

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any

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solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year.

Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

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A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than "SU" or "UAVG" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion

date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- * an existing published wage determination
- * a survey underlying a wage determination
- * a Wage and Hour Division letter setting forth a position on

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a wage determination matter

* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material,

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etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

PART 1 – GENERAL

1.1 REQUIREMENTS INCLUDE:

- A. Public Safety
- B. Temporary Traffic Control Plan
- C. Temporary Traffic Control Devices
- D. Traffic Signage and Pavement Markings
- E. Flagger Control
- F. Haul Routes
- G. Removal
- H. Vehicle Relocation Procedures
- I. Requesting Off-Duty Officers for Traffic Control

PART 2 – PRODUCTS

2.1 TRAFFIC CONTROL DEVICES

- A. Provide traffic control devices for street and highway construction, maintenance, utility, or incident management operations that conform to the current edition of the *Texas Manual on Uniform Traffic Control Devices* (Texas MUTCD) and AASHTO's *Roadside Design Guide*. The Texas MUTCD serves as the principal standard governing the application, design, and placement of traffic control devices.
- B. Provide a traffic control plan which describes temporary traffic control measures to be used for facilitating roadway users through work zones or incident areas in a safe and orderly manner.
- C. Provide signs, channelizing devices, portable changeable message signs, traffic barriers, cones, drums, and temporary pavement markings that comply to the Texas MUTCD.

PART 3 – EXECUTION

3.1 PUBLIC SAFETY

- A. Submit a traffic control plan to the Airport's Traffic Engineer for approval. Plan must be approved before any temporary traffic control devices are put in place. The Work is located on a major and operational airport. The Owner considers the safety, the orderly movement, and unrestricted flow of the traveling public and other users of the Airport, to be of the utmost importance, and, therefore, to be an essential part of the Contract. Public safety and convenience and provisions therefore, made necessary by the Work, shall be the direct responsibility of the Contractor and shall be performed at its own expense.
- B. Do not close any bridge, drainage facility, or any portion of the roadway to traffic except as designated in the approved traffic control plan or Drawings Sidewalks

and other areas involving pedestrian movement shall remain open and accessible to pedestrians unless designated otherwise in the traffic control plan or Drawings.

- C. The Contractor shall coordinate with Owner's Authorized Representative for designated parking areas for each construction project.

3.2 TRAFFIC CONTROL PLAN

- A. The development and application of a well designed temporary traffic control plan can ensure safe mobility for all road users and safeguard for workers in a work zone
- B. Provide a sealed and signed traffic control plan for all work that displaces the traffic stream during construction, maintenance, and utility activities. Describe lane closures, shoulder closures, mobile closures, and any activities within the "clear zone", as defined by AASHTO's *Roadside Design Guide*. Specify traffic control devices and procedures necessary to protect workers and motorists, and to route motorists safely and efficiently through lane closures and work zones. Place traffic control signage within the road user's view so that maximum visual acuity is provided. Position signage with respect to location, orientation, height, and lateral clearance, as specified in the current edition of the Texas MUTCD.
- C. Address pavement drop-offs in work zones in the traffic control plan as specified by TxDOT's *Roadway Design Manual – Appendix B*. Appendix B addresses the proper treatment for different pavement drop-offs in work zones with respect to lateral clearance and condition of vertical drop.
- D. DPS Fire and Emergency response vehicles must have an adequate lane width for movements through a work zone. The absolute minimum lane width is 11 feet. Provide additional width along a road horizontal curve to provide to accommodate the path sweep and off-tracking of oversized vehicles.

3.3 TEMPORARY TRAFFIC CONTROL DEVICES

- A. Traffic control devices are all signs, signals, markings, and other devices used to regulate, warn, or guide traffic, placed on, over, or adjacent to a street, highway, and pedestrian facility.
- B. Do not erect temporary traffic control devices prior to the placement of advance-warning signs.
- C. Maintain channelizing devices, and advance warning signs. Keep them clean, visible, in good condition, and properly positioned at all times. Replace damaged devices. Provide enough traffic control devices to replace any damaged devices during construction.
- D. Monitor traffic control component parts or the areas of a temporary traffic control work zone to ensure that traffic control measures are operating effectively and that all devices are clearly visible, clean and in good condition.
- E. Coordinate all traffic control work zones within the airport roadway network with the Airport's Traffic Engineer 72 hours prior to implementing a temporary traffic control. Airport's Traffic Engineer will coordinate with DPS, AOC, and the airport community.

3.4 TRAFFIC SIGNAGE AND PAVEMENT MARKINGS

- A. Provide traffic signs that comply with Part 2, Signs, and Part 6 of the Texas MUTCD.
- B. Provide traffic markings that comply with Part 3, Markings, of the Texas MUTCD.

3.5 FLAGGER CONTROL

- A. Provide Flagger's that meet the requirements of Chapter 6E of the Texas MUTCD Temporary Traffic Control.
- B. Provide trained and equipped flaggers to regulate traffic when construction operations encroach on public traffic lanes or as specified in the temporary traffic control plan.
- C. For daytime and nighttime activity, flaggers shall wear safety apparel meeting the requirements expressed in the Texas MUTCD.
- D. Flaggers should be able to demonstrate the following abilities:
 - 1. Receive and communicate traffic related instructions.
 - 2. Control signaling devices to provide clear and positive guidance to drivers.
 - 3. Understand and apply safe traffic control practices.

3.6 HAUL ROUTES

- A. Use only established roadways or use temporary roadways constructed by the Contractor when and as authorized by the Owner. Do not load vehicles beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by and federal, state, or local law or regulation when materials are transported in prosecuting the Work. Protect curbs and sidewalks from damage. Repair any damaged curbs, sidewalks, or roads.
- B. Notify the Owner in writing at least forty-eight hours prior to the movement of heavy equipment or wide or slow-moving vehicles to or from the Site. Adhere to vehicular routes established by the Owner.

3.7 REMOVAL

- A. Remove all traffic control devices and equipment immediately when no longer required. Repair any damage caused by the installation of traffic control devices. Remove post setting to a depth of two feet.
- B. Remove, cover or turn away traffic control devices from approaching traffic so the devices are not visible to drivers when work is suspended for short periods or that are no longer appropriate for the conditions.

3.8 VEHICLE RELOCATION PROCEDURES

The following procedures are established in order to relocate legally parked vehicles in public parking facilities operated by the Airport Board due to construction.

- A. Post a "30 Day Closure Notice" sign at the entrance to the parking facility. Sign specifications are available from the DFW Sign Shop.
- B. If the closure involves only a section of the parking facility, the signs should be posted in the affected area to delineate closure of the specific section. Cones,

barrels, tape, barricades or any combination thereof may be used to secure vacant spaces.

- C. If vehicles have not been removed after 30 days, the DFW Project Manager will ensure that the Contractor:
 - 1. Contact the Board's contract wrecker service 48 hours in advance to ensure the company has adequate staffing.
 - 2. Barricade the entrance to prevent additional vehicles from parking if the entire lot is involved.
 - 3. Ensure that before and after photographs are taken of vehicles that will be relocated.
 - 4. Create a vehicle log that includes the color, make, model, license plate number and document any existing damage.
 - 5. Note the location where the vehicle was parked and to where it has been relocated. Relocation should be as close as practical to the original location.
 - 6. If relocating vehicles at Remote Parking, notify Guest Services at (972) 973-4840.
 - 7. If relocating vehicles parked at Express Parking, notify Parking Contract Busing at (972) 574-0370 and AMPCO at (972) 574-7414.
 - 8. If relocating vehicles parking at the Employee Parking Lots, notify Parking Contract Busing at (972) 822-7704.
 - 9. Fax a copy of the vehicle log to DPS Communications at (972) 973-3194, DPS Project Planning & Management Division at (972) 973-3597, DFW Customer Service at (972) 574-0342, Parking Guest Relations at (972) 973-4841, South Parking Control Plaza at (972) 973-3816, North Parking Control Plaza at (972) 973-3806 and the Airport Operations Center (AOC) at (972) 973-3188.

3.9 REQUESTING OFF-DUTY OFFICERS FOR TRAFFIC CONTROL

- A. This section contains information and instructions on the proper procedures used to request Off-Duty Police Officers for traffic control purposes.
- B. Procedures:
 - 1. Conduct work in accordance with a Traffic Control Plan submitted and approved by the DFW Airport Traffic Engineer. Robert Rodriguez, P.E. can be contacted at (972) 973-1783 to assist with this process.
 - 2. Attend the weekly Traffic Control Coordination Meeting to discuss the project scope and the need for Off-Duty Police Officers. Traffic related project must be included in the weekly Traffic Advisory that is maintained and distributed to the Airport Community by DFW DPS.
 - 3. Submit a formal request for off-duty police officers to the Project Planning & Management Division Commander at DPS Station 1. Pay for off-duty police officers.

4. The Project Planning & Management Division Commander or designee will review the request and may consult the DFW Traffic Engineer to ensure that the Traffic Control Plan complies with all applicable laws/ordinances.
 5. The Project Planning & Management Division Commander retains the right to approve or reject the utilization of Off-Duty Police Officers. The determination is based on public safety and proper implementation of the Traffic Control Plan per legal/industry standards – Texas MUTCD.
 6. Once authorization has been granted, the Project Planning & Management Division Commander will notify the Off-Duty Coordinator to process the request and initiate the off-duty job notification.
 7. If there are any questions concerning these procedures, changes or cancellations for Off-Duty Police Officers, please contact the DPS Desk Sargent at (972) 973-3533.
- C. Additional information and responsibilities for Contractors:
1. Attend the weekly Traffic Control Coordination Meeting is held in Conference Room 120 of the Airport Development and Engineering Department Building located at 3003 S. Service Road., DFW Airport. The DFW Traffic Engineer facilitates this meeting every Monday at 10:00 a.m.

PART 4 – MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. Measurement shall be made in accordance with the unit(s) shown for each Traffic Control item identified on the Bid Schedule.

4.2 PAYMENT

- A. Payment shall be made upon completion of each Traffic Control item identified on the Bid Schedule and acceptance by the Owner. Interim payment(s) prior to completion may be made at the sole discretion of the Owner.

- END OF SECTION -

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PART 1 – GENERAL

- 1.1 This section includes all work necessary for and incidental to the execution and completion of the following selective items.
 - A. Existing high mast lighting poles.
 - B. Existing high mast lighting pole foundations.
 - C. Closure of garage deck openings subsequent to existing high mast lighting pole removal.

PART 2 - PRODUCTS

- 2.1 Not used.

PART 3 - EXECUTION

- 3.1 Demolition and removal procedures shall provide for safe conduct of the work, protection of property which is to remain undisturbed, coordination with other work in progress, timely disconnection of any utility service and protection for any vehicles or aircraft in the area.
- 3.2 The use of explosives is not permitted.
- 3.3 Demolished materials shall become the property of the Contractor and shall be properly disposed of outside the limits of the Airport.
- 3.4 The Contractor shall meet all applicable city, county, state, and federal laws and/or ordinances governing spillage of debris while transporting to the disposal site.

PART 4- MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. Measurement shall be made in accordance with the unit(s) shown for each Selective Demolition item identified on the Bid Schedule.

4.2 PAYMENT

- A. Payment shall be made upon completion of each Selective Demolition item identified on the Bid Schedule and acceptance by the Owner. Payment shall be full compensation for all materials, labor, tools, equipment and incidentals necessary to complete the work.

- END OF SECTION –

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PART 1 – GENERAL

- 1.1 This section includes all work necessary for and incidental to the procurement and installation of all items related to the installation of new Oncor power pads and modifications of existing power pads and electrical vaults.

PART 2- PRODUCTS

2.1 GENERAL

- A. All work shall comply with NFPA 70 - National Electric Code, the National Electrical Safety Code (NESC), Oncor, and all local codes and standards.
- B. All outages shall be coordinated with Owner and Oncor. Outages must be prescheduled and approved, in writing.
- C. In addition to material and equipment specified, Contractor shall also provide incidental materials required to provide a complete and operational installation. This includes power and control equipment for the lighting system installation.
- D. Materials and equipment shall be uniform throughout the installation. Equipment of the same type shall be of the same manufacturer. Materials and equipment shall be new. Materials and equipment for which tests have been established by the Underwriter's Laboratories, Inc. shall bear its label of approval.

PART 3- EXECUTION

- 3.1 During construction, the contractor shall maintain the existing lighting systems and electrical utilities operational without interruption. Should it be necessary to interrupt any lighting or electrical service or utility, the Contractor shall secure permission in writing from the Owner for such interruption at least ten (10) business days in advance. Any interruption shall be made with minimum amount of inconvenience to the Owner and any shut-down time shall have to be on a premium time basis and such time to be included in the contractor's bid. Arrange to provide and pay for temporary power source as required by project conditions.
- 3.2 Upon completion of the electrical construction work, perform tests and provide test reports as specified in this and other sections.
- 3.3 The locations of the existing/proposed lighting poles, power pads, electrical vaults, Oncor equipment, duct banks, conduits, etc. shown are approximate. The Contractor shall use good judgment in locating existing and placing the preceding items to eliminate all interference with adjacent utilities, trees, structures, etc.

PART 4- MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. Measurement shall be made in accordance with the unit(s) shown for each (EA) new power pad installation or existing power pad modification identified on the Bid Schedule.

4.2 PAYMENT

- A. EXISTING ELECTRICAL VAULT WITH NEW ELECTRICAL EQUIPMENT: Work in existing electrical vaults is minimal and shall not be paid for separately but shall be considered incidental to the installation of the proposed light poles. Payment shall be full compensation for furnishing, installing, modifying and testing all panels, transformers, electrical equipment, electrical conductors, junction boxes and enclosures; and all materials, labor, tools, equipment and incidentals necessary to complete the work.

- B. NEW POWER PAD WITH NEW ELECTRICAL EQUIPMENT: Payment shall be made upon completion of each new power pad installation as identified on the Bid Schedule and accepted by the Owner. Payment shall be full compensation for furnishing, installing, and testing all panels, transformers, electrical equipment, electrical cord, junction boxes and enclosures; and all materials, labor, tools, equipment and incidentals necessary to complete the work. This item also includes all excavation and backfill, foundations, concrete pads, retaining walls, bollards, and additional incidentals required to install a fully functional power pad as shown on the plans.

- END OF SECTION -

PART 1 – GENERAL

- 1.1 This section includes all work necessary for and incidental to the procurement and installation of lighting poles.

PART 2- PRODUCTS

2.1 GENERAL

- A. Pole material shall be galvanized steel.
- B. Pole height shall be as indicated in the contract drawings.
- C. Pole shall be designed for an 80-mph wind speed minimum.
- D. Light fixtures shall be Phillips Lumec as described on the light fixture schedule or approved equal.

2.2 HIGH MAST LIGHTING

- A. Pole shall be furnished by a TxDOT approved manufacturer and subject to Owner approval.
- B. Pole shall be furnished with a lowerable lighting ring assembly providing the number of luminaries as shown on the plans and schedules.
- C. Pole shall be furnished with an internal motorized winch for lowering and raising the lighting ring assembly.
- D. Lowering system shall be bottom latching i.e. not top latching.
- E. Lowering system shall provide two, independent stainless-steel lowering cables, each with an associated stainless-steel winch drum.
- F. Lowering system components shall be made of stainless-steel, i.e. not galvanized steel, as applicable.
- G. Pole height shall be as indicated on the Drawings.

2.3 STREET LIGHTING

- A. Pole shall be furnished by a TxDOT approved manufacturer and subject to Owner approval.
- B. Poles shall be round with breakaway base.
- C. Pole height shall be as indicated on the Drawings.
- D. Pole accessories shall include:
 - 1. Handhole.
 - 2. Anchor bolts.

PART 3 - EXECUTION

- 3.1 Install pole using established industry practices and in accordance with manufacturer requirements.
- 3.2 Use established industry and manufacturer safety practices when installing pole.

- 3.3 Prevent scarring or marring of the pole. Repair galvanized surfaces damaged in assembly, transit, or installation; or for steel parts or members welded after galvanizing in accordance with manufacturer requirements.
- 3.4 Where applicable, orient pole so maintenance personnel can see into the access hole while facing oncoming traffic.

PART 4- MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. Measurement shall be made in accordance with the unit(s) shown for each Lighting Pole item identified on the Bid Schedule.

4.2 PAYMENT

- A. Payment shall be made upon completion of each Lighting Pole item identified on the Bid Schedule and acceptance by the Owner. Payment shall be full compensation for furnishing transformers, electrical equipment, electrical cord, junction boxes and enclosures; and all materials, labor, tools, equipment and incidentals necessary to complete the work.

- END OF SECTION -

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section covers furnishing of all labor, materials, equipment, tools, supervision, and incidentals necessary for seeding or sodding. Turf materials must address the elimination and/or mitigation of materials that could attract hazardous wildlife on and/or around an airport.

1.2 REFERENCES

- A. Federal Aviation Administration (FAA) Advisory Circular 150/5200-33A, Hazardous wildlife Attractants on or Near Airports
- B. FAA Advisory Circular 150/5370-10G, Standards for Specifying Construction of Airports (Specifically Part 10, Turfing)
- C. Wildlife Hazard Management at Airports, A Manual for Airport Personnel available at:
https://www.faa.gov/airports/airport_safety/wildlife/resources/media/2005_FAA_Manual_complete.pdf
- D. Texas Commission on Environmental Quality (TCEQ) Stormwater Construction General Permit TXR150000 (specifically Final Stabilization criteria)
- E. TxDOT approved product list:
<https://www.txdot.gov/business/resources/erosion-control.html>

1.3 DEFINITIONS

- A. Adequate Grass Stand (FAA): A good stand of grass of uniform color and density, and when unviable or bare spots are one square foot or less, randomly dispersed, and do not exceed 3% of the area sodded.
- B. Airside: The airside consists of all areas within the AOA fence at the completion of the project, all areas extending 20 ft from the AOA fence, and all Runway Protection Zones (RPZ).
- C. Cool season: The cool season is October 1st through March 31st.
- D. Final Stabilization (TCEQ): All soil disturbing activities at the site have been completed and uniform (evenly distributed without large bare areas) perennial vegetative cover with a density of at least 70% approved vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures. In addition, Airside areas have established "Adequate Grass Stand".
- E. Non-public area: All non-Airside areas greater than 30 feet from a leased area, not mowed, and not landscaped.
- F. Permanent Seed: approved perennial grass species/varieties for final stabilization
- G. PLS: Pure Live Seed ($\text{Purity} \times \text{Germination} / 100 = \text{PLS}$)
- H. Public area: All non-Airside areas within 30 feet of a leased area, mowed, or landscaped.
- I. Sun Area: An area receiving greater than 4 hours of direct sunlight daily.

- J. Shade area: An area receiving 4 or less hours of direct sunlight daily.
- K. Temporary Seed: approved annual grass species/varieties
- L. TxDOT: Texas Department of Transportation
- M. Warm season: The warm season is April 1st through September 30th.

1.4 SUBMITTALS

- A. Seed/Sod Plan: Submit a seed/sod plan for approval. Plan shall include number of acres/square yards to seed/sod, application method, grass species/variety Latin name, supplier name and location, sod type/quality designation, seed vendor certification, total quantity of seed to be applied, tackifier SDS, mulch selected from TxDOT approved list, soil retention blanket selected from TxDOT approved list, soil retention blanket's manufacturer installation instructions, topsoil source and quantity.
- B. Fertilizer Plan: Submit a fertilizer plan for approval. The plan shall include the soil analysis laboratory results, laboratory fertilizer recommendation based on soil results and grass species/variety, proposed fertilizer mix and application rate.

PART 2 – PRODUCTS

2.1 SEED

- A. Provide and install seed as shown on the plans or as directed by OAR. All seed must be from previous season's crop and meet the requirement of the Texas Seed Law.
- B. All seed weight shall be per PLS pounds. Minimum application rate is indicated per acre.
- C. Only seed meeting the land use, season, and sun exposure requirements may be applied. Refer to charts below for permanent and temporary seed options. Seed shall be applied at the application rate specified in the table below.

PERMANENT SEED OPTIONS					
Land Use	Season During Application		Sun Exposure		Minimum Application Rate
	Warm	Cold	Sun	Shade	
Airside					
No seed options available (Sod Only)					
Public					
Unhulled Bermuda <i>Cynadon dactylon</i>	X		X	X	50 lbs. PLS
Hulled Bermuda <i>Cynadon dactylon</i>	X		X	X	50 lbs. PLS
Zoysia Grass <i>Zoysia japonica</i>	X			X	100 lbs. PLS
Non-public					
Unhulled Bermuda <i>Cynadon dactylon</i>	X		X	X	20 lbs. PLS
Hulled Bermuda <i>Cynadon dactylon</i>	X		X	X	20 lbs. PLS
Buffalo Grass <i>Bouteloua dactyloides</i> / Blue Grama Grass (native) <i>Bouteloua gracilis</i>	X		X	X	50 lbs. PLS/ 100 lbs. PLS
Buffalo Grass <i>Bouteloua dactyloides</i> w/ Sand Drop <i>Sporobolus cryptandrus</i>	X		X	X	50 lbs. PLS / 2 lbs PLS
Buffalo Grass <i>Bouteloua dactyloides</i> w/ Hooded Windmill <i>Chloris cucullata</i>	X		X	X	50 lbs. PLS / 1.5 lbs PLS
Blue Grama Grass (native) <i>Bouteloua gracilis</i>	X		X	X	4 lbs. PLS
TXDOT Permanent Urban Seed Mix (District 18 Clay Soils) Green Sprangletop- <i>Leptochloa dubia</i> , Sideoats Grama (El Reno)- <i>Boutelous curtipendula</i> , Buffalograss (Texoka)- <i>Bouteloua dactyloides</i> , Bermudagrass- <i>Cyando dactylon</i>	X		X	X	1 lbs. PLS/7 lbs. PLS/3 lbs. PLS/5 lbs. PLS

TEMPORARY SEED OPTIONS					
Land Use	Season During Application		Sun Exposure		Application Rate
	Warm	Cold	Sun	Shade	
Airside					
No seed options available					
Public					
No seed options available					
Non-public					
Teff Grass <i>Eragrostis tef</i>	X	X	X	X	10 lbs PLS
Creeping red fescue <i>Festuca rubra</i>		X	X	X	220 lbs. PLS
Western Wheatgrass <i>Passcopyrum smithii</i>		X	X	X	20 lbs. PLS

2.2 SOD

- A. Use grass sod with a healthy root system and dense matted roots throughout the soil of the sod for a minimum thickness of 1in.
- B. Keep sod moist from the time it is dug until it is planted. Grass sod with dried roots is unacceptable.
- C. Sod shall be relatively free of weeds or other undesirable foreign plants, large stones, roots, or other materials.
- D. Sod must be green and have evidence of 99% root establishment to achieve final stabilization. Sod that is placed during the cool season will require an inspection in the warm season to confirm viability.

- E. Sod will be considered under warranty for one year after final stabilization is achieved.
- F. Approved sod options vary based on season, sunlight, and location on Airport property. Refer to the chart below for sod options. Only sod meeting the land use, season, and sun exposure requirements may be utilized.

SOD OPTIONS				
Land Use	Season During Application		Sun Exposure	
	Warm	Cold	Sun	Shade
Airside				
Bermuda <i>Cynadon dactylon</i>	X	X	X	X
Public				
Bermuda <i>Cynadon dactylon</i>	X	X	X	X
Non-public				
Bermuda <i>Cynadon dactylon</i>	X	X	X	X
<i>Zoysia Zoysia japonica</i>	X	X		X
Buffalo Grass <i>Bouteloua dactyloides</i>	X		X	X

2.3 FERTILIZER

- A. Provide and distribute fertilizer over all areas to be seeded or sodded.
- B. Fertilizer is subject to testing by the Texas A&M Feed and Fertilizer Control Service or another approved lab in accordance with the Texas Fertilizer Law.

2.4 WATER

- A. Use water that is clean and free of industrial wastes and other substances harmful to the growth of vegetation.
- B. Water may be from a Potable Water source or Reclaimed Water source, but never pumped directly from a creek, stream or pond.
- C. The water source and supply location is subject to approval by the OAR prior to use.

2.5 MULCH

- A. Mulch is required to cover all seeded areas.
- B. See chart below for the approved mulch types and minimum application rates.

MULCH OPTIONS	
Type	Application Rate
Wheat Straw Mulch	2 tons per acre
TxDOT Approved Cellulose Fiber Mulch	per manufacturer rate but no less than 2000 lbs. per acre

- C. Wheat straw mulch must be crimped into the soil using an approved Straw Mulch Crimper.
- D. Recycled paper based cellulose mulches are prohibited.

2.6 TACKIFIER

- A. Use a tacking agent for all hydroseed applications. Apply per manufacturer's recommendations.

2.7 SOIL RETENTION BLANKET

- A. Soil retention blanket is required on all seeded areas with a slope of 3:1 or greater, and in any area where concentrated flow occurs.
- B. Use a soil retention blanket from the TxDOT Approved Product List.

2.8 TOPSOIL

- A. Use easily cultivated, fertile topsoil that is free from objectionable material and resistant to erosion.
- B. Utilize existing topsoil from the project site.
- C. If necessary to obtain additional topsoil, adhere to the soil transfer requirements in 01 33 29.06.01 Contaminated Media Management Plan.

PART 3 - EXECUTION

3.1 GENERAL

- A. All seed or sod applications must adhere to all applicable TCEQ or FAA Circulars including most recent versions of 150/5200-33, and 150/5370-10.
- B. All seed or sod applications will be considered under warranty for one year after final stabilization is achieved.

3.2 SEED

A. General

- 1. Submit a seed/sod plan for approval by the OAR prior to application.
- 2. Seed may be applied by the following methods: broadcast, drill seeding, hydroseeding.
- 3. All seed applications will require soil prep, top soil, fertilizer, and mulch. Tackifier and soil retention blankets are required based on application method and site conditions.

B. Soil Prep

- 1. After grading of the area has been completed, thoroughly loosen and work soil to a depth of not less than 5 inches, and break any clods greater than 1" in diameter.
- 2. The area shall be raked or otherwise cleared of stones, sticks, stumps, and other debris greater than 1" in diameter. The surface shall be prepared in a manner that is loose and level without voids, openings, or pores.

C. Topsoil

- 1. Complete soil prep prior to placing topsoil.

2. Spread the topsoil to a uniform loose cover with a minimum depth of 4 inches.
- D. Inspection
1. Once soil is prepped and top soil is placed, request a DFW environmental inspection.
 2. Soil prep and topsoil placement must be inspected and approved by a DFW environmental inspector prior to seed application.
- E. Fertilizer
1. Submit a Fertilizer Plan for OAR approval.
 2. Fertilizer mix and application rate shall be determined based on a soil laboratory analysis.
 3. A soil sample shall be submitted to Texas A&M Agrilife Extension or equivalent laboratory certified in soil analysis. Follow the laboratory's procedure for collecting a soil sample. Soil sample may be collected at any point post-grading and prior to seed application.
 4. Submit the lab results and proposed fertilizer for review and approval by OAR prior to application.
 5. Apply fertilizer at the approved application rate.
- F. Installation
1. Broadcast Application
 - a. If broadcast application method is selected, contractor shall evenly distribute seed across the entire area at the approved application rate.
 2. Drill seed Application
 - a. If drill seed application is selected, contractor shall evenly distribute seed in rows no further than 7" apart, utilizing an industry approved grass seed drill.
 3. Hydroseed Application
 - a. If hydroseed application method is selected, contractor must evenly apply seed, and tackifier at approved application rates.
 - b. All equipment shall be clean and free of contaminants prior to use.
- G. Mulch
1. The Contractor is required to apply an approved mulch at the rates specified over the planted seed bed.
 2. If wheat straw mulch is utilized, it must be crimped into the soil using an approved Straw Mulch Crimper.
- H. Soil retention Blanket
1. All areas with a slope of 3:1 or greater, and any area where concentrated flow occurs will require soil retention blanket.

2. Install and anchor the soil retention blanket according to the manufacturer's installation instructions.
 - I. Water
 1. Water as needed until final stabilization is achieved and approved by the OAR.
 2. Ponding is not allowed. Do not water to the point of ponding.
 - J. Mowing
 1. Mowing is required when the grass reaches 6" in height.
 2. Additional mowing may be required by the OAR until final stabilization is achieved.
 - K. Reseeding
 1. The area may require reseeding to achieve final stabilization. Reseeding is considered incidental to the cost of seeding and will be done at no additional expense to the owner.
 2. If final stabilization is not achieved in the warm season, reseeding will be required in the next warm season.
 3. At a minimum, reseeding consists of seed, fertilizer, and water application. Mulch, tackifier and soil retention blankets may be utilized.
- 3.3 SOD
- A. General
 1. Submit a seed/sod plan for approval by the OAR prior to application.
 - B. Soil Prep
 1. After grading of the area has been completed, thoroughly loosen and work soil to a depth of not less than 5 inches, and break any clods greater than 1" in diameter.
 2. The area shall be raked or otherwise cleared of stones, sticks, stumps, and other debris greater than 1" in diameter. The surface shall be prepared in a manner that is loose and level without voids, openings, or pores.
 - C. Topsoil
 1. Complete soil prep prior to placing topsoil.
 2. Spread the topsoil to a uniform loose cover with a minimum depth of 4 inches.
 - D. Inspection
 1. Once soil is prepped and top soil is placed, request a DFW Environmental Inspection.
 2. Soil prep and topsoil placement must be inspected and approved by a DFW Environmental Inspector prior to sod installation.

- E. Fertilizer
 - 1. If placing sod in a warm season, submit a fertilizer plan for approval.
 - 2. If placing sod in a cool season, OAR may require fertilizer in the warm season.
 - 3. Fertilizer mix shall contain primarily Nitrogen, and be applied at a rate of 100 lbs. of Nitrogen per acre.
- F. Installation
 - 1. Place sod over the prepared area and roll or tamp to create a solid mat.
 - 2. Sod placed on the Airside, in ditches, or on slopes greater than 4:1 will require staples. Use 12" wood staples to secure the sod.
 - 3. Fill all gaps with additional topsoil.
- G. Water
 - 1. Water as needed until final stabilization is achieved and approved by the OAR.
 - 2. Ponding is not allowed. Do not water to the point of ponding.
- H. Mowing
 - 1. Mowing may be required by the OAR until final stabilization is achieved.
 - 2. Mowing will be conducted within the time frame specified by the OAR.

3.4 FINAL STABILIZATION

- A. All areas shall be maintained until final stabilization is achieved.
- B. Final stabilization is achieved when the following conditions are met:
 - 1. All soil disturbing activities at the site have been completed.
 - 2. Uniform (evenly distributed without large bare areas) perennial vegetative cover with a density of at least 70% approved vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures.
 - 3. All Airside areas achieve a good stand of grass of uniform color and density, and when unviable or bare spots are one square foot or less, randomly dispersed, and do not exceed 3% of the area sodded.
- C. Final stabilization will be determined during the warm season (April 1st thru September 31st).

PART 4 - MEASUREMENT AND PAYMENT

4.1 MEASUREMENT

- A. Seeding shall be measured as a lump sum.
- B. Sodding shall be measured as a lump sum.

- C. Fertilizer is subsidiary to the seeding and/or sodding bid items and shall not be measured.
- D. Hydromulch or straw mulch is subsidiary to the seeding and/or sodding bid items and shall not be measured.
- E. Tackifier is subsidiary to the seeding and/or sodding bid items and shall not be measured.
- F. Soil retention blanket is subsidiary to the seeding and/or sodding bid items and shall not be measured.
- G. Protective barriers, watering, mowing, and other maintenance activities are subsidiary to the seeding and/or sodding bid items and shall not be measured.

4.2 PAYMENT

- A. The contractor will be paid for 75% of the seeding lump sum amount upon completion of seeding placement. The remaining 25% will be paid once the owner has made final acceptance of the seeded areas.
- B. The contractor will be paid for 90% of the sodding lump sum amount upon completion of the sod placement. The remaining 10% will be paid once the owner has made final acceptance of the sodded areas. The lump sum amount is full compensation for securing a source, excavation, loading, hauling, placing, rolling, finishing, furnishing materials, equipment, labor, tools, supplies, and incidentals. Sod is under warranty for one year after final stabilization is achieved. Sod must be green and have evidence of root establishment to achieve final stabilization. Sod that is placed during the cool season will require an inspection in the warm season to confirm viability for final acceptance. Areas where sod has failed to thrive shall be replaced with living green sod at the contractor's expense.

- END OF SECTION -

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SECTION 33 05 07
DIRECTIONAL BORING

PART 1 GENERAL

1.01 SCOPE

- A. This section provides for directional boring associated with the installation of underground conduit in casing pipe beneath pavements and structures.

PART 2 PRODUCTS

- 2.01 Products shall be as shown on the Plans.

PART 3 EXECUTION

3.01 GENERAL

- A. Installation Plan: Contractor shall submit the plan of his proposed installation procedures for approval. The plan shall include pipe guides, equipment positions, jointing methods, and other specific information pertinent to the procedure selected. The approval of this plan by the Engineer shall not relieve the Contractor from the responsibility of obtaining the specified results.
- B. Casing: Conduits shall be installed in a smooth standard weight steel pipe casing of the size shown on the construction plans. Conduit shall be installed with spacers. After installation of the casing and conduits, the entire length of the casing shall be grouted around the conduits.
- C. Pits: If the grade of the casing is below the ground surface, suitable pits or trenches shall be excavated for the purpose of conducting boring operations and for placing end joints of the casing. Wherever end trenches are cut into the sides of the embankment or beyond it, such work shall be sheathed securely and braced in a satisfactory manner to prevent earth caving. Pits shall be braced and shored in conformance with OSHA standards. The sizes of the boring pit and the receiving pit shall be approved by the Engineer.
- D. Operations: Where pipe is required to be installed under or near existing aircraft pavements or vehicle roads, construction shall be done in such a manner that will not interfere with aircraft or vehicle traffic and shall not weaken or damage any pavement. During construction operations, barricades and lights to safeguard traffic shall be furnished and maintained as directed by the Engineer, until such time as the backfill has been completed.

3.02 BORING

- A. Boring shall proceed from a pit provided for the boring equipment and workers. Excavation for pits and installation of shoring shall be as outlined under paragraph 3.1b. The location of the pit shall meet the approval of the Engineer. The holes are to be bored mechanically. The boring shall be done using a pilot hole prior to casing installation. By this method, an approximate 2-inch pilot hole shall be bored the entire length of the crossing and shall be checked for line and grade on the opposite end of the bore from the work pit. This pilot hole shall serve as the

centerline of the larger diameter casing hole to be bored. Excavated material will be placed near the top of the working pit and disposed of as operations will permit. Jetting will not be permitted.

- B. In unconsolidated soil formations, a gel-forming colloidal drilling fluid consisting of at least 10 percent of a high grade carefully processed bentonite may be used to consolidate cuttings of the bit, seal the walls of the hole, and furnish lubrication for subsequent removal of the cuttings and installation of the casing.
- C. Variance from line and grade shall be minimized; boring shall not interfere with the pavement section, pavement drainage system, light drain system, other electrical conduit/duct, or other utilities. Overcutting in excess of 1 inch shall be remedied by pressure grouting the entire length of the installation.

PART 4 MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. Directional boring shall be measured by the linear foot of casing pipe installed as completed by the Contractor and accepted by the Owner.
- B. Conduit shall be subsidiary to the directional boring and not measured separately.

4.02 PAYMENT

- A. Payment shall be made at the contract unit price per linear foot of casing pipe installed. This price shall be full compensation for all boring procedures; for excavating all pits and trenches required; for providing appropriate shoring and bracing of work pits; for conduits; for backfilling trenches and pits; and for all materials, labor, tools, equipment and incidentals necessary to complete this item.

END OF SECTION

SECTION 33 71 19.16

PULL BOX PLAZAS

PART 1 GENERAL

1.01 SCOPE

- A. Install concrete pull box plazas as shown on the plans.

PART 2 PRODUCTS

2.01 CONDUIT AND FITTINGS

- A. Underground Installations - Provide Schedule 80 PVC conduit and fittings.
- B. Above-ground installations - Provide steel conduit and fittings having an exterior coating applied by hot-dipped galvanizing except as noted on the drawings.

2.02 CONCRETE

- A. Provide concrete per TxDOT Item 421, Class A.

2.03 REINFORCING

- A. Provide reinforcement per TxDOT Item 440, ASTM A615, Grade 60.

PART 3 EXECUTION

3.01 CONSTRUCTION

- A. Configure pull box plazas as detailed on the Plans.

3.02 RETAINING WALLS

- A. Install retaining walls in accordance with TxDOT Item 423 as detailed on the Plans.

3.03 PULL BOXES

- A. Install TxDOT standard pull boxes as identified on the Plans.

3.04 CONDUITS

- A. Thoroughly clean all conduits before placing. During construction and after the plaza is completed, plug open ends of conduits to prevent the entrance of foreign matter. After the plaza has been completed, pull a flexible mandrel through each conduit. The mandrel must not be less than 12 inches long with a diameter approximately 1/4-inch less than the inside diameter of the conduit. After cleaning, place in each conduit a No. 30 nylon line with a plastic tag on each end reading "Pulling Line".
- B. The ends of stubbed conduits shall be capped watertight.

PART 4 MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. Pull box plazas shall be measured per each completed installation.
- B. Pull boxes shall be subsidiary to the pull box plaza construction and shall not be measured.
- C. Connecting direct-buried conduit between the pull box plaza and underground and above-ground 6W4 ductbanks shall be subsidiary to the pull box plaza construction and shall not be measured.
- D. Conduit stubbed outside of the pull box plaza shall be subsidiary to the pull box plaza construction and shall not be measured.

4.02 PAYMENT

- A. Payment for pull box plazas shall be made at the contract unit price upon completion by the Contractor and acceptance by the Owner. Payment shall be full compensation for furnishing all materials, labor, tools, equipment and incidentals necessary to complete the work.

END OF SECTION

SECTION 33 71 19.43

DUCTBANK

PART 1 GENERAL

1.01 SCOPE

- A. Install underground, concrete encased ductbank and above-ground, bridge mounted ductbank as shown on the plans.

PART 2 PRODUCTS

2.01 CONDUIT AND FITTINGS

- A. Underground Installations - Provide Schedule 40 PVC conduit and fittings.
- B. Above-ground installations - Provide steel conduit and fittings having an exterior coating applied by hot-dipped galvanizing except as noted on the drawings.

2.02 CONCRETE

- A. Provide concrete per TxDOT Item 421, Class A.

2.03 REINFORCING

- A. Provide reinforcement per TxDOT Item 440, ASTM A615, Grade 60.

PART 3 EXECUTION

3.01 CONSTRUCTION

- A. Configure ductbank as detailed on the Plans.

3.02 UNDERGROUND DUCTBANK

A. LOCATION AND INSPECTION

- 1. Before beginning trenching operations, stake out the proposed ductbank routing and obtain approval of the Owner's Authorized Representative (OAR). After trenching has begun and before any ducts or conduits are placed, notify the OAR so that the trenching and installation may be inspected. Also, notify the OAR prior to any placement of concrete encasement so that the placement is observed.

B. EXCAVATION

- 1. Excavate trenches for installation of ductbanks. Form the trench bottom to follow closely the specified grade for the ductbank.
- 2. Provide trench excavation protection in accordance with TxDOT Item 402 as required.

C. PLACING OF DUCTBANK

- 1. Changes in Direction: Make changes in direction of runs exceeding a total of 10 degrees, either horizontal or vertical, by using long sweep bends.

2. Joints: Make conduit joints watertight, in accordance with manufacturer's recommendations. Stagger joints in adjacent conduits a minimum of six inches. Make joints between PVC conduit and steel conduit with appropriate no-thread-to-threaded adapters. Use appropriate sealant.
3. Spacing: Place spacers or separators on not greater than five-foot centers. Use spacers or separators made of plastic, concrete or a suitable nonmetallic, non-decaying material.
4. Ductbank Markers: Install a 6-inch wide plastic (yellow) marker tape 12 inches above each ductbank. Install concrete ductbank markers flush with grade at maximum of 100 feet spacing and at each change in direction.

D. PLACING OF CONCRETE

1. Hold conduits for concrete encased raceways securely in place by acceptable window type spacer supports. Where, in the opinion of the OAR, ground conditions are such as to require concrete forms, install forms constructed of materials and in a manner acceptable to the OAR. No variations greater than ½-inch in 50 feet will be permitted from a straight line.
2. Envelopes may be poured directly against the sides of trenches if the cut is clean, even, and free of loose material. Remove loose material from trenches before and during pouring of concrete to eliminate all voids under and between raceways and honeycombing of the exterior surface.
3. Do not use power-driven tampers or agitators, unless they are specifically designed for the application to insure that watertight integrity of the raceways is maintained.
4. Generally, pour an entire concrete envelope in one continuous pour. Where more than one pour is necessary, terminate each pour in a sloped plane and insert 3/4-inch reinforcing rod dowels extending into the concrete 18 inches minimum on each side of the joint. Obtain OAR's approval for the number and location of dowels.
5. Red powder concrete dye shall be placed on top of the finished concrete.

E. BACKFILL

1. Ductbank shall be inspected by the OAR before backfilling. Trenches may be backfilled with excavated soil and supplemented as necessary with select materials. Compact the backfill and mound slightly above natural grade to account for settlement.
2. Restore adjacent areas disturbed by trenching or backfilling to a condition equal to the original.

3.03 ABOVE-GROUND DUCTBANK

- A. Install conduit and appurtenances for bridge crossings in accordance with the TxDOT standards in the drawings.

3.04 CLEANING

- A. Thoroughly clean all conduits before placing. During construction and after the ductbank is completed, plug open ends of conduits to prevent the entrance of foreign matter. After the ductbank has been completed, pull a flexible mandrel through each conduit. The mandrel must not be less than 12 inches long with a diameter approximately 1/4-inch less than the inside diameter of the conduit. After cleaning, place in each conduit a No. 30 nylon line with a plastic tag on each end reading "Pulling Line".

PART 4 MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. Underground ductbank shall be measured by the linear foot of concrete encasement.
- B. Above-ground ductbank shall be measured by each bridge crossing location.
- C. Conduit and fittings shall be subsidiary to the ductbank items and shall not be measured.
- D. Anchors, hangars, etc. for the above-ground ductbank shall be subsidiary to that item and shall not be measured.

4.02 PAYMENT

- A. Payment for underground ductbank shall be made at the contract unit price upon completion by the Contractor and acceptance by the Owner. Payment shall be full compensation for furnishing all materials, labor, tools, equipment and incidentals necessary to complete the work.
- B. Payment for above-ground ductbank shall be made at the contract unit price upon completion by the Contractor and acceptance by the Owner. Payment shall be full compensation for furnishing all materials, labor, tools, equipment and incidentals necessary to complete the work.

END OF SECTION

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**TxDOT Specifications
Special Provisions**

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ITEM 104 REMOVING CONCRETE

SPECIAL PROVISIONS

Work under this item shall conform to the requirements of Item 104 of the Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges, dated 11/1/2014.

1. Item references to "Engineer" shall be construed to mean the Owner's Authorized Representative (OAR) or as directed by the OAR.
2. Item references to "Department" shall be construed to mean DFW International Airport where applicable.
3. Measurement and Payment: All work performed, materials furnished, equipment, labor, tools, and incidentals will not be measured or paid for directly but will be subsidiary to Bid Item, "INSTALLATION OF NEW STREET LIGHTING POLE".

END OF SPECIAL PROVISIONS

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ITEM 402 TRENCH EXCAVATION PROTECTION
SPECIAL PROVISIONS

Work under this item shall conform to the requirements of Item 402 of the Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges, dated 11/1/2014.

1. Trench Excavation Protection shall be subsidiary to the bid item for which it is being performed and shall not be measured or paid separately.

END OF SPECIAL PROVISIONS

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ITEM 416 DRILLED SHAFT FOUNDATION
SPECIAL PROVISIONS

Work under this item shall conform to the requirements of Item 416 of the Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges, dated 11/1/2014.

1. Item references to "Engineer" shall be construed to mean the Owner's Authorized Representative (OAR) or as directed by the OAR.
2. Item references to "Department" shall be construed to mean DFW International Airport where applicable.
3. Payment shall be made upon completion of each Drilled Shaft Foundation item identified on the Bid Schedule and acceptance by the Owner. Payment shall be full compensation for all materials, labor, tools, equipment and incidentals necessary to complete the work.

END OF SPECIAL PROVISIONS

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ITEM 420 CONCRETE SUBSTRUCTURES

SPECIAL PROVISIONS

Work under this item shall conform to the requirements of Item 420 of the Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges, dated 11/1/2014.

1. Item references to "Engineer" shall be construed to mean the Owner's Authorized Representative (OAR) or as directed by the OAR.
2. Item references to "Department" shall be construed to mean DFW International Airport where applicable.
3. Measurement and Payment: All work performed, materials furnished, equipment, labor, tools, and incidentals will not be measured or paid for directly but will be subsidiary to Bid Item, "INSTALLATION OF NEW STREET LIGHTING POLE".

END OF SPECIAL PROVISIONS

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ITEM 421 HYDRAULIC CEMENT CONCRETE

SPECIAL PROVISIONS

Work under this item shall conform to the requirements of Item 421 of the Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges, dated 11/1/2014.

1. Item references to "Engineer" shall be construed to mean the Owner's Authorized Representative (OAR) or as directed by the OAR.
2. Item references to "Department" shall be construed to mean DFW International Airport where applicable.

END OF SPECIAL PROVISIONS

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ITEM 423 RETAINING WALLS
SPECIAL PROVISIONS

Work under this item shall conform to the requirements of Item 423 of the Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges, dated 11/1/2014.

1. Under "4. MEASUREMENT", delete the second paragraph. Measurement will be based on the field measured square feet of retaining wall installed by the Contractor in accordance with the contract documents and accepted by the Owner.

END OF SPECIAL PROVISIONS

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ITEM 440 REINFORCEMENT FOR CONCRETE

SPECIAL PROVISIONS

Work under this item shall conform to the requirements of Item 440 of the Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges, dated 11/1/2014.

1. Item references to "Engineer" shall be construed to mean the Owner's Authorized Representative (OAR) or as directed by the OAR.
2. Item references to "Department" shall be construed to mean DFW International Airport where applicable.

END OF SPECIAL PROVISIONS

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ITEM 442 METAL FOR STRUCTURES

SPECIAL PROVISIONS

Work under this item shall conform to the requirements of Item 442 of the Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges, dated 11/1/2014.

1. Item references to "Engineer" shall be construed to mean the Owner's Authorized Representative (OAR) or as directed by the OAR.
2. Item references to "Department" shall be construed to mean DFW International Airport where applicable.
3. Measurement and Payment: All work performed, materials furnished, equipment, labor, tools, and incidentals will not be measured or paid for directly but will be subsidiary to Bid Item, "INSTALLATION OF NEW STREET LIGHTING POLE".

END OF SPECIAL PROVISIONS

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ITEM 449 ANCHOR BOLTS

SPECIAL PROVISIONS

Work under this item shall conform to the requirements of Item 449 of the Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges, dated 11/1/2014.

1. Item references to "Engineer" shall be construed to mean the Owner's Authorized Representative (OAR) or as directed by the OAR.
2. Item references to "Department" shall be construed to mean DFW International Airport where applicable.

END OF SPECIAL PROVISIONS

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ITEM 476 JACKING, BORING, OR TUNNELING PIPE OR BOX
SPECIAL PROVISIONS

Work under this item shall conform to the requirements of Item 476 of the Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges, dated 11/1/2014.

1. Item references to "Engineer" shall be construed to mean the Owner's Authorized Representative (OAR) or as directed by the OAR.
2. Item references to "Department" shall be construed to mean DFW International Airport where applicable.
3. Under "4. MEASUREMENT", delete the second paragraph. Measurement will be based on the field measured linear feet of jacking, boring, or tunneling performed by the Contractor in accordance with the contract documents and accepted by the Owner.

END OF SPECIAL PROVISIONS

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ITEM 610 ROADWAY ILLUMINATION ASSEMBLIES
SPECIAL PROVISIONS

Work under this item shall conform to the requirements of Item 610 of the Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges, dated 11/1/2014.

1. Work under this item shall only refer portions of Item 610 related to furnishing and installing light fixtures. For roadway illumination pole and luminaire arm requirements, refer to Specification section 26 56 13 – Lighting Poles.
2. Item references to “Engineer” shall be construed to mean the Owner’s Authorized Representative (OAR) or as directed by the OAR.
3. Item references to “Department” shall be construed to mean DFW International Airport where applicable.
4. Measurement shall be by each luminaire installed.
5. Payment shall be at the unit price bid for each luminaire installed complete in place. This price is full compensation for furnishing, installing, and testing luminaires; and equipment, labor, materials, tools, and incidentals.

END OF SPECIAL PROVISIONS

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ITEM 616 PERFORMANCE TESTING OF LIGHTING SYSTEMS
SPECIAL PROVISIONS

Work under this item shall conform to the requirements of Item 616 of the Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges, dated 11/1/2014.

1. Item references to "Engineer" shall be construed to mean the Owner's Authorized Representative (OAR) or as directed by the OAR.
2. Item references to "Department" shall be construed to mean DFW International Airport where applicable.
3. Revise all references to "Roadway and high mast lighting" to "parking deck lighting."
4. Measurement shall be by lump sum for complete performance testing.
5. Payment shall be at the unit price bid for "Performance Testing of Lighting Systems". This price is full compensation for completion of operational testing for 14-day period as specified

END OF SPECIAL PROVISIONS

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ITEM 618 CONDUIT
SPECIAL PROVISIONS

Work under this item shall conform to the requirements of Item 618 of the Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges, dated 11/1/2014.

1. Item references to "Engineer" shall be construed to mean the Owner's Authorized Representative (OAR) or as directed by the OAR.
2. Item references to "Department" shall be construed to mean DFW International Airport where applicable.
3. Measurement will be based on the field measured linear feet of conduit installed in turf or under pavement – same unit cost for each, performed by the Contractor in accordance with the contract documents and accepted by the Owner.
4. Payment for conduit shall be measured per linear foot of conduit installed. This price is full compensation for furnishing and installing conduit; hanging, strapping, tunneling, excavating and furnishing and placing backfill; replacing pavement structure, sod, riprap, curbs or other surface; marking locations of conduit (when required); furnishing and installing fittings, junction boxes, and expansion joints; and equipment, labor, tools, and incidentals. This price also includes all subsurface utility excavation (SUE) incidental to the installation of new conduit.

END OF SPECIAL PROVISIONS

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**ITEM 620 ELECTRICAL CONDUCTORS
SPECIAL PROVISIONS**

Work under this item shall conform to the requirements of Item 620 of the Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges, dated 11/1/2014.

- 1.** Item references to "Engineer" shall be construed to mean the Owner's Authorized Representative (OAR) or as directed by the OAR.
- 2.** Item references to "Department" shall be construed to mean DFW International Airport where applicable.
- 3.** Measurement will be based on the field measured linear feet of conductor, of the size indicated on the plans, performed by the Contractor in accordance with the contract documents and accepted by the Owner.
- 4.** Payment for electrical conductors shall be considered per field measured linear feet of conductor installed. This price is full compensation for furnishing, installing and testing electrical conductors and for equipment, labor, materials, tools, and incidentals.

END OF SPECIAL PROVISIONS

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ITEM 624 GROUND BOXES
SPECIAL PROVISIONS

Work under this item shall conform to the requirements of Item 624 of the Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges, dated 11/1/2014.

1. Item references to "Engineer" shall be construed to mean the Owner's Authorized Representative (OAR) or as directed by the OAR.
2. Item references to "Department" shall be construed to mean DFW International Airport where applicable.
3. Revise all references to "Ground Boxes" to "Splice Boxes."
4. Measurement shall be by each splice box, size as noted on plans, complete in place.
5. Payment shall be at the unit price bid for each splice box complete in place. This price is full compensation for excavating and backfilling; constructing, furnishing, and installing the splice boxes and concrete aprons when required, and equipment, labor, materials, tools, and incidentals.

END OF SPECIAL PROVISIONS

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ITEM 628 ELECTRICAL SERVICES
SPECIAL PROVISIONS

Work under this item shall conform to the requirements of Item 624 of the Texas Department of Transportation Standard Specifications for Construction and Maintenance of Highways, Streets, and Bridges, dated 11/1/2014.

1. Item references to "Engineer" shall be construed to mean the Owner's Authorized Representative (OAR) or as directed by the OAR.
2. Item references to "Department" shall be construed to mean DFW International Airport where applicable.
3. Revise all references to "Electrical Services" to "Oncor Electrical Services."
4. Measurement shall be by each INSTALLATION, as noted on plans, complete in place.
5. Payment shall be at the unit price bid for each INSTALLATION of Oncor Electrical Services complete in place. This price is full compensation for excavating and backfilling; constructing, furnishing, and installing the electrical service, concrete pads, bollards where shown on plans, and equipment, labor, materials, tools, and incidentals.

END OF SPECIAL PROVISIONS

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