

Date: October 21, 2010

To: All Bidders

**Subject: Addendum 1
Love Field Modernization Program Project AAP025
Airside Apron Improvements**

Providing document with Contractors Questions (received through October 18) with Answers.

The Disadvantaged Business Enterprise (DBE) participation goal is 26.86%. There is no MBE or WBE goal.

The following constitutes Addendum 1 to the specifications, special provisions and proposal for the above referenced project:

1. Advertisement For Bids:

The Date for receiving bids is revised to November 11, 2010, 1:00 p.m.

2. Special Provisions:

Revised the 5th paragraph of item A-36 of the Special Provisions to read as follows:

The Contractor shall also furnish and erect for the Engineer's use a temporary field office. See Specification M-103 Engineer's Field Office, for requirements.

3. Special Provisions:

Added item A-54 to the Special Provisions, which states:

A-54 BADGING FOR WORK AT THE AIR TRAFFIC CONTROL TOWER (ATCT)

All construction personnel performing work at the ATCT shall possess a Security Identification Display Area (SIDA) Badge as issued by the City of Dallas, Department of Aviation. No unbadged personnel will be allowed to work inside the ATCT construction area or at the FAA Temporary Parking site. The ATCT construction area is defined as the area within the Lease Limits shown on the plans and inside the temporary security fence for ATCT personnel parking.

4. Specification P-403, Plant Mix Bituminous Pavements (Base, Leveling or Surface Course):

Revised item P-403-5.2 to read "Bituminous Transition Pavement – per ton".

5. Specification P-403, Plant Mix Bituminous Pavements (Base, Leveling or Surface Course):

Revise item P-403-5.1 to read "Bituminous Shoulder Pavement – per ton".

6. Specification P-403, Plant Mix Bituminous Pavements (Base, Leveling or Surface Course):

Replace Section 400-2.2 in Spec P-403 with the following:

403-2.2 Bituminous Shoulder Pavement shall be gradation Type D.

7. Specification P-403, Plant Mix Bituminous Pavements (Base, Leveling or Surface Course):

Replace Section 400-2.3 in Spec P-403 with the following:

403-2.3 Bituminous Transition Pavement shall be gradation Type D.

8. Specification P-501, Portland Cement Concrete Pavement:

Remove Item P-501-8.1d, 6 inch Thick Portland Cement Concrete Pavement.

9. Specification P-501, Portland Cement Concrete Pavement:

Add the following sentence to the end of section 501-8.1.a: "Four (4) inch sidewalk and eight (8) inch parking lot pavement are not subject to Percentage of Material Within Specification Limits (PWL) price adjustment. Eight (8) inch Ground Service Equipment (GSE) pavement is subject to Percentage of Material Within Specification Limits (PWL) price adjustment."

10. Specification 33 52 43.13, Fuel System, Fittings and Installation:

Revise Item 33 52 43.13-5.15 description from "Tie-in at West Course Manifold" to "Tie in at West Concourse Manifold".

11. Specification 33 52 43.30, Fuel System Electrical:

Revise all Electrical Duct Bank, Method of Measurements and Items from " per each" to "per linear foot".

12. Specification M-103, Engineer's Field Office:

Replace Table 1, Copy Machine description with the following:

Copy machine, Sharp MX-4101N or approved equal, with document feeder, with reduction and enlargement, auto document feeder and 20 copy sorting capability and paper supplies for 2,000 combined copies of 8½-inch by 11-inch, 8½-inch by 14-inch and 11-inch by 17-inch per month. Provide service contract/warranty (including toner and replacement cartridges) and maintenance contract for the duration of the Engineer's field office. Supply paper as needed.

13. Specification M-103, Engineer's Field Office:

Add the following sentence to the beginning of the paragraph after Table 1: "The field office building(s) shall be wired for data and phone service in each office and conference room with the printer/copier/scanner at a central location as directed by the Engineer."

14. Specification D-705, Pipe Underdrains for Airports:

Remove the following from section D-705-5.1, "...at the contract unit price per cubic yard for porous backfill No.2; at the contract unit price per square yard for filter fabric; at the contract unit price per linear foot for filter fabric pipe sock;..."

15. Specification D-705, Pipe Underdrains for Airports:

Replace D-705-4.1 with the Following: "705-4.1 The length of pipe, trench, porous backfill, filter fabric, and filter fabric pipe sock to be paid for shall be the number of linear feet of pipe of underdrain in place, completed, and approved; measured along the centerline of the pipe from end or inside face of structure to the end or inside face of structure, whichever is applicable. The several classes, types, and sizes shall be measured separately. All fittings shall be included in the footage as typical pipe sections in the pipeline being measured."

16. Specification D-705, Pipe Underdrains for Airports:

Replace Item D-705-5.3, Pourous Backfill No. 2 - per cubic yard with D-705-5.3, 6 inch Backflow Flapper Valve - per each.

- 17. Specification D-705, Pipe Underdrains for Airports:**
Replace Item D-705-5.4, Filter Fabric - per square yard with D-705-5.4, 6 inch Cleanout Assembly - per each.
- 18. Specification D-705, Pipe Underdrains for Airports:**
Delete Items D-705-5.5, D-705-5.6, and D-705-5.7
- 19. Specification D-705, Pipe Underdrains for Airports:**
Revise Item D-705-5.1 to read as follows: 6 inch PVC Pipe Underdrain - per linear foot
- 20. Specification U-801, Utility Construction and Appurtenances:**
Revise Item U-801-5.1.19 Disposal of Heavy Chlorinated Water Main Flushing Water (DWU Item No. 7730) to U-801-5.1.19A Disposal of Heavy Chlorinated Water Main Flushing Water - Phase 3 (DWU Item No. 7730).
- 21. Specification U-801, Utility Construction and Appurtenances:**
Add Item 19B, Item U-801-5.1.19 Disposal of Heavy Chlorinated Water Main Flushing Water (DWU Item No. 7730) to U-801-5.1.19B Disposal of Heavy Chlorinated Water Main Flushing Water - Phase 4 (DWU Item No. 7730).
- 22. Specification U-801, Utility Construction and Appurtenances:**
Add Item 19C, Item U-801-5.1.19 Disposal of Heavy Chlorinated Water Main Flushing Water (DWU Item No. 7730) to U-801-5.1.19C Disposal of Heavy Chlorinated Water Main Flushing Water - Phase 5 (DWU Item No. 7730).
- 23. Specification P-610, Structural Portland Cement Concrete:**
Item 610-3.23. Remove sentence "All fittings shall be included in the footage as typical pipe sections in the pipe being measured."
- 24. Specification P-610, Structural Portland Cement Concrete:**
Revise Item P-610-5.3 to "Box Culvert – per cubic yard".
- 25. Specification P-610, Structural Portland Cement Concrete:**
Delete Item D-610-5.4, Box Culvert Reinforcing Steel - per pound.
- 26. Specification P-610, Structural Portland Cement Concrete:**
Replace section 610-4.1.D with: 3 Span Box Culvert. Culvert concrete is measured by the cubic yard finished and installed. Reinforcing, castings, frames and all other appurtenances required will be considered subsidiary to the structure.
- 27. Specification P-152, Excavation and Embankment Section 152-1.2 CLASSIFICATION:**
Add the following: "**152-1.2.d. Impacted Soil Excavation.** Impacted Soil Excavation shall consist of the excavation and stockpiling of suitable material for pavement base as defined in section 02 61 00.01."
- 28. Specification P-152, Excavation and Embankment Section 152-1.2 CLASSIFICATION:**
Add the following: "**152-1.2.e. Contaminated Soil Excavation.** Contaminated Soil Excavation shall consist of the excavation, loading, and removal of soil not suitable for pavement base material. See section 02 61 00.01 for details and procedures for identifying, testing, and removing of soil deemed unsuitable for pavement base fill material."

29. Specification P-152, Excavation and Embankment:

Add the following: “**152-3.3** The quantity of Contaminated Soil to be paid for shall be the number of cubic yards excavated from the project area and transported to an offsite disposal area. Payment for the material disposal will be paid directly by the owner.”

30. Specification P-152, Excavation and Embankment:

Add the following: “**152-4.4** For “Contaminated Soil Excavation” payment shall be made at the contract price per cubic yard. This price shall be full compensation for furnishing all materials, transporting to an offsite disposal area, labor, equipment, tools, and incidentals necessary to complete the item.”

31. Specification P-152, Excavation and Embankment:

Add Item P-152-4.4 Contaminated Soil Excavation – per cubic yard

32. Specification P-751, Manholes, Junction Boxes (Vaults), Type Y-Inlets, Trench Drains, and Catch Basins:

Added the following Items:

751-4.4 Manhole adjustments shall be measured by the unit of each type of manhole adjustment in elevation, complete, and accepted.

751-4.5 Eighteen-inch flap gate valves shall be measured by the unit of valves installed, complete, and accepted.

Item D-751-5.4.1 Adjust Existing Manhole per Each

751-5.4 The accepted quantities of manhole adjustments will be paid for at the contract unit price per each in place when completed.

751-5.5 The accepted quantities of 18-inch flap gate valves will be paid for at the contract unit price per each in place when completed.

Item D-751-5.5.1 18 inch Flap Gate Valve per Each

33. Specification P-620, Runway and Taxiway Painting:

Added the following Items:

Item P-620-5.16 Vehicular Parking Area Striping per linear foot
Item P-620-5.17 Vehicular Parking Area Handicapped Pavement Marking per each

34. Specification P-620, Runway and Taxiway Painting:

Revise Item P-620-4.2 to read “...through P-620-5.17.”

35. Delete Volume 2 Table of Contents and replace with Volume 2 Table of Contents Attached.

36. Add Specification Section T-902, Trees, Shrubs and Groundcovers, Attached.

37. Add Specification Section T-906, Irrigation, Attached.

38. Add Specification Section 11280, Hydraulic Valve Systems, Attached.

39. Replace Base Bid, Bid Form with revised bid form, Attached. New Bid Form contains all current bid items with revised quantities.

40. Replace Bid Option, Bid Form with revised bid form, Attached. New Bid Form contains all current bid items with revised quantities.

41. Add Exhibit I to the Agreement Between Southwest Airlines and Contractor, attached.

All Bidders will be required to add the following sentence to the inside of the front cover sheet of the Special Provisions with signature:

" _____ Acknowledges
(Give Legal Name of Organization)

Receipt of Addendum No. 1, and has taken due cognizance of said addendum in all its terms in the preparation and submission of this bid.

(Signature)

If you have any questions please call Catherine McMullen, P.E., Project Manager at 469-941-8030.

**AIRSIDE APRON IMPROVEMENTS
CITY OF DALLAS
BID SCHEDULE**

Show bid prices in words and numerals. Words take precedence over numerals. Round off unit prices to two decimal places only. These Bid prices must include all labor, materials, equipment, insurance, overhead, superintendence, transportation, profit, and incidentals to cover the finished Work called for in the Contract Documents.

BASE BID

Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
1 - BB	1	LS	M-101-2.1	Mobilization At _____ Dollars And _____ Cents per lump sum	\$	\$
2 - BB	1	LS	M-102-4.1	Maintenance of Traffic At _____ Dollars And _____ Cents per lump sum	\$	\$
3 - BB	1	LS	M-103-4.1	Engineer's Field Offices At _____ Dollars And _____ Cents per lump sum	\$	\$
4 - BB	271,733	SY	P-150-5.1	13 and 14 inch Concrete Apron Pavement Removal At _____ Dollars And _____ Cents per square yard	\$	\$
5 - BB	11,831	SY	P-150-5.2	16 inch Concrete Apron Pavement Removal At _____ Dollars And _____ Cents per square yard	\$	\$
6 - BB	10,723	SY	P-150-5.3	19 inch Concrete Apron Pavement Removal At _____ Dollars And _____ Cents per square yard	\$	\$
7 - BB	3,159	SY	P-150-5.4	Asphalt Shoulder Pavement Removal At _____ Dollars And _____ Cents per square yard	\$	\$
8 - BB	1,174	LF	P-150-5.5	12 inch through 24 inch RCP Removal At _____ Dollars And _____ Cents per linear feet	\$	\$

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Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
9 - BB	1,917	LF	P-150-5.6	27 inch through 36 inch RCP Removal At _____ Dollars And _____ Cents per linear feet	\$	\$
10 - BB	2,359	LF	P-150-5.7	60 inch RCP Removal At _____ Dollars And _____ Cents per linear feet	\$	\$
11 - BB	1,928	LF	P-150-5.8	12 inch through 18 inch Continuous Grate Inlet Conduit Removal At _____ Dollars And _____ Cents per linear feet	\$	\$
12 - BB	1,988	LF	P-150-5.9	3 foot wide through 6 foot wide Reinforced Concrete Conduit Removal At _____ Dollars And _____ Cents per linear feet	\$	\$
13 - BB	2	EA	P-150-5.10	Drainage Structure Removal At _____ Dollars And _____ Cents per each	\$	\$
14 - BB	8,000	SY	P-150-5.11	Buried Slab Removal At _____ Dollars And _____ Cents per square yard	\$	\$
15 - BB	650	LF	P-150-5.12	36 inch Water Main Removal At _____ Dollars And _____ Cents per linear feet	\$	\$
16 - BB	2,106	LF	P-150-5.13	6 inch to 30 inch Water Line Removal At _____ Dollars And _____ Cents per linear feet	\$	\$

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Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
17 - BB	3,198	LF	P-150-5.14	Sanitary Sewer System Removal At _____ Dollars And _____ Cents per linear feet	\$	\$
18 - BB	1	EA	P-150-5.15	Oil/Water Separator Removal At _____ Dollars And _____ Cents per each	\$	\$
19 - BB	28	EA	P-150-5.16	Jet Bridge Foundation Removal At _____ Dollars And _____ Cents per each	\$	\$
20 - BB	22,330	CY	P-152-4.1	Unclassified Excavation At _____ Dollars And _____ Cents per cubic yard	\$	\$
21 - BB	500	CY	P-152-4.2	Muck Excavation At _____ Dollars And _____ Cents per cubic yard	\$	\$
22 - BB	71,518	CY	P-152-4.3	Embankment in Place At _____ Dollars And _____ Cents per cubic yard	\$	\$
23 - BB	10,000	CY	P-152-4.4	Contaminated Soil Excavation At _____ Dollars And _____ Cents per cubic yard	\$	\$
24 - BB	46,474	SY	P-155-8.1	Lime-treated subgrade, 12 inch depth At _____ Dollars And _____ Cents per square yard	\$	\$

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25 - BB	65,736	SY	P-155-8.2	Lime-treated subgrade, 10 inch depth At _____ Dollars And _____ Cents per square yard	\$	\$
26 - BB	4,705	SY	P-155-8.3	Lime-treated subgrade, 9 inch depth At _____ Dollars And _____ Cents per square yard	\$	\$
27 - BB	148,485	SY	P-155-8.4	Lime-treated subgrade, 8 inch depth At _____ Dollars And _____ Cents per square yard	\$	\$
28 - BB	1,839	SY	P-155-8.5	Lime-treated subgrade, 6 inch depth At _____ Dollars And _____ Cents per square yard	\$	\$
29 - BB	11,890	TON	P-155-8.6	Lime At _____ Dollars And _____ Cents per ton	\$	\$
30 - BB	1	LS	P-156-5.1	Erosion Control Measures At _____ Dollars And _____ Cents per lump sum	\$	\$
31 - BB	246,557	SY	P-159-5.1	Subbase Drainage Layer At _____ Dollars And _____ Cents per square yard	\$	\$
32 - BB	58,847	SY	P-208-5.1	Crushed Aggregate Base Course At _____ Dollars And _____ Cents per square yard	\$	\$

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Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
33 - BB	144,284	SY	P-304-8.1	Cement-Treated Base Course, 6 inch depth At _____ Dollars And _____ Cents per square yard	\$	\$
34 - BB	137,927	SY	P-304-8.2	Cement-Treated Base Course, 9 inch depth At _____ Dollars And _____ Cents per square yard	\$	\$
35 - BB	1,036	TON	P-403-5.1	Bituminous Shoulder Pavement At _____ Dollars And _____ Cents per ton	\$	\$
36 - BB	325	TON	P-403-5.2	Bituminous Transition Pavement At _____ Dollars And _____ Cents per ton	\$	\$
37 - BB	248,972	SY	P-501-8.1.a	17 inch thick Portland Cement Concrete Pavement At _____ Dollars And _____ Cents per square yard	\$	\$
38 - BB	23,468	SY	P-501-8.1.b	15 inch thick Portland Cement Concrete Pavement At _____ Dollars And _____ Cents per square yard	\$	\$
39 - BB	24,689	SY	P-501-8.1.c	8 inch thick Portland Cement Concrete Pavement At _____ Dollars And _____ Cents per square yard	\$	\$
40 - BB	386	SY	P-501-8.1.d	4 inch thick Portland Cement Concrete Sidewalk Pavement At _____ Dollars And _____ Cents per square yard	\$	\$

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41 - BB	534	LF	P-501-8.1.e	6 inch Concrete Curb (poured monolithic to Portland Cement Concrete Pavement) At _____ Dollars And _____ Cents per linear feet	\$	\$
42 - BB	137,605	GAL	P-602-5.1	Bituminous Prime Coat At _____ Dollars And _____ Cents per gallon	\$	\$
43 - BB	706	GAL	P-603-5.1	Bituminous Tack Coat At _____ Dollars And _____ Cents per gallon	\$	\$
44 - BB	1	EA	P-610-5.1	West Concourse Ductbank Access Vault At _____ Dollars And _____ Cents per each	\$	\$
45 - BB	934	LF	P-610-5.2	Retaining Walls At _____ Dollars And _____ Cents per linear feet	\$	\$
46 - BB	120	CY	P-610-5.3	Box Culvert Reservoir At _____ Dollars And _____ Cents per cubic yard	\$	\$
47 - BB	13,469	LF	P-620-5.1	Taxiway Centerline Markings At _____ Dollars And _____ Cents per linear feet	\$	\$
48 - BB	8,220	LF	P-620-5.2	Dashed Taxiway Edge Markings At _____ Dollars And _____ Cents per linear feet	\$	\$

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Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
49 - BB	2,747	LF	P-620-5.3	Taxiway Edge Markings At _____ Dollars And _____ Cents per linear feet	\$	\$
50 - BB	2,038	LF	P-620-5.4	Non-Movement Area Boundary Marking At _____ Dollars And _____ Cents per linear feet	\$	\$
51 - BB	712	LF	P-620-5.5	Intermediate Holding Position Marking At _____ Dollars And _____ Cents per linear feet	\$	\$
52 - BB	1,503	LF	P-620-5.6	De-Icing Lead Line Marking At _____ Dollars And _____ Cents per linear feet	\$	\$
53 - BB	667	LF	P-620-5.7	Taxiway Shoulder Markings At _____ Dollars And _____ Cents per linear feet	\$	\$
54 - BB	18,661	LF	P-620-5.8	Airfield Vehicle Roadway Markings At _____ Dollars And _____ Cents per linear feet	\$	\$
55 - BB	50	EA	P-620-5.9	Airfield Vehicle Roadway - Stop Bar Markings At _____ Dollars And _____ Cents per each	\$	\$
56 - BB	1,072	LF	P-620-5.10	RON Parking Pavement Markings At _____ Dollars And _____ Cents per linear feet	\$	\$

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Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
57 - BB	16	EA	P-620-5.11	Southwest Airlines Gate Striping At _____ Dollars And _____ Cents per each	\$	\$
58 - BB	2	EA	P-620-5.12	American Airlines Gate Striping At _____ Dollars And _____ Cents per each	\$	\$
59 - BB	2	EA	P-620-5.13	Continental Airlines Gate Striping At _____ Dollars And _____ Cents per each	\$	\$
60 - BB	19	EA	P-620-5.14	Taxiway Direction and Taxiway Location Marking At _____ Dollars And _____ Cents per each	\$	\$
61 - BB	5,714	LF	P-620-5.15	Lead-in Line Pavement Markings At _____ Dollars And _____ Cents per linear feet	\$	\$
62 - BB	4,253	LF	P-620-5.16	Vehicular Parking Area Striping At _____ Dollars And _____ Cents per linear feet	\$	\$
63 - BB	2	EA	P-620-5.17	Vehicular Parking Area Handicapped Pavement Marking At _____ Dollars And _____ Cents per each	\$	\$
64 - BB	2,051	LF	F-162-5.1	Permanent Chain Link AOA Fence At _____ Dollars And _____ Cents per linear feet	\$	\$

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Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
65 - BB	60	LF	F-162-5.2	Fence/Wall, including Pier Foundations & Connections At _____ Dollars And _____ Cents per linear feet	\$	\$
66 - BB	5	EA	F-162-5.3	Vehicle Slide Gate, Incl. Operator & Loop Detectors At _____ Dollars And _____ Cents per each	\$	\$
67 - BB	2	EA	F-162-5.4	Full Height Turnstile Pedestrian Gate At _____ Dollars And _____ Cents per each	\$	\$
68 - BB	873	LF	S-100-5.1	14' Height Metal Blast Protection Fence (MBPF) At _____ Dollars And _____ Cents per linear feet	\$	\$
69 - BB	765	LF	S-100-5.2	14' Height MBPF w/AOA Fence and Barbed Wire Outriggers At _____ Dollars And _____ Cents per linear feet	\$	\$
70 - BB	2,926	LF	D-701-5.1.1	12 inch Class III Reinforced Concrete Pipe At _____ Dollars And _____ Cents per linear feet	\$	\$
71 - BB	3,305	LF	D-701-5.1.2	18 inch Class III Reinforced Concrete Pipe At _____ Dollars And _____ Cents per linear feet	\$	\$
72 - BB	1,225	LF	D-701-5.1.3	24 inch Class III Reinforced Concrete Pipe At _____ Dollars And _____ Cents per linear feet	\$	\$

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Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
73 - BB	1,078	LF	D-701-5.1.4	30 inch Class III Reinforced Concrete Pipe At _____ Dollars And _____ Cents per linear feet	\$	\$
74 - BB	217	LF	D-701-5.1.5	36 inch Class III Reinforced Concrete Pipe At _____ Dollars And _____ Cents per linear feet	\$	\$
75 - BB	610	LF	D-701-5.1.6	42 inch Class III Reinforced Concrete Pipe At _____ Dollars And _____ Cents per linear feet	\$	\$
76 - BB	609	LF	D-701-5.1.7	48 inch Class III Reinforced Concrete Pipe At _____ Dollars And _____ Cents per linear feet	\$	\$
77 - BB	974	LF	D-701-5.1.8	54 inch Class III Reinforced Concrete Pipe At _____ Dollars And _____ Cents per linear feet	\$	\$
78 - BB	2,233	LF	D-701-5.1.9	60 inch Class III Reinforced Concrete Pipe At _____ Dollars And _____ Cents per linear feet	\$	\$
79 - BB	0	LF	D-701-5.1.10	48 inch Ductile Iron Pipe At _____ Dollars And _____ Cents per linear feet	\$	\$
80 - BB	623	LF	D-701-5.1.11	12 inch Polyvinyl Chloride (PVC) Pipe At _____ Dollars And _____ Cents per linear feet	\$	\$

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Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
81 - BB	40	LF	D-701-5.1.12	3' x 2' Class III Reinforced Concrete Box At _____ Dollars And _____ Cents per linear feet	\$	\$
82 - BB	40	LF	D-701-5.1.13	6' x 3' Class III Reinforced Concrete Box At _____ Dollars And _____ Cents per linear feet	\$	\$
83 - BB	18,610	LF	D-705-5.1	6 inch PVC Pipe Underdrain At _____ Dollars And _____ Cents per linear feet	\$	\$
84 - BB	1,536	LF	D-705-5.2	6 inch Schedule 40 PVC Pipe At _____ Dollars And _____ Cents per linear feet	\$	\$
85 - BB	94	EA	D-705-5.3	6 inch Backflow Flapper Valve At _____ Dollars And _____ Cents per each	\$	\$
86 - BB	120	EA	D-705-5.4	6 inch Cleanout Assembly At _____ Dollars And _____ Cents per each	\$	\$
87 - BB	191	CY	D-751-5.1.1	Manholes At _____ Dollars And _____ Cents per cubic yard	\$	\$
88 - BB	379	CY	D-751-5.1.2	Junction Boxes (Vaults) At _____ Dollars And _____ Cents per cubic yard	\$	\$

**AIRSIDE APRON IMPROVEMENTS
CITY OF DALLAS
BID SCHEDULE**

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BASE BID

Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
89 - BB	46	EA	D-751-5.2.1	Catch Basins At _____ Dollars And _____ Cents per each	\$	\$
90 - BB	1	EA	D-751-5.2.2	Type-Y Inlets At _____ Dollars And _____ Cents per each	\$	\$
91 - BB	4,836	LF	D-751-5.3.1	Trench Drains At _____ Dollars And _____ Cents per linear feet	\$	\$
92 - BB	5	EA	D-751-5.4	Adjust Existing Manhole At _____ Dollars And _____ Cents per each	\$	\$
93 - BB	1	EA	D-751-5.5	18 inc Flap Gate Valve At _____ Dollars And _____ Cents per each	\$	\$
94 - BB	3	EA	11280-1.8.1	Glycol Diversion System At _____ Dollars And _____ Cents per each	\$	\$
95 - BB	1	EA	11280-1.8.2.1	Glycol Containment System with 18 inch Valve At _____ Dollars And _____ Cents per each	\$	\$
96 - BB	1	EA	11280-1.8.2.2	Glycol Containment System with 30 inch Valve At _____ Dollars And _____ Cents per each	\$	\$

**AIRSIDE APRON IMPROVEMENTS
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BID SCHEDULE**

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BASE BID

Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
97 - BB	1	EA	11280-1.8.2.3	Glycol Containment System with 36 inch Valve At _____ Dollars And _____ Cents per each	\$	\$
98 - BB	5	EA	11280-1.8.3	Fuel Spill Containment System At _____ Dollars And _____ Cents per each	\$	\$
99 - BB	148	SF	T-901-5.1	Seeding At _____ Dollars And _____ Cents per #N/A	\$	\$
100 - BB	82	EA	T-902-5.1	1 Gallon Shrub At _____ Dollars And _____ Cents per each	\$	\$
101 - BB	1,243	EA	T-902-5.2	1 Gallon Groundcover At _____ Dollars And _____ Cents per each	\$	\$
102 - BB	2	CY	T-902-5.3	Mulch At _____ Dollars And _____ Cents per cubic yard	\$	\$
103 - BB	80	SY	T-902-5.4	Colorado River Rock At _____ Dollars And _____ Cents per square yard	\$	\$
104 - BB	200	LF	T-902-5.5	6 inch Steel Edging At _____ Dollars And _____ Cents per linear feet	\$	\$

**AIRSIDE APRON IMPROVEMENTS
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BID SCHEDULE**

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BASE BID

Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
105 - BB	14	EA	T-902-5.6	Boulders At _____ Dollars And _____ Cents per each	\$	\$
106 - BB	913	CY	T-905-5.1	Topsoiling (Obtained on Site or removed from Stockpile) At _____ Dollars And _____ Cents per cubic yard	\$	\$
107 - BB	913	CY	T-905-5.2	Topsoiling (Furnished from Off the Site) At _____ Dollars And _____ Cents per cubic yard	\$	\$
108 - BB	1,868	SF	T-906-5.1	Irrigation System At _____ Dollars And _____ Cents per #N/A	\$	\$
109 - BB	1	EA	T-906-5.2	1 inch Water Meter At _____ Dollars And _____ Cents per each	\$	\$
110 - BB	3,250	LF	L-108-5.1	No. 8 L-824C 5kV Cable Installed in Duct or Conduit At _____ Dollars And _____ Cents per linear feet	\$	\$
111 - BB	17,707	LF	L-108-5.2	No. 6 Solid CU Counterpoise, Installed with Ground Rods & Connectors At _____ Dollars And _____ Cents per linear feet	\$	\$
112 - BB	1,898	LF	L-108-5.3	No. 6 Solid CU Ground, Installed with Ground Rods & Connectors At _____ Dollars And _____ Cents per linear feet	\$	\$

**AIRSIDE APRON IMPROVEMENTS
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BASE BID

Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
113 - BB	9,000	LF	L-108-5.4	No. 2 600V Cable Installed in Duct or Conduit At _____ Dollars And _____ Cents per linear feet	\$	\$
114 - BB	1	EA	L-109-5.1	L-847-2 Circuit Selector Switch At _____ Dollars And _____ Cents per each	\$	\$
115 - BB	1	LS	L-109-5.2	Vault & ALCMS Modifications At _____ Dollars And _____ Cents per lump sum	\$	\$
116 - BB	7,372	LF	L-110-5.1	1W-2" Sch. 40 PVC Conduit, Under New Rigid Pvmt, Including Trench & Backfill At _____ Dollars And _____ Cents per linear feet	\$	\$
117 - BB	1,892	LF	L-110-5.2	1W-2" Sch. 40 PVC Conduit, Under New Flexible Pvmt, Including Trench & Backfill At _____ Dollars And _____ Cents per linear feet	\$	\$
118 - BB	263	LF	L-110-5.3	1W-2" Sch. 40 PVC Conduit, in Existing Flexible Pvmt, Including Sawcut, Trench & Backfill At _____ Dollars And _____ Cents per linear feet	\$	\$
119 - BB	236	LF	L-110-5.4	1W-2" Sch. 40 PVC Conduit, DEB, Including Trench & Backfill At _____ Dollars And _____ Cents per linear feet	\$	\$
120 - BB	877	LF	L-110-5.5	1W-2" Sch. 40 PVC Drain Conduit, Including Trench & Backfill At _____ Dollars And _____ Cents per linear feet	\$	\$

**AIRSIDE APRON IMPROVEMENTS
CITY OF DALLAS
BID SCHEDULE**

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BASE BID

Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
121 - BB	426	LF	L-110-5.6	3W-2" Sch. 40 PVC Conduit, Concrete Encased, Including Trench & Backfill At _____ Dollars And _____ Cents per linear feet	\$	\$
122 - BB	913	LF	L-110-5.7	4W-2" Sch. 40 PVC Conduit, Concrete Encased, Including Trench & Backfill At _____ Dollars And _____ Cents per linear feet	\$	\$
123 - BB	908	LF	L-110-5.8	6W-4" Sch. 40 PVC Conduit, Concrete Encased, Including Trench & Backfill At _____ Dollars And _____ Cents per linear feet	\$	\$
124 - BB	3,556	LF	L-110-5.9	1W-1.5" GRS Conduit in Existing Rigid Pvmt, Including Saw Cut & Backfill At _____ Dollars And _____ Cents per linear feet	\$	\$
125 - BB	1,424	LF	L-110-5.10	1W-1" Sch. 40 PVC Conduit, under New Rigid Pvmt, including Trench & Backfill At _____ Dollars And _____ Cents per linear feet	\$	\$
126 - BB	120	LF	L-110-5.11	Directional Bore 3W-2" HDPE At _____ Dollars And _____ Cents per linear feet	\$	\$
127 - BB	329	EA	L-111-5.1	Ground Rod Earth Resistance Testing At _____ Dollars And _____ Cents per each	\$	\$
128 - BB	3	EA	L-115-5.1	Junction Can Plaza (3 Cans) At _____ Dollars And _____ Cents per each	\$	\$

**AIRSIDE APRON IMPROVEMENTS
CITY OF DALLAS
BID SCHEDULE**

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BASE BID

Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
129 - BB	2	EA	L-115-5.2	Junction Can Plaza (4-Cans) At _____ Dollars And _____ Cents per each	\$	\$
130 - BB	2	EA	L-115-5.3	Aircraft Rated Manhole At _____ Dollars And _____ Cents per each	\$	\$
131 - BB	1	LS	L-119-5.1	Blast Fence Obstruction Lighting At _____ Dollars And _____ Cents per lump sum	\$	\$
132 - BB	33	EA	L-125-5.1	Furnish & Install L-867B Adjustable Base in New Flexible Pvmt. At _____ Dollars And _____ Cents per each	\$	\$
133 - BB	95	EA	L-125-5.2	Furnish & Install 2-Piece L-868B w/Band Ring & Multihole Adapter in New Rigid Pvmt. At _____ Dollars And _____ Cents per each	\$	\$
134 - BB	111	EA	L-125-5.3	Furnish & Install 2-Piece 12" Deep L-868B w/Band Ring & Multihole Adapter in Existing Rigid Pvmt. At _____ Dollars And _____ Cents per each	\$	\$
135 - BB	4	EA	L-125-5.4	Furnish & Install 1-Piece L-867B in Existing Flexible Pvmt. At _____ Dollars And _____ Cents per each	\$	\$
136 - BB	77	EA	L-125-5.5	Furnish L-852C Bidirectional LED Taxiway Centerline Fixture & Transformer At _____ Dollars And _____ Cents per each	\$	\$

**AIRSIDE APRON IMPROVEMENTS
CITY OF DALLAS
BID SCHEDULE**

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BASE BID

Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
137 - BB	116	EA	L-125-5.6	Furnish L-852D Bidirectional LED Taxiway Centerline Fixture & Transformer At _____ Dollars And _____ Cents per each	\$	\$
138 - BB	50	EA	L-125-5.7	Furnish L-861T Elevated LED Taxiway Edge Fixture & Transformer At _____ Dollars And _____ Cents per each	\$	\$
139 - BB	243	EA	L-125-5.8	Install Fixture w/Transformer At _____ Dollars And _____ Cents per each	\$	\$
140 - BB	31	EA	L-125-5.9	Furnish & Install 3/4" Blank Cover on Existing Light Base At _____ Dollars And _____ Cents per each	\$	\$
141 - BB	3	EA	L-125-5.10	Furnish L-858 Lighted Sign, Size 2, 2 Mod, Single Face At _____ Dollars And _____ Cents per each	\$	\$
142 - BB	7	EA	L-125-5.11	Furnish L-858 Lighted Sign, Size 2, 2 Mod, Double Face At _____ Dollars And _____ Cents per each	\$	\$
143 - BB	10	EA	L-125-5.12	Furnish L-858 Lighted Sign, Size 2, 3 Mod, Double Face At _____ Dollars And _____ Cents per each	\$	\$
144 - BB	1	EA	L-125-5.13	Furnish L-858 Lighted Sign, Size 2, 4 Mod, Single Face At _____ Dollars And _____ Cents per each	\$	\$

**AIRSIDE APRON IMPROVEMENTS
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BID SCHEDULE**

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BASE BID

Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
145 - BB	4	EA	L-125-5.14	Furnish L-858 Lighted Sign, Size 2, 4 Mod, Double Face At _____ Dollars And _____ Cents per each	\$	\$
146 - BB	4	EA	L-125-5.15	Install 2 Mod Sign, including Foundation At _____ Dollars And _____ Cents per each	\$	\$
147 - BB	6	EA	L-125-5.16	Install 3 Mod Sign, including Foundation At _____ Dollars And _____ Cents per each	\$	\$
148 - BB	2	EA	L-125-5.17	Install 4 Mod Sign, including Foundation At _____ Dollars And _____ Cents per each	\$	\$
149 - BB	2	EA	L-125-5.18	Install 5 Mod Sign, including Foundation At _____ Dollars And _____ Cents per each	\$	\$
150 - BB	2	EA	L-125-5.19	Install 3 Mod Sign on Existing Foundation At _____ Dollars And _____ Cents per each	\$	\$
151 - BB	1	EA	L-125-5.20	Install 4 Mod Sign on Existing Foundation At _____ Dollars And _____ Cents per each	\$	\$
152 - BB	1	EA	L-125-5.21	Extend Existing Sign Foundation & Install 4 Mod Sign At _____ Dollars And _____ Cents per each	\$	\$

**AIRSIDE APRON IMPROVEMENTS
CITY OF DALLAS
BID SCHEDULE**

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BASE BID

Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
153 - BB	1	EA	L-125-5.22	Extend Existing Sign Foundation & Install 5 Mod Sign At _____ Dollars And _____ Cents per each	\$	\$
154 - BB	1	EA	L-125-5.23	Extend Existing Sign Foundation & Install 6 Mod Sign At _____ Dollars And _____ Cents per each	\$	\$
155 - BB	20	EA	L-125-5.24	Remove Lighted Sign & Transformer, Return To Owner At _____ Dollars And _____ Cents per each	\$	\$
156 - BB	8	EA	L-125-5.25	Demo Sign Foundation At _____ Dollars And _____ Cents per each	\$	\$
157 - BB	52	EA	L-125-5.26	Remove Fixture & Transformer, Return To Owner At _____ Dollars And _____ Cents per each	\$	\$
158 - BB	21	EA	L-125-5.27	Demo Light Base in Exist Flexible Pavement At _____ Dollars And _____ Cents per each	\$	\$
159 - BB	21	EA	L-125-5.28	Fiber Form Blockout At _____ Dollars And _____ Cents per each	\$	\$
160 - BB	1	LS	16551-5.1	RON Ramp Area Lighting At _____ Dollars And _____ Cents per lump sum	\$	\$

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CITY OF DALLAS
BID SCHEDULE**

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BASE BID

Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
161 - BB	260	LF	U-801-5.1.1	6" PVC Water Pipe (DWU Item No. 1800H) At _____ Dollars And _____ Cents per linear feet	\$	\$
162 - BB	45	LF	U-801-5.1.2	8" PVC Water Pipe (DWU Item No. 1800J) At _____ Dollars And _____ Cents per linear feet	\$	\$
163 - BB	110	LF	U-801-5.1.3	10" Ductile Iron Water Pipe (DWU Item No. 1500K) At _____ Dollars And _____ Cents per linear feet	\$	\$
164 - BB	3,820	LF	U-801-5.1.4	12" Ductile Iron Water Pipe (DWU Item No. 1500L) At _____ Dollars And _____ Cents per linear feet	\$	\$
165 - BB	9	EA	U-801-5.1.5	Install Fire Hydrant (DWU Item No. 5091) At _____ Dollars And _____ Cents per each	\$	\$
166 - BB	11	TON	U-801-5.1.6	Cast Iron Fittings (DWU Item No. 5020) At _____ Dollars And _____ Cents per ton	\$	\$
167 - BB	7	EA	U-801-5.1.7	6" Gate Valve (DWU Item No. 5100H) At _____ Dollars And _____ Cents per each	\$	\$
168 - BB	1	EA	U-801-5.1.8	10" Gate Valve (DWU Item No. 5100K) At _____ Dollars And _____ Cents per each	\$	\$

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BASE BID

Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
169 - BB	8	EA	U-801-5.1.9	12" Gate Valve (DWU Item No. 5100L) At _____ Dollars And _____ Cents per each	\$	\$
170 - BB	1	EA	U-801-5.1.10	16" x 12" Tapping Sleeve (DWU Item No. 5110QxL) At _____ Dollars And _____ Cents per each	\$	\$
171 - BB	1	EA	U-801-5.1.11	10" Combined Service with 10" Meter (DWU Item No. 5064KxK) At _____ Dollars And _____ Cents per each	\$	\$
172 - BB	7,410	LF	U-801-5.1.12	Television Inspection (DWU Item No. 6920) At _____ Dollars And _____ Cents per linear feet	\$	\$
173 - BB	10	EA	U-801-5.1.13	Cut and Plug Existing Water Main (DWU Item No. 5600) At _____ Dollars And _____ Cents per each	\$	\$
174 - BB	7,410	LF	U-801-5.1.14	Trench Safety and Support (DWU Item No. 6925) At _____ Dollars And _____ Cents per linear feet	\$	\$
175 - BB	4	CY	U-801-5.1.15	Rock Foundation (DWU Item No. 7030) At _____ Dollars And _____ Cents per cubic yard	\$	\$
176 - BB	19	CY	U-801-5.1.16	Flowable Backfill (DWU Item No. 7041) At _____ Dollars And _____ Cents per cubic yard	\$	\$

**AIRSIDE APRON IMPROVEMENTS
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BASE BID

Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
177 - BB	52	CY	U-801-5.1.17	Sand Backfill (DWU Item No. 7050) At _____ Dollars And _____ Cents per cubic yard	\$	\$
178 - BB	25	CY	U-801-5.1.18	Class "B" Concrete (DWU Item No. 7071) At _____ Dollars And _____ Cents per cubic yard	\$	\$
179 - BB	1	LS	U-801-5.1.19A	Disposal of Heavy Chlorinated Water Main Flushing Water-Phase 3 (DWU Item No. 7730) At _____ Dollars And _____ Cents per lump sum	\$	\$
180 - BB	1	LS	U-801-5.1.19B	Disposal of Heavy Chlorinated Water Main Flushing Water-Phase 4 (DWU Item No. 7730) At _____ Dollars And _____ Cents per lump sum	\$	\$
181 - BB	1	LS	U-801-5.1.19C	Disposal of Heavy Chlorinated Water Main Flushing Water-Phase 5 (DWU Item No. 7730) At _____ Dollars And _____ Cents per lump sum	\$	\$
182 - BB	16	EA	U-801-5.1.20	Adjust Water Valve Covers and Stacks (DWU Item No. 20330) At _____ Dollars And _____ Cents per each	\$	\$
183 - BB	16	EA	U-801-5.1.21	Investigation (DWU Item No. 20500) At _____ Dollars And _____ Cents per each	\$	\$
184 - BB	900	LF	U-801-5.1.22	6" PVC Pressure Rated Wastewater Pipe (DWU Item No. 3110H) At _____ Dollars And _____ Cents per linear feet	\$	\$

**AIRSIDE APRON IMPROVEMENTS
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BASE BID

Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
185 - BB	1,800	LF	U-801-5.1.23	8" PVC Pressure Rated Wastewater Pipe (DWU Item No. 3110J) At _____ Dollars And _____ Cents per linear feet	\$	\$
186 - BB	475	LF	U-801-5.1.24	12" PVC Pressure Rated Wastewater Pipe (DWU Item No. 3110L) At _____ Dollars And _____ Cents per linear feet	\$	\$
187 - BB	9	EA	U-801-5.1.25	48" Wastewater Manhole (DWU Item No. 6130AE) At _____ Dollars And _____ Cents per each	\$	\$
188 - BB	4	EA	U-801-5.1.26	Wastewater Access Device (DWU Item No. 6100) At _____ Dollars And _____ Cents per each	\$	\$
189 - BB	7	EA	U-801-5.1.27	6" Wastewater Lateral with Cleanout (DWU Item No. 6061) At _____ Dollars And _____ Cents per each	\$	\$
190 - BB	9	EA	U-801-5.1.28	Vacuum Test for Wastewater Manhole (DWU Item No. 6141) At _____ Dollars And _____ Cents per each	\$	\$
191 - BB	208	LF	U-802-5.1.1	36 inch Drilled Shaft At _____ Dollars And _____ Cents per linear feet	\$	\$
192 - BB	1,604	LF	U-802-5.1.2	42 inch Drilled Shaft At _____ Dollars And _____ Cents per linear feet	\$	\$

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BASE BID

Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
193 - BB	53	CY	U-802-5.1.3	Belled Footing At _____ Dollars And _____ Cents per cubic yard	\$	\$
194 - BB	80	LF	U-802-5.1.4	48 inch Large Diameter Steel Pipe Casing At _____ Dollars And _____ Cents per linear feet	\$	\$
195 - BB	100	LF	U-802-5.1.5	54 inch Large Diameter Steel Pipe Casing At _____ Dollars And _____ Cents per linear feet	\$	\$
196 - BB	104	CY	U-802-5.1.6	Foundation Cap At _____ Dollars And _____ Cents per cubic yard	\$	\$
197 - BB	2	EA	U-802-5.1.7.a	Obstacle Bar (Type A) At _____ Dollars And _____ Cents per each	\$	\$
198 - BB	2	EA	U-802-5.1.87.b	Obstacle Bar (Type B1) At _____ Dollars And _____ Cents per each	\$	\$
199 - BB	1	EA	U-802-5.1.7.c	Obstacle Bar (Type B2) At _____ Dollars And _____ Cents per each	\$	\$
200 - BB	2	EA	U-802-5.1.7.d	Obstacle Bar (Type C) At _____ Dollars And _____ Cents per each	\$	\$

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Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
201 - BB	1	EA	U-802-5.1.7.e	Obstacle Bar (Type D) At _____ Dollars And _____ Cents per each	\$	\$
202 - BB	1	EA	U-802-5.1.7.f	Obstacle Bar (Type E) At _____ Dollars And _____ Cents per each	\$	\$
203 - BB	15	EA	U-802-5.1.8.a	Power Station Support (Type A) At _____ Dollars And _____ Cents per each	\$	\$
204 - BB	1	EA	U-802-5.1.8.b	Power Station Support (Type B) At _____ Dollars And _____ Cents per each	\$	\$
205 - BB	2	EA	U-802-5.1.8.c	Power Station support (Type C) At _____ Dollars And _____ Cents per each	\$	\$
206 - BB	1	EA	U-802-5.1.8.d	Power Station Support (Type D) At _____ Dollars And _____ Cents per each	\$	\$
207 - BB	164	EA	U-802-5.1.9.a	Bollard (Type A) At _____ Dollars And _____ Cents per each	\$	\$
208 - BB	21	EA	U-802-5.1.9.b	Bollard (Type B) At _____ Dollars And _____ Cents per each	\$	\$

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CITY OF DALLAS
BID SCHEDULE**

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BASE BID

Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
209 - BB	1,480	LF	U-802-5.1.10.a	Bollard Rail (Type A) At _____ Dollars And _____ Cents per linear feet	\$	\$
210 - BB	0	LF	U-802-5.1.10.b	Bollard Rail (Type B) At _____ Dollars And _____ Cents per linear feet	\$	\$
211 - BB	1,184	LF	U-802-5.1.11	TxDot Metal Beam Guard Fence (MBGF) At _____ Dollars And _____ Cents per linear feet	\$	\$
212 - BB	19,300	CY	02 61 00.01-5.1	Over Excavtion of Contaminated Materials At _____ Dollars And _____ Cents per cubic yard	\$	\$
213 - BB	1,930	TRIP	02 61 00.01-5.2	Hauling of Soil to/from the Central Stockpile Area At _____ Dollars And _____ Cents per trip	\$	\$
214 - BB	25,000	TON	02 65 00.01-5.1	Loading of Impacted/Contaminated Soil for Offsite Disposal At _____ Dollars And _____ Cents per ton	\$	\$
215 - BB	1	EA	02 65 00.01-5.2	Fuel Line Removal (Previously Drained, Remove in this Contract) - Phase 3B At _____ Dollars And _____ Cents per each	\$	\$
216 - BB	1	EA	02 65 00.01-5.3	Fuel Line Abandonment (Previously Drained, Grout in this Contract) - Phase 3B At _____ Dollars And _____ Cents per each	\$	\$

**AIRSIDE APRON IMPROVEMENTS
CITY OF DALLAS
BID SCHEDULE**

Show bid prices in words and numerals. Words take precedence over numerals. Round off unit prices to two decimal places only. These Bid prices must include all labor, materials, equipment, insurance, overhead, superintendence, transportation, profit, and incidentals to cover the finished Work called for in the Contract Documents.

BASE BID

Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
217 - BB	1	EA	02 65 00.01-5.4	Fuel Line Removal (Previously Drained, Remove in this Contract) - Phase 3D At _____ Dollars And _____ Cents per each	\$	\$
218 - BB	1	EA	02 65 00.01-5.5	Fuel Line Removal (Previously Drained, Remove in this Contract) - Phase 3E At _____ Dollars And _____ Cents per each	\$	\$
219 - BB	1	EA	02 65 00.01-5.6	Fuel Line Removal (Drain, Flush/Pig and Remove) - Phase 4A At _____ Dollars And _____ Cents per each	\$	\$
220 - BB	1	EA	02 65 00.01-5.7	Fuel Line Removal (Drain, Flush/Pig and Remove) - Phase 4B At _____ Dollars And _____ Cents per each	\$	\$
221 - BB	1	EA	02 65 00.01-5.8	Fuel Line Removal (Drain, Flush/Pig and Remove) - Phase 5A At _____ Dollars And _____ Cents per each	\$	\$
222 - BB	1	EA	02 65 00.01-5.9	Fuel Line Removal (Drain, Flush/Pig and Remove) - Phase 5B At _____ Dollars And _____ Cents per each	\$	\$
223 - BB	1	EA	02 65 00.01-5.10	Fuel Line Abandonment (Drain, Flush/Pig and Grout in Place) - Phase 5B At _____ Dollars And _____ Cents per each	\$	\$
224 - BB	1	EA	02 65 00.01-5.11	Add Alternate - Deduct Item 5.3 Fuel Line Abandonment (Drain, Flush/Pig and Grout in Place) - Phase 3B At _____ Dollars And _____ Cents per each	\$	\$

**AIRSIDE APRON IMPROVEMENTS
CITY OF DALLAS
BID SCHEDULE**

Show bid prices in words and numerals. Words take precedence over numerals. Round off unit prices to two decimal places only. These Bid prices must include all labor, materials, equipment, insurance, overhead, superintendence, transportation, profit, and incidentals to cover the finished Work called for in the Contract Documents.

BASE BID

Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
225 - BB	1	EA	02 65 00.01-12	Add Alternate - Remove (Drain, Flush/Pig and Remove) Fuel Pipe shown as "Previously Drained Grout in this Contract" on XF103 - Phase 5B At _____ Dollars And _____ Cents per each	\$	\$
226 - BB	1,000	GAL	02 72 00.01-5.1	Offsite Disposal of Free Product At _____ Dollars And _____ Cents per gallon	\$	\$
227 - BB	1,106	LF	33 52 43.08-5.1	42 inch Casing At _____ Dollars And _____ Cents per linear feet	\$	\$
228 - BB	90	LF	33 52 43.08-5.2	14 inch Casing At _____ Dollars And _____ Cents per linear feet	\$	\$
229 - BB	488	LF	33 52 43.13-5.1	Single 6-inch Jet Fuel Pipe At _____ Dollars And _____ Cents per linear feet	\$	\$
230 - BB	4,320	LF	33 52 43.13-5.2	Single 10-inch Jet Fuel Pipe At _____ Dollars And _____ Cents per linear feet	\$	\$
231 - BB	90	LF	33 52 43.13-5.3	Single 10-inch Jet Fuel Pipe in 14" Casing At _____ Dollars And _____ Cents per linear feet	\$	\$
232 - BB	1,106	LF	33 52 43.13-5.4	Double 10-inch Jet Fuel Pipe in 42" Casing At _____ Dollars And _____ Cents per linear feet	\$	\$

**AIRSIDE APRON IMPROVEMENTS
CITY OF DALLAS
BID SCHEDULE**

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BASE BID

Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
233 - BB	2,243	LF	33 52 43.13-5.5	Double 10-inch Jet Fuel Pipe in Common Trench At _____ Dollars And _____ Cents per linear feet	\$	\$
234 - BB	1	LS	33 52 43.13-5.6	Isolation Valve Vault 1 (Mechanical) At _____ Dollars And _____ Cents per lump sum	\$	\$
235 - BB	1	LS	33 52 43.13-5.7	Isolation Valve Vault 2 (Mechanical) At _____ Dollars And _____ Cents per lump sum	\$	\$
236 - BB	1	LS	33 52 43.13-5.8	Isolation Valve Vault 3 (Mechanical) At _____ Dollars And _____ Cents per lump sum	\$	\$
237 - BB	1	LS	33 52 43.13-5.9	Isolation Valve Vault 4 (Mechanical) At _____ Dollars And _____ Cents per lump sum	\$	\$
238 - BB	1	EA	33 52 43.13-5.10	Isolation Valve Vault 1 - Structural At _____ Dollars And _____ Cents per each	\$	\$
239 - BB	1	EA	33 52 43.13-5.11	Isolation Valve Vault 2 - Structural At _____ Dollars And _____ Cents per each	\$	\$
240 - BB	1	EA	33 52 43.13-5.12	Isolation Valve Vault 3 - Structural At _____ Dollars And _____ Cents per each	\$	\$

**AIRSIDE APRON IMPROVEMENTS
CITY OF DALLAS
BID SCHEDULE**

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BASE BID

Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
241 - BB	1	EA	33 52 43.13-5.13	Isolation Valve Vault 4 - Structural At _____ Dollars And _____ Cents per each	\$	\$
242 - BB	1	EA	33 52 43.13-5.14	14" Stopple at IVV-1 At _____ Dollars And _____ Cents per each	\$	\$
243 - BB	1	LS	33 52 43.13-5.15	Tie-in at West Concourse Manifold At _____ Dollars And _____ Cents per lump sum	\$	\$
244 - BB	1	LS	33 52 43.13-5.16	4 ea. Stopples at Existing Gate 1 At _____ Dollars And _____ Cents per lump sum	\$	\$
245 - BB	1	LS	33 52 43.13-5.17	Existing Tank Farm Manifold Modifications At _____ Dollars And _____ Cents per lump sum	\$	\$
246 - BB	20	EA	33 52 43.17-5.1	Hydrant Pits At _____ Dollars And _____ Cents per each	\$	\$
247 - BB	2	EA	33 52 43.17-5.2	Isolation Valve Pit (Mechanical) At _____ Dollars And _____ Cents per each	\$	\$
248 - BB	1	EA	33 52 43.17-5.3	Double High Point Vent & Low Point Drain Pit At _____ Dollars And _____ Cents per each	\$	\$

**AIRSIDE APRON IMPROVEMENTS
CITY OF DALLAS
BID SCHEDULE**

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BASE BID

Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
249 - BB	6	EA	33 52 43.17-5.4	Low Point Drain Pits At _____ Dollars And _____ Cents per each	\$	\$
250 - BB	6	EA	33 52 43.17-5.5	High Point Vent Pits At _____ Dollars And _____ Cents per each	\$	\$
251 - BB	2	EA	33 52 43.17-5.6	High Point Vent Pits - Dual Risers At _____ Dollars And _____ Cents per each	\$	\$
252 - BB	1	LS	33 52 43.18-5.1	Testing and Flushing - Phase 3 At _____ Dollars And _____ Cents per lump sum	\$	\$
253 - BB	1	LS	33 52 43.18-5.2	Testing and Flushing - Phase 4 At _____ Dollars And _____ Cents per lump sum	\$	\$
254 - BB	1	LS	33 52 43.18-5.3	Testing and Flushing - Phase 5 At _____ Dollars And _____ Cents per lump sum	\$	\$
255 - BB	1	LS	33 52 43.22-5.1	Leak Detection System Equipment and Piping At _____ Dollars And _____ Cents per lump sum	\$	\$
256 - BB	1	LS	33 52 43.22-5.2	Leak Detection System (Phase 3 Startup) At _____ Dollars And _____ Cents per lump sum	\$	\$

**AIRSIDE APRON IMPROVEMENTS
CITY OF DALLAS
BID SCHEDULE**

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BASE BID

Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
257 - BB	1	LS	33 52 43.22-5.3	Leak Detection System (Phase 4 Startup) At _____ Dollars And _____ Cents per lump sum	\$	\$
258 - BB	1	LS	33 52 43.22-5.4	Leak Detection System (Phase 5 Startup) At _____ Dollars And _____ Cents per lump sum	\$	\$
259 - BB	3	EA	33 52 43.30-5.1	Aircraft Rated Pull Box At _____ Dollars And _____ Cents per each	\$	\$
260 - BB	1,106	LF	33 52 43.30-5.2	Casing Conduit At _____ Dollars And _____ Cents per linear feet	\$	\$
261 - BB	1	EA	33 52 43.30-5.3	Isolation Valve Vault 1 - Electrical At _____ Dollars And _____ Cents per each	\$	\$
262 - BB	1	EA	33 52 43.30-5.4	Isolation Valve Vault 2- Electrical At _____ Dollars And _____ Cents per each	\$	\$
263 - BB	1	EA	33 52 43.30-5.5	Isolation Valve Vault 3 - Electrical At _____ Dollars And _____ Cents per each	\$	\$
264 - BB	1	EA	33 52 43.30-5.6	Isolation Valve Vault 4 - Electrical At _____ Dollars And _____ Cents per each	\$	\$

**AIRSIDE APRON IMPROVEMENTS
CITY OF DALLAS
BID SCHEDULE**

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BASE BID

Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
265 - BB	1	EA	33 52 43.30-5.7	Isolation Valve Pit 1 -Electrical At _____ Dollars And _____ Cents per each	\$	\$
266 - BB	1	EA	33 52 43.30-5.8	Isolation Valve Pit 2-Electrical At _____ Dollars And _____ Cents per each	\$	\$
267 - BB	51	LF	33 52 43.30-5.9	Electrical Duct Bank EDB-01 At _____ Dollars And _____ Cents per linear feet	\$	\$
268 - BB	181	LF	33 52 43.30-5.10	Electrical Duct Bank EDB-02 At _____ Dollars And _____ Cents per linear feet	\$	\$
269 - BB	286	LF	33 52 43.30-5.11	Electrical Duct Bank EDB-03 At _____ Dollars And _____ Cents per linear feet	\$	\$
270 - BB	30	LF	33 52 43.30-5.12	Electrical Duct Bank EDB-04 At _____ Dollars And _____ Cents per linear feet	\$	\$
271 - BB	34	LF	33 52 43.30-5.13	Electrical Duct Bank EDB-05 At _____ Dollars And _____ Cents per linear feet	\$	\$
272 - BB	34	LF	33 52 43.30-5.14	Electrical Duct Bank EDB-06 At _____ Dollars And _____ Cents per linear feet	\$	\$

**AIRSIDE APRON IMPROVEMENTS
CITY OF DALLAS
BID SCHEDULE**

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BASE BID

Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
273 - BB	28	LF	33 52 43.30-5.15	Electrical Duct Bank EDB-07 At _____ Dollars And _____ Cents per linear feet	\$	\$
274 - BB	105	LF	33 52 43.30-5.16	Electrical Duct Bank EDB-08 At _____ Dollars And _____ Cents per linear feet	\$	\$
275 - BB	553	LF	33 52 43.30-5.17	Electrical Duct Bank EDB-09 At _____ Dollars And _____ Cents per linear feet	\$	\$
276 - BB	68	LF	33 52 43.30-5.18	Electrical Duct Bank EDB-10 At _____ Dollars And _____ Cents per linear feet	\$	\$
277 - BB	11	LF	33 52 43.30-5.19	Electrical Duct Bank EDB-11 At _____ Dollars And _____ Cents per linear feet	\$	\$
278 - BB	51	LF	33 52 43.30-5.20	Electrical Duct Bank EDB-12 At _____ Dollars And _____ Cents per linear feet	\$	\$
279 - BB	18	LF	33 52 43.30-5.21	Electrical Duct Bank EDB-13 At _____ Dollars And _____ Cents per linear feet	\$	\$
280 - BB	243	LF	33 52 43.30-5.22	Electrical Duct Bank EDB-14 At _____ Dollars And _____ Cents per linear feet	\$	\$

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CITY OF DALLAS
BID SCHEDULE**

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BASE BID

Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
281 - BB	9	LF	33 52 43.30-5.23	Electrical Duct Bank EDB-15 At _____ Dollars And _____ Cents per linear feet	\$	\$
282 - BB	6	LF	33 52 43.30-5.24	Electrical Duct Bank EDB-16 At _____ Dollars And _____ Cents per linear feet	\$	\$
283 - BB	10	LF	33 52 43.30-5.25	Electrical Duct Bank EDB-17 At _____ Dollars And _____ Cents per linear feet	\$	\$
284 - BB	31	LF	33 52 43.30-5.26	Electrical Duct Bank EDB-18 At _____ Dollars And _____ Cents per linear feet	\$	\$
285 - BB	56	LF	33 52 43.30-5.27	Electrical Duct Bank EDB-19 At _____ Dollars And _____ Cents per linear feet	\$	\$
286 - BB	285	LF	33 52 43.30-5.28	Electrical Duct Bank EDB-20 At _____ Dollars And _____ Cents per linear feet	\$	\$
287 - BB	18	LF	33 52 43.30-5.29	Electrical Duct Bank EDB-21 At _____ Dollars And _____ Cents per linear feet	\$	\$
288 - BB	341	LF	33 52 43.30-5.30	Electrical Duct Bank EDB-22 At _____ Dollars And _____ Cents per linear feet	\$	\$

**AIRSIDE APRON IMPROVEMENTS
CITY OF DALLAS
BID SCHEDULE**

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BASE BID

Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
289 - BB	1,172	LF	33 52 43.30-5.31	Electrical Duct Bank EDB-23 At _____ Dollars And _____ Cents per linear feet	\$	\$
290 - BB	204	LF	33 52 43.30-5.32	Electrical Duct Bank EDB-24 At _____ Dollars And _____ Cents per linear feet	\$	\$
291 - BB	1	EA	33 52 43.30-5.33	Underground Cabling - Phase 3 At _____ Dollars And _____ Cents per each	\$	\$
292 - BB	1	EA	33 52 43.30-5.34	Underground Cabling - Phase 4 At _____ Dollars And _____ Cents per each	\$	\$
293 - BB	1	EA	33 52 43.30-5.35	Fiber Optic Cabling to Tank Farm - Phase 5 At _____ Dollars And _____ Cents per each	\$	\$
294 - BB	1	EA	33 52 43.30-5.36	Tank Farm Leak Detection Electrical At _____ Dollars And _____ Cents per each	\$	\$
295 - BB	1	EA	33 52 43.30-5.37	EFSO Aboveground Conduit - Phase 3 At _____ Dollars And _____ Cents per each	\$	\$
296 - BB	1	EA	33 52 43.30-5.38	EFSO Aboveground Conduit - Phase 4 At _____ Dollars And _____ Cents per each	\$	\$

**AIRSIDE APRON IMPROVEMENTS
CITY OF DALLAS
BID SCHEDULE**

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BASE BID

Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
297 - BB	1	EA	33 52 43.30-5.39	EFSO Aboveground Cabling and Fiber - Phase 3 At _____ Dollars And _____ Cents per each	\$	\$
298 - BB	1	EA	33 52 43.30-5.40	EFSO Aboveground Cabling - Phase 4 At _____ Dollars And _____ Cents per each	\$	\$
299 - BB	1	EA	33 52 43.30-5.41	Temporary EFSO System (R-100, R-101, R-102, R-103) At _____ Dollars And _____ Cents per each	\$	\$
300 - BB	16	EA	33 52 43.32-5.1	New EFSO Station (Surface Mount - Wall/Column) At _____ Dollars And _____ Cents per each	\$	\$
301 - BB	3	EA	33 52 43.32-5.2	New EFSO Station (Rack Mount) At _____ Dollars And _____ Cents per each	\$	\$
302 - BB	1	EA	33 52 43.32-5.3	EFSO Panel-E - Phase 3 At _____ Dollars And _____ Cents per each	\$	\$
303 - BB	1	EA	33 52 43.32-5.4	EFSO Panel-W - Phase 3 At _____ Dollars And _____ Cents per each	\$	\$
304 - BB	1	EA	33 52 43.32-5.5	EFSO Commissioning - Phase 3 At _____ Dollars And _____ Cents per each	\$	\$

**AIRSIDE APRON IMPROVEMENTS
CITY OF DALLAS
BID SCHEDULE**

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BASE BID

Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
305 - BB	1	EA	33 52 43.32-5.6	EFSO Commissioning - Phase 4 At _____ Dollars And _____ Cents per each	\$	\$
306 - BB	1	EA	33 52 43.32-5.7	EFSO Commissioning - Phase 5 At _____ Dollars And _____ Cents per each	\$	\$
307 - BB	4	EA	33 52 43.34-5.1	TS-1 Anode Groundbed Test Station At _____ Dollars And _____ Cents per each	\$	\$
308 - BB	0	EA	33 52 43.34-5.2	TS-2 Anode Groundbed and Bonding Test Station At _____ Dollars And _____ Cents per each	\$	\$
309 - BB	1	EA	33 52 43.34-5.3	TS-3 Bonding Test Station At _____ Dollars And _____ Cents per each	\$	\$
310 - BB	4	EA	33 52 43.34-5.4	Casing Test Station At _____ Dollars And _____ Cents per each	\$	\$
311 - BB	1	EA	33 52 43.34-5.5	Commissioning of Induced Current CP System - Phase 3 At _____ Dollars And _____ Cents per each	\$	\$
312 - BB	1	EA	33 52 43.34-5.6	Commissioning of Induced Current CP System - Phase 4 At _____ Dollars And _____ Cents per each	\$	\$

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CITY OF DALLAS
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BASE BID

Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
313 - BB	1	EA	33 52 43.34-5.7	Commissioning of Induced Current CP System - Phase 5 At _____ Dollars And _____ Cents per each	\$	\$

Total Base Bid, Items 1 through 313 : \$ _____

**AIRSIDE APRON IMPROVEMENTS
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BID OPTION

Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
1 - BO	1	LS	M-102-4.1	Maintenance of Traffic At _____ Dollars And _____ Cents per lump sum	\$	\$
2 - BO	17,087	SY	P-150-5.1	13 and 14 inch Concrete Apron Pavement Removal At _____ Dollars And _____ Cents per square yard	\$	\$
3 - BO	2,008	SY	P-150-5.2	16 inch Concrete Apron Pavement Removal At _____ Dollars And _____ Cents per square yard	\$	\$
4 - BO	519	LF	P-150-5.9	3 foot wide through 6 foot wide Reinforced Concrete Conduit Removal At _____ Dollars And _____ Cents per linear feet	\$	\$
5 - BO	2,000	SY	P-150-5.11	Buried Slab Removal At _____ Dollars And _____ Cents per square yard	\$	\$
6 - BO	7,460	CY	P-152-4.1	Unclassified Excavation At _____ Dollars And _____ Cents per cubic yard	\$	\$
7 - BO	25	CY	P-152-4.2	Muck Excavation At _____ Dollars And _____ Cents per cubic yard	\$	\$
8 - BO	8,605	CY	P-152-4.3	Embankment in Place At _____ Dollars And _____ Cents per cubic yard	\$	\$

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BID OPTION

Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
9 - BO	1,000	CY	P-152-4.4	Contaminated Soil Excavation At _____ Dollars And _____ Cents per cubic yard	\$	\$
10 - BO	17,106	SY	P-155-8.2	Lime-treated subgrade, 10 inch depth At _____ Dollars And _____ Cents per square yard	\$	\$
11 - BO	83	TON	P-155-8.6	Lime At _____ Dollars And _____ Cents per ton	\$	\$
12 - BO	1	LS	P-156-5.1	Erosion Control Measures At _____ Dollars And _____ Cents per lump sum	\$	\$
13 - BO	17,106	SY	P-159-5.1	Subbase Drainage Layer At _____ Dollars And _____ Cents per square yard	\$	\$
14 - BO	17,106	SY	P-304-8.2	Cement-Treated Base Course, 9 inch depth At _____ Dollars And _____ Cents per square yard	\$	\$
15 - BO	17,106	SY	P-501-8.1.a	17 inch thick Portland Cement Concrete Pavement At _____ Dollars And _____ Cents per square yard	\$	\$
16 - BO	8,553	GAL	P-602-5.1	Bituminous Prime Coat At _____ Dollars And _____ Cents per gallon	\$	\$

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CITY OF DALLAS
BID SCHEDULE**

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BID OPTION

Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
17 - BO	150	LF	D-701-5.1.3	24 inch Class III Reinforced Concrete Pipe At _____ Dollars And _____ Cents per linear feet	\$	\$
18 - BO	170	LF	D-701-5.1.5	36 inch Class III Reinforced Concrete Pipe At _____ Dollars And _____ Cents per linear feet	\$	\$
19 - BO	29	LF	D-701-5.1.11	12 inch Polyvinyl Chloride (PVC) Pipe At _____ Dollars And _____ Cents per linear feet	\$	\$
20 - BO	323	LF	D-701-5.1.13	6' x 3' Class III Reinforced Concrete Box At _____ Dollars And _____ Cents per linear feet	\$	\$
21 - BO	1,084	LF	D-705-5.1	6 inch PVC Pipe Underdrain At _____ Dollars And _____ Cents per linear feet	\$	\$
22 - BO	179	LF	D-705-5.2	6 inch Schedule 40 PVC Pipe At _____ Dollars And _____ Cents per linear feet	\$	\$
23 - BO	143	EA	D-705-5.3	6 inch Backflow Flapper Valve At _____ Dollars And _____ Cents per each	\$	\$
24 - BO	797	EA	D-705-5.4	6 inch Cleanout Assembly At _____ Dollars And _____ Cents per each	\$	\$

**AIRSIDE APRON IMPROVEMENTS
CITY OF DALLAS
BID SCHEDULE**

Show bid prices in words and numerals. Words take precedence over numerals. Round off unit prices to two decimal places only. These Bid prices must include all labor, materials, equipment, insurance, overhead, superintendence, transportation, profit, and

BID OPTION

Item	Approx. Quantity	Unit	Spec. Section	Item with Unit Price Written in Words	Unit Price Dollars & Cents	Total Amount Dollars & Cents
25 - BO	49	CY	D-751-5.1.2	Junction Boxes (Vaults) At _____ Dollars And _____ Cents per cubic yard	\$	\$
26 - BO	2	EA	D-751-5.2.1	Catch Basins At _____ Dollars And _____ Cents per each	\$	\$
27 - BO	177	LF	D-751-5.3.1	Trench Drains At _____ Dollars And _____ Cents per linear feet	\$	\$

Total Bid Option, Items 1 through 27 : \$ _____

EXHIBIT I
CONFIRMATION OF PROJECT FINANCING

EXHIBIT I
EVIDENCE OF FINANCING

TO: SOUTHWEST AIRLINES CO. ("Southwest")
2702 Love Field Drive
Dallas, Texas 75235
Attn: Bob Montgomery
Authorized Representative

FROM: _____ ("Contractor")

PROJECT: _____
Love Field Modernization Program
Dallas Love Field
Dallas, TX (the "Project")

Date of Contractor's Request: _____, _____

Pursuant to the requirements of Texas Business & Commerce Code, §56.001 *et seq.*, please provide to us, within thirty (30) days from the date you have received this request the following information to be furnished to Contractor's subcontractors to demonstrate the financial viability, and the availability of funding and the existence of, adequate financial arrangements to pay for improvements for the Project. We understand that

1. The Love Field Airport Modernization Corporation ("LFAMC"), and the City of Dallas ("City") have entered into a Program Development Agreement (the "PDA") for the development, design and construction of the Love Field Modernization Program ("LFMP"), an ongoing program of improvements and renovations to the terminal facilities at Love Field Airport, including airside, landside and terminal components. The parties acknowledge that the City is the owner of the real property upon which the LFMP is located. The Project is a critical part of the LFMP. Under the PDA, the LFAMC is responsible for construction of the Project. As provided in Resolution No. 08-3117, issued in accordance with the PDA, LFAMC has assigned to and Southwest has accepted responsibility for the construction of the Project.
2. The City has caused the LFAMC to issue its \$_____ Special Facilities Revenue Bonds, Series 2010 (Southwest Airlines Co. — Love Field Modernization Program Project) (the "2010 Bonds") to finance the costs of the Project, net of costs to be paid from grants and other revenues received by the City. The 2010 Bonds were issued pursuant to the Trust Indenture (the "Indenture") between the LFAMC and Wells Fargo Bank, National Association as "Trustee." The proceeds of the 2010 Bonds and money from grants and other revenues transferred by the City to the Trustee have been deposited into a Construction Fund (the "Construction Fund") to be maintained by the Trustee pursuant to the Indenture. The LFAMC, the City, and Southwest have entered into a Special Facilities Agreement (the "Facilities Agreement") which includes procedures for the disbursement or application of money on deposit in the

Construction Fund. Upon receipt of a disbursement request approved by the Aviation Director and submitted by Southwest, the Trustee will disburse or apply the money on deposit in the Construction Fund to pay costs of the Project.

3. The full legal name, physical and mailing address, and business telephone number of the entities involved in the financing of the Project:

SOUTHWEST AIRLINES CO.
2702 Love Field Drive
Dallas, Texas 75235
Attn: Bob Montgomery
Authorized Representative

LOVE FIELD AIRPORT MODERNIZATION CORPORATION
c/o The City of Dallas
City Hall
1500 Marilla Street
Dallas, Texas 75201
Attn: David K. Cook
Director, LFAMC's Board of Directors

CITY OF DALLAS
8008 Cedar Springs Road
Dallas, Texas 75235
Attn: Director of Aviation
Authorized Representative

4. Are funds available and has funding been authorized for the full contract amount for the construction of the improvements? ____ Yes ____ No

If *no*, please explain: _____

Date of Response: _____

SOUTHWEST AIRLINES CO.

(To be completed by Contractor only.) The name and address of Contractor's Payment Bond Surety to whom a claim may be sent:

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ITEM 11280 HYDRAULIC VALVE SYSTEMS

11280 – 1.1 General Requirements

- 1.1.1 This section covers the furnishing and installation of hydraulic valve systems for Glycol Diversion, Glycol Containment, and Fuel Spill Containment.
- 1.1.2 Valve (s) and Actuator (s) shall be of the same manufacturer.
- 1.1.3 Valve, Actuator and Hydraulic Control Unit are integrally engineered and designed for torque, actuator size and stroke volume, and shall be supplied by the same company.
- 1.1.4 Supplier shall agree to provide one day of startup assistance.

11280 – 1.2 High Performance Butterfly Valves – Valves shall be Keystone KLOK, or engineer-approved equivalent, meeting the following requirements.

- 1.2.1 Flange Mounting
 - 1.2.1.1 Valves shall be of lugged design and rated up to 285 psig and shall be suitable for mating to ASME Class 150 (flat or raised face) without modification of the valve body. Valves shall be suitable for end of line service.
 - 1.2.1.2 Laying length shall conform to the current MSS SP68 or API 609 standards.
 - 1.2.1.3 Preferred valve installation shall be with shaft in horizontal or angled position.
- 1.2.2 Body
 - 1.2.2.1 Body material shall be carbon steel.
 - 1.2.2.2 Valve bodies shall meet the minimum wall thickness requirements of ANSI B16.34.
 - 1.2.2.3 Valve bodies shall have an internally cast travel stop to provide positive positioning of the valve disc.
 - 1.2.2.4 Valve body neck length shall permit 2" of insulation of valve and piping.
- 1.2.3 Disc and Stem
 - 1.2.3.1 Disc material shall be 316 stainless steel.
 - 1.2.3.2 Stem material shall be 17-4 stainless steel.
 - 1.2.3.3 Valve disc and stem shall be of double offset design to minimize cycle wear and distortion of seat.

- 1.2.3.4 Disc design shall lend itself to high Cv and low pressure-drop values in the open position.
- 1.2.3.5 Valve discs shall be secured in a concentric location relative to the seat by means of non-wearing self-lubricated bushings.
- 1.2.3.6 Valve disc shall provide for maximum flow capacity and low pressure loss values in the open position using a two piece stem design, in which case the stems shall penetrate at least 1-1/2 times their diameter into the disc hub.
- 1.2.3.7 Valve discs shall employ a hardened edge material to allow long cycle life of both the disc and the seat.
- 1.2.3.8 Disc shall be capable of rotation through adjacent schedule 80 piping.
- 1.2.4 Seat
 - 1.2.4.1 Seat material shall be of Reinforced Teflon, RTFE.
 - 1.2.4.2 Seat design shall bi-directionally affect tight shut-off or all differential pressures through the full pressure loss rating with a minimum disc closure tolerance requirement of $\pm 2^\circ$ of rotation.
 - 1.2.4.3 Seat shall be replaceable without removing disc or stem from valve.
 - 1.2.4.4 Valve seats shall be located in the valve body and secured in place by means of a retaining ring.
 - 1.2.4.5 Line energized seating design is unacceptable. Valve design shall be capable of sealing at low and high pressure.
- 1.2.5 Stem Packing
 - 1.2.5.1 Stem packing material shall be Teflon.
 - 1.2.5.2 Stem packing shall be adjustable. Stem packing adjustment nuts shall have full 180° clearance for ease of wrench access and rotation.
 - 1.2.5.3 Stem packing shall be provided on the drive end of the valve only. The non-driving end of the valve is to use a static gasket type seal.
 - 1.2.5.4 Stem packing shall be equally suitable for full vacuum and pressure service.
- 1.2.6 Stem Support Bushings
 - 1.2.6.1 Valve journals shall have pressed fit upper and lower bushings located immediately adjacent to flatted body bore surface for maximum stem support.
- 1.2.7 Seat Retaining Rings
 - 1.2.7.1 Valve retaining rings shall be secured to the valve body for shipment and installation in such a manner as to provide a non-obstructed flange gasket surface.
 - 1.2.7.2 Valve retaining rings shall allow ease of removal in the event of severe corrosion of the body and retention fasteners.
- 1.2.8 Actuator Mounting

- 1.2.8.1 Valve body shall have an internally cast top plate for direct flush mounting of manual or power actuators without use of brackets or adapters.

11280 – 1.3 Actuators – Actuators shall be TYCO Morin HP Series, or engineer-approved equivalent, meeting the following requirements.

- 1.3.1 Actuator shall be of scotch yoke design, utilizing stainless steel yoke and roller bearing mechanism suitable for hydraulic operating media. Cylinders to be rated for 1,500 psig operating pressure. Piston bearing to be Teflon. Actuator to include linear travel stops that are field adjustable for a minimum of 8 degrees angular rotation at both ends of stroke. Spring return actuator to feature “man-safe” spring design for disassembly without special tools.
- 1.3.2 Valve position indicating switches shall be Westlock Type 2007, or engineer approved equivalent, shall be NEMA 7 and include 2 each SPDT mechanical switches.

11280 – 1.4 Electro-Hydraulic Actuator Control Systems - Hydraulic Power Unit engineered and built by StoneGate Concepts, Inc., or engineer-approved equivalent, meeting the following requirements.

- 1.4.1 Hydraulic control unit shall be designed based on the valve and actuator system requirements, and must provide adequate pressure and volume of hydraulic oil.
- 1.4.2 The actuator control unit to be designed as a completely self-contained combination hydraulic power unit and actuator control station to independently open and close the high-pressure hydraulic actuator(s). The Control Cabinet shall be an explosion-proof Cl. 1, Div. 1, NEMA-7 design.
- 1.4.3 Electrical equipment within the enclosure to include an electrical disconnect, circuit breakers, control relays, a motor starting relay, and terminals for electrical connections.
- 1.4.4 The oil-hydraulic system within the enclosure to include a combination pump with motor & reservoir, accumulator, solenoid valves, pressure regulator and gauge to provide a complete stand-alone hydraulic system.
- 1.4.5 The door front to include explosion-proof LED pilot lights, selector switches, and an electrical disconnect switch.
- 1.4.6 The valve control unit to require 120-volt 60-hertz electrical power. The current requirement is a minimum 20 amperes. The unit must have a proper ground.
- 1.4.7 The unit to be suitable for both “Local” and “Remote” operation. The output of the limit switches should come into the unit for “Local” indication and then dry contact outputs to the “Remote” control facility.

11280 – 1.5 Manual Gear Op System

- 1.5.1 Main isolation valves for glycol containment shall include shaft extension to three foot above grade, to be complete with stem extension, 3 foot floor stand, and heavy duty weatherproof hand wheel gear operator.

11280 – 1.6 System Design, Control & Functionality

- 1.6.1 Glycol Diversion System
 - 1.6.1.1 Each system to include two high performance butterfly valves, hydraulic actuators and controls, interlocked with each other for one valve to open when the other is closed and vice-versa. This will be to allow glycol to be recovered during de-icing operations.

- 1.6.1.2 One hydraulic control unit shall operate both valves within the vault, and contain the interlocking control scheme.
- 1.6.1.3 System to be remotely operated by field mounted switch in de-icing area.
- 1.6.1.4 Contractor to install 3/8" hydraulic tubing between valve actuator and adjacent hydraulic control system vaults.
- 1.6.1.5 Contractor to provide explosion proof - 120V electrical connection between valve limit switch and the hydraulic control unit.
- 1.6.1.6 The penetrations between the hydraulic control unit vault and the valve vault shall be designed to be watertight.
- 1.6.2 Glycol Containment System
 - 1.6.2.1 To include high performance butterfly valves, with extension and above grade manual gear op system per section 1.5.
- 1.6.3 Fuel Spill Containment System
 - 1.6.3.1 Each system to include high performance butterfly valve, hydraulic actuator and controls. Valves to be normally open.
 - 1.6.3.2 Local emergency stop buttons are depressed at each gate, closing the valves and isolating fuel within the vault.
 - 1.6.3.3 Contractor to install 3/8" hydraulic tubing between valve actuator and adjacent hydraulic control system vaults.
 - 1.6.3.4 Contractor to provide explosion proof - 120V electrical connection between valve limit switch and the hydraulic control unit.
 - 1.6.3.5 The penetrations between the hydraulic control unit vault and the valve vault shall be designed to be watertight.

11280 – 1.7 Method of Measurement

- 1.7.1 Glycol Diversion Systems shall be measured per each system furnished, installed, tested, accepted, and operational. A Glycol Diversion System consists of 1-12" butterfly valve and hydraulic actuator, 1-8" butterfly valve and hydraulic actuator, 1-hydraulic control unit capable of operating both valves, mounting hardware for valves and the hydraulic control unit, hydraulic tubing, and other associated equipment to complete the system not covered herein.
- 1.7.2 Glycol Containment Systems shall be measured per each system furnished, installed, tested, accepted, and operational. A Glycol Containment System consists of 1- high-performance butterfly valve and actuator, stem extension and manual operating system, mounting hardware for valves, and other associated equipment to complete the system not covered herein. Valve size for Glycol Containment Systems shall be as indicated on the plans, either 1-18", 1-30", or 1-36" valve.
- 1.7.3 Fuel Spill Containment Systems shall be measured per each system furnished, installed, tested, accepted, and operational. A Fuel Spill Containment System consists of 1-8" butterfly valve and hydraulic actuator, 1-hydraulic control unit capable of the valve, mounting hardware for valve and the hydraulic control unit, hydraulic tubing, and other associated equipment to complete the system not covered herein.

11280 – 1.8 Basis of Payment

- 1.8.1 Payment will be made at the contract unit price per each Glycol Diversion System. This price shall be full compensation for furnishing all materials and for preparation, assembly, and installation of these materials, and for labor, start-up assistance, equipment, tools, and incidentals necessary to complete the system.
- 1.8.2 Payment will be made at the contract unit price per each Glycol Containment System. This price shall be full compensation for furnishing all materials and for preparation, assembly, and installation of these materials, and for labor, start-up assistance, equipment, tools, and incidentals necessary to complete the system. Each Glycol Containment System will be paid at a separate unit cost per system according to the size of valve included in the system.
- 1.8.3 Payment will be made at the contract unit price per each Fuel Spill Containment System. This price shall be full compensation for furnishing all materials and for preparation, assembly, and installation of these materials, and for labor, start-up assistance, equipment, tools, and incidentals necessary to complete the system.

Payment shall be made under:

11280 – 1.8.1	Glycol Diversion System	per each
11280 – 1.8.2.1	Glycol Containment System with 18” valve	per each
11280 – 1.8.2.2	Glycol Containment System with 30” valve	per each
11280 – 1.8.2.3	Glycol Containment System with 36” valve	per each
11280 – 1.8.3	Fuel Spill Containment System	per each

END OF ITEM 11280

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ITEM T-902 TREES, SHRUBS AND GROWDCOVERS
(Non-Standard FAA Specification)

DESCRIPTION

902-1.1 SUMMARY. Plant materials, installation, staking, edging, mulching, soil treatments, and maintenance operations through the one-year warranty period of all trees, shrubs, ornamental grasses, ground covers, annuals, perennials and vines as indicated on drawings and specified herein.

902-1.2 SUBMITTALS

- A. Samples and Product Information: Representative samples or product information of the following materials shall be provided to the Landscape Architect from the supply source being used:
 - 1. Plant material: Prior to digging and shipment by the nursery, plant materials shall be tagged by the contractor and approved by the Landscape Architect. Plant materials may be photographed and submitted to the Landscape Architect for approval. Photographs shall contain a human scale factor for size and height reference. Acceptance of material through photographs does not preclude rejection of unsatisfactory material upon delivery. Submit original receipts or invoices and all delivery tickets for all materials to the Owner and Landscape Architect.
 - 2. Mulch: 1-pound sample and product information.
 - 3. Organic matter: 1-pound sample, product information and original delivery tickets or receipts.
 - 4. Fertilizer: Product information and analysis.

- B. Test Reports: Submit to the Owner and Landscape Architect, two copies each of certified test reports for:
 - 1. Topsoil (Top 1 inch to 3 inches).
 - 2. Subsoil (6 to 8 inches below Finish Grade).
 - 3. Organic Matter: 1-pound sample and product information.

- C. Certification
 - 1. Phyto-sanitary certification: All plant material inspection certificates required by federal, state, or other governing authorities will accompany each shipment and be turned over to the Owner and Landscape Architect upon delivery.
 - 2. Invoice: Original vendor's or grower's invoice for each shipment of plants, soil amendments, and mulch shall show sizes, quantities, and root treatment of plants, i.e., containerized, balled and burlapped, or bare root.

- D. Construction Schedule: Upon authorization to proceed with the work, submit three copies of the Construction Schedule indicating dates for the items of work.

- E. Maintenance Instructions: Submit three copies of typewritten instructions recommending procedures to be established by the Owner for the maintenance of landscape work for an entire year. Submit prior to Notice of Substantial Completion.

- F. Chemicals: Submit products, rates of application, and anticipated uses of pesticides, herbicides, and fumigants.

902-1.3 QUALITY ASSURANCE

A. Qualifications

1. The Contractor shall be a company specializing in landscape installation.
2. The Contractor shall have successfully completed at least 5 installations of this type, size, and complexity in the last three years.

B. All materials and work shall comply with applicable sections of the following references:

1. American Association of Nurserymen, Inc., (AAN) Standard: American Standard for Nursery Stock (ANSI Z60.1-2004).
2. Hortus Third, Cornell University, 1976.
3. Fertilizers; Mixed Commercial. Federal Specification: 0-F-241D.

C. Source Quality Control

1. Certification: All landscape materials shall be from stock inspected and certified by authorized governmental agencies. The stock shall comply with governmental regulations prevailing at the supply source and the job site.
2. Analysis and standards: Products packaged in sealed containers shall be labeled with manufacturer's certified analysis. The composition of bulk materials shall be tested by an approved laboratory in accordance with procedures established by the Association of Official Agricultural Chemists, wherever applicable, or as specified by product specifications referenced herein.
3. Plant material selection (containerized and B&B): Prior to digging and shipment by the nursery, the contractor shall select and pre-tag approved trees before delivery to the site. Plant materials may be photographed and submitted to the Landscape Architect for approval. Photographs shall contain a human scale factor for size and height reference. Acceptance of material through photographs does not preclude rejection of unsatisfactory material upon delivery. The contractor shall cover all expenses for the selection and pre-tag of trees and other plant materials. Notify the Landscape Architect of tagged material locations or provide photographed and tagged materials at least four weeks prior to digging.

D. Substitutions

1. If specified landscape material is not obtainable, notify the Landscape Architect, who will identify alternate sources or substitutes. Adjustments will be made at no additional cost to the Owner. If replacements are downsized, credits to the Owner will be based on comparable cost differential customary for materials and sizes involved.
2. Plants shall be supplied at the sizes specified. Plants of larger size may be used if acceptable to Landscape Architect and if sizes of roots or balls are increased proportionately.
3. Container plants may be substituted for those designed "B&B" if approved by the Landscape Architect. However, B&B substitutions will not be considered after April 15th.

902-1.4 DELIVERY, STORAGE, AND HANDLING

A. Digging Plant Material

1. Plants shall not be dug at the nursery or approved source until the Landscape Architect has received (See Section 1.3, C, 3) and approved the plant material and the Contractor is ready to transport them from their original locations to the site of the work or acceptable storage location.

B. Transportation of Plant Material

1. Plants transported to the project in open vehicles shall be covered with tarpaulins or other suitable covers securely fastened to the body of the vehicle to prevent overheating of the plants.
2. Plants shall be kept moist, fresh, and protected at all times. Such protection shall encompass the entire period during which the plants are in transit, being handled, or are in temporary storage.
3. The roots of barefoot stock shall be protected from drying out with wet straw or other suitable material while in transit.
4. Unless otherwise authorized by the Owner or Landscape Architect, notify the Landscape Architect at least five working days in advance of the anticipated delivery date of any plant material. The original bill of lading, showing the quantities, kinds, and sizes of materials included for each shipment shall be furnished to the Owner and Landscape Architect.

C. Storage

1. Unless specific authorization is obtained from the Landscape Architect, plants shall not remain on the site of work longer than three days prior to being planted.
2. Plants that are not planted immediately shall be protected as follows:
 - a. Root balls shall be kept moist and their solidity carefully preserved.
 - b. Plants shall not be allowed to dry out or freeze.
3. Both the duration and method of storage of plant materials shall be subject to the approval of the Landscape Architect.

D. Handling of Plant Materials

1. Exercise care in handling plant materials to avoid damage or stress.

902-1.5 REJECTION OF MATERIALS

- A. Evidence of inadequate protection following digging, carelessness while in transit, or improper handling or storage, shall be cause for rejection.
- B. Upon arrival at the temporary storage location or site of the work, plants shall be inspected for proper shipping procedures. Should the roots be dried out, large branches be broken, balls of earth broken or loosened, or areas of bark be torn or damaged the Landscape Architect will reject the injured plant.
- C. When a plant has been rejected, remove it from the area of the work and replace it with one of the required size and quality.

902-1.6 SUBSTANTIAL COMPLETION ACCEPTANCE

- A. The Owner and Landscape Architect will inspect all work for Substantial Completion upon written notice of completion. The request shall be received at least ten calendar days before the anticipated date of inspection.

- B. Acceptance of plant material by the Owner and Landscape Architect will be for general conformance to specified size, character, and quality, and shall not diminish responsibility for full conformance to the Contract Documents. Plants shall be healthy, free of pests and disease, and in flourishing condition before Substantial Completion acceptance shall be given. Plants shall be free of dead and dying branches and branch tips, and shall bear foliage of normal density, size, and color.
- C. Upon completion and re-inspection of all repairs or renewals necessary in the judgment of the Owner and Landscape Architect, the Landscape Architect will recommend to the Owner that acceptance of the work of this Section be given.
- D. Acceptance in Part
 - 1. The work may be accepted in parts when it is determined to be in the Owner's best interest to do so, and when permission is given to the Contractor in writing to complete the work in parts.
 - 2. Acceptance and use of such areas by the Owner shall not waive any other provisions of the Contract.

902-1.7 MAINTENANCE

- A. Maintain plant material until the completion of the warranty period and Final Acceptance of work, as described in Part 3 of this section.

902-1.8 WARRANTY

- A. Plants shall be warranted for a period of one year after the date of written approval of Substantial Completion by the Owner.
 - 1. When the work is accepted in parts, the warranty periods shall extend from each of the partial acceptances to the terminal date of the last warranty period. Thus, all warranty periods terminate at one time.
- B. Plants shall be healthy, free of pests and disease, and in flourishing condition at the end of the warranty period. Plants shall be free of dead and dying branches and branch tips, and shall bear foliage of normal density, size, and color.
- C. Replace dead plants and all plants not in a vigorous, thriving condition, as determined by the Owner and/or Landscape Architect during and at the end of the warranty period, without cost to the Owner, as soon as weather conditions permit and within the specified planting period.
 - 1. Replacements shall closely match adjacent specimens of the same species. Replacements shall be subject to all requirements stated in this Specification.
 - 2. Make all necessary repairs due to plant replacements. Such repairs shall be done at no extra cost to the Owner.
 - 3. The warranty of all replacement plants shall extend for an additional one-year period from the date of their acceptance after replacement. In the event that a replacement plant is not acceptable during or at the end of the said extended warranty period, the Owner may elect one more replacement or credit for each item.
- D. At the end of the warranty period, and no less than five days prior to Final Inspection, staking, guying materials and tree ties shall be removed from the site or as directed by the Landscape Architect.

902-1.9 FINAL INSPECTION AND FINAL ACCEPTANCE

- A. At the end of the one year warranty period, the Owner and Landscape Architect will, upon written notice of end of warranty period, inspect the work for Final Acceptance. Request shall be received at least ten calendar days before the anticipated date for Final Inspection.
- B. Upon completion and re-inspection of full repairs or replacements necessary in the judgment of the Owner and Landscape Architect at that time, the Landscape Architect will recommend to the Owner that Final Acceptance of the Work of the Section be given.

PRODUCTS

902-2.1 MATERIALS

- A. Plant Materials
 - 1. Name and Variety: Provide plant materials true to name and variety described in "Hortus Third," Cornell University, 1976, or by cultivars generally accepted in the trade.
 - 2. All plant material shall be No. 1 grade nursery stock grown in accordance with good horticultural practices. Plants shall be free of disease, insects, eggs, larvae, and defects such as knots, sunscald, injuries, abrasions, or disfigurement. They shall be sound, healthy, and vigorous, of uniform growth, typical of the species and variety, well formed, free from irregularities, with the minimum quality conforming to American Standard for Nursery Stock.
 - 3. Plants indicated, as specimen shall be exceptionally heavy, symmetrical, and tightly knit, cultured, to be unquestionably superior in form, branching, compactness, and symmetry.
 - 4. The minimum acceptable sizes of all plants shall be measured before pruning and with branches in normal position. Unless otherwise designated on the plant list, all plant dimensions shall conform to those listed in ANSI Z60.1, American Standard for Nursery Stock.
 - 5. Branching point is the distance above ground where balanced branching occurs or where a dimension in trunk appears to form the head of the tree.
 - 6. Root Treatment: Root treatments on all plants shall conform to the requirements of ANSI Z60.1. Plants shall be dug and prepared for shipment in a manner that will not cause damage to branches, shape, and future development after planting. B&B Trees shall not be accepted between months of May 1st to October 1st due to Texas drought and heat conditions.
 - a. Balled and burlapped ("B&B") plants shall have a firm, natural ball of earth of sufficient diameter and depth to encompass the fibrous and feeding root systems necessary for full recovery of the plant. Balls shall be securely wrapped with burlap and bound with cord or a wire basket. Ball sizes shall meet the requirements of the ANSI Z60.1, or as indicated on the Drawings.
 - b. Plants furnished in containers shall have the roots well established in the soil mass and shall have growth in the container for at least one growing season. Containers shall be large enough to provide earth-root mass of adequate size to support the plant tops being grown. For container-grown trees, container size shall provide a minimum of 9 inches of root mass per caliper inch of trunk. Plants, other than ground covers, over-established in the container, as evidenced by pot-bound root ends, will not be accepted.
 - 7. Plant materials shall be subject to final approval by the Landscape Architect at the job site.
- B. Soil Amendments – (Delivery tickets shall be provided by contractor for measuring of quantities.)
 - 1. Organic matter shall be “fully decomposed,” supplied by Living Earth Technology 972-869-4332.

2. Sand shall be clean, coarse, ungraded, meeting the requirements of ASTM C33 for fine aggregates.
3. Superphosphate shall be composed of finely ground phosphate rock, as commonly used for agricultural purposes, containing not less than 15 percent available phosphoric acid.
4. Fertilizer shall be granular fertilizer containing natural ingredients such as, but not limited to, composted manures, leather tankage and/or various meals, with a minimum percentage by weight of 3-1-2 nitrogen, available phosphoric acid, and potash. The following products are approved:
 - a. GreenSense by Ideal Technologies, Inc., Irving, Texas.
 - b. SUSTANE by Sustane Corporation, Chaska, Minnesota.
 - c. Texas - Tee by Maestro-Gro.
5. Elemental sulphur shall be finely ground horticultural grade material containing at least 95 percent purity. Material shall be delivered in unopened containers containing manufacturer's warranty analysis.

C. Bark Mulch

1. Mulch material shall be finely shredded, fibrous hardwood bark mulch, free from other foreign material and partially decomposed, passing a 1 1/2 inch screen and free of growth or germination inhibiting ingredients supplied by Living Earth Technology. 972-869-4332.

D. Filter fabric shall be DeWitt Pro5, or approved equal.

902-2.2 SOIL MIXES - (Delivery tickets shall be provided by contractor for measuring of quantities.)

- A. Shrub, ground cover and seasonal color beds shall have an enriched native soil comprised of organic matter and sand. Depth of bed as detailed in plans. Screened for maximum 1" particle size and blended for a uniform mixture, containing a minimum 45% organic material, supplied by Living Earth Technology, 972-869-9498.

902-2.3 ANTIDESICCANT

- A. Antidesiccant shall be an emulsion specifically manufactured for plant protection, which provides a protective film over plant surfaces, which is permeable enough to permit transpiration. Antidesiccant shall be delivered in manufacturer's sealed containers and shall contain manufacturer's printed instructions for use.
- B. Antidesiccant shall be equal to the following:

<u>Product</u>	<u>Manufacturer</u>
Wilt-Pruf	Wilt-Pruf Products, Inc. P.O. Box 4280 Greenwich, CT 06830

902-2.4 EDGING

- A. Steel edging shall be Ryerson Steel Landscaping Edging, manufactured by Ryerson, an Inland Steel Company, Chicago, IL 60680, or an approved equal. Steel edging shall be shop fabricated, 3/16 in. thick x 4 or 6 in. deep, galvanized steel, primed, and painted green. Edging shall be furnished in 20 ft. lengths.
 1. Steel edging shall have slotted holes for staking steel edging every 30 in. o.c.

1. Steel stakes shall be 16 in. long, tapered.

902-2.5 RIVER ROCK AND BOULDERS

- A. River rock shall be smooth, oval shaped Colorado River rock varying in size from 4" to 8" rock lengths. River rock shall not be supplied less than 4" lengths. Widths of river rock may vary.
- B. Boulders shall be featherlight, moss boulders or approved equal; generally dark brown to black in color as to contrast with the river rock. Size, shape and installation method of the boulders shall be as indicated in the detail drawings.

EXECUTION

902-3.1 VEGETATION REMOVAL

- A. Strip existing aggregates, granites, edging, plant material, grass and weeds, including roots, from all bed areas, leaving the soil surface one inch below finished grade.
- B. Herbicides: Apply specific herbicide to eradicate vegetation within bed areas.

902-3.2 PLANTING

- A. Excavation
 1. Rocks and other underground obstructions shall be removed to a depth necessary to permit proper planting according to plans and specifications. If underground utilities or other structural obstructions are encountered, the Landscape Architect will determine alternate planting locations.
 2. Plant pits shall be dug only by methods approved by the Landscape Architect.
 - a. Planting pits shall be round, with vertical sides and flat bottoms, and sized in accordance with outlines and dimensions shown on the drawings.
 - b. If rotating augers or other mechanical diggers are used to excavate holes, the vertical sides of the pits shall be scarified, fractured, or otherwise broken down to eliminate impervious surfaces.
 - c. Loosen or scarify in the bottom of all plant pits to a depth of 4 inches.
 - d. Over excavate the tree pits to remove an additional 12 inches of impervious materials.
 3. Excavated material that is not conducive to plant growth will not be used for backfill in any planter or planting pit and shall be removed to an area designated by the Owner or Owner Representative.
- B. Planting
 1. Trees: Place a minimum of 4 inches of compacted planting mixture in the bottom of the pit or to depth necessary to set the plant 2 inches above finished grade to insure that the root flare is not covered. Set the plant in the pit to the proper grade and position, faced to give the best appearance or relationship to one another and adjacent structures. Cut away burlap, rope, wire, or other wrapping materials from the top of the ball and remove. Do not remove burlap or ties from sides or bottom of ball. If plastic wrap or other non-degradable materials are used in lieu of burlap, completely remove them before placing of backfill. Cleanly cut off broken or frayed roots and sever the sides of the root ball of container-grown trees in several places. Place native soil or planting mixture (in cases of rock) around the ball and carefully compact to avoid injury to the roots and to fill the voids. After backfilling planting pit approximately two-thirds full, add water and allow planting mixture to settle. After the water has been

- absorbed, fill the planting pit with additional native soil or planting mixture. Tamp lightly to grade, place a 1-inch layer of organic matter over planting mixture, and form a watering basin of the size indicated on the drawings. Do not cover the tree root flare.
2. Container-grown shrubs, ground cover, and vines: Remove containers before planting and sever the sides of root ball in several places, loosening the roots on the outside of the ball sufficiently to encourage rapid root extension into the surrounding soil and to prevent girding of root mass.

C. Mulching

1. Mulching shall take place within 48 hours after planting.
2. Mulch plant beds, tree, and shrub planting pits to a uniform depth of 3 inches.
3. Mulch shall be kept out of the crowns of shrubs, away from tree trunks, and off buildings, sidewalks, light standards, and other structures.

D. Pruning

1. Shrubs
 - a. Prune shrubs by removing all dead wood and broken branches, thinning out canes and cutting back or removing unsymmetrical branches. Pruning shall result in a loose outline conforming to the general shape of the shrub type. Do not use hedge shears.

E. Edging

1. Steel edging shall be installed at locations indicated on the Drawings. Where required, edging shall be cut square and accurately to required length.
2. Steel edging shall be securely staked in required position. Stakes shall be driven every 30 in. o.c. along length of edging.
3. Adjacent lengths of edging shall overlap eight inches.
4. Edging shall be set plumb and vertical at required line and grade. Straight sections shall not be wavy; curved sections shall be smooth and shall have no kinks or sharp bends.
5. Top of edging shall be set in 3/4 in. above finished grade.
6. All corners shall be of 1 piece. Minimum length of short leg shall be not less than 5 ft.

F. Maintenance

1. The maintenance period shall commence when the written Notice of Substantial Completion is issued and shall continue as required until the end of the warranty period.
2. Plants shall be inspected at least once per week by the Contractor during the installation period and needed maintenance performed promptly. Monthly inspections should occur in the cool season and biweekly inspections in the warm season, during the one year warranty period.
3. The Contractor shall irrigate all plants adequately to maintain optimum supply of moisture within the root zone; recurring overly dry or wet conditions shall be grounds for rejection of plant material. If the irrigation system is inoperative, hand watering shall be accomplished from a source approved by the Owner. Water shall not be applied with a force that will displace mulch or cause soil erosion and shall not be applied so quickly that it cannot be absorbed by the mulch and plants.

4. Plants shall be pruned and mulch replaced as required.
5. Stakes and guys shall be adjusted or replaced as required. Repair eroded or damaged plant saucers.
6. Maintain all plant beds and saucers weed free at all times.
7. Keep plants free of insects and disease. All insecticides and fungicides applied to control pests and maintain plants in a healthy growing condition shall be approved by the Owner.
8. Fertilize plants at least twice during the warranty period. Fertilization shall be applied by topdressing 2 pounds per 100 square feet of bed area, and 3 to 5 pound each tree. Fertilizer for the application shall be a controlled release type used for the installation.
9. Remove, at no cost to Owner, dead and unacceptable plants, as their condition becomes apparent. A dead or unacceptable plant is defined by more than 20% of the foliage or branches are dead.

902-3.3 APPLICATION OF FERTILIZER

- A. Organic Fertilizer: Planting beds shall be fertilized two times per year (March and October) with Organic Fertilizer at a minimum rate of 12 lb. per 1,000 square ft. Rate of application shall be varied depending on fertilizer type used, weather conditions, and overall soil conditions to produce a consistent growth and color to the plantings. After application of fertilizer, planting beds shall be thoroughly watered.

902-3.4 CLEANUP AND PROTECTION

- A. Cleanup
 1. Excess and waste material shall be removed daily.
 2. When planting in an area has been completed, the area shall be cleared of all debris, soil piles, and containers.
 3. At least one paved pedestrian access route and one paved vehicular access route to each building shall be kept clean at all times. Other paving shall be cleaned when work in adjacent areas is completed.
- B. Repairs: Any damage to existing landscape, paving, or other such features because of work related to this contract shall be repaired and restored to its original condition.
- C. Protection: Protect landscape work and materials from damage due to landscape operations, operations by other Contractors, trades, and trespassers. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged landscape work as directed.

METHOD OF MEASUREMENT

902-4.1 Shrubs, groundcover and boulders will be measured for payment per each unit, complete and installed, and accepted by the Engineer.

902-4.2 Mulch will be measured for payment by the cubic yard, complete and installed, and accepted by the engineer.

902-4.3 Colorado River Rock will be measured for payment by the square yard, complete and installed, and accepted by the engineer.

902-4.4 6 inch Steel Edging will be measured for payment by the linear foot, complete and installed, and accepted by the engineer.

BASIS OF PAYMENT

902-5.1 Payment shall be made at the respective contract price per each for Shrubs, Groundcover, and Boulders, per cubic yard for Mulch, per square yard for Colorado River Rock, and per linear foot of 6 inch Steel Edging. This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item T-902-5.1	1 Gallon Shrubs	per each
Item T-902-5.2	1 Gallon Groundcover	per each
Item T-902-5.3	Mulch	per cubic yard
Item T-902-5.4	Colorado River Rock	per square yard
Item T-902-5.5	6 inch Steel Edging	per linear foot
Item T-902-5.6	Boulders	per each

END OF ITEM T-902

ITEM T-906 IRRIGATION
(Non-standard FAA Specification)

GENERAL

906-1.1 RELATED DOCUMENTS: The Drawings, Division 0 and Division 1 apply to the work under this Section.

906-1.2 SCOPE:

A. Work Included:

Furnishing and installing a complete irrigation system.
Trenching and backfill.
Furnishing and installing backflow prevention devices.
Furnishing and installing sleeves for irrigation piping and remote control valves where indicated.
Installation of water meters and taps.
Inspections and tests.

B. Related Work in Other Sections:

Lawns and Grasses	Section T-901
Trees, Shrubs and Ground Cover	Section T-902

906-1.3 INTENT OF THE DRAWINGS: All piping layout shown on the drawings are essentially diagrammatic for installation purposes. Locations of all, valves, piping, drip lines, wiring, etc., shall be established by the Contractor at the time of construction. Spacing of the sprinkler heads, drip lines, and quick coupling valves are shown on the drawings and shall be exceeded only with permission of the City of Dallas.

906-1.4 QUALITY ASSURANCE:

A. Requirements of Regulatory Agencies:

1. All work and materials shall be in full accordance with latest rules and regulations of safety orders of Division of Industrial Safety; the Uniform Plumbing Code and other applicable laws or regulations, including the City of Dallas Plumbing Code and Section 34 of the TNRCC Texas Water Code.
2. Nothing in these Drawings or Specifications is to be construed to permit work not conforming to these codes. Should the Contract Documents be at variance with the aforementioned rules and regulations, notify Landscape Architect and get his instructions before proceeding with the work affected.

B. Testing:

1. Preliminary review of completed installation will be made by Landscape Architect prior to backfilling of trenches and during hydrostatic testing.
2. Final review shall be made in conjunction with the final review of grass, groundcover, shrub and tree planting.

906-1.5 SUBMITTALS:

- A. Furnish required copies of manufacturer's literature, certifications, and operating instructions for the complete list of materials, for the following items:
1. Irrigation Controllers.
 2. Double Check Valves.
 3. Gate Valves.
 4. Drip Lines
 5. Pipe and Fittings.
 6. Remote Control Valves.
 7. Valve Boxes.
- B. Substitutions:
1. Specific reference to manufacturers' names and products specified in this Section are used as standards, but this implies no right to substitute other material or methods without written approval of the Landscape Architect.
 2. Installation of any approved substitution is Contractor's responsibility. Any changes required for installation of any approved substitution must be made to the satisfaction of Landscape Architect and without additional cost to the City of Dallas.
 3. Approval by Landscape Architect of substituted equipment and/or dimensional drawings does not waive these requirements.
- C. Record Irrigation Drawings: Contractor shall furnish Record Drawings of the complete irrigation system in accordance with the General and Special Conditions. Procure from the Landscape Architect full-sized copies of Construction Drawings. Contractor shall have an electronic or hard copy of the Construction drawings on the construction site at all times while the irrigation system is being installed. Contractor shall make a daily record of all work installed during each day. Actual location of valves and quick couplers and all irrigation and drainage piping shall be shown on the prints by dimensions from easily identified permanent features, such as buildings, curbs, fences, walks or property lines. Drawings shall show approved substitutions, if any, of material including manufacturer's name, model number, and catalogue year. The drawings shall be to scale and all indications shall be clear and legible. All information noted on the print shall be transferred electronically by the Contractor and all indications shall be recorded in a neat, orderly way. The recorded electronic copy shall be turned over to the Landscape Architect at or before the Final Acceptance of the project.

906-1.6 JOB CONDITIONS:

- A. Contractor shall acquaint himself with all site conditions. Should utilities or other work not shown on the plans be found during excavations, Contractor shall promptly notify Landscape Architect for instructions as to further action. Failure to do so will make Contractor liable for any and all damage thereto arising from his operations subsequent to discovery of such utilities not shown on plans.

- B. Contractor shall take necessary precautions to protect site conditions, underground utilities and portions of the existing irrigation system to remain. Should damage be incurred, the Contractor shall repair damage to its original condition or furnish and install equal replacement at his expense.
- C. Existing Irrigation System: All existing irrigation circuits shall be kept in operation at all times. If the existing system is damaged by this construction, Contractor shall be responsible for immediate repair of such damage. After each repair, all components of the repaired circuit shall be removed so that the lines can be cleared of all dirt and foreign matter.

906-1.7 FINAL ACCEPTANCE: Work under this Section will be accepted by Landscape Architect upon satisfactory completion of all work. Upon Final Acceptance, City of Dallas will assume responsibility for maintenance of the work. Said assumption does not relieve Contractor of obligations under Warranty.

906-1.8 WARRANTY:

- A. In addition to manufacturer's warranty's or warranties, Contractor shall warrant all work for one year from the date of Final Acceptance against defects in material, equipment and workmanship. Warranty shall also cover repair of damage to any part of the premises resulting from leaks or other defects in materials, equipment and workmanship to the satisfaction of the City of Dallas.
- B. Contractor shall not be held responsible for failures due to neglect by the city, vandalism, etc., during Warranty Period. Report such conditions to Landscape Architect in writing.

906-1.9 CLEAN UP: Keep all areas of work clean, neat, and orderly at all times. Keep all paved areas clean during installation operations.

MATERIALS

906-2.1 MATERIALS: Materials throughout the system shall be as specified and/or noted on the Drawings, new and in perfect condition.

906-2.2 WATER METER(S): Shall be installed in accordance with the local water district's requirements.

906-2.3 DOUBLE CHECK - DOUBLE GATE VALVE ASSEMBLY:

- A. Assembly to be Febco LF850-QTDC for size sizes ½" to 2", or for sizes 2½" to 4", use 850-LGDC below grade assembly or approved equal.
- B. Shall be installed in accordance with local codes and regulations.

906-2.4 PIPE:

- A. Piping on pressure side of irrigation control valves:
 - 1. Two and one-half (2 1/2") inch and smaller - To be polyvinyl chloride (PVC) 1120-1220, PVC Schedule 40 IPS Plastic Pipe, and shall conform to ASTM D-2241-73.
 - 2. One-half (1/2") inch - To be polyvinyl chloride (PVC) 1120-1220, PVC Schedule 40 IPS Plastic Pipe.
- B. Piping on non-pressure side of irrigation control valves:

1. Polyvinyl chloride (PVC) 1120-1220, SDR 21.0, Class 200, and shall conform to ASTM D-2241-73, except one-half (1/2") inch diameter shall be Class 315.
- C. Identification: All piping shall be continuously and permanently marked with the following:
 1. Manufacturer's name or trademark, size, schedule, and type of pipe, working pressure at 73 degrees F. and National Sanitation Foundation (N.S.F.) approval.

906-2.5 FITTINGS:

A. Fittings for Solvent-Welded Pipe:

1. Schedule 40, polyvinyl chloride, standard weight, as manufactured by "Sloane", "Lasco", or approved equal, to meet ASTM D-2466-73 and D-2467-73.
2. Threaded PVC nipples - Schedule 80 PVC.

906-2.6 SLEEVE FOR CONTROL WIRE AND WATER LINE: PVC 1126-1220, Schedule 40 pipe or Schedule 40 galvanized steel pipe.

906-2.7 IRRIGATION CONTROLLERS:

Controller unit to be Motorola "IRRInet-M (intrac)". For 24-station, use IS-R3A-IU-SS AC, or for 32-station, use IS-R4A-IU-SS AC with Stainless Steel Pedestal and field transmitter. Controller shall work and communicate effectively with existing Central Control System. Each control unit shall have a latching solenoid on the electric control valve. For each valve, 1 (one) field transmitter shall be provided to the City of Dallas representative.

For controller's independent from the Central Control System, provide Rainbird "ESP-SMT4" outdoor wall-mount or approved equal.

906-2.8 RAIN SENSING DEVICE:

Rain sensing device to be Rainbird RSD- BEX or approved equal.
Follow manufacturer's instructions and recommendations for installation.

906-2.9 REMOTE CONTROL VALVES:

- A. Valve to be of size and manufacturer shown on drawings, slow acting valves.
- B. Each electric valve to require a separate latching solenoid that will operate with the field transmitter controller.

906-2.10 CONTROL WIRE:

- A. Wire: Solid copper wire, U.L. approved for direct burial in ground. Minimum gauge: #14 UF (#12 UF for runs over 1,000 LF). Common ground wire shall be white in color.
- B. Splicing Materials: Scotchlock Spring Connector. "Scotchlock" #3576 Sealing Pack.

906-2.11 VALVE BOXES: To be injection-moulded of Polyesters and fibrous inorganic temperature resistant components. Box shall provide adequate clearance to operate and service valve. Box and lid shall be as manufactured by "Ametek", "Christy", "Carson", or equal.

- A. For Remote Control and Quick Coupler Valves: Shall be rectangular, approximately ten (10") inches by fourteen (14") inches inside dimensions by fifteen (15") inches deep.

- B. For Gate Valves: Shall be round, approximately nine (9") inches inside diameter by ten (10") inches deep.
- C. Valve Box Lids shall be brown in color in mulched or rocked landscape areas, shall be green in turf or ground cover areas and purple for quick coupler valves.

906-2.12 AND BACKFILL: Sand for backfill shall be clean masonry sand free of stones and/or debris.

906-2.13 DRIP SYSTEM:

- A. Remote Control Valve – For Drip Zones 3GPM to 19GPM, install Rainbird XCZ-PRB-100-COM Control Zone Kit. For Drip Zones 20GPM to 40GPM, install Rainbird XCZ-PRB-150-COM Control Zone Kit or approved equal.
- B. Landscape Drip Lines - Shall be installed as shown on Detail Sheets. Drip Lines shall be Netafim Techline CV (0.9GPH emitter) spaced at 12 inches or approved equal.
- C. Line Flushing Valves and Air Vacuum Reliefs valve to be installed per Detail Sheet and Manufacturer's recommendations.
- C. Fittings – Compression/insertion type fittings as manufactured by same as drip line.
- E. Valve Boxes – Ametek, Christy, Carson or approved equal.

EXECUTION

906-3.1 LAYOUT:

- A. No consideration will be given to any design changes until after the awarding of the contract. Should any changes be deemed necessary after award of contract, for proper installation and operation of the system, such changes shall be negotiated by the Landscape Architect (and based upon the Unit Price Schedule where applicable).
- B. Layout work as accurately as possible to drawings. Drawings are diagrammatic to the extent that line flushing valves, air vacuum relief valves, swing joints; offsets and all fittings are not shown.
- C. Full and complete coverage is required. Contractor shall make any necessary minor adjustments to layout required to achieve full coverage of irrigated areas at no additional cost to the City of Dallas.
- D. Where connections to existing stubouts are required, make necessary adjustments should stubs be located differently in the Drawings. Adjust layout as necessary to install around existing work.
- E. Where piping is shown to be under paved areas but running parallel and adjacent to planted area, the intent is to install piping in planted areas. Do not install directly over another line in same trench.
- F. The Contractor will stake out the location of each run of pipe and all sprinkler heads, drip lines, and valve locations prior to trenching. Before installation is started in a given area, the Landscape Architect shall check all locations and give his approval.

906-3.2 EXCAVATING AND TRENCHING:

- A. Perform all excavations as required for installation of work included under this Section, including shoring of earth banks, if necessary. Restore all surfaces, existing underground installations, etc., damaged or cut as a result of the excavations, to their original condition.
- B. Should utilities not shown on the plans be found during excavations, Contractor shall promptly notify Landscape Architect for instructions as to further action. Failure to do so will make Contractor liable for any and all damage thereto arising from his operations subsequent to discovery of such utilities. Indicate such utility crossings on the Record Drawings promptly.
- C. Dig trenches wide enough to allow a minimum of four (4") inches between parallel pipe lines. Trenches shall be of sufficient depth to provide minimum cover from finish grade as follows:
 - 1. Over pipe on pressure side of irrigation control valves, and quick coupling valves and control wires: (18) inches.
 - 2. Over pipe on non-pressure side of irrigation control valve: (12) inches.
 - 3. Where system is installed over structure, lay pipe on top of soil separator. Protect soil separator with two (2") inch layer of specified planting soil mix or sand.
 - 4. All PVC sleeves under paving shall be bedded with minimum of four (4") inches of sand backfill on all sides and have twenty four (24") inch cover.
 - 5. All mains shall be sloped to drain valves where applicable.
 - 6. Backfill all pressurized mains and marker boxes with a minimum of four (4") inches of sand backfill on all sides to protect lines and boxes from expansion and contraction.

906-3.3 BORING UNDER EXISTING PAVEMENTS:

- A. The boring shall proceed from a pit provided for the boring equipment and workmen. Excavation for pits and installation shall be as described under "Excavating and Trenching". The location of the pit shall not interfere with existing plant materials or structures designated to remain.
- B. Holes shall be bored mechanically. Where holes required are larger than two (2") inches, the bore shall be completed using a pilot hole. The two (2") inch hole shall be bored the entire length of the crossing and shall be checked on the opposite end for line and grade. If acceptable, this hole shall serve as the centerline for the larger hole to be bored. Lateral and vertical tolerance is limited to one (1") inch in ten (10') feet, provided that the variation be regular and occur only in one direction.
- C. The use of water or other fluids in connection with the boring operation will be permitted only to lubricate cutting. Jetting or missiling shall not be permitted. (In unconsolidated soil formations, a gel-forming colloidal drilling fluid consisting of at least ten (10%) percent of high-grade processed bentonite may be used to consolidate cuttings, seal the hole walls and furnish lubrication for subsequent removal of cuttings and installation of the pipe.)
- D. Excavated material will be placed near the top of the working pit and disposed of as required.
- E. Refer to other authorities for jurisdiction over other installations.

906-3.4 WATER METER(S): If required, install as per the requirements of the local water district and local codes and regulations.

906-3.5 BACKFLOW PREVENTION DEVICE: Install according to local codes and regulations and follow manufacturer's latest printed installation instructions.

906-3.6 CONDUITS AND SLEEVES:

- A. Furnish and install conduit where control wires pass under or through walls. Conduits to be of adequate size to accommodate retrieval for repair of wiring and shall extend twelve (12") inches beyond edge of walls.
- B. Install sleeves for all pipes passing through or under walls, walks and paving as shown on Drawings. Sleeving to be of adequate size to accommodate retrieval for repair of wiring or piping and shall extend twelve (12") inches beyond edge of paving or other construction.
- C. Coordinate conduit and sleeve installation with other trades as required.

906-3.7 PIPE LINE ASSEMBLY:

A. General:

- 1. Install pipes and fittings in accordance with manufacturer's latest printed instructions.
- 2. Clean all pipes and fittings of dirt, scales and moisture before assembly.
- 3. All pipe, fittings and valves, etc., shall be carefully placed in the trenches. Interior of pipes shall be kept free from dirt and debris and when pipe laying is not in progress, open ends of pipe shall be closed by approved means.
- 4. All lateral connections to the mainline as well as all other connections shall be made to the side of the mainline pipe. No connections to the top of the line shall be allowed.

B. Solvent-Welded Joints for PVC Pipes:

- 1. Use solvents and methods by pipe manufacturer.
- 2. Cure joint a minimum of one hour before applying any external stress on the piping and at least twenty four (24) hours before placing the joint under water pressure.

C. Threaded Joints for Plastic Pipes:

- 1. Use Teflon tape on the threaded PVC fittings except where Marlex fittings are used.
- 2. Use strap-type friction wrench only. Do not use metal-jawed wrench.
- 3. When connection is plastic to metal, male adaptors shall be used. The male adaptor shall be hand tightened, plus one turn with a strap wrench. Joint compound shall be Teflon tape or equal upon approval.

D. Threaded Joints for Galvanized Steel Pipes:

1. Factory-made nipples shall be used wherever possible. Field-cut threads in pipes will be permitted only where absolutely necessary; when field threading, cut threads accurately on axis with sharp dies.
2. Use pipe joint compound to make threads only.

E. Laying of Pipe:

1. Pipes shall be bedded in at least two (2") inches of finely divided material with no rocks or clods over one (1") inch diameter to provide a uniform bearing.
2. Pipe shall be snaked from side to side of trench bottom to allow for expansion and contraction. One additional foot per 100 feet of pipe is the minimum allowance for snaking.
3. Do not lay PVC pipe when there is water in the trench.
4. Plastic pipe shall be installed in a manner so as to provide for expansion and contraction as recommended by the manufacturer.
5. Plastic pipe shall be cut with PVC pipe cutters or hacksaw, or in a manner so as to ensure a square cut. Burrs at cut ends shall be removed prior to installation so that a smooth unobstructed flow will be obtained.
6. All plastic to plastic joints shall be solvent-weld joints or slip seal joints. Only the solvent recommended by the pipe manufacturer shall be used. All plastic pipe and fittings shall be installed as outlined and instructed by the pipe manufacturer and it shall be the Contractor's responsibility to make arrangements with the pipe manufacturer for any field assistance that may be necessary. The Contractor shall assume full responsibility for the correct installation.
7. Unless waived by the Landscape Architect, the Contractor shall install bell type or approved slip joint fitting at a minimum of twenty (20') feet OC for all pressurized mains.

906-3.8 IRRIGATION CONTROL VALVES: Install control valves in valve boxes where shown and group together where practical. Place no closer than twelve (12") inches to walk edges, buildings and walls. Valve boxes shall be flush with finish grade.

906-3.9 AUTOMATIC CONTROLLER:

- A. Coordinate location with City representative and install per manufacturer's latest printed instructions.
- B. Fully integrate controller intended to be controlled by existing Central Control system and ensure effective remote communication between controller and Central Control computer interface.
- C. Connect remote control valves to controller in clockwise sequence to correspond with station setting beginning with Stations 1, 2, 3, etc.

906-3.10 CONTROL WIRING: see section 906-2.8

906-3.11 CLOSING OF PIPE AND FLUSHING OF LINES:

- A. Cap or plug all openings as soon as lines have been installed to prevent entrance of materials that would obstruct the pipe. Leave in place until removal is necessary for completion of installation.
- B. Thoroughly flush out all water lines before installing heads, valves and other hydrants.
- C. Test as specified.
- D. Upon completion of testing, complete assembly and adjust sprinkler heads and/or drip lines for proper distribution.

906-3.12 BACKFILL AND COMPACTING:

- A. After system is operating and required tests and inspections have been made, backfill excavations and trenches with clean soil, free of debris.
- B. Backfill for all trenches, regardless of the type of pipe covered, shall be compacted to minimum ninety five (95%) percent density under pavements, eighty five (85%) percent under planted areas.
- C. Compact trenches in areas to be planted by thoroughly flooding the backfill. Jetting process may be used in those areas.
- D. Dress off all areas to finish grades.

906-3.13 WARRANTY: The Contractor shall warrant all materials and workmanship for (one (1) year from Final Acceptance)

906-3.14 CLEAN UP: Clean up and remove all debris from the entire work area including debris from trenches prior to Final Acceptance to satisfaction of Landscape Architect.

METHOD OF MEASUREMENT

906-4.1 The irrigation system be measured for payment per square foot, complete and installed, and accepted by the Engineer.

BASIS OF PAYMENT

906-5.1 Payment shall be made at the respective contract price per square yard for irrigation. This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item T-906-5.1 Irrigation system per square foot

END OF ITEM T-906

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**Love Field Modernization Program
Airside Apron Improvements**

Addendum 1, October 21, 2010

**Questions
Received as of October 18, 2010**

**Questions Received October 19-25 will be Answered in Addendum 2
Addendum 2 will be issued October 28, 2010**

- 1) What is the official bid date and time for this proposal? The discussion at the PreBid meeting was a due date of November 4th at 10:00AM. The "Construction Advertisement for Bids" states the date "on Thursdays" at 1:00PM.

Near the bottom of the advertisement, the bid opening date of November 4, 2010 is provided. Upon consideration of several requests, the bid opening date has been moved to November 11, 2010. Bids must be received by 1:00 pm on that date.

- 2) The "Contractor Check List for Bid Package" requires the individual bid items to be in both numeric and alphabetic unit price. The City of Dallas allows excel spreadsheets to be submitted for their bids with numbers only. With the large quantity of bid items, can this requirement for the words for the unit price be waived? Does Huitt Zollars have an excel spreadsheet that could be given to the contractors to submit our bids?

As part of Addendum 1, an Excel spreadsheet for this project has been posted on the Dallas City Hall website at the following location:
<https://bids.dallascityhall.com/webapp/VSSPROD/Advantage>. **The requirement for alphabetic unit prices is waived with the exception of hand-written entries on the bid forms. Hand-written entries must be in numbers and words for each unit price.**

- 3) The proposed concrete batch plant site shown on plan sheet G701 is not large enough. If the buildings on the east side of the lot are remaining, the minimum distance required from the batch point to the nearest building cannot be met. The proposed site has enough area for the concrete plant, but there is no room for stockpiles of coarse and fine aggregates. The contractor will be required to have materials stockpiled and approved prior to production of the concrete. Is there another site available to place the concrete plant?

No other batch plant site will be provided. The batch plant site has been somewhat enlarged and will be shown on the revised plan sheet G701 to be published in Addendum 2.

- 4) Will the contract be awarded on the basis of lowest price received at bid time or the lowest responsible bid?

The contract will be awarded to the contractor with the lowest responsive, responsible bid.

- 5) On plan sheet G701, will the dates shown for the closures be revised to match the proposed NTP?

The runway closure dates listed on sheet G701 are for other, unrelated projects are provided for information only. Runway closure to accommodate Airside Apron Improvements work is not anticipated.

- 6) Will the owner consider moving the bid date back at least one week due to the complex nature, large DBE percentage and varied scopes of specialty subcontractor work?

Upon consideration of several requests, the bid opening date has been moved to November 11, 2010. Bids must be received by 1:00 pm on that date.

- 7) How many days are there to complete the project? Working days or calendar days?

The project has contractual milestone dates rather than “days to complete.” Milestone dates are found in Section 8.5 and Exhibit E of the Agreement Between Southwest and Contractor. For insurance and bonding estimation purposes, it would be prudent to anticipate signing a contract on or about December 1, 2010 with the contract end date of September 30, 2015.

- 8) What are the liquidated damages for the project?

Liquidated damages are found in Section 8.5 of the Agreement Between Southwest and Contractor.

- 9) Is crushed concrete allowed for the base and cement treated base courses?

Crushed concrete is allowed for aggregate base course, drainage layer, and cement-treated base, as long as the specification requirements for each item are met.

- 10) Can the bid date be extended one week to move away from the TxDOT Letting on November 4 & 5 2010?

Upon consideration of several requests, the bid opening date has been moved to November 11, 2010. Bids must be received by 1:00 pm on that date.

- 11) Will the owner allow for electronic bid form?

Yes. An Excel spreadsheet for this project is provided as part of Addendum 1 and has been posted on the Dallas City Hall website at the following location: <https://bids.dallascityhall.com/webapp/VSSPROD/Advantage>. The requirement for alphabetic unit prices is waived with the exception of hand-written entries on the bid forms. Hand-written entries must be in numbers and words for each unit price.

- 12) We respectfully request that the Bid due date be extended by 1 week from November 4 to November 11 in order to give us enough time to prepare our best proposal.

Upon consideration of several requests, the bid opening date has been moved to November 11, 2010. Bids must be received by 1:00 pm on that date.

- 13) We respectfully request that the Question deadline be extended by 1 week from October 18 to October 25 in order to give us enough time to receive questions from subcontractors and suppliers and for us to thoroughly review the current Bid Documents and the new Documents expected to be issued in Addendum No. 1.

The date/time for submitting written questions has been extended until 8 am Monday, October 25, 2010.

- 14) Please provide an electronic version of the Bid Schedule in Excel format which we can use for submitting our price proposal.

An Excel spreadsheet for this project is provided as part of Addendum 1 and has been posted on the Dallas City Hall website at the following location: <https://bids.dallascityhall.com/webapp/VSSPROD/Advantage>. The requirement for alphabetic unit prices is waived with the exception of hand-written entries on the bid forms. Hand-written entries must be in numbers and words for each unit price.

- 15) Please provide a de-lineation of landside vs airside work for the Hydrant Fueling System either by Phase number or Station number. Please also address or describe your intent for the security, safety, and day vs night requirements for the installation of the 42" Casing.

In reviewing the project phasing plans, it appears that Hydrant Fueling System work in Phase 3 (and all subphases) can be done under "landside" conditions. This would mean that workers would not have to obtain red Love Field badges for Phase 3. It appears that all Hydrant Fueling System work in Phase 4 and for the main transmission lines to the tank farm would be done under "airside" conditions. This would mean that during Phase 4 and the installation of the main transmission lines, all workers must either obtain a red Love Field SIDA badge or be under escort of individuals who have Love Field SIDA badges that include Escort priveledges. Please keep in mind that even during Phase 3, many deliveries would need to be delivered on the airside, and the contractor is responsible for escorting delivery vehicles.

- 16) The BID Opening for the Airside Apron is on the same day as the TXDOT LETTING in November. Is it possible to get a two week extension on the BID date?

Upon consideration of several requests, the bid opening date has been moved to November 11, 2010. Bids must be received by 1:00 pm on that date.

- 17) Due to the amount of information to be reviewed, and the fact that the due date is the same as the TXDOT letting date. We would like to request a two week extension?

Upon consideration of several requests, the bid opening date has been moved to November 11, 2010. Bids must be received by 1:00 pm on that date.

- 18) Will Exhibit F for the Insurance Requirements be provided?

Exhibit F with Insurance Requirements will be provided in Addendum 2 scheduled to go out on October 28.

- 19) Due to the amount of bid items, will an excel spreadsheet bid form be allowed?

Yes. The Excel spreadsheet is provided as part of this addendum. All formulas have been removed. Bidders will have to enter and be responsible for all formulas.

- 20) In the meeting it was mentioned that the time bids are due is 10AM. In the proposal documents it states 1 PM. Please Clarify?

Bids must be received by 1:00 pm on November 11 and will be opened at 2 pm.

- 21) The contract requires a Dual or Multiple Obligee Rider be included with the bonds naming as dual obligees the LFAMC, the City and any other person/entity that SW may require.

While the providing of such rider is not unusual, the language required by the sureties in the rider is unacceptable to the Dual/Multiple Obligees. The language requires that the Obligees take over payment obligations to the Contractor in the event the Owner (first Obligee) is not able to do so, and secondly allows the sureties to make payment to all the Obligees, and those Obligees then must determine the settlement of the funds. SWA may not be able to dictate the terms of the rider. Please Advise?

Question to be answered in Addendum 2.

- 22) Section 14.3.7 Agreement between SWA and Contractor. All subcontractors are required to be bonded. Would City and/or SWA delete that requirement, and leave it to the Contractor to determine whether or not subcontractors are bonded? The City and SWA and subcontractors and suppliers are protected by the bonds furnished by the Contractor. Requiring all subcontractors to be bonded ultimately increases the cost of the work, and potentially limits the subcontractor pool available for the project. The Dual/Multiple Obligee rider will be a MAJOR issue with the subcontractor bonds, and will truly limit the pool of available subcontractors.

Question to be answered in Addendum 2.

- 23) Under Agreement SWA and Contractor Section 7.4.2, If the Contractor wants to self perform work, he must obtain two competitive quotes to justify his self performance. Will the City/SWA waive this for self performance of work?

Question to be answered in Addendum 2.

- 24) Please provide a drawing showing existing typical sections for each thickness of concrete or asphalt paving to be removed or provide the as-built drawings for each thickness of existing concrete or asphalt paving.

Question to be answered in Addendum 2.

- 25) Sheet G703, Phasing Plan Phase 3A, Area 3A.03 shows Building Demolition by Others.

Sheets C001-010 show concrete pavement to be removed under the building areas that were demolished by others.

Is there concrete pavement under the building areas that still needs to be removed once the building contractor has completed the building demolition or did the building contractor remove the concrete pavement along with the building foundations?

What are the grades and elevations of the building demolition areas after the building contractor has finished with demolition?

Did the building contractor also remove existing base material under building demolition areas? .

Building slabs on grade have been or will be removed by others. Additional slabs or concrete paving were encountered at approximately 2 ft below surface grade at two locations and were left in place. The extent of the additional slabs or concrete paving is not known.

After the building demolition contractor completes his work, grades will match surrounding surface.

Existing base material was not removed.

- 26) On the Contractors Check List Item #1 Proposal Cover Sheet. Is there a standard Cover Letter that SWA requires? What are the contents of the cover letter?

No standard Cover Letter is required. The Proposal Cover Sheet should include:

Bidder's Name and Contact Person

Bidder's Address

Bidder's Phone Number

Bidder's Contact Person Email Address

Project Name: Airside Apron Improvements

LFMP Project Number: AAP025

Bid Date: November 11, 2010

- 27) On the Contractors Check List Item #4 Contractor Signature Sheet. Is the Contractor Signature Sheet the Final Sheet of the Bid Schedule? If not please advise where to find.

Yes.

- 28) Will Attachment A Certification of Non-Segregated Facilities be provided to the apparent low bidder?

Question to be answered in Addendum 2.

- 29) Will Attachment C Standard Form-LLL for the Disclosure of Lobby Activities be provided? Also does it need to be submitted with the proposal package or after award of project?

Question to be answered in Addendum 2.

- 30) The following Bid Items have 0 (zero) Quantity: 39-BB, 78-BB, 194-BB, 292-BB. Will this be revised?

Question to be answered in Addendum 2.

- 31) 15) A-37 of the Special Provisions states " The Contractor shall dispose of all approved excavated materials and debris inside the limits of Dallas Love Field". Can you be more specific as to where inside Dallas Love Field the Excavation and the debris is to disposed?

Question to be answered in Addendum 2.

- 32) Please provide location for stockpile of excess material produced from this project?

Question to be answered in Addendum 2.

- 33) If the Batch Plant Site is deemed to small, will a larger alternative site be provided?

No other batch plant site will be provided. The batch plant site has been somewhat enlarged and will be shown on the revised plan sheet G701 to be published in Addendum 2.

- 34) Under the Agreement Between Southwest and Contractor Section 12.11 Hazardous Materials States " Southwest and the City will endeavor to provide the Contractor with the reporting information on all known location of Hazardous Materials. Contractor shall not, however, be responsible for the handling, removal, or disposal of any Hazardous Materials occurring or existing on the Site, unless such Hazardous Materials were released or brought onto the site by the Contractor or any entity for which the Contractor is responsible." Bid Items 196-BB through 198-BB contradict the agreement and deal with the removal of contaminated soils. Which is correct? If the soils are to be removed by the contractor who assume ownership of the contaminated soils?

Contaminated soils are not considered to be "Hazardous Materials." The Contractor will be responsible for excavating, stockpiling, loading, and trucking contaminated soil to a disposal facility designated by Southwest. Southwest will directly pay the disposal facility. The City of Dallas or its designated representative will sign all contaminated soil manifests as the Owner and Generator of the contaminated soil. The contractor will not assume ownership of contaminated soil.

- 35) In the Agreement Between Southwest and Contractor, It states that the Program Development Agreement (PDA) is part of the contract documents. It also states " the contractor shall be bound by and shall comply with the provisions and requirements pertaining to the Contractor as set forth in the PDA, as if the Contractor itself executed the PDA." Can you please provide the PDA, The Program Procedure Manual, The Donation Agreement, Resolution No.08-3117, and Steering Committee resolutions for our review?

Question to be answered in Addendum 2.

- 36) Drawing XF 442 Detail 1 shows the Double Vent Pit. Section A-A refers to the plans for a portion of the overall depth. Drawing XF 220 shows DVP-1 at Sta 18+31.93, but does not show the pit in the profile. What is the overall depth for the Double Vent Pit?

Top Elevation is 474.98 (see drawing XF217), Inv of upper 10" is 459.56 (see drawing XF220), bottom of pit to Centerline of 10" is 28.5". Therefore, total DVP-1 pit depth is approximately 8'-2". Actual pit depth shall be verified during the submittal process.

- 37) Specification 33 52 43.14-1.1C provides a table which references System 6 for the Internal Coating of the Below Ground Concrete Vaults. There is no System 6 contained in this section, nor is there any further reference to coating the interior of belowground concrete vaults. Is the interior or exterior surfaces of concrete vaults IVV-1, 2, 3, and 4 required to be coated? If so, please provide the required specification(s).

Neither the interior nor exterior of the concrete vaults is to be coated under 33 52 43.14. However, piping shall be coated as outlined in 33 52 43.14. Refer to structural specifications for waterproofing requirements.

- 38) There is 10" Fuel System Carrier Pipe to be installed in 14" and 42" Casing Pipe. Is the carrier pipe to be bare on the exterior or is it to be coated? Please provide the required coating system for the pipe and weldjoints if required.

All carrier pipe either direct buried or within the casing shall be coated in accordance with System 3 Specification Section 33 52 43.14. Joints shall be coated in accordance with System 4 Section 33 52 43.14.

- 39) Is the 14" and 42" Casing Pipe required to be radiographed? Please provide the governing code, section, and acceptance criteria if required.

All casing pipe shall be welded in accordance with API 1104 unless the contractor elects to use an Interlocking Casing (see 33 52 43.08). Radiographic testing with a minimum of 10% of the welds to be tested (minimum of 1 weld in casings less than 10 welds). Welds to be tested will be chosen at random by the Owner or his representative. Failed welds will be repaired in accordance with API 1104 and retested. An additional weld shall be tested for each failed weld encountered.

- 40) Drawing XF 604, Note 1, listed under both Phase 3 and Phase 4 refers to Temporary Galvanic Anode Groundbeds. There are none shown on the drawings. Is there a requirement for Temporary Galvanic Anode Groundbeds?

All magnesium anode groundbeds associated with test stations TS-1 and TS-2, shown on drawing XF-601 (details on XF-602), are temporary. Temporary means that they will be disconnected from the fuel line once the existing impressed current system is connected to the pipe associated with Phases 3 and 4. The disconnection procedure is described on drawing XF-604.

- 41) The quantities shown on the Bid Schedule for item numbers 213, 214, 215, 216, and 217 do not remotely match the quantity Fuel System Piping shown on the drawings. Please review the quantities and clarify or correct as required.

Quantities listed on the Bid Schedule for items 213 – 217 have been revised to reflect those shown on the drawings. Revised quantities are included new Bid Schedule issued with Addendum 1.

- 42) Request clarification on the following: Paint Specification P-620 calls for the use of solvent based paint. Table 1 calls for the application rate to be 115 SF per gallon. The drawing detail sheets C960 and C961 states in the General Notes that the paint shall conform to FS TT-P-1952, which is Waterborne, and the application rate to be 95 – 105 SF per gallon.

Question to be answered in Addendum 2.