

CITY OF SAN ANTONIO
DEPARTMENT OF CAPITAL IMPROVEMENTS MANAGEMENT SERVICES
DEPARTMENT OF AVIATION



PROJECT NAME: RUNWAY 12R – 30L ELECTRICAL IMPROVEMENTS
AND TERMINAL AREA TAXIWAY IMPROVEMENTS
(PACKAGE 4)

PROJECT NO. 33-00178 & 33-00193
DATE: June 21, 2016

ADDENDUM NO. 5

This addendum shall be included in, and be considered a part of the plans and specification for the above named project. The Contractor shall be required to sign an Acknowledgement of the receipt of this Addendum at the time he receives it. The Acknowledgement must also be submitted with the bid package.

Addendum No. 5 is issued to notify you of the revisions and/or corrections to the following items that were posted on the CoSA website and/or included in the hard copy of the bid packages.

1. In Division A, **Remove** '025 UNIT PRICING FORM' in its entirety and **replace** with the attached '025 UNIT PRICING FORM', dated June 21, 2016, Addendum No. 5.
2. **Remove** '025 ELECTRONIC UNIT PRICING FORM' in its entirety and **replace** with the attached '025 ELECTRONIC UNIT PRICING FORM', dated June 21, 2016, Addendum No. 5.
3. In Division B, **Insert** 'B-07 Procedures for Obtaining Airport Personnel ID Media-Badge Airfield Driver's License (2-26-2015).pdf'
4. In Division F, **Remove** '100 Mobilization' in its entirety and **replace** with the attached '100 Mobilization', dated June 21, 2016, Addendum No. 5.
5. Drawings: **Remove** the following plan sheets and **Replace** with the attached sheets:

Sheet Number	Sheet Title	Description
16	C4.1	TYPICAL SECTIONS
92	C4.2	TYPICAL SECTIONS
117	C4.3	TYPICAL SECTIONS
134	C4.4	TYPICAL SECTIONS
135	C4.5	TYPICAL SECTIONS

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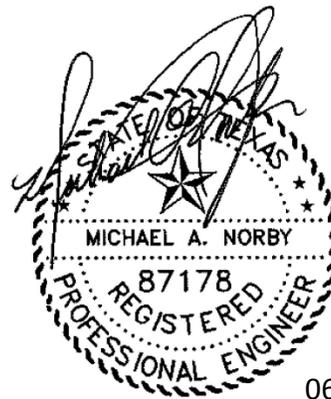
**PROJECT NAME: RUNWAY 12R – 30L ELECTRICAL IMPROVEMENTS
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(PACKAGE 4)**

**PROJECT NO. 33-00178 & 33-00193
DATE: June 21, 2016**

ADDENDUM NO. 5

List of Attachments

- 1) Addendum Number Five (5) Acknowledgement Form
- 2) '025 UNIT PRICING FORM', dated June 21, 2016, Addendum No. 5
- 3) '025 UNIT PRICING FORM' (Electronic Spreadsheet), dated June 21, 2016, Addendum No. 5
- 4) 'SUPPLEMENT TO STANDARD INSTRUCTIONS TO RESPONDENTS, dated June 21, 2016, Addendum No. 5
- 5) 'B-07 Procedures for Obtaining Airport Personnel ID Media-Badge Airfield Driver's License (2-26-2015)'
- 6) '100 MOBILIZATION FORM', dated June 21, 2016, Addendum No. 5.
- 7) Revised Plan Sheet drawings (5 sheets)
- 8) Requested Geotechnical Information



06/21/2016

END OF ADDENDUM NO. 5

CITY OF SAN ANTONIO
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PROJECT NO. 33-00178 & 33-00193
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ADDENDUM NO. 5

Contractor Questions: (For information only, the answers do not change or modify the contract documents in any manner)

1. **Q. Assuming the administrative NTP is issued on 10-24-16, the estimated delivery date for the generator required as part of the base bid is 5-1-17 which is past the 75 calendar day deadline of 3-18-17. Please advise if it is acceptable to install the generator after the Base bid deadline.**
A. Yes – It can be completed later but still within the project overall duration.

2. **Q. In the Supplement to Standard Instructions to Bidders (SUIB -1) the description of the new pavement section does not reflect what is shown in the drawings and bid form. Please clarify.**
A. SUIB-1 has been modified and is included in this Addendum.

3. **Specification section 501-4.10 (f) Joints calls for dowel bars at longitudinal construction joints to be bonded in drilled holes. Specification 501-4.10 g (2) Construction joints states that “install dowels and tie bars by the cast-in-place or the drill-and-dowel method. It goes on to say that they will be securely held in the proper horizontal and vertical position during placing and finishing operations, by means of devices fastened to the forms. Since there are some longitudinal construction joints, will either method be acceptable?**
A. Method is acceptable if it has prior approval of the engineer. Requires a submittal

4. **Specification section 501-4.1 Equipment, c Finishing Equipment states that “on projects requiring less than 500 square yard of cement concrete paving or requiring individual placement areas of less than 500 square yard , or irregular areas at locations inaccessible to slip-form paving equipment, concrete pavement may be placed with approved placement and finishing equipment using stationary side forms. Hand screeding and float finishing may only be used on small irregular areas as allowed by the Engineer”. Specification section 501-4.11 c. Finishing states that “Clary screeds, other rotating tube floats, or bridge deck finishers are not allowed on mainline paving, but may be allowed on irregular or odd shaped slabs, and near buildings subject to the engineer’s approval. Since the paving areas to be replaced are in the taxiway areas of the airport and are not located in the runway, and that several of the taxiway areas are irregular shapes, will the engineer allow metal forms and a tube screed to be used to finish the concrete in lieu of a slip-form paver on the base bid and all of the alternates”.**
A. Small Pours are OK for roller screeds – A slip for paver is not required.

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5. **Specification section 501-3.2 Proportions, paragraph 3, states that “The mix determined shall be workable concrete having a maximum allowable slump between one and two inches as determined by ASTM C143. For slip form concrete, the slump shall be between ½ inch and 1-1/2 inch”. If the concrete will be placed in forms, will a higher slump be allowed?**
 - A. For forms alternate slumps will be accepted. However, this will have to be submitted and approved by the engineer meeting all other criteria of the specification.

6. **How many business days are required to complete the badging process from start to finish?**
 - A. For US Citizen, it will take from 2 weeks to 4 weeks.

7. **How many additional business days after badging process is complete, are required to get an AOA license?**
 - A. It should take two weeks more or less.

8. **Q. The Single Catch Basin details show to remove the existing frame and grate inlet to adjust the inlet top grade. Will contractor be able to salvage the existing frame and grate, or will we be required to furnish a new one?**
 - A. Because of the unknown condition, age, or design weight of the existing grate, it is the opinion of the engineer that the grates be replaced to meet the current plans and specifications.

9. **Q. Amendment 4 revised the sodding detail for the base bid and alternate bids. The detail shows 2” of Sodding installed within 15 foot from the edge of pavement, followed by 2” of topsoil with no sod or seed to the extent of the grading limits. Is the topsoil to remain exposed beyond the 15’ with no seed or sod?**
 - A. The sodding shall be installed on all disturbed areas. Typical Sections have been modified and included in this Addendum.

10. **Q. Can field offices be placed within the staging area shown in addendum 4?**
 - A. Yes – However the area is very rough and it might take work prior to field office placement.

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ADDENDUM NO. 5

11. Can you please provide a drawing showing the work limits and barricade / fencing limits of the package 2 work that will require coordination with package 4?

A. The only location where this will be close is in the location of Taxiway J which is shown on the plans.

12. Q. Addendum 4 changed the flex base underneath the sod from 13” to 9” thick. Will the bid form be revised accordingly to reflect this plan change?

A. This has been modified 9’ wide, 13 inches thick – These drawing has been re-issued as part of this addendum.

13. Q. Please advise where the information from the geotechnical study can be found that was referenced as attached in Addendum 4.

A. The geotechnical Information is Attached. The full document is available for review in Kimley-Horn’s San Antonio office.

14. Q. Please advise where the information regarding the badging and licensing procedures can be found that was referenced in the answer to question 30 in Addendum 4.

A. This is answered in “Procedures for Obtaining Personnel Identification Media / Badge and Airfield Driver’s License at San Antonio International Airport” that has been included with this addendum.

15. Q. Will the amount for the allowance be published, base bid item 9 L-100-5.1 ALCMS Modifications (Manufacturer Allowance)

A. The Manufacturer's Allowance for the ALCMS Modifications is \$30,000

16. Q. Base bid item 31 I could only find 1 4mod sign (S-022) on the drawings.

A. Base Bid (Electrical) Item 31, and Base Bid (Electrical) Item 30, both should have a quantity of zero (0). There are no signs in the Base Bid (Electrical), only in the Base Bid (Taxiway J).

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17. Q. Base bid taxiway J items 53 & 54; I couldn't find these signs on the drawings.

- A. Base Bid (Taxiway J) Item 53 is Sign S-029 listed on the E2.1 SIGN DATA TABLE on Drawing E2.1A (Sheet 50) and shown on Drawing E5.1 (Sheet 72). Base Bid (Taxiway J) Item 54 is Sign S-022 which is listed and shown on the same sheets as Base Bid (Taxiway J) Item 53.

CITY OF SAN ANTONIO

Receipt of **Addendum Number Five (5)** is hereby acknowledged for plans and specifications for construction of **Runway 12R – 30L Electrical Improvements and Terminal Area Taxiway Improvements (Package 4)** for which bids will be opened on **Tuesday, June 28, 2016**.

THIS ACKNOWLEDGEMENT MUST BE SIGNED AND RETURNED WITH THE BID PACKAGE.

COMPANY NAME: _____

ADDRESS: _____

CITY/STATE/ZIP _____

DATE: _____

SIGNATURE: _____

PRINT NAME/TITLE: _____

CITY OF SAN ANTONIO
025 UNIT PRICING FORM

PROJECT NAME: Runway 12R - 30L Electrical Improvements and Terminal Area Taxiway Improvements (Package 4)

**BASE BID
ELECTRIC**

PROJECT NO. 33-00178 & 33-00193 (AIP NO 3-48-0192-XX-2015)

ITEM NO.	S.P. NO	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX. QUANTITIES	UNIT BID PRICE	AMOUNT	ITEM SEQUENCE NO.
1	100.1	Mobilization/Demobilization	LS	1		\$ -	
2	100.2	Contractor Staging Area	Allow	1	0,00	0,00	
3	100.3	Insurance and Bonds	LS	1		\$ -	
4	100.4	Airside Safety and Security / Traffic Control	LS	1		\$ -	
5	101.1	Preparing Right-of-Way	LS	1		\$ -	
6	540.1	Storm Water Pollution Prevention Plan	LS	1		\$ -	
7	GP 60-05	Field Office and Curing Facilities	LS	1		\$ -	
8	P-100-2.1	Contractor Quality Control	LS	1		\$ -	
9	L-100-5.1	ALCMS Modifications (Manufacturer Allowance)	LS	1.00	\$ 30,000.00	\$ 30,000.00	
10	L-100-5.2	ALCMS Modifications Contractor Effort	LS	1.00		\$ -	
11	L-100-5.3	Electrical Demolition	LS	0.40		\$ -	
12	L-100a-3.1	Photometric Testing	LS	1.00		\$ -	
13	L-105-6.1	Base Bid Rwy 13R-31L Temporary Jumpers, Lighting and Signage	LS	1		\$ -	
14	L-108-5.1	L-824, Type C, 1/C #8, 5 kV Cable	LF	18,500		\$ -	
15	L-108-5.2	L-824, Type C, 1/C #6, 5 kV Cable	LF	89,400		\$ -	
16	L-108-5.3	Bare, 1/C #6, Counterpoise Wire	LF	3,100		\$ -	
17	L-110-5.1	Single-way 2" Conduit, Direct Buried	LF	1,140		\$ -	
18	L-110-5.3	Multiple-way (6) 2-inch Conduits, Direct Buried	LF	350		\$ -	
19	L-110-5.4	Multiple-way (8) 2-inch Conduits, Direct Buried	LF	510		\$ -	
20	L-110-5.7	Multiple-way (6) 2-inch HDPE Conduits, Directional Bored	LF	700		\$ -	
21	L-110-5.8	Multiple-way (8) 2-inch HDPE Conduits, Directional Bored	LF	360		\$ -	
22	L-111-5.1	Furnish and Install Packaged 480/277 Volt Engine Generator, Controls and Exhaust System for West ALV	LS	1		\$ -	
23	L-111-5.2	Remove and Dispose of Existing 480V West ALV Engine Generator, Controls, and Exhaust System	LS	1		\$ -	
24	L-111-5.3	Furnish Temporary Engine Generator	WK	2		\$ -	
25	L-115-5.1	New Concrete Handhole, Type I, Furnished & Installed	EA	7		\$ -	
26	L-115-5.3	Two-Can Junction Can Plaza, Furnished & Installed	EA	7		\$ -	

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**BASE BID
ELECTRIC**

PROJECT NO. 33-00178 & 33-00193 (AIP NO 3-48-0192-XX-2015)

ITEM NO.	S.P. NO	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX. QUANTITIES	UNIT BID PRICE	AMOUNT	ITEM SEQUENCE NO.
27	L-850-4.1	New In-pavement L-850A Runway Centerline Light with New Isolation Transformers on Existing or Modified Base	EA	168		\$ -	
28	L-850-4.2	Salvage and Reinstall In-pavement L-850B Runway TDZ Light with New Isolation Transformer on Existing Base	EA	180		\$ -	
29	L-850-4.3	Salvage and Reinstall In-pavement L-850C Runway Edge Light with New Isolation Transformer on New or Existing Base	EA	14		\$ -	
30	L-858-5.3	New Size 3, 3-Module Airside LED Guidance Sign, Installed on Any Foundation or Base Assembly	EA	1		\$ -	
31	L-858-5.4	New Size 3, 4-Module Airside LED Guidance Sign, Installed on Any Foundation or Base Assembly	EA	2		\$ -	
32	L-862-4.1	Salvage and Reinstall Elevated L-862 Runway Edge Light with New Isolation Transformer on Existing Base	EA	74		\$ -	
33	L-862-4.2	Salvage and Reinstall Elevated L-862E Runway Threshold/End Light with New Isolation Transformer on Existing Base	EA	16		\$ -	
34	L-867/868-6.2	Size "B" L-867 Base Can for Any New, Reinstalled or Future Fixture in Non-Paved Shoulder	EA	2		\$ -	
35	L-867/868-6.5	New Size "B" L-867 Blank Base Can Cover	EA	4		\$ -	
36	L-867/868-6.7	New Size "B" L-868 Flange Ring and Spacer	EA	168		\$ -	
37	L-867/868-6.8	Core Drill Replace L-868 in (E) PCCP	EA	80		\$ -	
38	L-867/868-6.9	Core Drill L-868 Extension in (E) PCCP	EA	20		\$ -	
39	L-867/868-6.12	Concrete Foundation for 3-Module Sign	EA	1		\$ -	

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ELECTRIC**

PROJECT NO. 33-00178 & 33-00193 (AIP NO 3-48-0192-XX-2015)

ITEM NO.	S.P. NO	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX. QUANTITIES	UNIT BID PRICE	AMOUNT	ITEM SEQUENCE NO.
40	L-867/868-6.13	Concrete Foundation for 4-Module Sign	EA	2		\$ -	
Total Bid Amount:						\$ 30,000.00	

_____ certifies that the unit prices shown on this complete computer print-out for all of the bid items and the alternates contained in this proposal are the unit prices intended and that its bid will be tabulated using these unit prices and no other information from this print-out.

_____ Acknowledged and agrees that the total bid amount shown will be read as its total bid and further agrees that the official total bid amount will be determined by multiplying the unit bid prices shown in this print-out by the respective estimated quantities shown in the proposal and then totaling all of the extended amounts. _____ agrees to the terms, conditions, and requirements of the bidder's bid proposal.

Signed: _____ Date: _____

Title: _____

CITY OF SAN ANTONIO
025 UNIT PRICING FORM

PROJECT NAME: Runway 12R - 30L Electrical Improvements and Terminal Area Taxiway Improvements (Package 4)

**BASE BID
TWY J**

PROJECT NO. 33-00178 & 33-00193 (AIP NO 3-48-0192-XX-2015)

ITEM NO.	S.P. NO	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX. QUANTITIES	UNIT BID PRICE	AMOUNT	ITEM SEQUENCE NO.
1	100.1	Mobilization/Demobilization	LS	1		\$ -	
2	100.2	Contractor Staging Area	Allow	1	\$ 200,000.00	\$ 200,000.00	
3	100.3	Insurance and Bonds	LS	1		\$ -	
4	100.4	Airside Safety and Security / Traffic Control	LS	1		\$ -	
5	101.1	Preparing Right-of-Way	LS	1		\$ -	
6	540.1	Storm Water Pollution Prevention Plan	LS	1		\$ -	
7	GP 60-05	Field Office and Curing Facilities	LS	1		\$ -	
8	P-100-2.1	Contractor Quality Control	LS	1		\$ -	
9	P-101-5.1	Portland Cement Concrete Pavement Removal, Including Thickened Edge and Reinforcement	SY	2,650		\$ -	
10	P-101-5.3	Cement-Treated Base Removal	SY	2,650		\$ -	
11	P-101-5.4	Concrete Pavement Saw Cut (Full Depth)	LF	382		\$ -	
12	P-151-4.1	Clearing and Grubbing	AC	2.08		\$ -	
13	P-151-4.3	Remove Existing Catch Basin or Manhole	EA	2		\$ -	
14	P-152-4.1	Unclassified Excavation (Estimated)	CY	4,120		\$ -	
15	P-155-8.1	Lime-Treated Subgrade, 6" Depth (P-155)	SY	4,670		\$ -	
16	P-155-8.2	Lime	TON	100		\$ -	
17	P-208-5.1	Aggregate Base Course, 13" Depth (P-208)	SY	660		\$ -	
18	P-208-5.1	Temporary Aggregate Base Course, 8" Depth (P-208)	SY	170		\$ -	
19	P-304-8.1	Cement-Treated Base Course, 8" Depth (P-304)	SY	1,500		\$ -	
20	P-304-8.2	Cement-Treated Base Course, 16" Depth (P-304)	SY	3,200		\$ -	
21	P-401-8.1	Temporary HMA Pavement (5" Surface Course)	TON	50		\$ -	
22	P-403-8.1	HMA Pavement (3" Surface Course)	TON	240		\$ -	
23	P-403-8.2	Temporary HMA Pavement (9" Base Course)	TON	80		\$ -	
24	P-501-8.1	Portland Cement Concrete Pavement, 16" Depth	SY	3,000		\$ -	
25	P-604-6.1	Preformed Sealer, 1/2-inch Joint	LF	3,350		\$ -	
26	P-604-6.2	Preformed Sealer, 1-inch Joint	LF	310		\$ -	
27	P-604-6.3	Hot Applied Edge Seal	LF	480		\$ -	
28	P-620-5.1	Reflective Yellow Taxiway Pavement Markings, Waterborne	SF	1,810		\$ -	
29	P-620-5.2	Reflective White Runway Pavement Markings, Waterborne	SF	900		\$ -	
30	P-620-5.3	Non-Reflective Black Pavement Markings, Waterborne	SF	2,620		\$ -	
31	P-620-5.4	Reflective Surface Painted Holding Position Signs, Waterborne	SF	860		\$ -	
32	P-620-5.5	Pavement Marking Obliteration	SF	2,120		\$ -	

CITY OF SAN ANTONIO
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TWY J**

PROJECT NO. 33-00178 & 33-00193 (AIP NO 3-48-0192-XX-2015)

ITEM NO.	S.P. NO	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX. QUANTITIES	UNIT BID PRICE	AMOUNT	ITEM SEQUENCE NO.
33	P-620-5.6	Temporary Reflective Yellow Taxiway Pavement Markings, Waterborne	SF	490		\$ -	
34	T-904-5.1	Sodding, 2" Depth (T-904)	SY	10,040		\$ -	
35	T-905-5.1	Top Soil, 2" Depth (T-905)	CY	560		\$ -	
36	D-705-5.1	Underdrain System	LS	1		\$ -	
37	D-751-5.2	Adjust Existing Manhole/Inlet	EA	1		\$ -	
38	L-100-5.3	Electrical Demolition	LS	0.10		\$ -	
39	L-105-6.2	Base Bid Twy J Temporary Jumpers, Lighting and Signage	LS	1		\$ -	
40	L-108-5.1	L-824, Type C, 1/C #8, 5 kV Cable	LF	4,100		\$ -	
41	L-108-5.2	L-824, Type C, 1/C #6, 5 kV Cable	LF	1,000		\$ -	
42	L-108-5.3	Bare, 1/C #6, Counterpoise Wire	LF	3,100		\$ -	
43	L-110-5.1	Single-way 2" Conduit, Direct Buried	LF	1,340		\$ -	
44	L-110-5.3	Multiple-way (6) 2-inch Conduits, Direct Buried	LF	80		\$ -	
45	L-110-5.5	Single-way 2" Conduit, Concrete Encased	LF	300		\$ -	
46	L-110-5.6	Multiple-way (4) 2-inch HDPE Conduits, Directional Bored	LF	580		\$ -	
47	L-110-5.7	Multiple-way (6) 2-inch HDPE Conduits, Directional Bored	LF	400		\$ -	
48	L-110-5.9	System Drain, (1) 2" Conduit, Concrete Encased	LF	350		\$ -	
49	L-115-5.1	New Concrete Handhole, Type I, Furnished & Installed	EA	4		\$ -	
50	L-115-5.3	Two-Can Junction Can Plaza, Furnished & Installed	EA	4		\$ -	
51	L-850-4.3	Salvage and Reinstall In-pavement L-850C Runway Edge Light with New Isolation Transformer on New or Existing Base	EA	1		\$ -	
52	L-858-5.1	New Size 3, 1-Module Airside LED Guidance Sign, Installed on Any Foundation or Base Assembly	EA	2		\$ -	
53	L-858-5.3	New Size 3, 3-Module Airside LED Guidance Sign, Installed on Any Foundation or Base Assembly	EA	1		\$ -	
54	L-858-5.4	New Size 3, 4-Module Airside LED Guidance Sign, Installed on Any Foundation or Base Assembly	EA	1		\$ -	
55	L-861T-4.3	Salvage and Reinstall L-861T Quartz Taxiway Edge Light with New Isolation Transformer on New Base	EA	18		\$ -	
56	L-867/868-6.1	Size "B" L-867 Base Can for Any New, Reinstalled or Future Fixture in New Asphalt Shoulder	EA	12		\$ -	
57	L-867/868-6.2	Size "B" L-867 Base Can for Any New, Reinstalled or Future Fixture in Non-Paved Shoulder	EA	7		\$ -	

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**BASE BID
TWY J**

PROJECT NO. 33-00178 & 33-00193 (AIP NO 3-48-0192-XX-2015)

ITEM NO.	S.P. NO	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX. QUANTITIES	UNIT BID PRICE	AMOUNT	ITEM SEQUENCE NO.
58	L-867/868-6.3	Size "B" L-868 Base Can – "Standard Installation (New PCCP)"	EA	1		\$ -	
59	L-867/868-6.5	New Size "B" L-867 Blank Base Can Cover	EA	3		\$ -	
60	L-867/868-6.10	Concrete Foundation for 1-Module Sign	EA	2		\$ -	
61	L-867/868-6.11	Concrete Foundation for 2-Module Sign	EA	2		\$ -	
62	L-867/868-6.12	Concrete Foundation for 3-Module Sign	EA	1		\$ -	
63	L-867/868-6.13	Concrete Foundation for 4-Module Sign	EA	1		\$ -	
Total Bid Amount:						\$ 200,000.00	

_____ certifies that the unit prices shown on this complete computer print-out for all of the bid items and the alternates contained in this proposal are the unit prices intended and that its bid will be tabulated using these unit prices and no other information from this print-out.

_____ Acknowledged and agrees that the total bid amount shown will be read as its total bid and further agrees that the official total bid amount will be determined by multiplying the unit bid prices shown in this print-out by the respective estimated quantities shown in the proposal and then totaling all of the extended amounts. _____ agrees to the terms, conditions, and requirements of the bidder's bid proposal.

Signed: _____ Date: _____

Title: _____

CITY OF SAN ANTONIO
025 UNIT PRICING FORM

PROJECT NAME: Runway 12R - 30L Electrical Improvements and Terminal Area Taxiway Improvements (Package 4)

ALTERNATE #1
TW J

PROJECT NO. 33-00178 & 33-00193 (AIP NO 3-48-0192-XX-2015)

ITEM NO.	S.P. NO	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX. QUANTITIES	UNIT BID PRICE	AMOUNT	ITEM SEQUENCE NO.
1	100.1	Mobilization/Demobilization	LS	1		\$ -	
2	100.2	Contractor Staging Area	Allow	1	\$ 25,000.00	\$ 25,000.00	
3	100.3	Insurance and Bonds	LS	1		\$ -	
4	100.4	Airside Safety and Security / Traffic Control	LS	1		\$ -	
5	101.1	Preparing Right-of-Way	LS	1		\$ -	
6	540.1	Storm Water Pollution Prevention Plan	LS	1		\$ -	
7	GP 60-05	Field Office and Curing Facilities	LS	1		\$ -	
8	P-100-2.1	Contractor Quality Control	LS	1		\$ -	
9	P-101-5.1	Portland Cement Concrete Pavement Removal, Including Thickened Edge and Reinforcement	SY	1,330		\$ -	
10	P-101-5.2	Bituminous Pavement Removal	SY	170		\$ -	
11	P-101-5.3	Cement-Treated Base Removal	SY	1,490		\$ -	
12	P-101-5.4	Concrete Pavement Saw Cut (Full Depth)	LF	369		\$ -	
13	P-101-5.5	AC Pavement Saw Cut (Full Depth)	LF	60		\$ -	
14	P-151-4.1	Clearing and Grubbing	AC	1.94		\$ -	
15	P-152-4.1	Unclassified Excavation (Estimated)	CY	7,830		\$ -	
16	P-155-8.1	Lime-Treated Subgrade, 6" Depth (P-155)	SY	6,130		\$ -	
17	P-155-8.2	Lime	TON	130		\$ -	
18	P-208-5.1	Aggregate Base Course, 13" Depth (P-208)	SY	1,010		\$ -	
19	P-304-8.1	Cement-Treated Base Course, 8" Depth (P-304)	SY	3,200		\$ -	
20	P-304-8.2	Cement-Treated Base Course, 16" Depth (P-304)	SY	3,200		\$ -	
21	P-403-8.1	HMA Pavement (3" Surface Course)	TON	520		\$ -	
22	P-501-8.1	Portland Cement Concrete Pavement, 16" Depth	SY	2,890		\$ -	
23	P-604-6.1	Preformed Sealer, 1/2-inch Joint	LF	2,780		\$ -	
24	P-604-6.2	Preformed Sealer, 1-inch Joint	LF	530		\$ -	
25	P-604-6.3	Hot Applied Edge Seal	LF	1,020		\$ -	
26	P-620-5.1	Reflective Yellow Taxiway Pavement Markings, Waterborne	SF	2,890		\$ -	
27	P-620-5.3	Non-Reflective Black Pavement Markings, Waterborne	SF	4,080		\$ -	
28	P-620-5.4	Reflective Surface Painted Holding Position Signs, Waterborne	SF	860		\$ -	
29	P-620-5.5	Pavement Marking Obliteration	SF	830		\$ -	

CITY OF SAN ANTONIO
025 UNIT PRICING FORM

PROJECT NAME: Runway 12R - 30L Electrical Improvements and Terminal Area Taxiway Improvements (Package 4)

**ALTERNATE #1
TW J**

PROJECT NO. 33-00178 & 33-00193 (AIP NO 3-48-0192-XX-2015)

ITEM NO.	S.P. NO	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX. QUANTITIES	UNIT BID PRICE	AMOUNT	ITEM SEQUENCE NO.
30	T-904-5.1	Sodding, 2" Depth (T-904)	SY	9,390		\$ -	
31	T-905-5.1	Top Soil, 2" Depth (T-905)	CY	520		\$ -	
32	D-705-5.1	Underdrain System	LS	1		\$ -	
33	L-100-5.3	Electrical Demolition	LS	0.20		\$ -	
34	L-105-6.3	Alternate 1 Temporary Jumpers, Lighting and Signage	LS	1		\$ -	
35	L-108-5.1	L-824, Type C, 1/C #8, 5 kV Cable	LF	2,390		\$ -	
36	L-108-5.3	Bare, 1/C #6, Counterpoise Wire	LF	1,400		\$ -	
37	L-110-5.1	Single-way 2" Conduit, Direct Buried	LF	1,210		\$ -	
38	L-110-5.9	System Drain, (1) 2" Conduit, Concrete Encased	LF	180		\$ -	
39	L-858-5.2	New Size 3, 2-Module Airside LED Guidance Sign, Installed on Any Foundation or Base Assembly	EA	1		\$ -	
40	L-858-5.3	New Size 3, 3-Module Airside LED Guidance Sign, Installed on Any Foundation or Base Assembly	EA	1		\$ -	
41	L-861T-4.1	New L-861T LED Taxiway Edge Light with New Isolation Transformer on New Base	EA	14		\$ -	
42	L-861T-4.3	Salvage and Reinstall L-861T Quartz Taxiway Edge Light with New Isolation Transformer on New Base	EA	8		\$ -	
43	L-867/868-6.1	Size "B" L-867 Base Can for Any New, Reinstalled or Future Fixture in New Asphalt Shoulder	EA	13		\$ -	
Total Alternate #1 (Twy J) Bid Amount:						\$ 25,000.00	

_____ certifies that the unit prices shown on this complete computer print-out for all of the bid items and the alternates contained in this proposal are the unit prices intended and that its bid will be tabulated using these unit prices and no other information from this print-out.

_____ Acknowledged and agrees that the total bid amount shown will be read as its total bid and further agrees that the official total bid amount will be determined by multiplying the unit bid prices shown in this print-out by the respective estimated quantities shown in the proposal and then totaling all of the extended amounts. _____ agrees to the terms, conditions, and requirements of the bidder's bid proposal.

Signed: _____ Date: _____

Title: _____

CITY OF SAN ANTONIO
025 UNIT PRICING FORM

PROJECT NAME: Runway 12R - 30L Electrical Improvements and Terminal Area Taxiway Improvements (Package 4)

ALTERNATE #2
TW G

PROJECT NO. 33-00178 & 33-00193 (AIP NO 3-48-0192-XX-2015)

ITEM NO.	S.P. NO	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX. QUANTITIES	UNIT BID PRICE	AMOUNT	ITEM SEQUENCE NO.
1	100.1	Mobilization/Demobilization	LS	1		\$ -	
2	100.2	Contractor Staging Area	Allow	1	\$ 25,000.00	\$ 25,000.00	
3	100.3	Insurance and Bonds	LS	1		\$ -	
4	100.4	Airside Safety and Security / Traffic Control	LS	1		\$ -	
5	101.1	Preparing Right-of-Way	LS	1		\$ -	
6	540.1	Storm Water Pollution Prevention Plan	LS	1		\$ -	
7	GP 60-05	Field Office and Curing Facilities	LS	1		\$ -	
8	P-100-2.1	Contractor Quality Control	LS	1		\$ -	
9	P-101-5.1	Portland Cement Concrete Pavement Removal, Including Thickened Edge and Reinforcement	SY	3,070		\$ -	
10	P-101-5.3	Cement-Treated Base Removal	SY	3,070		\$ -	
11	P-101-5.4	Concrete Pavement Saw Cut (Full Depth)	LF	520		\$ -	
12	P-151-4.1	Clearing and Grubbing	AC	0.17		\$ -	
13	P-152-4.1	Unclassified Excavation (Estimated)	CY	165		\$ -	
14	P-155-8.1	Lime-Treated Subgrade, 6" Depth (P-155)	SY	3,230		\$ -	
15	P-155-8.2	Lime	TON	70		\$ -	
16	P-208-5.1	Aggregate Base Course, 13" Depth (P-208)	SY	510		\$ -	
17	P-304-8.2	Cement-Treated Base Course, 16" Depth (P-304)	SY	3,200		\$ -	
18	P-501-8.1	Portland Cement Concrete Pavement, 16" Depth	SY	3,070		\$ -	
19	P-604-6.1	Preformed Sealer, 1/2-inch Joint	LF	2,120		\$ -	
20	P-604-6.2	Preformed Sealer, 1-inch Joint	LF	360		\$ -	
21	P-620-5.1	Reflective Yellow Taxiway Pavement Markings, Waterborne	SF	420		\$ -	
22	P-620-5.3	Non-Reflective Black Pavement Markings, Waterborne	SF	810		\$ -	
23	P-620-5.5	Pavement Marking Obliteration	SF	270		\$ -	
24	T-904-5.1	Sodding, 2" Depth (T-904)	SY	820		\$ -	
25	T-905-5.1	Top Soil, 2" Depth (T-905)	CY	50		\$ -	
26	L-100-5.3	Electrical Demolition	LS	0.10		\$ -	
27	L-105-6.4	Alternate 2 Temporary Jumpers, Lighting and Signage	LS	1		\$ -	
28	L-108-5.1	L-824, Type C, 1/C #8, 5 kV Cable	LF	1,300		\$ -	
29	L-108-5.3	Bare, 1/C #6, Counterpoise Wire	LF	500		\$ -	
30	L-110-5.5	Single-way 2" Conduit, Concrete Encased	LF	380		\$ -	
31	L-110-5.9	System Drain, (1) 2" Conduit, Concrete Encased	LF	120		\$ -	
32	L-852-4.1	Remove and Relocate In-pavement L-852A Taxiway Centerline Light with New Isolation Transformer on New Base	EA	4		\$ -	

CITY OF SAN ANTONIO
025 UNIT PRICING FORM

PROJECT NAME: Runway 12R - 30L Electrical Improvements and Terminal Area Taxiway Improvements (Package 4)

**ALTERNATE #2
TW G**

PROJECT NO. 33-00178 & 33-00193 (AIP NO 3-48-0192-XX-2015)

ITEM NO.	S.P. NO	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX. QUANTITIES	UNIT BID PRICE	AMOUNT	ITEM SEQUENCE NO.
33	L-867/868-6.3	Size "B" L-868 Base Can – "Standard Installation (New PCCP)"	EA	6		\$ -	
34	L-867/868-6.4	Size "B" L-868 Base Can – "Core Drill New PCCP" Installation at Joint or Sawcut	EA	2		\$ -	
35	L-867/868-6.6	New Size "B" L-868 Blank Base Can Cover	EA	4		\$ -	
Total Alternate #2 (Twy G) Bid Amount:						\$ 25,000.00	

_____ certifies that the unit prices shown on this complete computer print-out for all of the bid items and the alternates contained in this proposal are the unit prices intended and that its bid will be tabulated using these unit prices and no other information from this print-out.

_____ Acknowledged and agrees that the total bid amount shown will be read as its total bid and further agrees that the official total bid amount will be determined by multiplying the unit bid prices shown in this print-out by the respective estimated quantities shown in the proposal and then totaling all of the extended amounts. _____ agrees to the terms, conditions, and requirements of the bidder's bid proposal.

Signed: _____ Date: _____

Title: _____

CITY OF SAN ANTONIO
025 UNIT PRICING FORM

PROJECT NAME: Runway 12R - 30L Electrical Improvements and Terminal Area Taxiway Improvements (Package 4)

ALTERNATE #3
TW D

PROJECT NO. 33-00178 & 33-00193 (AIP NO 3-48-0192-XX-2015)

ITEM NO.	S.P. NO	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX. QUANTITIES	UNIT BID PRICE	AMOUNT	ITEM SEQUENCE NO.
1	100.1	Mobilization/Demobilization	LS	1		\$ -	
2	100.2	Contractor Staging Area	Allow	1	\$ 25,000.00	\$ 25,000.00	
3	100.3	Insurance and Bonds	LS	1		\$ -	
4	100.4	Airside Safety and Security / Traffic Control	LS	1		\$ -	
5	101.1	Preparing Right-of-Way	LS	1		\$ -	
6	540.1	Storm Water Pollution Prevention Plan	LS	1		\$ -	
7	GP 60-05	Field Office and Curing Facilities	LS	1		\$ -	
8	P-100-2.1	Contractor Quality Control	LS	1		\$ -	
9	P-101-5.1	Portland Cement Concrete Pavement Removal, Including Thickened Edge and Reinforcement	SY	7,170		\$ -	
10	P-101-5.2	Bituminous Pavement Removal	SY	1,180		\$ -	
11	P-101-5.3	Cement-Treated Base Removal	SY	8,340		\$ -	
12	P-101-5.4	Concrete Pavement Saw Cut (Full Depth)	LF	1,284		\$ -	
13	P-101-5.5	AC Pavement Saw Cut (Full Depth)	LF	55		\$ -	
14	P-151-4.1	Clearing and Grubbing	AC	1.54		\$ -	
15	P-151-4.2	Remove Existing Storm Drain Pipe	LF	377		\$ -	
16	P-151-4.3	Remove Existing Catch Basin or Manhole	EA	1		\$ -	
17	P-152-4.1	Unclassified Excavation (Estimated)	CY	7,000		\$ -	
18	P-155-8.1	Lime-Treated Subgrade, 6" Depth (P-155)	SY	10,670		\$ -	
19	P-155-8.2	Lime	TON	230		\$ -	
20	P-208-5.1	Aggregate Base Course, 13" Depth (P-208)	SY	800		\$ -	
21	P-304-8.1	Cement-Treated Base Course, 8" Depth (P-304)	SY	2,400		\$ -	
22	P-304-8.2	Cement-Treated Base Course, 16" Depth (P-304)	SY	8,500		\$ -	
23	P-403-8.1	HMA Pavement (3" Surface Course)	TON	390		\$ -	
24	P-501-8.1	Portland Cement Concrete Pavement, 16" Depth	SY	8,230		\$ -	
25	P-604-6.1	Preformed Sealer, 1/2-inch Joint	LF	6,840		\$ -	
26	P-604-6.2	Preformed Sealer, 1-inch Joint	LF	950		\$ -	
27	P-604-6.3	Hot Applied Edge Seal	LF	740		\$ -	
28	P-620-5.1	Reflective Yellow Taxiway Pavement Markings, Waterborne	SF	29,030		\$ -	
29	P-620-5.3	Non-Reflective Black Pavement Markings, Waterborne	SF	3,160		\$ -	
30	P-620-5.4	Reflective Surface Painted Holding Position Signs, Waterborne	SF	860		\$ -	
31	P-620-5.5	Pavement Marking Obliteration	SF	1,780		\$ -	
32	T-904-5.1	Sodding, 2" Depth (T-904)	SY	7,440		\$ -	
33	T-905-5.1	Top Soil, 2" Depth (T-905)	CY	410		\$ -	

CITY OF SAN ANTONIO
025 UNIT PRICING FORM

PROJECT NAME: Runway 12R - 30L Electrical Improvements and Terminal Area Taxiway Improvements (Package 4)

ALTERNATE #3
TW D

PROJECT NO. 33-00178 & 33-00193 (AIP NO 3-48-0192-XX-2015)

ITEM NO.	S.P. NO	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX. QUANTITIES	UNIT BID PRICE	AMOUNT	ITEM SEQUENCE NO.
34	D-701-5.3	66" RGRCP, Class V	LF	16		\$ -	
35	D-701-5.4	Concrete Pipe Collar	EA	2		\$ -	
36	D-751-5.1	Catch Basins	EA	1		\$ -	
37	D-751-5.2	Adjust Existing Manhole/Inlet	EA	1		\$ -	
38	L-100-5.3	Electrical Demolition	LS	0.20		\$ -	
39	L-105-6.5	Alternate 3 Temporary Jumpers, Lighting and Signage	LS	1		\$ -	
40	L-108-5.1	L-824, Type C, 1/C #8, 5 kV Cable	LF	4,000		\$ -	
41	L-108-5.2	L-824, Type C, 1/C #6, 5 kV Cable	LF	600		\$ -	
42	L-108-5.3	Bare, 1/C #6, Counterpoise Wire	LF	2,600		\$ -	
43	L-110-5.1	Single-way 2" Conduit, Direct Buried	LF	1,130		\$ -	
44	L-110-5.3	Multiple-way (6) 2-inch Conduits, Direct Buried	LF	180		\$ -	
45	L-110-5.5	Single-way 2" Conduit, Concrete Encased	LF	690		\$ -	
46	L-110-5.7	Multiple-way (6) 2-inch HDPE Conduits, Directional Bored	LF	140		\$ -	
47	L-110-5.9	System Drain, (1) 2" Conduit, Concrete Encased	LF	380		\$ -	
48	L-115-5.2	Extend Handhole To New Grade	EA	1		\$ -	
49	L-115-5.4	Extend Two-Can Junction Can Plaza To New Grade	EA	1		\$ -	
50	L-852-4.1	Remove and Relocate In-pavement L-852A Taxiway Centerline Light with New Isolation Transformer on New Base	EA	13		\$ -	
51	L-858-5.5	Remove and Relocate Size 3, Any-Module Airside Guidance Sign, Installed on New Foundation	EA	3		\$ -	
52	L-861T-4.2	Salvage and Reinstall L-861T LED Taxiway Edge Light with New Isolation Transformer on New Base	EA	15		\$ -	
53	L-867/868-6.1	Size "B" L-867 Base Can for Any New, Reinstalled or Future Fixture in New Asphalt Shoulder	EA	13		\$ -	
54	L-867/868-6.2	Size "B" L-867 Base Can for Any New, Reinstalled or Future Fixture in Non-Paved Shoulder	EA	4		\$ -	
55	L-867/868-6.3	Size "B" L-868 Base Can – "Standard Installation (New PCCP)"	EA	17		\$ -	
56	L-867/868-6.4	Size "B" L-868 Base Can – "Core Drill New PCCP" Installation at Joint or Sawcut	EA	2		\$ -	
57	L-867/868-6.5	New Size "B" L-867 Blank Base Can Cover	EA	2		\$ -	
58	L-867/868-6.6	New Size "B" L-868 Blank Base Can Cover	EA	6		\$ -	
59	L-867/868-6.12	Concrete Foundation for 3-Module Sign	EA	1		\$ -	

CITY OF SAN ANTONIO
025 UNIT PRICING FORM

PROJECT NAME: Runway 12R - 30L Electrical Improvements and Terminal Area Taxiway Improvements (Package 4)

**ALTERNATE #3
TW D**

PROJECT NO. 33-00178 & 33-00193 (AIP NO 3-48-0192-XX-2015)

ITEM NO.	S.P. NO	BID ITEM DESCRIPTION	UNIT OF MEASURE	APPROX. QUANTITIES	UNIT BID PRICE	AMOUNT	ITEM SEQUENCE NO.
60	L-867/868-6.13	Concrete Foundation for 4-Module Sign	EA	1		\$ -	
61	L-867/868-6.14	Concrete Foundation for 2+4-Module Sign	EA	1		\$ -	
Total Alternate #3 (Twy D) Bid Amount:						\$ 25,000.00	

_____ certifies that the unit prices shown on this complete computer print-out for all of the bid items and the alternates contained in this proposal are the unit prices intended and that its bid will be tabulated using these unit prices and no other information from this print-out.

_____ Acknowledged and agrees that the total bid amount shown will be read as its total bid and further agrees that the official total bid amount will be determined by multiplying the unit bid prices shown in this print-out by the respective estimated quantities shown in the proposal and then totaling all of the extended amounts. _____ agrees to the terms, conditions, and requirements of the bidder's bid proposal.

Signed: _____ Date: _____

Title: _____

SUPPLEMENT TO STANDARD INSTRUCTIONS TO RESPONDENTS

1. Project Description:

This project consists of construction work at San Antonio International Airport, San Antonio, Texas. The intent of the contract is to provide for construction and completion, in every detail, of the work described. It is further intended that the Contractor furnish all labor, materials, equipment, tools, transportation and supplies required to complete the work in accordance with the plans, specifications, and terms of the contract.

The Contractor shall provide unit prices for the base bid and also for the base bid and the three (3) alternate bids. The description of the base bid and alternate bids are as follows:

BASE BID

The “Base Bid” consists of the reconstruction of the Runway 12R-30L electrical and associated taxiway electrical improvements. The Base Bid also includes the reconstruction of the portion of Taxiway J (TWJ) within the Runway 12R-30L RSA (south of the runway). Construction will require the removal of the existing asphalt cement (AC) pavement and Portland Cement Concrete (PCC) pavement sections including the removal of the Cement Treated Base (CTB) and Crushed Aggregate Base (AB). The new pavement section for the taxiway will be constructed with 16 inches of PCC pavement on 16 inches of CTB on 6 inches of Lime treated subgrade on compacted subgrade and new airfield lighting will be installed. This work also includes airport safety and security, storm water pollution prevention, all construction surveying and layout, existing utility location, Contractor quality control, pavement saw cutting, pavement removal, excavation and grading, Portland cement concrete, cement treated base, crushed aggregate base course, lime stabilized base, temporary asphalt paving, asphalt surface course shoulder pavement, paint marking & removal, electrical conduit, light & signage installation both temporary and permanent, drainage pipe and inlet removal and installation, and engineer’s field and laboratory office.

ALTERNATE BID 1

The “Alternate Bid 1” consists of the reconstruction of Taxiway J (TWJ) outside the Runway 12R-30L RSA (north of Taxiway G). Construction will require the removal of the existing asphalt cement (AC) pavement and Portland Cement Concrete (PCC) pavement sections including the removal of the Cement Treated Base (CTB) and Crushed Aggregate Base (AB). The new pavement section for the taxiway will be constructed with 16 inches of PCC pavement on 16 inches of CTB on 6 inches of Lime treated subgrade on compacted subgrade and new airfield lighting will be installed. This work also includes airport safety and security, storm water pollution prevention, all construction surveying and layout, existing utility location, Contractor quality control, pavement saw cutting, pavement removal, excavation and grading, Portland cement concrete, cement treated base, crushed aggregate base course, lime stabilized base, temporary asphalt paving, asphalt surface course shoulder pavement, paint marking & removal, electrical conduit, light & signage installation both temporary and permanent, drainage pipe and inlet removal and installation, and engineer’s field and laboratory office.

ALTERNATE BID 2

The “Alternate Bid 2” consists of the reconstruction of failing concrete panels on TWG near the intersection of Taxiway A (TWA). Construction will require the removal of the existing Portland Cement Concrete (PCC) pavement sections including the removal of the Cement Treated Base (CTB) and Crushed Aggregate Base (AB). The new pavement section for the taxiway will be constructed with 16 inches of PCC pavement on 16 inches of CTB on 6 inches of Lime treated subgrade on compacted subgrade and new airfield lighting will be installed. This work also includes airport safety and security, storm water pollution prevention, all construction surveying and layout, existing utility location, Contractor quality control, pavement saw cutting, pavement removal, excavation and grading, Portland cement concrete, cement treated base, crushed aggregate base course, lime stabilized base, temporary asphalt paving, asphalt surface course shoulder pavement, paint marking & removal, electrical conduit, light, & signage installation both temporary and permanent, drainage pipe and inlet removal and installation, and engineer’s field and laboratory office.

ALTERNATE BID 3

The “Alternate Bid 3” consists of the reconstruction of the Taxiway D (TWD) and TWG intersection. Construction will require the removal of the existing asphalt cement (AC) pavement and Portland Cement Concrete (PCC) pavement sections including the removal of the Cement Treated Base (CTB) and Crushed Aggregate Base (AB). The new pavement section for the taxiway will be constructed with 16 inches of PCC pavement on 16 inches of CTB on 6 inches of Lime treated subgrade on compacted subgrade and new airfield lighting will be installed. This work also includes airport safety and security, storm water pollution prevention, all construction surveying and layout, existing utility location, Contractor quality control, pavement saw cutting, pavement removal, excavation and grading, Portland cement concrete, cement treated base, crushed aggregate base course, lime stabilized base, temporary asphalt paving, asphalt surface course shoulder pavement, paint marking & removal, electrical conduit, light, & signage installation both temporary and permanent, drainage pipe and inlet removal and installation, and engineer’s field and laboratory office.

2. A responsive bid shall consist of the following:

- a. Compliance with items set forth in Division A, Formal Invitation for bids (IFB) and Contract

3. In determining a low bidder, the City shall consider the total of the following:

- a. Base Bid, and all Alternative Bids (where applicable)
- b. Contractor’s qualifications

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**PROCEDURES FOR OBTAINING AIRPORT PERSONNEL
IDENTIFICATION MEDIA/BADGE AND AIRFIELD DRIVER'S LICENSE
AT
SAN ANTONIO INTERNATIONAL AIRPORT (SAT)**

As per FAA/TSA guidelines, a person performing work in the Security Identification Display Area (SIDA), Secured Area, Sterile Area or Airport Operations Area must have a valid Airport Identification Media (known as a SAT badge) or be under an airport approved escort by a person having a SAT badge with the white "E" (escort endorsement) on the badge. Furthermore, each badge holder with the white "E" may escort up to five (5) unbadged individuals while keeping same under positive control at all times while in the SIDA, Secured Area, Sterile Area and/or the project site. **Note:** If the person is disqualified from receiving a SAT badge during the badge application process, or becomes disqualified after receiving a SAT badge, the individual can no longer be present anywhere within the SIDA, Secured Area, Sterile area and/or the project areas. Furthermore, any contractor assigned to the project who has a business related need to be present within the SIDA, Secured Area or Sterile Area for more than 14 days (consecutive or intermittently) must be processed for a SAT badge.

If driving is involved, the person must have a valid SAT badge and the appropriate airfield driver's license to operate a vehicle in the SIDA and/or the project site. If a vehicle escort is required, each SAT badge holder with the white "E" on his badge (and the appropriate airfield driver's license) may escort up to two (2) vehicles if there is only one unbadged person in each vehicle being escorted.

All vehicles operating in the SIDA or the project area must have the appropriate airport approved company signage on the vehicle. The signage must meet the following requirements: Company name must be in at least six inch (6") tall lettering and/or the company logo must be at least twelve inches (12") tall. The signage must be placed on both vertical sides of any self propelled, motorized vehicle at all times while within the SIDA or the project site. If signage is not available, an Airport issued "Top Hat" may be used for vehicles under an airport approved vehicle escort or while parked in the SIDA. A Top Hat may be obtained at SIDA vehicle gate #20 at the end of each work day.

The procedures to obtain an Airport Identification Media (badge) and/or an airport driver's license are as follows:

A) Airport Badge and ID Office

1) The Airport Security Badge and ID Office is located at 9623 West Terminal Drive, Bldg. #1322.

2) Hours of Operation are as follows:

Monday – Thursday	8:00 am – 4:00 pm
Friday	8:00 am – 3:00 pm
Office is closed for lunch daily from 11:30 am – 12:30 pm	

3) Once an Aviation Department division has notified the Airport Security of an approved City contract which will require the badging of personnel, the Contactor's designated representative for badging must call Kenneth Barrett at (210) 207-3840 to arrange to become an Authorizing Signatory. The Authorized Signatory will be responsible for all Airport Identification Media (badges) to be issued to the Contractor's employees working on the contract. Mr. Barrett will send the appropriate link to the person in order to complete an application for badge processing.

Once the application has been approved an appointment will be set to come to the Badge and ID Office for processing and training. Once the person has completed the required training they will then be authorized to approve applications for other Contractor employees under their responsibility. **Note:** If an employee of the Contractor has been convicted of any of the offenses listed in Exhibit 1 hereto, that employee will be immediately disqualified from obtaining an Airport Identification Media (badge) and will be ineligible to perform work at SAT.

4) All Airport Identification Media (badge) applications are processed electronically via an online application process. Once the Contractor’s Authorizing Signatory has been trained successfully on their responsibilities and completed all phases of the badging process, the website address for Contractor’s employees to use to complete the application will be provided. Furthermore, the Authorizing Signatory will be provided instructions on how to setup, use and approve badge applications via the online badging system.

5) As of October 1, 2010 badge processing fees are:

Fingerprint-based Criminal History Records Check (CHRC)/STA	\$65.00
SAT Identification Media/badge (new, renewal, replacement)	\$35.00
Lost Identification Media/badge	\$25.00
Not Returned Identification Media/badge	\$75.00
Reactivation of Identification Media/badge (Security Violation)	
1 st Offense	\$25.00
2 nd Offense	\$50.00
3 rd Offense	\$75.00
Progressive Security Fee Program	Sliding Scale
AOA Parking Decal (General Aviation leaseholds only)	\$5.00

6) Payment for processing is as follows:

- Each applicant can pay individually at their first appointment with cash, check or personal credit card.
- If the applicants wish to pay with a company credit card, the company representative whom the credit card is issued to must accompany the applicant and submit payment at their first appointment.
- With prior coordination with the Fiscal Operations Division the Authorized Signatory can complete and sign an “Authorization to Bill” form and send it with the applicant on the day they are to process. The City of San Antonio will then bill the company for the applicants processed.

There is no refund for badge processing fees.

7) When the applicant comes in to process to the Badge and ID Office they must present identification in compliance with the “List of Acceptable Documents” see Exhibit II.

- 8) As part of the badging process, all Contractor employees are required to complete a computer-based SIDA training class. All documents necessary to complete the application process (including obtaining the applicants fingerprints to conduct a Criminal History Records Check (CHRC) and Security Threat Assessment (STA) must be completed before the Contractor's employees may attend the computer-based SIDA training class. The SIDA class takes approximately 1-1 ½ hours to complete and the applicant must make a 100% on the final test to successfully complete this stage of the badging process. The SAT badge will only be issued after the applicant successfully completes the SIDA class; Airport Security completes the CHRC and receives an approved STA. It may take anywhere from five (5) business days to four (4) weeks before the applicant may be issued a Airport Identification Media (badge).
- 9) At the end of the contract, the Contractor's Authorizing Signatory is required to return all issued Airport Identification Media (badge) to the Airport Security Badge and ID Office directly and inform the Aviation Department division that managed the contract that all badges have been returned before final payment for the work can be processed. Each SAT badge that is not returned to the Airport Security Badge and ID Office is subject to a \$75.00 non-returned badge fee.
- 10) Any lost or stolen Airport Identification Media (badge) must be reported to Airport Security immediately by contacting (210) 207-3526 or 207-3433 so the badge can be deactivated. The Contractor's employee must contact the Contractor's Authorizing Signatory to make arrangements to complete the necessary paperwork to receive a replacement SAT badge. The Contractor shall be responsible for any fees/fines resulting from the lost, stolen, or otherwise unaccounted for SAT badge.

B) Airfield Driver License:

- 1) The Airport Operations Office is located at 457 Sandau Rd., San Antonio, TX 78216.
- 2) It is the sole responsibility of the tenants, airlines or contractors to select the correct training course needed for their employees. There are two types of airfield training courses: non-movement areas and movements areas. Non-movement areas are aprons and parking areas in the Airport Operation Area (AOA). No ATCT clearance is required. Movement w/Restrictions: Taxiways as well as other areas using for taxiing aircraft and aircraft parking areas. ATCT clearance is required.
- 3) To obtain an Airfield Driver's License an employee must attend an Airport sponsored drivers training class and pass a written test at the end of each class with a 90% or better. The airfield driver license can only be issued to a person passing the test.
- 4) The non-movement classes are held on every Monday and Tuesday at 9:00 a.m. and Thursday at 1:00 p.m. The movement classes are held every Tuesday at 1:00 p.m. and Thursday at 9:00 a.m. All classes must be scheduled in advance. To schedule a class call Airport Operations at 207-3540.
- 5) A valid State driver's license and a SAT Security Identification Display Area (SIDA) badge and a copy of certificate of insurance document of the individual's employer with the proper coverage must be presented at the time of the class. The copy of all three items stated must be submitted to the AOO for record on file.
- 6) You must have radio contact with FAA Air Traffic Controller to receive clearance to cross taxiways at all times.

7) Airfield Driver's Training Program Fees:

<u>Course</u>	<u>Amount:</u>
Non-Movement Area	\$ 20.00
Movement Area	\$ 25.00
Replacement License	\$ 10.00
Expired License Penalty	\$ 20.00

We will continue sending renewal notices approximately one month in advance to assure that drivers have enough time to schedule to attend the class prior to expiration.

- 8) For the construction contracts, there is no separate line item on the bid proposal for the costs involved and the costs shall be considered incidental to mobilization expenses.
- 9) The licensed driver can only travel on the areas authorized and use the gate approved by the Airport Security Office. A driver who loses his or her Airfield Driver License is responsible for reporting the loss immediately to Airport Operations Office. The employee will be responsible to pay the replacement fee for his/her airfield license.
- 10) The company shall have coverage for the vehicles used inside Air Operations Area for the project involved at all times. An Automobile Liability Policy with no less than a Combined, Single Limit for Bodily Injury and Property Damage of \$5,000,000 per occurrence, or its equivalent in Umbrella or Excess Liability Coverage.

In addition, the City of San Antonio must be listed as an "additional insured" in the endorsement section. The Insurance can be under the Company name if a company vehicle will be used and the vehicle must be listed in the insurance policy either specifically by VIN number or generally by covering all autos owned, leased or operated while conducting business on behalf of the company. If this is a private vehicle covered only by personal insurance, the insurance must be under the drivers name and VIN number must be listed. It is the company's responsibility to notify the Aviation Department for any insurance changes.

- 11) At the end of the project, the authorized Project Manager shall return all airfield driver licenses to the Airport Operations Office and notify Planning and Development and at the end of the return process so that the final payment to the consultants or contractors for the work involved can be processed.
- 12) Vehicles routinely operating within the Movement area shall have an operating yellow flashing light mounted on the uppermost part of the Vehicle.

EXHIBIT I

LIST OF DISQUALIFYING CRIMES

Title 49, Code of § 1542.209 Fingerprint-based criminal history records checks (CHRC).

- (1) Forgery of certificates, false marking of aircraft, and other aircraft registration violation; 49 U.S.C. 46306.
- (2) Interference with air navigation; 49 U.S.C. 46308.
- (3) Improper transportation of a hazardous material; 49 U.S.C. 46312.
- (4) Aircraft piracy; 49 U.S.C. 46502.
- (5) Interference with flight crew members or flight attendants; 49 U.S.C. 46504.
- (6) Commission of certain crimes aboard aircraft in flight; 49 U.S.C. 46506.
- (7) Carrying a weapon or explosive aboard aircraft; 49 U.S.C. 46505.
- (8) Conveying false information and threats; 49 U.S.C. 46507.
- (9) Aircraft piracy outside the special aircraft jurisdiction of the United States; 49 U.S.C. 46502(b).
- (10) Lighting violations involving transporting controlled substances; 49 U.S.C. 46315.
- (11) Unlawful entry into an aircraft or airport area that serves air carriers or foreign air carriers contrary to established security requirements; 49 U.S.C. 46314.
- (12) Destruction of an aircraft or aircraft facility; 18 U.S.C. 32.
- (13) Murder.
- (14) Assault with intent to murder.
- (15) Espionage.
- (16) Sedition.
- (17) Kidnapping or hostage taking.
- (18) Treason.
- (19) Rape or aggravated sexual abuse.
- (20) Unlawful possession, use, sale, distribution, or manufacture of an explosive or weapon.
- (21) Extortion.

- (22) Armed or felony unarmed robbery.
- (23) Distribution of, or intent to distribute, a controlled substance.
- (24) Felony arson.
- (25) Felony involving a threat.
- (26) Felony involving—
 - (i) Willful destruction of property;
 - (ii) Importation or manufacture of a controlled substance;
 - (iii) Burglary;
 - (iv) Theft;
 - (v) Dishonesty, fraud, or misrepresentation;
 - (vi) Possession or distribution of stolen property;
 - (vii) Aggravated assault;
 - (viii) Bribery; or
 - (ix) Illegal possession of a controlled substance punishable by a maximum term of imprisonment of more than 1 year.
- (27) Violence at international airports; 18 U.S.C. 37.
- (28) Conspiracy or attempt to commit any of the criminal acts listed in this paragraph (d).

EXHIBIT II

List of Acceptable Documents For Employment Verification

All documents must be valid, expired documents will NOT be accepted

All applicants requiring fingerprints must also provide at least one (1) form of photo identification.

List A

OR

List B

AND

List C

Documents that Establish Both Identity and Employment Eligibility	Documents that Establish Identity	Documents that Establish Employment Eligibility
<ol style="list-style-type: none"> 1. U.S. Passport or Passport Card 2. Permanent Resident Card or Alien Registration Receipt Card (Form I-551) 3. Foreign passport that contains a temporary I-551 stamp or temporary I-551 printed notation on a machine-readable immigrant visa 4. Employment Authorization Document that contains a photograph (Form I-766) 5. Form I-94 or Form I-94A bearing the same name as the passport and containing an endorsement of the alien's nonimmigrant status, as long as the period of endorsement has not yet expired and the proposed employment is not in conflict with any restrictions or limitations identified on the form 6. Passport from the Federated States of Micronesia (FSM) or the Republic of the Marshall Islands (RMI) with Form I-94 or Form I-94A indicating nonimmigrant admission under the Compact of Free Association Between the United States and the FSM or RMI 	<ol style="list-style-type: none"> 1. Driver's license or ID card issued by a State or outlying possession of the United States 2. ID card issued by Federal, State, or local government agency or entities, provided it contains a photograph or information such as name, date of birth, gender, height, eye color, and address 3. School ID card with a photograph 4. Voter's registration card 5. U.S. Military card or draft record 6. Military dependent's ID card 7. U.S. Coast Guard Merchant Mariner Card 8. Native American tribal document 9. Driver's license issued by a Canadian government authority <p style="text-align: center; margin: 5px 0;">For persons under the age of 18 who are unable to present a document listed above:</p> <ol style="list-style-type: none"> 10. School record or report card 11. Clinic, doctor, or hospital record 12. Day-care or nursery school record 	<ol style="list-style-type: none"> 1. Social Security Card other than one that specifies on the face that the issuance of the card does not authorize employment in the United States. 2. Certification of Birth Abroad Issued by the Department of State (Form FS-545) 3. Certification of Report of Birth issued by the Department of State (Form DS-1350) 4. Original or certified copy of birth certificate issued by a State, county, municipal authority, or territory of the United States bearing an official seal 5. Native American tribal document 6. U.S. Citizen ID Card (Form I-197) 7. Identification Card for Use of Resident Citizen in the United States (Form I-179) 8. Employment authorization document issued by the Department of Homeland Security

Applicants who are U.S. Citizens Born Abroad or Naturalized U.S. Citizens using documents from List B and List C to establish Identity and Employment Eligibility must additionally present one of the following:

U.S. Passport Number or Passport Card Number
 Certificate of Naturalization (Form N-550 or N-570)
 Certificate of US Citizenship (Form N-560 or N-561)
 Certification of Report of Birth (Form DS-1350)
 Consular Report of Birth Abroad (Form FS-240)
 Certification of Birth Abroad (Form FS-545)

100 MOBILIZATION

100.1. DESCRIPTION:

- A. Mobilization shall consist of preparatory work and operations, including but not limited to, installation of staging area temporary utilities, the movement of personnel, equipment, materials, supplies and incidentals to the project site, and for transportation of buildings, Quality Control personnel, laboratory field testing equipment and tools, testing supplies, haul roads and other facilities necessary to complete the Work on the project including providing one or more staging areas with temporary security fence and gate(s). This item is also for the Contractor's operations, and material storage for the Contractor. This item is for other work and operations that the Contractor must perform or costs he must incur before beginning work on the project, and for necessary work and costs in completing the construction and demobilizing from the site.

Demobilization costs may include, but not be limited to, removal of temporary utilities to the staging area and concrete batch plant(s), removal of temporary field offices and materials laboratories, demobilization of equipment, and the clean-up and restoration of the construction staging area, the concrete batch plant(s) and materials laboratories location.

- B. Contractor Staging Area: The Contractor shall provide an **off airport staging area** for his use during the duration of this project. This area shall be used for the Contractor's operations, the storage of materials, equipment parking, cement silos, batch plants or other equipment required for the construction of this project. The Contractor shall provide utility services to the site and all permits needed to use the temporary staging area. The Airport reserves the right to direct the Contractor to correct any deficiencies in the maintenance of the staging yard and the Contractor shall promptly comply with the directives of the Engineer. The Contractor is required to Comply with the requirements of the property owner when finished with this property and restore it to the prior condition. Prior to commencement of work, the Contractor shall document the existing conditions of the proposed staging area and haul routes. Acceptable documentation shall include photographs and video documentation. All documentation shall be submitted to the Engineer prior to beginning work.

The safety, convenience, and the protection of persons and property, of the general public and residents along the streets, highways and areas adjacent to the work areas shall be provided by the Contractor. The Contractor shall at all times so conduct his work as to assure the least possible obstruction to traffic and adjacent residents.

The Contractor shall submit a staging area layout and operations plan for approval before equipment mobilization. The plan shall include haul routes (On site, to the airport, gate access, and through the fence), public access, security fencing, batch plant locations, stockpile locations and dust control.

- C. Insurance and Bonds shall be purchased by the Contractor and Subcontractors in compliance with Article XI, *Insurance and Bonds* of the General Conditions, and modified in Division B, *Additional Requirements from Aviation Department, Insurance*.

D. Airside Safety and Security / Traffic Control

The airport is operated in strict compliance with Transportation Security Administration (TSA) and Federal Aviation Regulations (FAR), which prohibit unauthorized persons or vehicles in the Air Operations Area (AOA). Equipment and workmen will be restricted to the work area defined on the plans. Any violation by Contractor's personnel or sub-contractors will subject the contractor to penalties imposed by the TSA, FAA or San Antonio International Airport (SAIA).

The Contractor shall provide equipment, vehicles and manpower to administer all requirements of the Airport Construction Safety Plan (ACSP) as shown separately and the requirements shown below. The Contractor shall be responsible for the protection of the construction site, and all work, materials, equipment, and existing facilities thereon, against vandals and other unauthorized persons.

The Contractor's responsibilities for work areas are as follows:

1. The Contractor shall be held responsible for controlling his employees, subcontractors, and their employees with regard to traffic movement.
2. The Contractor shall rebuild, repair, restore, and make good at his own expense all injuries or damages to any portion of the work occasioned by his use of these facilities before completion and acceptance of his work.
3. The Contractor shall submit to the Engineer in writing a detailed work plan for each construction phase. The work plan shall include, but not be limited to, temporary electrical facilities, installation sequence of underground electrical and storm sewer systems, paving sequence, installation sequence of electrical items, maintenance of airfield electrical and NAVAID power and control circuits. This plan shall be submitted 14 calendar days prior to the start of each construction phase. No work within the construction phase may commence until the phase work plan is approved.
4. The Contractor shall submit to the Engineer in writing a plan, by construction phase, for controlling construction equipment and vehicular movements in the Air Operations Area (AOA). This plan shall be submitted at the Pre-Construction Meeting. No work may commence until this plan is approved. The Plan must include material haul roads.
5. The Contractor shall provide a responsible Traffic Manager whose duty shall be to control all construction traffic on or near active runways, taxiways, haul roads, and highways. Paved surfaces shall be kept clear at all times and specifically must be kept free from all debris which might damage aircraft.

Access Control

Any time access is required to the Airport Restricted Areas the contractor shall be responsible for assuring that no breeches of airport security occur. Restricted areas are fenced and must remain fenced at all times. The gates will remain closed and locked or a guard will be provided at the Contractor's expense. The location of the entrance gate (Gate Guard) will be dependent on the contractors Construction plan and how the access for each phase of the project is chosen. The Contractor will furnish the guard with a roster of his personnel and ensure that each individual has adequate identification. The duplicate keys for each lock will be turned over to the airport authorities.

- No person shall enter the contractor worksite without authorization. Any person found within the worksite without proper identification as describe herein shall be considered unauthorized and shall be removed from the worksite.
- All persons authorized access to the worksite shall display a valid Airport ID badge or be under authorized escort.
- Persons authorized to provide escorts include airport staff and designated contractor supervisors. The number of personnel being escorted shall not exceed ten (10) non-badged

personnels; this includes vendors, subcontractors, visitors and part-time workers. **Failure to provide an escort can result in loss of escort privileges, fines, revocation of the security badge, or all three.**

Challenge Procedures: All personnel are responsible for challenging and reporting anyone in their work areas not displaying an Airport ID badge. Personnel shall contact Airport Operations and/or SA Police Department and detain person(s) if safe to do so.

AIRPORT SAFETY REQUIREMENTS

Material Safety Data sheets:

Subcontractors are required to bring copies of MSDSs for all hazardous chemicals brought onto the site.

- These will be retained by the MSDS coordinator and will be accessible to all employees.

Each subcontractor must bring its specific Hazardous Communication Program and MSDSs in a binder labeled with the contractors name and identified as a Hazardous Communication Program.

- Upon leaving the job site and the removal of all hazardous materials, the binder will be returned to the subcontractors

Operating Construction Vehicles on the Airport

No vehicle shall enter the contractor worksite unless the following conditions are met:

- The driver is authorized to access the worksite (in possession of valid security badge with a driver endorsement).
- The driver possesses a valid driver's license.
- The vehicle is properly marked with the company name.
- Vehicle is marked with beacon or checkered flag or under escort.

Prohibited Vehicles

The use of motorcycles, bicycles, two-wheeled motor scooters and privately owned vehicles within the worksite is strictly prohibited.

Vehicle Condition

Vehicles must be in good mechanical condition with operational lights, horn, brakes, and clear visibility from the driver's seat. Trailers and semi-trailers must be equipped with proper brakes so that when disengaged from a towing vehicle, neither aircraft engine blast nor wind will cause them to become free rolling.

Compliance

All traffic within the Airport Restricted Area and/or contractor worksite must comply with any lawful order, signal or direction of any Airport employee. When such traffic is controlled by signs or pavement markings, such symbols shall be obeyed, unless otherwise directed by an officer or agent of the Airport.

Night or Low Visibility Operations

All vehicle headlights, taillights, and running or clearance lights shall be in operational condition. Headlights shall be used at all times.

Construction Vehicle and Equipment Markings

All construction equipment and vehicles shall have flashing amber lights, mounted at the highest point, during the nighttime and a 3' x 3' orange and white checkered flag or a flashing amber beacon during the daytime. All vehicles and equipment on the construction site shall have company designations visibly displayed. No personal vehicles will be allowed in the work area. All construction vehicles and equipment must have the company name and/or logo and vehicle number at least four (4) inches in height on each side of the vehicle.

Operation of Vehicles

No vehicle shall operate within the Airport Restricted Area:

- unless operated by an individual in possession of a valid Airport Identification Badge with a drivers endorsement or, under the direct escort of someone who is.
 - In a careless or negligent manner.
 - With disregard of the rights and safety of others.
 - At a speed or in a way which endangers persons or property.
 - While the driver is under the influence of drugs or alcohol.
- If such vehicle is loaded or maintained as to endanger persons or property.

Speed Limits

The speed limit on the perimeter roads is 25 miles per hour. The speed limit on the haul route is 15 miles per hour.

Vehicle Accidents

Each operator of a motor vehicle involved in an accident on the airport that results in damage to property or personal injury shall first contact 9-1-1 and then report it fully to the Airport Operations Department as soon as possible after the accident. The report must include the name and address of the person reporting. Copies of reports taken by City are acceptable for incidents that occur in the public areas of the airport.

Use of Crossing Guards

For construction that requires personnel, vehicles, and equipment to cross active taxiways/runways or other areas deemed appropriate by Airport Operations, the contractor shall provide crossing guards to prohibit the unauthorized crossing of an active taxiway.

- Each crossing guard shall have and properly display a valid airport issued security badge.
- Each crossing guard is required to undergo training. This training is provided by Airport Operations.
- A crossing guard shall be provided for **both** sides of a crossing point unless otherwise specified by Airport Operations.
- Each crossing guard shall have two-way radio communication with the Air Traffic Control Tower via aviation band radio provided by the contractor.
- Each crossing guard shall be properly equipped: Hand held stop sign, safety vest, and hearing protection.

Hearing Protection

Contractor personnel working on or adjacent to the AOA are encouraged to wear hearing protection.

Worker Injuries

In the event of a serious injury requiring medical attention call **911**. If called from a cell phone, tell the emergency operator to connect to the City of Mesa Emergency Dispatch, otherwise the call will

be routed to Maricopa County Dispatch and that will delay emergency response. All injuries must also be reported to Airport Operations as soon as possible.

After Hours Contacts

The Contractor shall submit to the Engineer a list of personnel who can be contacted 24 hours a day, seven (7) days a week and can respond in a reasonable time frame regarding any possible emergency on the work site. The list must include names, job title and phone numbers.

Daily Site Inspections

Prior to the Contractor leaving the worksite for the day, an inspection of the site shall be completed. All discrepancies noted in the inspection must be corrected to the satisfaction of the Engineer prior to the Contractor leaving the worksite.

Deliveries

All deliveries for the contractor shall be received by the contractor. Deliveries will not be accepted by anyone other than the contractor. The Airport nor its authorized representatives will not accept or be responsible for deliveries.

Taxiway and Runway Closures

Taxiway and runway closures require a minimum of:

- Prior notification and coordination in accordance with the contract documents.
- Closure requests shall factor in time for unanticipated events such as weather and equipment malfunction.
- Movement area closure schedules must be met. The Contractor shall advise the Engineer immediately of any need to extend a closure.
- Failure to meet a closure schedule may result in fines.
- Barricade lights must be red in color and either steady burn or flashing.
- Permanently closed runways require the obliteration of threshold markings, designation markings and touchdown zone markings. A Lighted 'X' shall be placed at each runway end on top of the designation numbers or at the locations shown on the plans.

Haul Routes

- Contractors are required to mark haul routes with barricades, traffic cones, signage, and light stanchions prior to the start of work. Both sides of the haul route shall be delineated.
- The haul route must be marked with red, steady burn or flashing omni-directional lights if work is schedule between sunset and sunrise.
- The contractor will monitor the haul route on a daily basis to ensure all posted markings, signs, and delineators are in place.
- Placards will be issued to transient haul trucks (i.e. concrete) upon entry into the Restricted Area by the gate guard.

Cranes or Mobilized Equipment

All activities involving cranes or mobilized vehicles exceeding 20 feet in height on or near the AOA require 48-hour advance coordination with Airport Operations. The following information is required:

- Location of equipment
- Maximum extendable height
- Duration of use
- Daily hours of operation
- Whether or not the crane can be lowered when not in use

Equipment must be lowered to its stowed height when not in use or as otherwise directed. The **highest point** of each piece of equipment shall be marked by a 3' x 3' orange and white checkered flag. At night and during periods of low visibility, the highest point of the crane must be marked by a red obstruction light. Crews must be prepared to remove equipment promptly if so directed.

Runway Safety Areas

Construction within the following areas is prohibited, unless required by the contract documents and is subject to approval of the Engineer.

- Within 250 feet parallel to a runway centerline
- Within 160 feet parallel to a taxiway centerline
- Within 1000 feet of the end of an active runway

Staging Area

All contractor materials, equipment and supplies shall be within the contractor's designated staging area. All staging areas shall be marked, debris boxes covered and area kept neat and clean of debris. For equipment that must remain in the work area, the following conditions must be met:

- Be located outside of the runway/taxiway safety and obstruction free areas.
- Be marked with lighted barricades around the equipment perimeter with a spacing of no more than 10 feet.
- Be coordinated at least 48 hours in advance with the Engineer.
- The highest point of the equipment marked and lit with a red flashing/steady burning omni-directional obstruction light.

Barricades and Lighting

The perimeters of the actual work areas, all uneven surfaces, mounds and excavations shall be adequately barricaded with low level barricades and/or Type II barricades (Outside of the TOFA) and lighted with omni-directional flashing red lights to prevent intrusion by taxiing aircraft, equipment and vehicles. Low profile barricades shall be supplemented with flashing high intensity red lights and two (2) orange flags at least 20" x 20" square and made and installed so that they are always in the extended position and properly oriented. Low level barricades shall be orange and white in color and shall be eight (8) feet in length and ten (10) inches in height. All cones and other marking devices must be lighted or equipped with reflectors during periods of darkness as directed by Airport Operations.

All barricades and cones must be maintained and kept in proper working order by the Contractor. All burnt out lights or inoperative batteries must be replaced immediately. Barricades and cones must remain upright at all times.

The placement of sandbags on barricades may be required in situations of adverse weather. In addition, the contractor must keep an adequate supply of extra barricades, lights and batteries on

site. Escorts for barricade maintenance must be provided by the contractor or coordinated in advance with Airport Operations.

Only red, battery powered, omni-directional lights are acceptable within the Restricted Area of the airport.

Trenches and Excavations

Contractors shall close trenches located within active safety areas at the end of each workday. No open trenches or excavations will be allowed within the following active safety areas without prior coordination and approval with the Engineer:

- Within 250 feet parallel to a runway centerline (trenches/excavations within 200 feet of a runway centerline require a runway closure which are subject to strict controls).
- Within 110 feet parallel to a taxiway centerline.
- Within 1000 feet of the end of a runway.
- Open trenches not to exceed 500 feet in length at any one time.
- Spoils from excavations are to be placed on the runway/taxiway side that is closest to the trench.
- Spoils length not to exceed 500 feet in length at any one time.
- Spoil height is not to exceed 4 feet or any height that would cause a visual obstruction.
- Spoils not returned to the trench or removed from the worksite are to be properly marked with lighted barricades with a spacing of no more than 10' or that to properly delineate the trench.

Stockpiled Material

Stockpiled materials are allowed only within the contractor's designated staging areas.

- Remove daily all stockpiled material from within aircraft movement areas, unless otherwise directed by the Engineer.
- No excavated or stored materials may remain within active runway or taxiway safety areas and object free zones.
- Stockpiled material may be located within the Air Operations Area only upon prior coordination and approval of the Engineer.

Workers with Airport ID Badges

Employees with a valid Airport ID badge are authorized to proceed into the Restricted Area. Advise the employee to remain on the designated haul route to their intended area. Airport ID badges must be worn on the outermost garment once inside the Restricted Area, including contractor worksite.

Workers without Airport ID Badges

Employees without a valid Airport ID badge must first check in with the security guard and be properly escorted inside the Restricted Area to their intended area. The gate guard shall log down the date, employee name and company. Advise the employee to wait at the gate until the escort arrives.

Deliveries

Delivery trucks are not required to obtain an Airport ID badge but must be properly escorted in order to proceed inside the Restricted Area to their intended area. The gate guard shall log down the date, driver name, and company. Advise the driver to wait at the gate until the escort arrives.

Haul Trucks

Transient haul truck drivers are not required to obtain an Airport ID badge but are required to check in with the contractor security guard. The driver shall be issued an orange/white checkered flag to be mounted on the highest point of the truck; and shall be returned to the security guard upon check out. Advise the driver to remain on the marked haul route and follow the appropriate signs to the intended work area. At no time shall a driver unfamiliar with the worksite be allowed to deviate from the marked haul route.

Weapons

No person, except a peace officer, authorized air carrier employee, airport employee or a member of an armed force of the United States on official duty, shall carry any weapon, explosive, or inflammable material on or about his person, openly or concealed, in the Restricted Area of the airport without the written permission of Airport Operations. No person shall furnish, give, sell, or trade a weapon on airport property.

Contractor Responsibilities

- The contractor must maintain and provide to the Engineer a log detailing the contract number, the airfield access point used, and all authorized and anticipated subcontractors and suppliers that will be requiring entry.
- The contractor must furnish guards with a sufficient number of flags for transient vehicles such as concrete or asphalt trucks entering the Restricted Area.
- The contractor must furnish guards a means of securing the access point should the guard have to leave the area in an emergency.

100.2. MEASUREMENT:

- A. Mobilization/Demobilization will be measured for payment by the lump sum as a single complete unit of work.
- B. Contractor Staging Area will be measured as a single complete unit of work.
- C. Insurance and Bond will be measured for payment by the lump sum as a single complete unit of work.
- D. Airside Safety and Security / Traffic Control will be measured for payment by the lump sum as a single complete unit of work.

100.3. PAYMENT:

- A. Mobilization/Demobilization
Payment for the performance of the Mobilization/Demobilization work as above specified will be made as partial payments as described below for the item Mobilization/Demobilization.
 - A. Payment will be made upon verification of documented expenditures for plant and facility setup. The combined amount for all these facilities will be no more than 10% of the mobilization lump sum or 1% of the total Contract amount, whichever is less.
 - B. When 1% of the adjusted Contract amount for construction Items is earned, 50% of the mobilization lump sum bid or 5% of the total Contract amount, whichever is less, will be paid. Previous payments under this Item will be deducted from this amount.

- C. When 5% of the adjusted Contract amount for construction Items is earned, 75% of the mobilization lump sum bid or 10% of the total Contract amount, whichever is less, will be paid. Previous payments under the Item will be deducted from this amount.
- D. When 10% of the adjusted Contract amount for construction Items is earned, 90% of the mobilization lump sum bid or 10% of the total Contract amount, whichever is less, will be paid. Previous payments under this Item will be deducted from this amount.
- E. Payment for the remainder of the lump sum bid for "Mobilization" will be made on the next estimate cycle after the initial retainage estimate or at final acceptance for projects without retainage.

Payment for Mobilization/Demobilization shall not exceed eight (8) percent of the total bid price for the base bid and shall not exceed eight (8) percent for the total of each of the additive alternate bid amounts.

- C. Contractor Staging Area
Payment for the providing a Contractor Staging Area **Off Site** shall be made as an not-to-exceed allowance. This allowance shall be full compensation for leasing, permitting, site preparation, operation, demobilization, utility services and for all labor, equipment, tools, and incidentals necessary to complete this item.

Partial payments will be made uniformly over the contract time, provided that the work site under Contractor Staging Area is maintained satisfactorily to the approval of the Airport and Engineer. The Contractor shall provide all lease payments, invoices, purchase orders, receipts, time sheets, payroll records, subcontractor agreements, and supplier agreements as documentation for payment against the allowance.

If the Contractor is allowed to use an on-site airport staging area, no allowance payment will be made for a Contractor Staging Area.

- D. Insurance and Bonds
Payment for Insurance and Bonds will be made upon presentation of a paid invoice for the payment bond, performance bond, and required insurance. The combined payment for bonds and insurance will be no more than 10% of the mobilization lump sum or 1% of the total Contract amount, whichever is less.

- E. Airside Safety and Security / Traffic Control
Payment for Airside Safety and Security / Traffic Control shall include full compensation for furnishing and administering all requirements of the Airport Construction Safety Plan (ACSP) and furnishing all labor, materials, **four (4) Lighted Runway X's**, vehicle/personnel escorts, power vacuum sweepers, furnishing, placement and removal of all temporary airside traffic control (low level barricades and safety fence), vehicle and equipment markings, security badges and training for all construction personnel, equipment, flagmen, cell phones, and incidentals to safely control construction traffic for the San Antonio International Airport.

Partial payments will be made uniformly over the contract time, provided that the work under Airside Safety and Security / Traffic Control is maintained satisfactorily to the approval of Airport Operations and the Engineer.

100.4. BID ITEM:

Payment will be made under:

- Item 100.1 Mobilization/Demobilization (maximum of **8%**) - lump sum
- Item 100.2 Contractor Staging Area - per allowance
- Item 100.3 Insurance and Bonds - lump sum
- Item 100.4 Airside Safety and Security / Traffic Control - lump sum

END OF ITEM 100



Kimley-Horn

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PHONE: (210) 541-9166
TEXAS REGISTERED FIRM,
NO. 928

**RUNWAY 12R-30L
ELECTRICAL IMPROVEMENTS
AND TERMINAL AREA
TAXIWAY IMPROVEMENTS
(PACKAGE 4)**



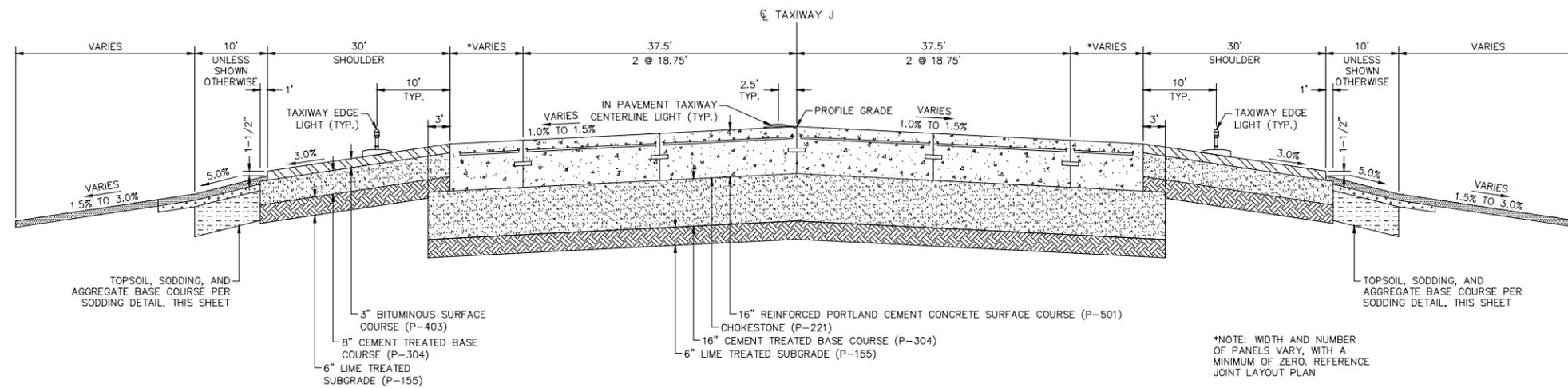
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1	06/10/16	ADDENDUM 4

ISSUE:

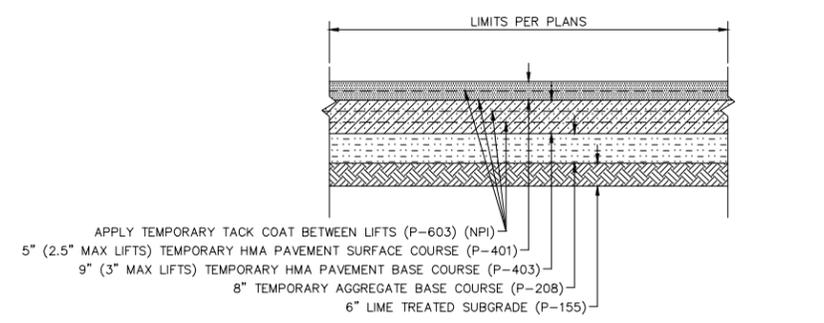
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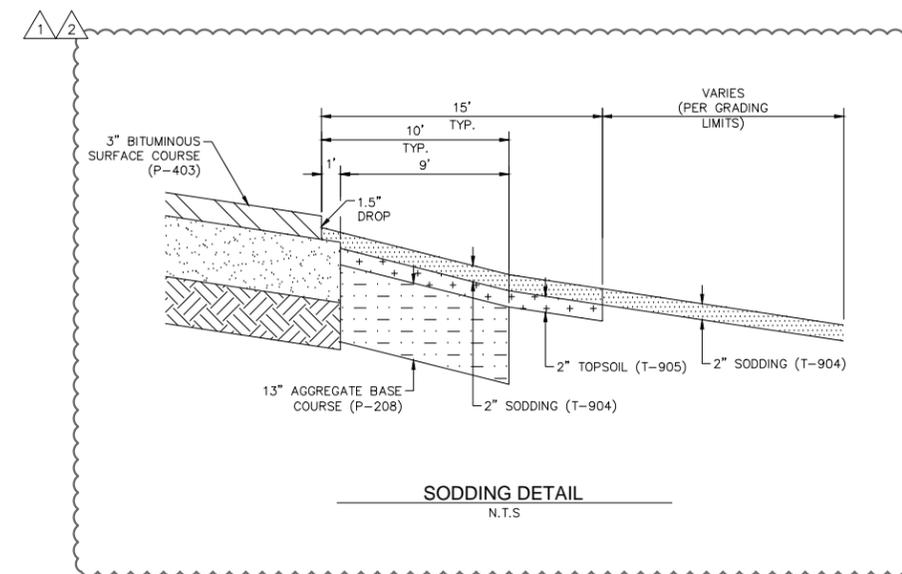
TYPICAL SECTIONS



A
C4.1 TAXIWAY J (STA. 11+25.00 TO 13+25.00) TYPICAL SECTION
N.T.S.



B
C4.1 TEMPORARY ASPHALT (FULL DEPTH) TYPICAL SECTION
(STA 11+09.31 TO STA 11+25)
N.T.S.



SODDING DETAIL
N.T.S.

GENERAL NOTES

- THE SUBGRADE IN CUT AREAS SHALL HAVE NATURAL DENSITIES SHOWN, OR
 - SHALL BE COMPACTED FROM THE SURFACE TO ACHIEVE THE REQUIRED DENSITIES.
 - SHALL BE REMOVED AND REPLACED IN WHICH CASE THE MINIMUM DENSITIES FOR FILLS APPLY. SEE SPECIFICATION P-152 FOR OVER-EXCAVATION REQUIREMENTS.
- NON-COHESIVE SOILS, FOR THE PURPOSE OF DETERMINING COMPACTION, ARE THOSE WITH A P.I. < 6.

K:\PWX_Aviation\19122001-San Antonio\CADD\Package 4_33-00193-R1CT-301-D00.dwg April 11, 2016 Crawford, Pat



**RUNWAY 12R-30L
ELECTRICAL IMPROVEMENTS
AND TERMINAL AREA
TAXIWAY IMPROVEMENTS
(PACKAGE 4)**

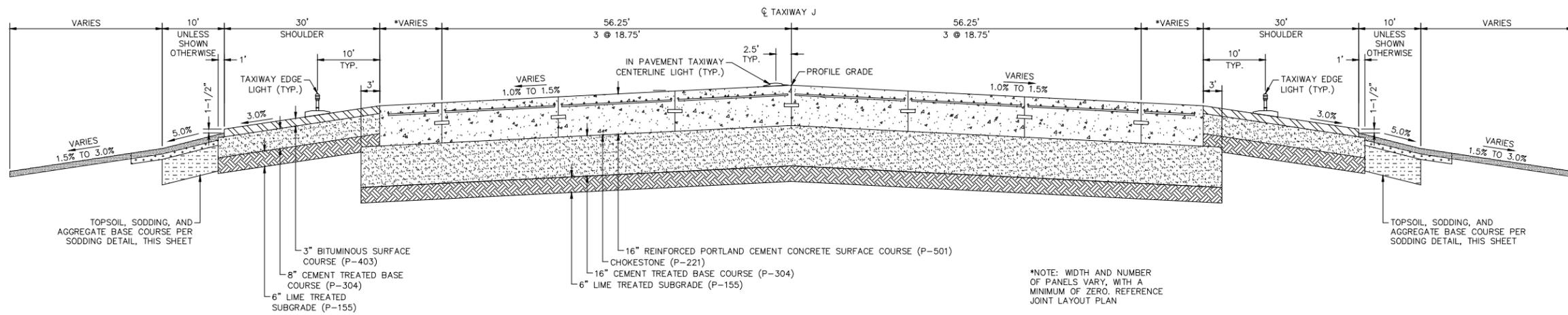


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1	06/10/16	ADDENDUM 4

ISSUE:

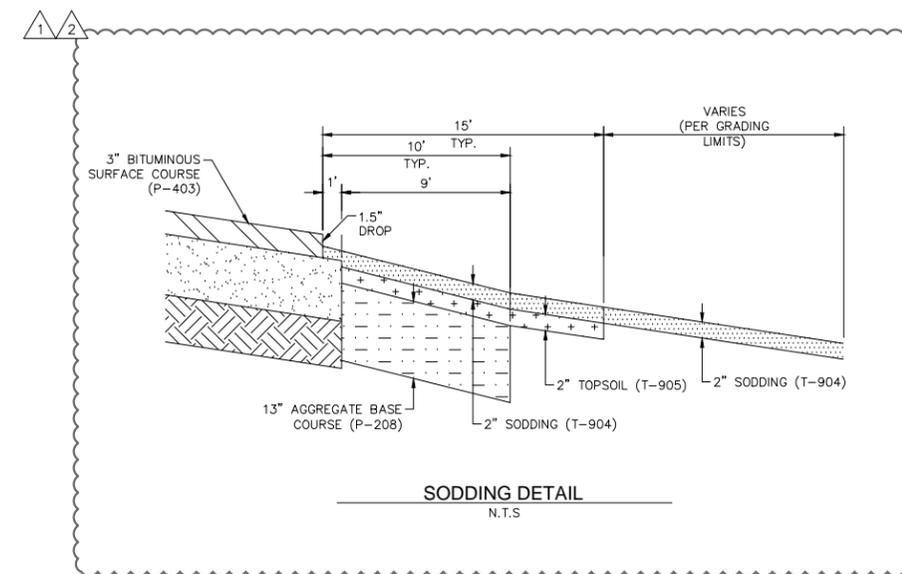
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TYPICAL SECTIONS



A TAXIWAY J (STA. 10+37.50 TO 11+25.00) TYPICAL SECTION
C4.2 N.T.S.

*NOTE: WIDTH AND NUMBER OF PANELS VARY, WITH A MINIMUM OF ZERO. REFERENCE JOINT LAYOUT PLAN



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NO. 928

**RUNWAY 12R-30L
ELECTRICAL IMPROVEMENTS
AND TERMINAL AREA
TAXIWAY IMPROVEMENTS
(PACKAGE 4)**

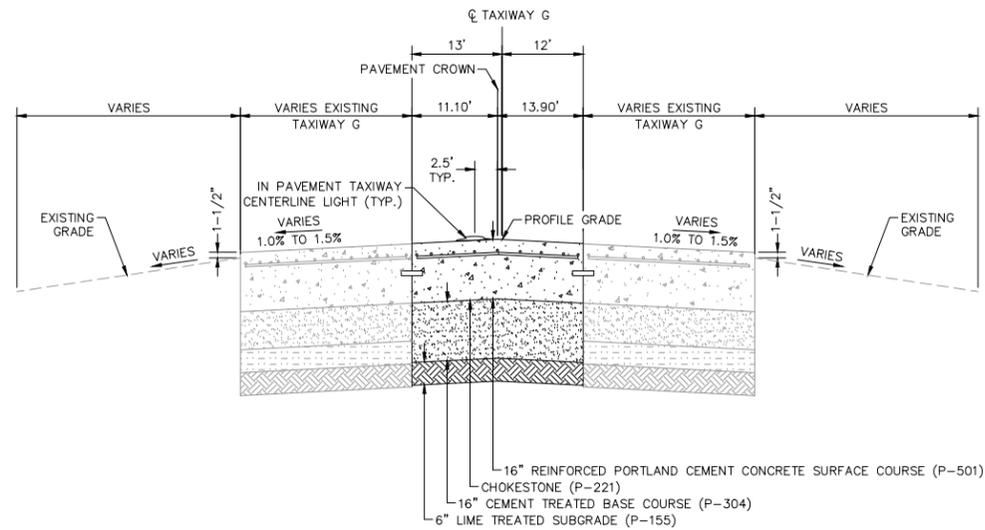


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1	06/10/16	ADDENDUM 4

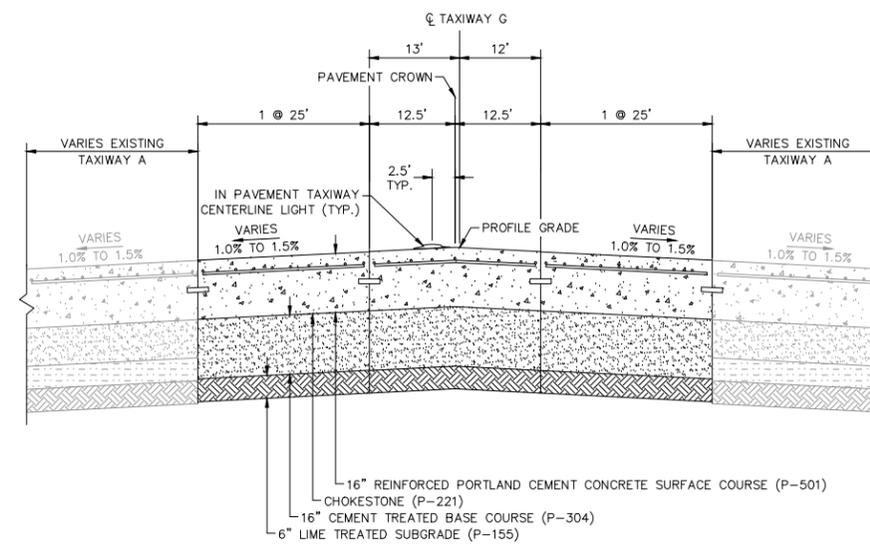
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TYPICAL SECTIONS



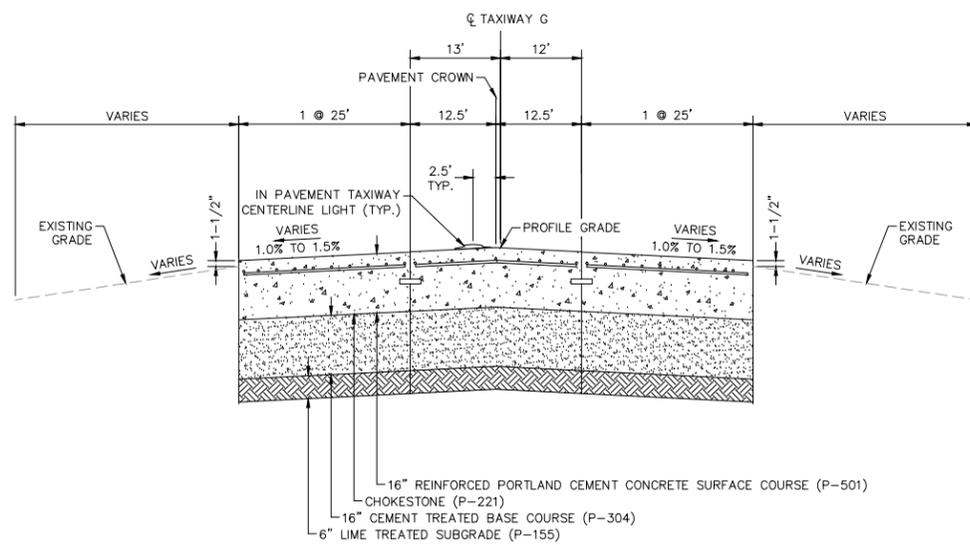
A TAXIWAY G (STA. 252+51.61 TO 252+75.84) TYPICAL SECTION
C4.2 N.T.S.



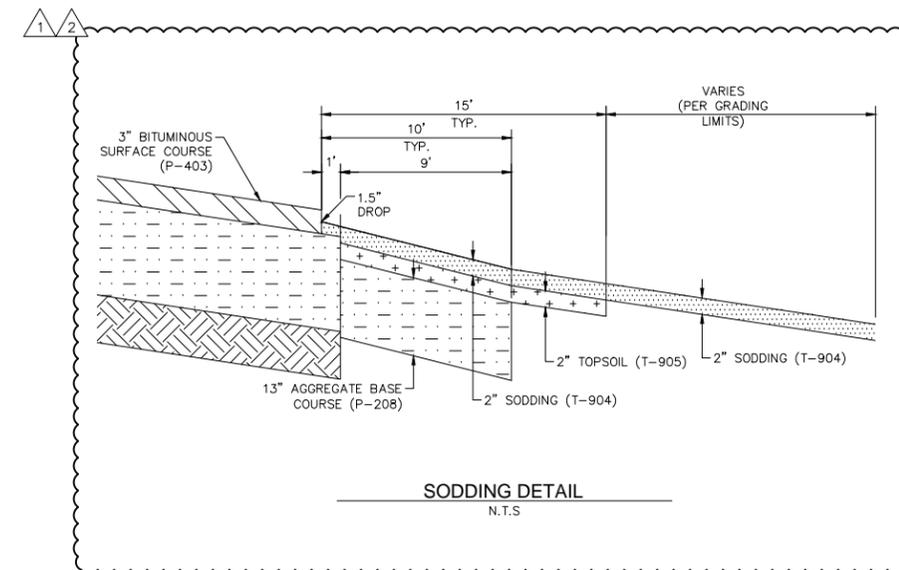
B TAXIWAY G (STA. 255+75.65 TO 257+03.30) TYPICAL SECTION
C4.2 N.T.S.

GENERAL NOTES

1. THE SUBGRADE IN CUT AREAS SHALL HAVE NATURAL DENSITIES SHOWN, OR
 - A. SHALL BE COMPACTED FROM THE SURFACE TO ACHIEVE THE REQUIRED DENSITIES.
 - B. SHALL BE REMOVED AND REPLACED IN WHICH CASE THE MINIMUM DENSITIES FOR FILLS APPLY. SEE SPECIFICATION P-152 FOR OVER-EXCAVATION REQUIREMENTS.
2. NON-COHESIVE SOILS, FOR THE PURPOSE OF DETERMINING COMPACTION, ARE THOSE WITH A P.I. < 6.



C TAXIWAY G (STA. 257+03.30 TO 259+25.65) TYPICAL SECTION
C4.3 N.T.S.



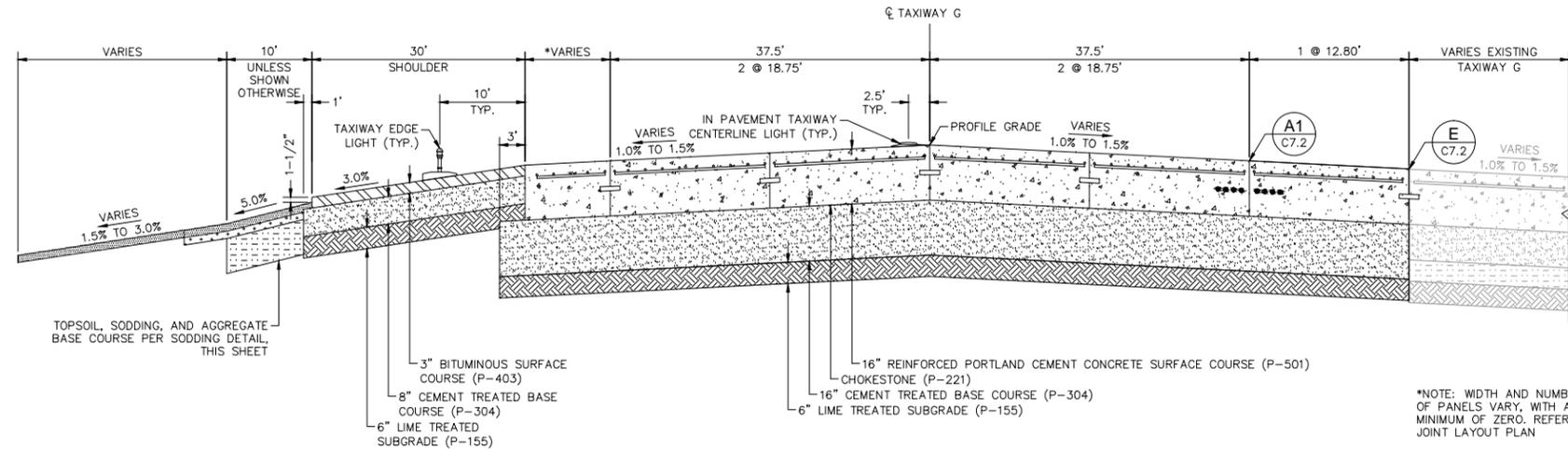
SODDING DETAIL
N.T.S.



Kimley-Horn

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NO. 928

**RUNWAY 12R-30L
ELECTRICAL IMPROVEMENTS
AND TERMINAL AREA
TAXIWAY IMPROVEMENTS
(PACKAGE 4)**

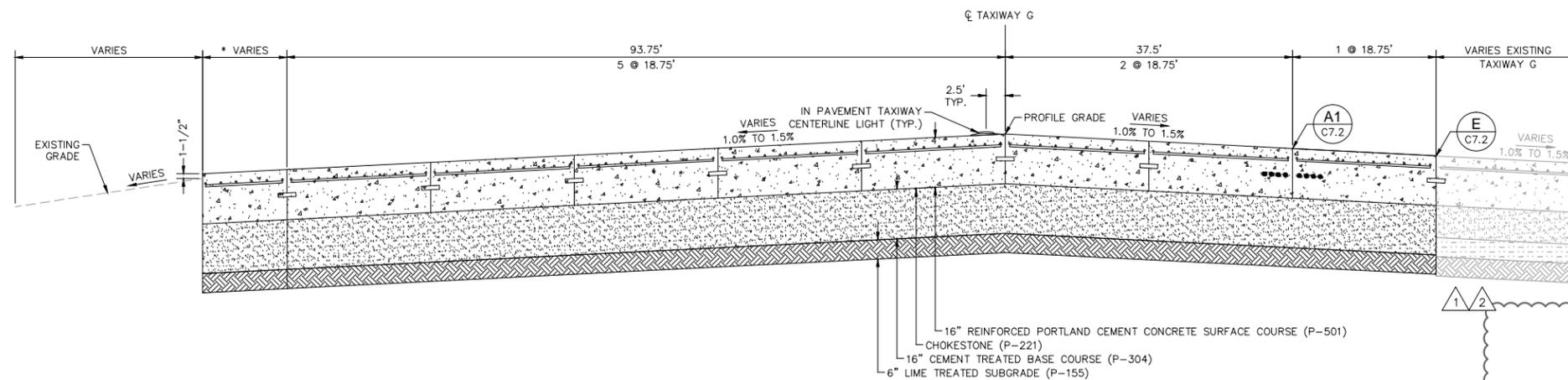


B
C4.3 TAXIWAY G (STA. 271+55.00 TO 273+85.00) TYPICAL SECTION
TAXIWAY G (STA. 275+75.00 TO 276+55.00) TYPICAL SECTION
N.T.S

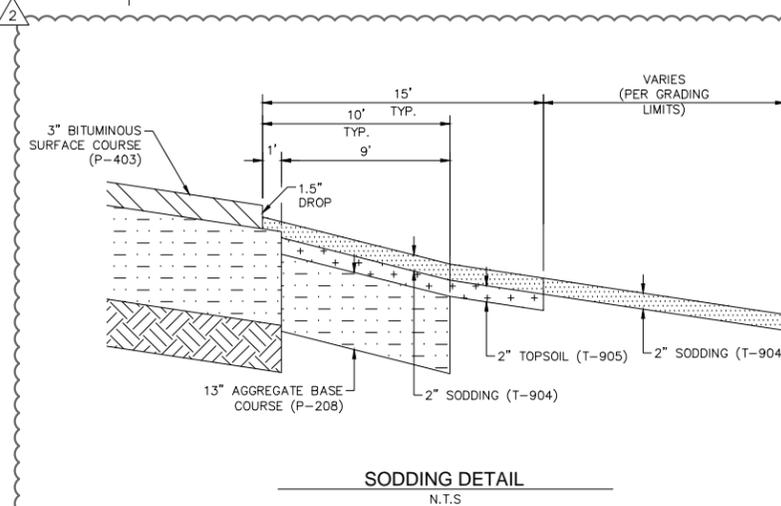
*NOTE: WIDTH AND NUMBER OF PANELS VARY, WITH A MINIMUM OF ZERO. REFERENCE JOINT LAYOUT PLAN

GENERAL NOTES

- THE SUBGRADE IN CUT AREAS SHALL HAVE NATURAL DENSITIES SHOWN, OR
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C
C4.3 TAXIWAY G (STA. 273+85.00 TO 274+75.00) TYPICAL SECTION
N.T.S



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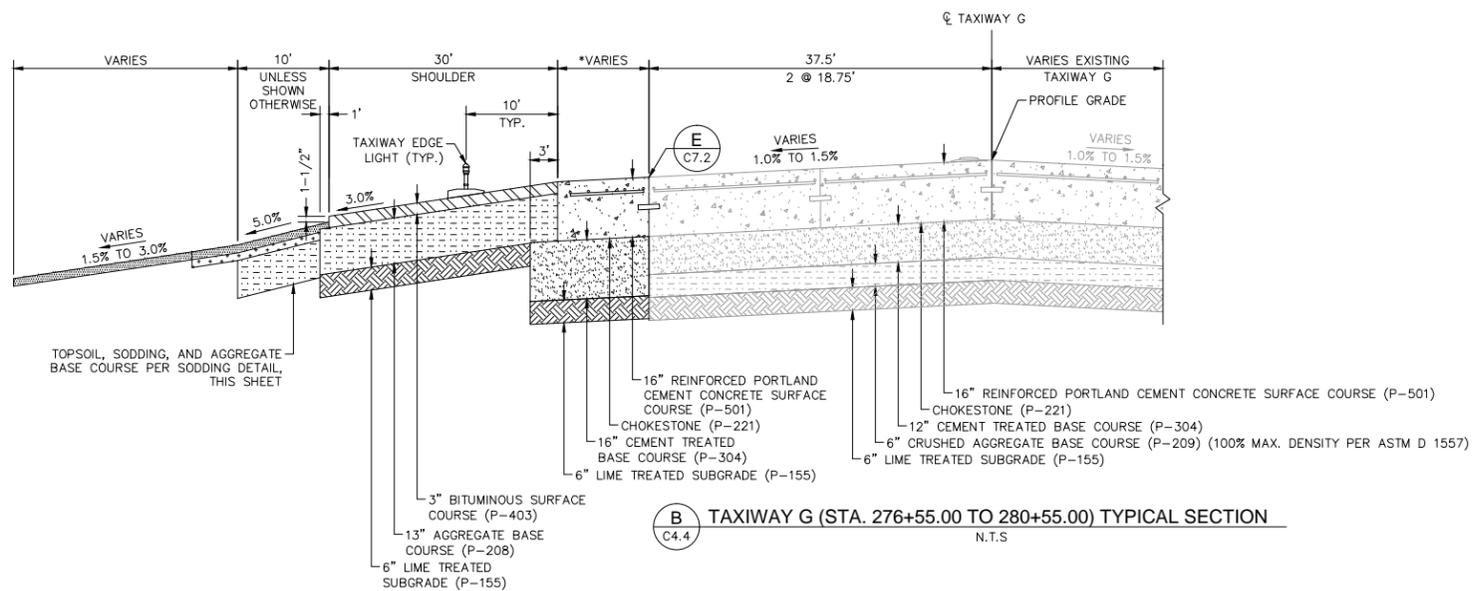
**RUNWAY 12R-30L
ELECTRICAL IMPROVEMENTS
AND TERMINAL AREA
TAXIWAY IMPROVEMENTS
(PACKAGE 4)**



MARK	DATE	DESCRIPTION
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1	06/10/16	ADDENDUM 4

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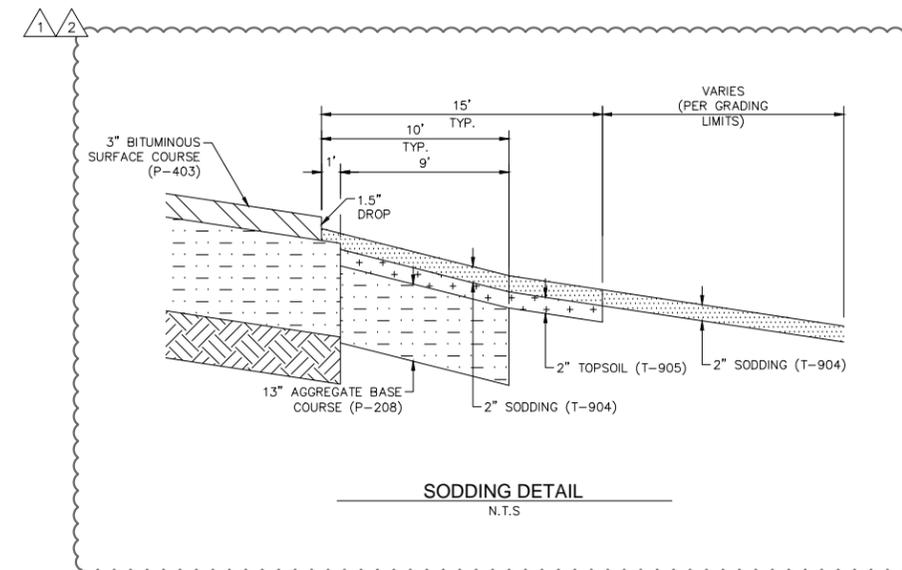
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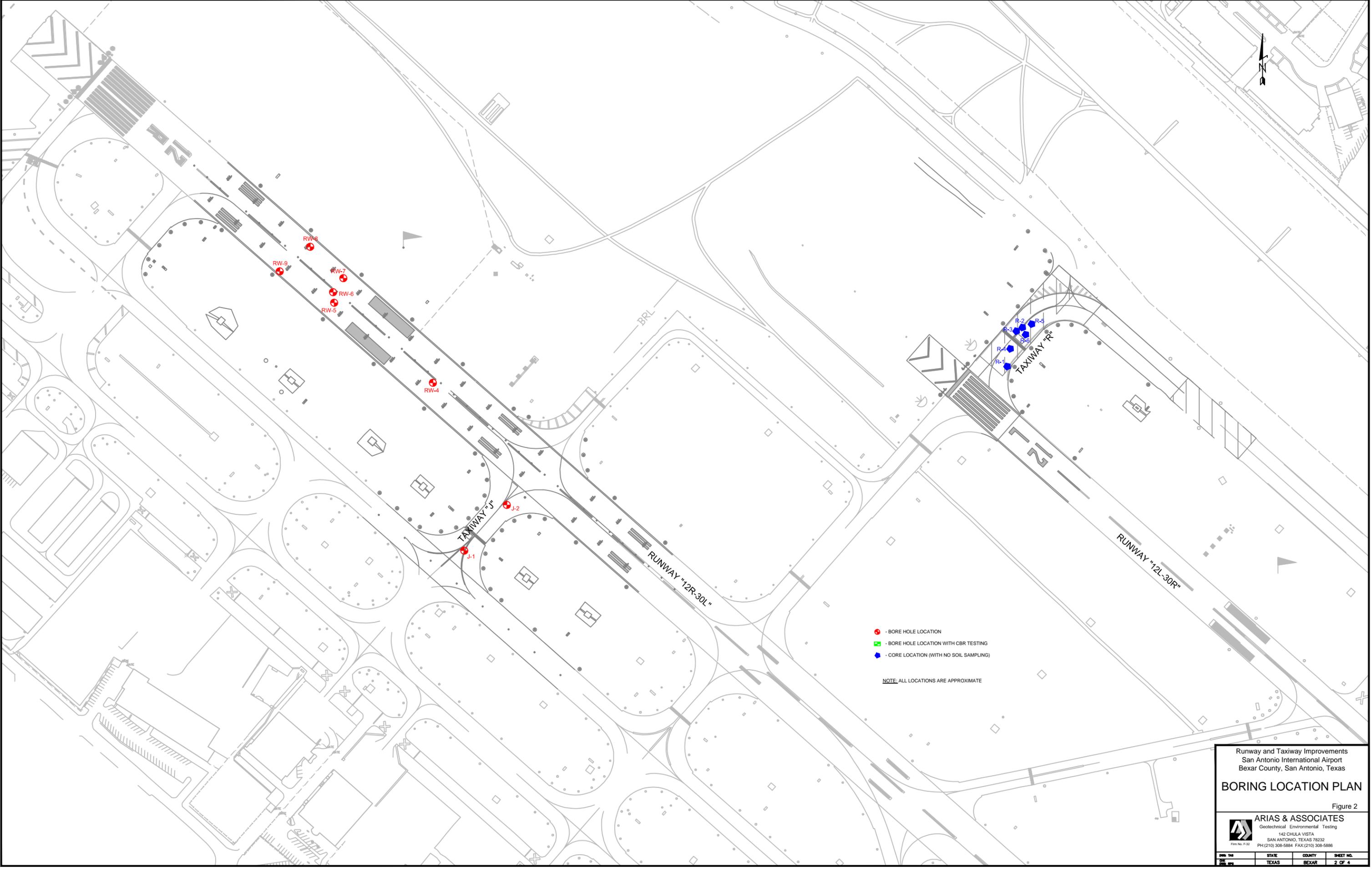


*NOTE: WIDTH AND NUMBER OF PANELS VARY, WITH A MINIMUM OF ZERO. REFERENCE JOINT LAYOUT PLAN

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- - BORE HOLE LOCATION
- - BORE HOLE LOCATION WITH CBR TESTING
- - CORE LOCATION (WITH NO SOIL SAMPLING)

NOTE: ALL LOCATIONS ARE APPROXIMATE

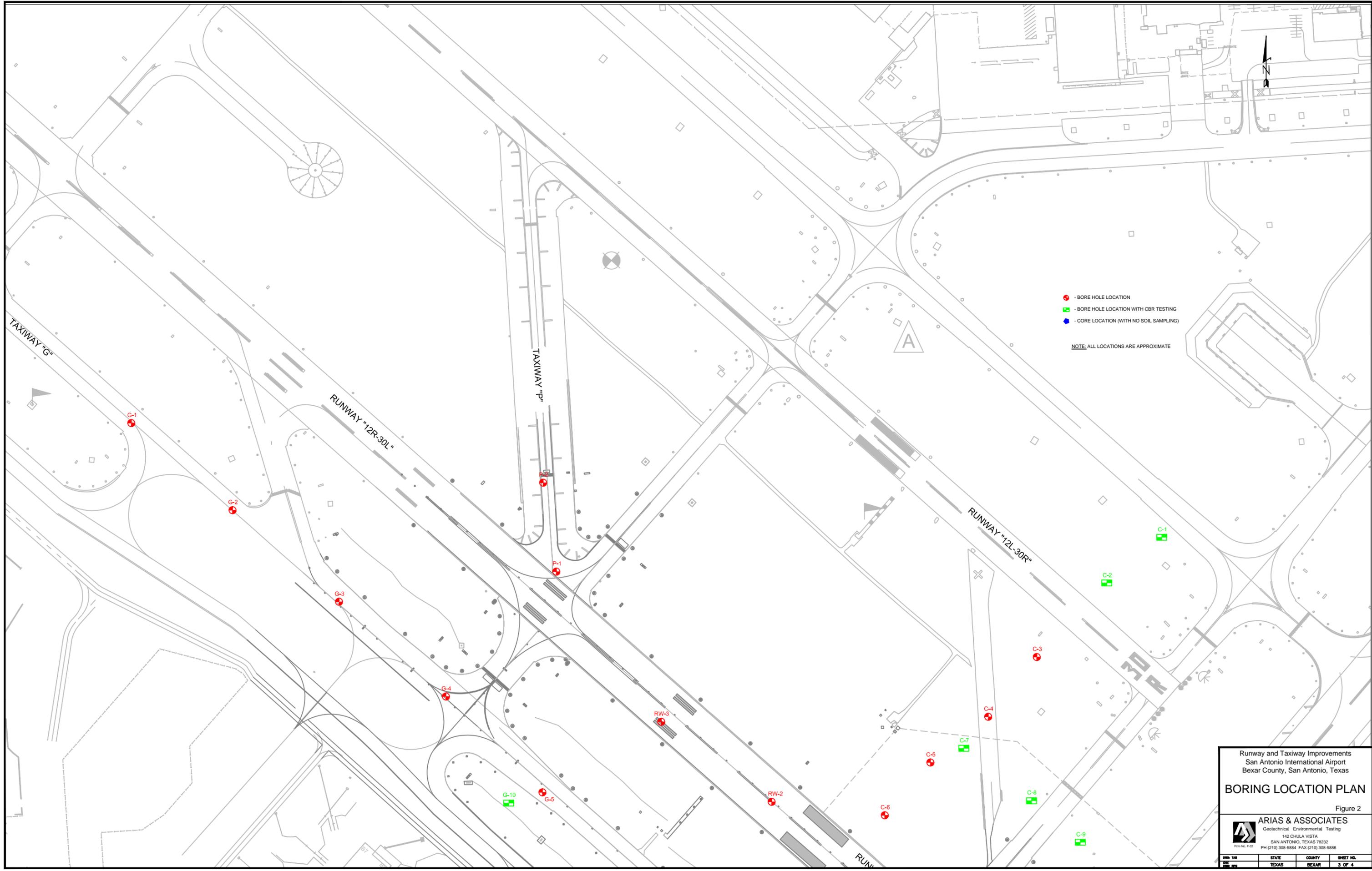
Runway and Taxiway Improvements
 San Antonio International Airport
 Bexar County, San Antonio, Texas

BORING LOCATION PLAN

Figure 2

ARIAS & ASSOCIATES
 Geotechnical Environmental Testing
 142 CHULA VISTA
 SAN ANTONIO, TEXAS 78232
 PH: (210) 308-5884 FAX: (210) 308-5886

DATE: 10/14/10	STATE: TEXAS	COUNTY: BEXAR	SHEET NO.: 2 OF 4
----------------	--------------	---------------	-------------------



- - BORE HOLE LOCATION
 - - BORE HOLE LOCATION WITH CBR TESTING
 - - CORE LOCATION (WITH NO SOIL SAMPLING)
- NOTE: ALL LOCATIONS ARE APPROXIMATE

Runway and Taxiway Improvements
 San Antonio International Airport
 Bexar County, San Antonio, Texas

BORING LOCATION PLAN

Figure 2

ARIAS & ASSOCIATES
 Geotechnical Environmental Testing
 142 CHULA VISTA
 SAN ANTONIO, TEXAS 78232
 PH:(210) 308-5884 FAX:(210) 308-5886

DATE	STATE	COUNTY	SHEET NO.
08/11/2011	TEXAS	BEXAR	3 OF 4

Table 3: Existing Pavement Thickness

General Area Description	Boring No.	Approximate Concrete Thickness, inches	Sub-Base Description
Twy G	G1 and G2	17.5 to 18	20" to 24" CTB
	G3 thru G9	16.5 to 18	10" to 19" CTB
Twy J	J1 and J2	17	8.5" to 9" CTB
Twy N	N1 thru N 4	16 to 19	11" to 17" CTB
	N5 thru N8	16 to 17	2.5" to 3" HMA
Rwy 12R	RW 1 thru RW 3	15 to 16.5	3" to 3.5" HMA
	RW 4 thru RW 9	15 to 17.5	9" to 12" CTB
Twy E	F1, F2, E7	16 to 17	2" to 3.5" of HMA
	E8	16	10.5" CTB
Twy R	R1 thru R6	17 to 18	Subbase layer not observed

Six of the recovered concrete cores selected by Kimley-Horn were packaged and sent to the University of Toronto to provide specialized testing to review the concrete for Alkali-Silica Reactivity (ASR). We understand that the results of ASR testing will be submitted directly to Kimley-Horn as a separate report.

Site Stratigraphy and Engineering Properties

The soil conditions encountered in the soil borings varied across the site. The natural soils encountered in the borings generally consisted of highly plastic (CH) clays near the surface and transitioned into low plasticity (CL) clays overlying clayey sands (SC) and clayey gravels (GC). A very hard partially cemented marlstone was encountered below about 8 to 20 feet at a few of the boring locations. Variable types of fill material consisting of clays, sand, and gravel were encountered in 13 of the 58 borings provided as part of this study. The thickness of the observed soil layers varied with location. The generalized subsurface stratigraphy and the engineering properties of each soil stratum encountered at this site are summarized in the table below.

Boring Log No. G1



Project: **Runway and Taxiway Improvements (2012)**
at San Antonio International Airport
San Antonio, Texas

Sampling Date: 3/10/13

Location: See Boring Location Plan

Backfill:

Backfill and patched

Soil Description	Depth (ft)	SN	WC	PL	LL	PI	N	-200
18" Concrete		CC	7					
24" Cement Treated Base	2							
FAT CLAY (CH), stiff, dark brown, with sand	4	SS	30	28	84	56	12	77
CLAYEY GRAVEL (GC), medium dense, tan	6	SS	29				28	
-very dense below 8'	8	SS		20	67	47	50/6"	

Borehole terminated at 9.5 feet

Groundwater Data:

First encountered during drilling: 3.5-ft depth

After : 8.4-ft depth

Field Drilling Data:

Logged By: R. Arizola

Driller: Eagle Drilling, Inc.

Equipment: Truck-mounted drill rig

Single flight auger: 0 - 9.5 ft

Nomenclature Used on Boring Log

■ Concrete Core (CC)

■ Split Spoon (SS)

▽ Water encountered during drilling

▼ Delayed water reading

WC = Water Content (%)

-200 = % Passing #200 Sieve

PL = Plastic Limit

LL = Liquid Limit

PI = Plasticity Index

N = SPT Blow Count

2012-955.GPJ 5/9/13 (BORING LOG SA12-02.ARI/ASSA12-01.GDT, LIBRARY2012-02.GLB)

Boring Log No. G4



**Project: Runway and Taxiway Improvements (2012)
at San Antonio International Airport
San Antonio, Texas**

Sampling Date: 3/13/13

Location: See Boring Location Plan

Backfill:

Backfill and patched

Soil Description	Depth (ft)	SN	WC	PL	LL	PI	N
18" Concrete							
		CC					
11" Cement Treated Base	2						
CLAYEY GRAVEL (GC), medium dense to dense, light tan, (possibly fill)	4	SS	6				43
	6	SS	7	15	30	15	19
	8	SS	30				22
	10	SS	15	22	53	31	52
FAT CLAY (CH), very stiff, dark brown and tan, with gravel -hard below 8'							
Borehole terminated at 10 feet							

Groundwater Data:

During drilling: Not encountered

Field Drilling Data:

Logged By: L. Perez
Driller: Accu Drilling
Equipment: Truck-mounted drill rig

Single flight auger: 0 - 10 ft

Nomenclature Used on Boring Log

Concrete Core (CC) Split Spoon (SS)

WC = Water Content (%)
PL = Plastic Limit
LL = Liquid Limit
PI = Plasticity Index
N = SPT Blow Count

2012-955.GPJ 5/9/13 (BORING LOG SA12-02,ARI/ASSA12-01,GDT,LIBRARY2012-02,GLB)

Boring Log No. G5



Project: **Runway and Taxiway Improvements (2012)
at San Antonio International Airport
San Antonio, Texas**

Sampling Date: 3/13/13

Location: See Boring Location Plan

Backfill: Backfill and patched

Soil Description	Depth (ft)	SN	WC	PL	LL	PI	PP	N	DD	Uc
16.5" Concrete										
19" Cement Treated Base	2	CC								
FAT CLAY (CH), stiff, dark brown	4	SS	32					11		
-with gravel below 6'	6	T	31				3.0		87	1.75
LEAN CLAY (CL), very stiff, tan, with calcarous deposits	8	T	31	29	74	45	4.0			
	10	T	21				4.5+		110	4.41

Borehole terminated at 10 feet

Groundwater Data:

During drilling: Not encountered

Field Drilling Data:

Logged By: L. Perez
Driller: Accu Drilling
Equipment: Truck-mounted drill rig

Single flight auger: 0 - 10 ft

Nomenclature Used on Boring Log

 Concrete Core (CC)
  Split Spoon (SS)

 Thin-walled tube (T)

WC = Water Content (%)

PL = Plastic Limit

LL = Liquid Limit

PI = Plasticity Index

PP = Pocket Penetrometer (tsf)

N = SPT Blow Count

DD = Dry Density (pcf)

Uc = Compressive Strength (tsf)

2012-955.GPJ 5/9/13 (BORING LOG SA12-02,ARI/ASSA12-01,GDT,LIBRARY2012-02,GLB)

Boring Log No. J1



Project: **Runway and Taxiway Improvements (2012)**
at San Antonio International Airport
San Antonio, Texas

Sampling Date: 3/13/13

Location: See Boring Location Plan

Backfill:

Backfill and patched

Soil Description	Depth (ft)	SN	WC	PL	LL	PI	N	-200
17" Concrete		CC						
9" Cement Treated Base	2							
10" Crushed Limestone Aggregate Base		SS	6				**50/6"	
FILL: FAT CLAY (CH), stiff, dark brown, sandy	4							
		SS	27	23	68	45	11	60
FAT CLAY (CH), very stiff, tan, with calcareous deposits	6							
		SS	23				16	
	8							
		SS	23	20	58	38	23	80
	10							

Borehole terminated at 10 feet

2012-955.GPJ 5/9/13 (BORING LOG SA12-02.ARI/ASSA12-01.GDT, LIBRARY2012-02.GLB)

Groundwater Data:

During drilling: Not encountered

Field Drilling Data:

Logged By: R. Arizola
 Driller: Eagle Drilling, Inc.
 Equipment: Truck-mounted drill rig

Single flight auger: 0 - 10 ft

Nomenclature Used on Boring Log

Concrete Core (CC)
 Split Spoon (SS)

WC = Water Content (%)
 PL = Plastic Limit
 LL = Liquid Limit
 PI = Plasticity Index
 N = SPT Blow Count

** = Blow Counts During Seating Penetration
 -200 = % Passing #200 Sieve

Boring Log No. J2



**Project: Runway and Taxiway Improvements (2012)
at San Antonio International Airport
San Antonio, Texas**

Sampling Date: 3/13/13

Location: See Boring Location Plan

Backfill: Backfill and patched

Soil Description	Depth (ft)	SN	WC	PL	LL	PI	PP	N	-200	DD	Uc
17" Concrete		CC									
8.5" Cement Treated Base	2		11								
10" Crushed Limestone Aggregate Base											
FAT CLAY (CH), stiff, dark brown	4	SS	31					11			
		T	36				2.8			85	1.77
-tan and brown, with gravel, below 6'	6										
CLAYEY GRAVEL (GC), loose, tan and brown	8	T	19	23	69	46	3.3		60		
		T	22				4.3				
LEAN CLAY (CL), very stiff, light tan, with calcareous deposits	10										
Borehole terminated at 10 feet											

Groundwater Data:

During drilling: Not encountered

Field Drilling Data:

Logged By: L. Perez
Driller: Accu Drilling
Equipment: Truck-mounted drill rig

Single flight auger: 0 - 10 ft

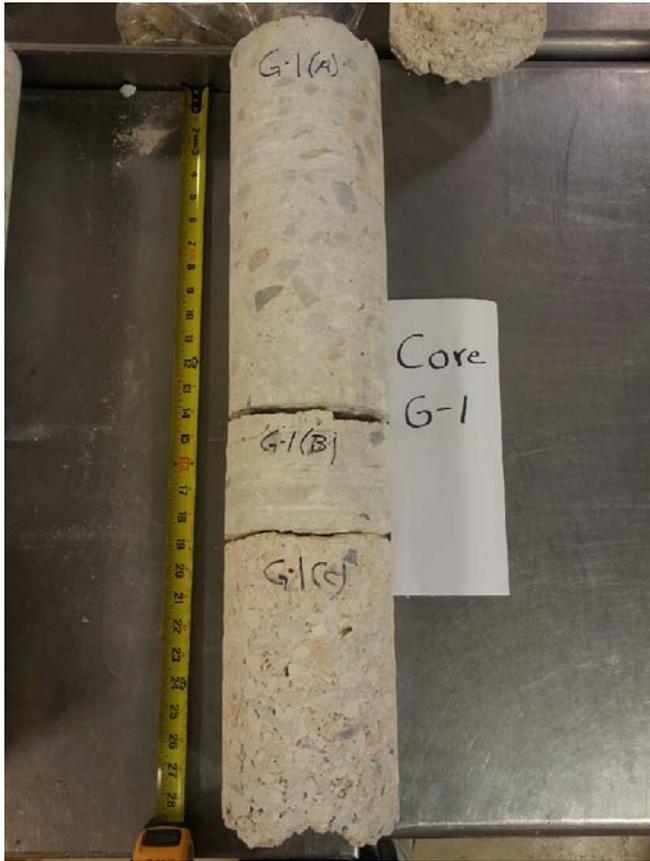
Nomenclature Used on Boring Log

- Concrete Core (CC)
- Split Spoon (SS)
- Thin-walled tube (T)
- WC = Water Content (%)
- PL = Plastic Limit
- LL = Liquid Limit
- PI = Plasticity Index
- PP = Pocket Penetrometer (tsf)
- N = SPT Blow Count
- 200 = % Passing #200 Sieve
- DD = Dry Density (pcf)
- Uc = Compressive Strength (tsf)

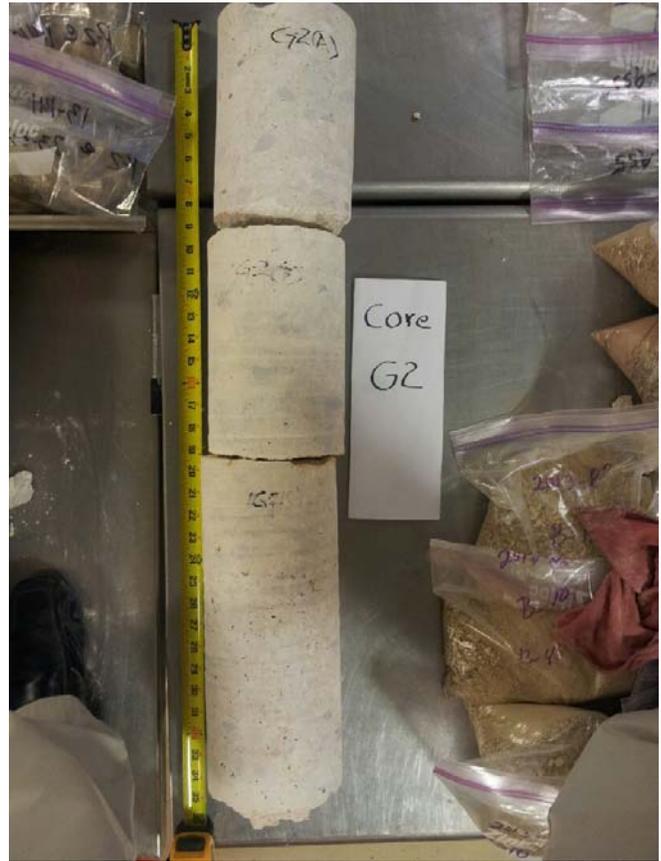
2012-955.GPJ 5/9/13 (BORING LOG SA12-02.ARI/ASSA12-01.GDT, LIBRARY2012-02.GLB)

KEY TO CLASSIFICATION SYMBOLS USED ON BORING LOGS

MAJOR DIVISIONS			GROUP SYMBOLS	DESCRIPTIONS		
COARSE-GRAINED SOILS	GRAVELS More Than Half of Coarse Fraction is LARGER Than No. 4 Sieve Size	Clean Gravels (Little or no Fines)	GW		Well-Graded Gravels, Gravel-Sand Mixtures, Little or no Fines	
		Gravels With Fines (Appreciable Amount of Fines)	GP		Poorly-Graded Gravels, Gravel-Sand Mixtures, Little or no Fines	
			GM		Silty Gravels, Gravel-Sand-Silt Mixtures	
			GC		Clayey Gravels, Gravel-Sand-Clay Mixtures	
	SANDS More Than Half of Coarse Fraction is SMALLER Than No. 4 Sieve Size	Clean Sands (Little or no Fines)	SW		Well-Graded Sands, Gravelly Sands, Little or no Fines	
		Sands With Fines (Appreciable Amount of Fines)	SP		Poorly-Graded Sands, Gravelly Sands, Little or no Fines	
			SM		Silty Sands, Sand-Silt Mixtures	
			SC		Clayey Sands, Sand-Clay Mixtures	
	FINE-GRAINED SOILS More Than Half of Material is SMALLER Than No. 200 Sieve Size	SILTS & CLAYS	Liquid Limit Less Than 50	ML		Inorganic Silts & Very Fine Sands, Rock Flour, Silty or Clayey Fine Sands or Clayey Silts with Slight Plasticity
			Liquid Limit Greater Than 50	CL		Inorganic Clays of Low to Medium Plasticity, Gravelly Clays, Sandy Clays, Silty Clays, Lean Clays
SILTS & CLAYS		Liquid Limit Greater Than 50		MH		Inorganic Silts, Micaceous or Diatomaceous Fine Sand or Silty Soils, Elastic Silts
			CH		Inorganic Clays of High Plasticity, Fat Clays	
FORMATIONAL MATERIALS	SANDSTONE			Massive Sandstones, Sandstones with Gravel Clasts		
	MARLSTONE			Indurated Argillaceous Limestones		
	LIMESTONE			Massive or Weakly Bedded Limestones		
	CLAYSTONE			Mudstone or Massive Claystones		
	CHALK			Massive or Poorly Bedded Chalk Deposits		
	MARINE CLAYS			Cretaceous Clay Deposits		
	GROUNDWATER		▼	Indicates Final Observed Groundwater Level		
			▽	Indicates Initial Observed Groundwater Location		



G1



G2



ARIAS & ASSOCIATES, INC.

Geotechnical • Environmental • Testing
TBPE Registration No. F-32

142 Chula Vista
San Antonio, Texas 78232
Office: (210) 308-5884 Fax: (210) 308-5886

CORE PHOTOS

Runway and Taxiway Improvements (2012)
San Antonio International Airport
San Antonio, Texas

Date: April 28, 2013

Job No.: 2012-955

Drawn By: TAS

Checked By: AS

Approved By: RPG

Scale: N.T.S.

Appendix E



G3



G4



ARIAS & ASSOCIATES, INC.

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Approved By: RPG

Scale: N.T.S.

Appendix E



G5



G6



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Approved By: RPG

Scale: N.T.S.

Appendix E



G9



J1



ARIAS & ASSOCIATES, INC.

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Appendix E



J2



P1



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Appendix E