SAN ANTONIO INTERNATIONAL AIRPORT

PLANS FOR CONSTRUCTION

OF

RUNWAY 3-21 EXTENSION - NEW EXIT TAXIWAY, TAXIWAY REPAIRS, AND PERIMETER RD RECONSTRUCTION - RE-BID

AT

SAN ANTONIO INTERNATIONAL AIRPORT

PROJECT NO. 33-00160

AIP NO. 3-48-0192-069-2011

Prepared By

AECOM

TEXAS REGISTERED ENGINEERING FIRM F-3082

In Association With

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01/25/2013

STATE OF TEXAS
GUO-PIN FUAN
81466
REGISTERED
PROFESSIONAL ENGINEER
12/6/12

CONTRACTOR IS ADVISED:

ANY REFERENCES MADE ON THIS SET OF PLANS TO RUNWAY "3-21" ARE TO BE REPLACED WITH RUNWAY "4-22"

ISSUE FOR BID

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Date:	12/03/2012
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SAN ANTONIO INTERNATIONAL AIRPORT
RUNWAY 3-21 EXTENSION - NEW EXIT TAXIWAY, TAXIWAY REPAIRS, AND PERIMETER RD RECONSTRUCTION - RE-BID

INDEX OF DRAWINGS

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ESTIMATED QUANTITIES

NO.	SPEC NO.	ITEM DESCRIPTION	UNIT	QUANTITY	CHANGE ORDERS	ACTUAL QUANTITY
1	100.1	Mobilization (8% per limitations in Section 040)	LS	1		
2	100.2	Insurance and Bond	LS	1		
3	100.3	Lighted Portable Runway Closure Marker	EA	2		
4	100.4	Type 1 and Type 2 Barricades	LS	1		
5	100.5	Temporary Airfield Lighting And Signage	LS	1		
6	101.1	Preparing Right-of-Way	LS	1		
7	103.3	Remove Concrete Roadway (>10,000 S.F.)	SF	55,872		
8	103.4	Remove Miscellaneous Concrete	SF	3,308		
9	104.1	Street Excavation (1,000<x<10,000 C.Y.)	CY	1,035		
10	107.1	Embankment (Final)(Dens Cont)(TY A)	CY	210		
11	108.1	Lime-Treated Subgrade (6")	SY	2,258		
12	108.1	Lime-Treated Subgrade (8")	SY	7,768		
13	200.1	Flexible Base (4" Compacted Depth)	SY	7,768		
14	200.1	Flexible Base (8" Compacted Depth)	SY	2,258		
15	202.1	Prime Coat	SY	1,554		
16	205.2	Hot Mix Aspaltic Pvmt , Ty D (3")	SY	2,258		
17	209.1	Concrete Pavement (10" Deep)	SY	7,768		
18	307.1	Concrete Structure (Headwalls)	CY	12		
19	309.1	Precast Reinforced Concrete Culvert (3'x2')	LF	296		
20	401.4	Safety End Treatment	EA	5		
21	505.1	Concrete Riprap (5" Thick) (<100 S.Y.)	SY	30		
22	509.1	Metal Beam Guard Rail (<200 L.F.)	LF	57		
23	516.1	Bermuda Sodding (<2,000 S.Y.)	SY	1,667		
24	530.1	Barricades, Signs, and Traffic Handling	LS	1		
25	531.6	R2-1 Speed Limit (24"x30") (High Density)	EA	2		
26	537.1	Traffic Button (Type W)	EA	95		
27	689	Portable Traffic Signal System	MONTH	3		
28	540.1	Rock Filter Dams (Install/Remove) (Type 2)	LF	35		
29	540.6	Construction Exits (Install/Remove)	SY	305		
30	540.6	Construction Exits (Install/Remove) (Twy R)	SY	111		
31	540.9	Temporary Sediment Control Fence	LF	4,820		
32	540.9	Temporary Sediment Control Fence (Twy R)	LF	200		
33	550.1	Trench Excavation Safety Protection	LF	650		
34	P-150-4.1	Removal of 3-Inch to 4-Inch Bituminous Taxiway, Shoulder or Blast Pad Pavement	SY	1,900		
35	P-150-4.2	Removal of Metal Guardrail with Metal Posts	LF	200		
36	P-150-4.3	Removal of Existing Runway/Taxiway Pavement Markings	SF	6,000		
37	P-150-4.4	Removal of 16-Inch Concrete Pavement, including Thickened Edge, Base, Reinforcement (Depth Varies)	SY	10,425		
38	P-150-4.5	2-Inch Mill of Existing Concrete Pavement (Twy R)	SY	180		
39	P-150-4.6	Removal of Existing Inlet	EA	1		
40	P-150-4.7	Removal of Sanitary Manhole	EA	2		
41	P-151-4.1	Clearing and Grubbing	AC	6		
42	P-152-4.1	Unclassified Excavation	CY	12,200		
43	P-154-5.1	6-Inch (Depth) Aggregate Subbase Course	SY	20,510		
44	P-155-8.1	6-Inch (Depth) Lime-Treated Subgrade (7%)	SY	21,340		
45	P-155-8.2	Lime	TON	455		
46	P-209-5.1	8-Inch (Depth) Crushed Aggregate Base Course	SY	1,635		
47	P-304-8.1	6-Inch (Depth) Cement Treated Base Course	SY	18,140		
48	P-304-8.2	Cement Treated Base Repair (10-Inch Nom Depth)	SY	2,050		
49	P-403-8.1	3-Inch (Depth) Bituminous Surface Course	SY	1,505		
50	P-403-8.2	Bituminous Overlay (Twy R)	TON	250		
51	P-403-8.3	Pavement Fabric (Twy R)	SY	650		
52	P-501-8.1	16-Inch (Depth) Reinforced Portland Cement Concrete Pavement	SY	18,150		
53	P-501-8.2	16-Inch to 20-Inch Thickened Reinforced Portland Cement Concrete Pavement	SY	5,720		
54	P-602-5.1	Bitiminous Prime Coat	GAL	13,175		
55	P-603-5.1	Bitiminous Tack Coat (Twy R)	GAL	200		
56	P-620-5.1	Reflective Yellow Taxiway Pavement Markings, waterborne (Twy R)	SF	50		
57	P-620-5.2	Reflective Yellow Taxiway Pavement Markings, waterborne	SF	5,100		
58	P-620-5.3	Reflective White Runway Pavement Markings, waterborne	SF	390		
59	P-620-5.4	Non-Reflective Black Runway and Taxiway Pavement Markings, waterborne	SF	9,400		
60	P-620-5.5	Non-Reflective Black Runway and Taxiway Pavement Markings, waterborne (Twy R)	SF	100		
61	P-620-5.6	Preformed Thermoplastic Surface Painted Holding Position Signs (SPHPS)	EA	26		
62	P-620-5.7	Preformed Thermoplastic Runway Hold Markings	LF	390		
63	P-621-4.1	Runway Pavement Grooving	SY	70		
64	D-701-5.1	18-inch Reinforced Concrete Pipe, Class V	LF	142		
65	D-751-5.1	FAA Rated Storm Sewer Grate Inlet	EA	2		
66	D-751-5.2	FAA Rated Sanitary Sewer Manhole	EA	2		
67	T-901.5.1	Hydro-Mulch Seeding for Erosion Control	AC	4		

ESTIMATED QUANTITIES

NO.	SPEC NO.	ITEM DESCRIPTION	UNIT	QUANTITY	CHANGE ORDERS	ACTUAL QUANTITY
68	T-901.5.2	Hydro-Mulch Seeding for Erosion Control (Twy R)	AC	1		
69	T-905-5.1	Topsoiling	CY	900		
		ELECTRICAL				
70		Electrical Demolition (Including existing lighting, cables/conductors, base cans, lamps, transformers, ground wires, abandoned cables, foundations, etc)	LS	1		
71	L-108-5.1	#6 AWG 5 KV Cable	LF	1,200		
72	L-108-5.2	#8 AWG 5 KV Cable	LF	13,100		
73	L-108-5.3	#1/0 AWG Counterpoise, Gnd Rods, and Connectors	LF	8,950		
74	L-108-5.4	Inspecting and Testing	LS	1		
75	L-108-5.5	Cable Connection Termination	EA	105		
76	L-110-5.1	1-Way, 2-Inch Schedule 40 PVC Sand Encased Duct, Complete In Place	LF	8,600		
77	L-110-5.2	Modification of Existing Ductbank	LF	700		
78	L-110-5.3	4-Way, 4-Inch Schedule 40 PVC Duct Bank, Complete In Place	LF	900		
79	L-110-5.5	Inspecting and Testing	LS	1		
80	L-115-5.1	Electrical Handhold / Pull Box	EA	8		
81	L-115-5.2	Inspecting and Testing	LS	1		
82	L-125-5.1	Taxiway Edge Lights (Elevated)	EA	91		
83	L-125-5.2	Light Base, New	EA	9		
84	L-125-5.4	Guidance Sign, Relocated (2 Module)	EA	6		
85	L-125-5.5	Guidance Sign, New Complete in Place (2 Module)	EA	6		
86	L-125-5.2	Inspecting and Testing	LS	1		
87	L-125-5.7	Isolation Transformer, 200W	EA	9		
88	L-125-5.8	Runway Edge Lights, In-Pavement	EA	2		
89	L-125-5.10	Light Fixture Identification Tags	EA	93		

ESTIMATED QUANTITIES - ALTERNATIVE 1

ALT. NO.	NO.	SPEC NO.	ITEM DESCRIPTION	UNIT	QUANTITY	CHANGE ORDERS	ACTUAL QUANTITY
1	90	P-152-4.1	Unclassified Excavation	CY	8,000		
1	91	P-154-5.1	6-Inch (Depth) Aggregate Subbase Course	SY	18,700		
1	92	P-155-8.1	6-Inch (Depth) Lime Treated Subgrade (7%)	SY	19,300		
1	93	P-155-8.2	Lime	TON	410		
1	94	P-209-5.1	8-Inch (Depth) Crushed Aggregate Base Course	SY	18,200		
1	95	P-403-8.1	3-Inch (Depth) Bituminous Surface Course	SY	17,750		
1	96	P-602-5.1	Bituminous Prime Coat	GAL	9,100		
1	97	P-620-5.2	Reflective Yellow Taxiway Pavement Markings, waterborne	SF	8,025		

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Designed By: GPF
Drawn By: CRJ/FE/GWS
Checked By: TKD
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SAN ANTONIO INTERNATIONAL AIRPORT
RUNWAY 3-21 EXTENSION - NEW EXIT TAXIWAY, TAXIWAY REPAIRS, AND PERIMETER RD RECONSTRUCTION - RE-BID

ESTIMATED QUANTITIES

Project No. 33-00160 | C.I.P. No. 0000 | A.I.P. No. 0000 | Sheet Z-003

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GENERAL NOTES:

1. THESE PLANS WERE DEVELOPED FROM "RECORD DRAWING" INFORMATION, SUPPLEMENTED BY ON-THE-GROUND SURVEYS. THE INFORMATION REPRESENTED IS BASED ON THE DESIGNERS BEST KNOWLEDGE OF THE EXISTING CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW THESE DRAWINGS WITH THE ENGINEER PRIOR TO WORKING IN ANY PARTICULAR AREA ON THE AIRPORT. SHOULD THE CONTRACTOR DISCOVER CONDITIONS NOT REFLECTED ON THESE PLANS, THE ENGINEER IS TO BE CONTACTED IMMEDIATELY.

2. CONSTRUCTION LIMITS – ALL CONTRACTOR VEHICLES AND TRAFFIC ARE TO REMAIN WITHIN THE LIMITS OF THE CONSTRUCTION AREA, STAGING AREA, OR HAUL ROUTES AS SHOWN ON THE PLANS.

3. CONTRACTOR IS TO REVIEW AND LOCATE IN THE FIELD ALL AIRFIELD UTILITIES AND FAA UTILITIES/CABLE WITH THE AIRFIELD MAINTENANCE STAFF, FAA STAFF AND ENGINEER PRIOR TO BEGINNING WORK. CONTRACTOR TO NOTIFY FAA FOR LOCATION OF ALL FAA UNDERGROUND CABLES IN THE CONSTRUCTION AREA, AND ARE TO BE VERIFIED AND FLAGGED PRIOR TO WORK.

4. STAGING AREA – THE CONTRACTOR'S STAGING AREA IS SHOWN IN THE DRAWINGS. THE CONTRACTOR IS TO MAKE PROVISIONS FOR ANY REQUIRED UTILITIES. UPON COMPLETION OF THIS PROJECT, THE CONTRACTOR IS TO RESTORE AND RE-GRADE THE STAGING AREA; INCLUDING BUT NOT LIMITED TO THE REMOVAL OF FENCING AND UTILITIES, RE-GRADING, TOPSOILING, AND RESEEDING COMPLETE TO THE SATISFACTION OF THE ENGINEER AND COSA/DOA. NO SEPARATE PAY FOR WORK ASSOCIATED WITH ESTABLISHING AND RESTORING CONTRACTOR STAGING AREA.

5. THE CONTRACTOR IS RESPONSIBLE FOR IMMEDIATE CLEAN-UP OF ANY DEBRIS THAT FALLS ON AIRFIELD PAVEMENT AS A RESULT OF HIS WORK. CONTRACTOR IS TO VACUUM SWEEP, ON A DAILY BASIS, OR AS REQUIRED, OR AS DIRECTED BY THE ENGINEER, AND AIRPORT OPS. ROADWAYS AND APRONS USED AS HAUL ROUTES WITHIN AND OUTSIDE OF THE CONSTRUCTION AREA ARE TO BE IMMEDIATELY CLEANED-UP OF MUD OR OTHER DEBRIS (ALL STAGING ACTIVITIES SHALL INCORPORATE THE PROPER EROSION AND SEDIMENTATION CONTROL.)

6. EQUIPMENT HEIGHT TO BE LIMITED TO 20' UNLESS APPROVED BY AIRPORT OPS. ALL EQUIPMENT WITH BOOMS SHALL BE LOWERED TO THE GROUND WHEN NOT IN USE, OVERNIGHT OR STORED.

7. ALL CONSTRUCTION VEHICLES OPERATING ON THE AIRPORT PROPERTY MUST BE PROVIDED WITH AN FAA APPROVED FLAG ON A STAFF ATTACHED TO THE VEHICLE SO THAT THE FLAG WILL BE READILY VISIBLE. THE FLAG SHALL NOT BE LESS THAN THREE FEET SQUARE CONSISTING OF AVIATION ORANGE AND WHITE SQUARES OF NOT LESS THAN A FOOT ON EACH SIDE. THE OWNER SHALL RETAIN OWNERSHIP OF (5) FIVE OF THESE FLAGS, IN GOOD CONDTION OR BETTER, UPON COMPLETION OF THE PROJECT. ALL VEHICLES BEING USED FOR ANY NIGHTTIME WORK SHALL BE EQUIPPED WITH A YELLOW ROTATING BEACON PER THE REQUIREMENTS OF AC 150/5370-2E, OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION, (INCL. LATEST REVISIONS).

8. NOTICE TO AIRMAN (NOTAM) ON CONSTRUCTION ACTIVITY WILL BE ISSUED BY AIRPORT OPS. THE CONTRACTOR, THROUGH THE COSA, WILL COORDINATE THE ISSUANCE OF NOTAMS WITH THE AIRPORT MANAGER, 48 HOURS IN ADVANCE.

9. AT NO TIME SHALL ANY EXCAVATED AREAS BE LEFT UNATTENDED IN THE VICINITY OF THE ACTIVE AIRFIELD, UNLESS APPROPRIATE MARKING AND BARRICADING IS EMPLOYED, AND APPROPRIATE NOTAMS ARE ISSUED.

10. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL CABLES AND UTILITIES. ANY BREAK IN CABLES AND/OR UTILITIES SHALL IMMEDIATELY BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

11. THE CONTRACTOR IS TO INSTRUCT HIS PERSONNEL OF THE SAFETY AND SECURITY ISSUES AND SEVERITY OF VIOLATIONS TO SAFETY ON THE OPERATIONAL AIRFIELD. REPEAT OR INTENTIONAL VIOLATIONS WILL BE GROUNDS FOR REFUSING ACCESS ON THE AIRFIELD TO SPECIFIC INDIVIDUALS.

12. ANY DAMAGES INCURRED BY THE AIRPORT OR ITS TENANTS, THAT IS CAUSED BY THE CONTRACTOR, SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

13. THE CONTRACTOR MUST TAKE ALL NECESSARY PRECAUTIONS TO PREVENT WASTE AND LOOSE BLOWING MATERIALS FROM GETTING INTO THE AIRCRAFT OPERATIONS AREAS AND MUST REMOVE ANY WASTE AND/OR LOOSE BLOWING MATERIALS FROM AIRPORT PAVED SURFACES AND GRASS AREAS.

14. THE CONTRACTOR MUST MAINTAIN THE ABSOLUTE CLEANLINESS OF "LIVE" AIRCRAFT MOVEMENT AREAS THROUGHOUT THE CONTRACT. THE CONTRACTOR IS RESPONSIBLE FOR IMMEDIATE CLEAN-UP OF ANY DEBRIS THAT FALL ON THE AIRFIELD PAVEMENT AS A RESULT OF HIS WORK.

15. THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTION TO PREVENT WIND BLOWN DEBRIS FROM ENTERING THE AIRFIELD FROM BATCHING, STORAGE AND CONSTRUCTION OFFICE/PARKING AREAS. DURING PERIODS OF PARTICULARLY HIGH WINDS MATERIALS THAT MIGHT BE BLOWN OUTSIDE THE BOUNDARIES OF THE CONSTRUCTION WORK (INCLUDING FROM WITHIN THE CONTRACTOR'S COMPOUND) MUST BE TETHERED. TYPICAL EXAMPLES ARE POLYSTYRENE, CONCRETE CURING COVERS, EMPTY BARRELS AND CARDBOARD BOXES.

16. CONTRACTOR IS TO PROVIDE A SWEEPER VACUUM TRUCK ON PROJECT SITE FOR THE DURATION OF WORK. CONTRACTOR SHALL PROVIDE AND MAINTAIN SO THAT IT IS AVAILABLE FOR USE AS NEEDED OR UPON REQUEST BY AIRPORT OPERATIONS, (NO SEPARATE PAY).

17. AS A MINIMUM, AND SUBJECT TO THE REQUIREMENTS BELOW, THE CONTRACTOR IS TO VACUUM SWEEP ON A DAILY BASIS OR AS REQUIRED, OR AS DIRECTED BY THE ENGINEER OR AIRPORT OPERATIONS STAFF. ROADWAYS AND AIRFIELD PAVEMENTS USED AS HAUL ROUTES WITHIN THE AND OUTSIDE OF THE CONSTRUCTION AREA ARE TO BE IMMEDIATELY CLEANED UP OF MUD AND/OR OTHER DEBRIS AND IS TO COMPLY WITH SAWS REQUIREMENTS.

    IN CARRYING OUT THESE DUTIES THE CONTRACTOR SHALL:

    - USE AND PROVIDE (FULLY FUELED AND MAINTAINED) AN APPROVED SELF PROPELLED VACUUM BRUSH SWEEPER SUITABLE FOR AERODROME OPERATIONS EQUIPPED WITH MAGNETIC BAR PICK UP AND CAPABLE OF PICKING UP COATED STONE, MUD, SLURRY AND DUST, WHICH SHOULD BE IN CONTINUOUS ATTENDANCE FOR THE DURATION OF THE CONSTRUCTION PERIOD
    - PROVIDE (FULLY FUELED AND MAINTAINED) A SECOND APPROVED SELF PROPELLED VACUUM BRUSH SWEEPER SUITABLE FOR AERODROME OPERATIONS (AS ABOVE) FOR THE FULL PERIOD OF THE CONTRACT AS A BACK-UP IN THE EVENT OF A BREAKDOWN OF THE PRIMARY SWEEPER
    - BEFORE ANY AIRCRAFT MOVEMENT TAKES PLACE, SWEEP CLEAN ANY AIRCRAFT PAVEMENT INCLUDED IN THE SCOPE OF WORKS AND WHICH WILL BE USED BY THAT AIRCRAFT
    - REMOVE ARISINGS FROM THE SWEEPER TO AN APPROVED DISPOSAL SITE.
    - WASH DOWN CONTRACTOR'S TRAFFIC AND MOBILE EQUIPMENT AS NECESSARY TO PREVENT MUD AND DEBRIS FROM BEING BROUGHT ON TO THE ACCESS ROUTES OR ANY AIRCRAFT PAVEMENT
    - CONTROL USE OF PLASTIC/POLYSTYRENE CUPS
    - AVOID LEAVING SCRAPS OF FOOD AROUND AS THESE CAN ATTRACT BIRDS WHICH WOULD CAUSE A BIRD STRIKE HAZARD.

18. FOR WORKS ON BUILDING/STRUCTURES ADJACENT TO APRONS ON WHICH AIRCRAFT OPERATIONS ARE TO CONTINUE, CONSIDERATION SHOULD BE GIVEN TO THE NEED TO CONTAIN DUST AND DEBRIS ETC. THIS MAY REQUIRE THE PROVISION OF 'FOD' SCREENS/ENVELOPES.

19. SEBSEQUENT TO COMPLETION OF CONSTUCTION, CONTRACTOR SHALL INSPECT ALL UNDERGROUND DRAINAGE SYSTEMS AND STRUCTURES AND REMOVE ANY DEBRIS, DIRT, SAND AND/OR OBJECTIONABLE MATERIAL; NO EXTRA PAY.

20. CLEANING PAVEMENTS SHALL BE PERFORMED USING SWEEPER VACCUM TRUCKS ONLY UNLESS OTHERWISE APPROVED.

COORDINATION NOTES:

1. IT IS THE CONTRACTORS RESPONSIBILITY TO COORDINATE ALL OF THE WORK SHOWN IN EACH DISCIPLINE. THE WORK SHOWN IS WITHOUT CONSIDERATION OF A CONSTRUCTION SEQUENCE.

2. THE CONTRACTOR WILL BE REQUIRED TO COORDINATE HIS CONSTRUCTION ACTIVITIES WITH OTHER AIRPORT CONSTRUCTION AND AIRPORT OPERATIONS. CONTRACTOR SHALL OBTAIN RADIO COMMUNICATIONS EQUIPMENT AND MAINTAIN RADIO COMMUNICATIONS, AS PER AIRPORT REQUIREMENTS.

3. THE CONTRACTOR IS TO SUBMIT, EACH WEEK, A TWO (2) WEEK WRITTEN OR GRAPHICAL ROLLING SCHEDULE TO THE ENGINEER OUTLINING CONSTRUCTION ACTIVITIES THAT MAY REQUIRE COORDINATION WITH OTHER CONTRACTORS. SUBMITTAL OF THIS SCHEDULE DOES NOT PRECLUDE THE CONTRACTOR FROM COORDINATING WORK WITH OTHER CONTRACTS.

4. A CONSTRUCTION PHASING PLAN AND SCHEDULE WILL BE PREPARED BY THE GENERAL CONTRACTOR AND SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCING WITH CONSTRUCTION. ANY MODIFICATIONS OR OTHER DEVIATION FROM THE SEQUENCE MUST BE APPROVED BY THE ENGINEER. THE ENGINEER RESERVES THE RIGHT TO MODIFY THE CONSTRUCTION SEQUENCE AT ANY TIME BASED ON THE OPERATIONAL AND SECURITY NEEDS OF THE AIRPORT AND THE ACTUAL PROGRESS OF THE WORK.

5. CONTRACTOR TO INFORM AIRPORT SECURITY AND AIRPORT ARFF PERSONNEL AND OPS 72-96 HOURS PRIOR TO CLOSURE OF SECURITY ROADS OR AIRPORT FACILITIES.

6. IMPLEMENTATION OF SAFETY/PHASING PLAN WILL BE REQUIRED PRIOR TO BEGINNING CONSTRUCTION.

7. IN CASE OF EMERGENCY, CONTRACTOR IS REQUIRED TO STOP ALL WORK AND CONTACT AIRPORT COMMUNICATION CENTER, (210) 207-3433, AND AIRPORT MAINTENANCE PERSONNEL, CONTACT (210) 207-3478.

8. CONTRACTOR SHALL CONFINE CONSTRUCTION ACTIVITIES TO WITHIN LIMITS OF WORK. CONTRACTOR SHALL NOT BLOCK NAVAIDS ASSOCIATED WITH ADJOINING RUNWAYS AND TAXIWAYS.

9. THE CONTRACTOR IS TO MEET WITH THE ENGINEER AND AIRPORT OPS AT THE START OF EACH DAY TO COORDINATE DAILY CONSTRUCTION ACTIVITIES.

SECURITY SAFETY AND BADGES NOTES:

1. THE CONTRACTOR IS TO COMPLY WITH ALL AIR SAFETY AND SECURITY MEASURES AND REQUIREMENTS SPECIFIED IN THE PLANS, AND SPECIFICATIONS. THE CONTRACTOR IS ALSO REQUIRED TO COMPLY WITH AIRPORT RULES AND REGULATION AT NO COST TO THE CITY

2. THE WORK WILL BE PERFORMED WITHIN THE AIR OPERATIONS AREA (AOA). ALL CONTRACTOR'S PERSONNEL WORKING WITHIN THE AOA SHALL BE UNDER THE DIRECT SUPERVISION OF GENERAL CONTRACTOR PERSONNEL. THE CONTRACTOR IS RESPONSIBLE FOR BRIEFING ALL HIS PERSONNEL ON ALL SECURITY REQUIREMENTS PRIOR TO ANY PERSONNEL WORKING IN THE CONSTRUCTION AREA.

3. CONSTRUCTION LIMITS – ALL CONTRACTOR VEHICLES AND CONSTRUCTION TRAFFIC ARE REQUIRED TO STAY WITHIN THE LIMITS OF CONSTRUCTION WHILE ON THE CONSTRUCTION SITE. THESE LIMITS ARE STRICTLY MAINTAINED. ACCESS TO THE CONSTRUCTION SITE IS SHOWN. TRAFFIC ASSOCIATED WITH CONSTRUCTION IS TO USE ONLY AREAS SHOWN FOR CONSTRUCTION USE. FAILURE TO DO SO COULD RESULT IN OFFENDERS BEING REMOVED FROM THE CONSTRUCTION SITE AND/OR ARRESTED.

4. CONTRACTOR'S ACCESS TO THE SITE IS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. THE CONTRACTOR IS NOT TO PERMIT ANY UNAUTHORIZED PERSONNEL OR TRAFFIC ON THE SITE.

5. WHEN THE CONSTRUCTION SITE IS IN THE AOA, ALL ACCESS GATES MUST BE LOCKED OR GUARDED BY BADGED PERSONNEL AT ALL TIMES WHEN GATES ARE NOT LOCKED. THE GUARD SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF SECURITY THROUGH THE GATE. THE GUARD SHALL CHECK DRIVER/PASSENGER IDENTIFICATION AND KEEP A LOG OF ALL VEHICLE/DRIVER ACTIVITIES IN AND OUT OF THE GATE.

6. CONTRACTOR USE OF EXISTING SIDA GATE 278 WILL BE ALLOWED UPON REQUEST AND SAT'S APPROVAL FOR USE OF GATES. CONTRACTOR IS ADVISED OF POTENTIAL USE OF GATES BY MULTIPLE CONTRACTORS.

7. CONTRACTOR SHALL BECOME FAMILIAR WITH AND STRICTLY ADHERE TO THE SAFETY REQUIREMENT CONTAINED IN ADVISORY CIRCULAR AC 150/5370-2E, CURRENT EDITION.

8. CONTRACTOR SHALL BECOME FAMILIAR WITH FAR PART 77 "OBJECTS AFFECTING NAVIGABLE AIRSPACE, CURRENT EDITION."

9. FAA SAFETY CHECKLIST SHALL BE COMPLETED PRIOR TO THE BEGINNING OF CONSTRUCTION EACH DAY OR SHIFT. DAILY FAA CHECK LIST TO BE SUBMITTED TO ENGINEER WEEKLY.

10. CONTRACTOR'S PERSONAL OPERATING MOTORIZED VEHICLES ON AIRPORT PROPERTY WILL BE REQUIRED TO ATTEND THE VEHICLE OPERATORS TRAINING CLASS PRIOR TO BEGINNING CONSTRUCTION.

11. BADGED PERSONNEL WORKING WITHIN THE AOA MUST DISPLAY CURRENT AIRPORT ISSUED IDENTIFICATION AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING SIGNATORY AUTHORITY (THIS PROCESS TAKES APPROXIMATELY THREE WEEKS) AND PROVIDING THE NECESSARY BACKGROUND CHECKS FOR THESE PERSONNEL. AS WELL AS MAINTAINING PERSONNEL FILES FOR THE PROJECT DURATION. THESE FILES ARE SUBJECT TO FAA REVIEW. SUBSEQUENT TO THE PRE CONSTRUCTION MEETING, THE CONTRACTOR MUST ARRANGE FOR ALL BADGED PERSONNEL TO ATTEND THE SIDA CLASS. NOT ALL PERSONNEL MUST BE BADGED. IT IS PERMISSIBLE TO HAVE ONE BADGED PERSONNEL ESCORT AND BE RESPONSIBLE FOR UP TO TWO UNBADGED PERSONS. ALL UNESCORTED EQUIPMENT OPERATOR AND DRIVERS MUST BE BADGED. SIDA CLASSES ARE COORDINATED THROUGH AIRPORT POLICE AND TAKE APPROXIMATELY TWO HOURS. ALL BADGES REMAIN THE PROPERTY OF THE AVIATION DEPARTMENT AND MUST BE RETURNED AT THE COMPLETION OF THE CONTRACT.

12. CONSTRUCTION ACCESS, THE CONTRACTOR WILL BE ISSUED INGRESS/EGRESS INTO THE AOA AT A PCINT DESIGNATED BY THE AVIATION DEPARTMENT. THIS POINT WILL BE AS CLOSE AS PRACTICABLE TO THE MARSHALING AREA AS POSSIBLE. THE CONTRACTOR WILL BE REQUIRED TO ENTER INTO A SECURITY ANENDMENT WHICH SHALL BE ISSUED AND KEPT ON FILE WITH AIRPORT POLICE. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN SECURITY AT ALL TIMES DURING THE DURATION OF THE CONTRACT. THE ACCESS WILL BE LOCKED AT ALL TIMES WHILE UNATTENDED AND SHALL BE MANNED BY APPROVED BADGED PERSONNEL ONLY.

13. CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING EQUIPMENT, SUPPLIES, AND OFFICES, WITHIN THAT STAGING AREA. SAN ANTONIO AIRPORT SYSTEM WILL NOT BE RESPONSIBLE FOR THEFT OR DAMAGES TO CONTRACTOR FACILITIES.

OPERATIONS:

1. AIRPORT OPERATIONS & SAFETY IS CHARGED WITH THE RESPONSIBILITY OF MONITORING THE SAFETY OF ALL ACTIVITIES WITHIN THE AOA, AND COMPLIANCE WITH APPLICABLE FEDERAL REGULATIONS. THE CONTRACTOR THEN SHALL COMPLY WITH ALL DIRECTIVES ISSUED BY OPERATIONS & SAFETY IN A TIMELY MANNER.

2. VEHICULAR OPERATIONS:
   IN ADDITION TO BEING BADGED, ALL UNESCORTED EQUIPMENT OPERATORS AND DRIVERS MUST ATTEND THE REQUIRED DRIVING COURSE SPONSORED BY AIRPORT OPERATIONS. THIS COURSE IS SPONSORED BY AIRPORT OPERATIONS AND TAKES APPROXIMATELY 2 HOURS. NO VEHICLES MAY BE OPERATED WITHIN THE AIR OPERATING AREA (AOA) UNTIL THE DRIVERS SUCCESSFULLY PASS THE DRIVING COURSE AND SATISFACTORY INSURANCE CERTIFICATES ARE ON FILE WITH THE OFFICE OF PLANNING & ENGINEERING (REFER TO SECTION ENTITLED "INSURANCE" ABOVE). ALL VEHICULAR MOVEMENT AREAS WILL BE SUBJECT TO THE APPROVAL OF THE AVIATION DEPARTMENT. ALL CONSTRUCTION VEHICLES OPERATING ON AIRPORT PROPERTY UTILIZE AN FAA APPROVED FLAG ATTACHED TO THE VEHICLE TOGETHER WITH 12" COMPANY LOGOS OR 6" LETTERS IDENTIFYING THE COMPANY, DISPLAYED ON BOTH DOORS.

3. ESCORT:
   ALL VEHICLES AND EQUIPMENT BEING OPERATED BY PERSONNEL WITHOUT HAVING SUCCESSFULLY COMPLETED THE DRIVING COURSE MUST BE ESCORTED BY VEHICLES OPERATED BY PERSONNEL AUTHORIZED TO DRIVE WITHIN THE AOA. THE ESCORT MUST BE PROXIMATE TO THE VEHICLES AT ALL TIMES WHILE IN THE AOA INCLUDING DEPARTING THROUGH THE CONSTRUCTION ACCESS. SHOULD THE NEED ARISE TO ENTER OR CROSS AN ACTIVE RUNWAY, THE ESCORT MUST BE PERFORMED BY PERSONNEL FROM AIRPORT OPERATIONS AND COORDINATED THROUGH AIRPORT OPERATIONS.

STORAGE AND MARSHALING AREAS:

1. EXCESS MATERIAL:
   ALL MATERIAL REMOVED FROM THE CONSTRUCTION SITE WHICH IS NOT TO BE USED IN THE FINAL CONSTRUCTION SHALL BE REMOVED FROM THE AIRPORT PROPERTY AND DISPOSED OF IN A LEGAL MANNER. NO EXCESS MATERIAL SHALL BE DISPOSED OF ON AIRPORT PROPERTY UNLESS PRIOR WRITTEN APPROVAL FROM THE AVIATION DEPARTMENT IS ISSUED.

2. CONSTRUCTION MATERIALS:
   CONSTRUCTION MATERIALS NOT FOR IMMEDIATE USE SHALL BE STOCKPILED AT THE DESIGNATED MARSHALING AREA. OTHER MATERIALS MAY BE STORED AT APPROVED LOCATIONS PROXIMATE TO THE WORK AREA PROVIDED HOWEVER THAT THE PILES ARE NO GREATER THAN 18" IN HEIGHT. HIGHER PILES MAY BE PERMITTED ONLY DURING WORKING HOURS AND IN SUCH QUANTITY THAT THEY MAY BE REDUCED IN HEIGHT TO 18" MAXIMUM WITHIN 30 MINUTES OF NOTIFICATION.

3. EQUIPMENT:
   ALL EQUIPMENT SHALL BE STORED AT THE DESIGNATED STORAGE AREAS DURING NON-WORKING TIMES. SPECIAL PROVISIONS MAY BE GRANTED FOR EQUIPMENT WHICH IS NOT READILY MOVABLE TO BE STORED ELSEWHERE UPON APPROVAL BY THE ENGINEER.

AIRPORT SEEDING NOTES:

1. DISTURBED AREAS TO RECEIVE SEEDING AND FERTILIZER OR SOLID SOD. RESTORATION OF DISTURBED AREAS TO BE COMPLETED TO THE SATISFACTION OF THE ENGINEER. CONTRACTOR SHALL ADHERE AND COMPLY WITH THE STORMWATER DISCHARGE PERMIT REGARDING E & S CONTROLS.

EROSION CONTROL NOTES:

1. EROSION CONTROLS TO BE AS SHOWN ON THE DRAWINGS AND AS OUTLINED IN TECHNICAL SPECIFICATION.
2. CONTRACTOR TO PROVIDE AND MAINTAIN DEVICES, AS APPROPRIATE, AROUND THE SITE ACCESS FOR EROSION CONTROL.
3. CONTRACTOR SHALL ADHERE AND COMPLY WITH THE CITY OF SAN ANTONIO AND TEXAS COMMISSION ON ENVIROMENTAL QUALITY REQUIREMENTS FOR THE STORMWATER DISCHARGE PERMIT REGARDING E & S CONTROLS.
4. THE CONTRACTOR MUST TAKE ALL NECESSARY PRECAUTIONS TO PREVENT WASTE AND LOOSE BLOWING MATERIALS FROM GETTING INTO THE AIRCRAFT OPERATIONS AREAS AND MUST REMOVE ANY WASTE AND/OR LOOSE BLOWING MATERIALS FROM AIRPORT PAVED SURFACES OR GRASS AREAS.

DEMOLITION NOTES:

1. THERE ARE MANY EXISTING FEATURES WITHIN THE PROJECT SITE THAT ARE TO REMAIN, AND ARE TO BE PROTECTED FRCM DAMAGE DURING CONSTRUCTION. CONTRACTOR IS TO TAKE CARE TO PROTECT EXISTING UTILITIES FROM DAMAGE RESULTING FROM DEMOLITION, EXCAVATION AND GRADING. DAMAGE TO EXISTING UTILITIES TO REMAIN, THAT ARE A RESULT OF THE CONTRACTORS WORK, ARE TO BE EXPEDITIOUSLY REPAIRED AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR TO NOTIFY THE ENGINEER INMEDIATELY OF DAMAGE TO EXISTING FACILITIES.

2. WHERE NEW PAVEMENT MEETS EXISTING PAVEMENT, NO PATCHES WILL BE ALLOWED, NO EXCEPTIONS. EXTREME CARE MUST BE TAKEN TO SAFE GAURD EXISTING PAVEMENT EDGES.

ENVIRONMENTAL:

1. CONTRACTOR TO COMPLY WITH ALL LOCAL, STATE AND NATIONAL ENVIRONMENTAL REGULATIONS WHICH PERTAIN TO SPILL PREVENTION CONTROL AND RESPONSE (CLEAN UP). THE CONTRACTOR IS ALSO REQUIRED TO COMPLY WITH SAAS SOIL MANAGEMENT PLAN AT NO COST TO THE CITY.

2. CONTRACTOR SHALL TRACK ALL MATERIALS LEAVING THE AIRPORT AS PER THE SAAS SOIL MANAGEMENT PLAN. THE AMOUNT OF MATERIAL AND ITS DESTINATION SHALL BE SUBMITTED TO THE AIRPORT PRIOR TO DISPOSAL.

3. ANY SOILS HAULED OFFSITE SHALL BE SAMPLED AS PER THE SAAS SOIL MANAGEMENT PLAN TO ENSURE PROPER DISPOSAL.

4. IN THE EVENT OF A HAZARDOUS MATERIALS SPILL, CONTRACTOR TO CONTACT AIRPORT OPERATIONS AND ARFF PERSONNEL IMMEDIATELY. STATE, LOCAL AND NATIONAL ENVIRONMENTAL SHALL BE NOTIFIED IMMEDIATELY. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CLEAN-UP AND REMEDIATION EFFORTS AT NO COST TO THE OWNER.

5. PRIOR TO COMMENCING WITH CONSTRUCTION, CONTRACTOR SHALL SUBMIT A SPILL PLAN TO THE CITY OF SAN ANTONIO AVIATION DEPARTMENT FOR APPROVAL. SPILL PLAN SHALL CONTAIN, BUT NOT LIMITED TO, CONTACT NUMBERS, LIST OF MATERIALS OF CONCERN, SPILL RESPONSE PROCEDURES, SPILL PREVENTION, SPILL RESPONSE MATERIALS AND TRAINING.

6. CONTRACTOR IS REQUIRED TO DEVELOPE A STORM WATER POLLUTION PREVENTION PLAN AND SUBMITTING A NOTICE OF INTENT TO THE TCEQ AT NO COST TO THE AIRPORT. A COPY OF THESE SHALL BE SUBMITTED TO THE AIRPORT.

7. CONTRACTOR SHALL MAINTAIN THE SITE AS PER THE STORM WATER PREVENTION PLAN AND THE TCEQ PERMIT UNTIL PROPOPER FINAL STABILIZATION OF THE CONSTRUCTION AREA.

8. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL WASTE MATERIALS UPON PROJECT COMPLETION. THE CONTRACTOR SHALL NOT PERMANENTLY PLACE ANY WASTE MATERIALS IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN DEVELOPMENT PERMIT.

9. THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY AND ENVIRONMENTAL PROTECTION AGENCY (EPA) REQUIRE EROSION AND SEDIMENTATION CONTROL FOR CONSTRUCTION OF SEWER COLLECTION SYSTEMS. DEVELOPER OR AUTHORIZED REPRESENTATIVE SHALL PROVIDE EROSION AND SEDIMENTATION CONTROL AS NOTES ON THE PROJECT'S PLAN AND PROFILE SHEETS.

10. ALL TEMPORARY EROSION AND SEDIMENTATION CONTROLS SHALL BE REMOVED BY THE CONTRACTOR AT FINAL ACCEPTANCE OF THE PROJECT BY THE SAN ANTONIO WATER SYSTEM.

11. NO EXTRA-PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS BUT NOT INCLUDED ON THE BID SCHEDULE. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED UNDER THE PAY ITEM TO WHICH IT RELATES.

12. WORK COMPLETED BY THE CONTRACTOR WHICH HAS NOT RECEIVED A WORK ORDER OR THE NOTICE TO PROCEED WITH THE SAN ANTONIO WATER SYSTEM CONSTRUCTION INSPECTION DIVISION WILL BE SUBJECT TO REMOVAL AND REPLACEMENT BY AND AT THE EXPENSE OF THE CONTRACTOR.

HAULING AND AIRSIDE ACCESS NOTES:

1. HAUL ROUTES ARE TO BE FOLLOWED AS SHOWN. ANY DEVIATION FROM THE HAUL ROUTE MUST BE PRE-APPROVED BY THE ENGINEER. ALL CONSTRUCTION VEHICLE ACCESS TO THE SITE WILL BE VIA THE ANTI-TRACKING ENTRANCES SHOWN.

2. ACCESS ROUTES ON THE AOA AND LANDSIDE WILL BE CLEANED CONTINUOUSLY THROUGHOUT THE WORK SHIFT AND AT THE END OF THE SHIFT. CLEAN-UP EQUIPMENT AND OPERATORS WILL REMAIN AT THE SITE UNTIL THE AREA IS ACCEPTED BY AIRPORT OPERATIONS AND THE ENGINEER FOR START OF AIR OPERATIONS.

3. THE STAGING AREAS ARE TO BE IN PLACE AS SHOWN. ANY DEVIATION FROM THE NOTED STAGING AREAS MUST BE APPROVED IN WRITING BY THE ENGINEER.

4. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE TRAINED TRAFFIC FLAGGERS AT THE ENTRANCE TO THE STAGING AREA AND THE ACCESS GATES. DURING PERIODS OF HEAVY CONSTRUCTION TRAFFIC. THE GATE SHALL BE LOCKED.

5. ALL ACCESS ROADS AND HAUL ROUTES AND/OR WORK AREAS ARE TO BE DEVELOPED, IMPROVED, AND MAINTAINED BY THE CONTRACTOR. THESE ROADS ARE TO BE RETURNED TO THEIR ORIGINAL CONDITION OR BETTER OR AS OTHERWISE DIRECTED BY THE ENGINEER UPON COMPLETION OF THE PROJECT.

6. ALL INCIDENTAL AREAS DISTURBED BY THE CONTRACTOR ARE TO BE RETURNED TO THEIR ORIGINAL CONDITION UPON COMPLETION OF THE PROJECT.

UTILITY COORDINATION:

1. CONTRACTOR TO CONTACT 'CALL BEFORE YOU DIG' 48 HOURS PRIOR TO BEGINNING CONSTRUCTION. 1-800-344-8377 OR 811.

2. CONTRACTOR TO CONTACT FAA OFFICE 72 HOURS PRIOR TO BEGINNING CONSTRUCTION SO THAT ALL THE FAA CABLES IN THE CONSTRUCTION AREA CAN BE STAKED.

   SAN ANTONIO FSDO
   10100 REUNION PLACE
   SUITE 200
   SAN ANTONIO, TX 78216
   PHONE: (210) 308-3300 OR (800) 292-2023 FAX: (210) 308-3399

3. THE LOCATIONS AND DEPTHS OF EXISTING UTILITIES, INCLUDING SERVICE LATERALS, AND DRAINAGE STRUCTURES SHOWN ON THE PLANS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTHS OF UNDERGROUND UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT, AND TO PROTECT THE SAME DURING CONSTRUCTION.

SAN ANTONIO WATER SYSTEM	(210) 233-2010
COSA DRAINAGE	(210) 207-2800
COSA TRAFFIC SIGNAL OPERATIONS	(210) 207-7765
TEXAS STATE WIDE ONE CALL LOCATOR CITY PUBLIC SERVICE	1-800-545-6005
SOUTH WESTERN BELL	1-800-545-6005
TIME WARNER CABLE	1-800-545-6005
VALERO ENERGY CO.	1-800-545-6005

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION FROM DAMAGE DONE TO EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, LANDSCAPING AND STRUCTURES.

5. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.181, CITY PUBLIC SERVICE MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND GAS VALVES THAT ARE IN THE PROJECT AREAS.

6. NO BLASTING SHALL BE PERFORMED.

7. CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/GEOTECHNICAL/SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITE(S) WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES. THE CONTRACTOR'S IMPLEMENTATION OF THE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLIES WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

STRUCTURAL GENERAL NOTES (P.610)

1. ALL REINFORCED CONCRETE, PRESTRESSED CONCRETE, AND RELATED STRUCTURAL STEEL MATERIALS, FABRICATION, AND ERECTION SHALL COMPLY WITH THE MINIMUM REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, FIFTEENTH EDITION,1992 AND INTERIM SPECIFICATIONS THERETO.
2. CHAMFER EXPOSED EDGES OF CONCRETE SURFACES 3/4-INCH UNLESS NOTED OTHERWISE ON PLANS.
3. DISTANCES ARE CENTER OF BARS OR STRANDS WHEN PLACING REINFORCEMENT. CLEAR DISTANCES, WHEN INDICATED ON PLANS, TO PROVIDE SUFFICIENT CONCRETE TO FACE OF BAR.
4. CURING AND SAWING OF CONCRETE IS TO START AS SOON AS THE FINISHING WILL NOT BE MARRED THEREBY. IT WILL NOT BE PERMISSIBLE TO DELAY THE CURING OR JOINT SAWING UNTIL THE MORNING AFTER CONCRETE IS CAST.
5. THE USE OF REPRODUCTIONS OF CONTRACT DRAWINGS FOR SHOP DRAWINGS WILL NOT BE PERMITTED.

STRUCTURAL REINFORCED CONCRETE (P.610)

1. ALL STRUCTURAL CONCRETE SHALL BE IN ACCORDANCE WITH SPECIFICATION P-610 STRUCTURAL PORTLAND CEMENT CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 4,000 PSI,

2. ALL BAR REINFORCING SHALL BE DEFORMED BARS OF NEW BILLET STEEL CONFORMING TO ASTM SPEC. A615, GRADE 60 (EXCEPT AS NOTED ON PLANS).

3. DETAILING OF REINFORCING BARS SHALL CONFORM TO REQUIREMENTS AS FOLLOWS IF NOT SHOWN ON PLANS OR TYPICAL DETAILS: SLAB REINFORCING MARKED "CONT." (CONTINUOUS) SHALL BE LAPPED 1.3 "LD" LENGTHS AT SPLICES AND CORNERS AND SHALL BE HOOKED OR EXTENDED "LD" LENGTHS AT NONCONTINUOUS ENDS. TOP BARS SHALL BE HOOKED OR EXTENDED "LD" LENGTHS AT NONCONTINUOUS ENDS. TOP BARS SHALL BE LAPPED AT MIDSPAN. BOTTOM BARS SHALL BE LAPPED AT SUPPORTS.

   HORIZONTAL WALL REINFORCEMENT SHALL BE LAPPED "LD" LENGTHS AT SPLICES AND CORNERS UNLESS OTHERWISE NOTED. ALL TEMPERATURE REINFORCEMENT SHALL BE CONTINUOUS. SEE CHART FOR "LD".

REINFORCEMENT DEVELOPMENT LENGTHS AND LAP SPLICE LENGTHS

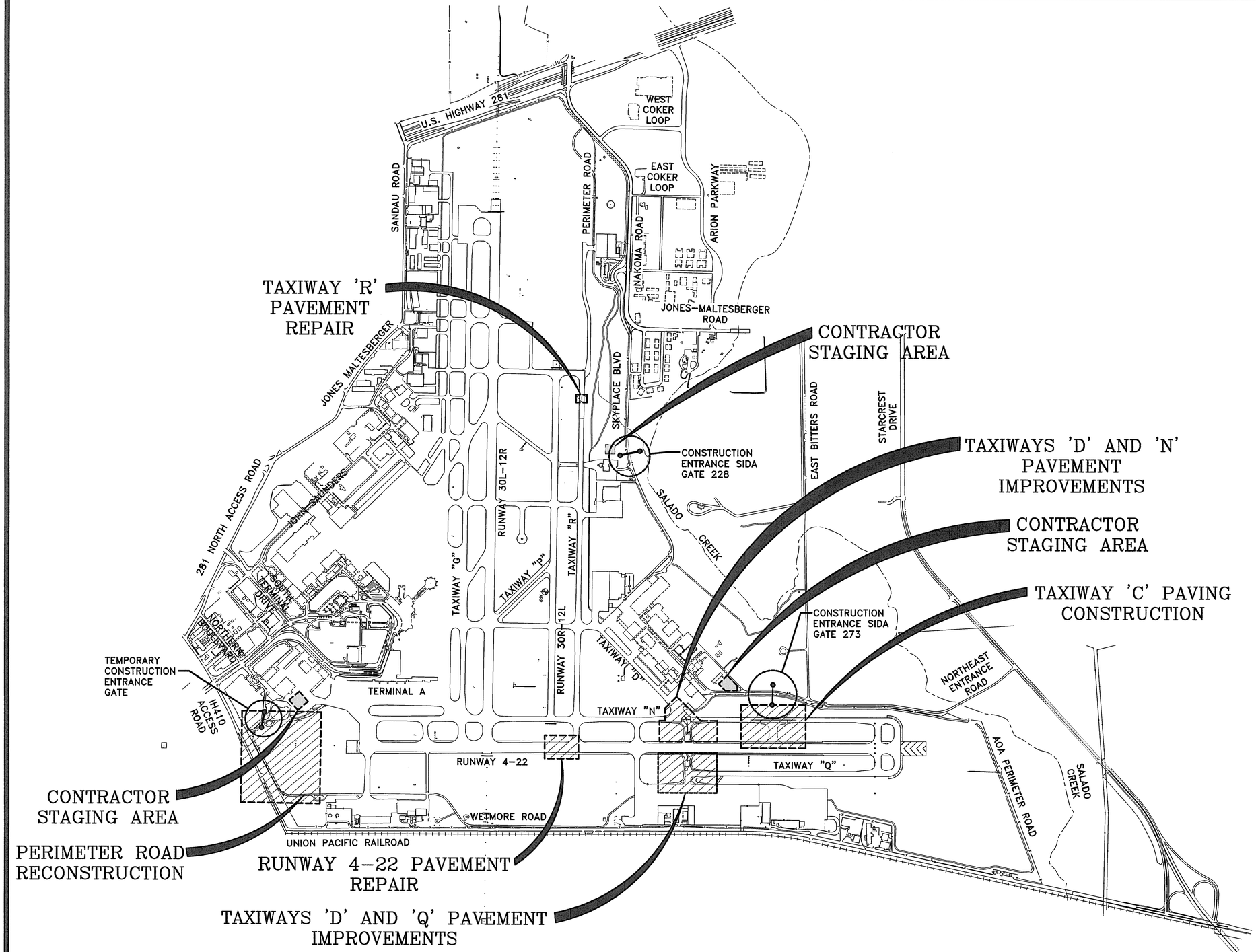
CONC. f'c = 4,000 psi REBAR fy = 60,000 psi					
BAR NO.	DEVELOPMENT LENGTHS LD (IN)		LAP SPLICES (IN)		COMPRESSION LAP SPLICES (IN)
	LD	TOP BAR	CLASS B	TOP BAR	
3	12	16	16	21	12
4	14	18	18	24	15
5	18	23	23	31	19
6	22	29	29	38	23
7	25	32	32	43	27
8	30	39	39	51	30
9	38	49	49	65	34
10	48	62	62	82	38
11	60	78	78	102	43

   TOP BAR IS DEFINED AS SPLICES/DEVELOPMENT LENGTHS OF HORIZONTAL REINFORCEMENT PLACED ABOVE MORE THAN 12 IN. OF FRESH CONCRETE.

4. CONCRETE WALLS AND COLUMNS SHALL BE TEMPORARILY BRACED AGAINST EARTH PRESSURE, WIND, AND POSSIBLE LATERAL CONSTRUCTION LOADS UNTIL GIRDERS, SLABS, OR OTHER STRUCTURAL ELEMENTS DESIGNED TO LATERALLY BRACE FINISHED STRUCTURES HAVE BEEN IN PLACE AND HAVE ATTAINED REQUIRED STRENGTHS. CONTRACTOR SHALL NOT BACKFILL AGAINST WALLS UNTIL THEY ARE PROPERLY BRACED.

BORROW AREA RESTORATION

1. ALL BORROW AREAS SHALL BE GRADED TO DRAIN AND PLACED BACK TO A MAINTAINABLE CONDITION



PROJECT LIMIT NOTE:

1. PROJECT LIMITS ARE INTENDED TO ENCOMPASS MAJOR AREA OF WORK REQUIRED FOR CONSTRUCTION OF THE PROJECT; HOWEVER THEY ARE NOT INTENDED TO DETERMINE THE SCOPE OF WORK FOR THE PROJECT. IF WORK, INCLUDING BUT NOT LIMITED TO, PAVEMENT TIE-INS, STRIPING, AND AIRFIELD ELECTRICAL REQUIRE WORK BEYOND THE PROJECT LIMITS, CONTRACTOR WILL SHALL COORDINATE THIS WORK WITH AIRSIDE OPERATIONS AND SHALL DILIGENTLY COMPLETE THESE ASPECTS OF WORK RESTORE ALL DISTURBED AREAS AS REQUIRED, AND RETURN WITHIN THE PROJECT LIMITS.

LEGEND

- PROJECT LIMITS
- CONTRACTOR STAGING AREAS
- PROPOSED CONSTRUCTION SITE ACCESS GATE

800 400 0 800 1600

SCALE: 1 IN = 800 FT

No.	Revision	By	App.	Date
	ISSUE FOR BID			01-25-13

ISSUE FOR BID

SAN ANTONIO AIRPORT SYSTEM

AECOM
TEXAS REGISTERED ENGINEERING FIRM F-3580
5757 Woodway Drive
Suite 101 West
Houston, Texas 77057
Tel: 713.267.3200
Fax: 713.267.3278

STATE OF TEXAS — GUO-PIN FUAN — 81466 — REGISTERED PROFESSIONAL ENGINEER — 12/6/12

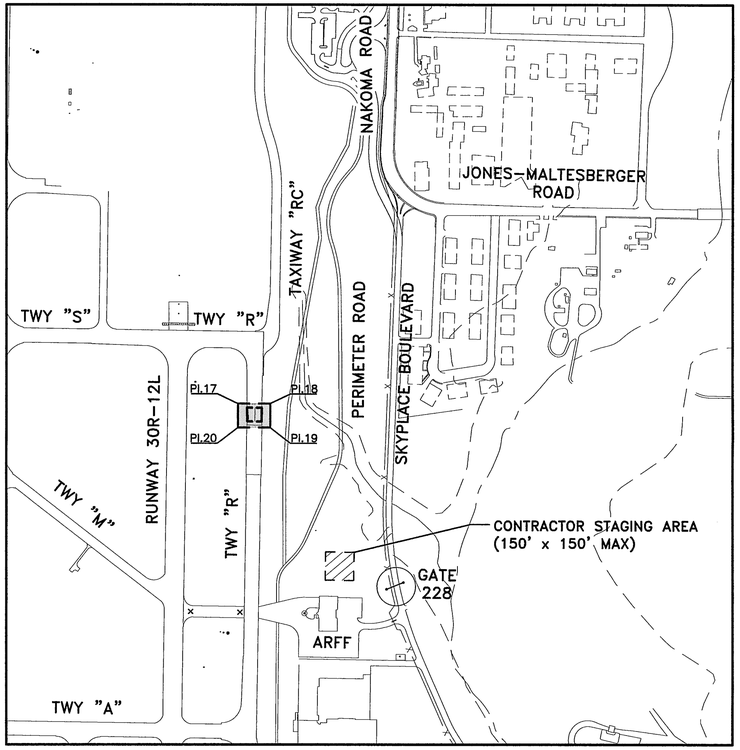
Designed By: GPF
Drawn By: CRJ/FE/GWS
Checked By: TKD
Date: 12/03/2012
Scale: AS SHOWN

SAN ANTONIO INTERNATIONAL AIRPORT
RUNWAY 3-21 EXTENSION - NEW EXIT TAXIWAY, TAXIWAY REPAIRS, AND PERIMETER RD RECONSTRUCTION - RE-BID

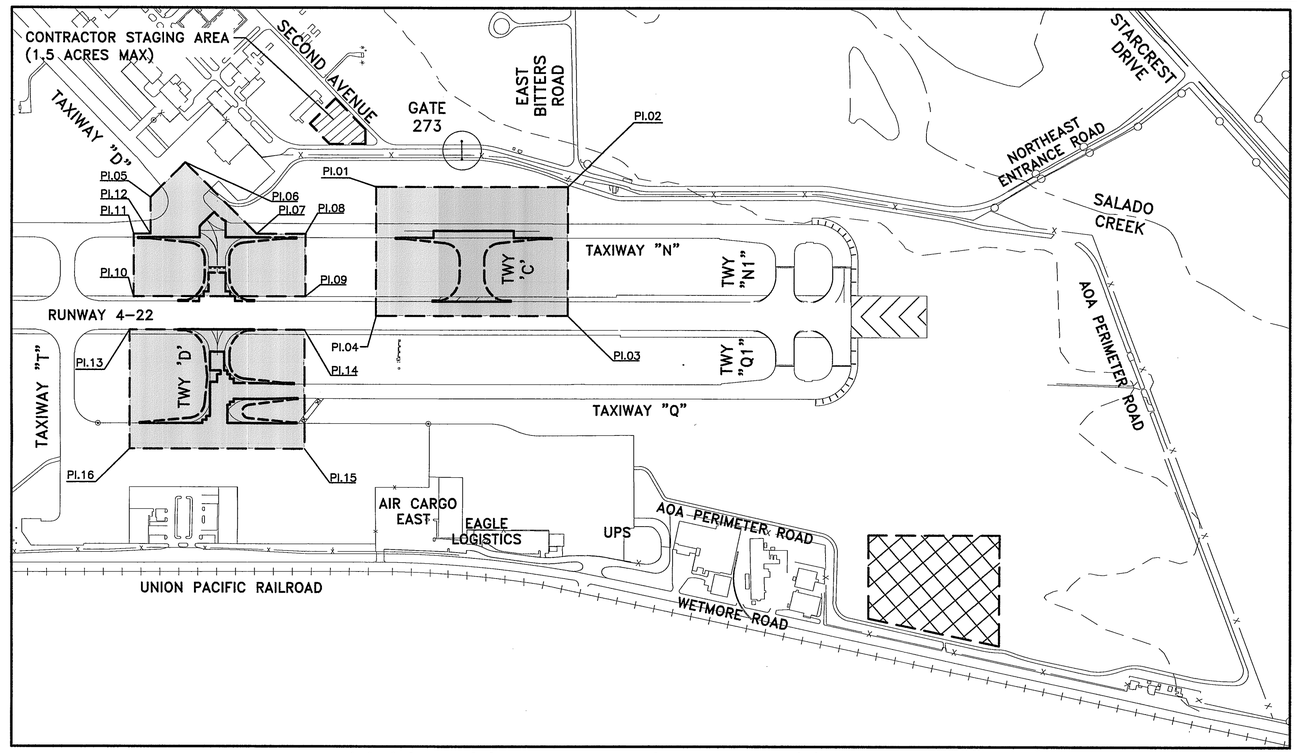
PROJECT LAYOUT PLAN

Project No. 33-00160 | C.I.P. No. 0000 | A.I.P. No. 0000 | Sheet Z-005

LAST MODIFIED: Dec 06, 2012 - 1:19pm BY USER: escobedof
DWG. LOCATION: S:\2012\33-00160-Technical\Civil-Sheets\RWY-321_Exten-PH4 - REBID\
DWG. NAME: SAT-RWY321-Z-005.dwg



TAXIWAY 'R' REPAIR



TAXIWAYS 'D', 'Q' AND 'N' IMPROVEMENTS / AND TAXIWAY 'C' CONSTRUCTION

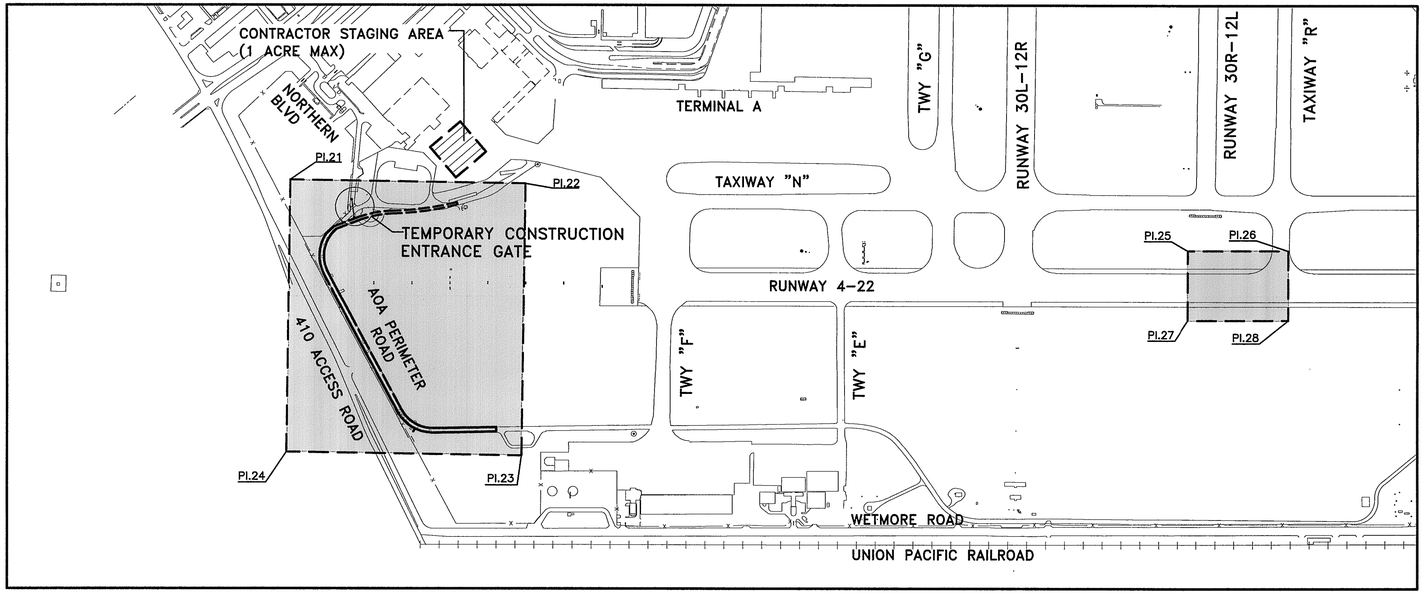
NOTE

1. SEE SHEET C-002 FOR SURVEY CONTROL.

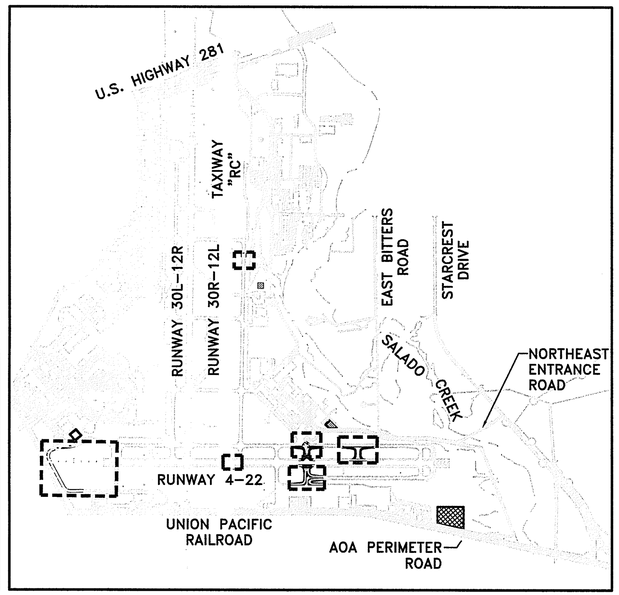
LEGEND

- OVERALL PROJECT LIMITS
- CONTRACTOR STAGING AREA
- BORROW/STOCK PILE AREA
- PI.01 COORDINATE REFERENCE NUMBER

COORDINATE REFERENCE NUMBER		
REF. NO.	PROJECT LIMITS COORD. NORTHING	PROJECT LIMITS COORD. EASTING
PI.01	13745424.86	2140804.40
PI.02	13746196.31	2141462.59
PI.03	13745752.87	2141981.45
PI.04	13744981.42	2141323.26
PI.05	13744481.41	2140072.09
PI.06	13744739.59	2140051.60
PI.07	13744781.87	2140584.31
PI.08	13744978.35	2140751.77
PI.09	13744763.32	2141004.05
PI.10	13744071.57	2140414.44
PI.11	13744286.59	2140162.17
PI.12	13744354.96	2140220.44
PI.13	13742761.64	2139170.85
PI.14	13744645.39	2141134.98
PI.15	13744237.96	2141611.81
PI.16	13743534.58	2141010.80
PI.17	13746609.37	2135421.04
PI.18	13746737.90	2135531.58
PI.19	13746656.81	2135628.34
PI.20	13746527.10	2135517.48
PI.21	13739397.35	2135810.79
PI.22	13740327.58	2136629.95
PI.23	13739378.39	2137707.84
PI.24	13738448.17	2136888.67
PI.25	13742775.29	2139182.49
PI.26	13743166.80	2139516.60
PI.27	13742523.94	2139449.39
PI.28	13742929.11	2139795.14



PERIMETER ROAD RECONSTRUCTION AND RUNWAY 4-22 REPAIR



PROJECT VICINITY MAP
NTS

400 200 0 400 800
SCALE: 1 IN = 400 FT

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SAN ANTONIO AIRPORT SYSTEM

AECOM
TEXAS REGISTERED ENGINEERING FIRM F-3580
5757 Woodway Drive
Suite 101 West
Houston, Texas 77057
Tel: 713.267.3200
Fax: 713.267.3278

STATE OF TEXAS
GUO-PIN FUAN
81466
REGISTERED PROFESSIONAL ENGINEER
2/6/12

Designed By: GPF
Drawn By: CRJ/FE/GWS
Checked By: TKD
Date: 12/03/2012
Scale: AS SHOWN

SAN ANTONIO INTERNATIONAL AIRPORT
RUNWAY 3-21 EXTENSION - NEW EXIT TAXIWAY, TAXIWAY REPAIRS, AND PERIMETER RD RECONSTRUCTION - RE-BID

PROJECT LIMITS PLAN

Project No. 33-00160 | C.I.P. No. 0000 | A.I.P. No. 0000 | Sheet C-001

LAST MODIFIED: Dec 06, 2012 - 12:27pm BY USER: ecoleset
DWG. LOCATION: V:\60328635_SAT\400-Technical\424-Sheets\RWY-321_Exten-PH4 - REBID\
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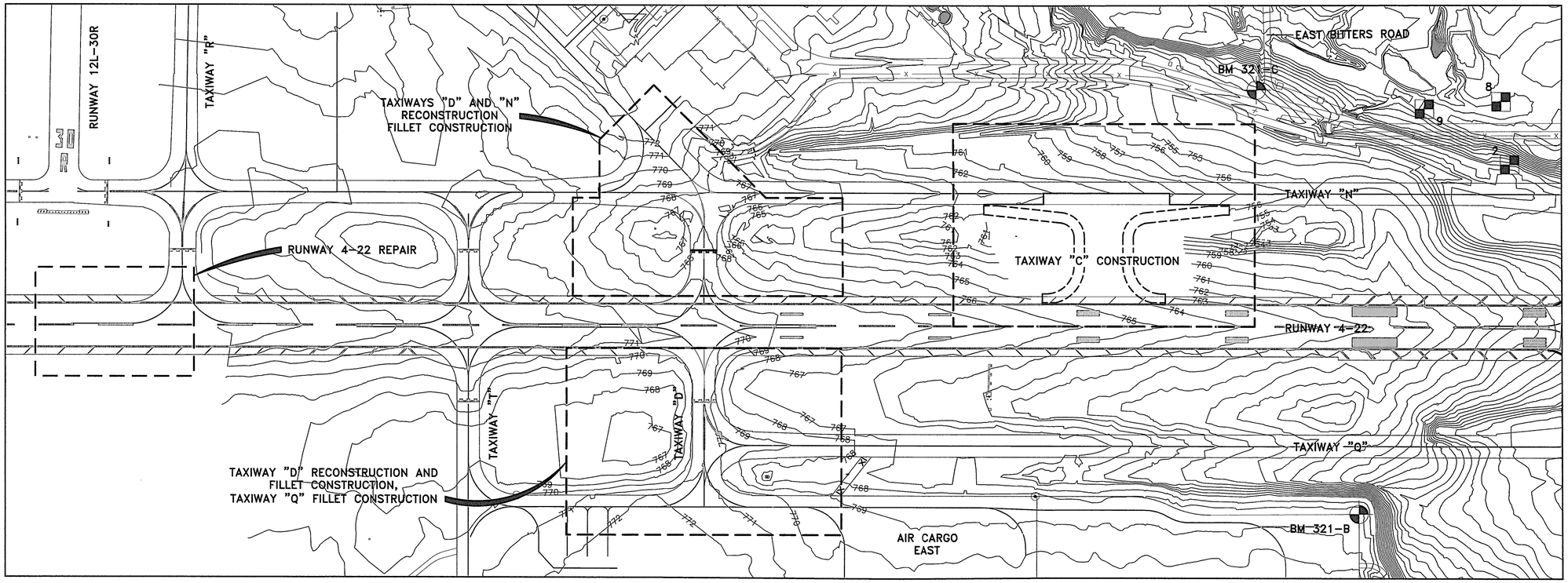
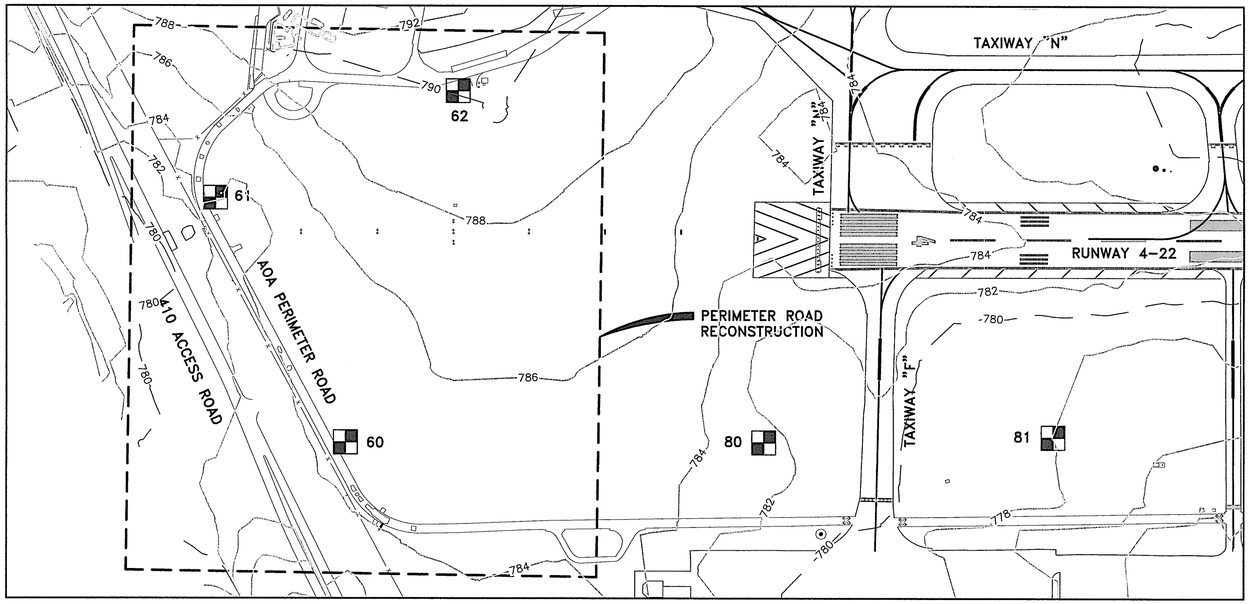




NOTES:

1. THIS DRAWING IS PRESENTED IN TEXAS STATE PLANE (SOUTH CENTRAL ZONE 4204) SCALED TO SURFACE WITH A "GRID TO SURFACE" COMBINED SCALE FACTOR: 1.00016428
HORIZONTAL DATUM: NAD 83/93 HARN
VERTICAL DATUM: NAVD 88
CONTOUR INTERVAL: 1 FOOT

LEGEND:

53 — CONTROL POINT WITH REFERENCE POINT NUMBER

BM 321-A — BENCH MARK WITH REFERENCE POINT NUMBER

PROJECT LIMITS

760 — EXISTING 1-FOOT CONTOURS

BENCHMARKS:

BM 321-A: SET SQUARE ON THE NORTHWEST CORNER OF A HEADWALL, LOCATED APPROXIMATELY 0.70 MILES NORTHEAST ALONG THE PERIMETER ROAD, FROM THE CENTERLINE PI OF OLD BITTERS AND SAID PERIMETER ROAD, APPROXIMATELY 25 FEET ± SOUTHEAST OF NORTH PERIMETER FENCE AND 1500 FEET ± EAST OF THE CENTERLINE OF THE NORTHEAST ENTRANCE ROAD. ELEV.: 737.06

BM 321-B: SET SQUARE AT THE NORTHWEST CORNER OF THE AIR CARGO EAST APRON, ELEVATION: 768.72

BM 321-C: ALSO KNOWN AS CONTROL POINT 1. SET 1/2" IRON ROD WITH CAP STAMPED "VICKREY TRAV" AT THE SOUTHWEST CORNER OF N.E. ENTRANCE ROAD AT E. BITTERS ROAD. ELEV.:750.87

CONTROL POINTS

NO	NORTHING	EASTING	ELEV	FULL DESCRIPTION
1	13746274.03	2141378.67	750.87	CAPPED IRON ROD
2	**13746759.63**	**2142120.37**	**745.64**	**CAPPED IRON ROD**
3	13747259.63	2142674.43	741.34	CAPPED IRON ROD
4	13748233.42	2143074.71	732.17	CAPPED IRON ROD
5	13747686.64	2142635.88	733.64	IRON ROD
6	13747351.66	2142356.65	737.01	CAPPED IRON ROD
7	13747151.83	2142186.05	738.08	CAPPED IRON ROD
8	**13746874.94**	**2141940.37**	**737.22**	**IRON ROD**
9	**13746663.03**	**2141792.42**	**736.73**	**CAPPED IRON ROD**
50	13749109.89	2145105.36	736.47	CAPPED IRON ROD
51	13749081.73	2143983.22	730.35	CAPPED IRON ROD
52	13748747.60	2145441.82	734.43	60D NAIL
53	13749372.98	2144619.27	732.55	IRON ROD
54	13749047.63	2143177.93	736.33	CAPPED IRON ROD
60	**13749109.89**	**2145105.36**	**783.91**	**CAP. IRON ROD w/VA CAP**
61	**13749081.73**	**2143983.22**	**783.39**	**CAP. IRON ROD w/VA CAP**
62	**13748747.60**	**2145441.82**	**790.19**	**CAP. IRON ROD w/VA CAP**
80	**13749372.98**	**2144619.27**	**782.07**	**CAP. IRON ROD w/VA CAP**
81	**13749047.63**	**2143177.93**	**777.73**	**CAP. IRON ROD w/VA CAP**

NOTE:

SCREENED CONTROL POINT LOCATIONS ARE SCATTERED OVER THE AIRFIELD AND ARE OUTSIDE OF THE IMMEDIATE CONSTRUCTON AREA.

200 100 0 200 400
SCALE: 1 IN = 200 FT

No.	Revision	By	App.	Date
	ISSUE FOR BID			01-25-13

ISSUE FOR BID

SAN ANTONIO AIRPORT SYSTEM

AECOM
TEXAS REGISTERED ENGINEERING FIRM F-2580
5757 Woodway Drive
Suite 101 West
Houston, Texas 77057
Tel: 713.267.3200
Fax: 713.267.3278

STATE OF TEXAS — GUO-PIN FUAN — 81466 — REGISTERED PROFESSIONAL ENGINEER — 12/4/12

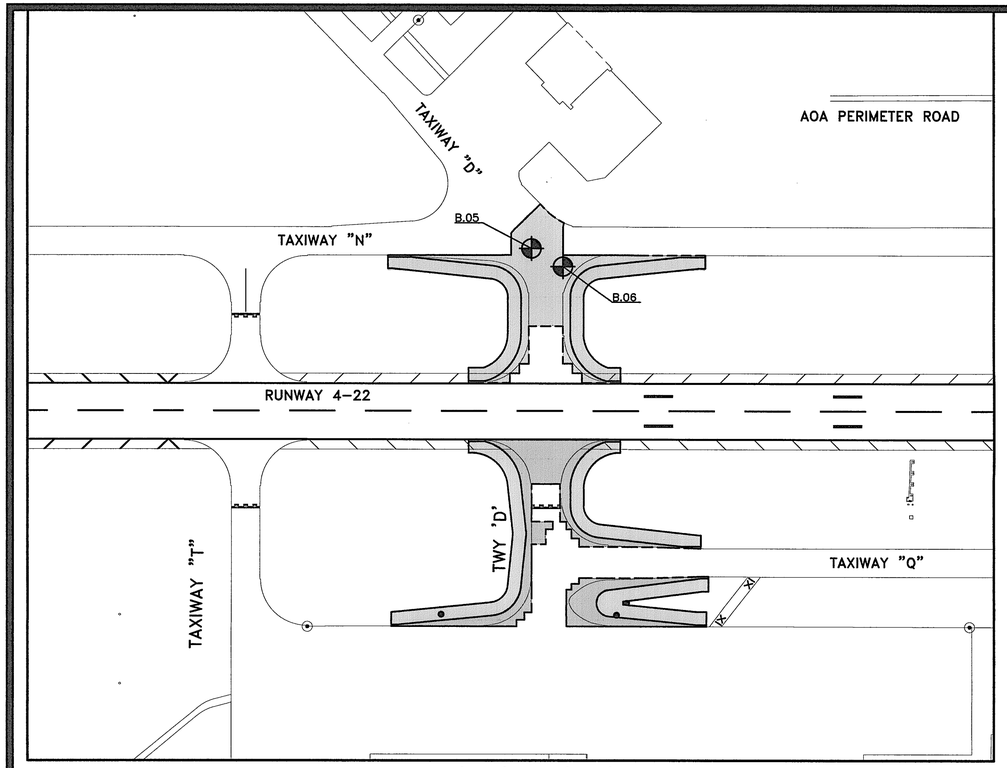
Designed By: GPF
Drawn By: CRJ/FE/GWS
Checked By: TKD
Date: 12/03/2012
Scale: AS SHOWN

SAN ANTONIO INTERNATIONAL AIRPORT
RUNWAY 3-21 EXTENSION - NEW EXIT TAXIWAY, TAXIWAY REPAIRS, AND PERIMETER RD RECONSTRUCTION - RE-BID

SURVEY CONTROL PLAN

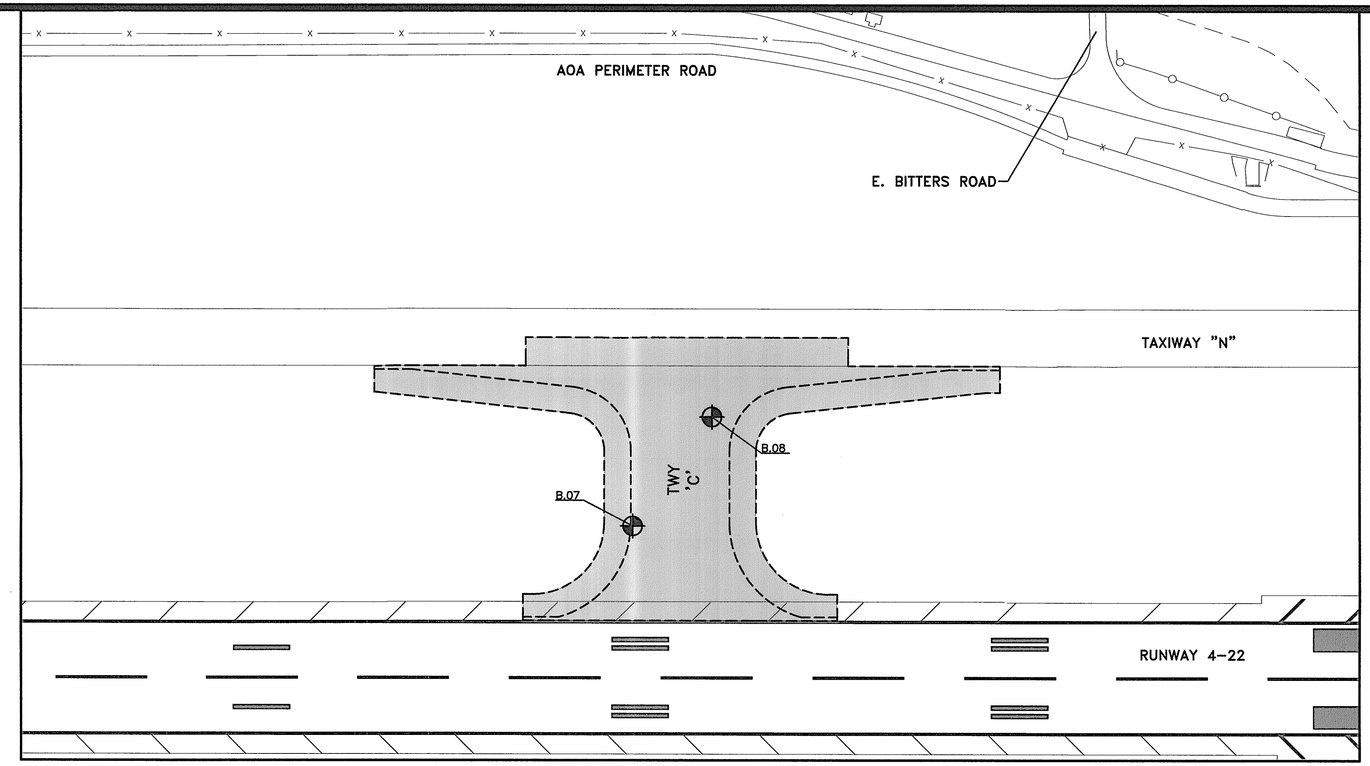
Project No. 33-00160 | C.I.P. No. 0000 | A.I.P. No. 0000 | Sheet C-002

LAST MODIFIED: Dec 05, 2012 - 12:28pm BY USER: eccobedof
DIRECTORY: \\corp.aecom.com\Houston\Projects\Technical\Civil\SAT\60160160\Rwy12L-30R-Rehab\RW-321_Exten-PH4 - REBID\
DWG. NAME: SAT-RWY321-C-002.dwg



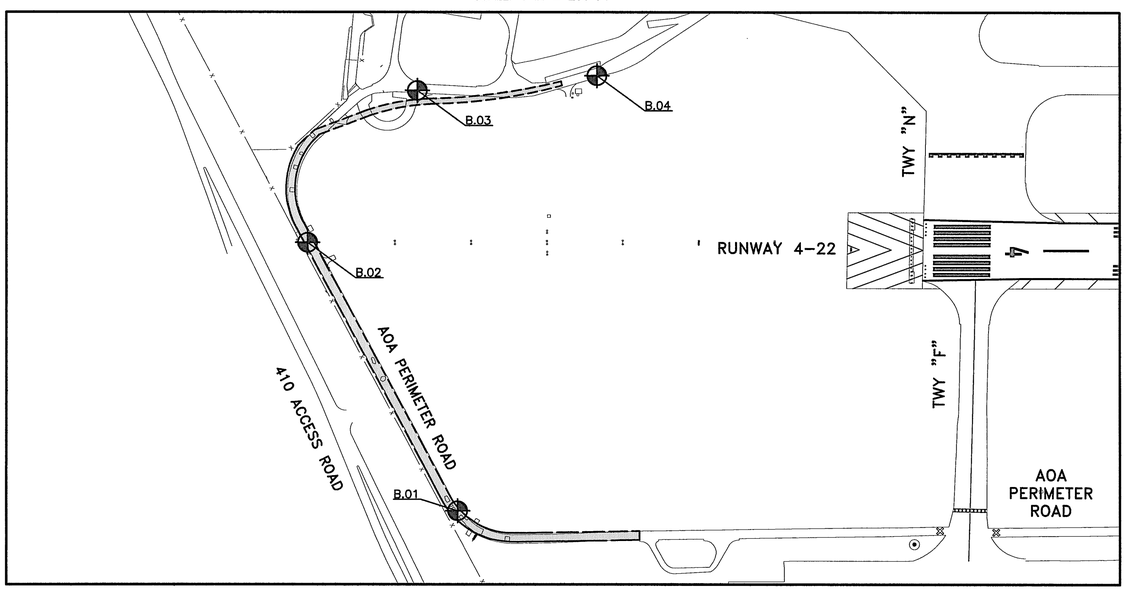
TAXIWAYS 'N–D' AND 'D–Q' INTERSECTIONS

SCALE: 1 IN = 200 FT



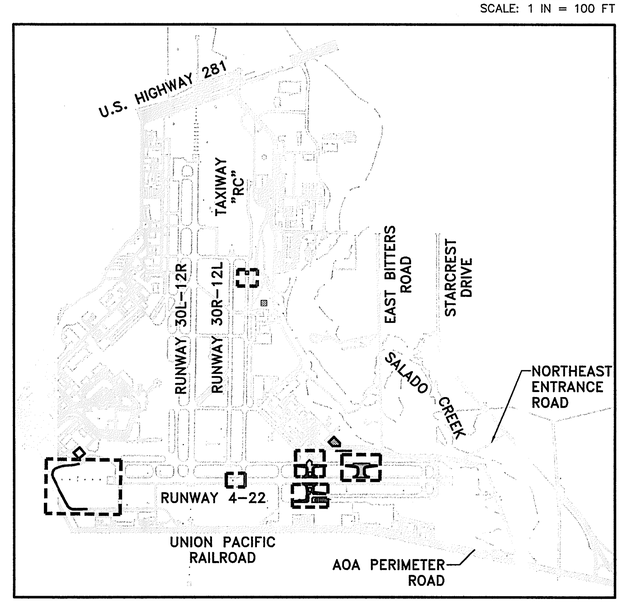
TAXIWAY 'C'

SCALE: 1 IN = 100 FT



AOA PERIMETER ROAD

SCALE: 1 IN = 200 FT



PROJECT VICINITY MAP

NTS

BORE LOCATION REFERENCE NUMBER		
REF. NO.	PROJECT LIMITS COORD. NORTHING	PROJECT LIMITS COORD. EASTING
B.01	13739044.54	2137156.47
B.02	13739203.75	2136361.11
B.03	13739683.80	2136243.59
B.04	13740069.08	2136520.96
B.05	13744592.21	2140424.71
B.06	13744623.98	2140515.03
B.07	13745449.81	2141459.39
B.08	13745622.88	2141417.64

NOTE

1. SEE SHEET C–002 FOR SURVEY CONTROL.

LEGEND

CONSTRUCTION LIMITS

PI.01 BORE REFERENCE NUMBER

BORE LOCATIONS

No.	Revision	By	App.	Date
	ISSUE FOR BID			01-25-13

ISSUE FOR BID

SAN ANTONIO AIRPORT SYSTEM

AECOM
TEXAS REGISTERED ENGINEERING FIRM F-3580
5757 Woodway Drive
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STATE OF TEXAS
GUO–PIN FUAN
81466
REGISTERED
PROFESSIONAL ENGINEER
1/8/12

Designed By: GPF
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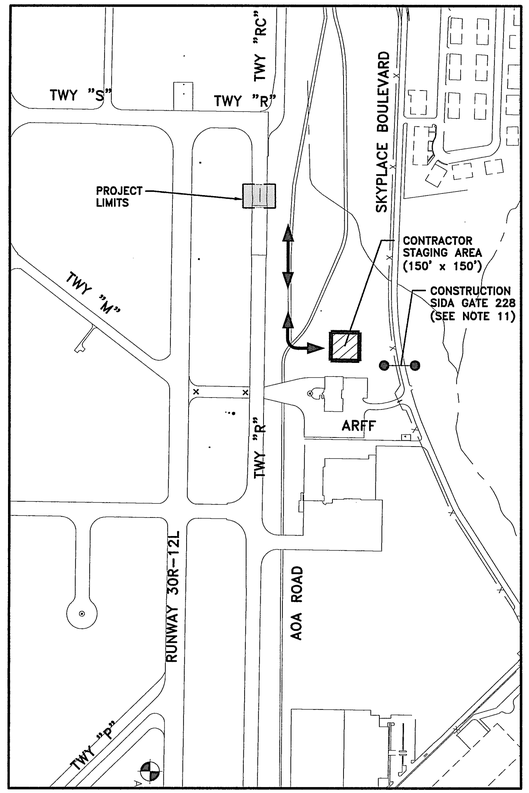
Checked By: TKD
Date: 12/03/2012
Scale: AS SHOWN

SAN ANTONIO INTERNATIONAL AIRPORT
RUNWAY 3-21 EXTENSION - NEW EXIT TAXIWAY, TAXIWAY REPAIRS, AND PERIMETER RD RECONSTRUCTION - RE-BID

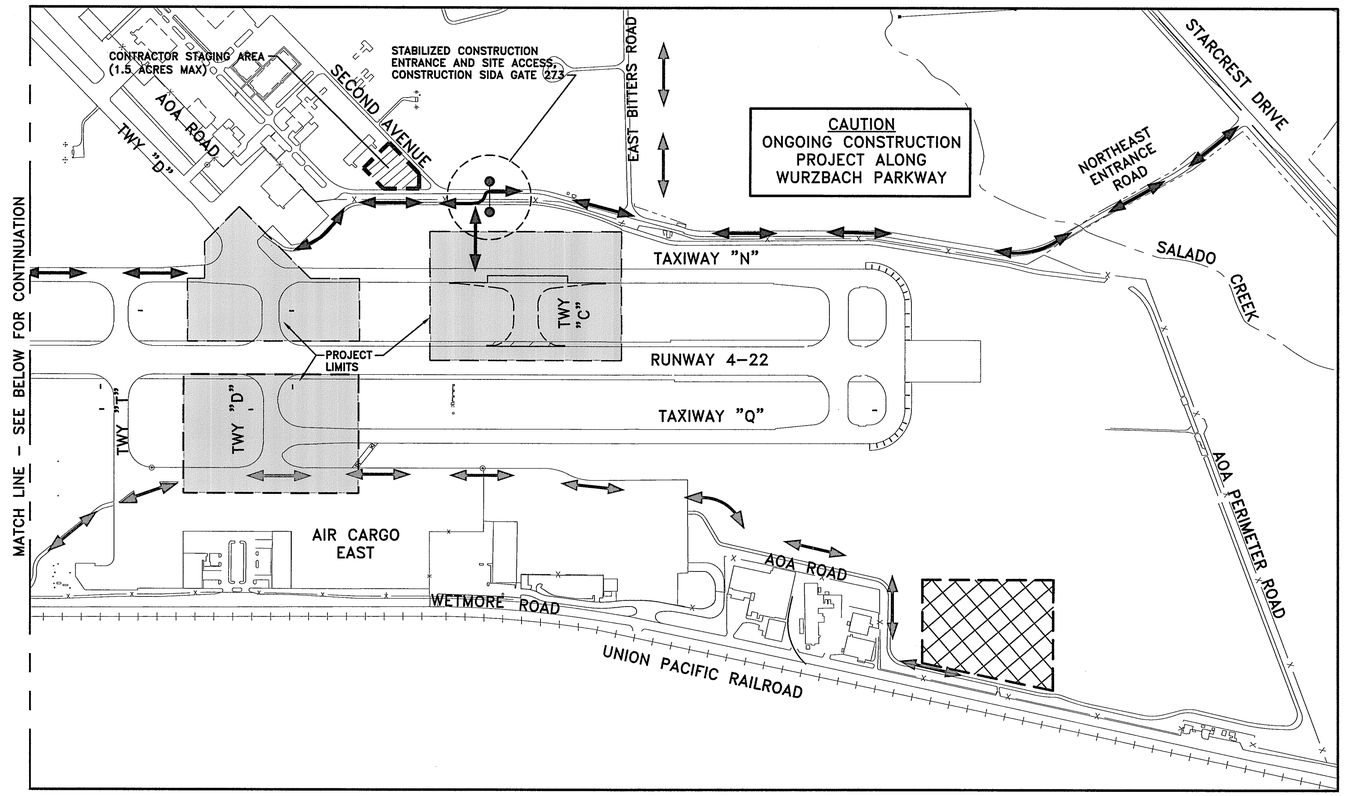
SOIL BORING LOCATION PLAN

Project No. 33-00160 | C.I.P. No. 0000 | A.I.P. No. 0000 | Sheet C-003

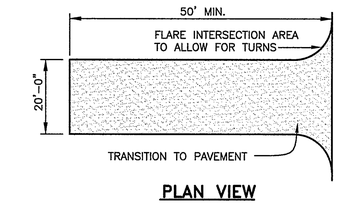
LAST MODIFIED: Dec 05, 2012 – 12:28pm BY USER: escobedof
XREFS: SAT-RWY321-S1-Xref-Topo; SAT-RWY321-S1-Xref-Technical(VE2-Sheets)(RW-321_Exten-PH4 – REBID)
DWG. NAME: SAT-RWY321-C-003.dwg



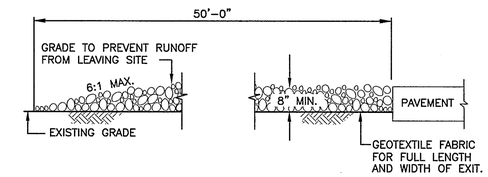
TAXIWAY "R" REPAIR



TAXIWAYS "D", "Q" AND "N" IMPROVEMENTS / AND TAXIWAY 'C' CONSTRUCTION



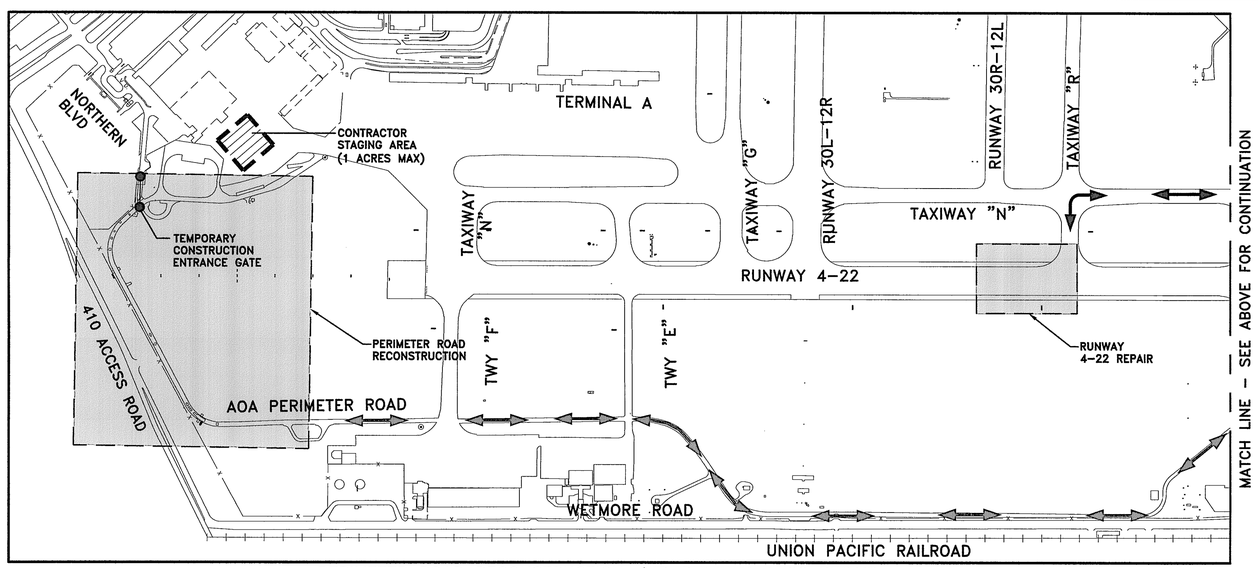
PLAN VIEW



PROFILE

NOTES

1. STONE SIZE – 4 TO 8 INCH OPEN GRADED ROCK.
2. WASHING – WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC ROADWAY OR APRON/TAXIWAY OR AIRFIELD PERIMETER ROAD. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE WHICH DRAINS INTO AN APPROVED TRAP OR SEDIMENT BASIN. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH, OR WATERCOURSE USING APPROVED METHODS.
3. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADWAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
4. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADWAY OR APRON/TAXIWAY OR PERIMETER ROAD MUST BE REMOVED IMMEDIATELY.
5. DRAINAGE – ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.



PERIMETER ROAD RECONSTRUCTION AND RUNWAY 4-22 REPAIR

NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR PLACING TEMPORARY ROCK BASE MATERIAL AS NEEDED. THE ROCK MATERIAL SHALL BE REMOVED BY THE CONTRACTOR AT NO COST TO THE OWNER AT THE COMPLETION OF THE PROJECT.
2. SEE SHEETS C-005, C-006, AND C-007 FOR EXISTING UTILITY CONDITIONS.
3. PAYMENT FOR STAGING AREAS PREPARATION AND UTILITIES SHALL BE MADE AS PART OF "MOBILIZATION".
4. CONTRACTOR SHALL PROVIDE BADGED PERSONNEL AT CONSTRUCTION SITE ACCESS.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING DAMAGES TO EXISTING ROADS AND AIRFIELD AREAS AS A RESULT OF CONSTRUCTION TRAFFIC TO WORK AREAS. REPAIRS SHALL MATCH EXISTING MATERIALS, AND IS TO INCLUDE PAVEMENT MARKINGS IF DAMAGED AS-WELL. ANY REPAIR EFFORTS ARE TO BE TO THE SATISFACTION OF THE OWNER, AT NO ADDITIONAL COST TO THE OWNER.
6. SEE SHEET Z-004 FOR SAFETY NOTES REGARDING RUNWAY SAFETY AREA AND OBJECT FREE AREA.
7. CONTRACTOR TO PROVIDE STABILIZED CONSTRUCTION ENTRANCE/EXIT TO CONSTRUCTION AREA, AS SHOWN ON PLANS.
8. CONTRACTOR SHALL PROVIDE EROSION CONTROL MEASURES AS NECESSARY ALONG THE PERIMETER OF THE STAGING AREA. (NO SEPARATE PAY)
9. CONTRACTOR SHALL MAINTAIN A BAGGED GUARD AT THE SITE ACCESS GATE AT ALL TIMES WHEN IT IS IN USE. GATE SHALL BE LOCKED WHEN NOT IN USE. SEE SHEET Z-004 FOR SECURITY SAFETY AND BADGE NOTES
10. SEE SHEET Z-004 FOR ENVIRONMENTAL NOTES.
11. CONTRACTOR SHALL NOT BLOCK THE EXISTING TEMPORARY ROAD THAT PROVIDES ACCESS FROM GATE 228 TO THE AIRPORT PERIMETER ROAD.
12. NORTHEAST ENTRANCE ROAD IS CURRENTLY CLOSED DUE TO WURZBACH PARKWAY CONSTRUCTION. CONTRACTOR TO USE EAST BITTERS ROAD UNTIL NORTHEAST ENTRANCE ROAD IS REOPENED.

STABILIZED CONSTRUCTION ENTRANCE/EXIT

N.T.S.

LEGEND:

- CONTRACTOR STAGING AREA
- PROJECT LIMITS
- BORROW/STOCK PILE AREA
- PRIMARY HAUL ROUTE
- SECONDARY HAUL ROUTE
- AOA FENCE

400 200 0 400 800

SCALE: 1 IN = 400 FT

No.	Revision	By	App.	Date
	ISSUE FOR BID			01-25-13

ISSUE FOR BID

SAN ANTONIO AIRPORT SYSTEM

AECOM
TEXAS REGISTERED ENGINEERING FIRM F-3580
5757 Woodway Drive
Suite 101 West
Houston, Texas 77057
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STATE OF TEXAS
GUO-PIN FUAN
81466
REGISTERED PROFESSIONAL ENGINEER
12/6/12

Designed By:	GPF
Drawn By:	CRJ/FE/GWS
Checked By:	TKD
Date:	12/03/2012
Scale:	AS SHOWN

SAN ANTONIO INTERNATIONAL AIRPORT
RUNWAY 3-21 EXTENSION - NEW EXIT TAXIWAY, TAXIWAY REPAIRS, AND PERIMETER RD RECONSTRUCTION - RE-BID

ACCESS, HAUL ROUTES, CONTRACTOR STAGING AREA

Project No. 33-00160 | C.I.P. No. 0000 | A.I.P. No. 0000 | Sheet C-004

LAST MODIFIED: Dec 06, 2012 - 12:29pm BY USER: escobedof
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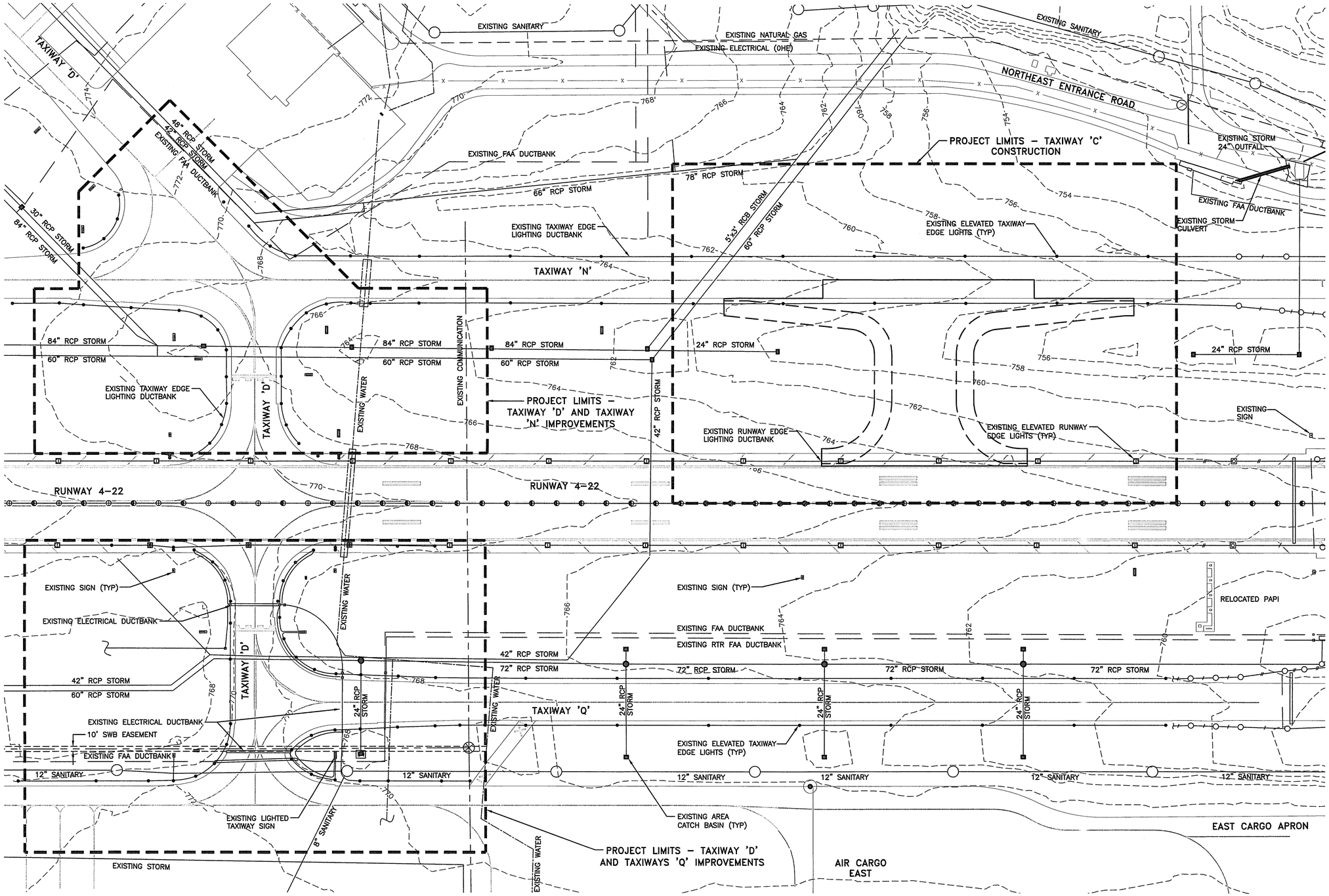
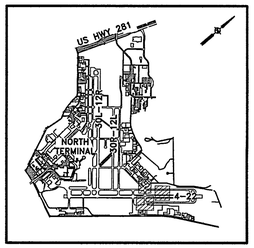


NOTES:

1. EXISTING CONDITIONS REPRESENTED HERE ARE BASED ON BEST INFORMATION AVAILABLE AT THE TIME OF DESIGN. IT IS NOT THE INTENTION OF THIS SHEET TO SHOW ALL SURFACE OR SUB–SURFACE FEATURES EXISTING ON SITE. IT IS ONLY TO SHOW GENERAL CONDITIONS WITHIN AND ADJACENT TO THE PROJECT LIMITS.
2. CONTRACTOR TO VERIFY LOCATIONS OF EXISTING UTILITIES WHICH ARE TO PROVIDE INTERIM SERVICE DURING CONSTRUCTION OR CONTINUED SERVICE UPON COMPLETION OF THE PROJECT. ANY DISRUPTION OF SERVICE REQUIRED TO MAINTAIN OPERATIONS SHALL BE REPAIRED IMMEDIATELY BY CONTRACTOR UPON NOTIFICATION. COSTS OF REPAIRS WILL BE THE CONTRACTORS RESPONSIBILITY.
3. REFER TO THE ELECTRICAL PLANS FOR ADDITIONAL INFORMATION AND ALIGNMENTS OF EXISTING ELECTRICAL FEATURES AND DUCTBANKS SHOWN ON THIS SHEET ALSO.

LEGEND:

- PROJECT LIMITS
- 760 — EXISTING MINOR CONTOURS (2' INTERVAL)
- SANITARY — EXISTING SANITARY SEWER LINE
- FAA — EXISTINIG FAA DUCT BANK
- STORM — EXISTING STORM SEWER LINE
- WATER — EXISTING WATER LINE
- COMM — EXISTING COMMUNICATION CONDUIT
- EXISTING ELECTRICAL CONDUIT
- EXISTING CONCRETE ENCASED DUCT BANK
- EXISTING STORM SEWER INLET
- EXISTING STORM SEWER MANHOLE
- EXISTING SANITARY SEWER MANHOLE
- EXISTING COMMUNICATION MANHOLE
- EXISTING SIGN
- EXISTING ELECTRICAL MANHOLE
- EXISTING RUNWAY EDGE LIGHT
- EXISTING RUNWAY CENTERLINE LIGHT
- EXISTING TAXIWAY EDGE LIGHT



KEY MAP
N.T.S.

100 50 0 100 200
SCALE: 1 IN = 100 FT

No.	Revision	By	App.	Date
	ISSUE FOR BID			01-25-13

ISSUE FOR BID

SAN ANTONIO AIRPORT SYSTEM

AECOM
TEXAS REGISTERED ENGINEERING FIRM F-3580
5757 Woodway Drive
Suite 101 West
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STATE OF TEXAS
GUO–PIN FUAN
81466
REGISTERED PROFESSIONAL ENGINEER
12/4/12

Designed By: GPF
Drawn By: CRJ/FE/GWS
Checked By: TKD
Date: 12/03/2012
Scale: AS SHOWN

SAN ANTONIO INTERNATIONAL AIRPORT
RUNWAY 3-21 EXTENSION - NEW EXIT TAXIWAY, TAXIWAY REPAIRS, AND PERIMETER RD RECONSTRUCTION - RE-BID

EXISTING CONDITIONS LAYOUT 1

Project No. 33-00160 | C.I.P. No. 0000 | A.I.P. No. 0000 | Sheet C-005

LAST MODIFIED: Dec 06, 2012 – 12:29pm BY USER: escobedof
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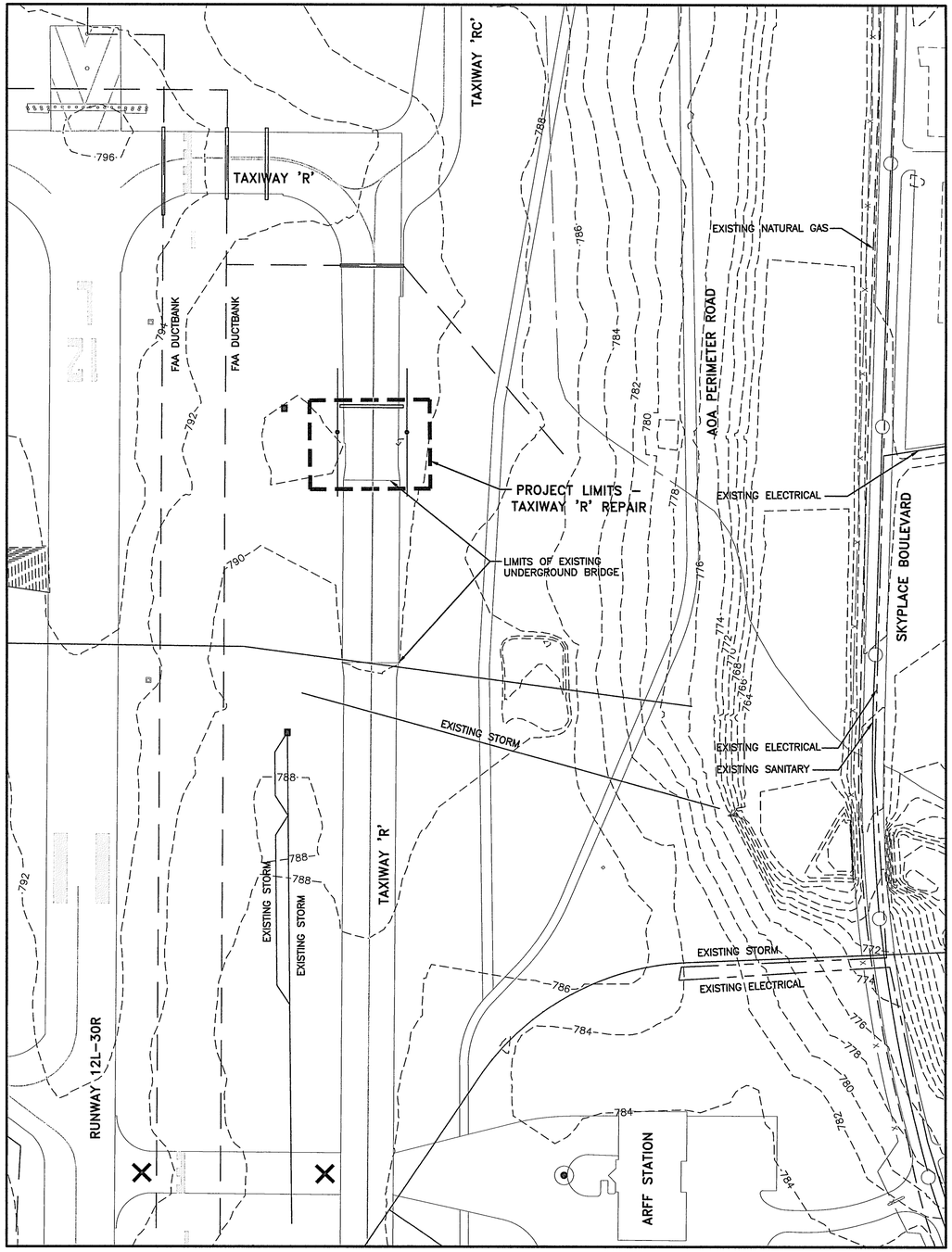
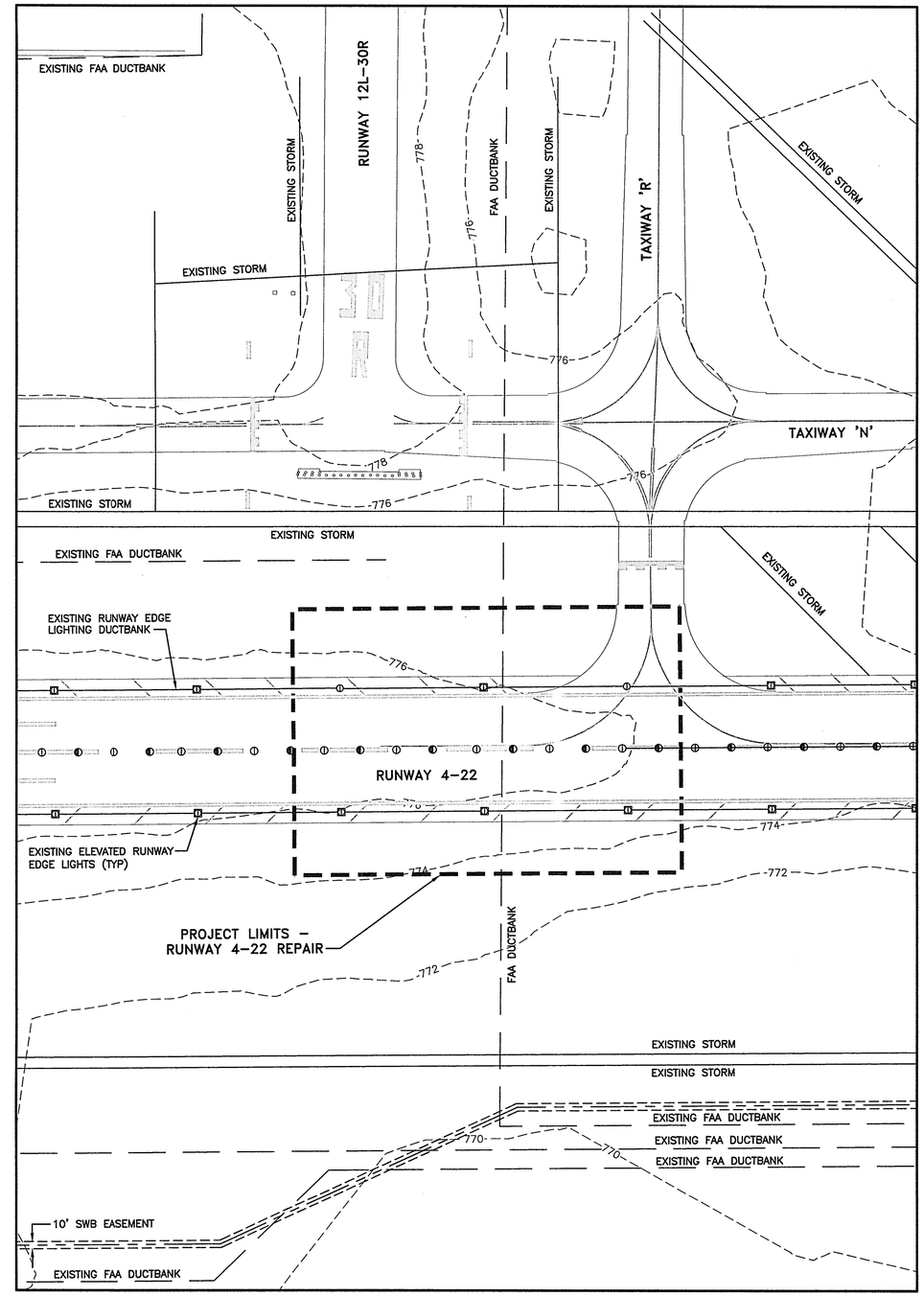
DWG. NAME: SAT-RWY321-C-005.dwg



TAXIWAY R REPAIR



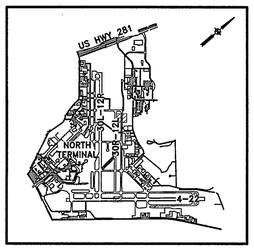
RUNWAY 4–22 REPAIR

NOTES:

1. EXISTING CONDITIONS REPRESENTED HERE ARE BASED ON BEST INFORMATION AVAILABLE AT THE TIME OF DESIGN. IT IS NOT THE INTENTION OF THIS SHEET TO SHOW ALL SURFACE OR SUB–SURFACE FEATURES EXISTING ON SITE. IT IS ONLY TO SHOW GENERAL CONDITIONS WITHIN AND ADJACENT TO THE PROJECT LIMITS.
2. CONTRACTOR TO VERIFY LOCATIONS OF EXISTING UTILITIES WHICH ARE TO PROVIDE INTERIM SERVICE DURING CONSTRUCTION OR CONTINUED SERVICE UPON COMPLETION OF THE PROJECT. ANY DISRUPTION OF SERVICE REQUIRED TO MAINTAIN OPERATIONS SHALL BE REPAIRED IMMEDIATELY BY CONTRACTOR UPON NOTIFICATION. COSTS OF REPAIRS WILL BE THE CONTRACTORS RESPONSIBILITY.
3. REFER TO THE ELECTRICAL PLANS FOR LOCATIONS AND ALIGNMENTS OF EXISTING ELECTRICAL FEATURES AND DUCTBANKS SHOWN ON THIS SHEET ALSO.

LEGEND:

- PROJECT LIMITS
- 760 — EXISTING MINOR CONTOURS (2' INTERVAL)
- SANITARY — EXISTING SANITARY SEWER LINE
- FAA — EXISTINIG FAA DUCT BANK
- STORM — EXISTING STORM SEWER LINE
- WATER — EXISTING WATER LINE
- COMM — EXISTING COMMUNICATION CONDUIT
- EXISTING ELECTRICAL CONDUIT
- EXISTING CONCRETE ENCASED DUCT BANK
- EXISTING STORM SEWER INLET
- EXISTING STORM SEWER MANHOLE
- EXISTING SANITARY SEWER MANHOLE
- EXISTING COMMUNICATION MANHOLE
- EXISTING SIGN
- EXISTING ELECTRICAL MANHOLE
- EXISTING RUNWAY EDGE LIGHT
- EXISTING RUNWAY CENTERLINE LIGHT



KEY MAP
N.T.S.

100 50 0 100 200
SCALE: 1 IN = 100 FT

No.	Revision	By	App.	Date
	ISSUE FOR BID			01-25-13

ISSUE FOR BID

SAN ANTONIO AIRPORT SYSTEM

AECOM
TEXAS REGISTERED ENGINEERING FIRM F-3580
5757 Woodway Drive
Suite 101 West
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Fax: 713.267.3278

STATE OF TEXAS — GUO–PIN FUAN — 81466 — REGISTERED PROFESSIONAL ENGINEER — 12/6/12

Designed By: GPF
Drawn By: CRJ/FE/GWS
Checked By: TKD
Date: 12/03/2012
Scale: AS SHOWN

SAN ANTONIO INTERNATIONAL AIRPORT
RUNWAY 3-21 EXTENSION - NEW EXIT TAXIWAY, TAXIWAY REPAIRS, AND PERIMETER RD RECONSTRUCTION - RE-BID

EXISTING CONDITIONS LAYOUT 2

Project No. 33-00160 | C.I.P. No. 0000 | A.I.P. No. 0000 | Sheet C-006

LAST MODIFIED: Dec 06, 2012 – 12:30pm BY USER: escobedof
DWG. LOCATION: V:\60039538–SAT\400–Technical\424–Sheets\RW–321_Exten–PH4 – REBID\
DWG. NAME: SAT–RW12–C–006.dwg

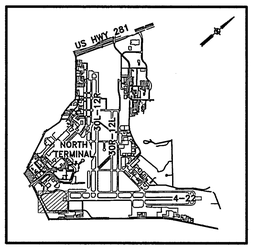
EXISTING FAA DUCT BANK
EXISTING UNDERGROUND ELECTRICAL
EXISTING SANITARY MANHOLE
EXISTING WATERLINE
AOA PERIMETER ROAD
EXISTING JET FUEL LINE
EXISTING UNDERGROUND ELECTRICAL
EXISTING FAA DUCTBANK
EXISTING SANITARY
EXISTING STORM
EXISTING STORM
TAXIWAY 'N'
TAXIWAY 'N'
EXISTING STORM
EXISTING STORM
EXISTING FAA DUCT BANK
EXISTING ELEVATED RUNWAY EDGE LIGHTS (TYP)
EXISTING STORM
EXISTING STORM CULVERT
EXISTING FAA DUCTBANK
EXISTING FAA DUCT BANK
EXISTING UNDERGROUND ELECTRICAL
EXISTING FAA DUCTBANK
EXISTING FAA DUCT BANK
RUNWAY 4-22
410 ACCESS ROAD
AOA PERIMETER ROAD
EXISTING RUNWAY EDGE LIGHTING DUCTBANK
EXISTING STORM
TAXIWAY 'F'
EXISTING FAA DUCTBANK
EXISTING STORM
EXISTING JET FUEL LINE
EXISTING SANITARY
EXISTING WATERLINE
EXISTING WATERLINE
EXISTING FAA DUCTBANK
EXISTING OVERHEAD LINE
EXISTING STORM CULVERT
EXISTING JET FUEL LINE
EXISTING SANITARY MANHOLE
10' SWB EASEMENT
AOA PERIMETER ROAD
PROJECT LIMITS – PERIMETER ROAD RECONSTRUCTION

NOTES:

1. EXISTING CONDITIONS REPRESENTED HERE ARE BASED ON BEST INFORMATION AVAILABLE AT THE TIME OF DESIGN. IT IS NOT THE INTENTION OF THIS SHEET TO SHOW ALL SURFACE OR SUB–SURFACE FEATURES EXISTING ON SITE. IT IS ONLY TO SHOW GENERAL CONDITIONS WITHIN AND ADJACENT TO THE PROJECT LIMITS.
2. CONTRACTOR TO VERIFY LOCATIONS OF EXISTING UTILITIES WHICH ARE TO PROVIDE INTERIM SERVICE DURING CONSTRUCTION OR CONTINUED SERVICE UPON COMPLETION OF THE PROJECT. ANY DISRUPTION OF SERVICE REQUIRED TO MAINTAIN OPERATIONS SHALL BE REPAIRED IMMEDIATELY BY CONTRACTOR UPON NOTIFICATION. COSTS OF REPAIRS WILL BE THE CONTRACTORS RESPONSIBILITY.
3. REFER TO THE ELECTRICAL PLANS FOR LOCATIONS AND ALIGNMENTS OF EXISTING ELECTRICAL FEATURES AND DUCTBANKS ALSO SHOWN ON THIS SHEET.

LEGEND:

- PROJECT LIMITS
- EXISTING MAJOR CONTOURS (10' INTERVAL)
- EXISTING MINOR CONTOURS (2' INTERVAL)
- SANITARY — EXISTING SANITARY SEWER LINE
- FAA — EXISTINIG FAA DUCT BANK
- STORM — EXISTING STORM SEWER LINE
- WATER — EXISTING WATER LINE
- COMM — EXISTING COMMUNICATION CONDUIT
- EXISTING ELECTRICAL EDGE LIGHT CONDUIT
- EXISTING CONCRETE ENCASED DUCT BANK
- EXISTING STORM SEWER INLET
- EXISTING STORM SEWER MANHOLE
- EXISTING SANITARY SEWER MANHOLE
- EXISTING SIGN
- EXISTING ELECTRICAL MANHOLE
- EXISTING RUNWAY EDGE LIGHT
- EXISTING RUNWAY CENTERLINE LIGHT



KEY MAP
N.T.S.

100 50 0 100 200
SCALE: 1 IN = 100 FT

No.	Revision	By	App.	Date
	ISSUE FOR BID			01-25-13

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SAN ANTONIO AIRPORT SYSTEM

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12/6/12

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Checked By: TKD
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SAN ANTONIO INTERNATIONAL AIRPORT
RUNWAY 3-21 EXTENSION - NEW EXIT TAXIWAY, TAXIWAY REPAIRS, AND PERIMETER RD RECONSTRUCTION - RE-BID

EXISTING CONDITIONS LAYOUT 3

Project No. 33-00160 | C.I.P. No. 0000 | A.I.P. No. 0000 | Sheet C-007

LAST MODIFIED: Dec 06, 2012 – 12:30pm BY USER: escobedof
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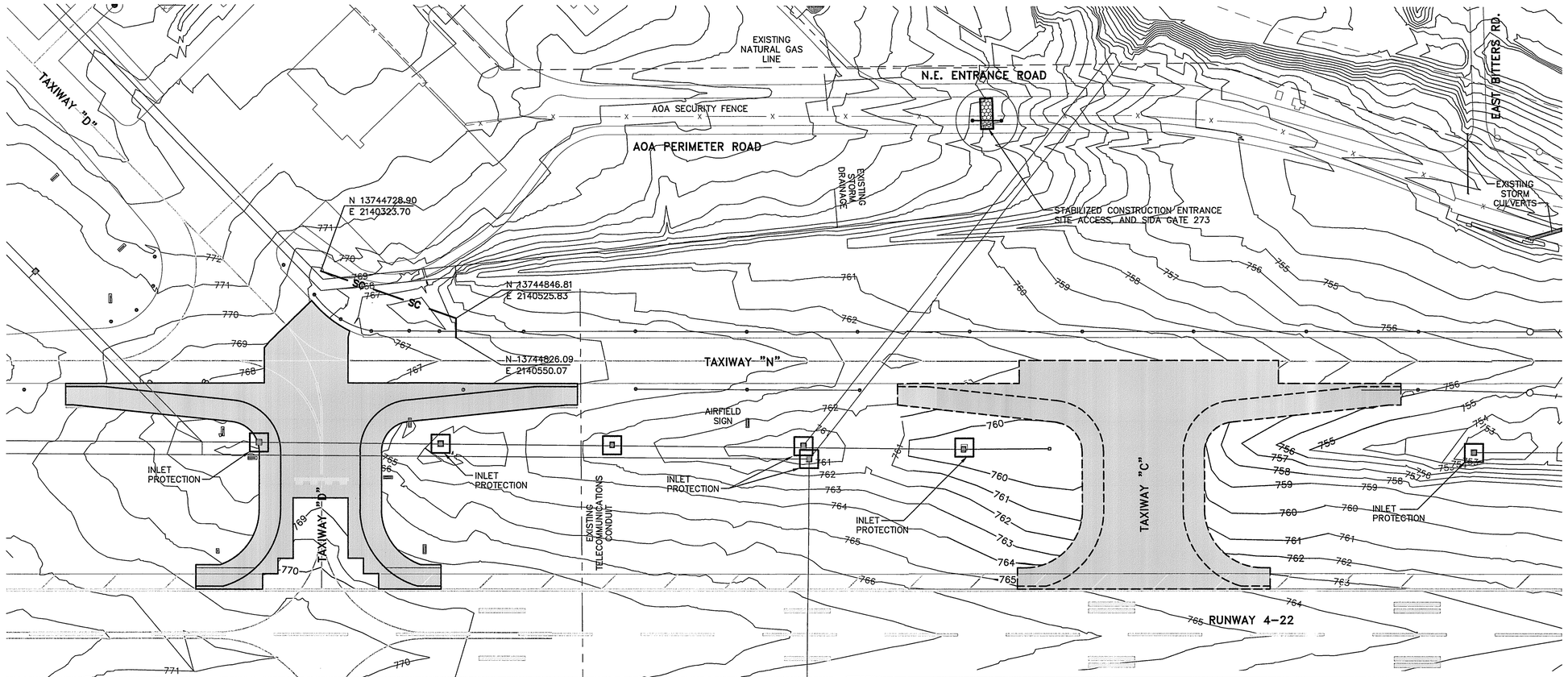

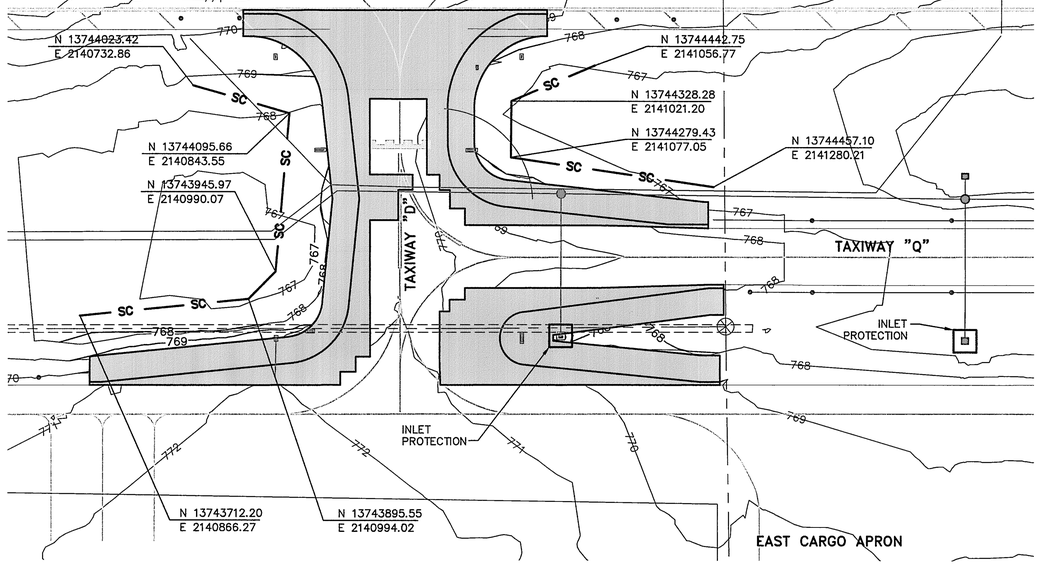

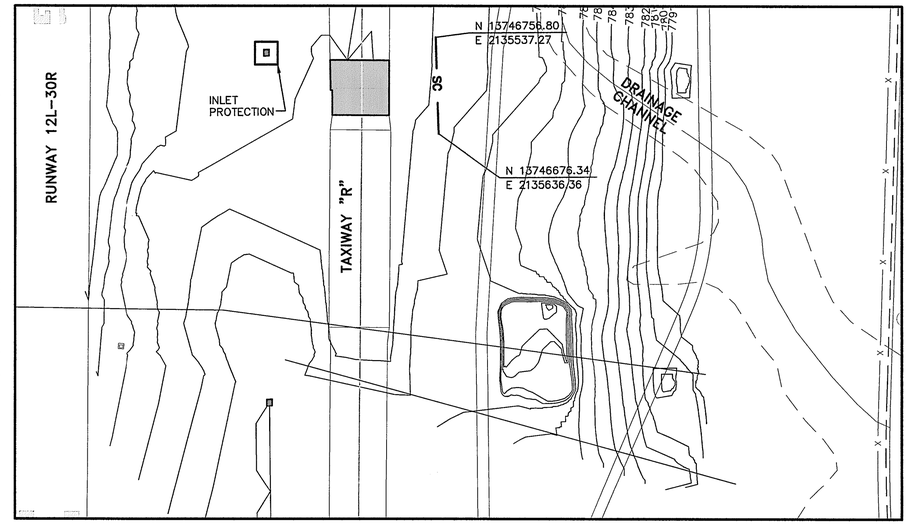

TAXIWAY 'R' REPAIR

NOTES

1. SEE SHEET C-010 FOR EROSION AND SEDIMENTATION NOTES AND DETAILS.
2. CONTRACTOR'S SWPPP WILL NOT BE REVIEWED EXCEPT FOR CONFLICTS WITH AIRPORT'S INDUSTRIAL PERMIT.
3. CONTRACTOR TO LOCATE STABILIZED CONSTRUCTION ENTRANCE/EXIT AS SHOWN ON THIS SHEET OR AS DIRECTED BY ENGINEER. SEE SHEET C-004 FOR DETAIL AND NOTES.
4. CONTRACTOR TO MOW AND RAKE VEGETATION CUTTINGS FROM EXISTING EMBANKMENT WITHIN THE GRADING LIMITS. COST SHALL BE INCIDENTAL TO ITEM P-151-4.1, CLEARING.
5. EXISTING AND ROCKBERMS TO REMAIN IN PLACE AT THE COMPLETION OF WORK. CONTRACTOR TO REPLACE EXISTING ROCKBERMS WHICH ARE IN DISREPAIR AS REQUIRED OR AT THE DIRECTION OF AIRPORT OPERATIONS.
6. SEE SHEET C-708 FOR PERIMETER ROAD STORM WATER POLLUTION PREVENTION PLAN

LEGEND

—— x ——	EXISTING AOA FENCE
—— 740 ——	PROPOSED 1-FOOT CONTOURS
—— 740 ——	EXISTING 1-FOOT CONTOURS
—— SC ——	SEDIMENT-CONTROL FENCE
	PROPOSED PAVEMENT
	EXISTING STORM INLET
	EXISTING STORM MANHOLE
	STABILIZED CONSTRUCTION ENTRANCE / EXIT

100 50 0 100 200

SCALE: 1 IN = 100 FT

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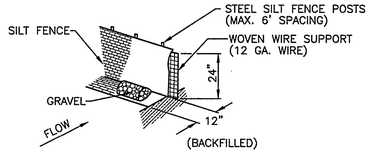
SAN ANTONIO INTERNATIONAL AIRPORT
RUNWAY 3-21 EXTENSION - NEW EXIT TAXIWAY, TAXIWAY REPAIRS, AND PERIMETER RD RECONSTRUCTION - RE-BID

EROSION AND SEDIMENTATION CONTROL PLAN

Project No. 33-00160 | C.I.P. No. 0000 | A.I.P. No. 0000 | Sheet C-008

LAST MODIFIED: Dec 06, 2012 - 12:31pm BY USER: eschotzd
DWG. LOCATION: V:\60395838_SAT\400-Technical\424-Sheets\RWY-321_Exten-PH4 - REBID\
DWG. NAME: SAT-RW321-C-008.dwg



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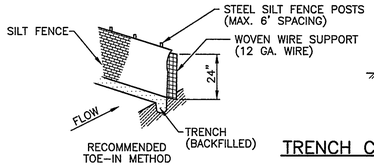
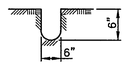


RECOMMENDED TOE-IN METHOD



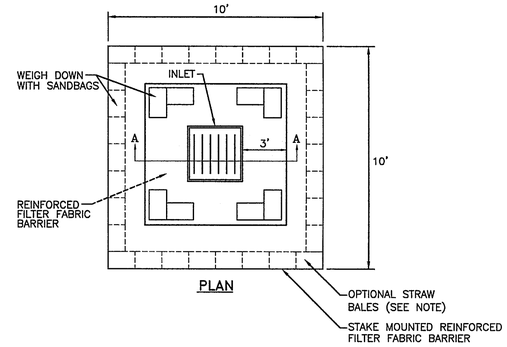
TRENCH CROSS SECTION

NOTES

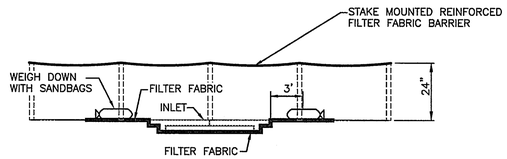
1. SUPPORT POSTS FOR THE FENCE TO BE INSTALLED TO A MINIMUM DEPTH OF 12 INCHES. SET POSTS MAXIMUM 6 FEET APART, SLIGHTLY ANGLED TOWARD INCOMING SURFACE FLOW.
2. PROVIDE A TOE-IN FOR THE GEOTEXTILE FABRIC ON THE UPSTREAM SIDE OF THE SILT FENCE IN A TRENCH 6 INCHES WIDE AND 6 INCHES DEEP TO ALLOW FOR FABRIC TO BE LAID IN THE GROUND AND BACKFILLED FOR ANCHORING OF THE GEOTEXTILE FABRIC. WHERE GEOTEXTILE FABRIC CANNOT BE ANCHORED IN A TRENCH, WEIGHT 12 INCH WIDE FABRIC FLAP WITH WASHED GRAVEL ON UPHILL SIDE TO PREVENT FLOW UNDERNEATH FENCE.
3. GEOTEXTILE FABRIC TO BE SECURELY FASTENED TO WOVEN WIRE SUPPORT WITH WIRE. WOVEN WIRE SUPPORT TO BE SECURED TO SUPPORT POSTS WITH WIRE. INSTALLED SILT FENCE TO HAVE MINIMUM HEIGHT OF 24 INCHES.
4. SILT FENCE TO BE INSPECTED WEEKLY AND AFTER EACH SIGNIFICANT RAINFALL EVENT. BREACHES IN THE FENCE TO BE IMMEDIATELY REPAIRED TO MINIMIZE ADDITIONAL SILT RUNOFF.
5. ACCUMULATED SILT TO BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES. THE SILT SHALL BE DISPOSED OF ON AN APPROVED SITE AND IN SUCH A MANNER THAT WILL NOT CONTRIBUTE TO ADDITIONAL SILTATION.

SEDIMENT CONTROL FENCE

N.T.S.



PLAN



SECTION A-A

NOTE:
TYPICALLY STRAW BALES ARE NOT RECOMMENDED FOR INLET PROTECTION BARRIERS.

INLET PROTECTION BARRIER

N.T.S.

EROSION/SEDIMENTATION CONTROL NOTES

1. TEMPORARY EROSION/SEDIMENTATION CONTROL PROTECTION MEASURES

   A. THE CONTRACTOR SHALL INSTALL EROSION/SEDIMENTATION CONTROL PRIOR TO ANY OTHER SITE PREPARATION WORK (CLEARING, GRUBBING, GRADING, OR EXCAVATION).

   B. CONTRACTOR SHALL CONSTRUCT AND MAINTAIN A STABILIZED CONSTRUCTION ENTRANCE/EXIT. (SEE SHEET C-004 FOR DETAIL.)

   C. THE PLACEMENT OF EROSION/SEDIMENTATION CONTROLS SHALL BE IN ACCORDANCE WITH THE EROSION AND SEDIMENTATION CONTROL PLAN AND AS REQUIRED TO MAINTAIN COMPLIANCE WITH SWPPP.

   D. ANY SIGNIFICANT VARIATION IN MATERIALS OR LOCATIONS OF CONTROLS OR FENCES FROM THAT SHOWN ON THE APPROVED PLANS MUST BE APPROVED BY THE RESIDENT ENGINEER, OR ENVIRONMENTAL SPECIALIST, AS APPROPRIATE.

   E. THE CONTRACTOR IS TO INSPECT THE CONTROLS AND FENCES AT WEEKLY INTERVALS, BEFORE ANY STORM FROM WHICH SIGNIFICANT RUNOFF IS ANTICIPATED, AND AFTER EVERY SIGNIFICANT RAINFALL TO REPAIR CONTROLS WHERE THEY HAVE BEEN SUBSTANTIALLY DISTURBED. THE PERSON(S) OR FIRM(S) RESPONSIBLE FOR MAINTENANCE OF CONTROLS AND FENCES SHALL BE IMMEDIATELY DIRECTED TO MAKE ANY NECESSARY REPAIRS.

   F. SHOULD WORK IN AN AREA REQUIRE TEMPORARY ALTERATION OR REMOVAL OF EROSION CONTROL MEASURES, CONTRACTOR SHALL RESTORE CONTROLS IMMEDIATELY FOLLOWING COMPLETION OF WORK IN SAID AREA.

   G. ANY SEDIMENT BUILDUP SHALL BE REMOVED AND BECOME PROPERTY OF THE CONTRACTOR. (NO SEPARATE PAYMENT.)

   H. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING ALL SILT AND DEBRIS FROM EXISTING DRAINAGE PIPES AND STRUCTURES AT THE END OF CONSTRUCTION. (NO SEPARATE PAYMENT.)

   I. CONTROL MEASURES INDICATED ON THIS PLAN ARE A MINIMUM RECOMMENDATION AND ARE SUBJECT TO INSPECTION BY THE SAN ANTONIO WATER SYSTEM, ENGINEERING, WATER, AND AND TCEQ. IF ADDITIONAL CONTROL MEASURES ARE REQUIRED DURING CONSTRUCTION, THESE SHALL BE AT THE CONTRACTOR'S EXPENSE.

   J. A MINIMUM 10-FOOT x 10-FOOT SILT FENCE IS TO BE PLACED AROUND THE CENTER OF INLETS AS SHOWN ON SHEETS C-008 & C-009

   K. CONTRACTOR IS RESPONSIBLE TO OBTAIN PERMITS ON ALL MATERIAL PITS, WASTE AREAS, HAUL ROUTES, AND OTHER OFF-SITE AREAS SELECTED BY THE CONTRACTOR FOR USE IN THIS CONTRACT.

   L. CONTRACTOR IS TO IMPROVE AND/OR MAINTAIN EXISTING ROCK BERMS TO A FULLY FUNCTIONAL STATE.

2. PERMANENT EROSION CONTROL

   A. ALL DISTURBED AREAS SHALL BE RESTORED AS NOTED BELOW AND DIRECTED IN THE SPECIFICATIONS FOR SEEDING.

   B. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL HYDROMULCH WITHIN THE LIMITS OF GRADING AND ANY AREAS DISTURBED DUE TO CONSTRUCTION, AS SHOWN ON SHEET C-301 AND C-302.

   C. THE SEEDING FOR EROSION CONTROL SHALL BE IN ACCORDANCE WITH SPECIFICATION ITEM T-901 AND AS UPDATED BY SPECIAL PROVISION.

   D. FERTILIZER SHALL BE IN ACCORDANCE WITH SPECIFICATION ITEM T-901 AND AS UPDATED BY SPECIAL PROVISION.

   E. CONTRACTOR WILL BE RESPONSIBLE FOR IRRIGATING AREA. CONTRACTOR SHALL COORDINATE ACCESS TO AREAS TO BE IRRIGATED WITH AIRPORT OPERATIONS.

   F. RESTORATION SHALL BE ACCEPTABLE WHEN THE GRASS IN RE-SEEDED AREAS HAS GROWN AT LEAST 1-1/2 INCHES HIGH WITH 95% COVERAGE, PROVIDED NO BARE SPOTS LARGER THAN 16 SQUARE FEET EXIST.

   G. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL REMOVE ALL EROSION CONTROL DEVICES IMPLEMENTED INTO THE WORK, NO EXCEPTIONS. A COMPONENT OF CONSTRUCTION COMPLETE IS THE REMOVAL AND RESTORATION OF THE EROSION CONTROL DEVISES.

3. CONSTRUCTION SEQUENCE

   A. INSTALL TEMPORARY EROSION CONTROLS PRIOR TO ANY CLEARING AND GRUBBING.

   B. COMPLETE DEMOLITION AS REQUIRED. BACKFILL ALL EXCAVATIONS DUE TO DEMOLITION BACK TO EXISTING GRADE PER P-152. (NO SEPARATE PAY.)

   C. REVEGETATE ALL DISTURBED AREAS IN ACCORDANCE WITH SPEC. ITEM T-901.

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Drawn By:	CRJ/FE/GWS
Checked By:	TKD
Date:	12/03/2012
Scale:	AS SHOWN

SAN ANTONIO INTERNATIONAL AIRPORT
RUNWAY 3-21 EXTENSION - NEW EXIT TAXIWAY, TAXIWAY REPAIRS, AND PERIMETER RD RECONSTRUCTION - RE-BID

EROSION AND SEDIMENTATION NOTES AND DETAILS

Project No. 33-00160 | C.I.P. No. 0000 | A.I.P. No. 0000 | Sheet C-010

LAST MODIFIED: Dec 06, 2012 - 12:31pm BY USER: escobedof
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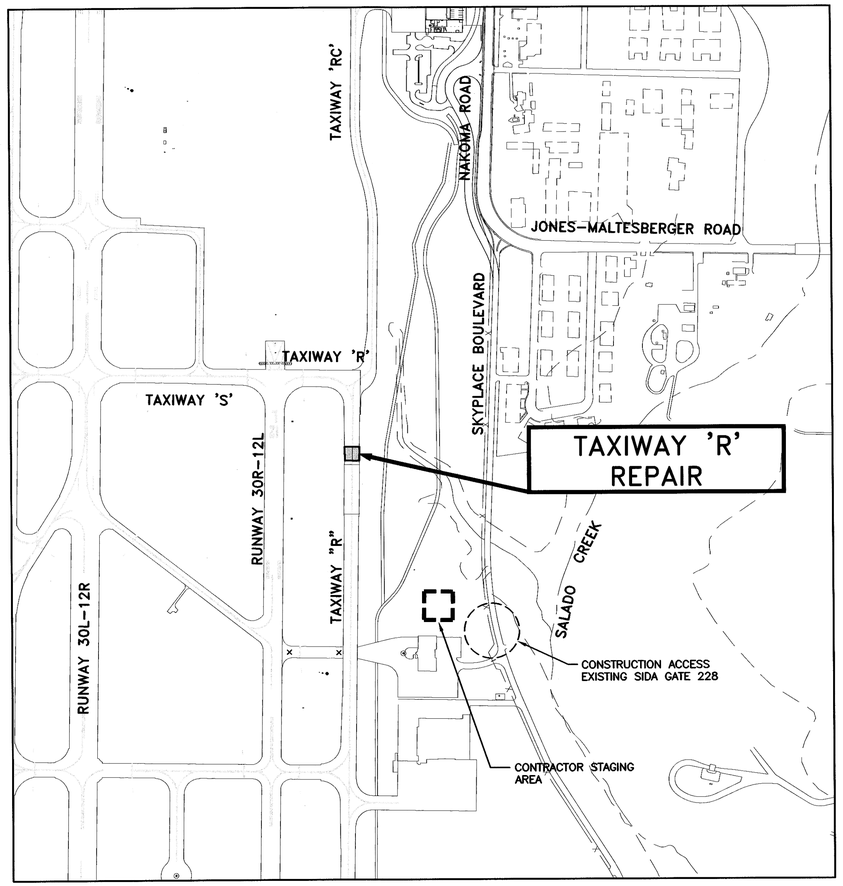
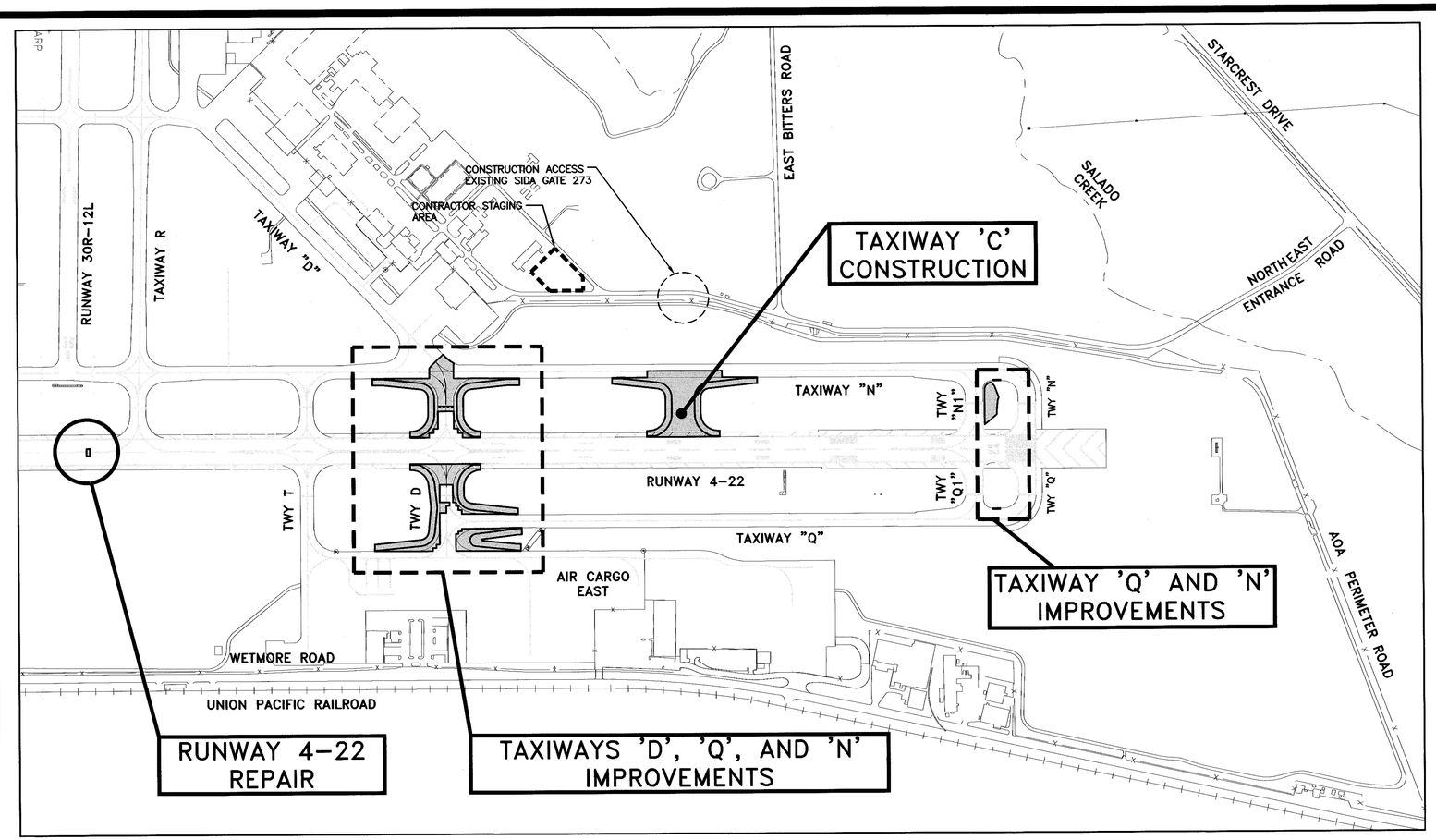
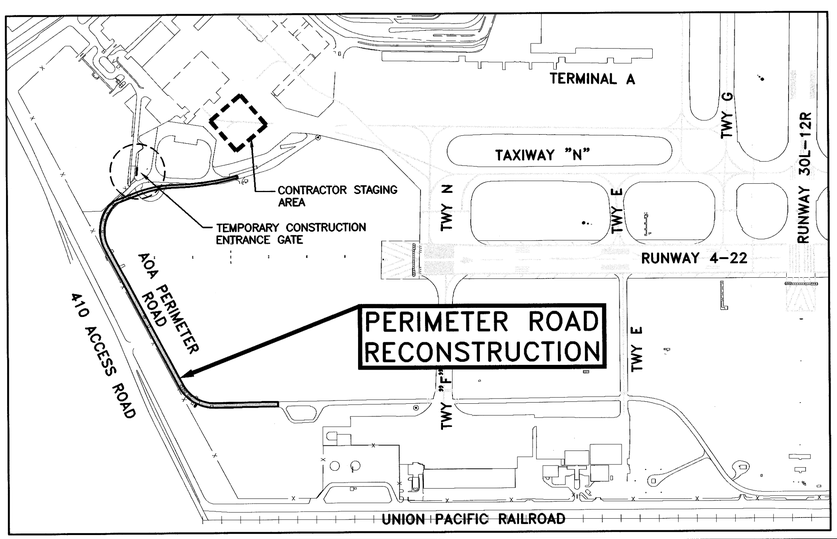






CONSTRUCTION SEQUENCING NOTES:

1. THIS SEQUENCING PLAN WAS DEVELOPED WITH CONSIDERATION FOR MINIMIZING IMPACT TO SAN ANTONIO INTERNATIONAL AIRPORT OPERATIONS. THE INTENT OF THE CONSTRUCTION SEQUENCING IS TO MINIMIZE IMPACT ON EXISTING AIRFIELD OPERATIONS. MODIFICATIONS TO THIS PLAN WILL BE ALLOWED ONLY AFTER A FORMAL WRITTEN REQUEST AND SCHEDULE IS SUBMITTED AND APPROVED BY THE OWNERS REPRESENTATIVE.
2. THE PROJECT WORK AREAS ARE LOCATED WITHIN THE EXISTING AIR OPERATIONS AREA (AOA). ALL WORK INSIDE OF THE AOA WILL REQUIRE COORDINATION WITH SAT PLANNING AND ENGINEERING, OPS, AND SECURITY.
3. THE PROJECT WORK AREAS ARE LOCATED INSIDE AND OUTSIDE OF ACTIVE RUNWAY AND TAXIWAY SAFETY AREAS AND OBSTACLE FREE AREAS. ALL WORK WITHIN THE AOA WILL BE COORDINATED WITH SAT OPS AND THE FAA. ALL WORK SHALL PROCEED IN ACCORDANCE WITH THE SEQUENCING PLANS AND IN ACCORDANCE WITH FAA AC150/5370-2F OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION.
4. REFERENCE SUBSEQUENT SEQUENCING PLAN SHEETS FOR DETAILED REQUIREMENTS FOR WORK.
5. CONTRACTOR IS NOTIFIED THAT CONSTRUCTION BY OTHERS WILL OR MAY BE IN PROGRESS SIMULTANEOUSLY WITH THIS PROJECT. PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR SHALL COORDINATE AND SCHEDULE ALL CONSTRUCTION ACTIVITIES WITH THE OWNER'S REPRESENTATIVE AND CONTRACTORS ACTIVE WITHIN OR NEAR THE LIMITS OF WORK.
6. AT THE REQUEST OF THE AIRPORT, OR THE OWNER'S REPRESENTATIVE; SEQUENCING LIMITS, TIMING AND BARRICADE LAYOUTS AS SHOWN ON SHEETS C-101 THOUGH C-104 MAY REQUIRE MODIFICATION IN ORDER TO MINIMIZE THE IMPACT ON CURRENT AIRFIELD WORK AND AIRCRAFT MOVEMENT.
7. PRIMARY ACCESS TO THE PROJECT SITE WILL BE THROUGH SIDA GATE 273. CONTRACTOR SHALL CONTROL ACCESS TO THE GATES AT ALL TIMES WHEN IT IS IN USE. THE GATE SHALL BE LOCKED WHEN NOT IN USE.
8. CONTRACTOR WILL HAVE ACCESS TO THE DIFFERENT PROJECT AREAS VIA THE PERIMETER ROAD AND WITH THE APPROVAL OF AIRPORT OPERATIONS. DRIVING ACROSS THE AIRFIELD WILL NOT BE PERMITTED.
9. RUNWAY 4-22 WILL BE CLOSED ON APRIL 1, 2013 AND MUST RESUME OPERATION ON OCTOBER 1. 2013. ALL WORK WITHIN THE RUNWAY 4-22 SAFETY AREA MUST BE COMPLETED BY AUGUST 30, 2013.
10. SEE C-707 FOR PERIMETER ROAD SEQUENCING. CONTRACTOR SHALL SCHEDULE PERIMETER ROAD CONSTRUCTION IN ORDER TO MINIMIZE IMPACT TO AIRPORT OPERATIONS.

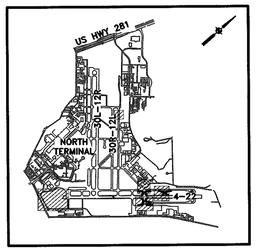
LEGEND

CONTRACTOR'S STAGING AREA

PROPOSED AIRFIELD IMPROVEMENTS

400 200 0 400 800

SCALE: 1 IN = 400 FT



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SAN ANTONIO INTERNATIONAL AIRPORT
RUNWAY 3-21 EXTENSION - NEW EXIT TAXIWAY, TAXIWAY REPAIRS, AND PERIMETER RD RECONSTRUCTION - RE-BID

OVERALL CONSTRUCTION SEQUENCING PLAN AREAS OF IMPACT

Project No. 33-00160 | C.I.P. No. 0000 | A.I.P. No. 0000 | Sheet C-101

LAST MODIFIED: Jan 22, 2013 - 11:57am BY USER: escobedd
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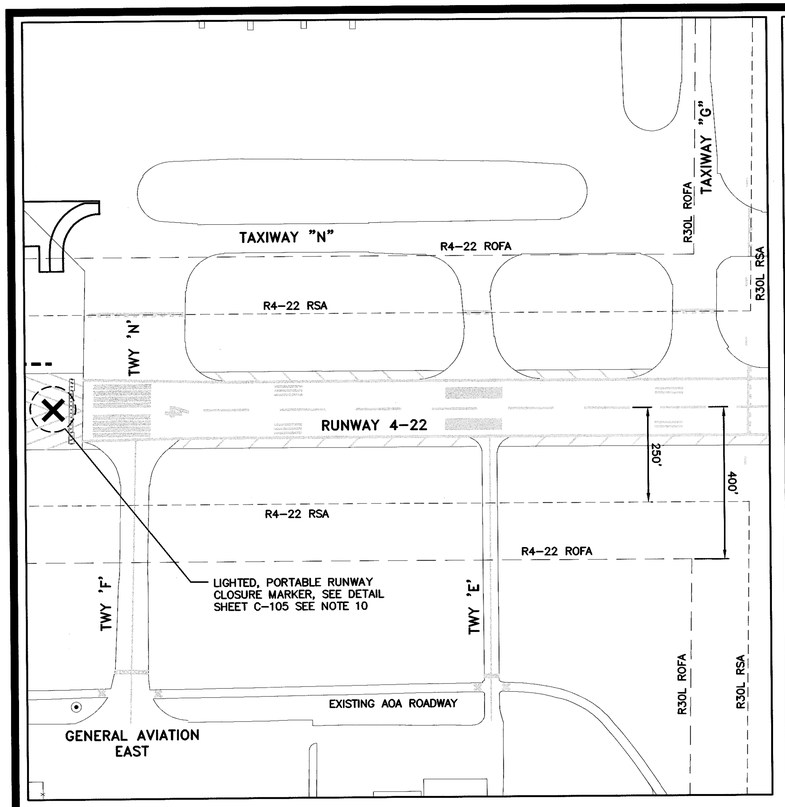
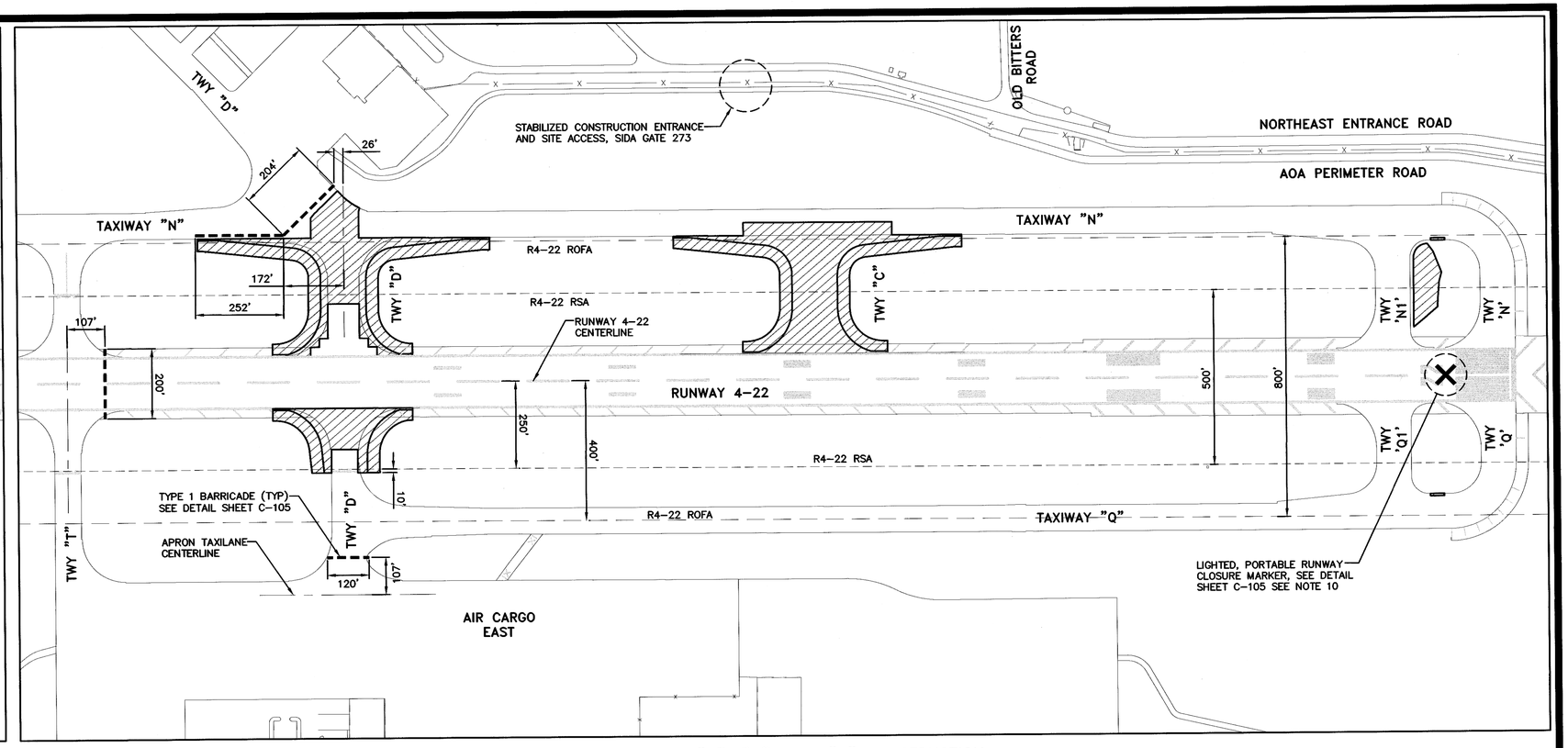


RUNWAY 4 LIGHTED 'X' LOCATION



TAXIWAYS "D", "N", AND "C" CONSTRUCTION

CONSTRUCTION PROJECT SEQUENCE 1:

1. THE WORK IN SEQUENCE 1 INCLUDES BUT IS NOT LIMITED TO:
   - A. STORM SEWER INFRASTRUCTURE.
   - B. CONSTRUCTION OF TAXIWAY 'C'.
   - C. TAXIWAY 'D' PAVEMENT REMOVAL AND IMPROVEMENTS
   - D. TAXIWAY EDGE LIGHT REMOVAL AND RELOCATION INCLUDING ASSOCIATED INFRASTRUCTURE.
2. CONTRACTOR IS NOT TO PROCEED WITH SEQUENCE 1 UNTIL RECEIVING WRITTEN NOTICE FROM THE OWNER'S APPROVED REPRESENTATIVE (OAR).
3. SIDA GATE 273 IS PROVIDED TO THE CONTRACTOR FOR ACCESS TO THE AOA. ALTERNATE ACCESS WILL REQUIRE AIRPORT APPROVAL.
4. THE MINIMUM REQUIREMENT FOR CONSTRUCTION BARRICADES IS SHOWN. CONTRACTOR TO PROVIDE ADDITIONAL BARRICADES AS REQUIRED BY AIRPORT OPERATIONS.
5. PLACEMENT OF TYPE I BARRICADES IS REQUIRED WHILE THE TAXIWAY INTERSECTION IMPROVEMENTS ARE UNDER CONSTRUCTION.
6. CONTRACTOR IS NOTIFIED THAT CONSTRUCTION BY OTHERS WILL OR MAY BE IN PROGRESS SIMULTANEOUSLY WITH THIS PROJECT. PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR SHALL COORDINATE AND SCHEDULE ALL CONSTRUCTION ACTIVITIES WITH THE OWNER'S REPRESENTATIVE AND CONTRACTORS ACTIVE WITHIN OR NEAR THE LIMITS OF WORK.
7. AT THE REQUEST OF THE AIRPORT, OR THE OWNER'S REPRESENTATIVE; SEQUENCING LIMITS TIMING AND BARRICADE LAYOUTS AS SHOWN ON SHEETS C-102 THOUGH C-104 MAY REQUIRE MODIFICATION IN ORDER TO MINIMIZE THE IMPACT ON CURRENT AIRFIELD WORK AND AIRCRAFT MOVEMENT.
8. CONSTRUCTION TRAFFIC SHALL NOT USE THE RUNWAY UNLESS WRITTEN AUTHORIZATION IS OBTAINED FROM O.A.R.
9. LIGHTED PORTABLE RUNWAY CLOSURE MARKERS PROVIDED AND MAINTAINED BY THE CONTRACTOR. CONTRACTOR TO TURN OVER THE LIGHTED RUNWAY CLOSURE MARKERS TO THE AIRPORT AT THE END OF THE PROJECT.

LEGEND:

- ROFA — RUNWAY OBJECT FREE AREA (ROFA)
- RSA — RUNWAY SAFETY AREA (RSA)
- TYPE 1 BARRICADE
- LIMITS OF IMPROVEMENT IN CONSTRUCTION SEQUENCE 1
- LIGHTED 'X' PORTABLE RUNWAY CLOSURE MARKER

200 100 0 200 400

SCALE: 1 IN = 200 FT

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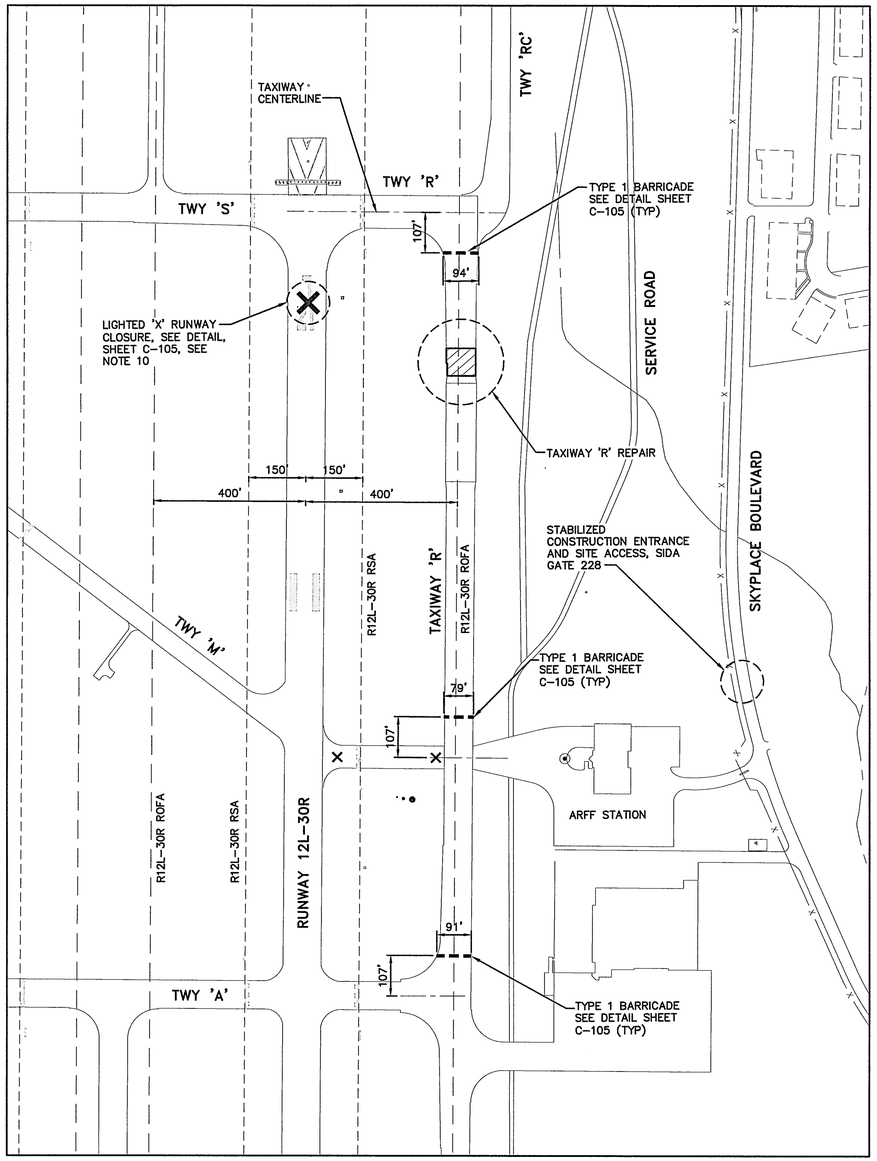
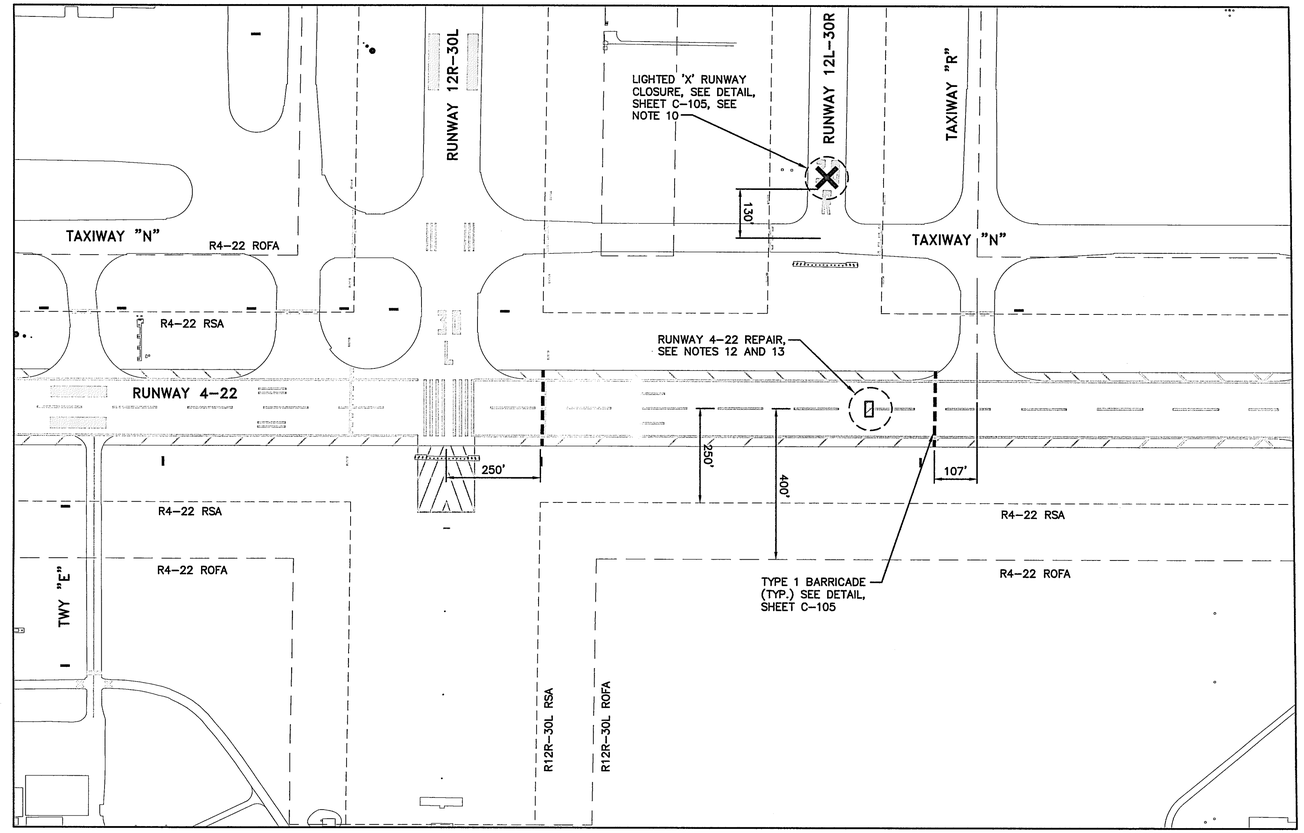
CONSTRUCTION SEQUENCE 1

Project No.	33-00160	C.I.P. No.	0000	Sheet	C-102
		A.I.P. No.	0000		

LAST MODIFIED: Jan 22, 2013 - 11:58am BY USER: escobedof
DWG. LOCATION: P:\AVS\60036838_SAT\400-Technical\421-Sheets\RW1-321_Exten-Ph4 - REBID\
DWG. NAME: RW1-321-C-102.dwg



TAXIWAYS 'R' REPAIR



RUNWAY 4-22 PAVEMENT REPAIR

CONSTRUCTION PROJECT SEQUENCE 1A:

1. THE WORK IN SEQUENCE 1A INCLUDES BUT IS NOT LIMITED TO:

   A. RUNWAY 4-22 PAVEMENT REPAIR (FIRE DAMAGE).

   B. TAXIWAY "R" ASPHALT PAVEMENT OVERLAY.

2. CONTRACTOR IS NOT TO PROCEED WITH SEQUENCE 1A UNTIL RECEIVING WRITTEN NOTICE FROM THE OWNER'S APPROVED REPRESENTATIVE (OAR).

3. SIDA GATE 228 IS PROVIDED TO THE CONTRACTOR FOR ACCESS TO THE AOA. ALTERNATE ACCESS WILL REQUIRE AIRPORT APPROVAL.

4. THE MINIMUM REQUIREMENT FOR CONSTRUCTION BARRICADES IS SHOWN. CONTRACTOR TO PROVIDE ADDITIONAL BARRICADES AS REQUIRED BY AIRPORT OPERATIONS.

5. PLACEMENT OF TYPE I BARRICADES IS REQUIRED WHILE THE TAXIWAY INTERSECTION IMPROVEMENTS ARE UNDER CONSTRUCTION.

6. CONTRACTOR IS NOTIFIED THAT CONSTRUCTION BY OTHERS WILL OR MAY BE IN PROGRESS SIMULTANEOUSLY WITH THIS PROJECT. PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR SHALL COORDINATE AND SCHEDULE ALL CONSTRUCTION ACTIVITIES WITH THE OWNER'S REPRESENTATIVE AND CONTRACTORS ACTIVE WITHIN OR NEAR THE LIMITS OF WORK.

7. AT THE REQUEST OF THE AIRPORT, OR THE OWNER'S REPRESENTATIVE, SEQUENCING LIMITS, TIMING, AND BARRICADE LAYOUTS AS SHOWN ON SHEETS C-102 THROUGH C-104 MAY REQUIRE MODIFICATION IN ORDER TO MINIMIZE THE IMPACT ON CURRENT AIRFIELD WORK AND AIRCRAFT MOVEMENT.

8. CONTRACTOR TO COORDINATE START DATE OF TAXIWAY 'R' PAVEMENT IMPROVEMENTS WITH OWNER. TAXIWAY 'R' PAVEMENT IMPROVEMENTS TO BE COMPLETED WITHIN FOUR (4) WEEKS OF OWNER'S APPROVED TAXIWAY 'R' PAVEMENT IMPROVEMENTS START DATE.

9. CONSTRUCTION TRAFFIC SHALL NOT USE THE RUNWAY UNLESS WRITTEN AUTHORIZATION IS OBTAINED FROM THE OAR.

10. LIGHTED PORTABLE RUNWAY CLOSURE MARKERS FOR CLOSURE OF RUNWAY 12L-30R ARE PROVIDED AND MAINTAINED BY THE AIRPORT.

11. RUNWAY 12L-30R MAY NOT BE CLOSED DURING THE EASTER HOLIDAY WEEKEND OR ANY OTHER HOLIDAY WEEKEND.

12. RUNWAY 4-22 REPAIR REQUIRES THE CLOSURE OF RUNWAY 12L-30R OR A REDUCTION IN USE. CONTRACTOR SHALL ANTICIPATE NIGHT TIME AND WEEKEND CONSTRUCTION FOR RUNWAY 4-22 REPAIR AND HAVE A WORK PLAN APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO WORK IN THIS AREA.

13. COORDINATE WITH AIRPORT OPERATIONS AND ENGINEERING ABOUT METHOD(S) OF EXISTING PAVEMENT REMOVAL IN ORDER TO MINIMIZE THE DURATION OF RUNWAY 4-22 DOWN TIME AND OPTIMIZE AIRFIELD SAFETY.

LEGEND:

- ROFA — RUNWAY OBJECT FREE AREA (ROFA)
- RSA — RUNWAY SAFETY AREA (RSA)
- TYPE 1 BARRICADE
- LIMITS OF IMPROVEMENT IN CONSTRUCTION SEQUENCE 1A
- LIGHTED 'X' PORTABLE RUNWAY CLOSURE MARKER

200 100 0 200 400

SCALE: 1 IN = 200 FT

No.	Revision	By	App.	Date
	ISSUE FOR BID			01-25-13

ISSUE FOR BID

SAN ANTONIO AIRPORT SYSTEM

AECOM
TEXAS REGISTERED ENGINEERING FIRM F-3580
5757 Woodway Drive
Suite 101 West
Houston, Texas 77057
Tel: 713.267.3200
Fax: 713.267.3278

STATE OF TEXAS — GUO-PIN FUAN — 81466 — REGISTERED PROFESSIONAL ENGINEER — 12/6/12

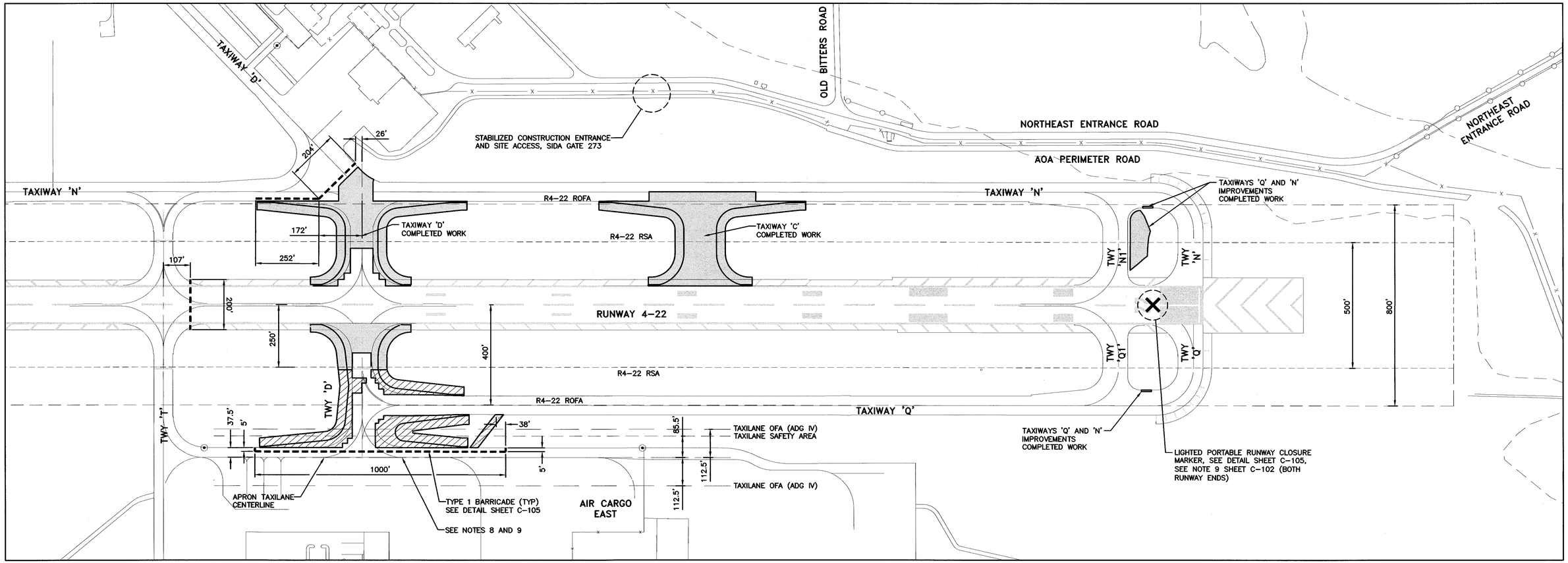
Designed By:	GPF
Drawn By:	CRJ/FE/GWS
Checked By:	TKD
Date:	12/03/2012
Scale:	AS SHOWN

SAN ANTONIO INTERNATIONAL AIRPORT
RUNWAY 3-21 EXTENSION - NEW EXIT TAXIWAY, TAXIWAY REPAIRS, AND PERIMETER RD RECONSTRUCTION - RE-BID

CONSTRUCTION SEQUENCE 1A

Project No. 33-00160 | C.I.P. No. 0000 | A.I.P. No. 0000 | Sheet C-103

LAST MODIFIED: Dec 06, 2012 - 12:32pm BY: USER: ecochran
DWG. LOCATION: V:\60039838_SAT\400-Technical\424-Sheets\RWY-321_Exten-PH4 - REBID\
DWG. NAME: SAT-RWY321-C-103.dwg



TAXIWAYS "D" AND "Q" CONSTRUCTION

CONSTRUCTION PROJECT SEQUENCE 2:

1. THE WORK IN SEQUENCE 2 INCLUDES BUT IS NOT LIMITED TO:
   - A. FAA DUCT BANK INFRASTRUCTURE.
   - B. TAXIWAY 'D' AT TAXIWAY 'Q' SURFACE PAVEMENT REMOVAL AND IMPROVEMENTS.
   - C. TAXIWAY 'D' AND TAXIWAY 'Q' PAVEMENT CONSTRUCTION.
   - D. TAXIWAY EDGE LIGHT REMOVAL AND RELOCATION INCLUDING ASSOCIATED INFRASTRUCTURE.
   - E. PAVEMENT MARKINGS.
   - F. REMOVAL OF EXISTING ASPHALT ROAD.
2. SEQUENCE 2 CAN COINCIDE WITH SEQUENCE 1, BUT CONTRACTOR IS NOT TO PROCEED WITH SEQUENCE 2 UNTIL RECEIVING WRITTEN NOTICE FROM THE OWNER'S APPROVED REPRESENTATIVE (OAR).
2. SIDA GATE 273 IS PROVIDED TO THE CONTRACTOR FOR ACCESS TO THE AOA. ALTERNATE ACCESS WILL REQUIRE AIRPORT APPROVAL.
3. THE MINIMUM REQUIREMENT FOR CONSTRUCTION BARRICADES IS SHOWN. CONTRACTOR TO PROVIDE ADDITIONAL BARRICADES AS REQUIRED BY AIRPORT OPERATIONS.
4. CONTRACTOR IS NOTIFIED THAT CONSTRUCTION BY OTHERS WILL OR MAY BE IN PROGRESS SIMULTANEOUSLY WITH THIS PROJECT. PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR SHALL COORDINATE AND SCHEDULE ALL CONSTRUCTION ACTIVITIES WITH THE OWNER'S REPRESENTATIVE AND CONTRACTORS ACTIVE WITHIN OR NEAR THE LIMITS OF WORK.
6. CONTRACTOR IS NOTIFIED THAT CONSTRUCTION BY OTHERS WILL OR MAY BE IN PROGRESS SIMULTANEOUSLY WITH THIS PROJECT. PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR SHALL COORDINATE AND SCHEDULE ALL CONSTRUCTION ACTIVITIES WITH THE OWNER'S REPRESENTATIVE AND CONTRACTORS ACTIVE WITHIN OR NEAR THE LIMITS OF WORK.
7. AT THE REQUEST OF THE AIRPORT, OR THE OWNER'S REPRESENTATIVE; SEQUENCING LIMITS, TIMING AND BARRICADE LAYOUTS AS SHOWN ON SHEETS C-102 THOUGH C-104 MAY REQUIRE MODIFICATION IN ORDER TO MINIMIZE THE IMPACT ON CURRENT AIRFIELD WORK AND AIRCRAFT MOVEMENT.
8. WORK WITHIN CARGO APRON TAXILANE OBJECT FREE AREA WILL BE ALLOWED BETWEEN 08:30 AND SUNSET UNLESS WRITTEN AUTHORIZATION IS OBTAINED FROM OWNER.
9. DURING WORK WITHIN TAXILANE OBJECT FREE AREA CONTRACTOR SHALL BE REQUIRED TO REMOVE EQUIPMENT AT THE REQUEST OF AIRPORT OPERATIONS TO ALLOW FOR AIRCRAFT TO TAXI IN THE VICINITY OF ACTIVE CONSTRUCTION AREAS.

LEGEND:

- ROFA — RUNWAY OBJECT FREE AREA (ROFA)
- RSA — RUNWAY SAFETY AREA (RSA)
- TYPE 1 BARRICADE
- LIMITS OF IMPROVEMENT IN CONSTRUCTION SEQUENCE 2
- COMPLETED WORK

200 100 0 200 400

SCALE: 1 IN = 200 FT

No.	Revision	By	App.	Date
	ISSUE FOR BID			01-25-13

ISSUE FOR BID

SAN ANTONIO AIRPORT SYSTEM

AECOM
TEXAS REGISTERED ENGINEERING FIRM F-3580
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Suite 101 West
Houston, Texas 77057
Tel: 713.267.3200
Fax: 713.267.3278

STATE OF TEXAS — GUO-PIN FUAN — 81466 — REGISTERED PROFESSIONAL ENGINEER — 1/22/13

Designed By: GPF
Drawn By: CRJ/FE/GWS
Checked By: TKD
Date: 12/03/2012
Scale: AS SHOWN

SAN ANTONIO INTERNATIONAL AIRPORT
RUNWAY 3-21 EXTENSION - NEW EXIT TAXIWAY, TAXIWAY REPAIRS, AND PERIMETER RD RECONSTRUCTION - RE-BID

CONSTRUCTION SEQUENCE 2

Project No. 33-00160 | C.I.P. No. 0000 | A.I.P. No. 0000 | Sheet C-104

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DWG LOCATION: P:_AVS\60039838_SAT\40-Technical\424-Sheets\RWY-321_Exten-Ph4 - REBID\
DWG NAME: S4-RW321-C-104.dwg