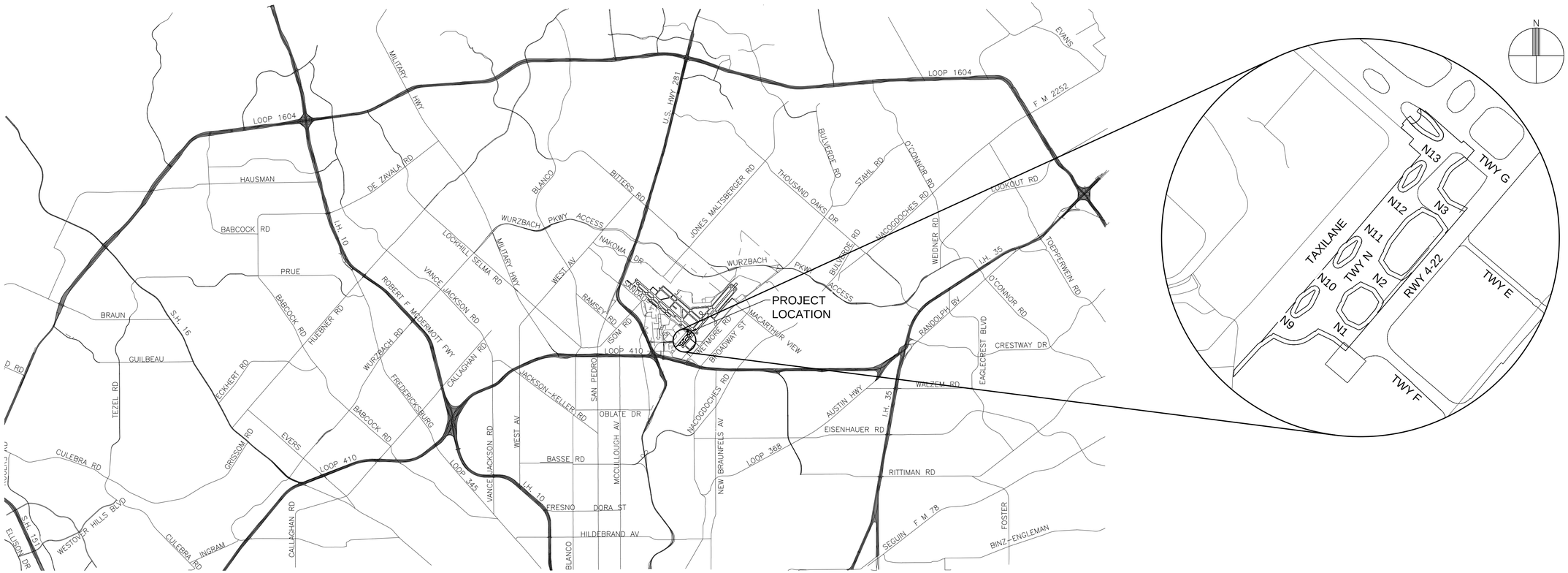
SAN ANTONIO INTERNATIONAL AIRPORT
SAN ANTONIO, TEXAS



PROJECT DESCRIPTION

WORK INCLUDES BUT IS NOT LIMITED TO GRADING, PAVING, MARKING, SIGNAGE AND LIGHTING FOR THE FOLLOWING:

BASE BID:
THE "BASE BID" CONSISTS OF THE CONSTRUCTION OF THE SOUTH EXTENSION OF TAXIWAY N (TWN) BETWEEN THE TW N CONNECTOR AND THE SOUTH APRON (THIS INCLUDES N9). CONSTRUCTION WILL REQUIRE THE REMOVAL OF THE EXISTING ASPHALT CEMENT (AC) PAVEMENT AND PORTLAND CEMENT CONCRETE (PCC) PAVEMENT SECTION 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 12 INCHES OF CTB ON 6 INCHES OF CRUSHED AGGREGATE BASE (AB) ON 6 INCHES OF LIME STABILIZED 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 CONSTRUCTION OF TAXIWAY N BETWEEN THE SOUTH EDGE OF TW G AND THE NORTH END OF TAXIWAY N EXTENSION (END OF BASE BID WORK AREA) (APPROXIMATELY 1,450 FEET LONG BY VARYING WIDTH) AND THE CONSTRUCTION OF NEW CONNECTING TAXIWAYS (N2, N11 AND N12) BETWEEN THE TERMINAL TAXILANE AND RUNWAY 4-22, AND THE RECONSTRUCTION OF CONNECTING TAXIWAYS (N1, N3 N10 AND N13) BETWEEN THE TERMINAL TAXILANE AND RUNWAY 4-22. THE NEW AND RECONSTRUCTION AREAS WILL REQUIRE THE REMOVAL OF THE EXISTING PORTLAND CEMENT CONCRETE (PCC) PAVEMENT SECTION INCLUDING THE REMOVAL OF THE CEMENT TREATED BASE (CTB) AND CRUSHED AGGREGATE BASE (AB). THE NEW PAVEMENT SECTION FOR THE TAXIWAYS WILL BE CONSTRUCTED WITH 16 INCHES OF PCC PAVEMENT ON 12 INCHES OF CTB ON 6 INCHES OF CRUSHED AGGREGATE BASE (AB) ON 6 INCHES OF LIME STABILIZED 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 REPLACEMENT OF LIGHTED TAXIWAY SIGNS ON TAXIWAY N AND CONNECTING TAXIWAYS BETWEEN THE NORTH EDGE OF RUNWAY 12R-30L AND THE NORTH END OF RUNWAY 4-22 AND BETWEEN TAXIWAY N AND RUNWAY 4-22.

TERMINAL AREA TAXIWAY IMPROVEMENTS - (PACKAGE 3)

PROJECT NO. 33-00193
FAA AIP 3-48-0192-XX-2015

ISSUED FOR BID

PREPARED FOR:
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SAN ANTONIO, TX 78216
PH: (210) 207-SAIA (7242)

PREPARED BY:
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CITY OF SAN ANTONIO AVIATION DEPARTMENT

SAN ANTONIO AIRPORT SYSTEM

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TEXAS REGISTERED FIRM, NO. 928

TERMINAL AREA TAXIWAY IMPROVEMENTS - (PACKAGE 3)

MICHAEL A. NORBY 57178 REGISTERED PROFESSIONAL ENGINEER
05/18/15

MARK	DATE	DESCRIPTION
ISSUE:		

PROJECT NO:	33-00193
FILE NAME:	_33-00193-R1GC-001-C00
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SHEET TITLE:

COVER SHEET

C1.1

SHEET NO. 1 OF 140

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TERMINAL AREA TAXIWAY IMPROVEMENTS - (PACKAGE 3)

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3	C1.3	PROJECT KEYMAP
4	C1.4	ABBREVIATIONS AND LEGEND
5	C1.5	SUMMARY OF QUANTITIES
6	C1.6	GENERAL NOTES
7	C1.7	GENERAL NOTES
8	C1.8	PROJECT LAYOUT PLAN
9	C1.9	HORIZONTAL AND VERTICAL CONTROL PLAN
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CITY OF SAN ANTONIO AVIATION DEPARTMENT

SAN ANTONIO AIRPORT SYSTEM

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TEXAS REGISTERED FIRM, NO. 928

TERMINAL AREA TAXIWAY IMPROVEMENTS - (PACKAGE 3)

MICHAEL A. NORBY 87178 REGISTERED PROFESSIONAL ENGINEER
05/18/15

MARK	DATE	DESCRIPTION
ISSUE:		

PROJECT NO:	33-00193
FILE NAME:	_33-00193-R1GN-001-C00
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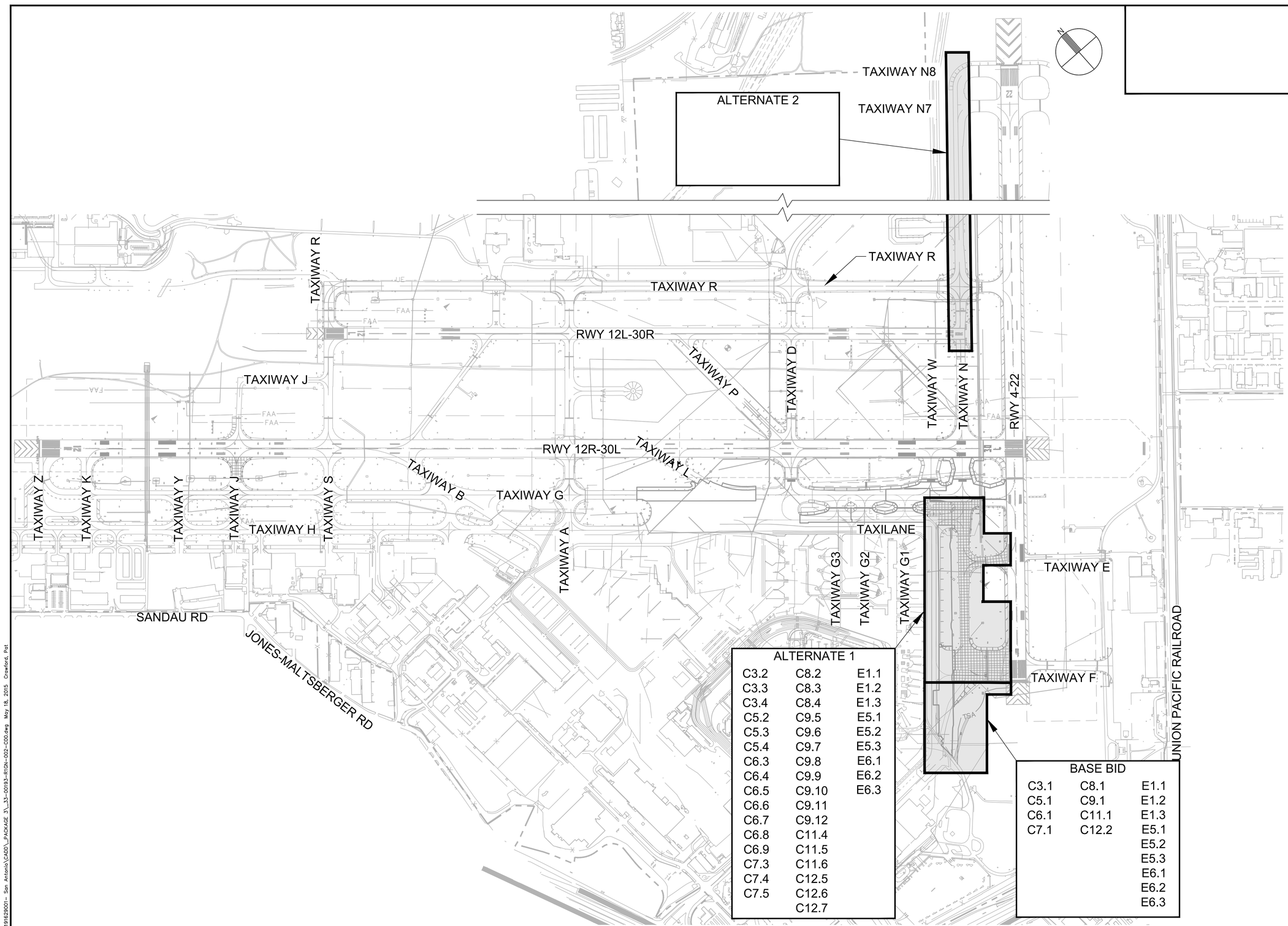
SHEET INDEX

C1.2

SHEET NO. 2 OF 140



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CITY OF
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AVIATION
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PROJECT KEYMAP

C1.3

ABBREVIATIONS:

ABAND	ABANDONED
AB OR ABC	AGGREGATE BASE COURSE
AC	ADVISORY CIRCULAR OR ASPHALTIC CONCRETE
ACI	AMERICAN CONCRETE INSTITUTE
ADPER	AVIATION DEPARTMENT PLANNING AND ENGINEERING REPRESENTATIVE
AHD	AHEAD
AIP	AIRPORT IMPROVEMENT PROGRAM
ALP	AIRPORT LAYOUT PLAN
ALS	APPROACH LIGHT SYSTEM
AOA	AIR OPERATIONS AREA
APPROX	APPROXIMATE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
ATCT	AIR TRAFFIC CONTROL TOWER
AWOS	AUTOMATED WEATHER OBSERVATION SYSTEM
BK	BACK
BM	BENCH MARK
BT	BASIC TRANSPORT
BU	BASIC UTILITY
BVC	BEGIN VERTICAL CURVE
CB	CATCH BASIN
CFR	CRASH, FIRE, AND RESCUE AND CODE OF FEDERAL REGULATIONS
CFS	CUBIC FEET PER SECOND
CIP	CAST IRON PIPE
CIPP	CAST-IN-PLACE CONCRETE PIPE
CL	CENTERLINE
CLR	CLEARANCE
CM	CONSTRUCTION MANAGER
CMP	CORRUGATED METAL PIPE
COI	CONSTRUCTION OBSERVER/INSPECTOR
CPT	CONTROL POINT
CTB	CEMENT TREATED BASE
CSPP	CONSTRUCTION SAFETY AND PHASING PLAN
CY	CUBIC YARDS
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
E	EAST, EASTING OR ELECTRICAL FEATURE
EA	EACH OR ENVIRONMENTAL ASSESSMENT
EL	ELEVATION
ELEV	ELEVATION
EOP	EDGE OF PAVEMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
EVC	END VERTICAL CURVE
EX	EXISTING
EXIST	EXISTING
FAA	FEDERAL AVIATION ADMINISTRATION
FAR	FEDERAL AVIATION REGULATION
FBO	FIXED BASE OPERATOR
FH	FIRE HYDRANT
FL	FLOWLINE
FOD	FOREIGN OBJECT DAMAGE/DEBRIS
FPS	FEET PER SECOND
GA	GAUGE OR GENERAL AVIATION
GB	GRADE BREAK
GALV	GALVANIZED
GIS	GEOGRAPHIC INFORMATION SYSTEM
GR	GRATE ELEVATION
GS	GLIDE SLOPE
GT	GENERAL TRANSPORT
GU	GENERAL UTILITY
H&S	HEALTH & SAFETY PLAN
HAZWOPER	HAZARDOUS WASTE OPERATIONS AND EMERGENCY RESPONSE
HDPE	HIGH DENSITY POLYETHLYNE
HORIZ	HORIZONTAL
HP	HIGH POINT
IE	INVERT ELEVATION
IFR	INSTRUMENT FLIGHT RULES
ILS	INSTRUMENT LANDING SYSTEM
INT	INTERSECTION
IR	IRON ROD
IRRIG	IRRIGATION
JT	JOINT
KV	KILOVOLT
L	LEFT
LF	LINEAR FEET
LOC	LOCALIZER
LS	LUMP SUM
LT	LEFT
LTS	LIME TREATED SUBGRADE
MAX	MAXIMUM
MBE	MINORITY BUSINESS ENTERPRISE
MGW	MAXIMUM GROSS WEIGHT
MH	MANHOLE
MIN	MINIMUM
MIRL	MEDIUM INTENSITY RUNWAY LIGHTS
MITL	MEDIUM INTENSITY TAXIWAY LIGHTS
ML	MONUMENT LINE
MPH	MILES PER HOUR
MULTI	MULTIPLE
N	NORTH, NORTHING
NAD	NORTH AMERICAN DATUM
NE	NORTHEAST
NEC	NATIONAL ELECTRIC CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURES ASSOCIATION
NGVD	NATIONAL GEODETIC VERTICAL DATUM
MPIAS	NATIONAL PLAN OF INTEGRATED AIRPORT SYSTEMS
NAVAID	NAVIGATIONAL AID
NDB	NON-DIRECTIONAL BEACON
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NO	NUMBER
NOS	NUMBERS
NOTAM	NOTICE TO AIRMEN
NP	NON-PLASTIC
NP	NON-PRECISION INSTRUMENT
NPI	NON-PAY ITEM
NTP	NOTICE TO PROCEED
NTS	NOT TO SCALE
NW	NORTHWEST
OC	ON CENTER
OD	OUTSIDE DIAMETER
OFF	OFFSET
OSHA	OCCUPATIONAL SAFETY AND HEALTH ACT
PAPI	PRECISION APPROACH PATH INDICATOR
PC	POINT OF CURVATURE
PCC	PORTLAND CEMENT CONCRETE OR POINT OF COMPOUND CURVE
PCCP	PORTLAND CEMENT CONCRETE PAVEMENT
PI	POINT OF INTERSECTION OR PLASTICITY INDEX
PL	PROPERTY LINE
POC	POINT ON CURVE
PP	POWER POLE
PPE	PERSONAL PROTECTIVE EQUIPMENT
PRC	POINT OF REVERSE CURVE
PROP	PROPOSED
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
R	RADIUS, RIGHT OR RUNWAY
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
REIL	RUNWAY END IDENTIFIER LIGHTS
RGRCP	RUBBER GASKETED REINFORCED CONCRETE PIPE
RP	RADIUS POINT
RSA	RUNWAY SAFETY AREA
RW	RIGHT-OF-WAY
RT	RIGHT
S	SLOPE OR SOUTH
SAIA	SAN ANTONIO INTERNATIONAL AIRPORT
SAT	SAN ANTONIO INTERNATIONAL AIRPORT
SD	STORM DRAIN
SE	SOUTHEAST
SEC	SECTION
SF	SEMI-FLUSH OR SQUARE FEET
SHT	SHEET
SIDA	SECURITY IDENTIFICATION DISPLAY AREA
SPA	SPACING
SPEC	SPECIFICATIONS
STA	STATION
STD	STANDARD
SW	SOUTHWEST
SY	SQUARE YARD
TCEQ	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
TOFA	TAXIWAY/TAXILANE OBJECT FREE AREA
TSA	TAXIWAY SAFETY AREA
TXDOT	TEXAS DEPARTMENT OF TRANSPORTATION
TYP	TYPICAL
UL	UNDERWRITERS LABORATORY
UTIL	UTILITY
VAR	VARIES
VFR	VISUAL APPROACH SLOPE INDICATOR
VC	VERTICAL CURVE
VERT	VERTICAL
VFR	VISUAL FLIGHT RULES
VPI	VERTICAL POINT OF INTERSECTION
W	WEST OR WELDED
WF	WIRE FABRIC
WV	WATER VALVE

LEGEND:

- CENTERLINE
- RSA — RUNWAY SAFETY AREA
- TSA — TAXIWAY SAFETY AREA
- TOFA — TAXIWAY/TAXILANE OBJECT FREE AREA
- CONTRACTOR FIELD OFFICE, HAUL ROUTE, STAGING AND STORAGE AREA
- CONSTRUCTION AND/OR GRADING LIMITS
- SAWCUT PAVEMENT–FULL DEPTH
- E — EXISTING ELECTRIC
- AB — EXISTING ELECTRIC (ABANDONED)
- (R) — ELECTRIC REMOVAL
- E — PROPOSED ELECTRIC
- AB FAA — EXISTING FAA COMMUNICATIONS
- FAA — EXISTING FAA COMMUNICATIONS (ABANDONED)
- ILS — EXISTING INSTRUMENT LANDING SYSTEM
- SWR — EXISTING SEWER
- EXISTING STORM DRAIN
- PROPOSED STORM DRAIN
- BORE LOCATION
- SURVEY MONUMENT
- HORIZONTAL AND/OR VERTICAL CONTROL POINT
- × 32.12 — EXISTING PAVEMENT ELEVATION
- × 32.12 — PROPOSED PAVEMENT ELEVATION
- 10 — EXISTING CONTOURS
- 10 — PROPOSED CONTOURS
- EXISTING TAXIWAY EDGE LIGHT
- PROPOSED TAXIWAY EDGE LIGHT
- EXISTING RUNWAY EDGE LIGHT
- OR — EXISTING RUNWAY LIGHT
- EXISTING ELECTRIC MANHOLE
- EXISTING ELECTRIC JUNCTION BOX
- PROPOSED ELECTRIC JUNCTION BOX
- EXISTING UTILITY MANHOLE
- UCO — EXISTING UNDERDRAIN CLEANOUT
- EXISTING STORM DRAIN INLET
- PROPOSED STORM DRAIN INLET
- X / CX.X — DETAIL NO. OVER SHEET NO.
- EXISTING WINDCONE

CITY OF SAN ANTONIO AVIATION DEPARTMENT

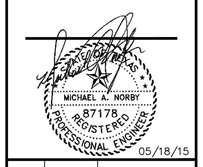
SAN ANTONIO AIRPORT SYSTEM

Kimley»Horn

KIMLEY-HORN AND ASSOCIATES, INC.
601 NW LOOP 410, SUITE 350
SAN ANTONIO, TEXAS 78216
PHONE: (210) 541-9166

TEXAS REGISTERED FIRM,
NO. 928

TERMINAL AREA TAXIWAY IMPROVEMENTS - (PACKAGE 3)



05/18/15

MARK	DATE	DESCRIPTION
ISSUE:		

PROJECT NO:	33-00193
FILE NAME:	_33-00193-R1GN-001-C00
DRAWN BY:	CAD
CHECKED BY:	MAN
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SHEET TITLE:

ABBREVIATIONS AND LEGEND

C1.4

SHEET NO. 4 OF 140

K:\PHX_Aviation\191629001 - San Antonio\CADD_PACKAGE 3_33-00193-R1GN-001-C00.dwg May 18, 2015 Crawford, Pat

SUMMARY OF QUANTITIES

BASE BID

Item	Specification Number	Bid Item Description	Quantity	Unit
BASE BID				
1	100.1	Mobilization/Demobilization	1	LS
2	100.2	Insurance and Bonds	1	LS
3	100.3	Airside Safety and Security / Traffic Control	1	LS
4	101.1	Preparing Right-of-Way	1	LS
5	540.1	Storm Water Pollution Prevention Plan	1	LS
6	GP 60-05	Field Office and Curing Facilities	1	LS
7	P-100-2.1	Contractor Quality Control	1	LS
8	P-101-5.1	Portland Cement Concrete Pavement Removal, Including Thickened Edge and Reinforcement	1,150	SY
9	P-101-5.2	Bituminous Pavement Removal	3,700	SY
10	P-101-5.3	Cement-Treated Base Removal	4,850	SY
11	P-101-5.4	Concrete Pavement Saw Cut (Full Depth)	980	LF
12	P-101-5.5	AC Pavement Saw Cut	70	LF
13	P-101-5.6	Mill Portland Cement Concrete Pavement (Varies, 0 - 2" Depth)	1,350	SY
14	P-151-4.1	Clearing and Grubbing	1.40	AC
15	P-151-4.2	Remove Existing Storm Drain Pipe	110	LF
16	P-151-4.3	Remove Existing Catch Basin or Manhole	3	EA
17	P-152-4.1	Unclassified Excavation	7,130	CY
18	P-155-8.1	Lime-Treated Subgrade (6" Depth)	12,010	SY
19	P-155-8.2	Lime	260	Ton
20	P-208-5.1	Aggregate Base Course, 13" Depth	5,210	SY
21	P-208-5.2	Temporary Aggregate Base Course, 8" Depth	760	SY
22	P-209-5.1	Crushed Aggregate Base Course, 6" Depth	6,160	SY
23	P-304-8.2	Cement-Treated Base Course, 12" Depth	6,160	SY
24	P-401-8.1	Temporary Bituminous Pavment (2" - 5" Surface Course)	1,700	Ton
25	P-403-8.1	HMA Pavement (3" Surface Course)	630	Ton
26	P-403-8.2	Temporary HMA Pavment (9" Base Course)	370	Ton
27	P-501-8.1	Portland Cement Concrete Pavement, 16"	5,840	SY
28	P-604-6.1	Preformed Sealer, 1/2-inch Joint	5,230	LF
29	P-604-6.2	Preformed Sealer, 1-inch Joint	480	LF
30	P-604-6.3	Hot Applied Edge Seal	960	LF
31	P-620-5.1	Reflective Yellow Taxiway Pavement Markings, Waterborne	4,600	SF
32	P-620-5.2	Reflective White Runway Pavement Markings, Waterborne	100	SF
33	P-620-5.4	Non-Reflective Black Pavement Markings, Waterborne	5,320	SF
34	P-620-5.6	Reflective Surface Painted Holding Position Signs, Waterborne	570	SF
35	P-620-5.7	Non-Reflective Green Infield Pavement Markings, Waterborne	0	SF
36	P-620-5.8	Pavement Marking Obliteration	2,290	SF
37	P-620-5.9	Temporary Reflective Yellow Taxiway Pavement Markings, Waterborne	3,440	SF
38	T-901-5.1	Hydro-Mulch Seeding	2.04	AC
39	T-904-5.1	Sodding	1,830	SY
40	T-905-5.1	Topsoiling	650	CY
41	D-701-5.1	24" RGRCP, Class V	120	LF
42	D-701-5.2	36" RGRCP, Class V	0	LF
43	D-701-5.3	42" RGRCP, Class V	0	LF
44	D-701-5.4	Concrete Pipe Collar	1	EA
45	D-705-5.1	Underdrain System	1	LS
46	D-751-5.1	Manholes	0	EA
47	D-751-5.2	Catch Basins	1	EA
48	D-751-5.3	Temporary Catch Basins	0	EA
49	D-751-5.4	In-Pavement Manhole/Inlet	1	EA
50	L-100-5.1	Electrical Demolition	0.25	LS
51	L-105-6.1	Temporary Jumper, L-824, Type C, 1/C #6, 5 kV Cable in Conduit	2,000	LF
52	L-105-6.2	Temporary, Surface Mounted Single-way 2" Conduit	1,000	LF
53	L-105-6.3	No. 8 AWG, 5 kV, L-824, Type C Cable, Installed in, Duct Bank or Conduit	1,200	LF
54	L-105-6.5	L-853 Elevated Retroreflective Taxiway Edge Marker	25	EA
55	L-105-6.6	Salvage and Reinstall L-862E Runway End/Threshold Light with New Isolation Transformer on Existing Base	4	EA
56	L-108-5.1	No. 8 AWG, 5 kV, L-824, Type C Cable, Installed in, Duct Bank or Conduit	3,000	LF
57	L-108-5.3	No. 6 AWG, Solid, Bare Counterpoise Wire, Installed in Trench, Above the Duct Bank or Conduit, Including Ground Rods and Ground Connectors	2,300	LF
58	L-110-5.1	Single-way 2" Conduit, Direct Buried	1,540	LF
59	L-110-5.4	Single-way 2" Conduit, Concrete Encased	440	LF
60	L-110-5.5	Multiple-way (6) 2-inch Conduits, Concrete Encased	70	LF
61	L-110-5.6	Multiple-way (4) 2-inch Conduits, Concrete Encased	240	LF
62	L-115-5.1	New Concrete Handhole, Type II, Furnished & Installed	2	EA
63	L-115-5.2	Two-Can Junction Can Plaza, Furnished & Installed	1	EA
64	L-858-5.2	New Size 3, 2-Module Airside LED Guidance Sign, Installed on Any Foundation or Base Assembly	2	EA
65	L-858-5.3	New Size 3, 3-Module Airside LED Guidance Sign, Installed on Any Foundation or Base Assembly	1	EA
66	L-858-5.4	New Size 3, 4-Module Airside LED Guidance Sign, Installed on Any Foundation or Base Assembly	1	EA
67	L-861T-4.1	New L-861T(L) LED Taxiway Edge Light with New Isolation Transformer on New or Existing Base	26	EA
68	L-861T-4.2	Spare L-861T(L) LED Taxiway Edge Light with New Isolation Transformer	6	EA
69	L-861T-4.4	Salvage and Reinstall L-862 Runway Edge Light with New Isolation Transformer on New or Existing Base	4	EA
70	L-867/868-6.1	Size "B" L-867 Base Can for Any New, Reinstalled or Future Fixture in New Asphalt Shoulder	25	EA
71	L-867/868-6.3	Size "B" L-868 Base Can – "Standard Installation (New PCCP)"	2	EA
72	L-867/868-6.8	New Size "B" L-867 Blank Base Can Cover	1	EA
73	L-867/868-6.9	New Size "B" L-868 Blank Base Can Cover	2	EA
74	L-867/868-6.12	Concrete Foundation for 2-Module Sign	2	EA
75	L-867/868-6.13	Concrete Foundation for 3-Module Sign	1	EA
76	L-867/868-6.14	Concrete Foundation for 4-Module Sign	1	EA

ALTERNATE 1

Item	Specification Number	Bid Item Description	Quantity	Unit
ALTERNATE 1 BID				
1	100.1	Mobilization/Demobilization	1	LS
2	100.2	Insurance and Bonds	1	LS
3	100.3	Airside Safety and Security / Traffic Control	1	LS
4	101.1	Preparing Right-of-Way	1	LS
5	540.1	Storm Water Pollution Prevention Plan	1	LS
6	GP 60-05	Field Office and Curing Facilities	1	LS
7	P-100-2.1	Contractor Quality Control	1	LS
8	P-101-5.1	Portland Cement Concrete Pavement Removal, Including Thickened Edge and Reinforcement	40,570	SY
9	P-101-5.2	Bituminous Pavement Removal	13,510	SY
10	P-101-5.3	Cement-Treated Base Removal	54,080	SY
11	P-101-5.4	Concrete Pavement Saw Cut (Full Depth)	2,800	LF
12	P-101-5.5	AC Pavement Saw Cut	100	LF
13	P-101-5.6	Mill Portland Cement Concrete Pavement (Varies, 0 - 2" Depth)	2,420	SY
14	P-151-4.1	Clearing and Grubbing	8.50	AC
15	P-151-4.2	Remove Existing Storm Drain Pipe	5,300	LF
16	P-151-4.3	Remove Existing Catch Basin or Manhole	11	EA
17	P-152-4.1	Unclassified Excavation	7,140	CY
18	P-155-8.1	Lime-Treated Subgrade (6" Depth)	65,560	SY
19	P-155-8.2	Lime	1,420	Ton
20	P-208-5.1	Aggregate Base Course, 13" Depth	16,410	SY
21	P-208-5.2	Temporary Aggregate Base Course, 8" Depth	7,270	SY
22	P-209-5.1	Crushed Aggregate Base Course, 6" Depth	50,690	SY
23	P-304-8.2	Cement-Treated Base Course, 12" Depth	50,690	SY
24	P-401-8.1	Temporary Bituminous Pavment (2" - 5" Surface Course)	2,370	Ton
25	P-403-8.1	HMA Pavement (3" Surface Course)	2,600	Ton
26	P-403-8.2	Temporary HMA Pavment (9" Base Course)	3,560	Ton
27	P-501-8.1	Portland Cement Concrete Pavement, 16"	49,150	SY
28	P-604-6.1	Preformed Sealer, 1/2-inch Joint	43,170	LF
29	P-604-6.2	Preformed Sealer, 1-inch Joint	3,310	LF
30	P-604-6.3	Hot Applied Edge Seal	4,680	LF
31	P-620-5.1	Reflective Yellow Taxiway Pavement Markings, Waterborne	19,800	SF
32	P-620-5.2	Reflective White Runway Pavement Markings, Waterborne	30,370	SF
33	P-620-5.4	Non-Reflective Black Pavement Markings, Waterborne	22,660	SF
34	P-620-5.6	Reflective Surface Painted Holding Position Signs, Waterborne	1,700	SF
35	P-620-5.7	Non-Reflective Green Infield Pavement Markings, Waterborne	3,300	SF
36	P-620-5.8	Pavement Marking Obliteration	47,130	SF
37	P-620-5.9	Temporary Reflective Yellow Taxiway Pavement Markings, Waterborne	15,510	SF
38	T-901-5.1	Hydro-Mulch Seeding	3.55	AC
39	T-904-5.1	Sodding	6,560	SY
40	T-905-5.1	Topsoiling	1,320	CY
41	D-701-5.1	24" RGRCP, Class V	2,100	LF
42	D-701-5.2	36" RGRCP, Class V	565	LF
43	D-701-5.3	42" RGRCP, Class V	525	LF
44	D-701-5.4	Concrete Pipe Collar	1	EA
45	D-705-5.1	Underdrain System	0	LS
46	D-751-5.1	Manholes	2	EA
47	D-751-5.2	Catch Basins	9	EA
48	D-751-5.3	Temporary Catch Basins	1	EA
49	D-751-5.4	In-Pavement Manhole/Inlet	1	EA
50	L-100-5.1	Electrical Demolition	0.75	LS
51	L-100-5.2	Windcone Relocation	1	LS
52	L-100-5.3	ALCMS Modifications (Allowance)	1	LS
53	L-100a-3.1	Photometric Testing	1	LS
54	L-105-6.1	Temporary Jumper, L-824, Type C, 1/C #6, 5 kV Cable in Conduit	8,000	LF
55	L-105-6.2	Temporary, Surface Mounted Single-way 2" Conduit	4,000	LF
56	L-105-6.3	No. 8 AWG, 5 kV, L-824, Type C Cable, Installed in, Duct Bank or Conduit	120,000	LF
57	L-105-6.4	Single-way 2" Conduit, Direct Buried	400	LF
58	L-105-6.5	L-853 Elevated Retroreflective Taxiway Edge Marker	80	EA
59	L-108-5.1	No. 8 AWG, 5 kV, L-824, Type C Cable, Installed in, Duct Bank or Conduit	16,300	LF
60	L-108-5.2	No. 6 AWG, 5 kV, L-824, Type C Cable, Installed in, Duct Bank or Conduit	4,100	LF
61	L-108-5.3	No. 6 AWG, Solid, Bare Counterpoise Wire, Installed in Trench, Above the Duct Bank or Conduit, Including Ground Rods and Ground Connectors	19,500	LF
62	L-110-5.1	Single-way 2" Conduit, Direct Buried	7,020	LF
63	L-110-5.2	Multiple-way (6) 2-inch Conduits, Direct Buried	850	LF
64	L-110-5.3	Multiple-way (4) 4-inch Conduits, Direct Buried	750	LF
65	L-110-5.4	Single-way 2" Conduit, Concrete Encased	7,700	LF
66	L-110-5.5	Multiple-way (6) 2-inch Conduits, Concrete Encased	630	LF
67	L-110-5.6	Multiple-way (4) 2-inch Conduits, Concrete Encased	1,140	LF
68	L-110-5.7	Multiple-way (4) 4-inch Conduits, Concrete Encased	100	LF
69	L-110-5.8	System Drain, (1) 2" Conduit, Concrete Encased	1,310	LF
70	L-115-5.1	New Concrete Handhole, Type II, Furnished & Installed	13	EA
71	L-115-5.2	Two-Can Junction Can Plaza, Furnished & Installed	7	EA
72	L-850-4.1	New In-pavement L-850C Runway Edge Light with New Isolation Transformer on New Base	3	EA
73	L-852-4.1	Salvage and Reinstall In-pavement L-852 Light with New Isolation Transformer on New or Existing Base	2	EA
74	L-858-5.1	New Size 3, 1-Module Airside LED Guidance Sign, Installed on Any Foundation or Base Assembly	1	EA
75	L-858-5.2	New Size 3, 2-Module Airside LED Guidance Sign, Installed on Any Foundation or Base Assembly	17	EA
76	L-858-5.3	New Size 3, 3-Module Airside LED Guidance Sign, Installed on Any Foundation or Base Assembly	4	EA
77	L-858-5.4	New Size 3, 4-Module Airside LED Guidance Sign, Installed on Any Foundation or Base Assembly	6	EA
78	L-858-5.5	New Size 2, 2-Module Airside LED Guidance Sign, Installed on Any Foundation or Base Assembly	2	EA
79	L-858-5.6	New Size 2, 3-Module Airside LED Guidance Sign, Installed on Any Foundation or Base Assembly	2	EA
80	L-861T-4.1	New L-861T(L) LED Taxiway Edge Light with New Isolation Transformer on New or Existing Base	112	EA
81	L-861T-4.2	Spare L-861T(L) LED Taxiway Edge Light with New Isolation Transformer	20	EA
82	L-861T-4.5	Salvage and Reinstall existing L-804 Runway Guard Light with New Isolation Transformer on New Base	1	EA
83	L-867/868-6.1	Size "B" L-867 Base Can for Any New, Reinstalled or Future Fixture in New Asphalt Shoulder	107	EA
84	L-867/868-6.3	Size "B" L-868 Base Can – "Standard Installation (New PCCP)"	40	EA
85	L-867/868-6.4	Size "B" L-868 Base Can – "Core Drill New PCCP" Installation at Joint or Sawcut	4	EA
86	L-867/868-6.6	Size "B" L-868 Base Can – "Diamond Leave-out"	3	EA
87	L-867/868-6.7	Size "D" L-867 Junction Can	3	EA
88	L-867/868-6.8	New Size "B" L-867 Blank Base Can Cover	1	EA
89	L-867/868-6.9	New Size "B" L-868 Blank Base Can Cover	40	EA
90	L-867/868-6.10	L-868 to L-867 Adaptor Ring	4	EA
91	L-867/868-6.11	Concrete Foundation for 1-Module Sign	1	EA
92	L-867/868-6.12	Concrete Foundation for 2-Module Sign	13	EA
93	L-867/868-6.13	Concrete Foundation for 3-Module Sign	1	EA
94	L-867/868-6.14	Concrete Foundation for 4-Module Sign	5	EA
95	L-867/868-6.15	Sign Base Assembly in New PCCP, Any Single Sign Array	4	EA

ALTERNATE 2

Item	Specification Number	Bid Item Description	Quantity	Unit
ALTERNATE 2 BID				
1	100.1	Mobilization/Demobilization	1	LS
2	100.2	Insurance and Bonds	1	LS
3	100.3	Airside Safety and Security / Traffic Control	1	LS
4	P-100-2.1	Contractor Quality Control	1	LS
5	L-108-5.1	No. 8 AWG, 5 kV, L-824, Type C Cable, Installed in, Duct Bank or Conduit	1,200	LF
6	L-858-5.2	New Size 3, 2-Module Airside LED Guidance Sign, Installed on Any Foundation or Base Assembly	13	EA
7	L-858-5.3	New Size 3, 3-Module Airside LED Guidance Sign, Installed on Any Foundation or Base Assembly	7	EA
8	L-867/868-6.12	Concrete Foundation for 2-Module Sign	13	EA
9	L-867/868-6.13	Concrete Foundation for 3-Module Sign	7	EA

CITY OF SAN ANTONIO
AVIATION DEPARTMENT

SAN ANTONIO AIRPORT SYSTEM

Kimley»Horn
KIMLEY–HORN AND ASSOCIATES, INC.
601 NW LOOP 410, SUITE 350
SAN ANTONIO, TEXAS 78216
PHONE: (210) 541–9166
TEXAS REGISTERED FIRM, NO. 928

TERMINAL AREA TAXIWAY IMPROVEMENTS - (PACKAGE 3)

MICHAEL A. NORBY 87178 REGISTERED PROFESSIONAL ENGINEER
05/18/15

MARK	DATE	DESCRIPTION
ISSUE:		-

PROJECT NO:	33-00193
FILE NAME:	_33-00193-R1GN-003-C00
DRAWN BY:	CAD
CHECKED BY:	MAN
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SHEET TITLE: SUMMARY OF QUANTITIES

C1.5
SHEET NO. 5 OF 140

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GENERAL NOTES:

1. THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS. THE PROJECT IS SUBJECT TO REVIEW BY REPRESENTATIVES OF THE SAN ANTONIO AIRPORT (AIRPORT), THE PROGRAM MANAGER/CONSTRUCTION MANAGER (PM/CM), THE ENGINEER, THE FEDERAL AVIATION ADMINISTRATION (FAA) AND THE TRANSPORTATION SAFETY AGENCY (TSA). THE CONTRACTOR SHALL PROVIDE UNRESTRICTED ACCESS TO THE SITE FOR INSPECTION PURPOSES DURING THE ENTIRE CONSTRUCTION PERIOD.

2. ALL CONTRACTOR PERSONNEL AGENTS, SUBCONTRACTORS, SUPPLIERS, VEHICLES, EQUIPMENT AND MATERIALS SHALL REMAIN WITHIN THE LIMITS OF THE PROJECT AND WITHIN THE SITE ACCESS AND HAUL ROUTES DESIGNATED ON THE PLANS.

3. THE CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION WITH THE CM PRIOR TO COMMENCING WORK.

4. THE AIR OPERATIONS AREA (AOA) IS DEFINED AS ALL PAVED AND UNPAVED AREAS OF THE AIRPORT INSIDE THE PERIMETER SECURITY FENCE AND INCLUDES BUT IS NOT LIMITED TO APRONS, TAXIWAYS, RUNWAYS AND RUNWAY/TAXIWAY SAFETY AREAS. NO VEHICLE OR EQUIPMENT SHALL MOVE UPON THE AOA UNLESS THE VEHICLE IS IDENTIFIED BY COMPANY LOGO OR NAME (12" MIN LOGO/6" MIN LETTERS) ON EACH SIDE OF THE VEHICLE, THE APPROPRIATE FLAG OR FLASHING AMBER LIGHT (FLAG OR LIGHT FOR DAYTIME ACTIVITY AND LIGHT FOR NIGHTTIME ACTIVITY) AND IS MONITORING THE APPROPRIATE RADIO FREQUENCY OR IS UNDER THE ESCORT OF A VEHICLE MONITORING THE APPROPRIATE RADIO FREQUENCY. THE CONTRACTOR SHALL PROVIDE THE NECESSARY NUMBER OF RADIOS FOR THE VEHICLES AND EQUIPMENT.

5. THE CONTRACTOR SHALL MONITOR SAN ANTONIO GROUND CONTROL FOR 121.9 OR AS ASSIGNED BY THE AIR TRAFFIC CONTROL TOWER (ATCT) AT ALL TIMES.

6. FLAG MEN OR ESCORTS WILL BE REQUIRED TO DIRECT THE CONTRACTOR'S TRUCKS AND EQUIPMENT WHICH ARE OPERATING ON ACTIVE AREAS OF THE AOA.

7. IT IS THE INTENT OF THESE PLANS TO MINIMIZE INTERFERENCE TO AIRCRAFT MOVEMENTS; THEREFORE, IN AREAS OF THE AOA, AIRCRAFT MOVEMENT SHALL HAVE THE RIGHT-OF-WAY.

8. THE CONTRACTOR SHALL PROCURE ALL PERMITS AND LICENSES, PAY ALL CHARGES, FEES, AND TAXES, AND GIVE ALL NOTICES NECESSARY AND INCIDENTAL TO THE DUE AND LAWFUL EXECUTION OF THE WORK.

9. THE PROJECT PAY ITEMS ARE PROVIDED TO BE INCLUSIVE OF ALL WORK TO BE PERFORMED AS SHOWN IN THESE PLANS. ALL WORK NOT IDENTIFIED WITH A SPECIFIC PAY ITEM IS TO BE CONSIDERED REQUIRED/INCIDENTAL WORK TO COMPLETE THE PROJECT AND IS TO BE INCLUDED IN THE COST OF THE PROJECT PAY ITEMS PROVIDED.

10. THE CONTRACTOR SHALL HAVE SUFFICIENT EQUIPMENT AND PERSONNEL ON SITE TO ACCOMPLISH EFFICIENT AND PROMPT CONSTRUCTION OF THE VARIOUS WORK ITEMS, INCLUDING WORK ON MORE THAN ONE WORK ITEM SIMULTANEOUSLY.

11. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES AND LOCATE ALL SERVICES A MINIMUM OF 48 HOURS PRIOR TO BEGINNING ANY WORK IN THE AREA. IN THE EVENT OF DAMAGE TO UNDERGROUND UTILITIES, AIRPORT OR FAA POWER OR COMMUNICATION LINES, WHETHER SHOWN ON THE DRAWINGS OR NOT, THE CONTRACTOR SHALL MAKE AND EXPEDITE REPAIRS TO REPLACE THE UTILITY LINE BACK IN FULL SERVICE AT NO INCREASE IN COST TO THE PROJECT.

    EXISTING UNDERGROUND UTILITIES ARE SHOWN FROM AVAILABLE UTILITY RECORDS AND OBSERVABLE SURFACE FEATURES. ACTUAL LOCATIONS MAY VARY AND UTILITIES NOT SHOWN ON THESE PLANS MAY EXIST. CONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY COMPANIES AND AIRPORT MAINTENANCE PERSONNEL FOR ASSISTANCE IN LOCATING ALL UNDERGROUND FACILITIES IN THE PROJECT AREA PRIOR TO CONSTRUCTION.

UTILITY SERVICE	CONTACT	PHONE NUMBER
SAN ANTONIO WATER SYSTEMS	GOVERNMENTAL RELOCATION	(210) 233-3466 (210) 233-3705
CPS ENERGY (CITY OF SAN ANTONIO PROJECTS)	JOHN OFFER	(210) 353-2012
CPS ENERGY (PROJECTS OTHER THAN CITY OF SAN ANTONIO PROJECTS)	RICHARD RODRIGUEZ	(210) 353-2226
ATT	JAMES PRINCE, LONG DISTANCE	(210) 471-0022
	RON CAPPS, LOCAL	(210) 283-1990
TIME-WARNER	STEPHON ROBERTSON	(210) 382-4306
MCI/VERIZON	JERRY REEVES	(214) 674-0555
GREY FOREST GAS	VANESSA LOPEZ	(210) 695-5992
BEXAR METROPOLITAN WATER DISTRICT	ARNOLD RAMIREZ	(210) 633-1402
GRANDE COMMUNICATION	GABRIEL MORALES	(210) 389-6011
VIA	ERNEST SWEET	(210) 362-4816
TXDOT	DAVID FULTON AVIATION	(512) 416-4502
	HENRY WICKES, SIGNALS	(512) 506-5125
	BRIAN FARIELLO TRANSGUIDE	(210) 731-5247
COSA TRAFFIC	ADRIAN OLGUIN	(210) 207-7769

12. UTILITIES SHALL BE LOCATED BY CALLING 1-800-DIG-TEST. THE FAA AND THE CONTRACTOR SHALL UNCOVER ALL EXISTING UTILITIES AND VERIFY EXISTING ELEVATIONS OF SAME AT ALL UTILITY CROSSINGS BEFORE COMMENCING ANY OTHER WORK. CONFLICTS SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.

13. EACH CONSTRUCTION AREA SHALL BE SHAPED TO ALLOW DRAINAGE OF SURFACE OR GROUND WATER DURING EACH WORK OPERATION. IF NECESSARY, SURFACE OR GROUND WATER SHALL BE PUMPED IMMEDIATELY FROM EACH CONSTRUCTION AREA IN COMPLIANCE WITH THE EPA OR TCEQ REGULATIONS. THE COST OF DEWATERING SHALL BE SUBSIDIARY TO THE CONSTRUCTION.

14. CONTRACTOR SHALL MAKE ALL PROVISIONS INCLUDING UTILITIES, TO ESTABLISH HIS/HER STAGING AREA. THE CONTRACTOR SHALL PROVIDE A SECURITY FENCE AROUND THE UTILIZED STAGING AREA. THIS SECURITY FENCE SHALL INCLUDE VISUAL SCREENING FROM PUBLIC AREAS. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL RESTORE THE STAGING AREA INCLUDING REMOVAL OF UTILITY SERVICE LINES, GRADING, TOPSOIL, AND SEEDING AS NECESSARY TO THE SATISFACTION OF THE CM TO RESTORE THE STAGING AREA TO ITS ORIGINAL CONDITION. NO SEPARATE PAY ITEM FOR WORK ASSOCIATED WITH ESTABLISHING AND RESTORING THE CONTRACTOR STAGING AREA IS INCLUDED.

15. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND ACQUIRING AN ACCEPTABLE WATER SOURCE AS NECESSARY FOR CONSTRUCTION.

16. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL HORIZONTAL AND VERTICAL CONSTRUCTION STAKING AS REQUIRED FOR THE PROJECT DEVELOPMENT.

17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING HIS/HER OWN PROJECT OFFICE AND COMPLETE UTILITY SERVICES. THE AIRPORT WILL NOT PROVIDE FACILITIES AND SERVICES TO THE CONTRACTOR DURING CONSTRUCTION. THE CONTRACTOR'S PERSONNEL ARE PROHIBITED FROM UTILIZING THE AIRPORT TERMINAL OR ANY TENANT FACILITIES.

18. THE CONTRACTOR SHALL VIDEO TAPE THE ENTIRE WORK AREA AFTER THE PRE-CONSTRUCTION MEETING AND PRIOR TO MOBILIZATION OF PERSONNEL AND EQUIPMENT. IN AREAS WHERE CONSTRUCTION EQUIPMENT CROSSES EXISTING PAVEMENTS, THE CONTRACTOR SHALL TAKE PICTURES OR VIDEO OF THE PAVEMENT PRIOR TO COMMENCING OPERATIONS. THE CONTRACTOR SHALL PROVIDE ONE (1) COPY OF ALL VIDEO AND/OR PHOTOGRAPHS TO THE CONSTRUCTION MANAGER. THIS DOCUMENTATION SHALL BE USED TO DETERMINE THE AMOUNT OF DAMAGE, IF ANY, CAUSED TO THE PAVEMENTS AND SURROUNDING FACILITIES BY THE CONSTRUCTION EQUIPMENT AND THE QUALITY OF CONSTRUCTION WHICH SHALL BE REQUIRED FOR THE REPAIRS, IF ANY.

GENERAL NOTES (CONT'D):

19. ALL SAWCUTTING SHALL BE SUBSIDIARY TO THE VARIOUS BID ITEMS IN THE CONTRACT.

20. WEEKLY PROGRESS MEETINGS ARE MANDATORY. THE DAY OF THE WEEK FOR THESE MEETINGS WILL BE DETERMINED BY AGREEMENT BETWEEN THE AIRPORT MANAGEMENT, THE CONSTRUCTION MANAGER AND THE CONTRACTOR, AT A MINIMUM. THE MEETING WILL BE ATTENDED BY THE PROJECT SUPERINTENDENT, CONTRACTING SUPERINTENDENT, FOREMEN OF ACTIVE WORK (INCLUDING SUBS) AND THE CONTRACTOR'S QC REPRESENTATIVE.

21. THE CONTRACTOR SHALL SUBMIT HIS/HER CONSTRUCTION WORK SCHEDULE TO THE CONSTRUCTION MANAGER EACH WEEK PROJECTING UPCOMING WORK FOR THE NEXT THREE WEEKS.

22. THE CONTRACTOR'S PROJECT SUPERINTENDENT SHALL PARTICIPATE IN ALL COORDINATION MEETINGS AND SHALL BE ON SITE DURING ALL ACTIVITIES.

23. HAUL TRUCKS TRANSPORTING LOOSE MATERIALS SHALL USE LOAD COVERS AND SHALL BE LOADED SUCH THAT NO SPILLAGE OCCURS DURING TRANSIT ON THE STATE, MUNICIPAL, OR AIRPORT ROADWAYS, TAXIWAYS OR APRONS. ALL CONTRACTOR EQUIPMENT MUST BE MAINTAINED IN GOOD WORKING ORDER. CONTRACTOR VEHICLES THAT LEAK OR DRIP OIL AND/OR FLUIDS ONTO ANY APRON, RAMP OR TAXIWAY MUST BE REMOVED FROM THE PROJECT FOR REPAIR.

24. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE ALL OFF-AIRPORT ROUTES WITH THE APPROPRIATE AUTHORITIES. ON-AIRPORT HAULING SHALL BE COORDINATED WITH CM AND APPROVED IN ADVANCE TO MINIMIZE IMPACT TO AIRPORT OPERATIONS.

25. CONSTRUCTION EQUIPMENT AND VEHICLES SHALL TRAVEL A MINIMUM AMOUNT ON NEWLY CONSTRUCTED PAVEMENTS SO THAT THESE AREAS WILL NOT BE DAMAGED, AT SPEEDS OF 15 MPH IN TENANT AND RAMP AREAS AND 25 MPH ON THE PERIMETER ROAD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF ANY DAMAGE TO THE NEWLY CONSTRUCTED PAVEMENTS AT THE CONTRACTOR'S EXPENSE.

26. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EFFORT AND COST OF IMMEDIATE CLEANING OF EARTH TRACKING AND SPILLS ON PAVED SURFACES RESULTING FROM THE CONTRACTOR'S OPERATIONS. BECAUSE OF THE POTENTIAL FOR EXTREME DAMAGE TO AIRCRAFT ENGINES BY INGESTION OF FOREIGN OBJECTS, THE CONTRACTOR SHALL OPERATE AND MAINTAIN MECHANICAL SWEEPER/VACUUM (WET/DRY) EQUIPMENT COMPLETE WITH OPERATORS ON THE PROJECT DURING ANY HAULING OR OTHER OPERATIONS ACROSS TAXIWAYS, TAXILANES OR APRONS. AT A MINIMUM, ONE VAC TRUCK PER CROSSING OF ACTIVE TAXIWAY OR RUNWAY IS REQUIRED.

27. BATCH PLANTS ARE PERMITTED AT THE DESIGNATED LOCATION. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL APPLICABLE PERMITS. THE BATCH PLANT MUST BE LIT WITH AN OBSTRUCTION LIGHT MEETING FAA CRITERIA FOR OBSTRUCTION LIGHTING.

28. CONTRACTOR SHALL PROVIDE AND INSTALL ALL MATERIALS AND DRAINAGE STRUCTURES TO CONSTRUCT A STABILIZED CONSTRUCTION ENTRANCE/EXIT AT EACH POINT SHOWN ON THE PLANS. THE COST OF ANY DRAINING STRUCTURES SHALL BE SUBSIDIARY TO ITEM 100-MOBILIZATION.

29. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE REPAIR OF ANY DAMAGE TO AIRPORT/AIRLINE FACILITIES, INCLUDING BUT NOT LIMITED TO EXISTING PAVEMENTS, UNDERGROUND CABLES, LIGHTS, SIGNS, BUILDINGS, FENCE, EQUIPMENT, ETC., CAUSED DURING CONSTRUCTION. ALL REPAIRS MUST BE MADE IN COORDINATION WITH THE CM AND TO EQUAL OR BETTER QUALITY AND IN COMPLIANCE WITH AIRPORT AND/OR FAA REQUIREMENTS. ALL REPAIR AND REPLACEMENT COSTS SHALL BE AT THE EXPENSE OF THE CONTRACTOR.

30. ALL MATERIAL SUBMITTALS FOR ITEMS TO BE USED IN CONSTRUCTION OF THE PROJECT SHALL BE SUBMITTED TO THE CONSTRUCTION MANAGER FOR REVIEW AND APPROVAL A MINIMUM OF 10 DAYS PRIOR TO COMMENCEMENT OF THE ASSOCIATED WORK.

31. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL WASTE MATERIAL GENERATED DURING CONSTRUCTION. WASTE MATERIAL MUST BE REMOVED FROM THE WORK SITE AND DISPOSED OF IN SUCH A MANNER AS TO NOT DAMAGE THE OWNER'S OR OTHER PERSON'S PROPERTY. (NO SEPARATE PAY FOR THE ITEM)

32. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING REQUIRED SECURITY TO PROTECT HIS OWN PROPERTY, EQUIPMENT, AND WORK IN PROGRESS.

33. VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD BEFORE COMMENCING ANY WORK. IT SHALL BE CONTRACTOR'S RESPONSIBILITY TO REPORT ANY DISCREPANCIES TO THE CONSTRUCTION MANAGER AND THE OWNER AT LEAST 48 HOURS PRIOR TO CONSTRUCTION IN AN AREA.

34. THE DRAWINGS SHOW AS MUCH INFORMATION AS CAN BE REASONABLY OBTAINED FROM AN ON THE GROUND OBSERVATION, SURVEY AND EXISTING CONSTRUCTION DRAWINGS REGARDING THE TOPOGRAPHIC FEATURES, AND ELEVATIONS, AS WELL AS THE LOCATION AND NATURE OF PIPELINES, UNDERGROUND CABLES, UTILITIES, ETC., HOWEVER, THE ACCURACY OF OR COMPLETENESS OF SUCH INFORMATION IS NOT GUARANTEED.

35. NO OPEN TRENCHES OR DROP OFFS ARE PERMITTED. AREA NEEDS TO BE FENCED OFF WITH REFLECTIVE SAFETY FENCE AND/OR STEEL PLATES MAY NEED TO BE USED.

36. HORIZONTAL CONTROL MONUMENTS ARE SHOWN ON SHEET C1.9. CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADDITIONAL TEMPORARY LAYOUT AND GRADE CONTROL SURVEYING AND TEMPORARY BENCH MARKS FOR CONSTRUCTION OF THE PROJECT.

37. CONTRACTOR SHALL BE RESPONSIBLE FOR PERMANENT SERVICE TERMINATION ASSOCIATED WITH UTILITY LINES TO BE REMOVED AND ABANDONED.

38. CONTRACTOR SHALL MAINTAIN A COPY OF ALL NECESSARY PERMITS ON THE JOBSITE.

39. ALL EXCAVATION IS UNCLASSIFIED AND SHALL INCLUDE ROCK AND ALL OTHER MATERIALS ENCOUNTERED REGARDLESS OF THEIR NATURE OR THE MANNER IN WHICH THEY ARE REMOVED.

40. WHERE FINISHED CONTOURS ARE SHOWN TO MATCH EXISTING CONTOURS ON THE GRADING PLANS, NO GRADE SEPARATION IS ALLOWABLE. CONTRACTOR SHALL ADJUST GRADING AS NECESSARY TO ACCOMPLISH THIS REQUIREMENT.

41. 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 FOR THE PROJECT DESCRIBED IN THE CONTRACTOR DOCUMENTS. THE CONTRACTORS IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY 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 COVERING THE PRESENCE AND ACTIVITY OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

42. CONTRACTOR SHALL FURNISH THE ENGINEER WITH AN AS-BUILT PLAN INDICATING THE ACTUAL MEASUREMENT AND LOCATION OF UTILITY LINES AND SITE IMPROVEMENTS INSTALLED OR ENCOUNTERED.

43. CONTRACTOR SHALL MAINTAIN SERVICE TO EXISTING SANITARY SEWERS AT ALL TIMES DURING CONSTRUCTION.

44. 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.

45. NO EXTRA PAYMENT WILL BE MADE FOR INCIDENTAL WORK OR MATERIALS REQUIRED TO COMPLETE A CONTRACT PAY ITEM. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED UNDER THE PAY ITEM TO WHICH IT RELATES.

46. WHENEVER POWER POLES ARE ADJACENT TO THE PROPOSED CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE PROPER SHORING, BRACING AND/OR OTHER SUITABLE SUPPORT FOR THE POLES DURING CONSTRUCTION (NO SEPARATE PAY ITEM)

GENERAL NOTES (CONT'D):

47. OVERHEAD POWER LINES EXIST IN THE AREA OF THE PROJECT OR HAUL ROUTES. TEXAS LAW ARTICLE 1436C, PROHIBITS ALL ACTIVITIES IN WHICH PERSONS OR EQUIPMENT MAY COME WITHIN SIX (6) FEET OF ENERGIZED OVERHEAD POWER LINES, AND FEDERAL REGULATIONS, TITLE 29, PART 1910.180(I) AND PART (1926.550(A) (15) REQUIRE A MINIMUM OF TEN (10) FEET FROM THESE FACILITIES WHERE CONTRACTOR MUST WORK NEAR OVERHEAD POWER LINES, CALL (210) 353-2012 FOR THE LINES TO BE DE-ENERGIZED AND/OR MOVED AT CONTRACTOR'S EXPENSE. NEED TO PROVIDE FAA TECH OPS (7) BUSINESS DAYS PRIOR NOTICE; AIRFIELD FACILITIES MAINTENANCE (3) BUSINESS DAYS PRIOR NOTICE; CPS ENERGY (1.5) MONTHS PRIOR NOTICE.

48. BLASTING IS NOT ALLOWED.

49. WATER LINE CROSSING: WHERE THE MINIMUM 9 FOOT HORIZONTAL SEPARATION DISTANCE BETWEEN SEWER LINES AND WATER LINES/MAINS CANNOT BE MAINTAINED, INSTALLATION OF WATER AND SEWER LINE SHALL BE IN STRICT ACCORDANCE WITH THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (30 TAC 290.44(E) AND 317.13 APPENDIX E)

50. EROSION AND SEDIMENTATION CONTROL: STORMWATER POLLUTION PREVENTION PLANS AND PROCEDURES SHALL BE IMPLEMENTED ACCORDING TO TCEQ AND EPA REGULATIONS FOR STORMWATER DISCHARGE FROM CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL MEET ALL REQUIREMENTS OF THE ATTACHED SW3P PLAN AND THESE REGULATIONS. FINAL PROJECT ACCEPTANCE SHALL NOT BE GRANTED UNTIL ALL PERMANENT STABILIZATION MEASURES HAVE BEEN ESTABLISHED. FURTHER INFORMATION REGARDING SAN ANTONIO AIRPORT SYSTEM'S SW3P, SOIL MANAGEMENT PLAN, FUEL SPILL RESPONSE PLAN, AND NOISE MANAGEMENT PROGRAM CAN BE FOUND AT AVIATION DEPARTMENT'S WEBSITE UNDER ENVIRONMENTAL STEWARDSHIP: HTTP: //WWW.SANANTONIO.GOV/AVIATION/

CONSTRUCTION NOTES:

1. SANITARY FACILITIES ARE TO BE SUPPLIED BY THE CONTRACTOR AND CAN ONLY BE LOCATED WITHIN SECURED CONSTRUCTION AREAS.

2. ALL ACCESS ROADS TO STORAGE AREAS AND/OR WORK AREAS ARE TO BE DEVELOPED AND MAINTAINED BY THE CONTRACTORS. THESE ROADS ARE TO BE RETURNED TO THEIR ORIGINAL OR BETTER CONDITION BY THE CONTRACTOR UPON COMPLETION OF THE PROJECT.

3. THE CONTRACTOR'S JOB SUPERINTENDENT IS TO MEET WITH THE RESIDENT PROJECT INSPECTOR PRIOR TO THE START OF EACH WORKING DAY TO COORDINATE DAILY CONSTRUCTION.

4. THE CONTRACTOR IS TO COORDINATE WITH THE RESIDENT PROJECT INSPECTOR AND THE AVIATION DEPARTMENT CONCERNING SAFETY IN ASSURING THAT POWER IS OFF IN THE SYSTEM WHILE THE ELECTRICAL WORK IS UNDERWAY. SPECIFICALLY, THEY ARE TO AGREE ON A CONTROL AND CHECK PROCEDURE TO PREVENT ACCIDENTAL POWER RECONNECT. THESE AGREED UPON PROCEDURES ARE TO BE DOCUMENTED IN A WRITTEN OUTLINE, SIGNED BY BOTH GROUPS AND A COPY ON FILE WITH THE RESIDENT PROJECT INSPECTOR AND THE AVIATION DEPARTMENT BEFORE ANY SUCH WORK IS UNDERTAKEN.

5. CONTRACTOR SHALL VERIFY THE SIZE OF EXISTING CABLES WHERE SPLICES AND CONNECTORS OCCUR IN ORDER TO PROVIDE THE PROPER SPLICE CONNECTOR KITS.

6. AT NO TIME SHALL ANY EXCAVATION AREAS BE LEFT UNATTENDED UNLESS APPROPRIATE MARKING AND BARRICADING IS EMPLOYED.

7. DEMOLITION AND EXCAVATION SOILS:

    A. BUILDING MATERIALS, UNCLASSIFIED DEMOLITION SOILS AND FENCING SHALL BE LEGALLY DISPOSED OF OUTSIDE AIRPORT PROPERTY.

    B. CONTAMINATED SOILS, IF ENCOUNTERED, SHALL BE STOCKPILED AND COVERED WITH 10 MIL VISQUINE TO PREVENT RAINWATER CONTAMINATION AND UNCONTROLLED VAPOR EMISSIONS, SEE OVERALL PHASING PLAN FOR DUMP LOCATION PRIOR TO REMOVAL OFF SITE.

    C. CONCRETE RUBBLE, CEMENT STABILIZED BASE, REINFORCING STEEL AND ASPHALT SHALL BE LEGALLY DISPOSED OF OUTSIDE AIRPORT PROPERTY.

    D. UNCONTAMINATED SOILS SHALL BE STOCKPILED WITHIN THE PHASING LIMITS INCLUDING HEIGHT RESTRICTIONS UNTIL SUCH TIME THAT THEY ARE RE-USED OR REMOVED FROM THE AIRPORT.

8. SEE STORM WATER POLLUTION PREVENTION PLAN FOR TURF REQUIREMENTS.

9. ALL CONCRETE FOR STRUCTURES, CURBS, RIPRAP, ETC., SHALL CONFORM TO FAA SPECIFICATION P-610.

10. ALL APRON AND TAXIWAY CONCRETE SHALL CONFORM TO FAA SPECIFICATION P-501.

11. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF ALL UTILITIES IN THE PROJECT AREA UNDER DEMOLITION AND CONSTRUCTION.

12. RESTRICTED AIRPORT AREA MUST REMAIN SECURE AT ALL TIMES. TEMPORARY FENCE ADEQUATE FOR THIS PURPOSE SHALL BE ERECTED PRIOR TO DEMOLITION AND ERECTION OF PERMANENT SECURITY FENCE. NO SEPARATE PAY ITEM FOR TEMPORARY FENCES.

13. EMPLOYEE PARKING IS SHOWN ON SHEET C2.1. CONTRACTOR SHALL ARRANGE FOR TRANSPORTATION TO JOB SITE.

14. ALL PERSONNEL OPERATING VEHICLES IN THE AOA MUST HAVE RECEIVED TRAINING AND HAVE AN AIRPORT DRIVING LICENSE.

SPECIAL CONDITIONS FOR CONSTRUCTION WITHIN THE AIR OPERATIONS AREA:

SAN ANTONIO INTERNATIONAL AIRPORT MAINTAINS OPERATIONS 24 HOURS A DAY, 365 DAYS PER YEAR FOR GENERAL AVIATION AND AIR CARRIER SERVICE. SAFETY, SECURITY AND OPERATIONS WILL TAKE PRECEDENCE OVER ALL CONSTRUCTION ACTIVITIES WITH THE AIRPORT SECURITY. AS SUCH, ALL CONSTRUCTION ACTIVITY SHALL BE CONDUCTED IN ACCORDANCE WITH THE STIPULATIONS OUTLINED BELOW AND WITH THOSE PROVIDED IN SPECIFICATIONS AND BID DOCUMENTS:

SECURITY
FINES: ANY FINES ASSESSED TO THE AVIATION DEPARTMENT DUE TO THE CONTRACTOR'S VIOLATIONS OF ANY SECURITY REQUIREMENTS WILL BE PASSED ON TO THE CONTRACTOR.

BADGING: PERSONNEL WORKING WITHIN THE SECURITY IDENTIFICATION DISPLAY AREA (SIDA)/AOA MUST DISPLAY CURRENT AIRPORT ISSUED IDENTIFICATION AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVING 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 PRECONSTRUCTION MEETING, THE CONTRACTOR MUST ARRANGE FOR ALL BADGED PERSONNEL TO ATTEND THE SIDA CLASS. ALL PERSONNEL MUST BE BADGED. UNBADGED PERSONNEL CAN BE ESCORTED FOR UP TO 14 DAYS, BEYOND 14 DAYS A BADGE MUST BE OBTAINED. ALL UNESCORTED EQUIPMENT OPERATORS AND DRIVERS MUST BE BADGED. SIDA CLASSES ARE COORDINATED THROUGH AIRPORT SECURITY AND TAKE APPROXIMATELY TWO HOURS. ALL BADGES REMAIN THE PROPERTY OF THE AVIATION DEPARTMENT AND MUST BE RETURNED AT THE COMPLETION OF THE CONTRACT.

CONSTRUCTION ACCESS: THE CONTRACTOR WILL BE ISSUED INGRESS/EGRESS INTO THE SIDA/AOA AT A POINT DESIGNATED BY THE AVIATION DEPARTMENT. THIS POINT WILL BE AS CLOSE AS PRACTICABLE TO THE MARSHALING AREA. THE CONTRACTOR WILL BE REQUIRED TO ENTER INTO A SECURITY AMENDMENT 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. 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 SIDA BADGE. THIS POLICY IS APPLIED TO ALL WORKERS, INCLUDING SUBCONTRACTOR AND SUPPLIERS AND ETC. ESCORT RATIO OF 5:1 APPLIES ONLY FOR WORK THAT IS LESS THAN 14 DAYS.

SPECIAL CONDITIONS FOR CONSTRUCTION WITHIN THE AIR OPERATIONS AREA (CONT'D):

FENCING
RESTRICTED AREA SHALL BE KEPT SECURE AT ALL TIMES BY TEMPORARY AND/OR PERMANENT SECURITY FENCES.

INSURANCE
IN ADDITION TO THE INSURANCE REQUIREMENTS OUTLINED IN THE GENERAL CONDITIONS, THE CONTRACTOR SHALL PROVIDE ADDITIONAL EXCESS (UMBRELLA) LIABILITY INSURANCE OF NOT LESS THAN $15,000,000 (FIFTEEN MILLION DOLLARS), THE COST OF WHICH SHALL BE INCLUDED IN ITEM GC-11.1.2 "ADDITIONAL INSURANCE COVERAGE".

OPERATIONS
AIRPORT OPERATIONS IS CHARGED WITH THE RESPONSIBILITY OF OVERSEEING THE DAILY OPERATIONS OF ALL ACTIVITIES WITHIN THE AIRPORT, INCLUDING THE PROPER EXECUTION OF ALL FACETS OF THE CONSTRUCTION ACTIVITIES AND COMPLIANCE WITH APPLICABLE FEDERAL REGULATIONS. THE CONTRACTOR SHALL COMPLY WITH ALL DIRECTIONS ISSUED BY OPERATIONS IN A TIMELY MANNER.

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 TAKES APPROXIMATELY 4 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 & DEVELOPMENT (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/SIDES OF VEHICLE.

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 SIDA/AOA. THE ESCORT MUST BE PROXIMATE TO THE VEHICLES AT ALL TIMES WHILE WITHIN THE SIDA/AOA INCLUDING DEPARTING THROUGH THE CONSTRUCTION ACCESS. SHOULD THE NEED ARISE TO ENTER OR CROSS AN ACTIVE RUNWAY, THE ESCORT MUST BE DONE BY PERSONNEL FROM AIRPORT OPERATIONS AND COORDINATED THROUGH AIRPORT OPERATIONS.

STORAGE & MARSHALING AREAS
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. SUITABLE MATERIAL MAY BE HAULED AND DISPOSED AT AIRPORT'S STOCKPILE SITE, AND SHALL BE FREE FROM ALL OF THE FOLLOWING:

- CONCRETE GREATER THAN 3" IN ANY DIMENSION
- ASPHALT OR BITUMINOUS MATERIAL
- PIPE OR CONDUIT
- CABLES AND WIRES
- CEMENT TREATED MATERIAL GREATER THAN 3" IN ANY DIMENSION
- METAL PRODUCTS OF ANY KIND
- TRASH, GARBAGE OR ORGANIC MATERIAL
- CONTAMINATED MATERIALS

CONSTRUCTION MATERIALS: CONSTRUCTION MATERIALS NOT FOR IMMEDIATE USE SHALL BE STOCKPILED AT THE DESIGNATED MARSHALING AREA. OTHER MATERIALS MAY BE STORED AT APPROVED LOCATIONS APPROXIMATE 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.

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 AVIATION DEPARTMENT.

NAVIGATIONAL EQUIPMENT
TESTING: THE FAA MAINTAINS VARIOUS FORMS OF NAVIGATIONAL EQUIPMENT AND APPURTENANCES THROUGHOUT THE AIRPORT. THERE MAY BE TIMES DURING THE CONSTRUCTION WHERE TESTS AND/OR EQUIPMENT CHECKS MUST BE RUN TO MAINTAIN SERVICEABILITY. THE CONTRACTOR SHALL COMPLY WITH ALL REQUESTS AND DIRECTIVES DURING THE PROSECUTION OF THE TESTS. TIMELY NOTIFICATION OF SUCH TESTS CANNOT BE GUARANTEED.

CABLES: COMMUNICATION AND NAVIGATIONAL CABLES TRAVERSE THE CONSTRUCTION AREA. EVERY EFFORT HAS BEEN MADE TO IDENTIFY AND PROPERLY DEPICT THE LOCATIONS OF ALL CABLES ON THE DRAWINGS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE AVIATION DEPARTMENT AT (210) 207-3519, 48 HOURS IN ADVANCE OF ANY CONSTRUCTION IN ORDER THAT THE CABLES WITHIN THE CONSTRUCTION AREA CAN BE PROPERLY LOCATED AND IDENTIFIED. THE CONTRACTOR SHALL IDENTIFY THE LOCATION AND ALIGNMENT OF THESE CABLES ALONG AND THROUGHOUT THE ENTIRE PROJECT AREA USING ORANGE SAFETY NETTING. GAPS TO FACILITATE VEHICULAR CROSSINGS WILL BE PERMITTED AS REQUIRED. THESE CROSSINGS SHALL BE PROTECTED USING 1/2" THICK BY 8' LONG STEEL PLATES PLACED ALONG THE FULL WIDTH OF EACH CROSSING. NO CONSTRUCTION SHALL COMMENCE PRIOR TO THE LOCATION OF THE CABLES. SHOULD THE CONTRACTOR ENCOUNTER CABLES NOT IDENTIFIED ON THE DRAWINGS OR FIELD LOCATED OR CUT OR OTHERWISE DAMAGED, HE SHALL IMMEDIATELY CEASE OPERATIONS IN THE AREA AND NOTIFY THE AVIATION DEPARTMENT DURING THE DAY OR AFTER HOURS AT (210) 207-3519, IN ORDER THAT THE FAA CAN IDENTIFY THE CABLE. UNLESS DIRECTED OTHERWISE, CUT OR DAMAGED CABLES SHALL BE REPLACED BETWEEN THE EXISTING PULL BOXES (TYPICALLY 2000 FEET APART). ALL SPLICING SHALL BE PERFORMED BY AN FAA CERTIFIED SPLICER. AFTER ALL SPLICES ARE COMPLETED, THE CABLES SHALL BE TESTED FOR CONTINUITY AND MEGGERED BY THE CONTRACTOR.

LIGHTING SYSTEMS: THE AVIATION DEPARTMENT AND THE FAA MAINTAINS VARIOUS FORMS OF LIGHTING SYSTEMS THROUGHOUT THE AIRPORT. ALL PORTIONS OF THESE SYSTEMS SHALL BE PROPERLY LOCATED AND IDENTIFIED PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR TO CONTACT THE AVIATION DEPARTMENT AT (210) 207-3519, 48 HOURS IN ADVANCE OF ANY CONSTRUCTION IN ORDER THAT THESE SYSTEMS MAY BE PROPERLY IDENTIFIED. ALL ELECTRICAL WORK SHALL BE COORDINATED THROUGH THE AVIATION DEPARTMENT TO ENSURE CIRCUIT OUTAGES ARE AVOIDED AND THAT THE APPROPRIATE CIRCUITS AND PROPERLY TAGGED OUT. WHERE DIRECTED, THE CONTRACTOR SHALL PROVIDE THE NECESSARY SAFETY NETTING AND VEHICULAR CROSSINGS AS OUTLINED IN THE SECTION ENTITLED "CABLES".

ALL LABOR, MATERIALS, TOOLS, CABLES AND CONNECTORS NECESSARY TO PROVIDE TEMPORARY CIRCUITS AS REQUIRED SHALL BE PROVIDED BY THE CONTRACTOR. FAA REQUIRES 7 BUSINESS DAYS PRIOR NOTICE.

BARRICADES
ALL CONSTRUCTION AREAS SHALL BE PROPERLY BARRICADED, SIGNED AND MARKED AS DIRECTED BY THE AVIATION DEPARTMENT IN ACCORDANCE WITH THE BARRICADES SHOWN ON THE DRAWINGS. BARRICADES SHALL BE PROPERLY SECURED AS NECESSARY TO PREVENT OVERTURNING OR DISPLACEMENT FROM WIND OR JET BLAST AND SHALL BE ILLUMINATED. REFER TO FAA AC 150/5340-1L CURRENT VERSION "STANDARD FOR AIRPORT MARKINGS" FOR FAA LIGHTING AND MARKING STANDARDS. EXCAVATED AREAS SHALL NOT BE LEFT UNATTENDED UNLESS APPROPRIATE BARRICADES ARE PROVIDED. THE CONTRACTOR SHALL HAVE A DESIGNATED CONTACT ON FILE WITH AIRPORT OPERATIONS WHO SHALL BE ON CALL 24 HOURS A DAY IN ORDER TO MAINTAIN THE BARRICADES. LOCATION AND PLACEMENT SHALL BE ADJUSTED AS NECESSITATED BY CHANGES IN CONSTRUCTION PROGRESS.

SAFETY NETTING SHALL BE INSTALLED IN LOCATIONS AS SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE RESIDENT PROJECT INSPECTOR. NETTING SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION AND SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT. ADJUSTMENTS IN LOCATION SHALL BE MADE AS DIRECTED BY THE AVIATION DEPARTMENT. REFER TO FAA AC 150/5340-1, CURRENT VERSION.

CITY OF SAN ANTONIO AVIATION DEPARTMENT

SAN ANTONIO AIRPORT SYSTEM

Kimley»Horn
KIMLEY-HORN AND ASSOCIATES, INC.
601 NW LOOP 410, SUITE 350
SAN ANTONIO, TEXAS 78216
PHONE: (210) 541-9166

TEXAS REGISTERED FIRM, NO. 928

TERMINAL AREA TAXIWAY IMPROVEMENTS - (PACKAGE 3)

STATE OF TEXAS
MICHAEL A. NORBY
87178
REGISTERED PROFESSIONAL ENGINEER
05/18/15

MARK	DATE	DESCRIPTION

ISSUE: .

PROJECT NO:	33-00193
FILE NAME:	_33-00193-R1GN-004-C00
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SHEET TITLE:

GENERAL NOTES

C1.6

K:\PHX_Aviation\191629001- San Antonio\CADD_PACKAGE 3_33-00193-R1GN-004-C00.dwg May 18, 2015 Crawford, Pat

GENERAL SAFETY NOTES:

1. CONSTRUCTION PERSONNEL WILL NOT BE ALLOWED TO OPERATE VEHICLES OR EQUIPMENT IN THE AOA UNTIL THEY HAVE SUCCESSFULLY COMPLETED THE AIRPORT AOA DRIVING SAFETY COURSE.

2. DURING THE PERFORMANCE OF THIS CONTRACT, THE AIRPORT RUNWAYS, TAXIWAYS, AND AIRCRAFT PARKING APRONS SHALL REMAIN IN USE BY AIRCRAFT TO THE MAXIMUM EXTENT POSSIBLE. AIRCRAFT USE OF AREAS NEAR THE CONTRACTOR'S WORK WILL BE CONTROLLED BY ATCT GROUND CONTROL, AIRPORT OPERATIONS AND THE AIRLINES TO MINIMIZE DISTURBANCE TO THE CONTRACTOR'S OPERATION. THE CONTRACTOR SHALL NOT ALLOW HIS/HER EMPLOYEES, SUBCONTRACTORS, SUPPLIERS, OR ANY PERSON OVER WHO HE/SHE HAS CONTRACTUAL CONTROL TO ENTER OR REMAIN IN ANY PART OF THE AIRPORT WHICH WOULD BE HAZARDOUS TO PERSONS OR TO AIRCRAFT OPERATIONS. WHENEVER AIRCRAFT OPERATIONS REQUIRE, THE CONSTRUCTION MANAGER MAY ORDER THE CONTRACTOR TO SUSPEND OPERATIONS, MOVE PLANT, PERSONNEL, EQUIPMENT, AND MATERIALS TO A SAFE LOCATION AND STAND BY UNTIL AIRCRAFT USE IS COMPLETED.

3. CONSTRUCTION EQUIPMENT AND VEHICLES SHALL NOT EXCEED 15 MPH WITHIN THE AOA, INCLUDING THE PERIMETER ROAD, NORTHEAST ENTRANCE ROAD AND SKYPLACE BLVD.

4. RUNWAY, TAXIWAY, APRON OR AIRPORT ROADWAY SHALL NOT BE CLOSED WITHOUT PRIOR APPROVAL OF AIRPORT OPERATIONS. TO ENABLE THE NECESSARY NOTICES TO AIRMEN (NOTAMS) OR ADVISORIES TO AIRPORT SERVICES OR TENANTS, CONTRACTOR SHALL PROVIDE A WRITTEN NOTICE OF THE REQUESTED CLOSING TO THE CONSTRUCTION MANAGER AT LEAST 48 HOURS IN ADVANCE.

5. VEHICLE IDENTIFICATION AND PARKING;

   A. CONTRACTOR VEHICLES AND EQUIPMENT SHALL BE IDENTIFIED BY COMPANY LOGO OR NAME (12" MIN LOGO/6" MIN LETTERS) ON EACH SIDE OF THE VEHICLE AND BY FLAGS AND/OR AMBER FLASHING LIGHTS. (FLAGS OR LIGHTS FOR DAY OPERATIONS AND LIGHTS FOR NIGHT OPERATIONS)
   B. EMPLOYEE PARKING SHALL BE LIMITED TO THE PROJECT STAGING AREA AS SHOWN ON THE PLANS OR CONTRACTORS ARRANGED SITE. EMPLOYEE VEHICLES WILL NOT BE ALLOWED WITHIN THE AOA.

6. WILDLIFE MANAGEMENT. DISCUSS THE FOLLOWING:
   A. ACCESS TO THE PROJECT SITE SHALL BE AS SHOWN ON THE PLANS OR AS DESIGNED BY THE CONSTRUCTION MANAGER.

7. THE CONTRACTOR SHALL BE RESPONSIBLE TO INSTALL SHEETING AND BRACING AS NECESSARY TO SUPPORT THE SIDES OF ANY/ALL TRENCH AND OTHER EXCAVATIONS AS REQUIRED BY CURRENT OSHA REGULATIONS. COST OF SHEETING AND BRACING SHALL BE SUBSIDIARY TO THE CONSTRUCTION.

8. THE CONTRACTOR SHALL PROVIDE THREE MOTORIZED MECHANICAL SWEEPER/VACUUM, ALONG WITH A "FOREIGN OBJECTS DEBRI" (FOD) PLAN PRIOR TO BEGINNING WORK. THE FOD PLAN AND DAILY ACTIVITIES SHALL BE PRESENTED BY THE CONTRACTOR PRIOR TO INITIATION OF WORK. THE FOD PLAN IS SUBJECT TO ADVANCE APPROVAL BY THE CONSTRUCTION MANAGER. THE MECHANICAL SWEEPER/VACUUM'S WILL REMAIN ON SITE AND OPERATIONAL FULL TIME THAT WORK CONTINUES ON THE AOA PAVEMENTS. TWO SWEEPERS SHALL BE IN USE AT ALL TIMES DURING THIS PROJECT.

9. NOTIFICATION OF CONSTRUCTION ACTIVITIES. PROVIDE THE FOLLOWING:
   A. SUFFICIENT LIGHTED BARRICADES ARE IN PLACE TO CONFINE THE WORK AREA AND TO CREATE A BARRIER BETWEEN AIRCRAFT AND VEHICLE MOVEMENT AREAS AND THE CONSTRUCTION AREA.
   B. ALL SAFETY EQUIPMENT FOR PERSONNEL AND CONSTRUCTION EQUIPMENT IS IN PLACE AND OPERABLE.
   C. ALL PERSONNEL WORKING WITHIN THE AOA HAVE BEEN PROPERLY TRAINED AND BADGED BY THE SAN ANTONIO AIRPORT POLICE DEPARTMENT TO WORK WITHIN THE AOA.
   D. THE CONTRACTOR HAS FAMILIARIZED HIS/HER PERSONNEL WITH THE HORIZONTAL AND VERTICAL CLEARANCES NEEDED TO PROVIDE FOR SAFE CONSTRUCTION OPERATIONS ADJACENT TO ACTIVE TAXIWAYS AND TAXILANES.
   E. THE CONTRACTOR HAS TO DEVELOP, SUBMIT AND RECEIVE APPROVAL OF HIS/HER QUALITY CONTROL AND SITE SAFETY AND FOOD PLANS.

10. STOCKPILED MATERIAL SHALL BE CONSTRAINED IN A MANNER TO PREVENT ITS MOVEMENT BY WIND, JET BLAST, PROPELLER WASH OR STORMWATER. STOCKPILED MATERIALS SHALL NOT BE PERMITTED WITHIN 250' OF AN ACTIVE RUNWAY CENTERLINE OR 160' FROM AN ACTIVE TAXIWAY CENTERLINE.

11. DEBRIS, WASTE AND LOOSE MATERIAL SHALL NOT BE ALLOWED ON ACTIVE AIRCRAFT MOVEMENT AREAS. THE MATERIAL WILL BE REMOVED IMMEDIATELY BY THE CONTRACTOR. DUST AND DEBRIS CONTROL IS SUBSIDIARY TO THE WORK AND IS NOT MEASURED FOR SEPARATE PAYMENT.

12. PRIOR TO OPENING ANY WORK AREA FOR AIRCRAFT OPERATIONS, THE CM WILL ARRANGE FOR INSPECTION BY AIRPORT OPERATIONS OR ANY AREA THAT HAS BEEN CLOSED FOR WORK OR THAT HAS BEEN USED FOR A CROSSING POINT OR HAUL ROUTE BY THE CONTRACTOR. THESE AREAS MUST COMPLY WITH THE SAFETY REQUIREMENTS DEFINED BY FEDERAL AVIATION REGULATIONS (FAR) PART 139, AND INTERPRETED BY THE DESIGNATED OPERATION'S INSPECTOR, BEFORE PERMISSION WILL BE GRANTED FOR THE CONTRACTOR'S WORK CREWS TO DEPART THE AREA.

13. THE CONTRACTOR SHALL PROVIDE A FULL TIME SAFETY PROFESSIONAL TO MANAGE THE CONTRACTOR'S SAFETY PLAN.

14. THE MAXIMUM HEIGHT OF CONSTRUCTION EQUIPMENT SHALL NOT EXCEED 20' WITHOUT APPROVAL IN ADVANCE.

15. ALL CONSTRUCTION EQUIPMENT MUST BE KEPT AT A DISTANCE GREATER THAN 25 FEET FROM THE WINGTIPS OF AIRCRAFT.

16. THE CONTRACTOR SHALL MAKE PROVISIONS SUCH THAT HINDRANCES TO SERVICING OPERATIONS AT THE AIRCRAFT GATES ADJACENT TO CONSTRUCTION ARE KEPT TO A MINIMUM.

17. CONTRACTOR MUST SUPPLY VEHICLES TO SHUTTLE WORKERS TO AND FROM WORK AREAS AND MARSHALLING AREAS. AT NO TIME WILL WORKERS BE PERMITTED TO WALK ACROSS OPERATIONAL AREAS ON THE AIRPORT.

18. ANY FINES ASSESSED TO THE SAN ANTONIO AVIATION DEPARTMENT DUE TO VIOLATIONS BY THE CONTRACTOR OF TSA SECURITY REQUIREMENTS WILL BE PASSED ON TO THE CONTRACTOR.

19. ALL ACCESS ROADS TO MARSHALLING AREAS AND/OR WORK AREAS ARE TO BE DEVELOPED AND/OR MAINTAINED BY THE CONTRACTOR. THESE ROADS ARE TO BE RETURNED TO THEIR ORIGINAL CONDITION UPON COMPLETION OF THE PROJECT UNLESS AGREED UPON BY SAT STAFF.

20. THE CONTRACTOR SHALL PROVIDE A UNIFORMED, LICENSED SECURITY GUARD. ACCEPTABLE TO THE OWNER, AND A FUNCTIONING TELEPHONE AT EACH AOA GATE AT ALL TIMES THAT SUCH A GATE IS UNLOCKED. ALL PERSONNEL AND VEHICLES REQUIRED ACCESS TO THE AOA SHALL COMPLY WITH ALL REQUIREMENTS OF THE AIRPORT SECURITY.

21. THE CONTRACTOR SHALL SUPPLY TWO SEPARATE FOD INSPECTORS TO BE IN PLACE AND INSPECTING VEHICLES FOR FOD PRIOR TO ENTERING THE NORTH CARGO APRON. SEE SHEET C2.1 FOR LOCATIONS. (INCIDENTAL TO THE PROJECT)

SAFETY PLAN COMPLIANCE DOCUMENT (SPCD):

THE SAFETY PLAN COMPLIANCE DOCUMENT (SPCD) SHOULD INCLUDE A GENERAL STATEMENT BY THE CONSTRUCTION CONTRACTOR THAT HE/SHE HAS READ AND WILL ABIDE BY THE CSPP. IN ADDITION, THE SPCD MUST INCLUDE ALL SUPPLEMENTAL INFORMATION THAT COULD NOT BE INCLUDED IN THE CSPP PRIOR TO THE CONTRACT AWARD. THE CONTRACTOR STATEMENT SHOULD INCLUDE THE NAME OF THE CONTRACTOR, THE TITLE OF THE PROJECT CSPP, THE APPROVAL DATE OF CSPP, AND A REFERENCE TO ANY SUPPLEMENTAL INFORMATION (THAT IS "I, NAME OF CONTRACTOR, HAVE READ THE TITLE OF PROJECT CSPP, APPROVED ON DATE, AND WILL ABIDE BY IT AS WRITTEN AND WITH THE FOLLOWING ADDITIONAL AS NOTED:"). THE SUPPLEMENTAL INFORAMTION IN THE SPCD SHOULD BE WRITTEN TO MATCH THE FORMAT OF THE CSPP INDICATING EACH SUBJECT BY CORRESPONDING CSPP SUBJECT NUMBER AND TITLE. IF NO SUPPLEMENTAL INFORMATION IS NECESSARY FOR ANY SPECIFIC SUBJECT, THE STATEMENT, "NO SUPPLEMENTAL INFORMATION," SHOULD BE WRITTEN AFTER THE CORRESPONDING SUBJECT TITLE. THE SPCD SHOULD NOT DUPLICATE INFORMATION IN THE CSPP:

1. COORDINATION. DISCUSS DETAILS OF PROPOSED SAFETY MEETINGS WITH THE AIRPORT OPERATOR AND WITH CONTRACTOR EMPLOYEES AND SUBCONTRACTORS.

2. PHASING. DISCUSS PROPOSED CONSTRUCTION SCHEDULE ELEMENTS, INCLUDING:

   A. DURATION OF EACH PHASE.
   B. DAILY START AND FINISH CONSTRUCTION, INCLUDING "NIGHT ONLY" CONSTRUCTION.
   C. DURATION OF CONSTRUCTION ACTIVITIES DURING:
      i. NORMAL RUNWAY OPERATIONS.
      ii. CLOSED RUNWAY OPERATIONS.
      iii. MODIFIED RUNWAY "AIRCRAFT REFERENCE CODE" USAGE.

3. AREAS AND OPERATIONS AFFECTED BY THE CONSTRUCTION ACTIVITY. THESE AREAS AND OPERATIONS SHOULD BE IDENTIFIED IN THE CSPP AND SHOULD NOT REQUIRE AN ENTRY IN THE SPCD.

4. PROTECTION OF NAVAIDS. DISCUSS SPECIFIC METHODS PROPOSED TO PROTECT OPERATING NAVAIDS.

5. CONTRACTOR ACCESS. PROVIDE THE FOLLOWING:

   A. DETAILS ON HOW THE CONTRACTOR WILL MAINTAIN THE INTEGRITY OF THE AIRPORT SECURITY FENCE (GATE GUARDS, DAILY LOG OF CONSTRUCTION PERSONNEL, AND OTHER).
   B. LISTING OF INDIVIDUALS REQUIRING DRIVER TRAINING (FOR CERTIFICATED AIRPORTS AND AS REQUESTED).
   C. RADIO COMMUNICATIONS.
      i. TYPES OF RADIOS AND BACKUP CAPABILITIES.
      ii. WHO WILL BE MONITORING RADIOS.
      iii. WHOM TO CONTACT IF THE ATCT CANNOT REACH THE CONTRACTOR'S DESIGNATED PERSON BY RADIO.
   D. DETAILS ON HOW THE CONTRACTOR WILL ESCORT MATERIAL DELIVERY VEHICLES.

6. WILDLIFE MANAGEMENT. DISCUSS THE FOLLOWING:
   A. METHODS AND PROCEDURES TO PREVENT WILDLIFE ATTRACTION.
   B. WILDLIFE REPORTING PROCEDURES.

7. FOREIGN OBJECT DEBRIS (FOD) MANAGEMENT. DISCUSS EQUIPMENT AND METHODS FOR CONTROL OF FOD, INCLUDING CONSTRUCTION DEBRIS AND DUST.

8. HAZARDOUS MATERIAL (HAZMAT) MANAGEMENT. DISCUSS EQUIPMENT AND METHODS FOR RESPONDING TO HAZARDOUS SPILLS.

9. NOTIFICATION OF CONSTRUCTION ACTIVITIES. PROVIDE THE FOLLOWING:
   A. CONTRACTOR POINTS OF CONTACT.
   B. CONTRACTOR EMERGENCY CONTACT.
   C. LISTING OF TALL OR OTHER REQUESTED EQUIPMENT PROPOSED FOR USE ON THE AIRPORT AND THE TIMEFRAME FOR SUBMITTING 7460-1 FORMS NOT PREVIOUSLY SUBMITTED BY THE AIRPORT OPERATOR.
   D. BATCH PLANT DETAILS, INCLUDING 7460-1 SUBMITTAL.

10. INSPECTION REQUIREMENTS. DISCUSS DAILY (OR MORE FREQUENT) INSPECTIONS AND SPECIAL INSPECTION PROCEDURES.

11. UNDERGROUND UTILITIES. DISCUSS PROPOSED METHODS OF IDENTIFYING AND PROTECTING UNDERGROUND UTILITIES.

12. PENALTIES. PENALTIES SHOULD BE IDENTIFIED IN THE CSPP AND SHOULD NOT REQUIRE AN ENTRY IN THE SPCD.

13. SPECIAL CONDITIONS. DISCUSS PROPOSED ACTIONS FOR EACH SPECIAL CONDITION IDENTIFIED IN THE CSPP.

14. RUNWAY AND TAXIWAY VISUAL AIDS. INCLUDING MARKING, LIGHTING, SIGNS AND VISUAL NAVAIDS. DISCUSS PROPOSED VISUAL AIDS INCLUDING THE FOLLOWING:

   A. EQUIPMENT AND METHODS FOR COVERING SIGNAGE AND AIRFIELD LIGHTS.
   B. EQUIPMENT AND METHODS FOR TEMPORARY CLOSURE MARKINGS (PAINT, FABRIC, OTHER).
   C. TYPES OF TEMPORARY VISUAL GUIDANCE SLOPE INDICATORS (VGSI).

15. MARKING AND SIGNS FOR ACCESS ROUTES. DISCUSS PROPOSED METHODS OF DEMARCATING ACCESS ROUTES FOR VEHICLE DRIVERS.

16. HAZARD MARKING AND LIGHTING. DISCUSS PROPOSED EQUIPMENT AND METHODS FOR IDENTIFYING EXCAVATION AREAS.

17. PROTECTION OF RUNWAY AND TAXIWAY SAFETY AREAS, INCLUDING OBJECT FREE AREAS, OBSTACLE FREE ZONES, AND APPROACH/DEPARTURE SURFACES. DISCUSS PROPOSED METHODS OF IDENTIFYING, DEMARCATING AND PROTECTING AIRPORT SURFACES INCLUDES:

   A. EQUIPMENT AND METHODS FOR MAINTAINING TAXIWAY SAFETY AREA STANDARDS.
   B. EQUIPMENT AND METHODS FOR SEPARATION OF CONSTRUCTION OPERATIONS FROM AIRCRAFT OPERATIONS, INCLUDING DETAILS OF BARRICADES.

18. OTHER LIMITATIONS ON CONSTRUCTION SHOULD BE IDENTIFIED IN THE CSPP AND SHOULD NOT REQUIRE AN ENTRY IN THE SPCD.

MATERIAL SAFETY DATA SHEETS (MSDS):

1. SUBCONTRACTORS ARE REQUIRED TO BRING COPIES OF MSDS'S FOR ALL HAZARDOUS CHEMICALS BROUGHT ONTO THE SITE.

   A. THESE WILL BE RETAINED BY THE MSDS COORDINATOR AND WILL BE ACCESSIBLE TO ALL EMPLOYEES.

2. EACH SUBCONTRACTOR MUST BRING ITS SPECIFIC HAZARDOUS COMMUNICATION PROGRAM AND MSDS'S IN A BINDER LABELED WITH THE CONTRACTOR'S NAME AND IDENTIFIED AS A HAZARDOUS COMMUNICATION PROGRAM.

   A. UPON LEAVING THE JOB SITE AND THE REMOVAL OF ALL HAZARDOUS MATERIALS, THE BINDER WILL BE RETURNED TO THE SUBCONTRACTORS.

TRAFFIC NOTES AND SPECIAL CONDITIONS:

1. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO SEE THAT ALL TRAFFIC CONTROL DEVICES ARE PROPERLY INSTALLED AND MAINTAINED AT THE JOBSITE IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS AND RELATED INDUSTRY STANDARDS AND REGULATIONS. THE CONTRACTOR SHALL SUBMIT FOR REVIEW A SIGN AND BARRICADE PLAN CONFORMING TO THE REQUIREMENTS OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, THE CITY'S CONSTRUCTION OBSERVER/INSPECTOR (COI) AND THE AVIATION DEPARTMENT PLANNING AND DEVELOPMENT REPRESENTATIVE (AVIATION DEPARTMENT) WILL ONLY BE RESPONSIBLE TO INSPECT THE TRAFFIC CONTROL DEVICES BEING DEPLOYED. IF IN THE OPINION OF THE AVIATION DEPARTMENT AND THE COI, THE TRAFFIC CONTROL DEVICES DO NOT CONFORM TO ESTABLISHED STANDARDS OR ARE INCORRECTLY PLACED OR ARE INSUFFICIENT IN QUANTITY TO PROTECT THE GENERAL PUBLIC, THE COI SHALL HAVE THE OPINION TO STOP CONSTRUCTION OPERATIONS AT NO EXPENSE TO THE CITY UNTIL SUCH TIME AS THE CONDITIONS ARE CORRECTED BY THE CONTRACTOR.

2. PRIOR TO REMOVING ANY TRAFFIC SIGNS OR TRAFFIC SIGNALS, THE CONTRACTOR SHALL CONTACT THE AVIATION DEPARTMENT AT 207-3506. PRIOR TO COMPLETION OF THE CONTRACT AND REMOVAL OF THE BARRICADES, THE CONTRACTOR SHALL AGAIN CONTACT THE AVIATION DEPARTMENT. THE BARRICADES SHALL NOT BE REMOVED UNTIL ALL APPLICABLE PERMANENT TRAFFIC SIGNS AND SIGNALS ARE IN PLACE.

3. IT IS THE CONTRACTORS RESPONSIBILITY TO OBTAIN AND MAINTAIN TEMPORARY STOP SIGNS AND ALL OTHER TRAFFIC CONTROL DEVICES REQUIRED TO PROTECT THE GENERAL PUBLIC. IF THE CITY OF SAN ANTONIO AVIATION DEPARTMENT HAS REMOVED PERMANENT STOP SIGNS, THE CONTRACTOR SHALL REQUEST THAT THE SIGNS BE RETURNED TO THE CONSTRUCTION SITE TO BE REINSTALLED BY THE CONTRACTOR. ALL PERMANENT SIGNS OR TRAFFIC CONTROL DEVICES MISSING OR DAMAGED UPON COMPLETION OF CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

4. THE CONTRACTOR MUST CONTACT THE CITY'S AVIATION DEPARTMENT 10 DAYS IN ADVANCE (NOT INCLUDING WEEKENDS) OF ANY STREET CLOSURE. THIS MUCH TIME IS NECESSARY TO INSTALL ADVISORY SIGNS AND GIVE THE MOTORISTS 7 DAYS NOTICE OF THE STREET CLOSURE. THE COI AFTER BEING NOTIFIED WILL CONTACT THE TRAFFIC DEVELOPMENT OFFICE TO MAKE THE NECESSARY ARRANGEMENTS.

5. AS WORK PROGRESSES, LOCATION OF TEMPORARY TRAFFIC CONTROL DEVICES WILL BE ADJUSTED AND MODIFIED, AS NECESSARY BY THE CONTRACTOR AT CONTRACTOR'S EXPENSE.

6. IF THE NEED ARISES, ADDITIONAL TEMPORARY TRAFFIC CONTROL DEVICES, SPECIAL DIRECTIONAL DEVICES, AND/OR BUSINESS NAME SIGNS MAY BE ORDERED BY THE TRAFFIC DEVELOPMENT REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.

7. TEMPORARY TRAFFIC SIGNAL DEVICES SHALL CONFORM TO THE CITY'S "TYPICAL SIGN AND BARRICADE STANDARDS" SHEETS AND TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

8. THE CONTRACTOR MUST MAINTAIN ALL STREETS WITHIN THE PROJECT LIMITS OPEN TO THROUGH TRAFFIC BY REPAIRING TRENCHES, POTHOLES, LEVELING UP WITH ASPHALT, ETC. AT NO DIRECT PAYMENT, COST TO BE INCLUDED IN OTHER ITEMS.

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SUITABLE ACCESS ACCOMMODATIONS FOR PEDESTRIANS.

10. THE CONTRACTOR SHALL PROVIDE ACCESS FOR DELIVERY OF MAIL BY THE U.S. POSTAL OFFICE.

11. THE CONTRACTOR SHALL PROVIDE FOR ACCESS TO ALL BUSINESSES AT ALL TIMES WITHIN ALL THE PHASES OF THE WORK.

12. WHEN THE CONSTRUCTION WORK NECESSITATES THE UTILIZATION OF VEHICLE PATHS OTHER THAN THE LANES NORMALLY USED, TRAFFIC CONTROL MARKINGS NO LONGER APPLICABLE SHALL BE REMOVED AND APPROVED TEMPORARY PAVEMENT MARKINGS AND SIGNS INSTALLED IN ACCORDANCE WITH PART VI-D OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

    AFTER CONSTRUCTION IS COMPLETED AND TRAFFIC IS REROUTED BACK TO THE ORIGINAL LANES, THE TRAFFIC CONTROL MARKINGS AND/OR RAISED BUTTONS THAT WERE ORIGINALLY REMOVED FROM THE EXISTING PAVEMENT MUST BE REPLACED. IN ADDITION, TEMPORARY MARKINGS MUST BE REMOVED. ALL OF THIS IS TO BE DONE AT NO DIRECT PAYMENT, COST TO BE INCLUDED IN OTHER ITEMS.

13. PERMANENT PAVEMENT MARKINGS SHALL BE APPLIED PRIOR TO THE OPENING OF THE COMPLETED STREET TO TRAFFIC. TEMPORARY ADDITIONAL SHORT-TERM EXPENDABLE PAVEMENT MARKINGS MAY BE PROVIDED PRIOR TO APPLICATION OF PAVEMENT MARKINGS IN MINIMUM LENGTHS OF 36" OR RAISED PAVEMENT MARKINGS TO DELINEATE CONTINUITY UNTIL SUCH TIME AS STANDARD PAVEMENT MARKINGS IN NORMAL LENGTHS CAN BE PLACED AT DIRECT PAYMENT.

14. ALL TEMPORARY TRAFFIC CONTROL DEVICES, ETC., SHALL BE PROVIDED BY THE CONTRACTOR WITHOUT DIRECT PAYMENT.

15. THE COI WILL MONITOR THE CONTRACTOR'S TRAFFIC CONTROL DEVICES AND WILL BE RESPONSIBLE TO FURNISH ALL BUSINESSES WITH AN INFORMATION FLYER ON ALL JOBS DURING CONSTRUCTION.

16. ANY DAMAGE TO PERMANENT TRAFFIC SIGNALS, THE CONTROLLER BOX, LOOPS OR CONDUIT DURING OR UPON COMPLETION OF THE PROJECT SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE. THE DECISION TO REPAIR, AS OPPOSED TO REPLACE, THE DAMAGED EQUIPMENT SHALL BE MADE BY THE CITY AVIATION DEPARTMENT.

17. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL STREETS OUTSIDE OF THE PROJECT LIMITS WHICH WERE DAMAGED BY CONSTRUCTION ACTIVITIES. THE REPLACING SECTION MUST BE APPROVED BY THE AVIATION DEPARTMENT. THERE WILL BE NO DIRECT PAYMENT FOR THIS WORK. THE COST IS TO BE INCLUDED IN OTHER ITEMS.

18. CONTRACTOR TO EVALUATE THE PLAN TO DETERMINE IF AN OFF DUTY POLICE OFFICER IS REQUIRED.

19. IF SPLIT CONSTRUCTION IS SHOWN, THEN THE SANITARY SEWER SHALL BE COMPLETED PRIOR TO BEGINNING STREET AND DRAINAGE CONSTRUCTION, AND TRAFFIC SHALL BE MAINTAINED OR DETOURED AS DIRECTED BY THE AVIATION DEPARTMENT. THERE WILL BE NO ADDITIONAL PAYMENT FOR MAINTAINING OF TRAFFIC AND DETOURS.

20. THE CONTRACTOR SHALL PROVIDE THE CITY OF AN EMERGENCY TELEPHONE NUMBER FOR EVENING, WEEKENDS AND HOLIDAYS BY THE FIRST WORKING DAY OF THE PROJECT. THIS TELEPHONE NUMBER MUST BE A COMMERCIAL ANSWERING SERVICE. THE ANSWERING SERVICE MUST BE ABLE TO CONTACT THE CONTRACTOR AND THE CONTRACTOR MUST RESPOND TO THE CITY STAFF WITHIN 90 MINUTES OF THE INITIAL CONTACT.

21. AIRPORT OPS MAY ALSO INSPECT TRAFFIC CONTROL DEVICES.

CITY OF SAN ANTONIO AVIATION DEPARTMENT

SAN ANTONIO AIRPORT SYSTEM

Kimley»Horn

KIMLEY-HORN AND ASSOCIATES, INC.
601 NW LOOP 410, SUITE 350
SAN ANTONIO, TEXAS 78216
PHONE: (210) 541-9166

TEXAS REGISTERED FIRM, NO. 928

TERMINAL AREA TAXIWAY IMPROVEMENTS - (PACKAGE 3)

MICHAEL A. NORBY
87178
REGISTERED PROFESSIONAL ENGINEER
05/18/15

MARK	DATE	DESCRIPTION
ISSUE:		-

PROJECT NO:	33-00193
FILE NAME:	_33-00193-R1GN-005-C00
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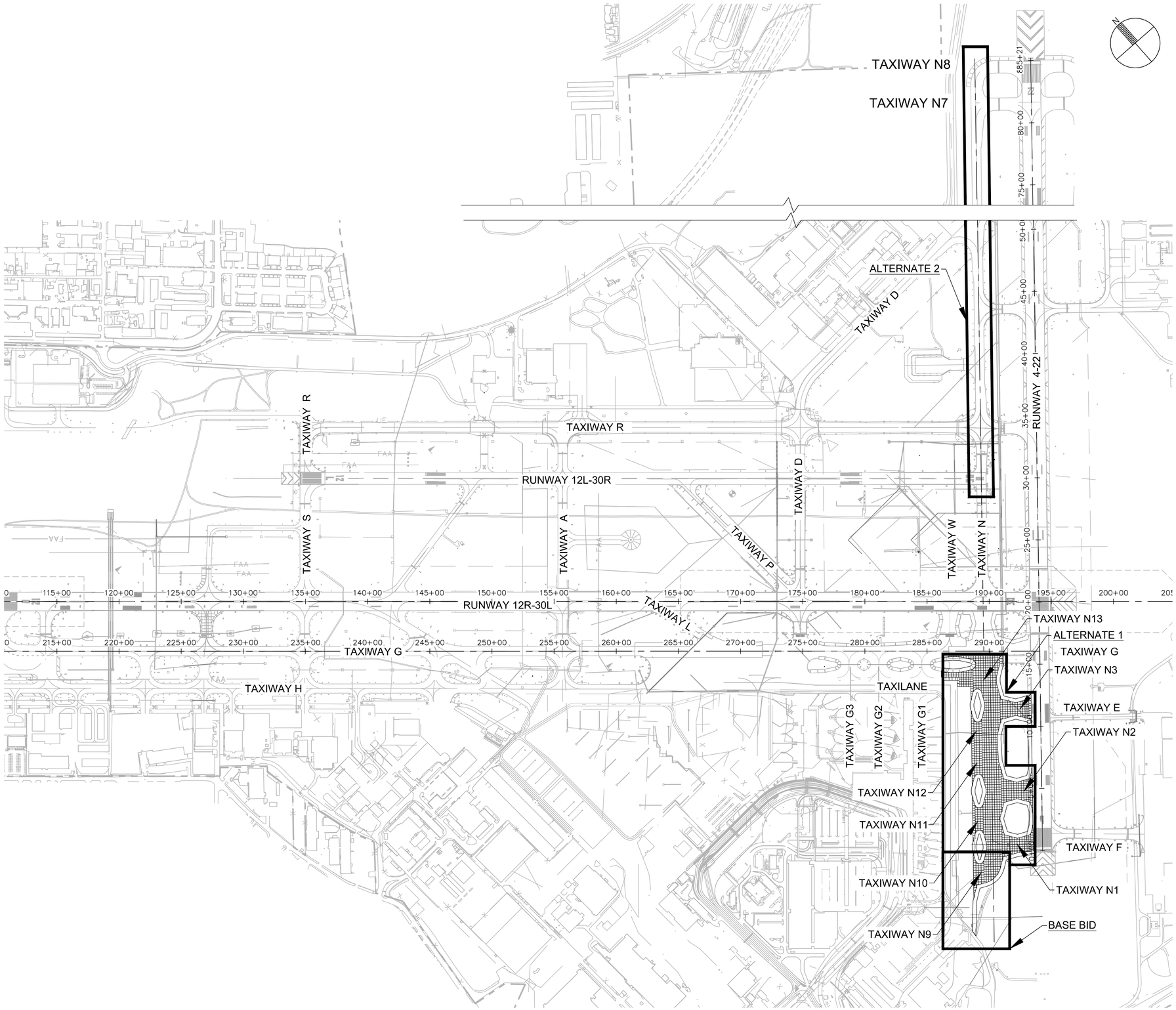
GENERAL NOTES

C1.7

SHEET NO. 7 OF 140



GENERAL NOTES

1. REFER TO SHEET C1.9 FOR HORIZONTAL AND VERTICAL CONTROL.
2. EACH ALTERNATIVE WILL BE BROKEN OUT INTO INDIVIDUAL PHASES. PLEASE REFER TO INDIVIDUAL PHASE SHEETS FOR GREATER DETAIL.

PROJECT DESCRIPTION

WORK INCLUDES BUT IS NOT LIMITED TO GRADING, PAVING, MARKING, SIGNAGE AND LIGHTING FOR THE FOLLOWING:

BASE BID:
THE "BASE BID" CONSISTS OF THE CONSTRUCTION OF THE SOUTH EXTENSION OF TAXIWAY N (TWN) BETWEEN THE TW N CONNECTOR AND THE SOUTH APRON (THIS INCLUDES N9). CONSTRUCTION WILL REQUIRE THE REMOVAL OF THE EXISTING ASPHALT CEMENT (AC) PAVEMENT AND PORTLAND CEMENT CONCRETE (PCC) PAVEMENT SECTION 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 12 INCHES OF CTB ON 6 INCHES OF CRUSHED AGGREGATE BASE (AB) ON 6 INCHES OF LIME STABILIZED 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 CONSTRUCTION OF TAXIWAY N BETWEEN THE SOUTH EDGE OF TW G AND THE NORTH END OF TAXIWAY N EXTENSION (END OF BASE BID WORK AREA) (APPROXIMATELY 1,450 FEET LONG BY VARYING WIDTH) AND THE CONSTRUCTION OF NEW CONNECTING TAXIWAYS (N2, N11 AND N12) BETWEEN THE TERMINAL TAXILANE AND RUNWAY 4–22, AND THE RECONSTRUCTION OF CONNECTING TAXIWAYS (N1, N3 N10 AND N13) BETWEEN THE TERMINAL TAXILANE AND RUNWAY 4–22. THE NEW AND RECONSTRUCTION AREAS WILL REQUIRE THE REMOVAL OF THE EXISTING PORTLAND CEMENT CONCRETE (PCC) PAVEMENT SECTION INCLUDING THE REMOVAL OF THE CEMENT TREATED BASE (CTB) AND CRUSHED AGGREGATE BASE (AB). THE NEW PAVEMENT SECTION FOR THE TAXIWAYS WILL BE CONSTRUCTED WITH 16 INCHES OF PCC PAVEMENT ON 12 INCHES OF CTB ON 6 INCHES OF CRUSHED AGGREGATE BASE (AB) ON 6 INCHES OF LIME STABILIZED 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 REPLACEMENT OF LIGHTED TAXIWAY SIGNS ON TAXIWAY N AND CONNECTING TAXIWAYS BETWEEN THE NORTH EDGE OF RUNWAY 12R–30L AND THE NORTH END OF RUNWAY 4–22 AND BETWEEN TAXIWAY N AND RUNWAY 4–22.

400 0 400 800
SCALE IN FEET

CITY OF SAN ANTONIO AVIATION DEPARTMENT

SAN ANTONIO AIRPORT SYSTEM

Kimley»Horn
KIMLEY-HORN AND ASSOCIATES, INC.
601 NW LOOP 410, SUITE 350
SAN ANTONIO, TEXAS 78216
PHONE: (210) 541-9166
TEXAS REGISTERED FIRM, NO. 928

TERMINAL AREA TAXIWAY IMPROVEMENTS - (PACKAGE 3)

MICHAEL A. NORBY 87178 REGISTERED PROFESSIONAL ENGINEER
05/18/15

MARK	DATE	DESCRIPTION
ISSUE:		

PROJECT NO:	33-00193
FILE NAME:	_33-00193-R1CL-401-C00
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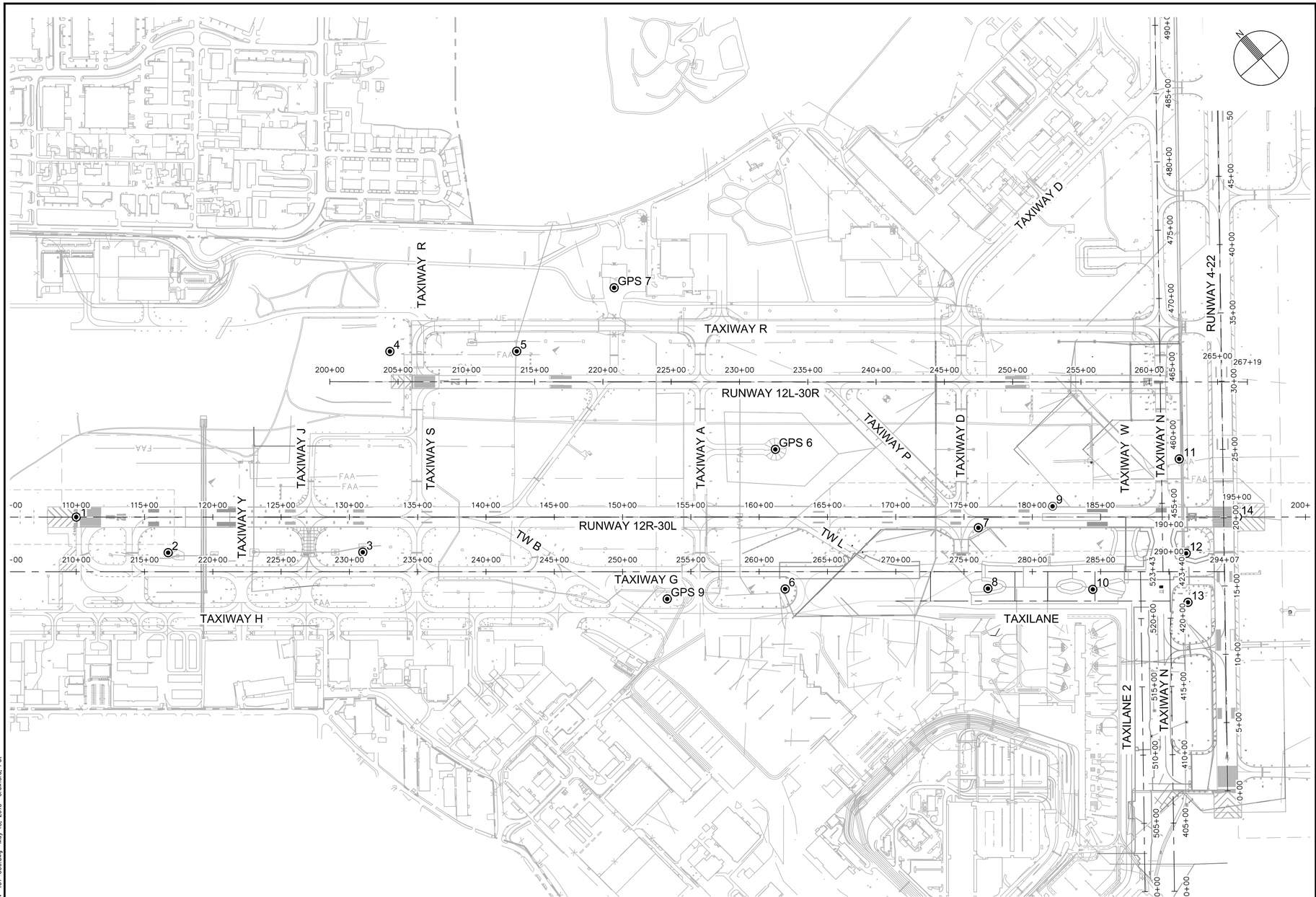
SHEET TITLE:

PROJECT LAYOUT PLAN

C1.8
SHEET NO. 8 OF 140



LEGEND

⊙# HORIZONTAL AND VERTICAL CONTROL POINT

GENERAL NOTES

1. CONTRACTOR TO SUBMIT WRITTEN VERIFICATION OF HORIZONTAL AND VERTICAL CONTROL POINTS WITHIN THE PROJECT VICINITY. **THE VERIFICATION MUST BE STAMPED BY A LICENSED SURVEYOR.**
2. WITHIN 72 HOURS OF BEGINNING CONSTRUCTION, ANY DISCREPANCIES NEED TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER.

DATUM

LATITUDE AND LONGITUDE ARE NAD 83 TEXAS SOUTH CENTRAL ZONE SPC BASED GRID COORDINATES, ELEVATIONS ARE BASED ON NGVD–29, AND NORTHING AND EASTING MONUMENTS ARE NAD 83 TEXAS SOUTH CENTRAL ZONE SPC BASE SURFACE COORDINATES.

ALIGNMENT DEFINITIONS

ALIGNMENT	START			END			BEARING
	NORTHING	EASTING	STATION	NORTHING	EASTING	STATION	
RUNWAY 12L–30R	13747017.6702	2134474.1830	200+00.00	13742577.4716	2139516.7570	267+18.85	S48° 38' 05.01"E
RUNWAY 12R–30L	13748160.9064	2131675.5751	100+00.00	13741222.9254	2139558.9549	205+01.58	S48° 38' 59.06"E
RUNWAY 4–22	13740425.6261	2137430.3131	0+00.00	13746903.4200	2142966.0600	85+20.93	N40° 30' 58.68"E
TAXIWAY G	13747860.6324	2131411.3110	200+00.00	13741645.7810	2138473.0245	294+07.03	S48° 38' 59.06"E
TAXIWAY N	13741943.1097	2138135.1805	450+00.00	13747195.7690	2142623.9605	519+09.38	N40° 30' 58.68"E
TAXIWAY N	13740131.1557	2136652.5041	400+00.00	1374191.0732	2138172.7187	423+40.00	N40° 30' 58.68"E
TAXILANE 2	13740270.8335	2136489.0565	500+00.00	13742052.1302	2138011.3044	523+43.13	N40° 30' 58.68"E

HORIZONTAL AND VERTICAL CONTROL POINTS

CONTROL POINT	NORTHING	EASTING	STATION	OFFSET	ELEVATION	DESCRIPTION
GPS 6	13744490.4566	2136596.0172	161+18.62	495.39' LT	785.480'	
GPS 7	13746158.4159	2136491.5000	149+38.21	1678.45' LT	784.750'	
GPS 9	13744191.3278	2135277.9149	153+26.77	599.98' RT	792.870	
1	13747500.2459	2132426.2600	110+00.00	0.00'	809.1'	RUNWAY 12R END THRESHOLD
2	13746859.8059	2132759.1200	116+72.99	260.86' RT	802.332'	TEMPORARY BENCHMARK
3	13745920.4459	2133831.0600	130+98.27	257.84' RT	800.091'	TEMPORARY BENCHMARK
4	13746893.3659	2134951.3400	132+96.48	1212.64' LT	789.049'	TEMPORARY BENCHMARK
5	13746280.5059	2135649.0300	142+25.12	1213.52' LT	788.733'	TEMPORARY BENCHMARK
*6	13743675.5572	2135974.4219	161+90.37	527.01' RT	787.345'	TEMPORARY BENCHMARK
7	13743077.4673	2137332.6719	176+05.12	78.64' RT	785.440'	TEMPORARY BENCHMARK
8	13742697.0141	2137091.1670	176+75.18	523.79' RT	782.170'	TEMPORARY BENCHMARK
*9	13742837.0343	2137844.6051	181+48.27	79.08' LT	782.430'	TEMPORARY BENCHMARK
10	13742185.2818	2137663.8840	184+43.19	529.57' RT	779.800'	TEMPORARY BENCHMARK
11	13742484.0927	2138769.4648	190+75.72	425.15' LT	774.336'	TEMPORARY BENCHMARK
12	13741932.2864	2138350.7699	191+25.97	265.69' RT,	776.859'	TEMPORARY BENCHMARK
13	13741654.0981	2138123.7712	191+39.35	624.49' RT	777.950'	TEMPORARY BENCHMARK
14	13741883.5882	2138808.2674	195+01.58	0.00'	778.4'	RUNWAY 30L END THRESHOLD

ALL STATIONS AND OFFSETS REFER TO RUNWAY 12R–30L
* FIELD VERIFY LOCATION

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TEXAS REGISTERED FIRM, NO. 928

TERMINAL AREA TAXIWAY IMPROVEMENTS - (PACKAGE 3)

MICHAEL A. NORBY 87178 REGISTERED PROFESSIONAL ENGINEER
05/18/15

MARK	DATE	DESCRIPTION
ISSUE:		

PROJECT NO:	33-00193
FILE NAME:	_33-00193-R1CV-401-C00
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HORIZONTAL AND VERTICAL CONTROL PLAN

C1.9
SHEET NO. 9 OF 140

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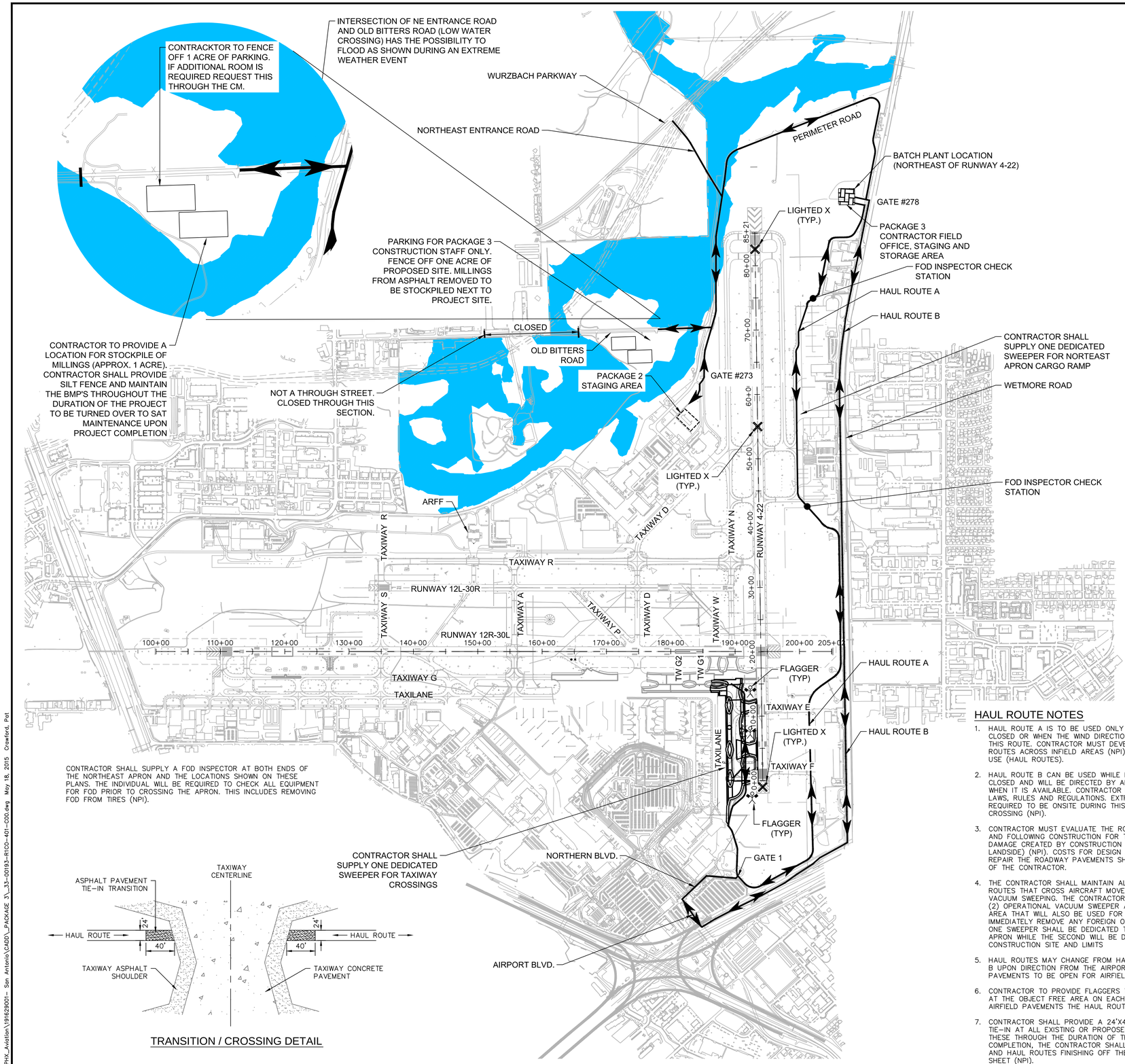

TRANSITION / CROSSING DETAIL

LEGEND

- CONTRACTOR FIELD OFFICE, STAGING AND STORAGE AREA
- HAUL ROUTE
- PORTABLE LIGHTED RUNWAY CLOSURE MARKER (PROVIDED BY THE CONTRACTOR)
- FLAGGER (TO BE SUPPLIED BY CONTRACTOR)
- WING WALKER (TO BE SUPPLIED BY AIRLINES)
- FLOODPLAIN

GENERAL NOTES

1. RUNWAY 4–22 AND 12R–30L WILL NOT BE CLOSED AT THE SAME TIME.
2. IT IS THE INTENT TO USE HAUL ROUTE A WHILE RUNWAY 4–22 IS CLOSED AND HAUL ROUTE B EITHER WHEN RUNWAY 4–22 IS OPEN OR CLOSED. HOWEVER, THE AIRPORT HAS THE AUTHORITY TO CHANGE THE HAUL ROUTES WHEN REQUIRED, DUE TO WIND DIRECTION AND TRAFFIC FLOW. THE CONTRACTOR WILL BE PROVIDED NOTICE OF THE CHANGE AS SOON AS PRACTICAL (EACH MORNING). NO ADDITIONAL PAYMENT WILL BE MADE FOR ALTERING THE ROUTE.
3. THE CONTRACTOR SHALL BE AWARE THAT CONSTRUCTION WILL BE ADJACENT TO ACTIVE AIRCRAFT OPERATIONS. CONSTRUCTION TRAFFIC SHALL YIELD TO AIRCRAFT AT ALL TIMES. THE CONTRACTOR SHALL NOT MOVE ANY EQUIPMENT ON ANY ACTIVE AIRPORT OPERATIONS AREA WITHOUT AN OPERATIONS OR MAINTENANCE STAFF ESCORT. DELAYS AND PRECAUTIONS RESULTING FROM AIRCRAFT MOVEMENTS SHOULD BE EXPECTED. EXPENSES ASSOCIATED WITH ANY DELAYS ARE INCIDENTAL TO THE PROJECT (NPI).
4. PORTABLE LIGHTED RUNWAY CLOSURE MARKERS (LIGHTED "X") WILL BE PROVIDED AND MAINTAINED BY THE CONTRACTOR THROUGHOUT THE DURATION OF THE BASE BID OR ALTERNATE 1 PHASES 1–4, REFER TO DETAIL 1, SHEET C2.5.
5. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN LOW PROFILE BARRICADES, LIGHTS AND FLAGS FOR RUNWAY/TAXIWAY CLOSURES AS INDICATED ON THE CONSTRUCTION PHASING PLANS, REFER TO DETAIL SHEET C2.5. THE CONTRACTOR SHALL PLACE THE LOW PROFILE BARRICADES AS SHOWN ON EACH PHASING PLAN OR AS DIRECTED BY THE SAT OPERATIONS PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING PROPER POSITIONING OF LOW PROFILE BARRICADES THROUGHOUT THE DURATION OF THE PROJECT (NPI).
6. THE CONTRACTOR SHALL COORDINATE WITH OPERATIONS AND MAINTENANCE STAFF TO COVER AND PROTECT ANY EXISTING GUIDANCE SIGNS AND EDGE LIGHTS ASSOCIATED WITH CLOSED RUNWAYS AND TAXIWAYS. DAMAGE TO SIGNS AND EDGE LIGHTS SHALL BE REPLACED AT THE CONTRACTOR EXPENSE (NPI).
7. THE CONTRACTOR SHALL REMOVE THE LOW PROFILE BARRICADES AND UNCOVER THE GUIDANCE SIGNS AND EDGE LIGHTS UPON COMPLETION OF THE PROJECT PHASE AS DIRECTED. DAMAGE TO SIGNS AND EDGE LIGHTS SHALL BE REPLACED AT THE CONTRACTORS EXPENSE (NPI).
8. CONTRACTOR IS RESPONSIBLE FOR THE SECURITY OF THE BATCH PLANT LOCATION. ALL MEASURES TO SECURE THE BATCH PLANT ARE THE RESPONSIBILITY OF THE CONTRACTOR.
9. THE CONTRACTOR IS RESPONSIBLE FOR THE SECURITY OF ANY OF THE TEMPORARY STAGING AREAS ASSOCIATED WITH PACKAGE 3 (NPI). FENCING WILL NOT BE ALLOWED TO BE ANCHORED INTO EXISTING PAVEMENT.
10. THE CONTRACTOR SHALL PROVIDE LICENSED GATE GUARDS IN ACCORDANCE WITH THE AIRPORTS STANDARDS AND REQUIREMENTS. COST FOR PROVIDING GATE GUARDS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THIS GUARD WILL NOT HAVE AUTHORITY OVER AIRPORT SECURITY WHILE ON DUTY. (NPI)
11. ALL VEHICLES WILL BE SUBJECT TO SEARCH BEFORE ENTERING THE SECURED AREA.
12. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE OFF–SITE ROUTES (STATE HIGHWAYS, COUNTY ROADS OR CITY STREETS) WITH THE APPROPRIATE OWNER WHO HAS JURISDICTION OVER THE AFFECTED ROUTE. ON–SITE HAUL ROUTES SHALL BE MAINTAINED BY THE CONTRACTOR AND SHALL BE RESTORED TO THEIR ORIGINAL CONDITION UPON COMPLETION OF BEING USED AS A HAUL ROUTE. THE CONTRACTOR SHALL PROVIDE APPROPRIATE TXDOT WARNING SIGNS PRIOR TO THE PROJECT ENTRANCE NOTIFYING THE TRAVELING PUBLIC. THESE SIGNS WILL BE REVIEWED AND APPROVED BY THE ENGINEER/AIRPORT AND BE PROVIDED FOR THE DURATION OF THE PROJECT. THESE SIGNS ARE CONSIDERED INCIDENTAL TO THE PROJECT. (NPI)
13. CONTRACTOR CAN TEMPORARILY STORE CONTAMINATED (IMPACTED) MATERIALS AT THE BATCH PLANT LOCATION OR AS DIRECTED BY THE CONSTRUCTION MANAGER OR AIRPORT, PRIOR TO REMOVAL FROM AIRPORT PROPERTY. CONTRACTOR IS RESPONSIBLE TO PROTECT THE EXISTING SITE FROM CONTAMINATION AND REMEDIATE ANY ISSUES CAUSED BY STORED MATERIALS AT NO ADDITIONAL COST TO THE OWNER.

HAUL ROUTE NOTES

1. HAUL ROUTE A IS TO BE USED ONLY WHILE RUNWAY 4–22 IS CLOSED OR WHEN THE WIND DIRECTION REQUIRES THE USE OF THIS ROUTE. CONTRACTOR MUST DEVELOP AND MAINTAIN HAUL ROUTES ACROSS INFIELD AREAS (NPI) THROUGH THE DURATION OF USE (HAUL ROUTES).
2. HAUL ROUTE B CAN BE USED WHILE RUNWAY 4–22 IS OPEN OR CLOSED AND WILL BE DIRECTED BY AIRPORT OPERATIONS AS TO WHEN IT IS AVAILABLE. CONTRACTOR MUST FOLLOW ALL LOCAL LAWS, RULES AND REGULATIONS. EXTRA SWEEPERS WILL BE REQUIRED TO BE ONSITE DURING THIS OPTION FOR VAST APRON CROSSING (NPI).
3. CONTRACTOR MUST EVALUATE THE ROADWAY NETWORK PRIOR TO AND FOLLOWING CONSTRUCTION FOR THE PURPOSES OF REPAIRING DAMAGE CREATED BY CONSTRUCTION TRAFFIC (AIRSIDE OR LANDSIDE) (NPI). COSTS FOR DESIGN AND CONSTRUCTION TO REPAIR THE ROADWAY PAVEMENTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. THE CONTRACTOR SHALL MAINTAIN ALL PAVEMENTS AND HAUL ROUTES THAT CROSS AIRCRAFT MOVEMENT AREAS BY MEANS OF VACUUM SWEEPING. THE CONTRACTOR SHALL HAVE AT LEAST TWO (2) OPERATIONAL VACUUM SWEEPER AND A BACKUP AT THE WORK AREA THAT WILL ALSO BE USED FOR HAUL ROUTE B TO IMMEDIATELY REMOVE ANY FOREIGN OBJECT DEBRIS (FOD) (NPI). ONE SWEEPER SHALL BE DEDICATED TO THE NORTHEAST CARGO APRON WHILE THE SECOND WILL BE DEDICATED TO THE CONSTRUCTION SITE AND LIMITS
5. HAUL ROUTES MAY CHANGE FROM HAUL ROUTE A TO HAUL ROUTE B UPON DIRECTION FROM THE AIRPORT AND BASED ON AIRFIELD PAVEMENTS TO BE OPEN FOR AIRFIELD OPERATIONS. (NPI)
6. CONTRACTOR TO PROVIDE FLAGGERS TO STOP GROUND VEHICLES AT THE OBJECT FREE AREA ON EACH SIDE OF ALL ACTIVE AIRFIELD PAVEMENTS THE HAUL ROUTE CROSSES. (NPI)
7. CONTRACTOR SHALL PROVIDE A 24'X40'X4" ASPHALT PAVEMENT TIE–IN AT ALL EXISTING OR PROPOSED CROSSINGS AND MAINTAIN THESE THROUGH THE DURATION OF THE PROJECT. UPON, PROJECT COMPLETION, THE CONTRACTOR SHALL REMOVE THESE TRANSITIONS AND HAUL ROUTES FINISHING OFF THE SECTION. SEE DETAIL THIS SHEET (NPI).

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MICHAEL A. NORBY 57178 REGISTERED PROFESSIONAL ENGINEER
05/18/15

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SHEET TITLE:

STAGING AREA AND HAUL ROUTES

C2.1

SHEET NO. 10 OF 140

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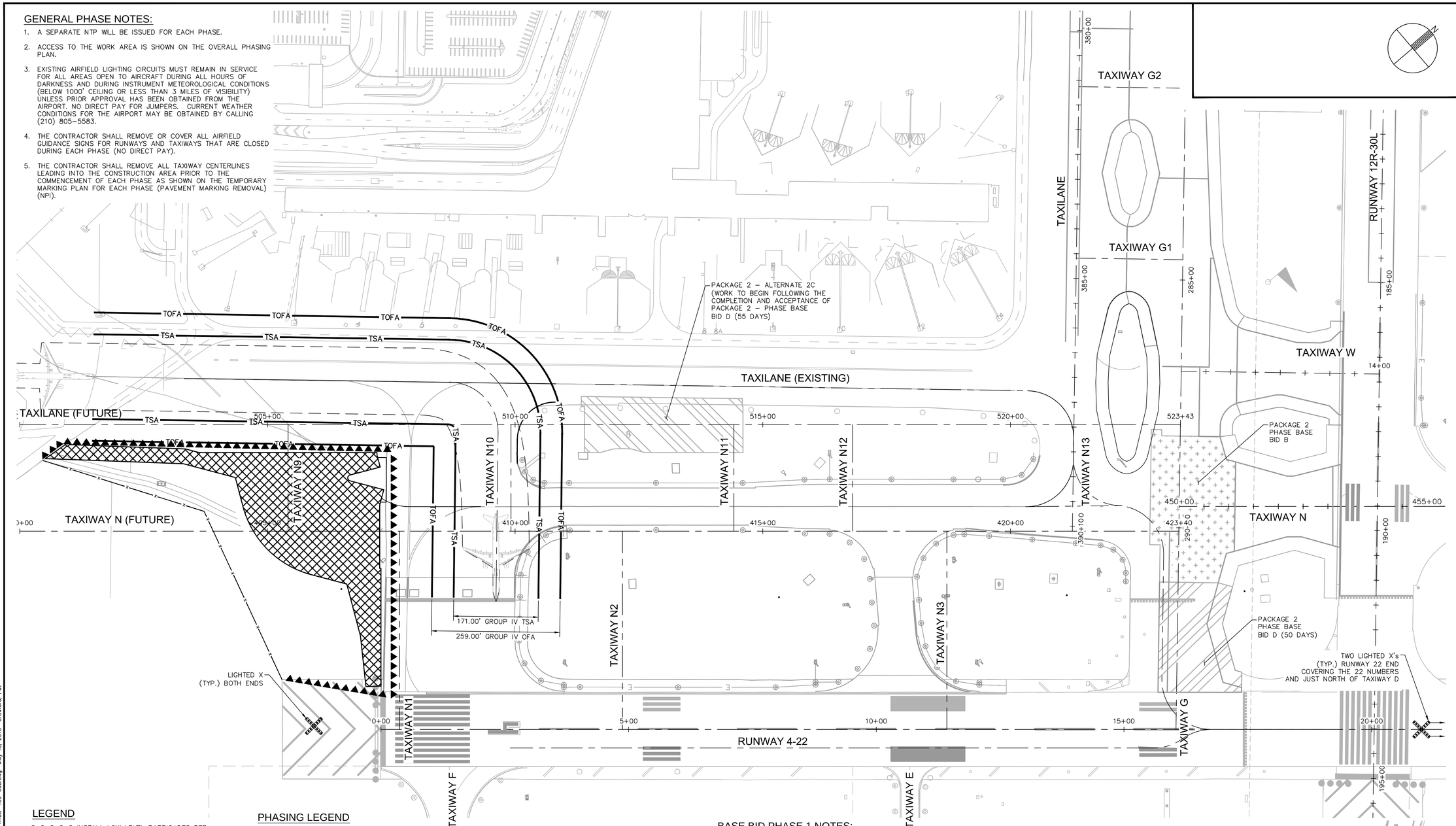
GENERAL PHASE NOTES:

1. A SEPARATE NTP WILL BE ISSUED FOR EACH PHASE.
2. ACCESS TO THE WORK AREA IS SHOWN ON THE OVERALL PHASING PLAN.
3. EXISTING AIRFIELD LIGHTING CIRCUITS MUST REMAIN IN SERVICE FOR ALL AREAS OPEN TO AIRCRAFT DURING ALL HOURS OF DARKNESS AND DURING INSTRUMENT METEOROLOGICAL CONDITIONS (BELOW 1000' CEILING OR LESS THAN 3 MILES OF VISIBILITY) UNLESS PRIOR APPROVAL HAS BEEN OBTAINED FROM THE AIRPORT. NO DIRECT PAY FOR JUMPERS. CURRENT WEATHER CONDITIONS FOR THE AIRPORT MAY BE OBTAINED BY CALLING (210) 805-5583.
4. THE CONTRACTOR SHALL REMOVE OR COVER ALL AIRFIELD GUIDANCE SIGNS FOR RUNWAYS AND TAXIWAYS THAT ARE CLOSED DURING EACH PHASE (NO DIRECT PAY).
5. THE CONTRACTOR SHALL REMOVE ALL TAXIWAY CENTERLINES LEADING INTO THE CONSTRUCTION AREA PRIOR TO THE COMMENCEMENT OF EACH PHASE AS SHOWN ON THE TEMPORARY MARKING PLAN FOR EACH PHASE (PAVEMENT MARKING REMOVAL) (NPI).



LEGEND

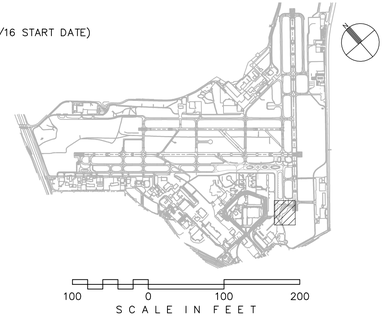
- INSTALL LOW LEVEL BARRICADES PER DETAIL 2, SHEET C2.22
- INSTALL LINKED LOW LEVEL BARRICADES PER DETAIL 3, SHEET C2.22
- AIRCRAFT WINGTIP
- TSA — TAXIWAY SAFETY AREA
- TOFA — TAXIWAY OBJECT FREE AREA
- INSTALL ORANGE SAFETY FENCE PER DETAIL 4 SHEET C2.5
- HAUL ROUTE
- FLAGGER (TO BE SUPPLIED BY CONTRACTOR)
- PORTABLE LIGHTED RUNWAY CLOSURE MARKER PROVIDED BY THE CONTRACTOR

PHASING LEGEND

- PACKAGE 2 – ALTERNATE 2C (40 DAYS)
- PACKAGE 2 – ALTERNATE 2B (55 DAYS)
- PACKAGE 2 – ALTERNATE 2A (45 DAYS)
- PACKAGE 2 – BASE BID B (50 DAYS)
- PACKAGE 2 – BASE BID D (50 DAYS) (03/11/16 START DATE)
- PACKAGE 3 – BASE BID PHASE 1 (65 DAYS)(03/11/16 START DATE)
- PACKAGE 3 – BASE BID PHASE 2 (15 DAYS)

BASE BID PHASE 1 NOTES:

1. BASE BID PHASE 1 WILL BEGIN ON MARCH 11, 2016 CONSISTENT WITH PACKAGE 2 PHASE – BASE BID D. TEMPORARY RUNWAY/TAXIWAY MARKINGS MUST BE COMPLETED PRIOR TO PROJECT START DATE.
2. RUNWAY 4–22 WILL BE CLOSED FOR THE DURATION OF THIS PROJECT BUT USED FOR TAXIING AIRCRAFT.
3. BASE BID PHASE 1 CONSISTS OF THE EXTENSION OF TAXIWAY N FROM THE EXISTING TAXIWAY N CONNECTOR TO THE EXISTING TAXILANE AS SHOWN AND PER SPECIFIC SHEETS.
4. FENCING AND BARRICADES MUST BE PLACED AS SHOWN AND OUT OF THE INDIVIDUAL TAXIWAY OBJECT FREE AREA (TOFA) AS SHOWN.
5. ANY WORK TO BE COMPLETED WITHIN A TAXIWAY OBJECT FREE AREA (TOFA) OR A TAXIWAY SAFETY AREA (TSA) WILL REQUIRE A TEMPORARY CLOSURE UNTIL THE WORK WITHIN THAT AREA IS COMPLETED.
6. CONTRACTOR MUST ALLOW ACCESS THROUGH THE SITE FOR THE PACKAGE 2 CONTRACTOR WORKING ON TAXIWAY G.



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MICHAEL A. HORBY 57178 REGISTERED PROFESSIONAL ENGINEER 05/18/15

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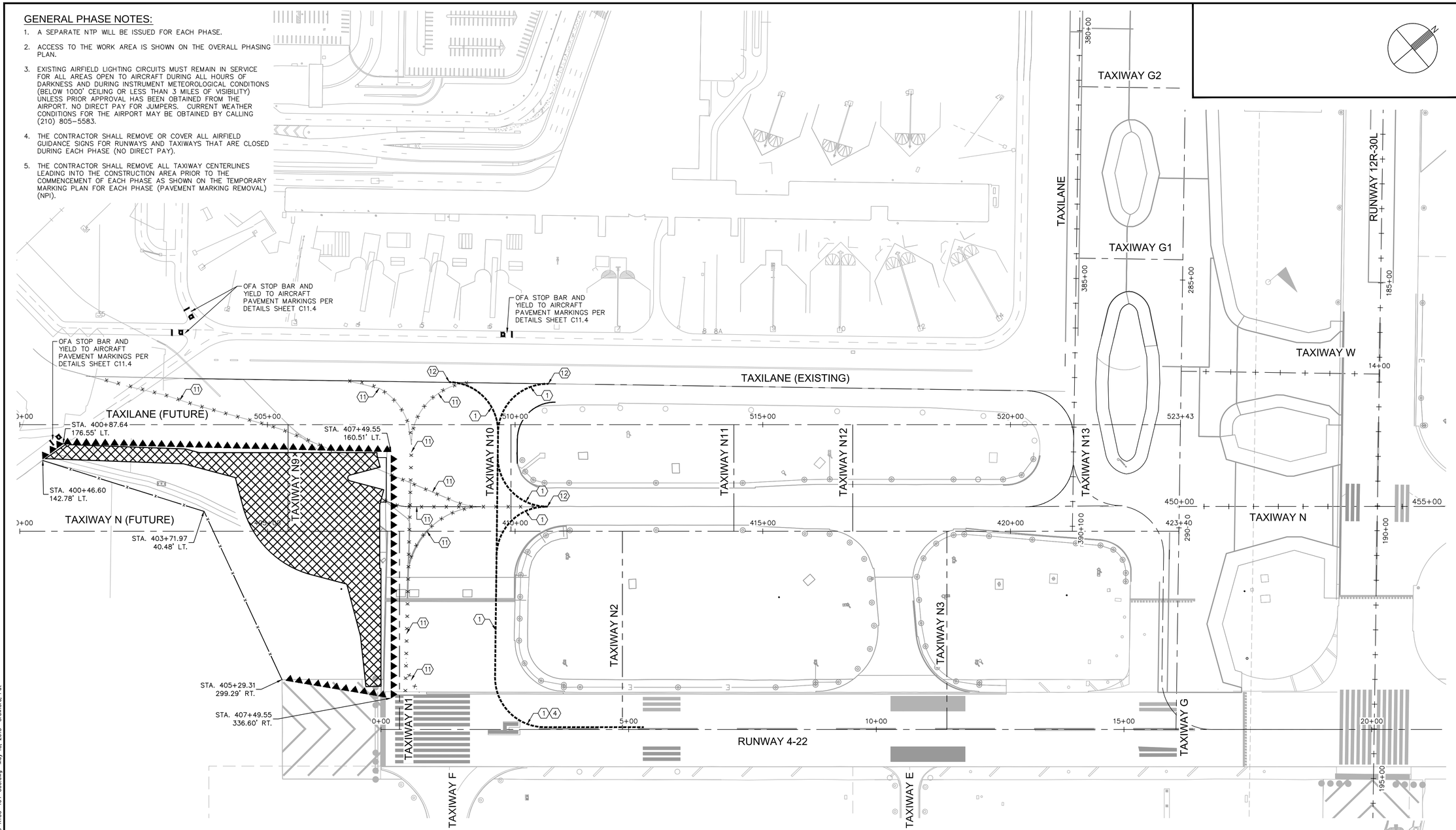
BASE BID - PHASE 1 PLAN

C2.2

SHEET NO. 11 OF 140

GENERAL PHASE NOTES:

1. A SEPARATE NTP WILL BE ISSUED FOR EACH PHASE.
2. ACCESS TO THE WORK AREA IS SHOWN ON THE OVERALL PHASING PLAN.
3. EXISTING AIRFIELD LIGHTING CIRCUITS MUST REMAIN IN SERVICE FOR ALL AREAS OPEN TO AIRCRAFT DURING ALL HOURS OF DARKNESS AND DURING INSTRUMENT METEOROLOGICAL CONDITIONS (BELOW 1000' CEILING OR LESS THAN 3 MILES OF VISIBILITY) UNLESS PRIOR APPROVAL HAS BEEN OBTAINED FROM THE AIRPORT. NO DIRECT PAY FOR JUMPERS. CURRENT WEATHER CONDITIONS FOR THE AIRPORT MAY BE OBTAINED BY CALLING (210) 805-5583.
4. THE CONTRACTOR SHALL REMOVE OR COVER ALL AIRFIELD GUIDANCE SIGNS FOR RUNWAYS AND TAXIWAYS THAT ARE CLOSED DURING EACH PHASE (NO DIRECT PAY).
5. THE CONTRACTOR SHALL REMOVE ALL TAXIWAY CENTERLINES LEADING INTO THE CONSTRUCTION AREA PRIOR TO THE COMMENCEMENT OF EACH PHASE AS SHOWN ON THE TEMPORARY MARKING PLAN FOR EACH PHASE (PAVEMENT MARKING REMOVAL) (NPI).



LEGEND

- ●●●●● INSTALL LOW LEVEL BARRICADES PER DETAIL 2, SHEET C2.5
- ▲▲▲▲▲ INSTALL LINKED LOW LEVEL BARRICADES PER DETAIL 3, SHEET C2.5
- x x x x OBLITERATE EXISTING PAVEMENT MARKING
- INSTALL TEMPORARY PAVEMENT MARKING
- APPLY TEMPORARY TAXIWAY CLOSURE MARKING PER DETAIL 4, SHEET C11.3

GENERAL NOTES

(1) APPLY TEMPORARY SIX INCH (6") WIDE SOLID YELLOW TAXIWAY CENTERLINE PAVEMENT MARKING PER DETAIL 2, SHEET C11.2

(2) APPLY TEMPORARY DOUBLE SIX INCH (6") WIDE SOLID YELLOW TAXIWAY EDGE PAVEMENT MARKING PER DETAIL 3, C11.2

(3) APPLY TEMPORARY ENHANCED CENTERLINE PAVEMENT MARKING PER DETAIL 5, SHEET C11.2

CONSTRUCTION NOTES (CONTINUED)

(4) REFER TO DETAIL 1, SHEET C11.3 FOR RUNWAY/TAXIWAY INTERSECTION INFORMATION

(5) APPLY PERMANENT 36" SOLID WHITE RUNWAY CENTERLINE PAVEMENT MARKING PER DETAIL 6, SHEET C11.2

(6) APPLY PERMANENT 36" SOLID WHITE RUNWAY EDGE LINE PAVEMENT MARKING PER DETAIL 1, SHEET C11.2

(7) APPLY PERMANENT SOLID WHITE AIMING POINT MARKING PER DETAIL 4, SHEET C11.7

(8) APPLY PERMANENT SOLID WHITE TOUCHDOWN ZONE MARKING PER DETAIL 4, SHEET C11.7

(9) APPLY PERMANENT SOLID WHITE RUNWAY DESIGNATION MARKING PER DETAIL 4, SHEET C11.7

(10) APPLY PERMANENT SOLID WHITE RUNWAY THRESHOLD MARKINGS PER DETAIL 4, SHEET C11.7

(11) OBLITERATE EXISTING PAVEMENT MARKING

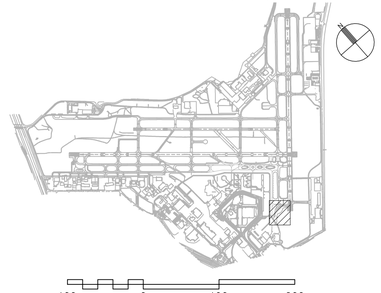
(12) MATCH EXISTING MARKING

GENERAL NOTES

1. PAVEMENT MARKING DETAILS SHALL CONFORM TO THE LATEST EDITION OF THE FEDERAL AVIATION ADMINISTRATION'S ADVISORY CIRCULAR AC-150/5340. IF A CONFLICT OCCURS BETWEEN THESE PLANS AND THE ADVISORY CIRCULAR, THE ADVISORY CIRCULAR SHALL TAKE PRECEDENCE.
2. THE CONTRACTOR SHALL REMOVE THE DESIGNATED PAVEMENT MARKINGS PRIOR TO THE APPLICATION OF TEMPORARY MARKINGS.
3. CONTRACTOR TO SURVEY EXISTING PAVEMENT MARKINGS SHOWN OUTSIDE OF PAVING LIMITS AND TO REINSTALL AT THOSE LOCATIONS UNLESS SPECIFIED OTHERWISE.
4. PROVIDE TEMPORARY APPLICATION OF ALL NEW PAVEMENT MARKINGS AS PER SPECIFICATIONS.
5. ALL TEMPORARY MARKINGS. LOCATED ON PCC, SHALL HAVE A SIX-INCH (6") WIDE BLACK BORDER.
6. EVERY EFFORT HAS BEEN MADE TO ACCURATELY DEPICT ALL MARKINGS THAT WILL BE RE-STRIPED ON THIS PROJECT, HOWEVER ADDITIONAL MARKINGS MAY BE REQUIRED AT THE DIRECTION OF THE ENGINEER AND SAT OPERATIONS.
7. SURFACES THAT ARE OBSTRUCTED DUE TO DEBRIS OR FLAKING PAINT SHALL BE THOROUGHLY CLEANED AND SWEPT BEFORE APPLYING NEW MARKINGS.

GENERAL NOTES (CONTINUED)

8. ENGINEER TO REVIEW AND APPROVE PAVEMENT MARKING LAYOUT BEFORE MARKING IS PERFORMED.
9. REFER TO SHEET C1.9 FOR HORIZONTAL AND VERTICAL CONTROL.
10. REFER TO SHEET C11.2 AND C11.3 FOR FOR PAVEMENT MARKING DETAILS.
11. ALL TEMPORARY MARKINGS SHALL RECEIVE A 6" BLACK BORDER (TEMPORARY APPLICATION).



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BASE BID - PHASE 1 TEMPORARY MARKINGS

C2.3

SHEET NO. 12 OF 140

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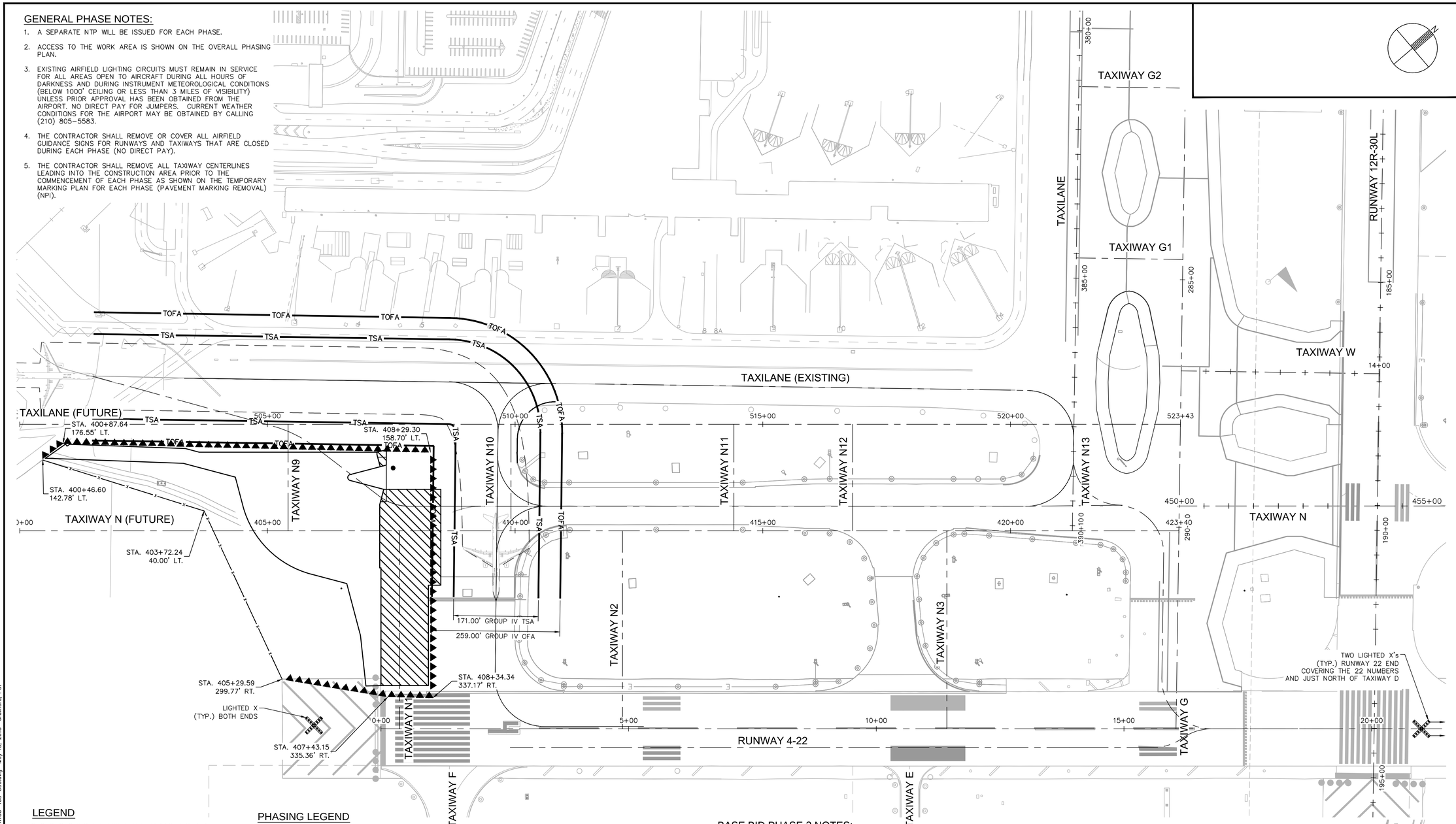
4. THE CONTRACTOR SHALL REMOVE OR COVER ALL AIRFIELD GUIDANCE SIGNS FOR RUNWAYS AND TAXIWAYS THAT ARE CLOSED DURING EACH PHASE (NO DIRECT PAY).
5. THE CONTRACTOR SHALL REMOVE ALL TAXIWAY CENTERLINES LEADING INTO THE CONSTRUCTION AREA PRIOR TO THE COMMENCEMENT OF EACH PHASE AS SHOWN ON THE TEMPORARY MARKING PLAN FOR EACH PHASE (PAVEMENT MARKING REMOVAL) (NPI).



LEGEND

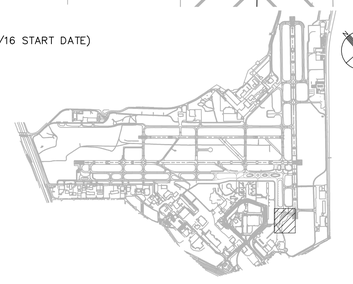
- INSTALL LOW LEVEL BARRICADES PER DETAIL 2, SHEET C2.22
- INSTALL LINKED LOW LEVEL BARRICADES PER DETAIL 3, SHEET C2.22
- AIRCRAFT WINGTIP
- TSA — TAXIWAY SAFETY AREA
- TOFA — TAXIWAY OBJECT FREE AREA
- INSTALL ORANGE SAFETY FENCE PER DETAIL 4 SHEET C2.5
- HAUL ROUTE
- FLAGGER (TO BE SUPPLIED BY CONTRACTOR)
- PORTABLE LIGHTED RUNWAY CLOSURE MARKER PROVIDED BY THE CONTRACTOR

PHASING LEGEND

- PACKAGE 2 – ALTERNATE 2C (40 DAYS)
- PACKAGE 2 – ALTERNATE 2B (55 DAYS)
- PACKAGE 2 – ALTERNATE 2A (45 DAYS)
- PACKAGE 2 – BASE BID B (50 DAYS)
- PACKAGE 2 – BASE BID D (50 DAYS) (03/11/16 START DATE)
- PACKAGE 3 – BASE BID PHASE 1 (65 DAYS)(03/11/16 START DATE)
- PACKAGE 3 – BASE BID PHASE 2 (15 DAYS)

BASE BID PHASE 2 NOTES:

1. BASE BID PHASE 2 WILL BEGIN FOLLOWING THE COMPLETION AND ACCEPTANCE OF BASE BID PHASE 1.
2. RUNWAY 4-22 WILL BE CLOSED FOR THE DURATION OF THIS PROJECT BUT USED FOR TAXIING AIRCRAFT.
3. BASE BID PHASE 2 MUST BE COMPLETED AT NIGHT. COORDINATION WITH OPERATIONS IS REQUIRED TO ADDRESS ANY AIRLINE TRAFFIC ISSUES.
4. BASE BID PHASE 2 CONSISTS OF MILLING A PORTION OF EISTING TAXIWAY N PCC PAVEMENT AND OVERLAYING WITH ASPHALT PAVEMENT.
5. FENCING AND BARRICADES MUST BE PLACED AS SHOWN AND OUT OF THE INDIVIDUAL TAXIWAY OBJECT FREE AREA (TOFA) AS SHOWN.
6. ANY WORK TO BE COMPLETED WITHIN A TAXIWAY OBJECT FREE AREA (TOFA) OR A TAXIWAY SAFETY AREA (TSA) WILL REQUIRE A TEMPORARY CLOSURE UNTIL THE WORK WITHIN THAT AREA IS COMPLETED.
6. CONTRACTOR MUST ALLOW ACCESS THROUGH THE SITE FOR THE PACKAGE 2 CONTRACTOR WORKING ON TAXIWAY G.



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SAN ANTONIO AIRPORT SYSTEM

Kimley»Horn

KIMLEY-HORN AND ASSOCIATES, INC.
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PHONE: (210) 541-9166

TEXAS REGISTERED FIRM, NO. 928

TERMINAL AREA TAXIWAY IMPROVEMENTS - (PACKAGE 3)

MICHAEL A. NORBY
87178
REGISTERED PROFESSIONAL ENGINEER
05/18/15

MARK	DATE	DESCRIPTION

ISSUE:

PROJECT NO:	33-00193
FILE NAME:	_33-00193-R1CO-405-C00
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SHEET TITLE:

BASE BID - PHASE 2 PLAN

C2.4

SHEET NO. 13 OF 140

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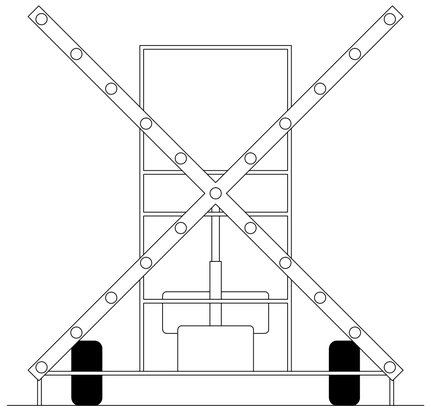


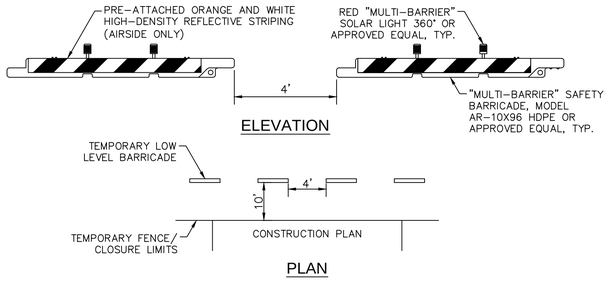
1 C2.5 PORTABLE LIGHTED RUNWAY CLOSURE MARKER

FOUR LOCATIONS AS SHOWN ON PLANS

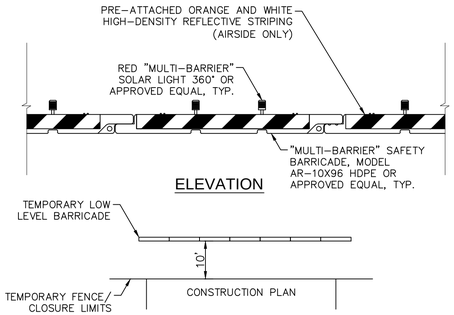
LIGHTED X NOTES

PORTABLE LIGHTED RUNWAY CLOSURE MARKERS (LIGHTED "X") SHALL MEET ALL OF THE FOLLOWING CONDITIONS:

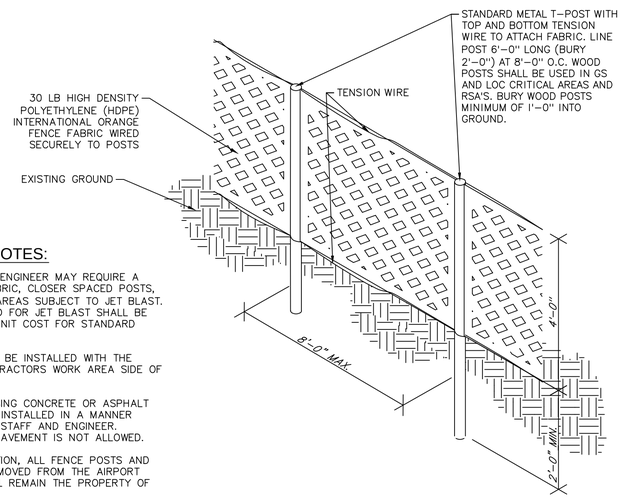
1. WILL BE PROVIDED AND MAINTAINED BY THE CONTRACTOR THROUGHOUT THE DURATION OF THE PROJECT. CONTRACTOR SHALL BE NOTIFIED IMMEDIATELY IF ANY DISRUPTION TO THE LIGHTED RUNWAY CLOSURE MARKERS IS NOTICED. LIGHTED "X" TO BECOME PROPERTY OF THE AIRPORT UPON COMPLETION OF THE PROJECT.
2. BE A PORTABLE, TOWABLE UNIT THAT CAN BE QUICKLY REMOVED FROM THE RUNWAY.
3. CONSIST OF CLEAR INCANDESCENT LAMPS OR TRANSMIT A WHITE COLOR, ARRANGED IN THE SHAPE OF A LETTER "X" WITH ARMS CROSSED AT AN APPROPRIATE ANGLE TO MAKE THE "X" DISCERNIBLE. THE ARMS SHALL BE PAINTED YELLOW ON ALL SIDES SO THAT THE UNIT WILL BE CLEARLY VISIBLE WHEN IT IS IN POSITION.
4. BE ENERGIZED BY A PORTABLE POWER SUPPLY.
5. BE CONTROLLED SO THAT THE LIGHTED SIGNAL WILL FLASH AT AN APPROXIMATE RATE OF TWO AND A HALF TO THREE (2.5–3) SECONDS "ON" AND ONE TO TWO AND A HALF (1–2.5) SECONDS "OFF".
6. PROVIDE THE FOLLOWING DAYTIME AND NIGHTTIME VISUAL REFERENCE DURING VISUAL FLIGHT RULE (VFR) CONDITIONS WHEN PLACED ON CENTERLINE PER THE DIMENSIONS SHOWN ON THE PLANS:
   (A) VISIBLE TO THE PILOT AT A RANGE OF AT LEAST FIVE NAUTICAL MILES.
   (B) RECOGNIZABLE AS A LETTER "X" FROM A RANGE OF AT LEAST ONE NAUTICAL MILE.
7. PROVIDE LAMP DIMMING CAPABILITY FOR NIGHTTIME OPERATIONS.
8. PRODUCE A SIGNAL THAT PROVIDES A HORIZONTAL COVERAGE TO AT LEAST FIFTEEN DEGREES (15') ON EACH SIDE OF THE RUNWAY CENTERLINE AND A VERTICAL COVERAGE FROM ZERO DEGREES (0') TO TEN DEGREES (10') ABOVE HORIZONTAL, BOTH DAY AND NIGHT, AT A RANGE OF ONE NAUTICAL MILE.
9. ADJUSTABLE AIMING AND LEVELING TO ALLOW TILTING TO AN OPTIMUM ANGLE OF THREE DEGREES (3') FROM VERTICAL.
10. WITHSTAND A MINIMUM WIND SPEED OF AT LEAST FORTY MILES PER HOUR (40 MPH) WITHOUT AFFECTING AIMING OR OPERATION.
11. INCLUDE AN ILLUMINATED FAILURE INDICATOR THAT IS VISIBLE FROM THE BACK (RUNWAY SIDE) OF THE UNIT.
12. INCLUDE AN OPERATIONS PLACARD IN A CONSPICUOUS LOCATION THAT INSTRUCTS OPERATORS TO VISUALLY CHECK THE OPERATION OF THE DEVICE EVERY TWO HOURS.
13. ONE PERSON SET UP IN LESS THAN FIVE MINUTES.
14. DIESEL PORTABLE POWER WITH ADAPTER TO RUN DIRECTLY FROM ELECTRICAL OUTLETS.
15. TRAILER HITCH OPTIONS INCLUDING TANDEM TOWING FOR ON–AIRPORT OPERATIONS.
16. ABILITY TO PROVIDE UP TO ONE HUNDRED AND TWENTY (120) HOURS OF CONTINUOUS OPERATION.
17. FAIL SAFE PROTECTION TO ENSURE THAT THE UNIT STAYS ON AS CONTINUOUS LIGHT IF THE FLASHER UNIT SHOULD FAIL.
18. DIMENSIONING AND LIGHTING ARRANGEMENT SHALL FOLLOW THE DESIGN RECOMMENDATION PER FAA AC 150/5345–55A.



2 C2.5 WATER FILLED LOW LEVEL BARRICADE



3 C2.5 WATER FILLED LINKED LOW LEVEL BARRICADE



4 C2.5 SAFETY FENCE

SAFETY FENCE NOTES:

1. THE SAT STAFF AND ENGINEER MAY REQUIRE A STRONGER FENCE FABRIC, CLOSER SPACED POSTS, AND/OR BRACES IN AREAS SUBJECT TO JET BLAST. AREAS STRENGTHENED FOR JET BLAST SHALL BE PAID AT TWICE THE UNIT COST FOR STANDARD SAFETY FENCE.
2. SAFETY FENCE SHALL BE INSTALLED WITH THE FABRIC ON THE CONTRACTORS WORK AREA SIDE OF THE POST.
3. SAFETY FENCE CROSSING CONCRETE OR ASPHALT PAVEMENT SHALL BE INSTALLED IN A MANNER ACCEPTABLE TO SAT STAFF AND ENGINEER. ANCHORING TO THE PAVEMENT IS NOT ALLOWED.
4. AT PROJECT COMPLETION, ALL FENCE POSTS AND FABRIC SHALL BE REMOVED FROM THE AIRPORT PROPERTY AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.
5. SAFETY FENCE SHALL BE PAID FOR IN ACCORDANCE WITH ITEM 100 "MOBILIZATION" BID ITEM 100.3, "AIRSIDE SAFETY, SECURITY, AND TRAFFIC CONTROL."

NOTES

1. CONTRACTOR TO PROVIDE BARRICADES AND LIGHTS FOR THE DURATION OF THE PROJECT, TO BE REMOVED UPON COMPLETION OF THE PROJECT.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING PROPER POSITIONING OF ALL BARRICADES AND FILLING WITH WATER. ANY BARRICADES DAMAGED DURING CONSTRUCTION WILL BE IMMEDIATELY REPLACED. (NPI)
3. LOW LEVEL BARRICADES SHALL BE PARALLEL TO THE CONSTRUCTION PERIMETER.
4. AROUND OPEN TRENCHES AND LARGE DROP OFFS, GREATER THAN ONE FOOT, THE CONTRACTORS SHALL HOOK THE BARRICADES TOGETHER. SEE PLANS FOR DIMENSIONS.
5. BARRICADES AND LIGHTED X'S SHALL BE PAID FOR IN ACCORDANCE WITH ITEM 100.3 MOBILIZATION BID ITEM #100.3, "AIRSIDE SAFETY, SECURITY, AND TRAFFIC CONTROL."

CITY OF SAN ANTONIO AVIATION DEPARTMENT

SAN ANTONIO AIRPORT SYSTEM

Kimley»Horn

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PHONE: (210) 541–9166

TEXAS REGISTERED FIRM, NO. 928

TERMINAL AREA TAXIWAY IMPROVEMENTS - (PACKAGE 3)

MICHAEL A. NORBY 87178 REGISTERED PROFESSIONAL ENGINEER
05/18/15

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PHASING DETAILS

C2.5

SHEET NO. 14 OF 140

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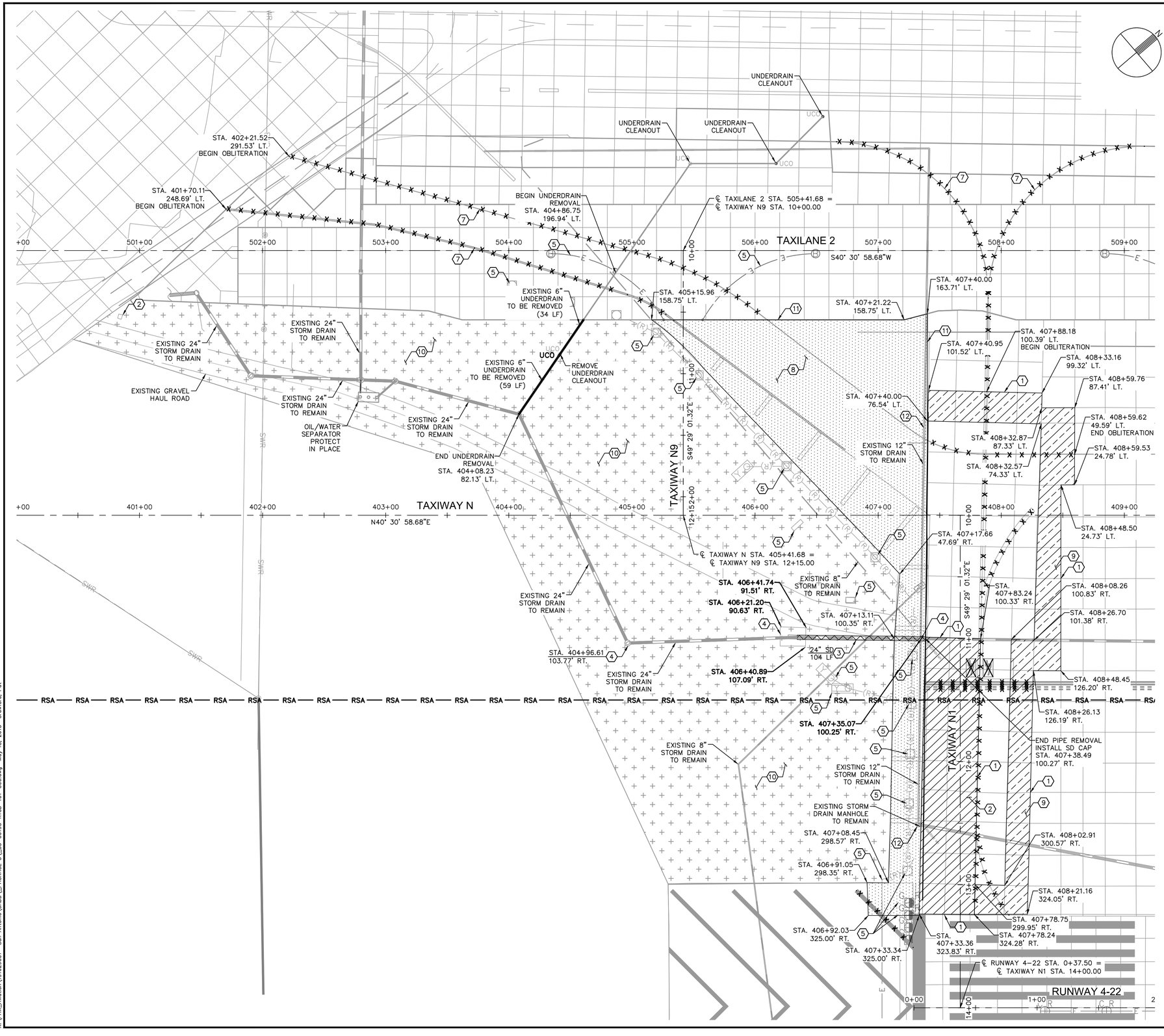


LEGEND

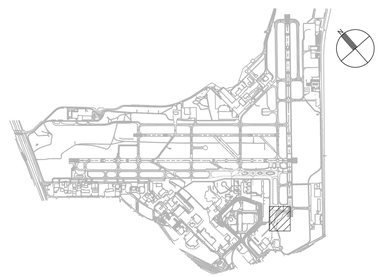
- PORTLAND CEMENT CONCRETE PAVEMENT REMOVAL
- CLEAR AND GRUB (P-101)
- FULL DEPTH AC PAVEMENT REMOVAL BY MILLING
- 2" AC PAVEMENT REMOVAL BY MILLING
- PORTLAND CEMENT CONCRETE PAVEMENT VARIABLE MILL (MAX 2")
- STORM DRAIN REMOVAL
- PAVEMENT MARKING OBLITERATION
- PHASING LIMITS

GENERAL NOTES

1. EXISTING UTILITY INFORMATION SHOWN ON THE PLANS CONCERNING THE TYPE, SIZE, AND LOCATION WERE COMPILED BASED ON THE UTILITY RECORDS AVAILABLE TO THE ENGINEER. THE CONTRACTOR SHALL PROVIDE A UTILITY LOCATOR AND VERIFY THE ACTUAL LOCATION OF UTILITIES PRIOR TO CONSTRUCTION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT ALL EXISTING UTILITIES IN PLACE UNLESS NOTED OR SPECIFIED OTHERWISE. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. UTILITIES INTERFERING WITH CONSTRUCTION SHALL BE RESET OR RELOCATED BY THE UTILITY COMPANY CONCERNED UNLESS NOTED OTHERWISE.
2. REFER TO SHEET C1.9 FOR HORIZONTAL AND VERTICAL CONTROL.
3. REFER TO ELECTRICAL PLANS (SERIES E) FOR ELECTRICAL DEMOLITION.
4. DOUBLE SAWCUT IS REQUIRED ALONG PCC REMOVAL LIMITS TO PROTECT EXISTING PCC PAVEMENT TO REMAIN.
5. STATIONING IS BASED ON FUTURE TAXIWAY N CENTERLINE STATIONING.
6. ALTERNATE 1 INCLUDES DEMOLITION OF THOSE AREAS SHOWN PREVIOUSLY IN THE BASE BID PLANS. THE NEW PHASING LIMITS, AS SHOWN IN THE INDIVIDUAL ALTERNATE 1 PHASING SHEETS, ALTER LIMITS AND TIMING OF THE BASE BID. IF ALTERNATE 1 IS AWARDED, BASE BID PHASING WILL BE INCLUDED IN ALTERNATE 1.

CONSTRUCTION NOTES

1. SAWCUT EXISTING PCC PAVEMENT – FULL DEPTH
2. REMOVE AND DISPOSE OF EXISTING PCC PAVEMENT OFFSITE
3. REMOVE AND DISPOSE OF EXISTING STORM DRAIN PIPE – LIMITS OF REMOVAL PER PLAN
4. REMOVE AND DISPOSE OF EXISTING DRAINAGE STRUCTURE
5. REFER TO ELECTRICAL PLANS (SERIES E)
6. REMOVE AND DISPOSE OF EXISTING AC PAVEMENT OFFSITE
7. OBLITERATE EXISTING PAVEMENT MARKING
8. FULL DEPTH AC PAVEMENT REMOVAL BY MILLING
9. 2" AC PAVEMENT REMOVAL BY MILLING
10. CLEAR AND GRUB
11. SAWCUT EXISTING AC PAVEMENT – FULL DEPTH
12. PROTECT IN PLACE
13. UNDERDRAIN REMOVAL



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SCALE IN FEET

CITY OF SAN ANTONIO AVIATION DEPARTMENT

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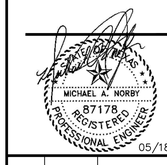
TEXAS REGISTERED FIRM, NO. 928

TERMINAL AREA TAXIWAY IMPROVEMENTS - (PACKAGE 3)



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DEMOLITION PLAN - BASE BID

C3.1

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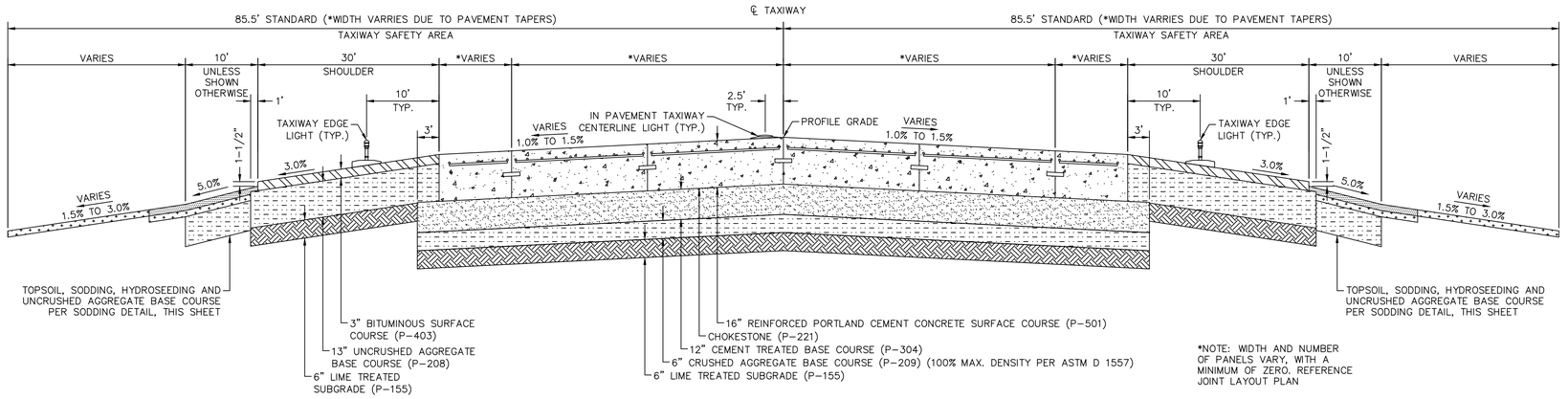
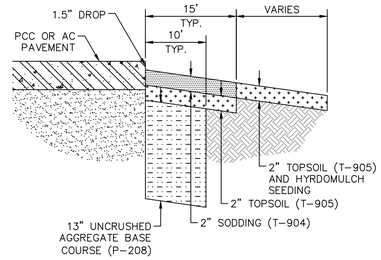


A / C4.1 TAXIWAY 'N' , 'N1' , 'N2' ,'N3' , 'N9' , 'N10' , AND 'N13' TYPICAL SECTION

N.T.S



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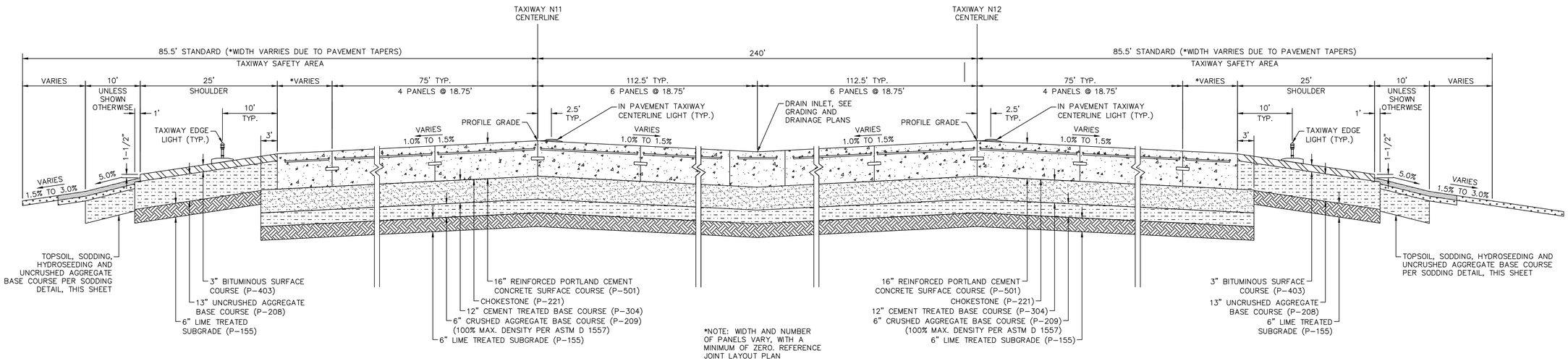

B / C4.1 TAXIWAY 'N11' AND TAXIWAY 'N12' TYPICAL SECTION

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.

CITY OF SAN ANTONIO AVIATION DEPARTMENT

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TERMINAL AREA TAXIWAY IMPROVEMENTS - (PACKAGE 3)

STATE OF TEXAS
MICHAEL A. NORBY
57178
REGISTERED PROFESSIONAL ENGINEER
05/18/15

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TYPICAL SECTIONS

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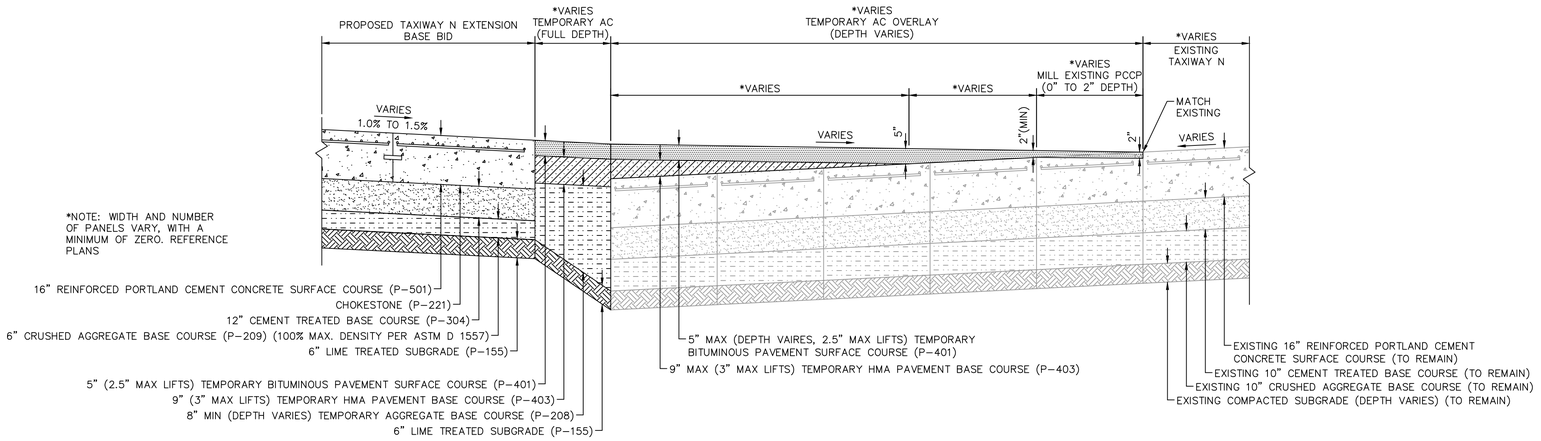
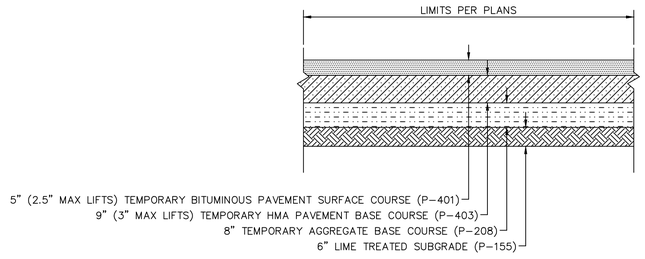


A C4.2 TAXIWAY 'N' TEMPORARY ASPHALT TRANSITION (CONDITION 1) TYPICAL SECTION - BASE BID

N.T.S

B C4.2 TAXIWAY 'N' TEMPORARY ASPHALT TRANSITION (CONDITION 2) TYPICAL SECTION - BASE BID

N.T.S



D C4.2 TEMPORARY ASPHALT (FULL DEPTH) TYPICAL SECTION

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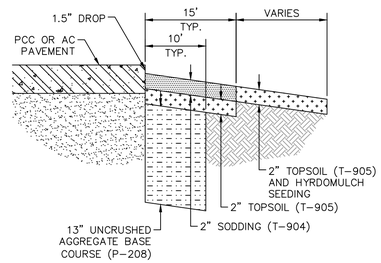

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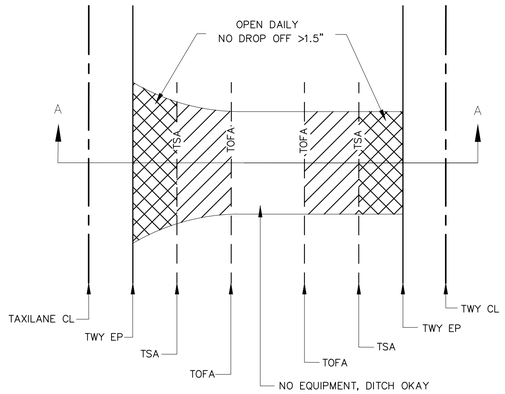
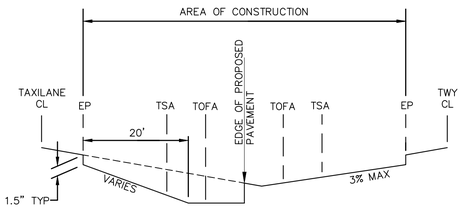


LEGEND:

AREA OF CONSTRUCTION WITHIN TSA (RETURN TO FAA 150/5370-2 CURRENT EDITION REQUIREMENTS)

AREA OF CONSTRUCTION WITHIN TOFA (NO WORK OR EQUIPMENT IN THIS AREA WHILE TAXIWAY IS ACTIVE)



A-A CROSS SECTION VIEW

NOTE: AIRCRAFT ALONG TAXIWAY WILL NOT BE UNDER POWER, BUT INSTEAD WILL COME TO A COMPLETE STOP, POWER DOWN, AND BE TOWED IN AND OUT OF THE GATE. THROUGH TAXIING WILL NOT BE ALLOWED.

C C4.2 TSA / TOFA CONSTRUCTION DETAIL

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.

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TERMINAL AREA TAXIWAY IMPROVEMENTS (PACKAGE 3)

MICHAEL A. NORBY 87178 REGISTERED PROFESSIONAL ENGINEER 05/18/15

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TYPICAL SECTIONS - BASE BID

C4.2

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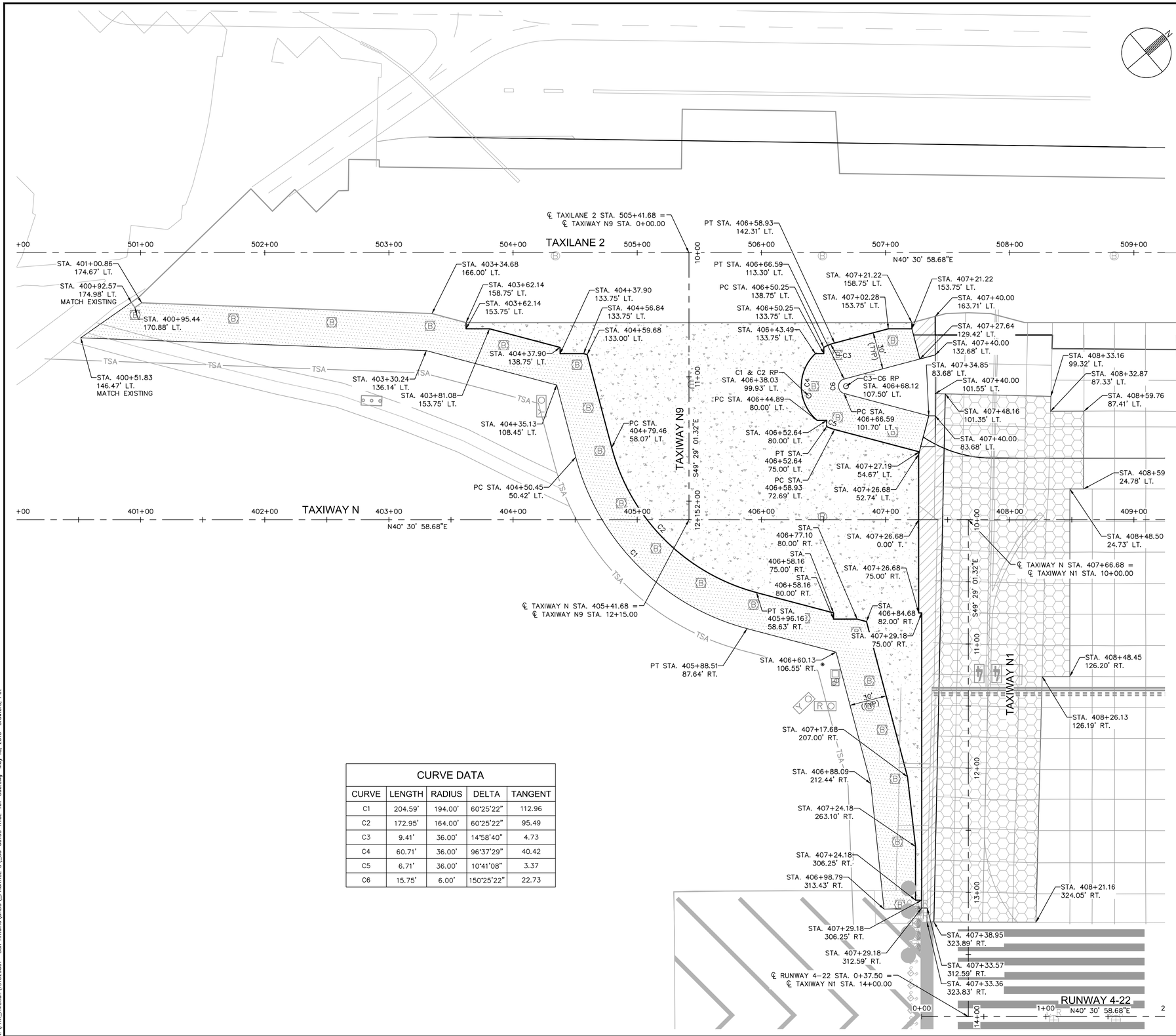


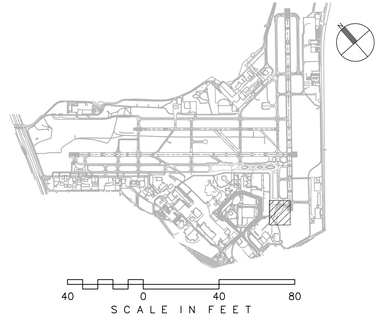
CURVE DATA				
CURVE	LENGTH	RADIUS	DELTA	TANGENT
C1	204.59'	194.00'	60°25'22"	112.96
C2	172.95'	164.00'	60°25'22"	95.49
C3	9.41'	36.00'	14°58'40"	4.73
C4	60.71'	36.00'	96°37'29"	40.42
C5	6.71'	36.00'	10°41'08"	3.37
C6	15.75'	6.00'	150°25'22"	22.73

LEGEND

- PORTLAND CEMENT CONCRETE PAVEMENT
- PORTLAND CEMENT CONCRETE TRANSITION
- ASPHALT CONCRETE SHOULDER PAVEMENT
- ASPHALT CONCRETE TRANSITION
- ASPHALT CONCRETE MILL AND REPLACE (VARIABLE DEPTH)

GENERAL NOTES

1. REFER TO SHEET C1.9 HORIZONTAL AND VERTICAL CONTROL.
2. REFER TO ELECTRICAL PLANS (SERIES E) FOR AIRFIELD LIGHTING, SIGNING, AND ELECTRICAL FEATURES.
3. ALL STATIONS AND OFFSETS REFER TO FUTURE TAXIWAY N CENTERLINE UNLESS OTHERWISE NOTED.



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GEOMETRIC LAYOUT PLAN - BASE BID

C5.1

SHEET NO. 18 OF 140

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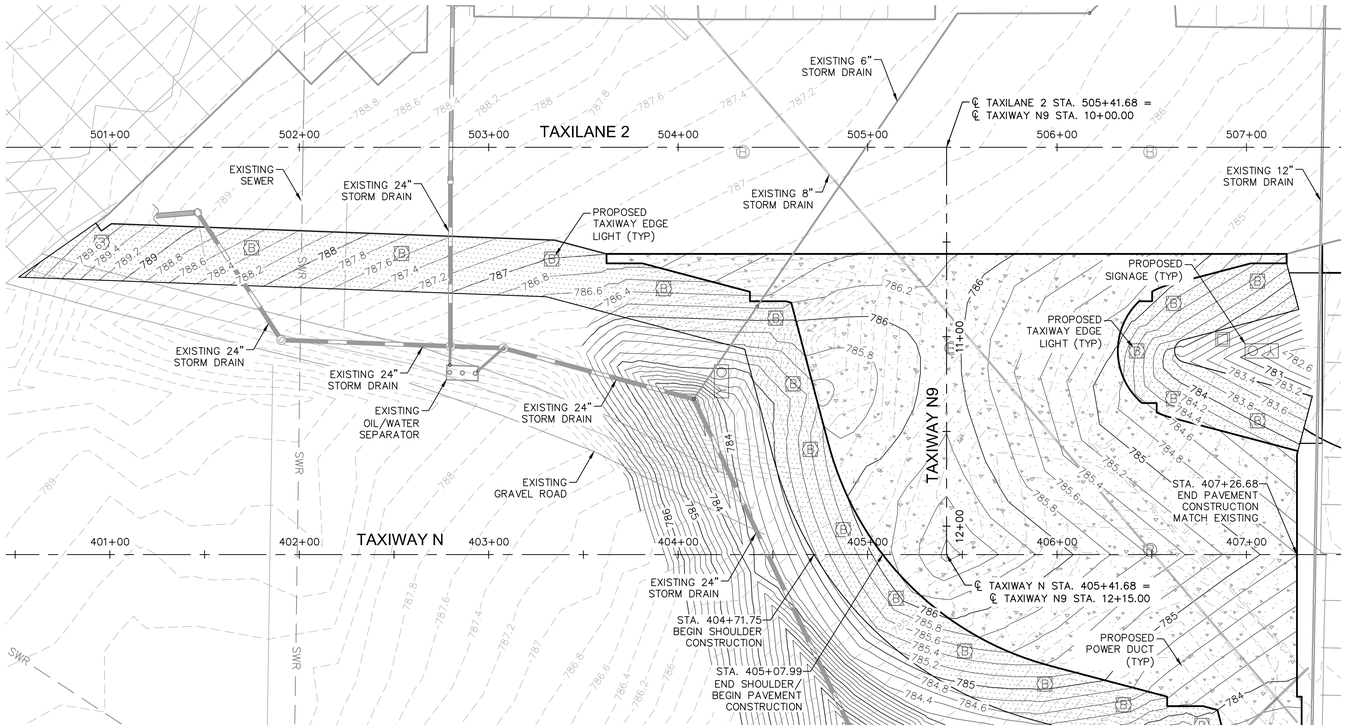
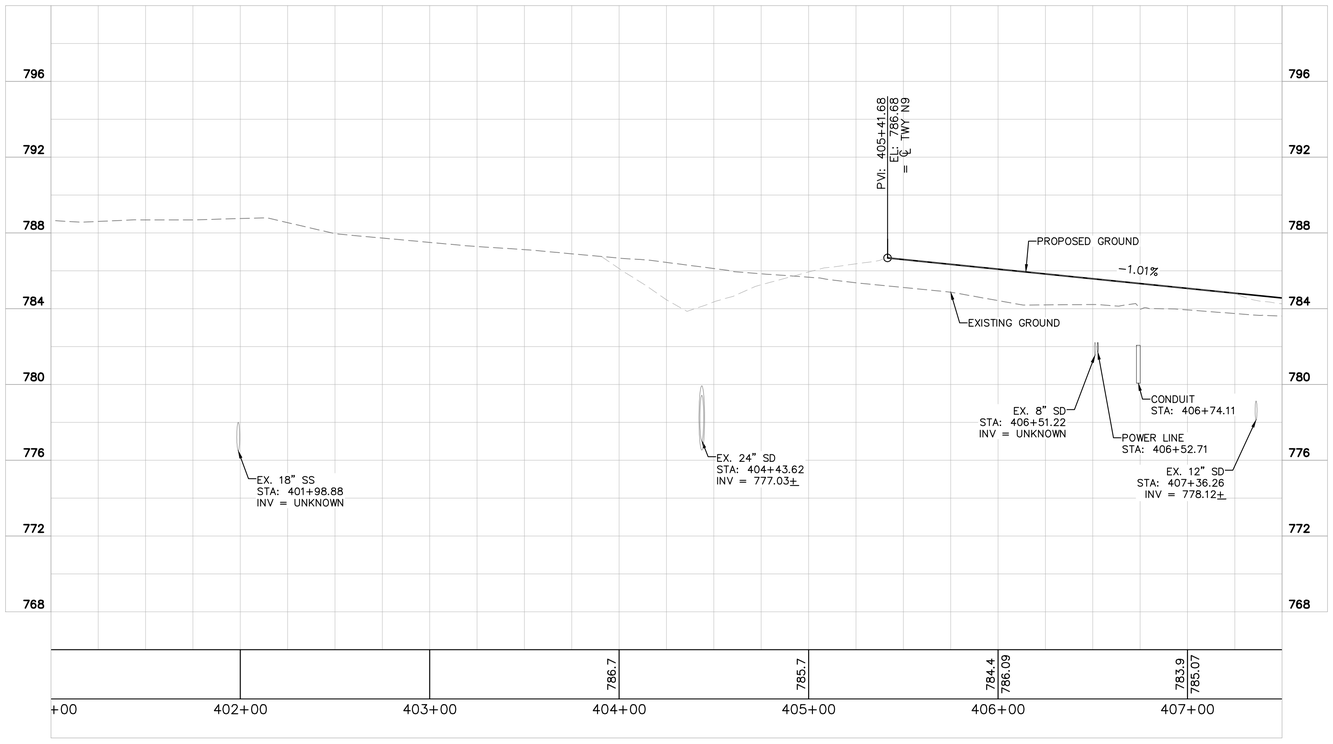




LEGEND

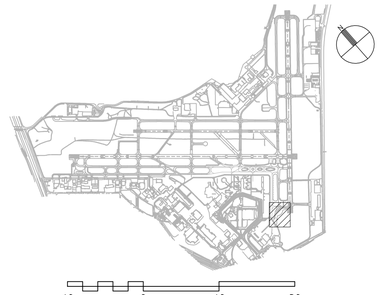
- PORTLAND CEMENT CONCRETE PAVEMENT
- PORTLAND CEMENT CONCRETE TRANSITION
- ASPHALT CONCRETE SHOULDER PAVEMENT
- ASPHALT CONCRETE TRANSITION
- ASPHALT CONCRETE MILL AND REPLACE (VARIABLE DEPTH)
- EXISTING RGRCP
- PROPOSED RGRCP
- DIRECTION OF FLOW
- 780 EXISTING CONTOUR
- 780 PROPOSED CONTOUR

GENERAL NOTES

1. ALL STATIONS AND OFFSETS REFER TO THE APPROPRIATE RUNWAY OR TAXIWAY STATIONING.
2. REFER TO ELECTRICAL PLANS (SERIES E) FOR AIRFIELD LIGHTING, SIGNING, AND ELECTRICAL FEATURES.
3. REFER TO GRADING AND DRAINAGE PLANS FOR DRAINAGE INFORMATION.

SCALE IN FEET (VERTICAL)

4 0 4 8



40 0 40 80
SCALE IN FEET

CITY OF SAN ANTONIO AVIATION DEPARTMENT

SAN ANTONIO AIRPORT SYSTEM

Kimley»Horn
KIMLEY-HORN AND ASSOCIATES, INC.
601 NW LOOP 410, SUITE 350
SAN ANTONIO, TEXAS 78216
PHONE: (210) 541-9166
TEXAS REGISTERED FIRM, NO. 928

TERMINAL AREA TAXIWAY IMPROVEMENTS - (PACKAGE 3)

MICHAEL A. NORBY 87178 REGISTERED PROFESSIONAL ENGINEER
05/18/15

MARK	DATE	DESCRIPTION
ISSUE:		

PROJECT NO:	33-00193
FILE NAME:	_33-00193-R1CP-101-C00
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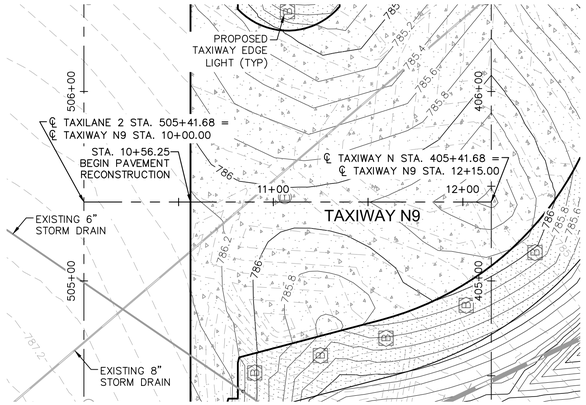
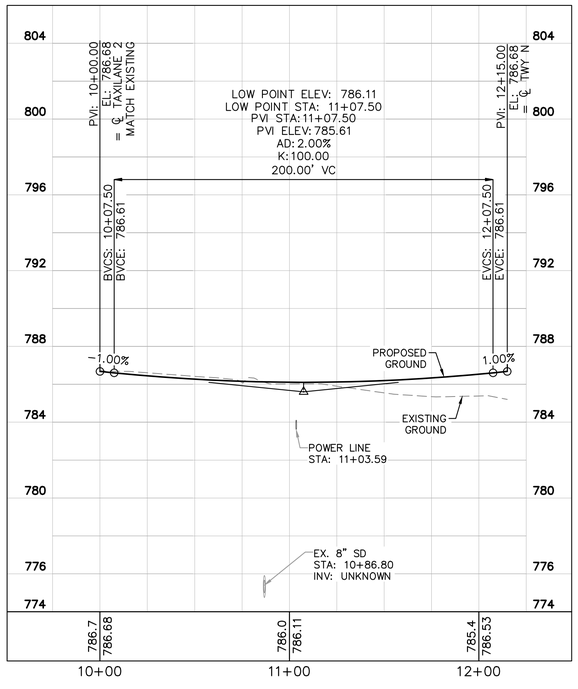
SHEET TITLE:

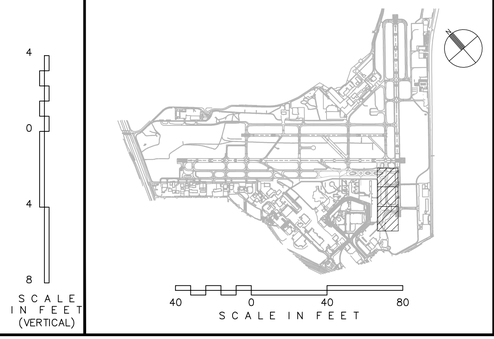
PLAN AND PROFILE - TAXIWAY N - BASE BID

C6.1



TAXIWAY N9





LEGEND

- PORTLAND CEMENT CONCRETE PAVEMENT
- PORTLAND CEMENT CONCRETE TRANSITION
- ASPHALT CONCRETE SHOULDER PAVEMENT
- ASPHALT CONCRETE TRANSITION
- ASPHALT CONCRETE MILL AND REPLACE (VARIABLE DEPTH)
- EXISTING RGRCP
- PROPOSED RGRCP
- DIRECTION OF FLOW
- 780 EXISTING CONTOUR
- 780 PROPOSED CONTOUR

GENERAL NOTES

1. ALL STATIONS AND OFFSETS REFER TO THE APPROPRIATE RUNWAY OR TAXIWAY STATIONING.
2. REFER TO ELECTRICAL PLANS (SERIES E) FOR AIRFIELD LIGHTING, SIGNING, AND ELECTRICAL FEATURES.
3. REFER TO GRADING AND DRAINAGE PLANS FOR DRAINAGE INFORMATION.

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PLAN AND PROFILE - TAXIWAY N9 - BASE BID

C6.2

SHEET NO. 20 OF 140

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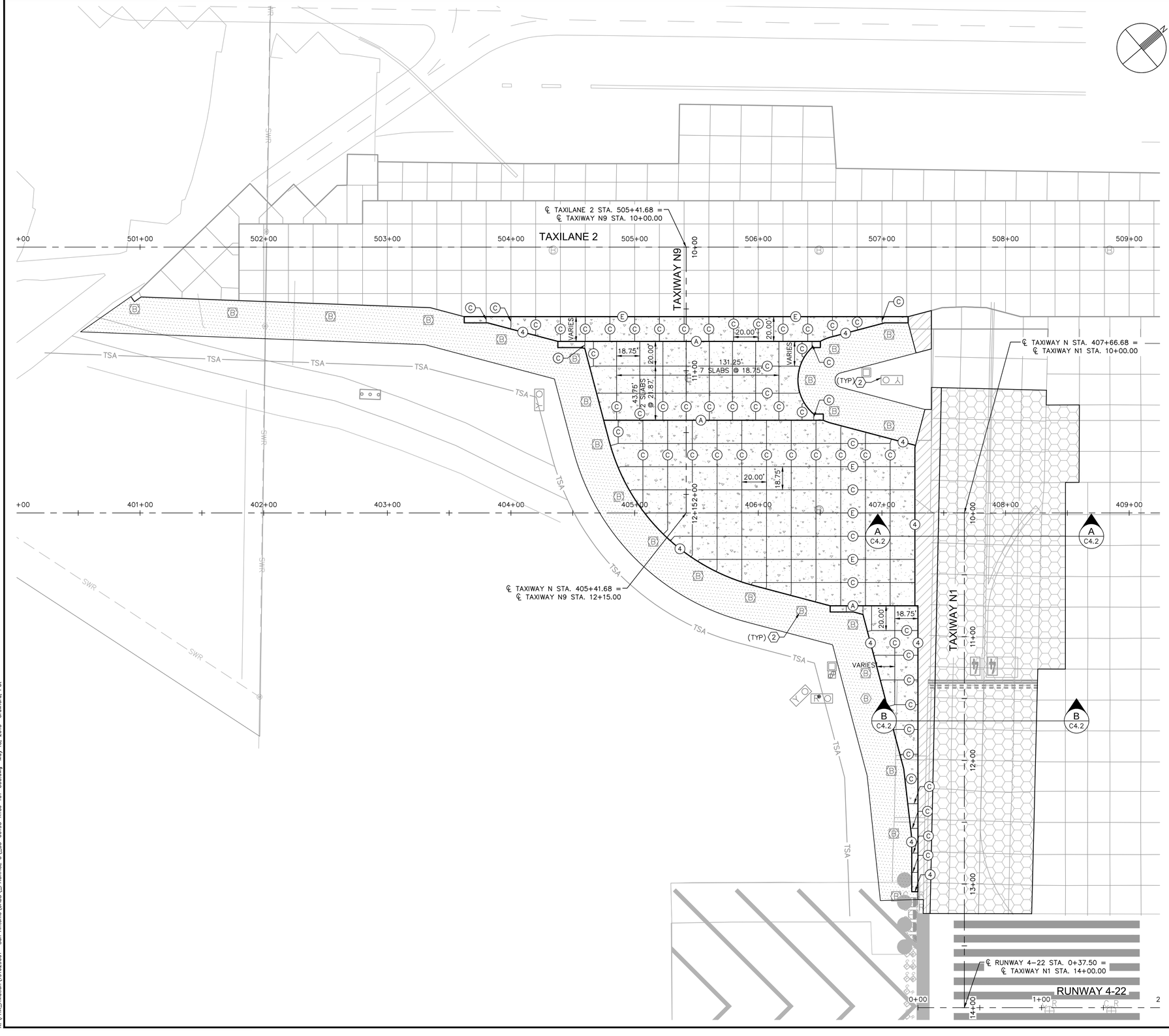


LEGEND

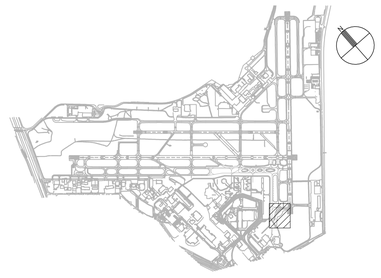
- PORTLAND CEMENT CONCRETE PAVEMENT
- PORTLAND CEMENT CONCRETE TRANSITION
- ASPHALT CONCRETE SHOULDER PAVEMENT
- ASPHALT CONCRETE TRANSITION
- ASPHALT CONCRETE MILL AND REPLACE (VARIABLE DEPTH)
- (A) JOINT TYPE A, REFER TO SHEET C7.2 FOR PAVEMENT JOINT DETAILS
- (A1) JOINT TYPE A1, REFER TO SHEET C7.2 FOR PAVEMENT JOINT DETAILS
- (C) JOINT TYPE C, REFER TO SHEET C7.2 FOR PAVEMENT JOINT DETAILS
- (E) JOINT TYPE E, REFER TO SHEET C7.2 FOR PAVEMENT JOINT DETAILS
- (4) EDGE SEAL TYPE 4, REFER TO SHEET C7.2 FOR PAVEMENT JOINT DETAILS
- A / C4.2 — SECTION VIEW, REFER TO SHEET C4.2 FOR TEMPORARY ASPHALT TRANSITION (CONDITION 1) TYPICAL SECTION FOR DETAILS
- B / C4.2 — SECTION VIEW, REFER TO SHEET C4.2 FOR TEMPORARY ASPHALT TRANSITION (CONDITION 2) TYPICAL SECTION FOR DETAILS

GENERAL NOTES

1. REFER TO SHEET C1.9 FOR HORIZONTAL AND VERTICAL CONTROL.
2. TYPE C AND TYPE E JOINTS MAY BE INTERCHANGED WITH APPROVAL FROM THE ENGINEER.
3. PORTLAND CEMENT CONCRETE PAVEMENT (P-501) JOINTS SHALL NOT VARY MORE THAN 1/2-INCH FROM THEIR DESIGNATED HORIZONTAL POSITION AND SHALL BE TRUE TO LINE WITH NOT MORE THAN 1/4-INCH VARIATION IN 10-FEET. ANY JOINT(S) THAT ARE NOT PARALLEL OR PERPENDICULAR, OTHER THAN IRREGULAR SLABS, SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR WITH NO ADDITIONAL COST TO THE AIRPORT.
4. ALL SAWCUT DEBRIS FROM THE WIDENING OF THE JOINTS SHALL BE REMOVED FROM THE CONCRETE SURFACE IMMEDIATELY AFTER SAWCUTTING BY VACUUMING THE SLURRY.
5. DOWEL BARS SHALL NOT VARY IN ALIGNMENT BY MORE THAN TWO-PERCENT (2%) OR 0.40" IN EACH PLANE. MISALIGNED DOWEL BARS BY MORE THAN THE SPECIFIED TOLERANCE SHALL REQUIRE THE PCCP TO BE REMOVED ON EACH SIDE OF THE DOWEL BARS AT NO ADDITIONAL COST TO THE AIRPORT.
6. CONTRACTOR TO COORDINATE WITH THE ENGINEER FOR JOINTING AROUND ELEC./COMM. MANHOLES THAT ARE TO REMAIN IN PLACE.
7. ALL PCCP PANELS ARE REINFORCED PER DETAIL 6, SHEET C7.2

CONSTRUCTION NOTES

1. SAWCUT AND MATCH EXISTING JOINT SPACING AND ELEVATION
2. REFER TO ELECTRICAL PLANS (SERIES E)
3. REINFORCED PANEL FOR IN PAVEMENT MANHOLE/INLET. SEE DETAIL SHEET C9.4



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PAVEMENT JOINT LAYOUT PLAN - BASE BID

C7.1

SHEET NO. 21 OF 140

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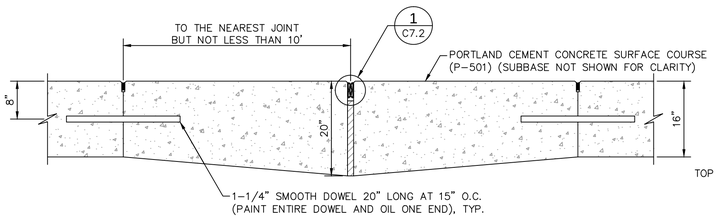
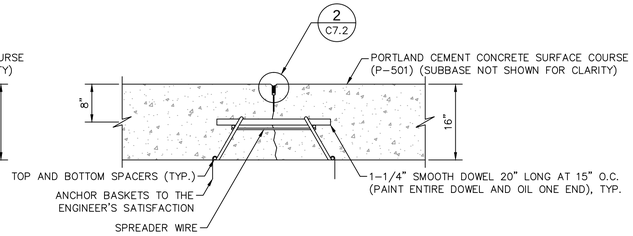
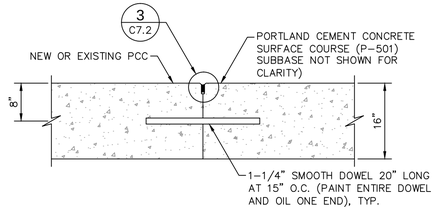


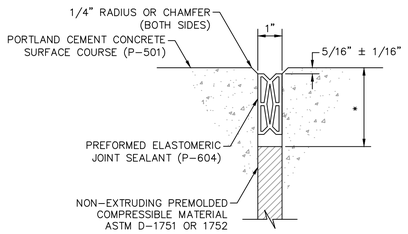
A C7.2 TYPE A - THICKENED EDGE ISOLATION JOINT
N.T.S.



C C7.2 TYPE C - DOWELED CONTRACTION JOINT
DOWEL BARS SHALL NOT BE PLACED MECHANICALLY
N.T.S.

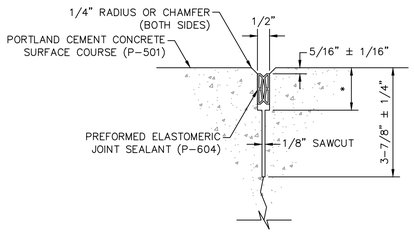


E C7.2 TYPE E - DOWELED CONSTRUCTION JOINT
DOWEL BARS SHALL NOT BE PLACED MECHANICALLY
N.T.S.



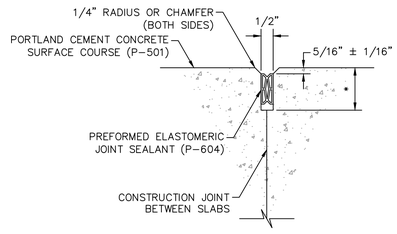
* DEPTH AS RECOMMENDED BY
MANUFACTURER OF JOINT SEALANT

1 C7.2 ISOLATION JOINT
N.T.S.



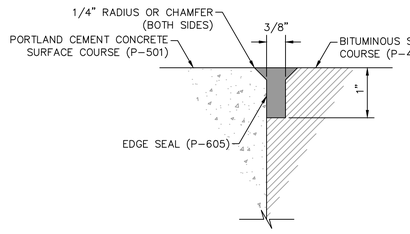
* DEPTH AS RECOMMENDED BY
MANUFACTURER OF JOINT SEALANT

2 C7.2 CONTRACTION JOINT
N.T.S.



* DEPTH AS RECOMMENDED BY
MANUFACTURER OF JOINT SEALANT

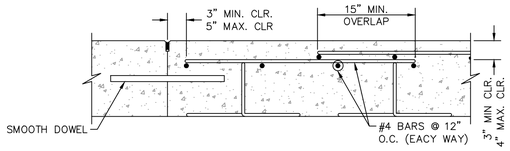
3 C7.2 CONSTRUCTION JOINT
N.T.S.



4 C7.2 EDGE SEAL TYPE 4
N.T.S.

GENERAL NOTES

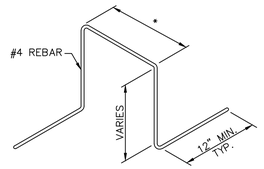
1. ALL JOINT CONSTRUCTION, MATERIALS AND JOINT SEALER SHALL BE IN ACCORDANCE WITH FAA SPECS P-501 AND P-604, UNLESS NOTED OTHERWISE.
2. ALL MATERIALS AND WORK REQUIRED FOR NEW JOINTS ARE INCIDENTAL TO ITEM P-501.
3. THE MATERIALS AND METHODS SHOWN HERE ARE THE MINIMUM REQUIREMENTS.
4. DOWELS SHALL BE SHOP PAINTED WITH ONE COAT OF PAINT PER SPECIFICATIONS P-501 AND THE DOWEL SHALL BE OILED IN THE FIELD AS NOTED ON DETAILS.
5. DOWEL BAR INSTALLATION DEVICE (DOWEL BASKET ASSEMBLY) AND METHOD OF ANCHORING INTO POSITION SHALL BE APPROVED BY ENGINEER.
6. EDGES OF THE SLAB SHALL BE SPRAYED WITH AN APPROVED CURING MATERIAL BEFORE MAKING AN ADJACENT POUR. A TRANSVERSE CONSTRUCTION JOINT, AT A PLANNED LOCATION, SHALL BE INSTALLED WHEN PAVING OPERATIONS ARE INTERRUPTED FOR MORE THAN THIRTY (30) MINUTES.
7. THE CONTRACTOR SHALL MAKE SPECIAL PROVISIONS TO KEEP THE FINISHED CONCRETE SURFACE FREE OF FOREIGN MATERIAL (AGGREGATES, OILS, ETC.) THROUGHOUT THE PROJECT. SWEEPERS AND VACUUM TRUCKS SHALL BE UTILIZED AS NECESSARY BY THE CONTRACTOR AND/OR AS DIRECTED BY THE ENGINEER TO MAINTAIN THIS PROVISION.
8. THE PAVEMENT SURFACE AND JOINTS SHALL BE CLEANED OF SAWCUT RESIDUE IMMEDIATELY AFTER EACH JOINT SAWING OPERATION. THE CONTRACTOR SHALL EMPLOY VACUUMING PROCEDURES TO CLEAN THE PAVEMENT SURFACE OF ALL RESIDUE. ADDITIONAL JOINT CLEANING PRIOR TO THE APPLICATION OF JOINT SEALANT SHALL BE ACCOMPLISHED BY MEANS AND METHODS WHICH DO NOT CREATE FUGITIVE DUST.
9. ALL CONSTRUCTION JOINTS THAT ARE NOT OPEN AND FREE OF FOREIGN MATERIAL SHALL BE CLEANED BY SAWING ONE-HALF INCH (1/2") WIDE AND FIVE-INCHES (5") DEEP.
10. DOWEL BARS SHALL NOT BE PLACED MECHANICALLY.
11. THE CONTRACTOR SHALL BE ATTENTIVE TO THE TIMING OF SAWCUTTING TO AVOID CRACKING, SEE DETAIL 2, THIS SHEET, FOR DEPTH OF SAWCUT.
12. ALL JOINT SEALANT TYPES SHOWN ON THIS SHEET SHALL BE VERIFIED BY THE JOINT SEALANT MANUFACTURER PRIOR TO CONSTRUCTION. A MANUFACTURERS REPRESENTATIVE MUST BE PRESENT DURING THE FIRST TWO DAYS OF PLACEMENT OF SEALANT.
13. THE PREFORMED JOINT SEAL IN TRANSVERSE CONTRACTION JOINTS SHALL BE INSTALLED IN ONE CONTINUOUS PIECE ACROSS THE RUNWAY OR TAXIWAY. THE LONGITUDINAL CONSTRUCTION JOINT SEAL SHALL BE INTERRUPTED AT EACH TRANSVERSE JOINT.
14. SEE ELECTRICAL PLANS FOR LOCATION OF TEMPORARY ELECTRICAL WIRES THAT MAY BE PLACED IN JOINTS.
15. A GANG DRILL OF NOT LESS THAN 3 DRILLS SHALL BE USED FOR DOWELED CONSTRUCTION JOINTS. HAND DRILLING WILL NOT BE ALLOWED.



NOTES:

1. ALL PCC PANELS SHALL BE REINFORCED.
2. REINFORCEMENT MAT SHALL NOT EXTEND ACROSS JOINTS.
3. REINFORCEMENT MATS SHALL CONFORM TO SECTION P-501-2.6 OF THE SPECIFICATIONS.
4. END AND SIDE LAPS SHALL OVERLAP A MINIMUM OF FIFTEEN-INCHES (15")
5. END AND SIDE LAPS SHALL BE WIRE TIED AT EACH END AND AT QUARTER (1/4) POINTS ALONG EACH EDGE.
6. SUBBASE NOT SHOWN FOR CLARITY

6 C7.2 PCC PANEL REINFORCEMENT MAT
N.T.S.

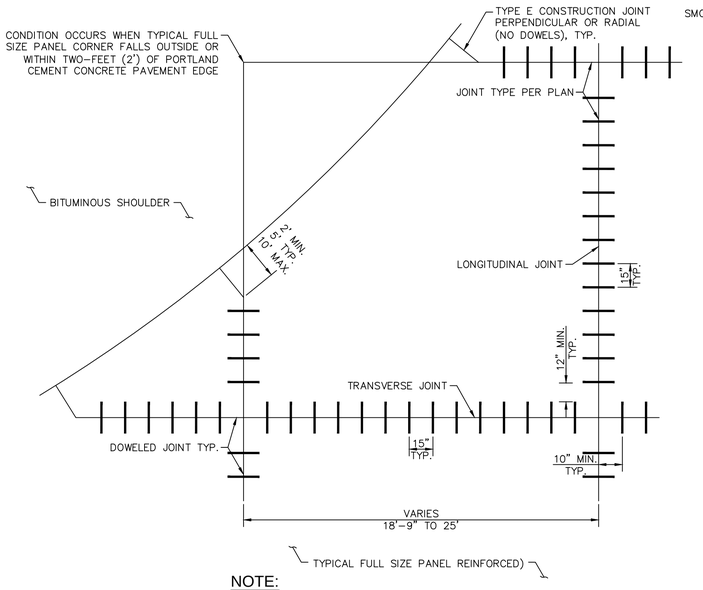


NOTES:

1. CHAIR SHALL BE FIRMLY ANCHORED TO GRADE
2. THE NUMBER OF CHAIRS USED SHALL BE SUFFICIENT TO FULLY SUPPORT REINFORCEMENT MAT AT THE PROPER HEIGHT DURING PLACEMENT OF CONCRETE

* LENGTH REQUIRED TO FULLY SUPPORT REINFORCEMENT MAT

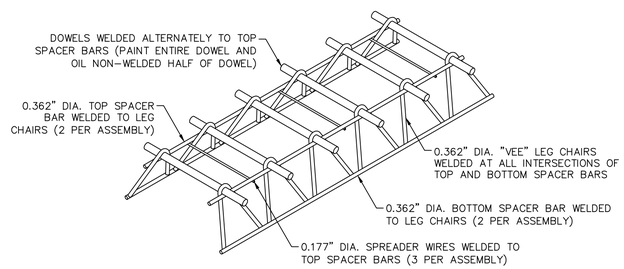
7 C7.2 REINFORCEMENT MAT SUPPORT CHAIR
N.T.S.



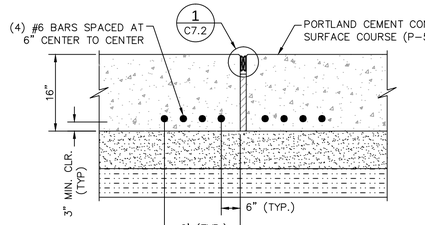
NOTE:

DOWEL SPACING AND CLEARANCES FOR IRREGULAR PANELS SHALL CONFORM TO DIMENSIONS SHOWN HEREON AND SHALL BE REINFORCED PER DETAIL 6, THIS SHEET.

5 C7.2 REINFORCED PCC PANELS
N.T.S.



8 C7.2 DOWEL BASKET ASSEMBLY
DOWEL BARS SHALL NOT BE PLACED MECHANICALLY
N.T.S.



A1 C7.2 TYPE "A1" REINFORCED EXPANSION JOINT
N.T.S.

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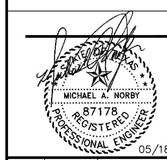

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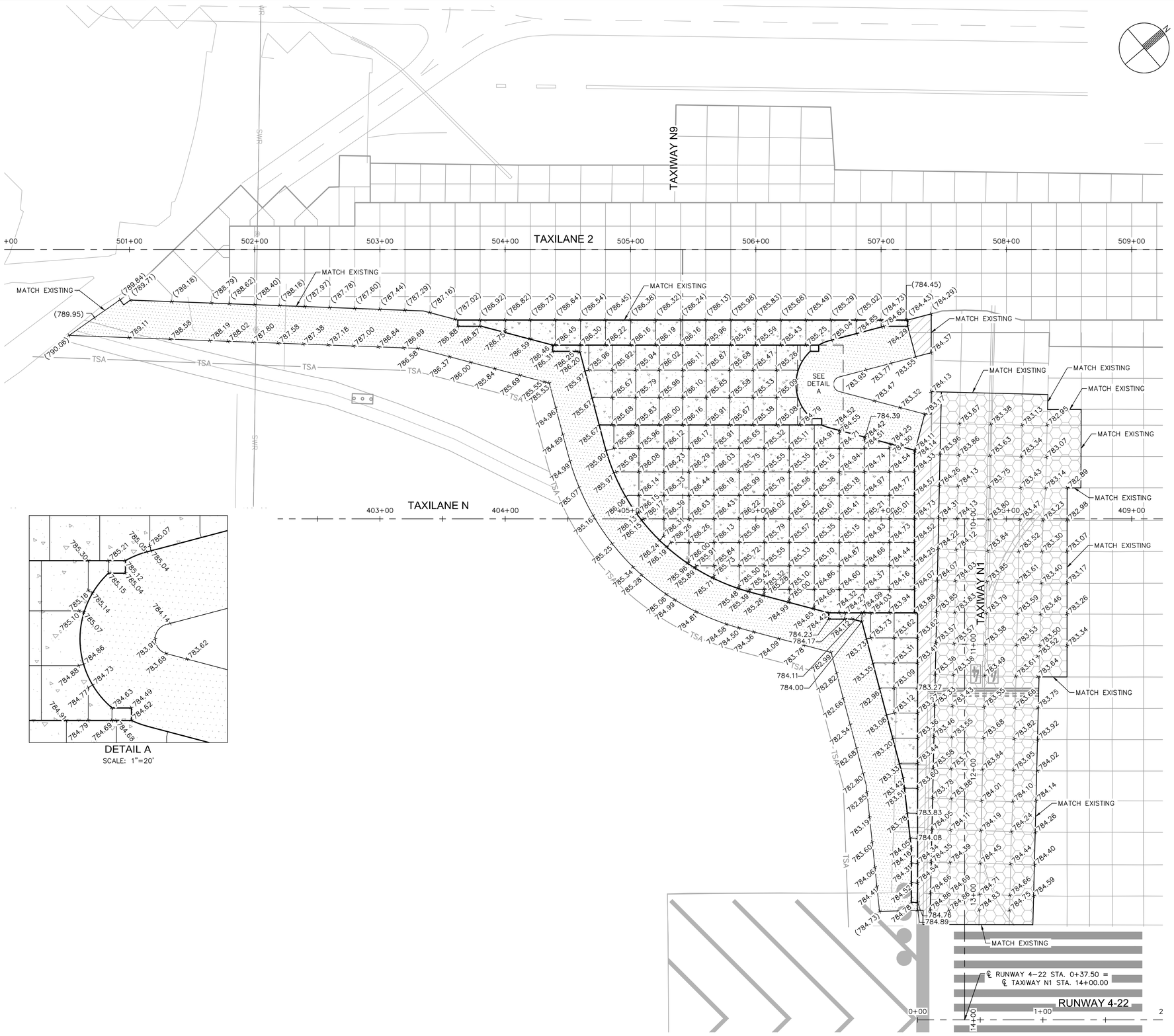
PAVEMENT JOINT DETAILS

C7.2

SHEET NO. 22 OF 140

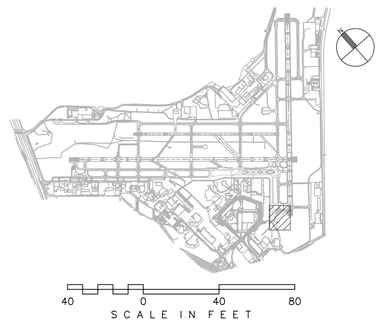


LEGEND

- PORTLAND CEMENT CONCRETE PAVEMENT
- PORTLAND CEMENT CONCRETE TRANSITION
- ASPHALT CONCRETE SHOULDER PAVEMENT
- ASPHALT CONCRETE TRANSITION
- ASPHALT CONCRETE MILL AND REPLACE (VARIABLE DEPTH)
- +XXX.XX — PROPOSED SPOT ELEVATION
- +(XXX.XX) — EXISTING SPOT ELEVATION

GENERAL NOTES

1. REFER TO SHEET C1.9 FOR HORIZONTAL AND VERTICAL CONTROL.
2. PAVEMENT ELEVATIONS SHOWN ARE BASED ON JOINT LAYOUT, REFER TO PAVEMENT JOINT LAYOUT PLANS (SERIES C7).
3. REFER TO GRADING AND DRAINAGE PLAN (SERIES C9) FOR ADDITIONAL GRADING INFORMATION.
4. CONTRACTOR SHALL MATCH EXISTING PAVEMENT ELEVATIONS AS SHOWN ON PLAN. IF EXISTING ELEVATIONS DIFFER FROM THOSE SHOWN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
5. REFER TO ELECTRICAL PLANS (SERIES E) FOR AIRFIELD LIGHTING, SIGNING, AND ELECTRICAL FEATURES.



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PAVEMENT ELEVATIONS PLAN - BASE BID

C8.1

SHEET NO. 23 OF 140