



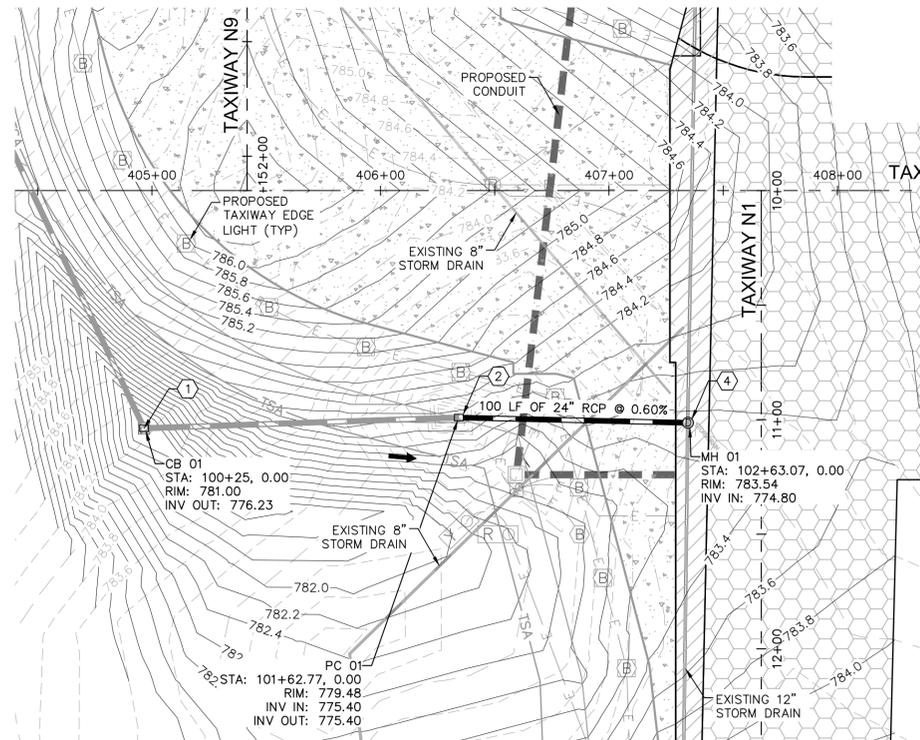
Kimley»Horn
KIMLEY-HORN AND ASSOCIATES, INC.
601 NW LOOP 410, SUITE 350
SAN ANTONIO, TEXAS 78216
PHONE: (210) 541-9166
TEXAS REGISTERED FIRM,
NO. 928

TERMINAL AREA TAXIWAY
IMPROVEMENTS -
(PACKAGE 3)

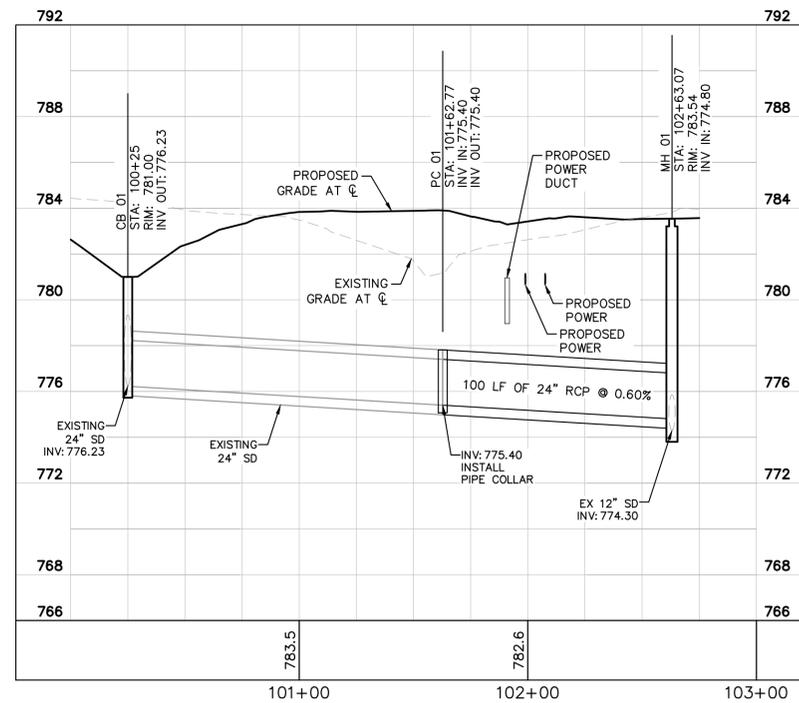


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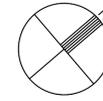
STORM DRAIN
PROFILE -
STORM DRAIN A -
BASE BID



SD-A PLAN VIEW



SD-A PROFILE VIEW



LEGEND

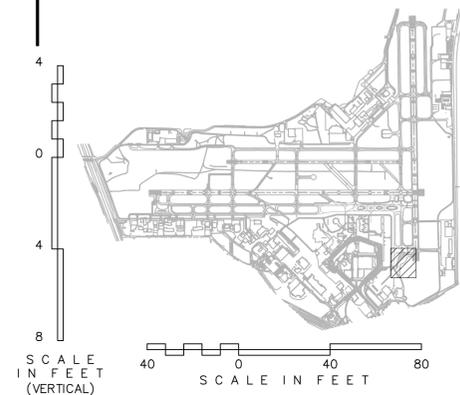
- EXISTING STORM DRAIN
- PROPOSED STORM DRAIN
- EXISTING STORM DRAIN INLET
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED STORM DRAIN CATCH BASIN
- STORM DRAIN TO BE REMOVED
- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING PROFILE ELEVATIONS
- PROPOSED PROFILE ELEVATIONS

GENERAL NOTES

1. EXISTING UTILITIES ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. CONTRACTOR SHALL VERIFY EXACT LOCATIONS OF ALL UNDERGROUND UTILITIES PRIOR TO COMMENCING WORK IN ANY AREA.
2. DESIGN CONTOURS REPRESENT FINISHED GRADE (PAVEMENT AND GRADING). CONTOURS AND PERCENT OF SLOPE ARE APPROXIMATE AND ARE SHOWN AS SUPPLEMENTAL INFORMATION ONLY.
3. REFER TO ELECTRICAL PLANS (SERIES E) FOR AIRFIELD LIGHTING, SIGNING, AND ELECTRICAL FEATURES.

CONSTRUCTION NOTES

- ① INSTALL CATCH BASIN, PER DETAIL 1 AND 2, SHEET C9.13.
- ② INSTALL PIPE COLLAR, PER DETAIL 1, SHEET C9.15.
- ③ INSTALL PIPE CONNECTION, PER DETAIL 3, SHEET C9.15.
- ④ INSTALL MANHOLE, SEE DETAIL SHEET C9.14





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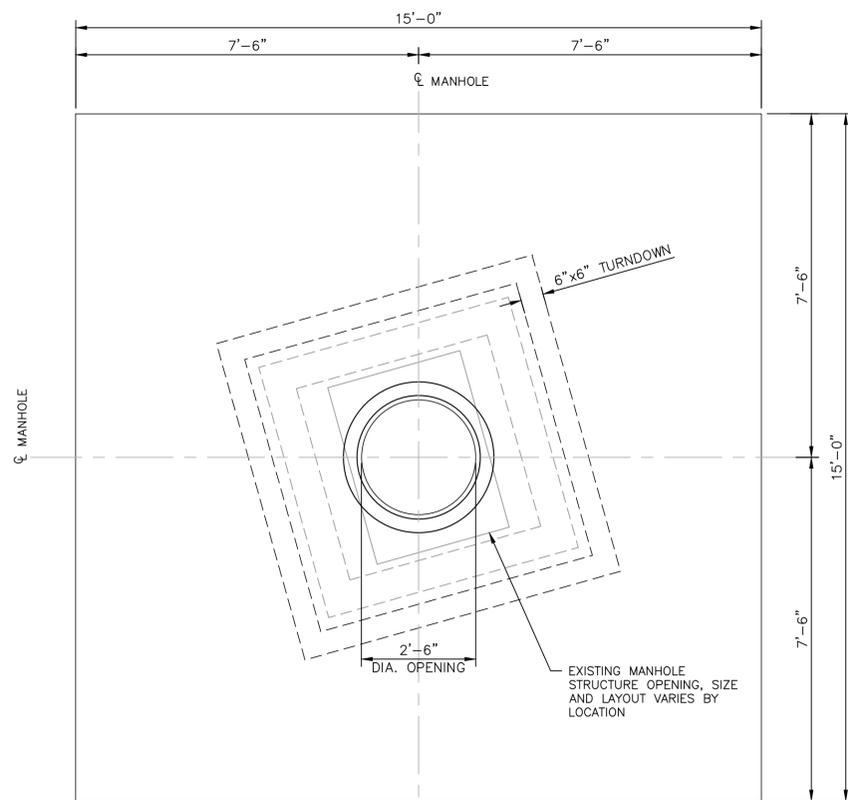
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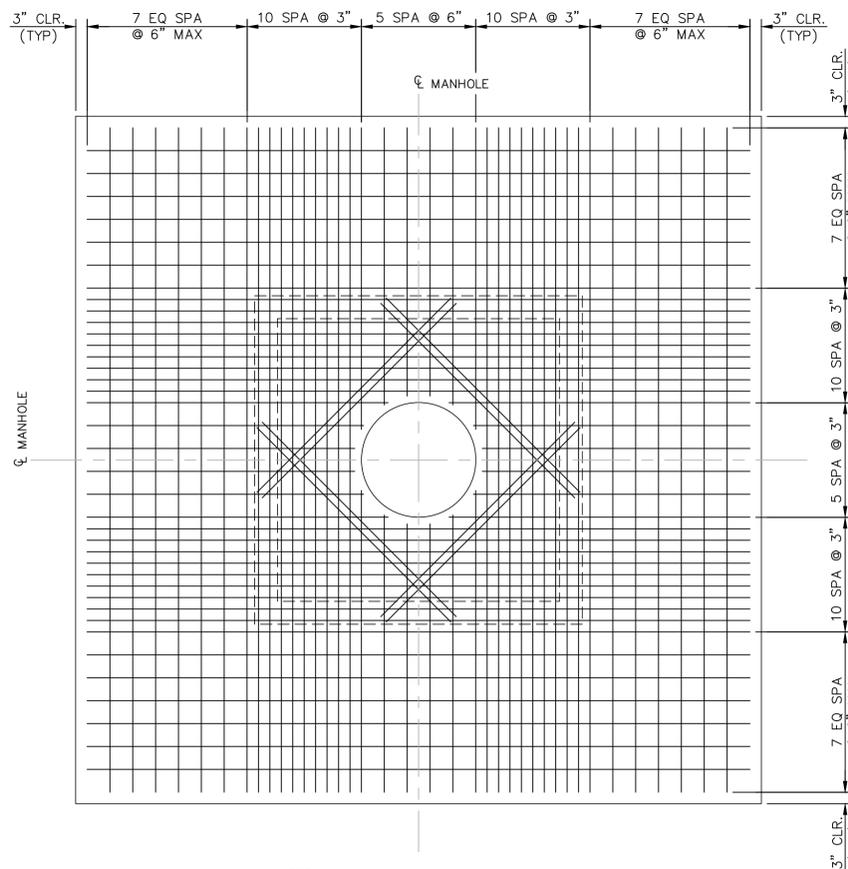


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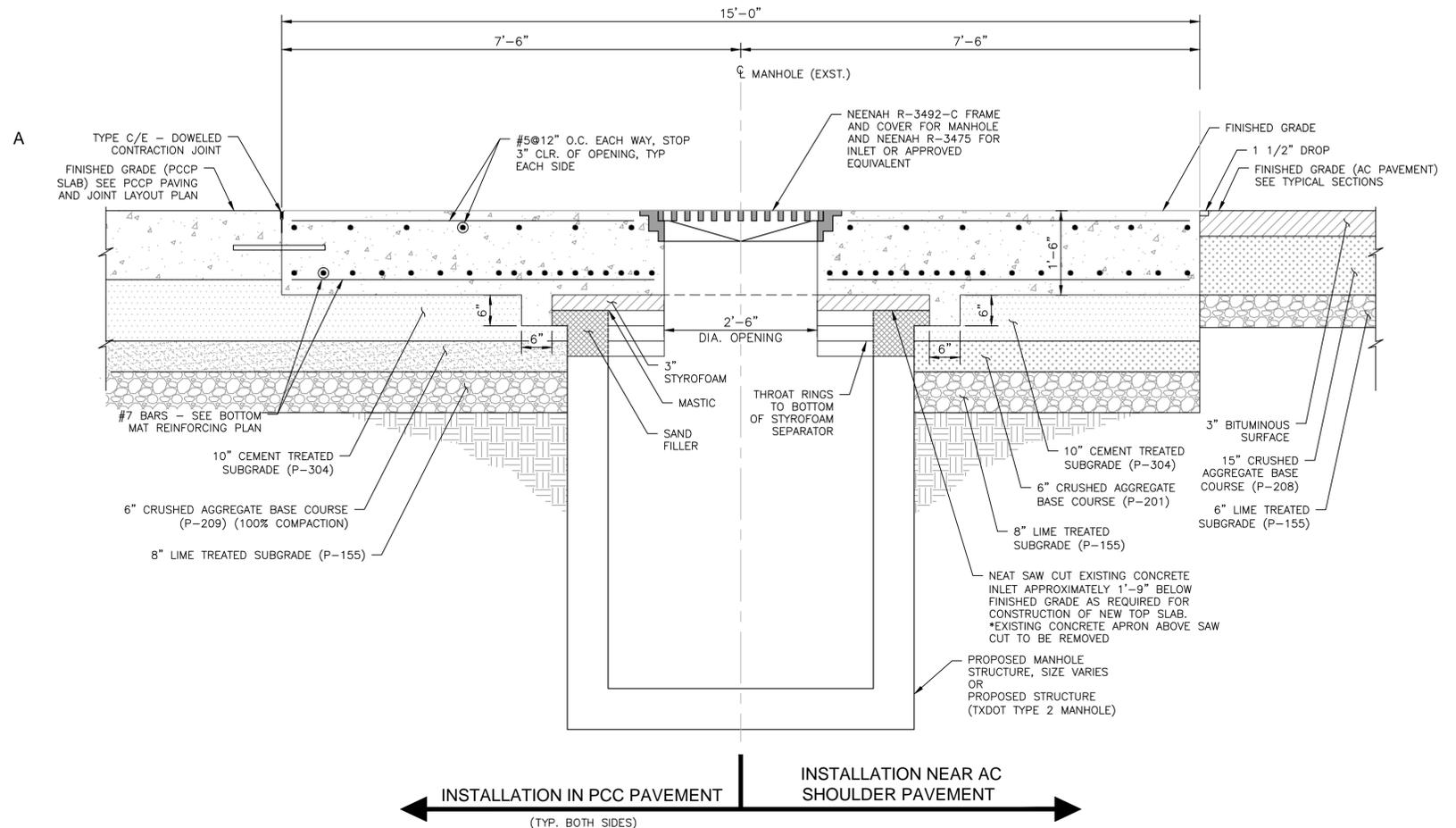
IN-PAVEMENT
MANHOLE/INLET
DETAIL



1
C9.4 TOP SLAB PLAN
SCALE: 1/2" = 1'-0"



2
C9.4 BOTTOM MAT REINFORCING
SCALE: 1/2" = 1'-0"



INSTALLATION IN PCC PAVEMENT | INSTALLATION NEAR AC SHOULDER PAVEMENT
(TYP. BOTH SIDES)

SECTION A-A
SCALE: 3/4" = 1'-0"

3
C9.4 IN-PAVEMENT MANHOLE/INLET

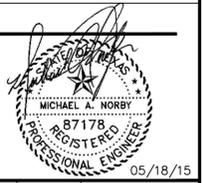
GENERAL NOTES:

- CONTRACTOR IS TO VERIFY DIMENSIONS OF EXISTING MANHOLES. IF EXISTING CONDITIONS ARE DIFFERENT THAN THOSE SHOWN IN THESE DETAILS, CONTRACTOR SHALL NOTIFY ENGINEER PRIOR TO INSTALLATION OF SLAB REVISION.
- TOP SLAB SHALL BE CENTERED OVER EXISTING MANHOLE OPENING. EXISTING MANHOLE OPENING SHALL NOT EXCEED 48"x48". SAW CUTTING OF THE EXISTING MANHOLE MAY BE REQUIRED FOR SETTING THE TOP SLAB AT PROPER GRADE.
- REINFORCING BARS SHALL BE DEFORMED BARS CONFORMING TO THE REQUIREMENTS OF ASTM A615 GRADE 60. SUPPORTS AND ACCESSORIES SHALL BE FURNISHED AS SHOWN OR REQUIRED. CHAIRS PLACED AGAINST EXPOSED SURFACES SHALL BE GALVANIZED OR PROVIDED WITH PLASTIC FEET.
- MINIMUM COVERAGE FOR REINFORCING SHALL BE THE CLEAR DISTANCE TO THE FACE OF BARS AS FOLLOWS: 2" UNLESS NOTED OTHERWISE.
- ALL REINFORCING STEEL SHALL BE ACCURATELY POSITIONED AND ADEQUATELY TIED USING PROPER CHAIRS OR BOLSTERS AND SHALL BE INSPECTED PRIOR TO POURING CONCRETE.
- CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH, F'c = 4000 PSI.
- ALL CONCRETE EDGES, CORNERS, AND INTERSECTIONS SHALL BE TOOLED OR CHAMFERED NO LESS THAN 1/2" WHETHER SHOWN OR NOT ON THE DRAWINGS.



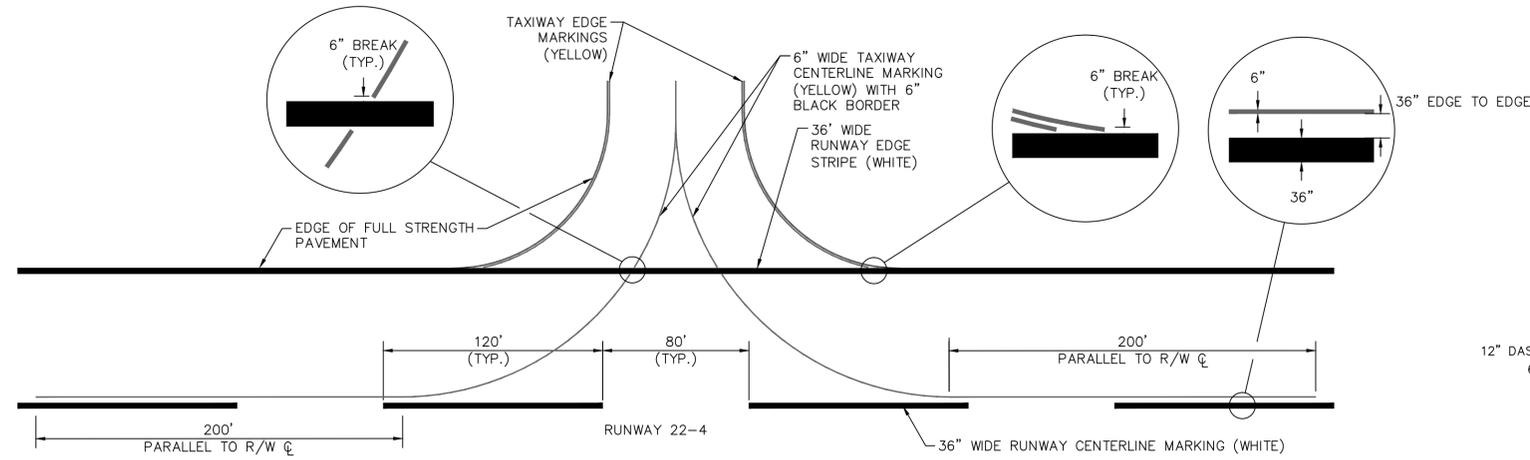
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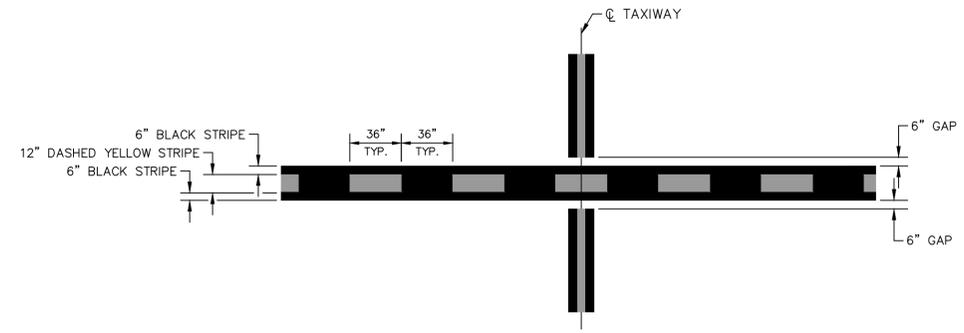


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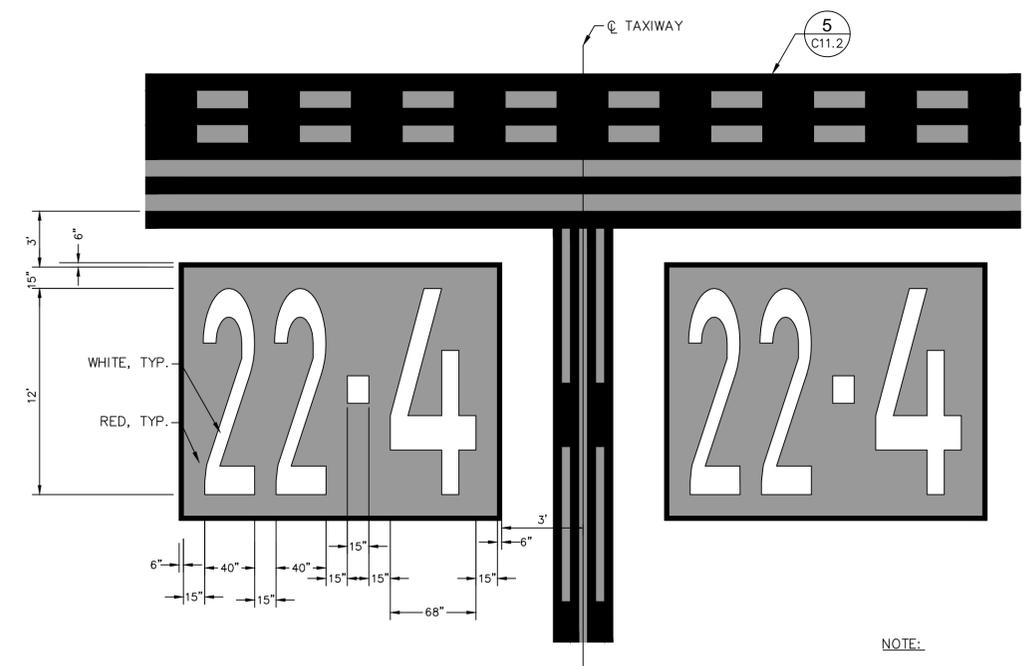
PAVEMENT MARKING
DETAILS



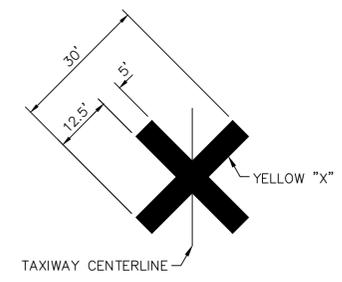
1
C11.3
RUNWAY/TAXIWAY INTERSECTION DETAIL
N.T.S.



2
C11.3
INTERMEDIATE HOLDING POSITION MARKING
N.T.S.



3
C11.3
SURFACE PAINTED
HOLDING POSITION SIGN DETAIL
N.T.S.



4
C11.3
CLOSED TAXIWAY PAVEMENT MARKING
N.T.S.

NOTE:
1. THE SURFACE PAINTED HOLDING POSITION SIGN HAS A RED BACKGROUND WITH A WHITE INSCRIPTION AND WILL BE OUTLINED IN BLACK. LETTERS AND NUMBERS SHALL CONFORM TO THE LATEST EDITION OF THE FEDERAL AVIATION ADMINISTRATION'S ADVISORY CIRCULAR 150/5340.

K:\Pix_Aviation\191228001-San Antonio\CADD\PACKAGE 3\33-00193-R1CM-501-C00.dwg May 18, 2015 Crawford, Pat

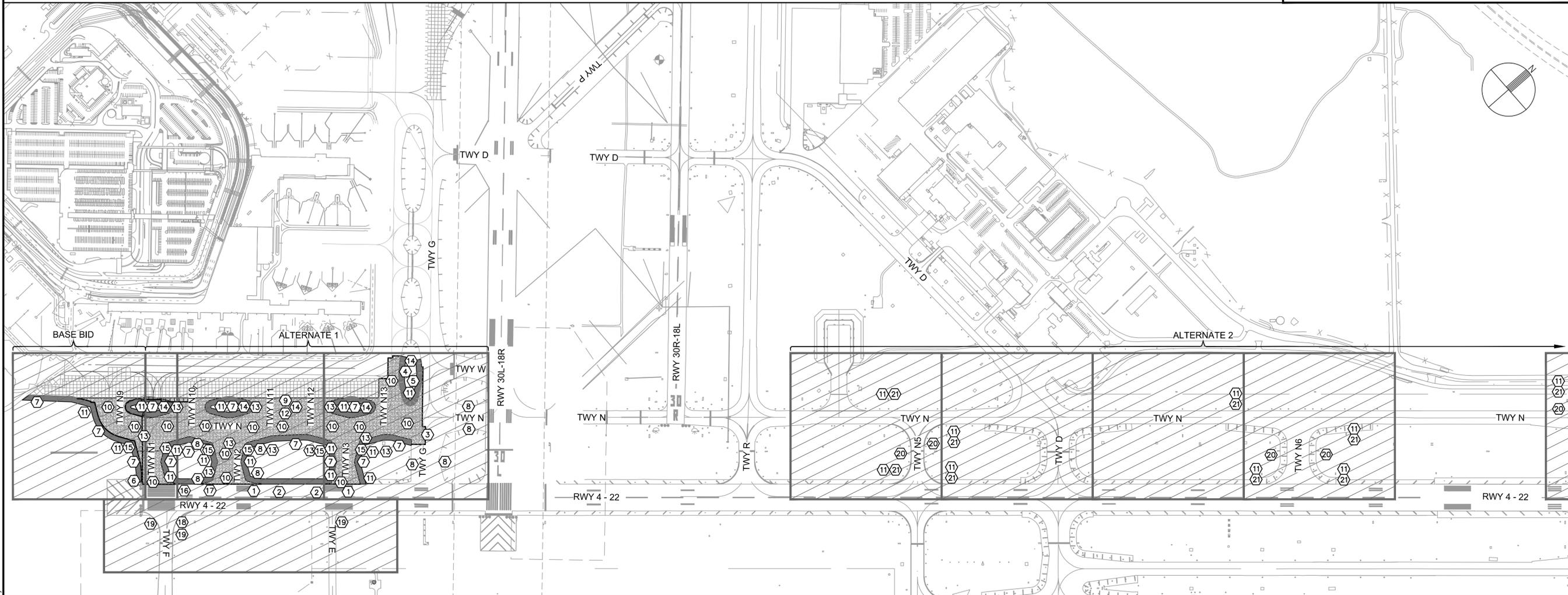
SAN ANTONIO INTERNATIONAL AIRPORT SAN ANTONIO, TEXAS

CITY OF
SAN ANTONIO
AVIATION
DEPARTMENT



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TERMINAL AREA TAXIWAY
IMPROVEMENTS -
(PACKAGE 3)

TERMINAL AREA TAXIWAY IMPROVEMENTS - (PACKAGE 3)

PROJECT NOS. 33-00178 AND 33-00193
FAA AIP 3-48-0192-XX-2013

ELECTRICAL SCOPE OF WORK

- ① FURNISH AND INSTALL NEW IN-PAVEMENT RUNWAY EDGE LIGHT ON NEW L-868 BASE CAN WITH NEW CONDUIT AND CABLES IN TAXIWAY 'N' PAVEMENT RECONSTRUCTION AREA.
- ② SALVAGE AND REINSTALL EXISTING ELEVATED RUNWAY EDGE LIGHT ON NEW L-867 BASE CAN WITH NEW CONDUIT AND CABLES IN TAXIWAY 'N' SHOULDER RECONSTRUCTION AREA.
- ③ SALVAGE AND REINSTALL EXISTING IN-PAVEMENT TAXIWAY CENTERLINE LIGHT ON NEW L-868 BASE CAN WITH NEW CONDUIT AND CABLES IN TAXIWAY 'G' RECONSTRUCTION AREAS.
- ④ SALVAGE AND REINSTALL EXISTING ELEVATED TAXIWAY EDGE LIGHTS ON NEW L-867 BASE CAN WITH NEW CONDUIT AND CABLES IN TAXIWAY 'G' RECONSTRUCTION AREAS.
- ⑤ SALVAGE AND REINSTALL EXISTING SIGN WITH NEW CONCRETE FOUNDATION.
- ⑥ SALVAGE AND REINSTALL RUNWAY END LIGHT ON NEW L-867 BASE CAN.
- ⑦ FURNISH AND INSTALL NEW LED TAXIWAY EDGE LIGHTS ON NEW L-867 BASE CANS WITH NEW CONDUIT AND CABLES ON TAXIWAY 'N' SHOULDER RECONSTRUCTION AREAS.
- ⑧ FURNISH AND INSTALL NEW LED TAXIWAY EDGE LIGHTS ON EXISTING L-867 BASE CANS WITH NEW CABLES ON TAXIWAY 'N' AND TAXIWAY 'G'.
- ⑨ FURNISH AND INSTALL NEW LED TAXIWAY EDGE LIGHTS ON NEW L-868 BASE CANS WITH NEW CABLES IN NO-TAXI ISLAND.
- ⑩ FURNISH AND INSTALL NEW L-868 BASE CANS WITH NEW CONDUIT FOR FUTURE TAXIWAY CENTERLINE LIGHTS IN NEW PCC PAVEMENT IN TAXIWAY 'G' AND TAXIWAY 'N' PAVEMENT RECONSTRUCTION AREAS.
- ⑪ FURNISH AND INSTALL NEW SIGNS WITH NEW CONCRETE FOUNDATIONS.
- ⑫ FURNISH AND INSTALL NEW SIZE 2 SIGNS WITH NEW CONCRETE FOUNDATIONS IN NO-TAXI ISLAND.
- ⑬ FURNISH AND INSTALL NEW DUCT BANKS IN TAXIWAY 'N' PAVEMENT AREAS.
- ⑭ FURNISH AND INSTALL NEW PRECAST CONCRETE HANDHOLE.
- ⑮ FURNISH AND INSTALL NEW PRECASE CONCRETE HANDHOLE AND ADJACENT JUNCTION CAN PLAZA.
- ⑯ FURNISH AND INSTALL NEW ELEVATED RUNWAY EDGE LIGHT ON NEW L-867 BASE CAN WITH NEW CONDUIT AND CABLES IN TAXIWAY 'N' PAVEMENT RECONSTRUCTION AREA.
- ⑰ FURNISH AND INSTALL NEW IN-PAVEMENT RUNWAY EDGE LIGHT ON NEW L-868 BASE CAN WITH NEW CONDUIT AND CABLES IN TAXIWAY 'N' PAVEMENT RECONSTRUCTION AREA.
- ⑱ FURNISH AND INSTALL NEW L-867 BASE CAN AT END OF DUCT CROSSING AND NEW CONDUIT TO CONNECT TO EXISTING CIRCUIT AT TAXIWAY F.
- ⑲ CONNECT TO EXISTING TAXIWAY CIRCUIT ON SOUTHEAST SIDE OF RUNWAY 4-22 AND MODIFY CIRCUIT PER REVISED CIRCUIT MAP.
- ⑳ FURNISH AND INSTALL NEW SIGN LEGEND PANELS ON EXISTING SIGN.
- ㉑ SALVAGE EXISTING SIGN TO AIRPORT.



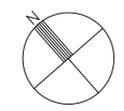
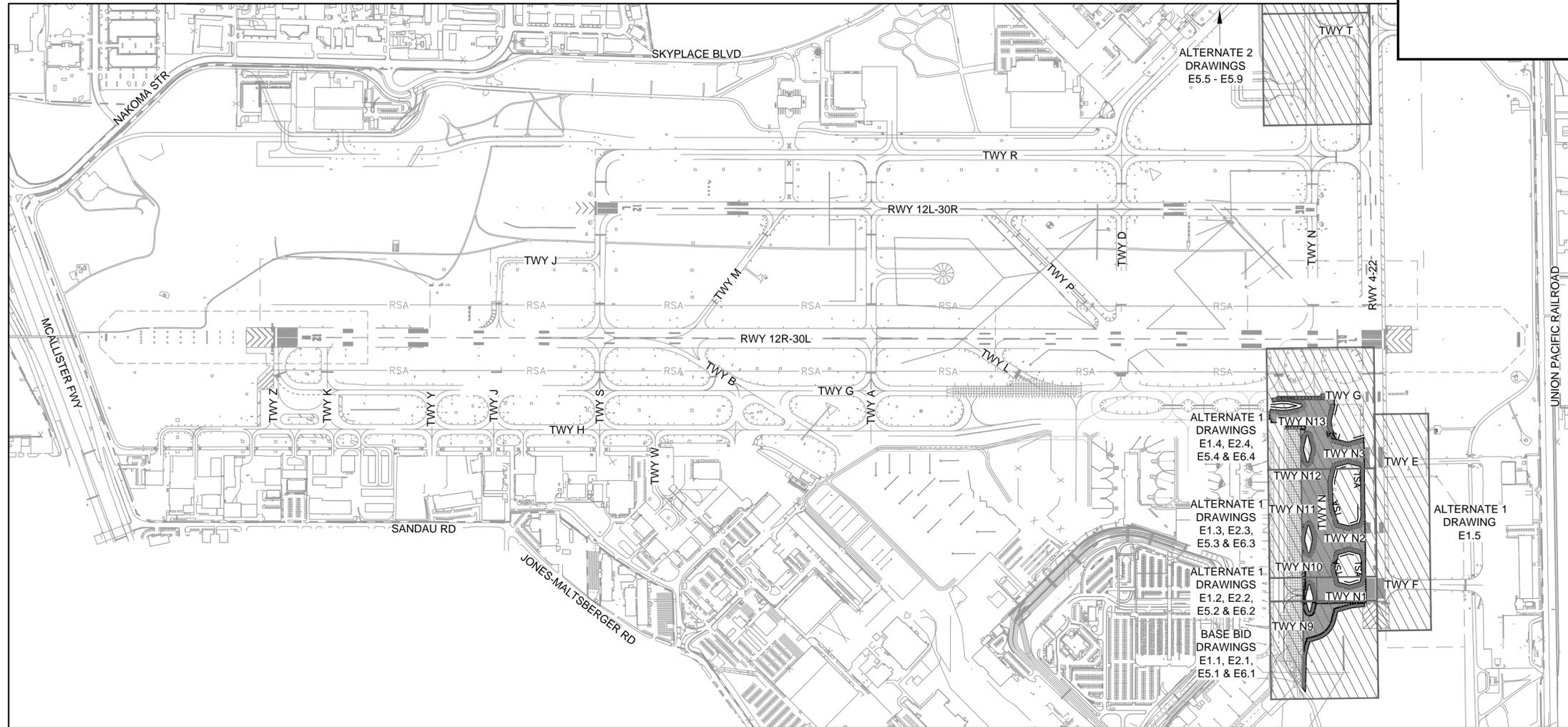
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ELECTRICAL SCOPE
OF WORK

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TERMINAL AREA TAXIWAY
IMPROVEMENTS -
(PACKAGE 3)



ABBREVIATION LIST

AB (AB)	ABANDONED CONDUIT OR DUCT (OR ABAND.)	R.E.	RESIDENT ENGINEER
ALV	AIRFIELD LIGHTING VAULT	(R)	REMOVE EQUIPMENT OR FACILITY
ATCT	AIR TRAFFIC CONTROL TOWER	(R/R)	REMOVE AND RELOCATE EQUIPMENT OR FACILITY
BC	BARE COPPER CONDUCTOR	(REL)	RELOCATED EQUIPMENT OR FACILITY (SEE R/R)
BL	BLANK	(RL)	RELABEL CIRCUIT OR EQUIPMENT
C, CNDT	CONDUIT	RPZ	RUNWAY PROTECTION ZONE
C.E.	CONCRETE ENCASED (PER P-610)	RSA	RUNWAY SAFETY AREA
CKT	CIRCUIT	RT	RIGHT; USUALLY OFFSET OF SURVEY DATUM
C/L, CL	CENTERLINE	R/W, RWY	RUNWAY
CLSM	CONTROLLED LOW STRENGTH MATERIAL	STA:	STATION, DISTANCE ALONG SURVEY DATUM BASE LINE
CONC	CONCRETE, P-610 FOR ELECTRICAL FACILITIES U.O.N.	STR	STRAND; SINGLE ELEMENT OF CABLE ASSEMBLY
C.M.	CONSTRUCTION MANAGER	(T), TEMP.	TEMPORARY EQUIPMENT OR FACILITY
COVER	BLANK COVER FOR L-867 OR L-868 BASE	TDZ	TOUCHDOWN ZONE
CTPB	CEMENT TREATED PERMEABLE BASE	TSA	TAXIWAY SAFETY AREA
DB, DEB	DIRECT EARTH BURIAL, PER P-152 OR P-153	T/W, TWY	TAXIWAY
(E)	EXISTING EQUIPMENT OR FACILITY	TYP.	TYPICAL
EC	EMPTY CONDUIT	U.O.N.	UNLESS OTHERWISE NOTED
FAA	FEDERAL AVIATION ADMINISTRATION	WWF	WOVEN WIRE FABRIC STEEL REINFORCEMENT IN P-610
F.O.C.	FIBER OPTIC CABLE	XFMR	TRANSFORMER
ISO	ISOLATION (TRANSFORMER)		
ISO-XFMR	ISOLATION TRANSFORMER		
LT	LEFT; USUALLY OFFSET OF SURVEY DATUM		
MFGR	MANUFACTURER		
(N)	NEW EQUIPMENT OR FACILITY		
OFFSET	DISTANCE FROM SURVEY DATUM BASE LINE (LT OR RT)		
PB	PULL BOX (L-115)		
PCC(P)	PORTLAND CEMENT CONCRETE (PAVEMENT PER P-501)		
PMB	PROCESS MISCELLANEOUS BASE (SEE CIVIL DRAWINGS)		
P.O.C.	POINT OF CONNECTION (WITH EXISTING CONDUIT OR DUCT)		
PR	PROPOSED (NEW) EQUIPMENT OR FACILITY OR PAIR (E.G 12-PR)		
PVC	POLYVINYLCHLORIDE: CONDUIT MATERIAL		

SYMBOL LIST

56	— E — E —	NEW 2" PVC CONDUIT, CONCRETE ENCASED (UNLESS OTHERWISE NOTED) WITH CIRCUIT FILL INFORMATION. SEE E4 SERIES SHEETS FOR CIRCUIT INFORMATION.
4-4" (N) POWER (N) 56	— (N) — (N) —	NEW DUCT (DIRECT BURIED) WITH DETAIL DESIGNATION AND CIRCUIT FILL INFORMATION. SEE SHEET E3.6 FOR DUCT SECTIONS.
4-4" (E) POWER (E) D111	— (E) — (E) —	EXISTING DUCT SECTIONS (CONCRETE ENCASED) AND CIRCUIT FILLS. U.O.N. EXISTING DUCT HAS EXISTING CIRCUITS IN IT.
— E — E —	— E — E —	EXISTING CONDUIT.
— E — E —	— E — E —	CONDUIT TO BE REMOVED
— E — E —	— E — E —	DUCT TO BE REMOVED
— FAA —	— FAA —	FAA CONDUIT OR DUCT

	NEW CONCRETE HANDHOLE AND ADJOINING JUNCTION CAN PLAZA
	EXISTING CONCRETE HANDHOLE
	L-850C IN-PAVEMENT BI-DIRECTIONAL RUNWAY EDGE LIGHT WITH OPTICAL SYSTEM COLOR FILTERS AS NOTED ON DATA TABLE
	L-862 ELEVATED BI-DIRECTIONAL RUNWAY EDGE LIGHT WITH OPTICAL SYSTEM COLOR FILTERS AS NOTED ON DATA TABLE
	L-862E ELEVATED BI-DIRECTIONAL RUNWAY THRESHOLD/END LIGHT WITH OPTICAL SYSTEM COLOR FILTERS AS NOTED ON DATA TABLE
	L-861 ELEVATED OMNI-DIRECTIONAL MEDIUM INTENSITY T/W EDGE LIGHT, BLUE GLOBE UNLESS OTHERWISE NOTED
	L-852A IN-PAVEMENT BI-DIRECTIONAL TAXIWAY CENTERLINE LIGHT (NARROW BEAM) WITH OPTICAL SYSTEM COLOR FILTERS AS NOTED ON DATA TABLE
	L-852J IN-PAVEMENT BI-DIRECTIONAL TAXIWAY CENTERLINE LIGHT (TOED WIDE BEAM) WITH OPTICAL SYSTEM COLOR FILTERS AS NOTED ON DATA TABLE
	BLANK LOAD RATED COVER ON L-868 BASE
	BLANK COVER ON L-867B LIGHT BASE OR L-867D BASE JUNCTION CAN
	AIRFIELD GUIDANCE SIGN
	WINDCONE

GENERAL NOTES

- REFER TO DRAWING C1.5 FOR CONFINED SPACES INFORMATION.
- REFER TO C2 SERIES DRAWINGS FOR PHASING NOTES.
- CONTRACTOR SHALL MAINTAIN ON HAND SUFFICIENT MATERIAL/EQUIPMENT REQUIRED TO PROVIDE TEMPORARY LIGHTING AND CIRCUIT EXTENSIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, FIXTURES, TRANSFORMERS, BASES, CONDUIT, L-824 CABLE & L-823 SPLICE KITS. THESE ITEMS WILL NOT BE AVAILABLE FROM THE SAN ANTONIO INTERNATIONAL AIRPORT MAINTENANCE SHOP.
- CONTRACTOR SHALL MAINTAIN THE INDICATED MINIMUM STOCK OF THE FOLLOWING ITEMS:
20 EACH TEMPORARY LIGHT FIXTURES WITH BASES
20 EACH L-830 6.6 AMP TRANSFORMERS OF VARIOUS CAPACITIES
200 LF 2" PVC CONDUIT FOR TEMPORARY ABOVE GRADE CONNECTIONS
400 LF L-824, #8 SKV TYPE C CABLE FOR TEMPORARY CONNECTIONS
40 EACH L-823 CONNECTOR KITS
- THE CONTRACTOR SHALL MAINTAIN QUALIFIED PERSONNEL, WITH THE APPROPRIATE EQUIPMENT, FOR THE INSTALLATION AND SPLICING OF AIRFIELD LIGHTING AND FIBER OPTIC CABLES. SUCH PERSONNEL SHALL BE CAPABLE OF 60 MINUTE RESPONSE TIME IF THEY ARE NOT ALREADY PRESENT ON THE AIRFIELD.
- CONTRACTOR SHALL COORDINATE ALL WORK WITH AIRPORT MAINTENANCE, AIRPORT OPERATIONS, AND THE ENGINEER AS NECESSARY.
- CONTRACTOR SHALL GIVE 48 HOURS NOTICE PRIOR TO WORKING ON OR AROUND ANY FAA EQUIPMENT, DUCT BANKS, HANDHOLES, ETC.
- ALL TEMPORARY JUMPERS SHALL BE INSTALLED PRIOR TO THE START OF ANY DEMOLITION, SEE E4 SERIES DRAWINGS.

MARK	DATE	DESCRIPTION

ELECTRICAL
SYMBOL LIST AND
GENERAL NOTES

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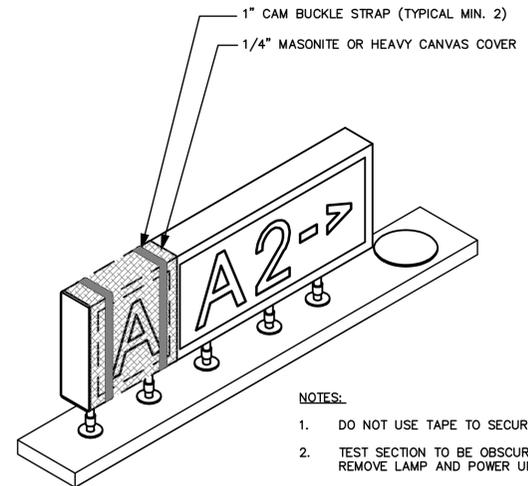


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SIGN DETAILS FOR
INSTALLATION IN
UNPAVED AREAS

SIGN INSTALLATION NOTES:

1. VERIFY ALL DIMENSIONS OF SIGN FACES, SIGN PEDESTALS, AND SIGN FACE SPACING WITH MANUFACTURER BEFORE INSTALLATION.
2. PROVIDE NEW TRANSFORMERS WITH NEW SIGNS, SIZE PER MANUFACTURER'S RECOMMENDATIONS. SET XFMR ON 6" TALL CYLINDER OF 4" PVC ON END.
3. SEE E2 SERIES DRAWINGS FOR SIGN LOCATIONS AND E5 SERIES DRAWINGS FOR MESSAGE CONTENTS.
4. PROVIDE #6 B.C. BOND TO GROUND LUG ON SIGN TO GROUND ROD.



NOTES:

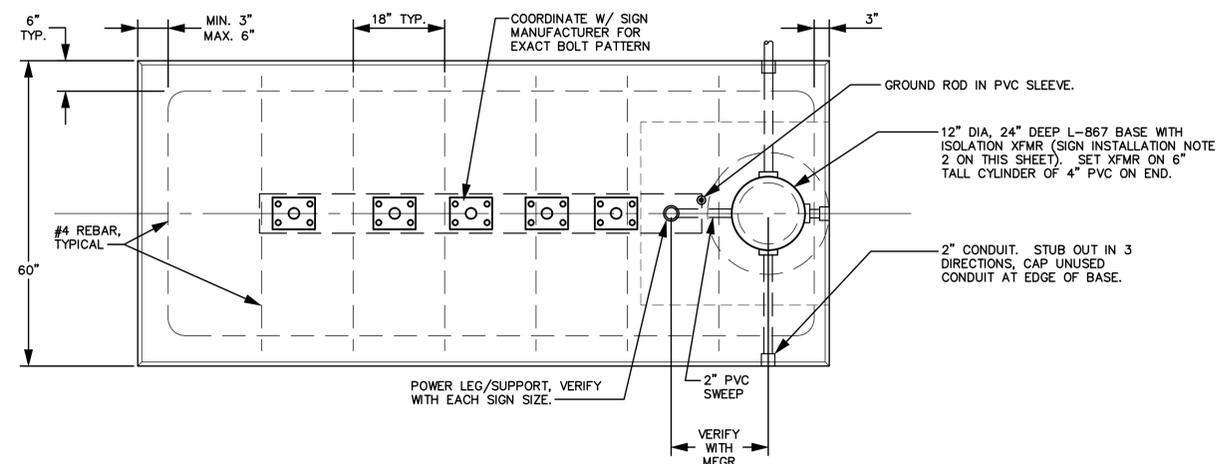
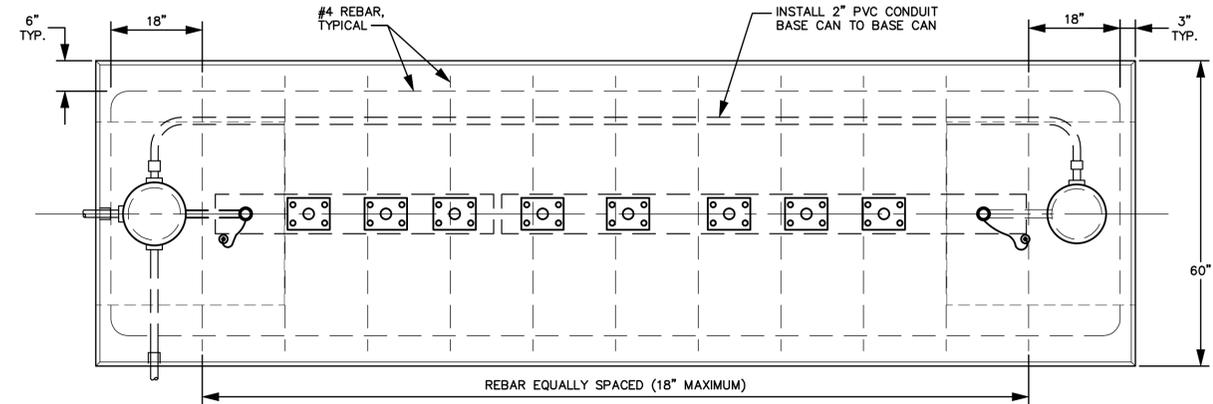
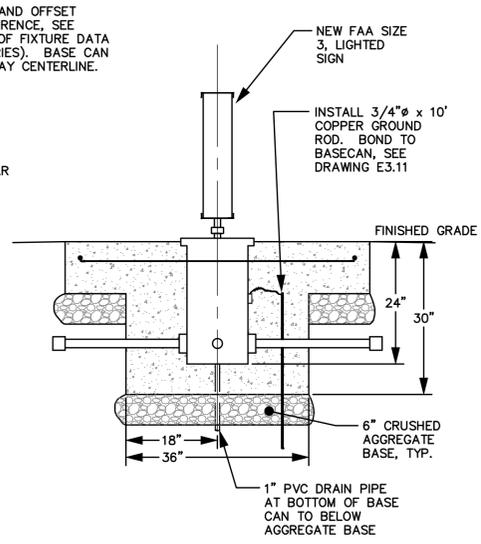
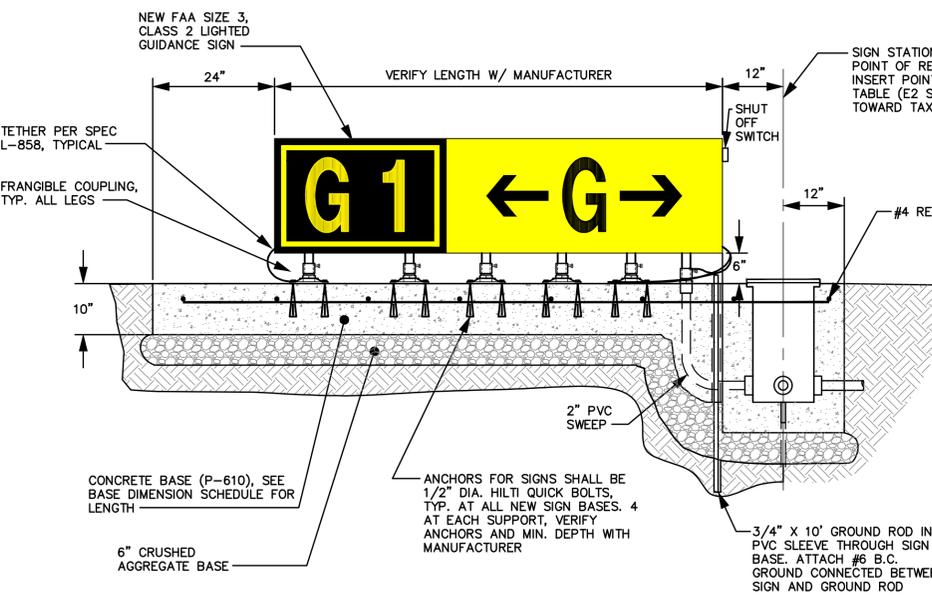
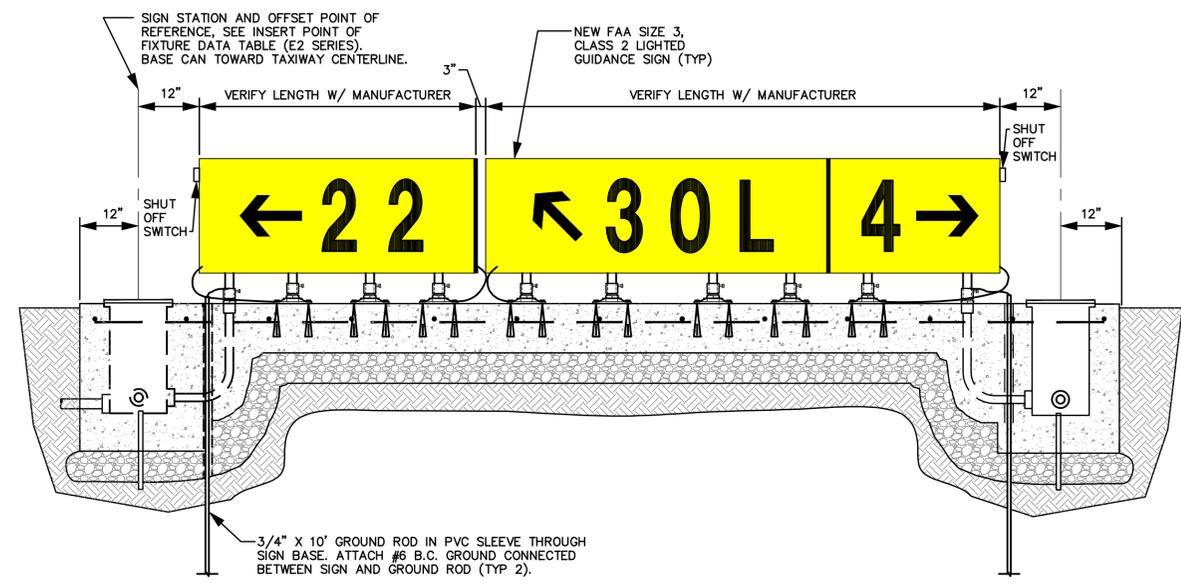
1. DO NOT USE TAPE TO SECURE COVER TO SIGN.
2. TEST SECTION TO BE OBTAINED FOR PROPER OPERATION AND THEN REMOVE LAMP AND POWER UNTIL RE-COMMISSIONING SIGN.

TEMPORARY SIGN COVER
N.T.S.

SIGN AND BASE DIMENSION SCHEDULE

NOTE: REFER TO SIGN DRAWINGS (E5 SERIES) FOR INDIVIDUAL SIGNS

SIGN SIZE	ONE MODULE		TWO MODULES		THREE MODULES		FOUR MODULES		3+2 MODULES	
	SIGN LENGTH	BASE LENGTH	SIGN LENGTH	BASE LENGTH	SIGN LENGTH	BASE LENGTH	SIGN LENGTH	BASE LENGTH	SIGN LENGTH	BASE LENGTH
3	42"	90"	84"	132"	126"	174"	168"	216"	210"	261"
2	36"	N/A	72"	N/A	108"	N/A	N/A	N/A	N/A	N/A



NEW AIRFIELD SIGN - INSTALLATION IN UNPAVED AREAS DETAILS
N.T.S.

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