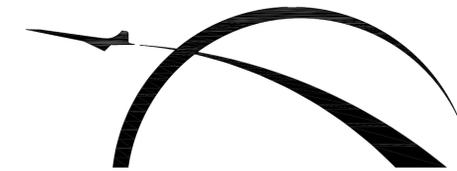


GEORGE BUSH IAH AIRPORT



HOUSTON AIRPORT SYSTEM

GUARD BOOTH REPLACEMENT PROJECT GUARD BOOTH NV-53

HAS PROJECT No. 727
HAS-ON-CALL No. 715C-021

100% CONSTRUCTION DRAWINGS
AUGUST 11, 2014

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HOUSTON AIRPORT SYSTEM

OWNER

16930 John F. Kennedy Blvd.
[P] (281) 233-1800 [F] (281) 233-1757
Houston, TX 77032

PGAL

ARCHITECT

3131 Briarpark, Suite 200
[P] (713) 622-1444 [F] (713) 968-9333
Houston, TX 77042

ISANI CONSULTANTS

CIVIL ENGINEER

3143 Yellowstone Blvd.
[P] (713) 747-2399
Houston, TX 77054

VOLTAIR

MEP ENGINEERS

5353 West Alabama, Suite 301
[P] (832) 371-6181
Houston, TX 77056

LANDTECH

LAND SURVEYING

2525 N. Loop West, Suite 300
[P] (713) 861-4131
Houston, TX 77008

GARZA + MCLAIN

STRUCTURAL ENGINEER

13313 Southwest Frwy, Suite 163
[P] (281) 494-1230
Sugarland, TX 77478

PGA ENGINEERS

TELECOMMUNICATIONS

13201 Northwest Frwy, Suite 800
[P] (713) 269-3182
Houston, TX 77040



PGAL

SCOPE OF WORK

- REMOVE EXISTING GUARD BOOTH FROM LOCATION IDENTIFIED IN THE DRAWINGS
- INSTALL NEW UNDERGROUND UTILITIES
- INSTALL NEW GUARD BOOTH AT THE LOCATION IDENTIFIED
- RECONNECT ELECTRICAL AND TELECOMMUNICATION LINES
- PRE MANUFACTURED GUARD BOOTH TO BE SUBMITTED AS A SIGNED AND SEALED SET OF DRAWINGS IN A DEFERRED SUBMITTAL

SCOPE OF WORK | 2

FIRE ALARM AND DETECTION SYSTEMS: (IBC SECTION 907.2.2)

A MANUAL FIRE ALARM SYSTEM SHALL BE INSTALLED IN GROUP B OCCUPANCIES HAVING AN OCCUPANT LOAD OF 500 OR MORE PERSONS OR MORE THAN 100 PERSONS ABOVE OR BELOW THE LOWEST LEVEL OF EXIT DISCHARGE

OCCUPANCY CALCULATIONS (IBC TABLE 1004.1.1)

OCCUPANCY TYPE	SPACE TYPE	FLOOR LEVEL	FLOOR AREA	LOAD FACTOR	TOTAL LOAD
B	BUSINESS	LEVEL 1	160	100 GROSS	2

TOTAL OCCUPANCY = 2

EGRESS WIDTH PER OCCUPANT SERVED (IBC TABLE 1005.1)

OCCUPANCY	WITH SPRINKLER SYSTEM ^a	
	STAIRWAYS (INCHES PER OCCUPANT)	OTHER EGRESS COMPONENTS (INCHES PER OCCUPANT)
OCCUPANCY OTHER THAN THOSE LISTED BELOW	0.3	0.2

EGRESS WIDTH CALCULATIONS (IBC TABLE 1005.1)

0.2" X OCC.	MIN. REQUIRED	PROVIDED
LEVEL 1: 0.2" X 1 OCC = 2 INCHES/OCC	.2"	36" PROVIDED

BUILDINGS WITH ONE EXIT (IBC TABLE 1019.2)

OCCUPANCY	MAXIMUM HEIGHT OF BUILDING ABOVE GRADE PLANE	MAXIMUM OCCUPANTS (OR DWELLING UNITS) PER FLOOR AND TRAVEL DISTANCE
A,B ¹ ,E*,F,M,U	1 STORY	49 OCCUPANTS AND 75 FEET TRAVEL DISTANCE

FIRE CLASSIFICATION FOR ROOF COVERINGS (IBC TABLE 1505.1):

CONSTRUCTION TYPE	CLASS	ASSEMBLY EFFECTIVENESS
V-B	C ^c	LIGHT FIRE-TEST EXPOSURE

c. BUILDINGS THAT ARE NOT MORE THAN TWO STORIES IN HEIGHT AND HAVING NOT MORE THAN 6,000 SQUARE FEET OF PROJECTED ROOF AREA AND WHERE THERE IS A MINIMUM 10-FOOT FIRE-SEPARATION DISTANCE FROM THE LEADING EDGE OF THE ROOF TO A LOT LINE ON ALL SIDES OF THE BUILDING, EXCEPT FOR STREET FRONTS OR PUBLIC WAYS, SHALL BE PERMITTED TO HAVE ROOFS OF NO. 1 CEDAR OR REDWOOD SHAKES AND NO. 1 SHINGLES.

PLUMBING FIXTURE COUNT (IBC TABLE 2902.1)

CLASSIFICATION	USE GROUP	REQUIRED PLUMBING FACILITIES (REFER TO OCCUPANCY CALCULATIONS ABOVE)									
		WATER CLOSETS MALE	WATER CLOSETS FEMALE	LAVATORIES MALE	LAVATORIES FEMALE	KITCHEN SINK	BATHTUBS OR SHOWERS	DRINKING FOUNTAINS	OTHER		
BUSINESS	B	1 PER 25 FOR THE FIRST 50 AND 1 PER 50 FOR THE REMAINDER EXCEEDING 50		1 PER 40 FOR THE FIRST 80 AND 1 PER 80 FOR THE REMAINDER EXCEEDING 80		--	--	1 PER 100	1 SERVICE SINK		
MINIMUM REQUIRED		1		1		0	0	NA	NA		

ALLOWABLE HEIGHT AND BUILDING AREA (IBC TABLE 503):

GROUP B, TYPE V-B CONSTRUCTION	TABLE 503	ALLOWED WITH MODIFICATIONS	ACTUAL
ALLOWABLE BUILDING HEIGHT	2 STORY	NA	1 STORY
ALLOWABLE BUILDING AREA, PER FLOOR	9,000 GSF	NA	160 GSF

REQUIRED SEPARATION OF OCCUPANCIES (HOURS): (IBC TABLE 508.3.3):

OCCUPANCY	A ^a ,E	I	R ^d	F-2,S-2 ^d ,U ^g	B ^b ,F-1,M*,S-1	H-1	H-2	H-3,H-4,H-5
B ^b	S NS	S NS	S NS	S NS	S NS	S NS	S NS	S NS

FIRE-RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (IBC SECTION 601)

BUILDING ELEMENT	FIRE RESISTANCE RATING (IN HOURS)
PRIMARY STRUCTURAL FRAME ^a , INCLUDING COLUMNS AND BEAMS	0 HOURS
BEARING WALLS	
EXTERIOR ^g	0 HOURS
INTERIOR	0 HOURS
NON-BEARING WALLS AND PARTITIONS	
INTERIOR ^f	0 HOURS
FLOOR CONSTRUCTION	
INCLUDING SUPPORT BEAMS AND JOISTS	0 HOURS
ROOF CONSTRUCTION	
INCLUDING SUPPORT BEAMS AND JOISTS	0 HOURS

FIRE-RESISTANCE RATING FOR EXTERIOR WALLS (IBC TABLE 602):

FIRE SEPARATION DISTANCE	CONSTRUCTION TYPE	OCCUPANCY GROUP	RATING
10FT ≤ X < 30FT	V-B	B	0 HOURS

FIRE-RESISTIVE RATING FOR CORRIDORS

WALL CLASSIFICATION	RATING	IBC SECTIONS
FIRE PARTITION	1 HOUR	708 & TABLE 1017.1

FIRE & SMOKE DAMPER LOCATIONS (IBC SECTION 716.5):

	LOCATION	IBC SECTIONS
FIRE DAMPERS:	RATED CORRIDORS FIRE PARTITIONS	N/A N/A
SMOKE DAMPERS:	RATED CORRIDORS FIRE PARTITIONS	N/A N/A

INTERIOR WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCY (IBC TABLE 803.5):

GROUP	NON-SPRINKLER ^d		
	EXIT ENCLOSURES AND EXIT PASSAGEWAYS ^{a,b}	CORRIDORS	ROOMS AND ENCLOSED SPACES ^c
B, E, M, R-1, R-4	A	B	C

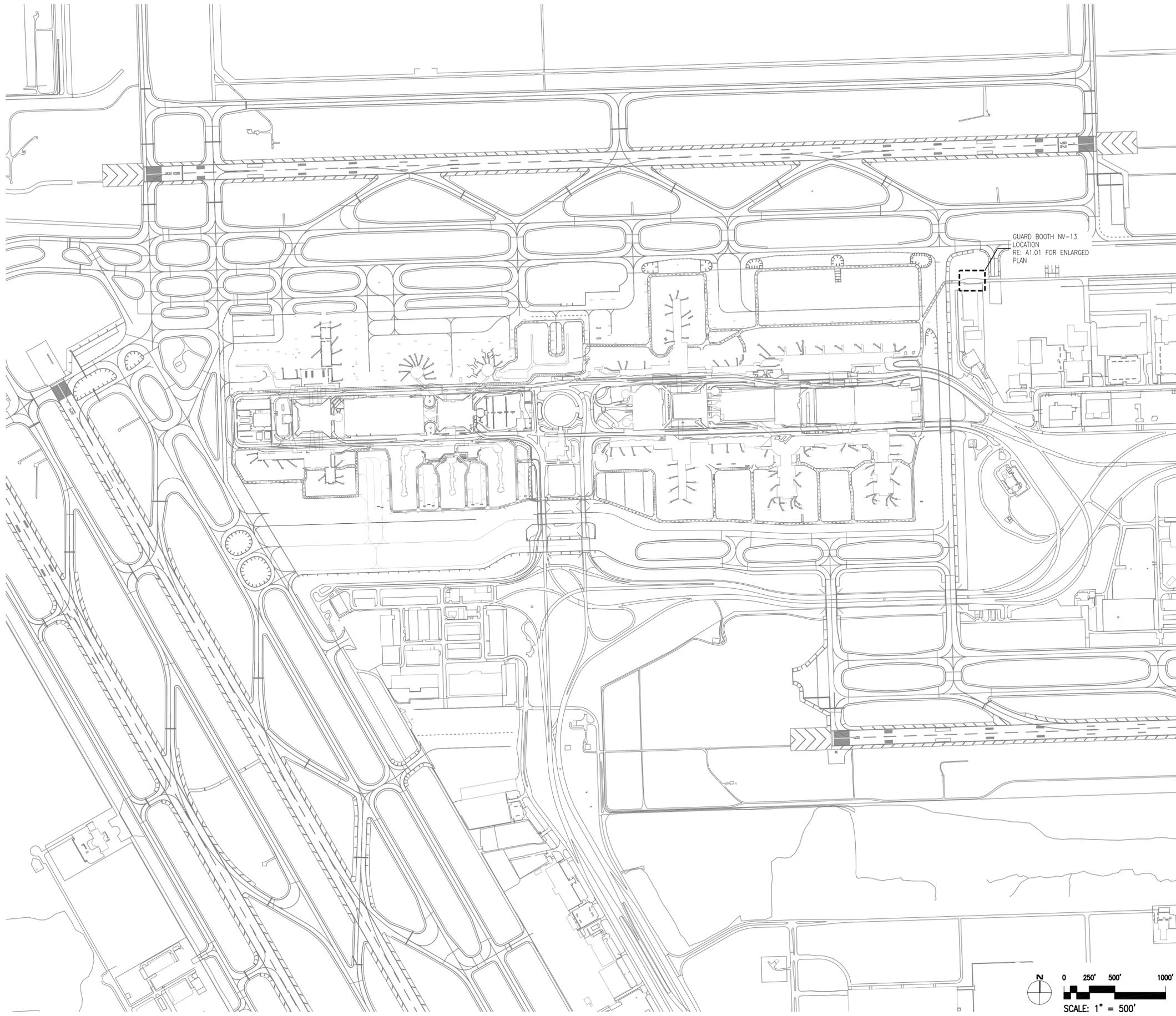
FIRE PROTECTION SYSTEMS: (IBC SECTION 903)

FIRE EXTINGUISHERS PROVIDED AT 75 FEET MAX TRAVEL DISTANCE AND/OR AT EVERY 3,000 SF OF AREA.
 IFC TABLE 906.3(1)

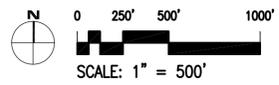
FIRE HYDRANT & ACCESS FROM BUILDING PERIMETER:

- WITHIN 600 FEET OF FIRE HYDRANT. IFC507.5.1 EXCEPTION 2
- WITHIN 150 FEET OF FIRE APPARATUS ACCESS ROAD, IFC 503.1.1
 - 20 FEET MINIMUM WIDTH FIRE LANE PROVIDED. IFC 503.2.1
 - 20 FEET MINIMUM TURNING RADIUS PROVIDED.

CODE ANALYSIS | 1



GUARD BOOTH NV-13
LOCATION
RE: A1.01 FOR ENLARGED
PLAN



OVERALL SITE PLAN | 1" = 500' | 2

GENERAL NOTES

1. NEW GUARD BOOTH WILL BE PLACED ADJACENT TO EXISTING TERMINAL BUILDING, AND WITHIN THE EXISTING AIRPORT PROPERTY LINES. REFER TO THE PLANS ON SHEET A1.01 FOR THE EXACT LOCATION OF NEW GUARD BOOTH TO BE INSTALLED.
2. ALL WORK SHALL OCCUR INSIDE THE EXISTING AIRPORT PROPERTY LIMITS.

HOUSTON AIRPORT SYSTEM
GEORGE BUSH
INTERCONTINENTAL AIRPORT
HOUSTON TEXAS
OWNER
HOUSTON AVIATION DEPT.
16930 JOHN F. KENNEDY BLVD.
HOUSTON, TX 77032
[T] 713-622-1444
[F] 713-968-9333

ARCHITECT
PGAL
3131 BRIARPARK
SUITE 200
HOUSTON, TX 77042
[T] 713 622 1444
[F] 713 968 9333

PGAL TBPE REG. NO. F-2742
CONSULTANT

PROJECT TITLE
HOUSTON AIRPORT SYSTEM
GUARD BOOTH
REPLACEMENT PROJECT
HAS PN 727
PROJECT NUMBER
R1002447
PROJECT LOCATION
4103 N. TERMINAL RD.
GUARD BOOTH NV-53
HOUSTON, TX 77032
DATE OF ISSUE
AUGUST 11, 2014

REVISIONS

HOUSTON AIRPORT SYSTEM PDC DESIGN DIVISION	DATE

REGISTRATION
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SHEET TITLE
OVERALL SITE PLAN

SHEET NUMBER
G0.02

GENERAL NOTES | 1

DATE PLOTTED: 08/11/14 10:52 AM
 PLOT BY: JACOB
 FILE NAME: A001.rvt
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Alexandria | Atlanta | Austin | Boca Raton | Boston | Dallas | Houston | Las Vegas | Los Angeles | Mexico City | New Orleans | New York | Phoenix | San Diego | San Francisco | Seattle | Tampa | Washington DC

GENERAL CONSTRUCTION NOTES:

- THE CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION SCHEDULE WITH ARCHITECT PRIOR TO COMMENCING WORK.
- CONTRACTOR SHALL CONTACT ALL GOVERNING AGENCIES A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION AND COORDINATE ALL WORK WITH THE SAME.
- VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD BEFORE COMMENCING ANY WORK. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPORT ANY DISCREPANCIES TO THE ENGINEER IN A TIMELY MANNER.
- ALL DIMENSIONS SHOWN ARE APPROXIMATE AND ARE TO BE VERIFIED BY THE CONTRACTOR. CHANGES IN HORIZONTAL OR VERTICAL ALIGNMENT ARE TO BE APPROVED BY THE ENGINEER.
- 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, ELEVATION AS WELL AS THE LOCATION AND NATURE OF THE PIPELINES, NATURAL GAS LINES, UNDERGROUND CABLES, UTILITIES ETC. HOWEVER, THE ACCURACY OF OR COMPLETENESS OF SUCH INFORMATION IS NOT GUARANTEED. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES NOT SHOWN ON THE DRAWINGS AND ENCOUNTERED DURING CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF CONFLICTS EXIST.
- THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES IN THE AREA A MINIMUM OF 48 HOURS PRIOR TO COMMENCING WORK AT ANY RIGHT-OF-WAY OR EXISTING EASEMENT. THE CONTRACTOR SHALL CONTACT THE UTILITY COORDINATING COMMITTEE AT (713) 223-4567, 1-800-245-4545 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
- SOME OF THE UNDERGROUND UTILITIES SHOWN HEREON HAVE NOT BEEN FIELD VERIFIED.
- CONTRACTOR SHALL UNCOVER EXISTING UTILITIES AT ALL "POINTS OF CROSSINGS" TO DETERMINE IF A CONFLICT EXISTS BEFORE COMMENCING ANY CONSTRUCTION. NOTIFY THE ENGINEER AT ONCE OF ANY CONFLICTS.
- IN THE EVENT OF DAMAGE TO UNDERGROUND UTILITIES OR FACILITIES, WHETHER SHOWN OR NOT ON THE DRAWINGS, THE CONTRACTOR SHALL MAKE THE NECESSARY REPAIRS TO REPLACE OR RETURN THE UTILITY OR THE FACILITY BACK IN SERVICE AT NO INCREASE IN THE CONTRACT PRICE. ALL SUCH REPAIRS SHALL CONFORM TO THE REQUIREMENTS OF THE COMPANY OR AGENCY SERVICING THE FACILITY.
- ALL EXISTING POWER POLES, LIGHT STANDARDS, SIGN, ETC. WHICH AFFECT THE PROPOSED CONSTRUCTION, SHALL BE REMOVED AND/OR RELOCATED AS REQUIRED WHETHER SHOWN ON THE DRAWINGS OR NOT AT NO ADDITIONAL COST TO THE OWNER.
- ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY SHALL ADHERE TO THE STANDARDS OF THE GOVERNING AGENCY.
- INGRESS AND EGRESS SHALL BE PROVIDED AT ALL TIMES FOR THE PROPERTY OWNERS AND THE BUSINESS OF THE ABUTTING PROPERTY AND THE CROSS STREETS WHICH ARE AFFECTED BY THE CONSTRUCTION OF THIS PROJECT.
- THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR MAINTAINING A SAFE PROJECT SITE 24 HOURS A DAY.
- DURING THE ENTIRE CONSTRUCTION PERIOD, THE CONTRACTOR SHALL MAINTAIN CONSTRUCTION WARNING SIGNS AT EACH END OF THE PROJECT TO WARN MOTORING AND PEDESTRIAN TRAFFIC THAT CONSTRUCTION IS IN PROGRESS AND OF POSSIBLE HAZARDOUS CONDITIONS GENERATED BY THE CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DELINEATING THE PERIMETER OF CONSTRUCTION WITH SAFETY FENCING AT NO ADDITIONAL COST. SAFETY FENCING SHALL BE ERECTED PRIOR TO CONSTRUCTION AND BE REMOVED UPON COMPLETION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING TRAFFIC IN THE IMMEDIATE VICINITY OF CONSTRUCTION. ALL WORK SHALL BE IN SUCH A MANNER AND SEQUENCE AS TO PROVIDE MAXIMUM PROTECTION TO TRAFFIC AND PEDESTRIANS. CONTROL SHALL BE CONSISTENT WITH THE TYPE OF WORK BEING PERFORMED.
- THE WORK AREA SHALL BE BARRICADED AND ILLUMINATED DURING DARKNESS AND PERIODS OF INACTIVITY, WHEN IN AN AREA OF DIRECT PUBLIC ACCESS.
- NOCCUPIED TRENCHES SHALL BE SECURED WITH SAFETY FENCING OR OTHER APPROPRIATE MEANS AT ALL TIMES. TRENCHES WHICH ARE NOT IMMEDIATELY BACKFILLED SHALL BE SECURELY COVERED OVERNIGHT AND BE SURROUNDED BY SAFETY FENCING.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING REQUIRED SECURITY TO PROTECT HIS OWN PROPERTY, EQUIPMENT, AND WORK IN PROGRESS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ADEQUATE DRAINAGE IS MAINTAINED AT ALL TIMES DURING CONSTRUCTION AND ANY DRAINAGE DITCH OR STRUCTURE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO THE SATISFACTION OF THE GOVERNING AUTHORITY.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONSTRUCTION OF ANY TEMPORARY DITCH OR DRAINAGE FACILITIES REQUIRED TO MAINTAIN ADEQUATE SITE DRAINAGE DURING CONSTRUCTION AT NO ADDITIONAL COST TO OWNER.
- THE CONTRACTOR IS TO INSTALL GROUND WATER CONTROL FACILITIES IF NEEDED, AT NO ADDITIONAL COST TO OWNER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL APPLICABLE PERMITS REQUIRED BY ALL GOVERNING AGENCIES.
- THE CONTRACTOR IS RESPONSIBLE FOR THE COMPLETION AND SUBMISSION OF ALL APPLICABLE STATE AND FEDERAL FORMS REQUIRED FOR STORM WATER POLLUTION PREVENTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION, IMPLEMENTATION, MAINTENANCE, AND INSPECTION OF STORM WATER POLLUTION PREVENTION CONTROL MEASURES INCLUDING, BUT NOT LIMITED TO, EROSION AND SEDIMENT CONTROLS, STORM WATER MANAGEMENT PLANS, WASTE COLLECTION AND DISPOSAL, OFF-SITE VEHICLE TRACKING, AND OTHER PRACTICES.
- THE CONTRACTOR SHALL COMPLY WITH OSHA REGULATIONS AND STATE OF TEXAS LAW CONCERNING EXCAVATION, TRENCHING AND SHORING.
- THE CONTRACTOR SHALL DESIGN AND PROVIDE A TRENCH SAFETY SYSTEM TO MEET THE APPROPRIATE REQUIREMENTS ESTABLISHED IN OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) SAFETY & HEALTH REGULATIONS, 29 CFR 1926, SUBPART P- EXCAVATIONS, TRENCHING AND SHORING, AND OSHA'S PROPOSED STANDARDS ON TRENCHING, EXCAVATION PUBLISHED IN VOLUME 52, NO. 72 OF THE FEDERAL REGISTER, APRIL 15, 1987, PAGES 12288-12339. SHOULD THE REFERENCED OSHA STANDARDS BE MODIFIED OR AMENDED, THE MORE STRINGENT REQUIREMENTS SHALL APPLY.
- CONTRACTOR SHALL PROVIDE SHEETING, SHORING AND BRACING AS NECESSARY TO PROTECT WORKMEN AND EXISTING UTILITIES DURING ALL PHASES OF CONSTRUCTION.
- IN ORDER TO COMPLY WITH HANDICAP REGULATIONS, THE CONTRACTOR SHALL ENSURE THAT THE SLOPE OF THE SIDEWALK AND AND/OR PAVING IN THE FIRST FIVE FEET OUTSIDE ANY DOOR DOES NOT EXCEED 2% IN ANY DIRECTION.
- NO CONSTRUCTION WHICH BLOCKS THE TRAFFIC ON ANY STREET, ALLEY, OR DRIVEWAY WILL BE ALLOWED DURING THE HOURS OF 6:30 A.M.- 8:30 A.M. AND 2:30 P.M.-6:30 P.M.
- THE CONTRACTOR MUST CLEAN MUD, DIRT OR DEBRIS TRACKED ONTO EXISTING STREETS BY HIMSELF OR SUBCONTRACTOR'S VEHICLES AND EQUIPMENT IN A TIMELY MANNER.
- CONDITION OF THE ROAD AND/OR RIGHT-OF-WAY, UPON COMPLETION OF JOB SHALL BE AS GOOD OR BETTER THAN PRIOR TO STARTING WORK.
- ALL AREAS DISTURBED BY CONSTRUCTION WHICH ARE NOT TO BE REPAVED OR OTHERWISE COVERED SHALL BE HYDROMULCHED.
- CONTRACTOR SHALL STRIP AND STOCKPILE TOPSOIL. TOPSOIL SHALL BE SPREAD OVER ALL AREAS RECEIVING SOD AND OR HYDROMULCH. CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING A STAND OF GRASS WITH NO AREAS OF EROSION BEFORE FINAL ACCEPTANCE.
- 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 CAUSE ANY DAMAGE OR ADDITIONAL COST TO THE OWNER OR OTHER PERSONS.
- ALL FILL PLACED ON SITE SHALL BE ENGINEERED FILL PER THE RECOMMENDATION OF THE SPECIFICATIONS.
- FINISH GRADE ELEVATIONS INDICATE FINAL GRADE OF PROPOSED MATERIAL (I.E. SOD, DIRT, MULCH ETC.) LANDSCAPE AREAS ADJACENT TO BUILDING, INCLUDING, DIRT, MULCH AND/OR BEDDING MATERIALS SHALL NOT COVER WEEPHOLES, AREAS ADJACENT TO BUILDING, LANDSCAPED, OR OTHERWISE SHALL SHEET FLOW AWAY FROM BUILDING WITH NO AREAS OF STANDING WATER ADJACENT TO BUILDING.
- GRADING AROUND BUILDINGS INCLUDING WALKWAYS SHALL BE COORDINATED WITH THE ENGINEER AND FINAL APPROVAL OF GRADES IN GRASS AREAS AND SWALES SHALL BE APPROVED BY ENGINEER PRIOR TO INSTALLATION OF LANDSCAPING MATERIAL.
- AFTER INSTALLATION OF DRAINAGE SYSTEM, CONTRACTOR SHALL PERFORM FINAL GRADING AS SHOWN ON THE PLANS AND/OR AS DIRECTED BY ENGINEER OR OWNER TO INSURE POSITIVE DRAINAGE OF ENTIRE SITE. FINAL GRADING SHALL BE APPROVED BY ENGINEER PRIOR TO INSTALLATION OF GRASS.
- CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING FINAL GRADES TO ENSURE POSITIVE DRAINAGE.
- ALL STRUCTURES AND SEWER PIPE UNDER OR WITHIN TWO (2) FEET OF PROPOSED OR FUTURE PAVEMENT SHALL BE BEDDED AND BACKFILLED WITH CEMENT STABILIZED SAND UP TO THE BOTTOM OF THE PAVEMENT SUBGRADE.
- CEMENT-SAND BACKFILL SHALL CONSIST OF NOT LESS THAN 1-1/2 SACKS OF CEMENT PER TON OF SAND WITH SUFFICIENT WATER TO HYDRATE THE CEMENT. THE MATERIAL SHALL BE PLACED IN LAYERS EIGHT(8) INCHES THICK MAXIMUM AND COMPACTED TO 95% STANDARD PROCTOR DENSITY.
- A FIBERBOARD EXPANSION JOINT SHALL BE PLACED BETWEEN THE BUILDING FOUNDATION AND THE CONCRETE PAVEMENT.
- THE CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL PROPOSED UTILITIES TO EXISTING BUILDING PRIOR TO COMMENCING WORK ON SITE UTILITIES. UPON ANY DISCREPANCIES, ENGINEER IS TO BE NOTIFIED.

STORM SEWER CONSTRUCTION NOTES

- ON SITE STORM SEWERS 10-INCH DIAMETER AND LESS SHALL BE HDPE (HIGH DENSITY POLYETHYLENE) PIPE MEETING AASHTO M252 & 12-INCH TO 24-INCH DIAMETER SHALL BE HDPE PIPE MEETING AASHTO M294 SPECIFICATIONS.
- ANY CONCRETE PIPE USED ON THIS PROJECT SHALL BE REINFORCED CONCRETE MEETING ASTM C-76 CLASS III, AND HAVE BELL AND SPIGOT JOINTS WITH RUBBER GASKETS. CONCRETE PIPE IS ONLY TO BE USED WHERE REQUIRED IN PUBLIC RIGHT-OF-WAY AND/OR AT TIES TO PUBLIC STORM SEWER SYSTEMS. BEDDING BACKFILLING AND INSTALLATION OF PIPE AND CONSTRUCTION OF APPURTENANCES SHALL BE IN ACCORDANCE WITH THE CIVIL SHEET DETAILS.
- THE CONTRACTOR SHALL USE PRECAST STORM SEWER MANHOLES AND INLETS. INLET BOTTOM SHALL BE FILLED WITH CONCRETE AND SLOPED TO INSURE POSITIVE DRAINAGE FROM INLET TO STORM SEWER LINE WITH NO STANDING WATER IN INLET. BRICK MANHOLES AND/OR INLETS MAY BE USED AS APPROVED BY THE ENGINEER WHEN SETTING STRUCTURES ON EXISTING UTILITY LINE. BRICK STRUCTURES MUST BE MORTARED INSIDE AND OUT. COORDINATE EACH INCIDENT WITH ENGINEER.
- ALL INLETS, MANHOLES, CLEANOUTS, AND HEADWALLS SHALL BE BACKFILLED WITH CEMENT STABILIZED SAND. CEMENT STABILIZED SAND FILL SHALL BE AT LEAST 12" ON BOTTOM OF STRUCTURE AND 12" AROUND OUTSIDE OF STRUCTURE.
- NO CORNER CONNECTIONS WILL BE ALLOWED TO ANY INLETS, JUNCTION BOXES OR BOX MANHOLES.
- CONTRACTOR SHALL CUT OFF PIPE FLUSH WITH INSIDE FACE OF INLETS AND MANHOLES.
- CONCRETE FOR DRAINAGE STRUCTURE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4500 PSI AT 28 DAYS.
- CULVERTS LARGER THAN SINGLE 30-INCH DIAMETER (OR LARGER THAN MULTIPLE 24-INCH DIAMETER CULVERTS) SHALL REQUIRE SAFETY END TREATMENTS (SETS).
- CONTRACTOR SHALL FLUSH AND CLEAN ALL STORM SEWER LINES AND STRUCTURES PRIOR TO ACCEPTANCE. ALL STORM LINES SHALL ALSO BE INSPECTED VIA CAMERA.
- TIE-INS TO EXISTING MANHOLES SHALL BE MADE SUCH THAT THE FINAL CONDITIONS UPON COMPLETION OF THE JOB SHALL BE AS GOOD OR BETTER THAN PRIOR TO STARTING WORK.

SANITARY SEWER CONSTRUCTION NOTES

- SANITARY SEWER SHALL BE PVC (POLY-VINYL CHLORIDE) PIPE MEETING A.S.T.M. SPECIFICATION, C-3034-73 AND HAVING A S.D.R. OF 26 OR LOWER IN NONE PAVED AREAS IN PAVED AREAS SDR SHOULD BE 18 OR LOWER UNLESS OTHERWISE SHOWN ON PLANS. BEDDING BACKFILLING AND INSTALLATION OF PIPE AND CONSTRUCTION OF APPURTENCES SHALL BE IN ACCORDANCE WITH THE CIVIL DETAIL SHEETS.
- THE CONTRACTOR SHALL USE PRECAST SANITARY SEWER MANHOLES.
- ALL MANHOLES AND CLEANOUTS SHALL BE BACKFILLED WITH CEMENT STABILIZED SAND. CEMENT STABILIZED SAND FILL SHALL BE AT LEAST 12" ON BOTTOM OF STRUCTURE AND 12" AROUND OUTSIDE OF STRUCTURE.
- CONTRACTOR SHALL CUT OFF PIPE FLUSH WITH INSIDE FACE OF MANHOLES.
- CONTRACTOR SHALL SEAL INTERIOR SURFACE OF PROPOSED SANITARY SEWER MANHOLES WITH RAVEN LINER 405, OR APPROVED EQUAL AS PER MANUFACTURER'S SPECIFICATIONS.
- ALL SANITARY SEWER SHALL BE VACUUM TESTED.
- ALL SANITARY SEWER LINES SHALL BE MANDREL AND AIR TESTED. ALL SANITARY SEWER LINES SHALL ALSO BE INSPECTED VIA CAMERA.
- UTILITIES ARE TO BE TAKEN TO WITHIN FIVE (5) FEET OF BUILDING. SEE PLUMBING SHEETS FOR CONTINUATION OF SERVICE CONNECTIONS INTO BUILDINGS.
- TIE-INS TO EXISTING MANHOLES SHALL BE MADE SUCH THAT THE FINAL CONDITIONS UPON COMPLETION OF THE JOB SHALL BE AS GOOD OR BETTER THAN PRIOR TO STARTING WORK.

- THE CONTRACTOR IS TO INSTALL WATER-TIGHT ADAPTORS OF A TYPE COMPATIBLE WITH THE MATERIALS BEING JOINED AT THE POINT OF CONNECTION OF THE SERVICE LINE TO THE BUILDING PLUMBING. NO CEMENT GROUT MATERIAL ARE PERMITTED.
- THE CONTRACTOR IS TO INSTALL EACH CLEANOUT SO THAT IT OPENS IN A DIRECTION OPPOSITE TO THE FLOW OF THE WASTE AND, EXCEPT IN CASE OF "WYE" BRANCH AND END-OF-THE-LINE CLEANOUTS, CLEANOUTS WILL BE INSTALLED VERTICALLY ABOVE THE FLOW LINE OF THE PIPE. CLEANOUT WILL BE MADE WITH AIR-TIGHT MECHANICAL PLUG.

WATER LINE CONSTRUCTION NOTES

- DOMESTIC OR FIRE WATER LINES 4" AND LARGER SHALL BE POLY-VINYL CHLORIDE(PVC), DR-18, CLASS 150, CONFORMING TO AWWA C900 OR C905, AS CURRENTLY AMENDED UNLESS OTHERWISE NOTED ON THE PLANS.
- WATER LINES 3" AND SMALLER SHALL BE SCHEDULE 40 PVC.
- ALL VALVES SHALL BE LEFT HAND (COUNTERCLOCKWISE) OPEN.
- SEE DETAIL SHEET FOR THRUST BLOCK DETAILS.
- CONTRACTOR SHALL INSTALL METALLIC TRACER WIRE ON ALL UNDERGROUND PVC PIPING AND SECURE WIRE ENDS AT ALL VALVE BOXES.
- CONTRACTOR SHALL ADJUST ELEVATION OF WATER LINES REQUIRED TO CLEAR OTHER UTILITIES. ADJUSTMENT MUST MEET TCEQ REQUIREMENTS FOR MINIMUM CLEARANCES, TYPE OF PIPE, ETC.
- MINIMUM VERTICAL CLEARANCE BETWEEN WATER LINES AND OTHER UTILITIES SHALL BE TWELVE INCHES, UNLESS OTHERWISE NOTED ON THE PLANS.
- EXISTING WATER SERVICES SHALL NOT BE INTERRUPTED DURING CONSTRUCTION.
- NO CONNECTIONS SHALL BE MADE TO EXISTING WATERLINES UNTIL ALL PROPOSED WATER LINES HAVE BEEN THOROUGHLY CLEANED, TESTED, DISINFECTED AND APPROVED. ALL TESTING PROCEDURES SHALL CONFORM TO THE GOVERNING AGENCY.
- UTILITIES ARE TO BE TAKEN WITHIN FIVE (5) FEET OF BUILDING. SEE PLUMBING SHEETS FOR CONTINUATION OF SERVICE CONNECTIONS INTO BUILDING.



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 GEORGE BUSH
 INTERCONTINENTAL AIRPORT
 HOUSTON TEXAS

OWNER
 HOUSTON AVIATION DEPT.
 16930 JOHN F. KENNEDY BLVD.
 HOUSTON TX, 77032
 (T) 713 622 1444
 (F) 713 968 9333

ARCHITECT



3131 BRIARPARK
 SUITE 200
 HOUSTON, TX 77042
 (T) 713 622 1444
 (F) 713 968 9333

PGAL TBPE REG. NO. F-2742
CONSULTANT



3143 YELLOWSTONE BLVD
 HOUSTON, TX 77054
 TEL: (713) 747-2399 FAX: (713) 748-3748
 TBPE FIRM REGISTRATION # 4575

PROJECT TITLE
 HOUSTON AIRPORT SYSTEM
 GUARD BOOTH
 REPLACEMENT PROJECT
 HAS PN 727

PROJECT NUMBER
 R1002447

PROJECT LOCATION
 4103 N. TERMINAL RD.
 GUARD BOOTH NV-53
 HOUSTON, TX 77032

DATE OF ISSUE
 AUGUST 11, 2014
 100% CONSTRUCTION DOCUMENTS
REVISIONS

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 PDC DESIGN DIVISION

DATE

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VINCENT N. JACOB
 98325
 PROFESSIONAL ENGINEER
 State of Texas
 8/11/14

SHEET TITLE

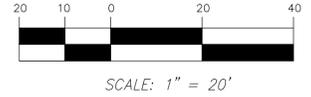
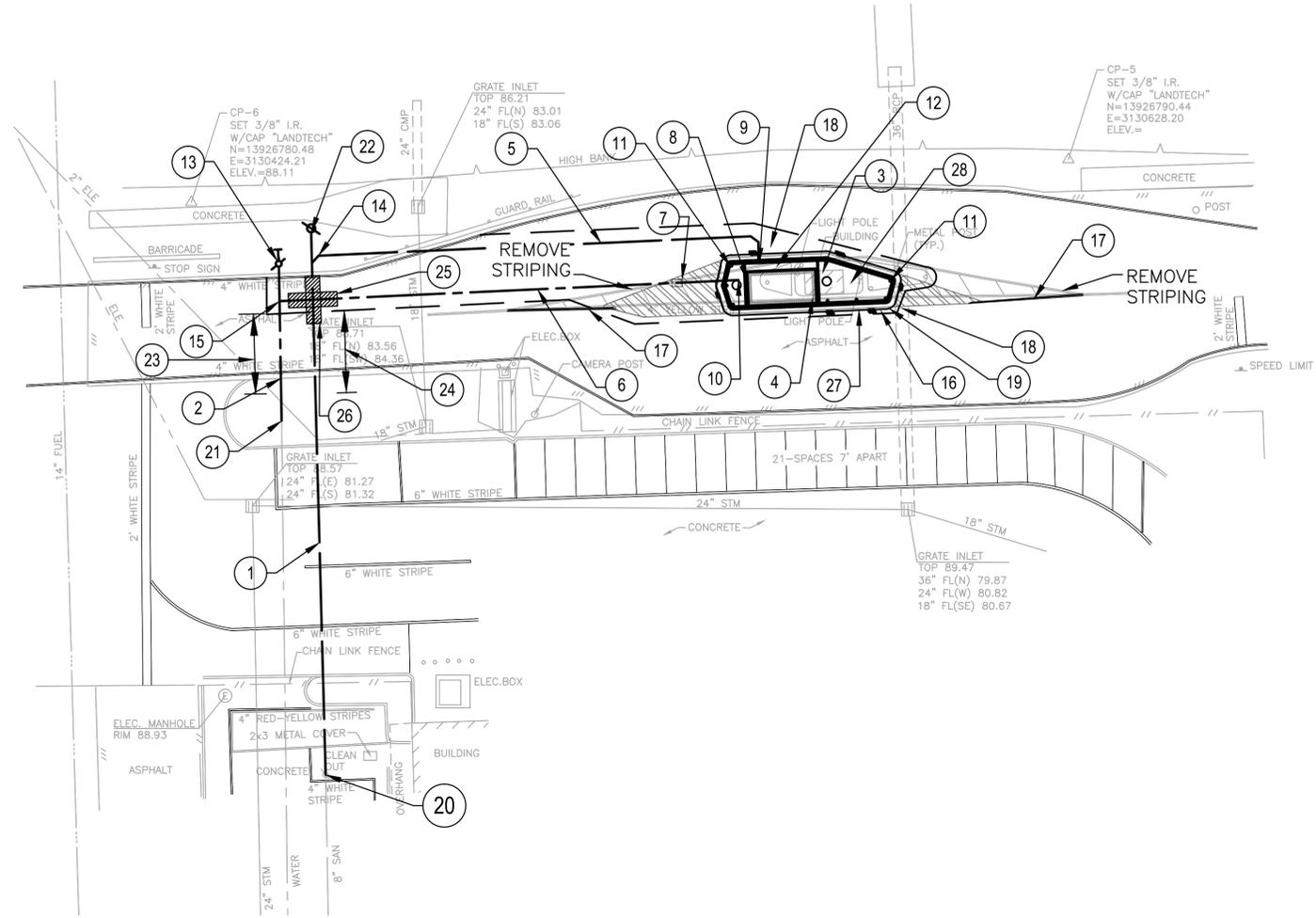
GENERAL NOTES

SHEET NUMBER

C0.01

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 TIME: 10:55 AM
 USER: JACOB

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CONSTRUCTION NOTES:

- ① EXTEND 8" SANITARY SEWER @ 0.44% (SEE PLAN AND PROFILE SHEET C5.01)
- ② EXTEND 4" WATERLINE (SEE PLAN AND PROFILE SHEET C5.01)
- ③ REMOVE EXISTING GUARD BOOTH
- ④ REMOVE EXISTING CONCRETE SLAB
- ⑤ INSTALL 4" PVC SANITARY SEWER SERVICE LINE
- ⑥ INSTALL 3/4" WATER SERVICE LINE
- ⑦ INSTALL WATER METER (SEE DETAIL SHEET C7.03)
- ⑧ INSTALL 8'x16' GUARD BOOTH (SEE ARCHITECTURAL)
- ⑨ SEE MEP FOR CONTINUATION OF SAN SERVICE LINE
- ⑩ SEE MEP FOR CONTINUATION OF WATER SERVICE LINE
- ⑪ INSTALL BOLLARDS (SEE DETAIL SHEET C7.03)
- ⑫ INSTALL CONCRETE SLAB (SEE STRUCTURAL)
- ⑬ INSTALL GATE VALVE WITH 2" BLOW-OFF
- ⑭ SANITARY SERVICE CONNECTION (SEE DETAIL SHEET C7.01)
- ⑮ WATER SERVICE CONNECTION SEE DETAIL SHEET C7.03
- ⑯ REMOVE AND REPLACE ASPHALT AS NEEDED TO INSTALL NEW GUARD BOOTH SLAB
- ⑰ INSTALL STRIPING
- ⑱ SAWCUT
- ⑲ INSTALL ASPHALT PAVEMENT (3" HMA, 8" BLACK BASE AND 6" LIME STABILIZED SUBGRADE)
- ⑳ CONNECT TO SANITARY SEWER (MATCH FLOWLINE)
- ㉑ CONNECT TO WATER LINE
- ㉒ INSTALL SANITARY SEWER CLEANOUT
- ㉓ AUGER WATER LINE UNDER EXISTING PAVEMENT
- ㉔ AUGER SANITARY SEWER UNDER EXISTING PAVEMENT
- ㉕ 20 LF JOINT OF DIP WATER LINE WITH RESTRAINT JOINTS
- ㉖ 20 LF JOINT OF DIP SANITARY SEWER WITH RESTRAINT JOINTS
- ㉗ INSTALL CONCRETE MONOLITHIC CURB GUTTER (SEE DETAIL SHEET C7.04)
- ㉘ INSTALL CONCRETE SIDEWALK (SEE DETAIL SHEET C7.04)

NOTES:

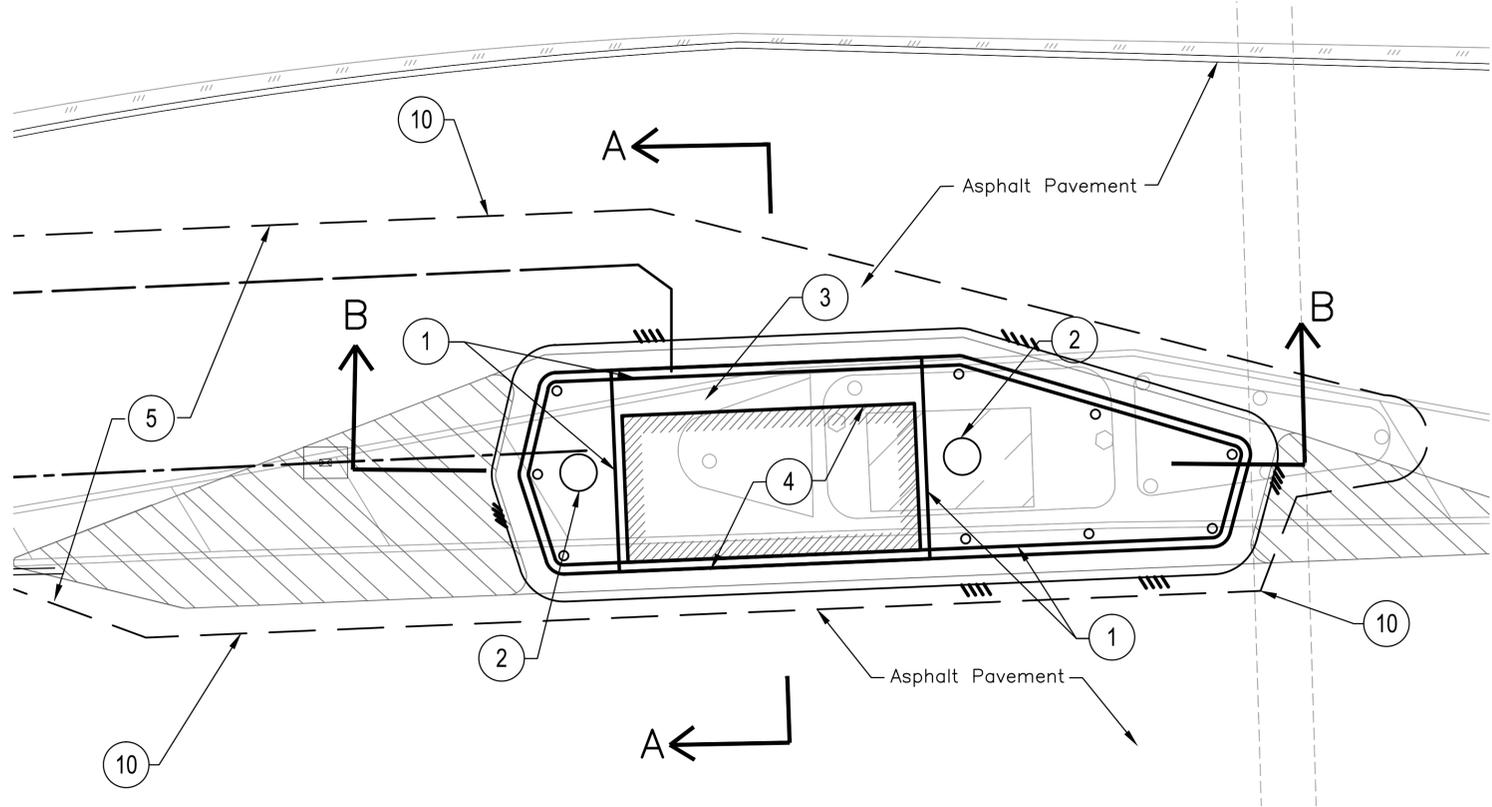
1. INSTALL CONCRETE AND ASPHALT TO PROVIDE POSITIVE DRAINAGE AWAY FROM NEW GUARD BOOTH TO ELIMINATE ANY STANDING WATER.
2. ALL COORDINATES ARE REFERENCED TO THE TEXAS COORDINATE SYSTEM OF 1983, SOUTH CENTRAL ZONE, NAD 83 (2011), EPOCH 2010.00. NGS MONUMENT "ZHU B", PRIMARY AIRPORT CONTROL STATION WAS HELD FOR PROJECT CONTROL. HORIZONTAL CONTROL SURVEY WAS PERFORMED USING GPS AND THE GEOID 12A MODEL. NGS GRID COORDINATES: N=13,912,033.65; E=3,129,527.22. UNIT OF MEASURE = U. S. SURVEY FOOT.
3. UNDERGROUND UTILITIES SHOWN PER HAS GIS RECORDS AND HAVE NOT BEEN FIELD VERIFIED.
4. SANITARY SEWER DEPTH FOR THE NV-53 SANITARY SERVICE CONNECTION IS APPROXIMATELY 4 FEET BELOW THE NATURAL GROUND ELEVATION AT THE EXISTING CLEANOUT WHERE THE NEW SANITARY SEWER CONNECTS. THIS IS BASED ON THE HOUSTON GIMS INFORMATION SINCE NO SURVEY INFORMATION WAS PROVIDED CONCERNING THE SANITARY SEWER DEPTH.

BM:

1. ALL COORDINATES SHOWN HEREON HAVE BEEN SCALED UP TO SURFACE VALUES USING A SURFACE ADJUSTMENT FACTOR OF 0.999923616683. TO CONVERT TO GRID COORDINATES USE THE FOLLOWING FORMULA: SURFACE X 0.999923616683 = GRID.
ALL ELEVATIONS ARE REFERENCED TO NAVD 88. NGS MONUMENT "ZHU B", PRIMARY AIRPORT CONTROL STATION WAS HELD FOR PROJECT CONTROL. VERTICAL CONTROL SURVEY WAS PERFORMED USING GPS AND CLOSED LEVEL LOOP PROCEDURES. ELEVATION = 81.03, NAVD88 (AS ADJUSTED IN JULY 2002 PER NGS PUBLISHED DATASHEET).

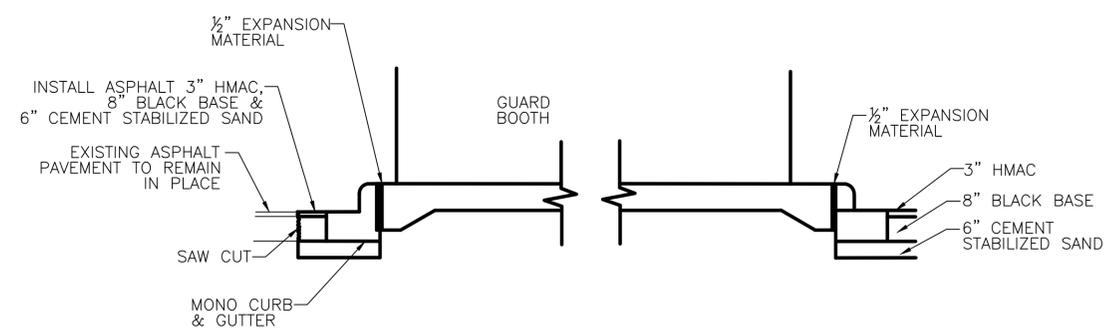
TBMS:

1. CP-5
SET 3/8" I.R.
W/CAP "LANDTECH"
ALONG NORTH SIDE OF PERIMETER ROAD, EAST OF GUARD BOOTH NV-53
N=13926790.44
E=3130628.20
ELEV.=
2. CP-6
SET 3/8" I.R.
ALONG NORTH SIDE OF PERIMETER ROAD, WEST OF GUARD BOOTH NV-53
W/CAP "LANDTECH"
N=13926780.48
E=3130424.21
ELEV.=88.11
3. TOPOGRAPHIC SURVEY OF IAH-SECURITY BOOTHS HOUSTON TEXAS GATE NV-13

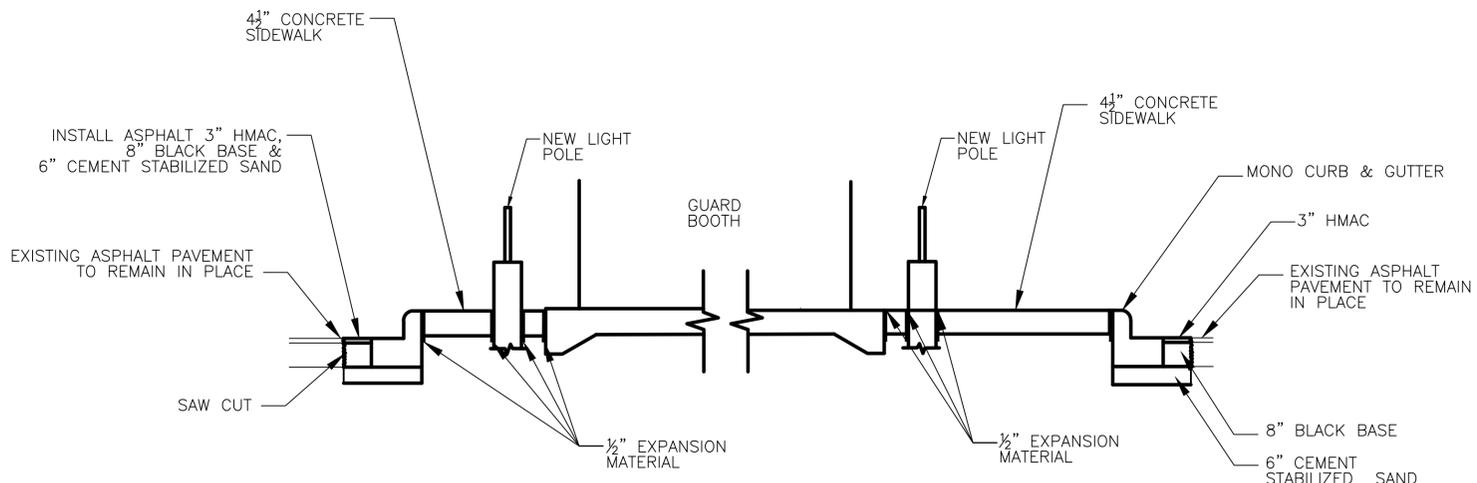


CONSTRUCTION NOTES:

- ① INSTALL ½" EXPANSION MATERIAL
- ② NEW LIGHT POLE (SEE ELECTRICAL)
- ③ INSTALL GUARD BOOTH SLAB (SEE STRUCTURAL)
- ④ INSTALL 8' X 16' GUARD BOOTH (SEE ARCHITECTURAL)
- ⑤ INSTALL ASPHALT PAVEMENT (3" HMAC, 8" BLACK BASE & 6" CEMENT STABILIZED SAND BASE)(SEE PAVEMENT REPAIR DETAIL SHEET C7.04)
- ⑥ 3" HMAC - WEARING SURFACE
- ⑦ 8" BLACK BASE
- ⑧ 6" CEMENT STABILIZED SAND
- ⑨ EXISTING ASPHALT PAVEMENT TO REMAIN IN PLACE
- ⑩ SAW CUT EXISTING PAVEMENT
- ⑪ INSTALL MONO. CURB & GUTTER (SEE DETAIL C7.02)
- ⑫ 4½" CONCRETE SIDEWALK (SEE DETAIL C7.04)



SECTION A-A



SECTION B-B

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 GEORGE BUSH
 INTERCONTINENTAL AIRPORT
 HOUSTON TEXAS
 OWNER
 HOUSTON AVIATION DEPT.
 16930 JOHN F. KENNEDY BLVD.
 HOUSTON TX, 77032
 [T] 713 622 1444
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ARCHITECT
PGAL
 3131 BRIARPARK
 SUITE 200
 HOUSTON, TX 77042
 [T] 713 622 1444
 [F] 713 968 9333

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 CONSULTANT

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 CONSULTANTS
 3143 YELLOWSTONE BLVD
 HOUSTON, TX 77054
 TEL: (713) 747-2399 FAX: (713) 748-3748
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SHEET TITLE

GUARD BOOTH
 SITE PLAN

SHEET NUMBER

C2.02

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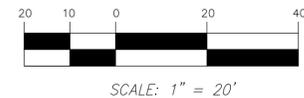
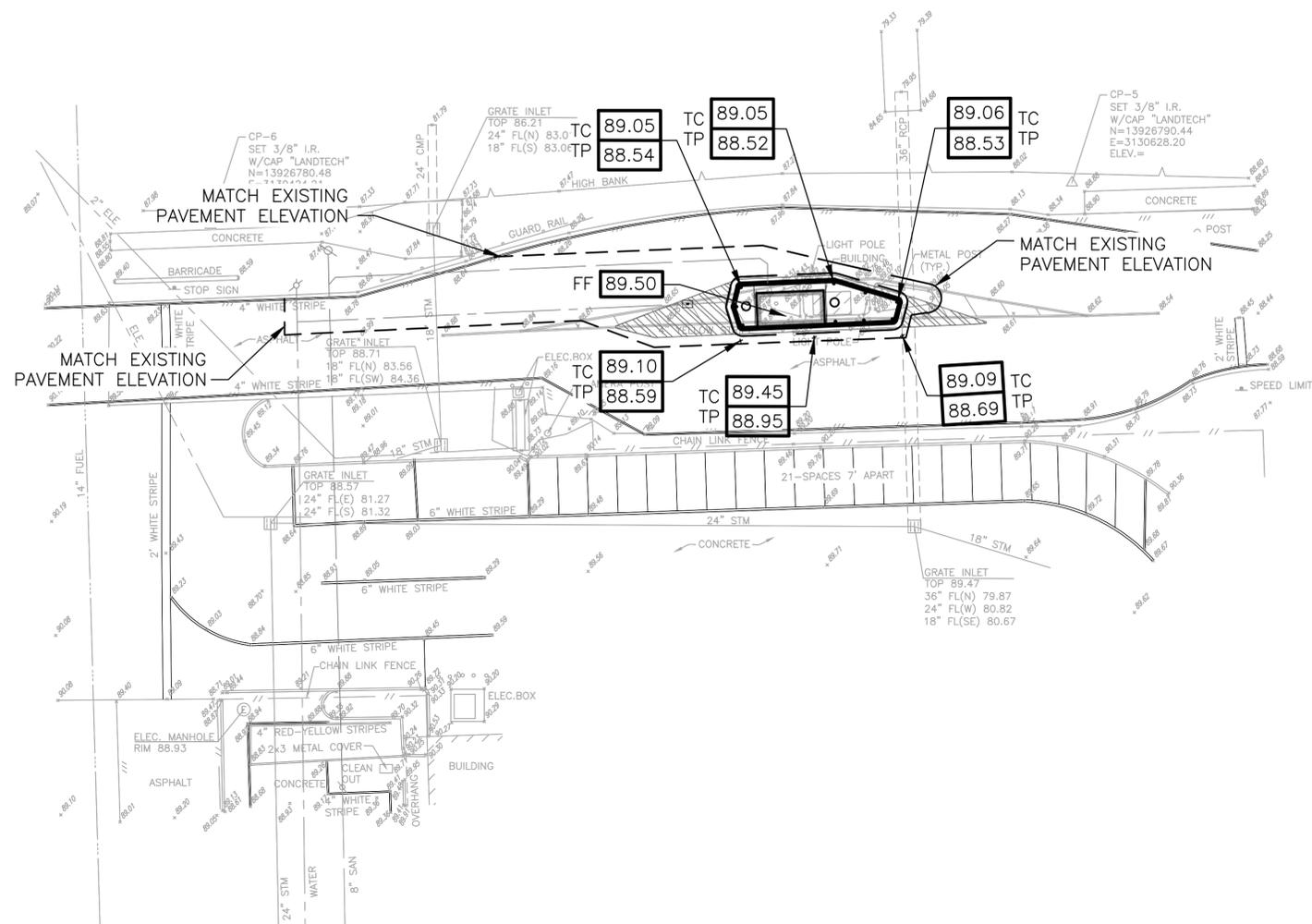
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PROPOSED LEGEND:

- WATER LINE
- SANITARY SEWER LINE

GRADING - LEGEND	
PROPOSED	EXISTING
NG [XX.XX]	NATURAL GROUND XX.XXNG
TG [XX.XX]	TOP OF GRATE XX.XX TG
TC [XX.XX]	TOP OF CURB [XX.XX] TC
TP [XX.XX]	TOP OF PAVEMENT [XX.XX] TP
FF [XX.XX]	FINISH FLOOR [XX.XX] FF

NOTES:

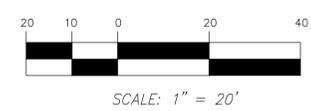
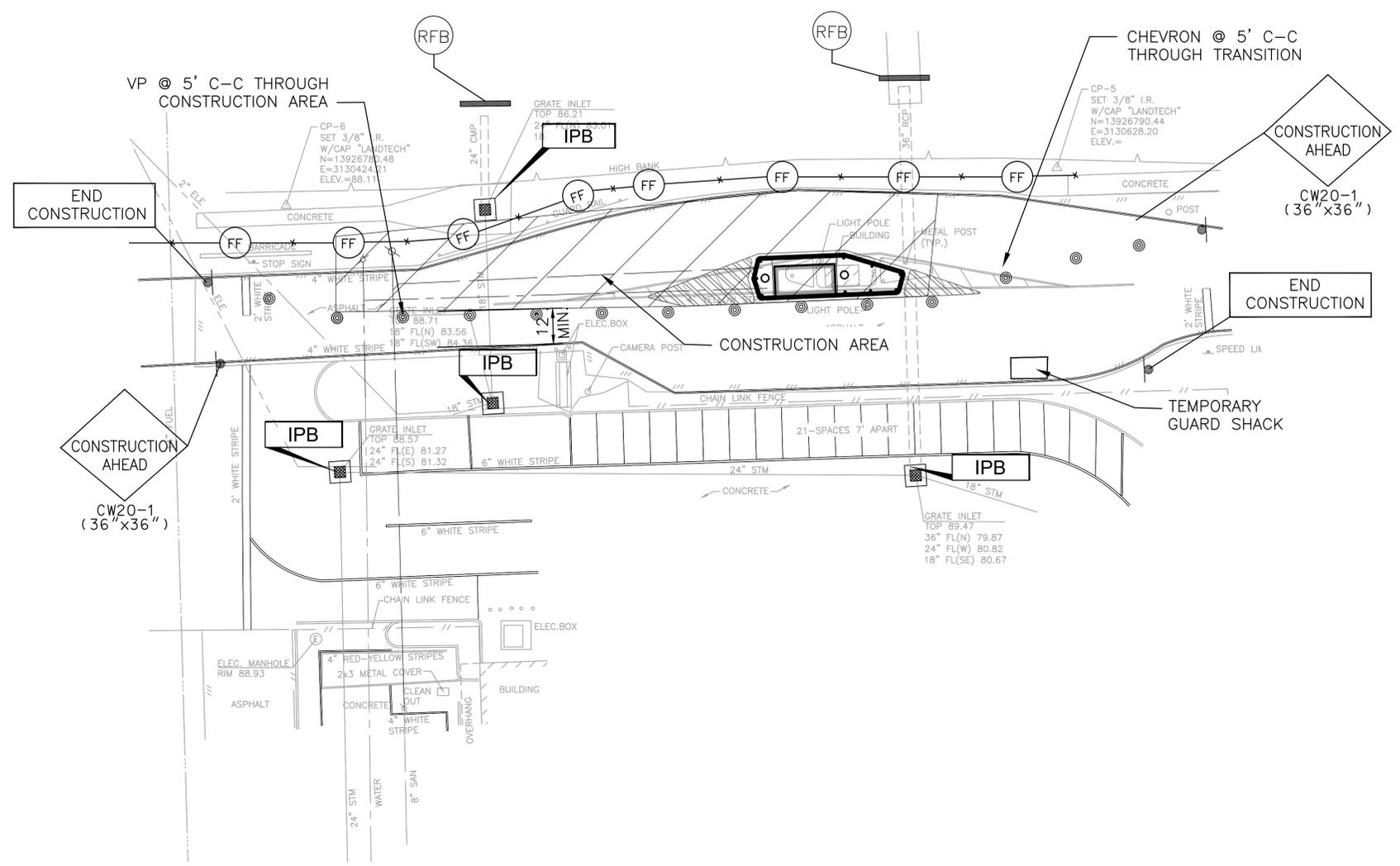
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TBM'S:

- CP-5
 SET 3/8" I.R.
 W/CAP "LANDTECH"
 ALONG NORTH SIDE OF PERIMETER ROAD, EAST OF
 GUARD BOOTH NV-53
 N=13926790.44
 E=3130628.20
 ELEV.=
- CP-6
 SET 3/8" I.R.
 ALONG NORTH SIDE OF PERIMETER ROAD, WEST OF
 GUARD BOOTH NV-53
 W/CAP "LANDTECH"
 N=13926780.48
 E=3130424.21
 ELEV.=88.11
- TOPOGRAPHIC SURVEY OF IAH-SECURITY BOOTHS
 HOUSTON TEXAS GATE NV-13



SWPPP LEGEND

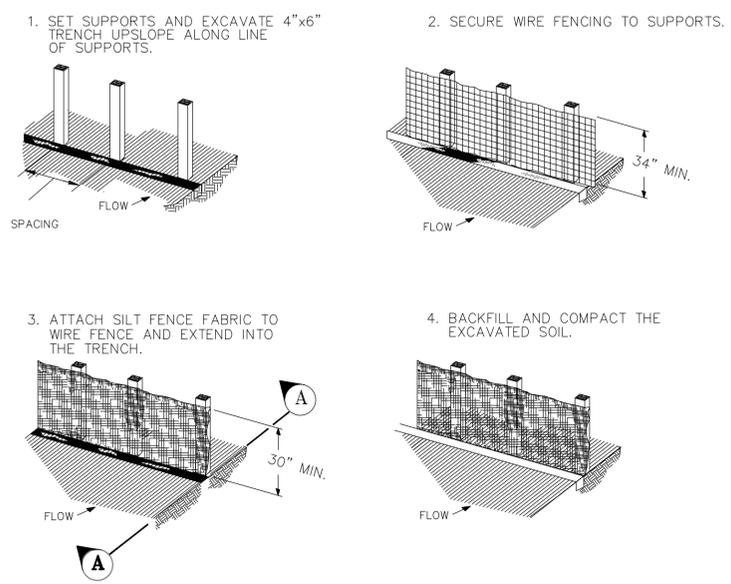
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	FILTER FABRIC FENCE
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	STABILIZED CONSTRUCTION EXIT
	FLOW DIRECTION
	FILTER DAM TYPE SYMBOL

TRAFFIC LEGEND :

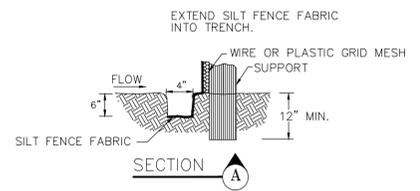
	BARREL
	CONSTRUCTION AREA
	VP - VERTICAL PANEL
	CHEVRON

NOTE:

- 1 MAINTAIN POSITIVE DRAINAGE DURING CONSTRUCTION
- 2 REMOVE DEBRIS FROM SITE ON A DAILY BASIS
- 3 NO CONSTRUCTION WORKERS CAN ENTER RESTRICTED AREAS WITHOUT AN ESCORT

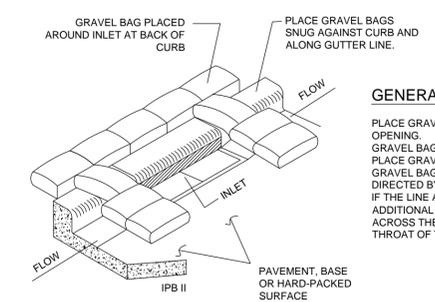


SILT FENCE



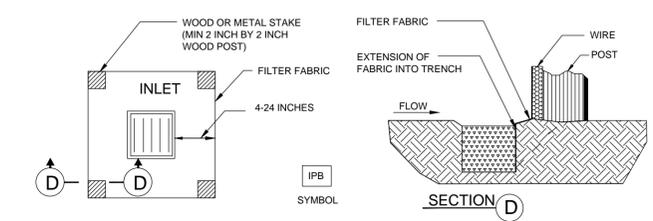
CONSTRUCTION NOTES:
 1. SEE SPECIFICATION SECTION NO. 02361-SILT FENCES.

	REINFORCED SILT FENCE
	SILT FENCE



GRAVEL BAG INLET PROTECTION BARRIER (FOR STAGE II INLETS)

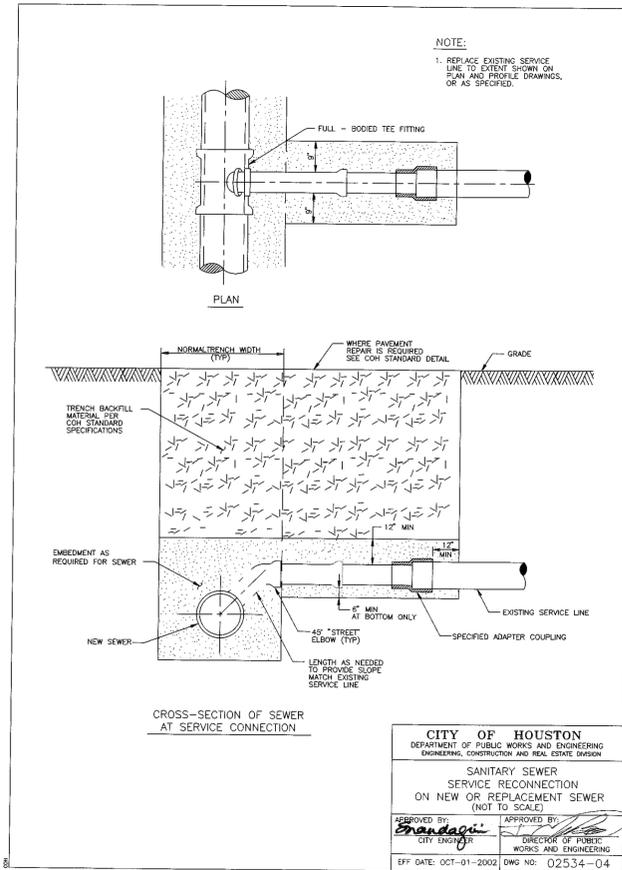
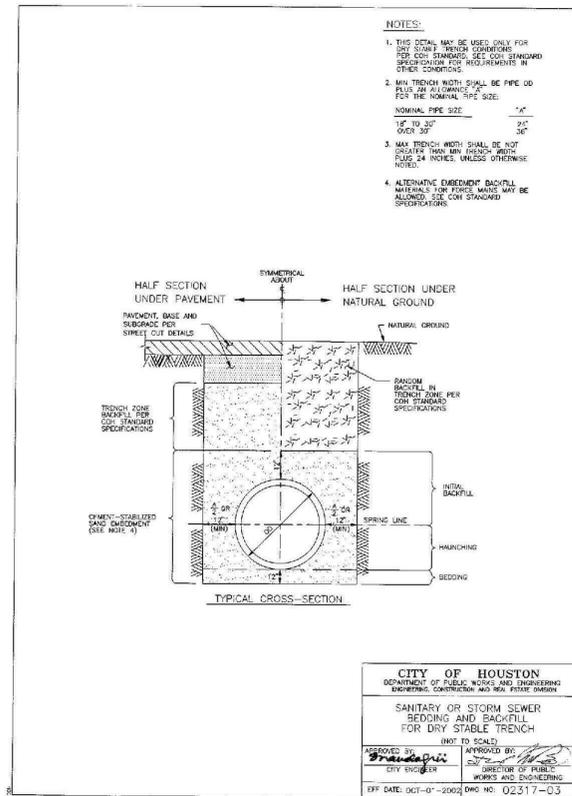
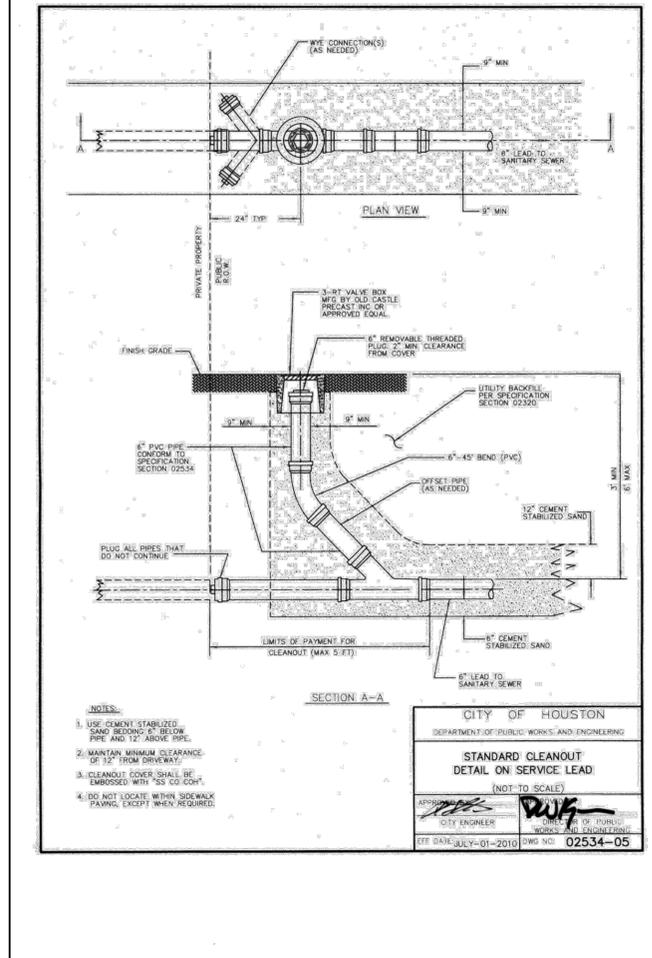
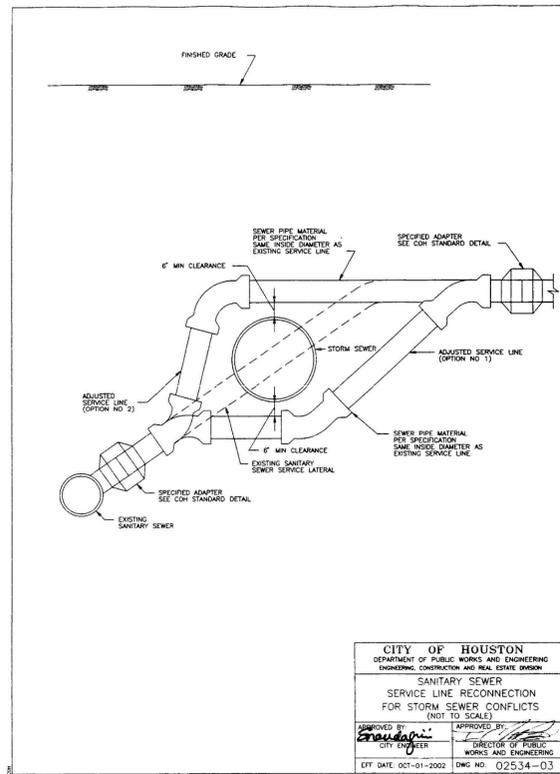
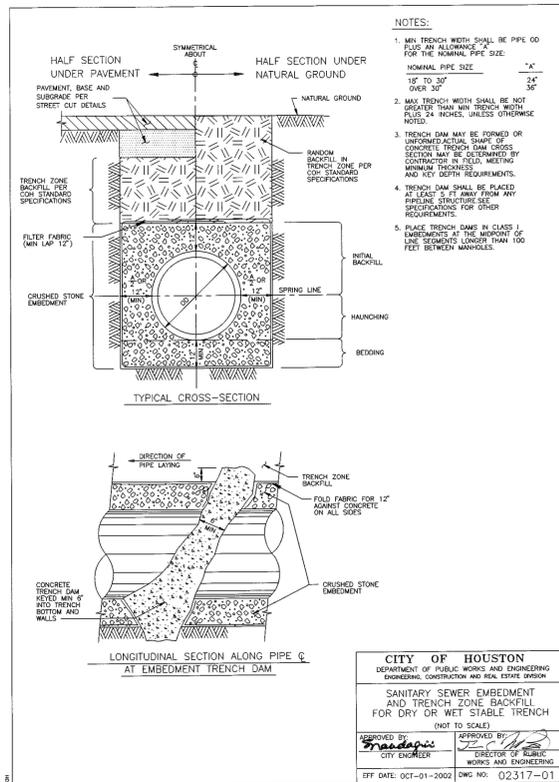
GENERAL NOTES:
 PLACE GRAVEL BAGS IN THE GUTTER ON EACH SIDE OF THE INLET OPENING.
 GRAVEL BAGS SHALL BE PLACED TIGHTLY AGAINST THE CURB.
 PLACE GRAVEL BAGS AT BACK OF CURB ALONG INLET.
 GRAVEL BAGS SHALL NOT BLOCK THROAT INLET, UNLESS DIRECTED BY ENGINEER.
 IF THE LINE ADJACENT TO THE INLET IS CLOSED TO TRAFFIC THEN ADDITIONAL GRAVEL BAGS SHALL BE PLACED CONTINUOUSLY ACROSS THE FRONT OF THE INLET, BUT SHALL NOT BLOCK THE THROAT OF THE INLET.



SILT FENCE INLET PROTECTION BARRIER

CONSTRUCTION NOTES:
 1. SEE CONSTRUCTION NOTES FOR RFB

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 PLOT TIME: 10:45:34 AM
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 PLOT RANGE: 0,0
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 PLOT STATUS: OK
 PLOT TIME: 10:45:34 AM
 PLOT DATE: 8/11/14 10:45:34 AM



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GEORGE BUSH
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HOUSTON TEXAS

OWNER
HOUSTON AVIATION DEPT.
16930 JOHN F. KENNEDY BLVD.
HOUSTON TX, 77032
[T] 713 622 1444
[F] 713 968 9333

ARCHITECT
PGAL
3131 BRIARPARK
SUITE 200
HOUSTON, TX 77042
[T] 713 622 1444
[F] 713 968 9333

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CONSULTANT

iSani
CONSULTANTS
3143 YELLOWSTONE BLVD
HOUSTON, TX 77054
TEL: (713) 747-2399 FAX: (713) 748-3748
TBPE FIRM REGISTRATION # 4575

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HOUSTON AIRPORT SYSTEM
PDC DESIGN DIVISION

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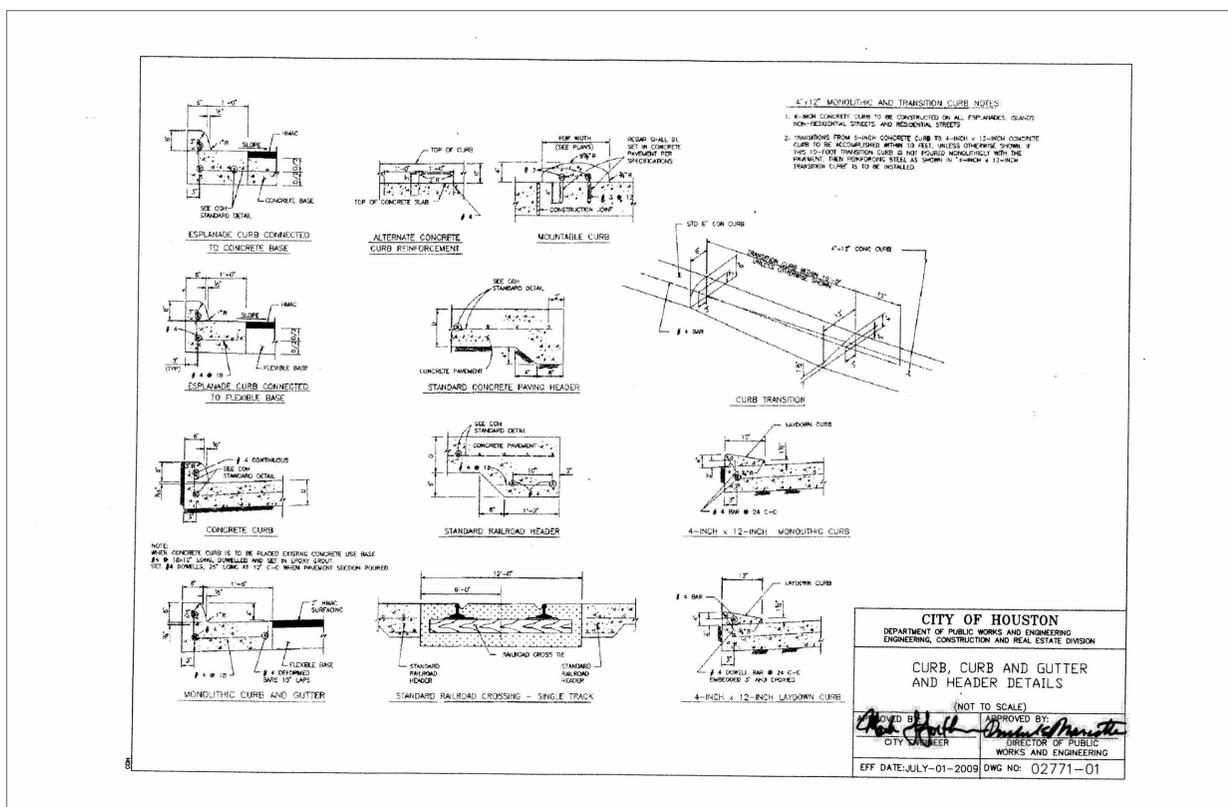
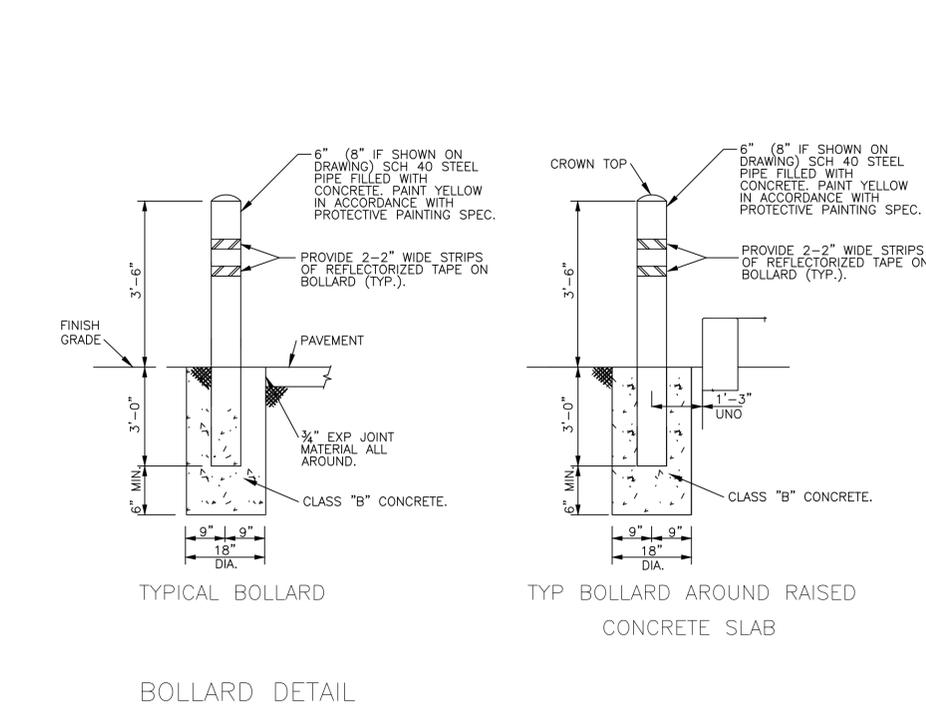
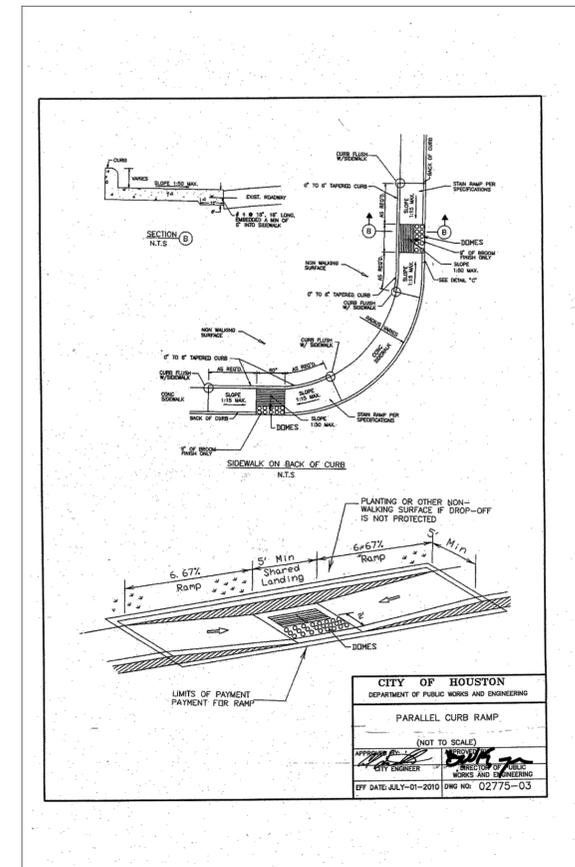
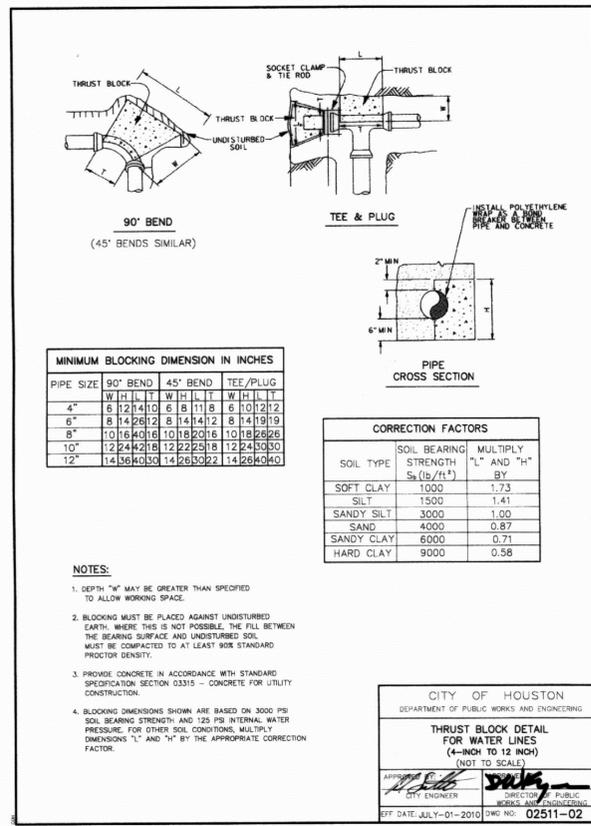
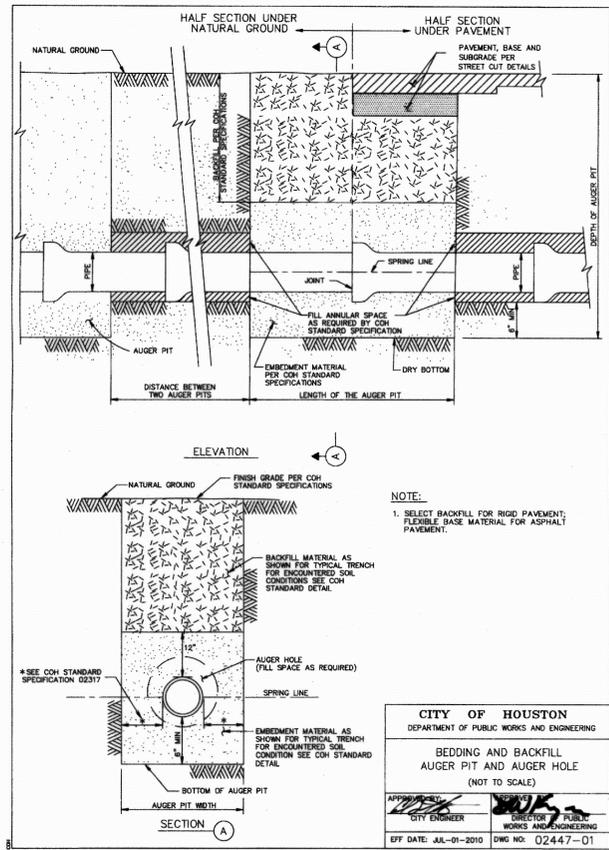
STATE OF TEXAS
VINCENT N. JACOB
98325
PROFESSIONAL ENGINEER

SHEET TITLE
WASTEWATER DETAILS

SHEET NUMBER
C7.01

DATE: 8/11/14
DRAWN BY: [Signature]
CHECKED BY: [Signature]
DATE: 8/11/14

Alexandria | Atlanta | Austin | Boca Raton | Boston | Dallas | Houston | Los Angeles | Las Vegas | New Orleans | Mexico City | Pierce Goodwin Alexander & Linville



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DATE: 8/11/14 11:13 AM
APPROVED BY: MONK
DATE: 8/11/14 11:13 AM

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OWNER
HOUSTON AVIATION DEPT.
16930 JOHN F. KENNEDY BLVD.
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[T] 713 622 1444
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ARCHITECT
PGAL
3131 BRIARPARK
SUITE 200
HOUSTON, TX 77042
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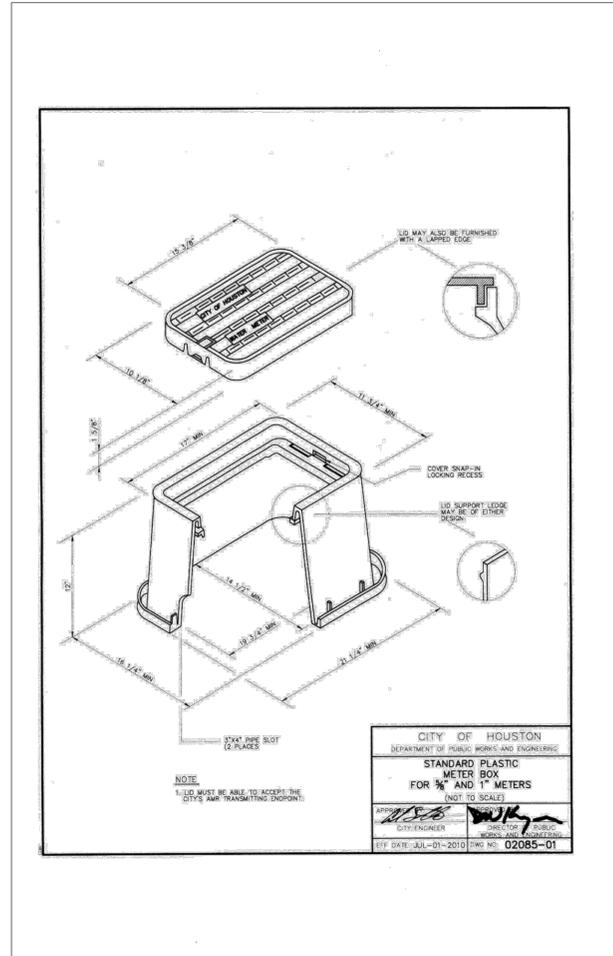
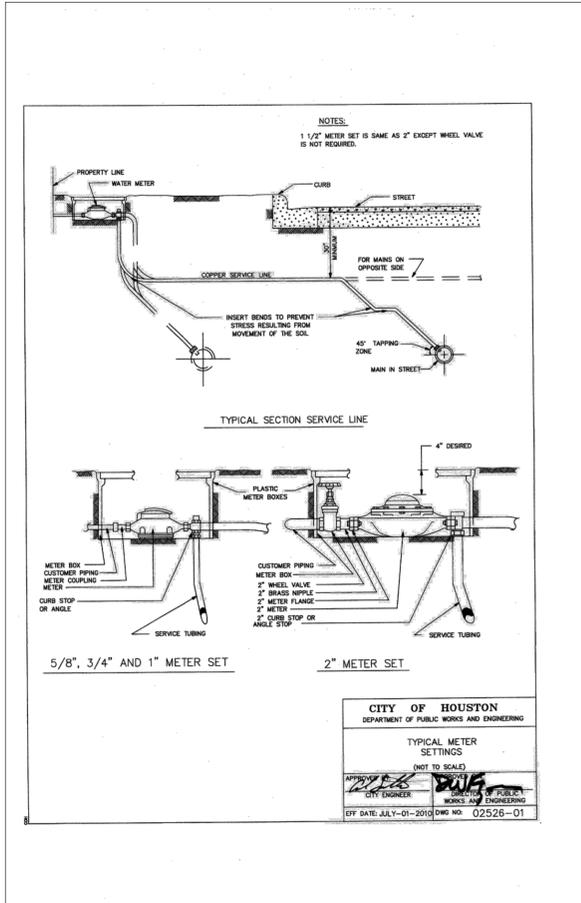
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8/11/14

SHEET TITLE
MISCELLANEOUS
DETAILS

SHEET NUMBER
C7.02



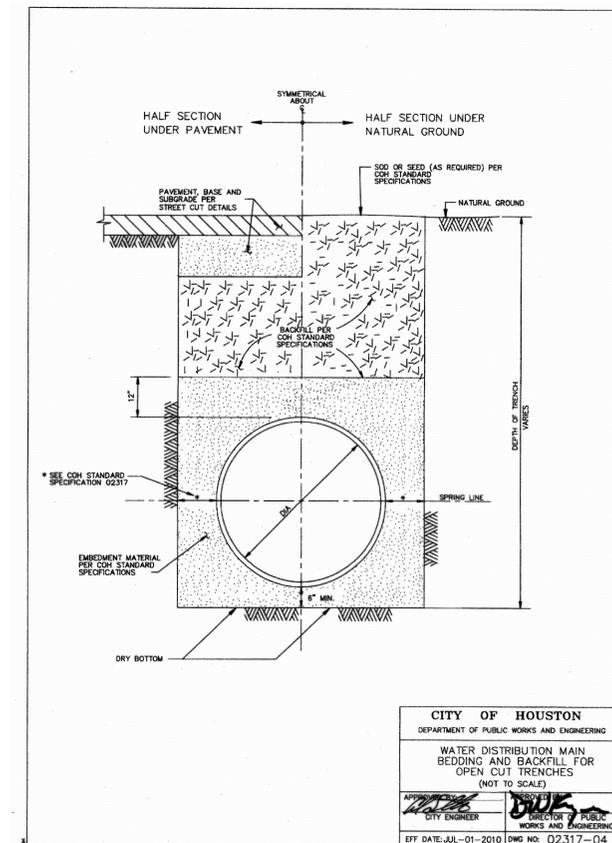
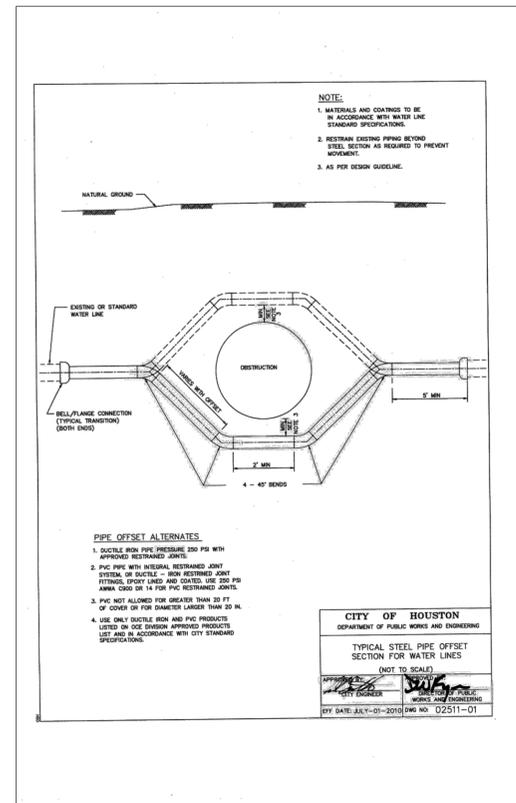
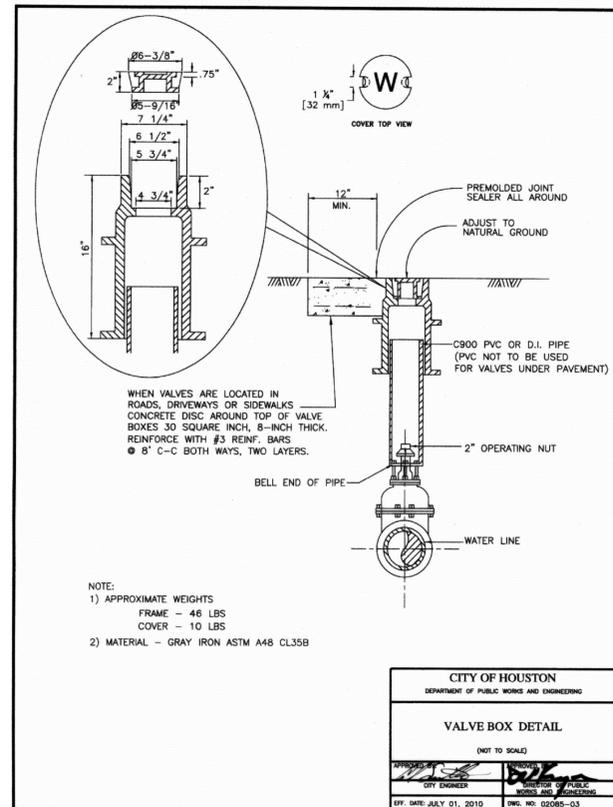
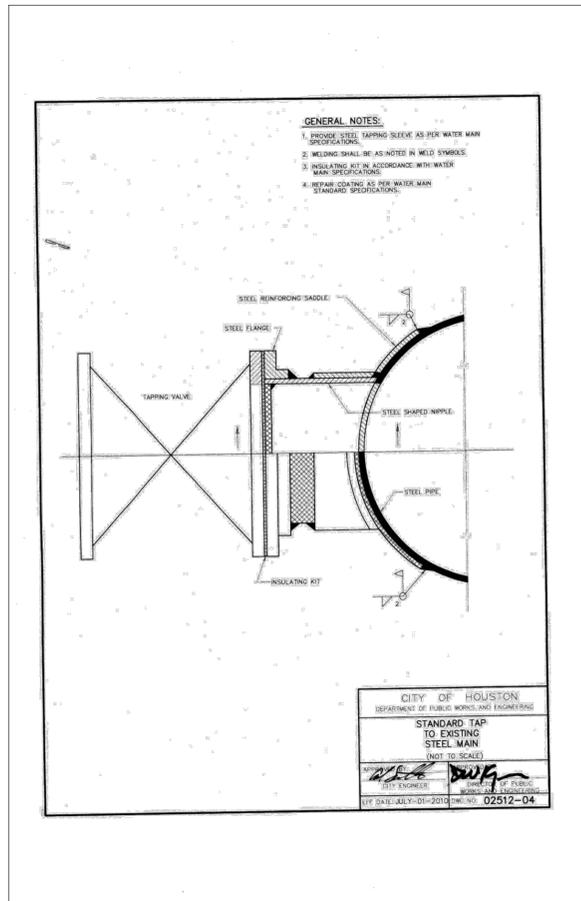
PIPE TAPPING SCHEDULE

WATER MAIN TYPE AND DIAMETER	SERVICE SIZE			
	3/4"	1"	1 1/2"	2"
4" CAST IRON OR DUCTILE IRON	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
4" ASBESTOS (EXISTING) CEMENT	WBSS	WBSS	DSS, WBSS	DSS, WBSS
4" PVC (AWWA C900)	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
6" AND 8" CAST IRON OR DUCTILE IRON	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
6" AND 8" ASBESTOS (EXISTING) CEMENT	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
6" AND 8" CAST IRON OR DUCTILE IRON	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
6" AND 8" PVC (AWWA C900)	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
12" CAST IRON OR DUCTILE IRON	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
12" ASBESTOS (EXISTING) CEMENT	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
12" PVC (AWWA C900)	DSS, WBSS	DSS, WBSS	DSS, WBSS	DSS, WBSS
16" AND UP CAST IRON OR DUCTILE IRON	DWBSS	DWBSS	DWBSS	DWBSS
16" AND UP ASBESTOS (EXISTING) CEMENT	DWBSS	DWBSS	DWBSS	DWBSS
16" AND UP PVC (AWWA C900)	DWBSS	DWBSS	DWBSS	DWBSS

DSS = DUAL STRAP SADDLES
WBSS = WIDE BAND STRAP SADDLES
DWBSS = DUAL WIDE BAND STRAP SADDLES

SERVICE TAPS (NOT TO SCALE)

DATE: JUL-01-2010 DWG NO. 02512-02



HOUSTON AIRPORT SYSTEM
GEORGE BUSH
INTERCONTINENTAL AIRPORT
HOUSTON TEXAS

OWNER
HOUSTON AVIATION DEPT.
16930 JOHN F. KENNEDY BLVD.
HOUSTON TX, 77032
[T] 713 622 1444
[F] 713 968 9333

ARCHITECT
PGAL
3131 BRIARPARK
SUITE 200
HOUSTON, TX 77042
[T] 713 622 1444
[F] 713 968 9333

PGAL TBPE REG. NO. F-2742
CONSULTANT

iSani
CONSULTANTS
3143 YELLOWSTONE BLVD
HOUSTON, TX 77054
TEL: (713) 747-2399 FAX: (713) 748-3748
TBPE FIRM REGISTRATION # 4575

PROJECT TITLE
HOUSTON AIRPORT SYSTEM
GUARD BOOTH
REPLACEMENT PROJECT
HAS PN 727

PROJECT NUMBER
R1002447

PROJECT LOCATION
4103 N. TERMINAL RD.
GUARD BOOTH NV-53
HOUSTON, TX 77032

DATE OF ISSUE
AUGUST 11, 2014
100% CONSTRUCTION DOCUMENTS
REVISIONS

HOUSTON AIRPORT SYSTEM
PDC DESIGN DIVISION

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STATE OF TEXAS
VINCENT N. JACOB
98325
PROFESSIONAL ENGINEER

SHEET TITLE
DATE

WATER DETAILS

SHEET NUMBER
C7.03

DATE: 8/11/14 10:28 AM
FILE: C:\WORK\02511-01\02511-01.dwg
PLOT: 8/11/14 10:28 AM
PLOT DEVICE: HP DesignJet T1100e
PLOT SCALE: 1.0000
PLOT SHEETS: 1/1

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OWNER
 HOUSTON AVIATION DEPT.
 16930 JOHN F. KENNEDY BLVD.
 HOUSTON TX, 77032
 (T) 713 622 1444
 (F) 713 968 9333

ARCHITECT
PGAL
 3131 BRIARPARK
 SUITE 200
 HOUSTON, TX 77042
 (T) 713 622 1444
 (F) 713 968 9333

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 VINCENT N. JACOB
 98325
 PROFESSIONAL ENGINEER

DATE

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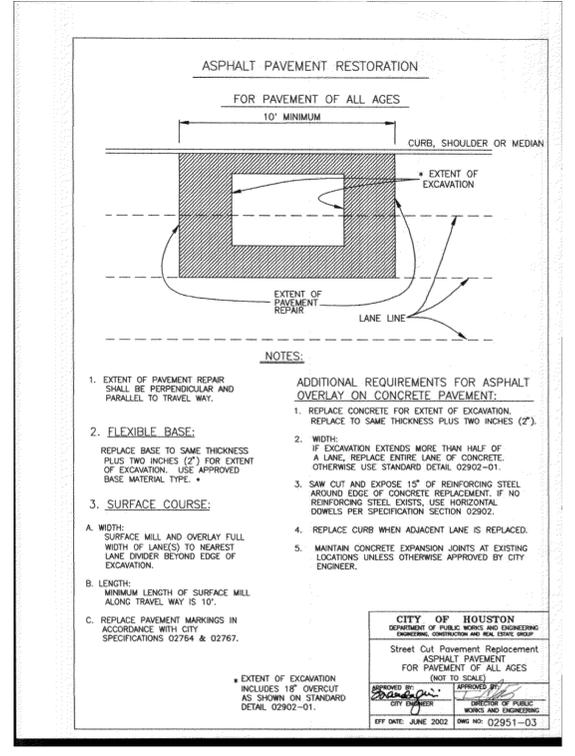
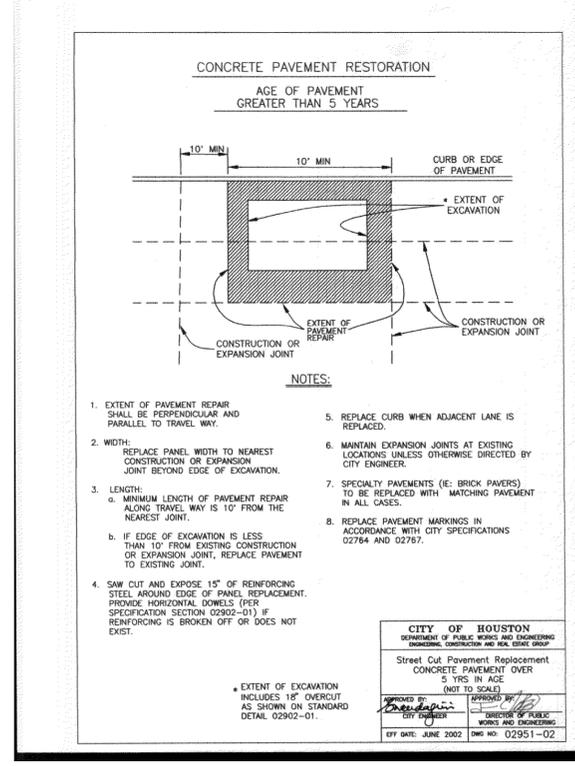
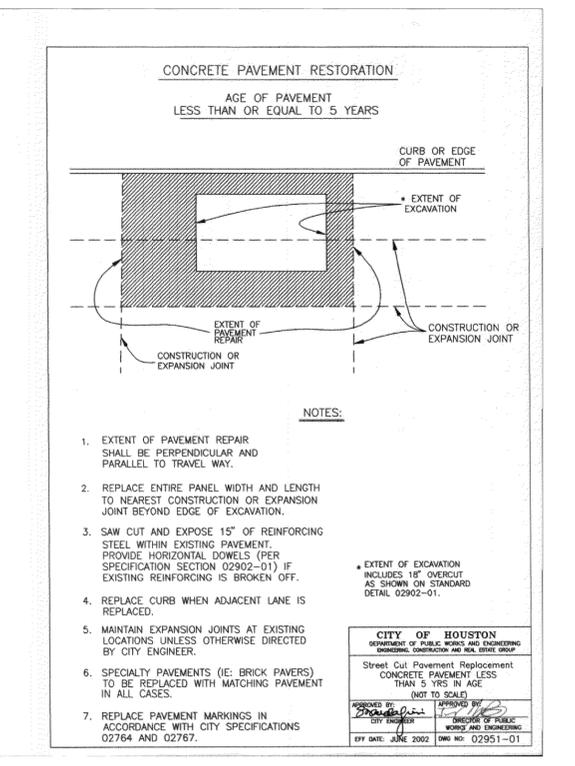
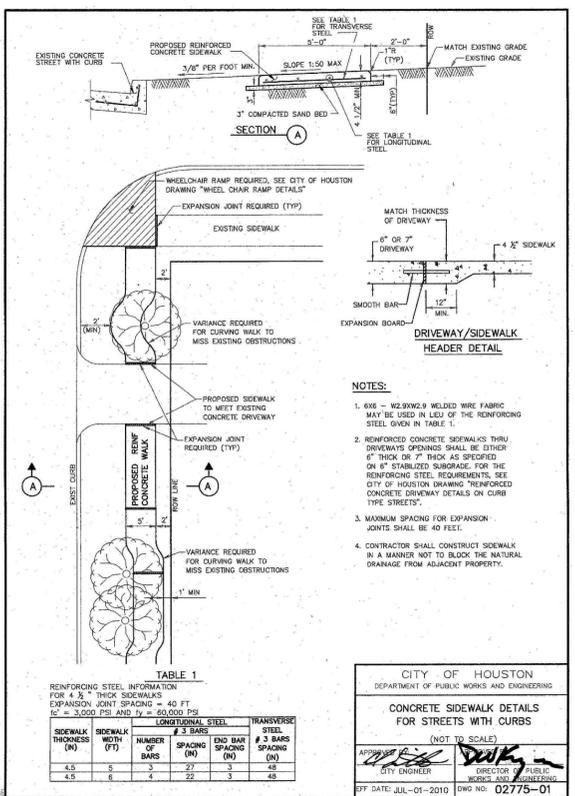
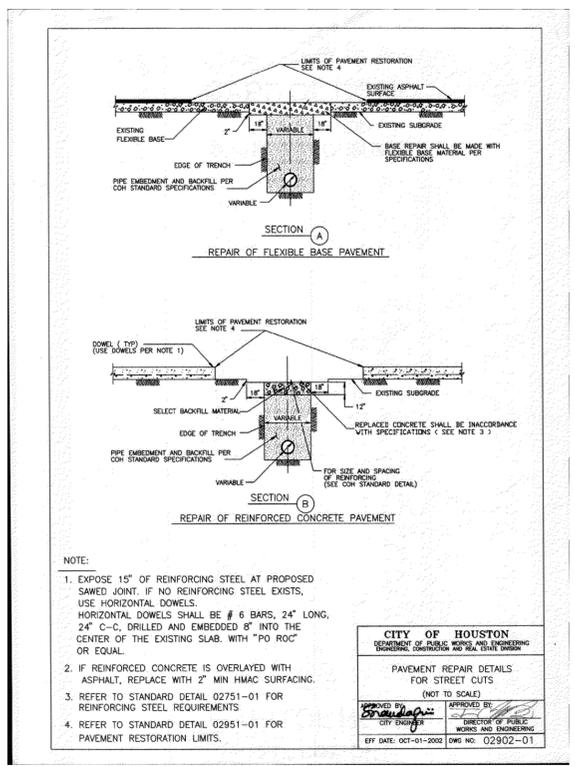
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 VINCENT N. JACOB
 98325
 PROFESSIONAL ENGINEER

DATE

PAVEMENT DETAILS
 SHEET NUMBER

C7.04



PROJECT NAME: C-702-COM-DETAILS (2)
 FILED BY: C-702 - PAVEMENT RESTORATION
 FILE NAME: C:\PROJECTS\2014\08\28\24
 FILE LOCATION: C:\PROJECTS\2014\08\28\24

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STRUCTURAL GENERAL NOTES

I. COORDINATION

- A. It is the responsibility of the General Contractor to obtain all Contract Documents and Addenda and to submit such documents to all subcontractors and material suppliers prior to the submittal of shop drawings, fabrication of any structural members, and construction.
- B. The General Contractor shall compare the Architectural, Structural Mechanical, Electrical, Plumbing, and other series drawings and report any discrepancies between each set of drawings and within each set of drawings prior to fabrication and installation of any structural members.
- C. Only larger sleeve openings and framed openings in structural framing component members are indicated on the Structural Drawings. However, all sleeves, inserts and openings, including frames and/or sleeves shall be provided for passage, provision and/or incorporation of the work of the contract, including but not limited to Mechanical, Electrical and Plumbing work. This work shall include the coordination of sizes, alignment, dimensions, position, locations, elevations and grades as required to serve the intended purpose. Openings not indicated on the Structural Drawings, but required as noted above, shall be submitted to the Engineer for review.
- D. Refer to Architectural, Mechanical, Electrical and Plumbing drawings for floor elevations, slopes, drains and location of depressed and elevated floor areas.
- E. Compatibility of the structure and provisions for building equipment supported on or from structural components shall be verified as to size, dimensions, clearances, accessibility, weights and reaction with the equipment for which the structure has been designed prior to submission of shop drawings and data for each piece of equipment and for structural components. Differences shall be noted on the submittals.
- F. The details designated as "Typical Details" apply generally to the Drawings in all areas where conditions are similar to those described in the details.
- G. All structural elements of the project have been designed by the Structural Engineer to resist the required code vertical and lateral forces that could occur in the final completed structure only. It is the responsibility of the Contractor to provide all required bracing during construction to maintain the stability and safety of all structural elements during the construction process until the lateral-load resisting or stability-providing system is completely installed and the structure is completely tied together.
- H. Lateral-force resisting system:
The lateral load stability of the guard booth is designed by the booth manufacturer and may consist of moment frames. The connection to the foundation must be designed as a pin.
- I. The Contract Structural Drawings and Specifications represent the finished structure, and except where specifically shown, do not indicate the means or methods of construction. The Contractor and their Sub-Contractors shall supervise and direct the Work and shall be solely responsible for all construction means, methods, procedures, techniques, sequences and safety measures including, but not limited to, adherence to all OSHA guidelines. The Engineer shall not have control of, and shall not be responsible for, construction means, methods, techniques, sequences or procedures, for safety precautions and programs in connection with the Work, for the acts or omissions of the Contractor, Subcontractors, or any other person performing any of the Work, or for the failure of any of these persons to carry out the Work in accordance with the Contract Documents.
- J. Where conflict exists among the various parts of the structural contract documents, structural drawings, structural general notes, and specifications, the strictest requirements, as indicated by the Engineer, shall govern.
- K. Periodic site observation by field representatives of Garza + McLain Structural Engineers, Inc. is solely for the purpose of determining if the Work is proceeding in accordance with the Structural Contract Documents. This limited site observation is not intended to be a check of the quality or quantity of the Work, but rather a periodic check in an effort to inform the Owner against defects and deficiencies in the work of the Contractor.

II. SUBSTITUTIONS

All requests for substitutions of materials or details shown in the contract documents shall be submitted for approval during the bidding period. Once bids are accepted, proposed substitutions will be considered only when they are officially submitted with an identified savings to be deducted from the contract and/or schedule impact and the material or product has been approved by the International Code Council Evaluation Service (ICCES) and the ICCES reports are included in the request. Submittals not satisfying the above criteria will not be considered.

III. MAINTENANCE STATEMENT

- A. All structures require periodic maintenance to extend lifespan and to insure structural integrity from exposure to the environment. A planned program of maintenance shall be established by the building owner. This program shall include such items as but not limited to painting of structural steel, protective coating for concrete, sealants, caulked joints, expansion joints, control joints, spalls and cracks in concrete, pressure washing of exposed structural elements exposed to a salt environment or other harsh chemicals and maintaining positive drainage away from the edge of the building.
- B. Site Drainage: it is recommended that the site drainage be well developed surface water should be directed away from the foundation soils. (Use a minimum slope of 5% within 10 feet of the foundation), no ponding of surface water shall be allowed near the structure during or after completion of the construction & the landscaping. The Contractor shall advise the owner of the site drainage requirements. The Engineer is not liable for foundation issues if the site is not maintained.

IV. CODES

- A. The General Building Code used as the basis for the structural design is as follows:
 1. International Building Code, 2006 Edition with the City of Houston Adopted Amendments.
- B. Structural Concrete: Building Code Requirements for Reinforced Concrete, American Concrete Institute, ACI 318.

V. DESIGN LOADS

- A. Dead Loads include the self weight of the structural elements and the following superimposed loads:
 1. Roof structure 10 psf
 2. Walls 8 psf
- B. Live Loads

OCCUPANCY OR USE	UNIFORM (.psf)	CONCENTRATED (lbs.)
1. Roof (unreduced)	20	N/A
- C. Wind loads
Wind lateral load shall be based on ASCE 7 using the following:
 1. Basic Wind Speed (3 sec) 110 mph
 2. Exposure C
 3. Importance Factor 1.0
 4. Refer to ASCE 7 for the definition of "a".
- D. Texas Architectural Barrier Act Standard. The structural strength of grab bars, tub and shower seats, fasteners, and mounting devices shall meet the following specification:
 1. Bending stress in a grab bar or seat induced by the maximum bending moment from the application of 250 lbf shall be less than the allowable stress for the material of the grab bar or seat.

2. Shear stress induced in a grab bar or seat by the application of 250 lbf shall be less than the allowable shear stress for the material of the grab bar or seat. If the connection between the grab bar or seat and its mounting bracket or other support is considered to be fully restrained, then direct and torsional shear stresses shall be totaled for the combined shear stress, which shall not exceed the allowable shear stress.
3. Shear force induced in a fastener or mounting device from the application of 250 lbf shall be less than the allowable lateral load of either the fastener or the mounting device or the supporting structure, whichever is the smaller allowable load.
4. Tensile force induced by a fastener by a direct tension force of 250 lbf plus the maximum moment from the application of 250 lbf shall be less than the allowable withdrawal load between the fastener and the supporting structure.
5. Grab bars shall not rotate within their fittings.
- E. Premanufactured guard booth shall be designed for the wind speed specified, self weight of all members, 20 psf Live load and 10 psf down ward wind per the ASCE7-05 load combinations. Guard booth must be designed to resist over turning along with wind uplift. Drawings shall be signed and sealed with reactions shown at supports. Booth will transfer vertical and horizontal loads to the foundation only.

VII. SUBMITTALS

- A. Shop drawings shall be prepared for all structural items and submitted for review by the Engineer. Contract Drawings shall not be reproduced and used as shop drawings. All items deviating from the Contract Drawings or from previously submitted shop drawings shall be clouded.
- B. The contractor shall review shop drawings for compliance with the contract documents and shall certify that he has done so by a stamp noting that the drawings have been "Approved" and which bears the signature (or initials) of an authorized representative of the contractor and the date. Submittals which do not reflect the contractor's approval, signature and date will be returned without review.
- C. The contractor shall be responsible for delays caused by rejection of inadequate shop drawings.
- D. Where review and return of shop drawings is required or requested, the engineer will review each submittal and, where possible, return within two weeks of receipt.
- E. Corrections or comments on shop drawings or manufacturer's data sheets do not relieve the contractor from compliance with requirements of the plans and specifications. The engineer's review is for general conformance with the requirements of the contract documents. The contractor is responsible for confirming and correcting all quantities and dimensions, selecting fabrication processes and techniques of construction, and coordinating his work with that of all other contractors.
- F. Submittal shall be submitted as a PDF to Engineer. Engineer will review, markup and send an electronic copy to architect.
- G. Submittal List and Schedule - The General Contractor shall prepare a detailed list and schedule of all submittal items to be sent to the Structural Engineer prior to the start of construction. This list shall be updated and revised and kept current as the job progresses. The submittal list shall be organized as shown below:
 1. Shop Drawings
 2. Manufacturers literature for products, assemblies and hardware
 3. Products, assemblies and hardware
 4. Product certifications, mill certificates and affidavits
- H. Shop Drawings
 1. The General Contractor shall submit for Engineer review shop drawings for the following items:
 - a. Reinforcing Steel
 - b. Penetrations in Grade Beams
 - c. Miscellaneous Steel
 - d. Embedded Items (Plates, Angles, Bolts, etc) or Items attached to the structural frame for building cladding attachment or for attachment of other items. (#)
 - e. Concrete Mix Designs (30 tests) (*, #)
 - f. Pre-manufactured guard booths (*, #)
 - g. Guard Booth Engineering Calculations (*, #)
 Items marked (*) shall be designed by an engineer and drawings shall be sealed by a registered engineer in the state where the project is located. Items marked (#) shall be submitted to Engineer for Owner's record only and will not have the Engineer's shop drawing stamp affixed.
 2. The omission from the shop drawings of any material required by the Contract Documents to be furnished shall not relieve the Contractor of the responsibility of furnishing and installing such materials, regardless of whether the shop drawings have been reviewed and approved.
- I. Manufacturers Literature - Submit two copies of manufacturer's literature for all materials and products used in the construction of the project.
- J. Reproduction - The use of reproductions of these contract documents by an contractor, subcontractor, erector, fabricator, or material supplier in lieu of preparation of shop drawings signifies his acceptance of all information shown hereon as correct, and obligates himself to any job expense, real or implied, arising due to any errors that may occur hereon.
- K. Letters-
 1. Concrete Reinforcement contractor shall provide a notarized letter that all concrete reinforcement was installed for contract documents.
 2. G.C. to provide a notarized letter to the Engineer stating all structural elements have been installed per the structural contract documents, shop drawings and supplemental sketches without deviation.

VIII. BUILDING PAD PREPARATION

- A. Remove all organic material, debris, and concrete from foundation area.
- B. Remove 2'-0" of existing subgrade and replace with select fill with a PI between 7 and 20 compacted to 95%.
- C. All grade foundation changes to be made with select fill.
- D. Grade beam design for a bearing pressure of 1500 psf.
- E. Provide a vapor retarder that conforms to ASTM E1745, Class A. Moisture retarder shall be no less than 10 mils thick. Provide vapor retarder's standard tape to tape all joints as well as around all vertical penetrations in slab.

IX. CAST IN PLACE CONCRETE

- A. CLASSES OF CONCRETE
All concrete shall conform to the requirements as specified in the table below unless noted otherwise on the drawings:
Concrete Mix Schedule:

Conc. Class	Strength psi	Agg. Type	Agg. Size	Slump Inches	Max w/c	Notes
A	3000	NWT	1 1/2"	4	0.55	
- a) "NWT" refers to normal concrete having air dry unit weight of approximately 145 PCF (ASTM 33 aggregate).

- b) Where w/c ratio is not indicated in the Concrete Mix Schedule, it shall be as necessary to meet strength requirements.
- c) Where the w/c ratio is shown, it shall be adhered to regardless of strength requirements.
- d) "Strength" is required compressive cylinder strength at an age of 28 days

Mix Usage Schedule:

Description of Use	Concrete Class	Air Content
Slab-on-fill / Beams	A	

- B. Maximum shrinkage of the concrete shall be 0.03% at 28 days as determined by ASTM C157.
- C. Horizontal construction joints in concrete pours shall be permitted only where indicated on the drawings. All vertical construction joints shall be made in the center of spans in accordance with the typical details. Contractor shall submit proposed locations for construction joints not shown on drawings for review by the Architect and Structural Engineer. Additional construction joints may require additional reinforcing as specified by the Engineer which shall be provided by the contractor at no additional cost to the owner.
- D. Embedded conduits, pipes, and sleeves shall meet the requirements of ACI 318-95, Section 6.3, including the following:
 1. Conduits and pipes embedded within a wall, or beam (other than those passing through) shall not be larger in outside dimension than 1/3 the overall thickness of the slab, wall or beam in which they are embedded.
 2. Conduits, pipes and sleeves shall not be spaced closer than three diameters or widths on center.

X. CONCRETE REINFORCING

- A. Concrete reinforcement for the project shall conform to the following:
 1. All Reinforcing Steel shall be ASTM A615, Grade 60 unless noted otherwise in the drawings or these notes.
 2. Welded Reinforcing Steel. Provide reinforcing steel conforming to ASTM A706.
 3. Deformed Bar Anchors. ASTM A496 minimum yield strength 70,000 PSI as noted on the drawings. Reinforcing bars shall not be substituted for deformed bar anchors.
- B. Detailing of reinforcing steel shall conform to the American Concrete Institute 315 Detailing Manual and all hooks and bends in reinforcing bars shall conform to ACI detailing standards unless shown otherwise.
- C. In unscheduled grade beams, walls, and slabs, detail reinforcing as follows:
 1. Class B Lap beam top reinforcing bars at mid span.
 2. Class B Lap beam bottom reinforcing bars at the supports.
 3. Provide Class B lap at other location pending Engineer's approval.
 4. Provide standard hooks in top and bottom bars at cantilever and discontinuous ends of beams, walls and slabs.
 5. Provide 2-#4 diagonal bars at all slab re-entrant corners placed under the top mat of steel.
- D. Welding of reinforcing steel will not be permitted unless specifically shown on drawings.
- E. Heat shall not be used in the fabrication or installation of reinforcement.
- F. Reinforcing steel clear cover shall be as follows:
 1. Earth-formed Grade Bms 2 1/2" top, 3" sides, 3" bottom
 2. Formed Grade Beams 2 1/2" top, 2" sides, 3" bottom
 3. Slab-on-fill Centered

XV. TESTING LABORATORY SERVICES

- A. Work specified herein shall be performed by a qualified Independent Testing Laboratory, selected and paid by the Owner. The Contractor shall be responsible for notifying the Independent Testing Laboratory at least 24 hours of advance of materials that require testing. The contractor shall pay for all retests of materials not meeting the requirements in the Contract Documents. Reports of each Test shall be prepared by the Independent Testing Laboratory and submitted promptly to the Owner, Contractor, Architect, and Engineer. Items found not to comply with the Construction Documents shall be brought to the immediate attention of the Contractor and Architect/ Engineer for resolution.
- B. Filling and Backfilling operation:
 1. Analyze backfill samples delivered by the contractor to determine compliance with gradation and quality requirements of the geotechnical report.
 2. Make in place compaction tests for moisture content, moisture density relationship, and density of materials in place. Perform one test for each 5000 square feet of area per lift.
 3. Verify Compaction of utility trenches.
- C. Concrete inspection and testing:
 1. Secure composite samples of concrete at the jobsite in accordance with ASTM C172.
 2. Mold and cure four specimens from each sample in accordance with ASTM C31. Test specimens in accordance with ASTM C39 for each pour of concrete.
 3. Test one cylinder @ 7 days, 2 @ 28 days, and hold one for 56 days (test only if 28 day strength is low.)
 4. Perform one strength test (four cylinders) for each 50 cubic yards of fraction thereof, of each mix design placed in one day. Test one cylinder @ 7 days, 2 @ 28 days, and hold one for 56 days (test only if 28 day strength is low.)
 5. Make one slump test for each set of cylinders following the procedural requirements of ASTM C143 and C172.
 6. Determine total air content of air entrained concrete in accordance with ASTM C231. Perform one test for each strength test.
- D. Concrete Reinforcement: Inspect all concrete reinforcing steel and embedded metal assemblies prior to placement of concrete for compliance with Contract Documents and shop drawings. All instances of non-compliance shall be immediately brought to the attention of the contractor for correction, and if uncorrected, reported to the engineer.
- E. Post installed hold down bolts.
 - F. Special Inspections: Special Inspections shall be performed in accordance with Chapter 17 of the 2006 IBC with the City of Houston Amendments by a Special Inspector hired by the Owner to perform the Special Inspections listed. The Special Inspector shall be qualified by an approved agency according to the City to perform the special inspections for which they will be undertaking. The Contractor shall coordinate with and notify the Special Inspector of all tests. The Special Inspector shall be responsible to verify that the items detailed in the Construction Documents were built accordingly and shall prepare, sign, and submit reports to the Registered Design Professional (RDP/RC) in Responsible Charge for all time spent at the site and shall notify the General Contractor responsible for the quality of the Project of the non-complying items. These Special inspections are in addition to other listed in these Structural Notes or Project Specifications refer to the building permit for required special inspections. The Special Inspector shall provide a Special Inspection Report, upon completion of the erection of the structure; submit a final report to the owner and engineer that includes all the daily inspection reports, testing reports and special inspector qualifications.

PROJECT: HOUSTON AIRPORT SYSTEM GUARD BOOTH REPLACEMENT PROJECT
 DRAWING NO: S0.01
 DATE: 08/11/2014
 DESIGNED BY: GABRIEL GARZA
 CHECKED BY: GABRIEL GARZA
 PROJECT LOCATION: 16930 JOHN F. KENNEDY BLVD., HOUSTON, TX 77032



HOUSTON AIRPORT SYSTEM
 GEORGE BUSH
 INTERCONTINENTAL AIRPORT
 HOUSTON TEXAS
 OWNER
 HOUSTON AVIATION DEPT.
 16930 JOHN F. KENNEDY BLVD.
 HOUSTON TX, 77032
 (T) 713 622 1444
 (F) 713 968 9333

ARCHITECT



3131 BRIARPARK
 SUITE 200
 HOUSTON, TX 77042
 (T) 713 622 1444
 (F) 713 968 9333

PGAL TBPE REG. NO. F-2742
 CONSULTANT

Garza + McLain
 STRUCTURAL ENGINEERS INC.
 13113 Southwest Freeway, Suite 163
 Sugar Land, Texas 77478
 (281) 484-1230 (voice)
 (281) 484-1234 (fax)

PROJECT TITLE
 HOUSTON AIRPORT SYSTEM
 GUARD BOOTH
 REPLACEMENT PROJECT
 HAS PN 727

PROJECT NUMBER
 R1002447
 PROJECT LOCATION

4103 N. TERMINAL RD.
 GUARD BOOTH NV-53
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DATE OF ISSUE
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GABRIEL GARZA
 90960
 PROFESSIONAL ENGINEER
 8.11.14

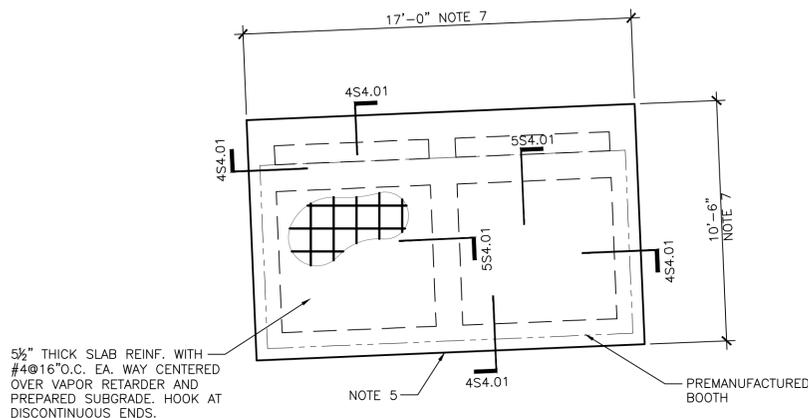
SHEET TITLE
 STRUCTURAL
 GENERAL NOTES

SHEET NUMBER
S0.01

Pierce Goodwin Alexander & Linville

Pierce Goodwin Alexander & Linville

HOUSTON AIRPORT SYSTEM PDC DESIGN DIVISION	DATE
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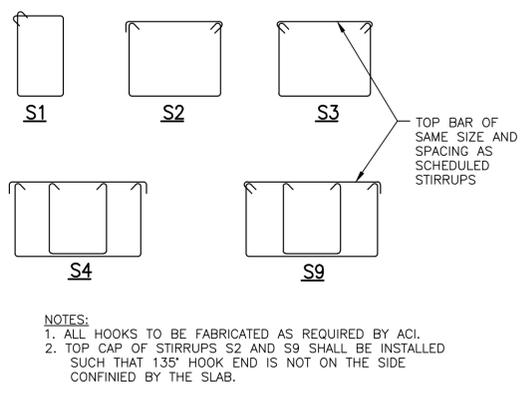
PLAN NOTES:

1. THE CONTRACTOR SHALL FIELD VERIFY AND/OR DETERMINE ALL EXISTING DIMENSIONS AND CONDITIONS SHOWN ON THE PLANS AND DETAILS PRIOR TO BEGINNING CONSTRUCTION AND SUBMITTING SHOP DRAWINGS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR SPECIAL CONDITIONS FOR WHICH DETAILS FOR NEW CONSTRUCTION HAVE NOT BEEN PROVIDED PRIOR TO PROCEEDING WITH THE WORK NO EXCEPTION.
2. BASED UPON ACTUAL FIELD CONDITIONS ENCOUNTERED AT THE JOB SITE, ADDITIONAL NEW FRAMING OR MODIFICATIONS TO EITHER THE NEW OR EXISTING FRAMING SHOWN MAY BE REQUIRED AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE ALL INFORMATION REQUIRED BY THE SUB CONTRACTORS AND MATERIAL SUPPLIERS BASED UPON FIELD MEASUREMENTS AND DETERMINATION OF EXISTING CONDITIONS AT THE JOB SITE. THIS INFORMATION SHALL BE INDICATED ON THE SHOP DRAWINGS SUBMITTED FOR REVIEW TO THE ARCHITECT AND ENGINEER NO EXCEPTION.
3. REFER TO STRUCTURAL GENERAL NOTES, PROJECT SPECIFICATIONS, AND TYPICAL DETAILS FOR ADDITIONAL INFORMATION.
4. REFER TO ARCH'L, CIVIL, AND MEP DRAWINGS FOR ADDITIONAL INFORMATION.
5. SAW CUT AND REMOVE EXISTING PAVING TO INSTALL NEW BOOTH FOUNDATION, DO NOT OVER CUT PAVEMENT USE ZERO TOLERANCE SLAB.
6. G.C. TO LOCATE ALL EXISTING UTILITIES THAT GROSS GUARD BOOTH PRIOR TO DIGGING FOR FOUNDATION, NOTIFY ENGINEER OF CONFLICTS.
7. CONCRETE DIMENSIONS TO BE A MINIMUM OF GUARD BOOTH WIDTH +1'-0" x GUARD BOOTH LENGTH +1"

1 GUARD BOOTH NV-53 FOUNDATION PLAN

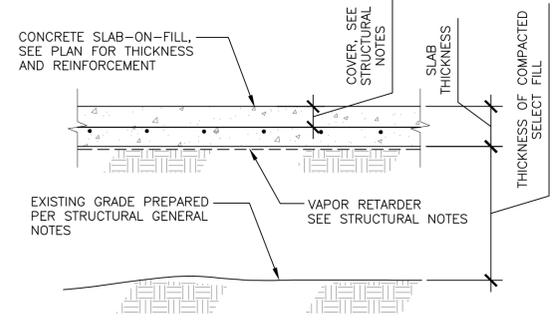
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 PLOT BY: Rmccarty
 PLOT DATE: 8/11/2014 10:07 AM
 PLOT TIME: 8/11/2014 10:07 AM

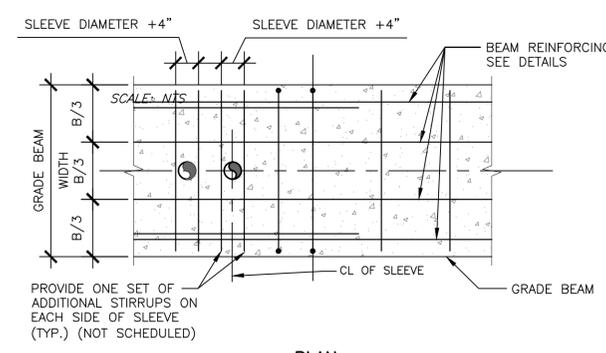


NOTES:
 1. ALL HOOKS TO BE FABRICATED AS REQUIRED BY ACI.
 2. TOP CAP OF STIRRUPS S2 AND S9 SHALL BE INSTALLED SUCH THAT 135° HOOK END IS NOT ON THE SIDE CONFINED BY THE SLAB.

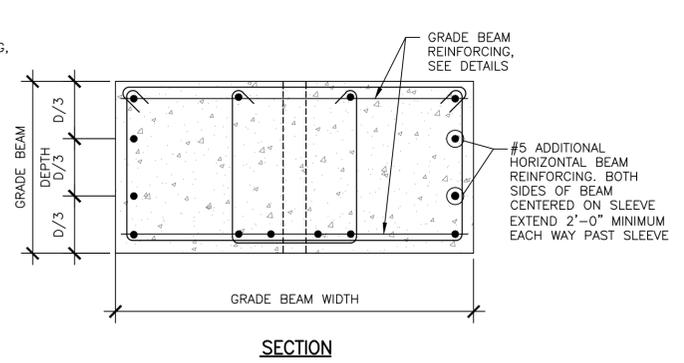
1 **TYPICAL STIRRUP TYPES**
 SCALE: NTS



2 **TYPICAL DETAIL SUBGRADE PREPARATION SLAB-ON-FILL CONSTRUCTION**
 SCALE: NTS



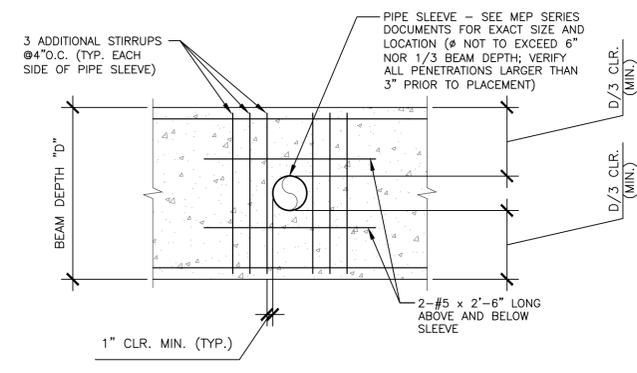
PLAN



SECTION

NOTES:
 1. REQUIRED BEAM SLEEVES ARE TO BE COORDINATED WITH MEP CONTRACTORS. REQUIRED SLEEVES MAY OR MAY NOT BE SHOWN ON THE STRUCTURAL DRAWINGS. GENERAL CONTRACTOR SHALL SUBMIT PLAN SHOWING LAYOUT OF ALL SLEEVES.
 2. SLEEVES SHALL BE LOCATED ON THE BEAM CENTER LINE OR AT LEAST WITHIN THE MIDDLE THIRD OF THE GRADE BEAM WIDTH.
 3. CONTINUOUS BEAM REINFORCING MAY BE SLIGHTLY DISPLACED (3" MAXIMUM) OR ADJACENT BARS BUNDLED (2 BAR BUNDLE MAXIMUM) TO FACILITATE SLEEVE INSTALLATION. DO NOT CUT, OFFSET, OR BEND REINFORCING.
 4. THE OUTSIDE DIAMETER OF A SLEEVE MAY NOT EXCEED 15% OF THE WIDTH OF THE GRADE BEAM THROUGH WHICH IT MUST PASS. SEE 8S4.00 IF SLEEVES ARE LARGER THAN 15% OF GRADE BEAM WIDTH.

3 **TYPICAL DETAIL VERTICAL PENETRATION, CONCRETE GRADE BEAM**
 SCALE: NTS



NOTES:
 1. NOTIFY ENGINEER IMMEDIATELY IF HORIZONTAL SLEEVE CAN NOT BE INSTALLED AS SHOWN. ADDITIONAL REINFORCING MAY BE REQUIRED.

4 **TYPICAL HORIZONTAL GRADE BEAM PENETRATION DETAIL**
 SCALE: NTS

"ld" TENSION DEVELOPMENT LENGTH FOR BEAM, SLAB & WALL REBARS (GRADE 60 UNCOATED BARS-NORMAL WEIGHT CONCRETE)

BAR SIZE	F'c=3000 psi		F'c=4000 psi		F'c=5000 psi	
	ld TOP	ld BOT	ld TOP	ld BOT	ld TOP	ld BOT
#3	1'-9"	1'-4"	1'-6"	1'-2"	1'-5"	1'-1"
#4	2'-4"	1'-10"	2'-1"	1'-7"	1'-10"	1'-5"
#5	3'-0"	2'-3"	2'-7"	2'-0"	2'-4"	1'-9"
#6	3'-7"	2'-9"	3'-1"	2'-4"	2'-9"	2'-1"
#7	5'-2"	4'-0"	4'-6"	3'-6"	4'-0"	3'-1"
#8	5'-11"	4'-7"	5'-2"	3'-11"	4'-7"	3'-6"
#9	6'-8"	5'-2"	5'-9"	4'-5"	5'-2"	4'-0"
#10	7'-6"	5'-10"	6'-6"	5'-0"	5'-10"	4'-6"
#11	8'-4"	6'-5"	7'-3"	5'-7"	6'-6"	5'-0"

NOTES:
 1. "TOP" BARS ARE HORIZONTAL REBARS WITH MORE THAN 12 IN. OF FRESH CONCRETE CAST BELOW THE BARS AT THE DEVELOPMENT LENGTH.
 2. "ld" FOR #3 & #4 BARS IN SLAB OR WALL ARE CONSERVATIVE & MAY BE REDUCED TO 0.75 TIMES (FOR #3 BARS) AND 0.94 TIMES (FOR #4 BARS) FROM THE TABULATED VALUES.
 3. FOR LIGHT-WEIGHT CONCRETE MULTIPLY THE TABULATED VALUES BY 1.3.

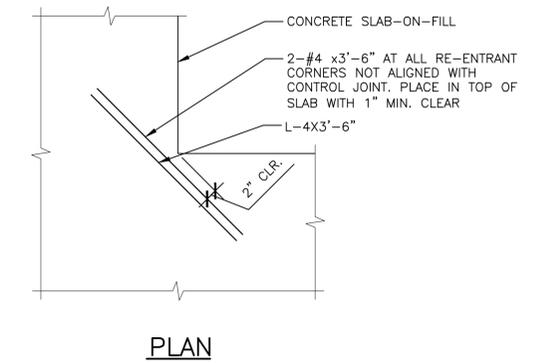
5 **TENSION DEVELOPMENT LENGTH FOR BEAM, SLAB AND WALL REBARS**
 SCALE: NTS

TENSION LAP SPLICES - CLASS B FOR TOP & BOTTOM BARS (GRADE 60 UNCOATED BARS-NORMAL WEIGHT CONCRETE)

BAR SIZE	F'c=3000 psi		F'c=4000 psi		F'c=5000 psi	
	ld TOP	ld BOT	ld TOP	ld BOT	ld TOP	ld BOT
#3	2'-4"	1'-9"	2'-0"	1'-6"	1'-10"	1'-5"
#4	3'-1"	2'-4"	2'-8"	2'-1"	2'-5"	1'-10"
#5	3'-10"	3'-0"	3'-4"	2'-7"	3'-0"	2'-4"
#6	4'-8"	3'-7"	4'-0"	3'-1"	3'-7"	2'-9"
#7	6'-9"	5'-2"	5'-10"	4'-6"	5'-3"	4'-0"
#8	7'-9"	5'-11"	6'-8"	5'-2"	6'-0"	4'-7"
#9	8'-8"	6'-8"	7'-6"	5'-9"	6'-9"	5'-2"
#10	9'-10"	7'-6"	8'-6"	6'-6"	7'-7"	5'-10"
#11	10'-11"	8'-4"	9'-5"	7'-3"	8'-5"	6'-6"

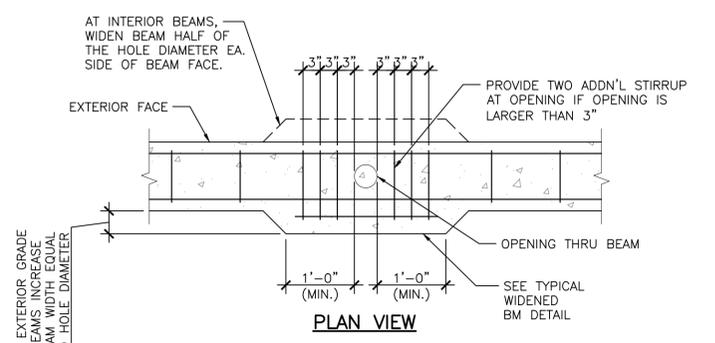
NOTE:
 FOR CLASS "A" SPLICE (PERMITTED ONLY WHEN NOT MORE THAN HALF THE BARS SPLICED & SPICES STAGGERED BY THE DISTANCE OF SPLICE LENGTH), USE SAME AS "ld" = TENSION DEVELOPMENT LENGTH TABLE.

6 **TENSION LAP SPLICES - CLASS B FOR TOP AND BOTTOM BARS**
 SCALE: NTS



PLAN

7 **TYPICAL SLAB-ON-FILL RE-ENTRANT CORNER REINFORCING DETAIL**
 SCALE: NTS



NOTE: PIPE/PENETRATION MUST COMPLETELY PASS THROUGH BEAM PRIOR TO TURNING

8 **TYPICAL DETAIL VERTICAL PENETRATION THRU GRADE BEAM LARGER THAN 15% OF THE GRADE BEAM WIDTH**
 SCALE: NTS



HOUSTON AIRPORT SYSTEM
GEORGE BUSH
 INTERCONTINENTAL AIRPORT
 HOUSTON TEXAS

OWNER
 HOUSTON AVIATION DEPT.
 16930 JOHN F. KENNEDY BLVD.
 HOUSTON TX, 77032
 [T] 713 622 1444
 [F] 713 968 9333

ARCHITECT

PGAL

3131 BRIARPARK
 SUITE 200
 HOUSTON, TX 77042
 [T] 713 622 1444
 [F] 713 968 9333

PGAL TBPE REG. NO. F-2742
 CONSULTANT

Garza + McLain
 STRUCTURAL ENGINEERS INC.
 13115 Southwest Freeway, Suite 163
 Sugar Land, Texas 77478
 (281) 484-1230 (voice)
 (281) 484-1234 (fax)
 PROJECT NO. 6-14-001
 EXPIRATION DATE 6-30-13
 JOB NO. 14010-03

Pierce Goodwin Alexander & Linville

PROJECT TITLE
 HOUSTON AIRPORT SYSTEM
 GUARD BOOTH
 REPLACEMENT PROJECT
 HAS PN 727

PROJECT NUMBER
 R1002447
 PROJECT LOCATION
 4103 N. TERMINAL RD.
 GUARD BOOTH NV-53
 HOUSTON, TX 77032

DATE OF ISSUE
 AUGUST 11, 2014
 100% CONSTRUCTION DOCUMENTS
 REVISIONS

HOUSTON AIRPORT SYSTEM PDC DESIGN DIVISION	DATE
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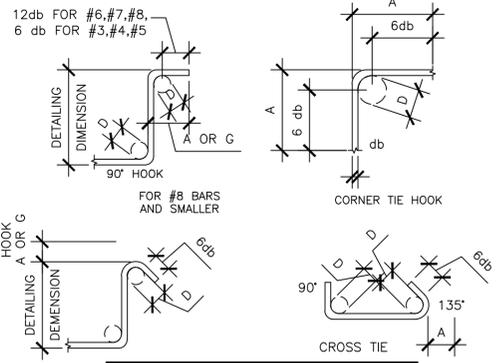
REGISTRATION
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SHEET TITLE
 TYPICAL
 FOUNDATION DETAILS

SHEET NUMBER

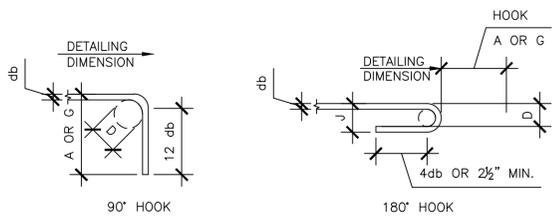
S4.01



STIRRUP AND TIE HOOK SCHEDULE

BAR SIZE	D (IN.)	90° HOOK A OR G (IN.)	135° HOOK A OR G (IN.)
#3	1 1/2	4	4
#4	2	4 1/2	4 1/2
#5	2 1/2	6	5 1/2

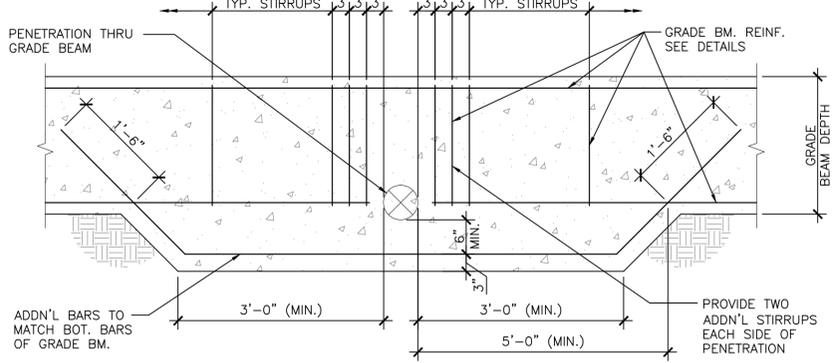
D= INSIDE DIAMETER OF BEND



RECOMMENDED END HOOKS, ALL GRADES

BAR SIZE	FINISHED BEND DIAMETER D, (IN.)	180° HOOK		90° HOOK
		A OR G, (IN.)	J, (IN.)	A OR G, (IN.)
#3	2 1/2	5	3	6
#4	3	6	4	8
#5	3 3/4	7	5	10
#6	4 1/2	8	6	12
#7	5 1/2	10	7	14
#8	6	11	8	16
#9	9 1/2	15	11 3/4	19
#10	10 1/2	17	13 1/4	22
#11	12	19	14 3/4	24
#14	18 1/2	27	21 3/4	31
#18	24	36	28 1/2	41

D= INSIDE DIAMETER OF BEND



ELEVATION VIEW

NOTE: PIPE/PENETRATION MUST COMPLETELY PASS THROUGH BEAM PRIOR TO TURNING

1 TYPICAL DETAIL STIRRUP AND TIE HOOK TYPES

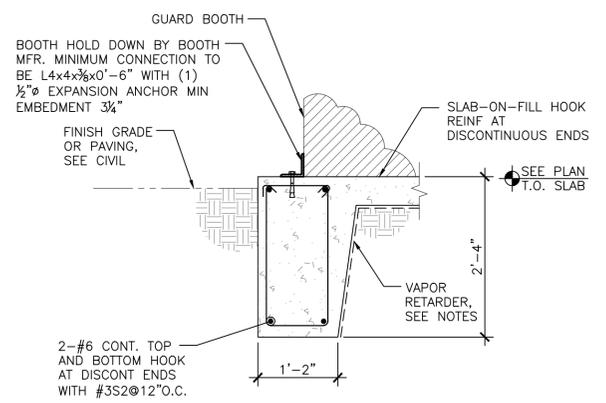
SCALE: NTS

2 TYPICAL DETAIL END HOOK TYPES

SCALE: NTS

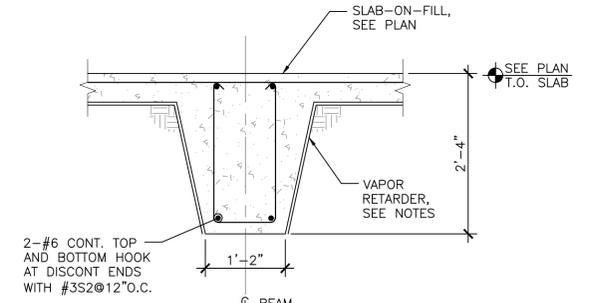
3 TYPICAL DETAIL HORIZONTAL PENETRATION OPENING THRU GRADE BEAM AT BOTTOM LONGITUDIAL REINFORCEMENT

SCALE: NTS



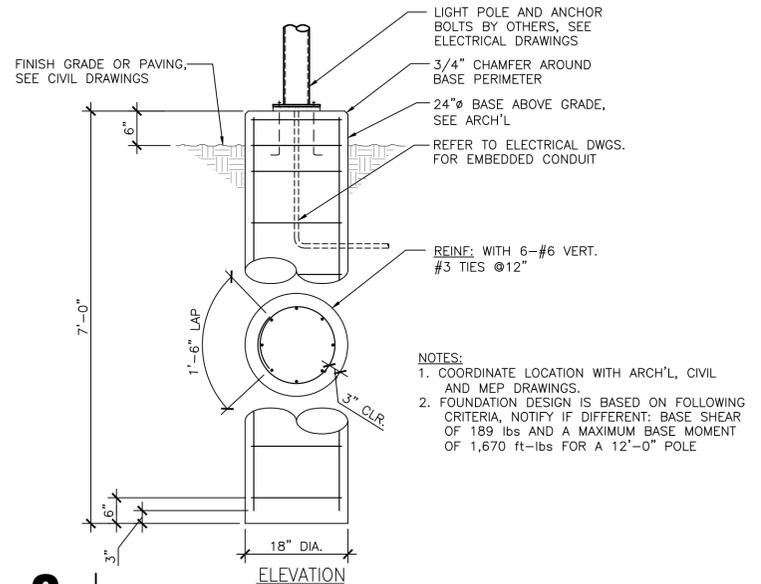
4 DETAIL

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



5 DETAIL

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



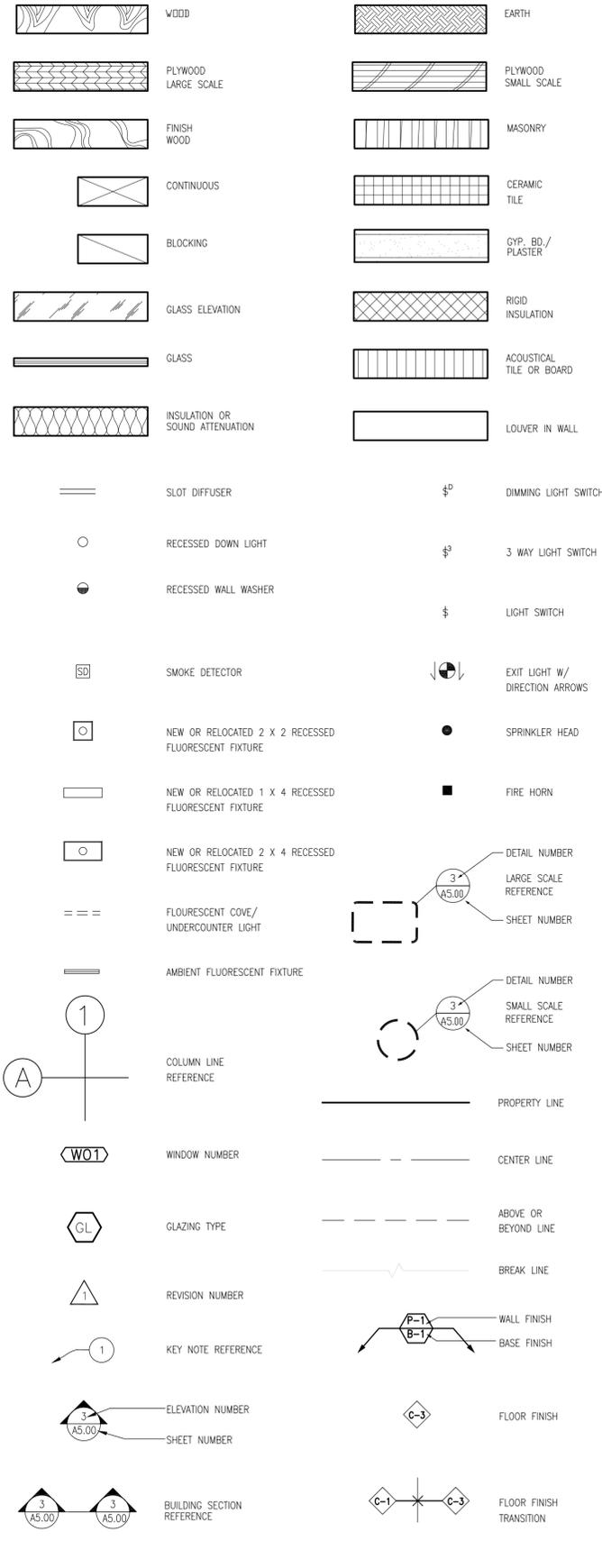
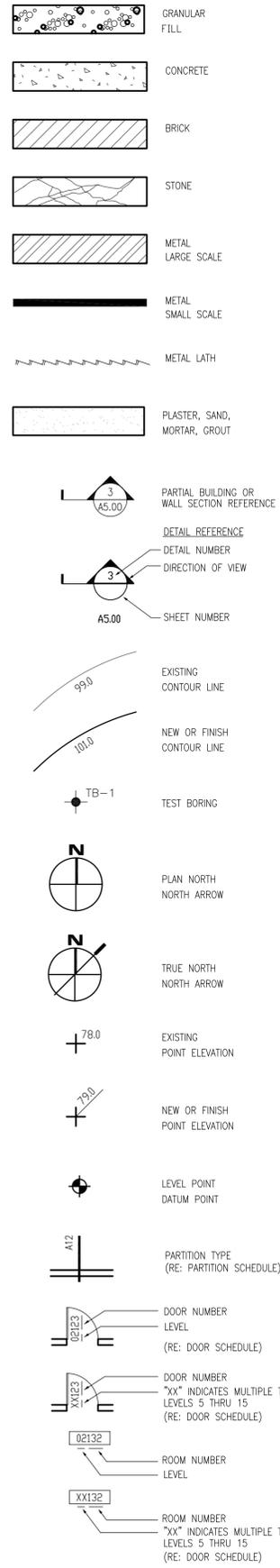
ELEVATION

6 TYPICAL LIGHTPOLE FOUNDATION DETAIL

SCALE: N.T.S.

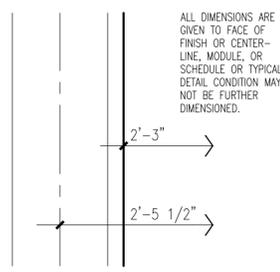
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 CHECKED BY: JAG
 PROJECT: HOUSTON AIRPORT SYSTEM
 SHEET: S4.01

&	AND	F.A.	FIRE ALARM	O.A.	OVER ALL
L	ANGLE	F.D.	FLOOR DRAIN	O/A	OUTSIDE AIR
[CHANNEL	F.D.C.	FIRE DEPARTMENT CONNECTION	O.C.	ON CENTER
@	AT	F.D.C.C.	FIRE DEPARTMENT CONNECTION CABINET	O.D.	OUTSIDE DIAMETER
⊕	CENTER LINE	FDN.	FOUNDATION	OPNG	OFFICE OPENING
⊥	DIAMETER OR ROUND PERPENDICULAR	F.E.	FIRE EXTINGUISHER	OPP.	OPPOSITE
#	POUND OR NUMBER EXISTING	F.E.C.	FIRE EXTINGUISHER CABINET	OPH.	OPPOSITE HAND
(E)		FEM.	FEMALE	OZ.	OUNCE
A.B.S.	ACRYLONITRILE BUTADIENE STYRENE	F.H.C.	FIRE HOSE CABINET	P.B.D.	PARTICLE BOARD
ABV.	ABOVE	F.H.M.S.	FLAT HEAD MACHINE SCREW	PL.	PLATE
A/C	AIR CONDITIONING	F.H.R.	FIRE HOSE RACK	P.LAM.	PLASTIC LAMINATE
ACOUS.	ACOUSTICAL	F.H.W.S.	FLAT HEAD WOOD SCREW	PLAS.	PLASTER
A.D.	AREA DRAIN	FIN.	FIRE HYDRANT FINISH	PLYWD.	PLYWOOD
ADD.	ADDENDUM	FLASH.	FLASHING	PNL.	PANEL(ING)
A.F.F.	ABOVE FINISH FLOOR	FLEX.	FLEXIBLE	POL.	POLISH
AGG.	AGGREGATE	FLR.	FLOOR	PR.	PAIR
A.H.U.	AIR HANDLING UNIT	FLUOR.	FLUORESCENT	P.S.F.	POUNDS PER SQUARE FOOT
ALLOW.	ALLOWANCE	F.MIR.	FRAMED MIRROR	P.SH.	PURSE SHELF
ALT.	ALTERNATE	F.MIR.SH.	FRAMED MIRROR AND SHELF	P.S.I.	POUNDS PER SQUARE INCH
ALUM.	ALUMINUM	F.O.F.	FACE OF FINISH	PT.	POINT
ANOD.	ANODIZED	F.O.S.	FACE OF STUDS	PTN.	PARTITION
APX.	APPROXIMATE	F.S.	FULL SIZE	Q.T.	QUARRY TILE
ARCH.	ARCHITECT(URAL)	FT.	FOOT (FEET)	QTR.	QUARTER
AUTO.	AUTOMATIC	FURR.	FURRED	R.	RISER
AUX.	AUXILIARY	FUT.	FUTURE	R/A	RETURN AIR
AVG.	AVERAGE	F.W.C.	FABRIC WALL COVERING	RAD.	RADIUS
				REF.	REFERENCE
				REFR.	REFRIGERATOR
				REIN.F.	REINFORCED
				REQ.	REQUIRE(D)
				RESIL.	RESILIENT
				REV.	REVISE
				RM.	ROOM
				R.O.	ROUGH OPENING
				S.	SOUTH
				S/A	SUPPLY AIR
				SAM.	SANITARY
				S.C.	SOLID CORE
				SCHED.	SCHEDULE
				S.D.	SOAP DISPENSER
				SECT.	SECTION
				SH.	SHELF
				SHR.	SHOWER
				SHT.	SHEET
				SIM.	SIMILAR
				S.N.D.	SANITARY NAPKIN DISPENSER
				S.N.R.	SANITARY NAPKIN RECEPTACLE
				S.M.R.	SANITARY NAPKIN-TAMPON DISPENSER
				SO.	SQUARE
				S.SK.	SERVICE SINK
				S.S.T.	STAINLESS STEEL
				ST.	STEEL
				STA.	STATION
				STD.	STANDARD
				STOR.	STORAGE
				STR.	STRUCTURE
				SUR.	SURFACE
				SUSP.	SUSPENDED
				SYM.	SYMMETRICAL
				SYS.	SYSTEM
				T.	TREAD
				T.B.	TOWEL BAR
				T.D.	TOWEL DISPENSER
				T.D.R.	TOWEL DISPENSER-RECEPTACLE
				TEL.	TELEPHONE
				TEMP.	TEMPERED
				TERR.	TERRAZZO
				T&G	TONGUE AND GROOVE
				THER.	THERMAL
				THK.	THICK(NESS)
				THRES.	THRESHOLD
				T.T.D.	TOILET TISSUE DISPENSER
				TV.	TELEVISION
				T.W.	TOP OF WALL
				TYP.	TYPICAL
				URINAL	URINAL
				UNLESS NOTED OTHERWISE	UNLESS NOTED OTHERWISE
				U.N.O.	UNLESS NOTED OTHERWISE
				V.C.T.	VINYL COMPOSITION TILE
				VERT.	VERTICAL
				VEST.	VESTIBULE
				V.I.F.	VERIFY IN FIELD
				VNR.	VENEER
				V.M.C.	VINYL WALL COVERING
				W.	WEST
				W/W.	WITH
				W.A.U.	WALL ASH URN
				W.C.	WATER CLOSET
				WD.	WOOD
				WIN.	WINDOW
				W/O	WITHOUT
				WP.	WATERPROOF
				W.R.	WASTE RECEPTACLE
				W/R	WATER RESISTANT
				WSCT.	WAINSCOT
				WT.	WEIGHT



24	20	16	12	8	4
23	19	15	11	7	3
22	18	14	10	6	2
21	17	13	9	5	1

THE NO'S 1 THRU 24 ARE AVAILABLE FOR EACH SHEET AND IF USED ALWAYS APPEAR IN THE LOCATIONS SHOWN. DETAILS MAY BE DRAWN ON ONE OR MULTIPLE MODULES.



HOUSTON AIRPORT SYSTEM
 GEORGE BUSH
 INTERCONTINENTAL AIRPORT
 HOUSTON TEXAS

OWNER
 HOUSTON AVIATION DEPT.
 16930 JOHN F. KENNEDY BLVD.
 HOUSTON, TX 77032
 [T] 713-622-1444
 [F] 713-968-9333

ARCHITECT
PGAL
 3131 BRIARPARK
 SUITE 200
 HOUSTON, TX 77042
 [T] 713 622 1444
 [F] 713 968 9333

PGAL TBPE REG. NO. F-2742
 CONSULTANT

PROJECT TITLE
 HOUSTON AIRPORT SYSTEM
 GUARD BOOTH
 REPLACEMENT PROJECT
 HAS PN 727

PROJECT NUMBER
 R1002447

PROJECT LOCATION
 4103 N. TERMINAL RD.
 GUARD BOOTH NV-53
 HOUSTON, TX 77032

DATE OF ISSUE
 AUGUST 11, 2014

REVISIONS

NO.	DATE	DESCRIPTION
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HOUSTON AIRPORT SYSTEM
 PDC DESIGN DIVISION

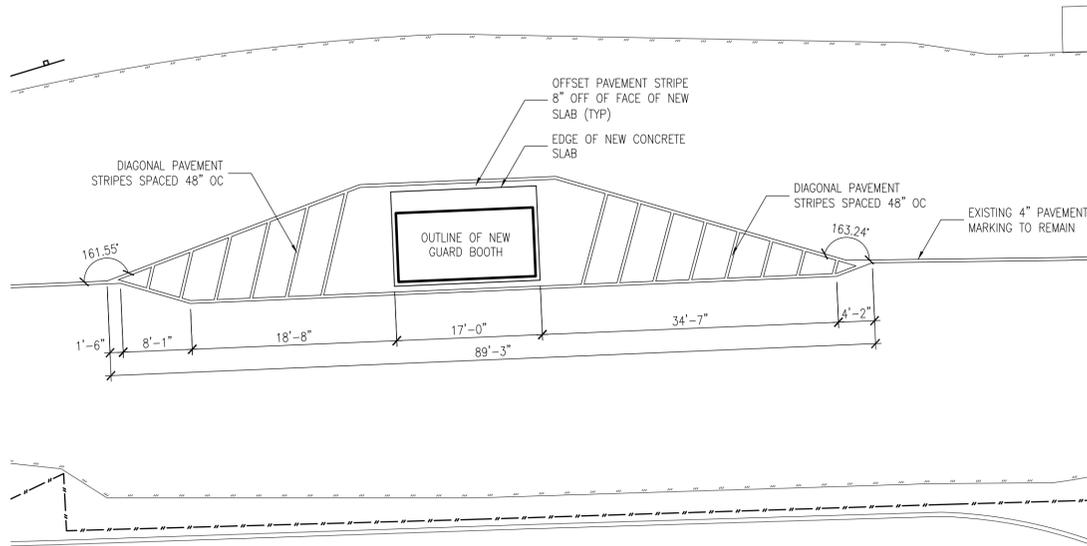
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MICHEL H. LILOP
 REGISTERED ARCHITECT
 STATE OF TEXAS
 18250

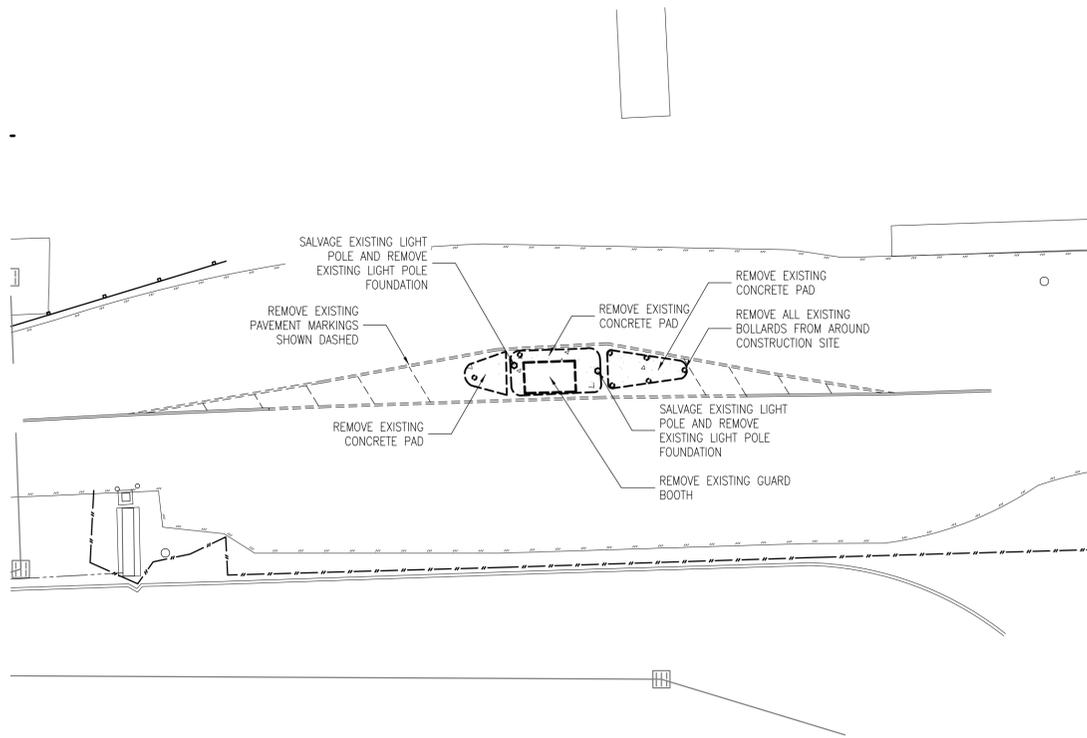
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 SYMBOLS & ABBREVIATIONS

SHEET NUMBER
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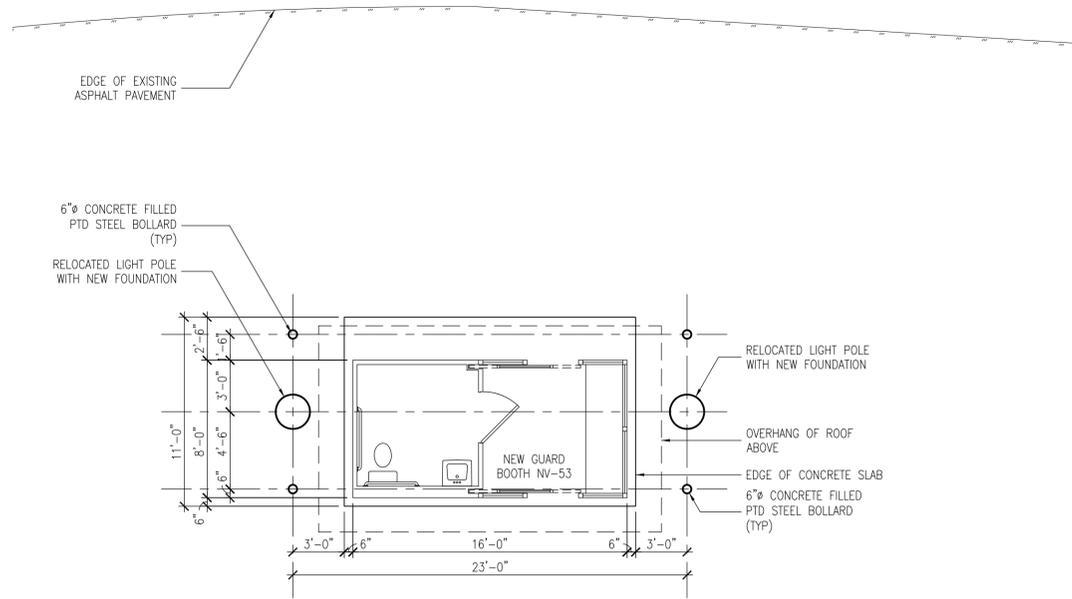
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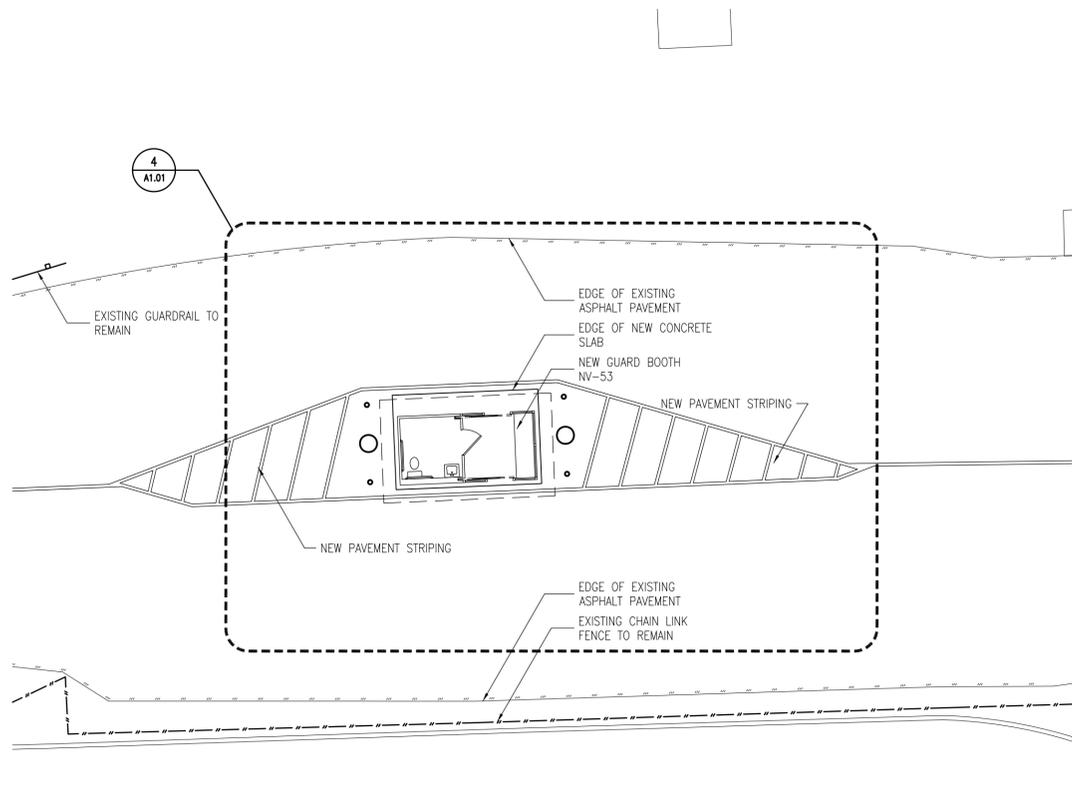
PAVEMENT STRIPING PLAN 1/32"=1'-0" 6



SITE DEMOLITION PLAN 1/16"=1'-0" 5



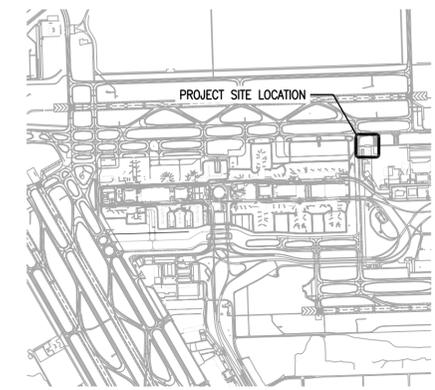
GUARD BOOTH NV-53 ENLARGED SITE PLAN 1/16"=1'-0" 4



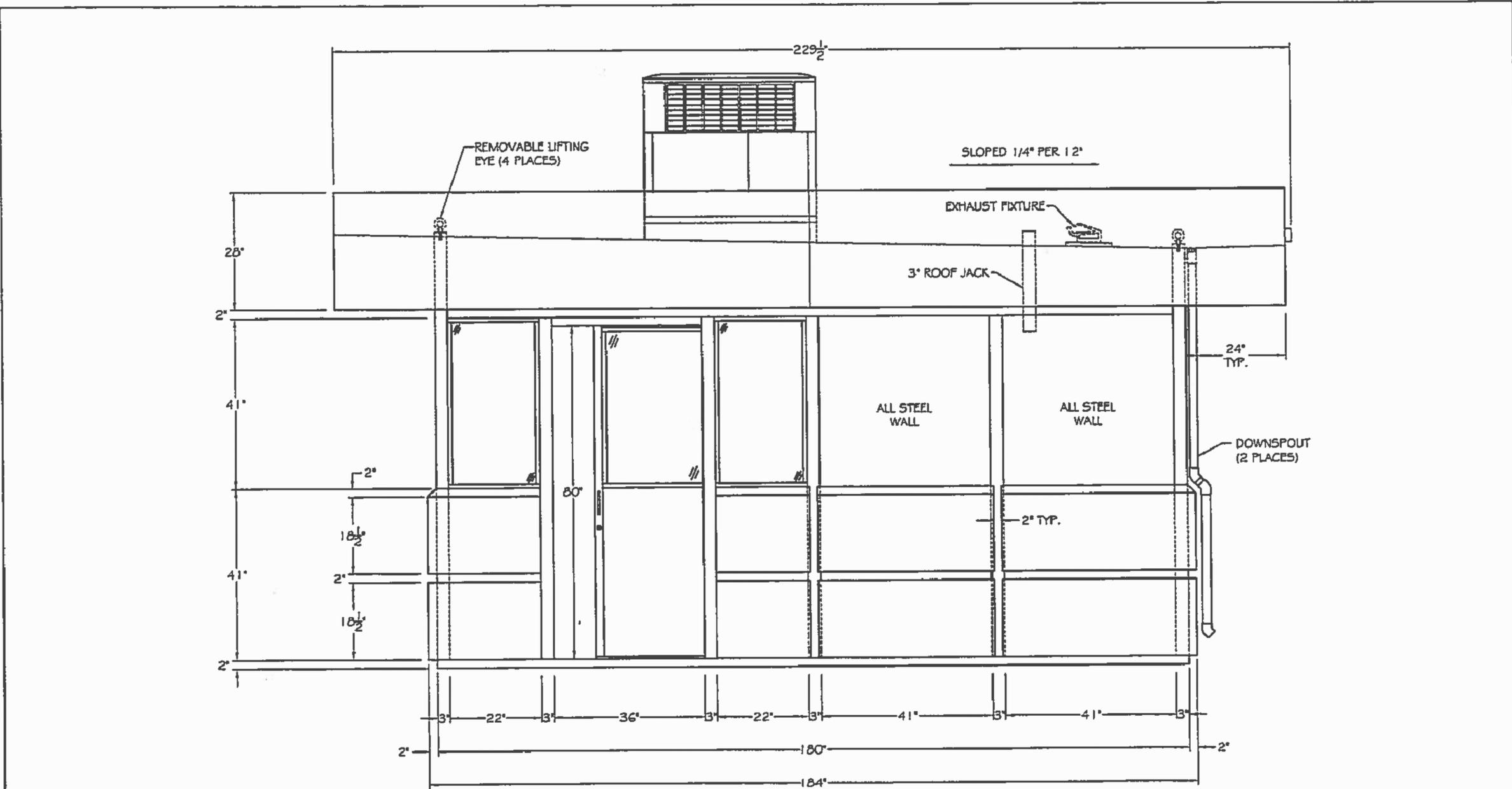
GUARD BOOTH NV-53 SITE PLAN 1/32"=1'-0" 3

1. GUARD BOOTH PLAN SHOWN FOR REFERENCE ONLY. CONTRACTOR TO COORDINATE ACTUAL BOOTH LAYOUT, UTILITY CONNECTION POINTS, AND ANCHOR POINTS WITH MANUFACTURER AND EXISTING SITE CONDITIONS PRIOR TO ALL CONSTRUCTION.
2. CONTRACTOR SHALL ACCOMMODATE FOR ALL ANCHOR POINTS AND UTILITY CONNECTIONS REQUIRED BY THE NEW GUARD BOOTH.
3. CONTRACTOR TO REMOVE EXISTING GUARD BOOTH, ASSOCIATED UTILITIES, CONDUITS, ETC. THAT WILL NOT BE REUSED FROM THE SITE AS REQUIRED.
4. CONTRACTOR SHALL MAINTAIN A SECURE SITE AT ALL TIMES. CONTRACTOR SHALL COORDINATE WITH THE OWNER AND/OR THE OWNER'S DESIGNATED REPRESENTATIVE 48 HOURS IN ADVANCE ANY PERIODS OF TIME WHERE ACCESS THROUGH THE SITE WILL BE IMPAIRED DUE TO THE CONSTRUCTION OF THIS PROJECT.
5. CONTRACTOR SHALL MAKE ALL REQUIRED PROVISIONS ADMINISTERED BY THE OWNER OR THE OWNER'S DESIGNATED REPRESENTATIVE TO KEEP THE SITE SECURE AT ALL TIMES.
6. CONTRACTOR SHALL MAINTAIN A MINIMUM OF ONE CARD READER ACCESS POINT THROUGH THE SECURITY GATE AT ALL TIMES.
7. CONTRACTOR SHALL NOTIFY THE OWNER OR THE OWNER'S DESIGNATED REPRESENTATIVE A MINIMUM OF 48 HOURS IN ADVANCE FOR THE SHUT-OFF OF ANY UTILITIES AT THE SITE, WHICH MAY IMPACT ANY OTHER OPERATIONS AT THE AIRPORT.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, PROTECTING, AND REPAIRING ANY UNDERGROUND UTILITIES THAT ARE AFFECTED BY THE CONSTRUCTION OF THIS PROJECT.
9. CONTRACTOR SHALL DOCUMENT ANY EXISTING DAMAGE AT THE SITE AND REPAIR ANY NEW DAMAGE TO THE SITE TO A LIKE NEW CONDITION CAUSED BY THE CONSTRUCTION OF THIS PROJECT.
10. CONTRACTOR SHALL THOROUGHLY CLEAN AND CONTAIN OR REMOVE DEBRIS FROM THE SITE ON A DAILY BASIS. ANY MATERIAL, DEBRIS, OR EQUIPMENT THAT CAN BE EASILY MOVED BY WIND SHOULD IMMEDIATELY BE CONTAINED AND REMOVED FROM THE SITE.
11. CONTRACTOR SHALL RETURN TO THE OWNER ANY SALVAGEABLE MATERIAL THAT IS NOT SCHEDULED TO BE REUSED.
12. ANY MATERIAL OR EQUIPMENT THAT IS SCHEDULED TO BE REUSED SHALL BE THOROUGHLY CLEANED AND REFURBISHED PRIOR TO REINSTALLATION.
13. CONTRACTOR SHALL REPAIR OR REPLACE ANY DAMAGE TO EXISTING PAVED OR LANDSCAPED AREAS AND CURBS CAUSED BY THE CONSTRUCTION OF THIS PROJECT WITH MATCHING PAVEMENT AND OR MATERIAL AS REQUIRED.
14. ALL ITEMS SCHEDULED TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY INCLUDING ANY FOOTINGS, UTILITIES, OR OTHERWISE HIDDEN COMPONENTS OF THE ITEM.
15. CONTRACTOR TO REFURBISH OR REPLACE LIGHT POLES AND FIXTURES WHICH ARE SCHEDULED TO BE RELOCATED.

GENERAL NOTES n.t.s. 2



AIRPORT SITE PLAN 1"=250' 1



(E1) LEFT ELEVATION
 SCALE 1/2" = 1' - 0"
 RIGHT ELEVATION OPPOSITE

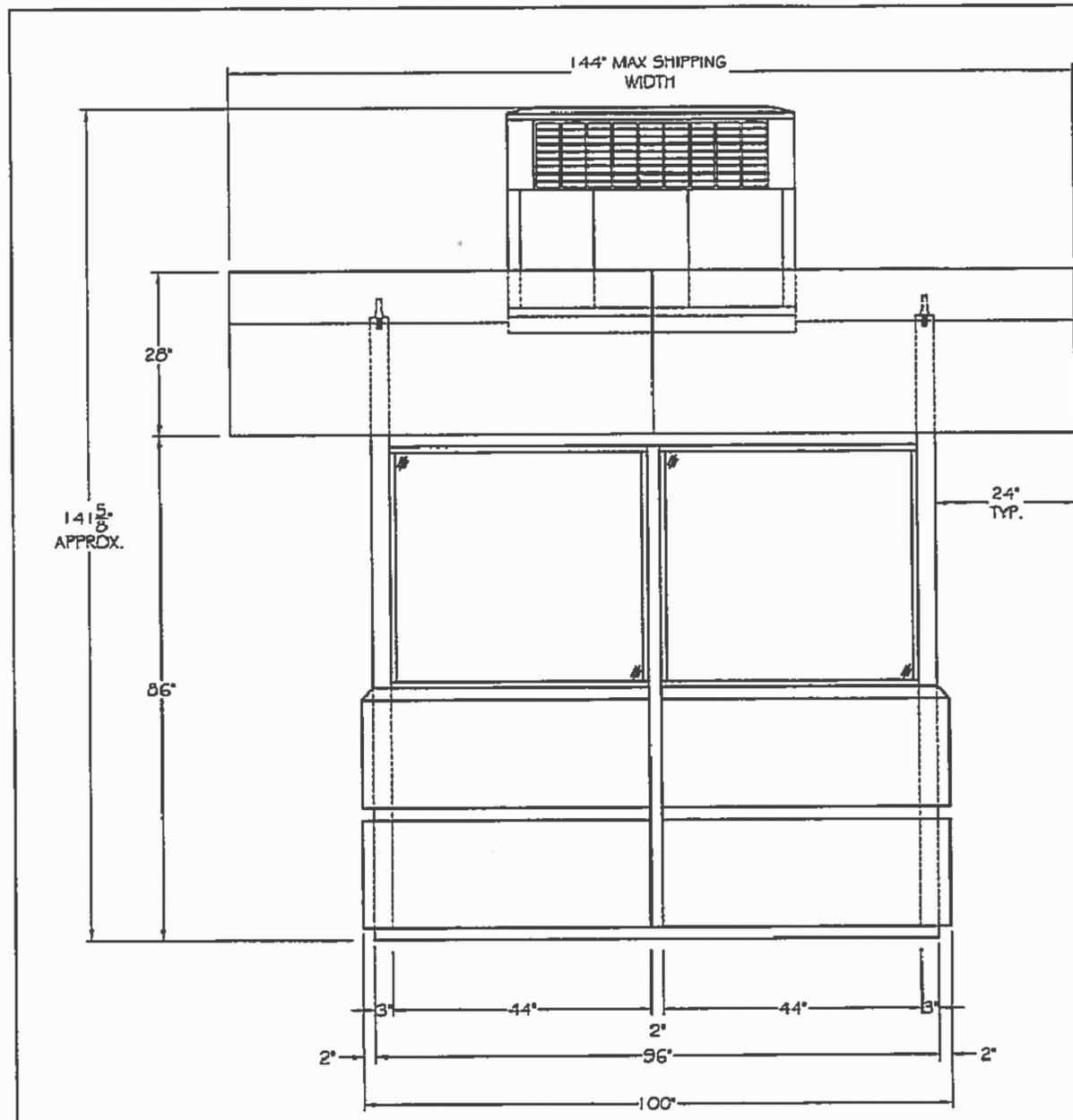
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BIG
 B.I.G. ENTERPRISES, INC.
 9702 E. RUSH STREET
 SOUTH EL MONTE, CA 91733-1730
 (626) 448-1449

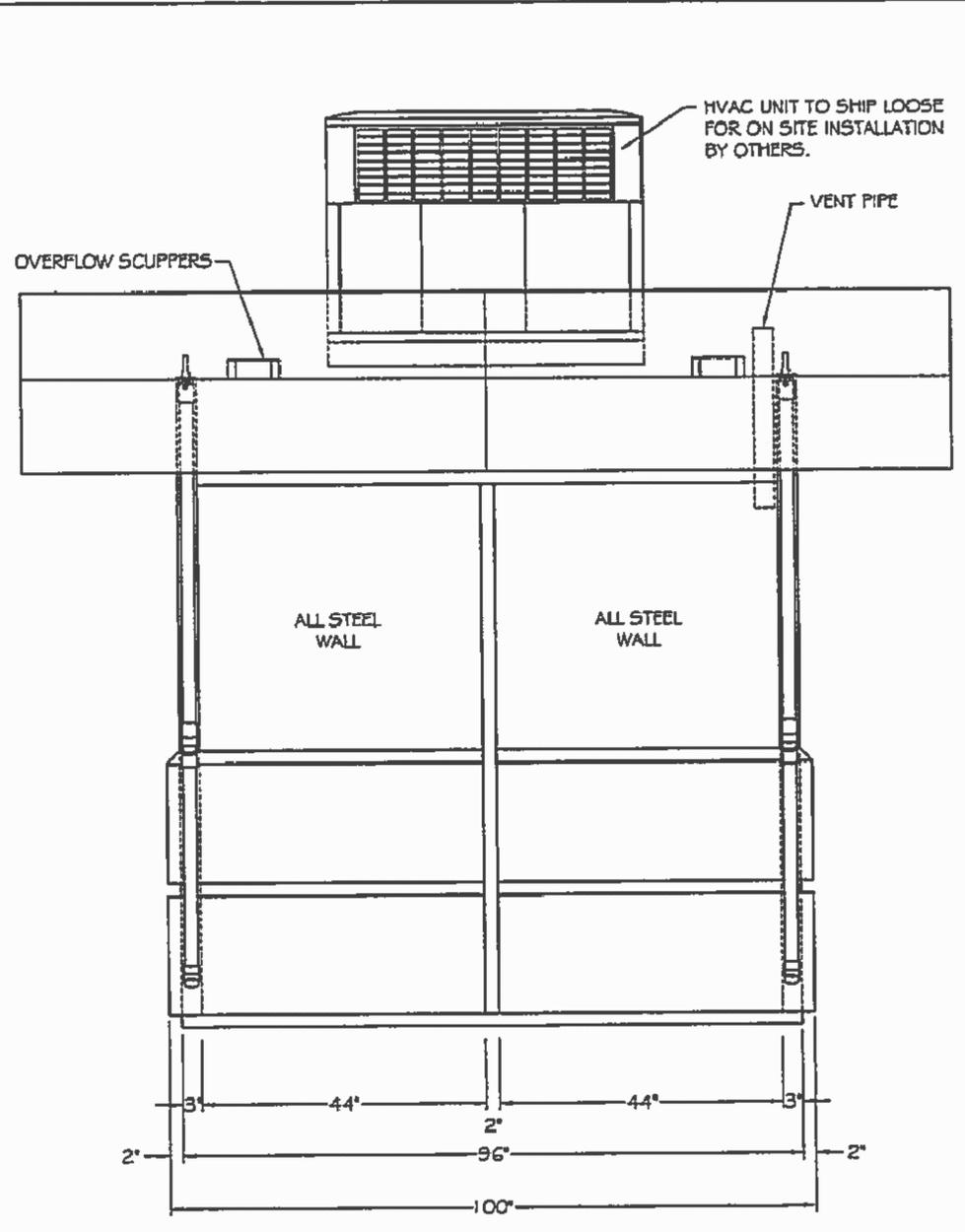
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 PLOT FILE: 081114_020300
 PLOT DEVICE: HP DesignJet T1100PS
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E2 FRONT ELEVATION
 SCALE 1/2" = 1' - 0"



E3 REAR ELEVATION
 SCALE 1/2" = 1' - 0"

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DS8150B-RR JOB 9201 SHEET 3 OF 8
 BY: LG DATE: 12-05-12
 SCALE: AS NOTED

CENTERPOINT ENERGY
 GUARD BOOTH

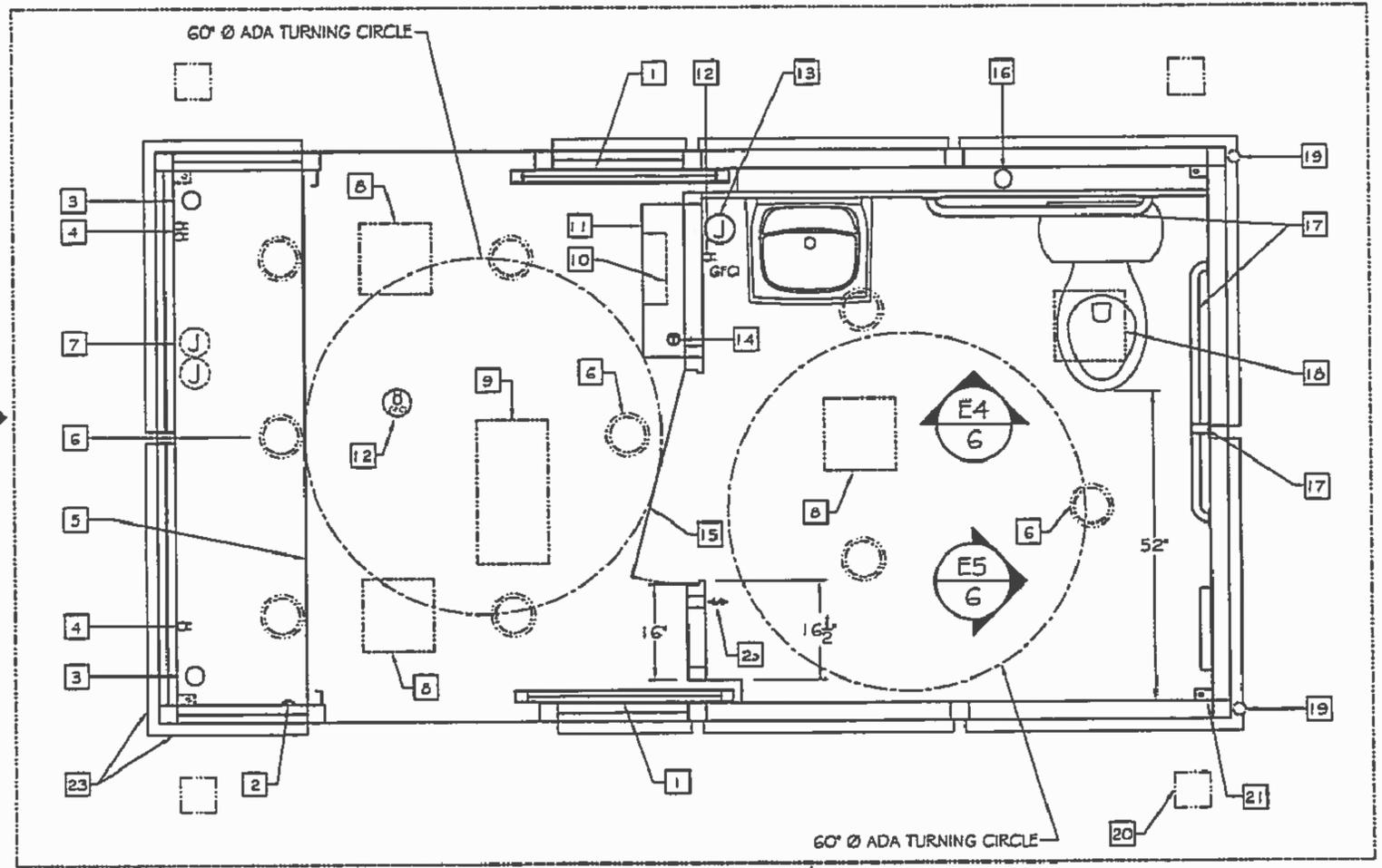
B.I.G. ENTERPRISES, INC.
 9702 E. RUSH STREET
 SOUTH EL MONTE, CA 91733-1730
 (626) 448-1449



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- LEGEND:**
- 1 36" x 80" SLIDING DOOR - GENERAL NOTE #5
 - 2 OCCUPANCY SENSOR
 - 2a INTERIOR LIGHT SWITCH
 - 3 3" CORD ACCESS HOLE
 - 4 RECEPTACLES (3 PLACES)- GENERAL NOTE #9
 - 5 22" SHELF - GENERAL NOTE #11
 - 6 FLUORESCENT FIXTURES - GENERAL NOTE #8
 - 7 DATACOMM. JUNCTION BOX - GENERAL NOTE #9a
 - 8 A/C SUPPLY - GENERAL NOTE #10
 - 9 A/C RETURN - GENERAL NOTE #10
 - 10 LOAD CENTER - GENERAL NOTE #7
 - 11 ELECTRICAL CABINET - GENERAL NOTE #7
 - 12 GFCI RECEPTACLE - GENERAL NOTE #9c
 - 13 WATER HEATER JUNCTION BOX - GENERAL NOTE #9b
 - 14 THERMOSTAT
 - 15 36" x 80" SWING DOOR - GENERAL NOTE #5a
 - 16 3" ROOF JACK - GENERAL NOTE #12
 - 17 GRAB BAR (3 PLACES) - GENERAL NOTE #12
 - 18 EXHAUST FAN - GENERAL NOTE #12
 - 19 DOWNSPOUT
 - 20 SOFFIT VENT (4 PLACES)
 - 21 ANCHOR CLIP (4 PLACES) - GENERAL NOTE #13
 - 22 2-4" OVERHANG - GENERAL NOTE #3
 - 23 ARCHITECTURAL PANEL - GENERAL NOTE #2

NOTE:
 ALL RESTROOM EQUIPMENT TO BE SHIPPED LOOSE
 FOR INSTALLATION ON SITE BY OTHERS. B.I. G. TO
 PROVIDE BRACING HARD POINTS FOR SINK AND ANY
 REQUESTED GRAB BARS. ANY OTHER BRACING POINTS OR
 CUTOUTS REQUIRED MUST BE SPECIFIED PRIOR TO B.I. G.
 PRODUCTION RELEASE.



E1
 2
FLOOR PLAN
 SCALE 1/2" = 1' - 0"

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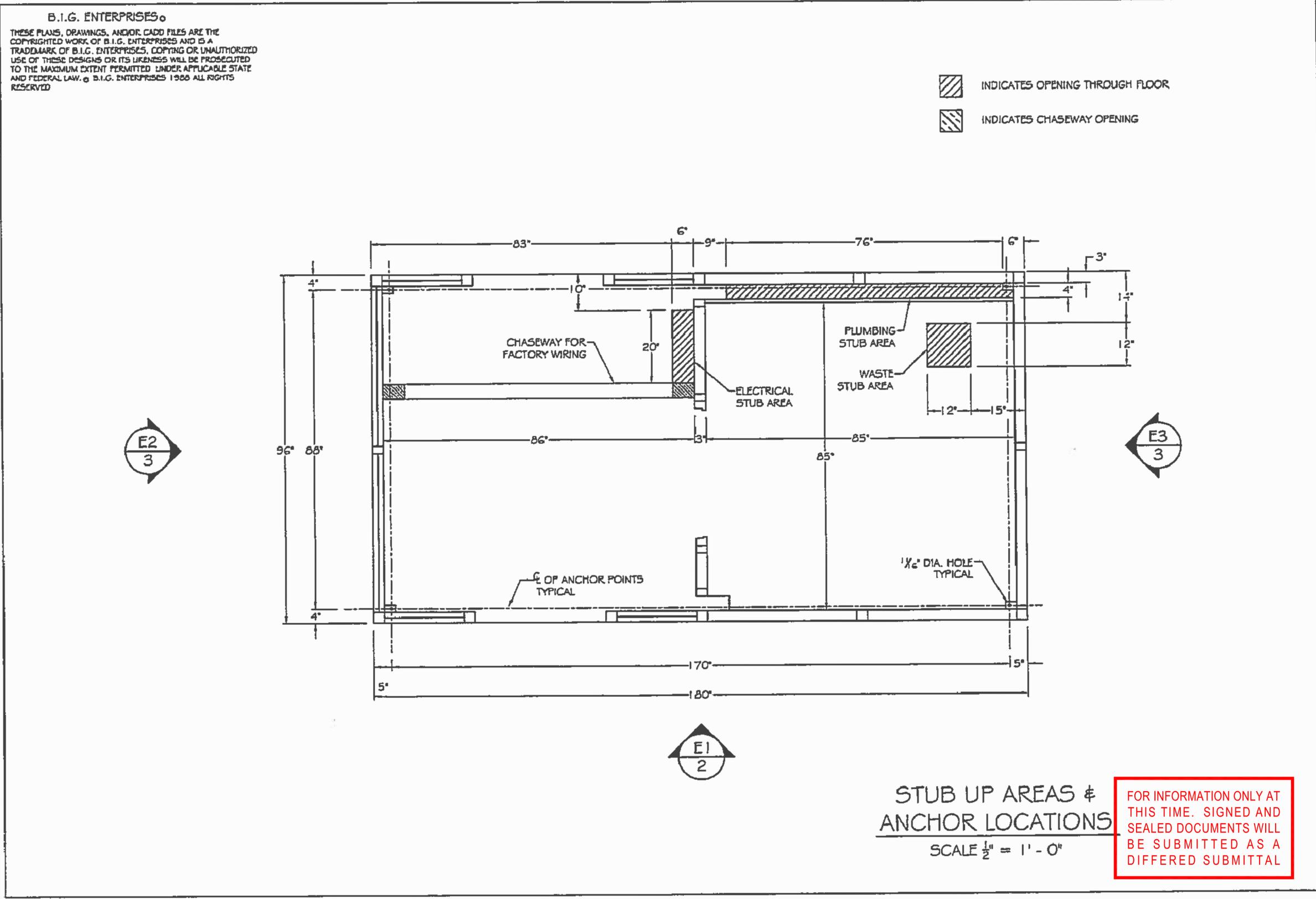
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 SOUTH EL MONTE, CA 91733-1730
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BIG

SHEET 5 OF 8

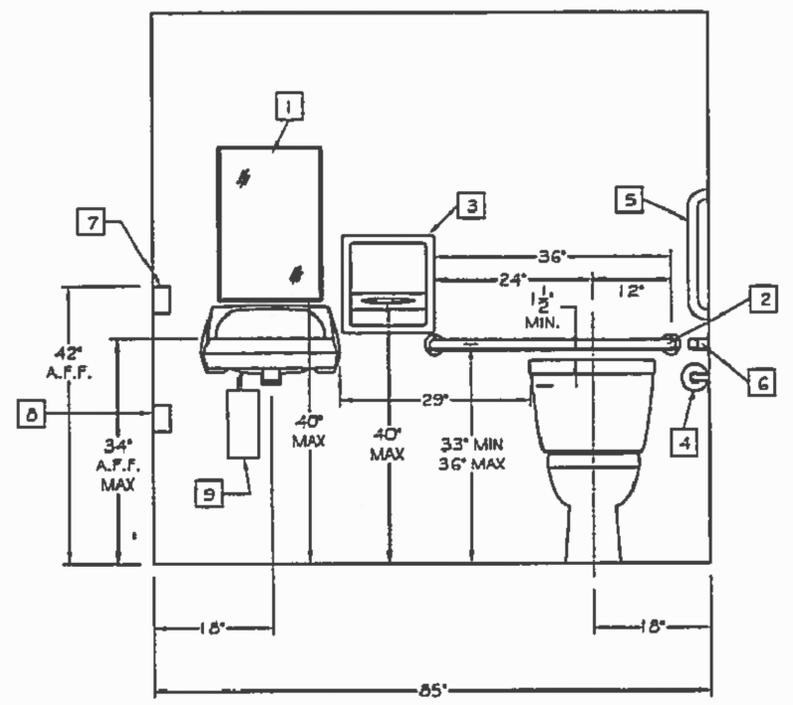
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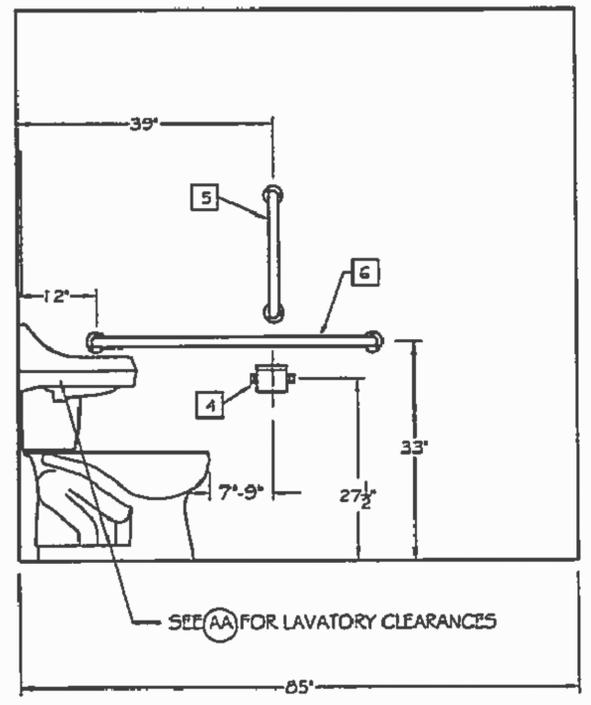
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- 1 16" x 22" MIRROR
- 2 36" GRAB BAR
- 3 PAPER TOWEL DISPENSER
- 4 TOILET PAPER HOLDER
- 5 18" GRAB BAR
- 6 42" GRAB BAR
- 7 GFCI RECEPTACLE
- 8 WATER HEATER JUNCTION BOX
- 9 WATER HEATER

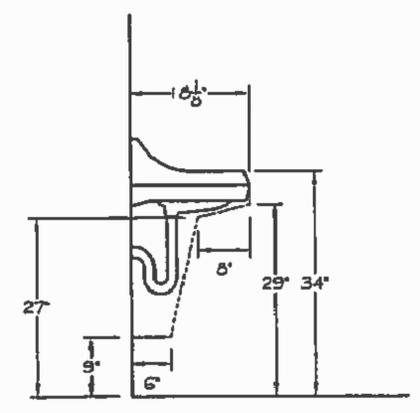
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E4 RESTROOM ELEVATION
 SCALE 1/2" = 1' - 0"



E5 RESTROOM ELEVATION
 SCALE 1/2" = 1' - 0"



AA LAVATORY CLEARANCES
 SCALE 1/2" = 1' - 0"

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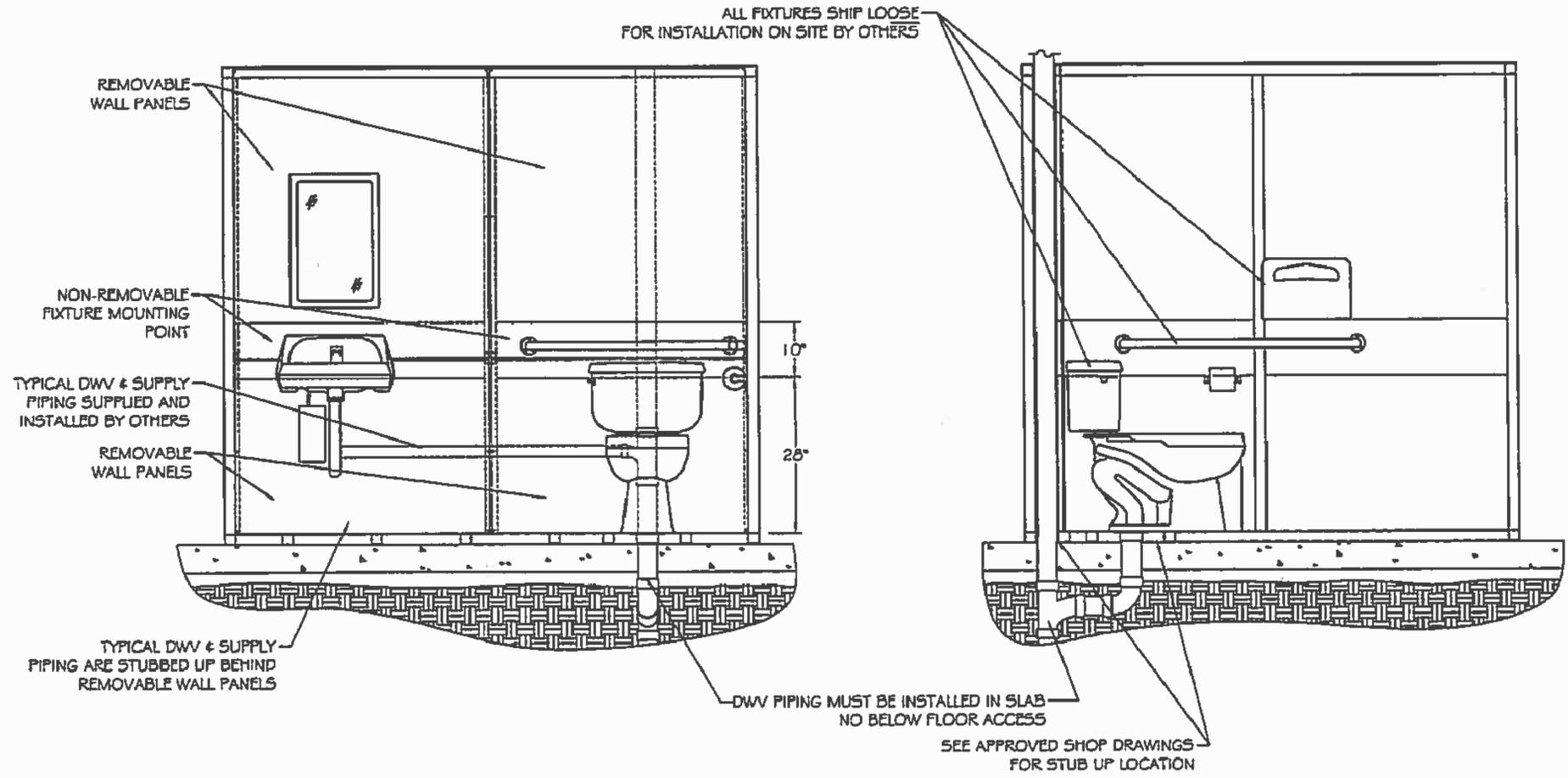
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 7
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 8
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NOTE:
 THIS DRAWING IS MEANT TO SHOW THE TYPE OF
 PLUMBING WORK REQUIRED TO CONNECT THE GUARD HOUSE.
 ACTUALL PLANS, PERMITS AND INSTALLATION ARE BY
 OTHERS.

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 PLOT SCALE: 1:1
 PLOT SHEETS: 8

GENERAL NOTES:

1. Frame members to consist of 3" x 3" .083" and 2" x 3" .083" A500 tube.
2. Unit to have half glazed 16 ga galvanized steel walls with 16 ga galvanized interior liners. Exterior wall panels below the window line to have architectural build out panels 2" deep to create 2" x 2" horizontal and vertical reveals.
- 2a. Walls to have R-Max TSXB500 insulation with a R-17 value.
3. Unit to have a 28" Parapet fascia with 24" overhang on all sides with a sloped 16 ga galvanized steel roof drained through two 1-1/2" PVC downspouts with overflow scuppers.
- 3a. Roof to have fiberglass batt insulation with a R-19 value.
- 3b. Unit to have four 3/4" shank lifting eyes mounted on the roof. Lifting eyes are designed for a STRAIGHT VERTICAL LIFT ONLY. Spreader bars must be used when lifting booth to ensure this vertical lift. All warranties will be void if not lifted in this manner.
4. Unit to have an 11 ga A569 steel floor covered with 1/8" thick x 19" square, black rubber tiles with 4" high black perimeter cove molding. Floor to be mounted on a 2" steel tube frame. Underside of floor to be fully coated with bituminous undercoating sealant.
- 4a. Floor will require a ramp the full width of one door opening with a slope of 1" to 1'-0" to meet ADA handicap access requirements. Ramp to be installed on site. All materials and labor by others.
5. Unit to have two commercial grade steel framed slide doors, 36" x 80" constructed of 16 ga steel panels with steel tube frames. Doors to be top hung, in a steel track, on a minimum of eight 2 1/4" steel ball bearing rollers with stainless steel lower guide, welded stainless steel pull handles, mortise hook type lock and complete weather stripping. Doors to be keyed alike.
- 5a. Unit to have one 16 ga custom commercial all steel swing door, 36" x 80", with a Corbin Russwin ADA compliant privacy lock set. Door to be mounted in the restroom partition wall.
6. Unit to have dual pane insulated tempered, safety glass with a make up of 1/4" tinted, 1/4" air space, 1/4" clear.
- 6a. Customer to specify the color of tint prior to B.I.G. production release. Standard tint colors are Bronze or Gray. If customer does not provide a tint selection, B.I.G. will choose a standard tint color that best complements the paint color selected.
7. Unit to have one 3 wire single phase, 12 pole, 125 amp 120/240 volt, load center flush mounted in a 5K-60 cabinet on the restroom partition wall. All electrical equipment to be U.L. listed and all wiring to be per current published NEC standards. All conductors to be copper, with a minimum size of #12. Exposed wiring to be in surface mounted EMT conduit. Concealed wiring to be in flexible aluminum conduit. Final power connection and grounding to be done on site by others. All work to be done by a qualified electrician in accordance with all applicable local codes.
8. Unit to have six 6" dia., 13 watt compact fluorescent light fixtures recessed in the steel ceiling of the guard area and controlled by an occupancy sensor.
- 8a. Unit to have three 6" dia., 13 watt compact fluorescent light fixtures recessed in the steel ceiling of the restroom and controlled by a single pole wall switch.
9. Unit to have three 115 volt duplex outlets mounted under the shelf.
- 9a. Unit to have two single gang junction boxes mounted under the shelf. Junction boxes to have an empty 1/2" conduit, with pull string, run to the electrical stub up area in a chaseway under the floor for data and communication lines by others.
- 9b. Unit to have a junction box mounted in the restroom. Junction box is to be wired for 240V, and is provided for the electrical connection of the water heater. The water heater is shipped loose, and is to be installed as part of the overall plumbing installation, by others.

- 9c. Unit to have a GFCI duplex outlet mounted in the restroom at 42" A.F.F and one watertight GFCI duplex outlet mounted on th roof for HVAC servicing.
10. Unit to have one roof mounted packaged heat pump providing 23,000 BTU cooling and 22,400 BTU reverse cycle heating, and 17,100 BTU (5 KW) supplemental electric heating during cold weather operation. Indicated BTU capacities are at 240V, 208V capacities are lower. All framing, supply registers, filtered returns, ducts, low voltage T-stat wire, and roof mount junction box installed. HVAC unit to be American Standard model no. 4WCC3024A1000A.
- 10a. Main A/C unit, wall mount thermostat, condensation P-trap and one non-fused disconnect are shipped loose for site installation by others.
- 10b. HVAC must be installed and maintained by a technician certified by the HVAC manufacturer to maintain warranty coverage.
11. Unit to have one 22" straight shelf with two 3" electric access grommet inserts. Shelf to be stainless steel with a #4 finish and mounted at 34" above finish floor.
- 11a. Shelf to be rated for a 250 lb. load.
12. Unit to have restroom area with partition wall, exhaust fixture (min 75 cfm, Broan #671 or equal) and one installed 3" roof jack with 3" PVC tube vent stubbed 6" below ceiling. Verification of vent sizing, and vent installation to be by others in coordination with the local applicable codes.
- 12a. All piping is to be supplied and installed on site by others.

The following equipment (or equals) will be shipped loose for on site installation by others:

Standard lavatory: Kohler #K2005-0 Faucet set: Zum Z06500-XL-3M
 Toilet: Kohler #K3609 Toilet seat: Olsen #10
 42" Grab Bar: Bobnck S.S. 6106-42 36" Grab Bar: Bobnck S.S. 6106-36
 18" Grab Bar: Bobnck S.S. 6106-18 Toilet paper holder: Bobnck S.S. B-6857
 Paper towel holder: Bobnck S.S., B-262
 Coat hook, double: Bobnck S.S., B-6727
 Soap dispenser: Bobnck S.S., B-2111
 Mirror: surface mount, S.S. channel frame 16" x 24", Bobnck #B-165 1624
 Water Heater: 240v 3.5 KW EEMAX SP35

13. Unit to have four interior anchor clips. Four 5/8" Hitc KB-TZ bolts (LARR 25701, ICC-ESR-1917) with 3 1/8" minimum embedment in 2500 psi concrete (or equal) are required for placement of booth. Concrete to be level. If sloped, slope towards drain opening(s) on booth. Concrete, bolts and mounting shall be by others. For a 3-1/8" embedment the foundation/slab design must be a minimum of 5" thick and be sized to allow for a minimum distance of 6-1/2" from the edge of the slab to the center line of the anchors for maximum strength.
14. All exposed steel surfaces except roof deck to be coated with two component high solids polyurethane rust inhibitive primer, and two component high solids polyurethane finish coat.
- 14a. Unit to be painted one color inside and out. Customer to provide paint color selection prior to the start of manufacturing.
- 14b. Roof to be fully weather sealed with a three step elastomeric membrane as follows:
 - A. All seams are sealed with a gun applied one part polyurethane sealant.
 - B. The entire roof deck is then coated with a liquid applied one-part polyurethane coating forming a tough waterproof, weather-resistant elastomeric coating.
 - C. The entire deck surface finished with a white heat reflective polyurethane coating. The coating meets Energy Star reflectance and emissivity performance requirements and is approved by the Cool Roof Rating Council (CRRC).

Job No: 9201 Job Name: Centerpoint Energy
 Booth Width in Inches: 96
 Booth Length in Inches: 180

A. Lighting Loads

Continuous Lighting Load	
120.0 ft ² x 3.5 VA / ft ² x 125% =	525.00
Actual Interior Lighting Load	
Total VA of all interior light fixtures =	117.00
Exterior Lighting Load	
0 VA x 0 Fixtures x 125% =	0.00
Larger of Continuous or Actual load + Exterior Load =	
	525.00

B. Receptacle Loads

Non-continuous Duty	
5 (No. of recept) x 180 VA =	900.00
Continuous Duty	
0 (No. of recept) x 180 VA x 125% =	0.00

C. Heating, A/C & Motor Loads

Larger of heating or A/C Load	
8884 VA x 125% =	11080.00
Motor Loads (Use VA rating on motor if provided)	
Continuous Motor Loads	
1 A x 120 V x 125% =	150.00
Non-Continuous Motor Loads	
0 A x 0 V =	0.00

D. Largest Motor Load

Largest motor load from C	
150 VA x 25% =	37.50

E. Additional Loads

Nameplate Loads for additional continuous loads provided with building x 125%	
0 VA x 125% =	0.00
Nameplate Loads for additional non-continuous loads provided with building	
3500 VA =	3500.00

F. Total Loads

Total VA	18193	1240 V =	67.47 Total Amps
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SHEET 8 OF 8

DSB150B-RR JOB 9201
 BY: LG
 DATE: 12-05-12
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CENTERPOINT ENERGY
 GUARD BOOTH

B.I.G. ENTERPRISES, INC.
 9702 E. RUSH STREET
 SOUTH EL MONTE, CA 91733-1730
 (626) 448-1449

BIG

OWNER
 HOUSTON AVIATION DEPT.
 16930 JOHN F. KENNEDY BLVD.
 HOUSTON, TX 77032
 (T) 713-622-1444
 (F) 713-968-9333

ARCHITECT
PGAL
 3131 BRIARPARK
 SUITE 200
 HOUSTON, TX 77042
 (T) 713 622 1444
 (F) 713 968 9333
 PGAL TBPE REG. NO. F-2742
 CONSULTANT

PROJECT TITLE
 HOUSTON AIRPORT SYSTEM
 GUARD BOOTH
 REPLACEMENT PROJECT
 HAS PN 727
 PROJECT NUMBER
 R1002447
 PROJECT LOCATION
 4103 N. TERMINAL RD.
 GUARD BOOTH NV-53
 HOUSTON, TX 77032
 DATE OF ISSUE
 AUGUST 11, 2014

REVISIONS

HOUSTON AIRPORT SYSTEM
 PDC DESIGN DIVISION

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REGISTERED ARCHITECT
 MICHAEL H. LLOYD
 STATE OF TEXAS

SHEET TITLE
 PROPOSED GUARD
 BOOTH SHEET 7 OF 7

SHEET NUMBER

HD FLOOR DRAIN WITH FUNNEL

EPOXY COATED CAST IRON BODY WITH BOTTOM OUTLET, COMBINATION AND ADJUSTABLE NICKEL BRONZE STRAINER, 5" ROUND TOP, 4" NICKEL BRONZE FUNNEL, TAPPED FOR TRAP PRIMER CONNECTION.

BASIS OF DESIGN

WATTS - FD-100-EF



PLUMBING SYMBOL LEGEND	PLUMBING ABBREVIATIONS	GENERAL NOTES
DOMESTIC COLD WATER DOMESTIC HOT WATER DOMESTIC HOT WATER RECIRCULATING GAS KITCHEN WASTE (GREASE) SANITARY PIPING SANITARY VENT ABOVE GROUND STORM OVERFLOW STORM DRAIN CONDENSATE DRAIN COMPRESSED AIR WATER METER HOSE BIBB OR WALL HYDRANT WITH VALVE IN RISER CLEAN OUT PLUG WALL CLEANOUT FLOOR CLEAN OUT FLOOR DRAIN ROOF DRAIN (ABOVE) FLOOR SINK SHUT-OFF VALVE IN VALVE BOX SHUTOFF VALVE BALL VALVE CALIBRATED BALANCING VALVE CHECK VALVE (SWING) PRESSURE REDUCING VALVE SOLENOID OPERATED VALVE REDUCED PRESSURE BACKFLOW PREVENTER RELIEF OR SAFETY VALVE GAS COCK GAS PRESSURE REGULATOR SHUTOFF VALVE ON RISER GAS COCK ON RISER CONNECTION, TOP CONNECTION, BOTTOM ELBOW, TURNED DOWN ELBOW, TURNED UP TEE, TURNED UP TEE, TURNED DOWN CAP DIRECTION OF FLOW COMPRESSED AIR PRESSURE REGULATOR 1/2" LINE TO PRIMER REVISION REFERENCE DETAIL REFERENCE: TOP-DETAIL#, BOTTOM-DRAWING# SHOWN ON	<p>AAV AIR ADMITTANCE VALVE AFF ABOVE FINISH FLOOR AW ACID WASTE AV ACID VENT CA COMPRESSED AIR CD CONDENSATE DRAIN CFH CUBIC FEET PER HOUR CO CLEANOUT CONT CONTINUATION CW DOMESTIC COLD WATER DN DOWN DS DOWNSPOUT DWG DRAWING EXIST EXISTING ESH EMERGENCY SHOWER/EYEWASH EWH ELECTRIC WATER HEATER EWC ELECTRIC WATER COOLER F DEGREE FAHRENHEIT FCO FLOOR CLEANOUT FD FLOOR DRAIN FS FLOOR SINK G GAS GPH GALLONS PER HOUR GPM GALLONS PER MINUTE GR KITCHEN WASTE (GREASE) HB HOSE BIBB HD HUB DRAIN HW DOMESTIC HOT WATER HWR DOMESTIC HOT WATER RECIRCULATING IE INVERT ELEVATION IW INDIRECT WASTE KW KILOWATT LBS POUNDS MH MANHOLE NC NORMALLY CLOSED NIC NOT IN CONTRACT NO NORMALLY OPEN NTS NOT TO SCALE OD OUTSIDE DIAMETER PEMB PRE-ENGINEERED METAL BUILDING PRV PRESSURE REDUCING VALVE PSI POUNDS PER SQUARE INCH PVC POLYVINYL CHLORIDE PIPE RD ROOF DRAIN RPPB REDUCED PRESSURE BACKFLOW PREVENTOR SAN SANITARY SD STORM DRAIN SF SQUARE FEET SH SHEET SS SERVICE SINK STO OVERFLOW STORM DRAIN V VENT VAC VACUUM VTR VENT THRU ROOF WCO WALL CLEANOUT WM WASHING MACHINE SUPPLY AND DRAIN BOX WTR WATER</p>	<ol style="list-style-type: none"> REFERENCE THE SPECIFICATIONS FOR MATERIAL AND EQUIPMENT INSTALLATION STANDARDS. THE PLUMBING INSTALLATION SHALL COMPLY WITH ALL STATE AND LOCAL CODES. PLANS ARE NOT COMPLETELY TO SCALE. PIPE ROUTING SHOWN IS SCHEMATIC AND IS NOT INTENDED TO INDICATE EXACT ROUTING. CONTRACTOR SHALL PROVIDE ANY ADDITIONAL OFFSETS AND FITTINGS REQUIRED FOR PROPER INSTALLATION AND TO MAINTAIN CLEARANCES. VERIFY STRUCTURAL, MECHANICAL AND ELECTRICAL INSTALLATIONS AND OTHER POTENTIAL OBSTRUCTIONS AND ROUTE PIPING TO AVOID INTERFERENCES. PROVIDE ALL OFFSETS AND FITTINGS AND MAKE CONNECTION TO SITE UTILITIES. CONCEAL PIPING ABOVE CEILINGS, WITHIN WALLS OR CHASES EXCEPT IN MECHANICAL ROOMS OR AS SPECIFICALLY NOTED. PROVIDE AN AIR GAP, WHEN REQUIRED BY CODE, SERVING INDIVIDUAL FIXTURES, DEVICES, APPLIANCES AND APPARATUS. PROVIDE CLEANOUTS IN ACCORDANCE WITH ALL STATE AND LOCAL CODES. INSTALL CLEANOUT WITH COVER FLUSH TO FINISH SURFACE. COORDINATE EXACT HUB DRAIN LOCATIONS WITH ARCHITECTURAL DRAWINGS. HUB DRAIN LOCATIONS TO BE COORDINATED WITH THE LOCATION OF THE GUARDBOOTH IN THE FIELD PRIOR TO ANY DEMOLITION. COORDINATE PIPING WITH ALL ELECTRICAL EQUIPMENT (PANELS, TRANSFORMERS, ETC.) PRIOR TO ANY INSTALLATION.

PLUMBING PIPING SCHEDULE					
TYPE/LOCATION	DOM. COLD WATER DISTRIBUTION	DOM. HOT WATER DISTRIBUTION	DRAIN, WASTE & VENT	STORM WATER	CONDENSATE WASTE
ABOVE GROUND	TYPE "L" COPPER	N/A	CAST IRON	N/A	PVC
BELOW GROUND	CPVC	N/A	CAST IRON	N/A	PVC
RETURN AIR PLENUM	N/A	N/A	N/A	N/A	TYPE "L" COPPER
AREA UNDERGROUND SUBJECT TO STRESS (THRU FOOTING)	STEEL	N/A	DUCTILE IRON	N/A	STEEL

NOTES:
 1. INSULATE THE FOLLOWING PIPING SYSTEMS WITH 1" THICK INSULATION:
 A. CONDENSATE WASTE PIPING.

DATE: 08/11/2014
 TIME: 10:00 AM
 USER: PIERCE
 PROJECT: HOUSTON AIRPORT SYSTEM
 SHEET: P0.07

HOUSTON AIRPORT SYSTEM
 GEORGE BUSH
 INTERCONTINENTAL AIRPORT
 HOUSTON TEXAS

OWNER
 HOUSTON AVIATION DEPT.
 16930 JOHN F. KENNEDY BLVD.
 HOUSTON TX, 77032
 [T] 713 622 1444
 [F] 713 968 9333

ARCHITECT
PGAL
 3131 BRIARPARK
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 HOUSTON, TX 77042
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PGAL TBPE REG. NO. F-2742
 CONSULTANT

VOLT AIR
 CONSULTING ENGINEERS
 Project No. 14006
 TEL 832.371.6181
 TX FIRM # F-14583

PROJECT TITLE
 HOUSTON AIRPORT SYSTEM
 GUARD BOOTH
 REPLACEMENT PROJECT
 HAS PN 727

PROJECT NUMBER
 R1002447

PROJECT LOCATION
 4103 N. TERMINAL ROAD
 HOUSTON, TX. 77032
 NV-53

DATE OF ISSUE
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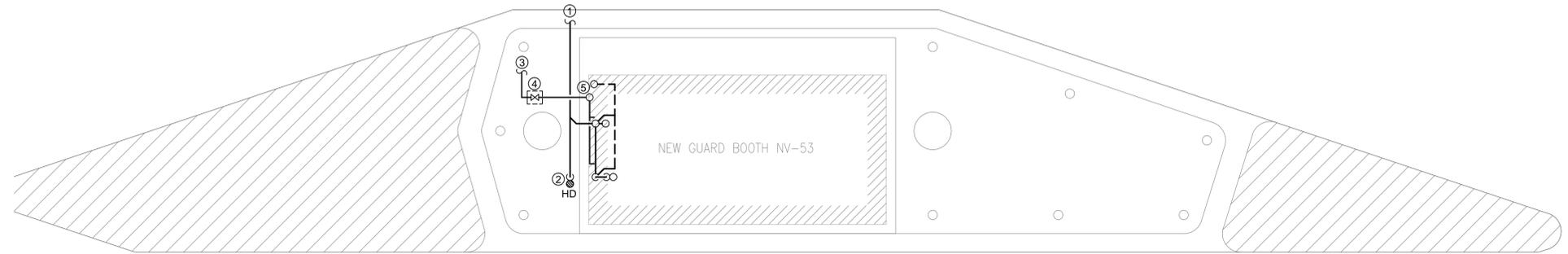
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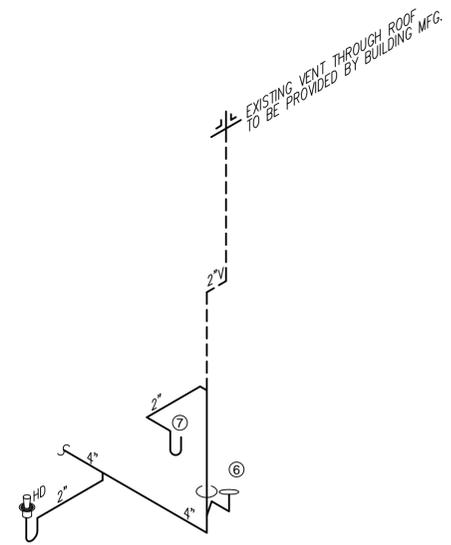
08/11/2014
 SHEET TITLE
 GUARD BOOTH NV-53
 PLUMBING LEGENDS
 AND SYMBOLS
 SHEET NUMBER
P0.07

Alexander | Atlanta | Austin | Boca Raton | Boston | Dallas | Houston | Las Vegas | Los Angeles | Mexico City | New Orleans | New York | Phoenix | Portland | Raleigh | San Antonio | San Diego | San Francisco | Seattle | Tampa | Washington DC

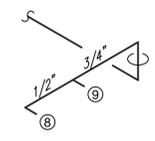
- # PLAN KEYED NOTES:**
- 4" SANITARY LINE REFER TO CIVIL PLANS FOR CONTINUATION.
 - NEW FUNNEL DRAIN AT THE SLAB AT THIS LOCATION. ROUTE NEW CONDENSATE DRAIN LINE FROM THE ROOF MOUNTED AIR CONDITIONING UNIT TO THE DRAIN AT THIS LOCATION. CONDENSATE LINE TO BE SIZED PER MANUFACTURER RECOMMENDATION. ALL EXPOSED CONDENSATE PIPING SHALL BE INSULATED WITH MINIMUM 3/4" ARMAFLEX INSULATION.
 - NEW 3/4" DOMESTIC WATER LINE TO THE PRE-MANUFACTURED BUILDING. REFER TO CIVIL DRAWINGS FOR CONTINUATION OF THE LINES.
 - PROVIDE A SHUT-OFF VALVE IN A VALVE BOX AT THIS LOCATION FOR ISOLATION OF THE WATER TO THE PRE-MANUFACTURED BUILDING AT THIS LOCATION.
 - COORDINATE EXACT LOCATION OF THE DOMESTIC WATER SERVICE ENTRANCE WITH THE APPROVED PRE-MANUFACTURED BUILDING SUPPLIER. ROUTE NEW WATER LINE UP INSIDE THE PLUMBING CHASE WALL THAT IS PROVIDED BY THE BOOTH MANUFACTURER. NEW WATER LINE SHALL CONNECT TO THE FLOOR MOUNTED TANK TYPE WATER CLOSET AND THE LAVATORY LOCATED WITHIN THE PRE-MANUFACTURED BUILDING. FIXTURES TO BE PROVIDED BY GUARD BOOTH MANUFACTURER. REFER TO ISOMETRIC PRESSURE RISER DIAGRAM FOR PIPE SIZING.
 - FLOOR MOUNTED TANK TYPE WATER CLOSET TO BE PROVIDED BY BOOTH MANUFACTURER ROUTE 4" SANITARY PIPING FROM THIS LOCATION.
 - WALL MOUNTED LAVATORY AT THIS LOCATION TO BE PROVIDED BY PRE-MANUFACTURED BUILDING SUPPLIER. ROUTE 2" SANITARY LINE IN WALL TO TIE INTO THE VENT RISER FROM THE WATER CLOSET. TIE VENT PIPING INTO EXISTING GUARD BOOTH MANUFACTURER VENT THROUGH ROOF.
 - PROVIDE 3/4" WATER LINE CONNECTION TO THE LAVATORY. REFER TO APPROVED PRE-MANUFACTURED BUILDING DRAWINGS FOR EXACT LOCATION OF THE FIXTURE.
 - PROVIDE 3/4" WATER LINE CONNECTION TO THE WATER CLOSET. REFER TO APPROVED PRE-MANUFACTURED BUILDING DRAWINGS FOR EXACT LOCATION OF THE FIXTURE.



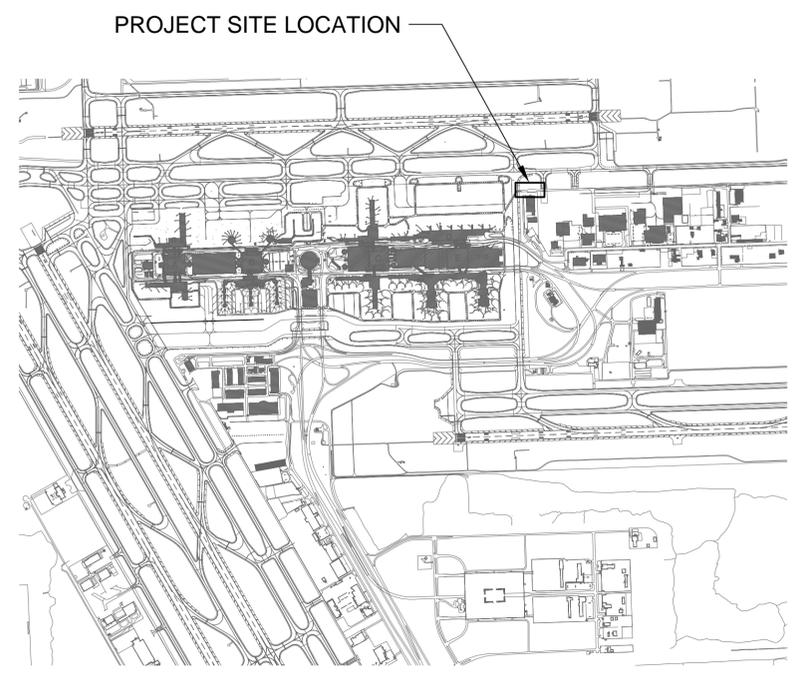
1 PLUMBING PLAN - GATE NV-53
 1/4"=1'-0"



3 SANITARY RISER PLAN
 N.T.S.



4 PRESSURE RISER PLAN
 N.T.S.



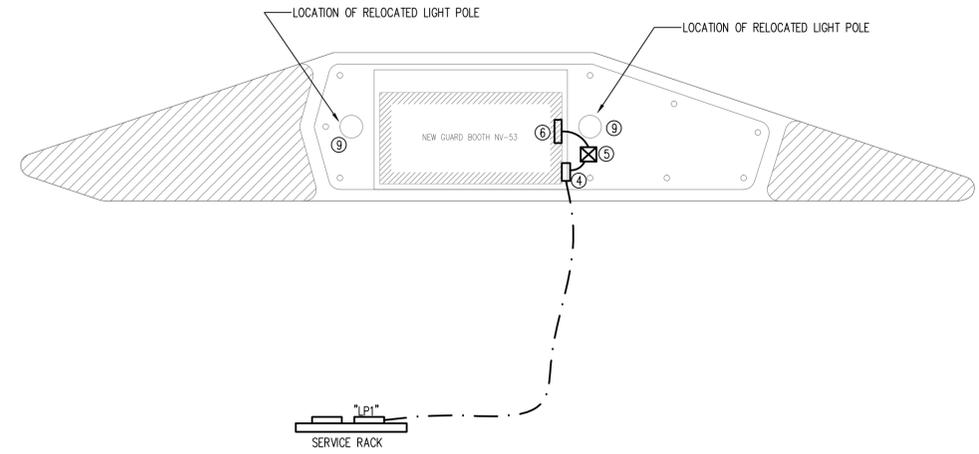
2 AIRPORT KEY PLAN
 NOT TO SCALE

DRAWN BY: JAV/AVT
 CHECKED BY: JAV/AVT
 DATE: 08/11/2014
 PROJECT: GUARD BOOTH REPLACEMENT PROJECT
 SHEET: P1.07

Alexander | Atlanta | Austin | Boca Raton | Boston | Dallas | Houston | Las Vegas | Los Angeles | Mexico City | New Orleans | New York | Phoenix | San Diego | San Francisco | Seattle | Tampa | Washington DC

Alexandria | Atlanta | Austin | Boca Raton | Boston | Dallas | Houston | Las Vegas | Los Angeles | Mexico City | New Orleans | New York | Phoenix | San Diego | San Francisco | Seattle | Tampa | Washington DC

ELECTRICAL SYMBOLS LEGEND	GENERAL NOTES
 GFCI-TYPE DUPLEX RECEPTACLE	1. #12 AWG NEUTRAL CONDUCTOR ALTHOUGH NOT INDICATED SHALL BE INCLUDED FOR EACH BRANCH CIRCUIT UNLESS OTHERWISE NOTED.
 DISCONNECT SWITCH, SHOWN SIZE - 2-POLE, 60 AMP, FUSED AT 50 AMP. NF = NON-FUSED 3R = NEMA 3R ENCLOSURE	2. #12 AWG GREEN GROUND CONDUCTOR, ALTHOUGH NOT INDICATED SHALL BE INCLUDED IN EACH RACEWAY UNLESS OTHERWISE NOTED.
 UNDERGROUND ELECTRICAL CONDUIT	3. HOME RUNS TO PANEL BOARDS SHALL HAVE A MAXIMUM OF THREE (3) PHASE CONDUCTORS (ONE PER PHASE) PLUS DEDICATED NEUTRAL FOR EACH PHASE CONDUCTOR AND GROUND CONDUCTOR IN EACH CONDUIT.
 TRANSFORMER	



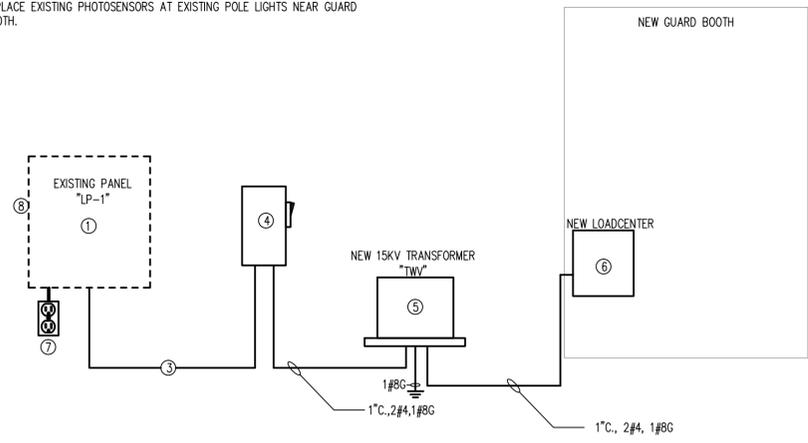
2 POWER PLAN - GATE NV-53
 3/16"=1'-0"

PLAN KEYED NOTES:

- IN PANEL "LP-1" AT EXISTING SERVICE RACK. REMOVE EXISTING 50A/2P BREAKER SERVING GUARD SHACK AND REPLACE WITH NEW 80A/2P BREAKER.
- NOT USED.
- ROUTE 2#4,1#6G, IN NEW UNDERGROUND 1"CONDUIT FROM NEW 80A BREAKER, TO NEW DISCONNECT SERVING NEW GUARD BOOTH. SAW CUT EXISTING GRADE TO ROUTE NEW CONDUIT. PROVIDE NEW PAVEMENT AND CEMENT TO COVER NEW CONDUIT ROUTE.
- PROVIDE NEW WEATHERPROOF 100A/2P DISCONNECT TO SERVE TRANSFORMER SERVING NEW GUARD BOOTH. PROVIDE MOUNTING EQUIPMENT SUCH AS UNISTRUT, NECESSARY FOR PROPER MOUNTING ON OR NEAR GUARD BOOTH.
- PROVIDE NEW 15KVA WEATHERPROOF(208V PRIMARY TO 120/240V 1# SECONDARY) TRANSFORMER TO SERVE NEW GUARD BOOTH.
- LOAD CENTER, PROVIDED BY BOOTH MANUFACTURER. CONNECT WIRING AND CONDUIT TO PANEL. LOAD CENTER SHALL BE PROVIDED WITH 70AMP MAIN BREAKER.
- REINSTALL 120V WEATHERPROOF RECEPTACLE IN EXISTING SPACE.
- PROVIDE NEW 120V 20A/1P CIRCUIT BREAKER TO SERVE TELECOMMUNICATION BOX.
- RELOCATE EXISTING LIGHT POLES TO NEW LOCATION SHOWN. EXTEND CONDUIT AND WIRING AS REQUIRED. PROVIDE NEW CONCRETE FOUNDATION AS REQUIRED. REPLACE EXISTING PHOTOSENSORS AT EXISTING POLE LIGHTS NEAR GUARD BOOTH.

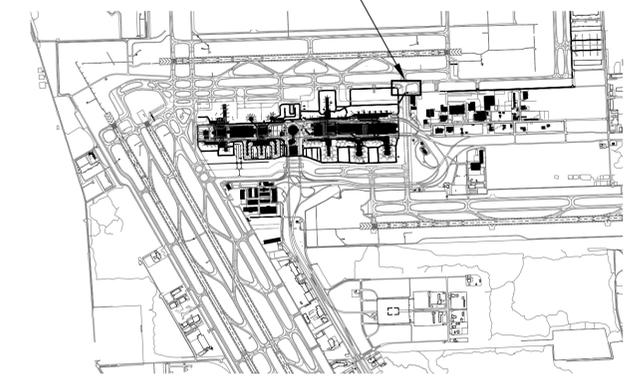
ELECTRICAL LOAD ANALYSIS:

EXISTING SERVICE TO GUARD BOOTH TO BE REMOVED:	= 7.0 KW @ 120/240V., 1#
PROPOSED NEW SERVICE TO NEW GUARD BOOTH:	= 14.6 KW @ 120/240V., 1#
LIGHTING LOADS =	117W x 1.25 = 146.25
RECEPTACLE LOADS =	5x180 = 900
HEATING, A/C LOADS =	8000 x 1.25 = 10000
MOTOR LOADS =	150 x 25% = 37.50
MISC. LOADS =	3500
TOTAL:	= 14583 WATTS
TOTAL DIFFERENCE:	= 14.6 KW @ 120/240V., 1#



1 ONE LINE RISER DIAGRAM - GATE NV13
 NOT TO SCALE

PROJECT SITE LOCATION



DATE PLOTTED: 8/11/14 10:53 AM
 PLOT BY: JLD
 PLOT DATE: 8/11/14 10:53 AM
 PLOT TIME: 10:53 AM
 PLOT DEVICE: HP DesignJet T1100e

TELECOMMUNICATIONS SYMBOLS LIST

SYMBOLS	DESCRIPTION
	FIBER OPTIC PATCH PANEL
	FIBER OPTIC TRANSMITTER
	FIBER OPTIC RECEIVER
	JUNCTION BOX
	COPPER PATCH PANEL
	KEYBOARD, VIDEO, MOUSE COUNSEL. (MIN 4 CHANNEL)
	MAINTENANCE HOLE
	GATE OPEN START CONTACT
	NETWORK SWITCH (OWNER)
	NETWORK SWITCH (TENANT)
	NETWORK PRINTER
	PULL BOX, SUBSURFACE, TRAFFIC RATED, 18"X18"X18" MINIMUM
	OSP COPPER PROJECTOR
	RELAY RACK, 19" X 72"
	WORKSTATION
	X-CAT6 SURFACE MOUNT TERMINATION JACK WHERE X REPRESENTS QUANTITY OF CAT6 CABLES. FIELD COORDINATE EXACT PLACEMENT WITH OTHER TRADE.
	4-CAT6 WITH 4-PORT WALL PLATE, 15" A.F.F.
	TV OUTLET (1 RG-6 CABLE)
	TELECOMMUNICATIONS DISTRIBUTION NODE
	1 CAT 6 WITH PLATE FOR WALL MOUNTED PHONE, 45"A.F.F.
	DURESS BUTTON
	3 CAT 6 CABLE USED (FLOOR OUTLET)
	2 CAT 6 CABLE - IN CEILING WIRELESS ACCESS POINT
	HAND HOLE
	ALL WEATHER OUTDOOR PHONE, 1 CAT 6
	CONDUIT TURNING UP
	CONDUIT TURNING DOWN
	ACCESS POINT, RUGGEDIZED 2 CAT-6
	NEW CONDUIT ABOVE GROUND
	NEW CONDUIT UNDERGROUND
	EXISTING CONDUIT

ABBREVIATIONS

AP	ACCESS POINT, WIFI 802.11
CT	CONDUIT
(E)	EXISTING
GC	GENERAL CONTRACTOR
HAS	HOUSTON AIRPORT SYSTEM
IFP	INTELLIGENT FIELD PANEL
LEC	LOCAL EXCHANGE CARRIER
MMF	MULTIMODE FIBER
(N)	NEW
NIC	NOT IN CONTRACT
PR	PAIR
R	RADIUS
SMF	SINGLE MODE FIBER
STP	SHIELDED TWISTED PAIR, 22 AWG
UTP	UNSHIELDED TWISTED PAIR

GENERAL NOTES

- FOLLOW HOUSTON AIRPORT SYSTEM TELECOM STANDARDS AND PRACTICES. SEE DIVISION 27 SPECIFICATIONS AND T DRAWINGS.
- REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER (RCDD) SUPERVISOR SHALL REVIEW, APPROVE AND STAMP ALL SHOP DRAWINGS. COORDINATE DRAWINGS AND RECORD DRAWINGS.
- ALL WALL PENETRATIONS SHALL BE SEALED WITH APPROVED FIRE STOPPING.
- REFER TO THE ELECTRICAL FLOOR PLAN DRAWINGS FOR ADDITIONAL ROUGH-IN REQUIREMENTS. WHERE THERE ARE DRAWING DISCREPANCIES, THE CONTRACTOR SHALL INSTALL THE GREATER QUANTITY OF DEVICES.
- ALL COMMUNICATIONS EQUIPMENT SHOWN SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR UNLESS NOTED OTHERWISE.
- BOND ALL COMMUNICATIONS CABINETS, RELAY RACKS, CABLE TRAYS, AND OTHER METALLIC SUPPORTING DEVICES TO TELECOMMUNICATIONS GROUND BUSBAR INSIDE COMMUNICATIONS ROOM. BOND WITH A #6 GROUND CONDUCTOR.
- ALL HORIZONTAL VOICE AND DATA CABLES SHALL BE DISTRIBUTED VIA (1") CONDUIT AND/OR CABLE TRAY. NO EXCEPTIONS.
- SINGLE LINE DIAGRAMS, SCHEMATICS, DETAILS AND CONDUIT PATHS SHOWN HEREIN ARE CONCEPTUAL AND ILLUSTRATE ONLY THE FUNCTIONAL RELATIONSHIPS BETWEEN COMPONENTS OF THE SYSTEM. ACCORDINGLY, FULL SHOP DRAWING DEVELOPMENT IS REQUIRED TO REALIZE THE SPECIFIED FUNCTIONS.
- DEVICE LOCATIONS ON PLANS ARE CONCEPTUAL. LOCATE AS SITE CONDITIONS REQUIRE AND AS APPROVED BY GC.
- REFER TO THE BID SPECIFICATION FOR ADDITIONAL REQUIREMENTS REGARDING THIS WORK.
- PAINTING, PATCHING AND FINISHES FOR DEVICES LOCATED IN EXISTING AREAS SHALL MATCH EXISTING FINISHES AS APPROVED BY GC.
- FINISHES OF DEVICES IN NEW/REMODEL AREAS SHALL BE APPROVED BY GC.
- WORK AND MATERIALS SHALL CONFORM TO THE MOST CURRENT UNIFORM STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION AS FURNISHED BY GC. WORK AND MATERIALS NOT IN CONFORMANCE WITH THESE SPECIFICATIONS AND DETAILS ARE SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
- WALL PHONE (BASIC BUTTONS)
- DESK PHONE (MULTI BUTTONS)
- OUTSIDE WALL PHONE (NO BUTTONS)
- CONTRACTOR INSTALLING THE CABLING INFRASTRUCTURE SHALL BE CERTIFIED & CURRENTLY A REGISTERED COMMSCOPE/SYSTEMAX PREMIER OR SELECT BUSINESS PARTNER CAPABLE OF ISSUING A NUMBERED REGISTRATION CERTIFICATE FOR ENTIRE CABLE SYSTEM.
- FOLLOW AND COMPLY WITH HOUSTON AIRPORT SYSTEMS ACCESS CONTROL STANDARDS & PRACTICES. REFER TO DIVISION 281300 SPECIFICATIONS FOR THE DURESS ALARMS AND COMPOSITE SECURITY CABLES.

DRAWING INDEX

SHEET NO.	DESCRIPTION
T0.00A	TELECOMMUNICATIONS INDEX, LEGEND AND NOTES
T0.00B	SECURITY LEGEND AND NOTES
T0.01	ONE LINE DIAGRAM, CARD READER, ALARM AND CAMERA SCHEDULES
T2.01	ENLARGED PLAN @ GATE NV53
T3.01	TDN DETAIL & SCHEDULE AND ACCESS CONTROL WIRING DIAGRAM
T3.02	TYPICAL CAMERA MOUNTING AND PEDESTAL DETAILS
T3.03	TELECOMMUNICATIONS DETAILS



HOUSTON AIRPORT SYSTEM
 GEORGE BUSH
 INTERCONTINENTAL AIRPORT
 HOUSTON TEXAS
 OWNER
 HOUSTON AVIATION DEPT.
 16930 JOHN F. KENNEDY BLVD.
 HOUSTON, TX 77032
 [T] 713-622-1444
 [F] 713-968-9333

ARCHITECT

 3131 BRIARPARK
 SUITE 200
 HOUSTON, TX 77042
 [T] 713 622 1444
 [F] 713 968 9333
 PGAL TBPE REG. NO. F-2742
 CONSULTANT


 ENGINEERS, INC
 13201 Northwest Freeway, Ste. 800
 Houston, TX 77040
 713.586.5544
 pgaengineers.com
 TBPE FIRM #12493

PROJECT TITLE
 HOUSTON AIRPORT SYSTEM
 GUARD BOOTH
 REPLACEMENT PROJECT
 HAS PN 727
 PROJECT NUMBER
 R1002447
 PROJECT LOCATION
 4103 N. TERMINAL RD.
 GUARD BOOTH NV-53
 HOUSTON, TX 77032
 DATE OF ISSUE
 AUGUST 11, 2014
 REVISIONS

HOUSTON AIRPORT SYSTEM
 PDC DESIGN DIVISION
 REGISTRATION
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REGISTRATION
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 JOHN GRUNWALD
 LICENSED PROFESSIONAL ENGINEER
 8-11-14

SHEET TITLE
 TELECOMMUNICATIONS
 INDEX, LEGEND & NOTES
 SHEET NUMBER

T0.00A

DATE: 8/11/14
 TIME: 10:00 AM
 PROJECT: HOUSTON AIRPORT SYSTEM
 SHEET: T0.00A (INDEX)

Austin | Atlanta | Dallas | Houston | Las Vegas | Los Angeles | Mexico City | New Orleans | Phoenix | San Antonio | San Diego | Seattle | Tampa | Washington DC
 Pierce Goodwin Alexander & Linville

GENERAL NOTES

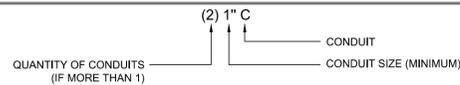
- THE FOLLOWING GENERAL NOTES ARE APPLICABLE AS STATED BELOW, EXCEPT WHERE SPECIFICALLY INDICATED OTHERWISE, ON THE DRAWINGS OR IN THE BID SPECIFICATION.
- SINGLE LINE DIAGRAMS, SCHEMATICS, DETAILS AND CONDUIT PATHS SHOWN HEREIN ARE CONCEPTUAL AND ILLUSTRATE ONLY THE FUNCTIONAL RELATIONSHIPS BETWEEN COMPONENTS OF THE SYSTEM. ACCORDINGLY, FULL SHOP DRAWING DEVELOPMENT IS REQUIRED TO REALIZE THE SPECIFIED FUNCTIONS.
- DEVICE LOCATIONS ON PLANS ARE CONCEPTUAL. LOCATE AS SITE CONDITIONS REQUIRE AND AS APPROVED BY THE OWNER.
- REFER TO THE BID SPECIFICATION AND DIV 28 FOR ADDITIONAL REQUIREMENTS REGARDING THIS WORK.
- INSTALL WALL MOUNTED CARD READERS, PUSH BUTTON SWITCHES, KEYPADS, KEY SWITCHES AND OTHER WALL MOUNTED FIELD DEVICES, AT 48 INCHES MAXIMUM ABOVE FINISHED FLOOR, UNLESS OTHERWISE NOTED. MOUNTING HEIGHT SHALL COMPLY WITH TEXAS ACCESSIBILITY STANDARD (TAS).
- PROVIDE PAINTING, PATCHING AND FINISHES, OF MATERIALS AND DEVICES, AS APPROVED BY THE OWNER.
- DOOR DETAILS ILLUSTRATE FUNCTIONAL RELATIONSHIPS. ACTUAL ARCHITECTURAL CONDITIONS (SUCH AS DIRECTION OF SWING AND HAND OF DOOR) MAY VARY.
- WORK AND MATERIALS TO CONFORM TO THE MOST CURRENT UNIFORM STANDARD SPECIFICATIONS, ASSOCIATED CODES REFERENCED BY THE (AHJ) AUTHORITY HAVING JURISDICTION, AND DETAILS FOR CONSTRUCTION, AS FURNISHED BY THE OWNER. WORK AND MATERIALS, NOT IN CONFORMANCE WITH PROJECT SPECIFICATIONS AND DETAILS, ARE SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
- FOR INFORMATION REGARDING FIRE RATINGS AND OCCUPANCY SEPARATIONS, REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS.
- NEW CONDUIT CONNECTIONS TO INCLUDE INTEGRAL PROTECTIVE BUSHINGS OR CHASE NIPPLES.
- NEW CONDUIT FOR FUTURE USE TO BE FILLED WITH 200 POUND STRENGTH PULL LINE. PROVIDE LABELING ON EACH END OF THE PULL LINE TO INDICATE LOCATION OF OTHER END.
- NEW CONDUITS SHALL BE CONCEALED WHENEVER POSSIBLE. SURFACE MOUNTED CONDUITS ARE PERMISSIBLE ONLY WHERE APPROVED. USE ONLY CONCEALED CONDUITS WITHIN FINISHED SPACES. THE ABOVE STANDARDS ALSO APPLY TO EXTERIOR SPACES. SEEK APPROVAL FROM THE OWNER FOR EACH AREA WHERE SURFACE CONDUIT IS NECESSARY.
- JUNCTION BOXES SHALL BE MINIMUM 4 INCH SQUARE DEEP STYLE, SIZED AS REQUIRED TO ACCOMMODATE CONDUITS UNLESS OTHERWISE NOTED. PROVIDE MOUNTING RING AS REQUIRED. PROVIDE A BLANK COVER PLATE FOR JUNCTION BOXES AND PULL BOXES WITH NO DEVICE.
- EXPOSED BOXES AND PANELS, MOUNTED IN OR ON EXTERIOR WALLS, TO BE NEMA 4.
- NEW CONDUIT TO BE 1" EMT MINIMUM, UNLESS OTHERWISE NOTED. EXTERIOR CONDUIT TO BE RIGID.
- USE 120VAC CIRCUITS UNLESS OTHERWISE NOTED. VERIFY CURRENT LOAD ON EXISTING CIRCUITS BEFORE CONNECTING NEW LOADS. COORDINATE WITH OWNER IF ADDITIONAL CIRCUITS ARE REQUIRED.
- CONTRACTOR TO VERIFY CONDUIT AND PLENUM CABLE PATHS INDICATED ON THE DRAWINGS. CONTRACTOR MAY PROPOSE ALTERNATE ROUTING WHERE CONFLICTS ARE FOUND.
- CONTRACTOR IS RESPONSIBLE FOR CEILING INTEGRITY, THIS INCLUDES ROUTING ABOVE CONCEALED SPLINE INTERLOCKING TILES.
- CONTRACTOR TO OBTAIN RECERTIFICATION FOR FIRE RATED DOOR FRAME AND DOOR MODIFIED BY THIS PROJECT.
- ACCESS CONTROL LOW VOLTAGE WIRING TO BE PLENUM RATED.
- DO NOT EXCEED 180° IN AGGREGATE CONDUIT BENDS WITHOUT PULLBOX.
- PROVIDE GROUND BUSHING ON ALL CONDUIT END IN EQUIPMENT ROOM. BOND TO APPROVED BUILDING GROUND.
- LABEL CONDUIT EVERY 50' WITH DEVICE ID & EQUIPMENT ROOM ID WITH PERMANENT INK CABLE MADE WITH LASER CABLE MAKER. SECURE TO CONDUIT WITH CLEAR TAPE.
- ALL WALL AND FLOOR PENETRATIONS SHALL BE SEALED WITH APPROVED FIRE STOP.
- ALL CABLES SHALL BE IN CONDUIT ABOVE DROP CEILING SHALL BE INSTALLED IN MIN. 1" J-HOOK EVERY 5'-8". DO NOT EXCEED 40% FILL.
- LABEL CABLE NOT IN CONDUIT EVERY 50' WITH DEVICE ID & EQUIPMENT ROOM ID. USE PERMANENT INK LABEL MAKER. SECURE TO CABLE WITH CLEAR TAPE.
- LOCATE DEVICES AS SITE CONDITIONS REQUIRE.
- FIELD VERIFY ALL DIMENSIONS.
- REFER TO THE SPECIFICATION FOR ADDITIONAL REQUIREMENTS REGARDING THIS WORK. CONTRACTOR TO PREPARE PROPOSAL FOR EACH DISCIPLINE. PROVIDE COORDINATION BETWEEN DISCIPLINES FOR CONSTRUCTION.
- NOTIFY DESIGN CONSULTANT AND OWNER WHERE EXISTING CONDITIONS REQUIRE REPAIR PRIOR TO INSTALLATION.
- COORDINATE ALL WORK WITH GENERAL CONTRACTOR.
- ALL CABLE PULLS WITHIN EXISTING AND NEW CONDUITS TO BE MADE AT SAME TIME.
- DEFINITION: BY DIVISION 8 - EQUIPMENT PROVIDED AND INSTALLED BY DIVISION 8 CONTRACTOR.
- DEFINITION: BY DIVISION 26 - EQUIPMENT PROVIDED AND INSTALLED BY DIVISION 26 CONTRACTOR.
- DEFINITION: BY DIVISION 27 - EQUIPMENT PROVIDED AND INSTALLED BY DIVISION 27 CONTRACTOR.

SECURITY CABLE DESIGNATION/TYPE *

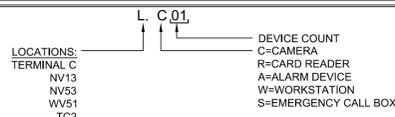
DESIGNATION	DESCRIPTION	USAGE	PART #
A	1 PAIR 22AWG SHIELDED	ALARM MONITORING	BELDEN 5500FE
B	2 PAIR 20AWG SHIELDED	MOTION DETECTOR, BEAM DETECTORS	BELDEN 5441FE
C	3 PAIR 22AWG SHIELDED	CARD READER	BELDEN 5542FE
D	2/C 18AWG	CAMERA PWR, PUSH BUTTON, LOCK PWR	BELDEN 5300UE
E	2 PAIR 22AWG SHIELDED	DATA, CCVS PTZ CONTROL	BELDEN 5541FE
F	2/C 18AWG SHIELDED	HORN	BELDEN 5300FE
G	COAXIAL W/2C POWER	VIDEO	
H	1 PAIR 20AWG TWISTED	INTERCOM	BELDEN 5400FE
J	1 PAIR TWISTED SH 18AWG PLUS 2/C 18AWG	EMERGENCY PHONE	BELDEN 5302GE
K	ENHANCED CAT-5E BONDED-PAIR UTP	NETWORK AND CAMERA	BELDEN 7851A
L	ACCESS CONTROL COMPOSITE CABLE, 4C 18AWG, 3PR 22 AWG, 4C 22 AWG	LOCK PWR, CR, DOOR CONTACT, REX, 1 SPARE YELLOW JACKET	WSECOMP2835
M	CCTV COMPOSITE CABLE 2C 18AWG, UNSHIELDED, CABLE ETHERNET (PLENUM), R659 (PLENUM)	CAM PWR, UTP/IP VIDEO ANALOG VIDEO CONNECT K112	WSECOMP-2817

* THIS TABLE IS REFERENCED AND IS SHOWN AS AN EXAMPLE OF ACCEPTABLE CABLE DESIGNATIONS. CONTRACTOR SHALL UTILIZE CABLE DESIGNATION TABLE FOR SHOP DRAWING AND RECORD DRAWING SUBMITTALS.

CONDUIT DESIGNATION KEY



DEVICE DESIGNATION KEY



ABBREVIATION

A	AMPERE	NTS	NOT TO SCALE
AC	ALTERNATING CURRENT POWER CONNECTION	NVR	NETWORK VIDEO RECORDER
A.F.C.	ABOVE FINISHED CEILING	NWS	NETWORK SWITCH
A.F.F.	ABOVE FINISHED FLOOR	OPP	OPPOSITE
A.F.G.	ABOVE FINISHED GRADE	OTDR	OPTICAL TIME DOMAIN REFLECTOMETER
AMP	AMPERE	P	POLE
AP	ACCESS POINT	PH	PHASE
B.F.C.	BELOW FINISHED CEILING	PB	PULL BOX
B.F.G.	BELOW FINISHED GRADE	PBX	PRIVATE BRANCH EXCHANGE (IN-HOUSE TELEPHONE SWITCH)
C.	CONDUIT	PED	PEDESTAL
CCVS	CLOSED CIRCUIT VIDEO SURVEILLANCE	PoE	POWER OVER ETHERNET
C.U.	CENTRAL OFFICE TELEPHONE LINE	Q	QUANTITY
CPS	CAMERA POWER SUPPLY	R	READER
CPU	CENTRAL PROCESSING UNIT	REQ'D	REQUIRED
CR	CARD READER	REX	REQUEST-TO-EXIT
DA	DURESS (PERSONAL ASSIST) SWITCH	RF	REFER TO
DPS	DOOR POSITION SWITCH	RX	RECEIVE / RECEIVER
(E)	EXISTING	SAN	STORAGE AREA NETWORK
EC	ELECTRICAL CONTRACTOR	SIM	SIMILAR
ELVC	ELEVATOR CONTRACTOR	SM	SINGLE MODE
EXT	EXTERNAL	SPB	SECURITY PULLBOX
EW	EACH WAY	STC	SECURITY TERMINAL CABINET
F	FUTURE	TGB	TERMINAL GROUND BUSBAR
FOPP	FIBER OPTIC PATCH PANEL	TS	TURNSTILE
GA	GATE ARM	TYP	TYPICAL
GC	GENERAL CONTRACTOR	TX	TRANSMIT / TRANSMITTER
GND	GROUND	UON	UNLESS OTHERWISE NOTED
GPS	GLOBAL POSITIONING SYSTEM	V	VOLT
GRC	GALVANIZED RIGID CONDUIT	VA	VOLT-AMPERE
HAS	HOUSTON AIRPORT SYSTEMS	VAC	VOLTS ALTERNATING CURRENT
HD	HIGH DEFINITION	VDC	VOLTS DIRECT CURRENT
HOU	WILLIAM P. HOBBY AIRPORT	VLAN	SECURITY LOCAL AREA NETWORK
IC	INTERCOM FIELD STATION	VMS	VIDEO MANAGEMENT SYSTEM
IDS	INTERCOM SYSTEM	VS	VIDEO SYSTEM
ID	IDENTIFICATION	WAN	WIDE AREA NETWORK
J	JUNCTION	W	WITH
KVA	KILO VOLT - AMPERE	WO	WITHOUT
LAN	LOCAL AREA NETWORK	WP	WEATHER PROOF
LPS	LOW VOLTAGE POWER SUPPLY	WS	WORKSTATION
LRDN	LONG RANGE DAY/NIGHT	XFMR	TRANSFORMER
MC	MOBILITY CONTROLLER	(N)	NEW
MD	MOTION DETECTOR	(R)	EXISTING, TO BE REMOVED AND REPLACED, AS SPECIFIED
MFG	MANUFACTURER	(U)	UPGRADE
MM	MULTIMODE	(X)	EXISTING, TO BE REMOVED
N/A	NOT APPLICABLE	(SL)	SLIDING GATE
NC	NORMALLY CLOSED	360	360 CAMERA
NO	NORMALLY OPEN	-C	CEILING MOUNTED
N.I.C.	NOT IN CONTRACT	-P	POLE MOUNTED

CCVS SYSTEM NOTES

- ALL OUTDOOR CAMERAS, TERMINATION BOXES, AND PULLBOXES SHALL BE INSTALLED WITH WEATHER RESISTANT HARDWARE.
- PROVIDE ALL INTEGRATION WITH ALARM ACCESS CONTROL SYSTEM COMPONENTS.
- PROVIDE ALL COORDINATION WITH OTHER DISCIPLINES FOR INSTALLATION OF EQUIPMENT.
- COORDINATE ALL SITE WORK WITH OWNER'S REP.
- DRAWINGS INDICATE CAMERA 'HOME POSITIONS'. VERIFY FIELD OF VIEW WITH HOUSTON AIRPORT SYSTEM (HAS) REPRESENTATIVE AND DESIGN CONSULTANT DURING INSTALLATION. SUBSTITUTION OF LENS TYPE & SIZE TO ACCOMPLISH INTENDED FIELD OF VIEW SHALL BE AT NO ADDITIONAL COST.
- CAMERAS MAY INCLUDE MULTIPLE TRANSMISSION METHODS. VERIFY EACH CAMERA PRIOR TO INSTALLATION.
- FIELD VERIFY ALL CAMERA LOCATIONS PRIOR TO INSTALLATION. CAMERA MAY BE RELOCATED WITHIN 25' OF LOCATION SHOWN ON FLOOR PLANS WITHOUT ADDITIONAL COST.

CAMERA SERVER AND DIGITAL STORAGE NOTES

- CAMERA SERVERS AND DIGITAL STORAGE FOR THIS PROJECT ARE EXISTING AND NOT REQUIRED.
- THE EXISTING CAMERA SERVERS AND DIGITAL STORAGE ARE LOCATED AT THE HAS ADMIN MDF & TERMINAL C MDF. THEY ARE REDUNDANT.
- PROVIDE HONEYWELL MAXPRO CAMERA LICENSING AS REQUIRED AT THE HAS ADMIN MDF & TERMINAL C MDF TO SUPPORT ALL HAS CAMERAS INSTALLED AS PART OF THIS PROJECT.

ACS SYSTEM NOTES

- ALL OUTDOOR MOUNTED CARD READERS SHALL BE INSTALLED WITH WEATHER RESISTANT AND TAMPER PROOF HARDWARE.
- CARD READER PEDESTALS SHALL BE SIZED FOR VOICE COMMUNICATIONS.
- PROVIDE ALL INTEGRATION WITH CLOSED CIRCUIT VIDEO SURVEILLANCE COMPONENTS.
- PROVIDE ALL COORDINATION WITH OTHER DISCIPLINES FOR INSTALLATION OF EQUIPMENT.
- COORDINATE ALL SITE WORK WITH OWNERS REP.
- PROVIDE ACCESS CONTROL LICENSES AS REQUIRED PART OF THIS PROJECT.

SECURITY EQUIPMENT SYMBOLS LIST

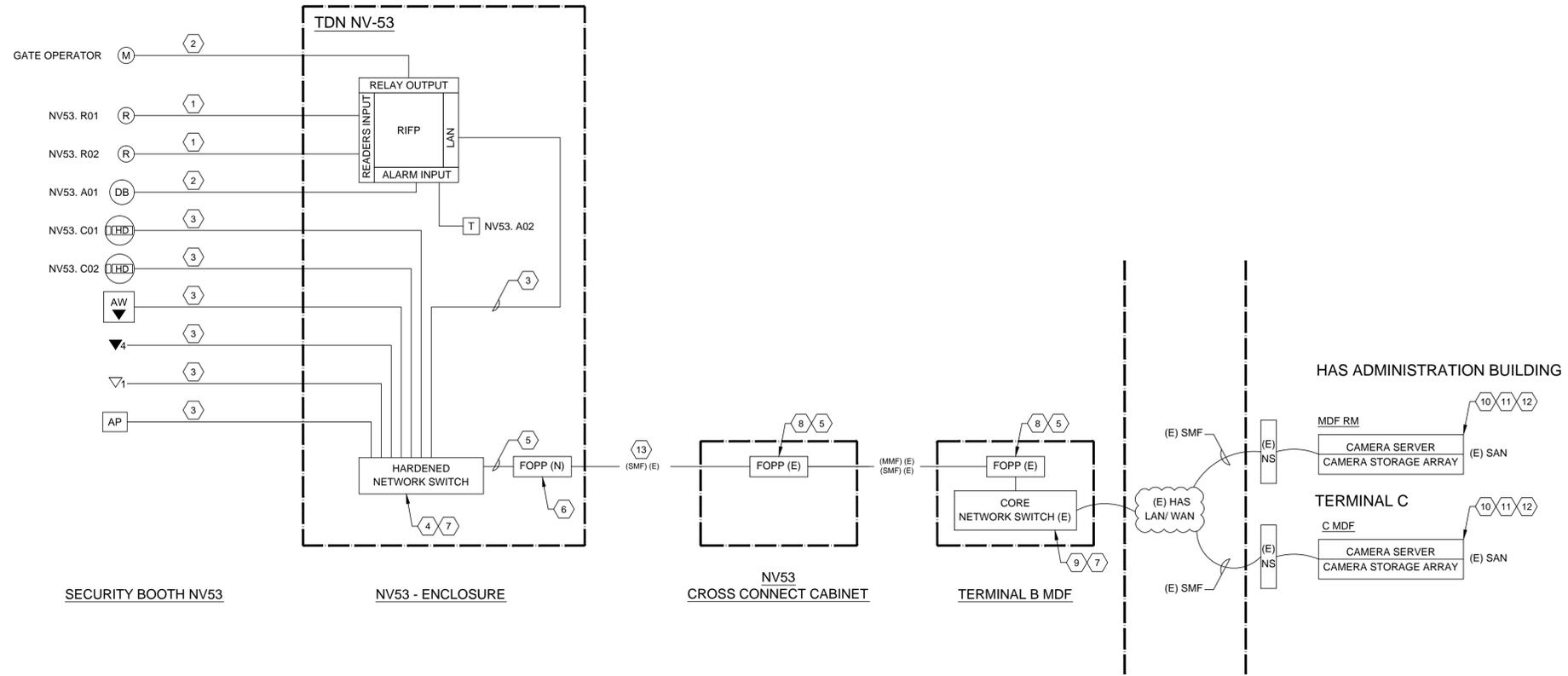
SYMBOL	DESCRIPTION
	EMERGENCY CALL BOX (VOIP) W/ IP CAMERA
	360 IP CAMERA
	FIXED HD IP CAMERA
	PTZ HD IP CAMERA
	CAMERA POWER SUPPLY
	DOOR POSITION SWITCH (FLUSH MOUNT)
	DOOR POSITION SWITCH (SURFACE MOUNT)
	DOOR POSITION SWITCH (ROLL UP DOOR)
	ELECTRIC MORTISE LOCK W/ REX SWITCH (FAIL SECURE)
	ELECTRIC PANIC BAR W/ REX SWITCH
	PANIC BAR W/ ELECTRIC LATCH RETRACTION & REX SWITCH
	FIBER OPTIC PATCH PANEL
	FIBER OPTIC RECEIVER
	FIBER OPTIC TRANSMITTER
	INTELLIGENT FIELD PANEL
	JUNCTION BOX ("#" DENOTES NUMBER)
	LOCK POWER SUPPLY
	REQUEST -TO- EXIT MOTION SENSOR
	NETWORK SWITCH
	POWER OVER ETHERNET
	POWER OVER ETHERNET (PoE EXTENDER)
	CARD READER
	REMOTE INTELLIGENT FIELD PANEL
	TAMPER SWITCH
	TELECOMMUNICATION DISTRIBUTION NODE
	REFER TO NOTE SCHEDULE ON SHEET AS INDICATED
	120 VAC POWER CIRCUIT
	REFER TO DETAIL AND SHEET AS INDICATED
	REFER TO ELEVATION DETAIL AND SHEET AS INDICATED
	HORIZONTAL CAMERA FIELD OF VIEW - 90°
	HORIZONTAL CAMERA FIELD OF VIEW - 60°

DATE



DATE: 11/11/14
 TIME: 10:00 AM
 USER: JGruenwald
 PROJECT: HOUSTON AIRPORT SYSTEM
 SHEET: T0.00B

Alexandria | Atlanta | Austin | Boca Raton | Boston | Dallas | Houston | Las Vegas | Los Angeles | Mexico City | New Orleans | New York | Phoenix | San Diego | San Francisco | Seattle | Tampa | Washington DC



ONE LINE DIAGRAM - NV53 NTS 1

- KEY NOTES:**
- 1 PROVIDE ACCESS CONTROL COMPOSITE CABLE(S) (REFERENCE SPECIFICATION SECTION 281300 FOR COMPOSITE CABLE). EXTEND COMPOSITE CABLE(S) TO RIFP.
 - 2 PROVIDE ALARM CABLE(S) (REFERENCE SPECIFICATION SECTION 281300 FOR ALARM CABLE). EXTEND CABLE(S) FROM FIELD DEVICE(S) TO RIFP.
 - 3 PROVIDE CAT 6 CABLE(S) FROM FIELD DEVICE(S) TO NEAREST TDN/IDF/MDF.
 - 4 HARDENED NETWORK SWITCH.
 - 5 FIBER OPTIC PATCH CORD. QUANTITY AS REQUIRED TO ESTABLISH CONTINUOUS CIRCUITS.
 - 6 FIBER OPTIC PATCH PANEL.
 - 7 PROVIDE GBIC AS REQUIRED FOR LINK COMMUNICATION IN ACCORDANCE WITH SPECIFICATIONS.
 - 8 (E) FIBER OPTIC PATCH PANEL.
 - 9 (E) CORE NETWORK SWITCH.
 - 10 CAMERA SERVERS AND DIGITAL STORAGE FOR THIS PROJECT ARE EXISTING AND NOT REQUIRED.
 - 11 THE EXISTING CAMERA SERVERS AND DIGITAL STORAGE ARE LOCATED AT THE HAS ADMINISTRATION BUILDING MDF & TERMINAL C MDF.
 - 12 PROVIDE HONEYWELL MAX PRO CAMERA LICENSING AS REQUIRED AT THE HAS ADMINISTRATION BUILDING MDF & TERMINAL C MDF TO SUPPORT ALL HAS CAMERAS INSTALLED AS PART OF THIS PROJECT.
 - 13 PROVIDE 12 CT SMF.

Reader Number	Sheet	Level	Door No	To/From	Reader Type	Mount	Associated Camera	Terminating IDF
NV53.R01	T2.01	SITE	GATE NV53	NON SECURE/ SECURE SIDE OF NV53	PROX w/ KEYPAD	WALL	NV53.C01	TDN NV53
NV53.R02	T2.01	SITE	GATE NV53	NON SECURE/ SECURE SIDE OF NV53	PROX w/ KEYPAD	PEDESTAL	NV53.C02	TDN NV53

CARD READER SCHEDULE - NV53 NTS 2

Alarm No.	Sheet No.	Level	Alarm Type	Associated Camera Number	Terminating IDF
NV53.A01	T2.01	SITE	Duress Button	NV53.C01, NV53.C02	TDN NV53
NV53.A02	T3.01	SITE	Tamper Switch	N/A	TDN NV53

ALARM POINT SCHEDULE - NV53 NTS 3

Camera Number	Sheet No.	Level	Camera View	Camera Type	Camera Mounting Type	Terminating Network Switch	Reference Mounting Detail
NV53.C01	T2.01	SITE	Card Reader NV53.R01	3	Ceiling	TDN NV53	2A/T3.02
NV53.C02	T2.01	SITE	Card Reader NV53.R02	3	Ceiling	TDN NV53	2A/T3.02

CAMERA SCHEDULE - NV53 NTS 4

HOUSTON AIRPORT SYSTEM
 GEORGE BUSH
 INTERCONTINENTAL AIRPORT
 HOUSTON TEXAS

OWNER
 HOUSTON AVIATION DEPT.
 16930 JOHN F. KENNEDY BLVD.
 HOUSTON, TX 77032
 [T] 713-622-1444
 [F] 713-968-9333

ARCHITECT
PGAL
 3131 BRIARPARK
 SUITE 200
 HOUSTON, TX 77042
 [T] 713 622 1444
 [F] 713 968 9333

PGAL TBPE REG. NO. F-2742
 CONSULTANT

PGA
 ENGINEERS, INC
 13201 Northwest Freeway, Ste. 800
 Houston, TX 77040
 713.586.5544
 pgaengineers.com
 TBPE FIRM #12493

PROJECT TITLE
 HOUSTON AIRPORT SYSTEM
 GUARD BOOTH
 REPLACEMENT PROJECT
 HAS PN 727

PROJECT NUMBER
 R1002447

PROJECT LOCATION
 4103 N. TERMINAL RD.
 GUARD BOOTH NV-53
 HOUSTON, TX 77032

DATE OF ISSUE
 AUGUST 11, 2014

REVISIONS

NO.	DESCRIPTION	DATE

HOUSTON AIRPORT SYSTEM
 PDC DESIGN DIVISION

REGISTRATION
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SHEET TITLE
 ONE LINE DIAGRAM,
 CARD READER, ALARM AND
 CAMERA SCHEDULES

SHEET NUMBER
T0.01

Pierce Goodwin Alexander & Linville

Alexandria | Atlanta | Dallas | Houston | Las Vegas | Los Angeles | Mexico City | New Orleans | New York | Phoenix | San Antonio | San Diego | Washington, DC

DWG: JAG EDP
 DATE: 08/11/14
 E: JAG

NO.	DESCRIPTION	DATE



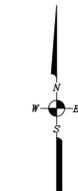
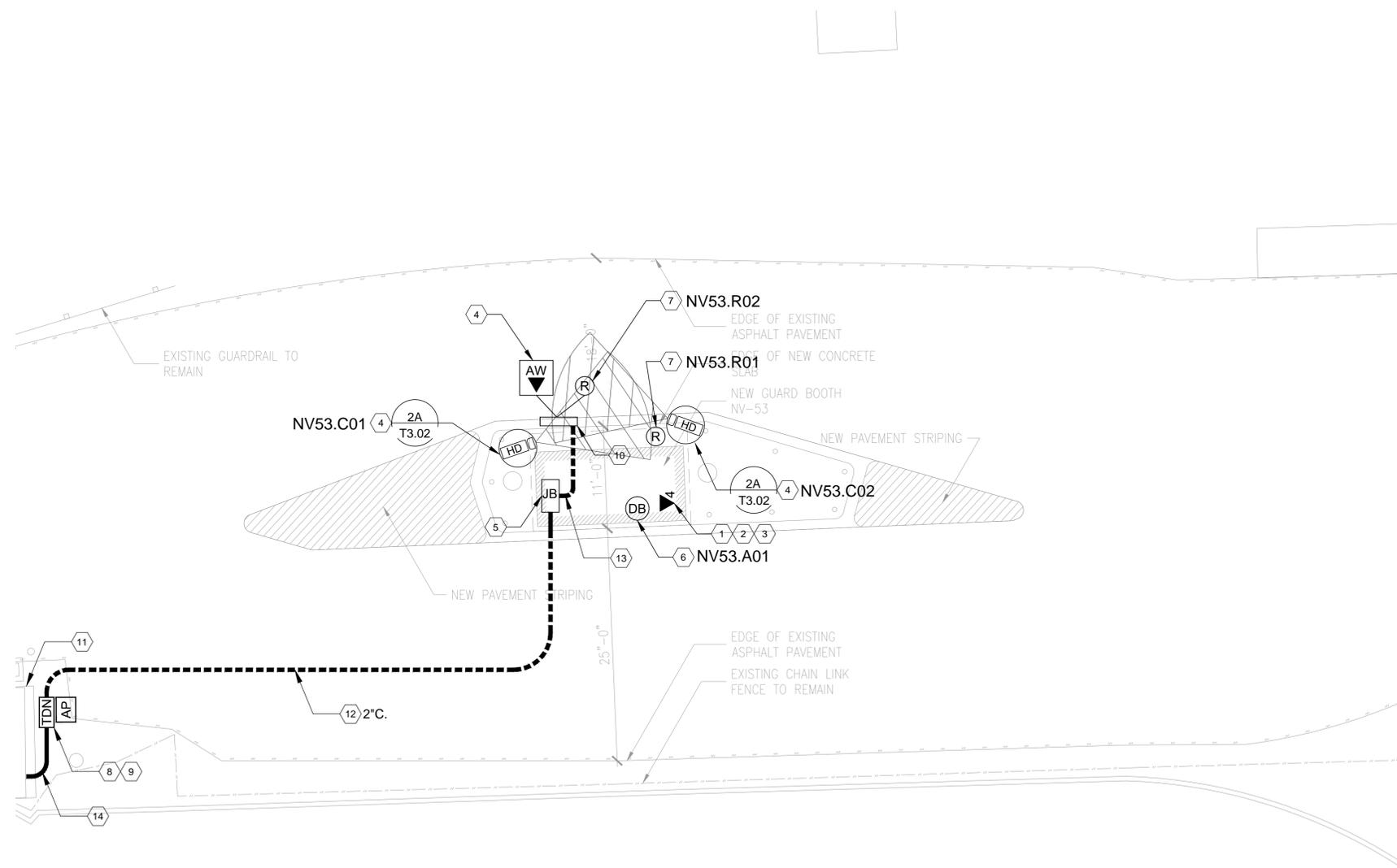
GENERAL NOTES:

1. COORDINATE EXACT LOCATION OF SECURITY AND TELECOMMUNICATIONS EQUIPMENT WITH HAS IT.

2. ALL DEVICE CABLE IN 1" CONDUIT TO JUNCTION BOX.

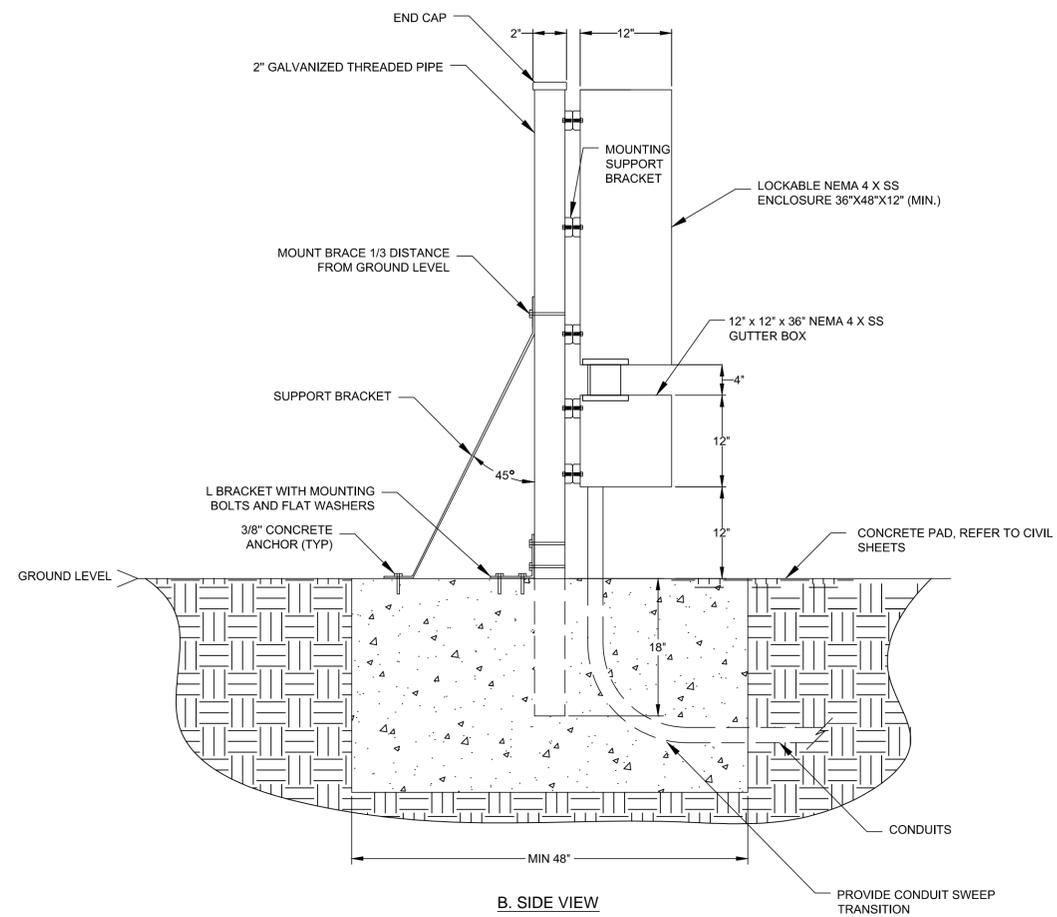
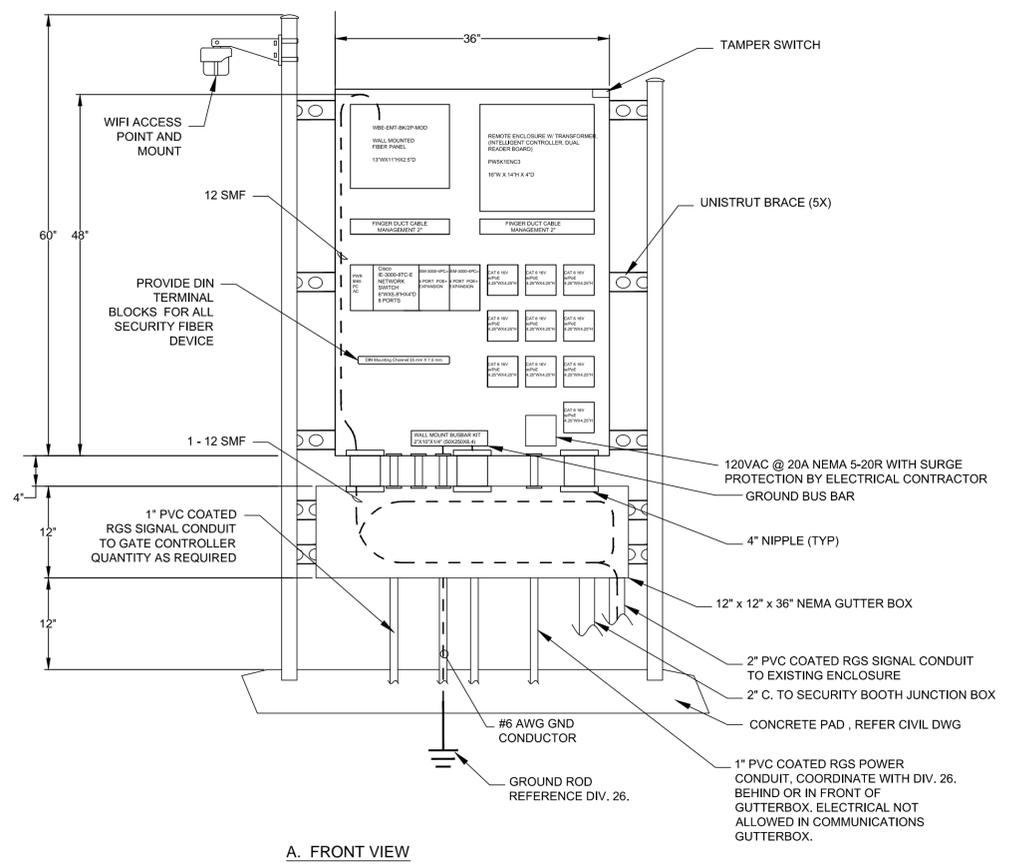
KEY NOTES:

- ① PROVIDE IP TELEPHONE (DESKTOP)
- ② WALL MOUNT DATA OUTLET (QUAD) AT 15" AFF.
- ③ PROVIDE 4 - CAT6 CABLES IN 1" CONDUIT, EXTEND CABLES AND CONDUITS TO TDN VIA JUNCTION BOX.
- ④ 1-CAT6 TO TDN VIA JUNCTION BOX.
- ⑤ 12"x12"x6" JUNCTION BOX INSIDE BOOTH.
- ⑥ ALARM CABLE TO TDN VIA JUNCTION BOX.
- ⑦ CARD READER CABLE TO TDN VIA JUNCTION BOX. MOUNT CARD READER AT 42" AFG MIN.
- ⑧ RE: 1/T3.01 FOR TELECOMMUNICATIONS DISTRIBUTION NODE (TDN) DETAIL.
- ⑨ NEW TDN. FASTEN TO EXISTING RACK. PROVIDE UNISTRUT FRAMING AS REQUIRED.
- ⑩ NEW CARD READER AND TELEPHONE PEDESTAL, RE: 4/T3.02.
- ⑪ EXISTING ENCLOSURES.
- ⑫ 2" SCH 80 PVC DIRECT BURIED IN TRENCH 18" BELOW GRADE. BACK FILL, REPAIR AND PATCH TO EXISTING CONDITION.
- ⑬ 1" SCH. 80 PVC.
- ⑭ 2" C. RGS.





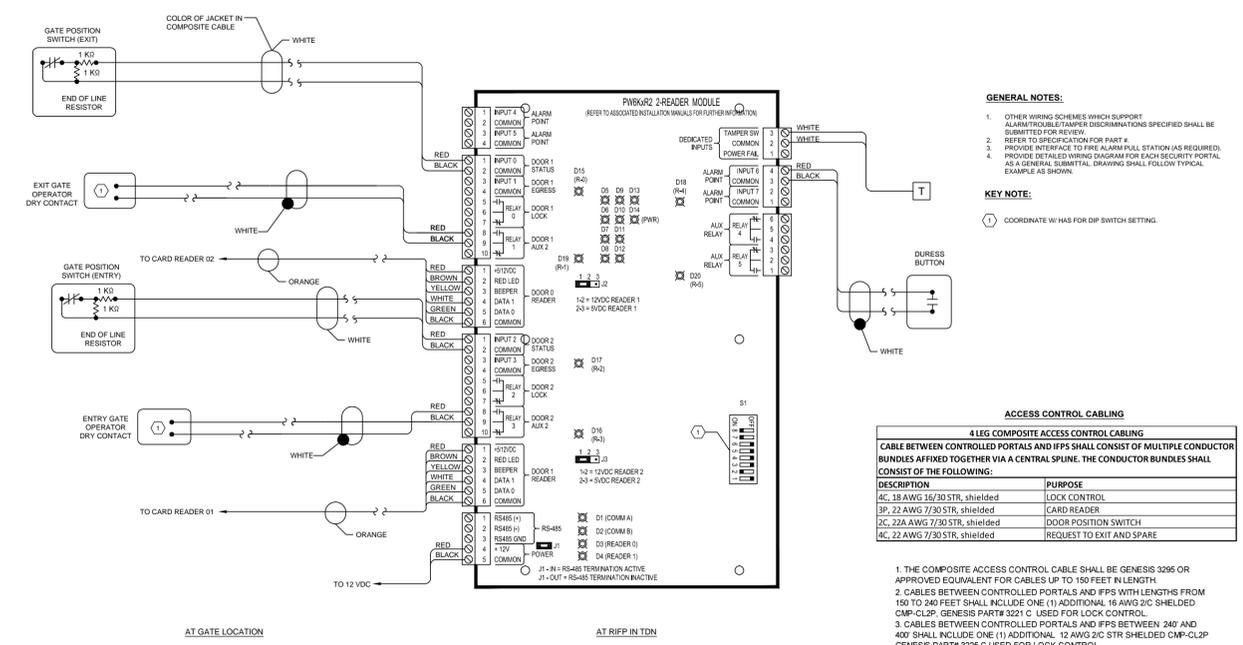
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TELECOMMUNICATIONS DISTRIBUTION NODE (TDN) DETAIL AT NV53 NTS 1

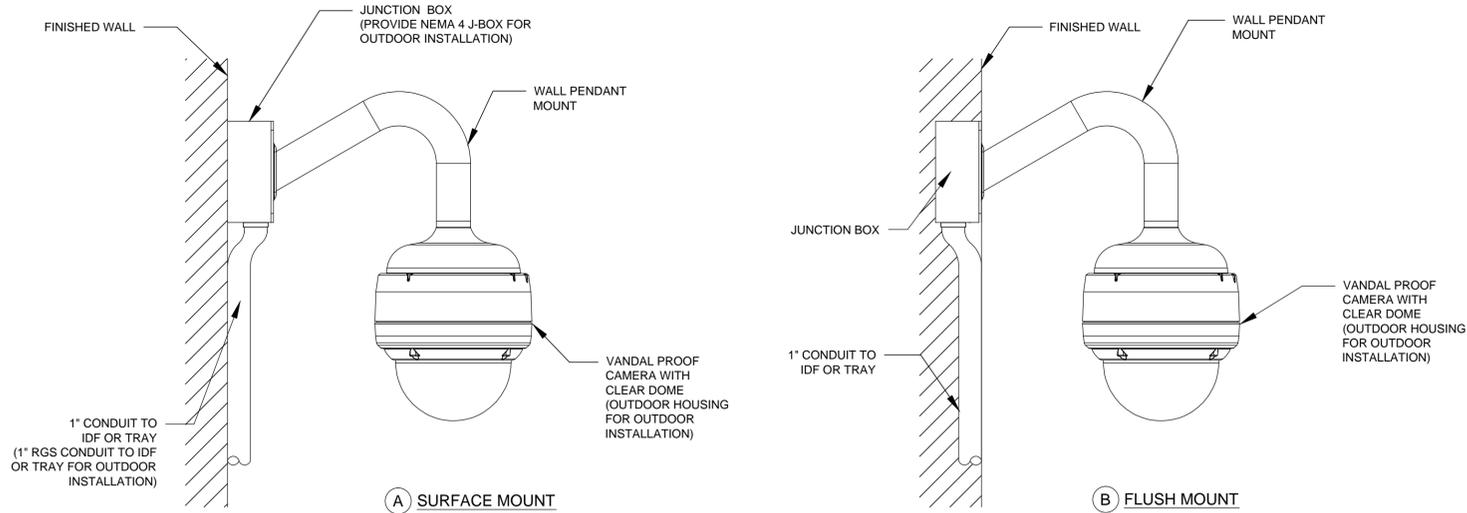
ITEM	TDN AT NV53	SPECIFICATION	MANUFACTURER	PART NUMBER	QTY.	UNIT
1	NEMA 4X STAINLESS STEEL SINGLE-DOOR WALL MOUNT	271100	HUBBELL	SSN4483612A	1	EA
2	OSP D12 SM FIBER	271300	COMMSCOPE	D-012-LN-8W-F12NS	FIELD VERIFY	FT
3	SYSTEMAX BUILDING ENTRANCE WALL MOUNTED FIBER PANEL	271300	COMMSCOPE	WB-E-MT-BK/2P-MOD	1	EA
4	ROLOSPICE KIT WITH 4 FUSION SPLICE TRAYS	271300	COMMSCOPE	RS-4AF-16SF	1	EA
5	TERASPEED® LC, 12 FIBER, BLUE GANGED ADAPTER, BLACK PANEL	271300	COMMSCOPE	PNL-BK-012-SFA-LC12-BL	1	EA
6	TERASPEED® LC TO LC, FIBER PATCH CORD, 1.6 MM DUPLEX, RISER RATED	271300	COMMSCOPE	FEWLCLC42-F005	2	EA
7	GIGASPEED XL® GS8E SINGLE END SOLID CABLE MODULAR PATCH CORD, SPRING GREEN	271500	COMMSCOPE	GS8E117-S-GN-SFT	AS REQUIRED	EA
8	GIGASPEED XL® GS8E STRANDED CORDAGE MODULAR PATCH CORD, SPRING GREEN	271500	COMMSCOPE	GS8E-GN-SFT	AS REQUIRED	EA
9	INDUSTRIAL ETHERNET 8 PORT SWITCH - HAS	272100	CISCO	Cisco IE-3000-8TC-E	1	EA
10	INDUSTRIAL ETHERNET SWITCH 4 PORT POE+ EXPANSION - HAS	272100	CISCO	IEM -3000-4PC	2	EA
11	WALL MOUNT BUSBAR KIT, 2"W X 0.25"H X 10"L, COPPER	271100	CHATSWORTH	13622-010	1	EA
12	CAT 6 CABLE - OSP ENVIRONMENT	271500	COMMSCOPE	1572A BK 4/24	AS REQUIRED	FT
13	CATEGORY 6 16V W/POE (LAN E/POE PROTECTORS) FOR ECB PHONES AND CAMERAS	271500	COMMSCOPE	CAT 6 16V w/POE	10	PR
14	DIN MOUNTING CHANNEL 35 MM X 7.5 MM SLOTTED				1	EA
15	22AWG FEED THROUGH TERMINAL BLOCKS FURNISHED AND INSTALLED BY SECURITY CONTRACTOR				AS REQUIRED	EA
16	TAMPER SWITCH FURNISHED AND INSTALLED BY SECURITY CONTRACTOR	271100	HONEYWELL	955PST	1	EA
17	INTELLIGENT CONTROLLER	281300	HONEYWELL	PW5K11C	1	EA
18	DUAL READER MODULE	281300	HONEYWELL	PW6K1R2	1	EA
19	REMOTE ENCLOSURE W/ TRANSFORMER	281300	HONEYWELL	PW5K1ENC3	1	EA
20	DAISY CHAIN CABLE	281300	HONEYWELL	PW5K1DCC	1	EA
21	FINGER DUCT CABLE MANAGEMENT 2"				AS REQUIRED	EA
22	RUGGED WIFI ACCESS POINT AND MOUNT, 802.11AC	272100	ARUBA	AP-275	1	EA

SCHEDULE - TDN AT NV53 NTS 2

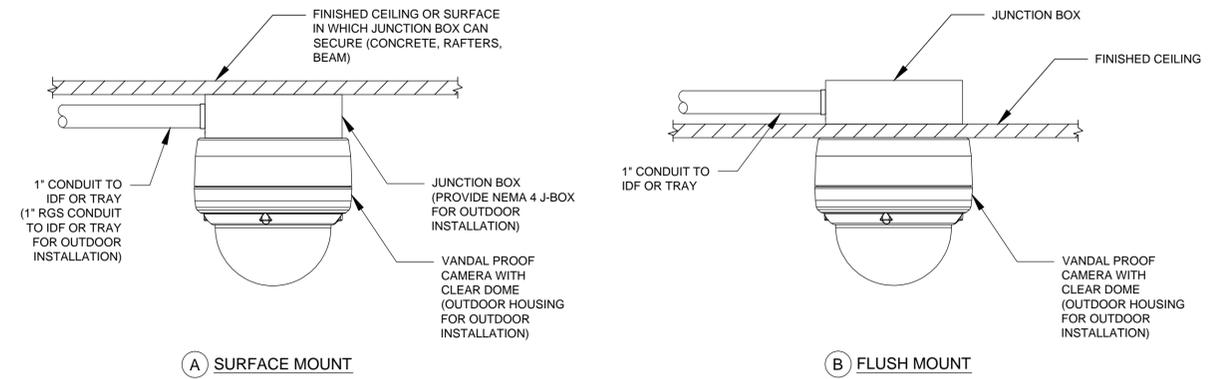


TYPICAL ACCESS CONTROL WIRING DIAGRAM NTS 3

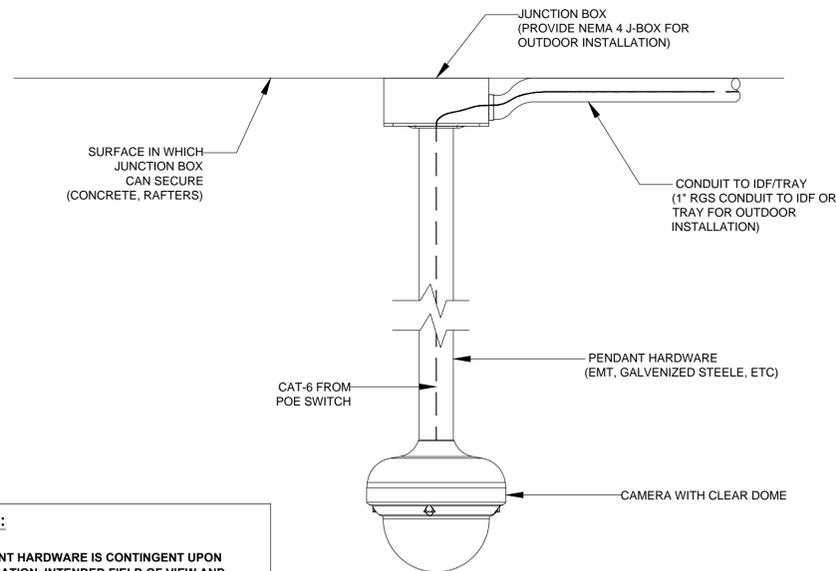
DATE: 08/11/14
 DRAWN: J. GREENWALD
 CHECKED: J. GREENWALD
 APPROVED: J. GREENWALD



TYPICAL CAMERA MOUNTING OPTION 1 - WALL MOUNT FOR HD OR PTZ CAMERA NTS 1

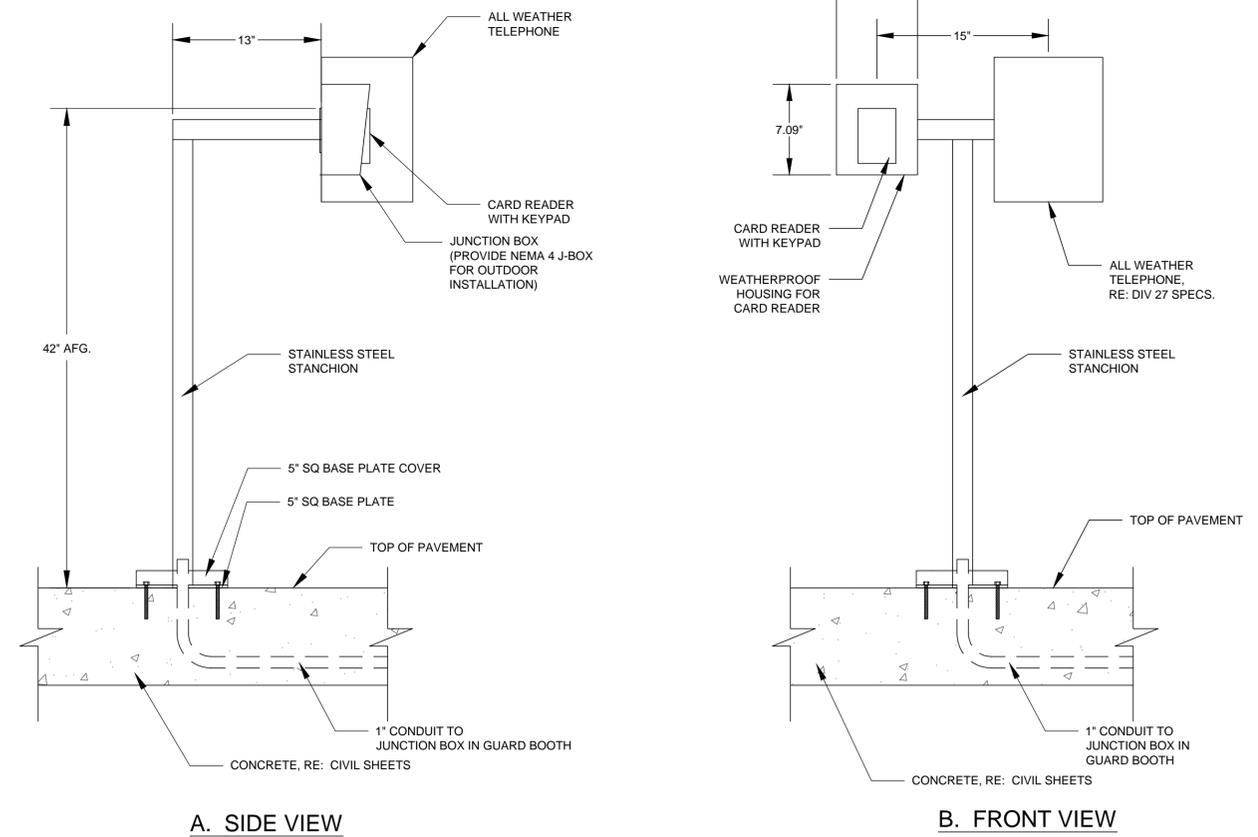


TYPICAL CAMERA MOUNTING OPTION 2 - CEILING MOUNT FOR HD OR PTZ CAMERA NTS 2



NOTE:
PENDANT HARDWARE IS CONTINGENT UPON APPLICATION, INTENDED FIELD OF VIEW AND MECHANICAL SPECIFICATIONS OF THE CAMERA DEVICE.

TYPICAL CAMERA MOUNTING OPTION 3 - PENDANT MOUNT NTS 3



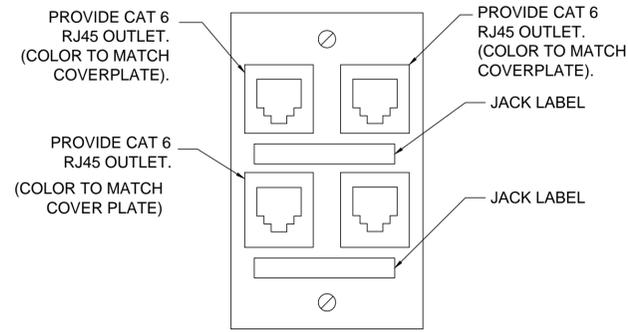
A. SIDE VIEW

B. FRONT VIEW

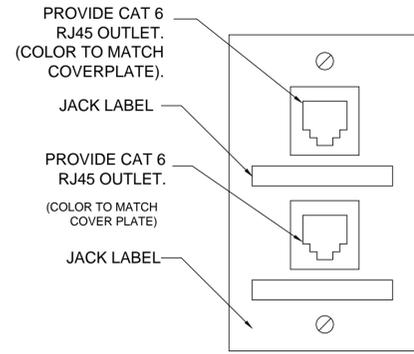
CARD READER AND TELEPHONE PEDESTAL NTS 4

DATE: 08/11/14
 TIME: 10:00 AM
 FILE: T3.02.dwg
 PLOT: T3.02.dwg

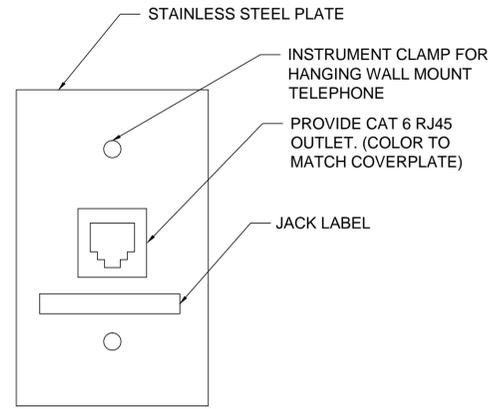
Pierce Goodwin Alexander & Linville | Mexico City | New Orleans | Los Angeles | Las Vegas | Houston | Dallas | Austin | Boca Raton | Boston | San Francisco | San Diego | San Jose | Seattle | Portland | Denver | Chicago | New York | Philadelphia | Washington DC | Atlanta | Miami | Tampa | Orlando | Phoenix | Salt Lake City | Salt Lake City | Salt Lake City



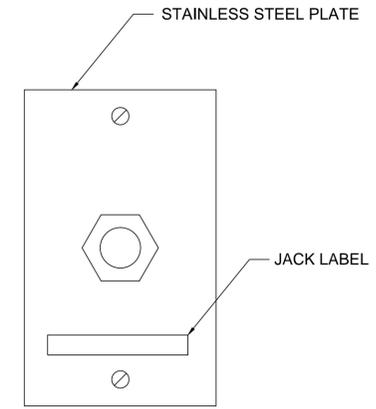
A 4 POSITION WORK AREA OUTLET ▼4



B 2 POSITION WORK AREA OUTLET ▼2

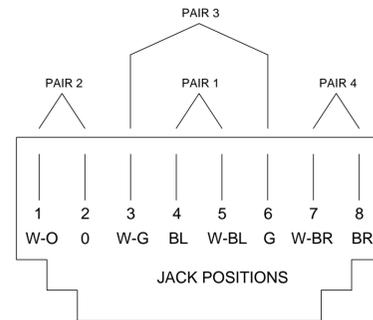


C WALL MOUNT PHONE ▼W



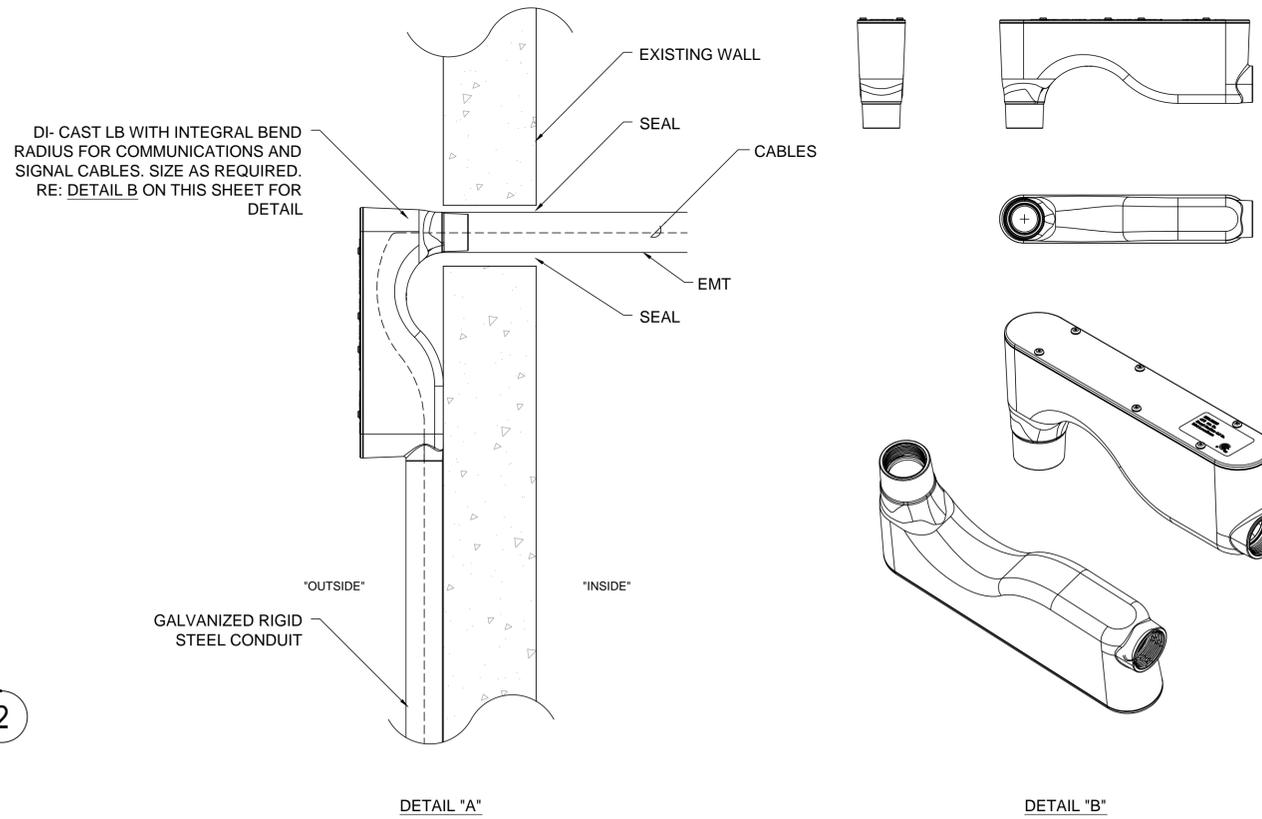
D CABLE TV ▼TV

COVERPLATE DETAIL NTS 1



NOTE:
ALL DEVICES WIRED T568B AS SHOWN.

T568B WIRING DIAGRAM NTS 2



DETAIL "A"

DETAIL "B"

WALL PENETRATIONS NTS 3

DATE: 8/11/14
 TIME: 10:00 AM
 FILE: T3.03.dwg
 PLOT: T3.03.dwg