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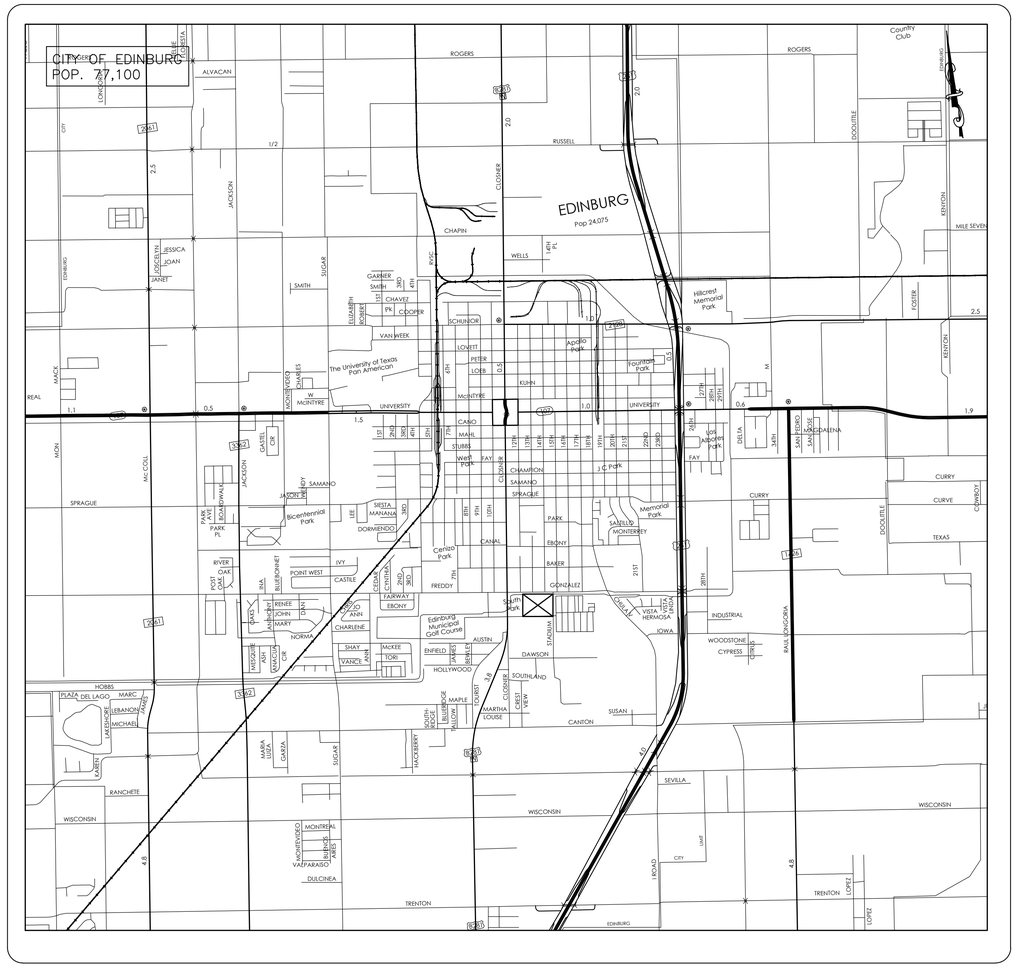
THE CITY OF EDINBURG

SAFE ROOM
SOUTH PARK SITE

PROJECT GRANT # DR-1791-342
FUNDING AGENCIES: FEMA, TX DEPT. OF PUBLIC SAFETY

FEMA/DPS FUNDED GRANT PROGRAM COMMUNITY SAFE ROOM-SOUTH PARK SITE
315 E. PALM DRIVE EDINBURG, TX 78539



VICINITY MAP
N.T.S.

EDINBURG CITY COMMISSION

RICHARD H. GARCIA	MAYOR
ELIAS LONGORIA, JR.	MAYOR PRO-TEM
J. R. BETANCOURT	COUNCILMEMBER
HOMER JASSO, JR.	COUNCILMEMBER
RICHARD MOLINA	COUNCILMEMBER
RAMIRO GARZA JR.	CITY MANAGER
PONCIANO N. LONGORIA, P.E., C.F.M.	DIRECTOR OF PUBLIC WORKS

REGISTERED ARCHITECT
DAVID NEGRETE
11640
STATE OF TEXAS
10/15/2013

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PLUMBING ENGINEER
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WESLACO, TEXAS 78596 (956) 351-5750
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TDLR PROJECT REGISTRATION FOR ARCHITECTURAL BARRIERS EABPRJB4803141

ARCHITECTURAL MATERIAL DESIGNATION

- BRICK
- CMU WALL
- CONCRETE
- GYP. BD. WALL
- EXISTING WALL TO REMAIN
- EARTH
- GLASS
- PLYWOOD
- STEEL
- WOOD
- DIFFUSER
- RETURN AIR
- 2x4 LAY-IN LIGHT FIXTURE
- CANLIGHT FIXTURE
- EXIT LIGHT
- CEILING MOUNTED EXIT LIGHT
- SD CEILING MOUNTED SMOKE DETECTOR
- I CEILING MOUNTED INTERCOM SPEAKER
- FA CEILING MOUNTED FIRE ALARM INDICATOR

ARCHITECTURAL GRAPHIC SYMBOLS

DRAWING DESCRIPTION
SHT. #
SCALE: SCALE REF: REFERENCE

ROOM NAME
RM. #
ROOM TAG

D01
DOOR NUMBER

A
WINDOW TYPE

HM-8
DOOR FRAME TYPE

M#
MARKER BOARD, # FEET LONG, 4 FT. H. TYP.

T#
TACK BOARD, # FEET LONG, 4 FT. H. TYP.

#
PARTITION TYPE
(SEE DETAIL EXPLANATION THIS PAGE)

INDICATES DETAIL NUMBER
X/A.YY
SECTION DETAIL
INDICATES DRAWING SHEET ON WHICH DETAIL IS SHOWN

INDICATES SECTION NUMBER
X/A.YYY X/A.YYY
BUILDING SECTION
INDICATES DRAWING SHEET ON WHICH SECTION IS SHOWN

X/A.YYY
ELEVATION

0'–0"
F.F.E.
ELEVATION HEIGHT

1
REVISION

MASONRY PARTITION TYPE LEGEND

TYPE UNIT:
C# = CONCRETE MASONRY UNIT,
RE: PARTITION TYPES - 4/A.000
SB = STRUCTURAL BRICK

C#
B
B1

NOMINAL THICKNESS IN INCHES

BURNISHING
BLANK = NONE
B1 = 1 SIDE BURNISHED
B2 = 2 SIDES BURNISHED

MASONRY TAGS ON THE 1/8" PLAN ONLY. REFERENCE STRUCTURAL DRAWINGS FOR MORE INFORMATION. WHERE BURNISHED ONE SIDE, REFERENCE FINISH SCHEDULE FOR INFORMATION ON WHICH SIDE OF WALL.

REFERENCE NOTES

REFERENCE NOTES	
03 00 00	CONCRETE (CIVIL)
03 10 10	UNDER SLAB VAPOR BARRIER
03 30 00	CAST-IN-PLACE CONCRETE, RE: STRUCT.
03 35 01	CONC. THIN SHELL CONSTR. RE: STRUCT.
A	AIR FORM/ROOF MEMBRANE RE: STUCT
B	FOAM INSUATION RE: STRUCT.
C	REINFORCING STEEL, RE: STRUCT.
D	CONCRETE RE: STRUCT.
04 05 03	MASONRY MORTARING AND GROUTING
04 20 00	UNIT MASONRY, RE: STRUCT FOR STRUCT WALLS
A	8" CMU
B	8" CMU BURNISHED ONE SIDE
C	8" CMU BURNISHED BOTH SIDES
D	CMU U BLOCK, RE: WALL FOR BURNISHING
E	10" STRUCTURAL BRICK
F	8" STRUCTURAL BRICK
G	STRUCTURAL BRICK BOND BEAM UNIT
H	STRUCTURAL BRICK U BLOCK
I	LADDER/TRUSS JOINT REINFORCEMENT
J	BLOCKNET FLASHING SYSTEM
K	CMU SOAP CAP, MATCH WALL BURNISHING
L	REINFORCING STEEL, RE: STRUCT.
05 12 00	STRUCTURAL STEEL FRAMING, RE: STRUCT.
05 21 00	STEEL JOIST FRAMING, RE: STRUCT.
05 31 00	STEEL DECKING, RE: STRUCT.
05 50 00	METAL FABRICATIONS
06 10 00	ROUGH CARPENTRY
A	FIRE RETARDANT TREATED SOLID BLOCKING
B	FIRE RETARDANT TREATED PLYWOOD
06 41 00	ARCHITECTURAL WOOD CASEWORK
A	3/4" PLYWOOD CABINET BODY
E	HARDWOOD BANDING, 1/4" THICK.
F	1X FRAMING
G	2X FRAMING
I	3/4" PLYWOOD COUNTER UNDERLAY
06 61 19	QUARTZ SURFACING FABRICATIONS
07 52 00	MODIFIED BITUMEN MEMBRANE ROOFING
A	MODIFIED BITUMEN PLY SHEET
B	MODIFIED BITUMEN CAP SHEET
C	VERAL ALUMINUM FACED FLASHING
D	TERMINATION PRESSURE BAR
E	FIBER CANT
F	VENTING BASE SHEET
G	SEAL EDGE WITH ROOFING SEALANT
07 62 00	SHEET METAL FLASHING AND TRIM
A	PARAPET CAP, FORM AS INDICATED
C	FLASHING
D	COUNTERFLASHING
E	SURFACE MOUNTED RECEIVER/REGLET
F	CLEAT
07 71 23	GUTTERS AND DOWNSPOUTS
A	GUTTER, PROFILE AS INDICATED
B	DOWNSPOUT, SIZE SHAPE INDICATED
07 90 00	JOINT PROTECTION

08 12 14	STANDARD STEEL FRAMES
A	STANDARD STEEL FRAME
B	MASONRY WIRE ANCHOR
C	FEMA 361 RATED STEEL FRAME
08 13 14	STANDARD STEEL DOORS
A	STANDARD STEEL DOOR
B	FEMA 361 RATED STEEL DOOR
08 14 16	FLUSH WOOD DOORS
08 17 23	INTEGRATED WOOD DOOR OPENING ASSEM
08 41 13	ALUMINUM FRAMED STOREFRONTS
E	FEMA 361 RATED ASSEMBLY
08 71 00	DOOR HARDWARE
09 51 13	ACOUSTICAL PANEL CEILINGS
A	2X2 LAYIN CEILING GRID
10 14 00	SIGNAGE
10 14 16	CAST BUILDING PLAQUES AND LETTERS
10 21 13.17	SOLID PHENOLIC TOILET COMPARTMENTS
10 28 00	TOILIET ACCESSORIES
A	GRAB BAR
B	TOILET PAPER DISPENSER
C	SANITARY NAPKIN DISPOSAL
D	TOILET SEAT COVER DISPENSER
E	ELECTRIC HAND DRYER
G	BABY CHANGING STATION
O	SOAP DISPENSER
10 44 00	FIRE PROTECTION SPECIALTIES
A	EXTINGUISHER WITH CABINET
B	EXTINGUISHER ON BRACKET
31 31 16	TERMITE CONTROL
A	STAINLESS STEEL MESH PARGED TO CONC.
32 31 13	CHAIN LINK FENCES AND GATES

ARCHITECTURAL ABBREVIATIONS

&	AND
L	ANGLE
C	CHANNEL
@	AT
<	CENTERLINE
~	DIAMETER/ROUND
#	POUND OR NUMBER
(E)	EXISTING
ABV	ABOVE
ACOUS.	ACOUSTICAL
ADD	ADDENDUM
ADJ.	ADJUSTABLE
A.F.F.	ABOVE FINISHED FLOOR
AGG.	AGGREGATE
AL.	ALUMINUM
ALT.	ALTERNATE
APPROX.	APPROXIMATELY
ARCH.	ARCHITECT(URE)
ASB.	ASBESTOS
ASPH.	ASPHALT
AUTO.	AUTOMATIC
BD.	BOARD
BET.	BETWEEN
BIT.	BITUMINOUS
BLDG.	BUILDING
BLK.	BLOCK
BM.	BEAM
B.S.	BOTH SIDES
B.W.	BOTH WAYS
CAB	CABINET
CER.	CERAMIC
C.G.	CORNER GUARD
CHAM.	CHAMFER
C.HT.	CEILING HEIGHT
C.I.P.C.	CAST-IN-PLACE CONCRETE
CIR.	CIRCLE
C.J.	CONSTRUCTION JOINT
CLO.	CLOSET
CLR.	CLEAR
C.M.T	CERAMIC MOSAIC TILE
CMU	CONCRETE MASONRY UNIT
CNTR.	COUNTER
C.O.	CASE OPENING
COL.	COLUMN
COMB.	COMBINATION
CONC.	CONCRETE
CONN.	CONNECTION
CONST.	CONSTRUCTION
CONT.	CONTINUOUS
CONTR.	CONTRACT(OR)
CORR.	CORRIDOR
CPT.	CARPET
CSMT.	CASEMENT
C.T.	CERAMIC TILE
CTEM	COAL TAR EMULSION
CTR.	CENTER
CTSK.	COUNTERSUNK
D.	DRAIN
DBL.	DOUBLE
DEMO.	DEMOLISH, DEMOLITION
DEPT.	DEPARTMENT
DIA.	DIAMETER
DIAG.	DIAGONAL
DIM.	DIMENSION
HDWD.	HARDWOOD
H.M.	HOLLOW METAL
HORIZ.	HORIZONTAL
HR.	HOUR
HT.	HEIGHT
I.D	INSIDE DIAMETER(DIM)
INCL.	INCLUDE(D)(ING)
INSUL.	INSULATION
INT.	INTERIOR
INV.	INVERT
DIV.	DIVISION
DN.	DOWN
D.O.	DOOR OPENING
DR.	DOOR
DS.	DOWNSPOUT
DTL.	DETAIL
D.W.	DISHWASHER
DWG.	DRAWINGS
DWR.	DRAWER
EA.	EACH
E.J.	EXPANSION JOINT
ELEV.	ELEVATION
ELEC.	ELECTRICAL
EMER.	EMERGENCY
ENCL.	ENCLOSURE
EPS	EXTRUDED POLYSTYRENE
EQUIP.	EQUIPMENT
ESTM.	ESTIMATE
EXH.	EXHAUST
EXP.	EXPANSION
EXPO.	EXPOSED
EXST.	EXISTING
EXT.	EXTERIOR
F.B.	FACE BRICK
F.B.O.	FURNISHED BY OTHERS
F.D.	FLOOR DRAIN
FDN.	FOUNDATION
F.F.	FINISH FLOOR
FGL.	FIBERGLASS
FIN.	FINISH(ED)
FL.	FLOOR
FLASH.	FLASHING
F.O.C.	FACE OF CONCRETE
F.O.F.	FACE OF FINISH
F.O.S.	FACE OF STUDS
FR.	FRAME
FT.	FOOT OR FEET
FTS.	FOOTING
FURR.	FURRING
GA.	GUAGE
GALV.	GALVANIZED
G.C.	GENERAL CONTRACTOR
GCMU	GLAZED CMU
GL.	GLASS
GLB.	GLASS BLOCK
GND.	GROUND
GR.	GRADE
GSCT	GLAZED STRUCT. CLAY TILE
GT.	GROUT
GYP.	GYPSUM
H.C.	HOLLOW CORE
H.D.	HEAVY DUTY
HDB.	HARDBOARD
HDR.	HEADER
HDW.	HARDWARE
J.	JOIST
JAN.	JANITOR
JT.	JOINT
KIT.	KITCHEN
L.	LENGTH
LAB.	LABORATORY
LAD.	LADDER
LAM.	LAMINATE
LAV.	LAVATORY
LBL.	LABEL
L.H.	LEFT HAND
LKR.	LOCKER
L.PT.	LOW POINT
LT.	LIGHT
LTL.	LINTEL
MAS.	MASONRY
MAX.	MAXIMUM
MECH.	MECHANICAL
MEMB.	MEMBRANE
MFR.	MANUFACTURER
MH.	MANHOLE
MIN.	MINIMUM
MIR.	MIRROR
MISC.	MISCELLANEOUS
M.O.	MASONRY OPENING
MOD.	MODULAR
MT.	MOUNT(ED)(ING)
MTL.	METAL
MULL.	MULLION
N.I.C.	NOT IN CONTRACT
NO. OR #	NUMBER
NOM.	NOMINAL
N.T.S.	NOT TO SCALE
O.A.	OVERALL
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER(DIM)
O.H.	OTHER HAND
OFF.	OFFICE
OPH.	OPPOSITE HAND
OPNG.	OPENINGS
OPP.	OPPOSITE
PARA.	PARALLEL
PBD.	PARTICLE BOARD
PCARB.	POLYCARBONATE
PED.	PEDESTAL
PERF.	PERFORATED
PERI.	PERIMETER
POLYISO.	POLYISOCYANURATE
P.O.T.	POINT OF TANGENT
PL.	PLATE
P.L.	PROPERTY LINE
P.LAM.	PLASTIC LAMINATE
PLAS.	PLASTER
PLYWD.	PLYWOOD
PR.	PAIR
PRCST.	PRE-CAST
PT.	PAINT
PVMT.	PAVEMENT
Q.T.	QUARRY TILE
R	RISER
RAD.	RADIUS
R.B.	RUBBER BASE
R.D.	ROOF DRAIN
REF.	REFERENCE
REFR.	REFRIGERATOR
REINF.	REINFORCED
REQ.	REQUIRED
RESIL.	RESILIENT
RET.	RETURN
REV.	REVISION
RFG.	ROOFING
RFL.	REFLECT(ED)(IVE)(OR)
RGTR.	REGISTER
R.H.	RIGHT HAND
RM.	ROOM
R.O.	ROUGH OPENING
R.O.W.	RIGHT OF WAY
S.C.	SOLID CORE
SCHED.	SCHEDULE
SECT.	SECTION
STF.	STOREFRONT
SH.	SHELF
SHR.	SHOWER
SHTH.	SHEATHING
SIM.	SIMILAR
SPEC.	SPECIFICATION
SPK.	SPEAKER
SQ.	SQUARE
STD.	STANDARD
STL.	STEEL
STOR	STORAGE
STRUCT.	STRUCTURE
SUSP.	SUSPENDED
SYM.	SYMBOL
SYN.	SYNTHETIC
SYS.	SYSTEM
T.	TREAD
T.C.	TOP OF CURB
T & G	TONGUE AND GROOVE
THK.	THICK
THR.	THRESHOLD
T.O.P.	TOP OF PAVEMENT
T.O.S.	TOP OF STEEL
T.O.W.	TOP OF WALL
TYP.	TYPICAL
TZ.	TERRAZZO
UNF.	UNFINISHED
U.O.N.	UNLESS OTHERWISE NOTED
VAR.	VARNISH
VB.	VAPOR BARRIER
V.B.	VINYL BASE
VERT.	VERTICAL
VEST.	VESTIBULE
V.I.F.	VERIFY IN FIELD
VIN.	VINYL
V.P.	VENEER PLASTER
V.T.	VINYL TILE
W/	WITH
WB.	WOOD BASE
W.C.	WATER CLOSET
WD.	WOOD
W.H.	WALL HUNG
WIN.	WINDOW
W/O	WITHOUT
WP.	WATER PROOF
W.S.	WATER STOP
WSCT.	WAINSCOT
WT.	WEIGHT
W.W.F.	WELDED WIRE FABRIC

CONTRACTOR RESPONSIBILITY

EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A MAIN WIND-FORCE RESISTING SYSTEM OR ANY COMPONENT LISTED IN THE QUALITY ASSURANCE PLAN SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE AUTHORITY HAVING JURISDICTION, THE RESPONSIBLE DESIGN PROFESSIONAL, AND THE OWNER PRIOR TO COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT. THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL CONTAIN:

1. ACKNOWLEDGEMENT OF AWARENESS OF THE SPECIAL REQUIREMENTS CONTAINED IN THE QUALITY ASSURANCE PLAN.
2. ACKNOWLEDGEMENT THAT CONTROL WILL BE EXERCISED TO OBTAIN COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS.
3. PROCEDURES FOR EXERCISING CONTROL WITHIN THE CONTRACTOR'S ORGANIZATION, THE METHOD AND FREQUENCY OF REPORTING AND THE DISTRIBUTION OF REPORTS.
4. IDENTIFICATION AND QUALIFICATIONS OF THE PERSON(S) EXERCISING SUCH CONTROL AND THEIR POSITION(S) IN THE ORGANIZATION.

EXCEPTION: PREFABRICATED OR PANELIZED STORM SHELTER COMPONENTS WHICH HAVE BEEN INSPECTED AND LABELED BY AN APPROVAL AGENCY MEETING THE REQUIREMENTS OF THE APPLICABLE BUILDING CODE.

SR

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ISSUED: 10.15.2013

CITY OF EDINBURG
SAFE ROOM - SOUTH PARK SITE
315 E. PALM DRIVE
EDINBURG, TX

08/07/2013
bwm

REVISIONS
-
-
-
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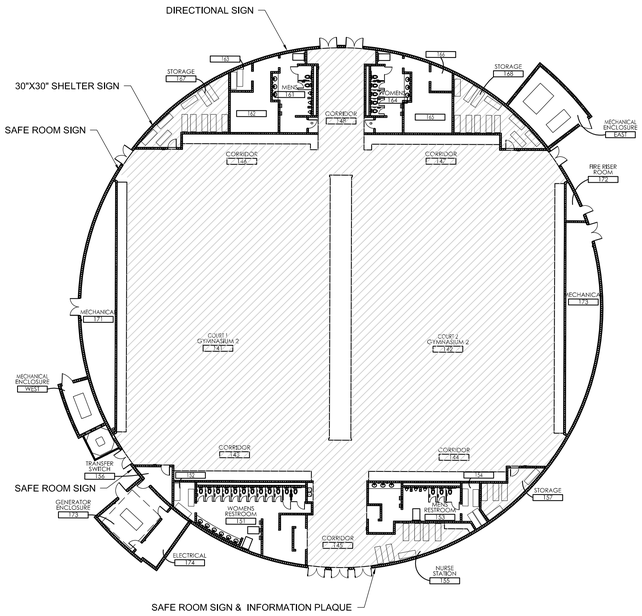
NOTES
SYMBOLS &
ABBREVIATIONS

G.001



THIS FLOOR PLAN ILLUSTRATES THIS SHELL PACKAGE ONLY. WORK OF FINISH OUT AND ADDITIONS BY OTHERS ARE NOT ILLUSTRATED HERE.

FOR A LARGER SCALE PLAN INDICATING THIS INFORMATION, REFERENCE 1/A.100. RE: A.002 FOR FOR MORE INFORMATION REGARDING BUILDING SIGNAGE.

1 / G.002 FLOOR PLAN INDICATING OPEN SPACE & SIGNAGE
SCALE: 1"=25' REF:

ICC-500 Sec. 501.1.1 Occupancy Density

Room Numbers	Room(s)	USF	ASF other	other NASF
141, 142, 143, 144, 145, 146, 147, 148	Central open area	17531		
151	Women		803	
152	Custodial		85	
153	Men		419	
154	Custodial		94	
155	Nurse's Station	302		
156	Transfer Switch			94
157	Storage	196		
161	Men		308	
162	Mens Locker Room		300	
163	Custodial		59	
164	Men		308	
165	Mens Locker Room		300	
166	Custodial		59	
167	Storage	399		
168	Storage	399		
171	Mechanical			741
172	Fire Riser			53
173	Mechanical			684
174	Generator			318
175	Electrical			168
	Aggregate Square Footage	**18827**	**2735**	**2058**
% of Total GSF	25,910	72.7%	10.6%	7.9%
% of 20K GSF	**20,000**	**94.1%**	**13.7%**	**10.3%**
Usable Space/80%	**23,534**	18827		
USF+ASF+NASF	**23,620**			

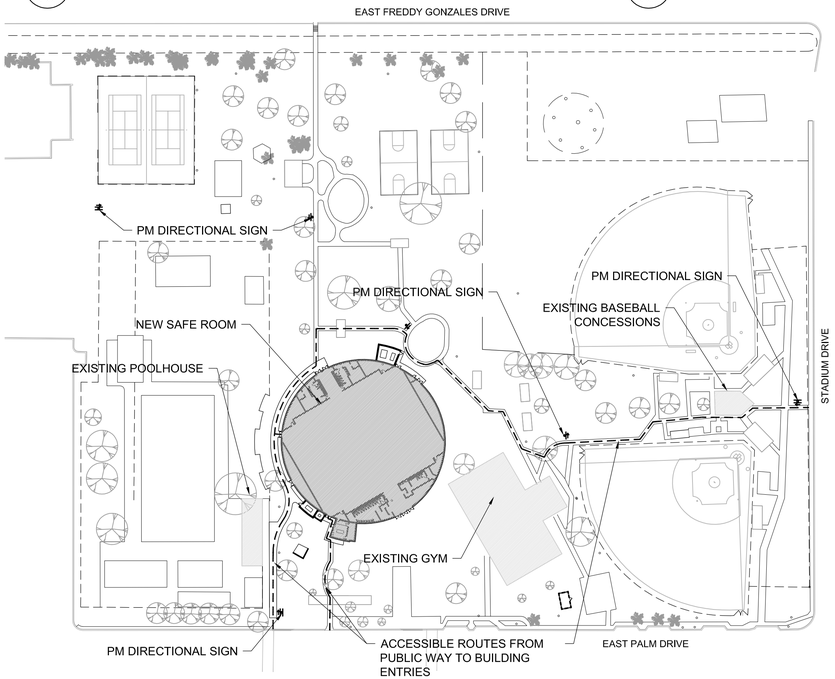
Available Open Area sf	Category	Percent of Open Area FEMA 361 Tables 3-1 & 3-3 factors		Occupants
18827	Tornado Stand/Seat	20%	5	753.1
18827	Tornado WC	80%	10	1506.2
	Tornado Total Occupants			**2259.2**
18827	Hurricane Stand/Seat	20%	20	188.3
18827	Hurricane WC	80%	20	753.1
	Hurricane Total Occupants			**941.4**

FEMA SAFE ROOM FUNDING IS FOR 20,000 SF. THE 94.1% USF EXCEEDS THE 80% REQUIREMENTS. OTHER AGGREGATE SF AND PERCENTAGES ARE GIVEN FOR ADDITIONAL INFORMATION ONLY.

ICC-500 703.2/703.3 PLUMBING FIXTURES

Occupancy Type	Occupants	Occupants per Toilet	Toilets Required	Toilets Provided	Occupants per Lavatory	Lavatories Required	Lavatories Provided
Tornado	2259.2	500	4.5	27	1000	2.3	15
Hurricane	941.4	50	18.8	27	100	9.4	15

2 / G.002 OCCUPANCY, DENSITY & RESTROOM REQUIREMENTS
SCALE: REF: 1/G.002

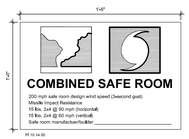


THIS SITE PLAN ILLUSTRATES SITE PLAN OF THIS SHELL PACKAGE ONLY BEFORE ANTICIPATED FINISH OUT AND RENOVATIONS/ADDITIONS ARE COMPLETED. IT ILLUSTRATES SITE USE OF THIS PACKAGE ONLY. SEE 2/G.003 FOR ANTICIPATED SITE USE AFTER FINISH OUT AND RENOVATIONS/ADDITIONS. REFERENCE AS.100 FOR WORK THIS PROJECT.

3 / G.002 CAMPUS SITE PLAN
SCALE: 1"=1000' REF:

BUILDING MOUNTED SHELTER SIGN

BUILDING MOUNTED INFORMATIONAL PLAQUE



SAFEROOM ENTRY SIGN

DIRECTIONAL SIGN, BUILDING & POLE MOUNTED

"SAFE ROOM" AND LOGOS SHALL BE REFLECTIVE, USING 3M SCOTCHLITE DIAMOND-GRADE REFELECTIVE SHEETING OR AN EQUIVALENT PRODUCT, YELLOW IN COLOR. VERIFY WITH MANUFACTURER THAT THE SIGN WILL GLOW FOR A MINIMUM OF 6 HOURS, IN THE EVENT OF POWER LOSS.

REFERENCE SHEET A.002 FOR MORE INFORMATION ON SIGNAGE.

4 / G.002 SAFE ROOM RELATED SIGNAGE TYPES
SCALE: 3"=1'-0" REF: 1/G.002

INSPECTIONS & OBSERVATIONS

1. SPECIAL INSPECTIONS SHALL BE PROVIDED FOR CONSTRUCTION AND INSTALLATION OF MATERIALS AS REQUIRED BY THE APPLICABLE BUILDING CODE, AND SECTION 106.3 FEMA P-361.
2. WHERE FABRICATION OF STRUCTURAL LOAD-BEARING AND DEBRIS-IMPACT RESISTANT COMPONENTS AND ASSEMBLIES IS BEING PERFORMED ON THE PREMISES OF A FABRICATOR'S SHOP, SPECIAL INSPECTION OF THE FABRICATOR SHALL BE PROVIDED.
3. SPECIAL INPSECTIONS SHALL BE PROVIDED FOR PROPOSED WORK COMPRISED OF : 1. CONSTRUCTION MATERIALS AND SYSTEMS THAT ARE ALTERNATIVES TO TRADITIONAL MATERIALS AND SYSTEMS PRESCRIBED BY THE APPLICABLE CODE. 2. UNUSUAL DESIGN AND CONSTRUCTION APPLICATIONS.
4. DURING CONSTRUCTION OF COMMUNITY SHELTERS, THE BUILDING OWNER SHALL EMPLOY A REGISTERED DESIGN PROFESSIONAL TO CONDUCT VISUAL OBSERVATIONS OF THE CONSTRUCTION OF THE STRUCTURAL SYSTEM FOR GENERAL CONFORMANCE TO THE APPROVED CONSTRUCTION DOCUMENTS AT SIGNIFICANT CONSTRUCTION STATES AND A COMPLETION OF THE CONSTRUCTION OF THE STRUCTURAL SYSTEM. STRUCTURAL OBSERVATION SHALL NOT OBVIATE THE NEED FOR OTHER INSPECTIONS OR TESTING REQUIRED BY THIS STANDARD OR THE APPLICABLE CODE.

   DEFICIENCIES SHALL BE REPORTED IN WRITING TO THE OWNER AND TO THE AUTHORITY HAVING JURISDICTION. AT THE CONCLUSION OF THE WORK, THE REGISTERED DESIGN PROFESSIONAL WHO MADE THE STRUCTURAL OBSERVATIONS SHALL SUBMIT TO THE AUTHORITY HAVING JURISDICTION A WRITTEN STATEMENT THAT THE SITE VISITS HAVE BEEN MADE AND SHALL IDENTIFY ANY REPORTED DEFICIENCIES WHICH, TO THE BEST OF THE STRUCTURAL OBSERVER'S KNOWLEDGE, HAVE NOT BEEN RESOLVED.
5. WHERE ANY SPECIAL DETAILS ARE UTILIZED IN THE DESIGN OF THE STRUCTURE, OR WHERE ANY SPECIAL INVESTIGATIONS ARE REQUIRED THAT ARE ADDITIONAL TO THOSE REQUIRED BY THE APPLICABLE BUILDING CODE, THE CONSTRUCTION DOCUMENTS SHALL CONTAIN A SCHEDULE OF THE INSPECTIONS REQUIRED AND THE CRITERIA FOR THE SPECIAL INSTALLATION.

5 / G.002 INSPECTIONS & OBSERVATIONS
SCALE: REF:

ICC-500 SEC 107.2.1 DESIGN INFORMATION

Item #	Item Description	Information
1	Type of Shelter: tornado, hurricane or a combination of both.	Combination Hurricane/Tornado designed in accordance with FEMA 361 (2008)and ICC-500 (2008)
2	A statement that the wind design conforms to the provisions of the *ICC/NSSA Standard for the Design and Construction of Storm Shelters*, with the edition year specified.	Reference Sheet S0.1
3	The shelter design wind speed, mph.	Reference Sheet S0.1
4	The importance factor.	Reference Sheet S0.1
5	The wind exposure cateory (indicate all if more than one is used.	Reference Sheet S0.1
6	The internal pressure coefficient.	Reference Sheet S0.1
7	The topographic factor Kzt.	Reference Sheet S0.1
8	The directionality factor Kd.	Reference Sheet S0.1
9	A statement that the shelter has/has not been construction within an area suseptible to flooding in accordance with Chapter 4 of this standard (ICC-500).	Reference Sheet C3, note 2.
10	The Design Flood Elevation and Base Flood Elevation for the site (if applicable).	Reference Sheet C3, note 2.
11	Documentation showing that components of the shelter envelope will meet the pressure and missile impact test requirements identified in Chapters 3 and * of this standard (ICC-500).	Reference 7/G.002
12	A floor plan drawing or image indicating location of the storm shelter on a site or within a building or facility, including a drawing or image indicating the entire facility.	Reference 3/G.002
13	The lowest shelter floor elevation and corresponding datum, except for residential shelters outside of special flood hazard areas.	Reference Sheet C3.
14	The occupant load of the storm shelter	Reference 2/G.002
15	The usable storm shelter floor area.	Reference 2/G.002
16	Venting area (square inches) provided and locations in the shelter.	Reference M0.1.

6 / G.002 ICC-500 SEC. 107.2.1 INFORMATION TABLE
SCALE: REF:

SAFE ROOM ENVELOPE REQUIREMENTS

ALL PRODUCTS AND MATERIALS THAT MAKE UP THE EXTERIOR ENVELOPE OF THE SAFE ROOM SHALL BE TESTED AND APPROVED ACCORDING TO FEMA P-361 STANDARDS.

ALL PRODUCTS INCLUDED IN THE EXTERIOR ENVELOPE MUST BE SUBMITTED TO ARCHITECT WITHIN 45 DAYS OF CONTRACT WITH ALL DOCUMENTATION APPLICABLE TO SHOW THAT THE PRODUCTS HAVE MET THE REQUIREMENTS OF TESTING PER FEMA P-361.

PER ICC-500 SECTION 310.1, ALL CONTRACTORS SHALL CONFIRM WITH STRUCTURAL ENGINEER FOR ANY OPENING THAT IS REQUIRED IN THE EXTERIOR WALLS FOR MEP ITEMS.

7 / G.002 SAFE ROOM ENVELOPE REQUIREMENTS
SCALE: REF:

CONTRACTOR RESPONSIBILITY

EACH CONTRACTOR RESPONSIBLE FOR CONSTRUCTION OF A MAIN WIND-FORCE RESISTING SYSTEM OR ANY COMPONENT LISTED IN THE QUALITY ASSURANCE PLAN SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE AUTHORITY HAVING JURISDICTION, THE RESPONSIBLE DESIGN PROFESSIONAL, AND THE OWNER PRIOR TO THE COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT. THE CONTRACTOR'S STATEMENT OF RESPONSIBILITY SHALL CONTAIN:

1. ACKNOWLEDGMENT OF AWARENESS OF TEH SPECIAL REQUIREMENTS CONTAINED IN THE QUALITY ASSURANCE PLAN.
2. ACKNOWLEDGMENT THAT CONTROL WILL BE EXERCISED TO OBTAIN COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS.
3. PROCEDURES FOR EXERCISING CONTROL WITHIN THE CONTRACTOR'S ORGANIZATION, THE METHOD ADN FREQUENCY OF REPORTING AND THE DISTRIBUTION OF REPORTS.
4. IDENTIFICATION ADN QUALIFICATIONS OF TEH PERSON(S) EXERCISING SUCH CONTROL AND THEIR POSITION(S) IN THE ORGANIZATION TIER.

8 / G.002 CONTRATOR RESPONSIBILITY
SCALE: REF:

11720 NORTH IH 35
AUSTIN TEXAS 78753
PH: 512.474.6526

204 E. STUBBS STREET
EDINBURG, TX 78539
PH: 956.386.0611
FAX: 956.386.0613

NEGRETE & KOLAR ARCHITECTS LLP
WWW.NEKOARCH.COM

ISSUED: 10.15.2013

CITY OF EDINBURG
SAFE ROOM - SOUTH PARK SITE
315 E. PALM DRIVE EDINBURG, TX

08/07/2013
bwm

REVISIONS
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FEMA & PROJECT REQUIREMENTS

G.002

SUMMARY OF CODE REQUIREMENTS
City of Edinburg Parks & Recreation Department Renovations and Additions
315 East Palm Drive, Edinburg, Texas.

I. General Description

The building is a single story FEMA 361 compliant safe room which will also serve as an indoor basketball facility when not being used as a safe room. These project documents serve as a shell package for the safe room only. A finish out package and a renovations and additions package for adjacent and connected construction is in design. Some references are made to that herein as future completion, otherwise this analysis is strictly as regards the dome shell package.

A. Project Name: City of Edinburg Safe Room South Park Site
B. Project Location: Edinburg, Texas
C. Applicable Codes:
1. FEMA 361 (2008)
2. ICC-500-2008, ICC/NSSA Standard for the Design and Construction of Storm Shelters
3. International Building Code – 2012
4. International Mechanical Code – 2012
5. International Plumbing Code – 2012
6. International Electrical Code 2012
7. International Fuel Gas Code – 2012
8. International Fire Code – 2012
9. International Energy Conservation Code - 2012
10. Texas Accessibility Standards (TAS)-2012
D. Occupancy Classification
1. Group A-4 – Assembly intended for viewing indoor sporting events and activities with spectator seating. IBC 303.5
E. Construction Type
1. Type II-B IBC 602.2
Notes:
a) This building will be equipped w/ an approved automatic sprinkler (fire) system.
b) Type II construction is that type of construction in which the building elements listed in Table 601 are of non-combustible materials, except as permitted in Section 603 and elsewhere in the code.

II. Height & Area Limits (IBC Table 503)

TYPE IIB construction

	Occupancy	max. allowed	# of stories	height
A.	A-4	9,500 sf (A_3)	2	55 ft.
		actual area	# of stories	height
		26,426 sf (A_3)	1	38.5 ft. (average height of dome)

1. Height increase: Since the building is sprinkled, allowable height increases to three stories and 75 feet. The building is within those limits. (IBC 504.2)
2. Area modifications: Using Equation 5-2 with the variables defined as:

a. Frontage Increase (IBC 506.2) There is an existing to remain gymnasium that is closer than 20 feet to the building. Per IBC 506.2, no increase for frontage increase is available.
b. Sprinkler Increase (IBC 506.3)
For single story buildings w/o fire resistance rating substitution (table 601), Is = 300 percent/
Is = 3

Equation 5-1: $A_a = A_t + [A_t*I_f] + [A_s*I_s]$

A occupancy
A_a = 9,500 + [0] + [9,500*3] A_a =**38,000 S.F.**
Is actual building area less than allowable area w/ increases?
Is 26,426 sf < 38,000 sf? **Yes**

II. Fire Resistance Requirements for Building Elements (IBC Table 601)

For Type II-B Construction:
A. Primary Structural Frame 0 Hours
B. Bearing Walls
Exterior 0 Hours
Interior 0 Hours
C. Roof construction & secondary members 0 Hours
D. Fire-Resistance Rating Requirements for Exterior Walls in Group A, Fire Separation Distance (Table 602)

Separation	<5'	≥5' & <10'	≥10' & <30'	≥30'
Required Rating	1 hour	1 hour	0 hour	0 hours

The only portion of the buildings which do not have a minimum fire separation distance of 10 feet is across from the northwest corner of the existing to remair gymnasium. At its closest, the gymnasium is 14'8" from the new building for a fire separation distance of 7'4". The total length of the new wall 20 feet or closer to the new building is 9'4" and a height of 25'4" 236.4 sf. Within that length, there is c single window of 7.1 sf. 7.1/236.4=3%.
E. Maximum Area of Exterior Openings (unprotected, Table 705.8 as per allowed for unprotected openings where automatic sprinkler installed, Section 705.8.1) per Fire Separation Distance (FSD): FSD 10 to less than 15: 45%.
a. 3% openings < 45% allowed. No protection required.
F. Accessory Use Areas: (IBC Section 508.2)
1. The B accessory area (room 155) is 324 sf. within the 26,426 sf building arec. This is less than 10% in accordance with IBC 508.2.1. The accessory occupancy does not exceed the tabular areas, without increases, for type IIB construction as listed in table 503, per IBC 508.2.1. As such, it does not require separations.
G. Incidental Use Areas: (IBC Section 509, IBC Table 509) Incidental Use areas shall be separated or protected, or both, in accordance with Table 509. There are no incidental use areas in the building required to be separated or protected.
H. Corridor Fire Resistance: Per IBC Table 1018.1, occupancies A do not required fire rated corridor partitions when the building is protected with an automatic sprinkler system.
NOTE: There are no fire rated corridors required.
I. Interior Wall and Ceiling Finish Requirements by Occupancy (sprinklered)
Flame Spread: Class A: 0-25; Class B: 26-75; Class C: 76-200 (IBC Table 803.5)

	Exit passageways	Corridors	Rooms/Enclosed Spaces
GroupA-4	Class B	Class B	Class C
Group B	Class B	Class C	Class C

Note: There are no exit passageways in this project.

II. Means of Egress Requirements (IBC Chapter 10)

A. This building is will function as a safe room when needed and will function as a community recreation space when not needed as a safe room. As such, three occupant loadings are addressed below; 1) community recreation space; 2) hurricane safe room; 3) tornado safe room.
B. Community Recreation Space:
1. In determining means of egress requirements, the number of occupants for whom means of egress facilities shall be determined in accordance with this (IBC Section 1004).
a. Per IBC Section1004.1.1 Areas without fixed seating, the number of occupants computed at the rate of one occupant per unit of area as prescribed in Table 1004.1.1." (occupancy numbers computed by this method, see below)
2. Occupancy Load Factors (IBC Table 1004.1.2) (ICC/NSSA Table 501.1.1)
a. IBC
i. Accessory Storage, Mechanical 300 sf Gross/occupant
ii. Assembly w/ fixed seats 18 lineal inches/occupant
iii. Assembly w/ tables & chairs 15sf Net/occupant
iv. Assembly w/ chairs 7sf Net/occupant
v. Business 100 sf Gross/occupant
vi. Exercise Rooms 50 sf Gross/occupant

OCCUPANCY AS COMPUTED BY IBC TABLE 1004.1.2					
Room	Name	Class	sf factor	sf	occ.
141	COURT 1	EXERCISE	50	5778	115.6
141	COURT 1 FIXED SEATS	FIXED		2003	567.0
142	COURT 2	EXERCISE	50	5778	115.6
142	COURT 2 FIXED SEATS	FIXED		2003	567.0
143	CORRIDOR	CIRCULATION	0	836	0.0
144	CORRIDOR	CIRCULATION	0	836	0.0
145	CORRIDOR	CIRCULATION	0	738	0.0
145	STORAGE	STORAGE	300	291	1.0
146	CORRIDOR	CIRCULATION	0	822	0.0
146	STORAGE	STORAGE	300	291	1.0
147	CORRIDOR	CIRCULATION	0	822	0.0
148	CORRIDOR	CIRCULATION	0	667	0.0
151	WOMENS RESTROOM	RESTROOM	0	809	0.0
152	CUSTODIAL	STORAGE	300	86	0.3
153	MENS RESTROOM	RESTROOM	0	418	0.0
154	CUSTODIAL	STORAGE	300	94	0.3
155	NURSES STATION	BUSINESS	100	324	3.2
156	TRANSFER SWITCH	MECHANICAL	300	94	0.3
157	STORAGE	STORAGE	300	196	0.7
161	MENS RESTROOM	RESTROOM	0	308	0.0
162	MENS SHOWER	LOCKERROOM	50	300	6.0
163	CUSTODIAL	STORAGE	300	59	0.2
164	WOMENS RESTROOM	RESTROOM	0	308	0.0
165	WOMENS SHOWER	LOCKERROOM	50	300	6.0
166	CUSTODIAL	STORAGE	300	59	0.2
167	STORAGE	STORAGE	300	399	1.3
168	STORAGE	STORAGE	300	399	1.3
171	MECHANICAL	MECHANICAL	300	741	2.5
172	FIRE RISER	MECHANICAL	300	53	0.2
173	MECHANICAL	MECHANICAL	300	684	2.3
174	GENERATOR	MECHANICAL	300	318	1.1
175	ELECTRICAL	MECHANICAL	300	168	0.6
			TOTAL		1393.5

The above occupancy calculations are reflective of the predominant anticipated use of the facility when not utilized as a safe room. That use is as a basketball gymnasium with spectator bleacher seating. Additional analysis was done for use as a community gathering space for either dances, movies, etc. The loading calculations above were adjusted as indicated in the table below to reflect the most anticipated concentration.

Room	Name	Class	sf factor	sf	occ.
141	COURT 1	TABLES	15	4333.5	288.9
141	COURT 1	CHAIRS	7	1444.5	206.4
141	COURT 1 FIXED SEATS	FIXED		2003	567.0
142	COURT 2	TABLES	15	4333.5	288.9
142	COURT 2	CHAIRS	7	1444.5	206.4
142	COURT 2 FIXED SEATS	FIXED		2003	567.0
TOTAL INCLUDING OTHER OCCUPIED SPACES					2210

a. ICC/NSSA TORNADO HURRICANE % THIS PROJECT
Stand/Seat 5 sf/occ. 20 sf/occ. 20%
Wheelchair 10 sf/occ. 20 sf/occ. 80%
Bedridden 30 sf/occ. 30 sf/occ. 0%

Room Numbers	Room(s)	USF	ASF other	other NASF
141, 142, 143, 144, 145, 146, 147, 148	Central open area	17531		
151	Women		803	
152	Custodial		85	
153	Men		419	
154	Custodial		94	
155	Nurse's Station	302		
156	Transfer Switch			94
157	Storage	196		
161	Men		308	
162	Mens Locker Room		300	
163	Custodial		59	
164	Men		308	
165	Mens Locker Room		300	
166	Custodial		59	
167	Storage	399		
168	Storage	399		
171	Mechanical			741
172	Fire Riser			53
173	Mechanical			684
174	Generator			318
175	Electrical			168
		18827	2735	2058
Area sf		%	sf factor	Occupants
18827	Tornado Stand/Seat	0.2	5	753.08
18827	Tornado Wheelchair	0.8	10	1506.16
	Tornado Total Occupants			2259.24
18827	Hurricane Stand/Seat	0.2	20	188.27
18827	Hurricane Wheelchair	0.8	20	753.08
	Hurricane Total Occupants			941.35

A. Number of Exit Paths (Minimum)
1. In Group A Occupancies, and A and B accessory use occupancies, two exits or exit access doorways from spaces shall be provided where occupant load exceeds 49 persons. (IBC Section/Table 1015.1)
2. In Group A Occupancies, three exits are required where the occupant load is 501 to 1000 and four exits required for occupant loads over 1000. (IBC 1015.1)
a) The A-4 occupancy at the dome has an occupant load during Tornado Safe Room use (highest potential loading) of 2,259 and has at least four exits.
b) The B accessory occupancy area has 4 occupants and is provided with one exit.
B. Exit Capacity: IBC Section 1005
Calculation of required exit capacity
1. Egress components other than stairways with sprinkler system: 0.15 inches per person IBC 1005.3.2, exception, otherwise 0.2 inches). Egress components other than stairways with sprinkler system: 0.15 inches per person (IBC 1005.3.2) Width for corridors shall be 44 inches minimum IBC table 1018.2).
2. Total Occupants (most concentrated at Tornado safe room) 2259*0.15 = 339 inches. 8 pairs of doors (64" capacity each) provides 512 inches of egress capacity at exit doors. 521<339, check.
3. Doors opening into the path of egress travel shall not reduce the required width to less than one-half during the course of the swing. When fully open, the door shall not project more than 7 inches (178 mm) into the required width. (IBC Section 1005.7.1)
4. Where objects project from walls, except handrails, where leading edges are above 27" AFF and below 80", they shall not project more than 4". (IBC 1003.3.3 TAS 307.2)
5. Protruding objects may not reduce the minimum clear width of accessible routes. (IBC 1003.3.4)
C. Size of Doors (IBC Section 1008.1.1)
1. The minimum width of each door opening shall be sufficient for the occupant load thereof and shall provide a clear width of not less than 32 inches (813 mm) ... The maximum width of a swinging door leaf shall be 48 inches (1219 mm) nominal. ...
A. Door Swing (IBC Section 1008)
1. Egress doors shall be pivoted or side-hinged swinging ... and ... shall swing in the direction of egress travel where serving an occupant load of 50 or more persons.... (IBC 1008.1.2).
B. Maximum Travel Distance (IBC Table 1016.1)
1. 250 feet (Group A, sprinkled)
C. Maximum Common Path of Egress
1. The maximum common path of egress for A occupancies with a sprinkler system is 75 feet (IBC table 1014.3). The longest common path of egress is 15'-2" at both corridors 145 and 148.
D. Discharge from Exits
1. Exterior exit doors shall lead directly to the exit discharge or the public way (IBC 1020.2.2).
E. Maximum Dead End Corridor is 20 feet. (IBC Section 1018.4) There are no dead end corridors.
F. Location of Exits
1. (IBC Section 1015.2.1) Where two exits or exit access doorways are required, from any portion of the exit access, the exit doors or exit access doorways shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the building or area to be served measured in a straight line between exit doors or exit access doorways. ...
a) Exception 2: Where a building is equipped throughout with an automatic sprinkler system ... the separation distance of the exit doors or exit access doorways shall not be less than one-third of the length of the maximum overall diagonal dimension of the area served.
2. (IBC Section 1015.2.2) Where three or more exits is required, at least two exit doors or exit access doorways shall be arranged in accordance with the provisions of 1015.2.1.
3. Egress from a room or space shall not pass through adjoining or intervening rooms or areas, except where such adjoining rooms or areas are accessory to the area served; are not a high-hazard occupancy; and provide a discernible path of egress travel to an exit. ... (IBC 1014.2.1)
a) There are a number of accessory areas which egress through adjoining and related spaces, e.g. custodial through restrooms and locker rooms, and locker rooms through restrooms. All are related and conform to this requirement.
G. Areas of Refuge
1. Will not be required, there are no stairs in this project.(IBC 202, Definition of Area of Refuge).

II. Emergency Services

A. Exit Lighting
1. Means of egress – One foot-candle at walking surface level (IBC 1006.2) Lighting indicated is emergency egress lighting.
2. According to IBC Section 1006.3, emergency (secondary) power is required, for a minimum of 90 minutes, to illuminate:
a. Corridors, interior exit stairways anc ramps and exit passageways in buildings required to have two or more exits.

a. Interior exit discharge elements, as permitted by Section 1027.1, in buildings required to have two or more exits.
b. Exterior landings, as required by Section 1008.1.6, for exit discharge doorways in buildings required to have two or more exits.
1. Reference Electrical drawings for indication of emergency illumination. All fixtures shown this SR package have emergency back-up batteries as well as are on standby power tied to the emergency generator.
A. Exit Signs
1. Exits and exit access doors shall be marked by an approved exit sign readily visible from any direction of egress travel. Access to exits shall be readily visible exit signs in cases where the exit or the path of egress travel is not immediately visible to the occupants. Exit sign placement shall be such that no point in a corridor is more than 100 feet (30 480 mm) from the nearest visible exit sign. (IBC Section 1011.1)
Exceptions:
1. Exit signs are not required in rooms or areas which require only one exit or exit access.
2. Main exterior exit doors or gates which obviously and clearly are identifiable as exits need not have exit signs where approved by the building official.
3. In A-4 occupancies, exit signs are not required on the seating side of vomitories or openings into seating areas where exit signs are provided in the concourse that are readily apparent from the vomitories.
2. Internal illumination or external illumination equal to .5 foot-candles at surface of the sign. (IBC Section 1011.6.2)
3. Required exit signs must be provided with emergency (secondary) power IBC 1011.6.3).
4. Exit signs are provided at the all exit doors.

II. Fire Protection

A. Where required:
1. An automatic sprinkler system is required for A-4 occupancies exceeding 12,000 sf or has an occupant load of 300 or more. The dome occupancy exceeds both conditions and requires an automatic sprinkler. The building will be protected by an automatic sprinkler.
B. Portable Fire Extinguishers
2. Section 906.1 of the 2012 IFC states:
Portable fire extinguishers shall be installed in the following locations:
a) In all Group A, B occupancies.
b) IFC Table 906.3(1) requires:

	Light Hazard Occupancy	Ordinary Hazard Occupancy	Extra Hazard Occupancy
Minimum Rated Single Extinguisher	2-A	2-A	4-A
Maximum Floor Area per Unit of A	3000 sf	1500 sf	1000 sf
Maximum Floor Area for Extinguisher	11,250 sf	11,250 sf	11,250 sf
Maximum Travel Distance to Extinguisher	75 ft	75 ft	75 ft

1. IFC Table 906.3(1) indicates a fire extinguisher for light hazard occupancies, which this project conforms, only requires a 2A fire extinguisher.
a) In accordance with IFC 906 table 906.3(1), our specifications provide for 2A-10B:C extinguisher for general locations. Rooms 141 near door 156.1, 141 near door 167, 142 near door 157, 142 near door 168, 145, 148.
b) 5B:C extinguishers are provided where electrical equipment will be prevalent, rooms 156, 174, 175.
A. **Fire Alarm**
1. A manual fire alarm system shall be installed in Group A occupancies having an occupant load of 500 or more (IBC 907.2.1). A manual fire alarm system is indicated.
B. **Fire Department Access**
1. Access roads for Fire Department access shall be provided to within 150 feet of all portions of the building (IFC 503.1.1)
a. The property owner will provide either all weather access drives or permeable paving to ensure access.
2. IFC 506.1 requires a key box for fire department emergency access. One will be provided for the fully completed project near the main entry door of the recreation center.

II. Plumbing Facilities Requirements (IBC Chapter 29, IPC Chapter 4)

According to IBC Table 2902.1/IPC Table 403.1, the following are minimum requirements for plumbing facilities, assuming even distribution of occupants between sexes. (occupancy numbers used from egress calculations above)

Table below for typical use as a gymnasium w/ bleacher seating.

Occupancy	Occupants	Toilet factor Male	Toilet Male Required	Toilet factor Female	Toilet Female Req.	Toilet factor unisex < 50	Toilet factor unisex > 50	Toilets Unisex req.	Lavatory factor <50	Lavatory factor >50	Lavatories Req.	Drink fountain factor	Drinking Fountains Req.
Assembly A4	1390	125	5.56	65	10.69			200	200	6.95	500	500	2.78
Business	4					25	50	.16	40	80	.1	100	.04
Total	218		5.56		10.69			.16			7.05		2.82

Table below for concentrated community gathering.

Occupancy	Occupants	Toilet factor Male	Toilet Male Required	Toilet factor Female	Toilet Female Req.	Toilet factor unisex < 50	Toilet factor unisex > 50	Toilets Unisex req.	Lavatory factor <50	Lavatory factor >50	Lavatories Req.	Drink fountain factor	Drinking Fountains Req.
Assembly A4	2210	125	8.84	65	17.0			200	200	11.05	500	500	4.42
Business	4					25	50	.16	40	80	.1	100	.04
Total	218		8.84		17.0			.16			11.15		4.46

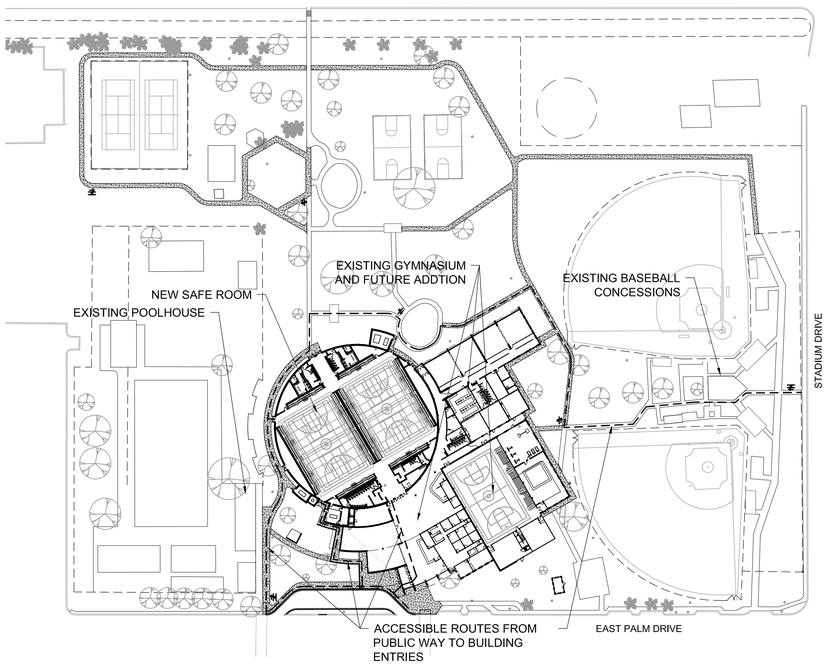
Per ICC-500 egress calculations and requirements

Occupancy (Community >50)	Occupants	Toilet per occ.	Toilets Req.	Lavatory per occ.	Lavatory Req.
Tornado	2260	1/500	4.52	1/1000	2.26
Hurricane	942	1/50	18.84	1/100	9.42

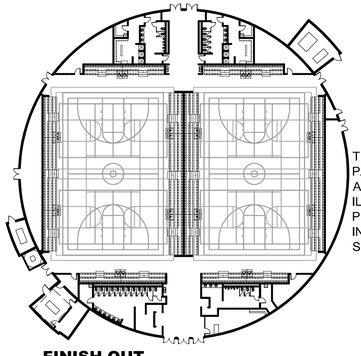
There are multiple fixture restrooms for each gender. In accordance with IPC 419.2, a urinal has been substituted for up to 67% of the water closets required in the A occupancy.

	Required IPC (concentrated	Required ICC-500	Provided
Toilets - Male	9		11
Toilets - Female	17		17
Toilets - Total	17	19	27
Lavatories	12	10	15
Drink Fountain	5		2*

* The building will be finished out in another building packcge which will contain an additional 4 drinking fountains. The finish out package design is not yet complete. Before may be used as a community recreation facility the finish out will be required to be completed.



THIS SITE PLAN ILLUSTRATES ANTICIPATED SITE PLAN AFTER FULL COMPLETION OF PHASED SHELL, FINISH OUT, AND RENOVATIONS AND ADDITIONS. IT IS INCLUDED FOR ILLUSTRATION PURPOSES OF FINAL ANTICIPATED SITE USE. FOR SITE USE THIS PACKAGE ONLY, SEE 2/G.002. REFERENCE "AS" SHEETS FOR WORK THIS PROJECT.



THIS FLOOR PLAN ILLUSTRATES THIS SHELL PACKAGE PLUS ANTICIPATED FINISH OUT. ANTICIPATED FINISHI OUT IS INCLUDED FOR ILLUSTRATION FOR CODE REFERENCE PURPOSES ONLY. THESE BID DOCUMENTS INCLUDE ONLY SHELL ITEMS. REFERENCE "A" SHEETS FOR EXTENT OF WORK THIS PROJECT.

SR

1 G.003 **BUILDING CODE ANALYSIS**
SCALE: REF:

2 G.003 **SITE PLAN W/ ACCESSIBLE ROUTE**
SCALE: 1"=1000' REF:

3 G.003 **FINISH OUT FLOOR PLAN**
SCALE: 1"=25' REF:

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ISSUED: 10.15.2013

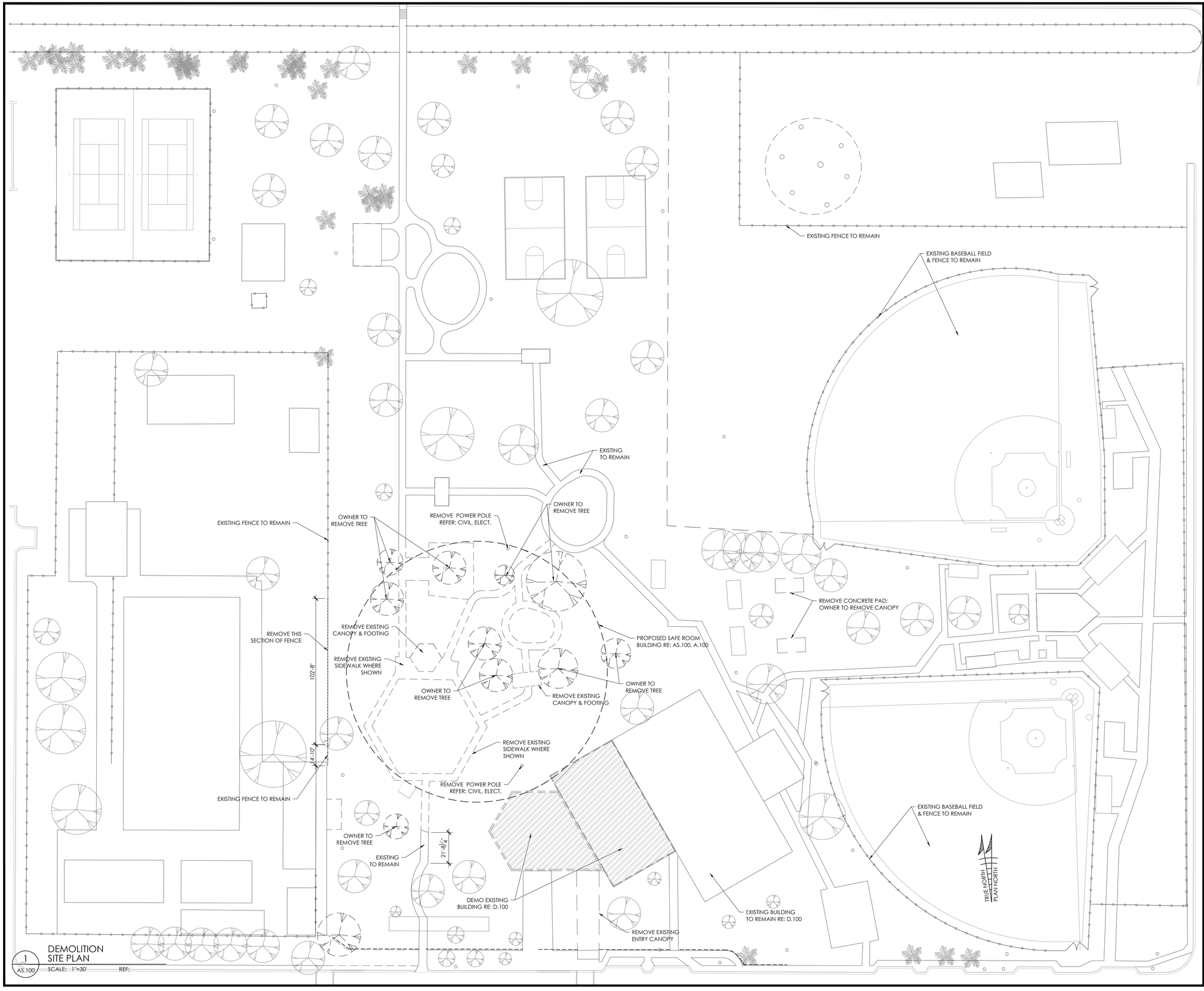
CITY OF EDINBURG
SAFE ROOM - SOUTH PARK SITE
315 E. PALM DRIVE EDINBURG, TX

8/7/2013
bwm

REVISIONS
-
-
-
-
-

BUILDING CODE & PROJECT REQUIREMENTS

G.003



1 AS.100 DEMOLITION SITE PLAN

SCALE: 1"=30' REF:

DEMO NOTES

1. TREES AND CANOPIES INDICATED HERE FOR REMOVAL TO BE REMOVED BY OWNER. CONTRACTOR SHALL PROVIDE OWNER MINIMUM 15 DAYS NOTICE BEFORE REQUIRED REMOVAL.

SR

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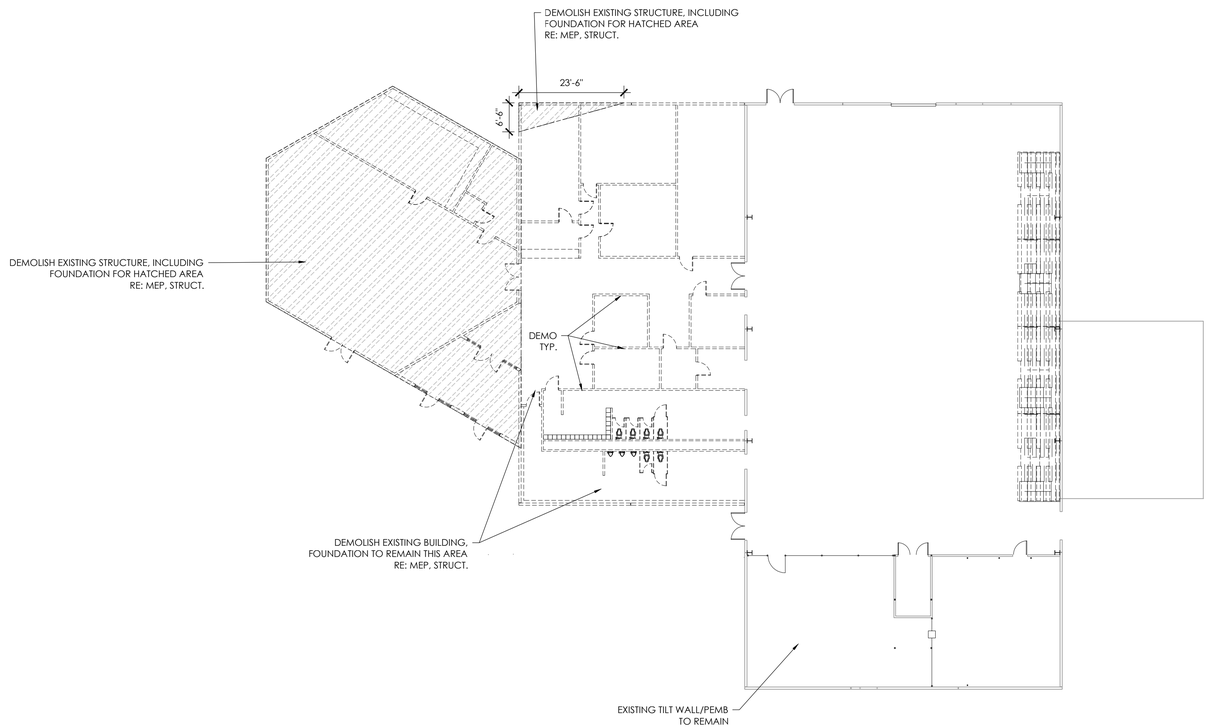
REVISIONS

DEMOLITION SITE PLAN

DS.100



1
D.100

EXISTING
DEMOLITION PLAN

SCALE: 1/8"=1'-0" REF: -

PLAN NORTH
TRUE NORTH

SR

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315 E. PALM DRIVE
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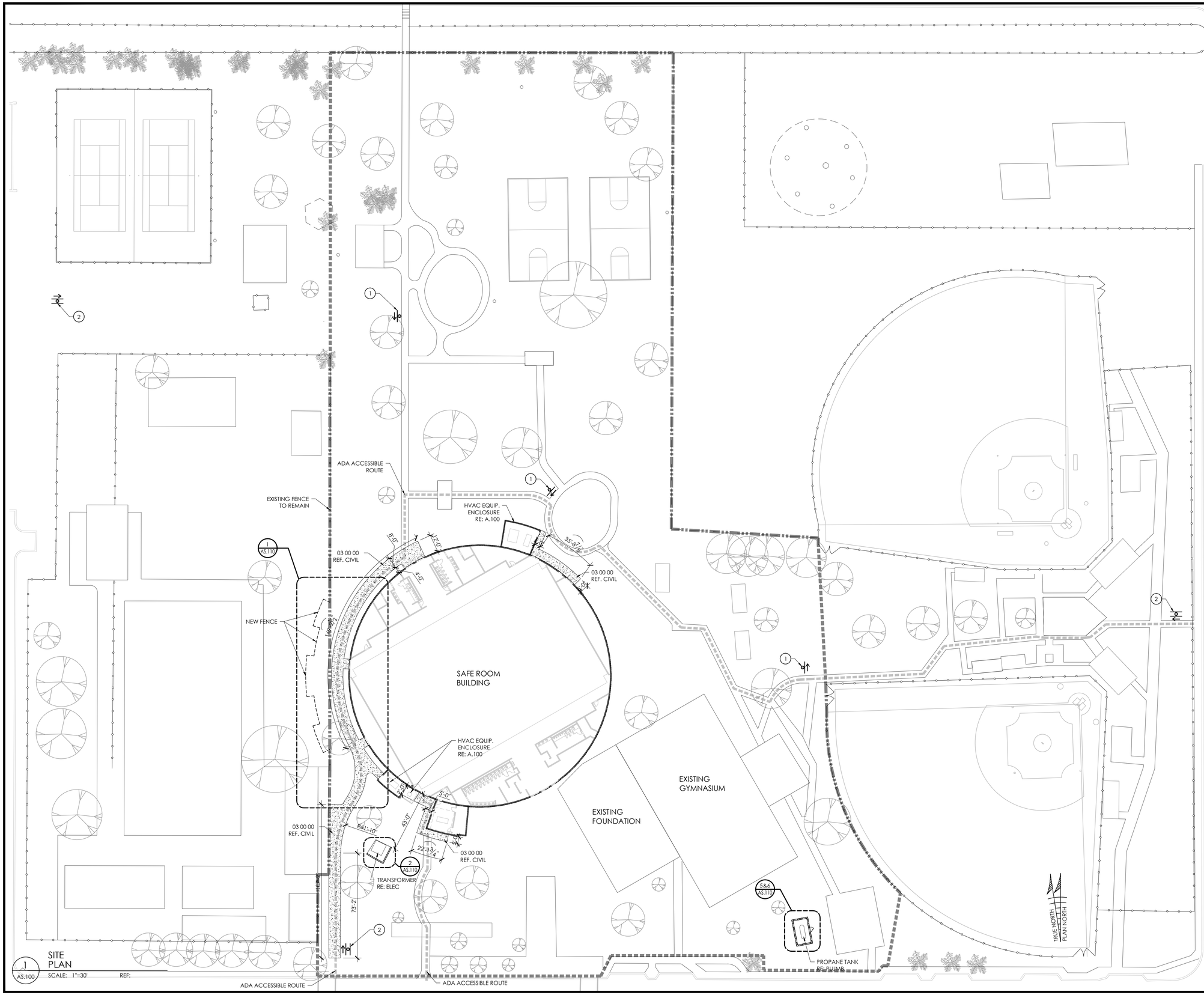
10.01.2013
CC

REVISIONS

EXISTING
DEMOLITION
PLAN

D.100



1 AS.100 SITE PLAN
SCALE: 1"=30' REF:

REFERENCE NOTES

03 00 00		CONCRETE (CIVIL)
03 30 00		CAST-IN-PLACE CONCRETE, RE: STRUCT.
04 05 03		MASONRY MORTARING AND GROUTING
04 20 00		UNIT MASONRY, RE: STRUCT FOR STRUCT WALLS
	A	8" CMU
	B	8" CMU BURNISHED ONE SIDE
	C	8" CMU BURNISHED BOTH SIDES
	D	CMU U BLOCK, RE: WALL FOR BURNISHING
	E	10" STRUCTURAL BRICK
	F	8" STRUCTURAL BRICK
	G	STRUCTURAL BRICK BOND BEAM UNIT
	H	STRUCTURAL BRICK U BLOCK
	I	LADDER/TRUSS JOINT REINFORCEMENT
	J	BLOCKNET FLASHING SYSTEM
	K	CMU SOAP CAP, MATCH WALL BURNISHING
	L	REINFORCING STEEL, RE: STRUCT.
05 12 00		STRUCTURAL STEEL FRAMING, RE: STRUCT.
05 21 00		STEEL JOIST FRAMING, RE: STRUCT.
05 31 00		STEEL DECKING, RE: STRUCT.
05 50 00		METAL FABRICATIONS
07 90 00		JOINT PROTECTION
10 14 00		SIGNAGE
10 14 16		CAST BUILDING PLAQUES AND LETTERS
32 31 13		CHAIN LINK FENCES AND GATES

KEY NOTES

1. ONE SIDED DIRECTIONAL SIGN. RE: A.002
2. TWO SIDED DIRECTIONAL SIGN. RE: A.002

LEGEND

- NEW CONCRETE SIDEWALK RE: CIVIL
- ADA ACCESSIBLE PATH
- ADDED CONSTRUCTION FENCE WITH SILT FENCE ALONG IT
- SILT FENCE ALONG EXISTING FENCE

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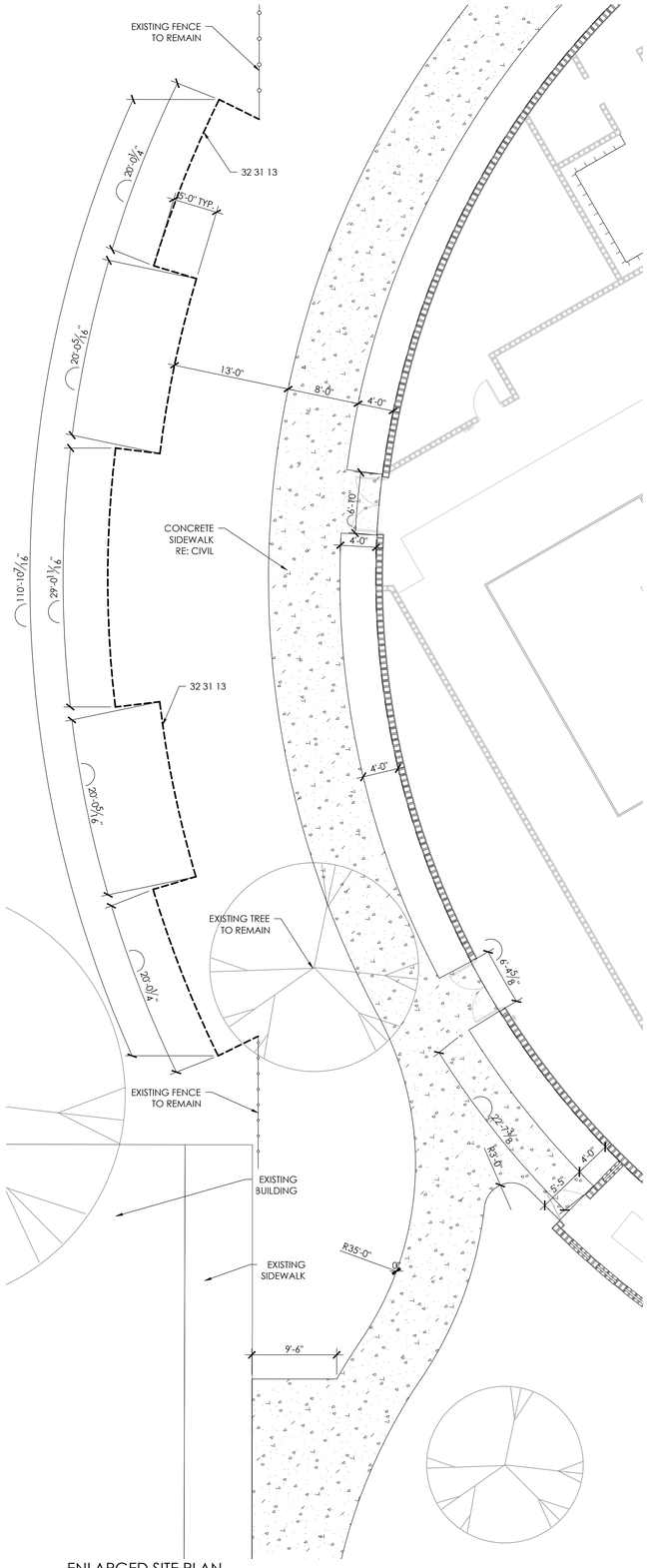
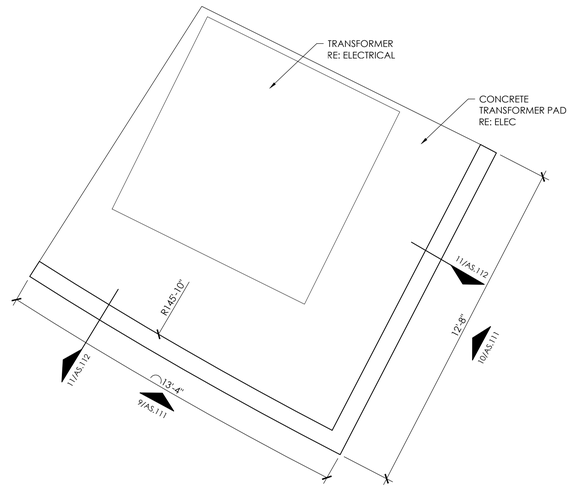
ARCHITECTURAL SITE PLAN

AS.100



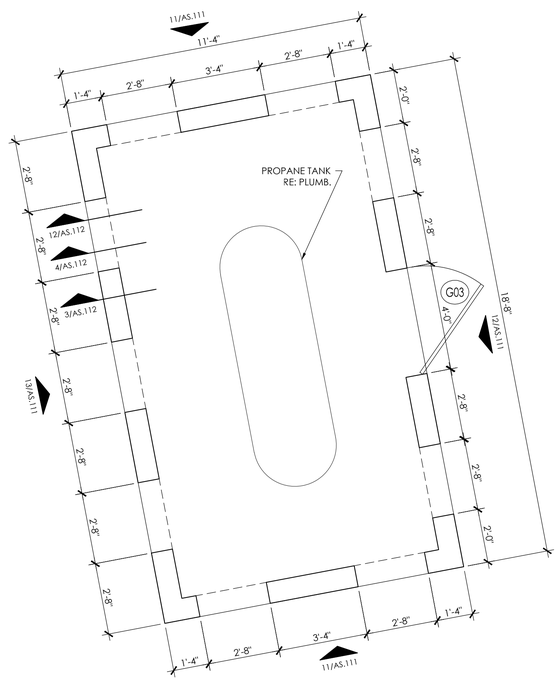
1 AS.110 ENLARGED SITE PLAN WEST @ NEW FENCE
SCALE: 1/8"=1'-0" REF: 1/AS.100



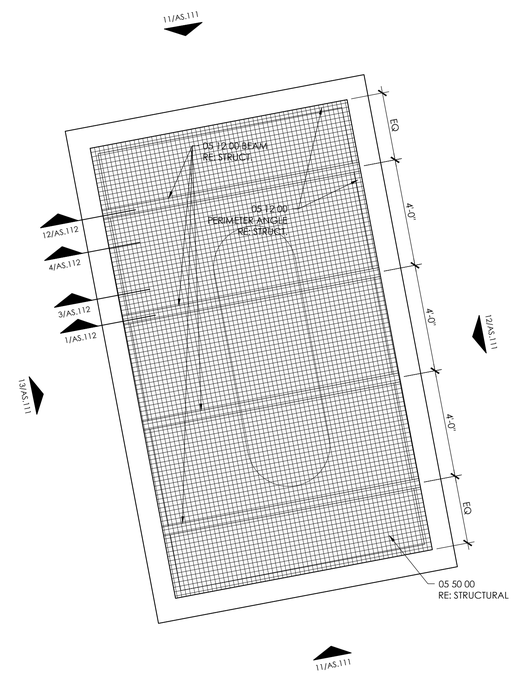
2 AS.110 ENLARGED SITE PLAN TRANSFORMER
SCALE: 3/8"=1'-0" REF: 1/AS.100

3 AS.110 NOT USED
SCALE: REF:

4 AS.110 NOT USED
SCALE: REF:



5 AS.110 ENLARGED SITE PLAN PROPANE TANK PLAN
SCALE: 3/8"=1'-0" REF: 1/AS.100



6 AS.110 ENLARGED SITE PLAN PROPANE TANK ROOF PLAN
SCALE: 3/8"=1'-0" REF: 1/AS.100

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	G	STRUCTURAL BRICK BOND BEAM UNIT
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05 21 00		STEEL JOIST FRAMING, RE: STRUCT.
05 31 00		STEEL DECKING, RE: STRUCT.
05 50 00		METAL FABRICATIONS
07 90 00		JOINT PROTECTION
10 14 00		SIGNAGE
10 14 16		CAST BUILDING PLAQUES AND LETTERS
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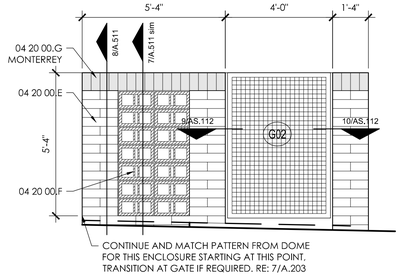
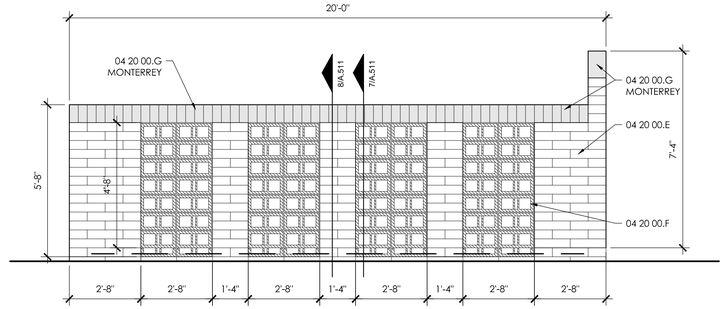
ENLARGED SITE PLANS

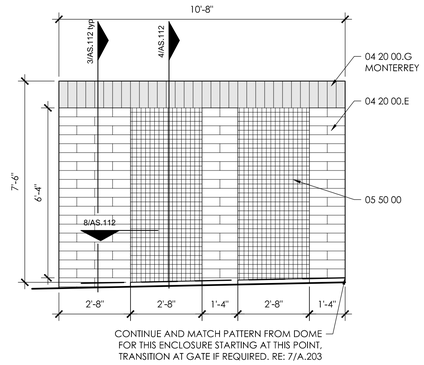
AS.110



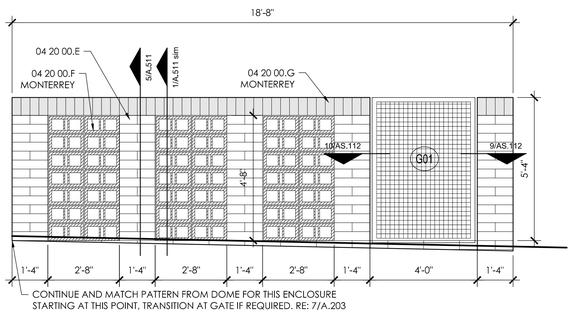
1 AS.111 NORTH ELEVATION
WEST MECHANICAL ENCLOSURE
SCALE: 3/8"=1'-0" REF: 1/A.100



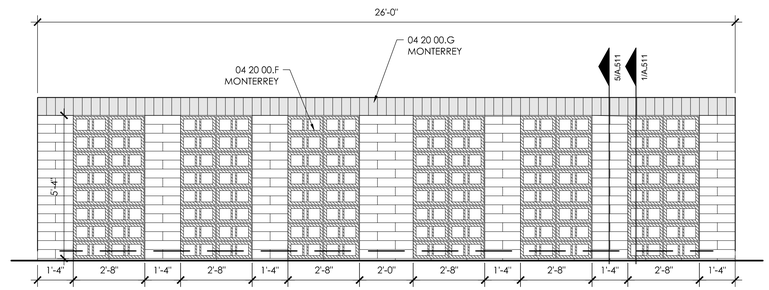
2 AS.111 WEST ELEVATION
WEST MECHANICAL ENCLOSURE
SCALE: 3/8"=1'-0" REF: 1/A.100



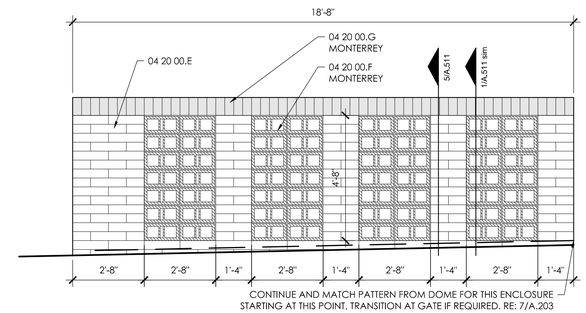
3 AS.111 SOUTH ELEVATION
WEST MECHANICAL ENCLOSURE
SCALE: 3/8"=1'-0" REF: 1/A.100



4 AS.111 SOUTH ELEVATION
EAST MECHANICAL ENCLOSURE
SCALE: 3/8"=1'-0" REF: 1/A.100



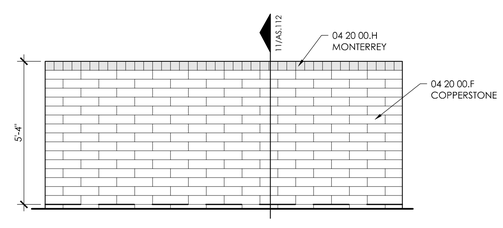
5 AS.111 EAST ELEVATION
EAST MECHANICAL ENCLOSURE
SCALE: 3/8"=1'-0" REF: 1/A.100



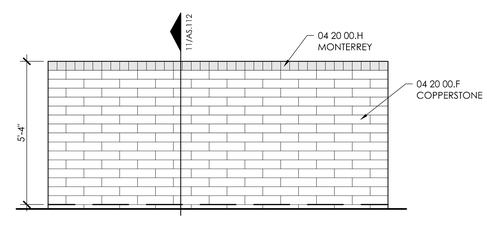
6 AS.111 NORTH ELEVATION
EAST MECHANICAL ENCLOSURE
SCALE: 3/8"=1'-0" REF: 1/A.100

7 AS.111 NOT USED
SCALE: REF:

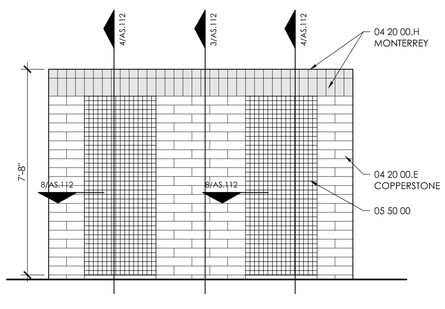
8 AS.111 NOT USED
SCALE: REF:



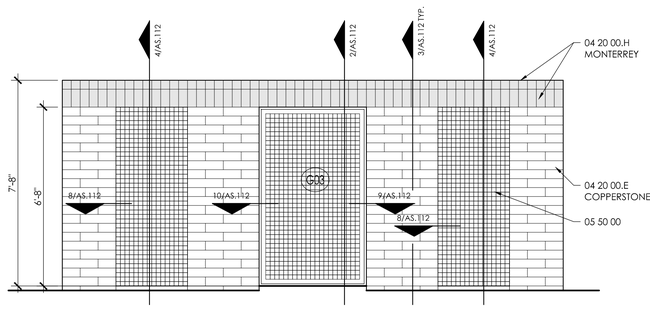
9 AS.111 SOUTH ELEVATION
SITE WALL AT TRANSFORMER
SCALE: 3/8"=1'-0" REF: 2/AS.100



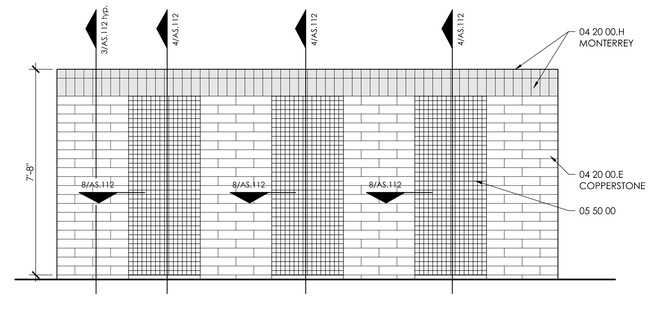
10 AS.111 EAST ELEVATION
SITE WALL AT TRANSFORMER
SCALE: 3/8"=1'-0" REF: 2/AS.100



11 AS.111 NORTH/SOUTH ELEVATIONS
ENCLOSURE AT PROPANE TANK
SCALE: 3/8"=1'-0" REF: 5/AS.110



12 AS.111 EAST ELEVATION
ENCLOSURE AT PROPANE TANK
SCALE: 3/8"=1'-0" REF: 5/AS.110



13 AS.111 WEST ELEVATION
ENCLOSURE AT PROPANE TANK
SCALE: 3/8"=1'-0" REF: 5/AS.110

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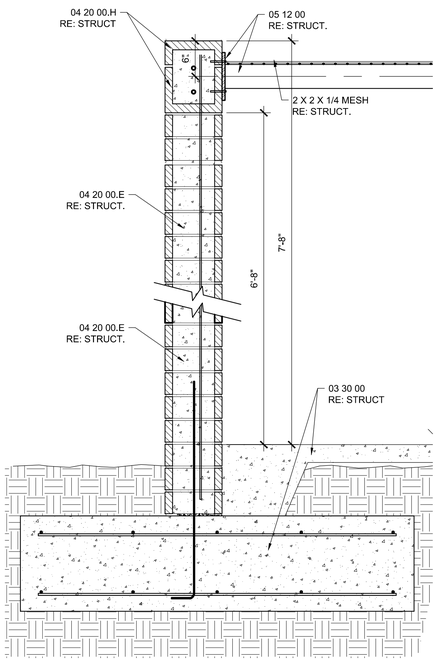
bwm

REVISIONS

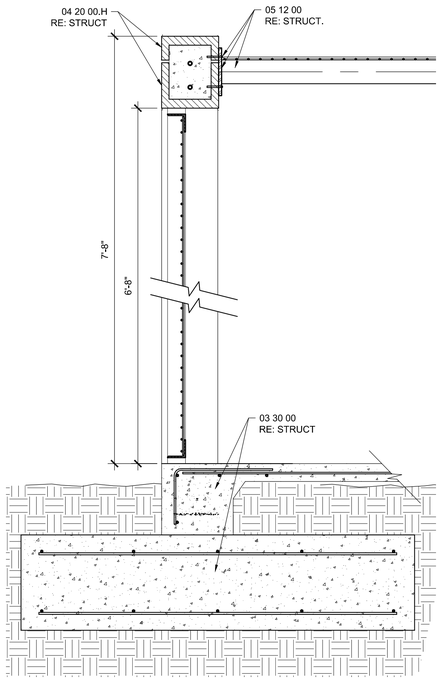
SR

SITE ELEVATIONS

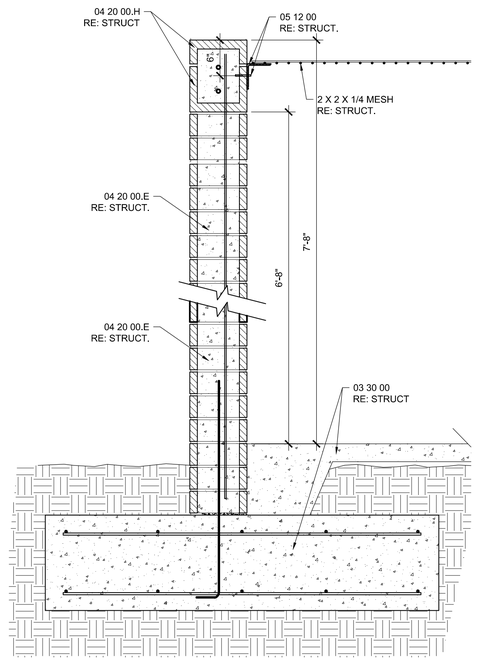
AS.111



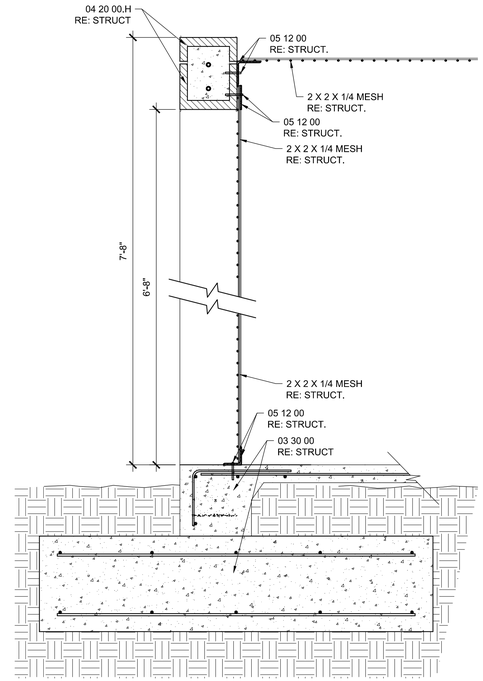
1 AS.112 SITE WALL AT OVERHEAD BEAM PROPANE ENCLOSURE
SCALE: 1"=1'-0" REF: 5/AS.110



2 AS.112 SITE WALL AT OVERHEAD BEAM/GATE AT PROPANE ENCLOSURE
SCALE: 1"=1'-0" REF: 5/AS.110



3 AS.112 SITE WALL AT PROPANE ENCLOSURE
SCALE: 1"=1'-0" REF: 5/AS.110

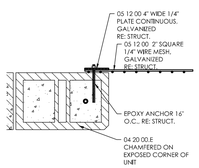


4 AS.112 SITE WALL AT WALL OPENING AT PROPANE ENCLOSURE
SCALE: 1"=1'-0" REF: 5/AS.110

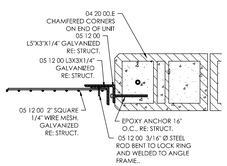
5 AS.112 NOT USED
SCALE: REF:

6 AS.112 NOT USED
SCALE: REF:

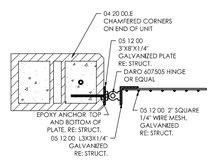
7 AS.112 NOT USED
SCALE: REF:



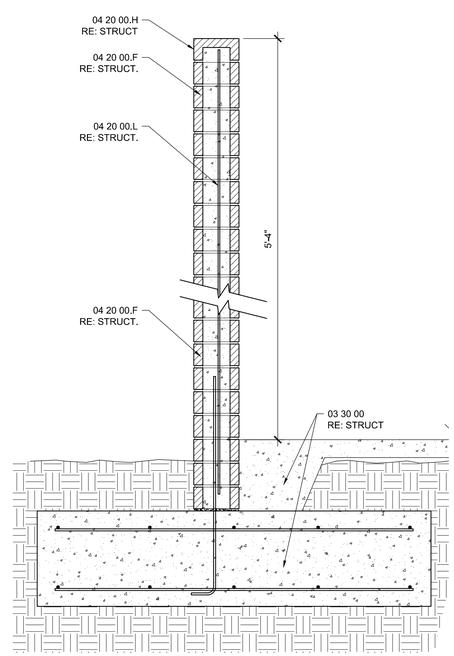
8 AS.112 JAMB AT SCREENED OPENING MECH/PROPANE ENCLOSURES
SCALE: 1"-1'-0" REF: 1/AS.111



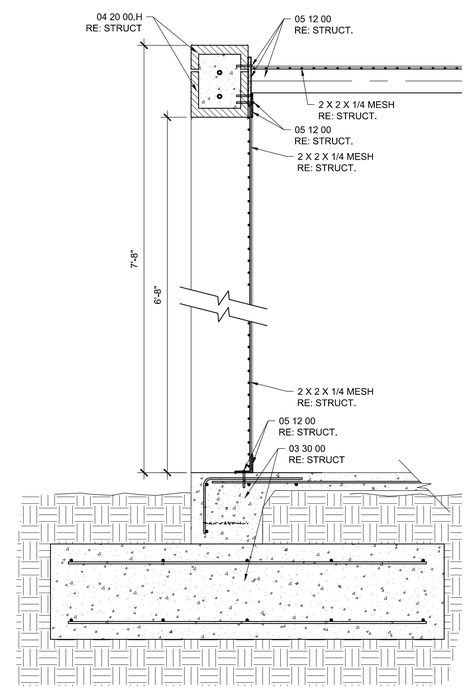
9 AS.112 STRIKE JAMB AT GATES MECH/PROPANE ENCLOSURES
SCALE: 1"-1'-0" REF: 3/AS.111



10 AS.112 HINGE JAMB AT GATE MECH/PROPANE ENCLOSURES
SCALE: 1"-1'-0" REF: 1/AS.111



11 AS.112 SCREEN WALL AT TRANSFORMER
SCALE: 1"-1'-0" REF: 2/AS.110



12 AS.112 SITE WALL AT OVERHEAD BEAM/WALL OPENING AT PROPANE ENCLOSURE
SCALE: 1"-1'-0" REF: 2/AS.110

REFERENCE NOTES

03 00 00		CONCRETE (CIVIL)
03 30 00		CAST-IN-PLACE CONCRETE, RE: STRUCT.
04 05 03		MASONRY MORTARING AND GROUTING
04 20 00		UNIT MASONRY, RE: STRUCT FOR STRUCT WALLS
	A	8" CMU
	B	8" CMU BURNISHED ONE SIDE
	C	8" CMU BURNISHED BOTH SIDES
	D	CMU U BLOCK, RE: WALL FOR BURNISHING
	E	10" STRUCTURAL BRICK
	F	8" STRUCTURAL BRICK
	G	STRUCTURAL BRICK BOND BEAM UNIT
	H	STRUCTURAL BRICK U BLOCK
	I	LADDER/TRUSS JOINT REINFORCEMENT
	J	BLOCKNET FLASHING SYSTEM
	K	CMU SOAP CAP, MATCH WALL BURNISHING
	L	REINFORCING STEEL, RE: STRUCT.
05 12 00		STRUCTURAL STEEL FRAMING, RE: STRUCT.
05 21 00		STEEL JOIST FRAMING, RE: STRUCT.
05 31 00		STEEL DECKING, RE: STRUCT.
05 50 00		METAL FABRICATIONS
07 90 00		JOINT PROTECTION
10 14 00		SIGNAGE
10 14 16		CAST BUILDING PLAQUES AND LETTERS
32 31 13		CHAIN LINK FENCES AND GATES

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REGISTERED ARCHITECT
DAVID NEGRETE
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STATE OF TEXAS

ISSUED: 10.15.2013

CITY OF EDINBURG
SAFE ROOM - SOUTH PARK SITE
315 E. PALM DRIVE
EDINBURG, TX

08/07/2013
JLB

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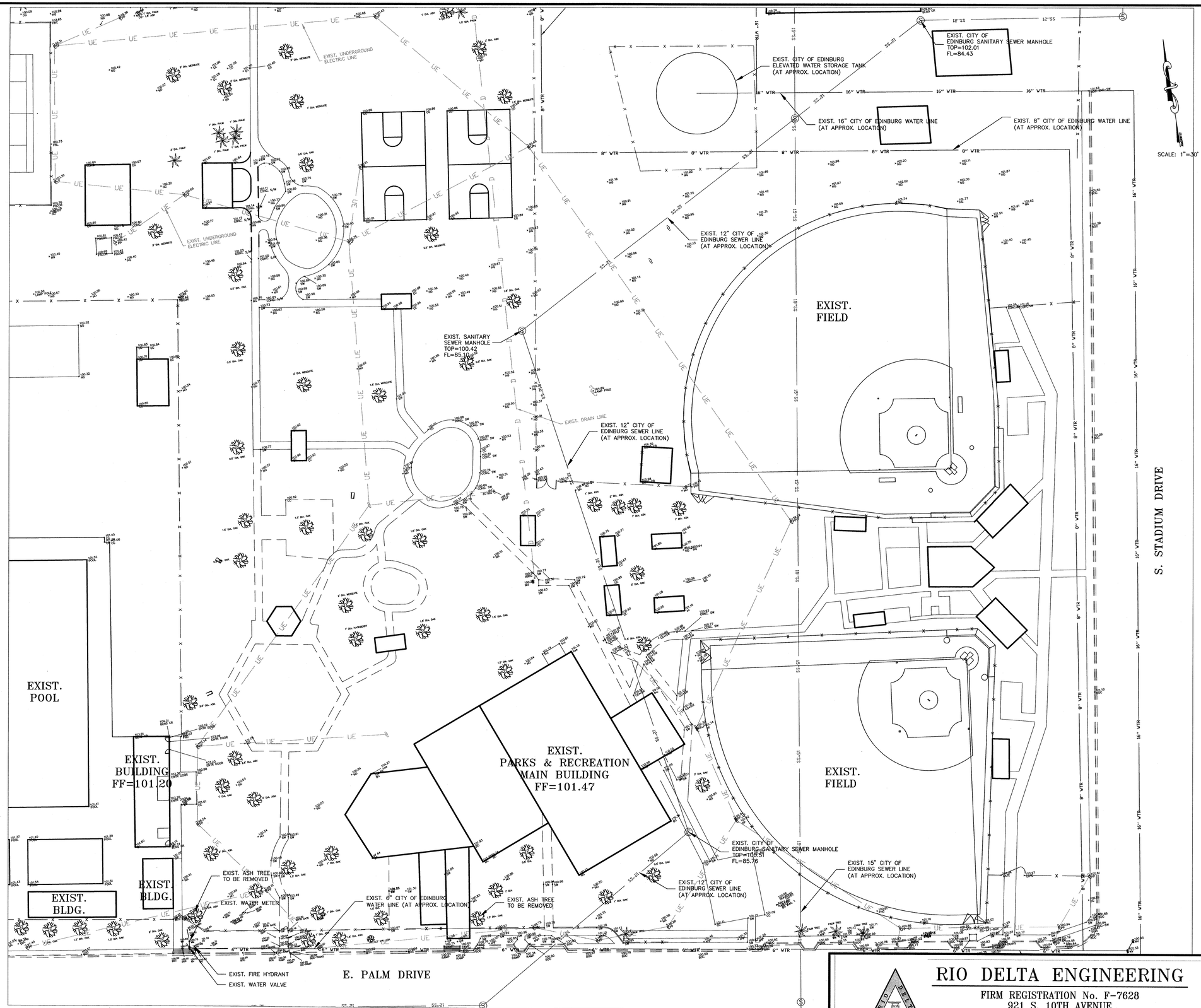
SITE DETAILS

AS.112



EXIST. TOPOGRAPHIC LAYOUT

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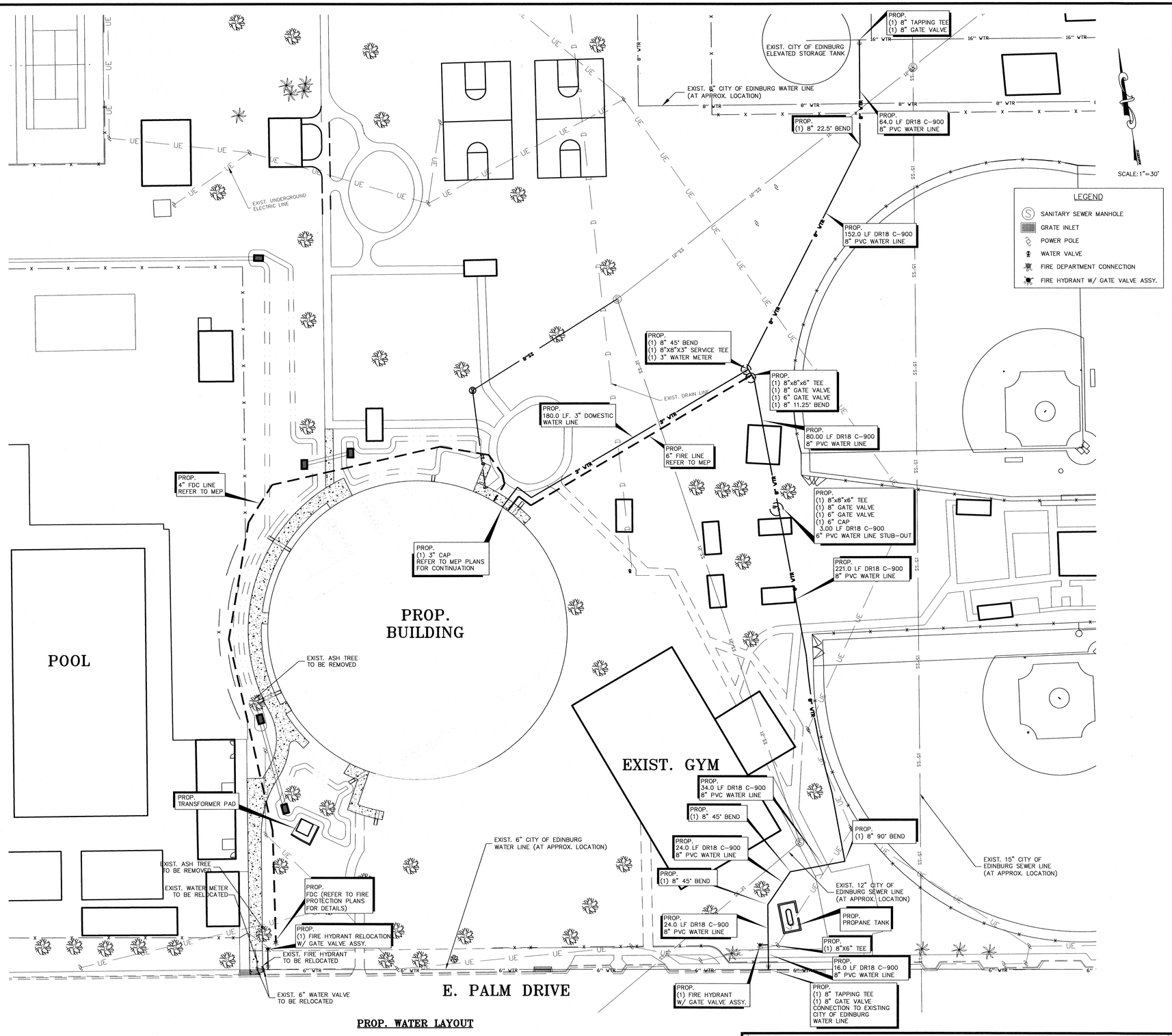

PROP. WATER LAYOUT

GENERAL NOTES:

1) ALL WATER LINE MAINS SHALL BE DR C-900 PIPE, UNLESS OTHERWISE NOTED.
2) ALL WATER LINES SHALL BE CONNECTED TO BUILDING STUBOUTS (WHERE APPLICABLE)

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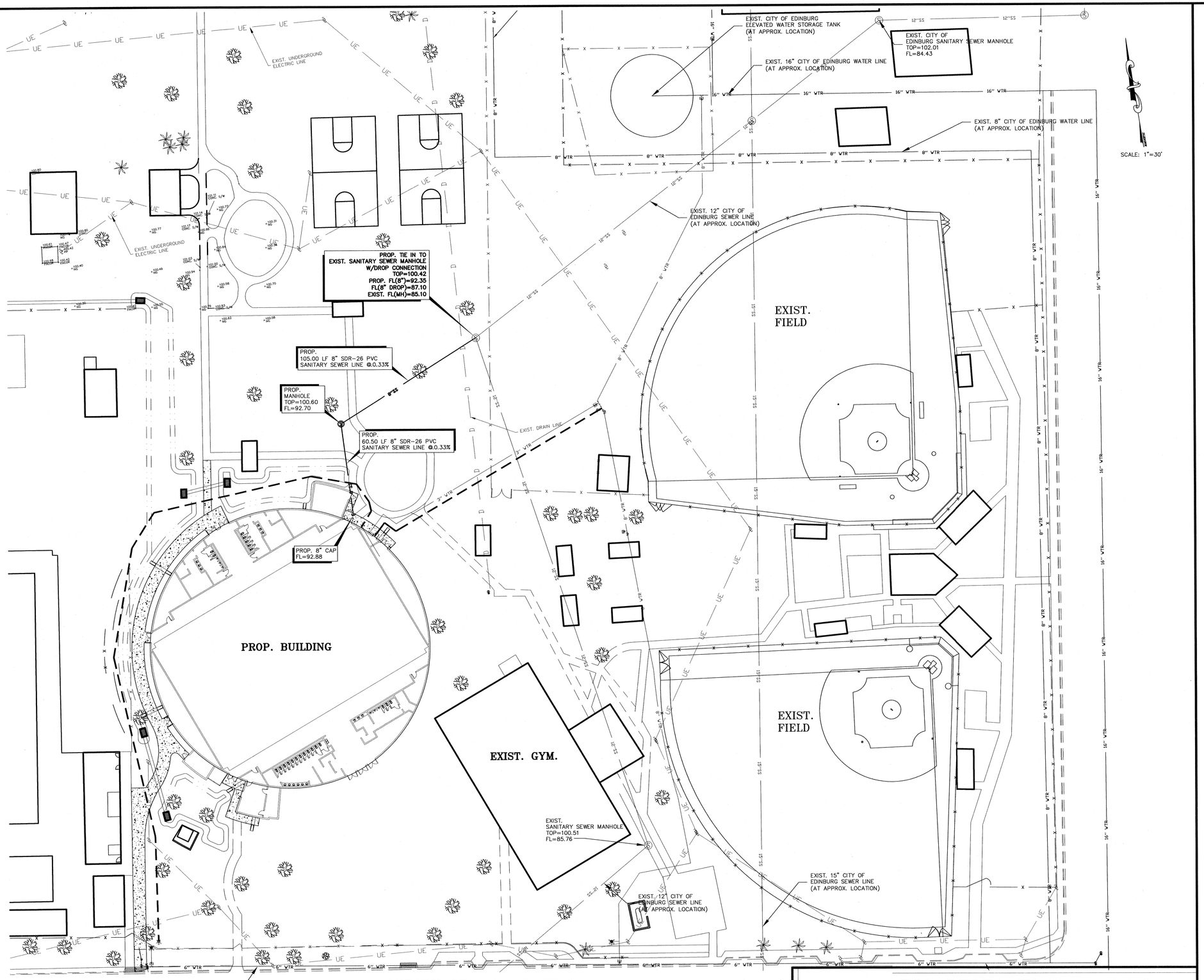
C2



PROP. SANITARY SEWER LAYOUT

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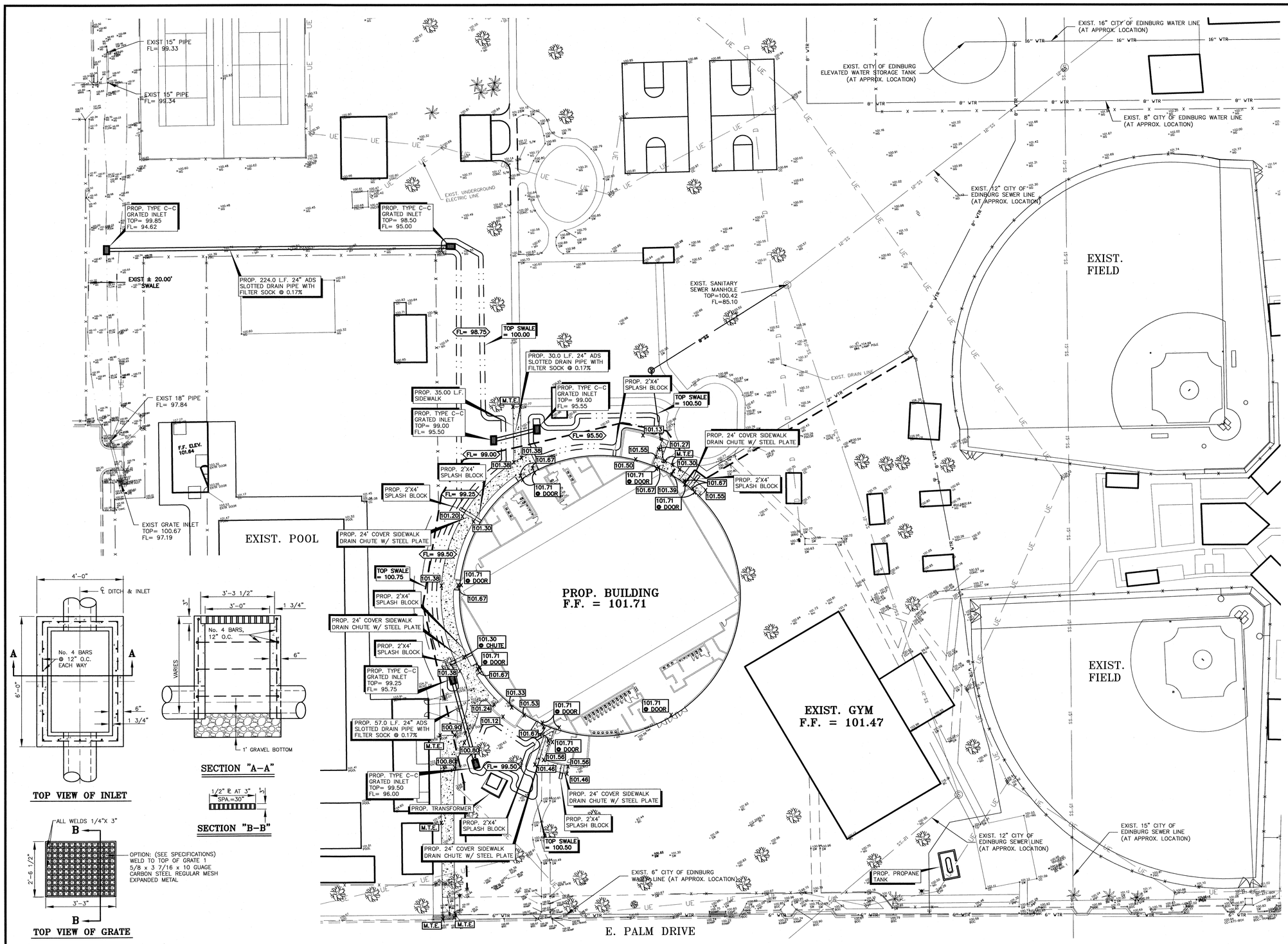
C3



OVERALL PAVING AND DRAINAGE LAYOUT

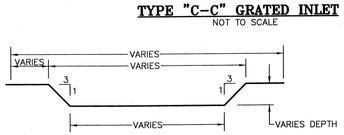
TOP VIEW OF INLET

SECTION "A-A"

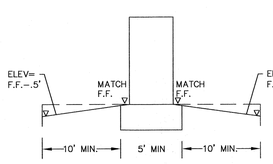
TOP VIEW OF GRATE

SECTION "B-B"

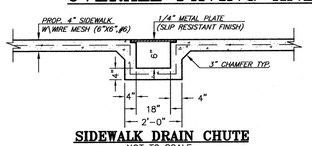
TYPE "C-C" GRATED INLET
NOT TO SCALE



DRAINAGE SWALE CROSS-SECTION
NOT TO SCALE



TYPICAL DOOR RAMP DETAIL
NOT TO SCALE



SIDEWALK DRAIN CHUTE
NOT TO SCALE

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SCALE: 1"=30'

LEGEND

- SANITARY SEWER MANHOLE
- GRATE INLET
- POWER POLE
- WATER VALVE
- FIRE DEPARTMENT CONNECTION
- FIRE HYDRANT W/ GATE VALVE ASSY.

NOTE:
1.- ALL GRATE INLETS IN DETENTION AREAS SHALL HAVE OPEN BOTTOMS. (SEE DETAIL)

2.- THE DEVELOPED AREA IS IN ZONE "X", AREAS DETERMINED TO BE OUTSIDE 500 YEAR FLOOD PLAIN ACCORDING TO FEMA's FLOOD INSURANCE RATE MAP COMMUNITY PANEL No 480338 0035 E, REVISED JUNE 6, 2000

GENERAL NOTE:

1. ALL ELEVATIONS SHOWN ARE TO THE TOF OF CURB/SIDEWALK UNLESS STATED OTHERWISE

NOTE:

1. CONTRACTOR TO ENSURE TO MATCH THE FINISH FLOOR AT NORTH END OF EXIST. GYM BUILDING FOR DOOR LOCATIONS.

2. ALL GRATE INLETS IN DETENTION AREAS SHALL HAVE OPEN BOTTOMS. (SEE DETAIL)

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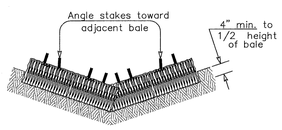
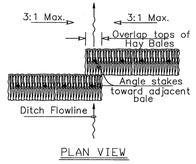
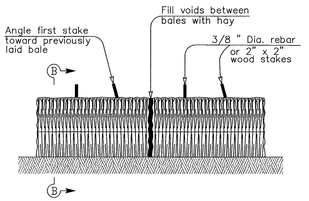
Y:\RGE ENGINEERING 2012\ENG 12.213 - CGE P AND R FACILITY RENOVATION\dwg\SR SET 9-13-13\SH 4 - PAVING AND DRAINAGE LAYOUT.dwg, 10/23/2013 2:38:42 PM, \\SER ERCK3\Ceo Plot.pc3 - PD2



PROFILE VIEW

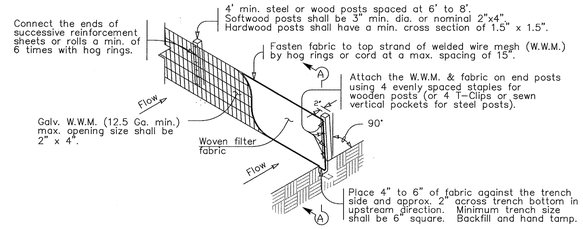


PLAN VIEW



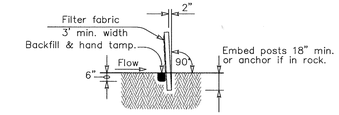
BALED HAY FOR EROSION CONTROL

BH



TEMPORARY SEDIMENT CONTROL FENCE

SCF



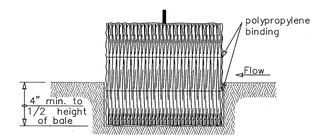
SECTION A-A

PLAN SHEET LEGEND

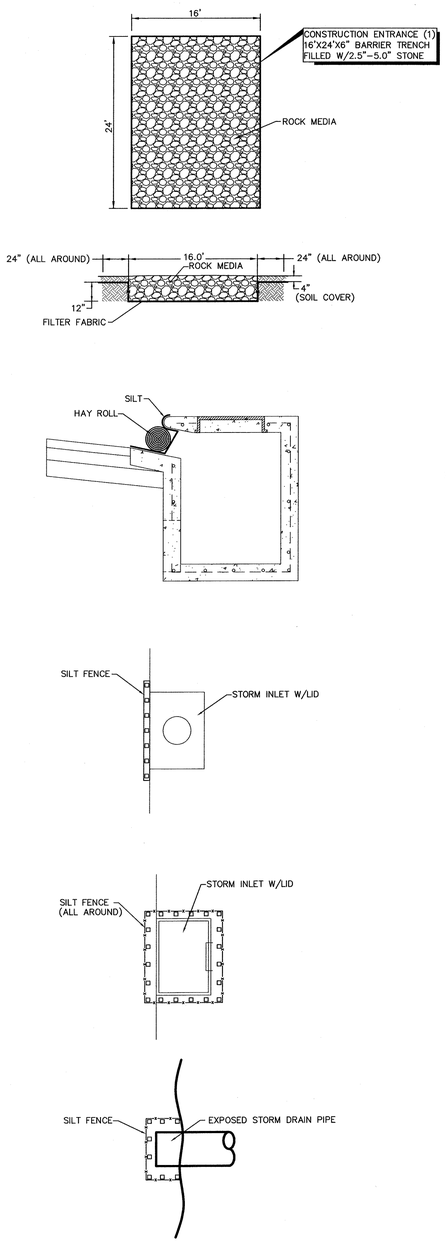
Sediment Control Fence — SCF

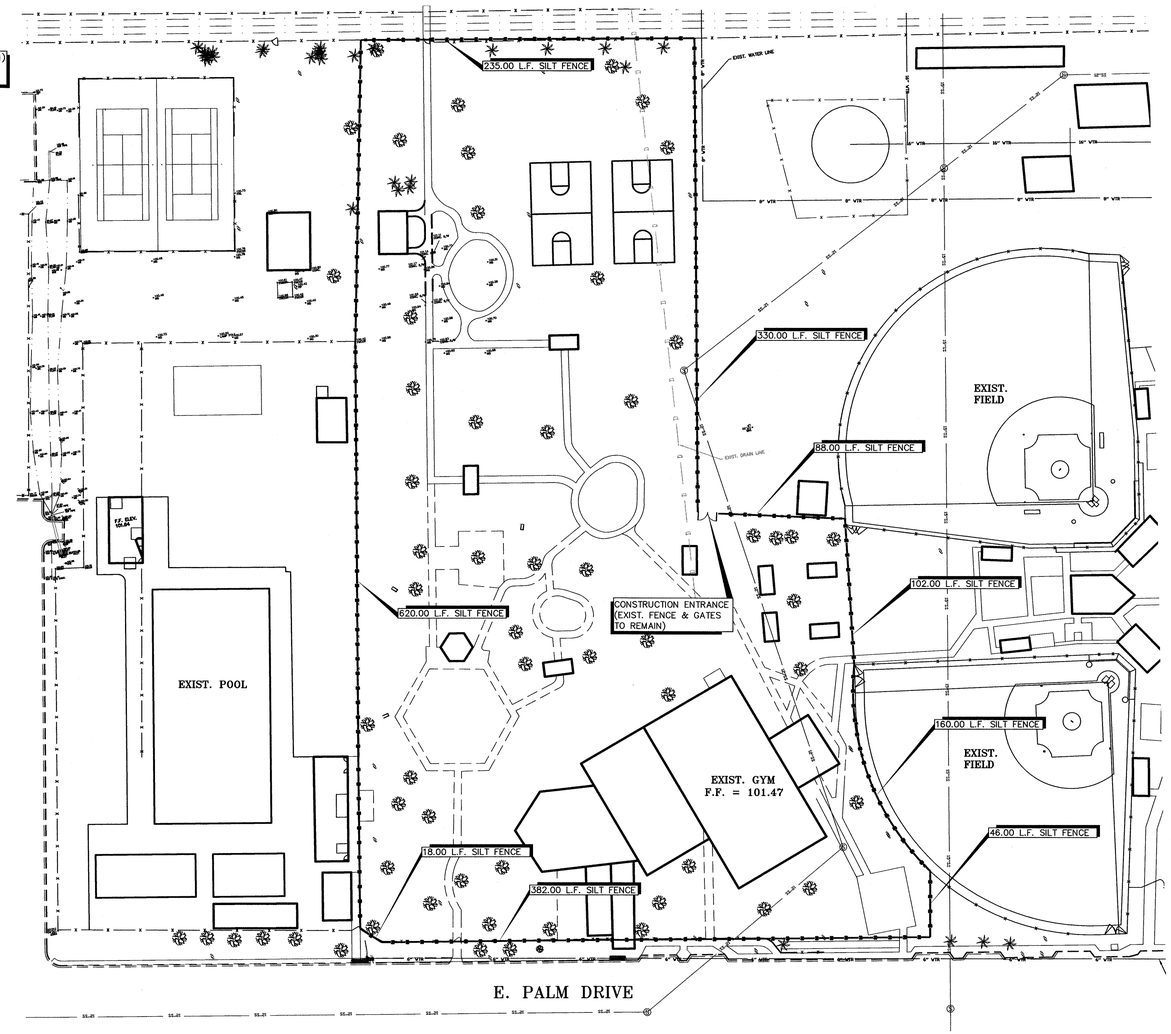
PLANS SHEET LEGEND

Baled Hay — BH



SECTION B-B





EROSION CONTROL PLAN

NOTE:

1. COORDINATE WITH CITY OF EDINBURG FOR ACCES/EGRESS, AND CONSTRUCTION HOURS.

2. CONSTRUCTION ENTRANCE LOCATION TO BE DETERMINED BY CITY OF EDINBURG PRIOR TO BEGINNING OF CONSTRUCTION.

3. THE CONTRACTOR SHALL PROVIDE AND ADMINISTER STORM WATER POLLUTION PREVENTION PLAN (SW3P) PRIOR TO COMMENCEMENT AND DURING CONSTRUCTION AS REQUIRED BY THE CITY OF EDINBURG AND/OR TCEQ.

GENERAL NOTES

1. Hay bales shall be a minimum of 30" in length and weigh a minimum of 50 Lbs.
2. Hay bales shall be bound by either wire or nylon or polypropylene string. The bales shall be composed entirely of vegetative matter.
3. Hay bales shall be embedded in the soil a minimum of 4" and where possible 1/2 the height of the bale.
4. Hay bales shall be placed in a row with ends tightly abutting the adjacent bales. The bales shall be placed with bindings parallel to the ground.
5. Hay bales shall be securely anchored in place with 3/8 " Dia. rebar or 2" x 2" wood stakes, driven through the bales. The first stake shall be angled towards the previously laid bale to force the bales together.
6. The guidelines shown hereon are suggestions only and may be modified by the Engineer.
7. The proposed construction entrance will be the only entrance to the site, except for emergency access, used throughout the duration of the construction, or until the proposed drives are paved.
8. The silt fence shall be maintained in place until the site is vegetated.
9. The construction entrance aggregate shall be replaced as needed.
10. All exposed entrance to storm drain pipes and to storm inlets, once installed, shall be protected against sedimentary flows until the development and landscaping has been completed.

BALED HAY USAGE GUIDELINES

A Baled Hay installation may be constructed near the downstream perimeter of a disturbed area along a contour to intercept sediment from overland runoff. A two year storm frequency may be used to calculate the flow rate to be filtered. The installation should be sized to filter a maximum flow thru rate of 5 GPM/FT^2 of cross sectional area. Baled hay may be used at the following locations:

1. Where the runoff approaching the baled hay flows over disturbed soil for less than 100'. If the slope of the disturbed soil exceeds 10%, the length of slope upstream the baled hay should be less than 50'.
2. Where the installation will be required for less than 3 months.
3. Where the contributing drainage area is less than 1/2 acre.

For Baled Hay installations in small ditches, the additional following considerations apply:

1. The ditch sideslopes should be graded as flat as possible to maximize the drainage flowrate thru the hay.
2. The ditch should be graded large enough to contain the overtopping drainage when sediment has filled to the top of the baled hay.

Bales should be replaced usually every 2 months or more often during wet weather when loss of structural integrity is accelerated.

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SCALE: 1"=50'

LEGEND

- SANITARY SEWER MANHOLE
- GRATE INLET
- POWER POLE
- WATER VALVE
- FIRE DEPARTMENT CONNECTION
- FIRE HYDRANT W/ GATE VALVE ASSY.

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SAFE ROOM - SOUTH PARK SITE
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SR

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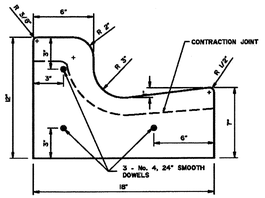
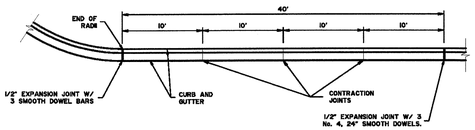


GENERAL NOTES:
1. CONCRETE SHALL BE 3000 P.S.I COMPRESSIVE STRENGTH AT 28 DAY.
2. ALL CONCRETE WORK SHALL BE TREATED WITH MEMBRANE CURING COMPOUND TYPE 2 WHITE PIGMENTED IN ACCORDANCE w/ TEXAS DEPARTMENT OF TRANSPORTATION DEPARTMENTAL MATERIALS SPECIFICATION ITEM 4650. CONSIDERED INCIDENTAL TO CONCRETE WORK.
3. 1/2" EXPANSION JOINTS REQUIRED AT 40' c.c. AND AT THE BEGINNING AND END OF ALL RADII. CONTRACTION JOINTS SHALL NOT EXCEED 10' c.c.
4. EXPANSION JOINTS SHALL HAVE 1/2 EXPANSION JOINT MATERIAL, AND 3 No. 4, 24" SMOOTH DOWEL BARS COATED TO PREVENT BOND.

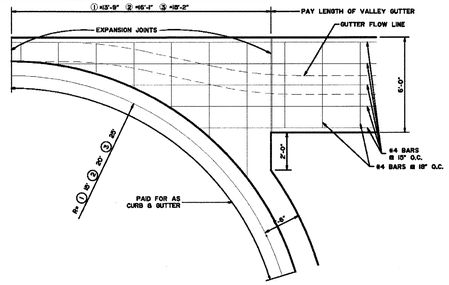
CURB AND GUTTER DETAIL

NOT TO SCALE

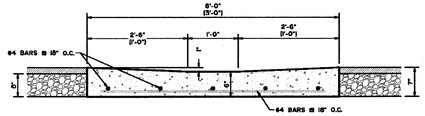


P-8 TYPICAL JOINTS

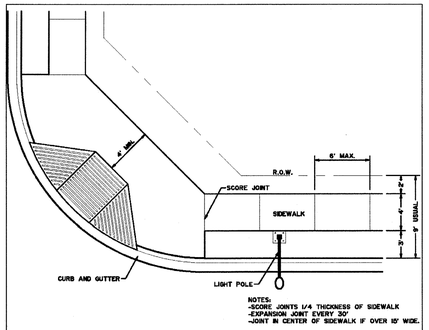
NOT TO SCALE



VALLEY GUTTER DETAIL

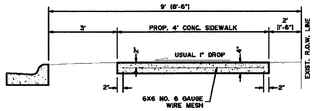


P-9 TYPICAL VALLEY GUTTER SECTION



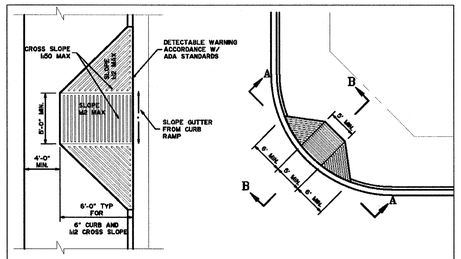
NOTES:
-SCORE JOINTS 1/4 THICKNESS OF SIDEWALK
-EXPANSION JOINT EVERY 30'
-JOINT IN CENTER OF SIDEWALK IF OVER 15' WIDE.

PLAN VIEW



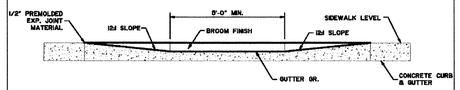
TYPICAL CONC. SIDEWALK

P-10 TYPICAL CONCRETE SIDEWALK DETAIL MINOR STREETS

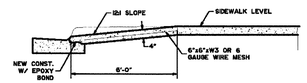


PLAN VIEW

PLAN VIEW



SECTION A-A

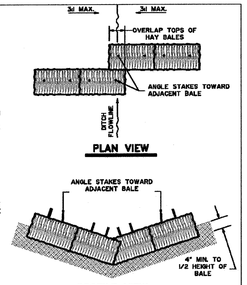


SECTION B-B

P-12 HANDICAP RAMP – DETAILS

GENERAL NOTES

1. HAY BALES SHALL BE A MINIMUM OF 30" IN LENGTH AND WEIGH A MINIMUM OF 50 LBS.
2. HAY BALES SHALL BE BOUND BY EITHER WIRE OR NYLON OR POLYPROPYLENE STRING. THE BALES SHALL BE COMPOSED ENTIRELY OF VEGETABLE MATTER.
3. HAY BALES SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4" AND WHERE POSSIBLE 1/2 THE HEIGHT OF THE BALE.
4. HAY BALES SHALL BE PLACED IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES. THE BALES SHALL BE PLACED WITH ENDWISE PARALLEL TO THE GROUND.
5. HAY BALES SHALL BE SECURELY ANCHORED IN PLACE WITH 3/8" DIA. REBAR OR 2" X 2" WOOD STAKES. DRIVEN THROUGH THE BALES. THE FIRST STAKE SHALL BE ANGLED TOWARDS THE PREVIOUSLY LAID BALE TO FORCE THE BALES TOGETHER.
6. THE GUIDELINES SHOWN HEREON ARE SUGGESTION ONLY AND MAY BE MODIFIED BY THE ENGINEER.

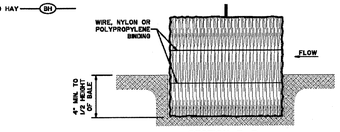


PLAN VIEW

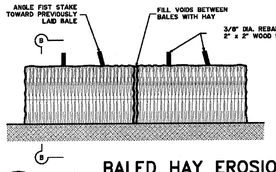
PROFILE VIEW

PLAN SHEET LEGEND

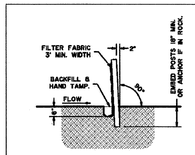
BALED HAY — BH



SECTION B-B



P-14 BALED HAY EROSION CONTROL – DETAILS



SECTION A-A

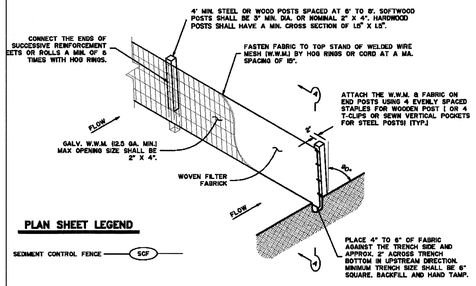
GENERAL NOTES

1. THE GUIDELINES SHOW HEREON ARE SUGGESTIONS ONLY AND MAY BE MODIFIED BY THE ENGINEER.

SEDIMENT CONTROL FENCE USAGE GUIDELINES

A SEDIMENT CONTROL FENCE MAY BE CONSTRUCTED NEAR THE DOWNSTREAM PERIMETER OF A DISTURBED AREA ALONG A CONTOUR TO INTERCEPT SEDIMENT FROM OVERLAND RUNOFF. A 2 YEAR STORM FREQUENCY MAY BE USED TO CALCULATE THE FLOW RATE TO BE FILTERED.

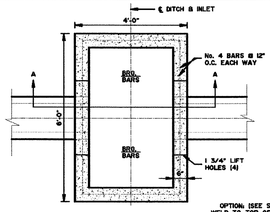
SEDIMENT CONTROL FENCE SHOULD BE SIZED TO FILTER A MAX. FLOW THROUGH RATE OF 100 GPM/FT². SEDIMENT CONTROL FENCE IS NOT RECOMMENDED TO CONTROL EROSION FROM A DRAINAGE AREA LARGER THAN 2 ACRES.



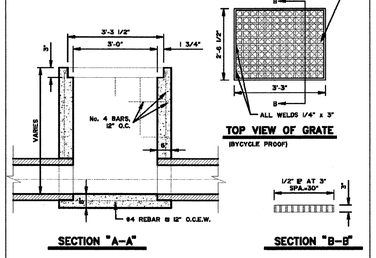
PLAN SHEET LEGEND

SEDIMENT CONTROL FENCE — SCF

P-15 TEMPORARY SEDIMENT CONTROL FENCE – DETAILS



TOP VIEW OF INLET



TOP VIEW OF GRATE

(BICYCLE PROOF)

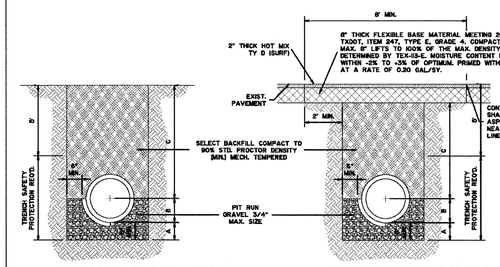
SECTION "A-A"

SECTION "B-B"

D-3 TYPE "C-C" GRATED INLET

(TWO GRATES PER INLET)

NOTE: WHEN UTILITY LOCATED WITHIN CITY R.O.W., ALL BACKFILL IS SUBJECT TO INSPECTION, TESTING AND APPROVAL BY THE CITY ENGINEER'S OFFICE



STANDARD PIPE BEDDING

STANDARD PIPE BEDDING

UNDER EXISTING PAVEMENT OR PROP. PAVEMENT

A. GRAVEL (3/4" MAX. SIZE) BEDDING PLACED BEFORE PIPE IS LAID UP TO FLOW LINE OF PIPE. (MIN. THICKNESS = 6")

B. GRAVEL. BACK FILL PLACED AFTER PIPE IS LAID FROM BOTTOM OF PIPE TO SPRING LINE OF PIPE. (4" LIFTS, MECH. TAMPED).

C. FILL TRENCH W/SELECT BACKFILL (Pi≤20), W/12" LIFTS COMPACT TO 90% STD. PROCTOR

FOUNDATION PREPARATION (WELLPOINTS, GRAVEL AND/OR CEMENT STABILIZATION, OR APPROVED SUBSTITUTE) SHALL BE REQUIRED WHEN TRENCH BOTTOM IS UNSTABLE.

BACK FILLING AT STRUCTURES SHALL BE PLACED IN UNIFORM LAYERS, MOISTENED AS REQUIRED TO APPROXIMATE OPTIMUM MOISTURE CONTENTS AND COMPACTED TO 90% STANDARD PROCTOR DENSITY. THE THICKNESS OF EACH LOOSE LAYER SHALL BE SAND, APPROVED SITE SOIL OR OTHER APPROVED SUBSTITUTE.

A. GRAVEL (3/4" MAX. SIZE) BEDDING PLACED BEFORE PIPE IS LAID UP TO FLOW LINE OF PIPE. (MIN. THICKNESS = 6")

B. GRAVEL. BACK FILL PLACED AFTER PIPE IS LAID FROM BOTTOM OF PIPE TO SPRING LINE OF PIPE. (4" LIFTS, MECH. TAMPED).

C. FILL TRENCH W/SELECT BACKFILL (Pi≤20), W/12" LIFTS COMPACT TO 90% STD. PROCTOR

FOUNDATION PREPARATION (WELLPOINTS, GRAVEL AND/OR CEMENT STABILIZATION, OR APPROVED SUBSTITUTE) SHALL BE REQUIRED WHEN TRENCH BOTTOM IS UNSTABLE.

BACK FILLING AT STRUCTURES SHALL BE PLACED IN UNIFORM LAYERS, MOISTENED AS REQUIRED TO APPROXIMATE OPTIMUM MOISTURE CONTENTS AND COMPACTED TO 90% STANDARD PROCTOR DENSITY. THE THICKNESS OF EACH LOOSE LAYER SHALL BE SAND, APPROVED SITE SOIL OR OTHER APPROVED SUBSTITUTE.

NOTE: ALL EXISTING STREET CROSSINGS SHALL REQUIRE SAND BACKFILL OF ENTIRE TRENCH.

D-8 STANDARD PIPE BEDDING – DETAILS

RIO DELTA ENGINEERING
FIRM REGISTRATION No. F-7628
921 S. 10TH AVENUE
EDINBURG TEXAS 78539
(TEL) 956-380-5152 (FAX) 956-380-5083

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AUSTIN TEXAS 78702
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EDINBURG, TX 78539
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NEGRETE & KOLAR ARCHITECTS LLP
WWW.NEKOARCH.COM

ISSUED: 10-15-2013

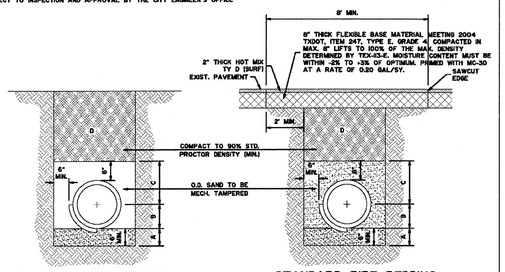
CITY OF EDINBURG
SAFE ROOM - SOUTH PARK SITE
315 E. PALM DRIVE
EDINBURG, TX

REVISIONS
-

SR

C6

NOTE: WHEN UTILITY LOCATED WITHIN CITY R.O.W., ALL BACK FILL IS SUBJECT TO INSPECTION AND APPROVAL BY THE CITY ENGINEER'S OFFICE



STANDARD PIPE BEDDING (MAIN & SERVICE LATERALS)

W-4

APPLICABLE BENEATH FUTURE/UNPAVED STREETS

A. SAND BEDDING PLACED BEFORE PIPE IS LAID UP TO FLOW LINE OF PIPE. (MIN. THICKNESS = 6")

B. SAND BACK FILL PLACED AFTER PIPE IS LAID FROM BOTTOM OF PIPE TO SPRING LINE OF PIPE. (4" LIFTS, MECH. TAMPED).

C. SAND BACK FILL PLACED FROM SPRING LINE OF PIPE TO 6" ABOVE TOP OF PIPE. (6" LIFTS, MECH. TAMPED).

D. FILL TRENCH W/SELECT BACKFILL, W/12" LIFTS COMPACT TO 90% STD. PROCTOR.

FOUNDATION PREPARATION (WELL POINTS, GRAVEL OR CEMENT STABILIZATION, OR APPROVED SUBSTITUTE)
SHALL BE REQUIRED WHEN TRENCH BOTTOM IS UNSTABLE.

BACK FILLING AT STRUCTURES SHALL BE PLACED IN UNIFORM LAYERS, MOISTENED AS REQUIRED TO
APPROXIMATE OPTIMUM MOISTURE CONTENTS AND
COMPACTED TO 95% STANDARD PROCTOR DENSITY.
THE THICKNESS OF EACH LOOSE LAYER SHALL BE SAND, APPROVED SITE SOIL OR OTHER APPROVED SUBSTITUTE.

STANDARD PIPE BEDDING (MAIN ONLY)

(PARALLEL WITHIN EXIST. STREET)

A. SAND BEDDING PLACED BEFORE PIPE IS LAID UP TO FLOW LINE OF PIPE. (MIN. THICKNESS = 6")

B. SAND BACK FILL PLACED AFTER PIPE IS LAID FROM BOTTOM OF PIPE TO SPRING LINE OF PIPE. (4" LIFTS, MECH. TAMPED).

C. SAND BACK FILL PLACED FROM SPRING LINE OF PIPE TO 6" ABOVE TOP OF PIPE. (6" LIFTS, MECH. TAMPED).

D. FILL TRENCH W/SELECT BACKFILL, W/12" LIFTS COMPACT TO 90% STD. PROCTOR.

FOUNDATION PREPARATION (WELL POINTS, GRAVEL OR CEMENT STABILIZATION, OR APPROVED SUBSTITUTE)
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COMPACTED TO 95% STANDARD PROCTOR DENSITY.
THE THICKNESS OF EACH LOOSE LAYER SHALL BE SAND, APPROVED SITE SOIL OR OTHER APPROVED SUBSTITUTE.

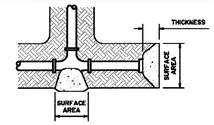
NOTE: ALL EXISTING/ACTIVE STREET CROSSINGS SHALL REQUIRE SAND BACKFILL OF ENTIRE TRENCH. (SEE DETAIL S-6)

THRUST BLOCK SIZE			
HORIZONTAL BENDS			
DIAMETER OF PIPE IN INCHES	SURFACE AREA SQ. FT.	THICKNESS IN INCHES	WEIGHT AT VERTICAL BENDS-LBS.
22-1/2" BENDS			
6 OR LESS	2	8	1,700
8	3	12	3,000
10	3.5	12	4,500
12	4	14	6,600
14	5	18	9,000
16	6	18	11,800
45° BEND			
6 OR LESS	4	12	3,200
8	5	14	5,800
10	6	18	9,000
12	7	18	13,000
14	8	24	17,000
16	8.5	24	23,200
90° BEND			
6 OR LESS	6	12	6,000
8	8	15	10,700
10	10	18	16,700
12	12	18	24,000
14	18	24	32,600
16	21	24	42,700
TEES & DEAD ENDS			
6 OR LESS	3	12	--
8	4	15	--
10	6	18	--
12	8.5	15	--
14	11.5	24	--
16	15	24	--

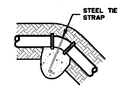
NOTE:
ALL VALUES SHOWN ARE MIN. FOR A HYDROSTATIC PRESSURE OF 150 P.S.I. AND A SOIL RESISTANCE OF 2,000 LBS. PER SQ./FT. WITH PIPELINE HAVING A MIN. OF 3 FT. OF COVER WITH CURB & GUTTER AND A 6 FT. MIN. WITHOUT CURB & GUTTER

W-5 THRUST BLOCKS DETAILS

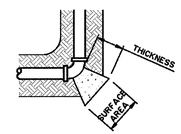
NOTE: SEE THRUST BLOCK SIZE CHART FOR PROPER THICKNESS AND SURFACE AREAS



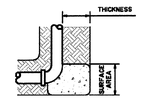
TEES & DEAD ENDS



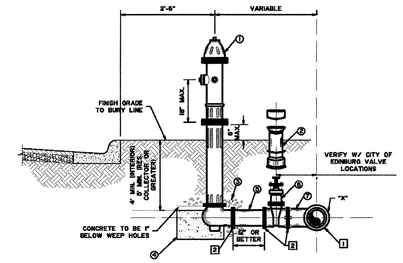
VERTICAL BENDS



HORIZONTAL BENDS



HYDRANT BURYS



W-7 STANDARD FIRE HYDRANT INSTALLATION

MULLER(SUPER CENTURION 250 A-423) OR AMERICAN DARLING B-84-B (SEE NOTE 4) ONLY

NOTE: FIRE HYDRANT TO BE PAINTED RED.

NOTE:

1.) OIL SHALL BE PLACED IN HYDRANT AT THE TIME OF INSTALLATION.

2.) PUMPER NOZZLE SHALL FACE ROADWAY. (5 1/2" H.S.T.)

3.) IN CERTAIN INSTANCES, WHER DISTANCES PERMITS, A PARALLEL TEE OR UNION-TITE 90° ELBOW W/RESTRAINING LUGS MAY BE USED IN LIEU OF A STANDARD TEE. FINAL APPROVAL BY THE CITY OF EDINBURG REQUIRED.

4.) IF AMERICAN DARLING IS USED MODEL B-84-B w/EPOXY COAT VALVE PLATE AND INTERIOR SHOE.

5.) TAPPING SLEEVES TO HAVE STAINLESS STEEL BOLTS AND NUTS.

6.) ALL VALVES, FITTINGS & HYDRANTS & ACCESSORIES TO BE GREASED WRAPPED IN PLASTIC.

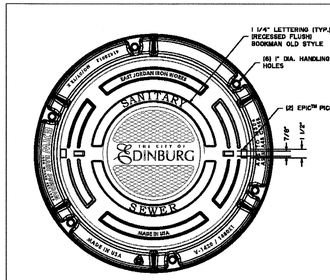
7.) ALL VALVES, FITTINGS AND ACCESSORIES, VALVE BOXES, METER BOXES AND COVERS MUST BE APPROVED BY THE CITY OF EDINBURG.

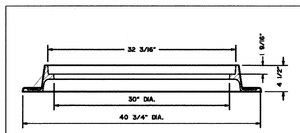
FIRE HYDRANT INSTALLATION
CONSIST OF FIRE HYDRANT, VALVE AND VALVE BOX

FIRE HYDRANT UNIT SHALL INCLUDE:

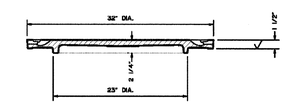
1.) FIRE HYDRANT w/ (4 1/2" PUMPER NOZZLE)
2.) VALVE BOX (DOMESTIC)
3.) 3 CU. FT. GRAVEL
4.) 3 CU. FT. CONCRETE 1' BELOW HYDRANT WEEP HOLES)
5.) 1' OR BETTER PVC SPOOLS
6.) 6" RESILIENT SEAT GATE VALVE (FLANGED X M.J.)
7.) X"x6" CAST IRON TEE (FLANGED X M.J.) "X" WATER MAIN DIA.

1 MECHANICAL JOINT
2 FLANGE



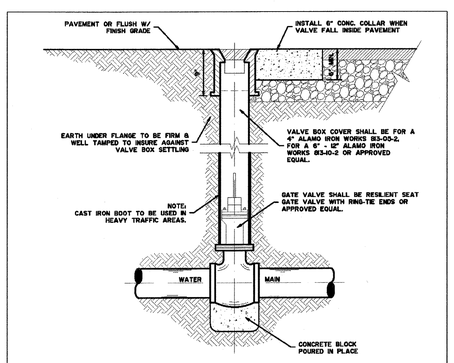


FRAME SECTION



COVER SECTION

S-10 CITY STANDARD ROADWAY MANHOLE RING AND COVER CASTING DETAIL

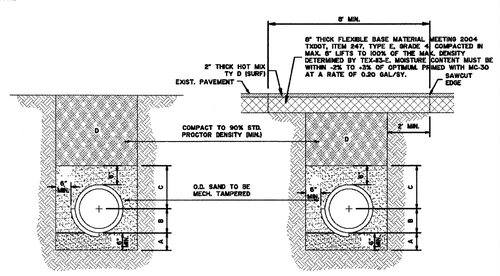


W-8 TYPICAL VALVE AND VALVE BOX INSTALLATION ON MAIN LINE

MUELLER (A-2360 SERIES) OR AMERICAN FLOW CONTROL (AFC-2500) ONLY

NOTE: ALL FITTINGS TO BE GREASED AND WRAPPED IN PLASTIC.

NOTE: WHEN UTILITY LOCATED WITHIN CITY R.O.W., ALL BACK FILL IS SUBJECT TO INSPECTION AND APPROVAL BY THE CITY ENGINEER'S OFFICE



STANDARD PIPE BEDDING (MAIN & SERVICE LATERALS)

APPLICABLE BENEATH FUTURE/UNPAVED STREETS

A. SAND BEDDING PLACED BEFORE PIPE IS LAID UP TO FLOW LINE OF PIPE. (MIN. THICKNESS = 6")

B. SAND BACK FILL PLACED AFTER PIPE IS LAID FROM BOTTOM OF PIPE TO SPRING LINE OF PIPE. (4" LIFTS, MECH. TAMPED).

C. SAND BACK FILL PLACED FROM SPRING LINE OF PIPE TO 6" ABOVE TOP OF PIPE. (6" LIFTS, MECH. TAMPED).

D. FILL TRENCH W/SELECT BACKFILL, W/12" LIFTS COMPACT TO 90% STD. PROCTOR.

FOUNDATION PREPARATION (WELL POINTS, GRAVEL OR CEMENT STABILIZATION, OR APPROVED SUBSTITUTE)
SHALL BE REQUIRED WHEN TRENCH BOTTOM IS UNSTABLE.

BACK FILLING AT STRUCTURES SHALL BE PLACED IN UNIFORM LAYERS, MOISTENED AS REQUIRED TO
APPROXIMATE OPTIMUM MOISTURE CONTENTS AND
COMPACTED TO 95% STANDARD PROCTOR DENSITY.
THE THICKNESS OF EACH LOOSE LAYER SHALL BE SAND, APPROVED SITE SOIL OR OTHER APPROVED SUBSTITUTE.

STANDARD PIPE BEDDING (MAIN ONLY)

(PARALLEL WITHIN EXIST. STREET)

A. SAND BEDDING PLACED BEFORE PIPE IS LAID UP TO FLOW LINE OF PIPE. (MIN. THICKNESS = 6")

B. SAND BACK FILL PLACED AFTER PIPE IS LAID FROM BOTTOM OF PIPE TO SPRING LINE OF PIPE. (4" LIFTS, MECH. TAMPED).

C. SAND BACK FILL PLACED FROM SPRING LINE OF PIPE TO 6" ABOVE TOP OF PIPE. (6" LIFTS, MECH. TAMPED).

D. FILL TRENCH W/SELECT BACKFILL, W/12" LIFTS COMPACT TO 90% STD. PROCTOR.

FOUNDATION PREPARATION (WELL POINTS, GRAVEL OR CEMENT STABILIZATION, OR APPROVED SUBSTITUTE)
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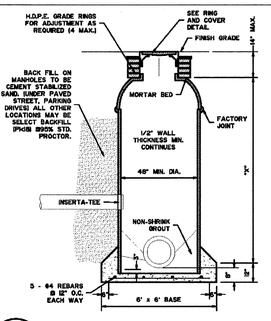
THE THICKNESS OF EACH LOOSE LAYER SHALL BE SAND, APPROVED SITE SOIL OR OTHER APPROVED SUBSTITUTE.

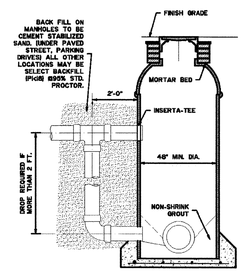
NOTE: ALL EXISTING/ACTIVE STREET CROSSINGS SHALL REQUIRE SAND BACKFILL OF ENTIRE TRENCH. (SEE DETAIL S-6)

S-5 SEWER STANDARD PIPE BEDDING

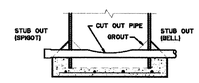


S-3 TYPICAL FIBERGLASS MANHOLE

NOTE: ALL DROP CONNECTIONS TO M.H. SHALL USE INSERTA-TEE



TYPICAL FIBERGLASS MANHOLE With DROP STRUCTURE



SECT. VIEW A-A

1. CUT PIPE TO LENGTH 7' FOR 4' M.H.
2. LAY PIPE
3. EXCAVATE UNDER PIPE FOR M.H. BASE MIN. 6"
4. PLACE REBAR MAT
5. PLACE CONCRETE
6. IMMEDIATELY PLACE FIBERGLASS M.H.
7. GROUT INSIDE WALLS OF M.H. AROUND PIPE
8. CUT OUT PIPE
9. NO PRE-CAST BASES PERMITTED.

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ISSUED: 10-15-2013

CITY OF EDINBURG
SAFE ROOM - SOUTH PARK SITE
315 E. PALM DRIVE
EDINBURG, TX

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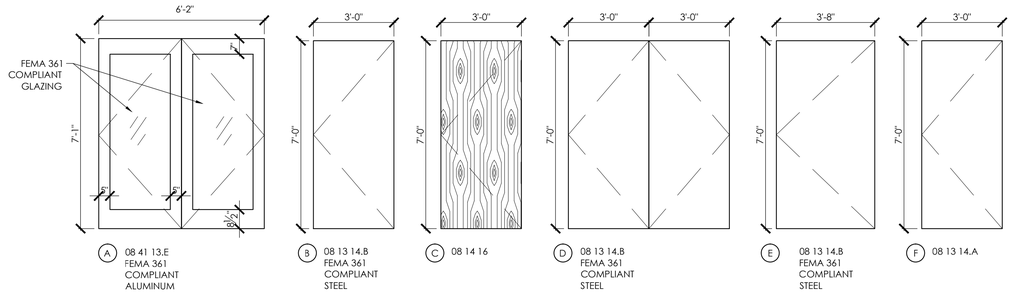
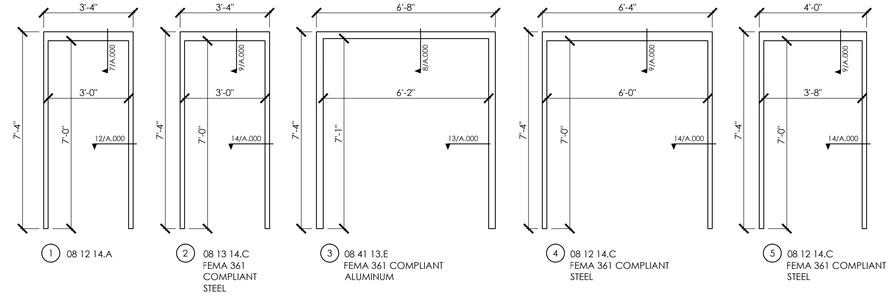
-

SR

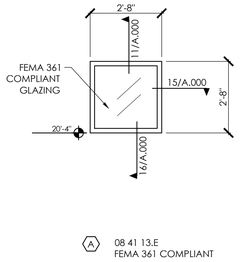
C7



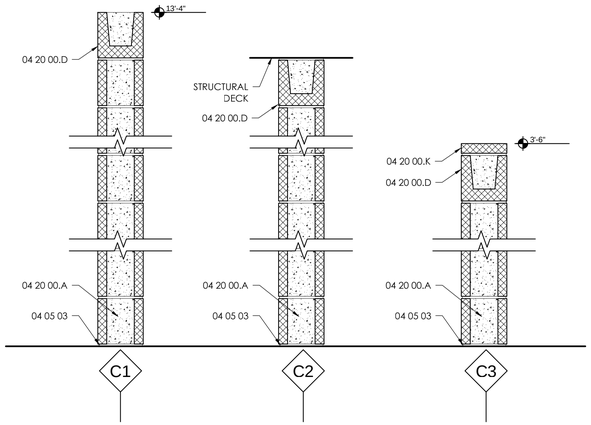
1 A.000 DOOR TYPES
SCALE: 3/8"=1'-0" REF:



2 A.000 FRAME TYPES
SCALE: 3/8"=1'-0" REF:

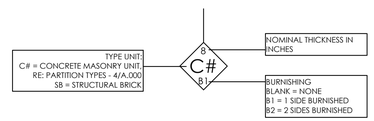


3 A.000 WINDOW TYPES
SCALE: 3/8"=1'-0" REF:



NOTE - RE: PARTITION TAGS ON PLAN AND FINISH SCHEDULE FOR BURNISHING

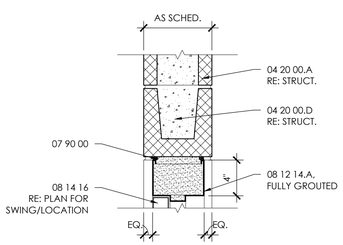
4 A.000 PARTITION TYPES
SCALE: 1"=1'-0" REF:



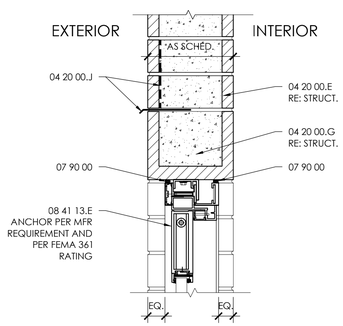
MASONRY TAGS ON THE 1/8" PLAN ONLY. REFERENCE STRUCTURAL DRAWINGS FOR MORE INFORMATION. WHERE BURNISHED ONE SIDE, REFERENCE FINISH SCHEDULE FOR INFORMATION ON WHICH SIDE OF WALL.

5 A.000 MASONRY PARTITION TYPE LEGEND
SCALE: 1"=1'-0" REF:

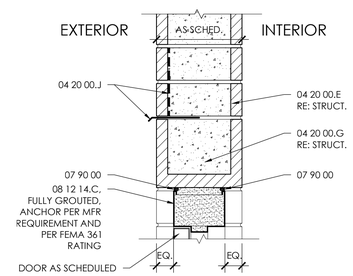
6 A.000 NOT USED
SCALE: REF:



7 A.000 HOLLOW METAL FRAME @ CMU HEAD SECTION DETAIL
SCALE: 1-1/2"=1'-0" REF:

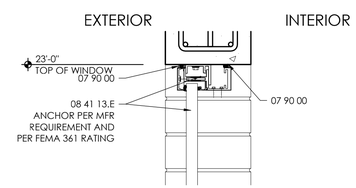


8 A.000 ALUMINUM STOREFRONT HEAD SECTION DETAIL
SCALE: 1-1/2"=1'-0" REF:

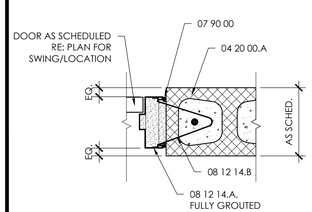


9 A.000 HOLLOW METAL FRAME HEAD SECTION DETAIL
SCALE: 1-1/2"=1'-0" REF:

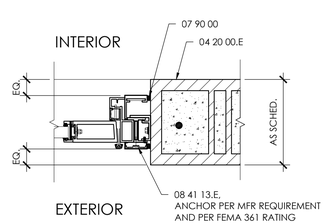
10 A.000 NOT USED
SCALE: 1-1/2"=1'-0" REF:



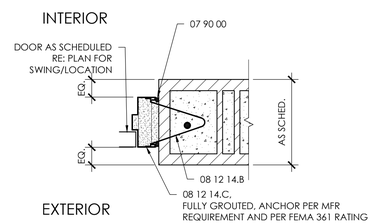
11 A.000 WINDOW HEAD SECTION DETAIL
SCALE: 1-1/2"=1'-0" REF:



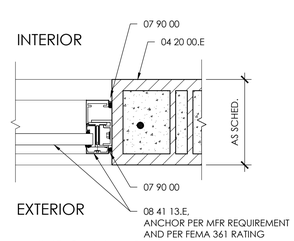
12 A.000 HOLLOW METAL FRAME @ CMU JAMB SECTION DETAIL
SCALE: 1-1/2"=1'-0" REF:



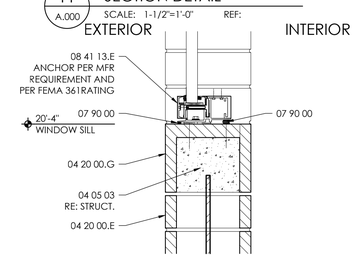
13 A.000 ALUMINUM STOREFRONT JAMB SECTION DETAIL
SCALE: 1-1/2"=1'-0" REF:



14 A.000 HOLLOW METAL FRAME JAMB SECTION DETAIL
SCALE: 1-1/2"=1'-0" REF:



15 A.000 WINDOW JAMB SECTION DETAIL
SCALE: 1-1/2"=1'-0" REF:



16 A.000 WINDOW SILL SECTION DETAIL
SCALE: 1-1/2"=1'-0" REF:

REFERENCE NOTES

04 05 03	MASONRY MORTARING AND GROUTING
04 20 00	UNIT MASONRY, RE: STRUCT FOR STRUCT WALLS
A	8" CMU
B	8" CMU BURNISHED ONE SIDE
C	8" CMU BURNISHED BOTH SIDES
D	CMU U BLOCK, RE: WALL FOR BURNISHING
E	10" STRUCTURAL BRICK
F	8" STRUCTURAL BRICK
G	STRUCTURAL BRICK BOND BEAM UNIT
H	STRUCTURAL BRICK U BLOCK
I	LADDER/TRUSS JOINT REINFORCEMENT
J	BLOCKNET FLASHING SYSTEM
K	CMU SOAP CAP, MATCH WALL BURNISHING
L	REINFORCING STEEL, RE: STRUCT.
08 12 14	STANDARD STEEL FRAMES
A	STANDARD STEEL FRAME
B	MASONRY WIRE ANCHOR
C	FEMA 361 RATED STEEL FRAME
08 13 14	STANDARD STEEL DOORS
A	STANDARD STEEL DOOR
B	FEMA 361 RATED STEEL DOOR
08 14 16	FLUSH WOOD DOORS
08 41 13	ALUMINUM FRAMED STOREFRONTS
E	FEMA 361 RATED ASSEMBLY
08 71 00	DOOR HARDWARE

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ISSUED: 10.15.2013

CITY OF EDINBURG
SAFE ROOM - SOUTH PARK SITE
315 E. PALM DRIVE
EDINBURG, TX

08/07/2013
bwm

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DOOR, WINDOW & PARTITION TYPES AND DETAILS

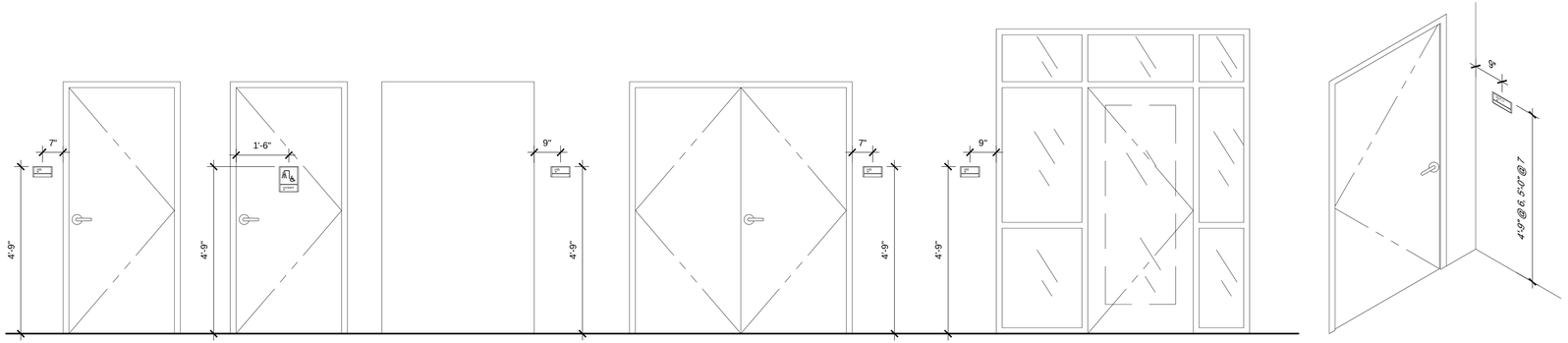
A.000

ROOM SIGN INSTALLED	LOCATION	TEXT L1	TEXT L2	TEXT L3	SIGN TYPE	MOUNTING DETAIL
EXTERIOR	East side of door 145.3	SEE SIGN TYPE			H,J	7
EXTERIOR	East side of door143	SEE SIGN TYPE			H	8
EXTERIOR	East side of door 146	SEE SIGN TYPE			H	8
EXTERIOR	South wall of Generator Enclosure	SEE SIGN TYPE			I	5/A.203
EXTERIOR	West of door 148.1	SEE SIGN TYPE			I	3/A.203
EXTERIOR	On door 172	SEE SIGN TYPE			G	2
CAMPUS	At intersection of west sidewalk with Palm Drive	SEE SIGN TYPE - TWO SIDED			K	Pole
CAMPUS	At intersection of sidewalk between ball fields and Stadium Drive	SEE SIGN TYPE - TWO SIDED			K	Pole
CAMPUS	At intersection of sidewalks due east of building	SEE SIGN TYPE - ONE SIDED			K	Pole
CAMPUS	At sidewalk circle NE of building	SEE SIGN TYPE - ONE SIDED			K	Pole
CAMPUS	At existing parking area at NW corner of site.	SEE SIGN TYPE - TWO SIDED			K	Pole
CAMPUS	At intersection of sidewalks north of the buidling.	SEE SIGN TYPE - ONE SIDED			K	Pole
145	Right side of framed opening to 151	151	WOMEN		F	3oh
145	Right side of framed opening to 153	153	MEN		E	3oh
143	Latch side of door 156.1	156	TRANSFER	SWITCH	D	1
143	Latch side of door 157	157	STORAGE		B	1
148	Latch side of door 161	161	MEN		E	1
148	Latch side of door 164	164	WOMEN		F	1
146	Latch side of door 167	167	STORAGE		B	1
147	Latch side of door 168	168	STORAGE		B	6
145	West jamb of door 145.2	EXIT			B	4
143	North jamb of door 143	EXIT			A	4
146	On adjacent wall to the north of door.	EXIT			A	6
147	Latch side of door 147	EMERGENCY	EXIT ONLY		C	4
148	Latch side of door 148.1	EMERGENCY	EXIT ONLY		C	4
For Campus signs, reference Sheet AS.100 for more precise installation locations.						

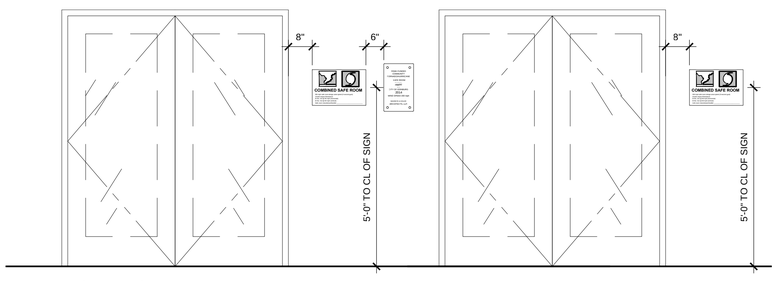
1 A.002 SIGN SCHEDULE
SCALE: REF: 1/A.101

2 A.002 SIGN TYPES
SCALE: 3"=1'-0" REF: 1/A.004

"SAFE ROOM", "SHELTER", ARROWS, AND LOGOS ON SIGN TYPES H, I, & K SHALL BE REFLECTIVE, USING 3M SCOTCHLITE DIAMOND-GRADE REFELECTIVE SHEETING OR AN EQUIVALENT PRODUCT, YELLOW IN COLOR. VERIFY WITH MANUFACTURER THAT THE SIGN WILL GLOW FOR A MINIMUM OF 6 HOURS, IN THE EVENT OF POWER LOSS.



1 TYPICAL INSTALLATION, SINGLE LEAF DOORS
2 MOUNTED ON DOOR
3 TYPICAL INSTALLATION AT FRAMED OPENINGS AND ENDS OF CORRIDORS.
4 INSTALLATION AT A PAIR OF DOORS
5 INSTALLATION AT STOREFRONT
6 INSTALLATION ON ADJACENT WALL. INSTALL AT LATCH SIDE FOR SINGLE LEAF DOORS AND RIGHT SIDE AT A PAIR OF DOORS



7 INSTALLATION AT ENTRY DOORS
8 INSTALLATION AT ENTRY DOORS

NOTE:
SIGN MOUNTING DETAILS ARE GENERAL CONFIGURATIONS. FOR ILLUSTRATION PURPOSES, SIGN TYPE A IS SHOWN IN THESE DETAILS BUT LOCATION INDICATED PERTAINS TO OTHER SIGN TYPES AS WELL. REFER TO SIGN SCHEDULE FOR TYPE OF SIGN.

DETAILS 1, 5, & 6 INDICATE SIGN MOUNTED ON LATCH SIDE OF DOOR. AT DOUBLE DOORS, SIGN IS PLACED TO THE RIGHT OF THE ACTIVE LEAF.

FOR DETAIL 3 AT FRAMED OPENINGS AND CORRIDORS, REFERENCE SIGN SCHEDULE FOR SIDE.

REFERENCE SIGN SCHEDULE FOR MORE INFORMATION.

3 A.002 SIGN INSTALLATION DETAILS
SCALE: 1/2"=1'-0" REF: -

REFERENCE NOTES	
07 90 00	JOINT PROTECTION
08 12 14	STANDARD STEEL FRAMES
A	STANDARD STEEL FRAME
B	MASONRY WIRE ANCHOR
C	FEMA 361 RATED STEEL FRAME
08 13 14	STANDARD STEEL DOORS
A	STANDARD STEEL DOOR
B	FEMA 361 RATED STEEL DOOR
08 14 16	FLUSH WOOD DOORS
08 41 13	ALUMINUM FRAMED STOREFRONTS
E	FEMA 361 RATED ASSEMBLY
08 71 00	DOOR HARDWARE
10 14 00	SIGNAGE
10 14 16	CAST BUILDING PLAQUES AND LETTERS

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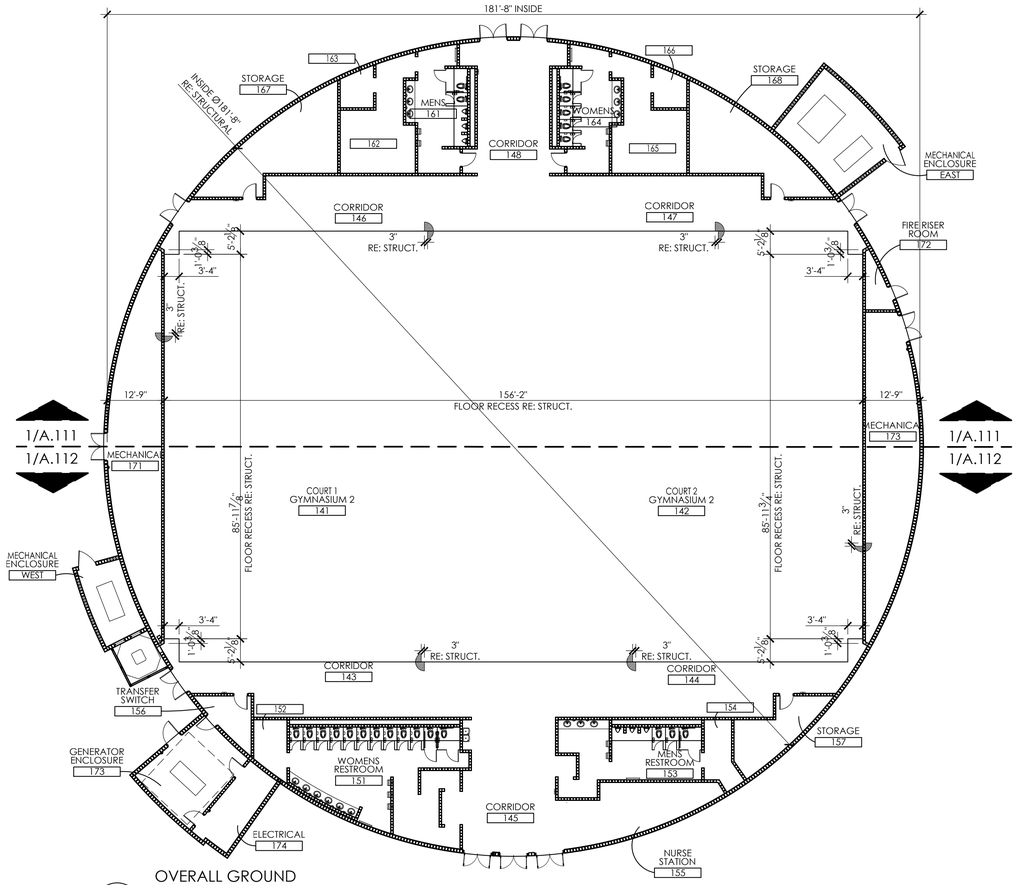
REVISIONS

SIGN SCHEDULES & DETAILS

A.002



4 A.100 OVERALL GROUND FLOOR DIMENSION PLANT

SCALE: 1/16"=1'-0" REF: -

DOOR NO.	FROM ROOM N0.	TO ROOM N0.	DOORS: DOOR TYPE	MAT'L	VIEW PANEL	GLAZING	INT/EXT	FRAMES: FRAME TYPE	MAT'L	HEAD	HINGE/ACTIVE JAMB	STRIKE/INACTIVE JAMB	REMARKS
143	EXTERIOR	143	D	08 13 14.B			EXT	4	08 12 14.C	9/A.000	14/A.000 oh	14/A.000	FEMA 361 Rated Assembly
145.1	EXTERIOR	145	A	08 41 13.E	FULL	08 41 13	EXT	3	08 41 13.E	8/A.000	13/A.000 oh	13/A.000	FEMA 361 Rated Assembly
145.2	EXTERIOR	145	A	08 41 13.E	FULL	08 41 13	EXT	3	08 41 13.E	8/A.000	13/A.000 oh	13/A.000	FEMA 361 Rated Assembly
145.3	EXTERIOR	145	A	08 41 13.E	FULL	08 41 13	EXT	3	08 41 13.E	8/A.000	13/A.000	13/A.000	FEMA 361 Rated Assembly
146	EXTERIOR	146	D	08 13 14.B			EXT	4	08 12 14.C	9/A.000	14/A.000 oh	14/A.000	FEMA 361 Rated Assembly
147	EXTERIOR	147	D	08 13 14.B			EXT	4	08 12 14.C	9/A.000	14/A.000 oh	14/A.000	FEMA 361 Rated Assembly
148.1	EXTERIOR	148	D	08 13 14.B			EXT	4	08 12 14.C	9/A.000	14/A.000 oh	14/A.000	FEMA 361 Rated Assembly
148.2	EXTERIOR	148	D	08 13 14.B			EXT	4	08 12 14.C	9/A.000	14/A.000 oh	14/A.000	FEMA 361 Rated Assembly
156.1	143	156	C	08 14 16			INT	1	08 12 14.A	7/A.000	12/A.000	12/A.000 oh	
156.2	156	174	F	08 13 14.A			INT	1	08 12 14.A	7/A.000	12/A.000 oh	12/A.000	
157	144	157	C	08 14 16			INT	1	08 12 14.A	7/A.000	12/A.000 oh	12/A.000	
161	148	161	C	08 14 16			INT	1	08 12 14.A	7/A.000	12/A.000 oh	12/A.000	
164	148	164	C	08 14 16			INT	1	08 12 14.A	7/A.000	12/A.000	12/A.000 oh	
167	146	167	C	08 14 16			INT	1	08 12 14.A	7/A.000	12/A.000 oh	12/A.000	
168	147	168	C	08 14 16			INT	1	08 12 14.A	7/A.000	12/A.000	12/A.000 oh	
171	EXTERIOR	171	D	08 13 14.B			EXT	4	08 12 14.C	9/A.000	14/A.000 oh	14/A.000	FEMA 361 Rated Assembly
172	EXTERIOR	172	B	08 13 14.B			EXT	2	08 12 14.C	9/A.000	14/A.000	14/A.000 oh	FEMA 361 Rated Assembly
173	EXTERIOR	173	D	08 13 14.B			EXT	4	08 12 14.C	9/A.000	14/A.000 oh	14/A.000	FEMA 361 Rated Assembly
174	EXTERIOR	174	E	08 13 14.B			EXT	5	08 12 14.C	9/A.000	14/A.000 oh	14/A.000	FEMA 361 Rated Assembly
175.1	174	175	F	08 13 14.A			INT	1	08 12 14.A	7/A.000	12/A.000 oh	12/A.000	
175.2	174	175	F	08 13 14.A			INT	1	08 12 14.A	7/A.000	12/A.000	12/A.000 oh	
G01	EXTERIOR	E MECH ENC	GATE				EXT			-	10/AS.112	9/AS.112	Size per plans and elevations
G02	EXTERIOR	W MECH ENC	GATE				EXT			-	10/AS.112	9/AS.112	Size per plans and elevations
G03	EXTERIOR	PROP ENC	GATE				EXT			-	10/AS.112	9/AS.112	Size per plans and elevations

2 A.100 DOOR SCHEDULE

SCALE: REF: -

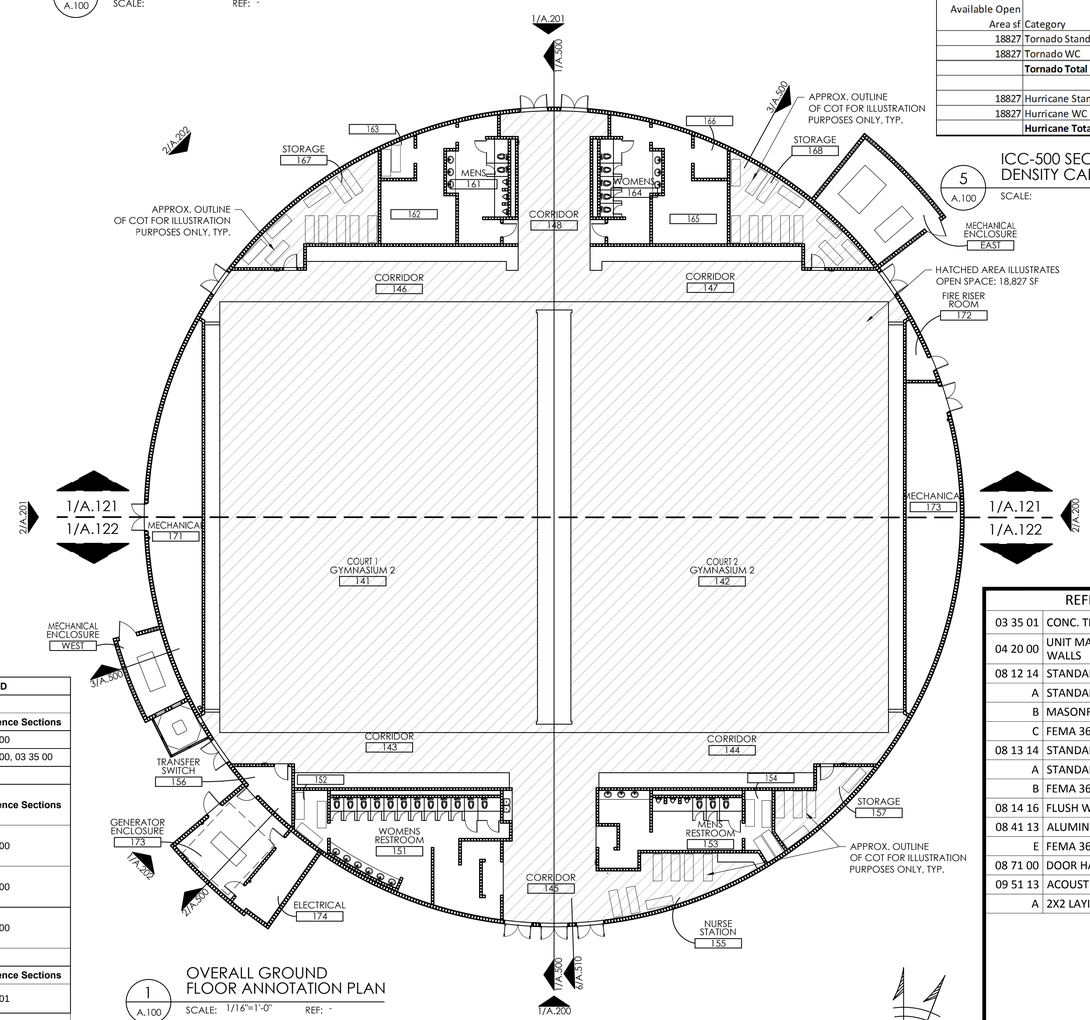
ICC-500 Sec. 501.1.1 Occupancy Density

Room Numbers	Room(s)	USF	ASF other	other NASF
141, 142, 143, 144, 145, 146, 147, 148	Central open area	17531		
151	Women		803	
152	Custodial		85	
153	Men		419	
154	Custodial		94	
155	Nurse's Station	302		
156	Transfer Switch			94
157	Storage	196		
161	Men		308	
162	Mens Locker Room		300	
163	Custodial		59	
164	Men		308	
165	Mens Locker Room		300	
166	Custodial		59	
167	Storage	399		
168	Storage	399		
171	Mechanical			741
172	Fire Riser			53
173	Mechanical			684
174	Generator			318
175	Electrical			168
Aggregate Square Footage		**18827**	**2735**	**2058**
% of Total GSF	25,910	72.7%	10.6%	7.9%
% of 20K GSF	**20,000**	**94.1%**	**13.7%**	**10.3%**
Usable Space/80%	**23,534**	18827		
USF+ASF+NASF	**23,620**			

Available Open Area sf	Category	Percent of Open Area FEMA 361 Tables 3-1 & 3-3 factors		Occupants
18827	Tornado Stand/Seat	20%	5	753.1
18827	Tornado WC	80%	10	1506.2
	Tornado Total Occupants			**2259.2**
18827	Hurricane Stand/Seat	20%	20	188.3
18827	Hurricane WC	80%	20	753.1
	Hurricane Total Occupants			**941.4**

5 A.100 ICC-500 SEC 501.1.1 OCCUPANCY DENSITY CALCULATIONS

SCALE: REF: 1/A.100



1 A.100 OVERALL GROUND FLOOR ANNOTATION PLAN

SCALE: 1/16"=1'-0" REF: -

ROOM FINISH SCHEDULE

Room Number	Room Name	Floor: Material	Floor: Base	Walls: North	Walls: East	Walls: South	Walls: West	Ceiling: Material	Ceiling: Height	Remarks
141	COURT 1 - GYMNASIUM 2	CONC	-	-	-	-	CMU	CONC	VARIES	CEILING VARIES 25'-58'.
142	COURT 2 - GYMNASIUM 2	CONC	-	-	CMU	-	-	CONC	VARIES	CEILING VARIES 25'-58'.
143	CORRIDOR	SCONC	-	-	-	CMU	SBMU	CONC	VARIES	CEILING VARIES 25'-58'.
144	CORRIDOR	SCONC	-	-	SBMU	CMU	-	CONC	VARIES	CEILING VARIES 25'-58'.
145	CORRIDOR	SCONC	-	-	CMU	SBMU	CMU	CONC	VARIES	CEILING VARIES 25'-58'.
146	CORRIDOR	SCONC	-	CMU	-	-	SBMU	CONC	VARIES	CEILING VARIES 25'-58'.
147	CORRIDOR	SCONC	-	CMU	SBMU	-	-	CONC	VARIES	CEILING VARIES 25'-58'.
148	CORRIDOR	SCONC	-	SBMU	CMU	-	CMU	CONC	VARIES	CEILING VARIES 25'-58'.
151	WOMENS RESTROOM	SCONC	-	BCMU	BCMU	SBMU/BCMU	BCMU	XST	12'-0"	
152		SCONC	-	CMU	CMU	SBMU	CMU	-	-	OPEN TO ABOVE
153	MENS RESTROOM	SCONC	-	BCMU	BCMU	BCMU	BCMU	XST	12'-0"	
154		SCONC	-	CMU	CMU	SBMU/BCMU	CMU	-	-	OPEN TO ABOVE
155	NURSES STATION	SCONC	-	CMU	CMU	SBMU	-	XST	10'-0"	CEILING GRID ONLY
156	TRANSFER SWITCH	SCONC	-	CMU	CMU	SBMU	SBMU	-	-	OPEN TO ABOVE
157	STORAGE	SCONC	-	CMU	SBMU	SBMU	CMU	-	-	OPEN TO ABOVE
161	MENS	SCONC	-	SBMU/BCMU	BCMU	BCMU	BCMU	XST	12'-0"	
162		SCONC	-	SBMU/BCMU	BCMU	BCMU	BCMU	XST	12'-0"	
163		SCONC	-	SBMU	CMU	CMU	CMU	-	-	OPEN TO ABOVE
164	WOMENS	SCONC	-	SBMU/BCMU	BCMU	BCMU	BCMU	XST	12'-0"	
165		SCONC	-	SBMU/BCMU	BCMU	BCMU	BCMU	XST	12'-0"	
166		SCONC	-	SBMU	CMU	CMU	CMU	-	-	OPEN TO ABOVE
167	STORAGE	SCONC	-	SBMU	CMU	CMU	SBMU	-	-	OPEN TO ABOVE
168	STORAGE	SCONC	-	SBMU	SBMU	CMU	CMU	-	-	OPEN TO ABOVE
171	MECHANICAL	SCONC	-	CMU	CMU	CMU	SBMU	XST	12'-0"	
172	FIRE RISER ROOM	SCONC	-	CMU	SBMU	CMU	CMU	XST	12'-0"	
173	MECHANICAL	SCONC	-	CMU	SBMU	CMU	CMU	XST	12'-0"	
174	GENERATOR ENCLOSURE	SCONC	-	SBMU	CMU	SBMU	SBMU	XST	16'-0"	
175	ELECTRICAL	SCONC	-	SBMU	SBMU	SBMU	CMU	XST	16'-0"	

3 A.100 ROOM FINISH SCHEDULE

SCALE: REF: -

FINISH SCHEDULE LEGEND

Desig.	Material	Reference Sections
FLOOR		
CONC	Concrete (unsealed)	03 30 00
SCONC	Sealed Concrete	03 30 00, 03 35 00
WALLS		
BCMU	Burnish Concrete Masonry Units (unpainted)	04 20 00
CMU	Concrete Masonry Units (unpainted)	04 20 00
SBMU	Structural Brick Masonry Units (unpainted)	04 20 00
CEILINGS		
CONC	Concrete (unsealed)	03 35 01
XST	Exposed Structure, Unpainted	05 12 00, 05 31 00

REFERENCE NOTES

03 35 01	CONC. THIN SHELL CONSTR. RE: STRUCT.
04 20 00	UNIT MASONRY, RE: STRUCT FOR STRUCT WALLS
08 12 14	STANDARD STEEL FRAMES
A	STANDARD STEEL FRAME
B	MASONRY WIRE ANCHOR
C	FEMA 361 RATED STEEL FRAME
08 13 14	STANDARD STEEL DOORS
A	STANDARD STEEL DOOR
B	FEMA 361 RATED STEEL DOOR
08 14 16	FLUSH WOOD DOORS
08 41 13	ALUMINUM FRAMED STOREFRONTS
E	FEMA 361 RATED ASSEMBLY
08 71 00	DOOR HARDWARE
09 51 13	ACOUSTICAL PANEL CEILINGS
A	2X2 LAYIN CEILING GRID

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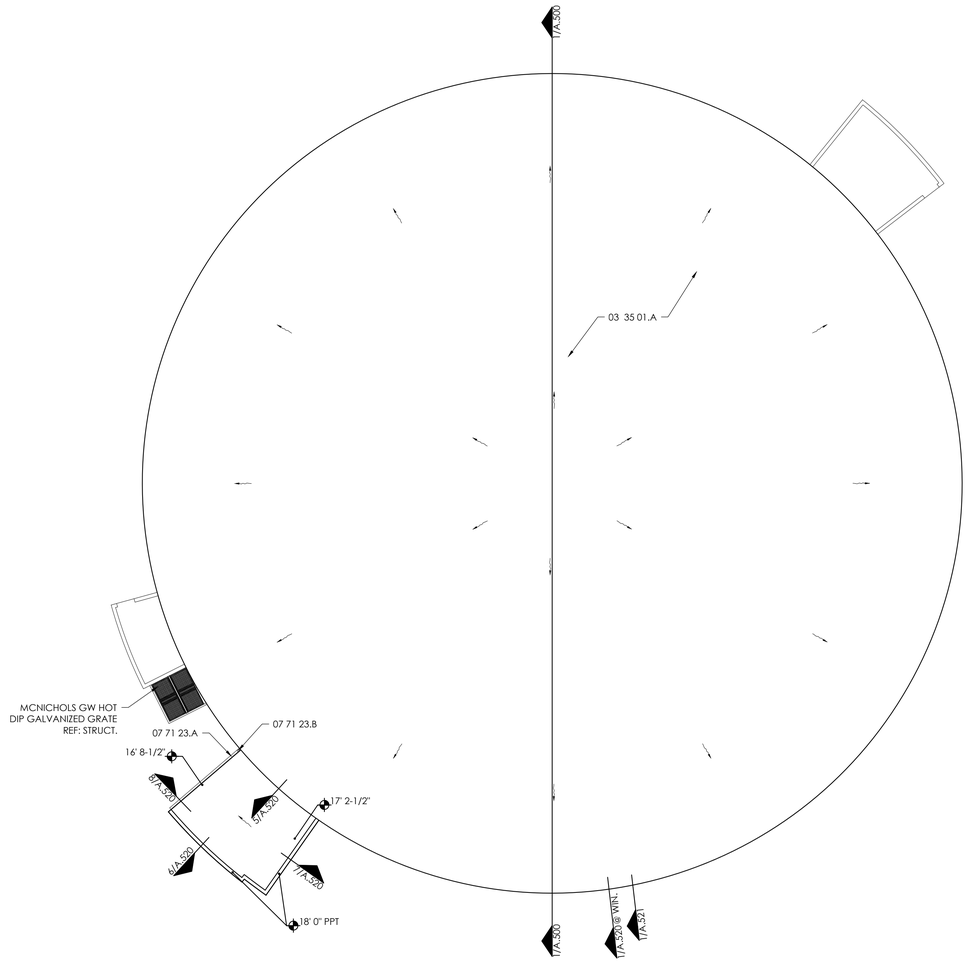
CITY OF EDINBURG
SAFE ROOM - SOUTH PARK SITE
315 E. PALM DRIVE
EDINBURG, TX

08/07/2013
bwm

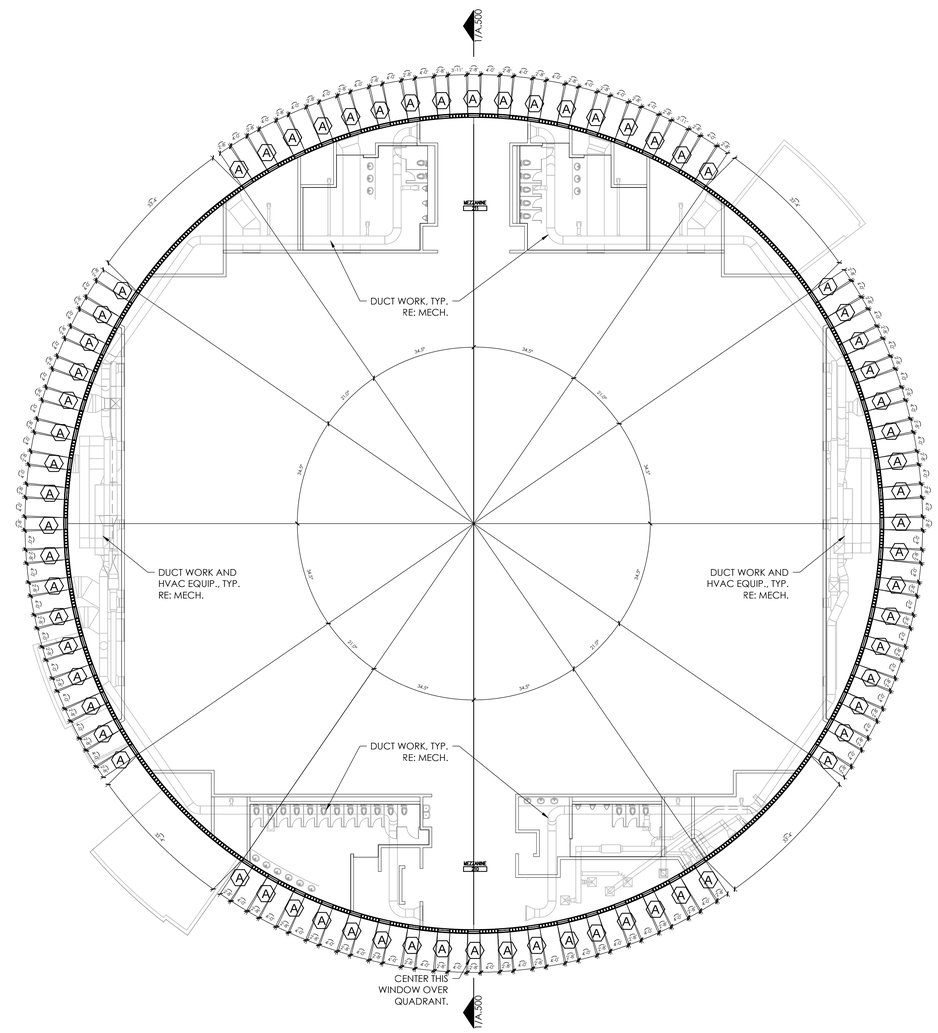
REVISIONS

OVERALL GROUND FLOOR PLANS & SCHEDULES

A.100



2 A.101 ROOF PLAN
SCALE: 1/16"=1'-0" REF: -



1 A.101 CLERESTORY PLAN
SCALE: 1/16"=1'-0" REF: -

REFERENCE NOTES

03 35 01		CONC. THIN SHELL CONSTR. RE: STRUCT.
	A	AIR FORM/ROOF MEMBRANE RE: STUCT
	B	FOAM INSUATION RE: STRUCT.
	C	REINFORCING STEEL, RE: STRUCT.
	D	CONCRETE RE: STRUCT.
07 52 00		MODIFIED BITUMEN MEMBRANE ROOFING
	A	MODIFIED BITUMEN PLY SHEET
	B	MODIFIED BITUMEN CAP SHEET
	C	VERAL ALUMINUM FACED FLASHING
	D	TERMINATION PRESSURE BAR
	E	FIBER CANT
	F	VENTING BASE SHEET
	G	SEAL EDGE WITH ROOFING SEALANT
07 62 00		SHEET METAL FLASHING AND TRIM
	A	PARAPET CAP, FORM AS INDICATED
	C	FLASHING
	D	COUNTERFLASHING
	E	SURFACE MOUNTED RECEIVER/REGLET
	F	CLEAT
07 71 23		GUTTERS AND DOWNSPOUTS
	A	GUTTER, PROFILE AS INDICATED
	B	DOWNSPOUT, SIZE SHAPE INDICATED
07 90 00		JOINT PROTECTION
08 41 13		ALUMINUM FRAMED STOREFRONTS
	E	FEMA 361 RATED ASSEMBLY

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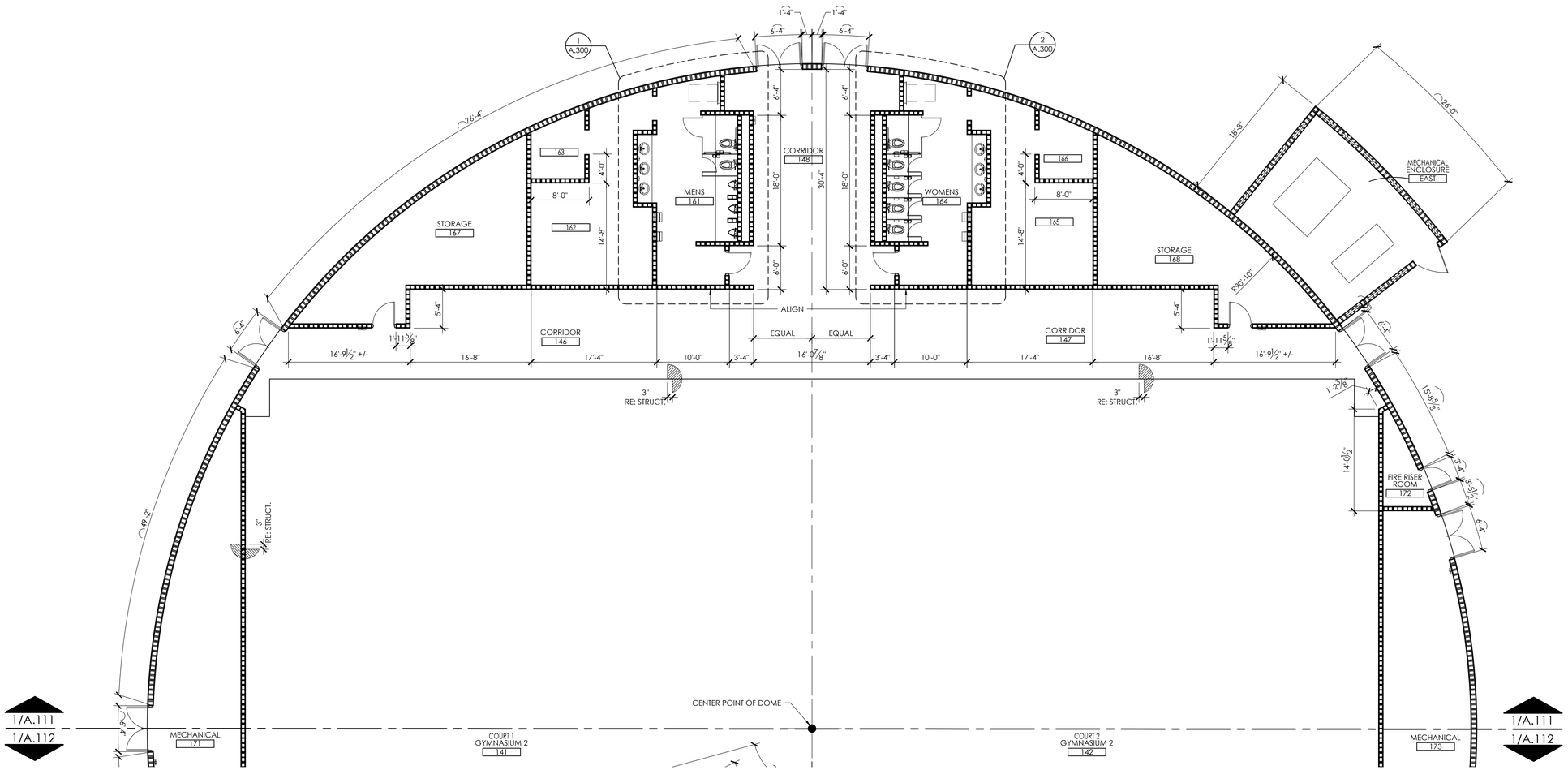
CLERESTORY & ROOF PLANS

A.101



1 A.111 ENLARGED NORTH DIMENSIONED FLOOR PLAN

SCALE: 1/8"=1'-0" REF: A.100

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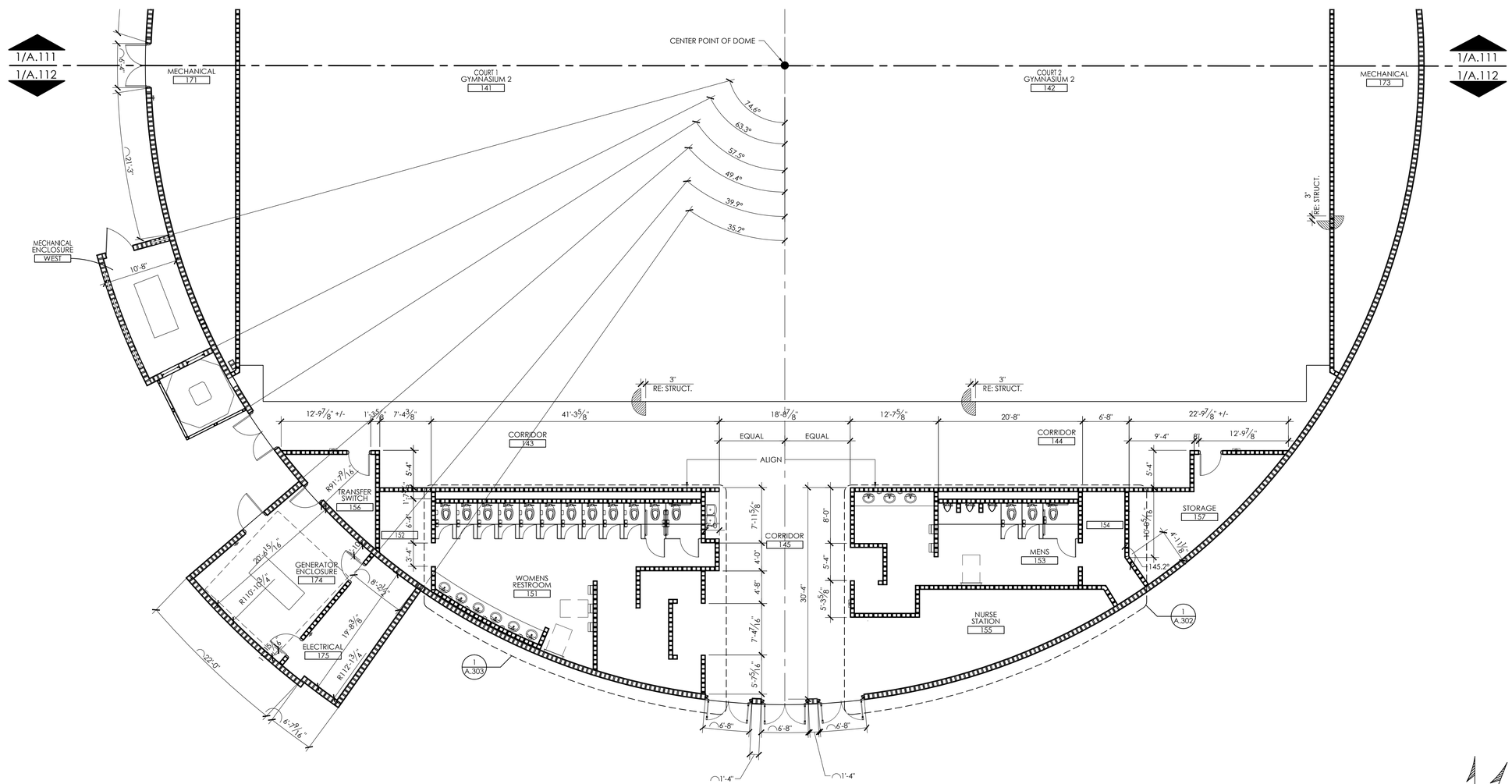
ENLARGED DIMENSIONED FLOOR PLAN NORTH SIDE

A.111



1 A.112 ENLARGED SOUTH DIMENSIONED FLOOR PLAN

SCALE: 1/8"=1'-0" REF: A.100

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EDINBURG, TX

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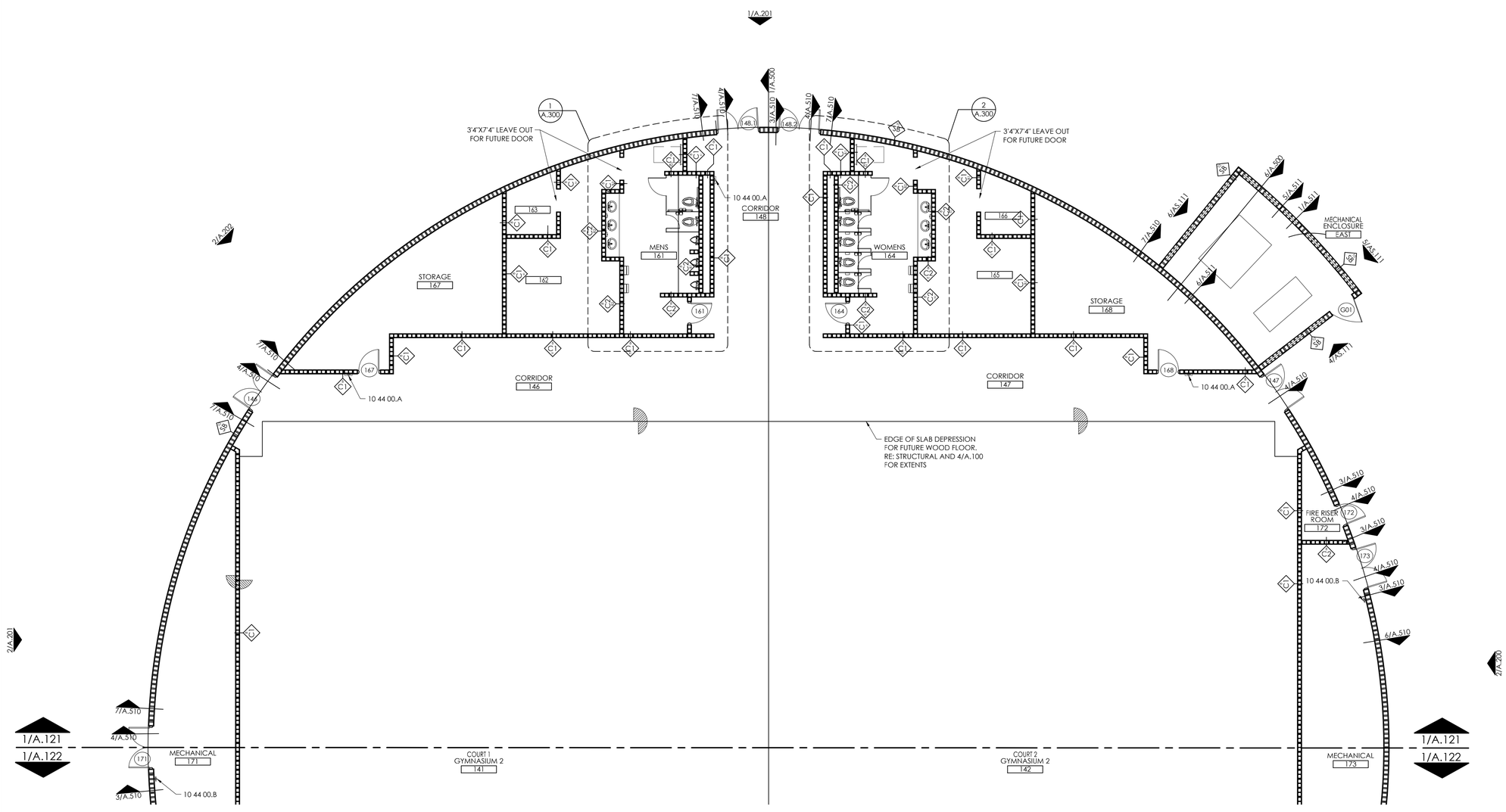
ENLARGED DIMENSIONED FLOOR PLAN SOUTH SIDE

A.112



1 A.121 ENLARGED NORTH ANNOTATED FLOOR PLAN

SCALE: 1/8"=1'-0" REF: A.100

REFERENCE NOTES

03 00 00		CONCRETE (CIVIL)
03 10 10		UNDER SLAB VAPOR BARRIER
03 30 00		CAST-IN-PLACE CONCRETE, RE: STRUCT.
03 35 01		CONC. THIN SHELL CONSTR. RE: STRUCT.
	A	AIR FORM/ROOF MEMBRANE RE: STUCT
	B	FOAM INSUATION RE: STRUCT.
	C	REINFORCING STEEL, RE: STRUCT.
	D	CONCRETE RE: STRUCT.
04 05 03		MASONRY MORTARING AND GROUTING
04 20 00		UNIT MASONRY, RE: STRUCT FOR STRUCT WALLS
	A	8" CMU
	B	8" CMU BURNISHED ONE SIDE
	C	8" CMU BURNISHED BOTH SIDES
	D	CMU U BLOCK, RE: WALL FOR BURNISHING
	E	10" STRUCTURAL BRICK
	F	8" STRUCTURAL BRICK
05 12 00		STRUCTURAL STEEL FRAMING, RE: STRUCT.
05 21 00		STEEL JOIST FRAMING, RE: STRUCT.
05 31 00		STEEL DECKING, RE: STRUCT.
05 50 00		METAL FABRICATIONS
06 10 00		ROUGH CARPENTRY
	A	FIRE RETARDANT TREATED SOLID BLOCKING
	B	FIRE RETARDANT TREATED PLYWOOD
06 41 00		ARCHITECTURAL WOOD CASEWORK
	A	3/4" PLYWOOD CABINET BODY
	E	HARDWOOD BANDING, 1/4" THICK.
	F	1X FRAMING
	G	2X FRAMING
	I	3/4" PLYWOOD COUNTER UNDERLAY
06 61 19		QUARTZ SURFACING FABRICATIONS
08 12 14		STANDARD STEEL FRAMES
	A	STANDARD STEEL FRAME
	B	MASONRY WIRE ANCHOR
	C	FEMA 361 RATED STEEL FRAME
08 13 14		STANDARD STEEL DOORS
	A	STANDARD STEEL DOOR
	B	FEMA 361 RATED STEEL DOOR
08 14 16		FLUSH WOOD DOORS
08 17 23		INTEGRATED WOOD DOOR OPENING ASSEM
08 41 13		ALUMINUM FRAMED STOREFRONTS
	E	FEMA 361 RATED ASSEMBLY
08 71 00		DOOR HARDWARE
10 14 00		SIGNAGE
10 14 16		CAST BUILDING PLAQUES AND LETTERS
10 21 13.17		SOLID PHENOLIC TOILET COMPARTMENTS
10 28 00		TOILIET ACCESSORIES
	A	GRAB BAR
	B	TOILET PAPER DISPENSER
	C	SANITARY NAPKIN DISPOSAL
	D	TOILET SEAT COVER DISPENSER
	E	COMBO TOWEL DISPENSER/DISPOSAL
	G	BABY CHANGING STATION
	O	SOAP DISPENSER
10 44 00		FIRE PROTECTION SPECIALTIES
	A	EXTINGUISHER WITH CABINET
	B	EXTINGUISHER ON BRACKET

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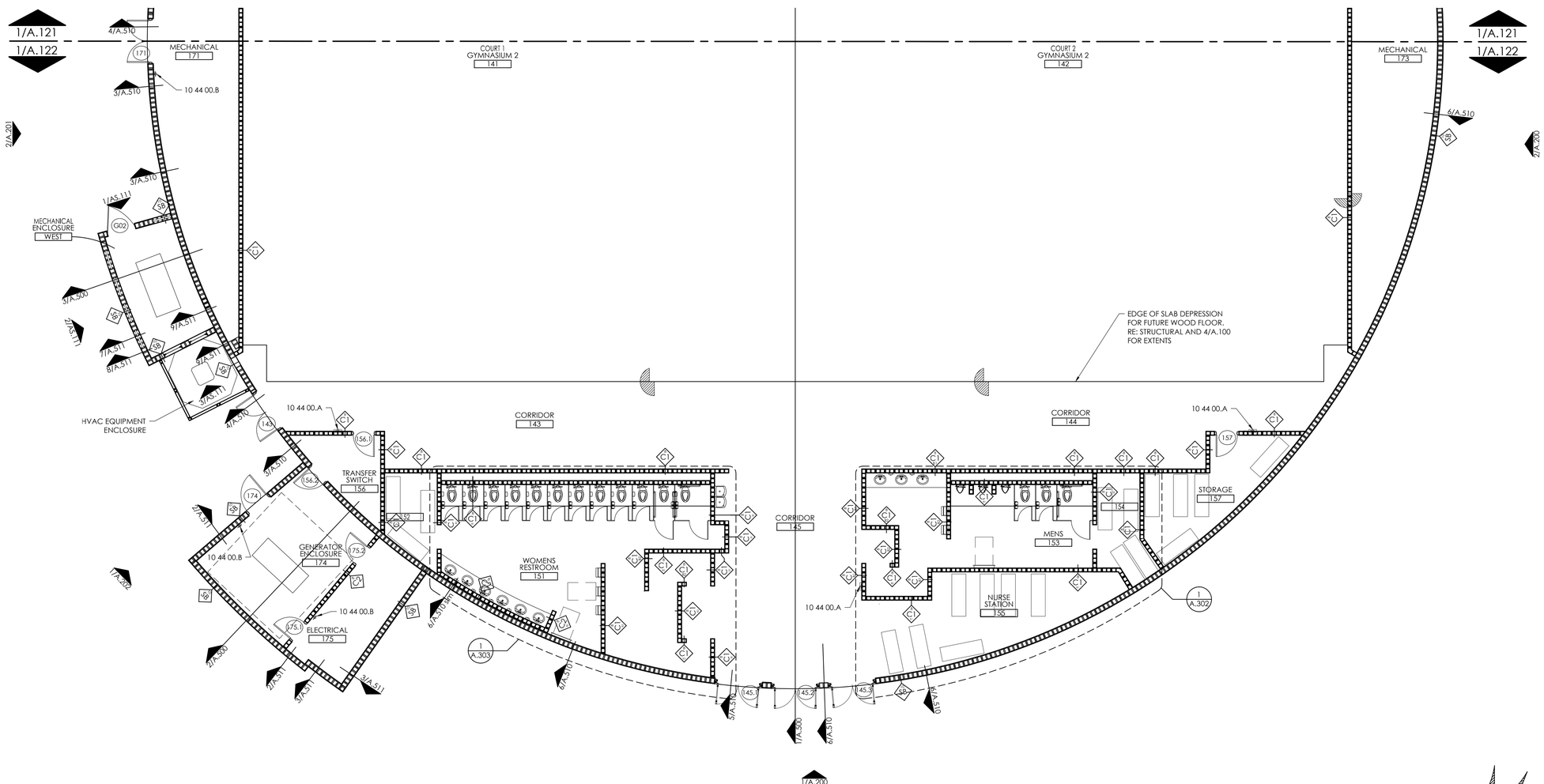
ENLARGED ANNOTATED FLOOR PLAN NORTH SIDE

A.121



1 A.122 ENLARGED SOUTH ANNOTATED FLOOR PLAN

SCALE: 1/8"=1'-0" REF: A.100

REFERENCE NOTES

03 00 00		CONCRETE (CIVIL)
03 10 10		UNDER SLAB VAPOR BARRIER
03 30 00		CAST-IN-PLACE CONCRETE, RE: STRUCT.
03 35 01		CONC. THIN SHELL CONSTR. RE: STRUCT.
	A	AIR FORM/ROOF MEMBRANE RE: STUCT
	B	FOAM INSUATION RE: STRUCT.
	C	REINFORCING STEEL, RE: STRUCT.
	D	CONCRETE RE: STRUCT.
04 05 03		MASONRY MORTARING AND GROUTING
04 20 00		UNIT MASONRY, RE: STRUCT FOR STRUCT WALLS
	A	8" CMU
	B	8" CMU BURNISHED ONE SIDE
	C	8" CMU BURNISHED BOTH SIDES
	D	CMU U BLOCK, RE: WALL FOR BURNISHING
	E	10" STRUCTURAL BRICK
	F	8" STRUCTURAL BRICK
05 12 00		STRUCTURAL STEEL FRAMING, RE: STRUCT.
05 21 00		STEEL JOIST FRAMING, RE: STRUCT.
05 31 00		STEEL DECKING, RE: STRUCT.
05 50 00		METAL FABRICATIONS
06 10 00		ROUGH CARPENTRY
	A	FIRE RETARDANT TREATED SOLID BLOCKING
	B	FIRE RETARDANT TREATED PLYWOOD
06 41 00		ARCHITECTURAL WOOD CASEWORK
	A	3/4" PLYWOOD CABINET BODY
	E	HARDWOOD BANDING, 1/4" THICK.
	F	1X FRAMING
	G	2X FRAMING
	I	3/4" PLYWOOD COUNTER UNDERLAY
06 61 19		QUARTZ SURFACING FABRICATIONS
08 12 14		STANDARD STEEL FRAMES
	A	STANDARD STEEL FRAME
	B	MASONRY WIRE ANCHOR
	C	FEMA 361 RATED STEEL FRAME
08 13 14		STANDARD STEEL DOORS
	A	STANDARD STEEL DOOR
	B	FEMA 361 RATED STEEL DOOR
08 14 16		FLUSH WOOD DOORS
08 17 23		INTEGRATED WOOD DOOR OPENING ASSEM
08 41 13		ALUMINUM FRAMED STOREFRONTS
	E	FEMA 361 RATED ASSEMBLY
08 71 00		DOOR HARDWARE
10 14 00		SIGNAGE
10 14 16		CAST BUILDING PLAQUES AND LETTERS
10 21 13.17		SOLID PHENOLIC TOILET COMPARTMENTS
10 28 00		TOILIET ACCESSORIES
	A	GRAB BAR
	B	TOILET PAPER DISPENSER
	C	SANITARY NAPKIN DISPOSAL
	D	TOILET SEAT COVER DISPENSER
	E	COMBO TOWEL DISPENSER/DISPOSAL
	G	BABY CHANGING STATION
	O	SOAP DISPENSER
10 44 00		FIRE PROTECTION SPECIALTIES
	A	EXTINGUISHER WITH CABINET
	B	EXTINGUISHER ON BRACKET

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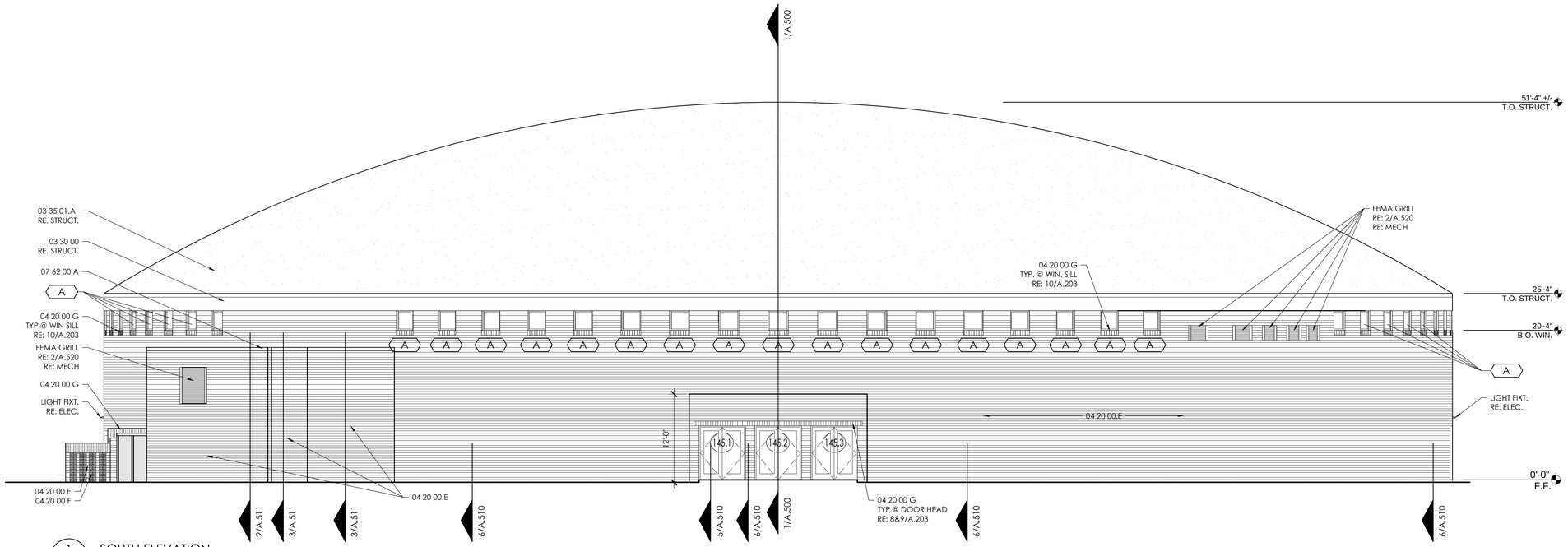
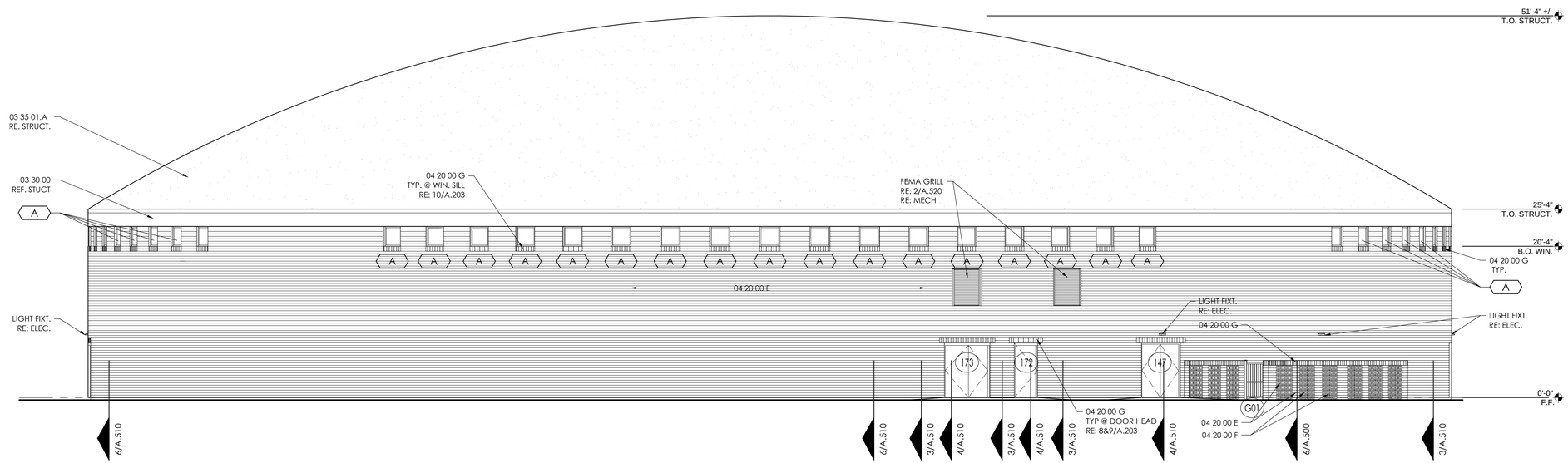
ENLARGED ANNOTATED FLOOR PLAN SOUTH SIDE

A.122



1 A.200 SOUTH ELEVATION

SCALE: 1/8"=1'-0" REF: 1/A.100



2 A.200 EAST ELEVATION

SCALE: 1/8"=1'-0" REF: 1/A.100

GENERAL NOTES

1. ELEVATIONS INCLUDED THIS SHEET ARE FOR GENERAL REFERENCE ONLY. ELEVATIONS ARE FROM ONE POINT AND BUILDING CURVES AWAY ON EITHER SIDE OF CENTER. REFERENCE SHEET A.203 FOR EXTERIOR ELEVATIONS THAT HAVE THE WALL PLANE FLATTENED. DIMENSIONS AND ADDITIONAL NOTATION ARE INCLUDED ON A.203 DRAWINGS.
2. REFERENCE 7/A.203 FOR BRICK COLORS AND PATTERN

REFERENCE NOTES

03 00 00		CONCRETE (CIVIL)
03 30 00		CAST-IN-PLACE CONCRETE, RE: STRUCT.
03 35 01		CONC. THIN SHELL CONSTR. RE: STRUCT.
	A	AIR FORM/ROOF MEMBRANE RE: STUCT
	B	FOAM INSUATION RE: STRUCT.
	C	REINFORCING STEEL, RE: STRUCT.
	D	CONCRETE RE: STRUCT.
04 05 03		MASONRY MORTARING AND GROUTING
04 20 00		UNIT MASONRY, RE: STRUCT FOR STRUCT WALLS
	A	8" CMU
	B	8" CMU BURNISHED ONE SIDE
	C	8" CMU BURNISHED BOTH SIDES
	D	CMU U BLOCK, RE: WALL FOR BURNISHING
	E	10" STRUCTURAL BRICK
	F	8" STRUCTURAL BRICK
	G	STRUCTURAL BRICK BOND BEAM UNIT
	H	STRUCTURAL BRICK U BLOCK
05 50 00		METAL FABRICATIONS
07 52 00		MODIFIED BITUMEN MEMBRANE ROOFING
	A	MODIFIED BITUMEN PLY SHEET
	B	MODIFIED BITUMEN CAP SHEET
	C	VERAL ALUMINUM FACED FLASHING
	D	TERMINATION PRESSURE BAR
	E	FIBER CANT
	F	VENTING BASE SHEET
	G	SEAL EDGE WITH ROOFING SEALANT
07 62 00		SHEET METAL FLASHING AND TRIM
	A	PARAPET CAP, FORM AS INDICATED
	C	FLASHING
	D	COUNTERFLASHING
	E	SURFACE MOUNTED RECEIVER/REGLET
	F	CLEAT
07 71 23		GUTTERS AND DOWNSPOUTS
	A	GUTTER, PROFILE AS INDICATED
	B	DOWNSPOUT, SIZE SHAPE INDICATED
08 12 14		STANDARD STEEL FRAMES
	A	STANDARD STEEL FRAME
	B	MASONRY WIRE ANCHOR
	C	FEMA 361 RATED STEEL FRAME
08 13 14		STANDARD STEEL DOORS
	A	STANDARD STEEL DOOR
	B	FEMA 361 RATED STEEL DOOR
08 41 13		ALUMINUM FRAMED STOREFRONTS
	E	FEMA 361 RATED ASSEMBLY
08 71 00		DOOR HARDWARE
10 14 00		SIGNAGE
10 14 16		CAST BUILDING PLAQUES AND LETTERS
32 31 13		CHAIN LINK FENCES AND GATES

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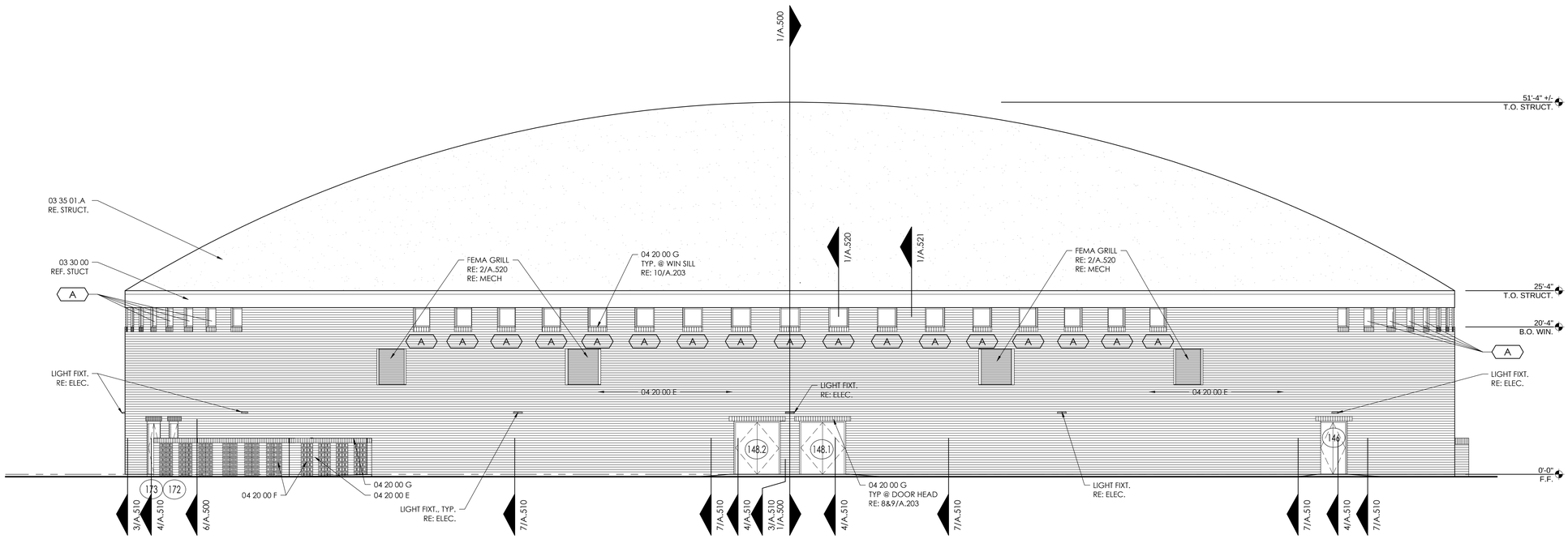
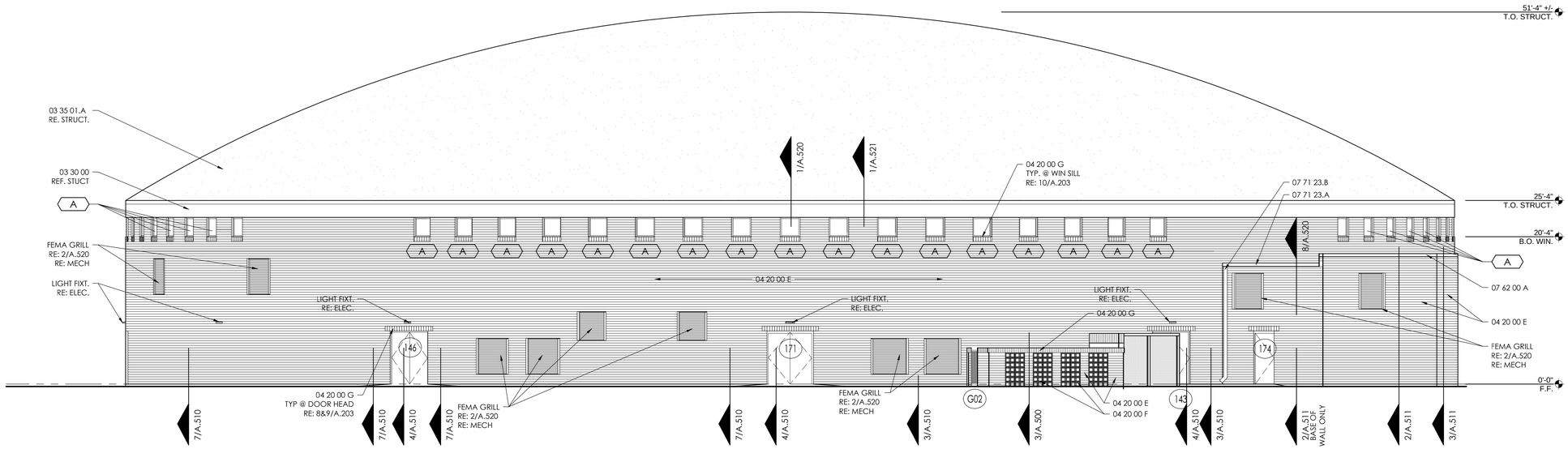
EXTERIOR ELEVATIONS

A.200



1 A.201 NORTH ELEVATION

SCALE: 3/32"=1'-0" REF: 1/A.100



2 A.201 WEST ELEVATION

SCALE: 3/32"=1'-0" REF: 1/A.100

GENERAL NOTES

1. ELEVATIONS INCLUDED THIS SHEET ARE FOR GENERAL REFERENCE ONLY. ELEVATIONS ARE FROM ONE POINT AND BUILDING CURVES AWAY ON EITHER SIDE OF CENTER. REFERENCE SHEET A.203 FOR EXTERIOR ELEVATIONS THAT HAVE THE WALL PLANE FLATTENED. DIMENSIONS AND ADDITIONAL NOTATION ARE INCLUDED ON A.203 DRAWINGS.
2. REFERENCE 7/A.203 FOR BRICK COLORS AND PATTERN

REFERENCE NOTES

03 00 00		CONCRETE (CIVIL)
03 30 00		CAST-IN-PLACE CONCRETE, RE: STRUCT.
03 35 01		CONC. THIN SHELL CONSTR. RE: STRUCT.
	A	AIR FORM/ROOF MEMBRANE RE: STUCT
	B	FOAM INSUATION RE: STRUCT.
	C	REINFORCING STEEL, RE: STRUCT.
	D	CONCRETE RE: STRUCT.
04 05 03		MASONRY MORTARING AND GROUTING
04 20 00		UNIT MASONRY, RE: STRUCT FOR STRUCT WALLS
	A	8" CMU
	B	8" CMU BURNISHED ONE SIDE
	C	8" CMU BURNISHED BOTH SIDES
	D	CMU U BLOCK, RE: WALL FOR BURNISHING
	E	10" STRUCTURAL BRICK
	F	8" STRUCTURAL BRICK
	G	STRUCTURAL BRICK BOND BEAM UNIT
	H	STRUCTURAL BRICK U BLOCK
05 50 00		METAL FABRICATIONS
07 52 00		MODIFIED BITUMEN MEMBRANE ROOFING
	A	MODIFIED BITUMEN PLY SHEET
	B	MODIFIED BITUMEN CAP SHEET
	C	VERAL ALUMINUM FACED FLASHING
	D	TERMINATION PRESSURE BAR
	E	FIBER CANT
	F	VENTING BASE SHEET
	G	SEAL EDGE WITH ROOFING SEALANT
07 62 00		SHEET METAL FLASHING AND TRIM
	A	PARAPET CAP, FORM AS INDICATED
	C	FLASHING
	D	COUNTERFLASHING
	E	SURFACE MOUNTED RECEIVER/REGLET
	F	CLEAT
07 71 23		GUTTERS AND DOWNSPOUTS
	A	GUTTER, PROFILE AS INDICATED
	B	DOWNSPOUT, SIZE SHAPE INDICATED
08 12 14		STANDARD STEEL FRAMES
	A	STANDARD STEEL FRAME
	B	MASONRY WIRE ANCHOR
	C	FEMA 361 RATED STEEL FRAME
08 13 14		STANDARD STEEL DOORS
	A	STANDARD STEEL DOOR
	B	FEMA 361 RATED STEEL DOOR
08 41 13		ALUMINUM FRAMED STOREFRONTS
	E	FEMA 361 RATED ASSEMBLY
08 71 00		DOOR HARDWARE
10 14 00		SIGNAGE
10 14 16		CAST BUILDING PLAQUES AND LETTERS
32 31 13		CHAIN LINK FENCES AND GATES

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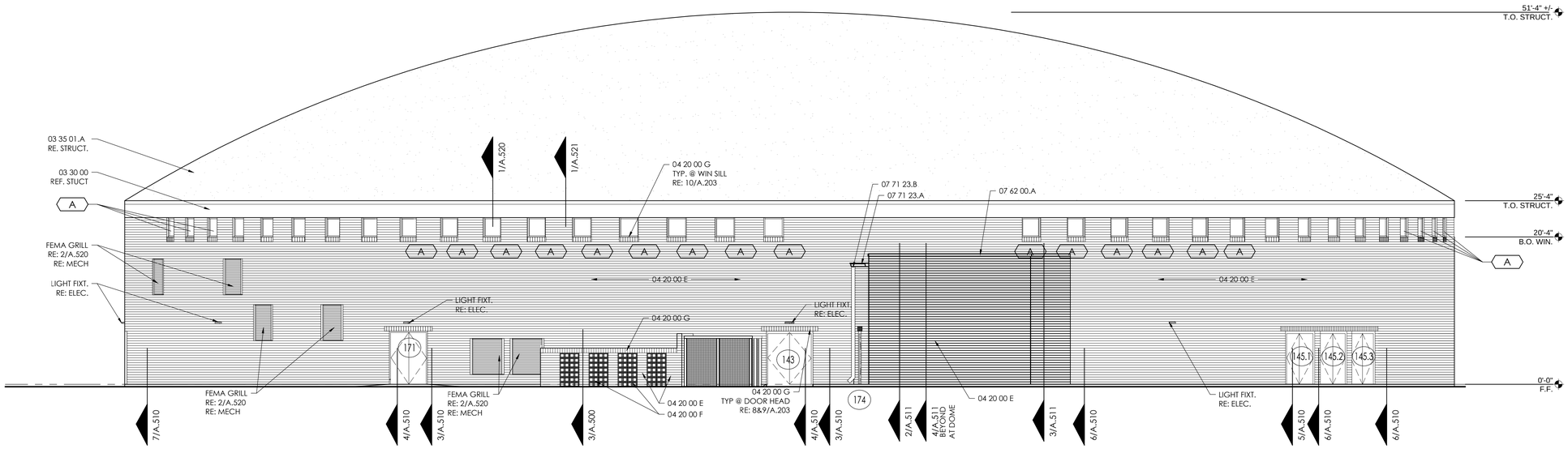
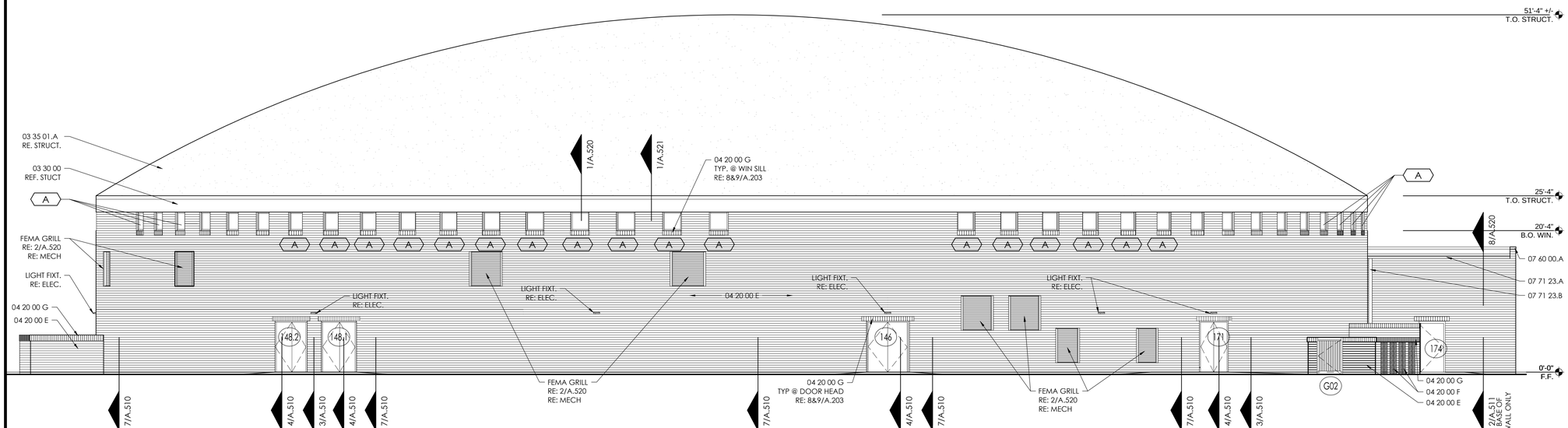
EXTERIOR ELEVATIONS

A.201



1 A.202 SOUTHWEST ELEVATION

SCALE: 3/32"=1'-0" REF: 1/A.100



2 A.202 NORTHWEST ELEVATION

SCALE: 3/32"=1'-0" REF: 1/A.100

GENERAL NOTES

1. ELEVATIONS INCLUDED THIS SHEET ARE FOR GENERAL REFERENCE ONLY. ELEVATIONS ARE FROM ONE POINT AND BUILDING CURVES AWAY ON EITHER SIDE OF CENTER. REFERENCE SHEET A.203 FOR EXTERIOR ELEVATIONS THAT HAVE THE WALL PLANE FLATTENED. DIMENSIONS AND ADDITIONAL NOTATION ARE INCLUDED ON A.203 DRAWINGS.
2. REFERENCE 7/A.203 FOR BRICK COLORS AND PATTERN

REFERENCE NOTES

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03 30 00		CAST-IN-PLACE CONCRETE, RE: STRUCT.
03 35 01		CONC. THIN SHELL CONSTR. RE: STRUCT.
	A	AIR FORM/ROOF MEMBRANE RE: STUCT
	B	FOAM INSUATION RE: STRUCT.
	C	REINFORCING STEEL, RE: STRUCT.
	D	CONCRETE RE: STRUCT.
04 05 03		MASONRY MORTARING AND GROUTING
04 20 00		UNIT MASONRY, RE: STRUCT FOR STRUCT WALLS
	A	8" CMU
	B	8" CMU BURNISHED ONE SIDE
	C	8" CMU BURNISHED BOTH SIDES
	D	CMU U BLOCK, RE: WALL FOR BURNISHING
	E	10" STRUCTURAL BRICK
	F	8" STRUCTURAL BRICK
	G	STRUCTURAL BRICK BOND BEAM UNIT
	H	STRUCTURAL BRICK U BLOCK
05 50 00		METAL FABRICATIONS
07 52 00		MODIFIED BITUMEN MEMBRANE ROOFING
	A	MODIFIED BITUMEN PLY SHEET
	B	MODIFIED BITUMEN CAP SHEET
	C	VERAL ALUMINUM FACED FLASHING
	D	TERMINATION PRESSURE BAR
	E	FIBER CANT
	F	VENTING BASE SHEET
	G	SEAL EDGE WITH ROOFING SEALANT
07 62 00		SHEET METAL FLASHING AND TRIM
	A	PARAPET CAP, FORM AS INDICATED
	C	FLASHING
	D	COUNTERFLASHING
	E	SURFACE MOUNTED RECEIVER/REGLET
	F	CLEAT
07 71 23		GUTTERS AND DOWNSPOUTS
	A	GUTTER, PROFILE AS INDICATED
	B	DOWNSPOUT, SIZE SHAPE INDICATED
08 12 14		STANDARD STEEL FRAMES
	A	STANDARD STEEL FRAME
	B	MASONRY WIRE ANCHOR
	C	FEMA 361 RATED STEEL FRAME
08 13 14		STANDARD STEEL DOORS
	A	STANDARD STEEL DOOR
	B	FEMA 361 RATED STEEL DOOR
08 41 13		ALUMINUM FRAMED STOREFRONTS
	E	FEMA 361 RATED ASSEMBLY
08 71 00		DOOR HARDWARE
10 14 00		SIGNAGE
10 14 16		CAST BUILDING PLAQUES AND LETTERS
32 31 13		CHAIN LINK FENCES AND GATES

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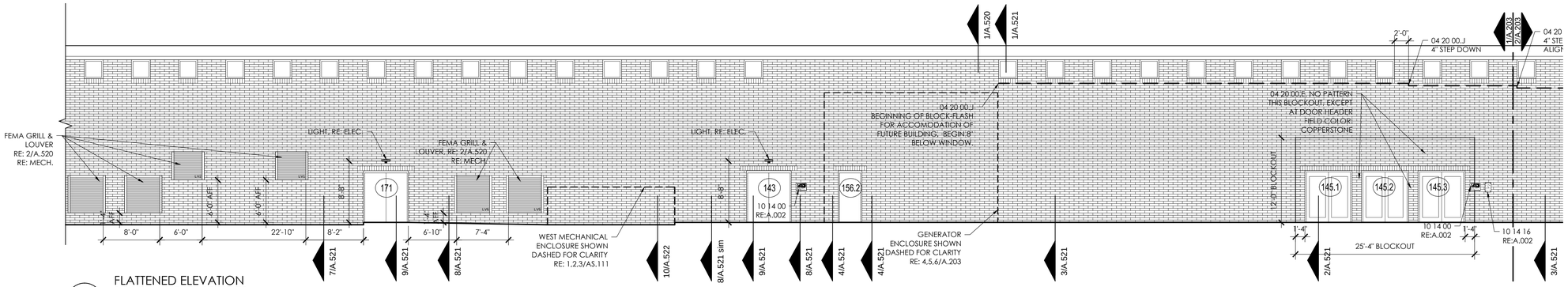
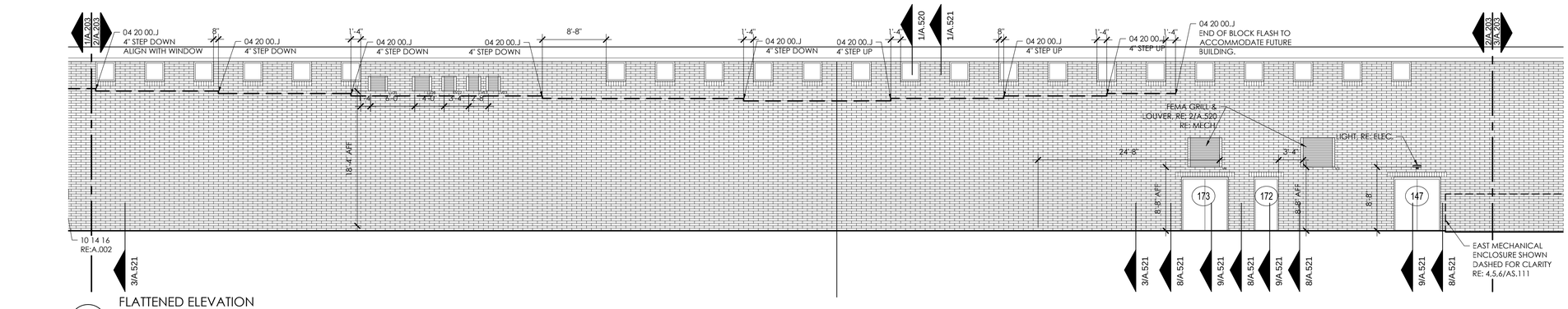
EXTERIOR ELEVATIONS

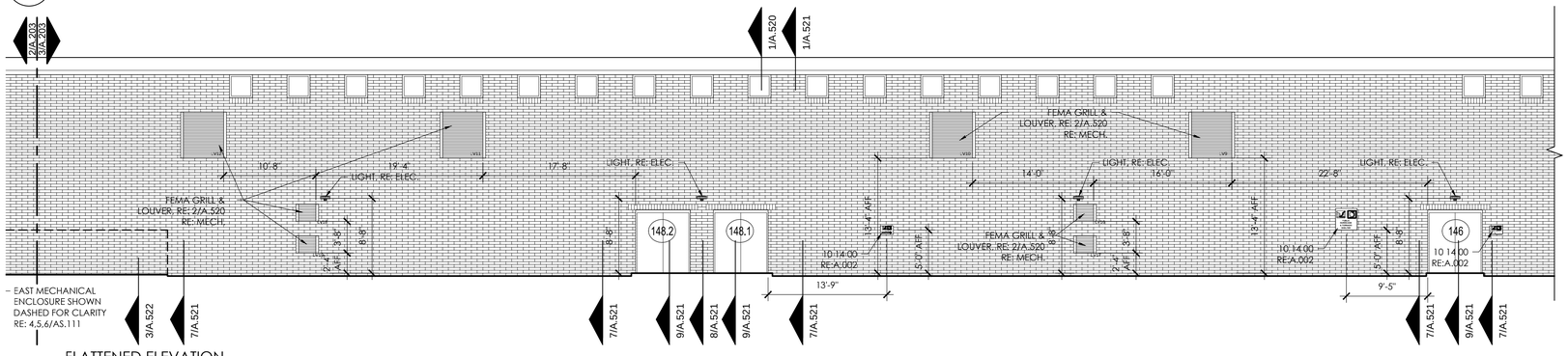
A.202



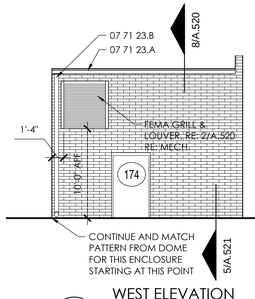
1 A.203 FLATTENED ELEVATION SOUTH AND EAST SIDES
SCALE: 1/8"=1'-0" REF: 1/A.100



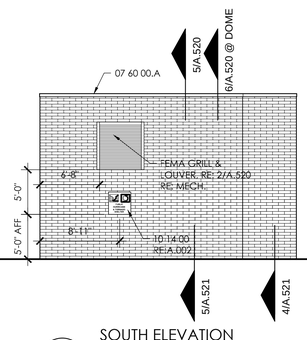
2 A.203 FLATTENED ELEVATION SOUTH AND WEST SIDE
SCALE: 1/8"=1'-0" REF: 1/A.100



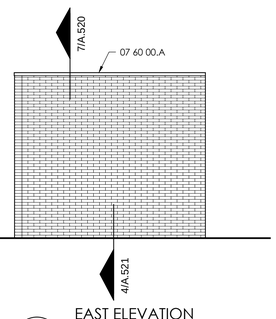
3 A.203 FLATTENED ELEVATION NORTH, NE, NW SIDE
SCALE: 1/8"=1'-0" REF: 1/A.100



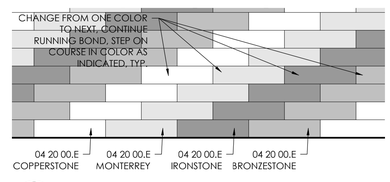
4 A.203 WEST ELEVATION GENERATOR ENCLOSURE
SCALE: 1/8"=1'-0" REF: 1/A.100



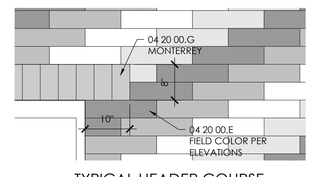
5 A.203 SOUTH ELEVATION GENERATOR ENCLOSURE
SCALE: 1/8"=1'-0" REF: 1/A.100



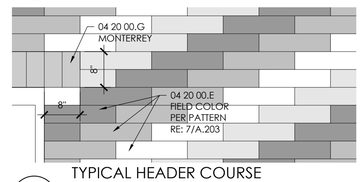
6 A.203 EAST ELEVATION GENERATOR ENCLOSURE
SCALE: 1/8"=1'-0" REF: 1/A.100



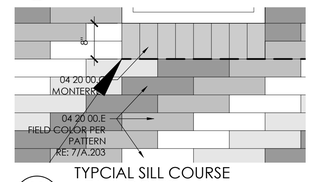
7 A.203 TYPICAL PATTERN
SCALE: 3/4"=1'-0" REF: 2/A.203



8 A.203 TYPICAL HEADER COURSE AT DOUBLE DOOR
SCALE: 3/4"=1'-0" REF: 1/A.203



9 A.203 TYPICAL HEADER COURSE AT SINGLE DOOR
SCALE: 3/4"=1'-0" REF: 1/A.203



10 A.203 TYPCIAL SILL COURSE AT WINDOWS
SCALE: 3/4"=1'-0" REF: 1/A.203

GENERAL NOTES

1. ELEVATIONS 1, 2, 3, 5, 8, &15, THIS SHEET. ARE VIEWS OF A CIRCULAR SURFACE AS IF VIEWED IN A FLAT PLANE. HORIZONTAL DIMENSIONS INDICATED ARE ALONG THE SURFACE OF THE WALL AND CORRESPOND TO THE LAYOUT OF BRICK. DIMENSIONS ARE CONSTRAINED TO THE INSIDE SURFACE OF THE DOME.
2. BRICK COLORS ARE ARRANGED IN A SIMPLE REPEATING PATTERN. SEE 7/A.203 FOR ILLUSTRATION

REFERENCE NOTES

03 00 00		CONCRETE (CIVIL)
03 30 00		CAST-IN-PLACE CONCRETE, RE: STRUCT.
03 35 01		CONC. THIN SHELL CONSTR. RE: STRUCT.
	A	AIR FORM/ROOF MEMBRANE RE: STUCT
	B	FOAM INSUATION RE: STRUCT.
	C	REINFORCING STEEL, RE: STRUCT.
	D	CONCRETE RE: STRUCT.
04 05 03		MASONRY MORTARING AND GROUTING
04 20 00		UNIT MASONRY, RE: STRUCT FOR STRUCT WALLS
	A	8" CMU
	B	8" CMU BURNISHED ONE SIDE
	C	8" CMU BURNISHED BOTH SIDES
	D	CMU U BLOCK, RE: WALL FOR BURNISHING
	E	10" STRUCTURAL BRICK
	F	8" STRUCTURAL BRICK
	G	STRUCTURAL BRICK BOND BEAM UNIT
	H	STRUCTURAL BRICK U BLOCK
05 50 00		METAL FABRICATIONS
07 52 00		MODIFIED BITUMEN MEMBRANE ROOFING
	A	MODIFIED BITUMEN PLY SHEET
	B	MODIFIED BITUMEN CAP SHEET
	C	VERAL ALUMINUM FACED FLASHING
	D	TERMINATION PRESSURE BAR
	E	FIBER CANT
	F	VENTING BASE SHEET
	G	SEAL EDGE WITH ROOFING SEALANT
07 62 00		SHEET METAL FLASHING AND TRIM
	A	PARAPET CAP, FORM AS INDICATED
	C	FLASHING
	D	COUNTERFLASHING
	E	SURFACE MOUNTED RECEIVER/REGLET
	F	CLEAT
07 71 23		GUTTERS AND DOWNSPOUTS
	A	GUTTER, PROFILE AS INDICATED
	B	DOWNSPOUT, SIZE SHAPE INDICATED
08 12 14		STANDARD STEEL FRAMES
	A	STANDARD STEEL FRAME
	B	MASONRY WIRE ANCHOR
	C	FEMA 361 RATED STEEL FRAME
08 13 14		STANDARD STEEL DOORS
	A	STANDARD STEEL DOOR
	B	FEMA 361 RATED STEEL DOOR
08 41 13		ALUMINUM FRAMED STOREFRONTS
	E	FEMA 361 RATED ASSEMBLY
08 71 00		DOOR HARDWARE
10 14 00		SIGNAGE
10 14 16		CAST BUILDING PLAQUES AND LETTERS
32 31 13		CHAIN LINK FENCES AND GATES

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ISSUED: 10.15.2013

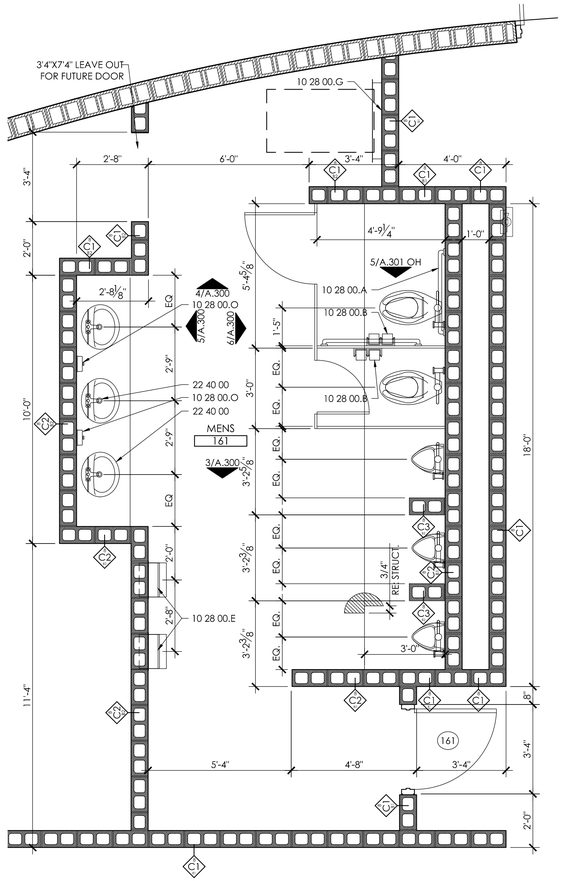
CITY OF EDINBURG
SAFE ROOM - SOUTH PARK SITE
315 E. PALM DRIVE
EDINBURG, TX

8/5/2013
bwm/jlb

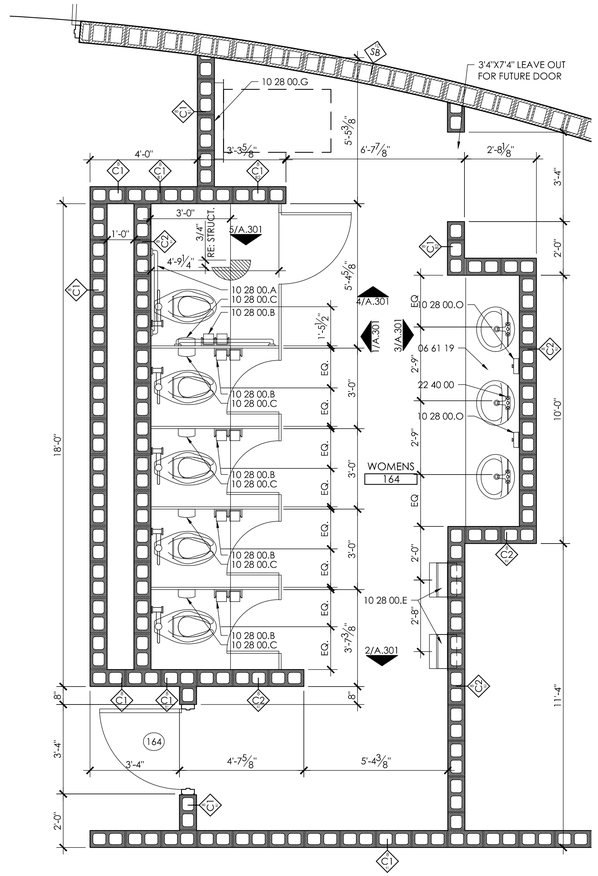
REVISIONS

EXTERIOR ELEVATIONS

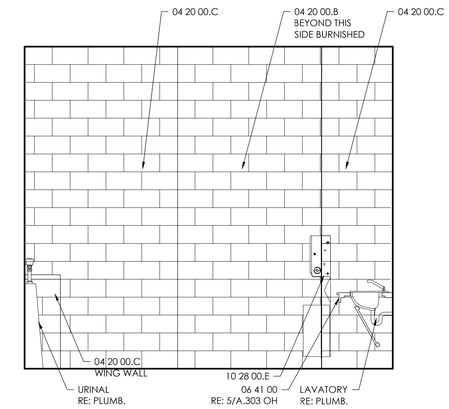
A.203



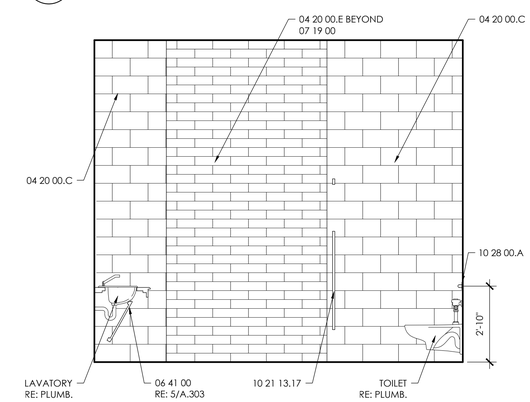
1 A.300 ENLARGED PLAN
161 MENS RESTROOM
SCALE: 3/8"=1'-0" REF: 1/A.121



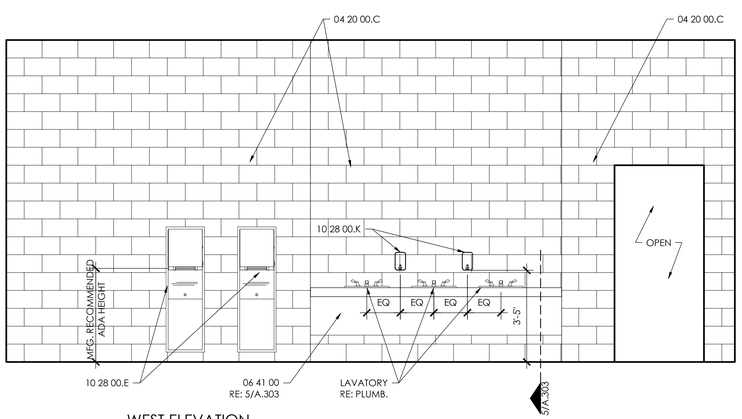
2 A.300 ENLARGED PLAN
164 WOMENS RESTROOM
SCALE: 3/8"=1'-0" REF: 1/A.121



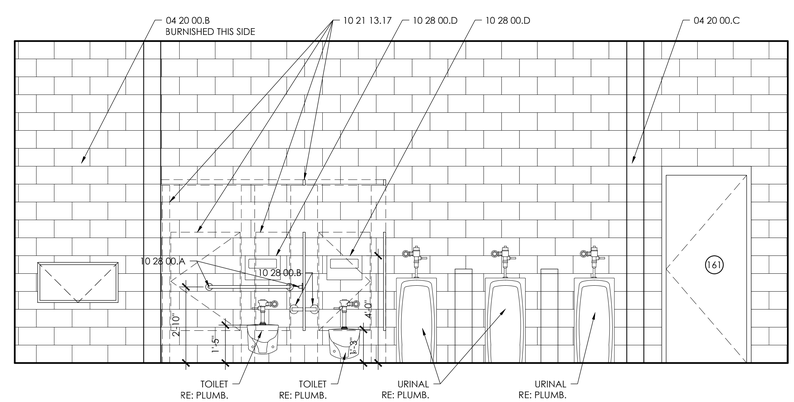
3 A.300 SOUTH ELEVATION
161 MENS RESTROOM
SCALE: 3/8"=1'-0" REF: 1/A.300



4 A.300 NORTH ELEVATION
161 MENS RESTROOM
SCALE: 3/8"=1'-0" REF: 1/A.300



5 A.300 WEST ELEVATION
161 MENS RESTROOM
SCALE: 3/8"=1'-0" REF: 1/A.300



6 A.300 EAST ELEVATION
161 MENS RESTROOM
SCALE: 3/8"=1'-0" REF: 1/A.300

GENERAL NOTES

1. 3/4" RECESS ALONG TOILET FIXTURES IS TO ACCOMMODATE FUTURE INSTALLATION OF FLOOR TILE, N.I.C. PLUMBING FIXTURES, COUNTERS, PARTITIONS, AND ACCESSORIES SHALL BE SET IN REFERENCE WITH FINISH FLOOR, NOT THE RECESS.

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	B	FOAM INSUATION RE: STRUCT.
	C	REINFORCING STEEL, RE: STRUCT.
	D	CONCRETE RE: STRUCT.
04 05 03		MASONRY MORTARING AND GROUTING
04 20 00		UNIT MASONRY, RE: STRUCT FOR STRUCT WALLS
	A	8" CMU
	B	8" CMU BURNISHED ONE SIDE
	C	8" CMU BURNISHED BOTH SIDES
	D	CMU U BLOCK, RE: WALL FOR BURNISHING
	E	10" STRUCTURAL BRICK
	F	8" STRUCTURAL BRICK
05 12 00		STRUCTURAL STEEL FRAMING, RE: STRUCT.
05 21 00		STEEL JOIST FRAMING, RE: STRUCT.
05 31 00		STEEL DECKING, RE: STRUCT.
05 50 00		METAL FABRICATIONS
06 10 00		ROUGH CARPENTRY
	A	FIRE RETARDANT TREATED SOLID BLOCKING
	B	FIRE RETARDANT TREATED PLYWOOD
06 41 00		ARCHITECTURAL WOOD CASEWORK
	A	3/4" PLYWOOD CABINET BODY
	E	HARDWOOD BANDING, 1/4" THICK.
	F	1X FRAMING
	G	2X FRAMING
	I	3/4" PLYWOOD COUNTER UNDERLAY
06 61 19		QUARTZ SURFACING FABRICATIONS
08 12 14		STANDARD STEEL FRAMES
	A	STANDARD STEEL FRAME
	B	MASONRY WIRE ANCHOR
	C	FEMA 361 RATED STEEL FRAME
08 13 14		STANDARD STEEL DOORS
	A	STANDARD STEEL DOOR
	B	FEMA 361 RATED STEEL DOOR
08 14 16		FLUSH WOOD DOORS
08 17 23		INTEGRATED WOOD DOOR OPENING ASSEM
08 41 13		ALUMINUM FRAMED STOREFRONTS
	E	FEMA 361 RATED ASSEMBLY
08 71 00		DOOR HARDWARE
10 14 00		SIGNAGE
10 14 16		CAST BUILDING PLAQUES AND LETTERS
10 21 13.17		SOLID PHENOLIC TOILET COMPARTMENTS
10 28 00		TOILIET ACCESSORIES
	A	GRAB BAR
	B	TOILET PAPER DISPENSER
	C	SANITARY NAPKIN DISPOSAL
	D	TOILET SEAT COVER DISPENSER
	E	COMBO TOWEL DISPENSER/DISPOSAL
	G	BABY CHANGING STATION
	O	SOAP DISPENSER
10 44 00		FIRE PROTECTION SPECIALTIES
	A	EXTINGUISHER WITH CABINET
	B	EXTINGUISHER ON BRACKET

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ISSUED: 10.15.2013

CITY OF EDINBURG
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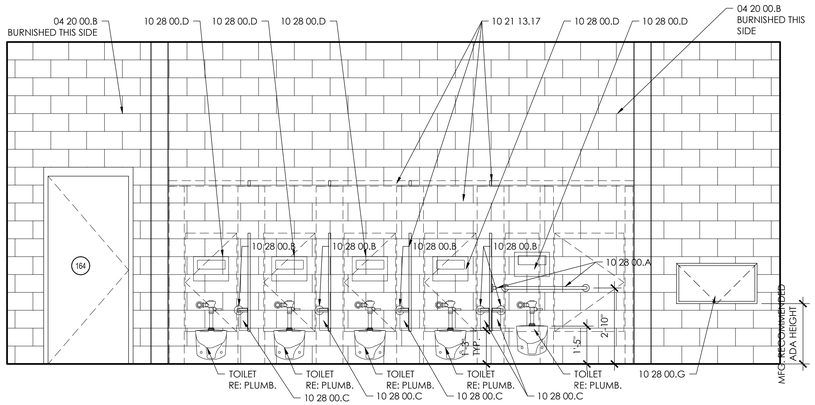
EDINBURG, TX

08/07/2013
bwm

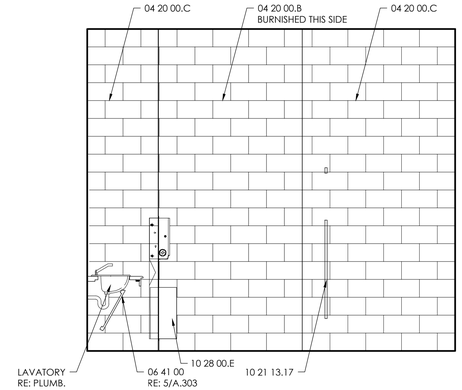
REVISIONS

ENLARGED RESTROOM PLANS & ELEVATIONS

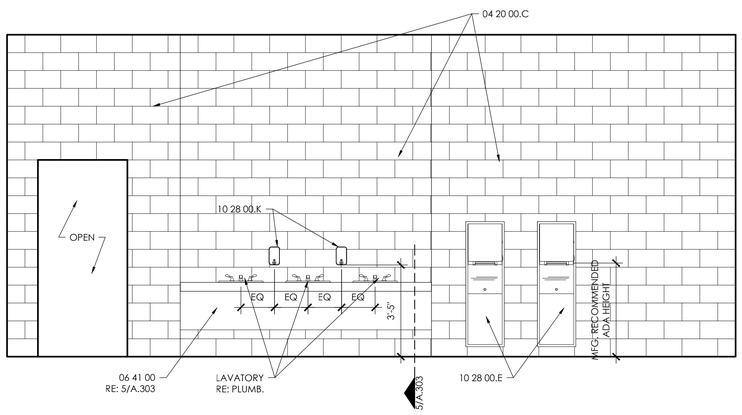
A.300



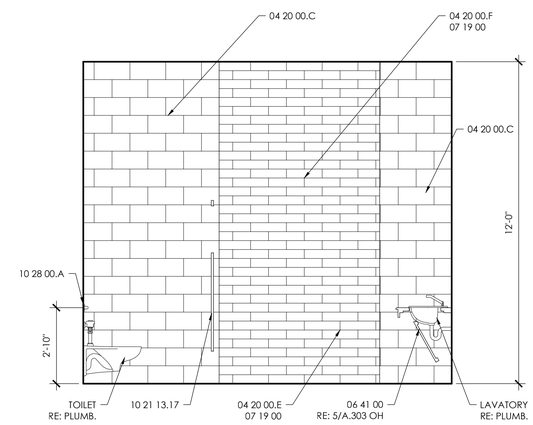
1 A.301 EAST ELEVATION
164 WOMENS RESTROOM
SCALE: 3/8"=1'-0" REF: 1/A.300



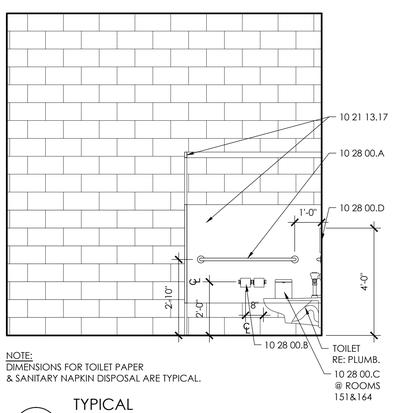
2 A.301 SOUTH ELEVATION
164 WOMENS RESTROOM
SCALE: 3/8"=1'-0" REF: 1/A.300



3 A.301 WEST ELEVATION
164 WOMENS RESTROOM
SCALE: 3/8"=1'-0" REF: 1/A.300



4 A.301 NORTH ELEVATION
164 WOMENS RESTROOM
SCALE: 3/8"=1'-0" REF: 1/A.300



NOTE:
DIMENSIONS FOR TOILET PAPER
& SANITARY NAPKIN DISPOSAL ARE TYPICAL.

5 A.301 TYPICAL
RESTROOM STALL AT HC
SCALE: 3/8"=1'-0" REF: 1/A.300

GENERAL NOTES

1. 3/4" RECESS ALONG TOILET FIXTURES IS TO ACCOMMODATE FUTURE INSTALLATION OF FLOOR TILE, N.I.C. PLUMBING FIXTURES, COUNTERS, PARTITIONS, AND ACCESSORIES SHALL BE SET IN REFERENCE WITH FINISH FLOOR, NOT THE RECESS.

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	B	FOAM INSUATION RE: STRUCT.
	C	REINFORCING STEEL, RE: STRUCT.
	D	CONCRETE RE: STRUCT.
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04 20 00		UNIT MASONRY, RE: STRUCT FOR STRUCT WALLS
	A	8" CMU
	B	8" CMU BURNISHED ONE SIDE
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	D	CMU U BLOCK, RE: WALL FOR BURNISHING
	E	10" STRUCTURAL BRICK
	F	8" STRUCTURAL BRICK
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05 21 00		STEEL JOIST FRAMING, RE: STRUCT.
05 31 00		STEEL DECKING, RE: STRUCT.
05 50 00		METAL FABRICATIONS
06 10 00		ROUGH CARPENTRY
	A	FIRE RETARDANT TREATED SOLID BLOCKING
	B	FIRE RETARDANT TREATED PLYWOOD
06 41 00		ARCHITECTURAL WOOD CASEWORK
	A	3/4" PLYWOOD CABINET BODY
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06 61 19		QUARTZ SURFACING FABRICATIONS
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	C	FEMA 361 RATED STEEL FRAME
08 13 14		STANDARD STEEL DOORS
	A	STANDARD STEEL DOOR
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08 14 16		FLUSH WOOD DOORS
08 17 23		INTEGRATED WOOD DOOR OPENING ASSEM
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08 71 00		DOOR HARDWARE
10 14 00		SIGNAGE
10 14 16		CAST BUILDING PLAQUES AND LETTERS
10 21 13.17		SOLID PHENOLIC TOILET COMPARTMENTS
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	A	GRAB BAR
	B	TOILET PAPER DISPENSER
	C	SANITARY NAPKIN DISPOSAL
	D	TOILET SEAT COVER DISPENSER
	E	COMBO TOWEL DISPENSER/DISPOSAL
	G	BABY CHANGING STATION
	O	SOAP DISPENSER
10 44 00		FIRE PROTECTION SPECIALTIES
	A	EXTINGUISHER WITH CABINET
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STATE OF TEXAS

ISSUED: 10.15.2013

CITY OF EDINBURG
SAFE ROOM - SOUTH PARK SITE
315 E. PALM DRIVE
EDINBURG, TX

08/07/2013
bwm

REVISIONS
-
-
-
-
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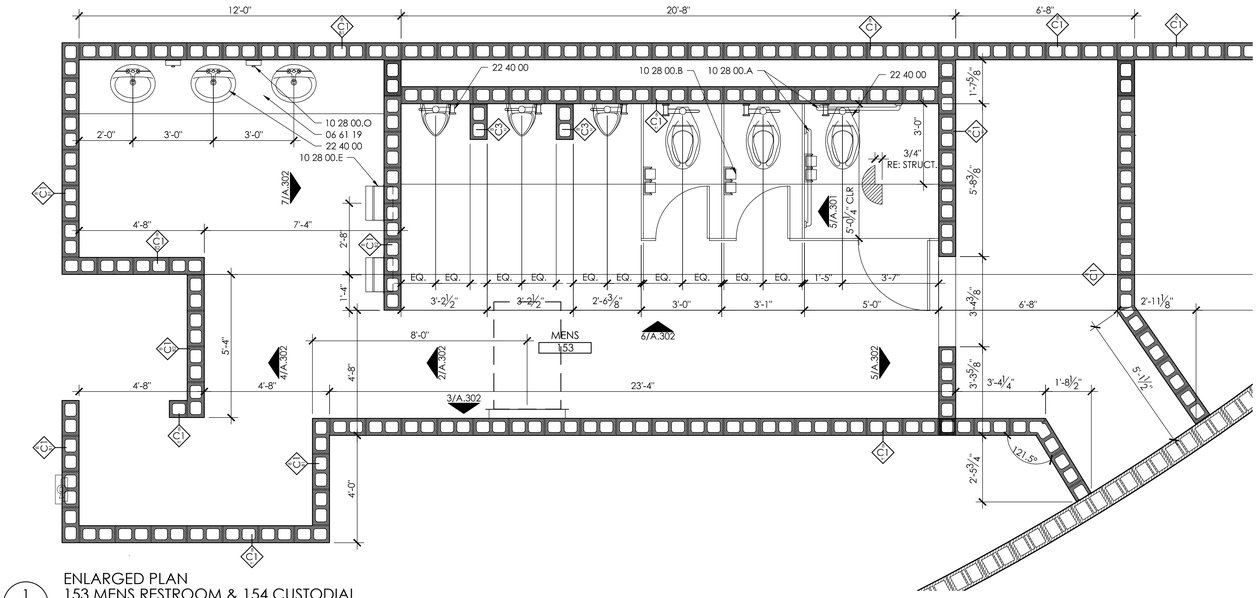
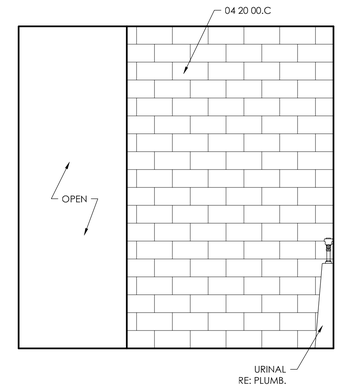
-

RESTROOM ELEVATIONS

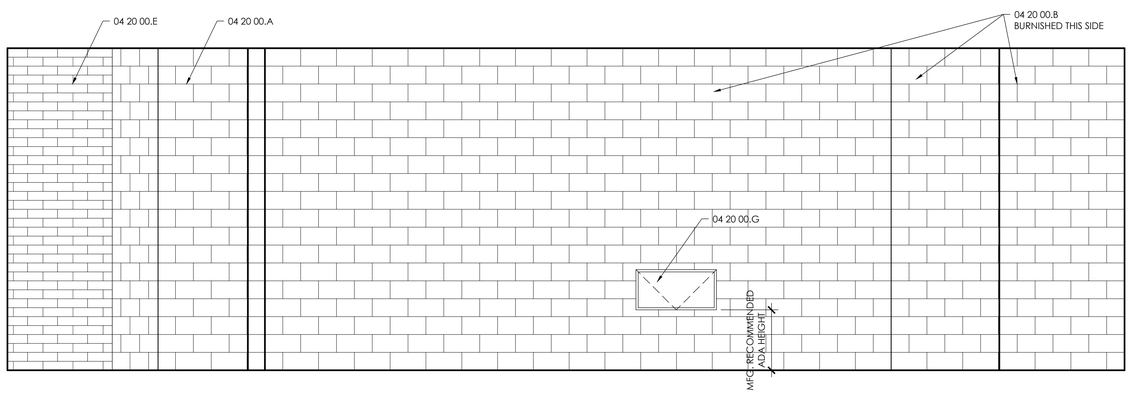
A.301



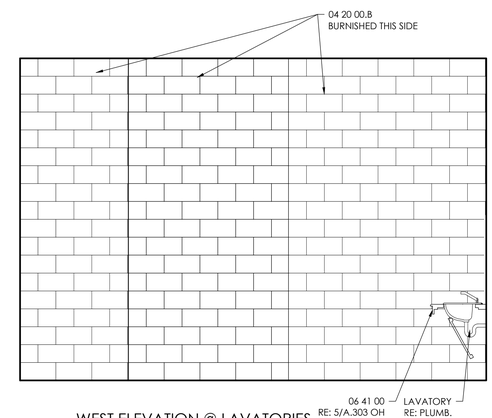
1 A.302 ENLARGED PLAN
153 MENS RESTROOM & 154 CUSTODIAL
SCALE: 3/8"=1'-0" REF: 1/A.122



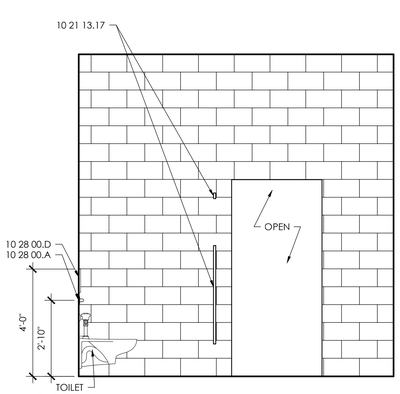
2 A.302 WEST ELEVATION @ FIXTURES
153 MENS RESTROOM
SCALE: 3/8"=1'-0" REF: 1/A.302



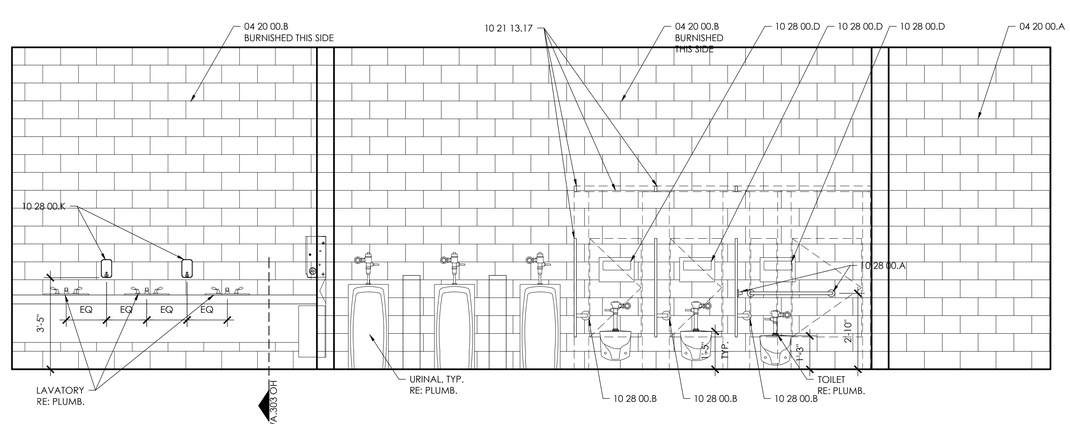
3 A.302 SOUTH ELEVATION
153 MENS RESTROOM
SCALE: 3/8"=1'-0" REF: 1/A.302



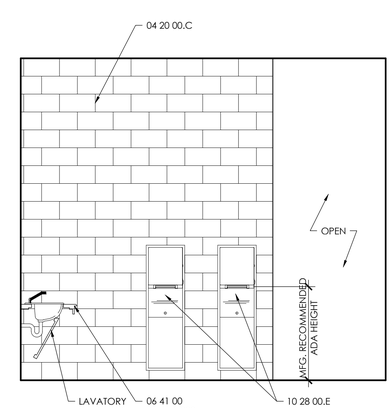
4 A.302 WEST ELEVATION @ LAVATORIES
153 MENS RESTROOM
SCALE: 3/8"=1'-0" REF: 1/A.302



5 A.302 EAST ELEVATION @ FIXTURES
153 MENS RESTROOM
SCALE: 3/8"=1'-0" REF: 1/A.302



6 A.302 NORTH ELEVATION
153 MENS RESTROOM
SCALE: 3/8"=1'-0" REF: 1/A.302



7 A.302 EAST ELEVATION @ LAVATORIES
153 MENS RESTROOM
SCALE: 3/8"=1'-0" REF: 1/A.302

GENERAL NOTES

1. 3/4" RECESS ALONG TOILET FIXTURES IS TO ACCOMMODATE FUTURE INSTALLATION OF FLOOR TILE, N.I.C. PLUMBING FIXTURES, COUNTERS, PARTITIONS, AND ACCESSORIES SHALL BE SET IN REFERENCE WITH FINISH FLOOR, NOT THE RECESS.

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03 30 00		CAST-IN-PLACE CONCRETE, RE: STRUCT.
03 35 01		CONC. THIN SHELL CONSTR. RE: STRUCT.
	A	AIR FORM/ROOF MEMBRANE RE: STUCT
	B	FOAM INSUATION RE: STRUCT.
	C	REINFORCING STEEL, RE: STRUCT.
	D	CONCRETE RE: STRUCT.
04 05 03		MASONRY MORTARING AND GROUTING
04 20 00		UNIT MASONRY, RE: STRUCT FOR STRUCT WALLS
	A	8" CMU
	B	8" CMU BURNISHED ONE SIDE
	C	8" CMU BURNISHED BOTH SIDES
	D	CMU U BLOCK, RE: WALL FOR BURNISHING
	E	10" STRUCTURAL BRICK
	F	8" STRUCTURAL BRICK
05 12 00		STRUCTURAL STEEL FRAMING, RE: STRUCT.
05 21 00		STEEL JOIST FRAMING, RE: STRUCT.
05 31 00		STEEL DECKING, RE: STRUCT.
05 50 00		METAL FABRICATIONS
06 10 00		ROUGH CARPENTRY
	A	FIRE RETARDANT TREATED SOLID BLOCKING
	B	FIRE RETARDANT TREATED PLYWOOD
06 41 00		ARCHITECTURAL WOOD CASEWORK
	A	3/4" PLYWOOD CABINET BODY
	E	HARDWOOD BANDING, 1/4" THICK.
	F	1X FRAMING
	G	2X FRAMING
	I	3/4" PLYWOOD COUNTER UNDERLAY
06 61 19		QUARTZ SURFACING FABRICATIONS
08 12 14		STANDARD STEEL FRAMES
	A	STANDARD STEEL FRAME
	B	MASONRY WIRE ANCHOR
	C	FEMA 361 RATED STEEL FRAME
08 13 14		STANDARD STEEL DOORS
	A	STANDARD STEEL DOOR
	B	FEMA 361 RATED STEEL DOOR
08 14 16		FLUSH WOOD DOORS
08 17 23		INTEGRATED WOOD DOOR OPENING ASSEM
08 41 13		ALUMINUM FRAMED STOREFRONTS
	E	FEMA 361 RATED ASSEMBLY
08 71 00		DOOR HARDWARE
10 14 00		SIGNAGE
10 14 16		CAST BUILDING PLAQUES AND LETTERS
10 21 13.17		SOLID PHENOLIC TOILET COMPARTMENTS
10 28 00		TOILIET ACCESSORIES
	A	GRAB BAR
	B	TOILET PAPER DISPENSER
	C	SANITARY NAPKIN DISPOSAL
	D	TOILET SEAT COVER DISPENSER
	E	COMBO TOWEL DISPENSER/DISPOSAL
	G	BABY CHANGING STATION
	O	SOAP DISPENSER
10 44 00		FIRE PROTECTION SPECIALTIES
	A	EXTINGUISHER WITH CABINET
	B	EXTINGUISHER ON BRACKET

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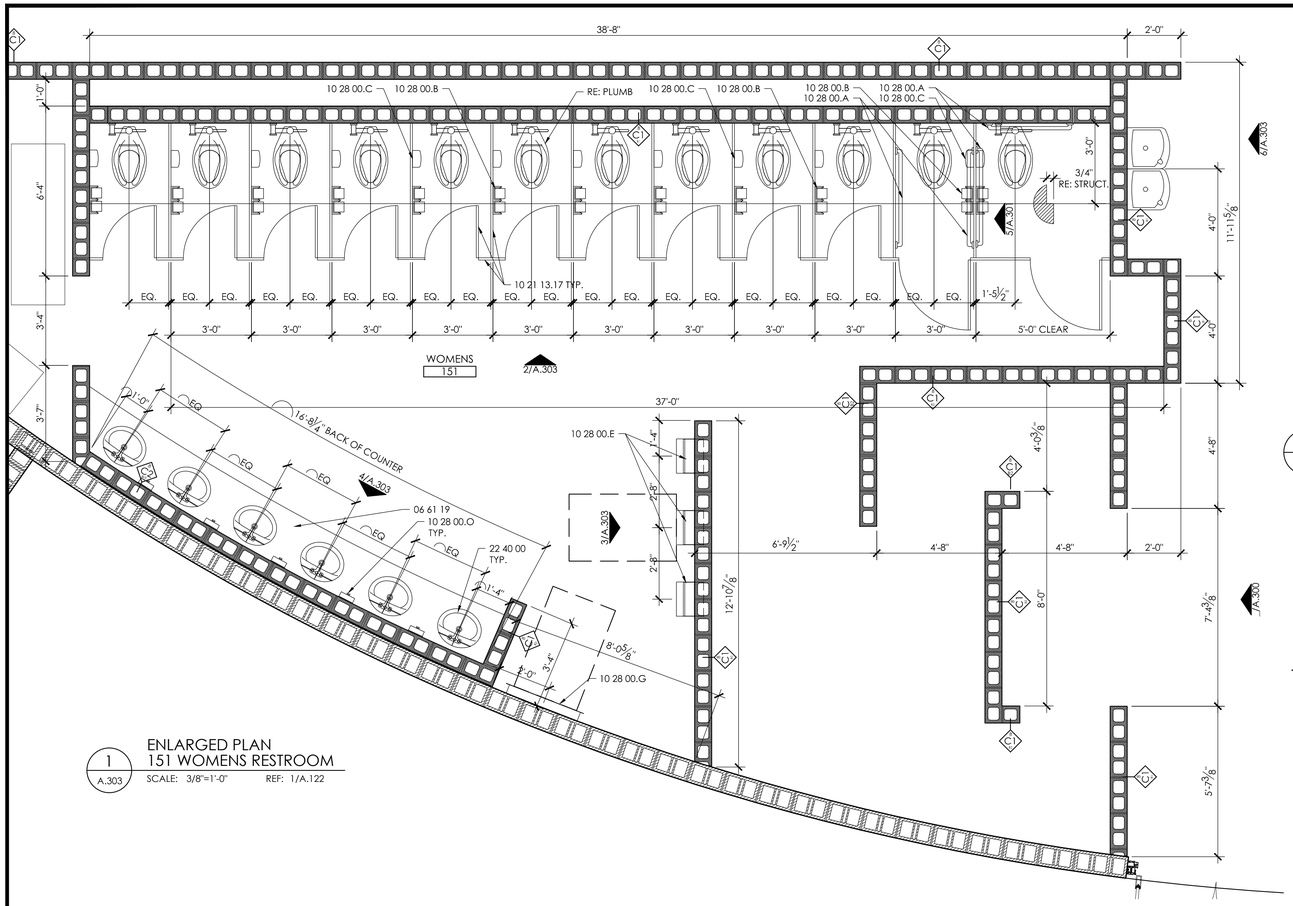
EDINBURG, TX

08/07/2013
bwm

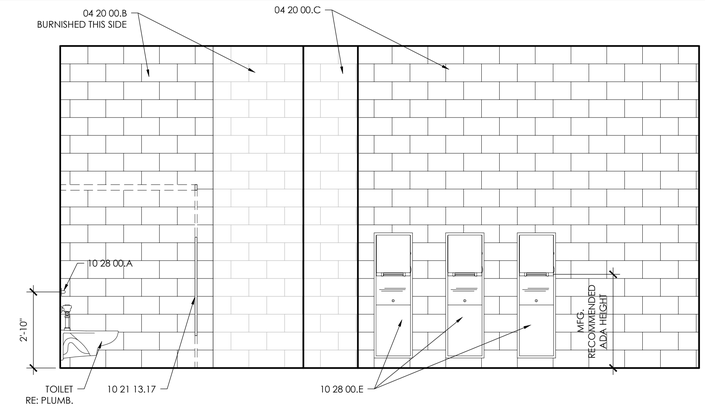
REVISIONS

ENLARGED RESTROOM PLANS & ELEVATIONS

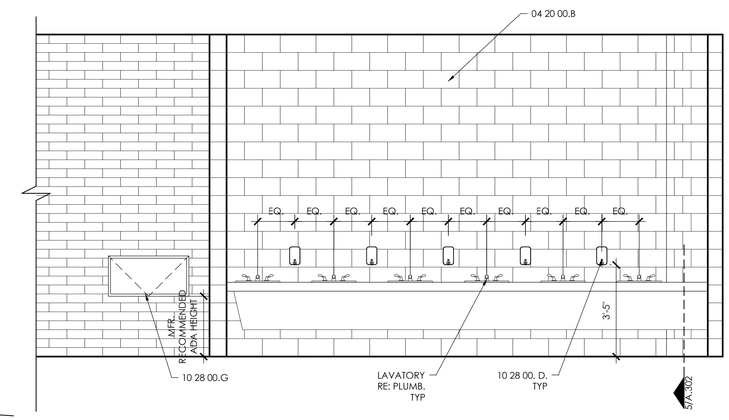
A.302



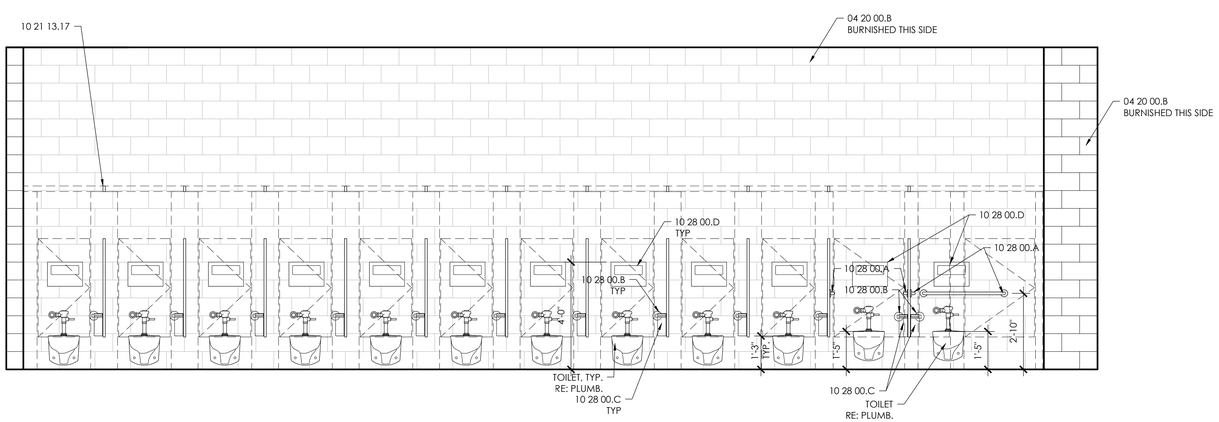
1 A.303 ENLARGED PLAN
151 WOMENS RESTROOM
SCALE: 3/8"=1'-0" REF: 1/A.122



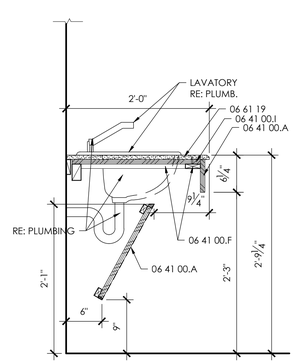
3 A.303 EAST ELEVATION
151 WOMENS RESTROOM
SCALE: 3/8"=1'-0" REF: 1/A303



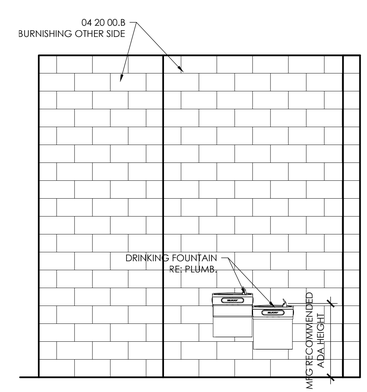
4 A.303 SOUTH ELEVATION
151 WOMENS RESTROOM
SCALE: 3/8"=1'-0" REF: 1/A.303



2 A.303 NORTH ELEVATION
151 WOMENS RESTROOM
SCALE: 3/8"=1'-0" REF: 1/A.303



5 A.303 MILLWORK SECTION
TYPICAL AT RESTROOMS
SCALE: 1"=1'-0" REF: 3/A.300



6 A.303 DRINKING FOUNTAINS
AT CORRIDOR 145
SCALE: 3/8"=1'-0" REF: 1/A.303

GENERAL NOTES

1. 3/4" RECESS ALONG TOILET FIXTURES IS TO ACCOMMODATE FUTURE INSTALLATION OF FLOOR TILE, N.I.C. PLUMBING FIXTURES, COUNTERS, PARTITIONS, AND ACCESSORIES SHALL BE SET IN REFERENCE WITH FINISH FLOOR, NOT THE RECESS.

REFERENCE NOTES

03 00 00		CONCRETE (CIVIL)
03 10 10		UNDER SLAB VAPOR BARRIER
03 30 00		CAST-IN-PLACE CONCRETE, RE: STRUCT.
03 35 01		CONC. THIN SHELL CONSTR. RE: STRUCT.
	A	AIR FORM/ROOF MEMBRANE RE: STUCT
	B	FOAM INSUATION RE: STRUCT.
	C	REINFORCING STEEL, RE: STRUCT.
	D	CONCRETE RE: STRUCT.
04 05 03		MASONRY MORTARING AND GROUTING
04 20 00		UNIT MASONRY, RE: STRUCT FOR STRUCT WALLS
	A	8" CMU
	B	8" CMU BURNISHED ONE SIDE
	C	8" CMU BURNISHED BOTH SIDES
	D	CMU U BLOCK, RE: WALL FOR BURNISHING
	E	10" STRUCTURAL BRICK
	F	8" STRUCTURAL BRICK
05 12 00		STRUCTURAL STEEL FRAMING, RE: STRUCT.
05 21 00		STEEL JOIST FRAMING, RE: STRUCT.
05 31 00		STEEL DECKING, RE: STRUCT.
05 50 00		METAL FABRICATIONS
06 10 00		ROUGH CARPENTRY
	A	FIRE RETARDANT TREATED SOLID BLOCKING
	B	FIRE RETARDANT TREATED PLYWOOD
06 41 00		ARCHITECTURAL WOOD CASEWORK
	A	3/4" PLYWOOD CABINET BODY
	E	HARDWOOD BANDING, 1/4" THICK.
	F	1X FRAMING
	G	2X FRAMING
	I	3/4" PLYWOOD COUNTER UNDERLAY
06 61 19		QUARTZ SURFACING FABRICATIONS
08 12 14		STANDARD STEEL FRAMES
	A	STANDARD STEEL FRAME
	B	MASONRY WIRE ANCHOR
	C	FEMA 361 RATED STEEL FRAME
08 13 14		STANDARD STEEL DOORS
	A	STANDARD STEEL DOOR
	B	FEMA 361 RATED STEEL DOOR
08 14 16		FLUSH WOOD DOORS
08 17 23		INTEGRATED WOOD DOOR OPENING ASSEM
08 41 13		ALUMINUM FRAMED STOREFRONTS
	E	FEMA 361 RATED ASSEMBLY
08 71 00		DOOR HARDWARE
10 14 00		SIGNAGE
10 14 16		CAST BUILDING PLAQUES AND LETTERS
10 21 13.17		SOLID PHENOLIC TOILET COMPARTMENTS
10 28 00		TOILIET ACCESSORIES
	A	GRAB BAR
	B	TOILET PAPER DISPENSER
	C	SANITARY NAPKIN DISPOSAL
	D	TOILET SEAT COVER DISPENSER
	E	COMBO TOWEL DISPENSER/DISPOSAL
	G	BABY CHANGING STATION
	O	SOAP DISPENSER
10 44 00		FIRE PROTECTION SPECIALTIES
	A	EXTINGUISHER WITH CABINET
	B	EXTINGUISHER ON BRACKET

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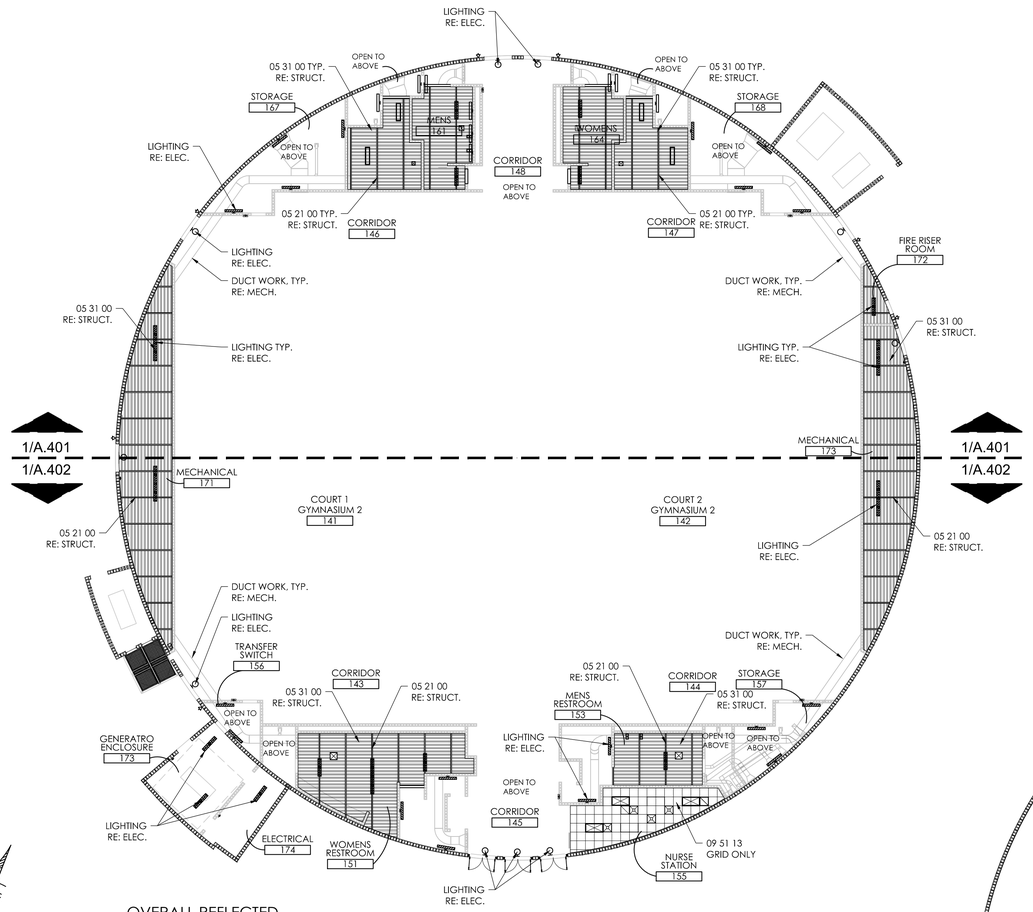
bwm

REVISIONS

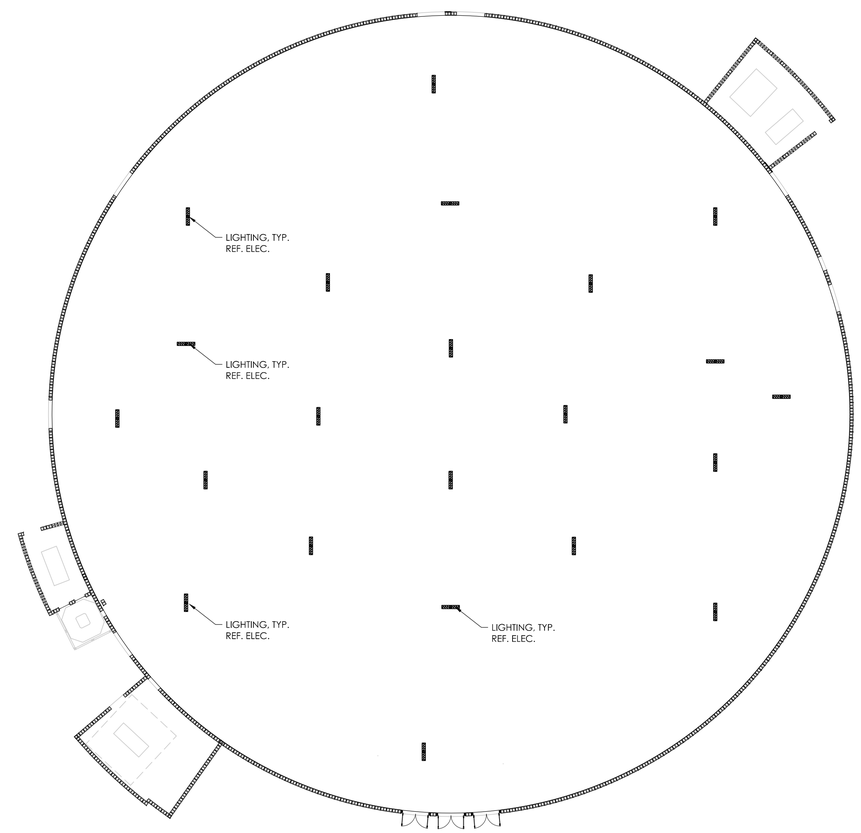
ENLARGED RESTROOM PLANS & ELEVATIONS

A.303



1 A.400 OVERALL REFLECTED CEILING PLAN - LOW LEVEL

SCALE: 1/16"=1'-0" REF: -



2 A.400 OVERALL REFLECTED CEILING PLAN - DOME

SCALE: 1/16"=1'-0" REF: -

REFERENCE NOTES

05 12 00	STRUCTURAL STEEL FRAMING, RE: STRUCT.
05 21 00	STEEL JOIST FRAMING, RE: STRUCT.
05 31 00	STEEL DECKING, RE: STRUCT.
05 50 00	METAL FABRICATIONS
09 51 13	ACOUSTICAL PANEL CEILINGS
A	2X2 LAYIN CEILING GRID

FINISH LEGEND

- SUSPENDED ACOUSTICAL TILE GRID 09 51 13
- STEEL DECKING 05 31 00 RE: STRUCT.
- 2 X 4 FLUORESCENT LIGHT FIXTURE RE: ELEC.
- 4' PENDANT LIGHT FIXTURE RE: ELEC.
- 4' LINEAR LIGHT FIXTURE RE: ELEC.
- 4' LINEAR WALL MOUNTED LIGHT FIXTURE RE: ELEC.
- WALL MOUNTED LIGHT FIXTURE RE: ELEC.
- RECESSED CAN LIGHT FIXTURE RE: ELEC.
- EMERGENCY HEAD FIXTURE RE: ELEC.

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EDINBURG, TX

10.01.2013 80% CD
CC

REVISIONS
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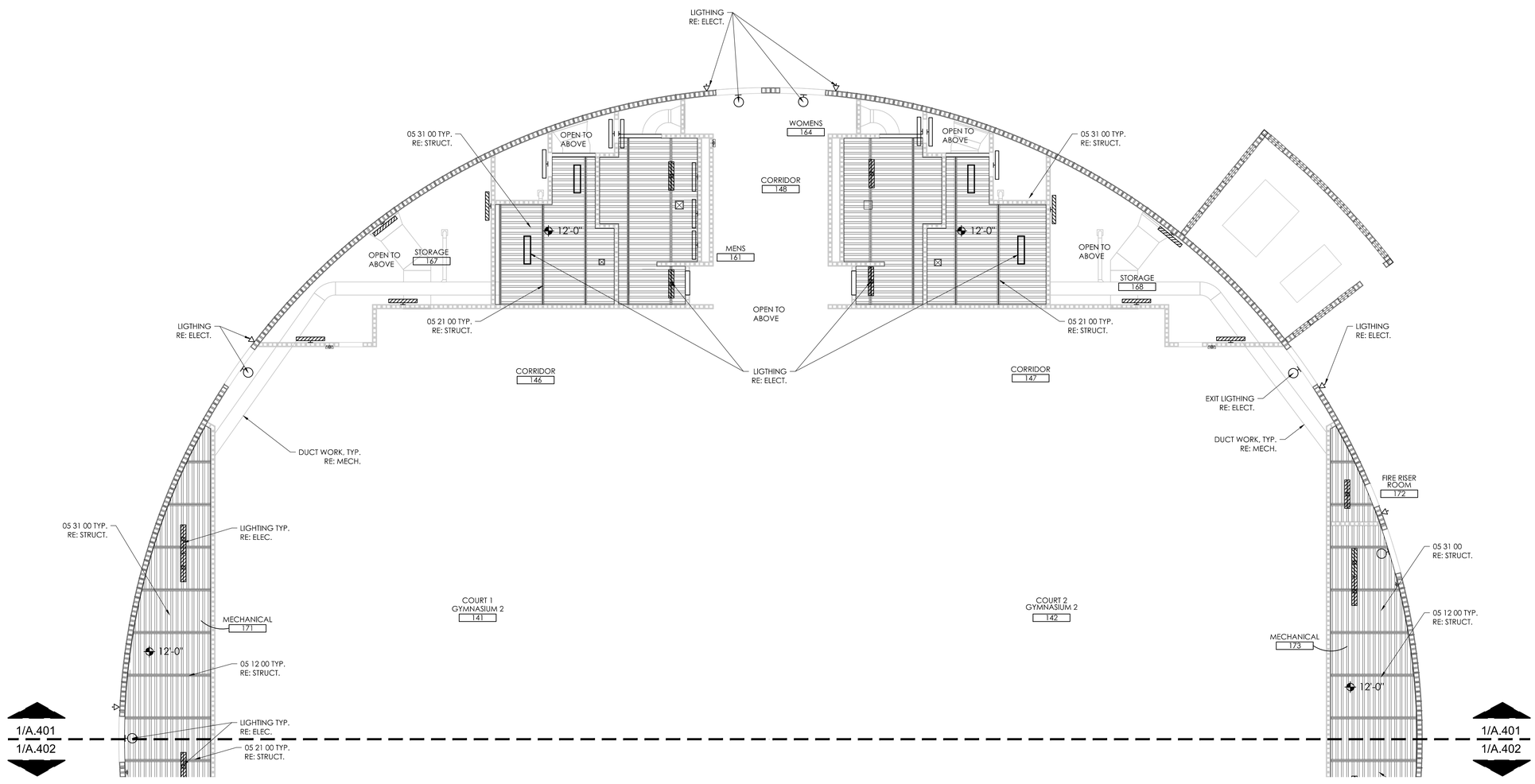
OVERALL REFLECTED CEILING PLAN

A.400



1 A.401 PARTIAL REFLECTED CEILING PLAN

SCALE: 1/8"=1'-0" REF: 2/A.400

PLAN NORTH
TRUE NORTH

REFERENCE NOTES

05 12 00	STRUCTURAL STEEL FRAMING, RE: STRUCT.
05 21 00	STEEL JOIST FRAMING, RE: STRUCT.
05 31 00	STEEL DECKING, RE: STRUCT.
05 50 00	METAL FABRICATIONS
09 51 13	ACOUSTICAL PANEL CEILINGS
A	2X2 LAYIN CEILING GRID

FINISH LEGEND

- SUSPENDED ACOUSTICAL TILE GRID 09 51 13
- STEEL DECKING 05 31 00 RE: STRUCT.
- 2 X 4 FLUORESCENT LIGHT FIXTURE RE: ELEC.
- 4' PENDANT LIGHT FIXTURE RE: ELEC.
- 4' LINEAR LIGHT FIXTURE RE: ELEC.
- 4' LINEAR WALL MOUNTED LIGHT FIXTURE RE: ELEC.
- WALL MOUNTED LIGHT FIXTURE RE: ELEC.
- RECESSED CAN LIGHT FIXTURE RE: ELEC.
- EMERGENCY HEAD FIXTURE RE: ELEC.

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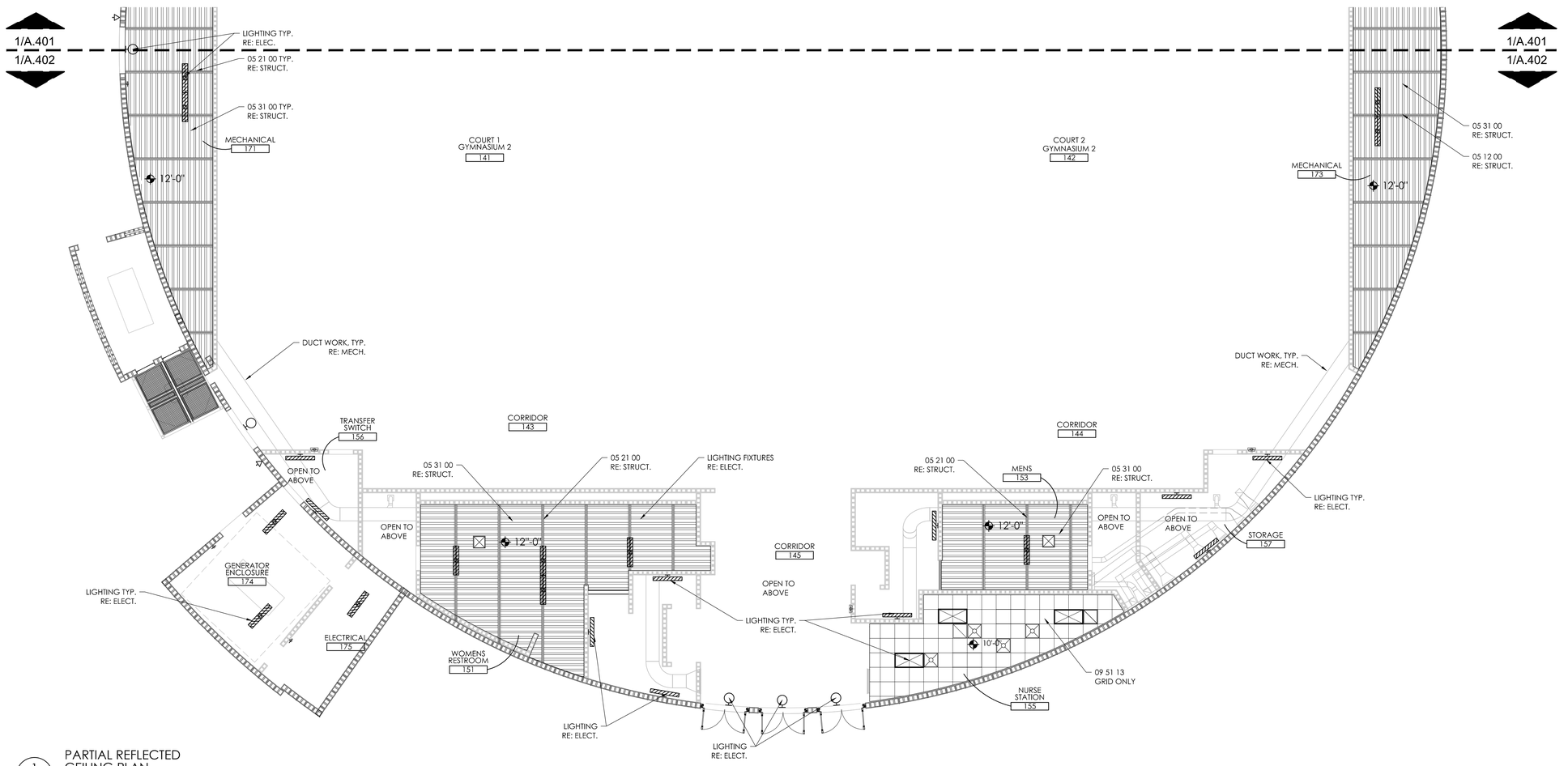
10.01.2013 80% CD
EZ

REVISIONS

PARTIAL REFLECTED CEILING PLAN

A.401



1 / A.402 PARTIAL REFLECTED CEILING PLAN

SCALE: 1/8"=1'-0" REF: 1/A.400

REFERENCE NOTES

05 12 00	STRUCTURAL STEEL FRAMING, RE: STRUCT.
05 21 00	STEEL JOIST FRAMING, RE: STRUCT.
05 31 00	STEEL DECKING, RE: STRUCT.
05 50 00	METAL FABRICATIONS
09 51 13	ACOUSTICAL PANEL CEILINGS
A	2X2 LAYIN CEILING GRID

FINISH LEGEND

- SUSPENDED ACOUSTICAL TILE GRID 09 51 13
- STEEL DECKING 05 31 00 RE: STRUCT.
- 2 X 4 FLUORESCENT LIGHT FIXTURE RE: ELEC.
- 4' PENDANT LIGHT FIXTURE RE: ELEC.
- 4' LINEAR LIGHT FIXTURE RE: ELEC.
- 4' LINEAR WALL MOUNTED LIGHT FIXTURE RE: ELEC.
- WALL MOUNTED LIGHT FIXTURE RE: ELEC.
- RECESSED CAN LIGHT FIXTURE RE: ELEC.
- EMERGENCY HEAD FIXTURE RE: ELEC.

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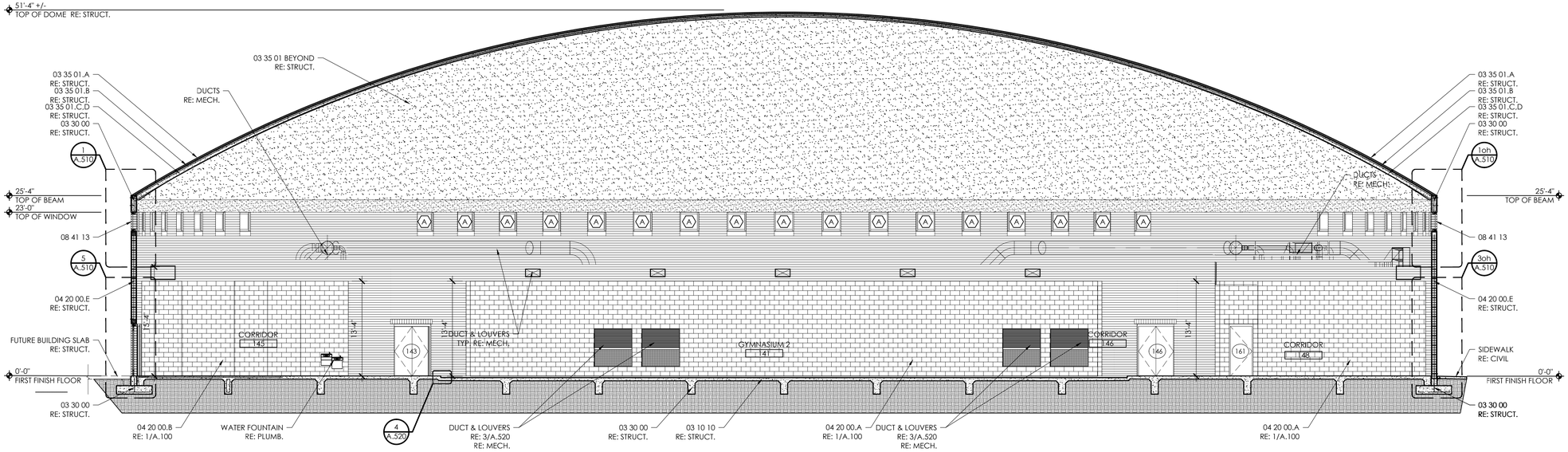
06/06/2013
EZ

REVISIONS

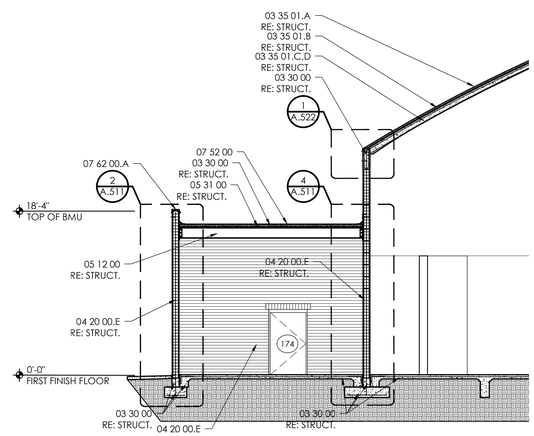
PARTIAL REFLECTED CEILING PLAN

A.402



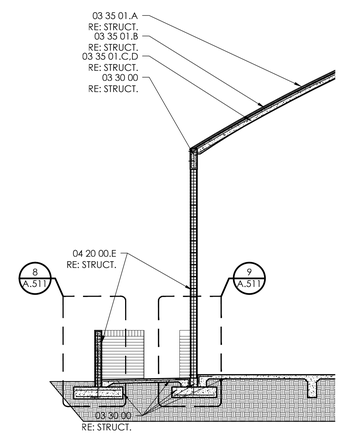
1 / A.500 SOUTH/NORTH BUILDING SECTION THROUGH DOME

SCALE: 1/8"=1'-0" REF: 1/A.100



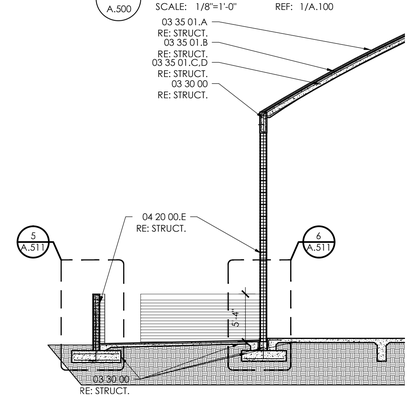
2 / A.500 SOUTH/NORTH BUILDING SECTION THROUGH GENERATOR ENCLOSURE

SCALE: 1/8"=1'-0" REF: 1/A.100



3 / A.500 BUIDING SECTION THROUGH WEST MECHANICAL ENCLOSURE

SCALE: 1/8"=1'-0" REF: 1/A.100



6 / A.500 BUIDING SECTION THROUGH EAST MECHANICAL ENCLOSURE

SCALE: 1/8"=1'-0" REF: 1/A.100

4 / A.500 NOT USED

SCALE: REF:

5 / A.500 NOT USED

SCALE: REF:

REFERENCE NOTES

03 00 00		CONCRETE (CIVIL)
03 10 10		UNDER SLAB VAPOR BARRIER
03 30 00		CAST-IN-PLACE CONCRETE, RE: STRUCT.
03 35 01		CONC. THIN SHELL CONSTR. RE: STRUCT.
	A	AIR FORM/ROOF MEMBRANE RE: STUCT
	B	FOAM INSUATION RE: STRUCT.
	C	REINFORCING STEEL, RE: STRUCT.
	D	CONCRETE RE: STRUCT.
04 05 03		MASONRY MORTARING AND GROUTING
04 20 00		UNIT MASONRY, RE: STRUCT FOR STRUCT WALLS
	A	8" CMU
	B	8" CMU BURNISHED ONE SIDE
	C	8" CMU BURNISHED BOTH SIDES
	D	CMU U BLOCK, RE: WALL FOR BURNISHING
	E	10" STRUCTURAL BRICK
	F	8" STRUCTURAL BRICK
	G	STRUCTURAL BRICK BOND BEAM UNIT
	H	STRUCTURAL BRICK U BLOCK
	I	LADDER/TRUSS JOINT REINFORCEMENT
	J	BLOCKNET FLASHING SYSTEM
	K	CMU SOAP CAP, MATCH WALL BURNISHING
	L	REINFORCING STEEL, RE: STRUCT.
05 12 00		STRUCTURAL STEEL FRAMING, RE: STRUCT.
05 21 00		STEEL JOIST FRAMING, RE: STRUCT.
05 31 00		STEEL DECKING, RE: STRUCT.
05 50 00		METAL FABRICATIONS
06 10 00		ROUGH CARPENTRY
	A	FIRE RETARDANT TREATED SOLID BLOCKING
	B	FIRE RETARDANT TREATED PLYWOOD
07 52 00		MODIFIED BITUMEN MEMBRANE ROOFING
	A	MODIFIED BITUMEN PLY SHEET
	B	MODIFIED BITUMEN CAP SHEET
	C	VERAL ALUMINUM FACED FLASHING
	D	TERMINATION PRESSURE BAR
	E	FIBER CANT
	F	VENTING BASE SHEET
	G	SEAL EDGE WITH ROOFING SEALANT
07 62 00		SHEET METAL FLASHING AND TRIM
	A	PARAPET CAP, FORM AS INDICATED
	C	FLASHING
	D	COUNTERFLASHING
	E	SURFACE MOUNTED RECEIVER/REGLET
	F	CLEAT
07 71 23		GUTTERS AND DOWNSPOUTS
	A	GUTTER, PROFILE AS INDICATED
	B	DOWNSPOUT, SIZE SHAPE INDICATED
07 90 00		JOINT PROTECTION
08 12 14		STANDARD STEEL FRAMES
	A	STANDARD STEEL FRAME
	B	MASONRY WIRE ANCHOR
	C	FEMA 361 RATED STEEL FRAME
08 13 14		STANDARD STEEL DOORS
	A	STANDARD STEEL DOOR
	B	FEMA 361 RATED STEEL DOOR
08 41 13		ALUMINUM FRAMED STOREFRONTS
	E	FEMA 361 RATED ASSEMBLY
08 71 00		DOOR HARDWARE
10 14 00		SIGNAGE
10 14 16		CAST BUILDING PLAQUES AND LETTERS
10 44 00		FIRE PROTECTION SPECIALTIES
	A	EXTINGUISHER WITH CABINET
	B	EXTINGUISHER ON BRACKET
31 31 16		TERMITE CONTROL
	A	STAINLESS STEEL MESH PARGED TO CONC.

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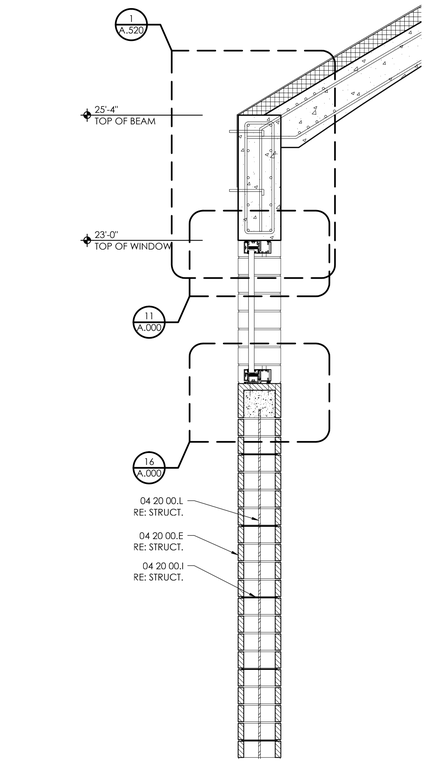
10.01.2013-80%CD
bwm

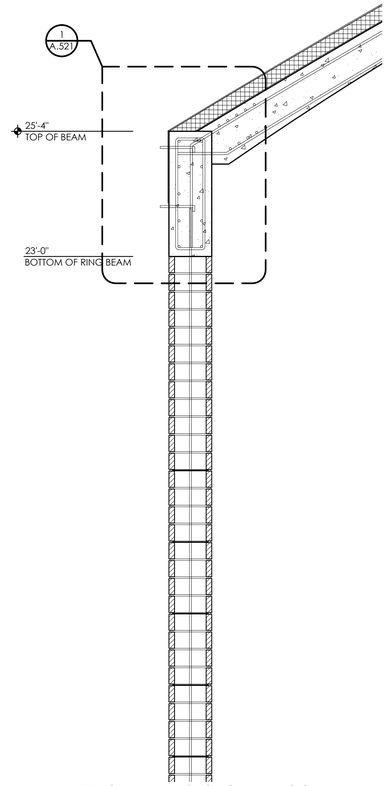
REVISIONS

BUILDING SECTIONS

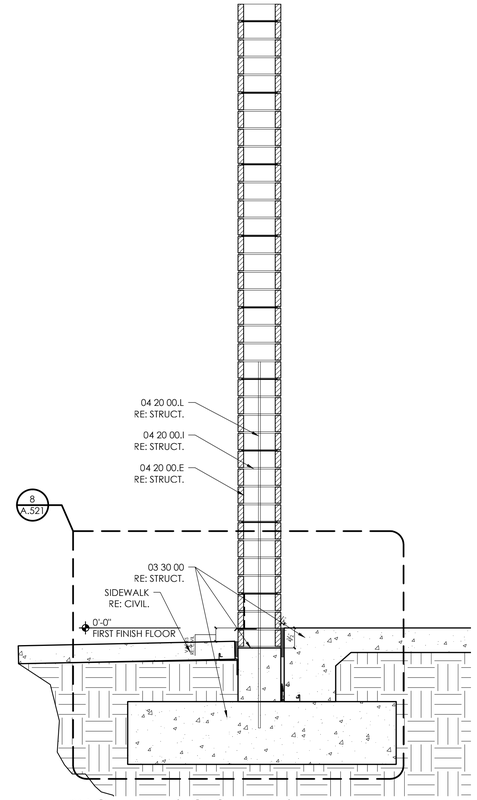
A.500



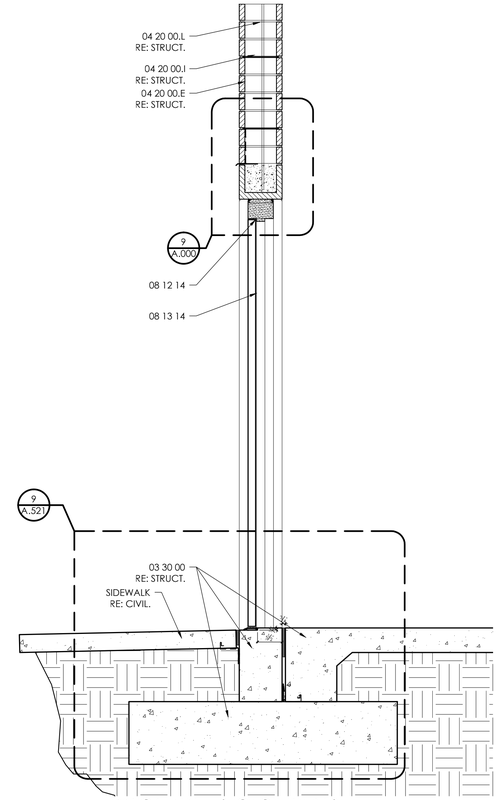
1 A.510 TYPICAL WALL SECTION AT ROOF AT CLERESTORY WINDOWS
SCALE: 3/4"=1'-0" REF: 1/A.500



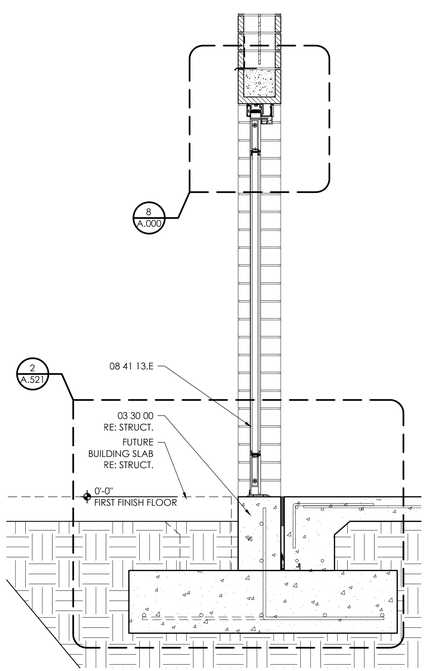
2 A.510 TYPICAL WALL SECTION AT ROOF WITHOUT CLERESTORY WINDOW
SCALE: 3/4"=1'-0" REF: 1/A.500



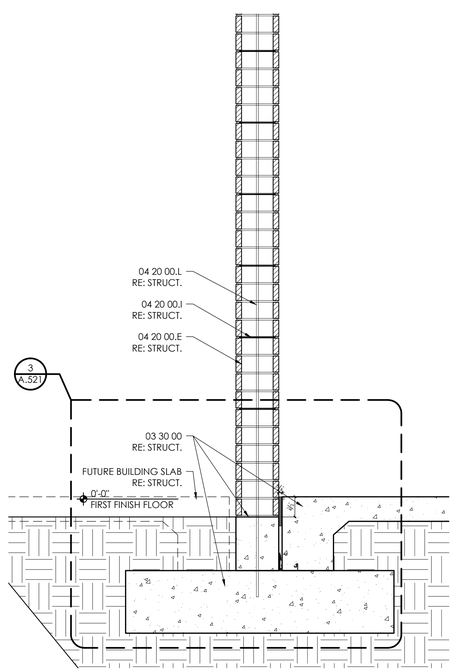
3 A.510 TYPICAL WALL SECTION AT BASE OF WALL AT SIDEWALK
SCALE: 3/4"=1'-0" REF: 1/A.121



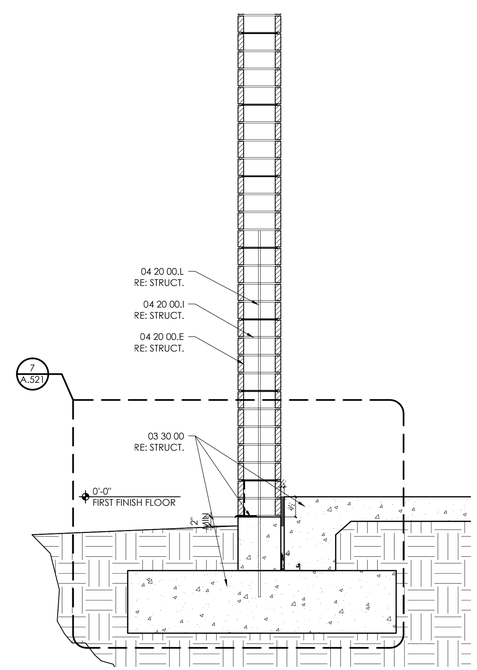
4 A.510 TYPICAL WALL SECTION AT BASE OF WALL AT DOOR
SCALE: 3/4"=1'-0" REF: 1/A.121



5 A.510 WALL SECTION AT BASE OF WALL AT CORRIDOR 145
SCALE: 3/4"=1'-0" REF: 1/A.500



6 A.510 WALL SECTION AT BASE OF WALL ADJACENT TO FUTURE BUILDING
SCALE: 3/4"=1'-0" REF: 1/A.121



7 A.510 TYPICAL WALL SECTION AT BASE OF WALL AT GRADE
SCALE: 3/4"=1'-0" REF: 1/A.121

8 A.510 NOT USED
SCALE: REF:

REFERENCE NOTES

03 00 00		CONCRETE (CIVIL)
03 10 10		UNDER SLAB VAPOR BARRIER
03 30 00		CAST-IN-PLACE CONCRETE, RE: STRUCT.
03 35 01		CONC. THIN SHELL CONSTR. RE: STRUCT.
	A	AIR FORM/ROOF MEMBRANE RE: STUCT
	B	FOAM INSUATION RE: STRUCT.
	C	REINFORCING STEEL, RE: STRUCT.
	D	CONCRETE RE: STRUCT.
04 05 03		MASONRY MORTARING AND GROUTING
04 20 00		UNIT MASONRY, RE: STRUCT FOR STRUCT WALLS
	A	8" CMU
	B	8" CMU BURNISHED ONE SIDE
	C	8" CMU BURNISHED BOTH SIDES
	D	CMU U BLOCK, RE: WALL FOR BURNISHING
	E	10" STRUCTURAL BRICK
	F	8" STRUCTURAL BRICK
	G	STRUCTURAL BRICK BOND BEAM UNIT
	H	STRUCTURAL BRICK U BLOCK
	I	LADDER/TRUSS JOINT REINFORCEMENT
	J	BLOCKNET FLASHING SYSTEM
	K	CMU SOAP CAP, MATCH WALL BURNISHING
	L	REINFORCING STEEL, RE: STRUCT.
05 12 00		STRUCTURAL STEEL FRAMING, RE: STRUCT.
05 21 00		STEEL JOIST FRAMING, RE: STRUCT.
05 31 00		STEEL DECKING, RE: STRUCT.
05 50 00		METAL FABRICATIONS
06 10 00		ROUGH CARPENTRY
	A	FIRE RETARDANT TREATED SOLID BLOCKING
	B	FIRE RETARDANT TREATED PLYWOOD
07 52 00		MODIFIED BITUMEN MEMBRANE ROOFING
	A	MODIFIED BITUMEN PLY SHEET
	B	MODIFIED BITUMEN CAP SHEET
	C	VERAL ALUMINUM FACED FLASHING
	D	TERMINATION PRESSURE BAR
	E	FIBER CANT
	F	VENTING BASE SHEET
	G	SEAL EDGE WITH ROOFING SEALANT
07 62 00		SHEET METAL FLASHING AND TRIM
	A	PARAPET CAP, FORM AS INDICATED
	C	FLASHING
	D	COUNTERFLASHING
	E	SURFACE MOUNTED RECEIVER/REGLET
	F	CLEAT
07 71 23		GUTTERS AND DOWNSPOUTS
	A	GUTTER, PROFILE AS INDICATED
	B	DOWNSPOUT, SIZE SHAPE INDICATED
07 90 00		JOINT PROTECTION
08 12 14		STANDARD STEEL FRAMES
	A	STANDARD STEEL FRAME
	B	MASONRY WIRE ANCHOR
	C	FEMA 361 RATED STEEL FRAME
08 13 14		STANDARD STEEL DOORS
	A	STANDARD STEEL DOOR
	B	FEMA 361 RATED STEEL DOOR
08 41 13		ALUMINUM FRAMED STOREFRONTS
	E	FEMA 361 RATED ASSEMBLY
08 71 00		DOOR HARDWARE
10 14 00		SIGNAGE
10 14 16		CAST BUILDING PLAQUES AND LETTERS
10 44 00		FIRE PROTECTION SPECIALTIES
	A	EXTINGUISHER WITH CABINET
	B	EXTINGUISHER ON BRACKET
31 31 16		TERMITE CONTROL
	A	STAINLESS STEEL MESH PARGED TO CONC.

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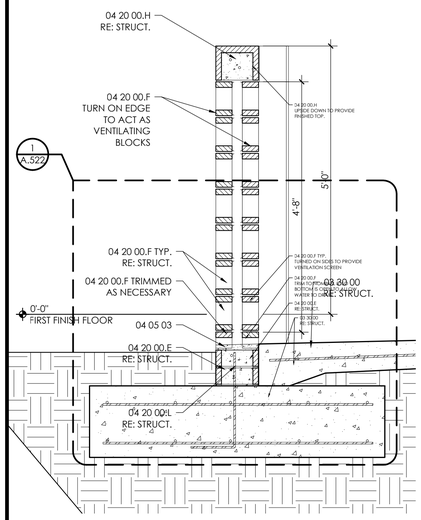
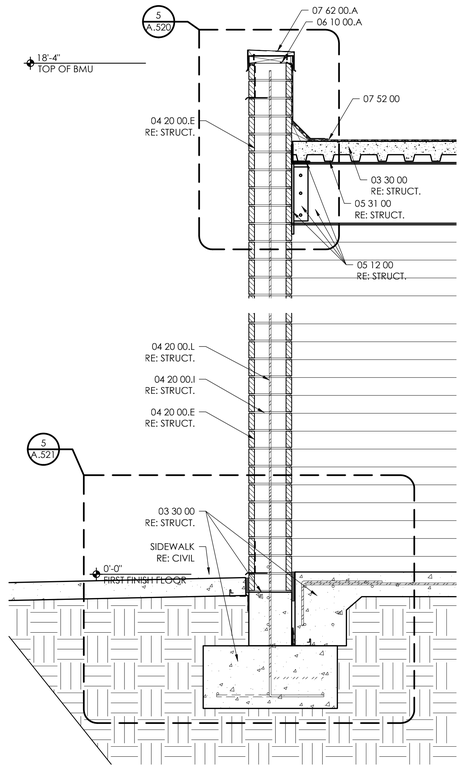
WALL SECTIONS

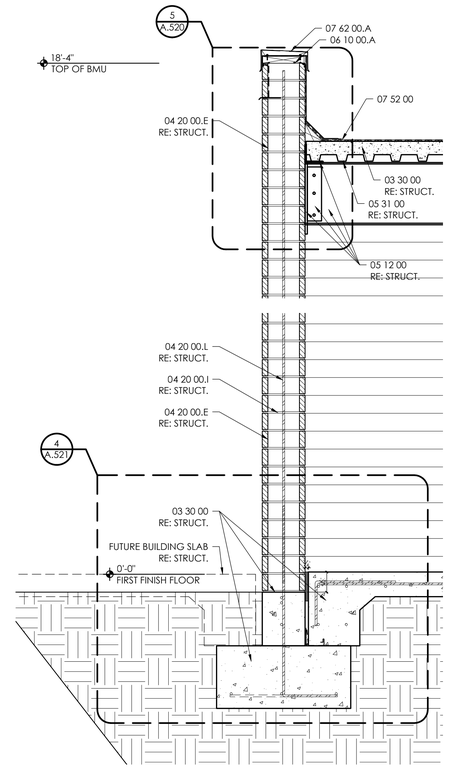
A.510



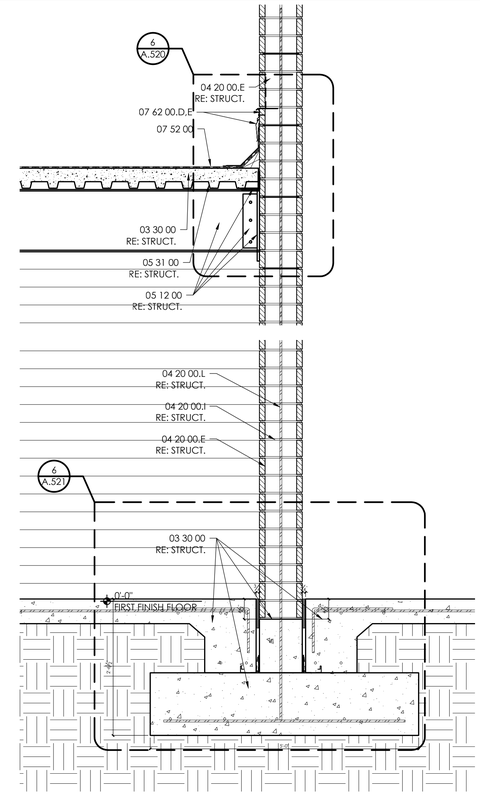
1 A.511 EAST MECHANICAL ENCLOSURE WALL SECTION AT VENTILATION BRICKS
SCALE: 3/4"=1'-0" REF: 6/A.500



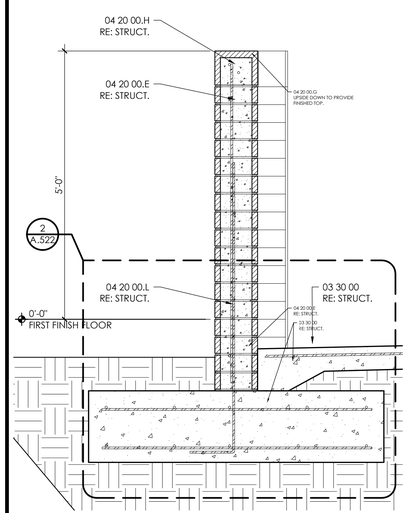
2 A.511 WALL SECTION THROUGH GENERATOR ENCLOSURE 174/175 AT SIDEWALK
SCALE: 3/4"=1'-0" REF: 2/A.500



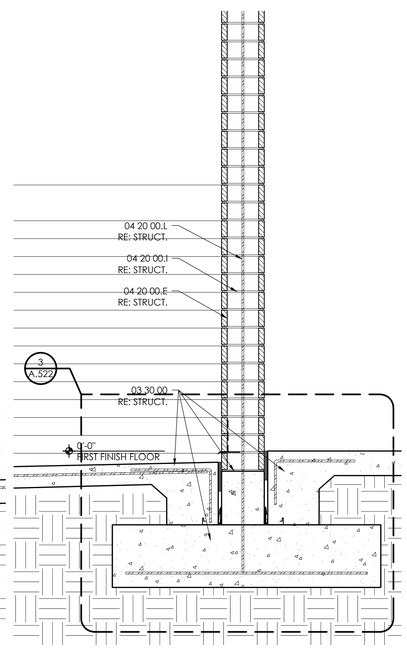
3 A.511 WALL SECTION THROUGH GENERATOR ENCLOSURE 175 AT FUTURE BUILDING
SCALE: 3/4"=1'-0" REF:



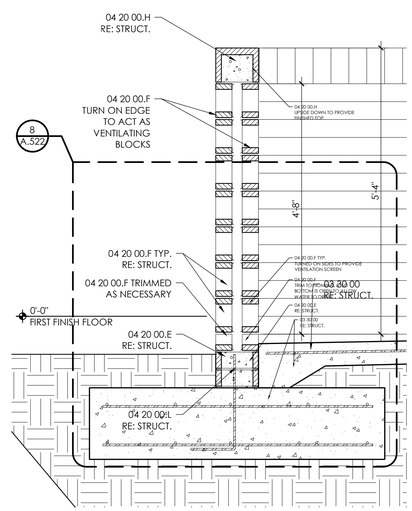
4 A.511 WALL SECTION AT DOME AND GENERATOR ENCLOSURE 174
SCALE: 3/4"=1'-0" REF: 2/A.500



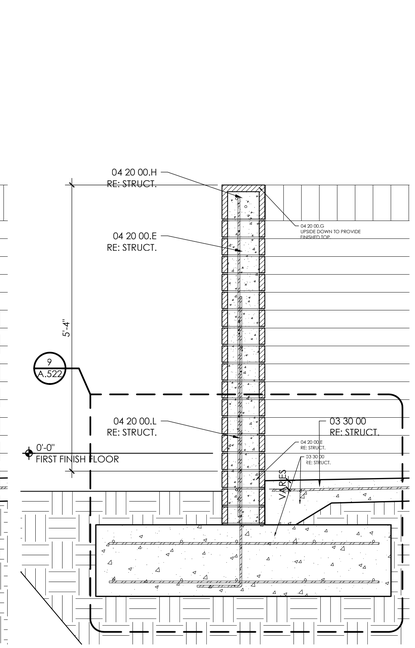
5 A.511 EAST MECHANICAL ENCLOSURE WALL SECTION AT SOLID MASONRY
SCALE: 3/4"=1'-0" REF: 6/A.500



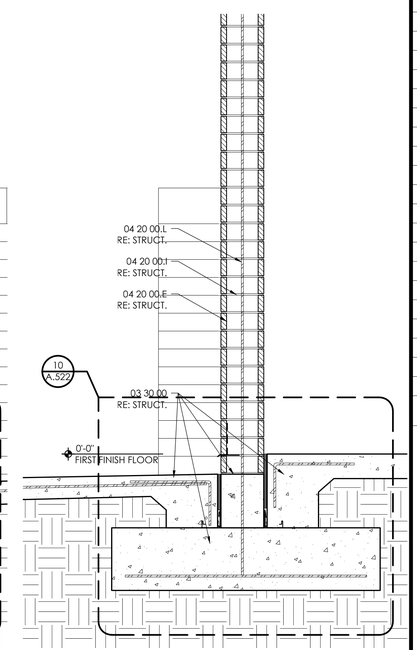
6 A.511 WALL SECTION ADJACENT TO EAST MECHANICAL ENCLOSURE
SCALE: 3/4"=1'-0" REF: 6/A.500



7 A.511 WEST MECHANICAL ENCLOSURE WALL SECTION AT VENTILATION BRICKS
SCALE: 3/4"=1'-0" REF: 3/A.500



8 A.511 WEST MECHANICAL ENCLOSURE WALL SECTION AT SOLID MASONRY
SCALE: 3/4"=1'-0" REF: 3/A.500



9 A.511 WALL SECTION ADJACENT TO WEST MECHANICAL ENCLOSURE
SCALE: 3/4"=1'-0" REF: 3/A.500

REFERENCE NOTES

03 00 00		CONCRETE (CIVIL)
03 10 10		UNDER SLAB VAPOR BARRIER
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	B	FOAM INSUATION RE: STRUCT.
	C	REINFORCING STEEL, RE: STRUCT.
	D	CONCRETE RE: STRUCT.
04 05 03		MASONRY MORTARING AND GROUTING
04 20 00		UNIT MASONRY, RE: STRUCT FOR STRUCT WALLS
	A	8" CMU
	B	8" CMU BURNISHED ONE SIDE
	C	8" CMU BURNISHED BOTH SIDES
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	F	8" STRUCTURAL BRICK
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	H	STRUCTURAL BRICK U BLOCK
	I	LADDER/TRUSS JOINT REINFORCEMENT
	J	BLOCKNET FLASHING SYSTEM
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05 31 00		STEEL DECKING, RE: STRUCT.
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	A	STANDARD STEEL FRAME
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	A	STANDARD STEEL DOOR
	B	FEMA 361 RATED STEEL DOOR
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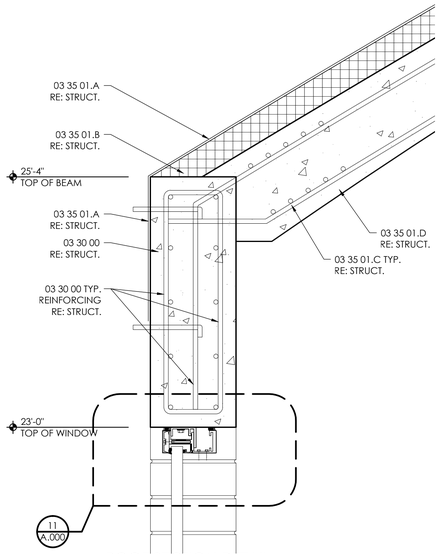
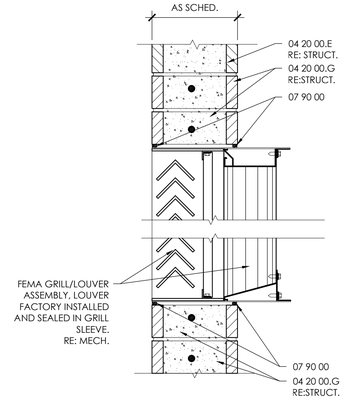
REVISIONS

WALL SECTIONS

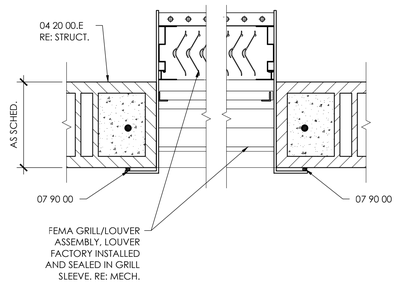
A.511



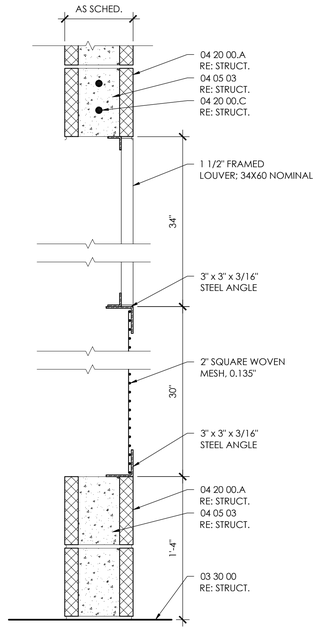
1 A.520 ROOF SECTION DETAIL AT WINDOW
SCALE: 1-1/2"=1'-0" REF: 1/A.510



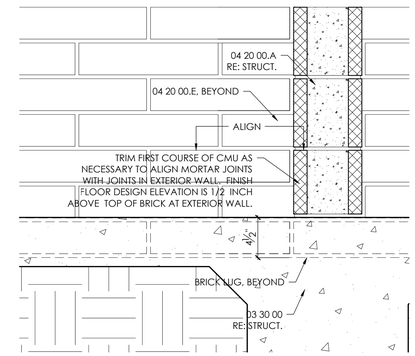
2A A.520 EXTERIOR LOUVER SECTION DETAIL
SCALE: 1-1/2"=1'-0" REF:



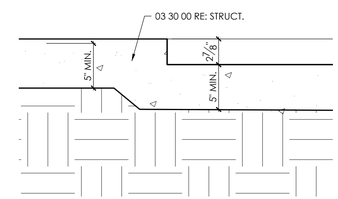
2B A.520 EXTERIOR LOUVER JAMB DETAIL
SCALE: 1-1/2"=1'-0" REF:



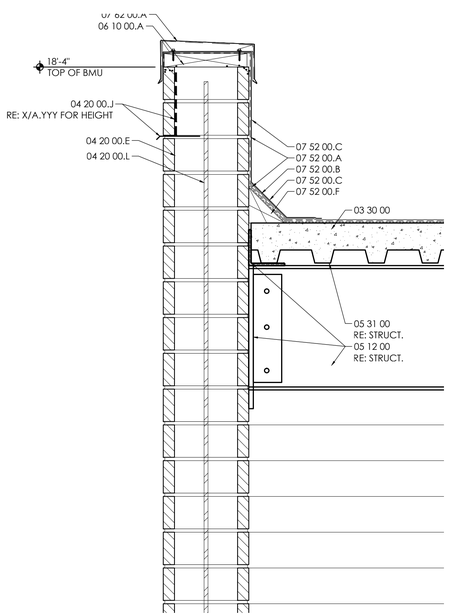
3 A.520 INTERIOR LOUVER SECTION DETAIL
SCALE: 1-1/2"=1'-0" REF:



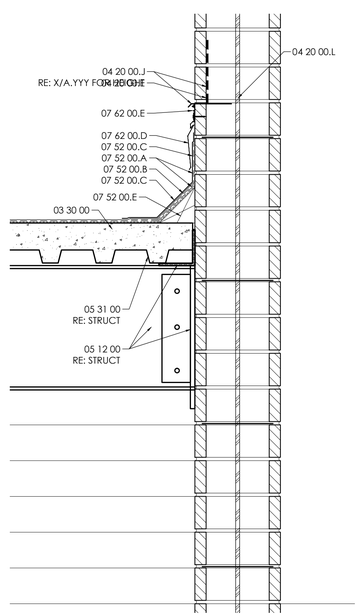
9 A.520 ALIGNMENT OF CMU TO EXTERIOR BRICK WALL
SCALE: 1-1/2"=1'-0" REF:



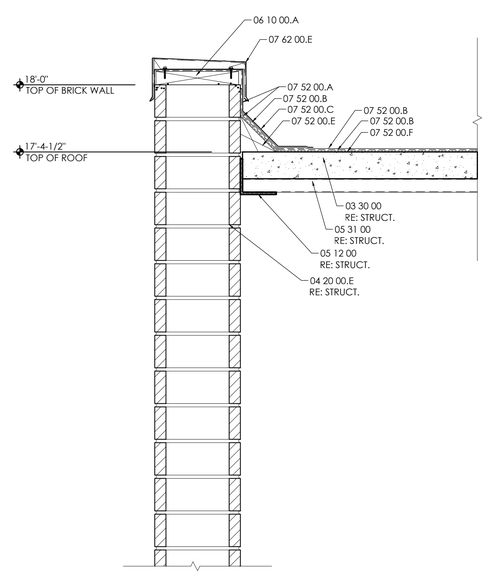
4 A.520 FLOOR SECTION DETAIL AT LEAVE OUT FOR FUTURE FLOOR
SCALE: 1-1/2"=1'-0" REF: 1/A.500



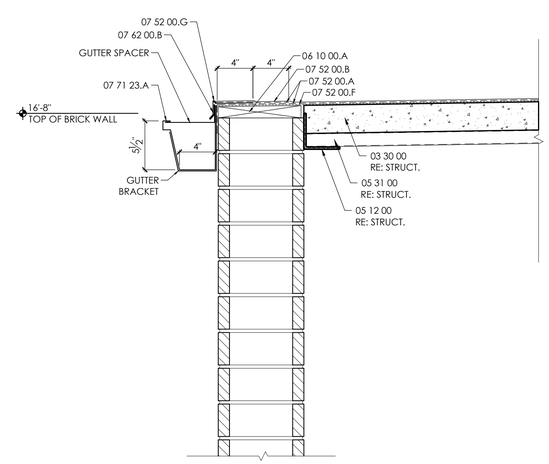
5 A.520 SECTION DETAIL @ RAKE WALL
SCALE: 1-1/2"=1'-0" REF: 2/A.511



6 A.520 ROOF DETAIL GENERATOR ENCLOSURE TO DOME
SCALE: 1-1/2"=1'-0" REF: 4/A.511



7 A.520 ROOF DETAIL AT PARAPET TOP OF ROOF
SCALE: 1-1/2"=1'-0" REF:



8 A.520 ROOF DETAIL AT GUTTER
SCALE: 1-1/2"=1'-0" REF:

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	B	FOAM INSUATION RE: STRUCT.
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04 05 03		MASONRY MORTARING AND GROUTING
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	H	STRUCTURAL BRICK U BLOCK
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	J	BLOCKNET FLASHING SYSTEM
	K	CMU SOAP CAP, MATCH WALL BURNISHING
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05 12 00		STRUCTURAL STEEL FRAMING, RE: STRUCT.
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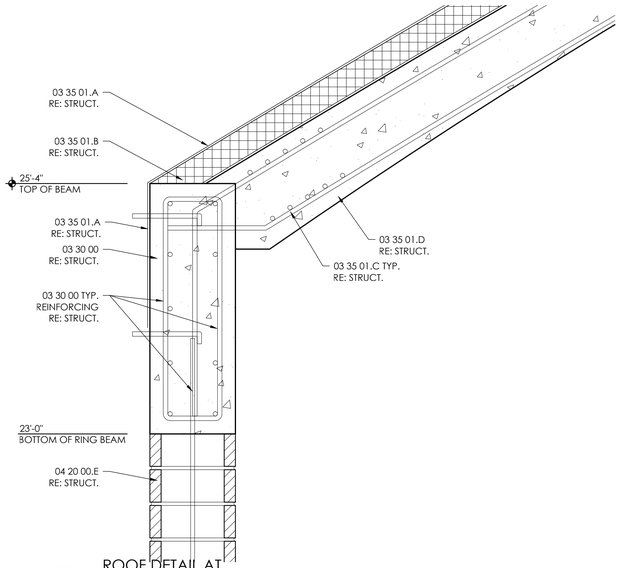
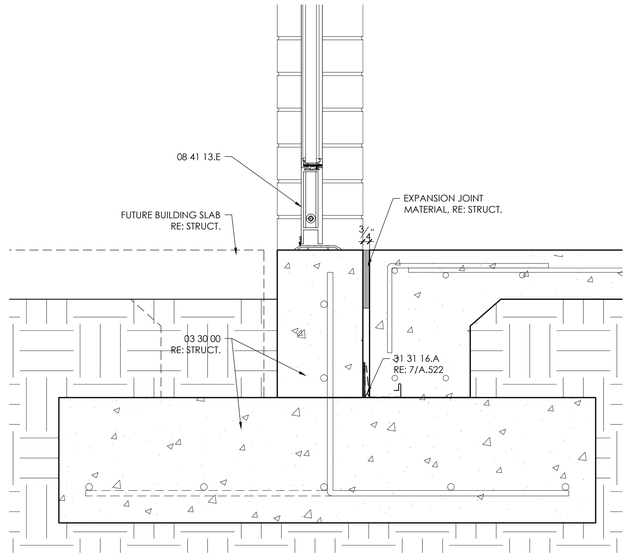
SECTION DETAILS

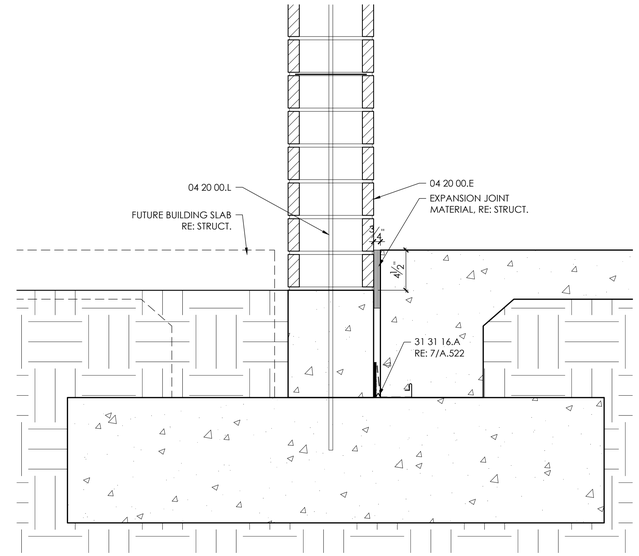
A.520



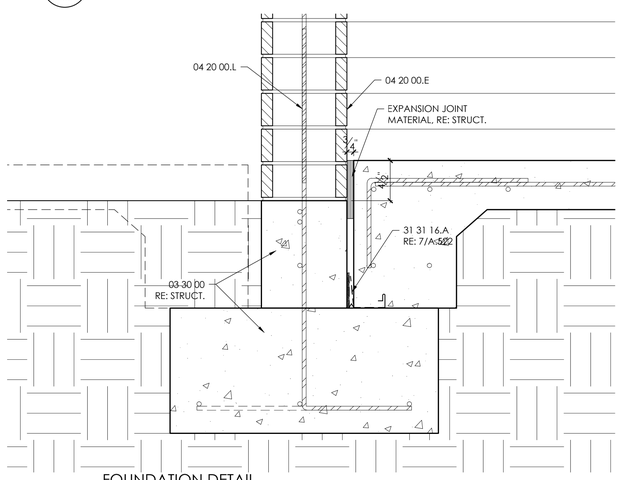
1 A.521 ROOF DETAIL AT RING BEAM AND WINDOW
SCALE: 1-1/2"=1'-0" REF: 2/A.510



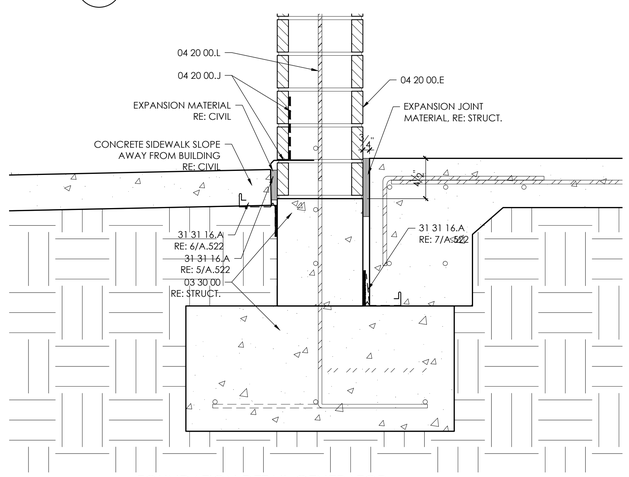
2 A.521 FOUNDATION DETAIL AT 145 DOORS
SCALE: 1-1/2"=1'-0" REF: 1/A.122



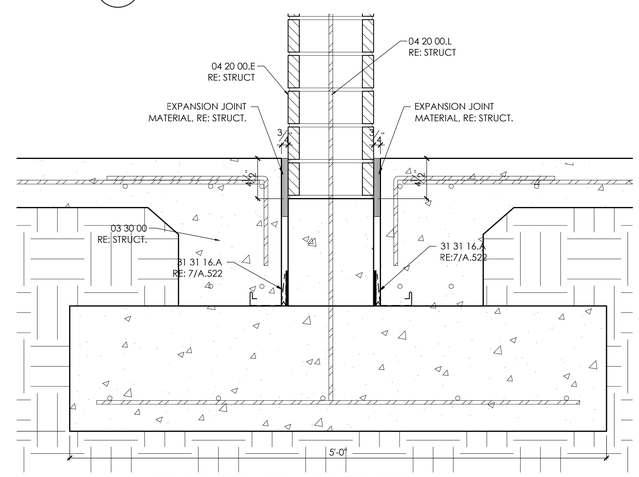
3 A.521 FOUNDATION DETAIL GENERATOR ENCLOSURE AT FUTURE BUILDING
SCALE: 1-1/2"=1'-0" REF: 1/A.122



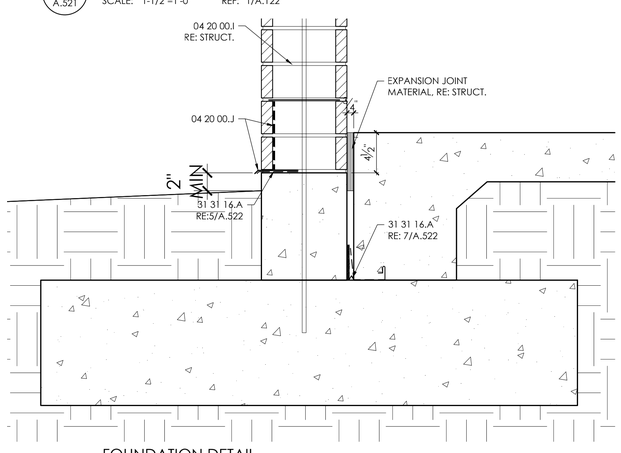
4 A.521 FOUNDATION DETAIL BETWEEN 175 GENERATOR AND FUTURE BUILDING
SCALE: 1-1/2"=1'-0" REF: 1/A.122



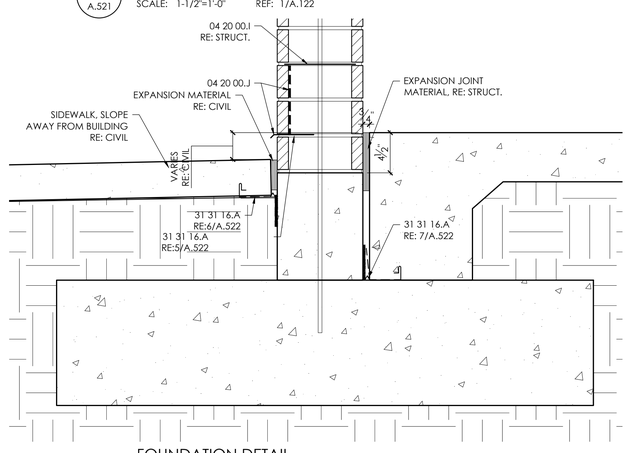
5 A.521 FOUNDATION DETAIL GENERATOR ENCLOSURE AT SIDEWALK
SCALE: 1-1/2"=1'-0" REF: 1/A.122



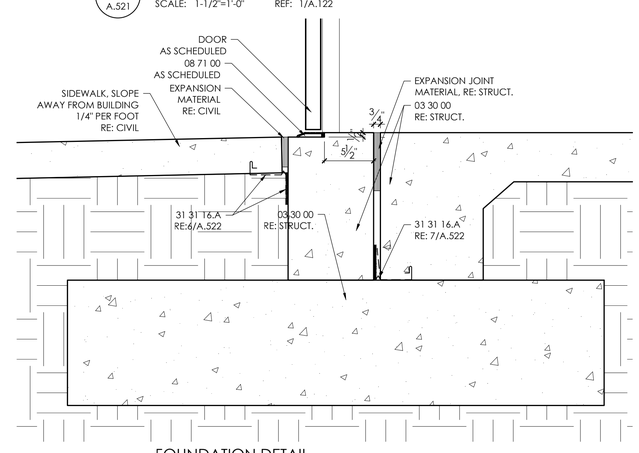
6 A.521 FOUNDATION DETAIL GENERATOR ENCLOSURE ADJACENT TO FUTURE BUILDING
SCALE: 1-1/2"=1'-0" REF: 1/A.122



7 A.521 FOUNDATION DETAIL AT GRADE
SCALE: 1-1/2"=1'-0" REF: 1/A.121



8 A.521 FOUNDATION DETAIL AT SIDEWALK
SCALE: 1-1/2"=1'-0" REF:



9 A.521 FOUNDATION DETAIL AT DOOR, TYPICAL
SCALE: 1-1/2"=1'-0" REF:

REFERENCE NOTES

03 00 00		CONCRETE (CIVIL)
03 10 10		UNDER SLAB VAPOR BARRIER
03 30 00		CAST-IN-PLACE CONCRETE, RE: STRUCT.
03 35 01		CONC. THIN SHELL CONSTR. RE: STRUCT.
	A	AIR FORM/ROOF MEMBRANE RE: STUCT
	B	FOAM INSUATION RE: STRUCT.
	C	REINFORCING STEEL, RE: STRUCT.
	D	CONCRETE RE: STRUCT.
04 05 03		MASONRY MORTARING AND GROUTING
04 20 00		UNIT MASONRY, RE: STRUCT FOR STRUCT WALLS
	A	8" CMU
	B	8" CMU BURNISHED ONE SIDE
	C	8" CMU BURNISHED BOTH SIDES
	D	CMU U BLOCK, RE: WALL FOR BURNISHING
	E	10" STRUCTURAL BRICK
	F	8" STRUCTURAL BRICK
	G	STRUCTURAL BRICK BOND BEAM UNIT
	H	STRUCTURAL BRICK U BLOCK
	I	LADDER/TRUSS JOINT REINFORCEMENT
	J	BLOCKNET FLASHING SYSTEM
	K	CMU SOAP CAP, MATCH WALL BURNISHING
	L	REINFORCING STEEL, RE: STRUCT.
05 12 00		STRUCTURAL STEEL FRAMING, RE: STRUCT.
05 21 00		STEEL JOIST FRAMING, RE: STRUCT.
05 31 00		STEEL DECKING, RE: STRUCT.
05 50 00		METAL FABRICATIONS
06 10 00		ROUGH CARPENTRY
	A	FIRE RETARDANT TREATED SOLID BLOCKING
	B	FIRE RETARDANT TREATED PLYWOOD
07 52 00		MODIFIED BITUMEN MEMBRANE ROOFING
	A	MODIFIED BITUMEN PLY SHEET
	B	MODIFIED BITUMEN CAP SHEET
	C	VERAL ALUMINUM FACED FLASHING
	D	TERMINATION PRESSURE BAR
	E	FIBER CANT
	F	VENTING BASE SHEET
	G	SEAL EDGE WITH ROOFING SEALANT
07 62 00		SHEET METAL FLASHING AND TRIM
	A	PARAPET CAP, FORM AS INDICATED
	C	FLASHING
	D	COUNTERFLASHING
	E	SURFACE MOUNTED RECEIVER/REGLET
	F	CLEAT
07 71 23		GUTTERS AND DOWNSPOUTS
	A	GUTTER, PROFILE AS INDICATED
	B	DOWNSPOUT, SIZE SHAPE INDICATED
07 90 00		JOINT PROTECTION
08 12 14		STANDARD STEEL FRAMES
	A	STANDARD STEEL FRAME
	B	MASONRY WIRE ANCHOR
	C	FEMA 361 RATED STEEL FRAME
08 13 14		STANDARD STEEL DOORS
	A	STANDARD STEEL DOOR
	B	FEMA 361 RATED STEEL DOOR
08 41 13		ALUMINUM FRAMED STOREFRONTS
	E	FEMA 361 RATED ASSEMBLY
08 71 00		DOOR HARDWARE
10 14 00		SIGNAGE
10 14 16		CAST BUILDING PLAQUES AND LETTERS
10 44 00		FIRE PROTECTION SPECIALTIES
	A	EXTINGUISHER WITH CABINET
	B	EXTINGUISHER ON BRACKET
31 31 16		TERMITE CONTROL
	A	STAINLESS STEEL MESH PARGED TO CONC.

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DAVID NEGRETE
11640
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ISSUED: 10.15.2013

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SAFE ROOM - SOUTH PARK SITE
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EDINBURG, TX

10.01.2013-80%CD
bwm

REVISIONS

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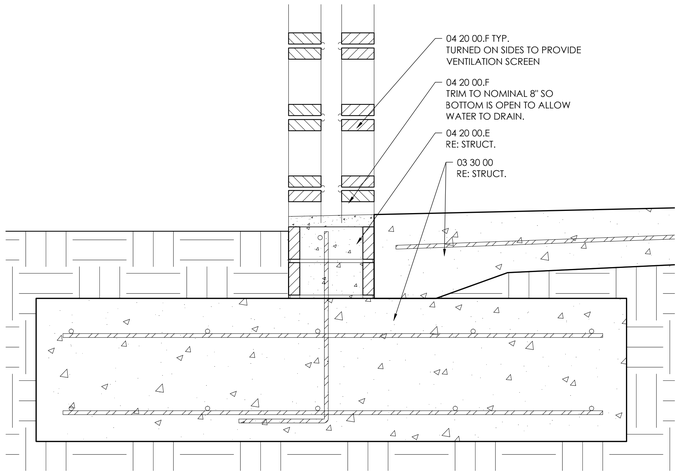
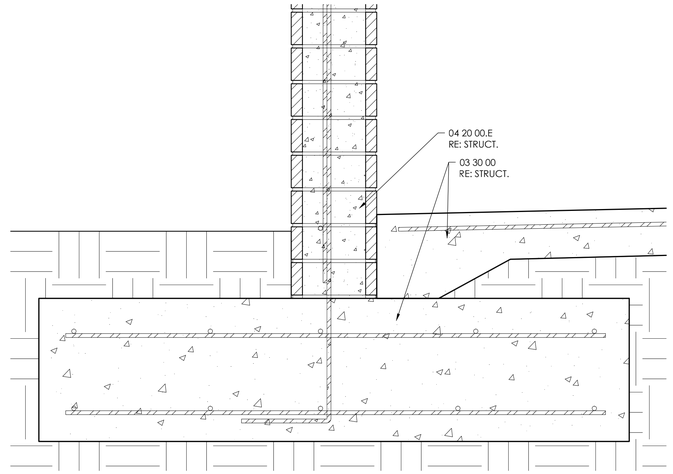
SECTION DETAILS

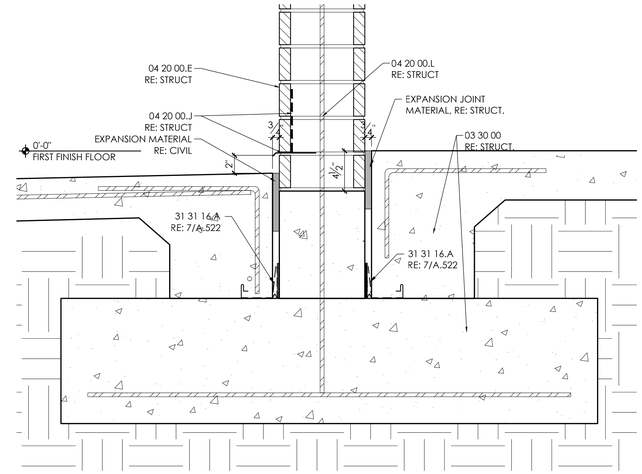
A.521



1 A.522 WALL SECTION WEST MECHANICAL ENCLOSURE AT VENTILATING BRICKS
SCALE: 1-1/2"=1'-0" REF: 1/A.122

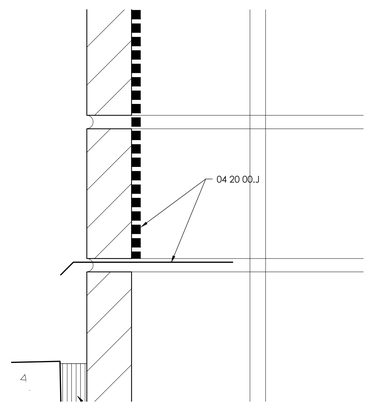


2 A.522 FOUNDATION DETAIL WEST MECHANICAL ENCLOSURE AT SOLID WALL
SCALE: 1-1/2"=1'-0" REF: 3/A.500

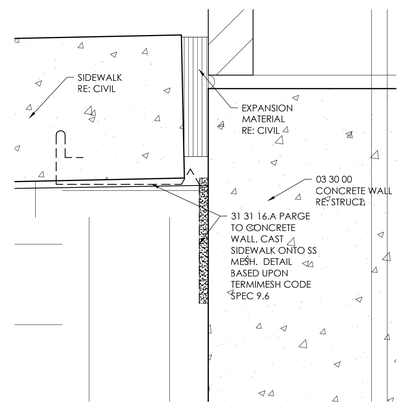


3 A.522 FOUNDATION DETAIL DOME TO WEST MECHAINCAL ENCLOSURE
SCALE: 1-1/2"=1'-0" REF: 3/A.500

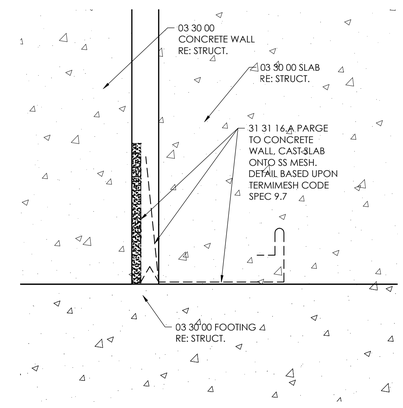
4 A.522 NOT USED
SCALE: REF:



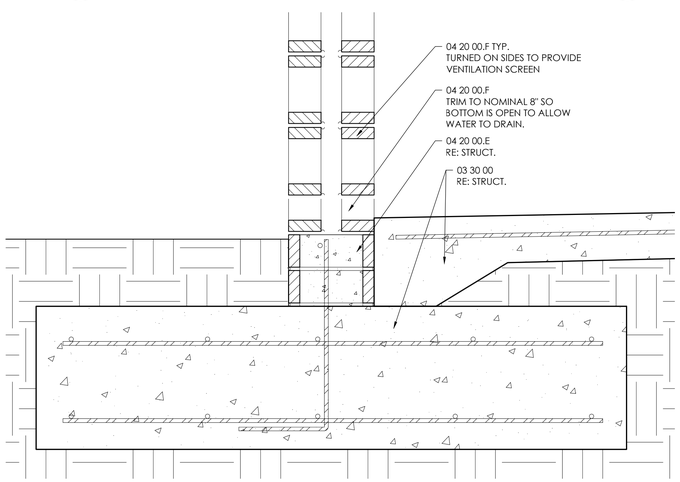
5 A.522 BASE OF WALL SILL FLASING/TERMITE CONTROL
SCALE: HALF SCALE REF:



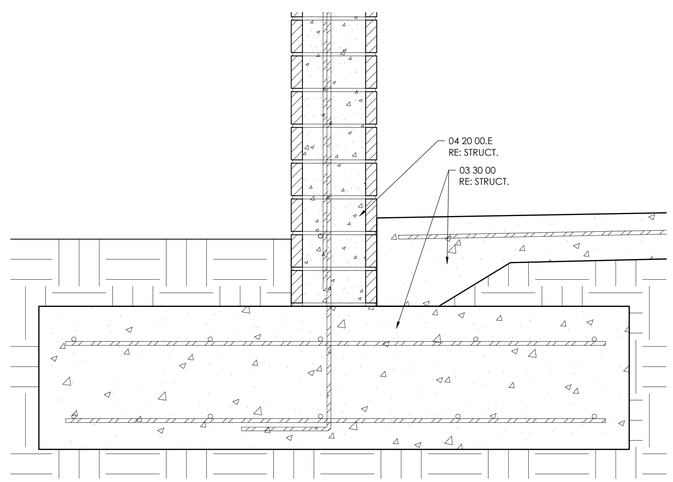
6 A.522 TERMITE CONTROL FOOTING TO SIDE WALK
SCALE: HALF SCALE REF:



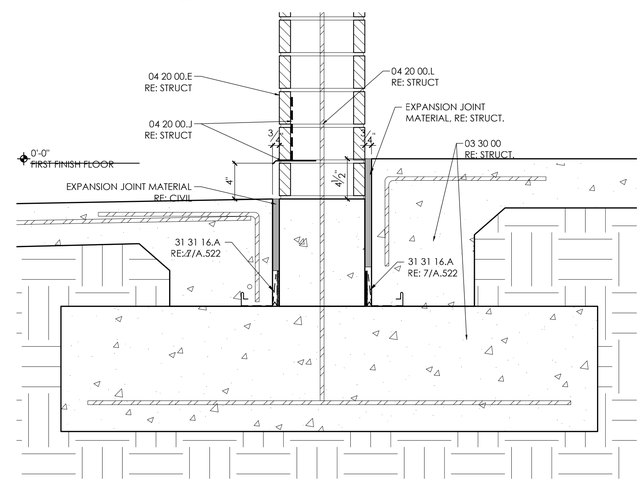
7 A.522 TERMITE CONTROL FOOTING TO SLAB
SCALE: HALF SCALE REF:



8 A.522 WALL SECTION EAST MECHANICAL ENCLOSURE AT VENTILATING BRICKS
SCALE: 1-1/2"=1'-0" REF: 1/A.122



9 A.521 FOUNDATION DETAIL EAST MECHANICAL ENCLOSURE AT SOLID WALL
SCALE: 1-1/2"=1'-0" REF: 3/A.500



10 A.522 FOUNDATION DETAIL DOME TO EAST MECHAINCAL ENCLOSURE
SCALE: 1-1/2"=1'-0" REF: 3/A.500

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10.01.2013
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REVISIONS
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SECTION DETAILS

A.522

GENERAL STRUCTURAL NOTES

GENERAL REQUIREMENTS

DRAWINGS
THESE DRAWINGS HAVE BEEN PREPARED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE STRUCTURAL ENGINEERS IN THIS OR SIMILAR LOCALITIES. THEY NECESSARILY ASSUME THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR AND/OR WORKERS WHO HAVE A WORKING KNOWLEDGE OF THE APPLICABLE CODE STANDARDS AND REQUIREMENTS AND OF INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION OR ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS, IT IS UNDERSTOOD THAT THE CONTRACTOR WILL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR ALL MISCELLANEOUS WORK NOT EXPLICITLY SHOWN.

MISCELLANEOUS ITEMS
CALCULATION AND DESIGN OF MISCELLANEOUS NON-STRUCTURAL ITEMS, SUCH AS STAIRS, RAILINGS, NON-STRUCTURAL WALLS AND PREFABRICATED STRUCTURAL ITEMS, SUCH AS FLOOR AND ROOF TRUSSES, ARE NOT INCLUDED AND ARE TO BE PROVIDED BY OTHERS UNLESS SPECIFICALLY NOTED ON THESE DRAWINGS.

CONSTRUCTION MEANS AND METHODS
THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DESIGN AND PROVIDE ADEQUATE SHORING, BRACING, FORM-WORK, ETC... AS REQUIRED FOR THE PROTECTION OF LIFE AND PROPERTY (INCLUDING UTILITIES) DURING CONSTRUCTION. CONSTRUCTION MATERIALS SHALL BE PLACED ON THE STRUCTURE SUCH THAT THE DESIGN LOADS AS STATED HEREIN ARE NOT EXCEEDED.

DIMENSIONS, INSERTS AND OPENINGS
THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS, CONDITIONS AND ELEVATIONS WITH CIVIL DRAWINGS PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL INFORM THE CIVIL ENGINEER IN WRITING OF ANY DISCREPANCIES OR OMISSIONS NOTED ON THE DRAWINGS. ANY SUCH DISCREPANCY, OMISSION, OR VARIATION NOT REPORTED BEFORE START OF CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. WHERE DISCREPANCIES OCCUR IN THESE DRAWINGS, NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS.

CONTRACTOR SHALL ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL WITH APPROPRIATE TRADES, DRAWINGS AND SUBCONTRACTORS PRIOR TO CONSTRUCTION.

STANDARDS
WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE EDITION REFERENCED IN THE GOVERNING BUILDING CODE.

TYPICAL DETAILS AND NOTES
TYPICAL DETAILS AND NOTES SHALL APPLY, THOUGH NOT NECESSARILY INDICATED AT A SPECIFIC LOCATION ON PLANS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT. DETAILS MAY SHOW ONLY ONE SIDE OF CONNECTION OR MAY OMIT INFORMATION FOR CLARITY.

SHOP DRAWINGS
SHOP DRAWINGS SHALL BE SUBMITTED FOR ALL STRUCTURAL ITEMS. SHOP DRAWINGS ARE REVIEWED ONLY FOR GENERAL COMPLIANCE WITH THE STRUCTURAL DRAWINGS. REVIEW DOES NOT INDICATE THAT THE SHOP DRAWINGS ARE CORRECT OR COMPLETE. RESPONSIBILITY FOR CORRECTNESS SHALL REST WITH THE CONTRACTOR. ANY CHANGES, SUBSTITUTIONS, OR DEVIATIONS FROM CONTRACT DRAWINGS SHALL BE CLOUDED. ANY OF THE AFOREMENTIONED SHALL NOT BE CONSIDERED APPROVED AFTER ENGINEER'S REVIEW UNLESS SPECIFICALLY NOTED ACCORDINGLY. THE SHOP DRAWINGS DO NOT SUPERSEDE OR REPLACE THE ORIGINAL CONTRACT DRAWINGS. ANY ENGINEERING PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL BEAR THE SEAL OF AN APPROPRIATELY REGISTERED ENGINEER. ENGINEERING STRUCTURAL SOLUTIONS SHALL NOT BE RESPONSIBLE FOR THE ADEQUACY OF ENGINEERING DESIGNS PERFORMED BY OTHERS. FIVE WORKING DAYS SHALL BE ALLOWED FOR THE ENGINEER'S REVIEW. CONTRACTOR SHALL PROVIDE A COPY OF EACH SUBMITTAL FOR ENGINEERING STRUCTURAL SOLUTIONS' RECORDS.

BASIS FOR DESIGN AND FEMA CODE COMPLIANCE

GOVERNING BUILDING CODE: . . . . 2012 IBC

WIND DESIGN INFORMATION (PER FEMA 361 SECOUND EDITION AND ICC500-2008):
WIND DESIGN CONFORMS TO THE PROVISIONS OF THE ICC/NSSA STANDARD FOR THE DESIGN AND CONSTRUCTION OF STORM SHELTERS (ICC500-2008).

DESIGN WIND SPEED (PER ICC500 FIGURE 304.2) . . . . 200 MPH
IMPORTANCE FACTOR 1.0
WIND EXPOSURE CATEGORY C
INTERNAL PRESSURE COEFF (GCpi) 0.55
Kzt, Kd 1.0

NOTE: ENVELOPE DESIGN EXCEEDS REQUIREMENTS PROVIDED BY FEMA FOR MISSILE IMPACT.

GRAVITY DESIGN
ROOF
DEAD . . . . SELF +10 PSF
ROOF LIVE LOAD (PER ICC500 SECTION 303.2) . . . . 100 PSF

SEISMIC DESIGN
USE GROUP IV
I_E 1.5
S_{DS} (SHORT PERIOD) 0.095
S_{D1} (1-SECOND PERIOD) 0.046
SITE CLASS . . . . D
LATERAL SYSTEM . . . . REINFORCED MASONRY SHEARWALLS
R 2.0
SEISMIC COEFFICIENT (ASD) 0.033
ANALYSIS PROCEDURE . . . . EQUIVALENT LATERAL-FORCE PROCEDURE

SOILS
SOIL BEARING PRESSURE . . . . 1700 PSF
MINIMUM FOOTING DEPTH . . . . 24 INCHES

TORNADO/HURRICANE STORM SHELTER

CONTRACTOR QUALITY ASSURANCE :
EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF THE MASONRY AND CONCRETE ASPECTS OF THE STORM SHELTER SHALL SUBMIT A WRITTEN STATEMENT OF RESPONSIBILITY TO THE AUTHORITY HAVING JURISDICTION PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THE STATEMENT SHOULD CONTAIN THE FOLLOWING:

1) ACKNOWLEDGEMENT OF AWARENESS OF THE SPECIAL CRITERIA CONTAINED IN THE QUALITY ASSURANCE PLAN.

2) ACKNOWLEDGEMENT THAT CONTROL WILL BE EXERCISED TO OBTAIN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS.

3) PROCEDURES FOR EXERCISING CONTROL WITHIN THE CONTRACTORS ORGANIZATION, AND THE METHOD AND FREQUENCY OF REPORTING AND THE DISTRIBUTION OF REPORTS

4) IDENTIFICATION AND QUALIFICATIONS OF THE PERSONS EXERCISING SUCH CONTROL AND THEIR POSITIONS IN THE ORGANIZATION.

STRUCTURAL OBSERVATIONS (ICC500-2008) SECTION 106.4 :
STRUCTURAL OBSERVATIONS SHALL BE PERFORMED BY A REGISTERED DESIGN PROFESSIONAL EMPLOYED BY THE OWNER, PER ICC500-2008 SECTION 106.4.

FOUNDATION (SEE GEOTECHNICAL REPORT)

DESIGN RECOMMENDATIONS
FIRM: RABA KISTNER; REPORT NO.: AMA13-023-00
DATE: MAY 10, 2013

CONSTRUCTION
ALL SITE PREPARATION, GRADING, COMPACTION TESTS, INSPECTIONS, ETC. SHALL BE FOLLOWED WITH STRICT ADHERENCE AND SHALL BE COMPLETED PRIOR TO ANY CONCRETE PLACEMENT. SEE ACI 325.3 FOR FURTHER REQUIREMENTS.

ENGINEERING SYSTEMS SOLUTIONS ASSUMES NO LIABILITY FOR GROUNDWATER OR OTHER MEANS OF FLOODING.

BACKFILL
BACKFILL AND RECOMPACT ALL TRENCHES PER THE GEOTECHNICAL REPORT. (MIN 90% DRY DENSITY)

DRAINAGE
PROVIDE ADEQUATE DRAINAGE AWAY FROM THE STRUCTURE.

REINFORCING STEEL

GRADE

TYPE	GRADE	ASTM STD
ALL WELDED BARS	60	A706
#4 OR LARGER	60	A615
#3 OR SMALLER	40	A615
WELDED WIRE FABRIC	60	A185

CLEAR COVER
ALL DIMENSIONS NOT NOTED AS "CLR" ARE TO THE CENTER OF THE BAR. MIN COVER FOR NON-PRESTRESSED STEEL (U.N.O.)

STRUCTURAL ELEMENT	COVER	TOLERANCE
FOOTINGS AND SLAB ON GRADE	3"	3/8"
WALLS (#5 OR SMALLER)	1 1/2"	3/8"
WALLS (#6 OR LARGER)	2"	1/2"
ELEVATED SLABS, BEAMS AND COLUMNS	1 1/2"	3/8"

LAP SPLICES
LENGTHS SHALL BE PROVIDED PER THE FOLLOWING TABLE. (U.N.O. TACK WELDING OF REINFORCING BARS NOT ALLOWED.) SPLICES MAY BE CONTACT OR NON CONTACT.

REBAR LAP SCHEDULE

BAR	(a) LAP	(b) 1.7 LAP
#3	18"	31"
#4	18"	31"
#5	23"	39"
#6	28"	48"
#7	36"	62"
#8	47"	80"
#9	59"	101"
#10	75"	128"
#11	92"	157"

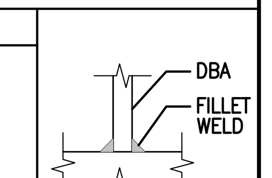
(a.) WHERE SPLICES ARE STAGGERED AT LEAST ONE LAP LENGTH USE THESE LAP LENGTHS

(b.) WHERE MORE THAN 1/3 OF BARS ARE SPLICED AT ONE LOCATION USE THESE LAP LENGTHS

DBA's

DBA WELD SCHEDULE

BAR SIZE	WELD SIZE
#3	1/4"
#4	3/16"
#5	3/8"
#6	7/16"
#7	1/2"
#8	9/16"



NOTES:
1. ALL DBA'S SHALL BE A706 60 GRADE
2. ALL WELDING SHALL BE PERFORMED W/ E70 ELECTRODE

WELDING
ALL REINFORCING AND DBA'S (DEFORMED BAR ANCHORS) TO BE WELDED SHALL BE A706. WELDING OF REINFORCING BARS, METAL INSERTS, AND CONNECTIONS SHALL CONFORM WITH AWS D1.4, AND SHALL BE MADE ONLY AT LOCATIONS SHOWN ON PLANS OR DETAILS.

BENDING
BENDING SHALL BE MADE ONLY AT LOCATIONS SHOWN ON PLANS OR DETAILS. ALL REINFORCING SHALL BE BENT COLD. BARS SHALL NOT BE UN-BENT AND RE-BENT. #6 BAR AND SMALLER MAY BE COLD FIELD BENT. #7 BAR AND LARGER SHALL NOT BE FIELD BENT WITH OUT PRIOR APPROVAL FROM ENGINEER OF RECORD.

PLACE AND DETAIL
ALL BARS SHALL BE DETAILED AND PLACED PER CRSI SPECIFICATIONS AND HANDBOOK. DOWEL ALL VERT REINFORCING TO FOUNDATION. SECURELY TIE ALL BARS IN LOCATION BEFORE PLACING CONCRETE.

MECHANICAL COUPLERS.
MECHANICAL SPLICE COUPLERS SHALL HAVE CURRENT ICC APPROVAL AND SHALL BE CAPABLE OF DEVELOPING 125% OF THE STRENGTH OF THE BAR.

CONCRETE

MATERIAL
MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE AS FOLLOWS:

SHOTCRETE . . . . 4000 PSI

FOOTINGS . . . . 4500 PSI

SLAB . . . . 4500 PSI

WALLS . . . . 4000 PSI

CEMENT TYPE (ABOVE GRADE) . . . . I OR II

CEMENT TYPE (ON OR BELOW GRADE) . . . . V + POZZOLAN OR SLAG

MAXIMUM W/C RATIO 0.45

CONCRETE CONT

ALL CONCRETE SHALL BE NORMAL WEIGHT OF 145 POUNDS PER CUBIC FOOT USING HARD ROCK AGGREGATES CONFORMING TO ASTM C33.

BATCHING, MIXING, AND TRANSPORTING
BATCHING, MIXING, AND TRANSPORTING CONCRETE SHALL BE PER ACI 304R.

CONCRETE MIXES SHALL BE DESIGNED BY A CERTIFIED LABORATORY AND APPROVED BY THE ENGINEER OF RECORD.

PORTLAND CEMENT SHALL CONFORM TO ACI 318 CHAPTER 3.2.

WATER SHALL NOT BE ADDED AT THE JOB SITE SUCH THAT THE APPROVED MIX DESIGN W/C RATIO IS EXCEEDED.

FORM WORK
FORM WORK SHALL BE PER ACI 347R.

PLACING
PLACING OF CONCRETE SHALL BE PER ACI 304R.

PLACING OF CONCRETE BY MEANS OF PUMPING SHALL BE PER ACI 304.2R.

REINFORCING STEEL AND EMBEDDED ITEMS SHALL BE CLEAN AND FREE FROM FOREIGN DEBRIS.

REINFORCING AND OTHER EMBEDDED ITEMS SHALL BE TIED IN PLACE AND CARE SHALL BE TAKEN TO ENSURE THAT EMBEDDED ITEMS ARE NOT DISPLACED WHILE PLACING CONCRETE.

CONTRACTOR SHALL ENSURE THAT PROPER COVER IS MAINTAINED AROUND ALL REINFORCING DURING PLACEMENT.

CONSOLIDATION
CONSOLIDATION OF CONCRETE SHALL BE PER ACI 309R.

EMBEDDED ITEMS
EMBEDDED ITEMS SHALL BE PLACED PER ACI 318 SECTION 6.3.

CONDUITS AND PIPES SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE WITHOUT WRITTEN APPROVAL FROM THE ENGINEER OF RECORD.

EMBEDDED CONDUITS, PIPES, AND SLEEVES SHALL NOT BE LARGER IN DIAMETER THAN 1/3 THE OVERALL THICKNESS OF THE SLAB, BEAM, OR WALL IN WHICH THEY ARE EMBEDDED AND SHALL NOT BE SPACED CLOSER THAN 3 DIAMETERS OR ELEMENT WIDTHS ON CENTER.

NO ALUMINUM EMBEDS SHALL BE IN DIRECT CONTACT WITH CONCRETE

COLD WEATHER CONCRETING
COLD WEATHER CONDITIONS EXIST AS DEFINED BY ACI 306.

WHEN COLD WEATHER EXISTS, FOLLOW ALL COLD WEATHER SPECIFICATIONS AS DEFINED BY ACI 306 AND NOTED BELOW.

LARGE EMBED ITEMS SHALL BE HEATED TO AT LEAST 32° F PRIOR TO PLACEMENT IN CONCRETE.

FROZEN SUBGRADE SHALL BE THAWED TO THE MINIMUM FROST DEPTH AS SPECIFIED IN THE BASIS FOR DESIGN.

CONCRETE MIX TEMPERATURE WHILE PLACING SHALL BE 55° F TO 75° F AND MAINTAINED OVER THE NEXT 72 HOURS.

A DETAILED REPORT SHALL BE SUBMITTED WITH THE CONCRETE MIX DESIGN AND PROTECTION PROCEDURES PRIOR TO PLACEMENT OF CONCRETE TO THE ENGINEER.

HOT WEATHER CONCRETING
PRIOR TO CONCRETE PLACEMENT, TOP 3" OF SUB-BASE SHALL BE WETTED SUFFICIENTLY TO SATURATE SUB-BASE WITHOUT ANY STANDING WATER

CONCRETE PLACEMENT TEMPERATURE MAY NOT EXCEED 90° FAHRENHEIT WHEN MEASURED IN ACCORDANCE WITH ASTM C1064

STEEL FORMS AND REINFORCEMENT SHALL BE COOLED PRIOR TO CONCRETE PLACEMENT WHEN STEEL TEMPERATURES EXCEED 120° FAHRENHEIT.

MIX WATER, AGGREGATES, CONVEYING AND PLACING EQUIPMENT OR ANY COMBINATION OF THE ABOVE SHALL BE COOLED IF NECESSARY TO MAINTAIN PROPER CONCRETE PLACING TEMPERATURE.

SHOTCRETE PROPORTIONS:
SHOTCRETE PROPORTIONS SHALL BE SELECTED THAT ALLOW SUITABLE PLACEMENT PROCEDURES USING THE DELIVERY EQUIPMENT SELECTED AND SHALL RESULT IN IN-PLACE HARDENED SHOTCRETE MEETING THE STRENGTH REQUIREMENTS STATED HERE-IN. COARSE AGGREGATE, IF USED, SHALL NOT EXCEED 3/8 INCH. ANY REBOUND OR ACCUMULATED LOOSE AGGREGATE SHALL BE REMOVED FROM THE SURFACES TO BE COVERED PRIOR TO PLACING THE INITIAL OR ANY SUCCEEDING LAYERS OF SHOTCRETE. REBOUND SHALL NOT BE REUSED AS AGGREGATE.

SHOTCRETE PLACEMENT:
SHOTCRETE PLACEMENT SHALL BE PLACED ACCORDING TO ACI 506R-90. PRE-CONSTRUCTION TESTING OF SHOTCRETE IS NOT REQUIRED PROVIDED THE CONTRACTOR DEMONSTRATES TO THE BUILDING OFFICIAL AND ENGINEER OF RECORD ACCEPTED SHOTCRETE WORK USING SIMILAR EQUIPMENT UNDER SIMILAR CIRCUMSTANCES WITH THE SAME PERSONNEL.

NOZZLEMAN CERTIFICATION:
SHOTCRETE NOZZLEMAN SHALL BE CERTIFIED PER DOME CONTRACTOR'S QUALITY ASSURANCE PLAN.

QUALITY CONTROL:
COMPLETED SHOTCRETE WORK SHALL BE CHECKED VISUALLY DURING CONSTRUCTION AND PRIOR TO FINAL APPROVAL OF SHOTCRETE FOR REINFORCING BAR EMBEDMENT, VOIDS, ROCK POCKETS, SAND STREAKS AND SIMILAR DEFICIENCIES.

SLAB ON GRADE OR CONCRETE OVER STEEL DECK
- 1-1/2" MAX AGGREGATE SIZE.
- CONTRACTOR SHALL FOLLOW ACI 302 AGGREGATE SPECIFICATION USING MIN OF #8 AND #4 AGGREGATES TO PROVIDE A WELL GRADED AGGREGATE MIX.
- CONTRACTOR SHALL PROVIDE CONTROL JOINTS AT 2 TO 3 TIMES THE SLAB THICKNESS IN FEET O.C. EACH WAY (IE) 4" SLAB=8' TO 12' JOINT SPACING). SEE TYPICAL CONTROL JOINT IN CONCRETE SLAB ON GRADE DETAIL

CONCRETE OVER STEEL DECK SHALL BE BOUNDED BY SAW-CUT CONTROL JOINTS SUCH THAT THE ENCLOSED AREA DOES NOT EXCEED 400 SQUARE FEET. MIN REINFORCING UNO ON PLANS SHALL BE 6x6-W1.4xW1.4 WWF (MIN) PLACED AT THE APPROXIMATE CENTER OF THE CONCRETE DEPTH OVER THE DECK.

MASONRY

BLOCK
LOAD-BEARING HOLLOW MASONRY UNITS CONFORMING TO ASTM C90 OR C652 W/ A MIN NET COMPRESSIVE STRENGTH OF 1900 PSI.

ALL BLOCKS SHALL BE PLACED IN RUNNING BOND CONSTRUCTION (UNO) W/ ALL VERT CELLS IN ALIGNMENT, UNO.

MORTAR:
MORTAR MIX SHALL CONFORM TO REQUIREMENTS OF ASTM C270, ASTM C780 FOR FIELD TESTING AND ACI 530.1, TYPE S W/ MIN COMPRESSIVE STRENGTH OF 1800 PSI.

GROUT:
GROUT SHALL CONFORM TO REQUIREMENTS OF ASTM C476.

SUFFICIENT WATER SHALL BE USED FOR GROUT TO FLOW INTO ALL JOINTS OF THE MASONRY WITHOUT SEGREGATION.

GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI AT 28 DAYS.

ALL CELLS IN BRICK OR CMU CONTAINING REINFORCING SHALL BE FILLED SOLID WITH GROUT.

HOLD GROUT DOWN 1 1/2" BELOW TOP OF BLOCK AT GROUT LIFT JOINTS.

SPECIAL INSPECTION, CLEAN-OUTS & WRITTEN APPROVAL IS REQUIRED FOR GROUT POURS OVER 5 FEET. HIGH LIFT GROUTING MAY BE PERFORMED PROVIDED CLEAN-OUTS ARE PROVIDED (AT 32" O.C. MAX) AT ALL VERTICALLY REINFORCED CELLS.

MASONRY COMPRESSIVE STRENGTH:
NET COMPRESSIVE STRENGTH OF THE OVERALL MASONRY SYSTEM W/ PRISM TESTING (MORTAR, BLOCK OR BRICK AND GROUT) SHALL BE (f'm) 1500 PSI MIN.

HORIZONTAL REINFORCING UNO:
MIN HORIZ REINF..........................10" WALL . . . . . .(1) #5 AT 24" O.C.
..........................8" WALL . . . . . .(1) #5 AT 48" O.C

ROOF/FLOOR LINES..........CONT 16" DEEP BOND BEAMS W/ (1) #5 TOP AND BOTTOM (2 BARS TOTAL)

TOP OF PARAPET.................... CONT 16" DEEP BOND BEAM W/ (1) #5

PROVIDE BENT BARS PER TYPICAL DETAILS TO MATCH AND LAP HORIZ BOND BEAM REINFORCING AT CORNERS AND WALL INTERSECTIONS TO MAINTAIN BOND BEAM CONTINUITY. USE BOND BEAM U-BLOCK UNITS AT HORIZ REINFORCING.

LINTELS:
MIN LINTEL WHERE NOT NOTED ON PLANS, SHALL HAVE A MIN OF (2) #5 CONT HORIZ BARS IN BOTTOM OF BOND BEAM OR LINTEL BLOCK AND SHALL BE GROUTED SOLID TO A MIN DEPTH OF 24 INCHES U.N.O.

ALL LINTEL REINFORCING AND GROUT SHALL EXTEND 16" MIN PAST JAMBS UNO ON PLANS OR DETAILS.

VERTICAL REINFORCING UNO:
10" WALL....................#5 AT 24" O.C.
8" WALL....................#5 AT 32" O.C

PROVIDE (1) FULL HEIGHT VERT BAR TO MATCH TYPICAL VERTICAL WALL REINFORCING, IN CENTER OF GROUTED CELL AT ALL WALL INTERSECTIONS, CORNERS, WALL ENDS, JAMBS AT WALL OPENINGS, AND EACH SIDE OF CONTROL JOINTS, UNO.

DOWEL ALL VERT REINFORCING TO FOUNDATION W/ DOWELS TO MATCH AND LAP VERT REINFORCING.

CONTROL JOINTS:
CONTROL JOINTS ARE NOT REQUIRED AT CURVED MASONRY DOME STEM WALLS. FOR STRAIGHT MASONRY WALLS, CONTROL JOINT LOCATIONS SHALL BE COORDINATED WITH THE ARCHITECT, BUT SPACING SHALL NOT EXCEED THE MINIMUM OF 1.5 TIMES THE WALL HEIGHT OR 24'-0" O.C. MAX.

JOINTS SHALL BE PLACED SO AS NOT TO FALL W/IN A LINTEL UNO NOR W/IN A WALL JAMB ADJACENT TO AN OPENING OR UNDER A POINT LOAD.

VERT CONTROL JOINTS IN FENCE AND RETAINING WALLS SHALL BE LOCATED AT 20' TO 30' INTERVALS. PER TYPICAL FENCE WALL EXPANSION JOINT DETAIL. ALL CONTINUOUS HORIZONTAL REINFORCING SHALL BE DISCONTINUED AT VERT CONTROL JOINTS

LAP REINFORCING:
LAP REINFORCING BARS AS SHOWN BELOW. STAGGER HORIZONTAL LAP SPLICES A MIN OF 60 BAR DIAMETERS (UNO).

MASONRY REINFORCING LAP SCHEDULE

BAR	LAP LENGTH
#3	20"
#4	24"
#5	36"
#6	56"

LENGTHS SHOWN ACCOMODATE A 2 1/2" MIN CLEAR COVER

EPOXY ANCHORAGE

DOWELS:
EPOXY GROUTED DOWELS SHALL BE INSTALLED USING:

HILTI RE-500 ADHESIVE ANCHOR SYSTEM

SIMPSON STRONG-TIE SET ADHESIVE ANCHOR SYSTEM

INSTALL THE ABOVE SYSTEMS PER THE ICC REPORT AND MFR'S RECOMMENDATIONS.

ALTERNATE EPOXY GROUT SYSTEMS WITH CURRENT ICC APPROVAL MAY BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL.

DEFERRED SUBMITTALS

DEFERRED SUBMITTAL
ALL ITEMS CONSIDERED IN THESE DESIGN DOCUMENTS AS BY OTHERS ARE NOTED AS DEFERRED SUBMITTALS THAT WILL INCLUDE BUT NOT BE LIMITED TO:

CONCRETE MIX DESIGN

SHOTCRETE MIX DESIGN

PRIOR TO SUBMITTAL OF DEFERRED ITEMS TO PLAN REVIEW, THEY SHALL BE SUBMITTED TO OUR OFFICE FOR REVIEW.

SPECIAL INSPECTIONS

SPECIAL INSPECTION INDEPENDENT OF THE CONTRACTOR, ARCHITECT, OR ENGINEER OF RECORD SHALL BE PROVIDED BY OWNER ACCORDING TO IBC/CBC CHAPTER 17. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK FOR CONFORMANCE W/ THE CONTRACT DOCUMENTS, NOT THE SHOP DWGS. THE SPECIAL INSPECTOR SHALL SEND REPORTS TO THE OWNER, THE BUILDING OFFICIAL, THE ARCHITECT, THE ENGINEER, AND CONTRACTOR. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING THAT THE SPECIAL INSPECTION WORK WAS, TO THE BEST OF HIS KNOWLEDGE, IN OR NOT IN CONFORMANCE W/ THE PLANS, SPECIFICATIONS AND APPLICABLE WORKMANSHIP PROVISIONS OF THE IBC/CBC.

CONT OR PERIODIC SPECIAL INSPECTION IS REQUIRED FOR THE FOLLOWING WORK:

VERIFICATION AND INSPECTION

CONCRETE	CONT	PERIODIC
INSPECTION OF REINFORCING STEEL, AND/OR PRE STRESS TENDONS AND PLACEMENT		■
INSPECT BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT	■	
VERIFYING USE OF REQUIRED DESIGN MIX		■
SAMPLING FRESH CONCRETE AND PERFORMING SLUMP, AIR CONTENT AND DETERMINING THE TEMPERATURE OF FRESH CONCRETE AT THE TIME OF MAKING SPECIMENS FOR STRENGTH TESTS PER ACI 318	■	
INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.		■
VERIFYING USE OF REQUIRED DESIGN MIX		■
VERIFICATION OF IN-SITU CONCRETE STRENGTH PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS		■
POST-TENSIONED CONCRETE	**CONT**	**PERIODIC**
INSPECTION OF CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	■	
INSPECTION OF PRESTRESSED CONCRETE APPLICATION OF PRESTRESSING FORCES	■	
VERIFICATION OF IN-SITU CONCRETE STRENGTH PRIOR TO STRESSING OF TENDONS		■
POST-INSTALLED ANCHORS (EPOXY, EXPANSION, SCREW)		
AS APPLICABLE THE INSPECTION PROGRAM SHALL VERIFY: ANCHOR TYPE, EMBEDMENT, TIGHTENING TORQUE, DIMENSIONS, HOLE DEPTH, DIA. AND CLEANOUT, EPOXY MIXING AND PLACEMENT PROCEDURES IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND CURRENT ICC REPORT (ESR)	DURATION OF INSPECTION SHALL BE IN ACCORDANCE W/ ICC REPORT (ESR)	
MASONRY (LEVEL 2 (CBC/IBC 1704.5.3))	**CONT**	**PERIODIC**
FROM THE BEGINNING OF MASONRY CONSTRUCTION, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:		
• PROPORTIONS OF SITE-MIXED MORTAR AND GROUT		■
• PLACEMENT OF MASONRY UNITS AND CONSTRUCTION OF MORTAR JOINTS		■
• PLACEMENT OF REINFORCEMENT AND CONNECTORS		■
• GROUT SPACE PRIOR TO GROUTING	■	
• PLACEMENT OF GROUT	■	
THE INSPECTION PROGRAM SHALL VERIFY:		
• SIZE AND LOCATION OF STRUCTURAL ELEMENTS		■
• TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS FRAMES OR OTHER CONSTRUCTION	■	
• SPECIFIED SIZE, GRADE AND TYPE OF REINFORCEMENT		■
• WELDING OF REINFORCING BARS	■	
• PROTECTION OF MASONRY DURING EXTREME WEATHER TEMPERATURES BELOW 40°F OR ABOVE 90°F		■
PREPARATION OF ANY REQUIRED GROUT SPECIMENS, MORTAR SPECIMENS AND/OR PRISMS SHALL BE OBSERVED	■	
COMPLIANCE W/ REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED SUBMITTALS SHALL BE VERIFIED		■

ADDITIONAL QUALITY ASSURANCE PLAN

THE CONTRACTOR SHALL PROVIDE STAMPED ENGINEERED DESIGN OF AIR FORM INDICATING THE DESIGN PARAMETERS INCLUDING WIND LOADS, INTERNAL PRESSURES DURING CONSTRUCTION AND INCIDENTAL CONSTRUCTION LOADING FOR REVIEW BY THE E.O.R. PRIOR TO CONSTRUCTION.

MEANS AND METHODS OF AIR FORM ATTACHMENT AND ERECTION ARE THE CONTRACTORS RESPONSIBILITY.

AIR FORM SHALL BE IN ACCORDANCE WITH ACI 334.3R-05 PROJECT SPECIFICATIONS

SHEET INDEX

SHEET NO.	SHEET TITLE
S0.1	GENERAL STRUCTURAL NOTES
S0.2	GENERAL STRUCTURAL NOTES
S1.1	DOME FOUNDATION PLAN
S2.1	DOME WINDOW OPENING PLAN
S2.2	DOME MECHANICAL OPENING PLAN
S3.1	DOME RING BEAM POST TENSION PLAN
S4.1	INTERIOR FRAMING PLAN
S5.1	DOME SECTION
S6.1	TYPICAL DETAILS
S7.1	FOUNDATION DETAILS
S7.2	FOUNDATION DETAILS
S8.1	FRAMING DETAILS
S9.1	OPENING DETAILS
S9.2	OPENING DETAILS

STANDARD ABBREVIATIONS

AB	ANCHOR BOLT	LLV	LONG LEG VERTICAL
ACI	AMERICAN CONCRETE INSTITUTE	LO	LOW
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	MFR	MANUFACTURER
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	MAX	MAXIMUM
ARCH	ARCHITECTURAL	MECH	MECHANICAL
ALT	ALTERNATE	MIN	MINIMUM
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIAL	MISC	MISCELLANEOUS
BOT	BOTTOM	NTS	NOT TO SCALE
BRG	BEARING	O.C.	ON CENTER
C	CHANNEL	OPP	OPPOSITE
℄	CENTER LINE	PL	PLATE
CLR	CLEAR	PLF	POUNDS PER LINEAR FOOT
COL	COLUMN	PSF	POUNDS PER SQUARE FOOT
CONC	CONCRETE	PSI	POUNDS PER SQUARE INCH
CONT	CONTINUOUS	REQ'D	REQUIRED
DBA	DEFORMED BAR ANCHOR A706 REBAR	SIM	SIMILAR
ø	DIAMETER	SPEC	SPECIFICATION
DWG	DRAWING	STD	STANDARD
EA	EACH	T&B	TOP AND BOTTOM
EF	EACH FACE	T&G	TONGUE AND GROVE
ELEV	ELEVATION	T.O.	TOP OF
EQ	EQUAL	T.O.C.	TOP OF CONCRETE
EW	EACH WAY	T.O.D.	TOP OF DECK
FF	FINISH FLOOR	T.O.F.	TOP OF FOOTING
FLR	FLOOR	T.O.L.	TOP OF LEDGER
FT	FOOT	T.O.P.	TOP OF PANEL
FTG	FOOTING	T.O.S.	TOP OF STEEL
GSN	GENERAL STRUCTURAL NOTES	T.O.W.	TOP OF WALL
HORIZ	HORIZONTAL	TYP	TYPICAL
IBC	INTERNATIONAL BUILDING CODE	UBC	UNIFORM BUILDING CODE
INFO	INFORMATION	U.N.O.	UNLESS OTHERWISE NOTED
K	KIP (1,000 LBS.)	VERT	VERTICAL
KSI	KIPS PER SQUARE INCH	W	WIDE FLANGE
L	ANGLE	W/	WITH
LL	DOUBLE ANGLE	W/O	WITHOUT
LLH	LONG LEG HORIZONTAL	WT	WEIGHT

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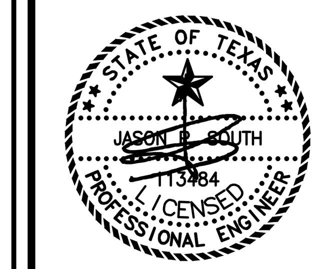


Oct. 15, 2013

CITY OF EDINBURG
SAFE ROOM - SOUTH PARK SITE
315 E. PALM DRIVE
EDINBURG, TX

100 %, 10/15/13
DML

REVISIONS

GENERAL STRUCTURAL NOTES

S0.1

GENERAL STRUCTURAL NOTES

POST TENSIONING

FIELD FORMAN
THE FIELD FORMAN RESPONSIBLE FOR THE PLACEMENT OF ALL POST–TENSIONING SHALL HAVE A MINIMUM OF THREE (3) YEARS IN THIS CAPACITY FOR THIS TYPE OF CONSTRUCTION.

PT STEEL QUALITY
ONE SAMPLE OF EACH REEL OR HEAT SHALL BE TESTED BY AN APPROVED LABORATORY. TEST RESULTS OR MILL CERTIFICATES SHALL BE SUBMITTED TO THE ENGINEER BEFORE STRESSING OF TENDONS. POST–TENSIONING TENDONS SHALL BE STRESS–RELIEVED OR BE OF LOW–RELAXATION QUALITY, AND SHALL CONFORM TO THE FOLLOWING:

SEVEN WIRE STRAND ASTM
DESIGNATION.....A–416
0.5" DIAMETER TENDON AREA.....0.153 IN SQ.
ULTIMATE STRENGTH.....270 KSI

TENDON STRESSES SHALL CONFORM TO THE FOLLOWING:

MAX JACKING STRESS.....216 KSI
MAX STRESS IMMEDIATELY AFTER PRESTRESS TRANSFER....200 KSI
MAX ANCHORAGE STRESS IMMEDIATELY AFTER PRESTRESS TRANSFER.....169 KSI

PT CALCULATIONS
CONTRACTOR SHALL PROVIDE FRICTION AND LONG–TERM LOSS CALCULATIONS FOR THE ENGINEERS APPROVAL.

PT HARDWARE QUALITY
ALL ANCHORAGES, COUPLERS AND MISCELLANEOUS HARDWARE SHALL BE STANDARD AND APPROVED BY GOVERNING AGENCIES AND THE ENGINEER.

TENDONS
UNBONDED STRANDS SHALL BE ENCASED IN SLIPPAGE SHEATHING WHICH SHALL CONSIST OF A SEALED DURABLE WATERPROOF PLASTIC TUBING CAPABLE OF PREVENTING THE PENETRATION OF MOISTURE AND CEMENT PASTE, AND WHICH WILL CONTAIN A RUST–INHIBITING GREASE COATING. TEARS IN THE SHEATHING SHALL BE REPAIRED TO RESTORE THE WATERTIGHTNESS OF THE SHEATHING. HEAT–SEALED SHEATHING SHALL NOT BE USED UNLESS THE WATERTIGHTNESS OF THE SHEATHING IS GUARANTEED BY THE CONTRACTOR.

SHOP DRAWINGS
THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS SHOWING TENDON LAYOUT, DEAD–END AND STRESSING–END LOCATIONS, AND TENDON SUPPORT LAYOUTS WITH DETAILS NECESSARY FOR INSTALLATION FOR THE ENGINEERS APPROVAL. A SET OF APPROVED SHOP DRAWINGS MUST BE FILED WITH THE CITY ENGINEER BY THE CONTRACTOR.

TENDON PLACEMENT
CARE SHALL BE TAKEN THAT TENDONS ARE LOCATED AND HELD IN THEIR DESIGNED POSITIONS. TOLERANCES FOR THE LOCATION OF THE PRESTRESSING STEEL SHALL NOT BE MORE THAN ± 1/8" VERTICALLY, EXCEPT AS NOTED OR APPROVED BY THE ENGINEER. ACCESS TO STRESSING ENDS SHALL BE MAINTAINED WHERE SHOWN.

TENDON ADJUSTMENTS
SLIGHT DEVIATIONS IN THE HORIZONTAL SPACING OF THE TENDONS WILL BE PERMITTED WHEN REQUIRED TO AVOID OPENINGS, INSERTS, AND DOWELS WHICH ARE SPECIFICALLY LOCATED. WHERE LOCATIONS OF TENDONS SEEM TO INTERFERE WITH EACH OTHER, ONE TENDON MAY BE MOVED HORIZONTALLY IN ORDER TO AVOID THE INTERFERENCE.

TWISTING
TWISTING OR ENTWINING OF INDIVIDUAL WIRE OR STRANDS WITHIN A BUNDLE OR A BEAM SHALL NOT BE PERMITTED.

PROFILES
PROFILES SHALL CONFORM TO CONTROLLING POINTS AND SHOULD BE IN AN APPROXIMATE PARABOLIC DRAPE BETWEEN SUPPORTS, UNO.

PRESTRESS COVER
ALL DIMENSIONS SHOWING THE LOCATION OF PRESTRESSING TENDONS ARE TO THE CENTER OF GRAVITY OF THE TENDON (CGS) UNO.

MINIMUM CHAIRING
TENDONS SHALL BE SECURED TO A SUFFICIENT NUMBER OF POSITIONING DEVICES TO ENSURE CORRECT LOCATION DURING AND AFTER THE PLACING OF THE CONCRETE, AND SHALL BE SUPPORTED AT A MIN OF 3'–6" O.C. CHAIRS GREATER THAN 2.5" IN SIZE SHALL BE STAPLED TO THE FORMWORK.

ANCHORS
ANCHORAGES SHALL BE RECESSED A MINIMUM OF TWO (2) INCHES. PLACE TWO (2) CONTINUOUS #4 BARS BEHIND ALL ANCHORAGES, UNO. SPLICES SHALL BE 24" MINIMUM AND STAGGERED.

BLOCKOUTS
ALL POCKETS OR BLOCKOUTS REQUIRED FOR ANCHORAGE SHALL BE ADEQUATELY REINFORCED SO AS NOT TO DECREASE THE STRENGTH OF THE STRUCTURE. ALL POCKETS SHOULD BE WATERPROOFED TO ELIMINATE WATER LEAKAGE THROUGH OR INTO THE POCKET.

PENETRATIONS
PENETRATIONS SHALL NOT BE PERMITTED EXCEPT AS SHOWN IN PT DRAWINGS OR TYPICAL DETAILS.

CHLORIDES
GROUT OR CONCRETE CONTAINING CHLORIDES SHALL NOT BE USED.

CONCRETE STRENGTH AT STRESSING
PRIOR TO STRESSING TENDONS, CONCRETE SHALL BE 4,000 PSI MIN POST TENSION RING BEAM SHALL BE POURED IN–PLACE.

TENDON STRESSING
TENSIONING SHALL BE DONE BY JACKING UNDER IMMEDIATE CONTROL OF A PERSON EXPERIENCED IN THIS TYPE OF WORK. CONTINUOUS INSPECTION AND RECORDING OF ELONGATIONS IS REQUIRED DURING ALL STRESSING OPERATIONS.

CALIBRATION
THE RAM AND ATTENDANT GAUGE USED SHALL HAVE BEEN CALIBRATED WITHIN SIXTY (60) DAYS OF THEIR USE.

STRESSING SEQUENCE
RING BEAM TENDONS SHALL BE STRESSED AFTER FIRST 10'–0" (ALONG ARC) OF DOME CONSTRUCTION IS COMPLETED. THE REMAINING PORTION OF THE DOME SHELL SHALL NOT BE CONSTRUCTED ABOVE 40 FT ALONG THE ARC.

POST TENSIONING CONT

ELONGATIONS
INDIVIDUAL TENDON FIELD READINGS OF ELONGATIONS AND/OR STRESSING FORCES SHALL NOT VARY BY MORE THAN ±7% FROM CALCULATED REQUIRED VALUES SHOWN ON THE SHOP DRAWINGS. IF THE MEASURED ELONGATIONS VARY FROM CALCULATED VALUES BY MORE THEN ±7% THE CONTRACTOR SHALL PROVIDE FRICTION CALCULATIONS AND/OR OTHER JUSTIFICATION TO THE SATISFACTION OF THE ENGINEER.

MEMBER FORCES
THE POST–TENSIONED FORCE PROVIDED IN THE FIELD FOR EA STRUCTURAL MEMBER SHALL NOT BE LESS THEN THE VALUES NOTED ON THE STRUCTURAL DRAWINGS. IN THIS CONTEXT, STRUCTURAL MEMBERS ARE BEAMS, DOME SHELL OR SLABS, WHETHER WITH BANDED OR DISTRIBUTED TENDONS, EA SERVING THEIR RESPECTIVE TRIBUTARY.

TENDON ENDS
DO NOT BURN OFF TENDON ENDS UNTIL THE ENTIRE SYSTEM HAS BEEN SATISFACTORILY STRESSED AND THE ENGINEERS APPROVAL HAS BEEN OBTAINED. THE STRESSING END ANCHORS AND WEDGES SHALL BE SPRAY PAINTED WITH RUST–OLEUM OR A SIMILAR COATING FOR CORROSION PROTECTION. INSTALL GREASE CAPS WITHIN THE FOLLOWING 24–HOUR PERIOD.

SHORING
EXCESS LOAD CAPACITY OF SLAB OR DOME SHELL SHALL NOT EXCEED LOADS EQUIVALENT TO THE DESIGN SUPERIMPOSED LOADS LESS CONSTRUCTION DEAD AND LIVE LOADS. DESIGN SUPERIMPOSED LOADS INCLUDE LIVE LOAD, PARTITION LOAD, AND ANY OTHER LOAD NOT IN PLACE AT THE TIME OF SHORING.

DE-SHORING
SLABS, DOME SHELL OR BEAMS MAY BE DE–SHORED WHEN ALL TENDONS HAVE BEEN SATISFACTORILY STRESSED, 28 DAY CONCRETE STRENGTH HAS BEEN REACHED, AND THE ENGINEERS APPROVAL IS OBTAINED, UNLESS SHORING IS REQUIRED TO CARRY FLOORS ON ABOVE LEVELS.

INSERTS AND PIPES
PLASTIC OR METAL CONDUITS MAY BE EMBEDDED IN THE SLAB OR DOME SHELL PROVIDING THAT THE FOLLOWING CRITERIA ARE MET:

CONDUITS MUST NOT INTERRUPT THE POST–TENSIONED CABLES.

COLUMN AREAS SHOULD BE AVOIDED.

IT IS UNDESIRABLE TO HAVE EXCESS AMOUNTS OF CONDUIT ENTERING THE SLAB OR SHELL FROM ONE LOCATION. IF THIS CONDITION EXISTS, THE CONDUITS MUST BE FANNED OUT IMMEDIATELY.

INSERTS OR PIPES SHALL BE SECURELY POSITIONED IN THE FORMS BEFORE PLACING CONCRETE. MAX PIPE SIZE SHALL BE 1/3 OF THE SLAB OR DOME SHELL THICKNESS AND LOCATED AT THE MID–DEPTH. MIN SPACING SHALL BE 3 TIMES THE PIPE DIAMETER. PIPES SHALL NOT IMPAIR THE STRENGTH OF THE MEMBER.

DRILLED AND POWER DRIVEN FASTENERS WILL BE PERMITTED ONLY WHEN IT CAN BE SHOWN THAT THE INSERTS WILL NOT SPALL THE CONCRETE AND ARE LOCATED TO AVOID THE TENDONS AND ANCHORAGES. THE CONTRACTOR MUST LOCATE TENDONS ON THE SURFACE SLAB OR DOME SHELL.

DEBRIS
REMOVE ALL DEBRIS FROM FORMS BEFORE POURING.

CONSTRUCTION JOINTS
CONSTRUCTION JOINTS SHALL HAVE ENTIRE SURFACE REMOVED TO EXPOSE CLEAN, SOLIDLY EMBEDDED AGGREGATE. THE CONTRACTOR SHALL OBTAIN THE ENGINEERS APPROVAL OF CONSTRUCTION JOINT LOCATION IN SLABS AND BEAMS.

AGGREGATE
SIZE OF AGGREGATE SHALL CONFORM TO ASTM C33–85.
3/4".....ASTM SIZE C67
1".....ASTM SIZE C57

ROUGHENED SURFACES
WHERE INDICATED ON THE DRAWINGS, ROUGHENED SURFACES SHALL BE PROVIDED BY MEANS OF HEAVY RAKING OR GROOVING. OTHER METHODS MAY BE ACCEPTABLE PENDING WRITTEN APPROVAL FROM THE ENGINEER. ALL INTERFACING SURFACES MUST BE CLEAN AND FREE OF LOOSE MATERIALS.

COLD FORMED STEEL FRAMING

MATERIAL
ALL COLD FORMED STEEL (CFS) FRAMING SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH MFR'S RECOMMENDATIONS AND IN ACCORDANCE WITH THE LATEST EDITION OF THE AISI SPECIFICATIONS FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS.

CFS TRUSSES SHALL BE FABRICATED IN A JIG IN A PLANT THAT HAS BEEN APPROVED AND CERTIFIED BY THE BUILDING OFFICIAL

STEEL FOR 97, 68, AND 54 MIL SECTIONS SHALL HAVE A MIN YIELD STRENGTH OF 50 KSI, UNLESS NOTED OTHERWISE.STEEL FOR ALL STUD, JOIST, AND TRACK SECTIONS 43 MILS AND THINNER; ALL DIAGONAL TENSIONSTRAPS OR BRACES, AND BRIDGING SHALL HAVE A MIN YIELD STRENGTH OF 33 KSI, UNLESS NOTED OTHERWISE. STEEL SHALL BE GALVANIZED OR THOROUGHLY COATED WITH RUST INHIBITIVE PAINT AT ALL LOCATIONS.

INSTALLATION
STRUCTURAL DWGS TYPICALLY SHOW ONLY THE PRIMARY STRUCTURAL FRAMING ELEMENTS OF THE SYSTEM. CONTRACTOR SHALL PROVIDE ALL ACCESSORIES, INCLUDING TRACK, WEB STIFFENERS, BLOCKING, LINTELS, CLIP ANGLES, REINFORCEMENTS, FASTENING DEVICES, BRACING, AND OTHER ACCESSORIES AS RECOMMENDED BY THE MFR TO PROVIDE A COMPLETE FRAMING SYSTEM.

ALL STUDS SHALL BE SECURELY SEATED FOR FULL END BEARING ON TOP AND BOTTOM TRACK UNLESS NOTED OTHERWISE. PROVIDE A SINGLE STUD UNDER TRUSS OR JOIST AND PROVIDE DOUBLE STUDS AT ALL JAMBS, CORNERS, INTERSECTIONS, AND BEAM BEARING UNLESS NOTED OTHERWISE. ALL STUDS SHALL BE ATTACHED AT TOP AND BOTTOM TRACK WITH (2) #8 SELF TAPPING SCREWS MIN, UNLESS NOTED OTHERWISE.

WALL STUD BRIDGING AS RECOMMENDED BY THE STUD MFR SHALL BE INSTALLED TO PREVENT BOTH WEAK AXIS BENDING AND STUD ROTATIONS AT 4'–0" MAX INTERVALS. WALLS 8'–0" AND SHORTER SHALL HAVE A SINGLE ROW OF BRIDGING AT MID–HEIGHT. IN ADDITION, BRIDGING SHALL BE PROVIDED AT ROOF LINES AND ELSEWHERE AS NOTED ON THE DWGS. SOLID BLOCKING SHALL BE INSTALLED IN LIEU OF BRIDGING WHERE NOTED ON THE DWGS.

ATTACHMENTS
ALL INTERIOR PARTITION WALL BOTTOM TRACKS SHALL BE ATTACHED TO CONCRETE WITH SHOTPINS AT 24" O.C. MIN, UNLESS NOTED OTHERWISE ON SHEAR WALL SCHEDULE. SHOTPIN OPTIONS SHALL BE: SIMPSON PDP–XX, 0.145"Ø x1 1/4" (ESR–2138), HILTI X–CF 72, 0.145"Ø x2 7/8" (ESR–2379) OR POWER FASTENERS DRIVE PIN, 0.145"Ø x1 1/4" (ESR–2024).

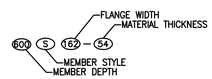
SCREWS SHALL BE SELF–TAPPING PAN HEAD, HEX HEAD, OR WAFER HEAD SHEET METAL SCREWS. SCREWS WHICH ARE REMOVED SHALL BE REPLACED BY A SCREW OF A LARGER DIAMETER WHERE THE REPLACEMENT IS MADE INTO AN EXISTING HOLE. REPLACE ALL SCREWS WHICH STRIP OUT MATERIAL. SCREWS SHALL BE SPACED NO CLOSER THAN 5/8 INCH ON CENTER AND WITH A MIN FREE EDGE DISTANCE OF 5/8 INCH. CLIP ANGLES OR FLAT CLIPS USED FOR ATTACHMENTS SHALL BE 33–MIL MIN, UNLESS NOTED OTHERWISE. SIZE CLIP ANGLES AND FLAT CLIPS TO MAINTAIN MIN SCREW SPACING AND EDGE DISTANCE NOTED ABOVE ALL SCREWS #8 AND LARGER SHALL HAVE A MIN HEAD SIZE OF 0.292 INCH. LENGTH OF SCREWS SHALL BE DETERMINED BY THE FOLLOWING: PENETRATION OF SCREWS THROUGH JOINED MATERIAL SHALL NOT BE LESS THAN 3 EXPOSED THREADS.

ALL WELDING, SHALL BE PERFORMED BY WELDERS EXPERIENCED IN LIGHT GAUGE STRUCTURAL STEEL FRAMING WORK. ALL WELDS OF GALVANIZED STEEL SHALL BE TOUCHED UP WITH ZINC–RICH PAINT, ALL WELDS OF CARBON SHEET STEEL SHALL BE TOUCHED UP WITH PAINT.

ALL WELDING, SHALL BE PERFORMED BY WELDERS EXPERIENCED IN LIGHT GAGE STRUCTURAL STEEL FRAMING WORK. NO TORCH CUTTING OF CFS MEMBER IS ALLOWED.

IDENTIFICATION
JOISTS STUDS, TRACKS, ETC... SHALL BE IDENTIFIED ON PLAN AS SHOWN BELOW. PROPERTIES OF MEMBER SHALL CONFORM TO THE PROPERTIES AS LISTED IN THE PRODUCT TECHNICAL INFORMATION MANUAL OF THE STEEL STUD MFR ASSOCIATION (SSMA) ICBO ER–4943P.

JOISTS, STUDS, TRACKS, ETC... ARE SPECIFIED ON THE DRAWINGS IN CONFORMANCE WITH THE FOLLOWING IDENTIFICATION FORMAT:



MEMBER DEPTH: DEPTH LISTED IN 1/100 OF AN INCH. (EXAMPLE: 600=6 INCH)

MEMBER STYLE: S= STUD OR JOIST SECTION
T= TRACK SECTION

FLANGE WIDTH: WIDTH LISTED IN 1/100 OF AN INCH. (EXAMPLE: 162=1.625 INCH)

MATERIAL THICKNESS: THICKNESS LISTED IN 1/1000 OF AN INCH (EXAMPLE: 54=.054 INCH (54 MILS)

TYPICAL STRUCTURAL STUD SECTIONS SHALL BE 33–MIL. UNLESS NOTE OTHERWISE. TOP AND BOTTOM TRACK THICKNESS SHALL MATCH STUD THICKNESS, UNLESS NOTED OTHER WISE. REFERENCE TABLE BELOW FOR MILS TO GAUGE CONVERSION.

GAUGE REFERENCE TABLE

MIN THICK (Mils)	GAUGE No.
33	20
43	18
54	16
68	14
97	12

STEEL JOISTS / JOIST GIRDERS

JOIST DESIGN
ALL JOISTS SHALL BE DESIGNED, FABRICATED, WELDED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE "STANDARD SPECIFICATIONS" OF THE STEEL JOIST INSTITUTE. LIVE LOAD DEFLECTIONS SHALL BE LIMITED TO SPAN/360. ALL JOISTS AND JOIST GIRDERS SHALL BE CAMBERED FOR THE DESIGN DEAD LOAD. MANUFACTURER SHALL ADD ADDITIONAL WEB.

MANUFACTURER SHALL ADD ADDITIONAL WEB MEMBERS AS REQUIRED AND ADJUST CHORD AND WEB SIZES ACCORDINGLY, BUT SHALL NOT ALTER DEPTH OF JOISTS WITHOUT APPROVAL OF THE ARCHITECT. DESIGN CALCULATIONS SHALL INCLUDE SUPERIMPOSED LOADS FROM MECHANICAL, ELECTRICAL, PLUMBING, AND OTHER ROOF–SUPPORTED EQUIPMENT. VERIFY SIZE, WEIGHT AND LOCATION OF EQUIPMENT WITH ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.

MANUFACTURER SHALL DESIGN JOIST AND JOIST GIRDERS IN ACCORDANCE WITH THE U.L. DESIGN REQUIREMENTS IN ORDER TO ACHIEVE THE FIRE RATING SPECIFIED IN ARCHITECTURAL DRAWINGS.

STEEL MEMBERS SHALL BE DESIGNED FOR AN UPLIFT PRESSURE OF 5 PSF DUE TO WIND

ALL STEEL JOISTS, GIRDERS OR BEAMS SHALL BEAR AT A PANEL POINT. JOISTS OR BEAMS SHALL BE EQUALLY SPACED BETWEEN COLUMN LINES UNLESS NOTED OTHERWISE ON PLANS.

INSTALLATION
MANUFACTURER SHALL PROVIDE BRIDGING AS REQUIRED PER SJI SPECIFICATIONS. WHERE BOTTOM CHORD WELD IS INDICATED ON DRAWINGS, DO NOT WELD BOTTOM CHORD TO JOIST SUPPORT UNTIL FULL DEAD LOAD IS IN PLACE. WHERE CROSS BRIDGING INTERFERED WITH MECHANICAL INSTALLATIONS, REMOVE THE INTERFERING CROSS BRIDGING ELEMENTS AFTER TOTAL DEAD LOAD IS APPLIED AND REPLACE WITH EQUIVALENT HORIZONTAL ANGLES AT TOP AND BOTTOM CHORDS.

STEEL DECK

ROOF DECK AND/OR FLOOR DECK
ROOF DECK SHALL BE AS NOTED ON PLAN. DECK SHALL BE ERECTED IN ACCORDANCE W/ MFR'S RECOMMENDATIONS. STEEL DECK MAY BE EITHER GALVANIZED OR PRIME PAINTED. PROVIDE 3 SPAN MINIMUM, UNLESS NOTED OTHERWISE ON PLANS.

MISCELLANEOUS:
STEEL DECK SUPPLIER SHALL PROVIDE ALL NECESSARY ACCESSORIES SUCH AS RIDGE AND VALLEY PLATES, SADDLES, COVER PLATES, ETC... TO MAKE THE JOB COMPLETE.

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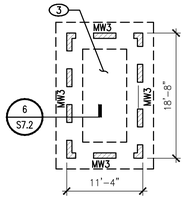
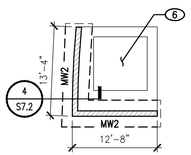
GENERAL STRUCTURAL NOTES

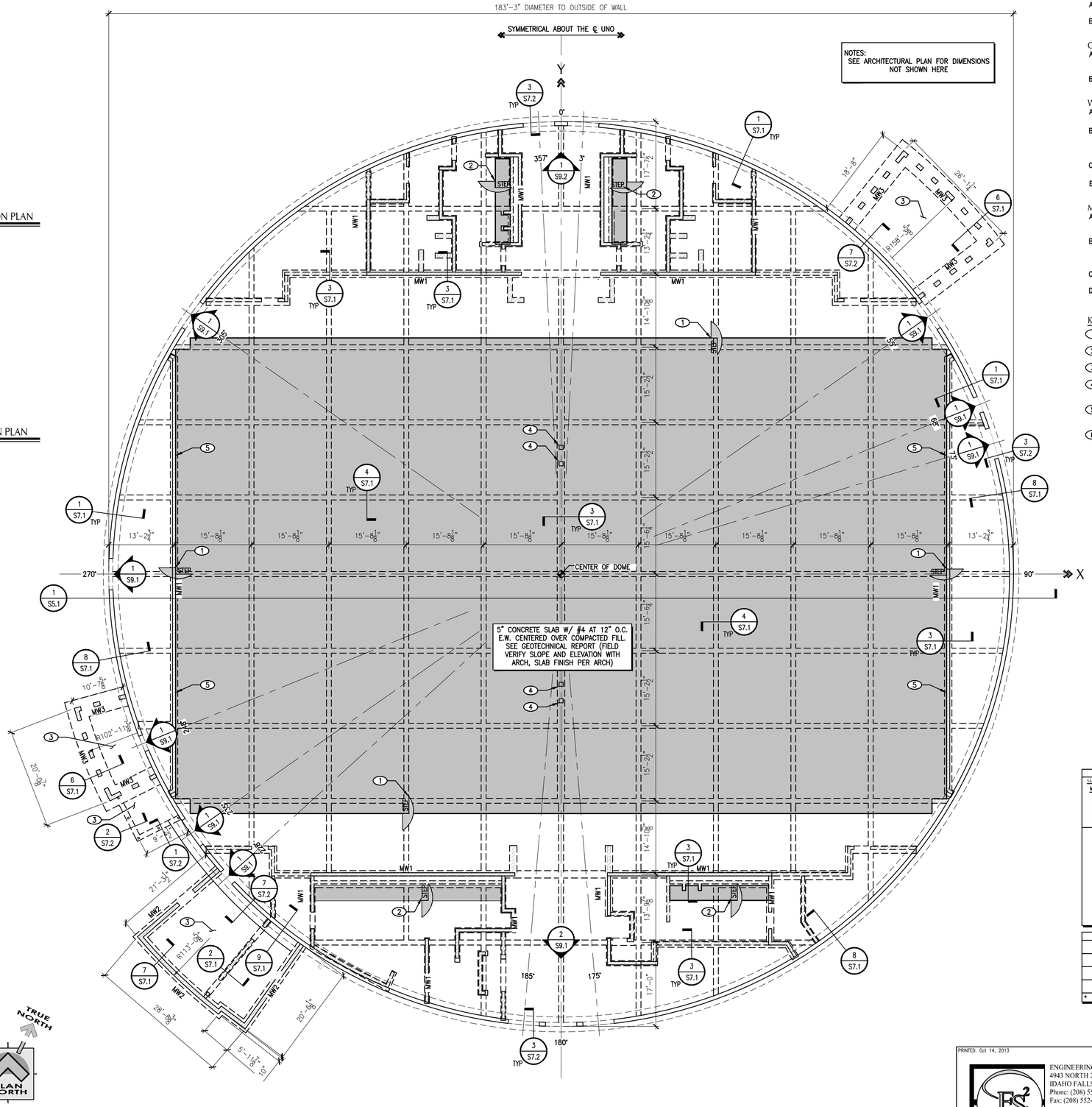
S0.2



2 S1.1 PROPANE TANK ENCLOSURE FOUNDATION PLAN
3/32"=1'-0"



3 S1.1 TRANSFORMER ENCLOSURE FOUNDATION PLAN
3/32"=1'-0"



1 S1.1 FOUNDATION PLAN
3/32"=1'-0"

FOUNDATION PLAN NOTES

SCHEDULES:

A. "MW1", "MW2"... INDICATE MASONRY WALLS, SEE WALL SCHEDULE THIS SHEET.

B. "MJ1", "MJ2" ... INDICATE MASONRY JAMB PER SCHEDULE THIS SHEET. TYPICAL MASONRY JAMB TO BE MJ1 (2) #5-24" U.N.O.

CONCRETE:

A. PROVIDE CONTROL JOINTS IN CONCRETE SLAB ON GRADE PER DETAIL 2/S6.1 AND THE GSN. OPTIMIZE LOCATIONS W/ ARCHITECTURAL DRAWINGS.

B. INDICATES RECESSED FLOOR SLAB PER ARCH. SEE DETAIL 5/S7.1 FOR REINFORCING AT STEP IN SLAB

WALLS:

A. INDICATES STRUCTURAL MASONRY WALLS, SEE PLAN FOR LOCATIONS.

B. INDICATES NON-STRUCTURAL MASONRY WALLS, SEE PLAN FOR LOCATIONS. ALL NON-STRUCTURAL MASONRY WALLS SHALL BE REINFORCED WITH (1) #5 AT 48" O.C. VERTICAL AND (1) #5 AT 48" O.C. HORIZONTAL, U.N.O.

C. INDICATES MASONRY WALLS PER "DF" DRAWINGS.

E. MASONRY CONTROL JOINT LOCATED PER ARCH. DO NOT EXCEED MAX SPACING PER TYPICAL DETAIL 4/S6.1

MISC:

A. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION. RESOLVE ANY DISCREPANCIES W/ THE ARCHITECT.

B. CONTRACTOR TO VERIFY LOCATION OF ALL INSERTS IN SLAB W/ APPROVED MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS PRIOR TO CONSTRUCTION. SEE ARCH FOR DRAIN LOCATIONS.

C. SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS OF OPENINGS AND WALLS.

D. FOUNDATION PREPARATION AND DRAINAGE AROUND BUILDING SHALL BE IN STRICT ACCORDANCE WITH GEOTECH REPORT AND GSN.

KEYNOTES:

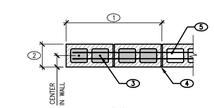
1. SLAB RECESS. VERIFY EXTENTS AND DEPTH W/ ARCH AND WOOD FLOOR MANUFACTURER
2. SLAB RECESS FOR TILE, VERIFYEXTENTS AND DEPTH W/ ARCH
3. 5" CONCRETE SLAB W/ #4 AT 12" O.C. E.W. OVER COMPACTED FILL
4. STEEL BASE PLATE PER DETAIL 5/S7.2. VERIFY LOCATION OF BASKETBALL STANDARDS WITH ARCHITECT
5. REINFORCE AND SOLID GROUT MASONRY CELLS AT BASKETBALL STANDARDS ATTACHMENT POINTS. VERIFY LOCATION WITH ARCHITECT
6. TRANSFORMER PAD PER ELECTRICAL DRAWINGS POINTS. VERIFY LOCATION WITH ARCHITECT

MASONRY JAMB SCHEDULE

SAMPLE PLAN SPECIFICATION:

MJ (2) #5-48"

- GROUTED WIDTH OF JAMB
- VERTICAL BAR SIZE
- TOTAL # OF VERTICAL BARS
- JAMB TYPE PER SCHEDULE BELOW



TYPE M1

KEYNOTES:

1. GROUT CELLS FROM FTN OR FLOOR BELOW TO FLOOR OR ROOF ABOVE.
2. WALL OR PLASTER THICKNESS PER PLAN.
3. TOTAL NUMBER OF VERTICAL JAMB BARS PER PLAN. PROVIDE DOWEL TO LAP AND MATCH AT FOUNDATION. BARS TO EXTEND FULL HEIGHT TO FLOOR OR ROOF FULL HEIGHT TO FLOOR OR ROOF FRAMING ABOVE.
4. MASONRY WALL CONTINUATION AS OCCURS.
5. HORIZONTAL REBAR SCHEDULE PER PLAN.

WALL SCHEDULE

MARK	TYPE	THICKNESS	REINFORCING	
			VERTICAL	HORIZONTAL
MW1	MASONRY*	8"	(1) #5 AT 48 O.C.	(1) #5 AT 48" O.C.
MW2	MASONRY* SOLID GROUTED	10"	(1) #5 AT 16 O.C.	(1) #5 AT 48" O.C.
MW3	MASONRY* SOLID GROUTED	10"	(1) #5 AT 8 O.C.	(1) #5 AT 48" O.C.

* WALLS REQUIRE SPECIAL INSPECTION AS OUTLINED IN THE INSPECTION SECTION OF THE GSN.

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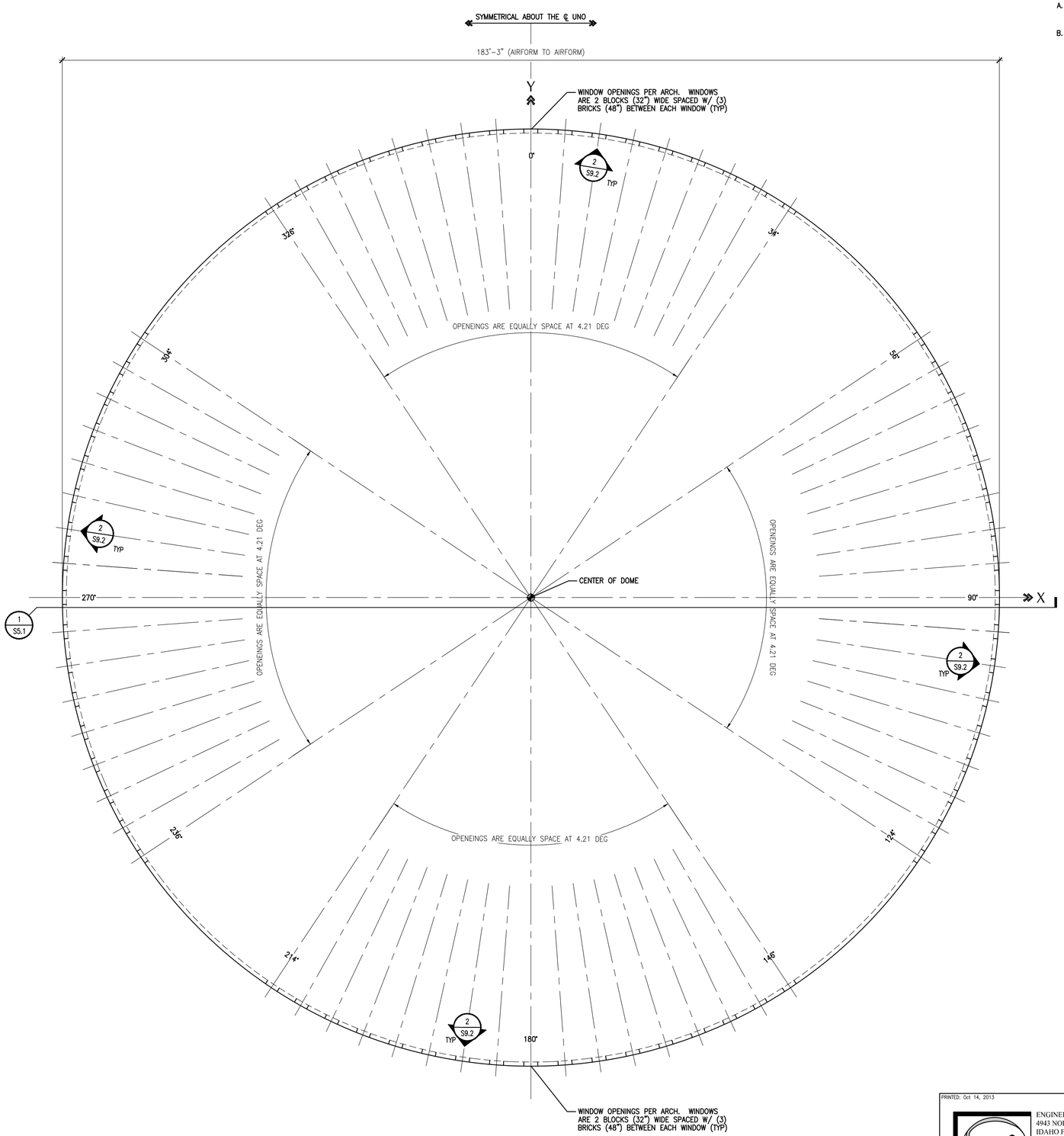
DOME FOUNDATION PLAN

S1.1

DOME PLAN NOTES

A. CONTRACTOR TO VERIFY DIMENSIONS WITH APPROPRIATE ARCHITECTURAL, AND MECHANICAL DRAWINGS PRIOR TO CONSTRUCTION AND RESOLVE ANY DISCREPANCY WITH THE ARCHITECT.

B. SEE ARCHITECTURAL PLANS FOR ANY DIMENSIONS NOT SHOWN HERE.



1 / S2.1 DOME WINDOW OPENING PLAN
3/32"=1'-0"

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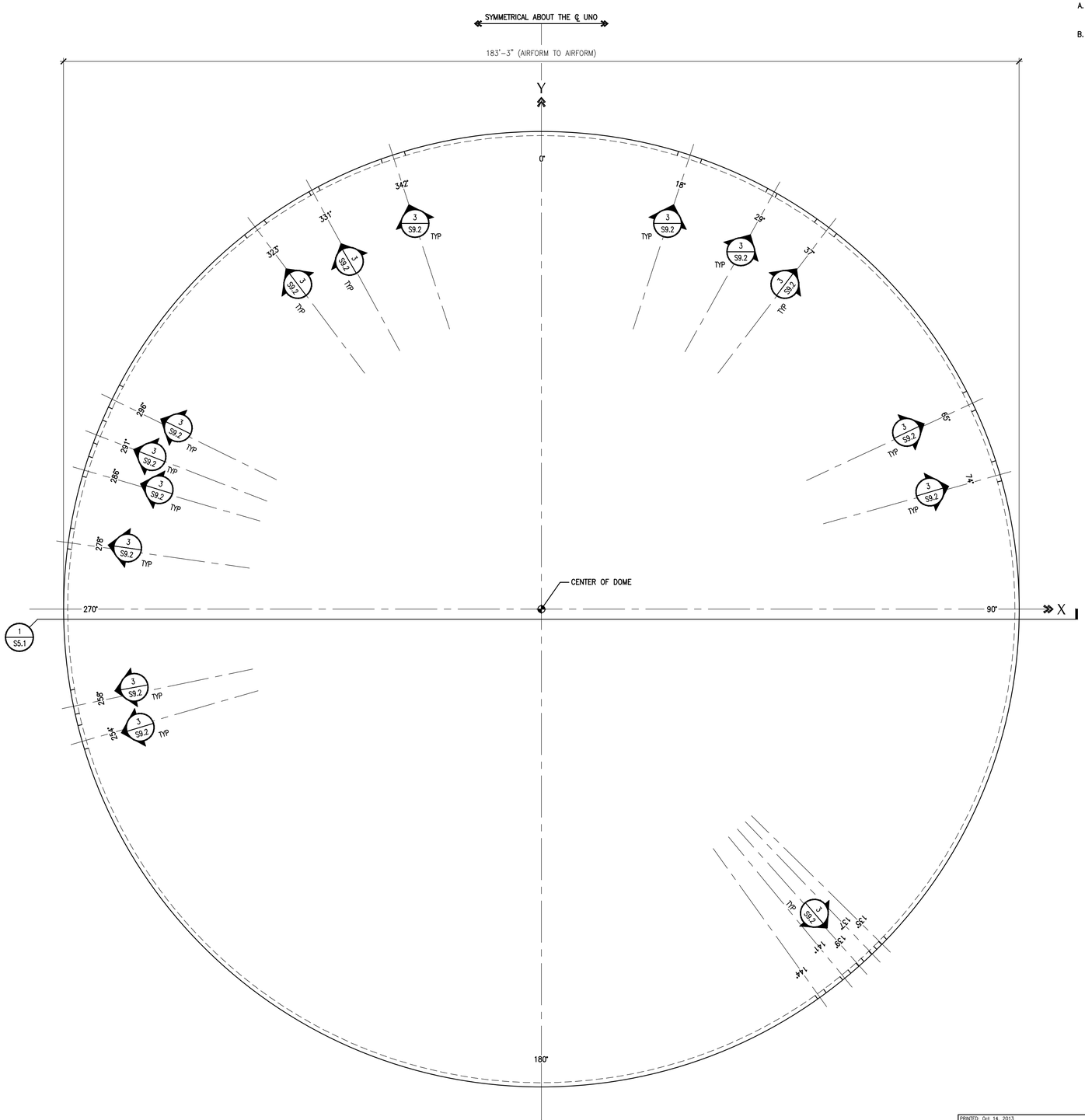
DOME WINDOW OPENING PLAN

S2.1

DOME PLAN NOTES

A. CONTRACTOR TO VERIFY DIMENSIONS WITH APPROPRIATE ARCHITECTURAL, AND MECHANICAL DRAWINGS PRIOR TO CONSTRUCTION AND RESOLVE ANY DISCREPANCY WITH THE ARCHITECT.

B. SEE DETAIL 6/S6.1 FOR MECHANICAL GRILL AT MASONRY WALL. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.



1 / S2.2 DOME MECHANICAL OPENING PLAN
3/32"=1'-0"

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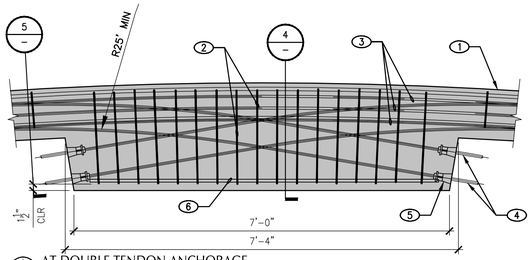
DOME MECHANICAL OPENING PLAN

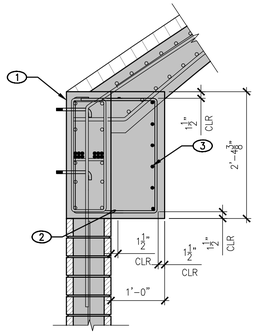
S2.2

KEYNOTES:

1. UPPER RING BEAM SIZE AND REINFORCING PER APPROPRIATE SECTION
2. TIES PER DETAIL 4 THIS SHEET (TIES REPLACE TYP REINFORCING)
3. PT STRANDS PER APPROPRIATE RING BEAM SECTION
4. TENDON STRESSING TAIL TO EXTEND 16" FROM FACE OF CONCRETE
5. GROMMET
6. ADDED REINFORCING PER DETAIL 4 THIS SHEET



2 S3.1 AT DOUBLE TENDON ANCHORAGE
NO SCALE



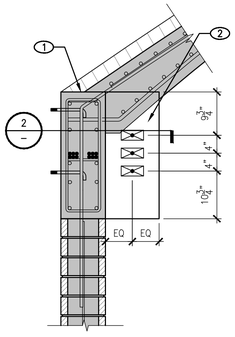
KEYNOTES:

1. TYPICAL UPPER RING BEAM SIZE AND REINFORCING PER APPROPRIATE SECTION
2. #4 TIES AT 4 1/2" O.C. (TIES REPLACE TYP REINFORCING)

VARIES
25"

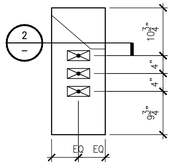
3. (6) #6 BAR

3 S3.1 UPPER RING BEAM AT TENSION LOCATIONS
NO SCALE



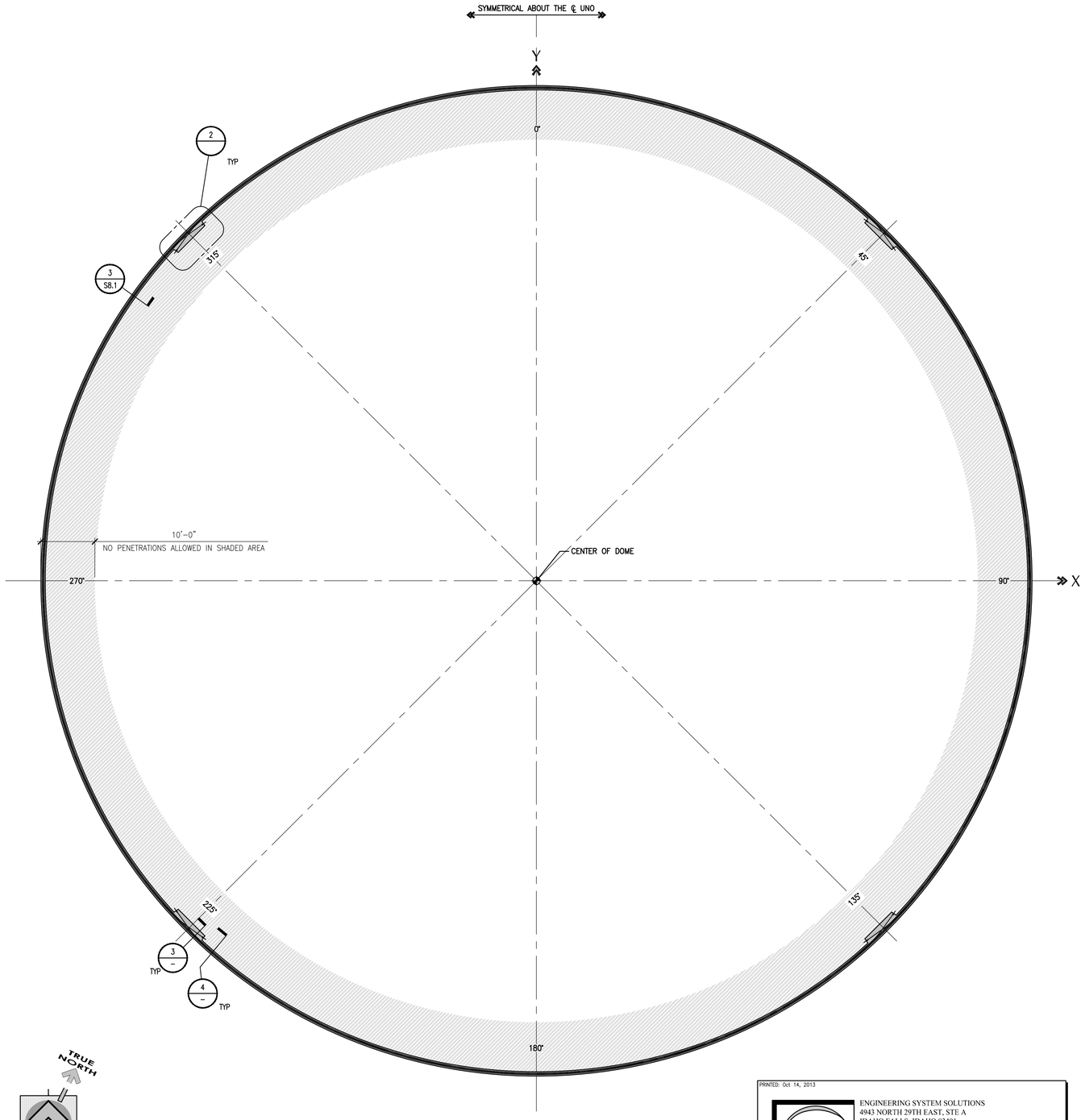
KEYNOTES:

1. TYPICAL UPPER RING BEAM SIZE AND REINFORCING PER APPROPRIATE SECTION
2. TYP PT ANCHOR, SEE BELOW FOR CONFIGUARTION AT ALTERNATING THRUST BLOCKS



OPPOSITE SIDE

4 S3.1 UPPER RING BEAM AT TENSION LOCATIONS
NO SCALE



DOME RING BEAM POST TENSION PLAN NOTES

A. CONTRACTOR TO VERIFY DIMENSIONS WITH APPROPRIATE ARCHITECTURAL AND CIVIL DRAWINGS PRIOR TO CONSTRUCTION AND REPORT DISCREPANCIES TO ES2 AND THE OWNER.

B. CONTRACTOR TO PROVIDE VERTICAL SLEEVES IN DOME SHELL FOR PLUMBING VENTS. SEE PLUMBING DRAWINGS FOR SIZE. COORDINATE LOCATION WITH PLUMBING CONTRACTOR.

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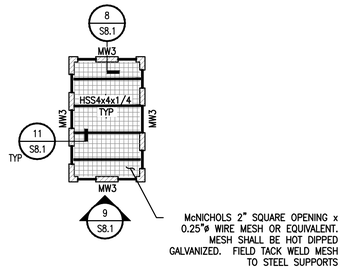
DML

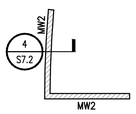
REVISIONS

DOME RING BEAM POST TENSION PLAN

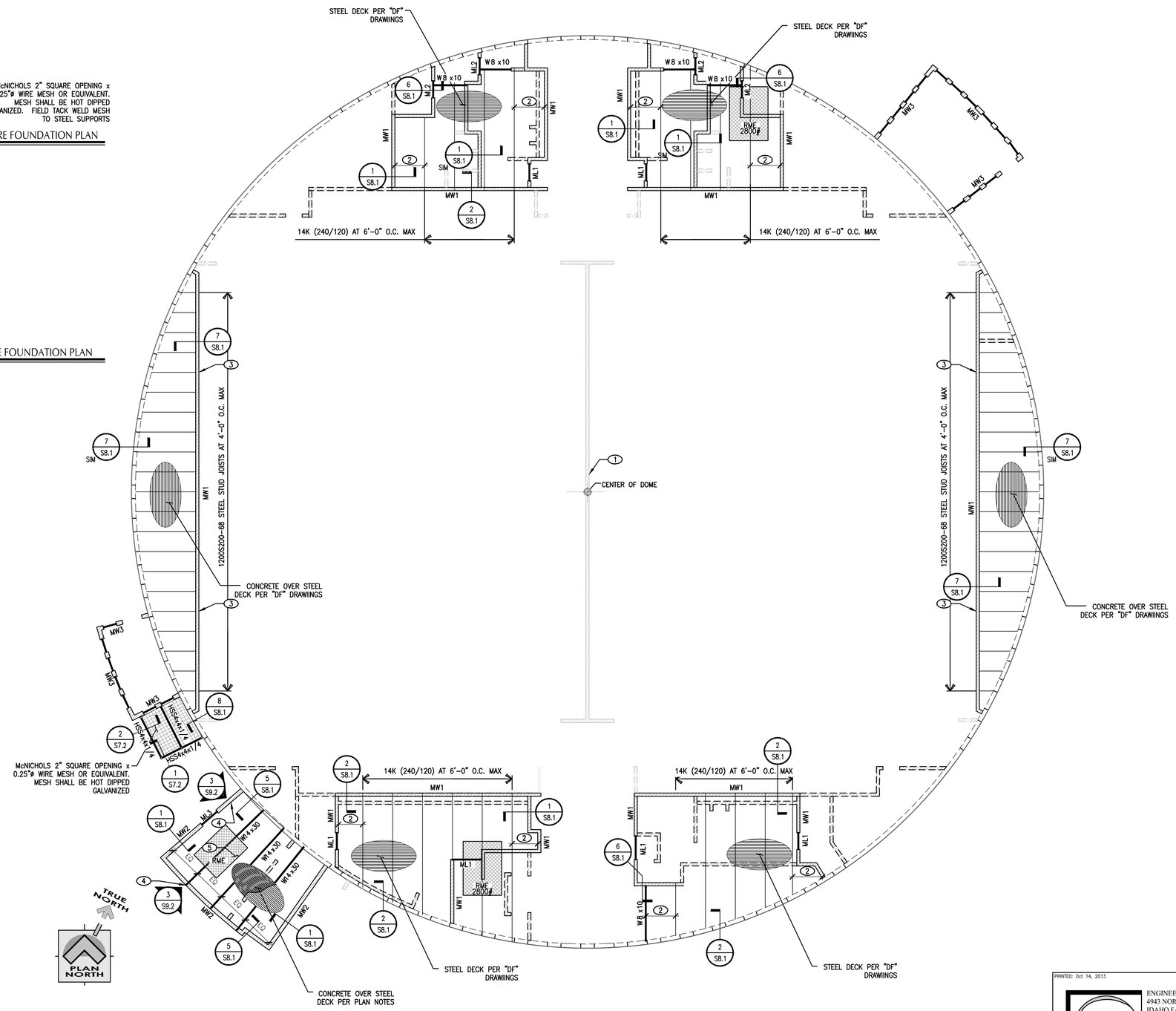
S3.1



2 S4.1 PROPANE TANK ENCLOSURE FOUNDATION PLAN
3/32"=1'-0"



3 S4.1 TRANSFORMER ENCLOSURE FOUNDATION PLAN
3/32"=1'-0"



1 S4.1 MEZZANINE FRAMING PLAN
3/32"=1'-0"

FLOOR FRAMING PLAN NOTES

SCHEDULES:

A. "MW1", "MW2"... INDICATE MASONRY WALLS, SEE WALL SCHEDULE THIS SHEET.

WALLS:

A. INDICATES STRUCTURAL MASONRY WALLS, SEE PLAN FOR LOCATIONS.

B. INDICATES NON-STRUCTURAL MASONRY WALLS, SEE PLAN FOR LOCATIONS. ALL NON-STRUCTURAL MASONRY WALLS SHALL BE REINFORCED WITH (1) #5 AT 48" O.C. VERTICAL AND (1) #5 AT 48" O.C. HORIZONTAL, U.N.O.

C. INDICATES MASONRY WALLS PER "DF" DRAWINGS.

D. TYPICAL MASONRY LINTEL SHALL BE A MINIMUM OF 16" SOLID GROUTED W/ (2) #5 CONT HORIZONTAL BAR IN THE BOTTOM, U.N.O.

E. TYPICAL MASONRY JAMB TO BE MJ (2) #5-24, U.N.O.

F. MASONRY CONTROL JOINT LOCATED PER ARCH. DO NOT EXCEED MAX SPACING PER TYPICAL DETAIL 4/S6.1

G. SEE ARCH DRAWINGS FOR WALL HEIGHTS

FRAMING:

A. 1 1/2" "B" 20 GAUGE VENTED STEEL FLOOR DECK (3 SPAN MIN). UNDER CONCRETE TOPPING SLAB. 5 1/2" TOTAL SLAB DEPTH W/ WWF 6x6 W2.2xW2.2 CENTERED.

B. FLOOR DECK ATTACHMENT SHALL BE AS FOLLOWS UNO PER DETAIL 8/S6.1:
(4) 1/2"ø PUDDLE WELDS PER SHEET AT ENDS, END LAPS, AND INTERMEDIATE SUPPORTS AT DRAG LINES/COLLECTORS.

1/2"ø PUDDLE WELDS AT 6" O.C. AT PERIMETER SUPPORTS, EDGES OF OPENINGS PARALLEL W/ DECK NOTED ON PLANS, AND INTERMEDIATE SUPPORTS AND DRAG LINES/COLLECTORS.

SIDE SEAM ATTACHMENT SHALL BE BUTTON PUNCHES AT 24" O.C.

STEEL JOISTS

A. STEEL JOIST MANUFACTURER SHALL DESIGN FOR LOAD INDICATED (TOTAL LOAD/LIVE LOAD).

B. ALL LOADS ARE BASED ON ASD

C. STEEL JOIST MANUFACTURER SHALL DESIGN OPEN WEB STEEL JOISTS FOR A 500# DRAG LOAD AT EACH JOIST FOR WIND.

MISC:

A. CONTRACTOR TO VERIFY ALL DIMENSIONS AND CONDITIONS PRIOR TO CONSTRUCTION. RESOLVE ANY DISCREPANCIES W/ ARCHITECTS.

B. WORK SHOWN IN "DF" DRAWINGS IS A SEPARATE CONTRACT FROM "SR" DRAWINGS.

C. RME, INDICATES ROOF MOUNTED EQUIPMENT, COORDINATE LOCATION AND PENETRATIONS W/ MECHANICAL DRAWINGS

KEYNOTES:

1. SEE "DF" SHEETS FOR WALLS SHOWN BUT NOT CALLED OUT
2. 6'-0" MAX SPACING BETWEEN WALL AND JOIST
3. REINFORCE AND SOLID GROUT MASONRY CELLS AT BASKETBALL STANDARDS ATTACHMENT POINTS. VERIFY LOCATION WITH ARCHITECT
4. GRILL AND LOUVER, SEE MECH AND ARCH DRAWINGS FOR SIZE AND LOCATION
5. MECHANICAL UNIT, SEE MECH DRAWINGS FOR SIZE AND LOCATION

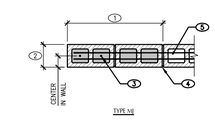
WALL SCHEDULE

MARK	TYPE	THICKNESS	REINFORCING VERTICAL	REINFORCING HORIZONTAL
MW1	MASONRY*	8"	(1) #5 AT 48 O.C.	(1) #5 AT 48" O.C.
MW2	MASONRY* SOLID GROUTED	10"	(1) #5 AT 16 O.C.	(1) #5 AT 48" O.C.
MW3	MASONRY* SOLID GROUTED	10"	(1) #5 AT 8 O.C.	(1) #5 AT 48" O.C.

* WALLS REQUIRE SPECIAL INSPECTION AS OUTLINED IN THE INSPECTION SECTION OF THE GSN.

MASONRY JAMB SCHEDULE

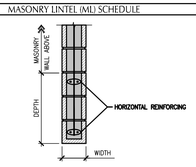
SAMPLE PLAN SPECIFICATION:
MJ (8) #5-48"
- GROUTED WIDTH OF JAMB
- VERTICAL BAR SIZE
- TOTAL # OF VERTICAL BARS
- JAMB TYPE PER SCHEDULE BELOW



KEYNOTES:

1. GROUT CELLS FROM FDN OR FLOOR BELOW TO FLOOR OR ROOF ABOVE.
2. WALL OR PILASTER THICKNESS PER PLAN.
3. TOTAL NUMBER OF VERTICAL JAMB BARS PER PLAN. PROVIDE DOWEL TO LAP AND MATCH AT FOUNDATION. BARS TO EXTEND FULL HEIGHT TO FLOOR OR ROOF FULL HEIGHT TO FLOOR OR ROOF FRAMING ABOVE.
4. MASONRY WALL CONTINUATION AS OCCURS.
5. HORIZONTAL REBAR SCHEDULE PER PLAN.

MASONRY LINTEL (ML) SCHEDULE



NOTES:

1. STANDARD WALL REINFORCING SHALL CONTINUE THROUGH LINTEL.
2. ALL LINTELS AND 2'-0" MIN OF ADJACENT WALLS SHALL BE GROUTED SOLID, UNO.
3. WHERE HORIZONTAL REINFORCING CANNOT EXTEND 2'-0" BEYOND OPENING, PROVIDE 90 DEG STD HOOK.
4. ANY SPLICES IN TOP BARS, BOTTOM BARS, OR TIES SHALL HAVE A MINIMUM LENGTH OF 72 BAR DIAMETERS.
5. MASONRY LINTELS REQUIRE SPECIAL INSPECTION AS OUTLINED IN THE INSPECTION SECTION OF THE GSN.
6. PROVIDE 1" CLEAR FROM CENTER OF BAR TO INSIDE FACE OF BLOCK.
7. WHERE MULTIPLE ROWS OF REINFORCING OCCUR, PROVIDE 3" CLEAR MIN BETWEEN REINFORCING BARS.

MARK	SIZE WIDTH	SIZE DEPTH	HORIZONTAL REINFORCING	VERTICAL REINFORCING
ML1	8"	16"	(2) #5 CONT BOTTOM	#5 AT 48" O.C.
ML2	8"	24"	(2) #5 CONT TOP (2) #5 CONT BOTTOM	#5 AT 48" O.C.
ML3	10"	24"	(2) #5 CONT TOP (2) #5 CONT BOTTOM	#5 AT 16" O.C.

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Oct. 15, 2013

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SAFE ROOM - SOUTH PARK SITE
315 E. PALM DRIVE
EDINBURG, TX

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REVISIONS

INTERIOR FRAMING PLAN

S4.1

DOME SECTION NOTES

A. ANCHORS FOR FASTENING CONDUITS, LIGHTING FIXTURES, ETC. MAY BE DRILLED AND SET AT ANY DESIRED LOCATION PROVIDED THAT SHELL REINFORCING IS NOT DISTURBED.

B. CHANGES IN SHELL THICKNESS SHALL BE SPRAYED IN W/ TAPERED EDGES TO PROVIDE GRADUAL TRANSITION.

C. HORIZONTAL BARS MAY BE FASTENED EITHER TO THE INSIDE OR OUTSIDE OF THE VERTICAL BARS U.N.O.

D. INSTALL DEPTH GAUGES IN A 6'-0" TO 10'-0" GRID PATTERN AS REQUIRED TO MAINTAIN AND CONTROL SHOTCRETE THICKNESS.

E. REINFORCEMENT BAR OF A DIFFERENT DIAMETER MAY BE SUBSTITUTED FOR THE SIZES INDICATED ONLY IF THE SUBSTITUTED BAR RESULTS IN THE SAME OR GREATER CROSS SECTIONAL AREA AND THE SPACING OF REBAR ALLOWS FOR PROPER CONCRETE PLACEMENT AND ENCASEMENT OF THE BARS, APPROVAL REQUIRED BY E.O.R.

F. PERSONNEL APPLYING SHOT CRETE SHALL BE CERTIFIED PER DOME SHELL CONTRACTOR'S QUALITY ASSURANCE PLAN.

G. THE CONSTRUCTION METHOD USED TO ACHIEVE THE PROFILE OF THE DOME SHOWN UTILIZES AN INFLATED AIR FORM. THIS METHOD DOES NOT ACHIEVE THE EXACT PROFILE DIMENSIONS AS STATED HERE WITHIN. THE TOLERANCE FOR THE AIR FORM SHALL BE WITHIN THE REQUIREMENTS SPECIFIED BY ACI 334.3R-05, THE AIR FORM VARIATION SHALL BE BASED ON RADIUS OF CURVATURE. PLEASE NOTE THAT A DIFFERENCE IN VERTICAL ELEVATION AT THE APEX WILL RESULT IN SMALL ASSOCIATIVE CHANGES FOR ALL OTHER PROFILE DIMENSIONS SHOWN.

H. IT IS IMPERATIVE THAT THE NUMBER OF HORIZONTAL REINFORCING ROWS IS ACHIEVED IN EA ZONE SPECIFIED. ON CENTER MIN SPACING TOLERANCES SHALL CONFORM WITH ACI 318. ON CENTER MAX SPACING TOLERANCE MAY VIOLATE ACI 318 PROVIDED PREVIOUSLY STATED REQUIREMENTS ARE MET.

I. EACH ZONE DENOTES A 5'-0" ARCH LENGTH U.N.O.

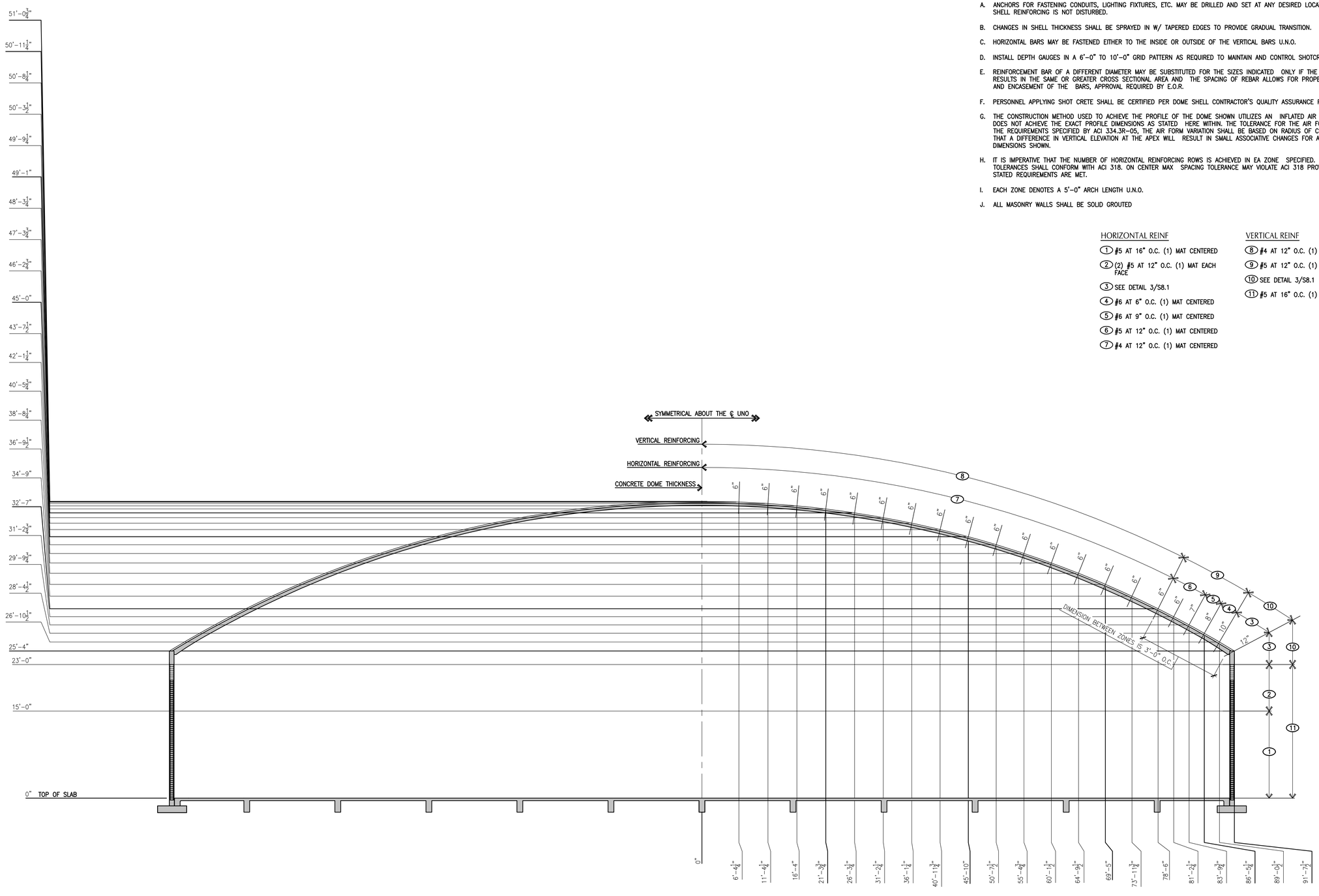
J. ALL MASONRY WALLS SHALL BE SOLID GROUTED

HORIZONTAL REINF

1. #5 AT 16" O.C. (1) MAT CENTERED
2. (2) #5 AT 12" O.C. (1) MAT EACH FACE
3. SEE DETAIL 3/S8.1
4. #6 AT 6" O.C. (1) MAT CENTERED
5. #6 AT 9" O.C. (1) MAT CENTERED
6. #5 AT 12" O.C. (1) MAT CENTERED
7. #4 AT 12" O.C. (1) MAT CENTERED

VERTICAL REINF

8. #4 AT 12" O.C. (1) MAT CENTERED
9. #5 AT 12" O.C. (1) MAT CENTERED
10. SEE DETAIL 3/S8.1
11. #5 AT 16" O.C. (1) MAT CENTERED



1 S5.1 DOME SECTION
3/32"=1'-0"

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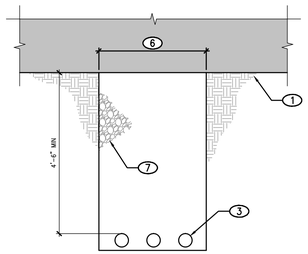
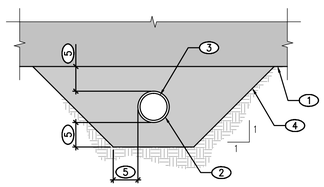
REVISIONS

DOME SECTION

S5.1



DEEP TRENCH OPTION



SHALLOW TRENCH OPTION

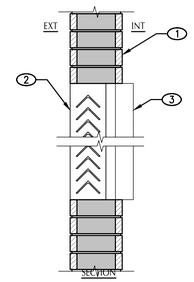
TRENCH PERPENDICULAR TO FOOTING

KEYNOTES:

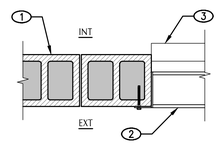
1. BOTTOM OF CONCRETE FOOTING OR FOUNDATION
2. SLEEVE SIZE TO PROVIDE 1/2" MIN CLEARANCE AROUND UTILITY PIPE
3. UTILITY PIPE
4. LEAN CONCRETE FILL PLACE PRIOR TO FOOTING PLACEMENT, FORM SAME WIDTH AS FOOTING
5. CLEARANCE EQUAL TO SLEEVE DIA (6" MIN)
6. 3'-0" MAX WIDTH. WHERE TRENCH WIDTH EXCEEDS 3'-0" NOTIFY STRUCTURAL ENGINEER PRIOR TO PLACEMENT OF FOOTING
7. BACKFILL AND RECOMPACT TRENCH PER SOIL REPORT AND SPECIFICATIONS
8. BOTTOM OF TRENCH PARALLEL TO FOUNDATION SHALL NOT BE CLOSER THAN 1 TO 1 SLOPE FROM BOTTOM EDGE OF FOOTING

NOTES:

A. SEE TYPICAL DETAIL FOR RADON TUBE INSPECTION IN FOUNDATION



SECTION



PLAN VIEW

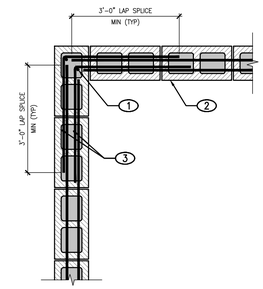
KEYNOTES:

1. MASONRY WALL PER PLAN
2. FEMA RATED GRILL PER MECHANICAL DRAWINGS. GRILL ANCHORAGE PER MANUFACTURER'S INSTALLATION INSTRUCTIONS
3. LOUVER PER MECHANICAL DRAWINGS. LOUVER ANCHORAGE PER MANUFACTURER'S INSTALLATION INSTRUCTIONS

NOTES:

A. WATERPROOF AROUND OPENING PER ARCH

B. SEE MANUFACTURER INFORMATION FOR INSTALLATION



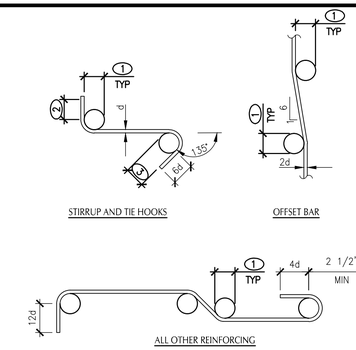
3 / S6.1 TYPICAL MASONRY CORNER (PLAN)
NO SCALE

KEYNOTES:

1. (2) #4 VERT MIN
2. MASONRY WALL PER PLAN
3. CORNER BARS TO MATCH SIZE AND SPACE OF HORIZ REINF IN WALL

NOTES:

A. GROUT SOLID (5) CELLS AT CORNER



STIRRUP AND TIE HOOKS

OFFSET BAR

ALL OTHER REINFORCING

KEYNOTES:

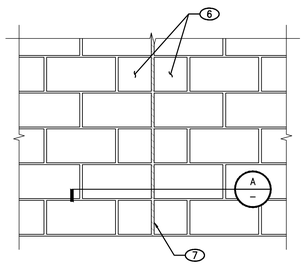
1. D = 8d FOR #3 THRU #8
   D = 10d FOR #9, #10 AND #11
   D = 12d FOR #14 AND #18
2. EXTENSION 6"d" FOR #5 AND SMALLER 12"d" FOR #6 THRU #8
3. MINIMUM FINISHED BEND DIA FOR STIRRUPS AND TIES ONLY
   5d FOR #5 AND SMALLER
   6d FOR #6 THRU #8
   8d FOR #9 THRU #11

NOTES:

A. d = BAR DIA

B. ALL REINFORCEMENT SHALL BE BENT COLD UNLESS NOTED OTHERWISE ON PLANS OR DETAILS

1 / S6.1 STANDARD REBAR BENDING DETAILS
NO SCALE



KEYNOTES:

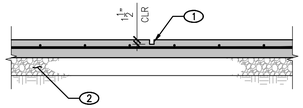
1. ADDITIONAL VERTICAL BARS ON EA SIDE OF ALL CONTROL JOINTS
2. TERMINATE ALL REINFORCING 2" FROM CONTROL JOINTS
3. BACKER ROD
4. WIDTH OF HEAD JOINT
5. DEPTH OF CAULKING 1/2 THE WIDTH OF THE HEAD JOINT
6. HALF UNITS
7. CONTROL JOINT

NOTES:

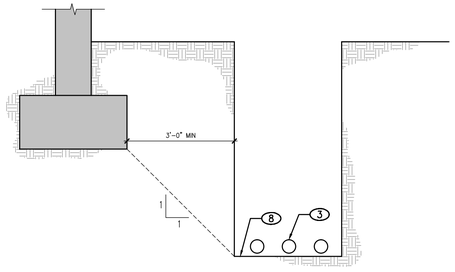
A. CONTROL JOINTS SHALL BE A MIN OF 32" FROM AN OPENING

KEYNOTES:

1. SAWCUT JOINT DEPTH EQUAL TO 1/4 SLAB THICKNESS
2. COMPACTED SUBGRADE PER GSN

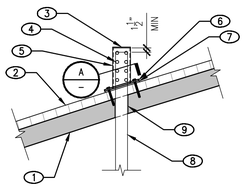


2 / S6.1 SAWCUT JOINT IN CONCRETE SLAB ON GRADE
NO SCALE



TRENCH PARALLEL TO FOOTING

9 / S6.1 TYPICAL UTILITY TRENCH AT CONTINUOUS FOOTING
NO SCALE



SECTION "A"

KEYNOTES CONT'D:

9. PIPE SLEEVE, COORDINATE LOCATION WITH PLUMBING VENT. PLACE SLEEVE DURING CONSTRUCTON OF DOME TO AVOID CONFLICTS WITH STRUCTURAL REBAR

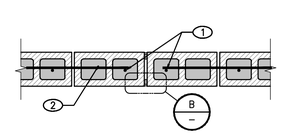
NOTES:

A. PENETRATIONS IN DOME SHELL SHALL NOT BE MADE WITHIN 10 FEET OF EDGE OF DOME

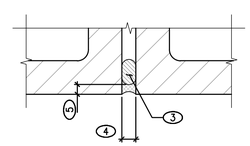
KEYNOTES:

1. DOME PER APPROPRIATE PLANS AND DETAILS
2. FOAM PER APPROPRIATE PLAN AND DETAILS
3. 1/4" THICK STEEL PLATE WELDED TO PIPE WITH 1/4" BEVEL WELD ALL AROUND, (12" MAX HEIGHT)
4. 1"ø HOLES, AREA OF HOLES TO EQUAL OPEN AREA OF UTILITY PIPE
5. 6" SCH 40 STEEL PIPE
6. 1/2"x12"x1'-0" STEEL PLATE W/ (4) 5/8"ø TITEN HD BOLTS W/ 3" MIN EMBEDMENT INTO SHELL
7. PROVIDE A NEOPRENE GASKET AND FULL BED OF DOW 995 SILICONE SEALANT BELOW BASEPLATE, INSURE HOLES IN MEMBRANE ARE NOT OVERSIZED, INSURE NO TEARING IN MEMBRANE DURING DRILLING OF HOLES INTO DOME.
8. PLUMBING VENT

7 / S6.1 TYPICAL PENETRATIONS AT DOME ROOF
NO SCALE

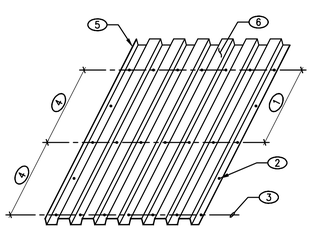


SECTION "A" CONTROL JOINT



SECTION "B" CAULKING DETAIL

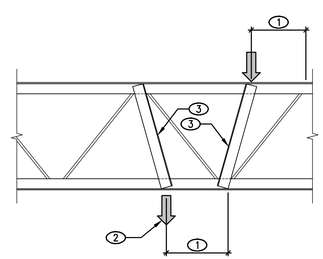
4 / S6.1 TYPICAL CONTROL JOINT
NO SCALE



KEYNOTES:

1. ℄ OF INTERMEDIATE SUPPORT PER PLAN
2. ATTACHMENT AT PERIMETER (SEE PLAN FOR SIZE AND SPACING)
3. ℄ OF END SUPPORT PER PLAN
4. ATTACHMENT SIZE AND SPACING PER PLAN
5. SIDE SEAM, ATTACHMENT PER PLAN
6. STEEL DECK PER PLAN

8 / S6.1 TYPICAL STEEL DECK ATTACHMENT
NO SCALE



KEYNOTES:

1. ADDITIONAL CHORD SUPPORTING WEB MEMBER REQUIRED WHERE CONCENTRATED LOAD OCCURS MORE THAN 4" FROM PANEL POINT
2. CONCENTRATED LOAD APPLIED AT TOP AND BOTTOM CHORD
3. L2 1/2x2 1/2x3/16 EA SIDE OF CONCENTRATED LOAD TO NEAREST OPPOSITE CHORD PANEL POINT

NOTES:

A. THIS DETAIL REQUIRED WHEN CONCENTRATED LOAD EXCEEDS 250 LBS. NOTIFY ENGINEER OF ANY CONCENTRATED LOADS NOT SPECIFICALLY NOTED ON STRUCTURAL DRAWINGS THAT EXCEED 500 LBS.

5 / S6.1 TYPICAL FIELD INSTALLED WEB MEMBER AT STEEL JOIST
NO SCALE

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REVISIONS

TYPICAL DETAILS

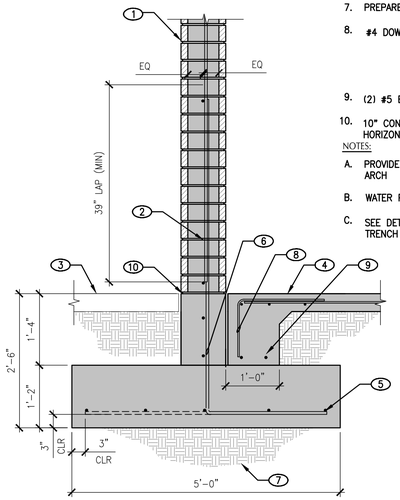
S6.1

KEYNOTES:

1. 10" SOLID GROUTED MASONRY WALL
2. REINFORCING SIZE & SPACING PER DOME SECTION, SEE DS5.1
3. EXTERIOR SITE WORK BY OTHERS
4. CONCRETE SLAB PER PLAN
5. (5) #6 BARS CONT THRU FOOTING, BOTTOM
6. #5 DOWEL TO MATCH VERTICAL WALL REINFORCING
   65° / 27"
7. PREPARED SUBGRADE PER GSN
8. #4 DOWEL AT 18" O.C.
   18" / 10"
9. (2) #5 BARS CONT, BOTTOM
10. 10" CONCRETE WALL W/ (2) #5 HORIZONTAL

NOTES:

A. PROVIDE VAPOR BARRIER PER ARCH
B. WATER PROOFING PER ARCH
C. SEE DETAIL 9/S6.1 FOR PIPE TRENCH AT FOUNDATION



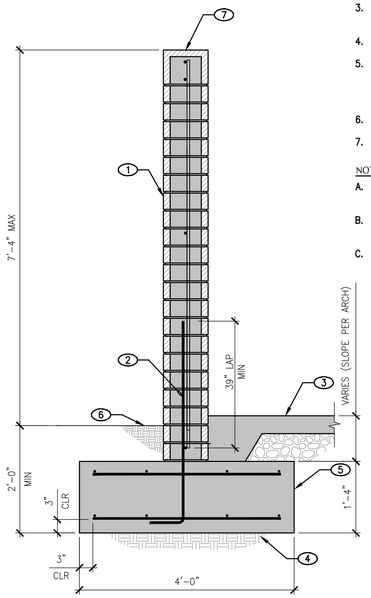
8 / S7.1 MASONRY WALL AT FOUNDATION
NO SCALE

KEYNOTES:

1. SOLID GROUTED MASONRY WALL PER PLAN
2. #5 DOWEL TO MATCH VERTICAL WALL REINFORCING
   65° / 27"
3. CONCRETE SLAB ON GRADE PER PLAN
4. COMPACTED SUBGRADE PER GSN
5. CONT CONCRETE FOOTING W (4) #5 LONGITUDINAL BARS CONT, TOP AND BOTTOM W/ #4 TRANSVERSE AT 18" O.C. TOP AND BOTTOM
6. FINAL GRADE PER ARCH
7. WALL CAP PER ARCH W/ (2) CONT #5 BARS AT TOP OF WALL

NOTES:

A. PROVIDE DRAINAGE AT BASE OF WALL PER ARCH
B. SEE DETAIL 9/S6.1 FOR PIPE TRENCH AT FOUNDATION
C. VERTICALLY ALIGN BRICK COURSING OF ENCLOSURE W/ COURSING OF BUILDING



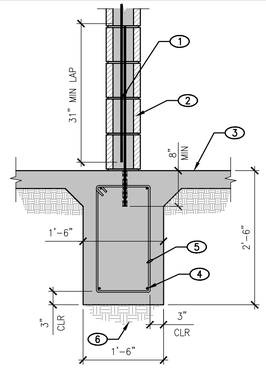
6 / S7.1 MASONRY WALL AT MECHANICAL YARD FOUNDATION
NO SCALE

KEYNOTES:

1. #5 DOWEL DRILLED AND EPOXIED INTO CONCRETE W/HILTI HY150 EPOXY. CENTER IN MASONRY WALL, MATCH VERTICAL MASONRY WALL REINFORCEMENT, SEE PLAN
2. MASONRY WALL PER PLAN
3. CONCRETE SLAB ON GRADE PER PLAN
4. (2) #6 TOP AND BOTTOM
5. #4 STIRRUP AT 24" O.C.
6. COMPACTED SUBGRADE PER GSN

NOTES:

A. PROVIDE VAPOR BARRIER PER ARCH
B. SEE DETAIL 9/S6.1 FOR PIPE TRENCH AT FOUNDATION



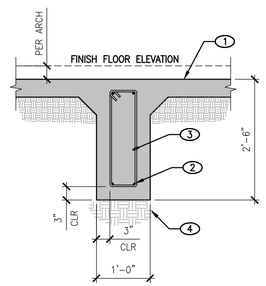
3 / S7.1 STRUCTURAL MASONRY WALL AT FOUNDATION
NO SCALE

KEYNOTES:

1. CONCRETE SLAB ON GRADE PER PLAN
2. (2) #6 TOP AND BOTTOM
3. #4 STIRRUP AT 24" O.C.
4. COMPACTED SUBGRADE PER GSN

NOTES:

A. PROVIDE VAPOR BARRIER PER ARCH
B. SEE DETAIL 9/S6.1 FOR PIPE TRENCH AT FOUNDATION



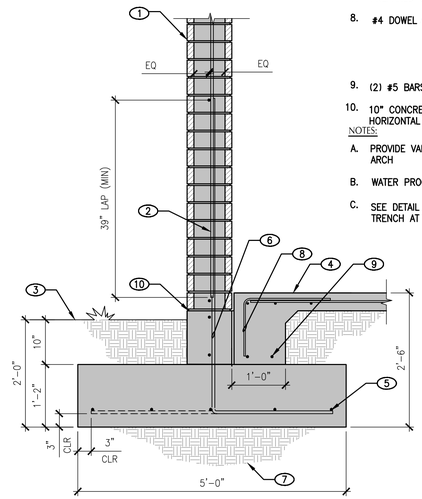
4 / S7.1 INTERIOR SLAB AND GRADE BEAM
NO SCALE

KEYNOTES:

1. 10" SOLID GROUTED MASONRY WALL
2. REINFORCING SIZE & SPACING PER DOME SECTION, SEE S5.1
3. FINAL GRADE
4. CONCRETE SLAB PER PLAN
5. (5) #6 BARS CONT THRU FOOTING, BOTTOM
6. #5 DOWEL TO MATCH VERTICAL WALL REINFORCING
   65° / 27"
7. PREPARED SUBGRADE PER GSN
8. #4 DOWEL AT 18" O.C.
   18" / 10"
9. (2) #5 BARS CONT, BOTTOM
10. 10" CONCRETE WALL W/ (2) #5 HORIZONTAL

NOTES:

A. PROVIDE VAPOR BARRIER PER ARCH
B. WATER PROOFING PER ARCH
C. SEE DETAIL 9/S6.1 FOR PIPE TRENCH AT FOUNDATION



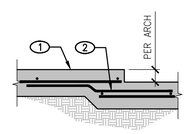
1 / S7.1 MASONRY WALL AT FOUNDATION
NO SCALE

KEYNOTES:

1. CONCRETE SLAB ON GRADE PER PLAN
2. #4 BENT BAR, MATCH SPACING OF SLAB REINF PER PLAN

NOTES:

A. PROVIDE VAPOR BARRIER PER ARCH



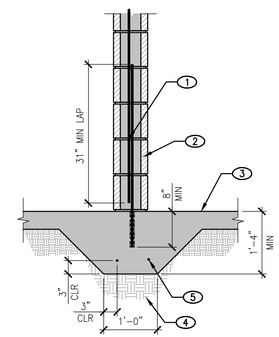
5 / S7.1 TYPICAL STEP IN CONCRETE FLOOR AT GYM FLOOR
NO SCALE

KEYNOTES:

1. #5 DOWEL DRILLED AND EPOXIED INTO CONCRETE W/HILTI HY150 EPOXY. CENTER IN MASONRY WALL, MATCH VERTICAL MASONRY WALL REINFORCEMENT, SEE PLAN
2. MASONRY WALL PER PLAN
3. CONCRETE SLAB ON GRADE PER PLAN
4. COMPACTED SUBGRADE PER GSN
5. (2) #5 BARS CONT, BOTTOM

NOTES:

A. PROVIDE VAPOR BARRIER PER ARCH
B. SEE DETAIL 9/S6.1 FOR PIPE TRENCH AT FOUNDATION



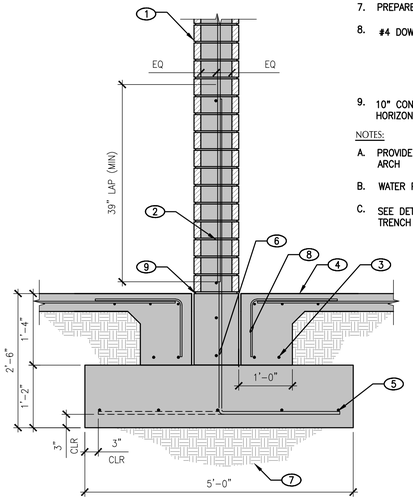
2 / S7.1 NON STRUCTURAL MASONRY WALL AT FOUNDATION
NO SCALE

KEYNOTES:

1. 10" SOLID GROUTED MASONRY WALL
2. REINFORCING SIZE & SPACING PER DOME SECTION, SEE DS5.1
3. (2) #5 BARS CONT, BOTTOM
4. CONCRETE SLAB PER PLAN
5. (5) #6 BARS CONT THRU FOOTING, BOTTOM
6. #5 DOWEL TO MATCH VERTICAL WALL REINFORCING
   65° / 27"
7. PREPARED SUBGRADE PER GSN
8. #4 DOWEL AT 18" O.C.
   18" / 10"
9. 10" CONCRETE WALL W/ (2) #5 HORIZONTAL

NOTES:

A. PROVIDE VAPOR BARRIER PER ARCH
B. WATER PROOFING PER ARCH
C. SEE DETAIL 9/S6.1 FOR PIPE TRENCH AT FOUNDATION



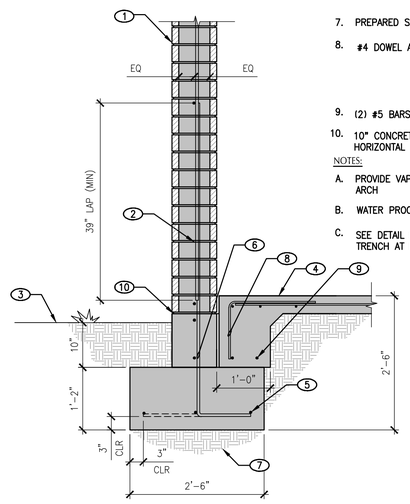
9 / S7.1 MASONRY WALL AT FOUNDATION
NO SCALE

KEYNOTES:

1. 10" SOLID GROUTED MASONRY WALL
2. REINFORCING SIZE & SPACING PER DOME SECTION, SEE DS5.1
3. FINAL GRADE
4. CONCRETE SLAB PER PLAN
5. (3) #5 BARS CONT THRU FOOTING, BOTTOM
6. #5 DOWEL TO MATCH VERTICAL WALL REINFORCING
   65° / 12"
7. PREPARED SUBGRADE PER GSN
8. #4 DOWEL AT 18" O.C.
   18" / 10"
9. (2) #5 BARS CONT, BOTTOM
10. 10" CONCRETE WALL W/ (2) #5 HORIZONTAL

NOTES:

A. PROVIDE VAPOR BARRIER PER ARCH
B. WATER PROOFING PER ARCH
C. SEE DETAIL 9/S6.1 FOR PIPE TRENCH AT FOUNDATION



7 / S7.1 MASONRY WALL AT FOUNDATION
NO SCALE

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Oct. 15, 2013

CITY OF EDINBURG
SAFE ROOM - SOUTH PARK SITE
315 E. PALM DRIVE
EDINBURG, TX

100 %, 10/15/13
DML

REVISIONS

FOUNDATION DETAILS

S7.1

KEYNOTES:

1. 10" SOLID GROUTED MASONRY WALL
2. REINFORCING SIZE & SPACING PER DOME SECTION, SEE S5.1
3. 10" CONCRETE WALL W/ (2) #5 HORIZONTAL
4. CONCRETE SLAB PER PLAN
5. (5) #6 BARS CONT THRU FOOTING, BOTTOM
6. #5 DOWEL TO MATCH VERTICAL WALL REINFORCING

65" / 27"

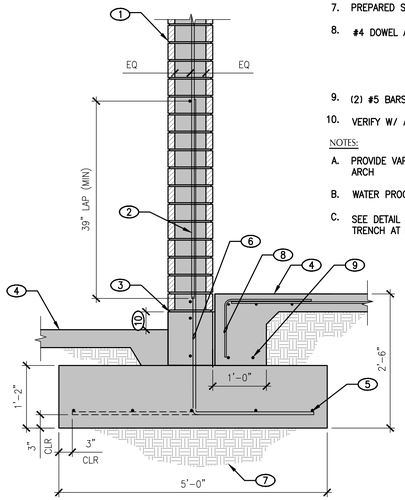
7. PREPARED SUBGRADE PER GSN
8. #4 DOWEL AT 18" O.C.

18" / 10"

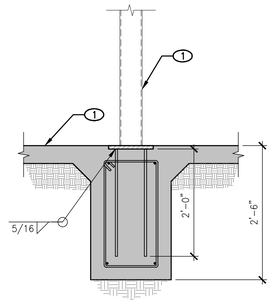
9. (2) #5 BARS CONT, BOTTOM
10. VERIFY W/ ARCH

NOTES:

A. PROVIDE VAPOR BARRIER PER ARCH
B. WATER PROOFING PER ARCH
C. SEE DETAIL 9/S6.1 FOR PIPE TRENCH AT FOUNDATION



7 / S7.2 MASONRY WALL AT FOUNDATION
NO SCALE



KEYNOTES:

1. SLAB AND FOUNDATION PER 3/S7.1
2. STEEL COLUMN PER "DF" DRAWINGS
3. 3/4"x10"x0'-10" BASE PLATE W/ (4) #5 DBA x 24" LONG

NOTES:

A. SEE ARCH FOR LOCATION OF BASKETBALL STANDARD SUPPORTS

5 / S7.2 STEEL EMBED PLATE AT FOUNDATION
NO SCALE

KEYNOTES:

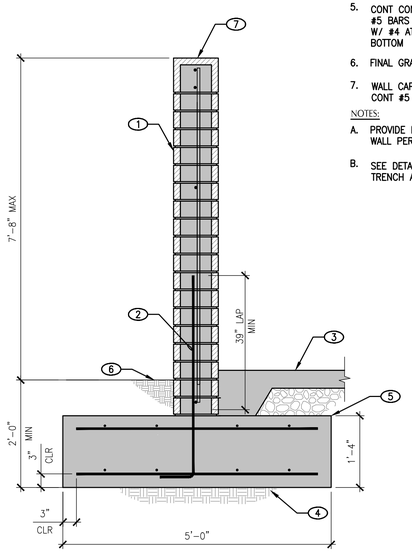
1. SOLID GROUTED MASONRY WALL PER PLAN
2. #5 DOWEL TO MATCH VERTICAL WALL REINFORCING

65" / 27"

3. CONCRETE SLAB PER PLAN
4. COMPACTED SUBGRADE PER GSN
5. CONT CONCRETE FOOTING W (4) #5 BARS CONT, TOP AND BOTTOM W/ #4 AT 18" O.C. TOP AND BOTTOM
6. FINAL GRADE PER ARCH
7. WALL CAP PER ARCH W/ (2) CONT #5 BARS AT TOP OF WALL

NOTES:

A. PROVIDE DRAINAGE AT BASE OF WALL PER ARCH
B. SEE DETAIL 9/S6.1 FOR PIPE TRENCH AT FOUNDATION



6 / S7.2 MASONRY WALL AT MECHANICAL YARD FOUNDATION
NO SCALE

KEYNOTES:

1. MASONRY WALL BEYOND PER PLAN
2. (2) #5 BARS CONT, BOTTOM
3. CONCRETE SLAB BY OTHERS
4. CONCRETE SLAB PER PLAN
5. (5) #6 BARS CONT THRU FOOTING, BOTTOM
6. #5 DOWEL TO MATCH VERTICAL WALL REINFORCING

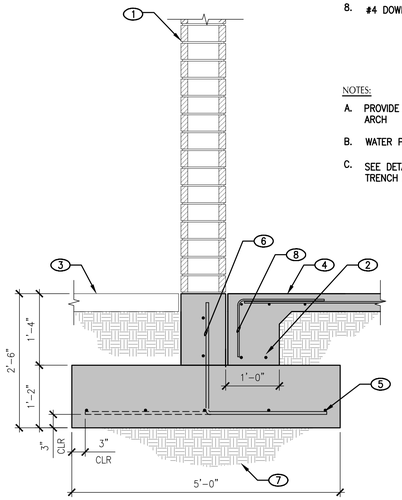
25" / 27"

7. PREPARED SUBGRADE PER GSN
8. #4 DOWEL AT 18" O.C.

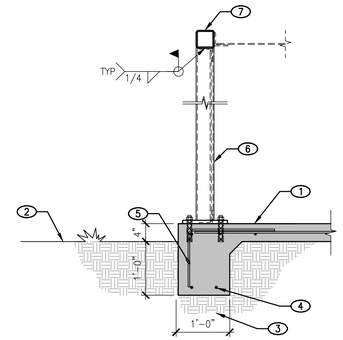
18" / 10"

NOTES:

A. PROVIDE VAPOR BARRIER PER ARCH
B. WATER PROOFING PER ARCH
C. SEE DETAIL 9/S6.1 FOR PIPE TRENCH AT FOUNDATION



3 / S7.2 DOOR OPENING AT FOUNDATION
NO SCALE



KEYNOTES:

1. CONCRETE SLAB PER PLAN
2. FINAL GRADE
3. PREPARED SUBGRADE PER GSN
4. (2) #5 BARS CONT, BOTTOM
5. #4 DOWEL AT 18" O.C.

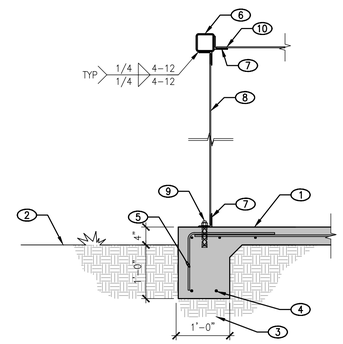
18" / 10"

6. HSS4X4X1/4 STEEL COLUMN W/ 3/4"x10"x0'-10" BASE PLATE W/ (4) 3/4" EPOXY ANCHORS W/ 6" MIN EMBEDMENT
7. STEEL BEAM PER PLAN

NOTES:

A. WATER PROOFING PER ARCH
B. ALL STEEL PIECES OF MECHANICAL ENCLOSURE SHALL BE HOT DIPPED GALVANIZED

1 / S7.2 STEEL COLUMN AT FOUNDATION
NO SCALE



KEYNOTES:

1. CONCRETE SLAB PER PLAN
2. FINAL GRADE
3. PREPARED SUBGRADE PER GSN
4. (2) #5 BARS CONT, BOTTOM
5. #4 DOWEL AT 18" O.C.

18" / 10"

6. STEEL BEAM PER PLAN
7. L3x3x1/4 STEEL ANGLE
8. WIRE MESH PER PLAN
9. 3/4" EPOXY ANCHOR AT 24" O.C. W/ 6" MIN EMBEDMENT
10. TACK WELD WIRE MESH TO STEEL ANGLE, TYP

NOTES:

A. WATER PROOFING PER ARCH
B. ALL STEEL PIECES OF MECHANICAL ENCLOSURE SHALL BE HOT DIPPED GALVANIZED

2 / S7.2 ENCLOSURE AT FOUNDATION
NO SCALE

KEYNOTES:

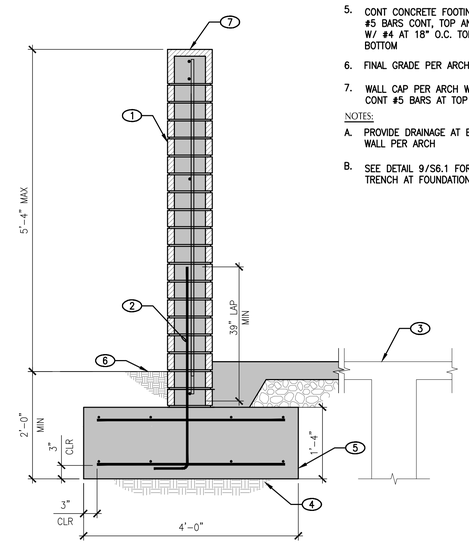
1. SOLID GROUTED MASONRY WALL PER PLAN
2. #5 DOWEL TO MATCH VERTICAL WALL REINFORCING

65" / 27"

3. TRANSFORMER PAD PER ELECTRICAL DRAWINGS
4. COMPACTED SUBGRADE PER GSN
5. CONT CONCRETE FOOTING W (4) #5 BARS CONT, TOP AND BOTTOM W/ #4 AT 18" O.C. TOP AND BOTTOM
6. FINAL GRADE PER ARCH
7. WALL CAP PER ARCH W/ (2) CONT #5 BARS AT TOP OF WALL

NOTES:

A. PROVIDE DRAINAGE AT BASE OF WALL PER ARCH
B. SEE DETAIL 9/S6.1 FOR PIPE TRENCH AT FOUNDATION



4 / S7.2 MASONRY WALL AT TRANSFORMER PAD FOUNDATION
NO SCALE

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EDINBURG, TX

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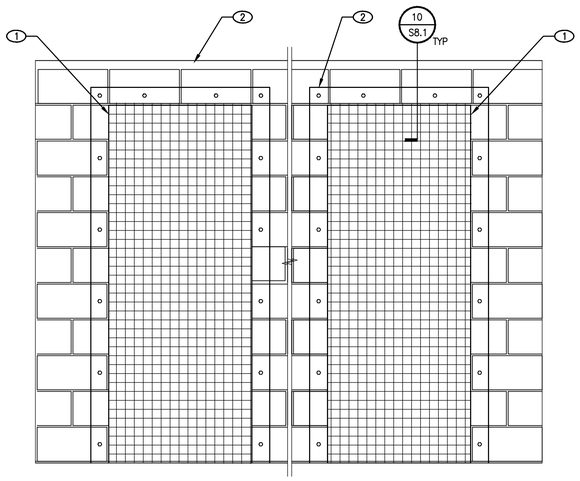
REVISIONS

FOUNDATION DETAILS

S7.2

KEYNOTES:

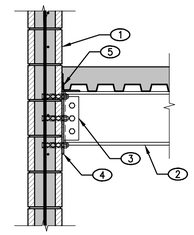
1. WIRE MESH, PER 10/S8.1
2. MASONRY WALL, PER PLAN
3. STEEL FRAME, PER 10/S8.1

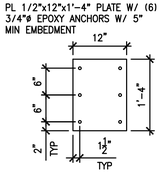


9 / S8.1 SITE ELEVATION AT PROPANE TANK
NO SCALE

KEYNOTES:

1. MASONRY WALL PER PLAN
2. STEEL BEAM PER PLAN
3. SHEAR PLATE, SEE DETAIL 4/S8.1
4. PL 1/2"x12"x1'-4" PLATE W/ (6) 3/4"ø EPOXY ANCHORS W/ 5" MIN EMBEDMENT
5. ANGLE PER DETAIL 1/S8.1

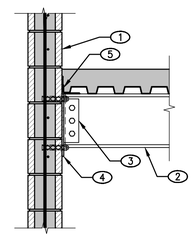


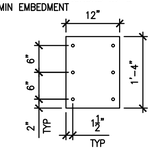


5 / S8.1 STEEL BEAM AT MASONRY WALL
NO SCALE

KEYNOTES:

1. MASONRY WALL PER PLAN
2. STEEL BEAM PER PLAN
3. SHEAR PLATE, SEE DETAIL 4/S8.1
4. PL 1/2"x12"x1'-4" PLATE W/ (6) 3/4"ø EPOXY ANCHORS W/ 5" MIN EMBEDMENT
5. ANGLE PER DETAIL 1/S8.1

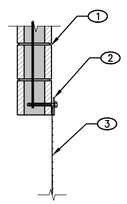




6 / S8.1 STEEL BEAM AT MASONRY WALL
NO SCALE

KEYNOTES:

1. MASONRY WALL, PER PLAN
2. 1/4"x4" STEEL PLATE W/ 5/8"ø TITEN HD AT 16" O.C., W/6" MIN EMBEDMENT
3. McNICHOLS 2" SQUARE OPENING x 0.25"ø WIRE MESH OR EQUIVALENT. MESH SHALL BE HOT DIPPED GALVANIZED



10 / S8.1 WIRE MESH ATTACHEMENT
NO SCALE

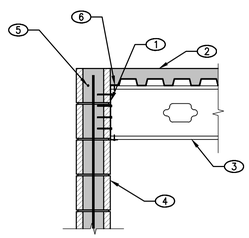
KEYNOTES:

1. MASONRY WALL PER PLAN
2. STEEL BEAM PER PLAN
3. SHEAR PLATE, SEE DETAIL 4/S8.1
4. PL 1/2"x12"x1'-4" PLATE W/ (6) 3/4"ø EPOXY ANCHORS W/ 5" MIN EMBEDMENT
5. ANGLE PER DETAIL 1/S8.1

7 / S8.1 STEEL JOIST AT MASONRY WALL
NO SCALE

KEYNOTES:

1. 120OT150-97 LEDGER TRACK W/ (4) 1/4" DIAx 3" LONG TITEN SCREWS AT 12" O.C. ATTACH JOIST TO TRACK W/ #12 SCREW THROUGH THROUGH TOP AND BOTTOM FLANGE
2. CONCRETE OVER STEEL DECK, PER "DF" DRAWINGS
3. ROOF JOISTS PER PLAN
4. MASONRY WALL PER PLAN
5. CONT 16" DEEP BOND BEAM W/ (2) #4 CONTINUOUS TOP
6. BOUNDARY ATTACHMENT



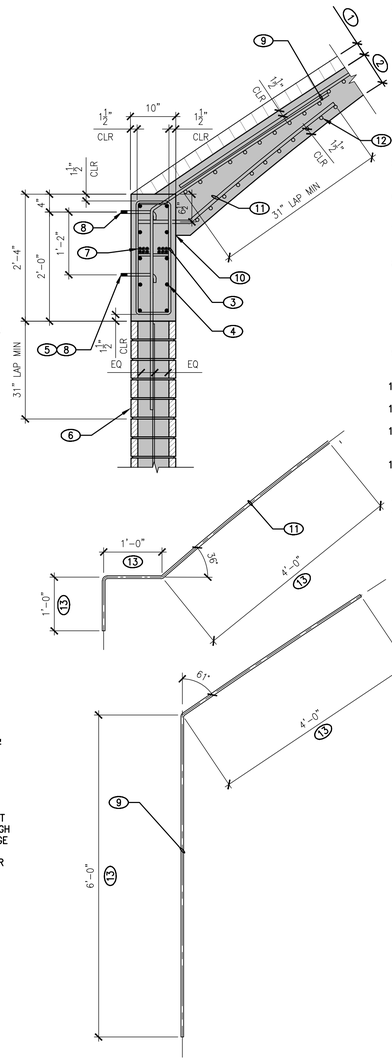
8 / S8.1 STEEL JOIST AT MASONRY WALL
NO SCALE

KEYNOTES:

1. 2 1/2" URETHANE FOAM AND AIR FORM
2. THICKNESS AND REINF PER DOME SECTION
3. #4 TIES AT 18" O.C.
4. (10) #6 BARS CONT THRU RING BEAM
5. J-BOLT REQ'D FOR PARAPET CONNECTION
6. 10" SOLID GROUTED MASONRY WALL PER DOME SECTION
7. (12) 1/2" MONOSTRAND PER S3.1, INDICATED BY ♦
8. 1/2"ø x8" J-BOLT AT 16" O.C. W/ 6" EMBEDMENT, VERIFY LOCATION OF ANCHOR BOLTS WITH WINDOW AND PARAPET LAYOUT. BOLT SPACING MAY NEED TO BE ADJUSTED FOR ATTACHMETN OF PARAPET FRAMING
9. #5 BENT DOWEL AT 8" O.C. CENTERED IN RING BEAM
10. BLOCKOUT PER ARCH
11. #5 BENT DOWEL AT 8" O.C.
12. (11) #6 BAR CONT AROUND DOME AT 6" O.C. EA FACE
13. DIMENSIONS OF REBAR ARE TO CENTER OF BAR

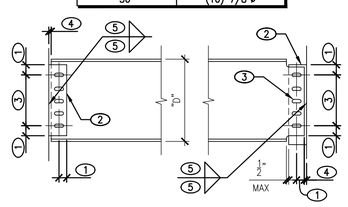
NOTES:

A. RINGBEAM SHALL BE POURED NOT SPRAYED



3 / S8.1 TYPICAL RING BEAM AT CONCRETE DOME
NO SCALE

NOMINAL BEAM DEPTH "D"	NUMBER OF BOLTS IN ROW
UP TO 7"	(2) 3/4"ø
8" TO 10"	(2) 3/4"ø
12" TO 14"	(3) 3/4"ø
16"	(4) 3/4"ø
18"	(5) 3/4"ø
21"	(6) 3/4"ø
24" TO 27"	(7) 7/8"ø
30"	(8) 7/8"ø
33"	(9) 7/8"ø
36"	(10) 7/8"ø



KEYNOTES:

1. AISC MIN EDGE DISTANCE
2. SHEAR PLATE TO EQUAL OR EXCEED BEAM WEB THICKNESS 3/8" MIN OR AS SHOWN OTHERWISE
3. HORIZ SHORT SLOTTED HOLES AT 3" O.C. MIN IN EITHER BEAM OR SHEAR PLATE PER AISC SPEC
4. 1/2" CLEAR TO FACE OF SUPPORTING MEMBER (TYP)
5. 5/16" FOR 21" DEEP BEAMS OR LESS, 3/8" FOR BEAMS 24" OR GREATER

NOTES:

A. TYP CONNECTION CONSISTS OF ONE SHEAR PLATE WITH 3/4"ø OR 7/8"ø A325N BOLTS, SEE SCHEDULE
B. MAINTAIN BOLT SPACING AND EDGE DISTANCES PER AISC SPEC

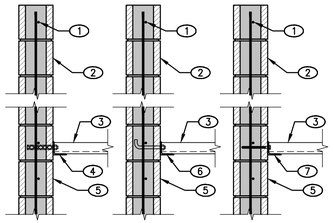
4 / S8.1 TYPICAL SHEAR PLATE CONNECTION DETAIL
NO SCALE

KEYNOTES:

1. CONT 16" DEEP BOND BEAM W/ (1) #5 CONTINUOUS TOP
2. MASONRY WALL PER PLAN
3. STEEL DECK, SEE PLAN FOR ATTACHMENT
4. CONT L3x3x1/4 LEDGER ANGLE W/ 5/8"ø x6" LONG EPOXY ANCHORS AT 24" O.C.
5. CONT 16" DEEP (MIN) SOLID GROUTED BOND BEAM AT JOIST ELEVATION W/ (1) #5 CONTINUOUS TOP AND BOTTOM
6. CONT L3x3x1/4 LEDGER ANGLE W/ 5/8"ø x6" LONG ANCHOR BOLT AT 24" O.C.
7. CONT L3x3x1/4 LEDGER ANGLE W/ 5/8"ø x6" LONG TITEN HD MASONRY ANCHORS AT 24" O.C.

NOTES:

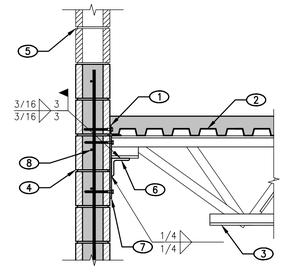
A. DECK ORIENTATION MAY BE REVERSED, SEE PLAN

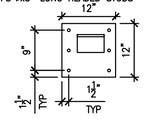


1 / S8.1 STEEL DECK AT MASONRY WALL
NO SCALE

KEYNOTES:

1. CONT LEDGER ANGLE AND ATTACHMENT PER DETAIL 1 THIS SHEET
2. STEEL DECK, SEE PLAN FOR ATTACHMENT
3. STEEL JOIST PER PLAN
4. MASONRY WALL PER PLAN
5. MASONRY WALL WHERE EXTENDS PER PLAN
6. L4x4x1/2 x 6" LONG ANGLE
7. PL 3/8"x12"x1'-4" EMBED W/ (6) 5/8"ø x5" LONG HEADED STUDS
8. CONT 16" DEEP (MIN) SOLID GROUTED BOND BEAM AT JOIST ELEVATION

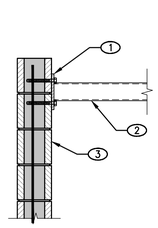


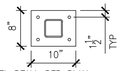


2 / S8.1 STEEL JOIST AT MASONRY WALL
NO SCALE

KEYNOTES:

1. 1/2" STEEL PLATE W/ (4) 5/8"ø TITEN HD, W/6" MIN EMBEDMENT
2. STEEL BEAM, PER PLAN
3. MASONRY WALL, PER PLAN





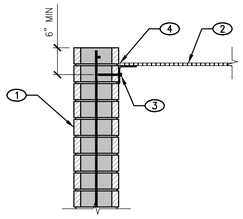
11 / S8.1 HSS CONNECTION AT MASONRY WALL
NO SCALE

KEYNOTES:

1. MASONRY WALL PER PLAN
2. STEEL MESH PER PLAN
3. L3x3x1/4 STEEL ANGLE W/ 3/4"ø TITEN HD AT 24" O.C.
4. TACK WELD STEEL MESH TO ANGLE

NOTES:

A. STEEL ANGLE AND ALL BOLTS AND NUTS SHALL BE HOT DIPPED GALVANIZED.



8 / S8.1 STEEL GRATE AT MASONRY WALL
NO SCALE

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Oct. 15, 2013

CITY OF EDINBURG
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315 E. PALM DRIVE
EDINBURG, TX

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FRAMING DETAILS

S8.1

11. (6) #5 VERTICAL DOWELS, DRILL AND EPOXY PER KEYNOTE 8

NOTES:

A. REINFORCING SHOWN REPLACES THE TYPICAL REINFORCING PER DOME SECTION

B. ENTRY STRUCTURE NOT SHOWN FOR CLARITY

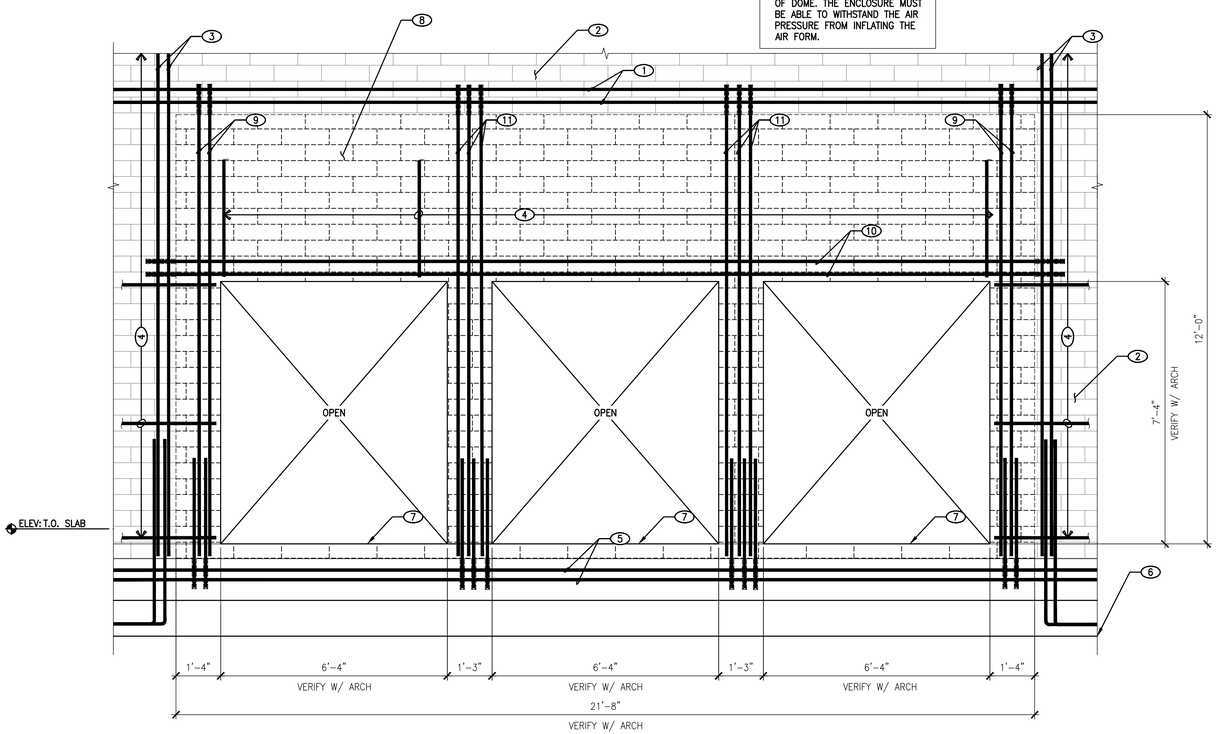
C. THE OPENINGS OF THE DOME ARE SHOWN AND DIMENSIONED AS A PROJECTION ON A VERTICAL PLANE. ALL OTHER DIMENSIONS ARE INTENDED TO BE ALONG THE ARC OF THE DOME SHELL

D. BRICK PATTERN SHOWN IS FOR SCHEMATIC PURPOSES ONLY. SEE ARCHITECTURAL DRAWINGS FOR ACTUAL BRICK COURSING AND ORIENTATION AROUND OPENINGS.

KEYNOTES:

1. ADD (2) #5 BAR ABOVE OPENING. EXTEND REINFORCING 36" MIN EACH SIDE OF OPENING
2. MASONRY WALL PER ARCHITECTURAL DRAWINGS
3. (2) #5 VERT W/ DOWEL TO MATCH AND LAP AT BASE, ALL BARS SEE 1/S7.1
4. TYP REINF PER DOME SECTION
5. ADD (2) #5 BAR BELOW OPENING. EXTEND REINFORCING 36" MIN EACH SIDE OF OPENING
6. CONT CONCRETE FOOTING PER PLAN
7. CONCRETE SLAB ON GRADE PER PLAN, POUR THROUGH DOOR
8. OPENING FOR EQUIPMENT ACCESS. UPON COMPLETION OF THE DOME, DRILL AND EPOXY #5 BAR WITH 8" EMBEDMENT MATCHING THE VERTICAL AND HORIZONTAL BAR SPACING, 25" LAP DOWEL WITH WALL REINFORCING AND FILL IN REMAINDER OF OPENING WITH MASONRY BLOCK
9. (2) #5 VERTICAL DOWELS TO MATCH AND LAP W/ DRILL AND EPOXY BAR PER KEYNOTE 8
10. (2) #5 HORIZONTAL DOWELS TO MATCH AND LAP W/ DRILL AND EPOXY BAR PER KEYNOTE 8

CONTRACTOR SHALL PROVIDE ENGINEERED SOLUTION FOR ENCLOSING CONSTRUCTION OPENING DURING CONSTRUCTION OF DOME. THE ENCLOSURE MUST BE ABLE TO WITHSTAND THE AIR PRESSURE FROM INFLATING THE AIR FORM.



2 / S9.1 GROUND FLOOR DOOR OPENING ELEVATION
NO SCALE

KEYNOTES:

1. ADD (2) #5 BAR ABOVE OPENING. EXTEND REINFORCING 36" MIN EACH SIDE OF OPENING
2. MASONRY WALL PER PLAN AND ARCHITECTURAL DRAWINGS
3. (2) #5 VERT W/ DOWEL TO MATCH AND LAP AT BASE, ALL BARS SEE 1/S7.1
4. TYP REINF PER DOME SECTION
5. ADD (2) #5 BAR BELOW OPENING. EXTEND REINFORCING 36" MIN EACH SIDE OF OPENING
6. CONT CONCRETE FOOTING PER PLAN
7. CONCRETE SLAB ON GRADE PER PLAN, POUR THROUGH DOOR

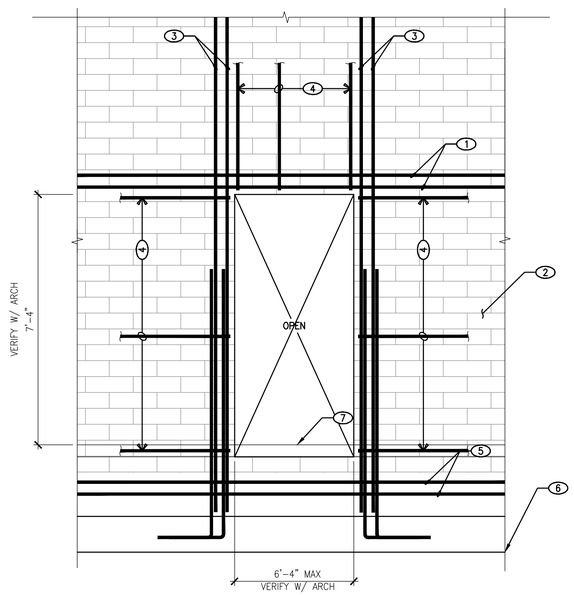
NOTES:

A. REINFORCING SHOWN REPLACES THE TYPICAL REINFORCING PER DOME SECTION

B. THE OPENINGS OF THE DOME ARE SHOWN AND DIMENSIONED AS A PROJECTION ON A VERTICAL PLANE. ALL OTHER DIMENSIONS ARE INTENDED TO BE ALONG THE ARC OF THE DOME SHELL

C. DOOR FRAMES SHALL BE ANCHORED INTO SOLID GROUT HEADER AND JAMB IN ACCORDANCE W/ DOOR MANUFACTURE RECOMMENDATIONS

D. BRICK PATTERN SHOWN IS FOR SCHEMATIC PURPOSES ONLY. SEE ARCHITECTURAL DRAWINGS FOR ACTUAL BRICK COURSING AND ORIENTATION AROUND OPENINGS.



1 / S9.1 GROUND FLOOR DOOR OPENING ELEVATION
NO SCALE

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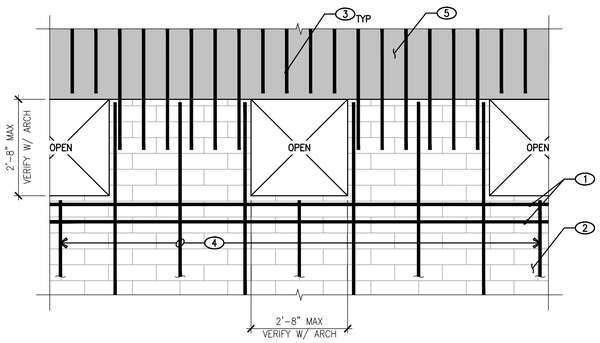
OPENING DETAILS

S9.1



KEYNOTES:

1. ADD (2) #5 BAR BELOW OPENING. EXTEND REINFORCING 36" MIN EACH SIDE OF OPENING
2. MASONRY WALL PER ARCHITECTURAL DRAWINGS
3. BENT DOWEL PER DETAIL 3/S8.1 CUT BOTTOM OF BAR SHORT WHERE OCCURS ABOVE WINDOW OPENINGS
4. TYP REINF PER DOME SECTION
5. CONCRETE RING BEAM PER PLAN

NOTES:

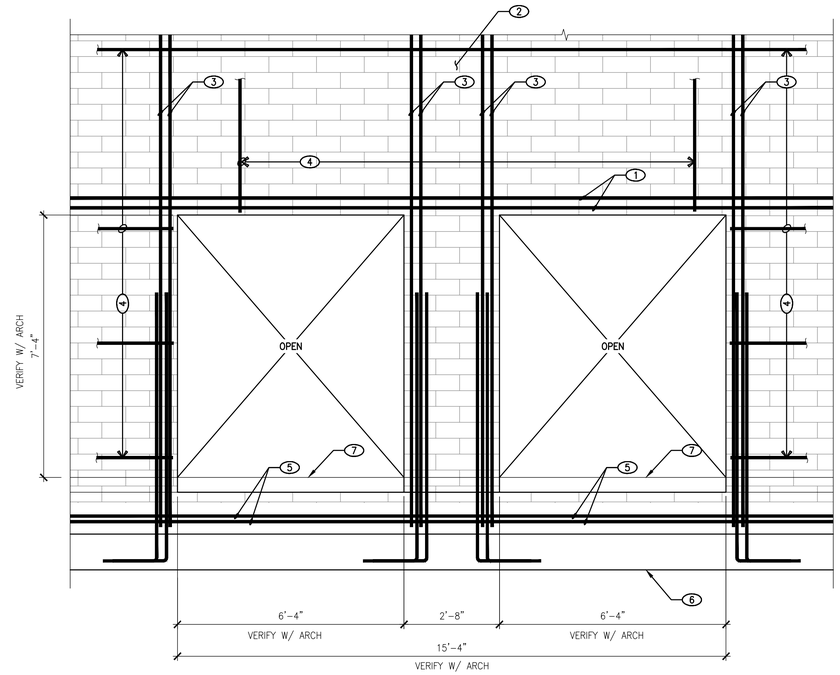
A. REINFORCING SHOWN REPLACES THE TYPICAL REINFORCING PER DOME SECTION

B. THE OPENINGS OF THE DOME ARE SHOWN AND DIMENSIONED AS A PROJECTION ON A VERTICAL PLANE. ALL OTHER DIMENSIONS ARE INTENDED TO BE ALONG THE ARC OF THE DOME SHELL

C. WINDOW FRAMES SHALL BE ANCHORED INTO SOLID GROUT HEADER AND JAMB IN ACCORDANCE W/ DOOR MANUFACTURE RECOMMENDATIONS

D. BRICK PATTERN SHOWN IS FOR SCHEMATIC PURPOSES ONLY. SEE ARCHITECTURAL DRAWINGS FOR ACTUAL BRICK COURSING AND ORIENTATION AROUND OPENINGS.

2 / S9.2 WINDOW OPENING ELEVATION
NO SCALE



KEYNOTES:

1. ADD (2) #5 BAR ABOVE OPENING. EXTEND REINFORCING 36" MIN EACH SIDE OF OPENING
2. MASONRY WALL PER PLAN AND ARCHITECTURAL DRAWINGS
3. (2) #5 VERT W/ DOWEL TO MATCH AND LAP AT BASE, ALL BARS SEE 1/S7.1
4. TYP REINF PER DOME SECTION
5. ADD (2) #5 BAR BELOW OPENING. EXTEND REINFORCING 36" MIN EACH SIDE OF OPENING
6. CONT CONCRETE FOOTING PER PLAN
7. CONCRETE SLAB ON GRADE PER PLAN, POUR THROUGH DOOR

NOTES:

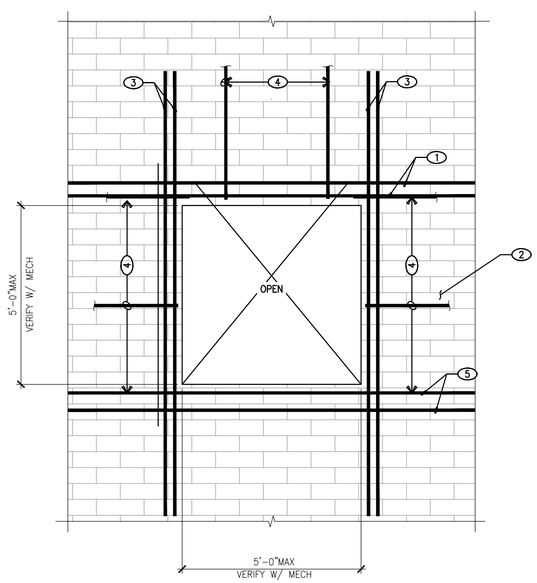
A. REINFORCING SHOWN REPLACES THE TYPICAL REINFORCING PER DOME SECTION

B. THE OPENINGS OF THE DOME ARE SHOWN AND DIMENSIONED AS A PROJECTION ON A VERTICAL PLANE. ALL OTHER DIMENSIONS ARE INTENDED TO BE ALONG THE ARC OF THE DOME SHELL

C. DOOR FRAMES SHALL BE ANCHORED INTO SOLID GROUT HEADER AND JAMB IN ACCORDANCE W/ DOOR MANUFACTURE RECOMMENDATIONS

D. BRICK PATTERN SHOWN IS FOR SCHEMATIC PURPOSES ONLY. SEE ARCHITECTURAL DRAWINGS FOR ACTUAL BRICK COURSING AND ORIENTATION AROUND OPENINGS.

1 / S9.2 GROUND FLOOR DOOR OPENING ELEVATION AT EQUIPMENT ACCESS
NO SCALE



KEYNOTES:

1. ADD (2) #5 BAR ABOVE OPENING. EXTEND REINFORCING 36" MIN EACH SIDE OF OPENING
2. MASONRY WALL PER ARCHITECTURAL DRAWINGS
3. (2) #5 VERT EACH SIDE OF OPENING. EXTEND REINFORCING 36" MIN PAST OPENING
4. TYP REINF PER DOME SECTION
5. ADD (2) #5 BAR BELOW OPENING. EXTEND REINFORCING 36" MIN EACH SIDE OF OPENING

NOTES:

A. REINFORCING SHOWN REPLACES THE TYPICAL REINFORCING PER DOME SECTION

B. THE OPENINGS OF THE DOME ARE SHOWN AND DIMENSIONED AS A PROJECTION ON A VERTICAL PLANE. ALL OTHER DIMENSIONS ARE INTENDED TO BE ALONG THE ARC OF THE DOME SHELL

C. BRICK PATTERN SHOWN IS FOR SCHEMATIC PURPOSES ONLY. SEE ARCHITECTURAL DRAWINGS FOR ACTUAL BRICK COURSING AND ORIENTATION AROUND OPENINGS.

3 / S9.2 MECHANICAL LOUVER OPENING ELEVATION
NO SCALE

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OPENING DETAILS

S9.2

Occupancy (SF/OCC)	20					
				Minimum Natural Ventilation Area		
Space Name*	Area (sqft)	Factor	Occupants	area/occupant	Area (in^2)	Area (ft^2)
Center Main	17531	1	877	12	10518.6	73.0
					Total (ft^2)	73.0

Provide Protected Openings	
Mark	Free area (sqft)
LV-5	10.04
LV-6	10.04
LV-7	10.04
LV-8	10.04
LV-9	10.04
LV-10	10.04
LV-11	10.04
LV-12	10.04
Total (ft^2)	80.32

FEMA Calculations	
Required Protected Opening area	73.0
Provided Protected Opening area	80.3
Meets FEMA 361/ICC500 Requirments (Y/N)	Y

*All spaces are connected together and are served by louvers indicated.

Occupancy (SF/OCC)	20					
				Minimum Natural Ventilation Area		
Space Name*	Area (sqft)	Factor	Occupants	area/occupant (in^2)	Area (in^2)	Area (ft^2)
Storage 167	399	1	20	12	239.4	1.7
					Total (ft^2)	1.7

Provide Protected Openings	
Mark	Free area (sqft)
LV-16	1.19
LV-17	1.19
Total (ft^2)	2.38

FEMA Calculations	
Required Protected Opening area	1.7
Provided Protected Opening area	2.4
Meets FEMA 361/ICC500 Requirments (Y/N)	Y

*All spaces are connected together and are served by louvers indicated.

Occupancy (SF/OCC)	20					
				Minimum Natural Ventilation Area		
Space Name*	Area (sqft)	Factor	Occupants	area/occupant	Area (in^2)	Area (ft^2)
Storage 168	399	1	20	12	239.4	1.7
					Total (ft^2)	1.7

Provide Protected Openings	
Mark	Free area (sqft)
LV-18	1.19
LV-19	1.19
Total (ft^2)	2.38

FEMA Calculations	
Required Protected Opening area	1.7
Provided Protected Opening area	2.4
Meets FEMA 361/ICC500 Requirments (Y/N)	Y

*All spaces are connected together and are served by louvers indicated.

Occupancy (SF/OCC)	20					
				Minimum Natural Ventilation Area		
Space Name*	Area (sqft)	Factor	Occupants	area/occupant	Area (in^2)	Area (ft^2)
Nurse Station 155	302	1	15	12	181.2	1.3
					Total (ft^2)	1.3

Provide Protected Openings	
Mark	Free area (sqft)
LV-20	1.19
LV-21	1.19
Total (ft^2)	2.38

FEMA Calculations	
Required Protected Opening area	1.3
Provided Protected Opening area	2.4
Meets FEMA 361/ICC500 Requirments (Y/N)	Y

*All spaces are connected together and are served by louvers indicated.

Occupancy (SF/OCC)	20					
				Minimum Natural Ventilation Area		
Space Name*	Area (sqft)	Factor	Occupants	area/occupant	Area (in^2)	Area (ft^2)
Storage 157	196	1	10	12	117.6	0.8
					Total (ft^2)	0.8

Provide Protected Openings	
Mark	Free area (sqft)
LV-22	0.65
LV-23	0.65
Total (ft^2)	1.3

FEMA Calculations	
Required Protected Opening area	0.8
Provided Protected Opening area	1.3
Meets FEMA 361/ICC500 Requirments (Y/N)	Y

*All spaces are connected together and are served by louvers indicated.

NATURAL VENTILATION IS PROVIDED PER ICC 500 TABLE 703.1 VENTING AREA REQUIREMENTS FOR HURRICANE SHELTERS AND PER 703.1.3 LOCATION OF VENTILATION OPENINGS.

GENERAL NOTES

A. INSTALL ALL MECHANICAL SYSTEMS IN ACCORDANCE WITH 2012 INTERNATIONAL BUILDING CODE, 2012 INTERNATIONAL MECHANICAL CODE, 2012 INTERNATIONAL FUEL GAS CODE, 2012 INTERNATIONAL ENERGY CONSERVATION CODE, AND 2012 INTERNATIONAL PLUMBING CODE.

B. CLOSELY COORDINATE ALL MECHANICAL WITH ELECTRICAL, ARCHITECTURAL, AND STRUCTURAL. DUCTWORK AND PIPING IS APPROXIMATE AND DIAGRAMMATIC AND IS NOT TO BE SCALED. PROVIDE ALTERNATE ROUTING, OFFSETS, AND TRANSITIONS AS REQUIRED FOR COORDINATION OF ALL WORK WITHOUT ADDITIONAL COST TO THE OWNER.

C. FIELD VERIFY ALL MECHANICAL PRIOR TO COMMENCING NEW WORK. DO NOT FABRICATE OR INSTALL ANY MECHANICAL BEFORE VERIFYING DIMENSIONS AND ROUTING WITH BUILDING CONDITIONS AND ALL OTHER TRADES.

D. COORDINATE ALL ELECTRICAL AND CONTROL REQUIREMENTS WITH ELECTRICIAN.

E. INSTALL ALL EQUIPMENT AND DEVICES PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE ONE YEAR PARTS AND LABOR WARRANTY ON INSTALLATION.

F. CONTRACTOR IS RESPONSIBLE FOR ALL APPLICABLE PERMITS AND FEES.

G. PROVIDE SUBMITTALS ON ITEMS LISTED IN SCHEDULES TO ENGINEER FOR REVIEW PRIOR TO ORDER, PURCHASE, OR INSTALLATION. ALL REQUIRED SUBMITTALS TO BE SUBMITTED IN A SINGLE TABBED BINDER. PROVIDE ALL HVAC CONSTRUCTION COSTS FOR ENGINEER DATA BASE AS PART OF SUBMITTALS.

H. ALL MANUFACTURER SUBSTITUTIONS MUST BE SUBMITTED TO ENGINEER AND APPROVED THROUGH AN ADDENDUM. PRIOR APPROVALS MUST BE SUBMITTED 10 DAYS PRIOR TO BID DATE.

I. PROVIDE OPERATIONS AND MAINTENANCE MANUAL INCLUDING ALL HVAC EQUIPMENT.

J. CLOSE ENDS OF DUCTWORK AND PIPING AND COVER FLOOR DRAINS DURING CONSTRUCTION. CLEAN ALL EQUIPMENT, PIPING, AND DUCTWORK AT COMPLETION OF PROJECT.

K. COORDINATE ALL DIFFUSER AND GRILLE LOCATIONS WITH REFLECTED CEILING PLAN AND ELECTRICAL DRAWINGS.

L. COORDINATE ALL STRUCTURAL PENETRATIONS FOR DUCT WORK WITH GENERAL CONTRACTOR. DUCT PENETRATIONS THROUGH ROOF ARE TO BE COORDINATED WITH JOIST LAYOUT.

M. COORDINATE EXACT LOCATION OF THERMOSTATS WITH ARCHITECT PRIOR TO INSTALLATION.

N. PROVIDE BALANCE VALVES AND DAMPERS TO ALLOW COMPLETE BALANCE OF HVAC SYSTEMS.

O. PROVIDE ACCESS PANELS FOR ALL EQUIPMENT, DAMPERS, ACTUATORS, AND FILTERS. ENSURE ADEQUATE ACCESS TO ALL SYSTEM COMPONENTS FOR MAINTAINABILITY.

P. PROVIDE FLUSH CUP CONCEALED OPERATORS ON ALL HAND DAMPERS LOCATED ABOVE HARD OR INACCESSIBLE CEILINGS.

Q. PROVIDE STARTERS AND CONTACTORS NECESSARY TO OPERATE ALL MECHANICAL EQUIPMENT. COORDINATE ALL REQUIREMENTS WITH ELECTRICAL.

R. PROVIDE VIBRATION ISOLATION FOR ALL FAN OR COMPRESSOR DRIVEN EQUIPMENT. PROVIDE FLEXIBLE CONNECTIONS TO EQUIPMENT.

S. PROVIDE TRAPPED CONDENSATE DRAINS PIPED FULL SIZE TO FLOOR DRAIN FOR ALL AIR CONDITIONING EQUIPMENT. PIPING TO BE SCHEDULE 40 PVC.

T. PROVIDE SEISMIC RESTRAINTS FOR HVAC EQUIPMENT, DUCTWORK, AND PIPING IN ACCORDANCE WITH INTERNATIONAL BUILDING CODE WITH SEISMIC DESIGN CATEGORY A, SHORT PERIOD DESIGN SPECTRAL RESPONSE ACCELERATION COEFFICIENT SDS=0.044, ONE SECOND PERIOD DESIGN SPECTRAL RESPONSE ACCELERATION COEFFICIENT SD1=0.023, AND IMPORTANCE FACTOR 1.0. PIPING SUPPORTED WITHIN 12" OF STRUCTURE DOES NOT REQUIRE SEISMIC BRACING. DUCTS SUPPORTED WITHIN 12" OF STRUCTURE OR DUCTS LESS THAN 6 SQ. FT. CROSS-SECTIONAL AREA DO NOT REQUIRE SEISMIC BRACING.

U. ALL ITEMS LOCATED IN A RETURN AIR PLENUM TO HAVE A FLAME SPREAD INDEX OF 25 AND SMOKE DEVELOPMENT INDEX OF 50. DUCT COVERINGS AND LININGS TO HAVE A FLAME SPREAD INDEX NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX OF 50 IN ACCORDANCE WITH ASTM84. DUCT COVERINGS AND LININGS SHALL NOT FLAME, GLOW, SMOLDER, OR SMOKE WHEN TESTED IN ACCORDANCE WITH ASTMC411.

V. LINE ALL RECTANGULAR SUPPLY DUCT A MINIMUM OF 20 FEET DOWNSTREAM OF ERV OR FAN COIL. LINE ALL RETURN DUCT A MINIMUM OF 20 FEET UPSTREAM OF ERV OR FAN COIL. LINE ALL RETURN AIR TRANSFERS AND GRILLE PLENUM BOXES. DUCT LINER TO BE MINIMUM R-5. TRIM AND SEAL JOINTS.

W. INSULATE ALL CONCEALED UNLINED DUCT WITH MINIMUM R-5 (INSTALLED) FIBERGLASS DUCT WRAP. INSULATE ALL OUTSIDE AIR DUCT WITH MINIMUM R-5 (INSTALLED) FIBERGLASS DUCT WRAP. INSULATION TO BE UL LISTED AND MEET NFPA 220. ALL DUCT LOCATED IN COLD ATTIC TO BE INSULATED WITH MINIMUM R-8 (INSTALLED).

X. INSULATE REFRIGERANT PIPING WITH 1" INSULATION. PROVIDE ALUMINUM JACKET ON ALL INSULATION LOCATED OUTDOORS. INSULATION TO BE 0.27 BTU*IN/HR*FT²*°F.

Y. ROUND FLEXIBLE DUCT TO BE 1" THICK INSULATED AND MEET NFPA 90A STANDARDS. FLEXIBLE DUCT RUNS TO BE MAXIMUM 8 FEET IN LENGTH AND FREE OF KINKS. FLEXIBLE DUCTS TO BE TESTED ACCORDING TO UL181. FLEXIBLE DUCT FASTENERS TO COMPLY WITH UL181B. UNLISTED DUCT TAPE IS PROHIBITED.

Z. CONSTRUCT ALL DUCT TO SMACNA STANDARDS FOR LOW PRESSURE DUCT CONSTRUCTION, SEAL CLASS A AND 2 IN.WG. PRESSURE CLASS. ALL DUCT TO BE GALVANIZED METAL. ALL ROUND EXPOSED DUCT TO BE SPIRAL DUCT.

AA. CONSTRUCT ALL DUCT TEES, BENDS, AND ELBOWS WITH RADIUS NOT LESS THAN 1.5 TIMES THE WIDTH OF THE DUCT. WHERE PHYSICAL CONSTRAINTS PROHIBIT RADIUSED ELBOWS, PROVIDE RECTANGULAR ELBOW WITH TURNING VANES. ALL BRANCH TAKEOFFS TO BE CONSTRUCTED OF 90° WYE WITH 45° ENTRY.

AB. DUCT DIMENSIONS SHOWN ARE CLEAR INSIDE DIMENSIONS.

AC. PAINT DUCT INTERIORS VISIBLE THROUGH REGISTERS, GRILLES, DIFFUSERS, AND LOUVERS FLAT BLACK.

AD. MECHANICAL EQUIPMENT INSTALLED OUTDOORS TO BE LISTED AND LABELED FOR OUTDOOR INSTALLATION.

AE. BALANCE ALL HVAC EQUIPMENT AND AIR DEVICES PER PLAN BY AN APPROVED INDEPENDENT TEST AND BALANCE CONTRACTOR. BALANCE REPORT TO BE GIVEN TO ENGINEER, OWNER, AND O&M MANUAL.

AF. CONCEALED VENTS, DUCTS, AND ALL PIPING INSTALLED THROUGH FRAMING MEMBERS MUST BE PROTECTED FROM FASTENER PENETRATION BY A STEEL SHIELD PLATE (MINIMUM THICKNESS OF 1/16") UNLESS THE DISTANCE FROM THE FACE EDGE OF THE FRAMING IS NOT LESS THAN 1.5".

AG. PROVIDE NEW FILTERS ON ALL FORCED AIR SYSTEMS AND NEW BELTS FOR ALL BELT DRIVEN EQUIPMENT WITHIN ONE WEEK PRIOR TO SUBSTANTIAL COMPLETION.

AH. CONTRACTOR MUS COORDINATE ALL ELECTRICAL REQUIREMENTS FOR ALL EQUIPMENT WITH ELECTRICAL CONTRACTOR ONCE APPROVED SUBMITTALS ARE RECEIVED.

STANDARD ABBREVIATIONS

DIA OR Ø	DIAMETER
AFF	ABOVE FINISHED FLOOR
AI	ANALOG INPUT
ALT	ALTERNATE
AO	ANALOG OUTPUT
APD	AIR PRESSURE DROP
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BTU/H	BRITISH THERMAL UNITS PER HOUR
CAP.	CAPACITY
CFM	CUBIC FEET PER MINUTE
CV	CONSTANT VOLUME
DB	DRY BULB
DI	DIGITAL INPUT
DO	DIGITAL OUTPUT
(E)	EXISTING
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EFF	EFFICIENCY
ELEV	ELEVATION
ESP	EXTERNAL STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE
FA	FREE AREA
FPM	FEET PER MINUTE
FT	FEET
FV	FACE VELOCITY
FW	FRESH WATER
GA	GAUGE
GAL	GALLON
GPM	GALLONS PER MINUTE
HP	HORSEPOWER
HR	HOUR
HT	HEIGHT
IAQ	INDOOR AIR QUALITY
IN.	INCH
INWC	INCHES OF WATER COLUMN
INWG	INCHES OF WATER GAUGE
LAT	LEAVING AIR TEMPERATURE
LBS	POUNDS
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	THOUSAND BRITISH THERMAL UNITS/HOUR
MECH	MECHANICAL
MIN	MINIMUM
MVD	MANUAL VOLUME DAMPER
NC	NOISE CRITERIA
NIC	NOT IN CONTRACT
NO.	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
OBD	OPPOSED BLADE DAMPER
OSA	OUTSIDE AIR
PD	PRESSURE DROP
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAUGE
RA	RETURN AIR
SA	SUPPLY AIR
SEN	SENSIBLE
SL	SEA LEVEL
SP	STATIC PRESSURE
SQ FT	SQUARE FEET
SS	SERVICE SINK OR STAINLESS STEEL
TOD	TOP OF DUCT
TSP	TOTAL STATIC PRESSURE
VAV	VARIABLE AIR VOLUME
VFD	VARIABLE FREQUENCY DRIVE
VOL	VOLUME
W/	WITH
W/O	WITHOUT
WB	WET BULB
WPD	WATER PRESSURE DROP
WT	WEIGHT

MECHANICAL LEGEND

BALL VALVE
BUTTERFLY VALVE
GATE VALVE
GLOBE VALVE
M — MOTORIZED VALVE OPERATOR
CHECK VALVE (SWING OR LIFT AS REQ'D)
SOLENOID VALVE
AUTOMATIC CONTROL VALVE (2-WAY)
AUTOMATIC CONTROL VALVE (3-WAY)
PRESSURE REDUCING VALVE
P & T RELIEF VALVE
PET COCK OR GAUGE COCK
CALIBRATED BALANCING VALVE
WATER HAMMER ARRESTOR
AIR VENT (AUTOMATIC)
STRAINER
VENTURI FLOW METER
TEMPERATURE & PRESSURE TEST PLUG
F — FLOW SWITCH
T — TEMPERATURE SENSOR
PRESSURE GAUGE W/GAUGE COCK
THERMOMETER
PUMP
ELBOW DOWN
ELBOW UP
TEE DOWN
HOSE BIB OR SILLCOCK
PIPE CAP
REDUCER VALVE
UNION
YARD HYDRANT/ROOF HYDRANT
FLOOR DRAIN
FLOOR SINK
CLEANOUT TO GRADE (COTG)
FLOOR CLEANOUT (FCO)
WALL CLEANOUT (WCO)
EXPANSION JOINT
FLEXIBLE PIPE CONNECTION
RPBP — REDUCED PRESSURE BACKFLOW PREVENTER
DOUBLE CHECK BACKFLOW PREVENTER
DOMESTIC COLD WATER (DCW)
DOMESTIC HOT WATER (DHW)
DOMESTIC HOT WATER RECIRC. (DHWR)
(TEMP)°F — DOMESTIC HOT WATER (SPECIFIED TEMP.)
SANITARY VENT (VT)
SANITARY SEWER ABOVE GRADE (SS)
SANITARY SEWER BELOW GRADE (SS)
HEAT TRACING

NOT ALL SYMBOLS MAY BE USED

SUPPLY DIFFUSER
RETURN GRILLE
EXHAUST GRILLE
RETURN AIR DUCT SECTION
RETURN AIR DUCT TURNED UP
RETURN AIR DUCT DOWN
SUPPLY AIR DUCT SECTION
SUPPLY AIR DUCT TURNED UP
SUPPLY AIR DUCT DOWN
EXHAUST AIR DUCT SECTION
EXHAUST AIR DUCT TURNED UP
EXHAUST AIR DUCT DOWN
ACCESS PANEL
MANUAL VOLUME DAMPER
G — GRAVITY BACKDRAFT DAMPER
M — MOTORIZED DAMPER
F — FIRE DAMPER
FS — COMBINATION FIRE/SMOKE DAMPER
18/12 — DUCT SIZE (FIRST FIGURE IS SIZE SHOWN)
BURIED OR UNDERFLOOR DUCT
DUCT W/ ACOUSTICAL LINING
FLEXIBLE DUCT (HELICAL)
FLEXIBLE DUCT CONNECTION
DUCT TRANSITION
ELBOW W/ TURNING VANES
TEE W/45 DEGREE ENTRY
WYE W/ 45 DEGREE ENTRY
T — THERMOSTAT OR TEMP SENSOR
H — HUMIDISTAT OR HUMIDITY SENSOR
S — SENSOR
POINT OF REMOVAL FROM EXISTING
POINT OF CONNECTION TO EXISTING
M## — KEYED NOTE
SEC# / SHEET# — SECTION CUT LINE
DET# / SHT# — DETAIL TAG
CHS — CHILLED WATER SUPPLY
CHR — CHILLED WATER RETURN
CD — CONDENSATE DRAIN
CWS — CONDENSOR WATER SUPPLY
CWR — CONDENSOR WATER RETURN
FS — FIRE SPRINKLER SERVICE
HWS — HEATING WATER SUPPLY
HWR — HEATING WATER RETURN
LP — LIQUID PROPANE
NG — NATURAL GAS
OD — OVERFLOW DRAIN
RD — ROOF DRAIN
RL — REFRIGERANT LIQUID
RS — REFRIGERANT SUCTION
S — STEAM
SD — STORM DRAIN
** — PIPING BELOW GRADE (**SYS. ABR.)

SHEET INDEX

SHEET NO.	SHEET TITLE	REVISION #1	REVISION #2
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M1.1	MECHANICAL FLOOR PLAN - SAFE ROOM		
M2.1	MECHANICAL SCHEMATICS		
M3.1	MECHANICAL SECTIONS		
M4.1	ENLARGED MECHANICAL PLANS - SAFE ROOM		
M5.1	MECHANICAL DETAILS		
M6.1	MECHANICAL SCHEDULES		

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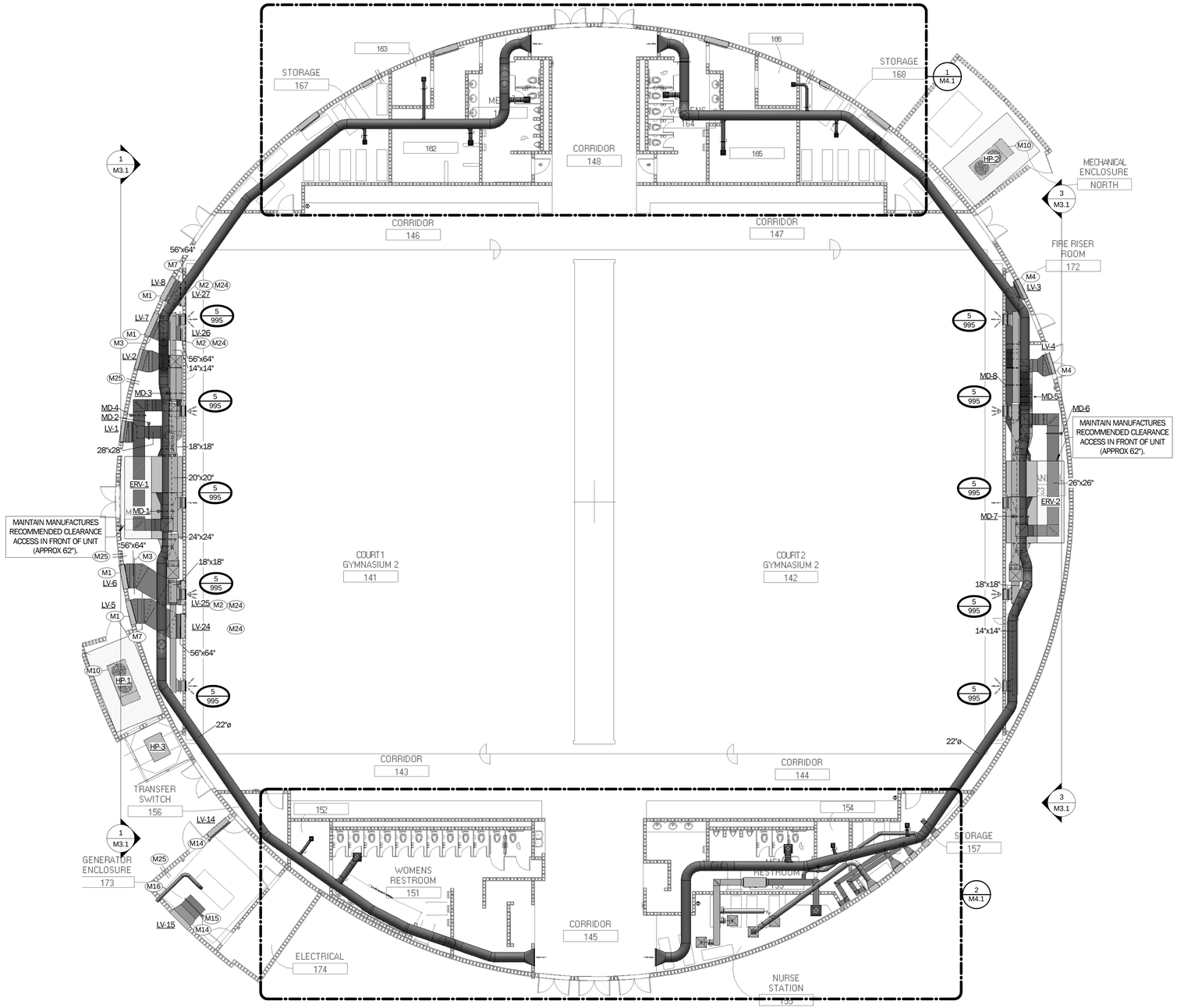
315 E. PALM DRIVE
EDINBURG, TX

100% 10/15/2013

REVISIONS

MECHANICAL LEGEND, NOTES, AND GENERAL ABBREVIATIONS

M0.1



MECHANICAL FLOOR PLAN - SAFE ROOM

SCALE: 3/32" = 1'-0"

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KEYNOTES

M1 LOCATE BOTTOM OF LOUVER MAX 16" (MIN 12") ABOVE FINISHED FLOOR.

M2 LOCATE BOTTOM OF NATURAL VENTILATION OPENING AT MAX 16" (MIN 12") ABOVE FINISHED FLOOR. TRANSITION DUCT FROM LOUVER TO GRILLE AS REQUIRED. REFER TO ARCHITECTURAL.

M3 PROVIDE LOW-LEAK MANUAL DAMPER FOR NATURAL VENTILATION LOUVER(S).

M4 COORDINATE FINAL LOUVER LOCATION WITH ARCHITECT/GENERAL CONTRACTOR. MAINTAIN MINIMUM 10' HORIZONTAL SEPARATION BETWEEN OSA INTAKE AND EXHAUST FROM BUILDING.

M7 PROVIDE LOW-LEAK MANUAL DAMPER FOR NATURAL VENTILATION LOUVER. PROVIDE REMOTE OPERATOR FOR DAMPER IN ACCESSIBLE LOCATION NEAR ADJACENT DAMPER.

M10 HATCHED AREA INDICATES REQUIRED CLEARANCE ACCESS PER MANUFACTURERS RECOMMENDATION (MINIMUM 48" ON THE ENDS AND 36" ON THE SIDES). COORDINATE FINAL ENCLOSURE DIMENSIONS BASED ON MANUFACTURERS RECOMMENDATION WITH ARCHITECT/GENERAL CONTRACTOR.

M14 INTERLOCK DAMPER TO OPEN WITH OPERATION OF GENERATOR. DAMPER TO BE POWER CLOSE/ SPRING OPEN.

M15 CONNECT DUCT TO GENERATOR COOLING SYSTEM PER GENERATOR MANUFACTURERS RECOMMENDATION. GENERATOR BY OTHERS.

M16 ROUTE SCHEDULE 40 BLACK WELDED STEEL EXHAUST PIPE FROM GENERATOR EXHAUST OUTLET TO EXTERIOR WALL. PROVIDE CORRUGATED FLEX AND EXPANSION JOINT CONNECTOR FROM GENERATOR EXHAUST PORT TO EXHAUST PIPE. MAINTAIN MINIMUM 6â€™.2â€ CLEAR BETWEEN BOTTOM OF EXHAUST PIPE AND FINISHED FLOOR. COORDINATE FINAL TERMINATION LOCATION WITH ARCHITECTURAL. SUPPORT ALL PIPING WITH ALL-THREAD SUPPORT RACKS. PROVIDE WALL THIMBLE AT EXTERIOR WALL PENETRATION. PROVIDE FIRWIN (OR EQUAL) INSULATION BLANKET ON EXHAUST PIPING (MIN 1,200 DEGREE F). TERMINATE WITH CHAMFER AND WELDED BIRDSCREEN. PAINT EXTERIOR PIPING WITH 1,200 Â°F PAINT. PIPING TERMINATION AND OPENING O BE FEMA 361 (ICC-500) RATED.

M24 REFER TO ARCHITECTURAL DETAIL FOR INSTALLATION OF LOUVER ABOVE BLEACHER SEATING. FRESH AIR OPENING FROM EXTERIOR LOUVER TO TRANSITION TO ACCOMMODATE WELDED MESH OPEN AREA BELOW BLEACHER AND LOUVER ABOVE BLEACHER. PER ARCHITECTURAL.

M25 PROVIDE 4"Â¯ SCHD 40 PVC SLEEVES BELOW SLAB AND STUB UP ABOVE CONCRETE SLAB W/ CAP INSIDE OF STRUCTURE. SLEEVES ARE FOR FUTURE USE. COORDINATE FINAL STUB LOCATION WITH GENERAL CONTRACTOR/ARCHITECT.

GENERAL NOTES

A. REFER TO 1, 2, 3, 4/M5.1, SHEET M0.1, AND SPECIFICATIONS FOR DUCT REQUIREMENTS.
B. REFER TO ARCHITECTURAL/STRUCTURAL DRAWINGS FOR LOUVER INSTALLATION REQUIREMENTS. COORDINATE ALL INSTALLATION DIMENSIONS WITH GENERAL CONTRACTOR.
C. PROVIDE CONCRETE HOUSEKEEPING PAD FOR ALL HVAC EQUIPMENT. HOUSE KEEPING PAD TO BE 4" HIGH AND EXTEND BEYOND EDGES OF EQUIPMENT MINIMUM 4".

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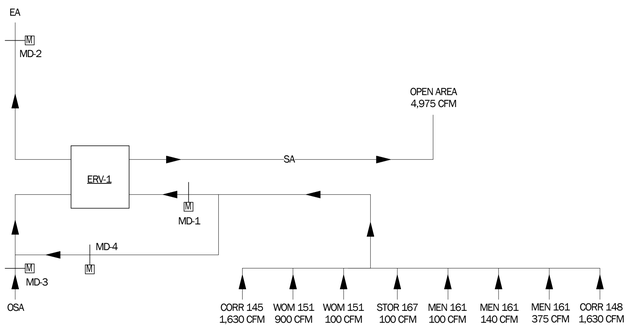
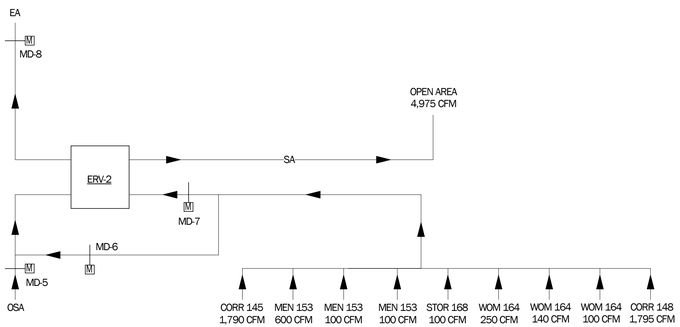
MECHANICAL FLOOR PLAN - SAFE ROOM

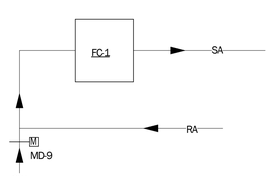
M1.1



ERV-1 SCHEMATIC SCALE: NONE



ERV-2 SCHEMATIC SCALE: NONE



FC SCHEMATIC SCALE: NONE

-ERV- 1 AND ERV - 2
- SUPPLY FAN START/STOP
- SUPPLY FAN STATUS (DIFFERENTIAL PRESSURE SWITCH)
- SUPPLY FAN VFD SPEED
- EXHAUST FAN START/STOP (HARDWIRED TO SUPPLY FAN START/STOP)
- EXHAUST FAN STATUS (DIFFERENTIAL PRESSURE SWITCH)
- EXHAUST FAN VFD SPEED
- ENERGY WHEEL START/STOP (HARDWIRED TO SUPPLY FAN START/STOP)
- ENERGY WHEEL STATUS (CURRENT SENSING RELAY)
- SUPPLY AIR TEMPERATURE (AVERAGING SENSOR)
- SUPPLY AIR HUMIDITY (0-10VDC)
- EXHAUST AIR ENTERING WHEEL TEMPERATURE (AVERAGING SENSOR)
- EXHAUST AIR LEAVING WHEEL TEMPERATURE (AVERAGING SENSOR)
- OUTSIDE AIR ENTERING WHEEL TEMPERATURE (AVERAGING SENSOR)
- DIRTY PRE-FILTER STATUS (DIFFERENTIAL PRESSURE SWITCH)
- ZONE TEMPERATURE SENSOR
- COMPRESSOR 1 ENABLE
- COMPRESSOR 1 SPEED (1-5VDC)
- COMPRESSOR 2 ENABLE
- REVERSING VALVE
- HOT GAS RE-HEAT ENABLE
- HOT GAS RE-HEAT (0-10VDC)
- AUXILIARY HEAT STAGE(S)
- EXHAUST AIR MOTORIZED DAMPER (0-10VDC)
- OPEN AREA RETURN AIR MOTORIZED DAMPER (0-10VDC)
- OUTSIDE AIR MOTORIZED DAMPER (0-10VDC)
- BYPASS AIR MOTORIZED DAMPER (0-10VDC)

FC- 1
- SUPPLY FAN START/STOP
- SUPPLY FAN STATUS (DIFFERENTIAL PRESSURE SWITCH)
- SUPPLY AIR TEMPERATURE (DUCT PROBE)
- DIRTY PRE-FILTER STATUS (DIFFERENTIAL PRESSURE SWITCH)
- ZONE TEMPERATURE SENSOR
- COOL STAGE(S)
- REVERSING VALVE

EMERGENCY EVENT CONTROL
- EMERGENCY EVENT PUSHBUTTON (LATCHING PUSHBUTTON WITH KEYED RESET, DRY CONTACT) TO ENABLE BOTH ERV UNITS SIMULTANEOUSLY.

EMERGENCY GENERATOR AND TRANSFER SWITCH
- EMERGENCY GENERATOR STATUS (DRY CONTACT)
- TRANSFER SWITCH STATE "NORMAL POWER" / "EMERGENCY POWER" (DRY CONTACT)

MISCELLANEOUS MONITORING POINTS
- OUTSIDE AIR TEMPERATURE
- FIRE ALARM RELAY (DRY CONTACT)

CONTROL CONTRACTOR SHALL BE DIRECTLY ENGAGED WITH MECHANICAL SUB-CONTRACTOR (MECHANICAL SUB-CONTRACTOR TO HIRE AND PAY CONTROL CONTRACTOR) AND SHALL BE RESPONSIBLE TO PROVIDE ALL CONTROL WIRING, CONDUIT, AND PROGRAMMING TO ACCOMPLISH THE FOLLOWING SEQUENCE OF OPERATION AND TO CONNECT TO OWNERS CAMPUS CONTROL SYSTEM. PROVIDE ZONE SPACE TEMPERATURE SENSORS WITH PUSH BUTTON OCCUPIED OVERRIDE AND TEMPERATURE SET POINT ADJUSTMENT. ALL ADJUSTMENT RANGES TO BE CONTROLLED THROUGH DDC SYSTEM.

ERV-1 (REFER TO ERV-1 AIRFLOW SCHEMATIC THIS SHEET)
SCHEDULE (COORDINATE OCCUPIED AND UNOCCUPIED SCHEDULES WITH OWNER):
- DAMPER POSITION A (OCCUPIED): OPEN THE FOLLOWING DAMPERS: MD-1, MD-2, AND MD-3. CLOSE DAMPER MD-4. CYCLE CORRESPONDING OUTDOOR HEAT PUMP AND MODULATE HGRH COIL TO MAINTAIN OPEN AREA SPACE TEMPERATURE HEATING AND COOLING OCCUPIED SET POINTS AND TO MAINTAIN MAXIMUM LEAVING GRAINS (64 GRAINS) IN SUPPLY AIR FLOW FROM ERV.
- DAMPER POSITION B (UNOCCUPIED): OPEN THE FOLLOWING DAMPER: MD-4. CLOSE DAMPERS MD-1, MD-2, AND MD-3. ON CALL FOR COOLING/HEATING FROM OPEN AREA SPACE TEMPERATURE SENSOR ENABLE SUPPLY FAN. CYCLE CORRESPONDING OUTDOOR HEAT PUMP TO MAINTAIN OPEN AREA SPACE TEMPERATURE HEATING AND COOLING UNOCCUPIED SET POINTS. EXHAUST FAN DOES NOT RUN DURING UNOCCUPIED HOURS.
- EMERGENCY EVENT: PROVIDE MANUAL PUSH BUTTON W/KEYED RESET TO ENABLE SUPPLY FAN (4,975 CFM), EXHAUST FAN (4,975 CFM), OPEN THE FOLLOWING DAMPERS: MD-A, MD-B, MD-E, CLOSE DAMPER MD-D, AND ENABLE HEAT WHEEL DURING EMERGENCY EVENT.

ERV-2 (REFER TO ERV-2 AIRFLOW SCHEMATIC THIS SHEET)
SCHEDULE (COORDINATE OCCUPIED AND UNOCCUPIED SCHEDULES WITH DISTRICT):
- DAMPER POSITION A (OCCUPIED): OPEN THE FOLLOWING DAMPERS: MD-5, MD-7, AND MD-8. CLOSE DAMPER MD-6. CYCLE CORRESPONDING OUTDOOR HEAT PUMP AND MODULATE HGRH COIL TO MAINTAIN OPEN AREA SPACE TEMPERATURE HEATING AND COOLING OCCUPIED SET POINTS AND TO MAINTAIN MAXIMUM LEAVING GRAINS (64 GRAINS) IN SUPPLY AIR FLOW FROM ERV.
- DAMPER POSITION B (UNOCCUPIED): OPEN THE FOLLOWING DAMPER: MD-6. CLOSE DAMPERS MD-5, MD-7, AND MD-8. ON CALL FOR COOLING/HEATING FROM OPEN AREA SPACE TEMPERATURE SENSOR ENABLE SUPPLY FAN. CYCLE CORRESPONDING OUTDOOR HEAT PUMP TO MAINTAIN OPEN AREA SPACE TEMPERATURE HEATING AND COOLING UNOCCUPIED SET POINTS. EXHAUST FAN DOES NOT RUN DURING UNOCCUPIED HOURS.
- EMERGENCY EVENT: PROVIDE MANUAL PUSH BUTTON W/KEYED RESET TO ENABLE SUPPLY FAN (4,975 CFM), EXHAUST FAN (4,975 CFM), OPEN THE FOLLOWING DAMPERS: MD-A, MD-B, MD-E, CLOSE DAMPER MD-D, AND ENABLE HEAT WHEEL DURING EMERGENCY EVENT.

FC-1
OCCUPIED SCHEDULE (COORDINATE OCCUPIED SCHEDULE WITH OWNER):
- ENABLE SUPPLY FAN TO RUN DURING OCCUPIED HOURS. ON CALL FOR HEATING OR COOLING FROM SPACE TEMPERATURE SENSOR CYCLE CORRESPONDING OUTDOOR HEAT PUMP TO MAINTAIN SPACE TEMPERATURE OCCUPIED HEATING OR COOLING SET POINT.

UNOCCUPIED SCHEDULE (COORDINATE UNOCCUPIED SCHEDULE WITH DISTRICT):
- ON CALL FOR HEATING OR COOLING FROM SPACE TEMPERATURE SENSOR ENABLE SUPPLY FAN AND CYCLE CORRESPONDING OUTDOOR HEAT PUMP TO MAINTAIN SPACE TEMPERATURE UNOCCUPIED HEATING OR COOLING SET POINT.

EMERGENCY GENERATOR AND TRANSFER SWITCH:
- THE BAS WILL MONITOR A DRY CONTACT CLOSURE AT THE EMERGENCY GENERATOR AND TRANSFER SWITCH TO INDICATE "GENERATOR RUNNING" STATUS AND TRANSFER SWITCH STATE, "NORMAL POWER" OR "EMERGENCY POWER" FOR TRENDING AND ALARMING PURPOSES.

MISCELLANEOUS MONITORING POINTS:
- THE BAS WILL MONITOR AN OUTDOOR AIR TEMPERATURE SENSOR AND BROADCAST ITS VALUE TO ALL CONTROLLED EQUIPMENT.
- THE BAS WILL MONITOR A DRY CONTACT AT THE FIRE ALARM PANEL INDICATING A GENERAL FIRE ALARM.

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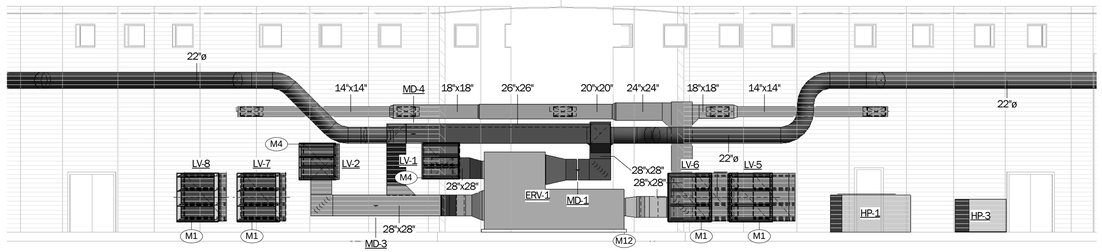
REVISIONS

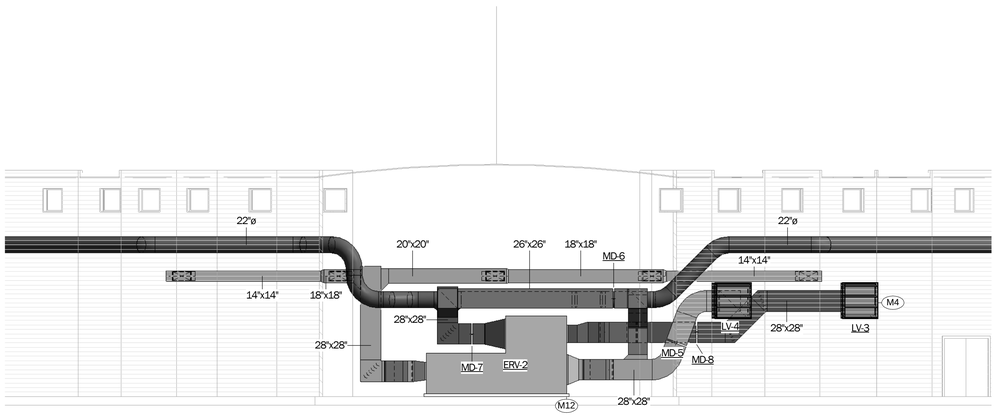
MECHANICAL SCHEMATICS

M2.1



1 / M3.1 MECHANICAL SECTION - WEST

ES² SCALE: 1/8" = 1'-0"



3 / M3.1 MECHANICAL SECTION - EAST

ES² SCALE: 1/8" = 1'-0"

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KEYNOTES

M1 LOCATE BOTTOM OF LOUVER MAX 16" (MIN 12") ABOVE FINISHED FLOOR.

M4 COORDINATE FINAL LOUVER LOCATION WITH ARCHITECT/GENERAL CONTRACTOR. MAINTAIN MINIMUM 10' HORIZONTAL SEPARATION BETWEEN OSA INTAKE AND EXHAUST FROM BUILDING.

M12 COORDINATE CONCRETE HOUSEKEEPING PAD WITH GENERAL CONTRACTOR.

GENERAL NOTES

A. REFER TO 1, 2, 3, 4/M5.1, SHEET M0.1, AND SPECIFICATIONS FOR DUCT REQUIREMENTS.
B. REFER TO ARCHITECTURAL/STRUCTURAL DRAWINS FOR LOUVER INSTALLATION REQUIREMENTS. COORDINATE ALL INSTALLATION DIMENSIONS WITH GENERAL CONTRACTOR.

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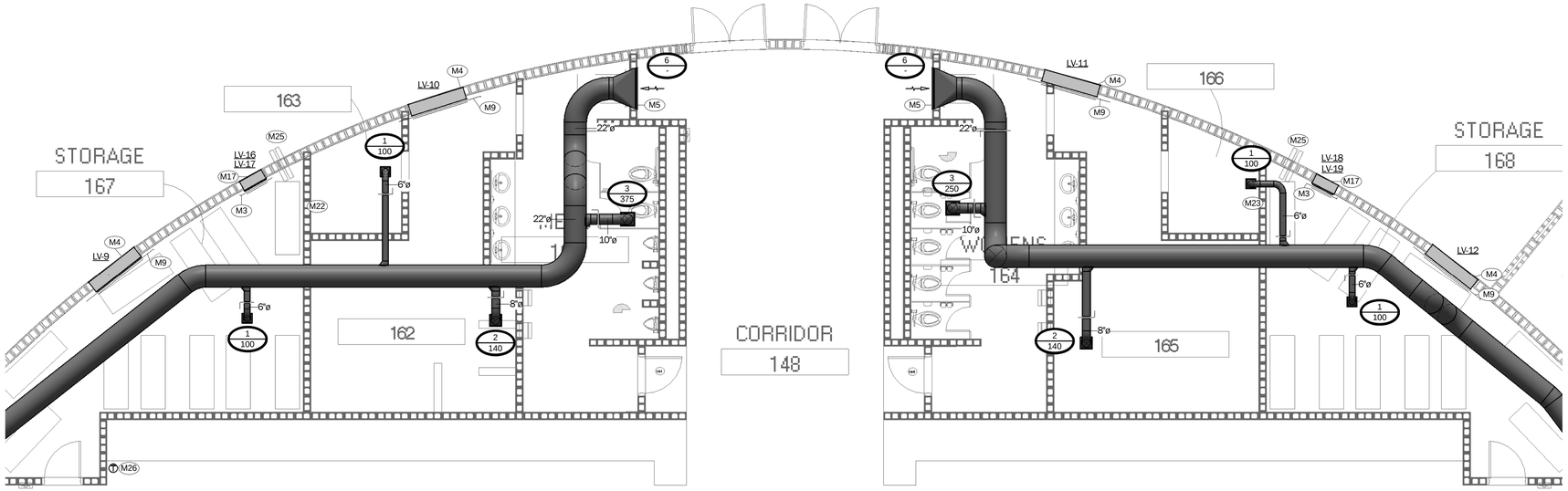
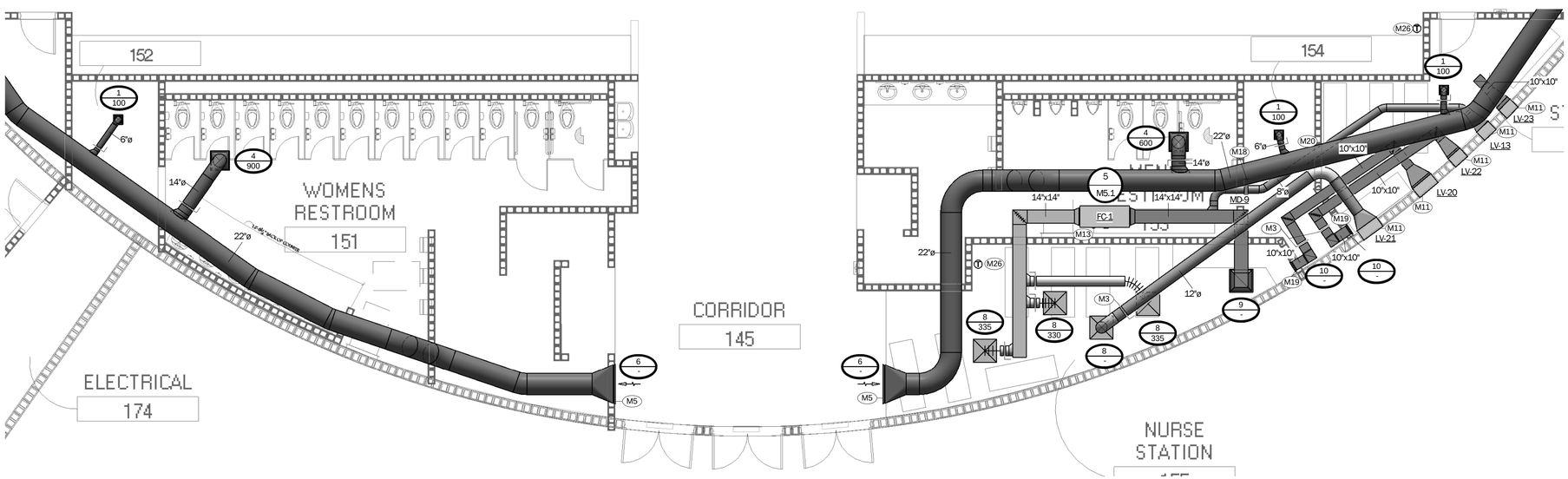
MECHANICAL SECTIONS

M3.1



ENLARGED MECHANICAL FLOOR PLAN SCALE: 3/16" = 1'-0"



ENLARGED MECHANICAL FLOOR PLAN SCALE: 3/16" = 1'-0"

KEYNOTES

M3 PROVIDE LOW-LEAK MANUAL DAMPER FOR NATURAL VENTILATION LOUVER(S).

M4 COORDINATE FINAL LOUVER LOCATION WITH ARCHITECT/GENERAL CONTRACTOR. MAINTAIN MINIMUM 10' HORIZONTAL SEPARATION BETWEEN OSA INTAKE AND EXHAUST FROM BUILDING.

M5 LOCATE AIR DEVICE ON PLATFORM ABOVE TOP OF WALL. COORDINATE FINAL LOCATION WITH ARCHITECT.

M9 PROVIDE LOW-LEAK MANUAL DAMPER FOR NATURAL VENTILATION LOUVER. PROVIDE REMOTE OPERATOR FOR DAMPER IN ACCESSIBLE LOCATION ON GROUND FLOOR. COORDINATE FINAL LOCATION WITH ARCHITECT.

M11 LOCATE LOUVER ABOVE ROOF LEVEL OF ADJACENT FUTURE CORRIDOR. COORDINATE FINAL LOCATION WITH ARCHITECT.

M13 LOCATE FAN COIL ABOVE CEILING.

M17 THERE ARE A TOTAL OF TWO LOUVERS AT THIS LOCATION. ONE HIGH AND ONE LOW. REFER TO LOUVER SCHEDULE FOR INDIVIDUAL LOUVER MOUNTING HEIGHTS.

M18 INTERLOCK MOTORIZED DAMPER TO OPEN WITH OPERATION OF FAN COIL.

M19 LOCATE TOP OF NATURAL VENTILATION GRILLE MAX 46" AFF. COORDINATE FINAL LOCATION WITH ARCHITECT.

M20 PROVIDE REMOTE OPERATOR (60" AFF) FOR LV-20, LV-21, LV-22, AND LV-23 IN THIS LOCATION.

M22 PROVIDE REMOTE OPERATOR (60" AFF) FOR LV-9 AND LV-10 IN THIS APPROXIMATE LOCATION. COORDINATE FINAL LOCATION WITH ARCHITECT.

M23 PROVIDE REMOTE OPERATOR (60" AFF) FOR LV-11 AND LV-12 IN THIS APPROXIMATE LOCATION. COORDINATE FINAL LOCATION WITH ARCHITECT.

M25 PROVIDE 4"Ã¯ SCHD 40 PVC SLEEVES BELOW SLAB AND STUB UP ABOVE CONCRETE SLAB W/ CAP INSIDE OF STRUCTURE. SLEEVES ARE FOR FUTURE USE. COORDINATE FINAL STUB LOCATION WITH GENERAL CONTRACTOR/ARCHITECT.

M26 COORDINATE FINAL THERMOSTAT LOCATION WITH ARCHITECT.

GENERAL NOTES

A. REFER TO 1, 2, 3, 4/M5.1, SHEET M0.1, AND SPECIFICATIONS FOR DUCT REQUIREMENTS.
B. REFER TO ARCHITECTURAL/STRUCTURAL DRAWINS FOR LOUVER INSTALLATION REQUIREMENTS. COORDINATE ALL INSTALLATION DIMENSIONS WITH GENERAL CONTRACTOR.

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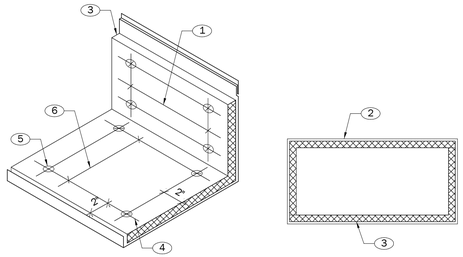
ENLARGED MECHANICAL PLANS - SAFE ROOM

M4.1



KEYNOTES:

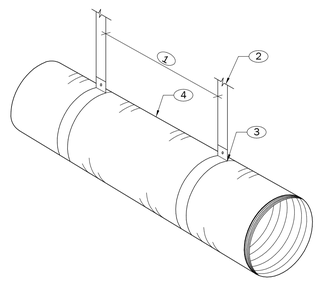
1. 12" O.C. MAX IN DIRECTION OF AIR FLOW. (IF DUCT IS FABRICATED ON AUTOMATED COIL LINE THIS DIMENSION MAY BE INCREASED TO 14" MAX)
2. SHEET METAL DUCT
3. DUCT LINER
4. NOT MORE THAN 2" FROM EDGE OF LINER
5. FASTENERS (TYPICAL)
6. 12" O.C. MAX (TYPICAL)

NOTES:

A. ALL TRANSVERSE AND LONGITUDINAL EDGES OF LINER TO BE COATED WITH ADHESIVE

3/M5.1 DUCT LINER

NO SCALE



KEYNOTES:

1. 2'-0" MAX
2. FOR UPPER ATTACHMENT SEE DUCT STRAP HANGER DETAIL
3. 1"x18" GAUGE BAND CLAMP
4. MAX. SAG 1/2"/FT. OF SUPPORT SPACING

4/M5.1 FLEXIBLE DUCT SUPPORT

NO SCALE

KEYNOTES CONT:

11. INSULATION
12. FLEX DUCT
13. RIGID ROUND DUCT OR DIFFUSER COLLAR

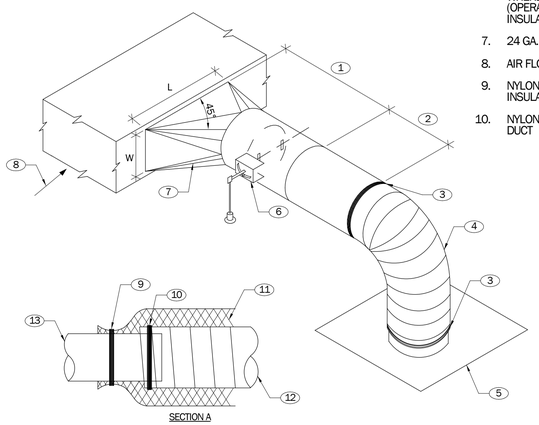
NOTES:

A. TAKE-OFFS SHOULD NOT BE INSTALLED CLOSER THAN TWO DUCT WIDTHS TO ELBOWS OR INTERSECTIONS

B. AREA OF LxW SHALL BE EQUAL TO 1.5 x AREA BRANCH DUCT

KEYNOTES:

1. 45° TAP AND DAMPER ASSEMBLY IS PRE MANUFACTURED-SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS. DO NOT FABRICATE IN SHOP OR FIELD
2. RIGID ROUND DUCT SEE PLANS FOR LENGTH. WRAP WITH EXTERNAL INSULATION WHERE REQUIRED
3. SEE SECTION A
4. INSULATED FLEX DUCT MAX LENGTH 8'-0"
5. CEILING DIFFUSER
6. LOCKING QUADRANT HANDLE OR REMOTE CEILING OPERATOR WHERE DAMPER INACCESSIBLE (OPERATE EXTENSION WHERE INSULATED)
7. 24 GA.
8. AIR FLOW
9. NYLON CLAMP OVER INSULATION
10. NYLON CLAMP OVER FLEX DUCT



1/M5.1 BRANCH DUCT AND GRILLE - ACCESS CEILIING

NO SCALE

KEYNOTES (CONT'D):

7. PIPE DRAIN FROM DRAIN PAN TO INDIRECT AT JANITOR SINK
8. PIPE PRIMARY AND OVERFLOW DRAIN CONNECTIONS FROM EQUIPMENT TO INDIRECT AT JANITOR SINK
9. DRAIN PAN 3" BEYOND EQUIPMENT HUNG FROM SUPPORT FRAMING AND MINIMUM 1/2" DEEP.

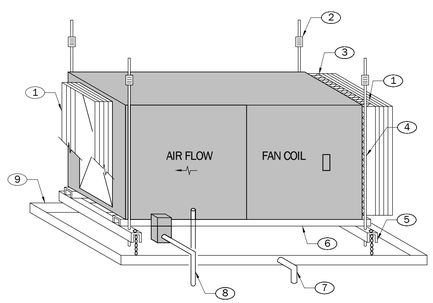
NOTES:

A. ALL CHANNELS FOR SUPPORT ARE 1 5/8 UNISTRUT P1000

B. DRAIN PAN TO BE CONSTRUCTED OF MIN. 24 GA. GALVANIZED SHEET METAL.

KEYNOTES:

1. FLEX CONNECTION
2. VIBRATION ISOLATOR (TYP)
3. FILTER FRAME EXTERNAL OF FURNACE
4. DO NOT BLOCK FILTER ACCESS FURNACE ACCESS DOORS WITH HANGER RODS
5. CHANNEL CROSS MEMBER SUPPORT TYP. OF 2
6. CHANNEL CONTINUOUS SUPPORT UNDER ENTIRE LENGTH OF FURNACE



5/M5.1 FAN COIL SUPPORT

NO SCALE

DIMENSION OF LONGEST SIDE (IN)	SHEET METAL GAGE (ALL FOUR SIDES)	TRANSVERSE REINFORCING (1)					
		MIN. REINFORCING ANGLE SIZE AND MAX. LONGITUDINAL SPACING BETWEEN TRANSVERSE JOINTS AND OR INTERMEDIATE REINFORCING	AT JOINTS				
			MIN. H. IN.	DRIVE SLIP / PLAIN S SLIP	HEMMED S SLIP	ALTER'NT BAR SLIP	REIN-FORCED BAR SLIP
				RECOMMENDED GAGE	RECOMMENDED GAGE	RECOMMENDED GAGE	RECOMMENDED GAGE
UP THRU 12	26	NONE REQUIRED	1	26	26	24	24
13 THRU 18	24	NONE REQUIRED	1	24	24	24	24
19 THRU 30	24	1"x1"x1/8" AT 60"	1	-	24	24	24
31 THRU 36	22	1"x1"x1/8" AT 60"	1	-	-	22	22

(1) TRANSVERSE REINFORCING SIZE IS DETERMINED BY DIMENSION OF SIDE TO WHICH ANGLE IS APPLIED
(2) LONGITUDINAL JOINTS TO BE PITTSBURGH OR SNAP LOCK TYPE

2/M5.1 DUCT CONSTRUCTION

NO SCALE

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MECHANICAL DETAILS

M5.1

FAN COIL (FC)

MARK	CFM	OSA	ESP	EAT (DW/WB)	MAX LAT DB/W	MIN HEATING (MBH)	ELECTRICAL VOLT/PHASE	ELECTRICAL MCA	ELECTRICAL MOP	MAX. DIMENSIONS H (IN)	MAX. DIMENSIONS D (IN)	MAX. DIMENSIONS W (IN)	MAX. DIMENSIONS WT (LBS)	MANUFACTURER & MODEL	NOTES
FC-2	11,000	N/A	0.75	78/64	55/54	100	460/3	17	30	60	93	130	2800	AAON M2-H	1,2
FC-3	11,000	N/A	0.75	78/64	55/54	100	460/3	17	30	60	93	130	2800	AAON M2-H	1,2

NOTES:
1. TRANE, CARRIER, YORK, AND AAON ARE APPROVED MANUFACTURERS. REFER TO MANUFATCTURER & MODEL FOR BASIS OF DESIGN.
2. HEATING CAPACITY AT 36°F OUTDOOR TEMPERATURE.

OUTDOOR HEAT PUMP (HP)

MARK	NOM COOLING (MBH)	MIN SEER	MIN EER	COOLING OSA (°F)	NOM HEATING (MBH)	MIN HSPF	MIN COP	HEATING OSA (°F)	ELECTRICAL VOLT/PHASE	ELECTRICAL MCA	ELECTRICAL MOP	MAX. DIMENSIONS H (IN)	MAX. DIMENSIONS D (IN)	MAX. DIMENSIONS W (IN)	MAX. DIMENSIONS WT (LBS)	MANUFACTURER & MODEL	NOTES
HP-4	408	N/A	11.1	95	408	8.5	3.1	36	460/3	77	100	59	78	105	2200	AAON CC-C	1,2
HP-5	408	N/A	11.1	95	408	8.5	3.1	36	460/3	77	100	59	78	105	2200	AAON CC-C	1,2

NOTES:
1. TRANE, CARRIER, YORK, AND AAON ARE APPROVED MANUFACTURERS. GOODMAN IS APPROVED FOR EQUIPMENT 5 TONS AND SMALLER. REFER TO MANUFACTURER & MODEL FOR BASIS OF DESIGN.
2. PROVIDE WITH MODULATING DIGITAL SCROLL COMPRESSOR, HOT-GAS REHEAT, SUCTION PRESSURE TRANSDUCER, MODULATING FAN PRESSURE CONTROL.

ENERGY RECOVERY VENTILATOR (ERV)

MARK	EXHAUST CFM	SUPPLY CFM	ESP SUPPLY	ESP EXHAUST	HEAT WHEEL WINTER EAT (DB/WB)	HEAT WHEEL WINTER LAT (DB/WB)	HEAT WHEEL SUMMER EAT (DB/WB)	HEAT WHEEL SUMMER LAT (DB/WB)	DX COOLING EAT (DB/WB)	DX COOLING LAT (DB/WB)	HGRH EAT (DB/WB)	HGRH LAT (DB/WB)	HEAT PUMP MIN SEN (MBH)	HEAT PUMP BACKUP (KW)	EXHAUST FAN (HP)	SUPPLY FAN (HP)	UNIT ELECTRICAL MCA	UNIT ELECTRICAL MOP	UNIT ELECTRICAL VOLT/PH	BACK UP HEAT ELECTRICAL FLA	BACK UP HEAT ELECTRICAL MOP	BACK UP HEAT ELECTRICAL VOLT/PH	MAX DIMENSIONS H(IN)	MAX DIMENSIONS L(IN)	MAX DIMENSIONS W(IN)	MAX DIMENSIONS WT(LBS)	MANUFACTURER MODEL	NOTES
ERV-1	4,975	4,975	0.75	0.75	30/29	58/48	94/79	81/69	81/69	59/56	59/56	75/65	183	28	7.5	7.5	25.3	40	460/3	33.7	45	460/3	104	148	70	3700	AAON-M2	1,2,3,4
ERV-2	4,975	4,975	0.75	0.75	30/29	58/48	94/79	81/69	81/69	59/56	59/56	75/65	183	28	7.5	7.5	25.3	40	460/3	33.7	45	460/3	104	148	70	3700	AAON-M2	1,2,3,4

NOTES:
1. UNIT REQUIRES TWO SEPARATE ELECTRICAL CONNECTIONS. FANS AND HEATWHEEL MOTOR TO BE CONNECTED TO EMERGENCY POWER. BACKUP ELECTRIC HEAT NOT REQUIRED TO BE CONNECTED TO EMERGENCY POWER.
2. INDOOR RETURN TEMPERATURES: SUMMER (DB/WB) 75/64; WINTER (DB/WB) 72/56.
3. PROVIDE WITH SUPPLY AIR TEMPERATURE SENSOR (FIELD INSTALLED), OUTSIDE TEMPERATURE SENSOR, HOT-GAS REHEAT COIL, INTEGRAL FILTER RACK WITH MERV 8 FILTER, AND SUCTION PRESSURE TRANSDUCER, TERMINAL STRIP FOR CONTROL THROUGH BAS, SUPPLY AND EXHAUST FAN VFD'S.
4. SHIP UNIT IN SECTIONS TO FIT THROUGH DOOR FOR FIELD ASSEMBLY.

ALL EQUIPMENT SELECTED AT SITE ELEVATION (95") UNLESS NOTED OTHERWISE.

AIR DEVICE

AIR DEVICE # — CFM

MARK	TYPE & DUTY	FACE SIZE	NECK SIZE	CEILING* TYPE	MAX. CFM	MAX. T.P. (IN WC)	N.C. LEVEL MAX.	MANUFACTURER & MODEL	NOTES
1	PERFORATED EXHAUST	10"x10"	8"x8"	SURFACE	190	0.12	10	TITUS 8F	1,2
2	PERFORATED EXHAUST	12"x12"	10"x10"	SURFACE	300	0.12	10	TITUS 8F	1,2
3	PERFORATED EXHAUST	12"x12	14"x14"	SURFACE	440	0.12	11	TITUS 8F	1,2
4	PERFORATED EXHAUST	20"x20"	18"x18"	SURFACE	1290	0.12	16	TITUS 8F	1,2
5	SUPPLY	26"x14"	24"x12"	N/A	1,000	0.10	25	TITUS 300R	1,2
6	TRANSFER	42"x24"	40"x22"	N/A	2,200	0.04	15	TITUS 355R	1,2
8	RADIAL BLADE DIFFUSER	24"x24"	10"Ø	SURFACE	330	0 .14	27	AIR DIFFUSION PRODUCTS, INC-DNR	1,2
9	PERFORATED RETURN	24"x24"	22"x22"	GRID	1200	0.05	17	TITUS PXP	1,2
10	SUPPLY	12"x12"	10"x10"	N/A	-	-	-	TITUS 300R	1,2

* VERIFY FRAME TYPE OF ALL AIR DEVICES WITH ARCHITECTURAL REFLECTED CEILING PLAN BEFORE ORDERING

NOTES:
1. COLOR BY ARCHITECT.
2. TITUS, PRICE, AIR DIFFUSION PRODUCTS, AND KRUEGER ARE APPROVED MANUFACTURERS. REFER TO MANUFACTURER & MODEL FOR BASIS OF DESIGN.
3. PROVIDE WITH MINIMUM 9.98 SQFT FREE AREA.

LOUVER SCHEDULE (LV)

MARK	CFM	VELOCITY (FPM)	MIN. FREE AREA (SQ. FT.)	DIMENSIONS WIDTH (IN)	DIMENSIONS HEIGHT (IN)	MANUFACTURER & MODEL	NOTES
LV-1	5,000	1,000	5.0	48	48	GREENHECK FSG-801 AND EVH-602	1,2
LV-2	5,000	1,000	5.0	48	48	GREENHECK FSG-801 AND EVH-602	1,2
LV-3	5,000	1,000	5.0	48	48	GREENHECK FSG-801 AND EVH-602	1,2
LV-4	5,000	1,000	5.0	48	48	GREENHECK FSG-801 AND EVH-602	1,2
LV-5	-	-	9.98	56	64	GREENHECK FSG-801 AND EVH-602	1,2,3
LV-6	-	-	9.98	56	64	GREENHECK FSG-801 AND EVH-602	1,2,3
LV-7	-	-	9.98	56	64	GREENHECK FSG-801 AND EVH-602	1,2,3
LV-8	-	-	9.98	56	64	GREENHECK FSG-801 AND EVH-602	1,2,3
LV-9	-	-	9.98	56	64	GREENHECK FSG-801 AND EVH-602	1,2,3
LV-10	-	-	9.98	56	64	GREENHECK FSG-801 AND EVH-602	1,2,3
LV-11	-	-	9.98	56	64	GREENHECK FSG-801 AND EVH-602	1,2,3
LV-12	-	-	9.98	56	64	GREENHECK FSG-801 AND EVH-602	1,2,3
LV-13	150	800	0.19	16	24	GREENHECK FSG-801 AND EVH-602	1,2,4
LV-14	-	1,100	5.0	56	64	GREENHECK FSG-801 AND EVH-602	1,2,4
LV-15	-	1,100	5.0	56	64	GREENHECK FSG-801 AND EVH-602	1,2,4
LV-16	-	-	0.84	24	24	GREENHECK FSG-801 AND EVH-602	1,2,4,5
LV-17	-	-	0.84	24	24	GREENHECK FSG-801 AND EVH-602	1,2,4,6
LV-18	-	-	0.84	24	24	GREENHECK FSG-801 AND EVH-602	1,2,4,5
LV-19	-	-	0.84	24	24	GREENHECK FSG-801 AND EVH-602	1,2,4,6
LV-20	-	-	0.76	24	24	GREENHECK FSG-801 AND EVH-602	1,2,3
LV-21	-	-	0.76	24	24	GREENHECK FSG-801 AND EVH-602	1,2,3
LV-22	-	-	0.45	16	24	GREENHECK FSG-801 AND EVH-602	1,2,3
LV-23	-	-	0.45	16	24	GREENHECK FSG-801 AND EVH-602	1,2,3
LV-24	-	-	5.6	60	30	GREENHECK ESU-150	7
LV-25	-	-	5.6	60	30	GREENHECK ESU-150	7
LV-26	-	-	5.6	60	30	GREENHECK ESU-150	7
LV-27	-	-	5.6	60	30	GREENHECK ESU-150	7

NOTES:
1. GREENHECK, RUSKIN, POTTORF, AND METAL AIRE ARE APPROVED MANUFACTURERS MEETING FEMA 361 AND ICC 500 . REFER TO MANUFACTURER & MODEL FOR BASIS OF DESIGN.
2. COLOR BY ARCHITECT. SELECTED FROM STD COLOR CHART.
3. LOUVER MARK DESIGNATES A COMBINATION OF A FLUSH MOUNT WITH JAMB FLANGES AND DEEP SLEEVE FEMA 361 GRILLE, WALL SLEEVE, DRAINABLE LOUVER, BIRDSCREEN, AND DAMPER WITH MANUAL OPERATOR. INSTALL AND FACTORY SEAL EVH-602X IN DEEP SLEEVE.
4. LOUVER MARK DESIGNATES A COMBINATION OF A FLUSH MOUNT WITH JAMB FLANGES AND DEEP SLEEVE FEMA 361 GRILLE, WALL SLEEVE, DRAINABLE LOUVER, AND BIRDSCREEN. INSTALL AND FACTORY SEAL EVH-602X IN DEEP SLEEVE.
5. INSTALL SO THAT BOTTOM OF LOUVER IS LOCATED MINIMUM 72" ABOVE FINISHED FLOOR PER ICC 500. COORDINATE FINAL LOCATION WITH ARCHITECT.
6. INSTALL SO THAT TOP OF LOUVER IS LOCATED MAXIMUM 54" ABOVE FINISHED FLOOR PER ICC 500. COORDINATE FINAL LOCATION WITH ARCITECT (MIN 50% AREA OF LOUVER TO BE BELOW 46" AFF).
7. GREENHECK, RUSKIN, POTTORFF AND METALAIRE ARE APPROVED MANUFACTURERS. REFER TO MANUFACTURER & MODEL FOR BASIS OF DESIGN.

MOTORIZED DAMPER SCHEDULE (MD)

MARK	DIMENSIONS (IN) WIDTH	DIMENSIONS (IN) HEIGHT	VOLTAGE	MANUFACTURER & MODEL	NOTES
MD-1	28	28	24V	RUSKIN CD60	1,2,3
MD-2	26	26	24V	RUSKIN CD60	1,2,3
MD-3	28	28	24V	RUSKIN CD60	1,2,3
MD-4	26	26	24V	RUSKIN CD60	1,2,3
MD-5	26	26	24V	RUSKIN CD60	1,2,3
MD-6	26	26	24V	RUSKIN CD60	1,2,3
MD-7	28	28	24V	RUSKIN CD60	1,2,3
MD-8	28	28	24V	RUSKIN CD60	1,2,3
MD-9	8"Ø	-	24V	RUSKIN CDRS25	1,2,3

NOTES:
1. FINAL DIMENSIONS TO BE COORDINATED WITH DUCT DIMENSION AFTER COORDINATION WITH ALL TRADES AND FIELD CONDITIONS.
2. PROVIDE WITH BELIMO ACTUATOR, POWER CLOSE - SPRING OPEN AIRFOIL BLADE.
3. DAMPER AND ACTUATOR TO BE PROVIDED BY CONTROL CONTRACTOR.

NATURAL VENTILATION IS PROVIDED PER ICC 500 TABLE 703.1 VENTING AREA REQUIREMENTS FOR HURRICANE SHELTERS AND PER 703.1.3 LOCATION OF VENTILATION OPENINGS. REFER TO SHEET M0.1 FOR CALCULATIONS

PER ICC 500 SECTION 310.1, ALL CONTRACTORS SHALL CONFIRM WITH STRUCTURAL ENGINEER FOR ANY OPENING THAT IS REQUIRED IN THE WALLS FOR MEP ITEMS.

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LICENSED
PROFESSIONAL ENGINEER

ISSUED: 15 OCT 2013

CITY OF EDINBURG
SAFE ROOM - SOUTH PARK SITE
315 E. PALM DRIVE
EDINBURG, TX

100% 10/15/2013

REVISIONS

MECHANICAL SCHEDULES

M6.1

GENERAL NOTES

A. INSTALL ALL ELECTRICAL SYSTEMS IN ACCORDANCE WITH 2012 INTERNATIONAL BUILDING CODE, 2009 INTERNATIONAL ENERGY CONSERVATION CODE, 2008 FEMA P-361 REQUIREMENTS, 2008 ICC 500 REQUIREMENTS, AND 2011 NATIONAL ELECTRIC CODE.
B. CLOSELY COORDINATE ALL ELECTRICAL SYSTEMS WITH MECHANICAL, PLUMBING, STRUCTURAL, AND ARCHITECTURAL SYSTEMS. CONDUIT/CABLE ROUTING IS APPROXIMATE AND DIAGRAMMATIC AND SHALL NOT BE SCALED. PROVIDE ALTERNATE ROUTING FOR COORDINATION OF ALL WORK WITHOUT ADDITIONAL COST TO OWNER.
C. FIELD VERIFY ALL ASPECTS OF ELECTRICAL SYSTEMS PRIOR TO COMMENCING WORK. DO NOT INSTALL ANY ELECTRICAL COMPONENTS BEFORE VERIFYING DIMENSIONS AND ROUTING WITH BUILDING CONDITIONS.
D. COORDINATE ALL POWER AND CONTROL REQUIREMENTS OF SYSTEMS PROVIDED BY OTHERS (HVAC EQUIPMENT, KITCHEN EQUIPMENT, ETC.). E.C. SHALL BE RESPONSIBLE FOR ALL LINE VOLTAGE CONNECTIONS.
E. INSTALL ALL ELECTRICAL EQUIPMENT, LIGHTING, DEVICES, ETC. PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE ONE YEAR PARTS AND LABOR WARRANTY ON ALL ELECTRICAL INSTALLATION.
F. PROVIDE MINIMUM WORKING CLEARANCES PER NEC.
G. E.C. SHALL BE RESPONSIBLE FOR APPLYING FOR, OBTAINING, AND PAYING ALL FEES FOR ALL REQUIRED PERMITS AND INSPECTIONS ASSOCIATED WITH THE ELECTRICAL SYSTEMS.
H. E.C. SHALL BE RESPONSIBLE FOR ALL CONCRETE PADS, SUPPORTS, BASES, ETC. THAT ARE REQUIRED FOR ELECTRICAL EQUIPMENT.
I. MAINTAIN 18" (MINIMUM) CLEARANCE BETWEEN LINE VOLTAGE CIRCUITING AND ALL LOW VOLTAGE, SIGNAL BUS, TELEPHONE, DATA, TELEVISION, SATELLITE, ETC. CABLING. INTERSECTIONS BETWEEN LINE VOLTAGE CIRCUITS AND LOW VOLTAGE CABLE SHALL BE AT 90 DEGREE ANGLES.
J. CONCEAL ALL ELECTRICAL CONDUITS, RACEWAYS, AND CABLING IN WALLS, ABOVE CEILINGS, OR BELOW FLOORS. IF CONCEALED RACEWAYS ARE NOT POSSIBLE AND SURFACE RACEWAYS ARE REQUIRED, IT SHALL BE APPROVED BY AND COORDINATED WITH ARCHITECT/ENGINEER PRIOR TO COMMENCING WITH ANY WORK.
K. PROVIDE SEISMIC RESTRAINTS FOR REQUIRED ELECTRICAL EQUIPMENT, RACEWAYS, LIGHT FIXTURES, ETC. IN ACCORDANCE WITH 2006 IBC AS FOLLOWS: SEISMIC DESIGN CATEGORY D, SITE CLASS D, SEISMIC USE GROUP 1, SHORY PERIOD DESIGN SPECTRAL RESPONSE ACCELERATION COEFFICIENT SDS=0.49, ONE SECOND PERIOD DESIGN SPECTRAL RESPONSE ACCELERATION COEFFICIENT SD1=0.25, AND IMPORTANCE FACTOR 1.0.
L. PROVIDE ELECTRICAL CONNECTIONS TO FIRE AND FIRE/SMOKE DAMPERS WHERE REQUIRED. PROVIDE FIRE SAFING (FIRE CAULK, PUTTY PADS, ETC.) ON ALL PENETRATIONS IN AND THROUGH FIRE RATED SEPARATIONS WITH UL LISTED FIRE SAFING MATERIAL.
M. LOCATIONS OF POWER CONNECTIONS ARE PARTIALLY DIAGRAMMATIC. COORDINATE FINAL LOCATION WITH ARCHITECTURAL DRAWINGS AND ACTUAL FIELD CONDITIONS.
N. COORDINATE WITH MECHANICAL DUCT WORK AND STRUCTURAL MEMBERS FOR BEST LOCATION OF FIXTURES TO PROVIDE MAXIMUM UNOBSTRUCTED LIGHTING.
O. LOCATIONS OF LIGHTING OUTLETS AND RECEPTACLES IS PARTIALLY DIAGRAMMATIC. COORDINATE FINAL LOCATIONS WITH FIELD CONDITIONS.
P. COORDINATE WORK IN EXTERIOR WALLS TO MINIMIZE INTERRUPTION OF INFILTRATION/VAPOR BARRIER SEAL AROUND ALL PENETRATIONS.
Q. LOCATIONS OF RECEPTACLE ARE PARTIALLY DIAGRAMMATIC. INSTALL RECEPTACLES IN ACCORDANCE WITH PART III OF NEC ARTICLE 210 AS WELL AS ALL STATE, AND LOCAL CODES.

ADDITIONAL ELECTRICAL NOTES

1. CODES: ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE, AS WELL AS ALL APPLICABLE STATE AND LOCAL CODES AND ORDINANCES.
2. COMPLETE INSTALLATION: PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, ACCESSORIES, ETC., NECESSARY TO ACCOMPLISH A COMPLETE ELECTRICAL SYSTEM IN ACCORDANCE WITH THE PLANS TOGETHER WITH THE SPECIFICATIONS.
3. GROUNDING: GROUND ALL EQUIPMENT AND SYSTEM NEUTRAL IN ACCORDANCE WITH ARTICLE 250 OF THE NEC. A SEPARATE GROUND CONDUCTOR SHALL BE PULLED WITH ALL BRANCH EQUIPMENT AND FEEDER CIRCUITS.
4. CIRCUITING: ALL WIRING SHALL BE IN CONDUIT, CONCEALED EXCEPT WHERE NOTED. EMT WITH STEEL FITTINGS MAY BE USED IN DRY PROTECTED INTERIOR LOCATIONS. PVC SCHEDULE 40 SHALL BE USED BELOW GRADE AT MINIMUM -24 INCHES. WRAPPED RIGID ELBOWS AND RISERS SHALL BE USED FOR ALL THROUGH-GRADE TRANSITIONS AND STUB-UPS. GRC OR IMC CONDUIT WITH THREADED FITTINGS SHALL BE USED IN ALL LOCATIONS WHERE EXPOSED TO THE ELEMENTS OR SUBJECT TO PHYSICAL DAMAGE. NM AND ENT ARE NOT ALLOWED. CONNECT RECESSED AND SUSPENDED LIGHT FIXTURES, MOTORIZED AND VIBRATING EQUIPMENT WITH STEEL FLEX.
5. WIRING: WIRE SHALL BE COPPER AND INSULATION SHALL BE THHN UNLESS OTHERWISE INDICATED. MINIMUM SIZE SHALL BE #12.
6. EXISTING CONDITIONS: CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH ALL EXISTING AND PROPOSED CONDITIONS WHICH MAY AFFECT THE COURSE OF WORK PRIOR TO SUBMITTING A BID ON THIS PROJECT. EXTRAS WILL NOT BE ALLOWED FOR FAILURE TO COMPLY WITH THIS REQUIREMENT.
7. PERMITS: OBTAIN AND PAY FOR ALL BUILDING AND WORK PERMITS AND INSPECTION FEES REQUIRED FOR THIS PROJECT.
8. UTILITY SERVICE: PROVIDE POWER AND COMMUNICATIONS SYSTEM SERVICES IN ACCORDANCE WITH THE REQUIREMENTS OF THE SERVICING UTILITIES. PROVIDE EXCAVATION, RACEWAY STRUCTURES, GROUNDING, ETC. AS DIRECTED, IN ACCORDANCE WITH UTILITY STANDARDS. CONTACT SERVING UTILITIES AND OBTAIN THEIR REQUIREMENTS PRIOR TO BID. (UTILITY SERVICE AND LINE EXTENSIONS CHARGES PAID BY OTHERS.)
9. TEMPORARY CONSTRUCTION POWER: PROVIDE TEMPORARY ELECTRICAL POWER AND LIGHTING FOR ALL TRADES THAT REQUIRE SERVICE DURING THE COURSE OF THIS PROJECT. PROVIDE TEMPORARY SERVICE AND DISTRIBUTION AS REQUIRED. COMPLY WITH THE NEC AND OSHA REQUIREMENTS. (ENERGY COSTS BY GENERAL CONTRACTOR.)
10. FUSES AND CIRCUIT BREAKERS: FUSES AND CIRCUIT BREAKERS SHALL BE SIZED PER ACTUAL NAME PLATE OF EQUIPMENT SERVED. FUSES SHALL BE DUAL-ELEMENT FAST BLOW TYPE.
11. EQUIPMENT STANDARDS: ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND OF THE HIGHEST QUALITY AVAILABLE ('SPECIFICATION GRADE'). LIGHTING FIXTURES SHALL HAVE ACRYLIC LENSES AND CLASS 'P' BALLASTS WITH A BALLAST FACTOR OF 1.1 OR HIGHER. SERVICE EQUIPMENT SHALL BE FACTORY-ASSEMBLED COMMERCIAL GRADE, CONFIGURED PER SERVING UTILITY STANDARDS. WIRING DEVICES SHALL BE SPECIFICATION GRADE WITH NYLON PLATES, IVORY UNLESS NOTED. RAISED STEEL BOX COVERS MAY BE USED IN UTILITY AREAS.
12. GUARANTEE: THE COMPLETE ELECTRICAL SYSTEM, AND ALL PORTIONS, THEREOF, SHALL BE GUARANTEED TO BE FREE FROM DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR FROM FINAL ACCEPTANCE. PROMPTLY REMEDY SUCH DEFECTS AND ANY SUBSEQUENT DAMAGE CAUSED BY THE DEFECTS OR REPAIR THEREOF AT NO EXPENSE TO THE OWNER. LAMPS ARE EXEMPT FROM THIS GUARANTEE, BUT SHALL BE NEW AND UNUSED AT THE TIME OF ACCEPTANCE.
13. SUBMITTALS: SUBMIT EIGHT COPIES OF FACTORY SHOP DRAWINGS FOR ALL LIGHTING FIXTURES, SWITCH GEAR, PANELS, MOTOR CONTROL, WIRING DEVICES, ETC. PROPOSED FOR THIS PROJECT. PROPOSED SUBSTITUTIONS SHALL BE EQUAL OR SUPERIOR TO SPECIFIED ITEMS IN ALL RESPECTS. DETERMINATION OF EQUALITY RESTS SOLELY WITH THE ENGINEER. ALL PROPOSED SUBSTITUTIONS SHALL BE RECEIVED BY THE ENGINEER 10 DAYS PRIOR TO BID.
14. LOCATIONS: INDICATED LOCATIONS OF ALL OUTLETS AND EQUIPMENT ARE SUBJECT TO CHANGE. SHIFT/RELOCATE/RECONFIGURE ANY OUTLET, EQUIPMENT, OR CONNECTION POINT UP TO 10 FEET AS DIRECTED BY THE ENGINEER, AT NO ADDED COST.
15. IDENTIFICATION: IDENTIFY ALL EQUIPMENT, SWITCHBOARD CIRCUITS, AND ELECTRICALLY-CONNECTED EQUIPMENT WITH ENGRAVED NAMEPLATES. PANEL DIRECTORIES SHALL BE TYPED.
16. PANEL BOARDS: PANEL BOARDS SHALL HAVE LOCKING COVERS.
17. ALL ELECTRICAL, ALARM, TELECOM, COMPUTER, ETC. WIRING WITHIN RETURN AIR (R/A) PLENUMS AND OTHER AIR HANDLING SPACES SHALL BE RATED FOR USE PLENUMS.

SAFE ROOM SCOPE OF WORK

A. SCOPE OF WORK FOR SAFE ROOM (SR) PORTION OF THE DOME PORTION OF THIS PROJECT IS ALL THE WORK THAT IS REQUIRED BY FEMA FOR A SAFE ROOM SHELTER. THIS WORK INCLUDES ALL EMERGENCY LIGHTING, LOW VOLTAGE LIGHTING CONTROLS, ELECTRICAL SERVICE EQUIPMENT, ELECTRICAL EMERGENCY AND STANDBY POWER EQUIPMENT (GENERATOR, TRANSFER SWITCHES, PANELS, TRANSFORMERS, ETC.). THIS WORK ALSO INCLUDES ELECTRICAL CONNECTIONS FOR POWER OF HVAC EQUIPMENT, SOME RECEPTACLES AND SOME TELECOMMUNICATIONS JACKS.
B. ELECTRICAL WORK TO BE DONE THAT IS NOT PART OF THE SAFE ROOM PORTION OF THE PROJECT IS SHOWN ON THE DOME FINISH (DF) DRAWINGS. E.C. TO COORDINATE ALL ELECTRICAL WORK WITH G.C. WORK THAT WILL EFFECT (DF) WORK.

ADDITIONAL SAFE ROOM SCOPE OF WORK

A. SR E.C. IS TO PROVIDE ALL UNDERGROUND CONDUIT AND ANY CONDUITS IN DOME SHELL WITH PULL LINES STUBBED AND CAPPED THAT IS FOR DF DRAWINGS. SR E.C. TO COORDINATE THIS WORK WITH D.F. DRAWINGS AND G.C. DF E.C. WILL PROVIDE ALL ELECTRICAL CONNECTIONS, CABLING, ETC EXCEPT FOR UNDERGROUN CONDUIT AND CONDUIT IN SCHELL WITH PULL LINE. ALL ELECTRICAL ITEMS THAT ARE LABELED FOR DF DRAWINGS ON THE SR DRAWINGS ARE FOR REFERENCE ONLY AND ARE TO AID SR E.C. WITH UNDERGROUND AND SHELL CONDUILT PLACEMENT. SR E.C. IS RESPONSIBLE FOR OBTAINING A SET OF DF DRAWINGS TO VERIFY THAT ALL UNDERGROUND CONDUIT FOR DF IS ROUTED.

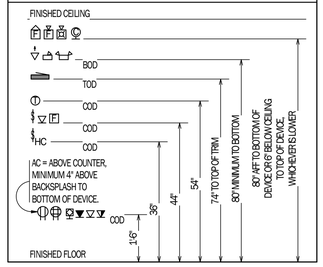
STANDARD ABBREVIATIONS

EC	ELECTRICAL CONTRACTOR
MC	MECHANICAL CONTRACTOR
GC	GENERAL CONTRACTOR
C	CONDUIT
CU	COPPER
GND	GROUND
BOD	BOTTOM OF DEVICE
COD	CENTER OF DEVICE
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
BLG	BELOW GRADE
AC	ABOVE COUNTER, 4" ABOVE BACK SPLASH
NL	NIGHT LIGHT
a,b,c etc	SWITCH DESIGNATION
UG	UNDERGROUND
WP	WEATHERPROOF
BN1L-2,4,6	CIRCUIT DESIGNATION, PANEL BOARD BN1L, CIRCUITS 2,4,6
1/E5.2	INDICATES DETAIL 1 ON SHEET E5.2
#	SHEET WORK NOTE

CIRCUITING

	HOME RUN TO PANEL. NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS.
	CONDUIT OR CABLING CONCEALED IN CEILING OR WALL
	CONDUIT OR CABLING CONCEALED UNDER FLOOR OR UNDERGROUND
P	UNDERGROUND PRIMARY POWER SERVICE
T	UNDERGROUND PRIMARY TELEPHONE SERVICE
CATV	UNDERGROUND PRIMARY CABLE SERVICE
	CIRCUIT, NUMBER OF HASH MARKS INDICATES NUMBER OF CONDUCTORS IN CABLE/RACEWAY. GROUND WIRE NOT SHOWN BUT SHALL BE INCLUDED. NO HASH MARKS INDICATES 2 CONDUCTORS PLUS GROUND.

INTERIOR BOX MOUNTING HEIGHTS



ELECTRICAL SYMBOLS LEGEND

ELECTRICAL LIGHTING SYMBOLS

	1X4 LAY-IN FIXTURE
	2X2 LAY-IN FIXTURE
	2X4 LAY-IN FIXTURE
	HATCHING INDICATES PARABOLIC FIXTURE
	SURFACE/PENDANT MOUNT FLUORESCENT FIXTURE
	WALL MOUNT FLUORESCENT FIXTURE
	UNDER CABINET LIGHTING
	SURFACE/PENDANT MOUNT FIXTURE
	RECESSED CEILING FIXTURE
	WALL MOUNT FIXTURE
	SHADING INDICATES HID FIXTURE
	DIRECTIONAL CEILING FIXTURE
	DIRECTIONAL GROUND FIXTURE
	2 HEAD EMERGENCY FIXTURE
	EMERGENCY REMOTE HEAD FIXTURE
	CEILING MOUNT EXIT FIXTURE
	WALL MOUNT EXIT FIXTURE
	LIGHT & EXHAUST FAN COMBO
	POLE MOUNT FIXTURE
	SQUARE POLE MOUNT FIXTURE
	LIGHT BOLLARD
	LIGHT SCENE CONTROLLER
	INFRA RED MOTION SENSOR
PC	PHOTOCELL
PC	WALL MOUNT PHOTOCELL
PS	PHOTO SENSOR
OS	OCCUPANCY SENSOR
P	POWER PACK
	WALL SWITCH 3 THREE WAY 4 FOUR WAY K KEY OPERATED C CALL IN P PILOT LIGHT WP WEATHERPROOF OS OCCUPANCY SENSOR D DIMMER MC SPDT- MOMENTARY CONTACT LV LOW VOLTAGE T TIMER #B CONTROL STATION # FOR BUTTON COUNT
	HATCHING INDICATES EMERGENCY/ BATTERY FIXTURE (TYPICAL FOR ALL FIXTURES & SYMBOLS)

ELECTRICAL POWER SYMBOLS

	208V OUTLET
	DUPLEX OUTLET
	DOUBLE DUPLEX OUTLET
	QUAD ISOLATED GROUND OUTLET
	ISOLATED GROUND OUTLET
	GFCI OUTLET
	SPLIT WIRED (SWITCHED) OUTLET
	POWER OUTLET
	SIMPLEX OUTLET
	208V FLOOR OUTLET
	DUPLEX FLOOR OUTLET
	DOUBLE DUPLEX FLOOR OUTLET
	CEILING OUTLET
	SPECIAL CONNECTION
	FLOOR SPECIAL CONNECTION
	WALL SPECIAL CONNECTION
	NEW PANELBOARD, FLUSH MOUNT
	NEW PANELBOARD, SURFACE MOUNT
	NEW POWER DISTRIBUTION SWITCHBOARD
	EXISTING PANELBOARD, FLUSH MOUNT
	EXISTING PANELBOARD, SURFACE MOUNT
J	FLOOR MOUNT J-BOX
J	FLUSH MOUNT J-BOX
J	WALL MOUNT J-BOX
T	THERMOSTAT
T	TRANSFORMER
	DRY TRANSFORMER
	PAD MOUNT TRANSFORMER
	METER (PLAN VIEW)
	MOTOR CONTROL
VFD	VARIABLE FREQUENCY DRIVE
PP	POWER POLE
	PUSH BUTTON
	EMERGENCY BUTTON
	COMBO STARTER
	CONTACTOR
	DISCONNECT SWITCH
	CIRCUIT BREAKER
	FUSE
	FUSEABLE SAFETY SWITCH
DS	DOOR SWITCH
MAG	MAGNETIC DOOR SWITCH
M	MOTOR CONTROL SWITCH
	MOTOR CONNECT

COMMUNICATION SYMBOLS

	DATA JACK
	DATA JACK IN FLOOR
	TELEPHONE JACK
	TELEPHONE JACK IN FLOOR
	DATA/TELEPHONE JACK
	DATA/TELEPHONE JACK IN FLOOR
S	SPEAKER OUTLET
S	SPEAKER OUTLET WALL MOUNT
	MICROPHONE OUTLET
	CABLE JACK
I	INTERCOM
B	ADDRESSABLE BELL
S	ADDRESSABLE SPEAKER
	BELL
	BUZZER
S	SECURITY SYSTEM STROBE
KP	SECURITY SYSTEM KEY PAD
MD	SECURITY SYSTEM MOTION DETECTOR

FIRE ALARM SYMBOLS

F	FIRE ALARM BELL
F	FIRE ALARM HORN
F	FIRE ALARM HORN/STROBE
F	FIRE ALARM STROBE
CO	CARBON MONOXIDE DETECTOR
SD	DUCT SMOKE DETECTOR
HD	HEAT DETECTOR
HD	HEAT DETECTOR WALL MOUNT
SD	SMOKE DETECTOR
SD	SMOKE DETECTOR WALL MOUNT
FSD	FIRE/SMOKE DAMPER
M	MAGNETIC DOOR HOLDER
F	FIREMAN PULL
	FIREMAN PHONE
FACP	FIRE ALARM CONTROL PANEL
PS	FIRE/SPRINKLER PRESSURE SWITCH
TS	FIRE/SPRINKLER TAMPER SWITCH
TS	REMOTE TEST SWITCH
FARA	FIRE ALARM REMOTE ACCESS
FS	FLOW SWITCH
FF	FIRE FLY

NOT ALL SYMBOLS MAY BE USED

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E1.1	ELECTRICAL LIGHTING PLAN - SAFE ROOM LEVEL 1		
E1.2	ELECTRICAL LIGHTING PLAN - SAFE ROOM LEVEL 2		
E2.1	ELECTRICAL POWER PLAN - SAFE ROOM		
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E5.1	ELECTRICAL DETAILS - SAFE ROOM		
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E7.1	ELECTRICAL CODE COMPLIANCE - SAFE ROOM		

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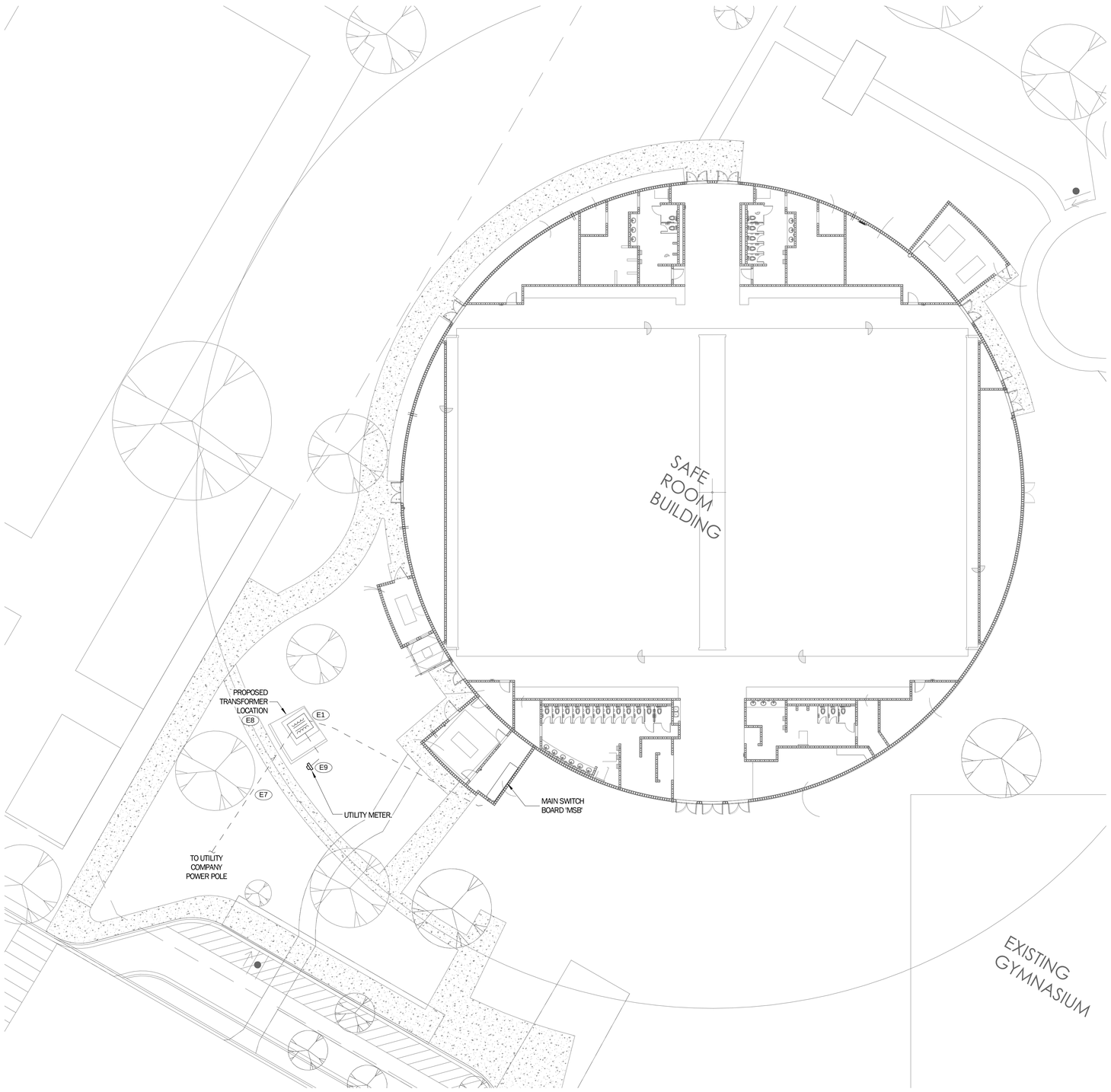
GENERAL NOTES, SHEET INDEX AND SYMBOLS - SAFE ROOM

E0.1



ELECTRICAL SITE PLAN SCALE: 1/16" = 1'-0"

KEYNOTES

E1 MAINTAIN WORKING CLEARANCES AROUND UTILITY COMPANY PROVIDED TRANSFORMER IN ACCORDANCE WITH UTILITY REQUIREMENTS (10-FT IN FRONT OF PRIMARY CABLE COMPARTMENT, AND 3-FT ON OTHER THREE SIDES). PROVIDE AND INSTALL ALL REQUIRED SECONDARY-SIDE CONDUITS CONDUCTORS AND METERING PER UTILITY COMPANY REQUIREMENTS. COORDINATE PRIMARY SIDE INSTALLATION WITH POWER COMPANY. COORDINATE FINAL ROUTING, LOCATION, TRANSFORMER, PAD DIMENSIONS AND ANY REQUIRED BOLLARD PROTECTION W/ UTILITY COMPANY.

E7 PROVIDE AND INSTALL ALL REQUIRED PRIMARY SIDE TRENCHING INFRASTRUCTURE AND BACKFILL AS WELL AS SECONDARY SIDE CONDUITS, CONDUCTORS AND METERING PER UTILITY COMPANY REQUIREMENTS. COORDINATE FINAL ROUTING, SIZE AND QUANTITY W/ UTILITY REPRESENTATIVE. SEE ALSO RISER DIAGRAM DETAIL ON 1/E5.1 AND GENERAL NOTE A, THIS SHEET.

E8 ENSURE TRANSFORMER LOCATION IS ACCESSIBLE TO AEP PERSONNEL AND SERVICE VEHICLES. MINIMUM EASEMENT WIDTH FOR PRIMARY RUN IS 10'. MINIMUM EASEMENT WIDTH FOR TRANSFORMER PAD IS 15'. PROVIDE AEP WITH SURVEYED EASEMENT AREA PRIOR TO CONSTRUCTION.

E9 INSTALL AEP FURNISHED METER SOCKET AND METER CABLE. FURNISH AND INSTALL FRAME FOR METER SOCKET AS PER AEP SPECIFICATIONS, RIGID CONDUIT FROM METER SOCKET TO METERING TRANSFORMER, NO. 6 BONDING CONDUCTOR IN CONDUIT WITH METER CABLE, AND ALL OTHER REQUIRED MATERIAL INCLUDING TRENCH AND BACKFILL. SEE ALSO RISER DIAGRAM DETAIL ON 1/E5.1.

GENERAL NOTES

A. EC SHALL BE RESPONSIBLE FOR COORDINATION WITH ALL UTILITY COMPANIES REGARDING DELINEATION OF SCOPE OF WORK FOR SERVICES INTO BUILDING (I.E. WHAT IS PROVIDED BY UTILITY VS. WHAT IS PROVIDED BY E.C.) AND SHALL MAKE ALLOWANCES IN BASE BID FOR ALL REQUIREMENTS.
B. UNDERGROUND WIRING IS PARTIALLY DIAGRAMMATIC AND SHOWN FOR CLARITY IN SCOPE OF WORK. COORDINATE FOR JOINT TRENCHING WHERE APPLICABLE AND WITH SITE/CIVIL DRAWINGS. ALL ACTUAL TRENCHING AND PROJECT WIRING SHALL FALL WITHIN PROJECT BOUNDARIES.
C. PROVIDE DEDICATED NEUTRAL (GROUNDED) CONDUCTOR FOR ALL BRANCH CIRCUITS. NO ULTI-WIRE BRANCH CIRCUITS ARE ALLOWED.
D. WHERE CIRCUIT CONDUCTORS HAVE BEEN OVERSIZED TO ACCOUNT FOR VOLTAGE DROP, EXTEND HOME RUN SIZE AS INDICATED THROUGH LIGHTING CONTROL CABINET THEN TO PANEL INDICATED. FOR 20A CIRCUITS, SPLICE #12 CU ONTO FEEDER FOR TERMINATION AT BREAKER/CONTACTOR AS NECESSARY. SPLICE CONDUCTORS ONLY IN PANEL, 12" MAXIMUM LENGTH.

ADDITIONAL NOTES

1. THESE PLANS HAVE BEEN PREPARED WITHOUT ANY OFFICAL UTILITY COMPANY COMMITMENTS. FINAL COORDINATION, APPLICATIONS, PERMITS, AND FEES ASSOCIATED WITH POWER, TELEPHONE AND CABLE UTILITY SERVICES SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. EC SHALL MAKE ALLOWANCES IN BASE BID FOR ALL REQUIRED UTILITY COMPANY WORK.
2. IN ACCORDANCE WITH TEXAS STATE LAW AND PRIOR TO BEGINING ANY UNDERGROUND SITE ELECTRICAL WORK, EC SHALL BE RESPONSIBLE FOR REQUESTING AN UNDERGROUND LINE LOCATE AT LEAST TWO DAYS IN ADVANCE. CONTACT TEXAS811, GEOREMOTE OR DIAL 811.

UTILITY COMPANY CONTACT INFORMATION

POWER COMPANY: AMERICAN ELECTRIC POWER (AEP)
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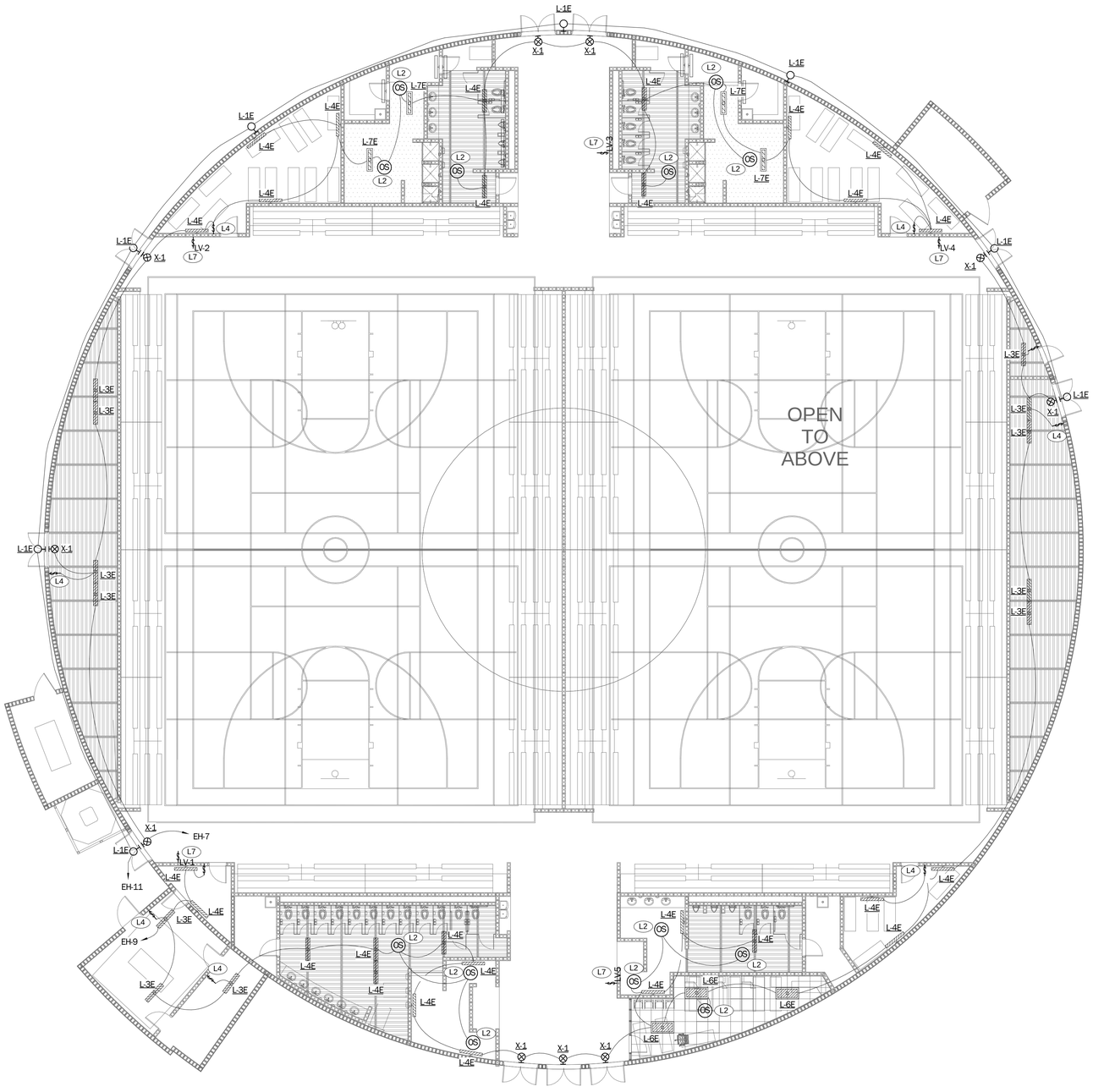
ELECTRICAL SITE PLAN - SAFE ROOM

E1.0



ELECTRICAL LIGHTING PLAN - SAFE ROOM LEVEL 1 SCALE: 3/32" = 1'-0"

KEYNOTES

L2 FOR ROOM/AREA LIGHTING CONTROL, PROVIDE DUAL-TECHNOLOGY CEILING MOUNTED OCCUPANCY SENSOR, GREENGATE #OAC-DT-500(-1000,-2000) OR EQUAL (PROVIDE CORRECT SENSOR FOR ROOM SIZE BASED ON MANUFACTURER'S RECOMMENDATIONS). PROVIDE AND INSTALL SPARE SWITCHPACK TO CONTROL EMERGENCY LIGHTING (INSTALLED BY OTHERS DURING 'SAFE ROOM' PROJECT. PROVIDE 1/2"C W/(3) #18 CU (BLACK, RED, BLUE) BETWEEN MULTIPLE SENSORS CONTROLLING A COMMON AREA. SEE OCCUPANCY SENSOR DETAIL, SHEET E5.2A.

L4 LOCATE LIGHT SWITCH ADJACENT TO LIGHT SWITCH INSTALLED IN 'DOME FINISH' PROJECT.

L7 LOW VOLTAGE OVERRIDE SWITCH FOR CODE (IECC 2009) REQUIRING AUTOMATIC LIGHTING SHUTOFF AND LIGHTING CONTROL. FOR EACH LOW VOLTAGE SWITCH PROVIDE 4-SQUARE BOX W/SINGLE GANG MUDRING (AT STANDARD SWITCH HEIGHT) AND (1) 3/4" C ROUTED TO LIGHTING CONTROL PANEL. COORDINATE EXACT LOCATIONS AND NUMBER OF LV SWITCHES W/OWNER. SEE LIGHTING CONTROL SCHEDULE FOR ADDITIONAL INFORMATION. SEE GENERAL NOTE, THIS SHEET.

GENERAL NOTES

A. PROVIDE AND INSTALL ALL IN-WALL AND UNDER-GROUND CONDUIT REQUIRED FOR LIGHTING CIRCUITS THAT ARE TO BE INSTALLED DURING 'DOME-FINISH' PHASE OF THE PROJECT. COORDINATE 'DOME-FINISH' CONDUIT REQUIREMENTS WITH GC.
B. LOWER CASE LETTERS ON OR NEAR LIGHT FIXTURES INDICATE CONTROLLING SWITCHES. SWITCH LEGS AND TRAVELERS MAY NOT ALWAYS BE SHOWN.
C. PROVIDE DEDICATED NEUTRAL (GROUNDED) CONDUCTOR FOR ALL LIGHTING CIRCUITS. NO MULTI-WIRE BRANCH CIRCUITS ARE ALLOWED.
D. CONNECT EMERGENCY/EXIT FIXTURES TO UN-SWITCHED HOT PORTION OF CIRCUIT INDICATED. PROVIDE ADDITIONAL CONDUCTORS AS REQUIRED. PROVIDE ALL REQUIRED CONDUCTORS WHICH MAY NOT ALWAYS BE SHOWN.
E. ALL INTERIOR LIGHTING SHALL BE CONTROLLED IN ACCORDANCE WITH IECC 2009 MANDATORY REQUIRMENTS.
F. ROUTE ALL LIGHTING CIRCUITS INDICATED THROUGH LIGHTING CONTROL PANEL 'LCP'. SEE LIGHTING CONTROL SCHEDULE, SHEET E6.3 FOR DETAILS.
G. POSITION OCCUPANCY SENSORS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS SO AS TO HAVE THE BEST VIEW OF ENTIRE COVERAGE AREA WHILE MINIMIZING THE POSSIBILITY OF FALSE ALARMS.
H. FOR OCCUPANCY SENSORS, PROVIDE BACK BOX OF SUFFICIENT SIZE TO INSTALL ASSOCIATED SWITCH (POWER) PACK WHERE REQUIRED. PROVIDE SEPARATIONS OF CLASS 1 AND CLASS 2 WIRING PER NEC. COORDINATE WITH MANUFACTURER'S LITERATURE FOR LINE AND LOW VOLTAGE WIRING AT ALL LIGHTING CONTROL DEVICES. FOR COMMON OCCUPANCY SENSOR THAT CONTROLS MULTIPLE CIRCUITS IN ROOM/AREA, EACH CIRCUIT NEEDS A SWITCH PACK. SEE TYPICAL OCCUPANCY SENSOR DETAIL 2/E5.2.
I. ALL LIGHTING CONTROL COMPONENTS INCLUDING LIGHTING CONTROL PANEL ('LCP') AND LOW VOLTAGE SWITCHES ('LV') SHALL BE CONNECTED IN A "DAISY CHAIN" CONFIGURATION WITH A DEDICATED CANbus NETWORK USING (1) COOPER #LCCP OR BELDEN #1502P CABLE. LIGHTING CONTROL NETWORK SHALL BE DISTINGUISHED FROM OTHER LOW-VOLTAGE AND TELECOM WIRING.
J. ALL RECESSED LIGHT FIXTURES LOCATED IN FIRE RATED CEILINGS SHALL BE ENCLOSED WITH A 1-HOUR RATED GYP BOX ABOVE THE CEILING AND ANY NECESSARY FIRE BLOCKING IN ORDER TO MAINTAIN RATING OF CEILING ASSEMBLY. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR LOCATIONS OF RATED ASSEMBLIES AND W/ GC FOR LOCATIONS OF FIRE BLOCKING AND GYP BOXES REQUIRED.
K. SEE TYPICAL RECESSED LIGHT FIXTURE INSTALLATION DETAIL 4/E5.2 FOR INSTALLING LAY-IN LIGHTS.
L. POSITION EMERGENCY LIGHT FIXTURES IN ACCORDANCE W/ MANUFACTURER'S RECOMMENDATIONS TO ENSURE THAT 1-FOOT CANDLE IS MAINTAINED ALONG ALL MEANS OF EGRESS PATHS.
M. PENDANT MOUNTED LIGHT FIXTURES SHALL BE HUNG WITH AIRCRAFT CABLE HANGERS OR JACK-CHAIN. PROVIDE ADDITIONAL SUPPORTS, CONDUITS, CONDUCTORS, ETC. TO PENDANT MOUNT LIGHT FIXTURES BELOW DUCTWORK, PIPING, ETC. LOCATE PENDANT MOUNT FIXTURES APPROXIMATELY 5-FT BELOW DOME STRUCTURE. . COORDINATE EXACT ELEVATION WITH ARCHITECT.
N. LIGHTS ARE POSITIONED AND CONTROLLED SO THAT A MINIMUM AVERAGE 10 FC OF LIGHT ARE AVAILABLE TO ALL OCCUPIED AREAS.
O. ALL WIRING IN PLENUM CEILINGS SHALL BE PLENUM RATED.

ADDITIONAL NOTES

A. ALL LIGHT FIXTURES SHOWN ON THIS SHEET ARE EMERGENCY FIXTURES AND ARE ON EMERGENCY POWER. ADDITIONAL NONEMERGENCY LIGHTS ARE SHOWN ON DOME FINISH (DF) DRAWINGS AND ARE NOT ON STANDBY OR EMERGENCY POWER. SEE SAFE ROOM SCOPE OF WORK NOTES A AND B ON E0.1 SHEET.

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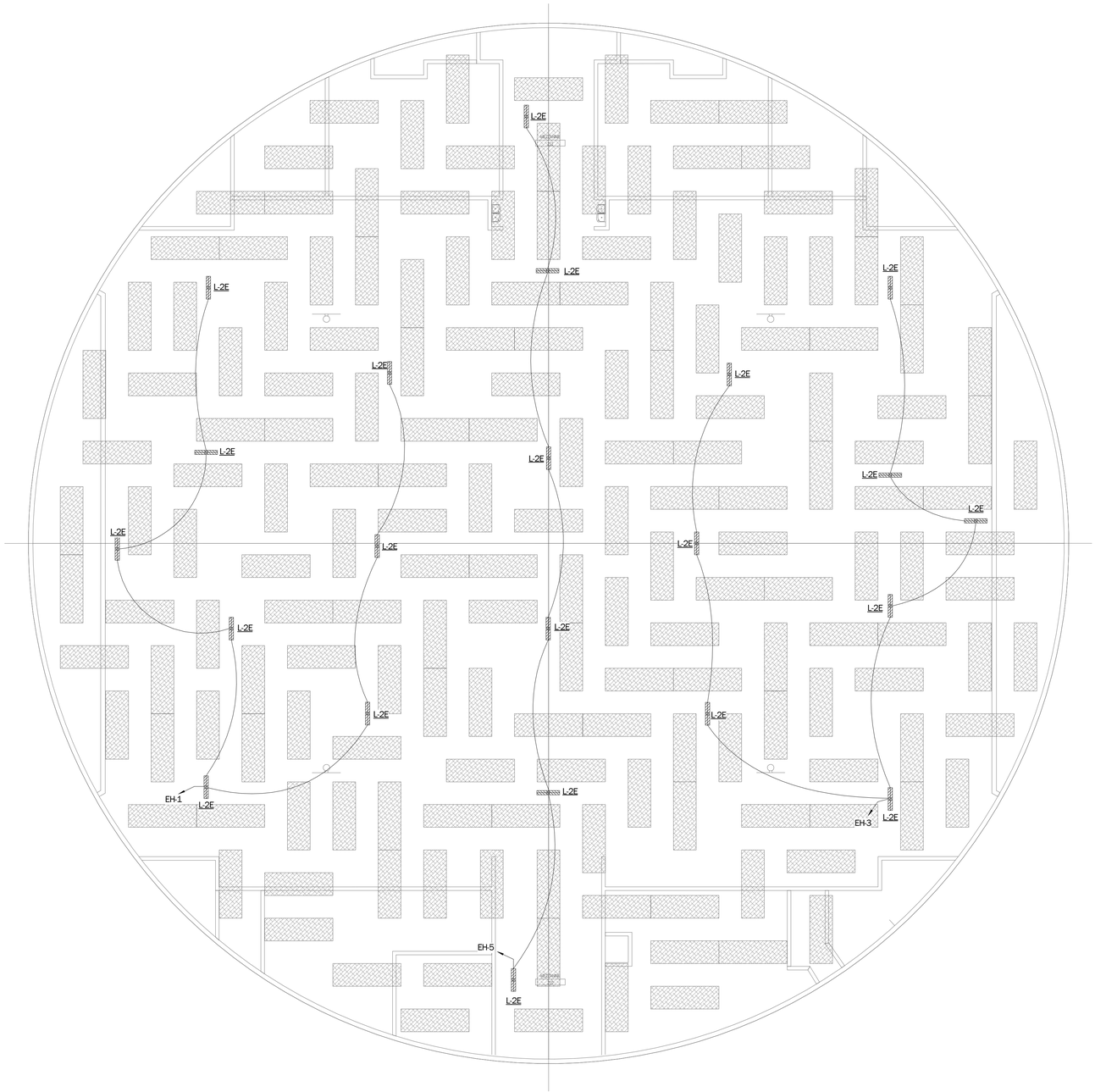
SR

ELECTRICAL LIGHTING PLAN - SAFE ROOM LEVEL 1

E1.1



ELECTRICAL LIGHTING PLAN - SAFE ROOM LEVEL 2 SCALE: 3/32" = 1'-0"

GENERAL NOTES

A. PROVIDE AND INSTALL ALL IN-WALL AND UNDER-GROUND CONDUIT REQUIRED FOR LIGHTING CIRCUITS THAT ARE TO BE INSTALLED DURING 'DOME-FINISH' PHASE OF THE PROJECT. COORDINATE 'DOME-FINISH' CONDUIT REQUIREMENTS WITH GC.
B. LOWER CASE LETTERS ON OR NEAR LIGHT FIXTURES INDICATE CONTROLLING SWITCHES. SWITCH LEGS AND TRAVELERS MAY NOT ALWAYS BE SHOWN.
C. PROVIDE DEDICATED NEUTRAL (GROUNDED) CONDUCTOR FOR ALL LIGHTING CIRCUITS. NO MULTI-WIRE BRANCH CIRCUITS ARE ALLOWED.
D. CONNECT EMERGENCY/EXIT/NIGHT LIGHT FIXTURES TO UN-SWITCHED HOT PORTION OF CIRCUIT INDICATED. PROVIDE ADDITIONAL CONDUCTORS AS REQUIRED. PROVIDE ALL REQUIRED CONDUCTORS WHICH MAY NOT ALWAYS BE SHOWN.
E. ALL INTERIOR LIGHTING SHALL BE CONTROLLED IN ACCORDANCE WITH IECC 2009 MANDATORY REQUIRMENTS.
F. ROUTE ALL LIGHTING CIRCUITS INDICATED THROUGH LIGHTING CONTROL PANEL 'LCP' AND LOW VOLTAGE SWITCHES. SEE LIGHTING CONTROL SCHEDULE FOR DETAILS.
G. ALL LIGHTING CONTROL COMPONENTS INCLUDING LIGHTING CONTROL PANEL ('LCP') AND LOW VOLTAGE SWITCHES ('LV') SHALL BE CONNECTED IN A "DAISY CHAIN" CONFIGURATION WITH A DEDICATED CANbus NETWORK USING (1) COOPER #LCCP OR BELDEN #1502P CABLE. LIGHTING CONTROL NETWORK SHALL BE DISTINGUISHED FROM OTHER LOW-VOLTAGE AND TELECOM WIRING.
H. POSITION EMERGENCY LIGHT FIXTURES IN ACCORDANCE W/ MANUFACTURER'S RECOMMENDATIONS TO ENSURE THAT 1-FOOT CANDLE IS MAINTAINED ALONG ALL MEANS OF EGRESS PATHS.
I. PENDANT MOUNTED LIGHT FIXTURES SHALL BE HUNG WITH AIRCRAFT CABLE HANGERS OR JACK-CHAIN. PROVIDE ADDITIONAL SUPPORTS, CONDUITS, CONDUCTORS, ETC. TO PENDANT MOUNT LIGHT FIXTURES BELOW DUCTWORK, PIPING, ETC. LOCATE PENDANT MOUNT FIXTURES APPROXIMATELY 5-FT BELOW DOME STRUCTURE. . COORDINATE EXACT ELEVATION WITH ARCHITECT.
J. LIGHTS ARE POSITIONED AND CONTROLLED SO THAT A MINIMUM AVERAGE 10 FC OF LIGHT ARE AVAILABLE TO ALL OCCUPIED AREAS.

ADDITIONAL NOTES

A. ALL LIGHT FIXTURES SHOWN ON THIS SHEET ARE EMERGENCY FIXTURES AND ARE ON EMERGENCY POWER. ADDITIONAL NONEMERGENCY LIGHTS ARE SHOWN ON DOME FINISH (DF) DRAWINGS AND ARE NOT ON STANDBY OR EMERGENCY POWER. SEE SAFE ROOM SCOPE OF WORK NOTES A AND B ON E0.1 SHEET.

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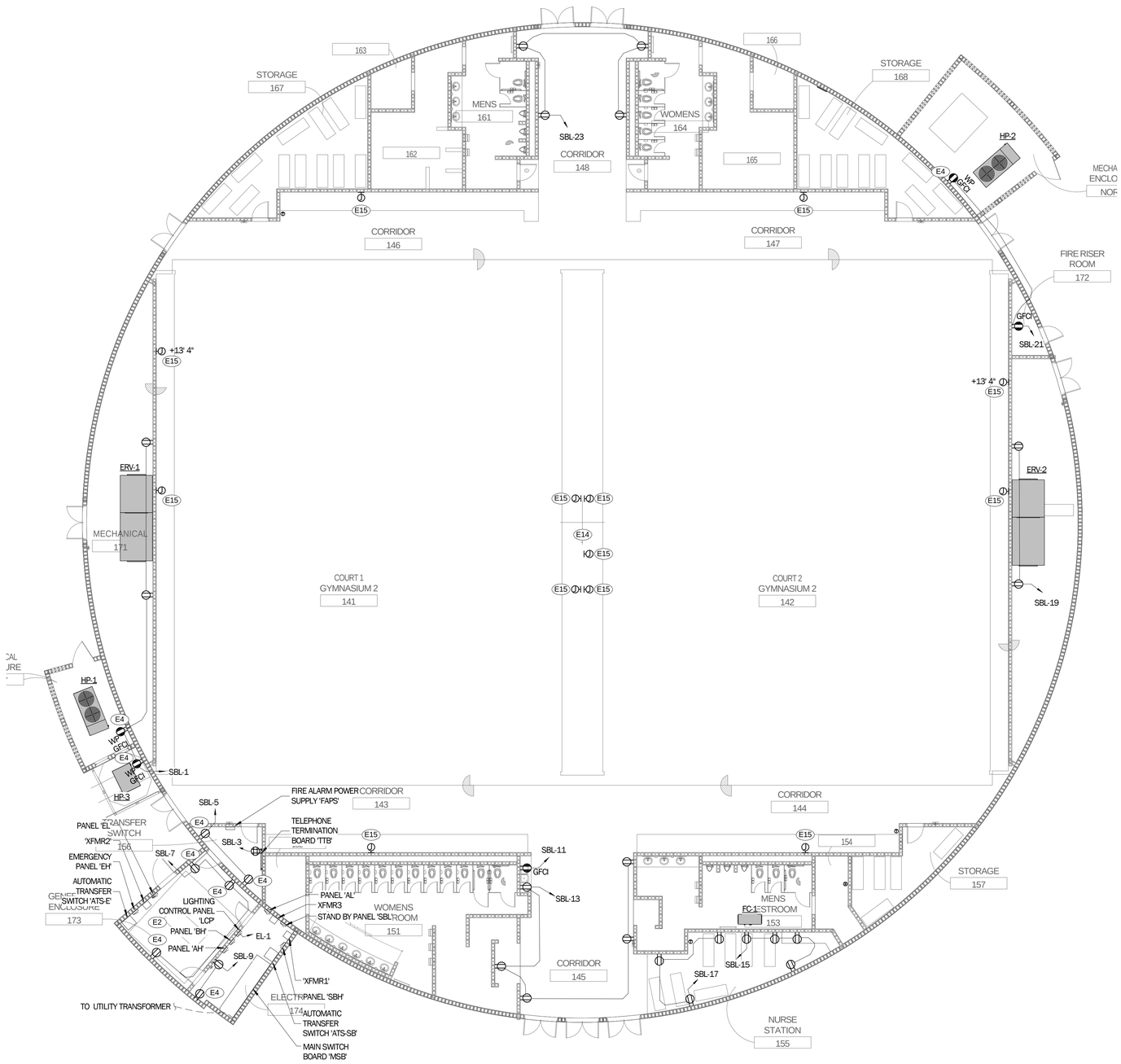
ELECTRICAL LIGHTING PLAN - SAFE ROOM LEVEL 2

E1.2



ELECTRICAL POWER PLAN - SAFE ROOM LEVEL 1 SCALE: 3/32" = 1'-0"

KEYNOTES

E1 MAINTAIN WORKING CLEARANCES AROUND UTILITY COMPANY PROVIDED TRANSFORMER IN ACCORDANCE WITH UTILITY REQUIREMENTS (10-FT IN FRONT OF PRIMARY CABLE COMPARTMENT, AND 3-FT ON OTHER THREE SIDES). PROVIDE AND INSTALL ALL REQUIRED SECONDARY-SIDE CONDUITS CONDUCTORS AND METERING PER UTILITY COMPANY REQUIREMENTS. COORDINATE PRIMARY SIDE INSTALLATION WITH POWER COMPANY. COORDINATE FINAL ROUTING, LOCATION, TRANSFORMER, PAD DIMENSIONS AND ANY REQUIRED BOLLARD PROTECTION W/ UTILITY COMPANY.

E2 PROVIDE ALL REQUIRED POWER AND CONTROL CONNECTIONS FOR COMPLETE EMERGENCY/STAND-BY GENERATOR OPERATION. COORDINATE EXACT LOCATION FOR UNDERGROUND CONDUIT STUB-UP LOCATIONS WITH FINAL GENERATOR MANUFACTURER CUT SHEET INFORMATION.

E4 SURFACE MOUNT RECEPTACLE TO AVOID PENETRATIONS IN EXTERIOR WALL.

E14 SR E.C. TO PROVIDE UNDERGROUND CONDUIT W/ PULL LINE STUBBED AND CAPPED AT STEEL STRUCTURE. THE CONDUIT IS FOR THE (4) ELECTRIC BASKETBALL WINCH MOTORS, (2) ELECTRONIC SCOREBOARDS, AND PROJECTOR. SEE ADDITIONAL SAFE ROOM SCOPE OF WORK NOTE A.

E15 ELECTRICAL DEVICE SHOWN ON SR DRAWINGS IS FOR REFERENCE ONLY. ELECTRICAL DEVICE IS PART OF DF E.C. SCOPE OF WORK AND IS SHOWN ON SR DRAWINGS TO AID SR E.C. IN PLACING UNDERGROUND CONDUIT WITH PULL LINE STUBBED AND CAPPED FOR DEVICE. SR E.C. IS RESPONSIBLE FOR PROVIDING ALL UNDERGROUND CONDUITS FOR ALL DF ELECTRICAL DEVICES. SEE ADDITIONAL SAFE ROOM SCOPE OF WORK NOTE A.

GENERAL NOTES:

A. PROVIDE AND INSTALL ALL IN-WALL AND UNDER-GROUND CONDUIT REQUIRED FOR POWER CIRCUITS THAT ARE TO BE INSTALLED DURING 'DOME-FINISH' PHASE OF THE PROJECT. COORDINATE 'DOME-FINISH' CONDUIT REQUIREMENTS WITH GC.
B. PROVIDE DEDICATED NEUTRAL (GROUNDED) CONDUCTOR FOR ALL BRANCH CIRCUITS. NO MULTI-WIRE BRANCH CIRCUITS ARE ALLOWED. DO NOT INSTALL MORE THAN THREE BRANCH CIRCUITS/HOMERUNS PER RACEWAY.
C. COORDINATE LOCATION OF CONDUITS THROUGH FLOOR FRAMING WITH OTHER TRADES (FIRE SPRINKLER, PLUMBING, ETC.) FOR NEAREST AND MOST DIRECT ROUTING.
D. LOCATIONS OF RECEPTACLES ARE PARTIALLY DIAGRAMMATIC. INSTALL RECEPTACLES IN ACCORDANCE WITH PART 3 OF NEC ARTICLE 210 AS WELL AS ALL STATE AND LOCAL CODES.
E. DIMENSIONS OF ELECTRICAL GEAR AND ELECTRICAL ROOM LAYOUTS ARE PARTIALLY DIAGRAMMATIC AND ARE ESTIMATED FROM MANUFACTURER'S LITERATURE. EC SHALL COORDINATE ROOM LAYOUT FOR ACTUAL EQUIPMENT INSTALLED AND MAINTAIN WORKING CLEARANCES IN ACCORDANCE WITH NEC, STATE, AND LOCAL CODES AND AMENDMENTS.
F. REFER TO ARCHITECTURAL DRAWINGS, DETAILS, AND ELEVATIONS FOR FINAL LOCATIONS, MOUNTING HEIGHTS, AND FINISHES REQUIRED FOR ELECTRICAL DEVICES PRIOR TO ROUGH-IN.
G. WHERE RECEPTACLES AND TELECOM OUTLETS ARE ADJACENT TO EACH OTHER, INSTALL ON OPPOSITE SIDES OF THE SAME STUD/FRAMING MEMBER OR IN THE SAME STUD CAVITY ON A COMMON MOUNTING BRACKET, ERICO "CADDY" #RBS OR EQUAL, SUCH THAT ALL DEVICES ARE SPACED THE SAME THROUGHOUT THE BUILDING. SEE E3.1 SHEET FOR ADJACENT TELECOM LOCATIONS.
H. INFORMATION REGARDING MECHANICAL AND PLUMBING EQUIPMENT ELECTRICAL CONNECTIONS ARE SHOWN ON THE MECHANICAL EQUIPMENT CONNECTION SCHEDULE.
I. ALLL UNDERGROUND CONDUIT INSTALLATIONS SHALL COMPLY WITH NEC 300.5 FOR PROTECTION, TRANSISTIONS, AND MINIMUM COVER DEPTHS.
J. ELECTRICAL OUTLET BOXES IN RATED ASSEMBLIES (SEE ARCH FOR LOCATIONS) SHALL BE INSTALLED SUCH THAT THE ASSEMBLY RATING IS NOT REDUCED. ALL BOXES SHALL BE STEEL OR LISTED FOR USE IN FIRE RATED ASSEMBLIES AND SEALED COMPLETELY. ALL CONDUIT PENETRATIONS THROUGH RATED ASSEMBLIES SHALL BE SEALED COMPLETELY WITH FIRE CAULK, PUTTY PADS, ETC AS REQUIRED TO MAINTAIN ASSEMBLY RATING.
K. FOR ALL T-STAT/SENSOR LOCATIONS, PROVIDE 4-SQUARE BOX W/ 1-GANG MUDRING AT +60" AFF AND W/ (1) 3/4"C STUBBED UP TO ABOVE NEAREST ACCESSIBLE CEILING FOR CONTROL WIRING AND STAT BY MC. COORDINATE FINAL LOCATION W/ MC PRIOR TO ROUGH-IN.
L. ALL RECEPTACLES CONNECTED TO EMERGENCY CIRCUITS ('E' DESIGNATION) SHALL BE RED, HUBBELL #HBL5362R (DUPLEX, TYP) OR EQUAL. SEE ALSO SPECIFICATION SECTION 262726.
M. ALL ELECTRICAL SHOWN ADJACENT TO OR ON A WALL SHALL HAVE CONDUIT AND BOXES SET IN THE WALL, EXCEPT EQUIPMENT ON EXTERIOR STRUCTURAL WALLS WHICH SHALL BE SURFACE MOUNTED.

GENERAL SITE NOTES

A. EC SHALL BE RESPONSIBLE FOR COORDINATION WITH ALL UTILITY COMPANIES REGARDING DELINEATION OF SCOPE OF WORK FOR SERVICES INTO BUILDING (I.E. WHAT IS PROVIDED BY UTILITY VS. WHAT IS PROVIDED BY E.C.) AND SHALL MAKE ALLOWANCES IN BASE BID FOR ALL REQUIREMENTS.
B. UNDERGROUND WIRING IS PARTIALLY DIAGRAMMATIC AND SHOWN FOR CLARITY IN SCOPE OF WORK. COORDINATE FOR JOINT TRENCHING WHERE APPLICABLE AND WITH SITE/CIVIL DRAWINGS. ALL ACTUAL TRENCHING AND PROJECT WIRING SHALL FALL WITHIN PROJECT BOUNDARIES.
C. PROVIDE DEDICATED NEUTRAL (GROUNDED) CONDUCTOR FOR ALL BRANCH CIRCUITS. NO ULTI-WIRE BRANCH CIRCUITS ARE ALLOWED.
D. WHERE CIRCUIT CONDUCTORS HAVE BEEN OVERSIZED TO ACCOUNT FOR VOLTAGE DROP, EXTEND HOME RUN SIZE AS INDICATED THROUGH LIGHTING CONTROL CABINET THEN TO PANEL INDICATED. FOR 20A CIRCUITS, SPLICE #12 CU ONTO FEEDER FOR TERMINATION AT BREAKER/CONTACTOR AS NECESSARY. SPLICE CONDUCTORS ONLY IN PANEL, 12" MAXIMUM LENGTH.

ADDITIONAL NOTE

A. ALL ELECTRICAL OUTLETS SHOWN ON THIS SHEET ARE ON EMERGENCY POWER OR STANDBY POWER. ADDITIONAL ELECTRICAL OUTLETS ARE SHOWN ON DOME FINISH (DF) DRAWINGS AND ARE NOT ON STANDBY OR EMERGENCY POWER. SEE SAFE ROOM SCOPE OF WORK NOTES A AND B ON E0.1 SHEET.

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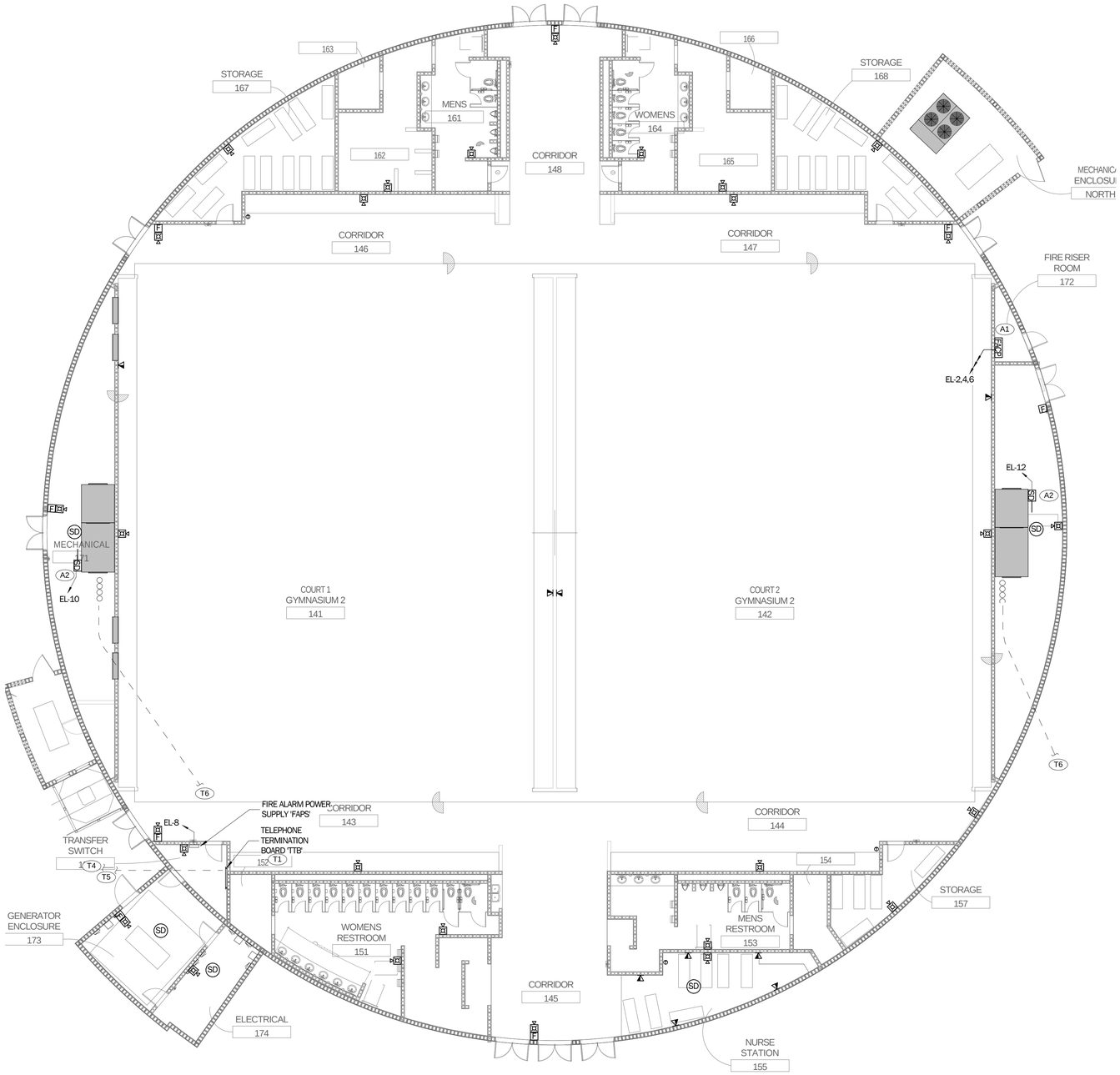
ELECTRICAL POWER PLAN - SAFE ROOM

E2.1



ELECTRICAL SPEC. SYSTEMS PLAN - SAFE ROOM LEVEL 1 SCALE: 3/32" = 1'-0"

KEYNOTES

A1 THE LOCATION OF THE CIRCUIT DISCONNECTING MEANS FOR THE FIRE ALARM CIRCUIT SHALL BE PERMANENTLY IDENTIFIED AT 'FACP' PER NFPA 72.

A2 PROVIDE DUCT SMOKE DETECTORS FOR THE SUPPLY AIR PATH OF ALL HVAC EQUIPMENT OVER 2,000 CFM. COORDINATE W/MC FOR INSTALLATION OF DETECTOR SAMPLING TUBE IN DUCTWORK. PROVIDE RELAY MODULE(S) FOR UNIT SHUT-DOWN UPON DETECTION OF SMOKE. PROVIDE REMOTE ALARM SUPERVISORY INDICATION AND REMOTE TEST SWITCH FOR EACH DUCT SMOKE DETECTOR WHEN DETECTOR INDICATOR IS NOT VISIBLE TO RESPONDING PERSONNEL. PROVIDE ALL CONDUIT AND REQUIRED FIRE ALARM WIRING TO 'FACP' FOR COMPLETE CONNECTION.

T1 PROVIDE AND INSTALL MAIN TELEPHONE TERMINATION BACKBOARD ('TTB'). PROVIDE 4'X8'X3/4" PLYWOOD MOUNTED VERTICALLY AND PAINTED WHITE WITH FIRE-RESISTANCE PAINT.

T4 PROVIDE (1) 4" PVC CONDUIT WITH LONG RADIUS ELBOWS AND PULL-LINE U.G. FROM 'TTB' TO MAIN TELEPHONE UTILITY PEDESTAL OR TERMINATION POINT. COORDINATE ALL REQUIREMENTS W/ TELEPHONE UTILITY COMPANY PRIOR TO ROUGH-IN.

T5 PROVIDE (1) 4" PVC CONDUIT WITH LONG RADIUS ELBOWS AND PULL-LINE U.G. FROM 'TTB' TO MAIN CABLE TERMINATION POINT. COORDINATE ALL REQUIREMENTS W/ CABLE COMPANY PRIOR TO ROUGH-IN.

T6 PROVIDE AND INSTALL (4) 3" C. STUB-UP IN MECHANICAL RM. COORDINATE EXACT LOCATION WITH GC. ROUTE CONDUIT UG FROM MECHANICAL ROOM TO DESIGNATED LOCATION IN RA AREA AND TIE TO DATA NETWORK PROVIDED BY OTHERS. SEE RA AREA DRAWINGS. COORDINATE ROUTING AND TIE-IN POINT WITH GC.

GENERAL NOTES - TELECOM:

A. PROVIDE AND INSTALL ALL IN-WALL AND UNDER-GROUND CONDUIT REQUIRED FOR TELECOM SYSTEMS THAT ARE TO BE INSTALLED DURING 'DOME-FINISH' PHASE OF THE PROJECT. COORDINATE 'DOME-FINISH' CONDUIT REQUIREMENTS WITH GC.
B. REFER TO ARCHITECTURAL DRAWINGS, DETAILS, AND ELEVATIONS FOR TELECOM FINAL LOCATIONS, MOUNTING HEIGHTS, AND FINISHES REQUIRED FOR ELECTRICAL DEVICES PRIOR TO ROUGH-IN.
C. FOR EACH VOICE/DATA/COAX LOCATION, PROVIDE "5-SQUARE" DEEP BACKBOX W/ 1-GANG MUDRING AND 1"C (EMT) STUBBED UP TO ABOVE NEAREST ACCESSIBLE CEILING AREA OR TO TELECOM ROOM 130. ALL CABLING BY OWNER. SEE ALSO DETAIL 3/E5.2.
D. WHERE RECEPTACLES AND TELECOM OUTLETS ARE ADJACENT TO EACH OTHER, INSTALL ON OPPOSITE SIDES OF THE SAME STUD/FRAMING MEMBER OR IN THE SAME STUD CAVITY ON A COMMON MOUNTING BRACKET, ERICO "CADDY" #RBS OR EQUAL, SUCH THAT ALL DEVICES ARE SPACED THE SAME THROUGHOUT THE BUILDING. SEE E2.1 SHEET FOR ADJACENT RECEPTACLE LOCATIONS.

GENERAL NOTES - FIRE ALARM:

A. PROVIDE AND INSTALL ALL IN-WALL AND UNDER-GROUND CONDUIT REQUIRED FOR FIRE ALARM SYSTEM THAT IS TO BE INSTALLED DURING 'DOME-FINISH' PHASE OF THE PROJECT. COORDINATE 'DOME-FINISH' CONDUIT REQUIREMENTS WITH GC.
B. FIRE ALARM SYSTEM FOR THIS FACILITY SHALL BE A VOICE EVACUATION SYSTEM, NOTIFIER 'ONYX' #NSF-640 OR EQUAL W/ INTEGRAL DIGITAL VOICE COMMAND UNIT, DIGITAL AUDIO AMPLIFIERS AND SPEAKER STROBE NOTIFICATION APPLIANCES AS REQUIRED FOR COMPLETE UL-LISTED SYSTEM.
C. INSTALLATION OF FIRE ALARM SHALL COMPLY WITH NEC, NFPA 72 AND ALL OTHER APPLICABLE CODES AS ADOPTED AND REQUIRED BY LOCAL AUTHORITY HAVING JURISDICTION.
D. FIRE ALARM WIRING DEPICTED ON THESE DRAWINGS IS SCHEMATIC - ACTUAL WIRE LOCATIONS MAY DIFFER. WIRING SHALL BE INSTALLED AS ACTUAL CONSTRUCTION ALLOW AND TO MINIMIZE PENETRATIONS THROUGH AREA SEPARATION & FIRE WALLS. FIRE ALARM WIRING SHALL BE INSTALLED IN RACEWAY WHERE NOT POSSIBLE TO CONCEAL IN STANDARD FRAMING OR ABOVE ACCESSIBLE CEILING AND SHALL BE PERFORMED AS ACTUAL BUILDING CONDITIONS ALLOW.
E. FIRE ALARM DEVICE BOXES IN FIRE-RATED ASSEMBLIES AND SOUND CRITICAL ASSEMBLIES (SEE ARCH DRAWINGS FOR LOCATIONS) SHALL BE INSTALLED SUCH THAT THE ASSEMBLY RATING IS NOT REDUCED OR STC RATING IS NOT COMPROMISED. ALL BACK BOXES SHALL BE STEEL. ALL CONDUIT PENETRATIONS THROUGH AND DEVICE BOXES INSTALLED IN RATED ASSEMBLIES SHALL BE SEALED COMPLETELY WITH FIRE CAULK, PUTTY PADS, OR OTHER LISTED MEANS AS REQUIRED TO MAINTAIN RATING.
F. POWER FOR FIRE ALARM PANEL AND ANY FIRE ALARM POWER SUPPLIES SHALL BE PROVIDED BY A DEDICATED 120VAC BRANCH CIRCUIT AND IDENTIFIED IN THE SERVING PANEL AS SUCH.
G. POWER-LIMITED AND NONPOWER-LIMITED CIRCUIT WIRING SHALL REMAIN SEPARATED BY AT LEAST 0.25" IN ALL FIRE ALARM CABINETS AND ENCLOSURES. ALL POWER-LIMITED AND NONPOWER-LIMITED CIRCUIT WIRING MUST ENTER AND EXIT ANY ENCLOSURE THROUGH DIFFERENT KNOCKOUTS AND/OR SEPARATE CONDUITS.
H. WHEN UTILIZING SHIELDED CABLE, TIE SHIELDS THROUGH AND INSULATE AT EACH JUNCTION BOX. INSULATE AND TAPE BACK AT END.
I. ALL FIRE ALARM CABLING SHALL BE ACCEPTABLE TO THE FIRE ALARM EQUIPMENT MANUFACTURER FOR THE INTENDED PURPOSE.
J. SMOKE DETECTORS SHALL NOT BE INSTALLED UNTIL AFTER ALL CONSTRUCTION CLEAN-UP IS COMPLETED.
K. LOCATE SMOKE DETECTORS A MINIMUM OF 3' FROM HVAC AIR DEVICES. WALL-MOUNTED SMOKE DETECTORS SHALL BE LOCATED BETWEEN 4" (MIN) AND 12" (MAX) FROM CEILING. CEILING-MOUNTED SMOKE DETECTORS SHALL BE MOUNTED TO CEILINGS AND NOT ON THE BOTTOM OF BEAMS OR JOISTS.
L. PROVIDE SYNCHRONIZATION OF VISUAL NOTIFICATION APPLIANCES. PROVIDE ALL REQUIRED SYNC MODULES. PROVIDE A MULTI-SYNC MODE SLAVE CONNECTION BETWEEN ALL REQUIRED SYNC MODULES.
M. VERIFY ALL FIELD SELECTABLE AUDIBILITY SETTINGS OF NOTIFICATION APPLIANCES W/ FIRE ALARM CONTRACTOR.
N. UPON COMPLETION OF FIRE ALARM SYSTEM INSTALLATION AND PROGRAMMING, THE INSTALLING CONTRACTOR SHALL PERFORM FINAL TESTING OF THE ENTIRE SYSTEM, PER ALL APPLICABLE CODES, AND SHALL COORDINATE AND PERFORM A FINAL FIRE ALARM SYSTEM INSPECTION.
O. PROVIDE OFF-SITE MONITORING AS REQUIRED BY ADOPTED FIRE CODE, SECTION 907.15 AND THE LOCAL AUTHORITY HAVING JURISDICTION.
P. INSTALLING CONTRACTOR SHALL PHYSICALLY LABEL ALL INITIATING DEVICES AND NOTIFICATION APPLIANCE CIRCUIT END-OF-LINE (WHEN WIRING CLASS "B"). THESE LABELS SHALL BE IN PLACE PRIOR TO START-UP AND TESTING.
Q. ALL FIRE ALARM WIRING SHALL BE INSTALLED IN CONDUIT, 3/4" MIN. FIRE ALARM PATHWAYS, CONDUITS, J-BOXES, CABLES, ETC SHALL BE DEDICATED TO ONLY FIRE ALARM SYSTEM WIRING AND SHALL BE IDENTIFIED AS SUCH IN RED. FOR FIRE ALARM DEVICES, PROVIDE "5 SQUARE" DEEP BOX (RANDL INDUSTRIES #A-55056, IN RED OR EQUAL) W/ MUDRING AS REQUIRED FOR SPECIFIC DEVICE.
R. FIRE ALARM SYSTEM PATHWAYS FOR THIS PROJECT HAVE BEEN IDENTIFIED AS CLASS "B" CIRCUITS. PER NFPA 72, THE LEVEL OF PATHWAY SURVIVABILITY HAS BEEN DESIGNATED AS LEVEL 2 (MIN) AND SHALL CONSIST OF 2-HOUR FIRE RATED CIRCUIT INTEGRITY (CI) CABLE, OTHER LISTED 2-HOUR FIRE RATED CABLE SYSTEM, OR 2-HOUR FIRE RATED ENCLOSURE OR PROTECTED AREA. ALL PATHWAY INSTALLATION SHALL COMPLY W/ NEC ARTICLES 760 & 770.
S. ALL ELECTRICAL, ALARM, TELECOM, COMPUTER, ETC. WIRING WITHIN RETURN AIR (R/A) PLENUMS AND OTHER AIR HANDLING SPACES SHALL BE RATED FOR USE IN PLENUMS.
T. FIRE ALARM SYSTEM SHOWN FOR REFERENCE ONLY. FIRE ALARM SYSTEM WILL BE DESIGN/BUILD UNDER DEFERRED SUBMITTAL. DESIGN BUILD CONTRACTOR SHALL SUBMIT DESIGNS AND SPECS FOR APPROVAL. SEE TYPICAL FIRE ALARM RISER DETAIL 1/E5.2.

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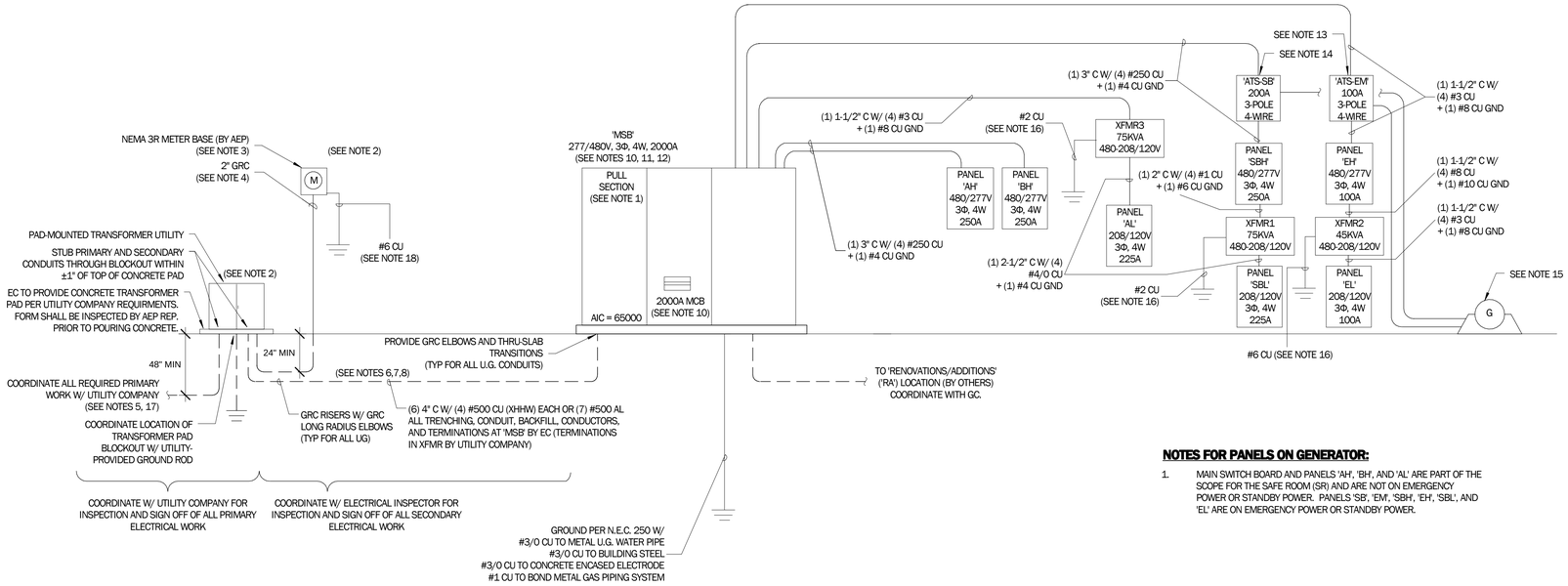
ELECTRICAL SPEC.
SYSTEMS - SAFE ROOM

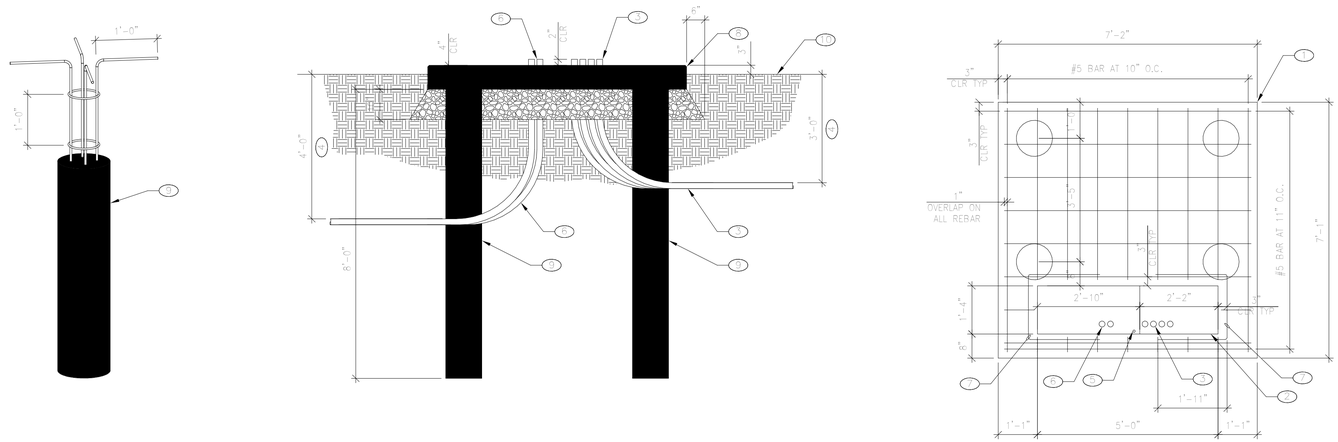
E3.1



1 E5.1 POWER RISER DIAGRAM
NO SCALE

NOTES FOR PANELS ON GENERATOR:

1. MAIN SWITCH BOARD AND PANELS 'AH', 'BH', AND 'AL' ARE PART OF THE SCOPE FOR THE SAFE ROOM (SR) AND ARE NOT ON EMERGENCY POWER OR STANDBY POWER. PANELS 'SB', 'EM', 'SBH', 'EH', 'SBL', AND 'EL' ARE ON EMERGENCY POWER OR STANDBY POWER.



2 E5.1 TRANSFORMER CONCRETE PAD AND PIERS
NO SCALE

NOTES:

1. CONCRETE SLAB REINFORCING SHALL BE #5 REBAR ON CENTER AS SHOWN, W/4" MIN COVER. REINFORCING BARS SHALL CONFORM TO ASTM A615 GRADE 60. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AFTER 28 DAYS.
2. BLOCKOUT FOR PRIMARY AND SECONDARY COMPARTMENTS.
3. SECONDARY/METERING CONDUIT . THE NUMBER AND PLACEMENT OF SECONDARY CONDUITS TO BE DETERMINED BY AEP ENGINEERING. CONDUIT MAY EXTEND IN ANY DIRECTION AS REQUIRED. (SEE SITE ELECTRICAL PLAN FOR LOCATION/DIRECTION).
4. BURIAL DEPTH FOR DIRECT BURIED CABLE OR CONDUIT IS DEFINED AS THE DISTANCE BETWEEN FINAL GRADE AND THE TOP OF THE CABLE OR CONDUIT, UNLESS OTHERWISE DESIGNATED BY AEP ENGINEERING. DIRECT BURIED PRIMARY SUPPLY CABLES OR CONDUITS SHALL BE INSTALLED AT A BURIAL DEPTH OF NOT LESS THAN 4'-0" AND SECONDARY SUPPLY CABLES OR CONDUITS SHALL BE INSTALLED AT A BURIAL DEPTH OF NOT LESS THAN 3'-0". THESE INITIAL DEPTHS ARE TO ALLOW FOR CHANGES TO SURFACE CONDITIONS. LOCAL AGREEMENTS AND CODES MAY REQUIRE ADDITIONAL DEPTH. IF THERE ARE KNOWN EXTENSIVE CHANGE TO THE FINAL GRADE SUCH THAT THESE DEPTHS ARE NOT MAINTAINED, CORRECTIVE ACTION SHALL BE TAKEN.
5. GROUND ROD PLACEMENT PER AEP REQUIREMENTS.
6. PRIMARY CONDUIT NUMBER, SIZE, LOCATION AND DIRECTION TO BE SPECIFIED BY AEP ENGINEERING. CONDUIT CAN BE FLEXIBLE, TYPE EB OR SCHEDULE 40 PVC CONDUIT WITH 90 DEGREE, 36" (LONG) RADIUS BENDS.
7. (2) #5x68" LONG BENT BARS EA SIDE OF COMPARTMENT.
8. BEVEL ALL OUTSIDE EDGES OF CONCRETE WITH 1" CHAMFER.
9. PIERS SHALL BE 12" MINIMUM AND 8'-0" DEEP WITH (4) #4 BARS SHOULD BE 12" LONG IN THE HORIZONTAL DIRECTION. THE BENDS SHOULD B BENT SO THAT THEY TIE INTO THE PAD REBAR.
10. FINAL GRADE PER ARCH/CIVIL DRAWINGS. ESTABLISH BEFORE PAD INSTALLATION.

ADDITIONAL NOTE:

A. CONCRETE PAD WITH PIERS IS TO BE INSTALLED ONLY WHEN HIGH VOLUME CLAY OR SAND TYPE SOILS ARE ENCOUNTERED. THESE SOIL TYPES ARE CHARACTERIZED BY EXTREME SURFACE CONDITION VARIATIONS OVER TIME. WHERE SOIL IS FOUND TO BE TOTALLY BEDROCK, SHALE, OR HARDPAN, ELIMINATE DRILLED PIERS AND REFER TO AEP REQUIREMENTS.

NOTES:

1. INSTALL ELECTRICAL SERVICE ENTRANCE IN ACCORDANCE WITH UTILITY COMPANY REQUIREMENTS.
2. COORDINATE W/ UTILITY COMPANY FOR INSTALLATION OF METERING EQUIPMENT (PT'S AND CT'S) WITHIN SECONDARY SIDE OF TRANSFORMER. COORDINATE EXACT LOCATION OF UTILITY TRANSFORMER WITH AEP AND WITH ARCHITECT.
3. EC SHALL OBTAIN 13-TERMINAL METER BASE ENCLOSURE FROM AEP AND INSTALL IT ON A FREE STANDING FRAME, BUILT TO AEP SPECIFICATIONS, IN A LOCATION TO ENSURE THAT METERING CONDUIT IS LESS THAN 25'. MOUNTING HEIGHT OF METER SHALL BE PER AEP METER HEIGHT REQUIREMENTS (TOP OF METER NO LESS THAN 4' AND NO GREATER THAN 6').
4. EC SHALL PROVIDE (1) 2"C (PVC) W/ PULL STRING FROM SECONDARY SIDE BLOCKOUT OF TRANSFORMER PAD TO METER BASE LOCATION ON EXTERIOR OF BUILDING.
5. EC SHALL PROVIDE 4"C (PVC) W/PULL STRING FOR PRIMARY SERVICE ENTRANCE CABLES INSTALLED BY AEP. CONDUIT SHALL BE SCHEDULE 40 PVC, GRAY IN COLOR AND MEET NEMA TC-2 REQUIREMENTS. STUB PRIMARY CONDUITS UP AT (E) POWER POLE + 18" ABOVE FINISHED GRADE AND PROVIDE 48" RADIUS BENDS AT 90 TURNS AND STAND-OFFS TO LOCATE THE CONDUITS BETWEEN 6" AND 9" OFF THE POLE.
6. PER ELECTRIC UTILITY REQUIREMENTS, ALL PRIMARY TRENCHING SHALL BE 48" AND ALL SECONDARY TRENCHING SHALL BE 36". ALL TRENCHING AND BACKFILL BY EC AND ALL CONDUIT INSTALLATION IN TRENCHES SHALL BE INSPECTED BY AEP PRIOR TO BACKFILL.
7. ALL UNDERGROUND SERVICE CONDUITS SHALL BE SEALED PER NEC 230.8.
8. DEPTH BELOW GRADE FOR ALL EXTERIOR CONDUITS SHALL BE IN ACCORDANCE W/ NEC TABLE 300.5.
9. EC SHALL BE RESPONSIBLE FOR MAINTAINING WORKING CLEARANCES IN ACCORDANCE W/ NEC 110.26.
10. PROVIDE LABEL "SERVICE DISCONNECTING MEANS" PER NEC 230.7 (B).
11. ELECTRICAL GEAR MAY BE SERIES-RATED. OVER-CURRENT DEVICE ENCLOSURES SHALL BE IDENTIFIED AS SERIES RATED AND LABELED IN ACCORDANCE WITH NEC 110.22. THE OVER-CURRENT DEVICES SHALL BE AIC RATED PER MANUFACTURERS' LABELING OF THE ELECTRICAL EQUIPMENT.
12. AVAILABLE SHORT CIRCUIT AMPS BASED ON Z = 1.25% FOR UTILITY TRANSFORMER. EC TO VERIFY ACTUAL AIC RATING W/ ELECTRIC UTILITY PRIOR TO ORDERING ELECTRICAL GEAR.
13. FOR EMERGENCY AUTOMATIC TRANSFER SWITCH, PROVIDE (1) 100A RATED, 3-POLE, 4-WIRE SWITCH 'ATS-EM'.
14. FOR STAND-BY AUTOMATIC TRANSFER SWITCH, PROVIDE (1) 200A RATED, 3-POLE, 4-WIRE SWITCH 'ATS-SB'.
15. PROVIDE 80KW/100KVA RATED DUAL-FUEL GENERATOR (PROPANE AND NATURAL GAS) 480/277V, 3-PHASE, 4-WIRE. PROVIDE W/ (2) CIRCUIT BREAKERS IN SEPARATE ENCLOSURES PER NEC 700.10(B)(5)(d); (1) 100A BREAKER FOR 'ATS-EM' AND (1) 200A BREAKER FOR 'ATS-SB'. PROVIDE GENERATOR W/ REMOTE ANNUNCIATOR, BLOCK HEATER, AND BATTERY RACK W/ CHARGER AND HEATER. SITE ELEVATION FOR THIS GENERATOR IS 60'.
16. GROUND AND BOND TRANSFORMERS TO NEAREST STRUCTURAL STEEL OR OTHER GROUNDING ELECTRODE PER NEC 250.30 FOR SEPARATELY DERIVED SYSTEMS W/ CONDUCTOR SIZED AS SHOWN.
17. PRIMARY RACEWAY SHALL HAVE A HORIZONTAL CLEARANCE OF NOT LESS THAN 24 INCHES FROM ANY PARALLEL SEWER LINE AND A VERTICAL CLEARANCE OF NOT LESS THAN 12 INCHES FROM ANY OTHER FOREIGN UTILITY (WATER, GAS, TELEPHONE, ETC.). WHERE 12 INCH VERTICAL CLEARANCE CANNOT BE PROVIDED, A 24-INCH HORIZONTAL CLEARANCE SHALL BE MAINTAINED. DO NOT COVER CONDUIT UNTIL INSPECTED BY AEP REPRESENTATIVE.
18. METER SOCKET SHALL BE GROUNDED AND BONDED THROUGH A SEPARATE EQUIPMENT-GROUNDING CONDUCTOR CONNECTED TO THE GROUNDED SERVICE CONDUCTOR.

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ELECTRICAL DETAILS - SAFE ROOM

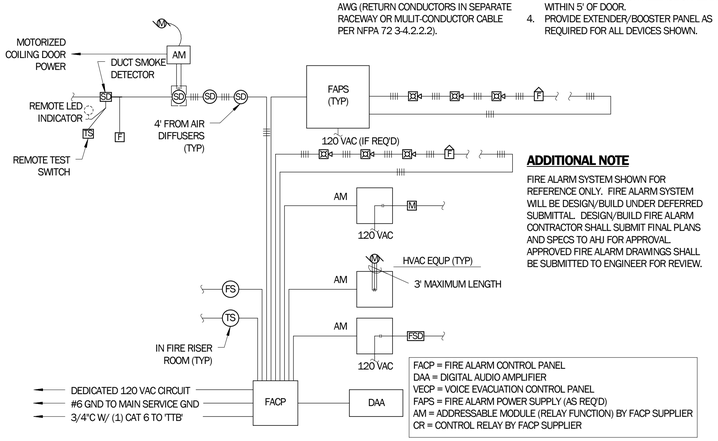
E5.1

NOTES

1. E.C SHALL VERIFY EXACT QUANTITIES FROM PLAN DRAWING THE RISER IS DIAGRAMMATIC AND DOES NOT INDICATE ALL SITUATIONS, OR ALL COMPONENTS REQUIRED FOR A COMPLETE SYSTEM.
2. ALL FIRE ALARM WIRING SHALL BE INSTALLED IN CONDUIT, 3/4" MIN. FIRE ALARM CONUITS, BOXES, ETC SHALL BE DEDICATED TO ONLY FIRE ALARM WIRING AND SHALL BE IDENTIFIED AS SUCH IN RED.
3. BACK BOXES FOR FIRE ALARM DEVICES SHALL BE "5-SQUARE" BY 2-7/8" DEEP W/ 4-SQUARE 1-GANG EXTENSION RINGS, RANDL INDUSTRIES. PROVIDE BOTH BOXES AND EXTENSION RINGS IN RED.
4. INITIATION CIRCUITS: CLASS B WIRING, MINIMUM #16 AWG NOTIFICATION CIRCUITS: CLASS A WIRING, MINIMUM #16 AWG (RETURN CONDUCTORS IN SEPARATE RACEWAY OR MULIT-CONDUCTOR CABLE PER NFPA 72 3-4.2.2.2).

NOTES

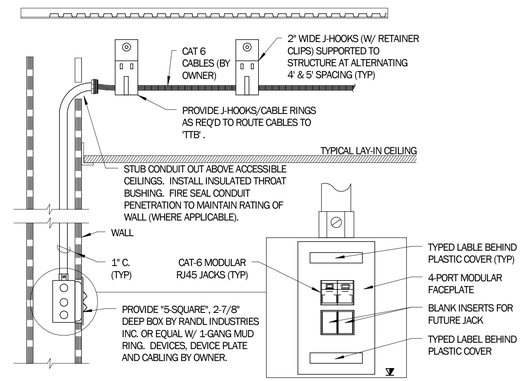
1. LOCATE AND INSTALL DUCT SMOKE DETECTORS PER 2002 NFPA 72 AND NFPA 90A FOR DUCTS GREATER THAN 30" DIAMETER OR WIDTH, UTILIZE DUCT SMOKE DETECTOR MOUNTED TO THE SIDE OF THE DUCT WITH SAMPLING TUBES. FOR DUCTS SMALLER THAN 30" DIAMETER OR WIDTH, UTILIZE SMOKE DETECTOR MOUNTED TO THE INSIDE OF A DUCT ACCESS PLATE (DETECTOR SHALL BE LISTED FOR USE IN HVAC DUCTING).
2. UPON GENERAL ALARM, ALL HVAC UNITS SHALL BE SHUT DOWN AND ALL SMOKE DAMPERS SHALL CLOSE.
3. SMOKE DETECTORS SHALL BE MINIMUM OF 4' FROM AIR DIFFUSERS. CEILING MOUNTED DETECTORS SHALL BE NO CLOSER THAN 4" FROM CEILING. SMOKE DETECTORS FOR DOOR RELEASE SHALL BE WITHIN 5' OF DOOR.
4. PROVIDE EXTENDER/BOOSTER PANEL AS REQUIRED FOR ALL DEVICES SHOWN.



ADDITIONAL NOTE

FIRE ALARM SYSTEM SHOWN FOR REFERENCE ONLY. FIRE ALARM SYSTEM WILL BE DESIGN/BUILD UNDER DEFERRED SUBMITTAL. DESIGN/BUILD FIRE ALARM CONTRACTOR SHALL SUBMIT FINAL PLANS AND SPECS TO AHJ FOR APPROVAL. APPROVED FIRE ALARM DRAWINGS SHALL BE SUBMITTED TO ENGINEER FOR REVIEW.

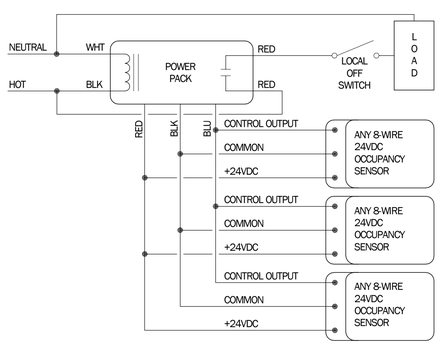
1 / E5.2 TYPICAL FIRE SYSTEM RISER DIAGRAM
NO SCALE



NOTES

1. VERIFY EXACT WALL TYPES W/ ARCHITECTURAL DRAWINGS. DRAWING IS INTENDED FOR GENERAL REFERENCE; ALL REQUIRED EQUIPMENT AND SUPPORTS NOT SHOWN.
2. EACH VOICE/DATA OUTLET LOCATION SHALL SUPPORT UP TO (4) CAT-6 DROPS - ALL CABLING BY OWNER.
3. MODULAR ANGLED JACKS AND WALL PLATES BY OWNER.
4. ALL TELECOM REQUIREMENTS SHALL BE COORDINATED W/ OWNER'S I.T. REPRESENTATIVE.
5. PROVIDE "5-SQUARE", 2-7/8" DEEP BACK BOX FOR ALL TELECOM OUTLETS, INCLUDING WIRELESS ACCESS POINTS.

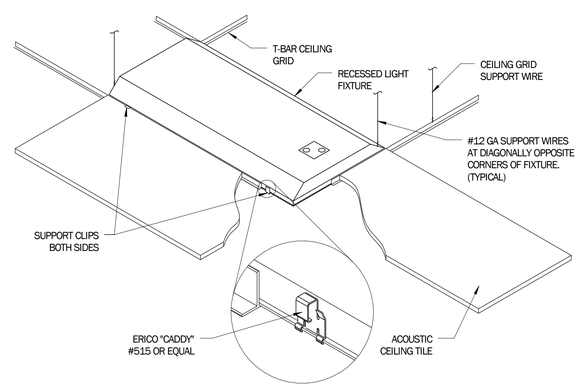
3 / E5.2 TYPICAL DATA DETAIL- SAFE ROOM
NO SCALE



NOTES

1. MAXIMUM NUMBER OF SENSORS PER POWER PACK DEPENDS ON THE MODEL OF SENSOR. SEE THE PRODUCT DATA SHEET TO DETERMINE THE SPECIFIC CURRENT CONSUMPTION OF EACH SENSOR.

2 / E5.2 MULTIPLE OCCUPANCY SENSORS WITH 1 POWER PACK
NO SCALE



NOTES

1. RECESSED, LAY-IN, AND TROFFER LIGHT FIXTURES SHALL BE SUPPORTED TO THE CEILING FRAMING PER LEL 410.16(C).
2. EC SHALL BE RESPONSIBLE FOR FIXTURE SUPPORT WIRES INDEPENDENT OF CEILING GRID SYSTEM.
3. IDENTIFY FIXTURE SYPPORT WIRES WITH PERMANENT MEANS (I.E. PAINT) TO DISTINGUISH FROM CEILING GRID SUPPORT WIRES.
4. T-BAR CEILING GRID, GRID SUPPORT WIRES, AND CEILING TILE BY OTHERS.

4 / E5.2 TYPICAL RECESSED LIGHT FIXTURE INSTALLATION DETAIL - SAFE ROOM
NO SCALE

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ELECTRICAL DETAILS - SAFE ROOM

E5.2

LIGHTING FIXTURE SCHEDULE (L)

KEY	MANUFACTURER	CATALOG NUMBER	LOCATION	MOUNTING TYPE	MOUNTING HEIGHT	BACK BOX	LAMP	LAMP COLOR	EFFICACY	NUMBER LAMPS	FIXTURE WATTAGE	BALLAST #	BALLAST TYPE IS	BALLAST TYPE RS*	BALLAST TYPE PS*	BALLAST FACTOR L	BALLAST FACTOR N	BALLAST FACTOR H	EMERGENCY	DIM	VOLTAGE	REMARKS
L-1E	LITHONIA	DSXW1 LED-10C-1000-50K-T3M-MVOLT-ELCW-DBLXD	EXTERIOR	SURFACE MOUNT	8'-8"	4/0	LED 3043 LUMENS	5000K	76	-	40	-							X		277	WALL MOUNT LED LIGHT FIXTURE W/ TYPE III MEDIUM DISTRIBUTION W/ EMERGENCY BATTERY BACKUP FOR EGRESS LIGHTING, COORDINATE COLOR W/ ARCHITECT
L-2E	LITHONIA	IBL-24L-ND-LP750 DLC-I2412	GYMNASIUMS, CORRIDORS	PENDANT	SEE REMARKS	4/0	LED	5000K	93	-	258	-							X		277	LED HIGH BAY W/ EMERGENCY BACKUP. PENDANT MOUNT FIXTURES 5' BELOW DOME CEILING.
L-3E	LITHONIA	ZL2-L46-4600L-LP840-BSL722	MECHANICAL, STORAGE RMS	SURFACE/PENDANT	-	4/0	LED	4000K	80	-	75	-							X		277	LED 4' STRIPLIGHT W/ EMERGENCY BATTER PACK
L-4E	LITHONIA	WL4-41L-D43-LP840-EL14L	RESTROOMS, LOCKERROOMS	SURFACE	-	4/0	LED	4100K	-	-	43	-							X		277	SURFACE MOUNT LED W/ EMERGENCY BATTERY PACK
L-6E	LITHONIA	2ALL4-49L-D50-LP840-EL17L	NURSE STATION	RECESSED	-	-	LED	4000K	-	-	50	-							X		277	2'X4' RECESSED LED W/ EMERGENCY BATTERY PACK\\
X-1	LITHONIA	LHQM-LED-R-WRS	SEE DRAWINGS	WALL SURFACE	WALL: 7'-6" (ABV DOOR)	INCLUDED	LED	-	-	-	4.3	-							X		277	LED SINGLE FACE EMERGENCY EXIT SIGN W/ SELF-DIAGNOSTICS, COORDINATE LETTER COLOR W/ ARCHITECT

NOTES:
1. LIGHT FIXTURE MANUFACTURERS INDICATED ARE 'BASIS-OF-DESIGN', PROVIDE THESE PRODUCTS OR EQUAL. IF PROVIDING ALTERNATES, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE AND PROVIDE EQUVALENT PRODUCTS (SEE SPECS FOR MORE DETAILS).
2. FIXTURES SHALL HAVE APPROPRIATE UL LABEL, DAMP, OR WET AS REQUIRED BY CODES AND ORDINANCES.
3. FIXTURES SHALL INCLUDE ALL ACCESSORIES NECESSARY FOR INSTALLATION ACCORDING TO MANUFACTURER'S SHOP DRAWINGS AND AS REQUIRED BY CODES AND LOCAL ORDINANCES.
4. PRIOR TO ORDERING ANY LIGHTING EQUIPMENT, THE CONTRACTOR SHALL COORDINATE ALL FIXTURE LOCATIONS WITH ARCHITECTURAL REFLECTED CEILING PLANS AND CEILING CAVITY DEPTHS.
5. CONTRACTOR SHALL VERIFY FIXTURE VOLTAGE AND CEILING TRIM COMPATABILITY PRIOR TO ORDERING FIXTURES.
6. PROVIDE APPROVED FIRE-RATED ENCLOSURES FOR ALL LIGHTING FIXTURES LOCATED IN FIRE-RATED CEILINGS.
7. LIGHTING FIXTURE CATALOG NUMBERS ARE SERIES TYPE ONLY. PROVIDE ALL NECESSARY HARDWARE AS REQUIRED BY THE SPECIFICATIONS, DRAWINGS, AND PROJECT CONDITIONS FOR A COMPLETE INSTALLATION.
8. PROVIDE CLEARANCES FROM COMBUSTIBLES A MINIMUM OF 1/2" (OTHER THAN AT POINTS OF SUPPORT) AND 3" FROM INSULATION FOR RECESSED LIGHTING FIXTURES WHICH ARE NON-IC RATED.
9. PROVIDE A MINIMUM OF TWO (2) #12 SUPPORT WIRES ATTACHED TO BUILDING FRAME IN ADDITION TO T-BAR CLIPS FOR FIXTURES RECESSED IN SUSPENDED T-BAR CEILING.
10. FIXTURES WITH EMERGENCY BATTERY BACKUP SHALL BE WIRED AHEAD OF ANY LOCAL SWITCHING IN COMPLIANCE WITH CEC ARTICLE 700.
11. EMERGENCY LIGHTING UNITS SHALL BE EQUIPPED WITH FACTORY-INSTALLED INTEGRAL TEST SWITCHES. *ALL EMERGENCY BATTERY BALLASTS SHALL BE SELF-TESTING TYPE - BODINE #B50ST OR EQUAL

EQUIPMENT CONNECTION SCHEDULE

ITEMS BY OTHERS									ITEMS BY ELECTRICAL CONTRACTOR							
									DISCONNECT				FEEDER		EQUIPMENT CONTROL	
UNIT	DESCRIPTION	LOCATION	VOLTAGE	PHASE	MCA	MOCP	KW	HP	DESCRIPTION	STARTER	NEMA ENCLOSURE	FUSE	PANEL & CIRCUIT #	CONDUIT / WIRE	ALL CONTROL CONDUIT BY EC ALL CONTROL DEVICES BY MC (UON)	REMARKS
ERV-1	ENERGY RECOVERY VENTILATOR	MECHANICAL 171	480	3	25.3	40	-	-	60A, 3P, NON-FUSED	-	1	-	SBH-1,3,5,	3/4" C W/ (3) #8 Cu + (1) #10 Cu GND	PROVIDE BACK BOX W/ MUD RING FOR T-STAT/SENSOR AND 1/2" W/ PULL LINE TO ERV UNIT FOR CONTROL WIRING (BY MC)	PROVIDE 480VAC, 3-PHASE STAND-BY POWER CONNECTION TO ERV-1 FANS
					33.7	45	-	-	60A, 3P, NON-FUSED	-	1	-	AH-1,3,5	3/4" C W/ (3) #8 Cu + (1) #10 Cu GND		PROVIDE 480V, 3-PHASE NORMAL POWER CONNECTION TO ERV-1 BACK UP ELECTRIC HEAT
ERV-2	ENERGY RECOVERY VENTILATOR	MECHANICAL 173	480	3	25.3	40	-	-	60A, 3P, NON-FUSED	-	1	-	SBH-7,9,11	3/4" C W/ (3) #8 Cu + (1) #10 Cu GND	PROVIDE BACK BOX W/ MUD RING FOR T-STAT/SENSOR AND 1/2" W/ PULL LINE TO ERV UNIT FOR CONTROL WIRING (BY MC)	PROVIDE 480VAC, 3-PHASE STAND-BY POWER CONNECTION TO ERV-2 FANS
					33.7	45	-	-	60A, 3P, NON-FUSED	-	1	-	AH-7,9,11	3/4" C W/ (3) #8 Cu + (1) #10 Cu GND		PROVIDE 480V, 3-PHASE NORMAL POWER CONNECTION TO ERV-2 BACK UP ELECTRIC HEAT
FC-1	FAN COIL	SEE DWGS	208	3	19.4	25	-	-	30A, 3P, NON-FUSED	-	1	-	SBL-8,10,12	3/4" C W/ (3) #10 Cu + (1) #10 Cu GND	PROVIDE BACK BOX W/ MUD RING FOR T-STAT/SENSOR AND 1/2" W/ PULL LINE TO FC UNIT FOR CONTROL WIRING (BY MC)	PROVIDE 208V, 3-PHASE STAND-BY POWER CONNECTION TO FAN COIL
HP-1	HEAT PUMP	SEE DWGS	480	3	34	45	-	-	60A, 3P, NON-FUSED	-	3R	-	AH-13,15,17	3/4" C W/ (3) #8 Cu + (1) #10 Cu GND	PROVIDE 1/2" W/ PULL LINE FROM HEAT PUMP TO ASSOCIATED ERV-1 FOR CONTROL WIRING (BY MC)	PROVIDE 480V, 3-PHASE NORMAL POWER CONNECTION TO HEAT PUMP
HP-2	HEAT PUMP	SEE DWGS	480	3	34	45	-	-	60A, 3P, NON-FUSED	-	3R	-	AH-19,21,23	3/4" C W/ (3) #8 Cu + (1) #10 Cu GND	PROVIDE 1/2" W/ PULL LINE FROM HEAT PUMP TO ASSOCIATED ERV-2 FOR CONTROL WIRING (BY MC)	PROVIDE 480V, 3-PHASE NORMAL POWER CONNECTION TO HEAT PUMP
HP-3	HEAT PUMP	SEE DWGS	208	3	16	25	-	-	30A, 3P, NON-FUSED	-	3R	-	SBL-2,4,6	3/4" C W/ (3) #10 Cu + (1) #10 Cu GND	PROVIDE 1/2" W/ PULL LINE FROM HEAT PUMP TO ASSOCIATED FC-1 FOR CONTROL WIRING (BY MC)	PROVIDE 208V, 3-PHASE STAND-BY POWER CONNECTION TO HEAT PUMP

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ELECTRICAL SCHEDULES - SAFE ROOM

E6.1

PANEL 'EH' SCHEDULE

LOCATION:	GENERATOR RM	AMPS:	100	MINIMUM AIC:	18,000
TYPE OF MAIN:	MLO	VOLTS:	277/480	GROUND BUS:	YES
MANUFACTURER:	SQUARE D	PHASE:	3	MOUNT:	SURFACE
TYPE:	NF	WIRE:	4	NOTES:	
		FED FROM:	MSB1'		

LOAD TYPE	CIRCUIT DESCRIPTION	CKT NO	P	BRKR AMP	NOTES	VOLT AMPS	A	B	C	VOLT AMPS	NOTES	BRKR AMP	P	CKT NO	CIRCUIT DESCRIPTION	LOAD TYPE
L	LTS GYMNASIUM EMERG HIGH-BAY WEST	1	1	20	1	2064	2064							2		
L	LTS GYMNASIUM EMERG HIGH-BAY EAST	3	1	20	1	2064		2064						4		
L	LTS GYMNASIUM EMERG HIGH-BAY CENTER	5	1	20	1	1548			1548					6		
L	LTS LEVEL 1 EMERGENCY NW	7	1	20	1	597	597							8		
L	LTS LEVEL 1 EMERGENCY SE	9	1	20	1	1441		1441						10		
L	LTS EXTERIOR WALL EMERG EGRESS	11	1	20	1	288			288					12		
	SPARE	13												14		
	SPARE	15												16		
	SPARE	17												18		
		19												20		
		21												22		
		23												24		
		25												26		
		27												28		
		29												30		
		31												32		
		33												34		
		35												36		
		37					1286			1286		50	3	38	PANEL 'EL' VIA 50KVA 'XFMR2'	P
		39						937		937	3	-	-	40	-	P
		41							937	937		-	-	42	-	P

LOAD CODES	CONNECTED
P=PANEL	3160
L=LIGHTING	8002
R=RECEPTACLE	0
1M=1PH MOTORS	0
3M=3PH MOTORS	0
Q=EQUIPMENT	0
E=ELECTRIC HEAT	0
	11162 VA
	13.4 A

CONNECTED PHASE VA: 3947 4442 2773
CONNECTED PHASE AMPS: 14.2A 16A 10A

AB -11.1%
BC 37.6%
AC 29.7%

NOTES:
1: ROUTE LIGHTING CIRCUIT THROUGH LIGHTING CONTROL PANEL 'LCP'
2: REFER TO EQUIPMENT CONNECTION SCHEDULE FOR MORE INFORMATION
3: PROVIDE HANDLE LOCK-OFF DEVICE ON BREAKER FEEDING TRANSFORMER, PROVIDE LABLE ON TRANSFORMER FOR LOCATION OF LOCKING DEVICE

PANEL 'SBH' SCHEDULE

LOCATION:	ELEC ROOM	AMPS:	250	MINIMUM AIC:	18,000
TYPE OF MAIN:	MLO	VOLTS:	277/480	GROUND BUS:	YES
MANUFACTURER:	SQUARE D	PHASE:	3	MOUNT:	SURFACE
TYPE:	NF	WIRE:	4	NOTES:	
		FED FROM:	'MSB1'		

LOAD TYPE	CIRCUIT DESCRIPTION	CKT NO	P	BRKR AMP	NOTES	VOLT AMPS	A	B	C	VOLT AMPS	NOTES	BRKR AMP	P	CKT NO	CIRCUIT DESCRIPTION	LOAD TYPE
3M	ERV-1 (FAN MOTOR)	1	3	40	2	7011	7011							2		
3M	-	3	-	-		7011		7011						4		
3M	-	5	-	-		7011			7011					6		
3M	ERV-2 (FAN MOTOR)	7	3	40	2	7011	7011							8		
3M	-	9	-	-		7011		7011						10		
3M	-	11	-	-		7011			7011					12		
		13												14		
		15												16		
		17												18		
		19												20		
		21												22		
		23												24		
		25												26		
		27												28		
		29												30		
		31												32		
		33												34		
		35												36		
		37					5937			5937		125	3	38	PANEL 'SBL' VIA 75KVA 'XFMR1'	P
		39						5217		5217	3	-	-	40	-	P
		41							4621	4621		-	-	42	-	P

LOAD CODES	CONNECTED
P=PANEL	15775
L=LIGHTING	0
R=RECEPTACLE	0
1M=1PH MOTORS	0
3M=3PH MOTORS	42066
Q=EQUIPMENT	0
E=ELECTRIC HEAT	0
	57841 VA
	69.6 A

CONNECTED PHASE VA: 19959 19239 18643
CONNECTED PHASE AMPS: 72.1A 69.5A 67.3A

AB 3.6%
BC 3.1%
AC 6.6%

NOTES:
1: PROVIDE 'HACR' LISTED BREAKER
2: REFER TO EQUIPMENT CONNECTION SCHEDULE FOR MORE INFORMATION
3: PROVIDE HANDLE LOCK-OFF DEVICE ON BREAKER FEEDING TRANSFORMER, PROVIDE LABLE ON TRANSFORMER FOR LOCATION OF LOCKING DEVICE

MAIN SWITCHBOARD 'MSB1'

VOLT: 277/480 AMP: 1600 PHASE: 3 WIRE: 4

LOCATION:	ELEC RM (175)	AIC:	65,000
TYPE OF MAIN:	MCB (2,9)	MOUNTING:	PAD
MANUFACTURER:	SQUARE D	ENCLOSURE:	NEMA 1
TYPE:	QED SERIES	NOTES:	(1,2,3,4,5,6)

CIRCUIT DESCRIPTION	P	BRK AMP	CKT NO	A	B	C
RENOVATIONS/ADDITIONS (BY OTHERS) (8,10)	3	1000	1	231667	231667	231667
PANEL 'AH' (7,8)	3	250	2	46944	46944	46944
PANEL 'BH' (7,8)	3	250	4	30068	27268	26947
PANEL 'SBH' (7,8)	3	250	5	18459	17739	18643
PANEL 'EH' (7,8)	3	100	6	3947	4442	2773
PANEL 'AL' VIA 75KVA XFMR3 (7,8)	3	100	7	7760	8800	8800
HEAT PUMP (HP-4)	3	100	8	21339	21339	21339
HEAT PUMP (HP-5)	3	100	9	21339	21339	21339
SPACE			10			
SPACE			11			
SPACE			12			
PHASE TOTALS				381523	379538	378452
						0.5%
TOTAL VA				1139513		0.3%
TOTAL AMPS				1371.3		0.8%

(NOTES):
1. 'MDP' SHALL BE RATED FOR SERVICE ENTRANCE EQUIPMENT AND EQUIPPED W/ 100% RATED NEUTRAL BUS
2: PROVIDE LABEL 'SERVICE DISCONNECT' PER NEC 230.70(B)
3: 'MDP' SHALL BE EQUIPPED W/ INTEGRAL 240KA SURGE PROTECTION DEVICE (TVSS) MODULE AND SURGE COUNTER (SQUARE D "SURGELOGIC" SPD OR EQUAL)
4: 'MDP' SHALL BE EQUIPPED W/ INTEGRAL POWER QUALITY MONITORING SYSTEM AND DIGITAL DISPLAY (SQUARE D "POWERLOGIC" #PM870 OR EQUAL)
5: 'MDP' SHALL BE EQUIPPED W/ A SIGN TO INDICATE THE TYPE AND LOCATION OF AUXILLARY ON-SITE POWER SOURCE (GENERATOR) PER NEC 701.7(A)
6: 'MDP' SHALL BE EQUIPPED W/ A WARNING SIGN REGARDING THE GROUNDING & BONDING CONNECTION PER NEC 701.7(B)
7: IF OWNER (EDINBURG) HAS A CURRENT UNIQUE PANEL NAMING SYSTEM, IT IS PERMISSABLE TO RENAME PANELS INDICATED ON THIS PROJECT TO MATCH NOMENCLATURE AFTER COORDINATION W/ OWNER
8: PROVIDE 100% RATED FEEDER BREAKER
9: PROVIDE 100% RATED BREAKER
10. COORDINATE CONDUIT AND CONDUCTORS TO SUBDISTRIBUTION PANEL FOR RENOVATION/ADDITION PROJECT WITH G.C.

PANEL 'EL' SCHEDULE

LOCATION:	GENERATOR RM	AMPS:	100	MINIMUM AIC:	10,000
TYPE OF MAIN:	MSB	VOLTS:	120/208	GROUND BUS:	YES
MANUFACTURER:	SQUARE D	PHASE:	3	MOUNT:	SURFACE
TYPE:	NQ	WIRE:	4	NOTES:	
		FED FROM:	'EH' VIA 'XFMR2'		

LOAD TYPE	CIRCUIT DESCRIPTION	CKT NO	P	BRKR AMP	NOTES	VOLT AMPS	A	B	C	VOLT AMPS	NOTES	BRKR AMP	P	CKT NO	CIRCUIT DESCRIPTION	LOAD TYPE
L	LIGHTING CONTROL PANEL (LCP)	1	1	20		350	734			384		20	1	2	FIRE ALARM CONTROL PANEL (FACP)	Q
		3						552		552		20	1	4	FIRE ALARM VOICE EVAC CONTROL PNL (VECP)	Q
		5							552	552		20	1	6	FIRE ALARM DIGITAL AUDIO AMPLIFIER (DAA)	Q
		7					552			552		20	1	8	FIRE ALARM POWER SUPPLY (FAPS)	Q
		9						385		385		20	1	10	DUCT SMOKE DETECTOR (ERV-1)	Q
		11							385	385		20	1	12	DUCT SMOKE DETECTOR (ERV-2)	Q
		13												14		
		15												16		
		17												18		
		19												20		
		21												22		
		23												24		
		25												26		
		27												28		
		29												30		
		31												32		
		33												34		
		35												36		
		37												38		
		39												40		
		41												42		

LOAD CODES	CONNECTED
P=PANEL	0
L=LIGHTING	350
R=RECEPTACLE	0
1M=1PH MOTORS	0
3M=3PH MOTORS	0
Q=EQUIPMENT	2810
E=ELECTRIC HEAT	0
	3160 VA
	8.8 A

CONNECTED PHASE VA: 1286 937 937
CONNECTED PHASE AMPS: 10.7A 7.8A 7.8A

AB 27.1%
BC 0.0%
AC 27.1%

NOTES:

PANEL 'SBL' SCHEDULE

LOCATION:	ELEC ROOM	AMPS:	225	MINIMUM AIC:	10,000
TYPE OF MAIN:	MSB	VOLTS:	120/208	GROUND BUS:	YES
MANUFACTURER:	SQUARE D	PHASE:	3	MOUNT:	SURFACE
TYPE:	NQ	WIRE:	4	NOTES:	
		FED FROM:	'SPH' VIA 'XFMR1'		

LOAD TYPE	CIRCUIT DESCRIPTION	CKT NO	P	BRKR AMP	NOTES	VOLT AMPS	A	B	C	VOLT AMPS	NOTES	BRKR AMP	P	CKT NO	CIRCUIT DESCRIPTION	LOAD TYPE
R	REC - MECHANICAL RM 171	1	1	20		720	2041			1321	1	15	3	2	HEAT PUMP (HP-3)	3M
R	REC - TTB OUTLET	3	1	20		360		1681		1321		-	-	4	-	3M
R	REC - SWITCH RM 156	5	1	20		360			1681	1321		-	-	6	-	3M
R	REC - GENERATOR ENCLOSURE 174	7	1	20		720	1136			416	1	15	2	8	FAN COIL (FC-1)	1M
R	REC - ELECTRICAL RM 175	9	1	20		720		1136		416		-	-	10	-	1M
Q	WATER COOLER - COORIDOR 145	11	1	20		1500			1500					12		
R	REC - COORIDOR 145	13	1	20		900	900							14		
R	REC - NURSE STATION 155	15	1	20		540		540						16		
R	REC - NURSE STATION 155	17	1	20		540			540					18		
R	REC - MECHANICAL RM 173	19	1	20		360	360							20		
R	REC - FIRE RISER RM 172	21	1	20		360		360						22		
R	REC - COORIDOR 148	23	1	20		900			900					24		
Q	WATER COOLER COORIDOR 148	25	1	20		1500	1500							26		
Q	WATER COOLER COORIDOR 148	27	1	20		1500		1500						28		
		29												30		
		31												32		
		33												34		
		35												36		
		37												38		
		39												40		
		41												42		

LOAD CODES	CONNECTED
P=PANEL	0
L=LIGHTING	0
R=RECEPTACLE	6480
1M=1PH MOTORS	832
3M=3PH MOTORS	3963
Q=EQUIPMENT	4500
E=ELECTRIC HEAT	0
	15775 VA
	43.8 A

CONNECTED PHASE VA: 5937 5217 4621
CONNECTED PHASE AMPS: 49.5A 43.5A 38.5A

AB 12.1%
BC 11.4%
AC 22.2%

NOTES:
1: REFER TO EQUIPMENT CONNECTION SCHEDULE FOR MORE INFORMATION

ELECTRICAL LOAD SUMMARY

CONNECTED LIGHTING LOAD:	VA	28283
	AMPS	34.0
DEMAND FACTOR:		100%
(PER NEC 220.14)		
CONNECTED RECEPTACLE LOAD:	VA	15340
	AMPS	18.5
FIRST 10KVA:		100%
REMAINDER:		50%
(PER NEC TABLE 220.44)	VA	12670.0
	AMPS	35.2
CONNECTED HVAC LOAD:	VA	315727
	AMPS	379.9
CONNECTED EQUIPMENT LOAD:	VA	84812
	AMPS	102.1
CONNECTED RENOVATIONS/ADDITIONS LOAD:	VA	695001
	AMPS	836.3
DEMAND FACTOR:		25%
PLUS LARGEST MOTOR LOAD:	VA	16004
(PER NEC 430.24)	AMPS	19.3
TOTAL LOAD	VA	**1152497**
	AMPS	**1386.9**
'MSB-1' RATED SIZE:	AMPS	1600
'MSB-1' CONNECTED AMPACITY (100%):	AMPS	1600
SPARE CAPACITY ON 'MSB-1':	AMPS	213.1

PANEL 'BH' SCHEDULE

LOCATION:	ELEC ROOM	AMPS:	250	MINIMUM AIC:	18,000
TYPE OF MAIN:	MLO	VOLTS:	277/480	GROUND BUS:	YES
MANUFACTURER:	SQUARE D	PHASE:	3	MOUNT:	SURFACE
TYPE:	NF	WIRE:	4	NOTES:	4
		FED FROM:	'MSB1'		

LOAD TYPE	CIRCUIT DESCRIPTION	CKT NO	P	BRKR AMP	NOTES	VOLT AMPS	A	B	C	VOLT AMPS	NOTES	BRKR AMP	P	CKT NO	CIRCUIT DESCRIPTION	LOAD TYPE
L	LTS GYMNASIUM HIGH BAY WEST	1	1	20	1,3	3612	14279			10667	2,3	50	3	2	INSTANTANEOUS WATER HEATER (IWH-1)	Q
L	LTS GYMNASIUM HIGH BAY WEST	3	1	20	1,3	3612		14279		10667		-	-	4	-	Q
L	LTS GYMNASIUM HIGH BAY EAST	5	1	20	1,3	3870			14537	10667		-	-	6	-	Q
L	LTS GYMNASIUM HIGH BAY EAST	7	1	20	1,3	3612	14279			10667	2,3	50	3	8	INSTANTANEOUS WATER HEATER (IWH-2)	Q
L	LTS GYMNASIUM HIGH BAY CENTER	9	1	20	1,3	2322		12989		10667		-	-	10	-	Q
L	LTS LEVEL 1 SE	11	1	20	1,3	1743			12410	10667		-	-	12	-	Q
L	LTS LEVEL 1 NW	13	1	20	1,3	1510	1510							14		
		15												16		
	SPARE	17												18		
		19												20		
		21												22		
		23												24		
		25												26		
		27												28		
		29												30		
		31												32		
		33												34		
		35												36		
		37												38		
		39												40		
		41												42		

LOAD CODES	CONNECTED
P=PANEL	0
L=LIGHTING	20281
R=RECEPTACLE	0
1M=1PH MOTORS	0
3M=3PH MOTORS	0
Q=EQUIPMENT	64002
E=ELECTRIC HEAT	0
	84283 VA
	101.4 A

CONNECTED PHASE VA: 30068 27268 26947
CONNECTED PHASE AMPS: 108.5A 98.4A 97.3A

AB 9.3%
BC 1.2%
AC 10.4%

NOTES:
1: ROUTE LIGHTING CIRCUIT THROUGH LIGHTING CONTROL PANEL 'LCP'
2: REFER TO EQUIPMENT CONNECTION SCHEDULE FOR MORE INFORMATION
3: BRANCH CIRCUIT TO BE INSTALLED DURING 'DOME FINISH' CONSTRUCTION.
4: PANEL 'BH' TO BE INSTALLED AS PART OF 'SAFE ROOM' CONSTRUCTION.

PANEL 'AH' SCHEDULE

LOCATION:	ELEC ROOM	AMPS:	250	MINIMUM AIC:	18,000
TYPE OF MAIN:	MLO	VOLTS:	277/480	GROUND BUS:	YES
MANUFACTURER:	SQUARE D	PHASE:	3	MOUNT:	SURFACE
TYPE:	NF	WIRE:	4	NOTES:	3
		FED FROM:	'MSB1'		

LOAD TYPE	CIRCUIT DESCRIPTION	CKT NO	P	BRKR AMP	NOTES	VOLT AMPS	A	B	C	VOLT AMPS	NOTES	BRKR AMP	P	CKT NO	CIRCUIT DESCRIPTION	LOAD TYPE
E	ERV-1 (BACK UP HEAT)	1	3	45		9339	9339							2		
E	-	3	-	-	1	9339		9339						4		
E	-	5	-	-		9339			9339					6		
E	ERV-2 (BACK UP HEAT)	7	3	45		9339	9339							8		
E	-	9	-	-	1	9339		9339						10		
E	-	11	-	-		9339			9339					12		
3M	HEAT PUMP (HP-1)	13	3	45		9422	9422							14		
3M	-	15	-	-	1	9422		9422						16		
3M	-	17	-	-		9422			9422					18		
3M	HEAT PUMP (HP-2)	19	3	45		9422	9422							20		
3M	-	21	-	-	1	9422		9422						22		
3M	-	23	-	-		9422			9422					24		
3M	FAN COIL (FC-2)	25	3	30		4711	4711							26		
3M	-	27	-	-	1,2	4711		4711						28		
3M	-	29	-	-		4711			4711					30		
3M	FAN COIL (FC-3)	31	3	30		4711	4711							32		
3M	-	33	-	-	1,2	4711		4711						34		
3M	-	35	-	-		4711			4711					36		
		37												38		
		39												40		
		41												42		

LOAD CODES	CONNECTED
P=PANEL	0
L=LIGHTING	0
R=RECEPTACLE	0
1M=1PH MOTORS	0
3M=3PH MOTORS	84798
Q=EQUIPMENT	0
E=ELECTRIC HEAT	56034
	140832 VA
	169.5 A

CONNECTED PHASE VA: 46944 46944 46944
CONNECTED PHASE AMPS: 169.5A 169.5A 169.5A

AB 0.0%
BC 0.0%
AC 0.0%

NOTES:
1: REFER TO EQUIPMENT CONNECTION SCHEDULE FOR MORE INFORMATION
2: BRANCH CIRCUIT TO BE INSTALLED DURING 'DOME FINISH' CONSTRUCTION.
3: PANEL 'AH' TO BE INSTALLED AS PART OF 'SAFE ROOM' CONSTRUCTION.

ELECTRICAL GENERATOR LOAD SUMMARY

'EMERGENCY' CONNECTED LOAD	VA	11162
(PANEL 'EH') (10)	AMPS	13.4
'STAND-BY' CONNECTED LOAD:	VA	54841
(PANEL 'SB') (10)	AMPS	66.0
TOTAL LOAD	VA	**66003**
	AMPS	**79.4**
GENERATOR RATED SIZE (9):	AMPS	96
GENERATOR CONNECTED AMPACITY (100%) (8):	AMPS	96
SPARE CAPACITY ON GENERATOR (8):	AMPS	16.6

(NOTES):
8. PER NEC 700.4A, GENERATOR SIZE SHALL HAVE ADEQUATE CAPACITY FOR ALL CONNECTED LOADS TO BE OPERATED SIMULTANEOUSLY (BOTH EMERGENCY AND STAND-BY)
9. PER MANUFACTURER'S PUBLISHED INFORMATION, FULL LOAD OUTPUT RATING IS BASED ON NATURAL GAS AND IS LESSER ("WORST CASE") AMOUNT THAN IF GENERATOR IS RUNNING ON LP GAS
10: SINGLE EMERGENCY SYSTEM (GENERATOR) MAY BE USED TO SUPPLY BOTH EMERGENCY AND STAND-BY LOADS WHERE GENERATOR UTILIZES (2) SEPARATE BREAKERS IN SEPARATE ENCLOSURES FEEDING (2) SEPARATE AUTOMATIC TRANSFER SWITCHES PER NEC 700.10(B)(5)(d)

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STATE OF TEXAS
PROFESSIONAL ENGINEER

ISSUED: 15 OCT 2013

CITY OF EDINBURG
SAFE ROOM - SOUTH PARK SITE
315 E. PALM DRIVE
EDINBURG, TX

100% 10/15/2013

REVISIONS

ELECTRICAL SCHEDULES - SAFE ROOM

E6.2

PANEL 'AL' SCHEDULE

LOCATION:	ELEC ROOM	AMPS:	225	MINIMUM AIC:	10,000
TYPE OF MAIN:	MSB	VOLTS:	120/208	GROUND BUS:	YES
MANUFACTURER:	SQUARE D	PHASE:	3	MOUNT:	SURFACE
TYPE:	NQ	WIRE:	4	NOTES:	4
		FED FROM:	'MSB1' VIA 'XFMR3'		

LOAD TYPE	CIRCUIT DESCRIPTION	CKT NO	P	BRKR AMP	NOTES	VOLT AMPS	A	B	C	VOLT AMPS	NOTES	BRKR AMP	P	CKT NO	CIRCUIT DESCRIPTION	LOAD TYPE
R	REC - WOMEN RR 151	1	1	20	3	1500	1860			360	3	20	1	2	REC - CUSTODIAL 152	R
Q	HAND DRYER WOMENS RR 151	3	1	20	1,3	1500		1860		360	3	20	1	4	REC - CUSTODIAL 154	R
Q	HAND DRYER WOMENS RR 151	5	1	20	1,3	1500			1860	360	3	20	1	6	REC - CUSTODIAL 163	R
Q	HAND DRYER WOMENS RR 151	7	1	20	1,3	1500	1860			360	3	20	1	8	REC - CUSTODIAL 166	R
R	REC - MENS RR 153	9	1	20	3	1500		2040		540	3	20	1	10	REC - STORAGE 168	R
Q	HAND DRYER MENS RR 153	11	1	20	1,3	1500			2040	540	3	20	1	12	REC - STORAGE 157	R
Q	HAND DRYER MENS RR 153	13	1	20	1,3	1500	2040			540	3	20	1	14	REC - STORAGE 167	R
R	REC - WOMEN RR 164	15	1	20	3	1500		2400		900	3	20	1	16	REC - GYMNASIUM	R
Q	HAND DRYER WOMENS RR 164	17	1	20	1,3	1500			2400	900	3	20	1	18	REC - GYMNASIUM	R
Q	HAND DRYER WOMENS RR 164	19	1	20	1,3	1500	1500					20	1	20		
T	REC - MENS RR 161	21	1	20	3	1500		1500				20	1	22		
Q	HAND DRYER MENS RR 161	23	1	20	1,3	1500			1500			20	1	24		
Q	HAND DRYER MENS RR 161	25	1	20	1,3	1500	1500					20	1	26		
Q	WATER HEATER - WH1	27	1	20	3	1500		1500						28		
Q	WATER HEATER - WH2	29	1	20	3	1500			1500					30		
		31												32		
		33												34		
		35												36		
		37												38		
		39												40		
		41												42		

CONNECTED PHASE VA:	8760	9300	9300
CONNECTED PHASE AMPS:	73A	77.5A	77.5A

LOAD CODES	CONNECTED
P=PANEL	0
L=LIGHTING	0
R=RECEPTACLE	9360
1M=1PH MOTORS	0
3M=3PH MOTORS	0
Q=EQUIPMENT	16500
E=ELECTRIC HEAT	0
	25860 VA
	71.8 A

AB	-5.8%
BC	0.0%
AC	-5.8%

NOTES:
1: PROVIDE (1) #10 CU (HOT) + (1) #10 CU (NEUTRAL) + (1) #10 CU GND HOMERUN. TERMINATE AT HAND DRYER
2: REFER TO EQUIPMENT CONNECTION SCHEDULE FOR MORE INFORMATION
3: BRANCH CIRCUIT TO BE INSTALLED DURING 'DOME FINISH' CONSTRUCTION.
4: PANEL 'BH' TO BE INSTALLED AS PART OF 'SAFE ROOM' CONSTRUCTION.

LIGHTING CONTROL PANEL ('LCP') SCHEDULE

RELAY OR POLE	LIGHTING CONTOL ZONE	BRANCH CKT	SWITCH ID (# OF BUTTONS)	BUTTON IDENTIFIER	BUTTON (LED) NUMBER	LOAD (VA)	CONTROL TYPE TC	TYPE PC	TYPE OS	TYPE LV	OVERRIDE TC	OVERRIDE PC	OVERRIDE OS	OVERRIDE LV	SCHED	REMARKS
1	LTS GYMNASIUM EMERG HIGH-BAY WEST	EH-1	LV-1,2,4 (8-BUTTON)	'WEST GYM-E'	1	2064	X							X	1	'ON' BUTTON = TEMP OVERRIDE FOR LCP. (SAFE-ROOM SCOPE)
2	LTS GYMNASIUM EMERG HIGH-BAY EAST	EH-3	LV-1,2,4 (8-BUTTON)	'EAST GYM-E'	2	2064	X							X	1	
3	LTS GYMNASIUM EMERG HIGH-BAY CENTER	EH-5	LV-1,2,4 (8-BUTTON)	'CEN GYM-E'	3	1548	X							X	1	
4	LTS LEVEL 1 EMERGENCY NW	EH-7	LV-3 (4-BUTTON)	'ON NW-E' 'OFF NW-E'	1 2	597	X		X				X	X	1	'ON' BUTTON = TEMPORARY OVERRIDE FOR LOCAL MANUAL SWITCHING OR OCC SENSOR CONTROL. (SAFE ROOM SCOPE)
5	LTS LEVEL 1 EMERGENCY SE	EH-9	LV-5 (4-BUTTON)	'ON SE-E' 'OFF SE-E'	1 2	1441	X		X				X	X	1	
6	SPARE	EH-11				0										
7	SPARE	EH-13				0										
8	SPARE	EH-15				0										
9	SPARE	EH-17				0										
HIGH VOLTAGE BARRIER BETWEEN EMERGENCY AND NON-EMERGENCY LIGHTING CIRCUITS																
10	LTS GYMNASIUM HIGH BAY WEST	BH-1	LV-1,2,4 (8-BUTTON)	'WEST GYM-N1'	4	3612	X							X		'ON' BUTTON = TEMP OVERRIDE FOR LCP.
11	LTS GYMNASIUM HIGH BAY WEST	BH-3	LV-1,2,4 (8-BUTTON)	'WEST GYM-N2'	5	3612	X							X		
12	LTS GYMNASIUM HIGH BAY EAST	BH-5	LV-1,2,4 (8-BUTTON)	'EAST GYM-N2'	6	3870	X							X		
13	LTS GYMNASIUM HIGH BAY EAST	BH-7	LV-1,2,4 (8-BUTTON)	'EAST GYM-N1'	7	3612	X							X		
14	LTS GYMNASIUM HIGH BAY CENTER	BH-9	LV-1,2,4 (8-BUTTON)	'CEN GYM-N'	8	2322	X							X		
15	LTS LEVEL 1 SE	BH-11	LV-3 (4-BUTTON)	'ON NW-N' 'OFF NW-N'	3 4	1743	X		X				X	X		'ON' BUTTON = TEMPORARY OVERRIDE FOR LOCAL MANUAL SWITCHING OR OCC SENSOR CONTROL.
16	LTS LEVEL 1 NW	BH-13	LV-5 (4-BUTTON)	'ON SE-N' 'OFF SE-N'	3 4	1846	X		X				X	X		
17	SPARE	BH-15				0										
18	SPARE	BH-17				0										

CONTROL NOTES:
TC = ASTRONOMICAL TIME CLOCK
PC = PHOTOCELL
OS = OCCUPANCY SENSOR
LV = LOW VOLTAGE SWITCH

1. TC CONTROL - ON = VERIFY W/ OWNER, OFF = VERIFY W/ OWNER (TYPICAL SCHEDULE SHALL BE - ON=7:00AM, OFF=5:00PM)
2. TC CONTROL - ON = 30 MIN BEFORE SUNSET (DUSK), OFF = 30 MIN AFTER SUNRISE (DAWN)
3. TC CONTROL - ON = 30 MIN BEFORE SUNSET (DUSK), OFF = 10:00PM (VERIFY TIME WITH OWNER)
4. TC CONTROL - ON & OFF (VERIFY TIME WITH OWNER)

LIGHTING CONTROL COMPONENTS NOTES:
PROVIDING AND INSTALLING LCP AND MAKING NON-EMERGENCY CIRCUIT CONNECTIONS FALLS WITHIN THE SCOPE OF 'DOME FINISH'. MAKING EMERGENCY CONNECTION CIRCUITS IS PART OF 'SAFE ROOM'

'LCP' SHALL BE UL 916 LISTED, STAND ALONE, RELAY BASED (HID-TYPE, 1- OR 2-POLE) - GREENGATE 'LITEKEEPER' BY COOPER LIGHTING CONTROLS #LK32-120/277-S4-HVB1 OR EQUAL. PROVIDE W/ #LK-LB LOGIC BOARD AND SURFACE MOUNTED ENCLOSURE. 'LCP' SHALL ALSO BE UL 924 LISTED AND ALLOW FOR CONTROL OF BOTH EMERGENCY AND NON-EMERGENCY LIGHTING CIRCUITS. PROVIDE W/ GREENGATE RELAY INTERFACE MODULE

(#RIM) ACCESSORY AND HIGH VOLTAGE BARRIER PER UL 924 REQUIREMENTS.
LOW VOLTAGE SWITCHES SHALL BE DIGITAL LED INDICATING, DECORA STYLE LIGHTING CONTROL SYSTEM COMPATABLE IN 1- 2-, 3-, 4-, 5- OR 6-BUTTON CONFIGURATIONS - GREENGATE #GDS-SERIES OR EQUAL. PROVIDE W/ #GDS-I-KIT DIGITAL SWITCH INTEGRATOR AS REQUIRED.
AFTER HOURS LIGHTING CONTROL OVERRIDE SWITCH FUNCTION SHALL BE PROGRAMMED FOR A MAXIMUM OF 30 MINUTES, 'LCP' SHALL PROVIDE A 'FLICK WARNING' AND TIME OUT OPTION PRIOR TO SWEEP OFF

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STATE OF TEXAS
PROFESSIONAL ENGINEER

ISSUED: 15 OCT 2013

CITY OF EDINBURG
SAFE ROOM - SOUTH PARK SITE
315 E. PALM DRIVE
EDINBURG, TX

100% 10/15/2013

REVISIONS

ELECTRICAL SCHEDULES - SAFE ROOM

E6.3

COM*check* Software Version 3.9.2

Exterior Lighting Compliance Certificate

2009 IECC

Section 1: Project Information

Project Type: **New Construction**
Project Title : Parks & Rec. Dept Renovation & Addition
Exterior Lighting Zone: **2 (Neighborhood business district)**

Construction Site:
315 E. Palomar Dr.
Edinburg, TX

Owner/Agent:

Designer/Contractor:
Kelden Boren
4943 N. 29th E., Suite 101
Idaho Falls, ID

Section 2: Exterior Lighting Area/Surface Power Calculation

A Exterior Area/Surface	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B x C)	F Proposed Watts
Main entry	30 ft of door width	20	Yes	600	720
Other door (not main entry)	24 ft of door width	20	Yes	480	0
Total Tradable Watts* =				1080	720
Total Allowed Watts =				1080	
Total Allowed Supplemental Watts** =				600	

* Wattage tradeoffs are only allowed between tradable areas/surfaces.
** A supplemental allowance equal to 600 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

Section 3: Exterior Lighting Fixture Schedule

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Main entry (30 ft of door width): Tradable Wattage				
LED 1: L-1: Exterior Bldg Mtd: Other:	1	15	48	720
Other door (not main entry) (24 ft of door width): Tradable Wattage				
Total Tradable Proposed Watts =				720

Section 4: Requirements Checklist

Lighting Wattage:
☐ 1. Within each non-tradable area/surface, total proposed watts must be less than or equal to total allowed watts. Across all tradable areas/surfaces, total proposed watts must be less than or equal to total allowed watts.
Compliance: Passes.

Controls, Switching, and Wiring:
☐ 2. All exemption claims are associated with fixtures that have a control device independent of the control of the nonexempt lighting.
☐ 3. Lighting not designated for dusk-to-dawn operation is controlled by either a a photosensor (with time switch), or an astronomical time switch.
☐ 4. Lighting designated for dusk-to-dawn operation is controlled by an astronomical time switch or photosensor.
☐ 5. All time switches are capable of retaining programming and the time setting during loss of power for a period of at least 10 hours.

Exterior Lighting Efficacy:
☐ 6. All exterior building grounds luminaires that operate at greater than 100W have minimum efficacy of 60 lumen/watt.

Exceptions:
Lighting that has been claimed as exempt and is identified as such in Section 3 table above.
Lighting that is specifically designated as required by a health or life safety statue, ordinance, or regulation.
Emergency lighting that is automatically off during normal building operation.
Lighting that is controlled by motion sensor.

Section 5: Compliance Statement

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 2009 IECC requirements in COM*check* Version 3.9.2 and to comply with the mandatory requirements in the Requirements Checklist.

Kelden Boren, P.E. — Name - Title
Signature
June 5, 2013 — Date

COM*check* Software Version 3.9.2

Interior Lighting Compliance Certificate

2009 IECC

Section 1: Project Information

Project Type: **New Construction**
Project Title : Parks & Rec. Dept Renovation & Addition

Construction Site:
315 E. Palomar Dr.
Edinburg, TX

Owner/Agent:

Designer/Contractor:
Kelden Boren
4943 N. 29th E., Suite 101
Idaho Falls, ID

Section 2: Interior Lighting and Power Calculation

A Area Category	B Floor Area (ft2)	C Allowed Watts / ft2	D Allowed Watts (B x C)
Gymnasium (Gymnasium)	26360	1.1	28996
Total Allowed Watts =			28996

Section 3: Interior Lighting Fixture Schedule

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Gymnasium (Gymnasium 26360 sq.ft.)				
LED 1: L-2.E: High Bay: Other:	1	89	258	22962
LED 2: L-3.E: Strip Light: Other:	1	20	75	1500
LED 3: L-4.E: Surface Wall/Ceiling: Other:	1	51	43	2193
LED 4: L-5: Recessed Dwn Lt: Other:	1	6	25	150
LED 5: L-6.E: 2x4 Troffer: Other:	1	5	50	250
LED 6: L-7: Other:	1	6	25	150
Total Proposed Watts =				27205

Section 4: Requirements Checklist

Interior Lighting PASSES: Design 6% better than code.

Lighting Wattage:
☐ 1. Total proposed watts must be less than or equal to total allowed watts.

Allowed Watts	Proposed Watts	Complies
28996	27205	YES

Controls, Switching, and Wiring:

☐ 2. Daylight zones under skylights more than 15 feet from the perimeter have lighting controls separate from daylight zones adjacent to vertical fenestration.
☐ 3. Daylight zones have individual lighting controls independent from that of the general area lighting.

Exceptions:
Contiguous daylight zones spanning no more than two orientations are allowed to be controlled by a single controlling device.
Daylight spaces enclosed by walls or ceiling height partitions and containing two or fewer light fixtures are not required to have a separate switch for general area lighting.
☐ 4. Independent controls for each space (switch/occupancy sensor).

Exceptions:
Areas designated as security or emergency areas that must be continuously illuminated.
Lighting in stairways or corridors that are elements of the means of egress.
☐ 5. Master switch at entry to hotel/motel guest room.
☐ 6. Individual dwelling units separately metered.
☐ 7. Medical task lighting or art/history display lighting claimed to be exempt from compliance has a control device independent of the control of the nonexempt lighting.
☐ 8. Each space required to have a manual control also allows for reducing the connected lighting load by at least 50 percent by either controlling all luminaires, dual switching of alternate rows of luminaires, alternate luminaires, or alternate lamps, switching the middle lamp luminaires independently of other lamps, or switching each luminaire or each lamp.

Exceptions:
Only one luminaire in space.
An occupant-sensing device controls the area.
The area is a corridor, storeroom, restroom, public lobby or sleeping unit.
Areas that use less than 0.6 Watts/sq.ft.
☐ 9. Automatic lighting shutoff control in buildings larger than 5,000 sq.ft.

Exceptions:
Steeping units, patient care areas; and spaces where automatic shutoff would endanger safety or security.
☐ 10. Photocell/astronomical time switch on exterior lights.

Exceptions:
Lighting intended for 24 hour use.
☐ 11. Tandem wired one-lamp and three-lamp ballasted luminaires (No single-lamp ballasts).

Exceptions:
Electronic high-frequency ballasts; Luminaires on emergency circuits or with no available pair.

Section 5: Compliance Statement

Compliance Statement: The proposed lighting design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed lighting system has been designed to meet the 2009 IECC requirements in COM*check* Version 3.9.2 and to comply with the mandatory requirements in the Requirements Checklist.

Kelden Boren, P.E. — Name - Title
Signature
June 5, 2013 — Date

IECC CODE COMPLIANCE NOTE:

A. ALL LIGHTS FOR THE IECC CODE COMPLIANCE ARE SHOWN IN COMCHECK FORMS INCLUDING BOTH LIGHTS ON SAFE ROOM (SR) DRAWINGS AND DOME FINISH (DF) DRAWINGS.

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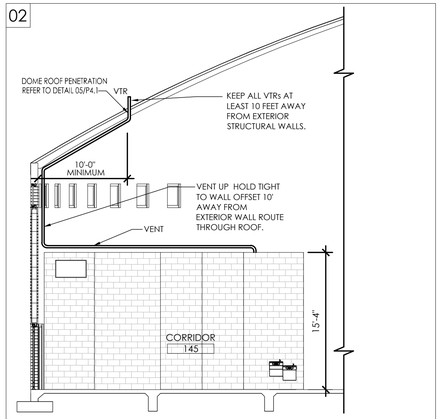
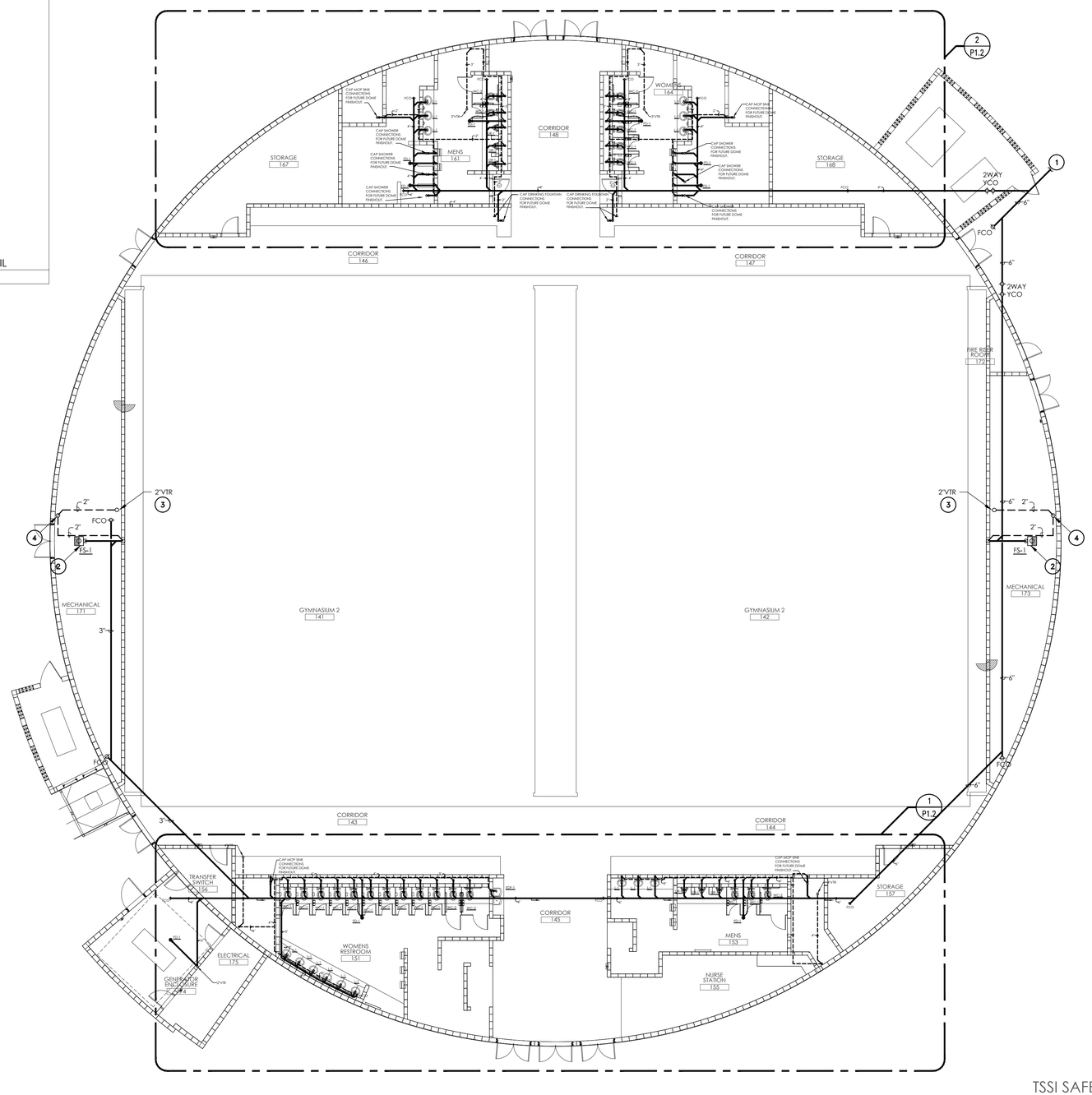
ELECTRICAL CODE COMPLIANCE - SAFE ROOM

E7.1



VENT ROUTING & VENT THRU DOME ROOF TYPICAL DETAIL

NO SCALE



KEYED NOTES: PLUMBING

1. REFER TO CIVIL SITE PLAN FOR CONTINUATION OF PLUMBING FIVE FEET AWAY FROM BUILDING. PLUMBING CONTRACTOR TO BE RESPONSIBLE FOR COORDINATION. VERIFICATION AND CONNECTION OF ALL UTILITIES TO SITE UTILITY STUB-OUTS. CONTRACTOR SHALL VERIFY LOCATIONS, INVERT SLOPE, ELEVATION, AND DIRECTION OF FLOW WITH CIVIL ENGINEERING DRAWINGS.
2. FLOOR SINK FOR CONDENSATE FROM AHUs. COORDINATE LOCATION WITH HVAC CONTRACTOR. FLOOR DRAIN SHALL BE WITHIN 2 FEET FROM AHU.
3. KEEP ALL VTRs AT LEAST 10 FEET AWAY FROM EXTERIOR STRUCTURAL WALLS. REFER TO DETAIL #02 THIS SHEET.
4. VENT UP HOLD TIGHT TO WALL OFFSET 10' AWAY FROM EXTERIOR WALL ROUTE THROUGH ROOF. REFER TO DETAIL #02 THIS SHEET.

1 / P1.1 SEWER & VENT
PLUMBING PLAN
SCALE: 3/32" = 1'-0"

TSSI SAFE ROOM PROJECT

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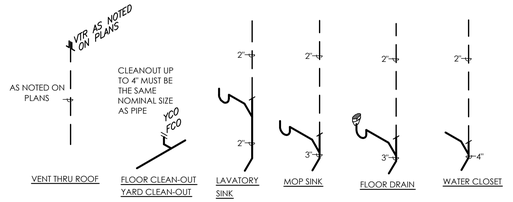
PLUMBING PLAN

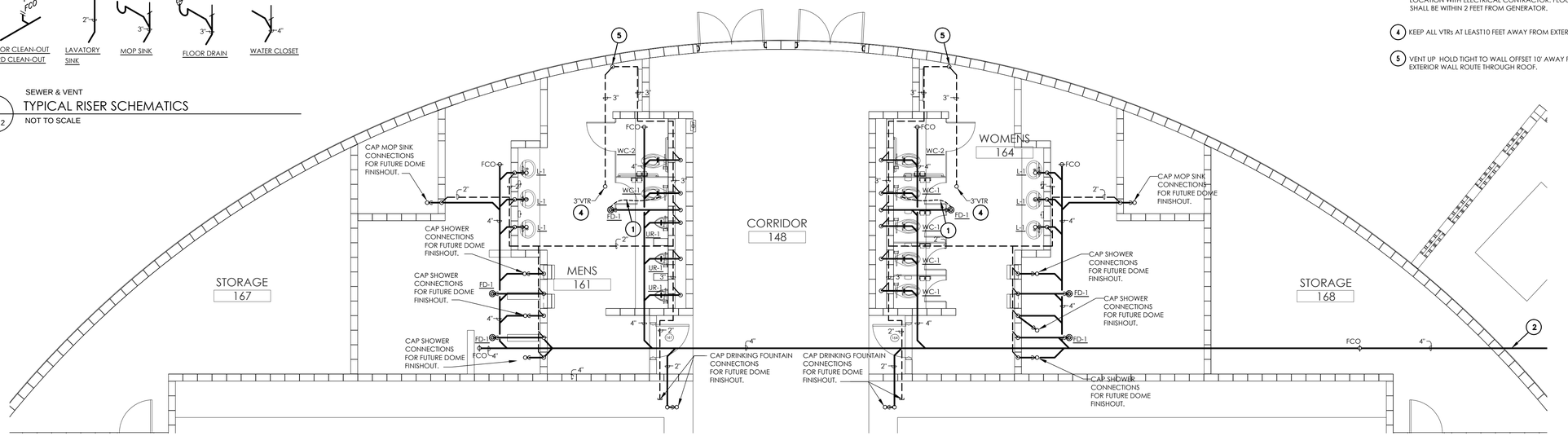
P1.1



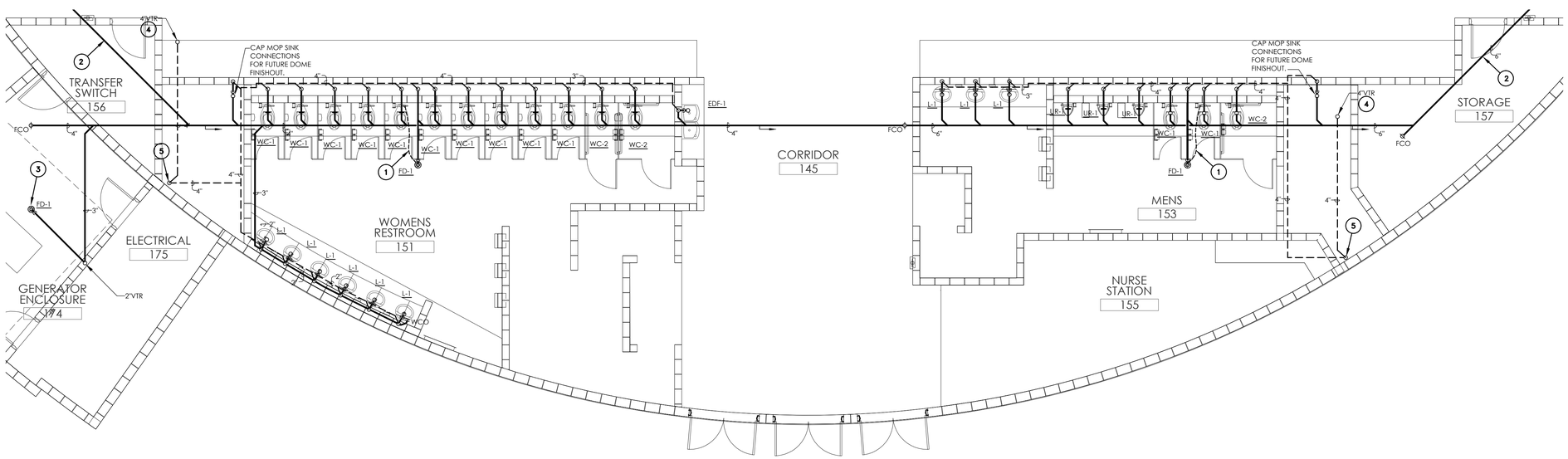
3 / P1.2 SEWER & VENT
TYPICAL RISER SCHEMATICS
NOT TO SCALE

KEYED NOTES: PLUMBING

1. 1/2" COPPER FROM TRAP PRIMER COVER WITH POLYETHYLENE SLEEVE "POLY SLEEVE" OR EQUAL. PROVIDE FLUSHVALVE TRAP SEAL PRIMER EQUAL TO SLOAN VBF-72-A. SEE DETAIL 08/P4.1.
2. REFER TO SHEET P1.1 FOR PIPE CONTINUATION.
3. FLOOR SINK FOR GENERATOR MAINTENANCE. COORDINATE LOCATION WITH ELECTRICAL CONTRACTOR. FLOOR DRAIN SHALL BE WITHIN 2 FEET FROM GENERATOR.
4. KEEP ALL VTRs AT LEAST10 FEET AWAY FROM EXTERIOR STRUCTURAL WALLS.
5. VENT UP HOLD TIGHT TO WALL OFFSET 10' AWAY FROM EXTERIOR WALL ROUTE THROUGH ROOF.



2 / P1.2 SEWER & VENT
ENLARGED PLUMBING PLAN-LOCKER ROOMS
SCALE: 3/16" = 1'-0"



1 / P1.2 SEWER & VENT
ENLARGED PLUMBING PLAN-RESTROOMS
SCALE: 3/16" = 1'-0"

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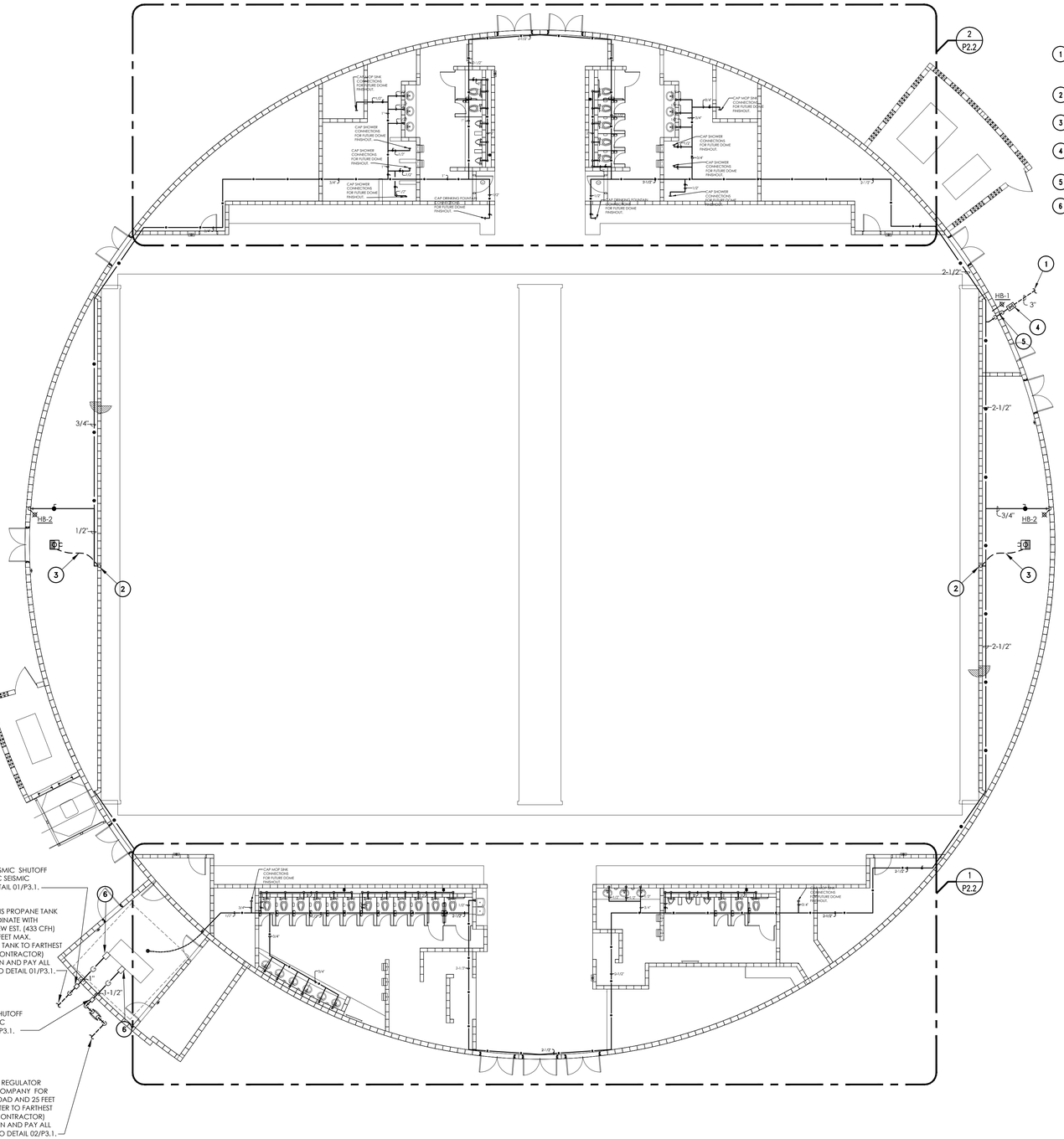
PLUMBING PLAN

P1.2



KEYED NOTES: PLUMBING

1. REFER TO CIVIL SITE PLAN FOR CONTINUATION OF OF PLUMBING FIVE FEET AWAY FROM BUILDING. PLUMBING CONTRACTOR TO BE RESPONSIBLE FOR COORDINATION. VERIFICATION AND CONNECTION OF ALL UTILITIES TO SITE UTILITY STUB-OUTS. PROVIDE 3" WATER METER AND BACKFLOW PREVENTER.
2. PRESSURE DROP ACTIVATED TRAP PRIMER. PROVIDE ACCESS PANEL IF INACCESSIBLE. SEE DETAIL 06/P4.1.
3. 1/2" COPPER FROM TRAP PRIMER COVER WITH POLYETHYLENE SLEEVE "POLY SLEEVE" OR EQUAL. TYPICAL ALL TRAP-PRIMERS.
4. CUT-OFF VALVE IN CAST IRON BOX. SET BOX FLUSH WITH FINISHED GRADE.
5. WATER SERVICE ENTRANCE. REFER TO DETAIL 01/P4.1.
6. TRANSITION AS REQUIRED AND CONNECT TO NEW DUAL FUEL GENERATOR. VERIFY POINT OF CONNECTION. (GENERATOR BY ELECTRICAL CONTRACTOR.)

1 / P2.1 DOMESTIC WATER
PLUMBING PLAN
SCALE: 3/32" = 1'-0"

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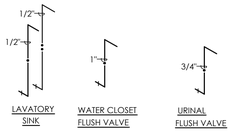
PLUMBING PLAN

P2.1



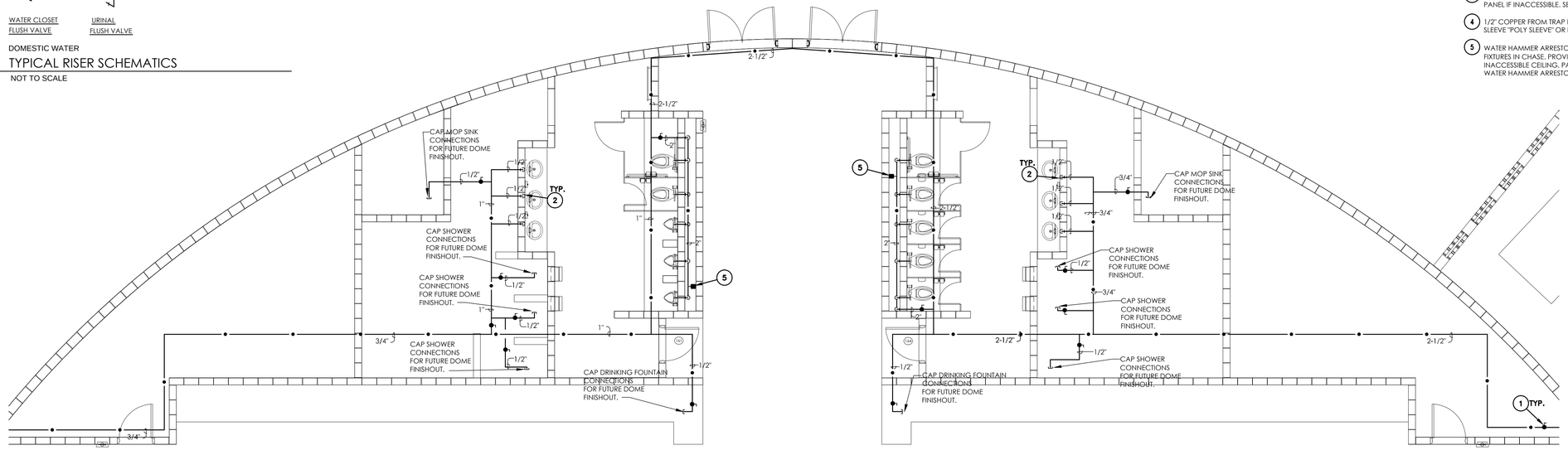
DOMESTIC WATER

3 / P2.2 TYPICAL RISER SCHEMATICS

NOT TO SCALE

KEYED NOTES: PLUMBING

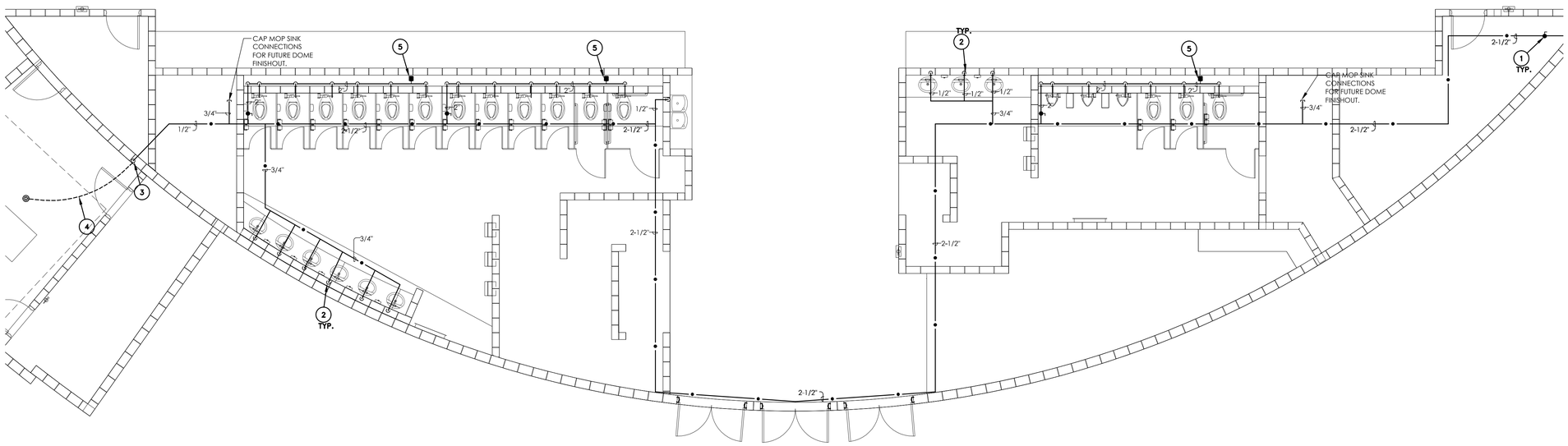
1. BRONZE CUT-OFF VALVE ABOVE CEILING. PROVIDE ACCESS PANEL WHERE LOCATED IN AN INACCESSIBLE CEILING. PANEL SHALL BE 12"X12" PAINTED TO MATCH CEILING.
2. PROVIDE SINGLE FIXTURE WATER HAMMER ARRESTORS EQUAL TO MINI-RESTER SIOUX CHIEF, FOR ENTIRE WATER SUPPLY SYSTEM. AIR CHAMBERS NOT AN APPROVED SUBSTITUTE.
3. PRESSURE DROP ACTIVATED TRAP PRIMER. PROVIDE ACCESS PANEL IF INACCESSIBLE. SEE DETAIL 06/P4.1.
4. 1/2" COPPER FROM TRAP PRIMER COVER WITH POLYETHYLENE SLEEVE "POLY SLEEVE" OR EQUAL. TYPICAL ALL TRAP-PRIMERS.
5. WATER HAMMER ARRESTOR (HYDRA-RESTER), SIOUX CHIEF OR EQUAL FOR FIXTURES IN CHASE. PROVIDE ACCESS PANEL WHERE LOCATED IN AN INACCESSIBLE CEILING. PANEL SHALL BE 12"x12" PAINTED TO MATCH CEILING. WATER HAMMER ARRESTOR, SIZE AS PER MANUFACTURER'S SIZING TABLE.



DOMESTIC WATER

2 / P2.2 ENLARGED PLUMBING PLAN-LOCKER ROOMS

SCALE: 1/8" = 1'-0"



DOMESTIC WATER

1 / P2.2 ENLARGED PLUMBING PLAN-RESTROOMS

SCALE: 1/8" = 1'-0"

TSSI SAFE ROOM PROJECT

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PLUMBING PLAN

P2.2

ABBREV. DESCRIPTION

AC	ABOVE CEILING
AFF	ABOVE FINISHED FLOOR
ASA	AMERICAN STANDARDS ASSOCIATION
ASME	AMERICAN SOICIETY OF MECHANICAL ENGINEERS
ASTM	AMERICAN SOCIETY FOR TESTING MATERIALS
AW	ACID WASTE
AWWA	AMERICAN WATER WORKS ASSOCIATION
AV	ACID VENT
BTUH	BRITISH THERMAL UNIT PER HOUR
CA	COMPRESSED AIR
CI	CAST IRON
CO	CLEANOUT
CU	COPPER
DN	DOWN
EQ	EQUAL
FCO	FLOOR CLEANOUT
FF	FINISH FLOOR
FG	FINISH GRADE
FH	FIRE HYDRANT
GAL	GALLON(S)
GALV	GALVANIZED
GW	GREASE WASTE
HB	HOSE BIBB
HP	HORESPOWER
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
RD	ROOF DRAIN(S)
RE:4/P6	REFER TO DETAIL 4 DRAWING P-6
RO	REVERSE OSMOSIS
SD	STORM DRAIN
SPEC	SPECIFICATION
TYP	TYPICAL
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORIES
VTR	VENT THRU ROOF
V	VACUUM
W/	WITH
WCO	WALL CLEAN OUT
YCO	YARD CLEAN OUT

PLUMBING FIXTURE SCHEDULE

MARK	FIXTURE TYPE	CONNECTION SIZE				DESCRIPTION
		San. Sewer	Vent	Cold Water	Hot Water	
WC-1 WC-2	WATER CLOSET WALL HUNG STANDARD AND ADA REFER TO ARCH'L DRAWING FOR MOUNTING HEIGHTS	4"	2"	1"	-	AMERICAN STANDARD "AFWALL" MODEL NO. 3351.001, WALL HUNG WATER CLOSET, WITH ELONGATED RIM, LOW CONSUMPTION (1.6 GPF), WITH SLOAN "ROYAL" FLUSHVALVE MODEL NO. 111, 1-1/2" TOP SPUD INLET. VITREOUS CHINA, WITH "BENEKE" OPEN FRONT SEAT LESS COVER MODEL NO. 533SS. CARRIER BY ZURN MODEL NO. Z-1204-N. FLUSH LEVER SHALL BE MOUNTED ON APPROACH SIDE OF THE FIXTURE.
UR-1	URINAL (STANDARD & HANDICAPPED) FLOOR MOUNTED	3"	2"	3/4"	-	AMERICAN STANDARD "STALLBROOK" MODEL NO. 6400.014. SLOPING FRONT STALL URINAL. VITREOUS CHINA, 1 GPF FLUSH OR LESS, WASHOUT FLUSH ACTION TOP INLET, WITH SLOAN "ROYAL" FLUSHOMETER VALVE MODEL NO. 186-1.
L-1	LAVATORY COUNTER TOP HANDICAPPED	2"	2"	1/2"	1/2"	AMERICAN STANDARD "EQUALYN" MODEL NO. 0491.047 SELF-RIMMING OVAL BASIN COUNTERTOP LAVATORY. CONCEALED FRONT OVERFLOW. VITREOUS CHINA. COMPLETE WITH INSTALLATION TEMPLATE. WITH ONE HOLE CENTER SET. PROVIDE METERING FAUCET EQUAL TO ZURN MODEL NO. Z86300-CP4 (CHROME). VANDAL RESISTANT , ADA APPROVED. PROVIDE PROTECTIVE COVER ON P-TRAP AND STOPS.
EDF-1	ELECTRIC WATER COOLER REFER TO ARCH'L DRAWING FOR MOUNTING HEIGHTS	2"	2"	1/2"	-	BI-LEVEL ELECTRIC WATER COOLER SHALL BE "ACORN" MODEL No. A17240BF-UBL-BF2S,WITH CAPACITY OF 8.0 GALLONS. VANDAL RESISTANT, STAINLESS STEEL BASIN WITH INTEGRAL DRAIN GRID AND BUBBLER WITH FEXIBLE GUARD, LEAD FREE ADA COMPLIANT, WITH BOTTLE FILLER.
HB-1	HOSE BIB EXTERIOR	-	-	3/4"	-	MILD TEMPERATURE WALL HYDRANT SHALL BE WADE MODEL 8600MT-175 3/4" INLET WITH BRONZE CASING, BRONZE FACE AND STRAIGHT INLET CONNECTION WITH INTEGRAL BACKFLOW PREVENTER.
HB-2	WALL FAUCET HOSE BIB (IN BOX)	-	-	3/4"	-	WOODFORD (IN BOX) MODEL B26 P-3/4" INLET, WITH BACKFLOW PREVENTER AND LOOSE TEE KEY.
FS-1	MECH. ROOM FLOOR SINK	AS NOTED ON PLANS				EQUAL TO JOSAM PART # 49303-3-31-Z-SS, 8" SQUARE A.R.E. TOP, WITH 5-7/8" DEEP SUMP, WITH DRAINAGE FLANGE, 1/2 GRATE, ALUMINUM SEDIMENT BUCKET, 1/2" PRIMER TAP.
FD-1	RESTROOM FLOOR DRAIN	AS NOTED ON PLANS				EQUAL TO JOSAM PART # 30003-6A-Y-50, CAST IRON BODY WITH CLAMP RING, FLANGE, ADJUSTABLE NIKALOY STRAINER, HUB OUTLET WITH GASKET AND 1/2" PRIMER TAP.
FD-2	SHOWER FLOOR DRAIN	AS NOTED ON PLANS				EQUAL TO JOSAM PART # 30002-6A-Y-50, CAST IRON BODY WITH CLAMP RING, FLANGE, ADJUSTABLE NIKALOY STRAINER, HUB OUTLET WITH GASKET AND 1/2" PRIMER TAP.

NOTES:

1. ALL VITREOUS CHINA FIXTURES SHALL BE WHITE UNLESS NOTED OTHERWISE (UNO).
2. INSULATE ALL WATER AND WASTE PIPING UNDER LAVATORIES WITH HANDY-SHIELD JACKET BY PLUMBEREX.

PLUMBING PIPING MATERIAL:

1. SANITARY DRAIN & VENT INSIDE BUILDING BELOW GRADE:
   SCHEDULE 40 PVC
2. SANITARY DRAIN OUTSIDE BUILDING:
   SCHEDULE 40 PVC
3. SANITARY DRAIN & VENT INSIDE BUILDING ABOVE GRADE:
   SCHEDULE 40 PVC
4. SANITARY DRAIN & VENT IN PLENUM CEILING:
   NO-HUB CAST IRON
5. DOMESTIC HOT & COLD WATER:
   COPPER, TYPE "L" HARD DRAWN
6. DOMESTIC WATER BELOW GRADE:
   COPPER, TYPE "K" SOFT ANNEALED
7. DOMESTIC WATER BELOW GROUND OUTSIDE OF BUILDING PIPING 2" SIZE AND SMALLER:
   COPPER, TYPE "L" HARD DRAWN

PLUMBING GENERAL NOTES: (ALL SHEETS)

A. ALL WORK AND MATERIAL SHALL BE IN COMPLIANCE WITH ALL APPLICABLE CODES AS ADAPTED AND AMENDED BY THE INSPECTING AUTHORITIES.

B. ALL PLUMBING WORK SHALL BE INSTALLED SO AS TO AVOID CONFLICT WITH ALL ELECTRICAL WORK, MECH'L WORK AND STRUCTURAL MEMBERS. COORDINATE WITH MECHANICAL, ELEC'L AND STRUCTURAL FOR PROPER CLEARANCES.

C. REFER TO ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR PHASING AND SEQUENCE OF CONSTRUCTION OF WORK.

D. SLEEVE ALL OUTSIDE WALL, FLOOR SLAB, AND GRADE BEAM PENETRATIONS PER DETAILS AND PER CODE.

E. LOCATE ALL PLUMBING VENTS TO ROOF (VTR) SO THAT THEY TERMINATE A MINIMUM OF 1'-0" AWAY FROM ANY VERTICAL SURFACE AND 10'-0" AWAY FROM ANY OUTSIDE AIR INTAKES.

F. RECORD INVERT ELEVATIONS OF ALL YCO'S ON "AS-BUILT" DRAWINGS.

G. MINIMUM 3" WASTE LINE BELOW FLOOR AND MINIMUM 2" WASTE RISER, UNLESS NOTED OTHERWISE (UNO).

H. PLUMBING CONTRACTOR SHALL PAY FOR ALL UTILITY CONNECTIONS FEES, PERMITS, TESTS AND INSPECTIONS. FURNISH 3 COPIES OF INSPECTION CERTIFICATE BEFORE REQUESTING FINAL PAYMENT.

I. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING AND REPAIRING ALL AREAS WHICH ARE DAMAGED BY HIS OPERATIONS.

J. CUTTING OF CONCRETE FLOORS SHALL BE BY MACHINE SAW. HOLES FOR PIPES (WALL OR FLOOR) SHALL BE DONE WITH CORE DRILLING EQUIPMENT WITH PRIOR APPROVAL FROM THE STRUCTURAL ENGINEERS.

K. PRESSURE TEST ALL INSTALLATIONS PRIOR TO CONNECTING EQUIPMENTS.

L. LABEL ALL PIPING PER ANSI STANDARD.

M. PROVIDE PROPER INSULATION ON ALL HOT WATER PIPING, STORM PIPING AND CONDENSATE PIPING.

N. PROVIDE SHUT-OFF VALVES (STOPS) ON ALL ROUGH-INS TO FIXTURES AND EQUIPMENTS.

O. PROVIDE ANY BACK FLOW PREVENTION DEVICE REQUIRED BY CODE OR GOVERNING AUTHORITIES. CONTRACTOR SHALL VERIFY THIS WITH CITY OR LOCAL AGENCIES AND INCLUDE COST OF SAME IN BID. CONTRACTOR TO HAVE BACK FLOWS CERTIFIED.

P. PROVIDE WATER HAMMER ARRESTORS AS INDICATED ON THE DRAWINGS. AIR CHAMBERS NOT AN APPROVED SUBSTITUTE.

Q. ALL EXPOSED PIPING FOR DESIGNATED DISABLED ACCESS FIXTURES SHALL BE COVERED OR OTHERWISE WRAPPED IN ACCORDANCE WITH A.D.A. REQUIREMENTS AND LOCAL AUTHORITY.

R. ALTERNATE MATERIALS NOT IDENTIFIED IN SPECIFICATIONS/DRAWINGS BUT APPROVED BY LOCAL AUTHORITY SHALL BE SUBMITTED TO ARCHITECT AND PLUMBING ENGINEER FOR REVIEW PRIOR TO INSTALLATION.

S. ISOMETRIC DIAGRAMS ARE FOR SIZING PURPOSES ONLY AND SHALL NOT BE USED FOR MATERIAL TAKE-OFFS, OR BE CONSTRUED TO INDICATE ACTUAL SITE INSTALLATION.

T. DRAWING IS DIAGRAMMATIC ONLY. CONTRACTOR SHALL COORDINATE EXACT LOCATIONS OF PIPING, DEVICES AND EQUIPMENT WITH BUILDING ELEMENTS AND THE WORK OF OTHER TRADES.

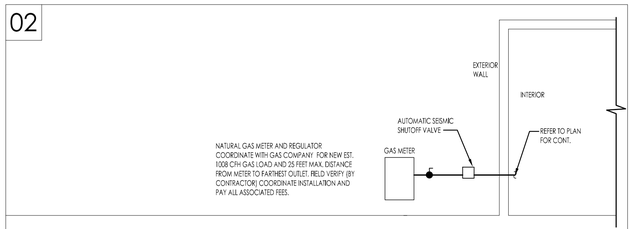
U. EVERY FLOOR DRAIN, FLOOR SINK OR HUB DRAIN SHALL BE SERVED BY AN AUTOMATIC TRAP PRIMER, UNO.

PLUMBING SYMBOL LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	BALL VALVE		DOMESTIC COLD WATER
	CHECK VALVE		DOMESTIC HOT WATER
	GATE VALVE		DOMESTIC HOT WATER RETURN
	UNION		SANITARY SEWER VENT
	DIRECTION OF FLOW		SANITARY WASTE LINE
	WALL CLEANOUT	140°	140° HOT WATER
	FLOOR CLEANOUT YARD CLEANOUT		SANITARY DIRECTION OF FLOW
	FLOOR SINK		BRANCH - TOP CONNECTION
	FLOOR DRAIN		PIPE RISER
	WALL HYDRANT OR HOSE BIBB		PIPE DROP
WHA	WATER HAMMER ARRESTOR		POINT OF CONNECTION (APPROXIMATED FIELD VERIFY EXACT POINT OF CONNECTION)

NOTE: 1. NOT ALL SYMBOLS USED ON THIS PROJECT
2. INSTALL WATER CLOSET FLUSH VALVE HANDLE TOWARDS WIDER SIDE OF WATER CLOSET OR DOOR OPENING.
3. INSTALL ADA APPROVED FLUSH VALVE HANDLE FOR ADA PLUMBING FIXTURES.

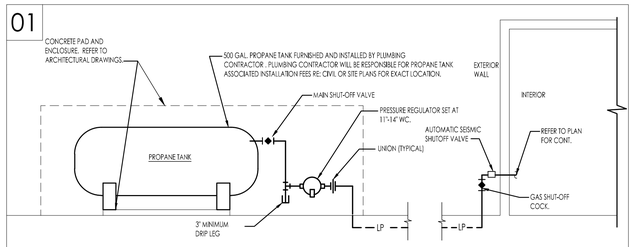
02



NATURAL GAS PIPING DIAGRAM

NO SCALE

01



PROPANE TANK PIPING DIAGRAM

NO SCALE

TSSI SAFE ROOM PROJECT

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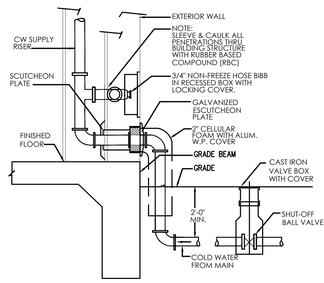
SAFE ROOM - SOUTH PARK SITE
315 E. PALM DRIVE
EDINBURG, TX

REVISIONS

PLUMBING SCHEDULES

P3.1

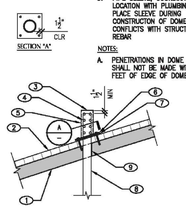
01



WATER SERVICE ENTRANCE DETAIL

NO SCALE

05



KEYNOTES CONT'D:

9. PIPE SLEEVE, COORDINATE LOCATION WITH PLUMBING VENT. PLACE SLEEVE DURING CONSTRUCTION OF DOME TO AVOID CONFLICTS WITH STRUCTURAL REBAR

NOTES:

A. PENETRATIONS IN DOME SHELL SHALL NOT BE MADE WITHIN 10 FEET OF EDGE OF DOME.

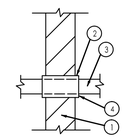
KEYNOTES:

1. DOME PER APPROPRIATE PLANS AND DETAILS
2. FOAM PER APPROPRIATE PLAN AND DETAILS
3. 1/4" THICK STEEL PLATE WELDED TO PIPE WITH 1/4" BEVEL WELD ALL AROUND, (12" MAX HEIGHT)
4. 1"ø HOLES, AREA OF HOLES TO EQUAL OPEN AREA OF UTILITY PIPE
5. 6" SCH 40 STEEL PIPE
6. 1/2"x12"x1'-0" STEEL PLATE W/ (4) 5/8"ø TITEN HD BOLTS
7. PROVIDE A NEOPRENE GASKET AND FULL BED OF DOW 995 SILICONE SEALANT BELOW BASEPLATE. INSURE HOLES IN MEMBRANE ARE NOT OVERSIZED, INSURE NO TEARING IN MEMBRANE DURING DRILLING OF HOLES INTO DOME.
8. PLUMBING VENT

VENT THRU ROOF AT DOME ROOF DETAIL

NO SCALE

09



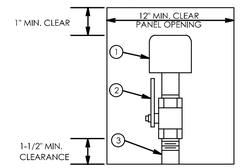
1. MASONRY WALL
2. GALVANIZED SCHEDULE 40 STEEL OR COPPER SLEEVE. SIZE TO BE MINIMUM 3/8" LARGER IN DIAMETER THAN PIPE AND INSULATION.
3. PLUMBING PIPE (RELIEF LINES, DOMESTIC WATER, AIR, AND GAS PIPING).
4. FILL VOID WITH MINERAL WOOL AND CAULK VERMIN TIGHT.

WALL SLEEVE DETAIL

NO SCALE

13

1. WATER HAMMER ARRESTOR, SIZE AS PER MANUFACTURER'S SIZING TABLE.
2. BALL VALVE, SAME NOMINAL SIZE AS PIPE BRANCH. OPENING IN BALL VALVE TO MATCH PIPE I.D.
3. PIPE SAME SIZE AS BRANCH LINE TO WHICH IT IS ATTACHED.



NOTE: PROVIDE REDUCER IF REQUIRED BETWEEN VALVE AND WATER HAMMER ARRESTOR.

DIMENSIONS FOR MIN. PANEL SIZE AND OPENING IF WATER HAMMER ARRESTOR IS LOCATED IN WALL. LOCKING PANEL COLOR TO BE DETERMINED BY ARCHITECT.

WATER HAMMER ARRESTOR DETAIL

NO SCALE

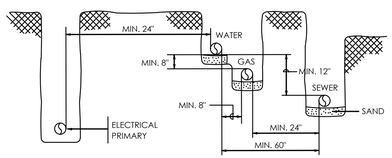
02

CLEAR TRENCH OF ALL ROCKS AND DEBRIS BEFORE ADDING SAND CUSHION.

COMPACT TRENCH FILL TO 95% PROCTOR DENSITY.

MAINTAIN A MINIMUM OF 60 INCHES UNDISTURBED EARTH BETWEEN PARALLEL WATER AND SEWER LINES OR SUPPORT WATER LINE ON SEPARATE SHELF A MINIMUM OF 12" ABOVE SEWER LINE.

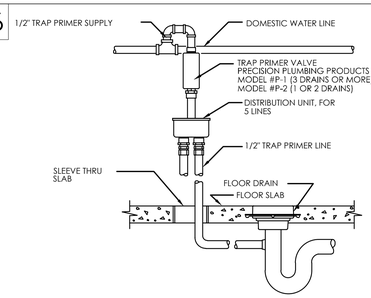
MAINTAIN A MINIMUM OF 24" HORIZONTALLY BETWEEN ELECTRICAL PRIMARY AND SEWER, MAINTAIN A MINIM OF 12" VERTICALLY OR 24" HORIZONTALLY BETWEEN ELECTRICAL PRIMARY AND WATER LINES, GAS LINES, TELEPHONE RACEWAYS AND CABLE RACEWAYS.



TRENCHING DETAIL

NO SCALE

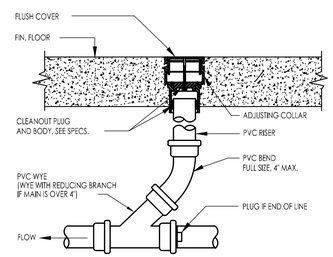
06



TRAP SEAL PRIMER DETAIL

NO SCALE

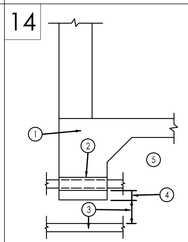
10



FLOOR CLEANOUT DETAIL

NO SCALE

14

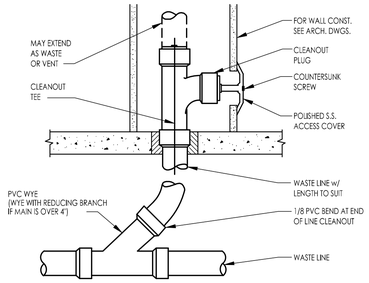


1. GRADE BEAM
2. GALVANIZED SCH 40 STEEL SLEEVE. SIZE PER SPECS. CENTER PIPE IN SLEEVE.
3. PIPING PASSING HORIZONTALLY UNDER GRADE BEAM SHALL BE LOCATED A MINIMUM OF 6" BELOW BEAM. PROVIDE A SLEEVE.
4. PIPING PASSING HORIZONTALLY THROUGH GRADE BEAM SHALL BE LOCATED NO LESS THAN 6" ABOVE BOTTOM OF BEAM.
5. COORDINATE LOCATIONS OF PIPING IN 3.4.5 ABOVE AS RELIEVING ARCHES OR ADDITIONAL CONCRETE MAY BE REQUIRED TO MAINTAIN STRUCTURAL INTEGRITY OF BEAM.

GRADE BEAM SLEEVE DETAIL

NO SCALE

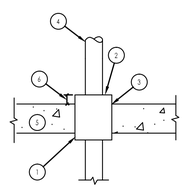
03



WALL CLEANOUT DETAIL

NO SCALE

07

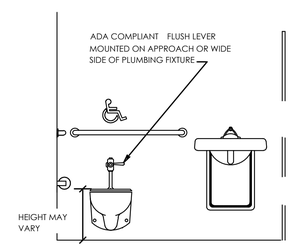


1. METAL SLEEVE TWO SIZES LARGER THAN PIPE
2. FILL VOID WITH NON-SHRINKING WATERPROOF, VERMIN PROOF MATERIAL
3. ALL PLUMBING PIPE PENETRATIONS THROUGH GROUND FLOOR, AND GRADE BEAMS SHALL BE SLEEVED
4. PIPE
5. CONCRETE SLAB
6. MINIMUM 2"

FLOOR PENETRATION DETAIL

NO SCALE

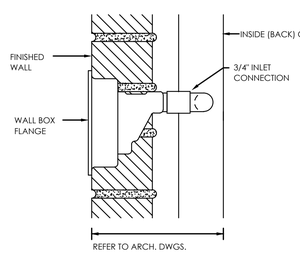
11



ADA WATER CLOSET DETAIL

NO SCALE

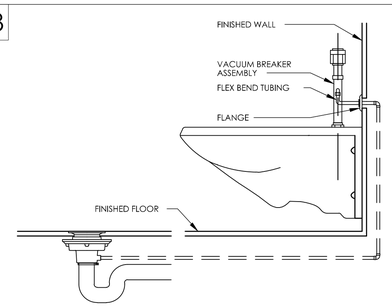
04



WALL HYDRANT DETAIL

NO SCALE

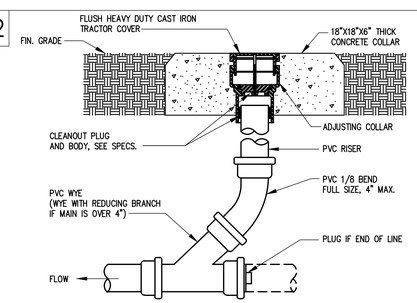
08



FLUSH VALVE TRAP SEAL PRIMER

NO SCALE

12



YARD CLEANOUT DETAIL

NO SCALE

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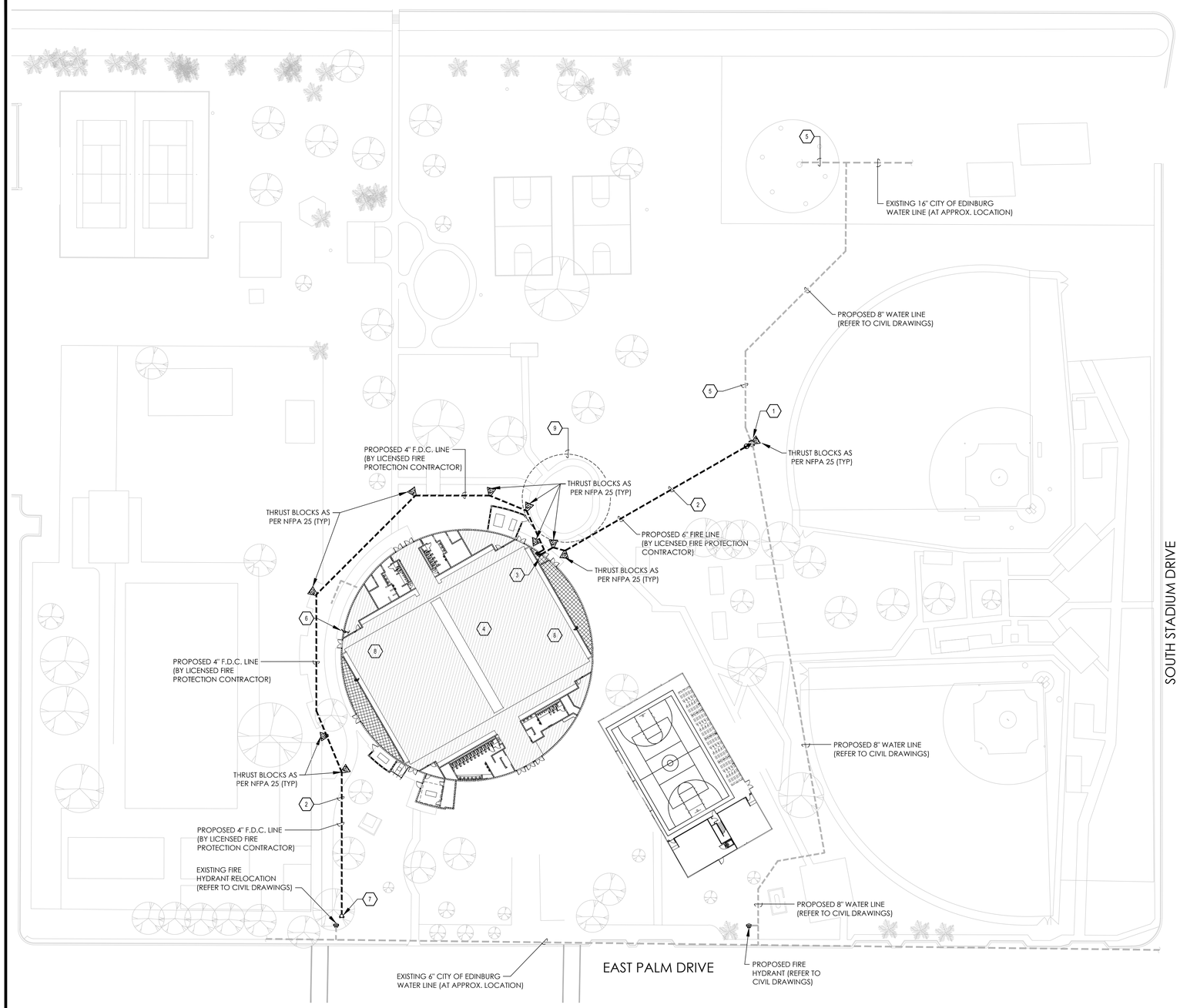
REVISIONS

PLUMBING DETAILS

P4.1



1 EXISTING SITE PLAN
AS.100 SCALE: 1" = 40' REF: AS.100

GENERAL NOTES: FIRE PROTECTION

1. SYSTEM TO BE DESIGNED TO MEET ALL LATEST NFPA CODES. PLANS SHALL BE SUBMITTED TO THE CITY OF EDINBURG FOR REVIEW AND APPROVAL. FIRE MARSHAL TO BE THE FINAL APPROVING AUTHORITY FOR ALL FIRE PROTECTION WORK.
2. ALL PIPE TO BE SIZED HYDRAULICALLY
3. DETAILS DESCRIBE SOME SPRINKLER COMPONENTS REQUIRED BY AN AUTOMATICALLY OPERATED SYSTEM. SPRINKLER CONTRACTOR TO PROVIDE ALL SYSTEM COMPONENTS REQUIRED FOR A TURN KEY FIRE SPRINKLER SYSTEM.
4. HAZARD CLASSIFICATION SHALL BE AS PER NFPA 13.
5. ALL ABOVE CEILING PIPING WILL NEED TO BE ROUTED AROUND EXISTING CONDUITS, BEAMS, MECHANICAL DUCT WORK AND DRAIN LINES. ALL PIPE LEFT WITH TRAP WATER NEEDS TO BE PROVIDED W/ A DRAIN VALVE.
6. SEAL ALL WALL OPENINGS W/ MORTAR OR FIRE CAULKING.
7. FIRE PROTECTION SYSTEM TO BE INSTALLED BY A LICENSED FIRE PROTECTION CONTRACTOR.

NOTE: CARE SHALL BE TAKEN DURING DIGGING. ALL LINES DAMAGED UNDERGROUND WILL BE FIXED BY THE CONTRACTOR.

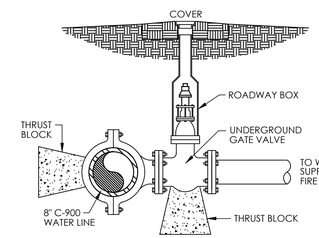
KEYED NOTES: FIRE PROTECTION

1. FIRE SPRINKLER MAIN TO CONNECT TO PROPOSED 8" WATER LINE. REFER TO DETAIL #1. ALL FIRE MAIN LINE FROM THIS POINT TO BE INSTALLED BY A LICENSED FIRE PROTECTION SPRINKLER CONTRACTOR.
2. RUN FIRE MAIN AND FDC LINES BETWEEN 3 AND 4 FEET DEEP. PROVIDE 4 INCHES OF SAND UNDER PIPE. COVER ALL PIPE AND LEAVE JOINTS EXPOSED FOR ENGINEER AND FIRE DEPARTMENT INSPECTION.
3. FIRE SPRINKLER SYSTEM RISER SHALL BE PLACED IN THIS ROOM. REFER TO DETAIL #2.
4. THIS IS A NEW BUILDING FACILITY. FIRE PROTECTION SYSTEM TO COORDINATE WITH ALL OTHER TRADES.
5. REFER TO CIVIL PLAN FOR EXACT WATER MAIN LOCATIONS.
6. INSPECTOR'S TEST TO CONNECT TO FIRE PROTECTION SYSTEM.
7. FREE STANDING F.D.C. TO BE AT THIS LOCATION.
8. ALL UPRIGHTS IN EXPOSED AREAS TO BE PROVIDED WITH HEAD GUARDS.
9. EXISTING OVAL SIDEWALK TO REMAIN. NOT TO BE DISTURBED BY ANY FIRE MAIN LINE INSTALLATION WORK.

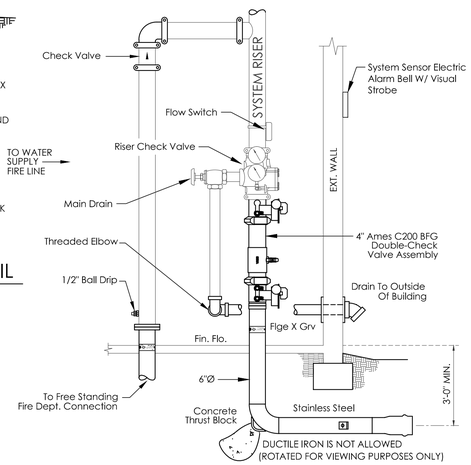
HAZARD CLASSIFICATION

LIGHT HAZARD OCCUPANCY
0.10 DENSITY FOR 1500 SQ. FT.

ORDINARY HAZARD (GROUP 1) OCCUPANCY
0.15 DENSITY FOR 1500 SQ. FT.



1 TAPPING SLEEVE DETAIL
NTS



2 RISER ROOM DETAIL
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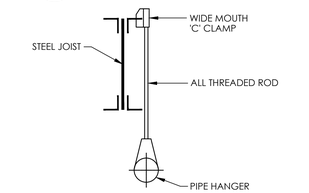
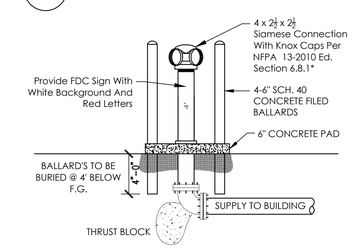
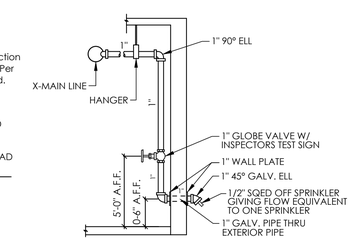


3 HANGER DETAIL
NTS



5 FREE STANDING F.D.C. DETAIL
NTS



4 INSPECTOR'S TEST DETAIL
NTS

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REVISIONS

FIRE PROTECTION

FP1.1