ABBREVIATIONS

ABBRV	TERM
A/E	ARCHITECT/ENGINEER
AB	ANCHOR BOLT
ABBRV	ABBREVIATION
ACI	AMERICAN CONCRETE INSTITUTE
ADDM	ADDENDUM
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALT	ALTERNATE
ALUM	ALUMINUM
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APPROX	APPROXIMATE
ARCH	ARCHITECT
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASI	ARCHITECT'S SUPPLEMENTAL INSTRUCTION
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AVG	AVERAGE
AWS	AMERICAN WELDING SOCIETY
B	BEAM
B PL	BASE PLATE
BC	BACK OF CURB
BC	BOLT CIRCLE
BLDG	BUILDING
BOS	BOTTOM OF STEEL
BOT	BOTTOM
BRG	BEARING
BRG PL	BEARING PLATE
BS	BOTH SIDES
BTWN	BETWEEN
C	C SHAPE
C TO C	CENTER TO CENTER
CAM	CAMBER
CANTIL	CANTILEVER
CD	CONSTRUCTION DOCUMENTS
CERT	CERTIFY
CG	CENTER OF GRAVITY
CHFR	CHAMFER
CIP	CAST-IN-PLACE
CJ	CONSTRUCTION JOINT
CJ	CONTROL JOINT
CL	CENTER LINE
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECT
CONN	CONNECTION
CONSTR	CONSTRUCTION
CONT	CONTINUE
CONT	CONTINUOUS
CONTR	CONTRACTOR
COORD	COORDINATE
CP	CONCRETE PIER
CRSI	CONCRETE REINFORCING STEEL INSTITUTE
CTR	CENTER
CU YD	CUBIC YARD
D	DEEP
D	DEPTH
DAT	DATUM
DBA	DEFORMED BAR ANCHOR
DD	DESIGN DEVELOPMENT
DEG	DEGREE
DET	DETAIL
DEV	DEVELOPMENT
DIA	DIAMETER
DIAG	DIAGONAL
DL	DEAD LOAD
DOC	DOCUMENT
DP	DRILLED PIER
DWG	DRAWING
E	MODULUS OF ELASTICITY
EA	EACH
EE	EACH END
EF	EACH FACE
EJ	EXPANSION JOINT
EL	ELEVATION
ELEV	ELEVATOR
ENGR	ENGINEER
EOS	EDGE OF SLAB
EQ	EQUAL
EQ	SEISMIC
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
ETC	AND SO FORTH
EW	EACH WAY
EW EF	EACH WAY EACH FACE
EWP	ELEVATION WORKING POINT
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
F	FAHRENHEIT
FD	FLOOR DRAIN
FDTN	FOUNDATION
FF	FAR FACE
FIN	FINISH
FIN FLR	FINISH FLOOR
FLG	FLANGE
FLR	FLOOR
FO	FINISHED OPENING
FS	FAR SIDE
FT	FEET
FT	FOOT
FT-K	FOOT-KIPS
FT-LB	FOOT-POUNDS
FUT	FUTURE
G	GIRDER
GA	GAGE
GALV	GALVANIZED
GALV STL	GALVANIZED STEEL
GC	GENERAL CONTRACTOR
GFRC	GLASS-FIBER-REINFORCED CONCRETE
GR	GRADE
GR BM	GRADE BEAM
H	HIGH
HC	HOLLOW CORE
HORIZ	HORIZONTAL
HP	HP-STEEL SECTION
HSS	HOLLOW STRUCTURAL STEEL SECTION
HST	HOIST
HT	HEIGHT
HVAC	HEATING, VENTILATING, AND AIR CONDITIONING
I	MOMENT OF INERTIA
IBC	INTERNATIONAL BUILDING CODE
ID	INSIDE DIAMETER
IF	INSIDE FACE
IN-K	INCH-KIPS
IN-LB	INCH-POUND
INFO	INFORMATION
INT	INTERIOR
INV	INVERT
INV EL	INVERT ELEVATION
ISO	ISOMETRIC
K	KIP(S)
KLF	KIPS PER LINEAL FOOT
KSF	KIPS PER SQUARE FOOT
KSI	KIPS PER SQUARE INCH
KWY	KEYWAY

ABBREVIATIONS

ABBRV	TERM
L	ANGLE
LAT	LATITUDE
LBS	POUND
LF	LINEAR FEET (FOOT)
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LONG	LONGITUDINAL
LP	LIGHT POLE
LT GA	LIGHT GAGE
LT WT	LIGHTWEIGHT
LYR	LAYER
M	M-STEEL SHAPE
M	MOMENT
MANUF	MANUFACTURER
MAX	MAXIMUM
MECH	MECHANICAL
MECH RM	MECHANICAL ROOM
MFR	MANUFACTURER
MH	MANHOLE
MID	MIDDLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MT	MT-STEEL SHAPE
N	NORTH
NA	NOT APPLICABLE
NF	NEAR FACE
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NS	NEAR SIDE
NSNM	NON-SHRINK NON-METALLIC
NTS	NOT TO SCALE
O/O	OUT TO OUT
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OPH	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
ORIG	ORIGINAL
P	AXIAL LOAD
P/C	PRECAST
P/T	POST TENSIONED
PC	PILE CAP
PCF	POUNDS PER CUBIC FOOT
PCI	PRECAST/PRESTRESSED CONCRETE INSTITUTE
PL	PROPERTY LINE
PLF	POUNDS PER LINEAR FOOT
PRCST	PRECAST
R	RADIUS
RC	REINFORCED CONCRETE
RD	ROOF DRAIN
REBAR	REINFORCING STEEL BARS
REF	REFERENCE
REINF	REINFORCEMENT
REM	REMAINDER
REM	REMAINING
REQD	REQUIRED
REV	REVISION
RO	ROUGH OPENING
ROW	RIGHT OF WAY
S	SECTION MODULUS
SCHED	SCHEDULE
SDI	STEEL DECK INSTITUTE
SE	STRUCTURAL ENGINEER
SECT	SECTION
SF	SQUARE FOOT (FEET)
SHT	SHEET
SIM	SIMILAR
SJI	STEEL JOIST INSTITUTE
SOG	SLAB ON GROUND
SPEC	SPECIFICATION
SST	STAINLESS STEEL
STAG	STAGGERED
STD	STANDARD
STIF	STIFFENER
STIR	STIRRUP
STL PL	STEEL PLATE
STRUCT	STRUCTURAL
SYM	SYMMETRICAL
SYS	SYSTEM
T	TORSION
T&B	TOP AND BOTTOM
TD	TRENCH DRAIN
TEMP	TEMPORARY
TFF	TOP OF FINISH FLOOR
THRU	THROUGH
TO CP	TOP OF CONCRETE PIER
TO CW	TOP OF CONCRETE WALL
TO DP	TOP OF DRILLED PIER
TO FDTN	TOP OF FOUNDATION
TO P/C	TOP OF PRECAST
TO PC	TOP OF PILE CAP
TOB	TOP OF BEAM
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
TOF	TOP OF FOUNDATION
TOS	TOP OF SLAB
TOS	TOP OF STEEL
TOW	TOP OF WALL
TRANS	TRANSVERSE
TS	TUBE STEEL
TYP	TYPICAL
UL	UNDERWRITERS LABORATORIES
ULT	ULTIMATE
UN	UNLESS NOTED
UNIF	UNIFORM
UNO	UNLESS NOTED OTHERWISE
V	SHEAR
VAR	VARIES
VERT	VERTICAL
VIF	VERIFY IN FIELD
VRFY	VERIFY
W	W-STEEL SHAPE
W	WIDE
W/	WITH
W/O	WITHOUT
WF	WIDE FLANGE
WL	WIND LOAD
WP	WORKING POINT
WT	WEIGHT
WT	WT-STEEL SHAPE
WWR	WELDED WIRE REINFORCEMENT
X BRACE	CROSS BRACE
YD	YARD
Z	MODULUS OF SECTION

STRUCTURAL GENERAL LEGEND

- CIP
- CIP (PLAN CUT)
- PRECAST CONCRETE
- CMU
- CONCRETE WASH ON PRECAST CONCRETE
- CIP POUR STRIP
- TRAFFIC TOPPING
- (1) SHEET NOTE

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100 E. METHVIN ST.
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STATE OF TEXAS
JAMES E. WARNER
104009
LICENSED
PROFESSIONAL ENGINEER
2-18-22

100% CONSTRUCTION DOCUMENTS

PROJECT NO.: 27-001147.00

DATE: 02-18-2022

REVISION SCHEDULE

Δ	Description	Date

LEVEL 4
LEVEL 3
LEVEL 2
LEVEL G/OFFICE

SHEET NAME

ABBREVIATIONS AND LEGENDS

SHEET NO.

S-002

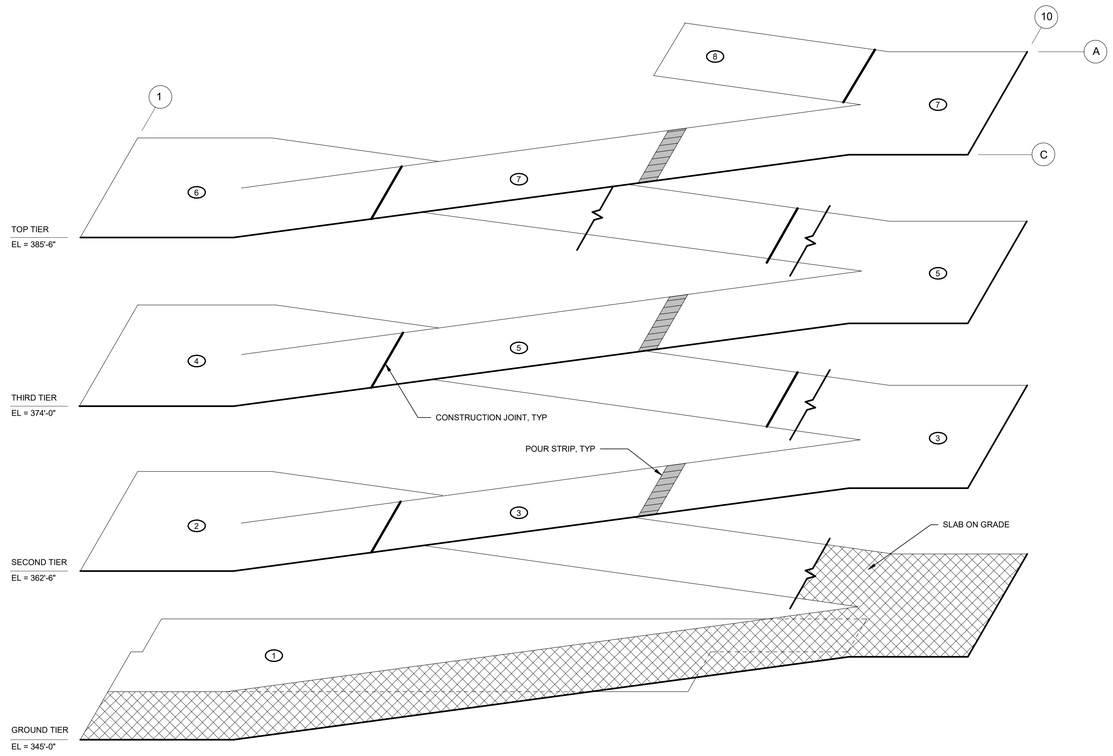
GENERAL SHEET NOTES

1. SHOWN IS THE DESIGN POUR UPON WHICH SLAB, BEAM, AND GIRDER DESIGN IS BASED. CONTRACTOR MAY REVISE POUR SEQUENCE WITH WRITTEN APPROVAL FROM ENGINEER. REDESIGN REQUIRED BY CONTRACTOR INITIATED REVISIONS TO DESIGN POUR SEQUENCE SHALL BE AT CONTRACTOR'S EXPENSE.

LEGEND

= COLUMN GRID

= DESIGN POUR SEQUENCE



POUR SEQUENCE

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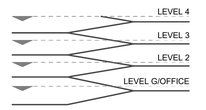
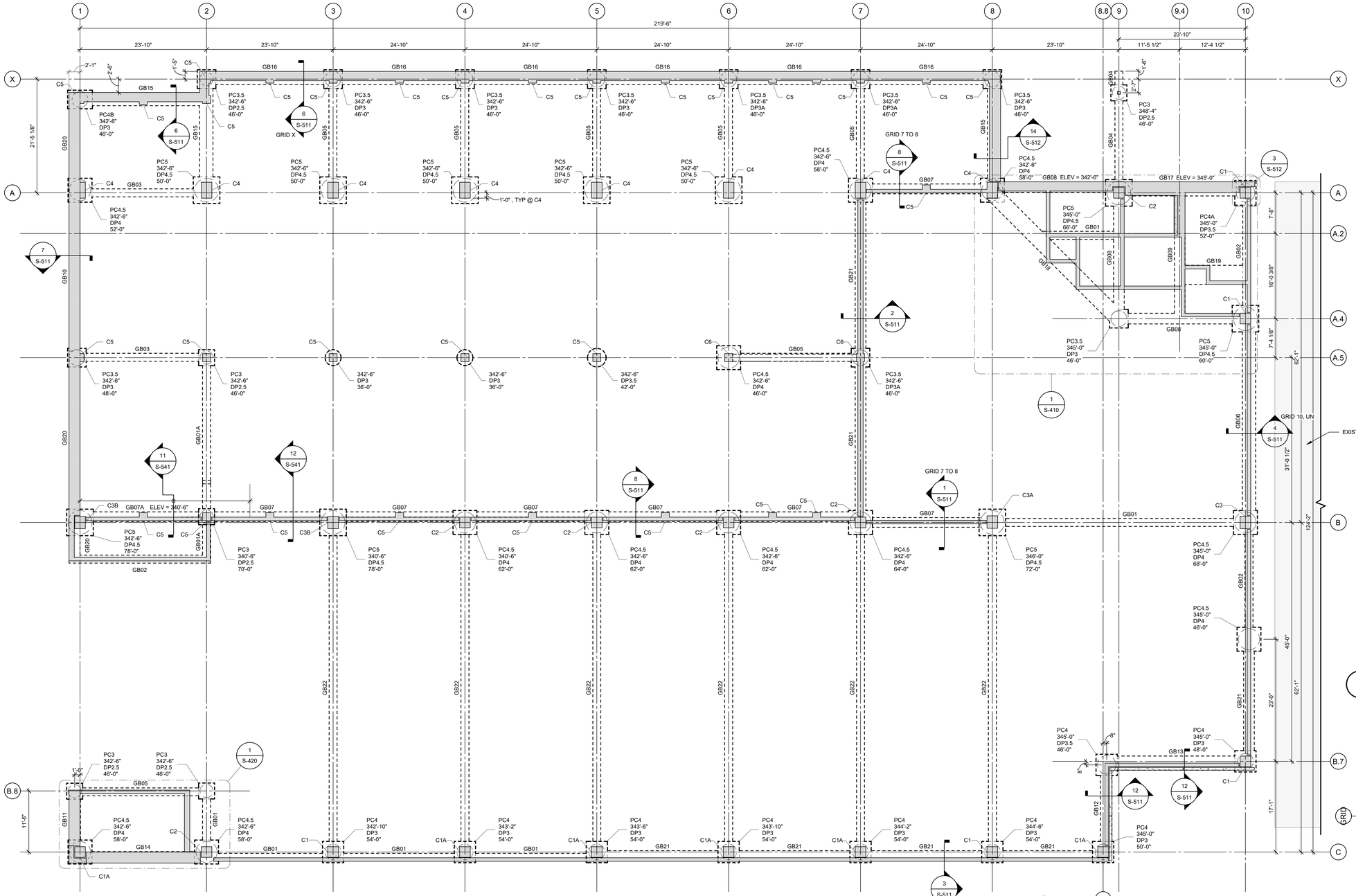


SHEET NAME

POST-TENSION POUR SEQUENCE

SHEET NO.

S-003



1 FOUNDATION PLAN

1/8" = 1'-0"

NOTE: FOUNDATIONS NOT DESIGNED FOR EFFECTS OF LATERAL LOADS. SIZES AND DEPTHS ARE SUBJECT TO INCREASE.

PIER CAP SCHEDULE

CAP MARK	SIZE LENGTH	SIZE WIDTH	CAP REMARKS
PC3	3' - 0"	3' - 0"	
PC3.5	3' - 6"	3' - 6"	
PC4	4' - 0"	4' - 0"	
PC4A	4' - 8"	4' - 0"	
PC4B	4' - 8"	3' - 6"	
PC4.5	4' - 6"	4' - 6"	
PC5	5' - 0"	5' - 0"	

DRILLED PIER SCHEDULE

PIER MARK	PIER DIAMETER	PIER LONGITUDINAL REINFORCING	PIER TIES (TYPICAL)	PIER REMARKS
DP2.5	2' - 6"	(8) #9	#4 @ 12"	
DP3	3' - 0"	(11) #9	#4 @ 12"	PIER LONGITUDINAL = (11) #10 @ DP3A
DP3.5	3' - 6"	(11) #10	#4 @ 10"	
DP4	4' - 0"	(12) #11	#4 @ 12"	
DP4.5	4' - 6"	(15) #10	#4 @ 18"	

DRILLED PIER NOTES:

DPN1. ALL REINFORCING SHALL BE PLACED AT EVEN SPACING, UNO. ALL VERTICAL REINFORCING SHALL BE FULL DEPTH. REINFORCING SPACERS SHALL BE HEAVY DUTY.

DPN2. DRILLED PIERS ARE CENTERED ON COLUMNS AND SHEARWALLS UNO.

DPN3. LENGTH OF DRILLED PIER SHOWN IS BASED ON DRILLED SHAFT CAPACITY GRAPHS IN GEOTECHNICAL REPORT, NOTIFY ENGINEER IF SHAFT LENGTH IS REQUIRED TO BE MODIFIED BASED ON FIELD CONDITIONS.

DPN4. MAXIMUM ECCENTRICITY OF DRILLED PIER FROM LOCATION SHOWN SHALL BE 3".

DPN5. SEE DETAIL 4/S-100 FOR DRILLED PIER INFORMATION

DPN6. CONCRETE SHOULD BE PLACED IMMEDIATELY AFTER COMPLETION OF DRILLING, DO NOT LEAVE SHAFT OPEN OVERNIGHT.

GRADE BEAM SCHEDULE

MARK	SIZE (INCHES) W	SIZE (INCHES) D	LONGITUDINAL REINFORCEMENT TOP	LONGITUDINAL REINFORCEMENT BOTTOM	LONGITUDINAL REINFORCEMENT SIDE REINFORCEMENT	STIRRUPS - #4 U.N., SPACING EA. END	REMARKS
GB01	18"	34"	(2) #9	(2) #9	(2) #9 EA FACE	(3) @ 3", (8) @ 6", REM @ 15"	TOP REINFORCING = (3) #9 AT GB01A
GB02	18"	34"	(3) #8	(3) #8	(3) #9 EA FACE	(3) @ 3", (12) @ 6", REM @ 15"	
GB03	18"	34"	(3) #9	(4) #9		(3) @ 3", REM @ 15"	
GB04	18"	34"	(2) #9	(2) #9		(3) @ 3", REM @ 15"	
GB05	18"	34"	(2) #6	(3) #9		(3) @ 3", REM @ 15"	
GB06	30"	40"	(3) #9	(4) #9	(4) #9 EA FACE	(3) @ 3", (8) @ 9", REM @ 15"	
GB07	22"	34"	(3) #9	(3) #9	(3) #9 EA FACE	(3) @ 3", (14) @ 6", REM @ 15"	BOTTOM REINFORCING = (4) #9 @ GB07A
GB08	24"	48"	(2) #9	(5) #9	(4) #9 EA FACE	(3) @ 3", (6) @ 12", REM @ 15"	
GB09	24"	48"	(3) #6	(5) #9		(3) @ 3", REM @ 20"	
GB10	25"	60"	(5) #9	(5) #9	(3) #9 EA FACE	(3) @ 12", REM @ 18"	
GB11	26"	34"	(3) #6	(3) #9	(2) #9 EA FACE	(3) @ 3", REM @ 15"	
GB12	26"	48"	(3) #6	(4) #9	(4) #9 EA FACE	(3) @ 3", REM @ 18"	
GB13	32"	48"	(3) #6	(5) #9	(5) #9 EA FACE	(3) @ 3", (6) @ 9", REM @ 15"	
GB14	26"	48"	(2) #9	(6) #9	(2) #9 EA FACE	(3) @ 3", (9) @ 8", REM @ 15"	
GB15	30"	34"	(2) #9	(4) #9	(3) #9 EA FACE	(3) @ 3", REM @ 15"	
GB16	30"	34"	(4) #9	(4) #9	(4) #9 EA FACE	(3) @ 3", REM @ 12"	
GB17	32"	60"	(2) #9	(4) #9	(3) #9 EA FACE	(3) @ 3", REM @ 12"	
GB18	36"	48"	(3) #9	(6) #9		(3) @ 3", (5) @ 12", REM @ 20"	
GB19	43"	24"	(3) #6	(4) #8		(3) @ 3", REM @ 10"	
GB20	25"	34"	(4) #9	(4) #9	(3) #9 EA FACE	(3) @ 3", (8) @ 6", REM @ 15"	TOP REINFORCING = (5) #9 @ GRID A.5
GB21	24"	34"	(3) #9	(2) #9	(3) #9 EA FACE	(3) @ 3", (14) @ 8", REM @ 15"	
GB22	18"	40"	(2) #9	(3) #9		(3) @ 3", (6) @ 12", REM @ 24"	

GRADE BEAM NOTES:

GBN1. FOR CONSTRUCTION JOINTS AND FOUNDATION SUPPORTS, PROVIDE CLASS B LAP SPLICES. SEE S-650 FOR REQUIRED LENGTHS. PROVIDE 2" X 6" HORIZONTAL KEYWAY AT JOINT.

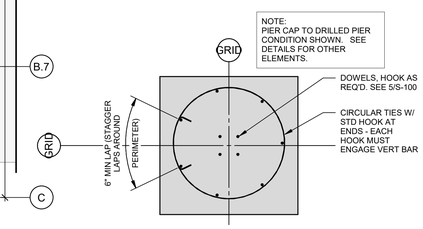
GBN2. PROVIDE CLOSED STIRRUPS TYPICAL, SEE 8/S-510.

GBN3. TOP OF GRADE BEAM TO MATCH TOP OF FOUNDATION UNO.

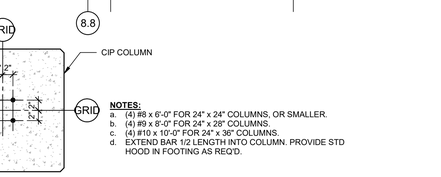
SHEET NOTES

1. REFER TO SHEET S-001 FOR GENERAL NOTES.
2. PROVIDE 3" CLEAR COVER FOR ALL BOTTOM REINFORCEMENT AND 2" CLEAR COVER FOR ALL TOP REINFORCEMENT, UNLESS NOTED.
3. AT LOCATIONS WHERE PRECAST WALLS ARE SUPPORTED ON FOUNDATIONS, PROVIDE EMBEDDED PLATES IN FOUNDATIONS, COORDINATE WITH PRECAST SUPPLIER.
4. ANCHOR BOLTS, PLATES WITH WELDED ANCHORS, REINFORCING BAR CAGES WITH NMB SPLICES (OR SIMILAR) OR ANY OTHER CONNECTION MATERIALS THAT CONNECT THE PRECAST CONCRETE MEMBERS TO THE CIP CONCRETE FOUNDATIONS ARE TO BE SUPPLIED BY THE PRECAST SUPPLIER AND INSTALLED BY THE GENERAL CONTRACTOR, WARNING TO GENERAL CONTRACTOR: COORDINATE WITH PRECAST SUPPLIER TO FULLY UNDERSTAND THE LARGE MAGNITUDE OF THE EMBEDS TO BE INSTALLED AND THE VERY TIGHT TOLERANCES REQUIRED.
5. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF ALL TEMPORARY EXCAVATION BRACING, SHEETING, AND SHORING.
6. COORDINATE PENETRATIONS IN GRADE BEAMS & PRECAST MEMBERS WITH MEP AND CIVIL DRAWINGS, SHOW PENETRATIONS ON ALL SHOP DRAWINGS. SEE DETAIL 3/S-510.
7. INTERCONNECTING GRADE BEAMS AND PIER CAPS SHALL BE FINISHED IN THEIR ENTIRETY BEFORE PRECAST IS ERECTED.
8. FOR UTILITIES NEAR FOUNDATIONS, SEE 3/S-510.
9. SEE CIVIL DRAWINGS FOR EXTERIOR GRADES, UTILITIES, ADJACENT STRUCTURES AND PROPERTY LINES. NOTIFY ENGINEER OF ANY CONFLICTS IMMEDIATELY.
10. VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS.
11. SEE DRAWING S-101 FOR GRADE SLAB AND SUBGRADE INFORMATION.
12. CONTRACTOR TO PROTECT SUBGRADE FROM DAMAGE DUE TO WEATHER.
13. GENERAL CONTRACTOR TO COORDINATE BLOCKOUTS / SLEEVES REQUIRED BY MECHANICAL / ELECTRICAL / PLUMBING DRAWINGS WITH UNDERGROUND CONSTRUCTION.
14. FOR STEP IN GRADE BEAM SEE 1/S-510.

3 STRUCTURAL GRADE BEAM LEGEND

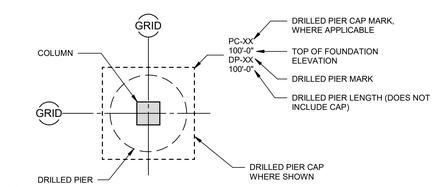


NOTES:
1. SEE GRADE BEAM SCHEDULE AND GRADE BEAM NOTES FOR ADDITIONAL INFORMATION.
2. GRADE BEAMS ARE CENTERED ON SUPPORTING PIERS, UNO.



NOTES:
a. (4) #8 x 6'-0" FOR 24" x 24" COLUMNS, OR SMALLER.
b. (4) #9 x 8'-0" FOR 24" x 28" COLUMNS.
c. (4) #10 x 10'-0" FOR 24" x 36" COLUMNS.
d. EXTEND BAR 1/2 LENGTH INTO COLUMN. PROVIDE STD HOOK IN FOOTING AS REQ'D.

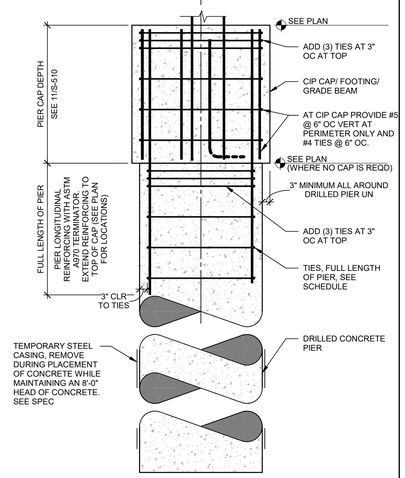
5 COLUMN DOWELS



NOTES:
1. SEE DRILLED PIER SCHEDULE AND DRILLED PIER NOTES FOR ADDITIONAL INFORMATION.
2. SEE DRILLED PIER CAP SCHEDULE FOR ADDITIONAL INFORMATION.
3. FOR TOP OF DRILLED PIER SEE 2/S-100.

4 STRUCTURAL FOUNDATION LEGEND (FOR DRILLED PIERS)

NOTE:
PIER CAP TO DRILLED PIER CONDITION SHOWN. SEE DETAILS FOR OTHER ELEMENTS.



2 DRILLED PIER CAP AND DETAIL

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Δ	Description	Date

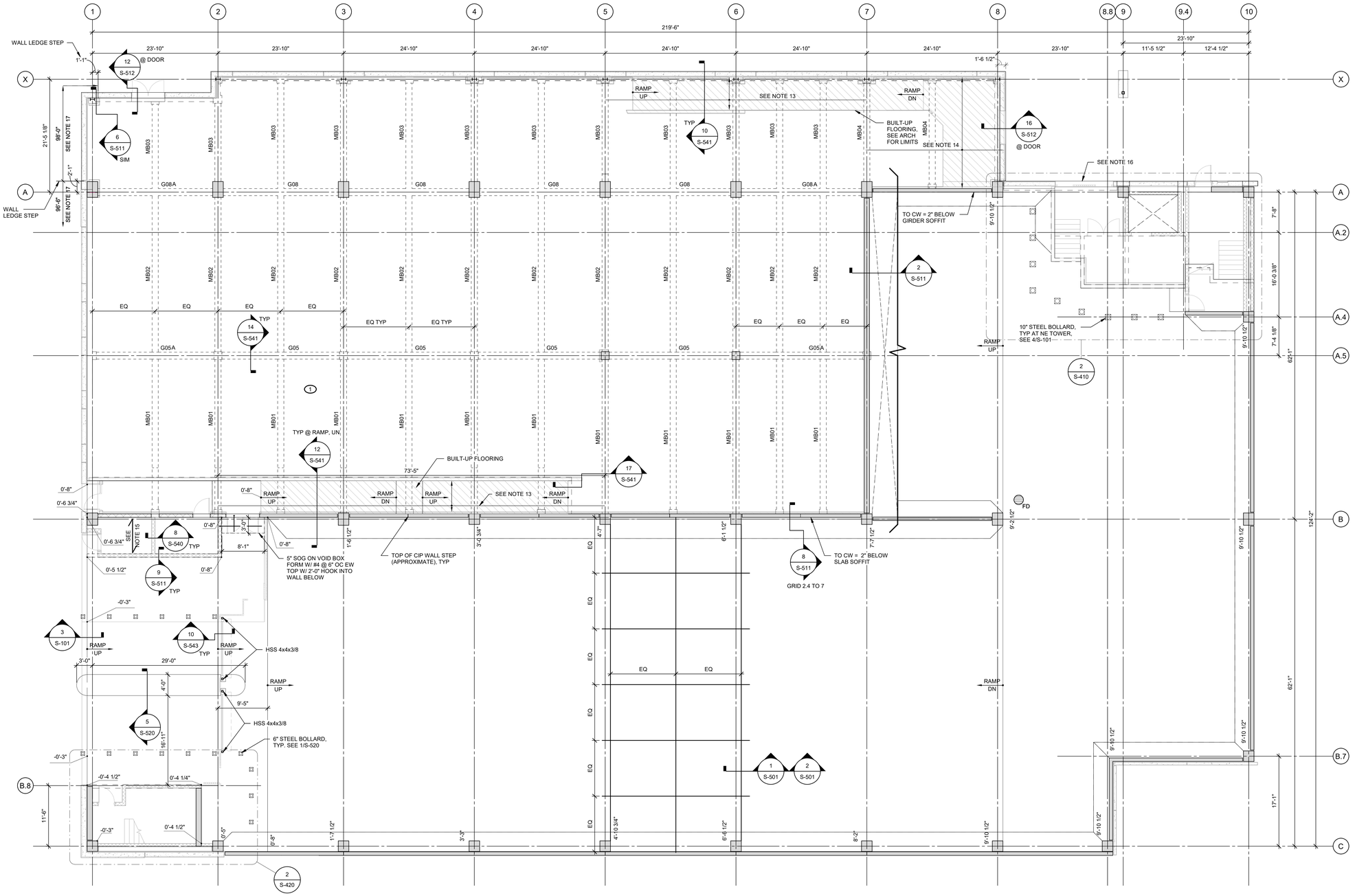
LEVEL 4
LEVEL 3
LEVEL 2
LEVEL G/OFFICE

SHEET NAME

FOUNDATION PLAN

SHEET NO.

S-100



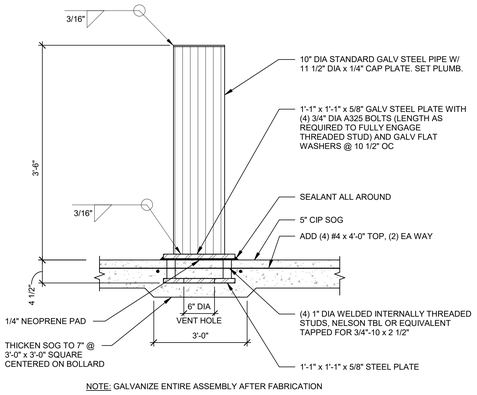
SHEET NOTES

REFERENCES:

1.	GENERAL NOTES.	S-001
2.	TYPICAL DETAILS	S-501
3.	FOUNDATION INFORMATION	S-100
4.	TOP OF CIP WALLS	S-100
5.	PRECAST COLUMN SCHEDULE	S-103
6.	SLURRY WALL ELEVATIONS	S-301
7.	ENLARGED PLANS	S-400 SERIES

NOTES:

1. REFER TO SHEET S-001 FOR GENERAL NOTES.
2. REFER TO CIVIL DRAWINGS FOR EXTERIOR GRADE ELEVATIONS.
3. REFER TO ARCHITECTURAL DRAWINGS FOR ENTRY / EXIT PLANS.
4. REFER TO "S-400 & A-400" SERIES DRAWINGS FOR STAIR AND STAIR / ELEVATOR PLANS, ELEVATIONS AND SECTIONS.
5. REFER TO "S-500 & A-500" SERIES DRAWINGS FOR STAIR AND STAIR / ELEVATOR DETAILS.
6. REFER TO PLUMBING DRAWINGS FOR FLOOR DRAIN LOCATIONS AND DETAILS.
7. CONCRETE INTERIOR SLAB ON GROUND SHALL BE 5" THICK AND REINFORCED WITH #3 @ 18" OC EW, PLACED 2" CLEAR FROM TOP OF SLAB. SLAB SHALL BE PLACED ON A MINIMUM 12" THICK LAYER OF 3/4" CRUSHED STONE PLACED ON A GEOTEXTILE FILTER FABRIC. REFER TO GEOTECHNICAL REPORT FOR ADDITIONAL REQUIREMENTS.
8. PROVIDE 1/2" JOINT FILLER AT GRADE SLAB AROUND COLUMNS, TYPICAL.
9. USE STRAIGHT LINE INTERPOLATION FOR FLOOR ELEVATION BETWEEN THOSE INDICATED.
10. PROVIDE CONSTRUCTION OR CONTROL JOINTS IN CIP WALLS PER DETAILS ON S-501 TO MATCH JOINT IN SLAB-ON-GROUND.
11. PROVIDE CORNER REINFORCEMENT FOR CIP WALLS, FOOTING AND GRADE BEAMS PER DETAILS ON S-501.
12. ELEVATED SLAB CONSTRUCTION IS 5" CIP CONCRETE WITH #5 @ 10" OC X CONT TOP AND #4 @ 14" OC X CONT BOTTOM UNLESS NOTED OTHERWISE. TOP OF SLAB AT OFFICE AREA = 100'-0" UN.
13. SLAB BOTTOM REINF SHALL BE #4 @ 12" OC X CONT.
14. SLAB BOTTOM REINF SHALL BE #4 @ 8" OC X CONT.
15. 6" CIP SLAB ON VOID BOX FORMS. PROVIDE #5 @ 12" OC BOTTOM.
16. PRECAST PANEL ABOVE OPENING SPANS HORIZONTALLY TO PRECAST PANELS ON EACH SIDE OF OPENING.
17. XX'-X" = CIP WALL LEDGE ELEVATION, SEE 7/S-511.



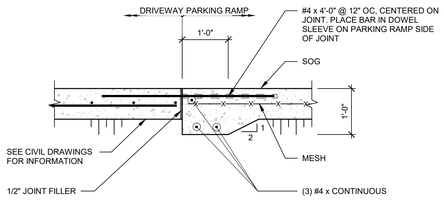
NOTE: GALVANIZE ENTIRE ASSEMBLY AFTER FABRICATION

4 PIPE BOLLARD DETAIL

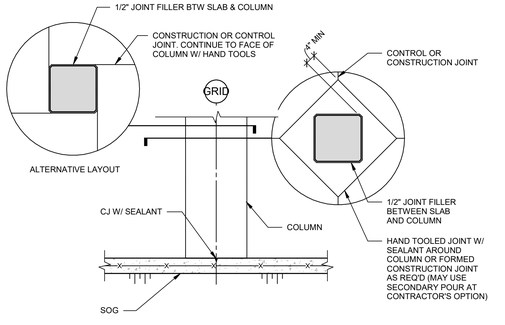
1 GROUND TIER

1/8" = 1'-0"

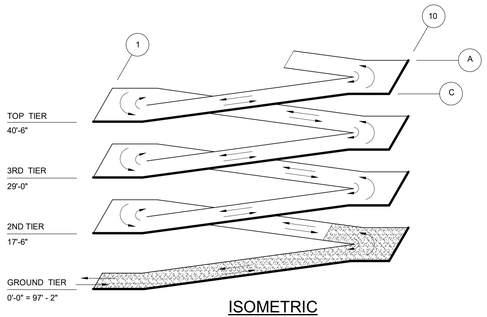
IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THERE IS A MINIMUM OF 8'-2" HEADROOM BETWEEN ALL DRIVING SURFACES AND OVERHEAD BEAMS PRIOR TO PLACING CONCRETE.



3 EDGE OF SLAB DETAIL



2 GRADE SLAB/COLUMN DETAIL



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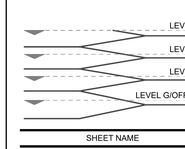

SHEET NAME

GROUND TIER PLAN

SHEET NO.

S-101

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STATE OF TEXAS
JAMES E. WARNER
104009
LICENSED
PROFESSIONAL ENGINEER
2-18-22

100% CONSTRUCTION DOCUMENTS

PROJECT NO.: 27-001147.00

DATE: 02-18-2022

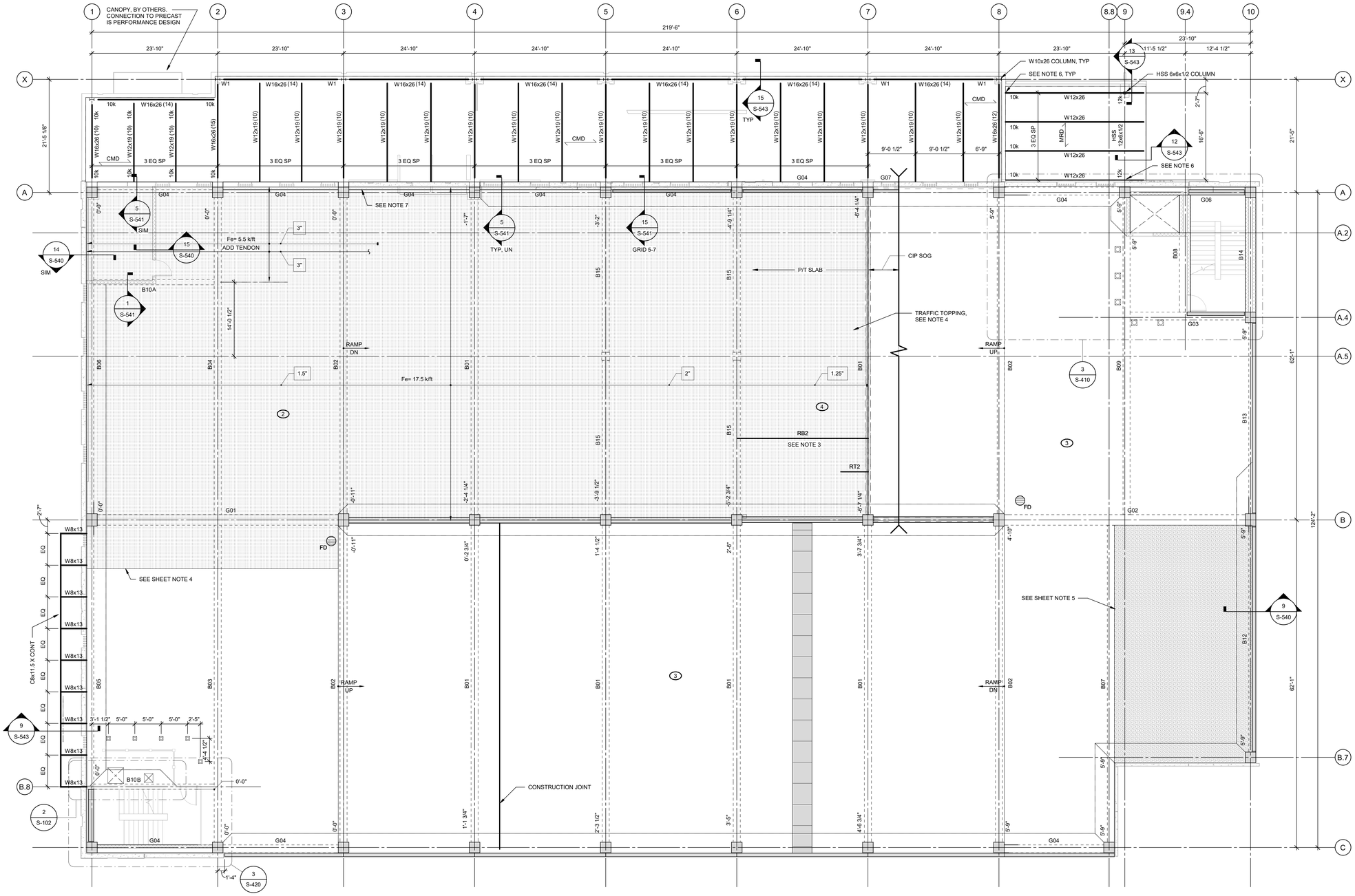
REVISION SCHEDULE

Δ	Description	Date

A NEW FACILITY FOR

GREGG COUNTY - PARKING GARAGE & OFFICE

100 E. METHVIN ST.
LONGVIEW, TX 75601

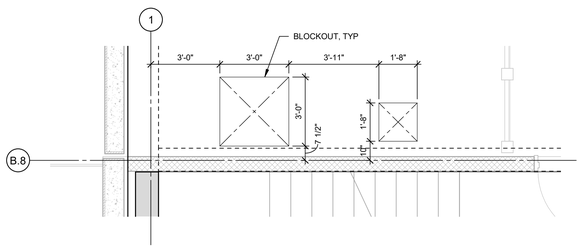


1 SECOND TIER PLAN

1/8" = 1'-0"

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THERE IS A MINIMUM OF 7'-2" HEADROOM BETWEEN ALL DRIVING SURFACES AND OVERHEAD BEAMS PRIOR TO PLACING CONCRETE.

WARNING: THE FLOOR SLAB HAS POST-TENSIONING TENDONS NEAR BOTH SURFACES OF THE SLAB. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING IN THE SLAB SO AS NOT TO DAMAGE THE TENDONS OR TENDON SHEATHING. TENDONS MAY BREAK WITH EXPLOSIVE FORCE WHEN CUT. NO ANCHORS MAY BE DRILLED OR SHOT INTO THE SLAB WITHOUT FIRST LOCATING THE TENDONS AND THEN THE ANCHORS CAN NOT BE MORE THAN 1" LONG.



2 ENLARGED PLAN

FLOOR PLAN LEGEND

INDICATES FLOOR OR MECHANICAL OPENING. SEE ARCHITECTURAL AND MECHANICAL PLANS FOR LOCATION AND SIZE OF OPENING. IF NOT INDICATED SEE DETAILS ON S-511 FOR MORE INFORMATION.

MRD, CMD — INDICATES DIRECTION OF DECK/SLAB SPAN.

STEEL BEAM LEGEND

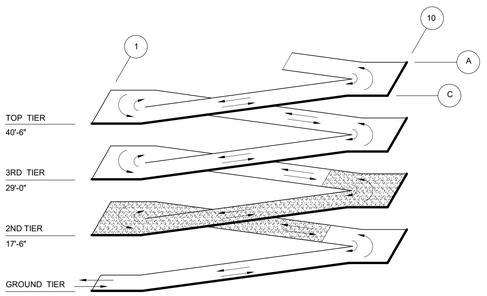
AISC SHAPE — W18x35 (20) — # OF COMPOSITE SHEAR CONNECTORS

W1 — INDICATES FLEXIBLE MOMENT CONNECTION SEE 6/S-543

XXk (12k UN) — FACTORED VERTICAL REACTION (ULTIMATE)

STEEL NOTES:

1. PROVIDE METAL DECKING OVER ROOF BEAMS, WHERE SHOWN ON PLAN. SEE S-543 FOR DETAILS.
2. PROVIDE CONCRETE FILL OVER COMPOSITE METAL DECK TO FLOOR LINE, UNLESS OTHERWISE INDICATED. SEE ARCHITECTURAL DRAWINGS FOR SLAB EDGE CONDITIONS, SILL RECESS, ETC.
3. ALL HORIZONTAL HSS STEEL SHALL HAVE LONG SIDE ORIENTED VERTICALLY U.N.O.
4. DECK BEARING ELEVATION AT OFFICE = 114'-8" UNO, AT PED CANOPY = 112'-3" UNO.
5. CMD INDICATES 5 1/4" CIP SLAB ON 2" DEEP, 18 GAUGE METAL DECK, U.N.O. SEE S-001 AND S-543 FOR ADDITIONAL INFORMATION.
6. MRD INDICATES 3" DEEP, 18 GAUGE METAL DECK, U.N.O. SEE S-100 AND S-543 FOR ADDITIONAL INFORMATION.



ISOMETRIC

SHEET NOTES

1. REFER TO SHEET S-001 FOR GENERAL NOTES.
2. SEE SHEET S-103 FOR TYPICAL SHEET NOTES AND LOCATIONS OF TYPICAL DETAIL REFERENCE (UNLESS NOTED).
3. BOTTOM CLEAR COVER TO ALL REINFORCING SHALL BE 1" IN THIS BAY.
4. [ ] - INDICATES TRAFFIC TOPPING, EXTEND 2'-0" BEYOND WALL BELOW. SEE SPECIFICATIONS.
5. [ ] - INDICATES 6 1/2" SLAB. SLAB SHALL BE THICKENED TOWARD SOFFIT SIDE.
6. CONNECTION BETWEEN STEEL MEMBERS AND PRECAST PANEL. SEE 14/S-543.
7. TOP OF BEAM ELEVATION ON GRID A BETWEEN GRIDS 1 AND 8 IS CONSTANT.

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Δ	Description	Date

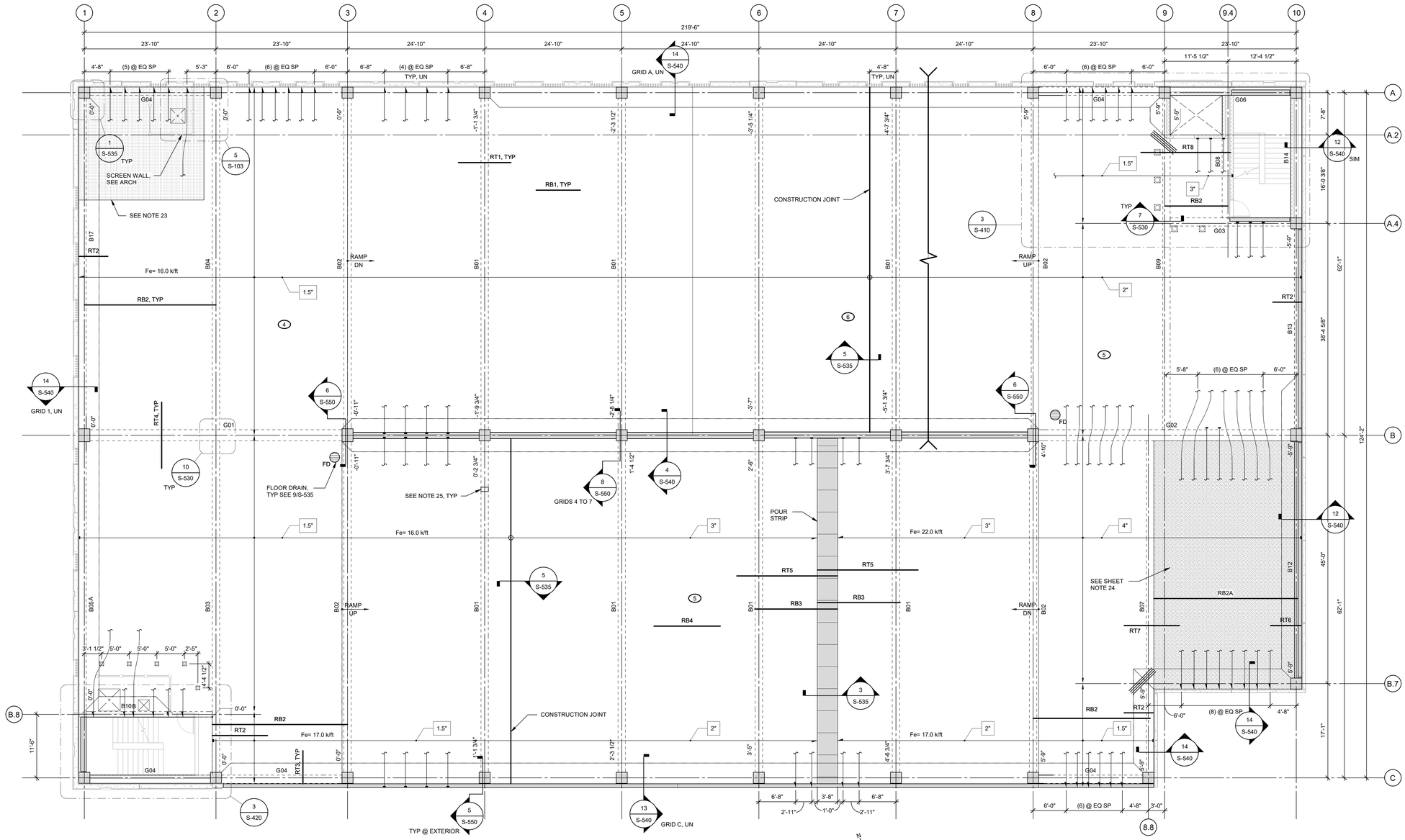
LEVEL 4
LEVEL 3
LEVEL 2
LEVEL G/OFFICE

SHEET NAME

SECOND TIER PLAN

SHEET NO.

S-102



1 THIRD TIER PLAN

1/8" = 1'-0"

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THERE IS A MINIMUM OF 7'-2" HEADROOM BETWEEN ALL DRIVING SURFACES AND OVERHEAD BEAMS PRIOR TO PLACING CONCRETE.

WARNING: THE FLOOR SLAB HAS POST-TENSIONING TENDONS NEAR BOTH SURFACES OF THE SLAB. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING IN THE SLAB SO AS NOT TO DAMAGE THE TENDONS OR TENDON SHEATHING. TENDONS MAY BREAK WITH EXPLOSIVE FORCE WHEN CUT. NO ANCHORS MAY BE DRILLED OR SHOT INTO THE SLAB WITHOUT FIRST LOCATING THE TENDONS AND THEN THE ANCHORS CAN NOT BE MORE THAN 1" LONG.

SHEET NOTES

1. REFER TO SHEET S-001 FOR GENERAL NOTES.
2. FOR DESIGN POUR SEQUENCE, SEE SHEET S-003.
3. SHEET S-103 REPRESENTS THE TYPICAL TIER PLAN. SHEET NOTES, DETAIL REFERENCES, SLAB INFORMATION, BEAM MARKS, AND OTHER INFORMATION SHOWN ON THIS SHEET APPLY TO ALL SUPPORTED LEVEL PLANS, UN.
4. REFER TO 2/S-103 FOR TYPICAL BAY PLAN.
5. REFER TO 3/S-103 FOR PLAN ELEVATION KEY.
6. REFER TO PLUMBING DRAWINGS FOR FLOOR DRAIN LOCATIONS AND DETAILS.
7. REFER TO S-500 SERIES DRAWINGS FOR COLUMN DETAILS AND COLUMN SCHEDULE.
8. REFER TO S-500 SERIES DRAWINGS FOR BEAM DETAILS AND BEAM SCHEDULE.
9. REFER TO S-500 SERIES DRAWINGS FOR P/T SLAB DETAILS.
10. REFER TO CIVIL DRAWINGS FOR EXTERIOR GRADE ELEVATIONS.
11. REFER TO "S-400" & "A-400" SERIES DRAWINGS FOR STAIR / ELEVATOR PLANS, ELEVATIONS, AND SECTIONS.
12. REFER TO "S-500" & "A-500" SERIES DRAWINGS FOR STAIR / ELEVATOR DETAILS.
13. REFER TO ELECTRICAL DRAWINGS FOR LIGHT FIXTURE LOCATIONS AND INFORMATION.
14. DETAIL CUTS AND INFORMATION SHOWN ON THIS SHEET ARE TYPICALLY FOR SUPPORTED LEVELS, UNLESS NOTED.
15. ALL COLUMNS ARE CENTERED ON GRID LINES, UNLESS NOTED.
16. USE STRAIGHT LINE INTERPLOLATION FOR FLOOR ELEVATION BETWEEN THOSE INDICATED.
17. WHERE SHOWN THUS | | | PROVIDE (4) #5 x 8'-0" @ SLAB, MID-DEPTH, TYPICAL ALL LEVELS.
18. SLAB CONSTRUCTION IS 6" POST-TENSIONED CONCRETE, TYPICAL UNLESS NOTED OTHERWISE.
19. PROVIDE (2) ADDITIONAL SLAB PT TENDONS WITH TYPICAL DRAPE & (2) ADDITIONAL TOP SLAB BARS PER SLAB PROFILES THROUGH COLUMNS AT SLAB EDGES ALONG GRIDS A, B, & C. TENDONS MAY ALSO BE UTILIZED IN GIRDERS ON THOSE GRIDS.
20. PROVIDE (2) 2" x 6" BLOCKOUTS AT THE SLAB SOFFIT, SEE 4/S-530. LOCATE AT 1/3 POINTS OF SPAN. USE FORM-A-DRAIN BY BUILDBLOCK OR APPROVED EQUIVALENT.
21. SEE DETAIL 11/S-535 FOR REQUIREMENTS OF EMBEDDED CONDUIT. COORDINATION WILL BE REQUIRED BY THE CONTRACTORS IN ORDER TO ENSURE SPACING REQUIREMENTS ARE MET. THIS MAY REQUIRE A SIGNIFICANT AMOUNT OF THE CONDUITS TO ENTER THE ELECTRICAL ROOM FROM BELOW. THE CONDUIT AREA (INCLUDING FITTINGS) WITHIN ANY COLUMN SHALL NOT EXCEED 4% OF THE COLUMN AREA.
22. CONTRACTOR SHALL REVIEW AND UNDERSTAND THE LEVEL OF CONCRETE FINISHES EXPECTED PER SPECIFICATION SECTIONS 033000-3.10 AND 033000-3.11. MOCK-UPS WILL BE REQUIRED TO SET LEVEL OF EXPECTATION. APPROVED MOCK-UP SHALL REMAIN UNDAMAGED UNTIL THE END OF CONSTRUCTION TO SERVE AS A BASIS OF APPROVAL.
23. [ ] - INDICATES TRAFFIC TOPPING, EXTEND 2'-0" BEYOND WALL BELOW. SEE SPECIFICATIONS.
24. [ ] - INDICATES 6 1/2" SLAB. SLAB SHALL BE THICKENED TOWARD SOFFIT SIDE.
25. 10" SLEEVE, TYP AT EA BEAM ALL LEVELS. SEE S-530 FOR DETAILS.

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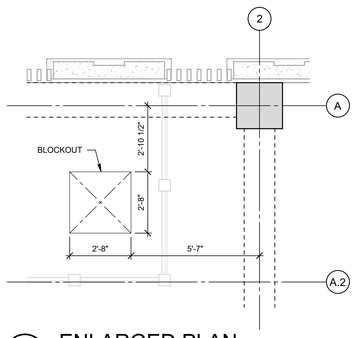
SHEET NAME

THIRD TIER PLAN

SHEET NO.

S-103



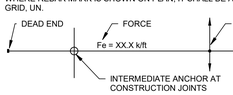
5 ENLARGED PLAN

TOP REINFORCING STEEL (1-1/2" CONCRETE COVER FROM TOP OF SLAB, UNLESS NOTED)		
MARK	REINFORCING	REMARKS
RT1	#4 x 9'-6" @ 16" OC	TYPICAL OVER ALL INTERIOR BEAMS, UN.
RT2	#4 x 5'-3" @ 16" OC	
RT3	#4 x 6'-0" @ 12" OC	TYPICAL AT ALL EXTERIOR GIRDERS. PLACE JUST BELOW TOP BARS.
RT4	#4 x 12'-0" @ 12" OC	TYPICAL OVER ALL INTERIOR GIRDERS. PLACE JUST BELOW TOP BARS.
RT5	#4 x 18'-3" @ 16" OC	TYPICAL AT POUR STRIP.
RT6	#4 x 5'-6" @ 14" OC	PROVIDE AT 6 1/2" SLAB.
RT7	#4 x 10'-0" @ 14" OC	PROVIDE AT 6 1/2" SLAB.
RT8	#4 x 16'-3" @ 16" OC	

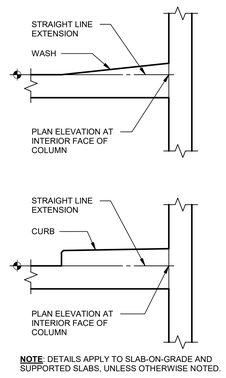
BOTTOM REINFORCING STEEL (3/4" CONCRETE COVER FROM BOTTOM OF SLAB)		
MARK	REINFORCING	REMARKS
RB1	#4 x 8'-0" @ 16" OC	TYPICAL MIDPAN OF ALL BAYS, UN.
RB2	#4 x SPAN @ 16" OC	TYPICAL AT END BAYS. REDUCE SPACING TO 14" AT RB2A
RB3	#5 x 15'-0" @ 12" OC	TYPICAL AT POUR STRIP.
RB4	#4 x 12'-0" @ 16" OC	

SLAB NOTES

1. TENDON PLACEMENT INFORMATION:
   TYPICAL TENDON ORDINATES TO CENTER OF PT TENDON ARE AS FOLLOWS, UN.
   A. AT STRESSING AND DEAD END ANCHORAGES..... MID-DEPTH OF SLAB
   B. OVER SUPPORTS ..... 1-3/4" FROM TOP OF SLAB
   C. AT MIDDLE OF SPAN TYP UN ..... 1" FROM BOTTOM OF SLAB
   D. AT 0.45L FROM END AT END SLAB ..... 1" FROM BOTTOM OF SLAB
   E. [X] INDICATES CGS FROM BOTTOM OF SLAB WHERE IT VARIES FROM TYPICAL LISTED IN NOTES A THRU D
   F. TENDONS PLACED USING REVERSE PARABOLIC PROFILE WITH INFLECTION POINTS AT 1/12TH SLAB SPAN.
   G. LOCATION OF TENDONS BASED ON 1/2"ø STRANDS.
   H. TEMPERATURE TENDONS PLACED ON TOP OF MAIN TENDONS AND AT MID-DEPTH AT ANCHORAGE. SEE PLANS FOR TEMPERATURE TENDON LOCATIONS.
   I. MINIMUM END COVER ON PT ANCHORS = 1 1/2".
   J. "L" IS DISTANCE FROM BEAM CENTERLINE TO BEAM CENTERLINE.
   K. SUPPORT BARS FOR SLAB TENDONS, WHERE NEEDED. SUPPORT BARS SHALL NOT CAUSE INCORRECT POSITIONING OF SCHEDULED MILD REINFORCEMENT.
2. ADD TENDONS DEAD ENDS SHALL BE PLACED 1/4 POINT OF SLAB SPAN IN BAYS SHOWN, TYP UN.
3. USE (2) #4 BARS x CONT THROUGH COLUMNS AT PT ANCHORS.
4. SEE PLANS FOR ADDITIONAL REINFORCEMENT.
5. REFER TO 2/S-535 FOR MILD REINFORCEMENT PLACEMENT DETAIL.
6. WHERE REBAR MARK IS SHOWN ON PLAN, IT SHALL BE APPLIED ALONG ENTIRE LENGTH OF GIVEN GRID, UN.

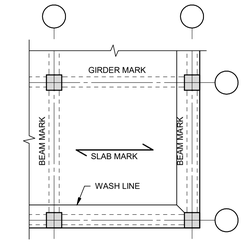


4 PT SLAB MILD SCHEDULE & NOTES

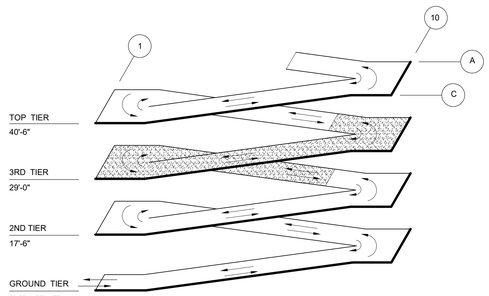


NOTE: DETAILS APPLY TO SLAB-ON-GRADE AND SUPPORTED SLABS, UNLESS OTHERWISE NOTED.

3 PLAN ELEVATION KEY



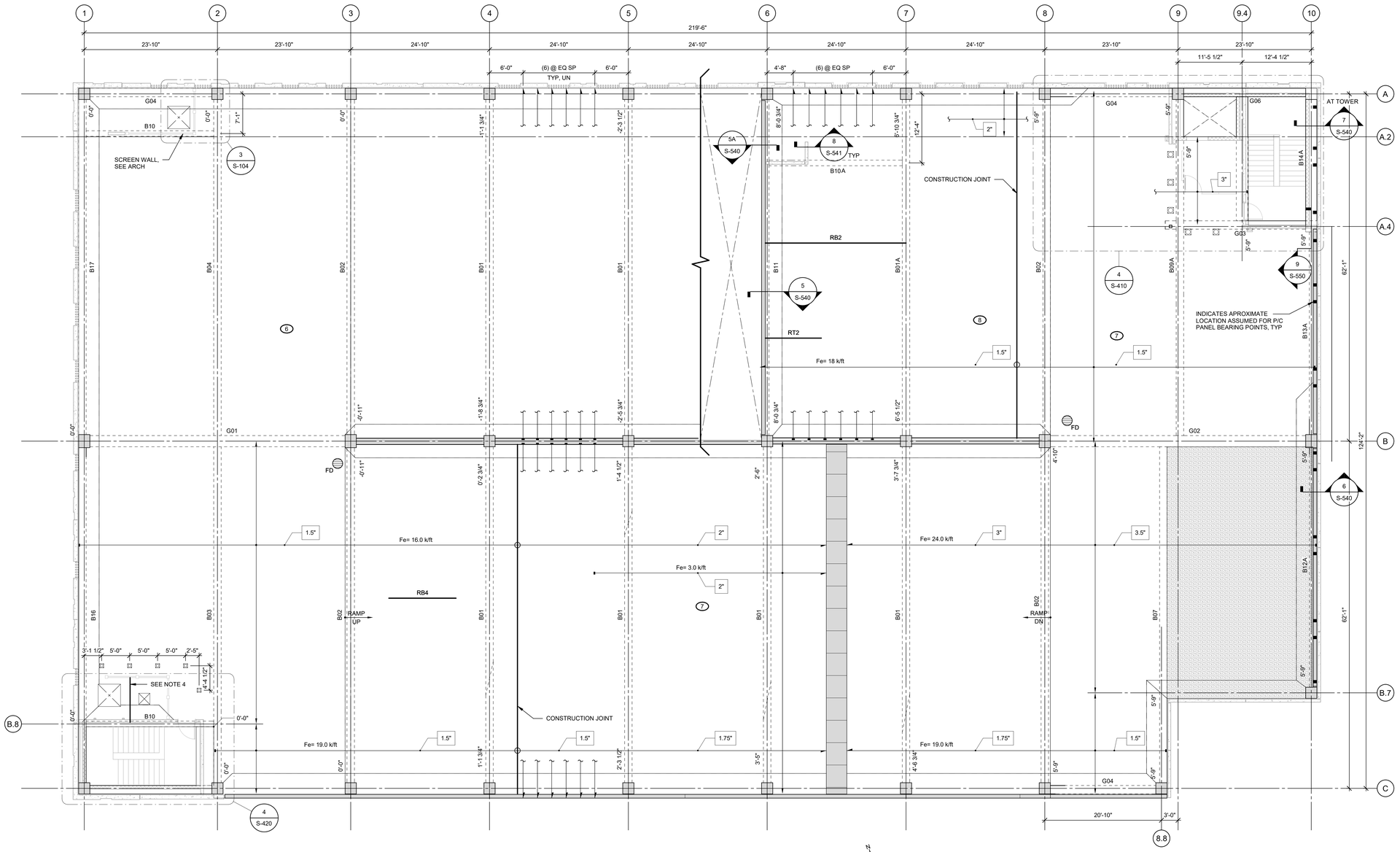
2 TYPICAL BAY PLAN



ISOMETRIC

SHEET NOTES

1. REFER TO SHEET S-001 FOR GENERAL NOTES.
2. SEE SHEET S-103 FOR TYPICAL SHEET NOTES AND LOCATIONS OF TYPICAL DETAIL REFERENCE (UNLESS NOTED).
3. TEMPERATURE TENDONS NOTED AS "TYPICAL" APPLY ONLY TO INTERIOR BAYS EXPOSED TO THE SKY.
4. PROVIDE #4 x 8'-0" @ 8" OC BETWEEN OPENINGS. PLACE ABOVE SLABE BOTTOM REINFORCING.

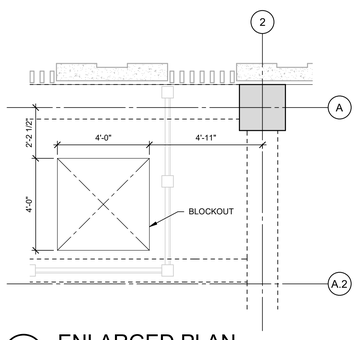


1 FOURTH TIER PLAN

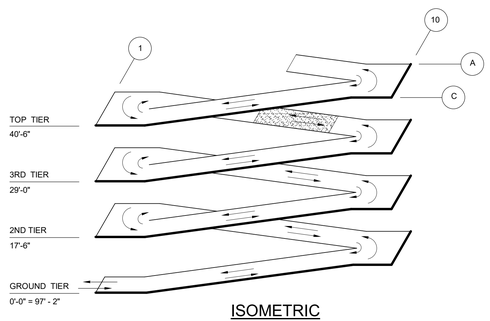
1/8" = 1'-0"

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THERE IS A MINIMUM OF 7'-2" HEADROOM BETWEEN ALL DRIVING SURFACES AND OVERHEAD BEAMS PRIOR TO PLACING CONCRETE.

WARNING: THE FLOOR SLAB HAS POST-TENSIONING TENDONS NEAR BOTH SURFACES OF THE SLAB. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING IN THE SLAB SO AS NOT TO DAMAGE THE TENDONS OR TENDON SHEATHING. TENDONS MAY BREAK WITH EXPLOSIVE FORCE WHEN CUT. NO ANCHORS MAY BE DRILLED OR SHOT INTO THE SLAB WITHOUT FIRST LOCATING THE TENDONS AND THEN THE ANCHORS CAN NOT BE MORE THAN 1" LONG.



3 ENLARGED PLAN



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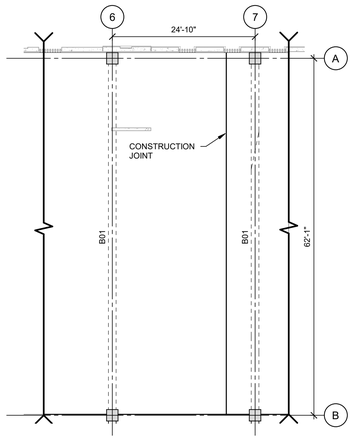
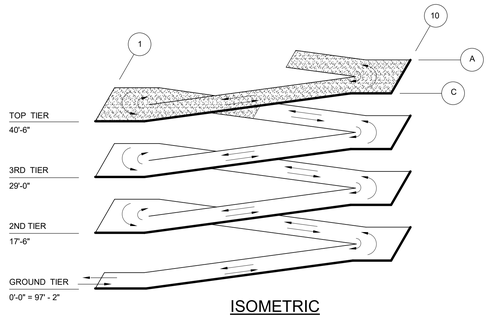


2 FOURTH TIER ENLARGED PLAN



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Δ	Description	Date

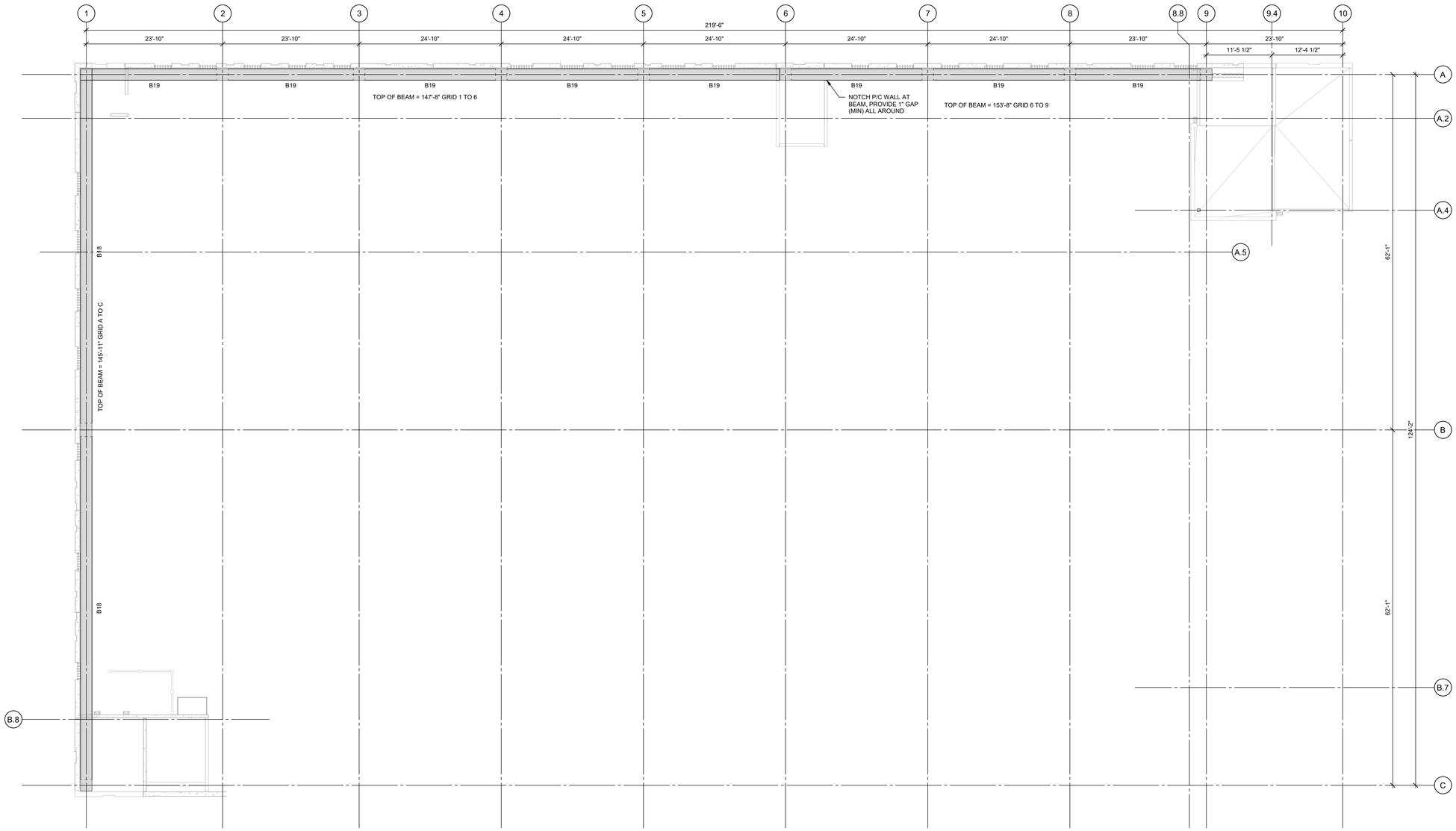
LEVEL 4
LEVEL 3
LEVEL 2
LEVEL G/OFFICE

SHEET NAME

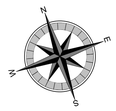
FOURTH TIER PLAN

SHEET NO.

S-104



1 ROOF PLAN



SHEET NOTES

1. REFER TO SHEET S-001 FOR GENERAL NOTES.
2. SEE SHEET S-103 FOR TYPICAL SHEET NOTES AND LOCATIONS OF TYPICAL DETAIL REFERENCE (UNLESS NOTED).

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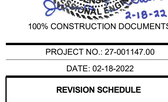

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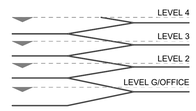
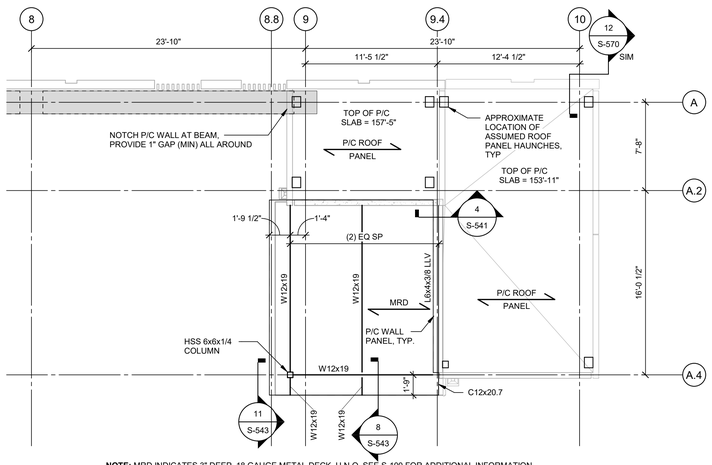


SHEET NAME

ROOF PLAN

SHEET NO.

S-105

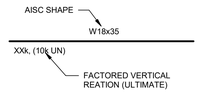


NOTE: MRD INDICATES 3" DEEP, 18 GAUGE METAL DECK, U.N.O. SEE S-100 FOR ADDITIONAL INFORMATION.

5 ENLARGED ROOF TIER PLAN

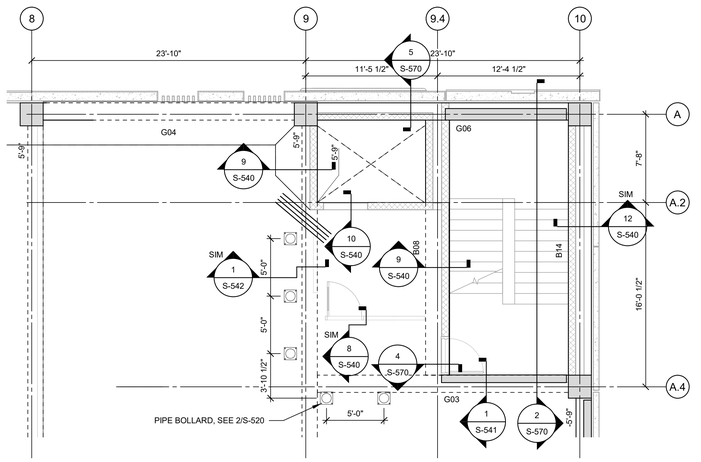
3/16" = 1'-0"

STEEL BEAM LEGEND



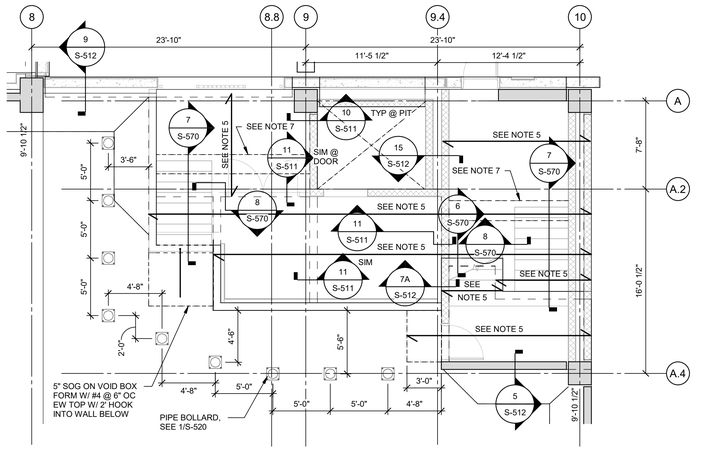
STEEL NOTES:

1. PROVIDE METAL DECKING OVER ROOF WHERE SHOWN ON PLAN. SEE S-543 FOR DETAILS.
2. DECK BEARING ELEVATION AT CANOPY = 152'-7 1/2"
3. MRD INDICATES 3" DEEP, 18 GAUGE METAL DECK, U.N.O. SEE S-100 AND S-543 FOR ADDITIONAL INFORMATION.



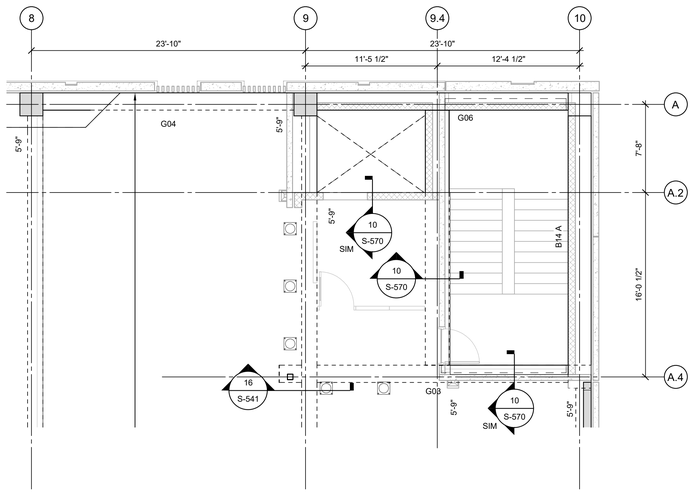
3 ENLARGED TYPICAL TIER PLAN

3/16" = 1'-0"



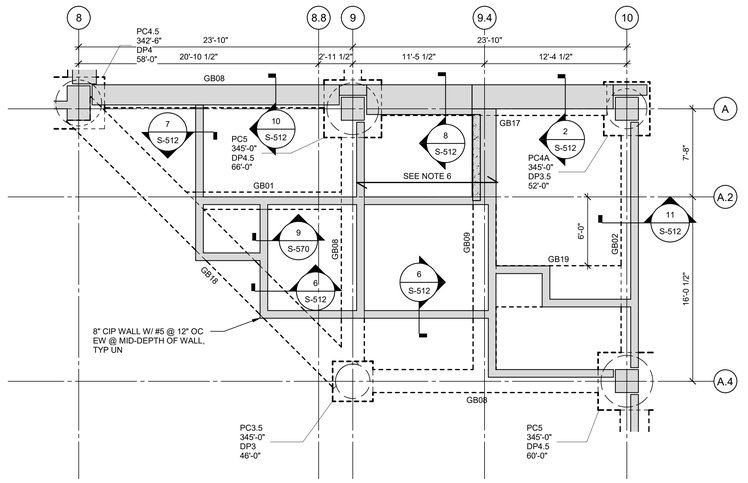
2 ENLARGED GROUND TIER

3/16" = 1'-0"



4 ENLARGED TOP TIER PLAN

3/16" = 1'-0"



1 ENLARGED FOUNDATION PLAN

3/16" = 1'-0"

SHEET NOTES

1. FOR GENERAL NOTES SEE S-001.
2. DETAIL CUTS AND INFORMATION SHOWN ON TYPICAL TIER PLAN 3/S-410 ARE TYPICAL FOR SUPPORTED TIERS, UN.
3. SEE S-100 FOR FOUNDATION INFORMATION.
4. ⟷ INDICATES 6" THICK P/C ROOF SLAB SPAN. ROOF IS ASSUMED TO BE SUPPORTED BY PRECAST WALLS.
5. 6" CIP SLAB ON VOID BOX FORMS. PROVIDE #4 @ 10" OC TOP AND BOTTOM. #4 @ 12" OC TRANSVERSE BOTTOM.
6. 18" CIP SLAB ON VOID BOX FORMS. PROVIDE #7 @ 12" EW TOP AND BOTTOM.
7. LOCALLY THICKEN SLAB TO 12" CIP. PROVIDE (3) #5 BOTTOM.

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100% CONSTRUCTION DOCUMENTS

PROJECT NO.: 27-001147.00

DATE: 02-18-2022

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LEVEL 4
LEVEL 3
LEVEL 2
LEVEL G/OFFICE

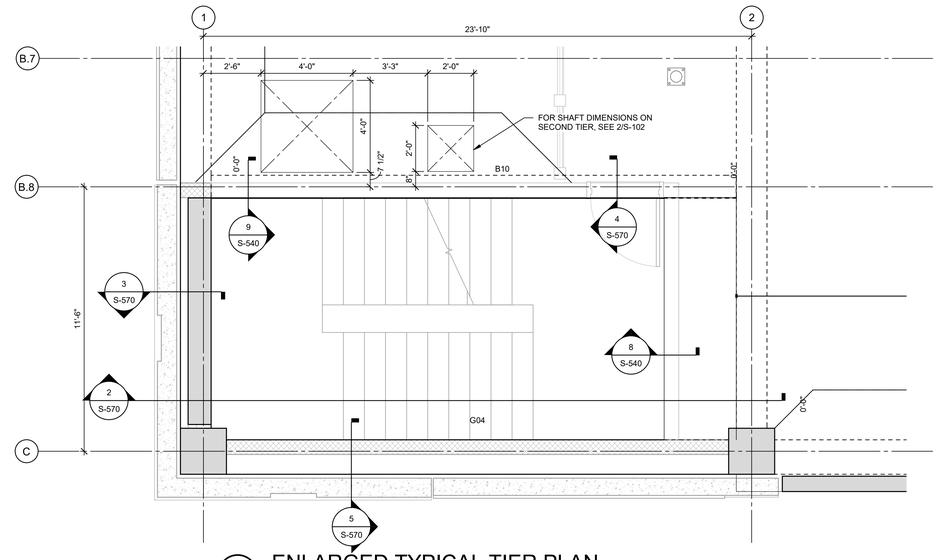
SHEET NAME

ENLARGED STAIR/ELEVATOR PLANS

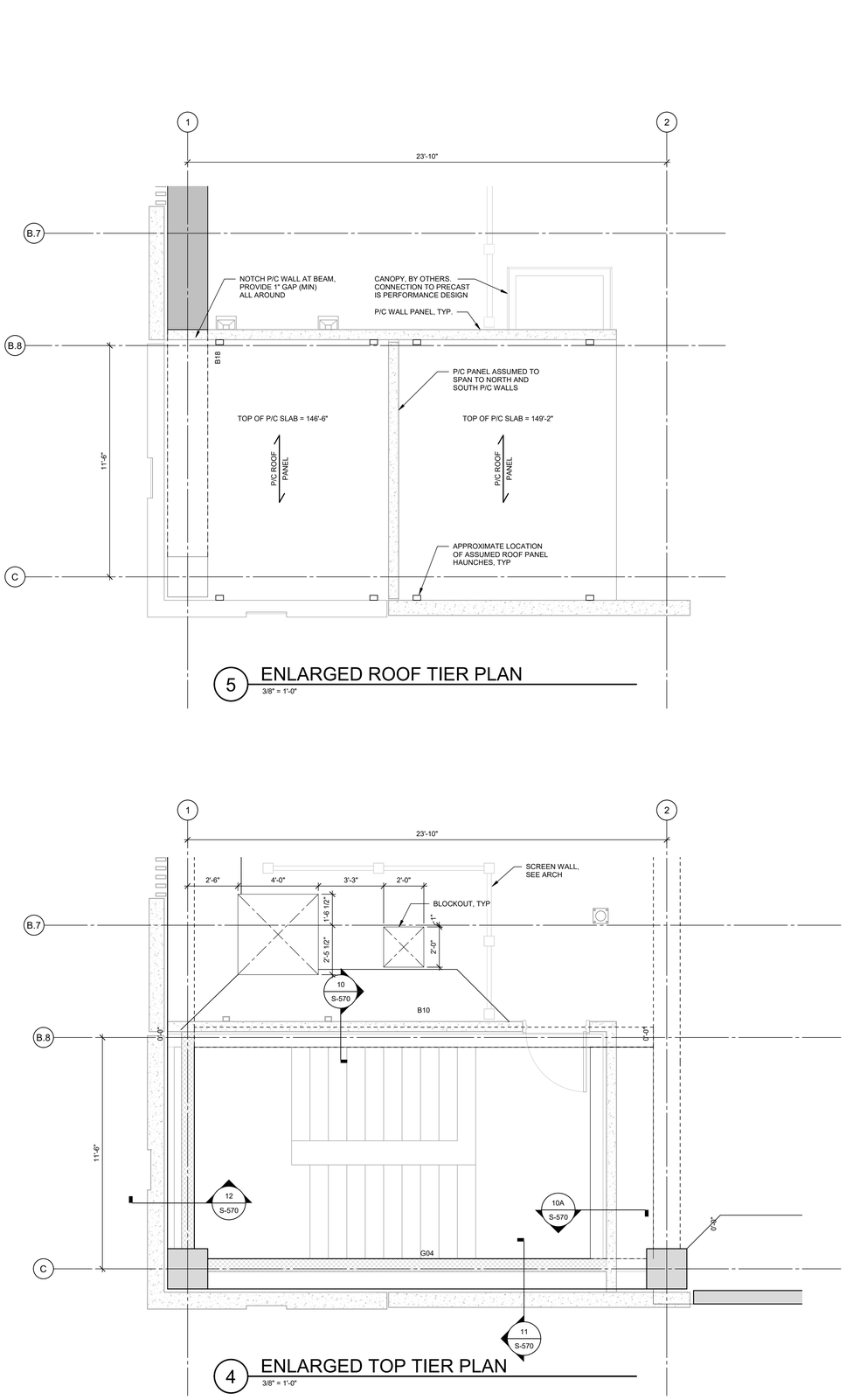
SHEET NO.

S-410

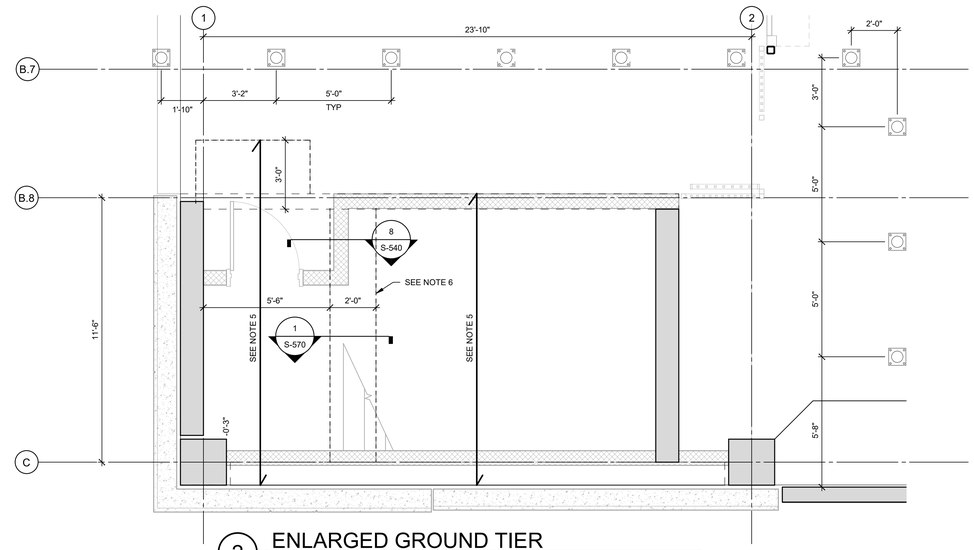
5 ENLARGED ROOF TIER PLAN
3/8" = 1'-0"



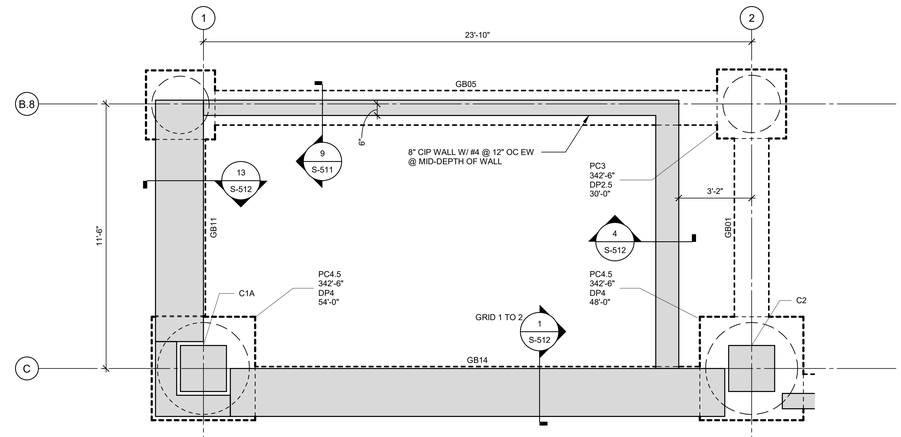
3 ENLARGED TYPICAL TIER PLAN
3/8" = 1'-0"



4 ENLARGED TOP TIER PLAN
3/8" = 1'-0"



2 ENLARGED GROUND TIER
3/8" = 1'-0"



1 ENLARGED FOUNDATION PLAN
3/8" = 1'-0"

SHEET NOTES

1. FOR GENERAL NOTES SEE S-001.
2. DETAIL CUTS AND INFORMATION SHOWN ON TYPICAL TIER PLAN 3/S-410 ARE TYPICAL FOR SUPPORTED TIERS, UN.
3. SEE S-100 FOR FOUNDATION INFORMATION.
4. ⟵⟶ INDICATES 6" THICK P/C ROOF SLAB SPAN. ROOF IS ASSUMED TO BE SUPPORTED BY PRECAST WALLS.
5. 6" CIP SLAB ON VOID BOX FORMS. PROVIDE #5 @ 12" EW BOTTOM
6. LOCALLY THICKEN SLAB TO 12" CIP. PROVIDE (3) #5 BOTTOM.

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LEVEL 4
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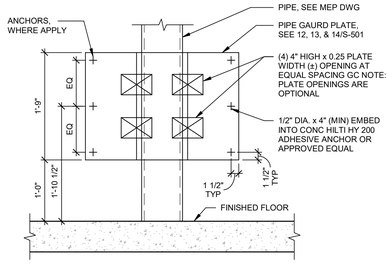
SHEET NAME

ENLARGED STAIR PLANS

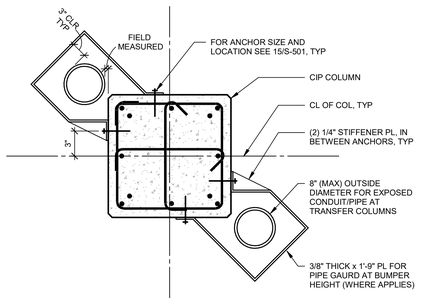
SHEET NO.

S-420



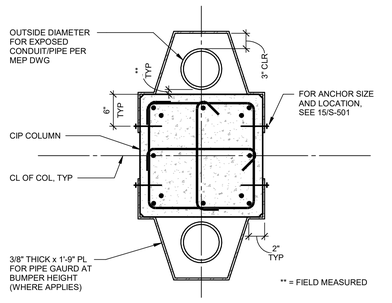
NOTE: GALVANIZE ENTIRE ASSEMBLY (TYP @ PIPE GAURDS)

15 PIPE GUARD DETAIL



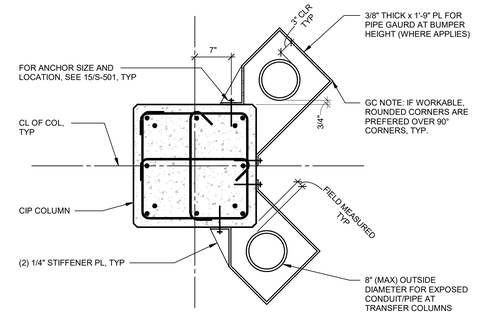
NOTE: GC HAS THE OPTION TO MODIFY PLATE CONFIGURATION BASED ON THE OVERALL SIZE & LOCATION OF CONDUIT/PIPE.

14 PIPE GUARD DETAIL



NOTE: GC HAS THE OPTION TO MODIFY PLATE CONFIGURATION BASED ON THE OVERALL SIZE & LOCATION OF CONDUIT/PIPE.

13 PIPE GUARD DETAIL



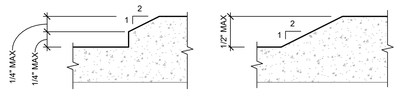
NOTE: GC HAS THE OPTION TO MODIFY PLATE CONFIGURATION BASED ON THE OVERALL SIZE & LOCATION OF CONDUIT/PIPE.

12 PIPE GUARD DETAIL

REFERENCED REGULATIONS AND STANDARDS

1. CHANGES IN LEVEL LESS THAN 1/4".
2. ADA-ACCESSIBILITY GUIDELINES FIGURE 303.2 CHANGE IN LEVEL FIG. 1
3. ASTM F1637-02 STANDARD PRACTICE FOR SAFE WALKING SURFACES IN SECTION 5.2.2.
4. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

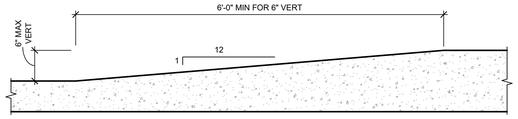
11 VERTICAL CHANGE IN LEVEL



REFERENCED REGULATIONS AND STANDARDS

1. CHANGES IN LEVEL BETWEEN 1/4" AND 1/2".
2. ADA-ACCESSIBILITY GUIDELINES FIGURE 303.2 BEVELED CHANGE IN LEVEL.
3. ASTM F1637-02 STANDARD PRACTICE FOR SAFE WALKING SURFACES IN SECTION 5.2.3.
4. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

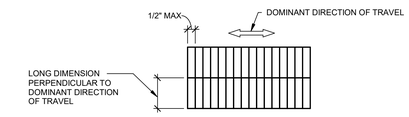
10 VERTICAL CHANGE IN LEVEL



REFERENCED REGULATIONS AND STANDARDS

1. CHANGES IN LEVEL LESS THAN 1/2" AND 6".
   A. REFER TO REFERENCED STANDARDS FOR ADDITIONAL REQUIREMENTS.
   B. MAXIMUM SLOPE ON RAMP SURFACE IS 8.33%.
2. ADA-ACCESSIBILITY GUIDELINES RAMP SECTION 405 AND CURB RAMPS SECTION 406.
3. ASTM F1637-02 STANDARD PRACTICE FOR SAFE WALKING SURFACES. CHANGES IN LEVEL GREATER THAN 1/2" IN SECTION 5.2.4.
4. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

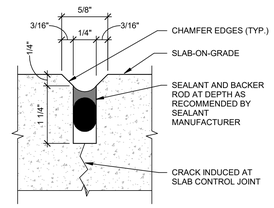
9 VERTICAL CHANGE IN LEVEL



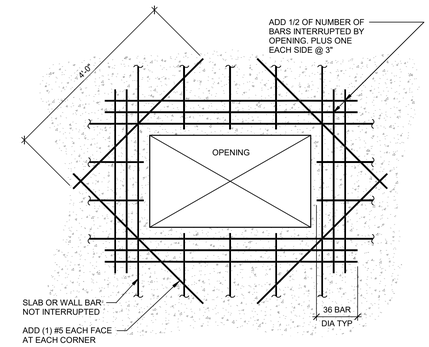
REFERENCED REGULATIONS AND STANDARDS

1. OPENINGS IN FLOOR OR GROUND SURFACES SHALL NOT ALLOW PASSAGE OF A SPHERE OF MORE THAN 1/2" DIA EXCEPT AS ALLOWED FOR ELEVATORS ADA 409.4.3. AND ADA 407.4.3. AND PLATFORM LIFTS ADA 410.4.
2. ADA-ACCESSIBILITY GUIDELINES FIGURE 303.2 ELONGATED OPENINGS IN FLOOR OR GROUND SURFACES.
3. ASTM F1637-02 STANDARD PRACTICE FOR SAFE WALKING SURFACES IN SECTION 10.
4. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

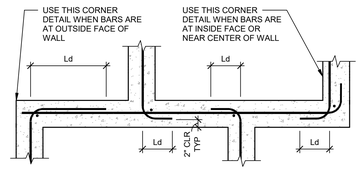
8 OPENINGS IN FLOOR SURFACES



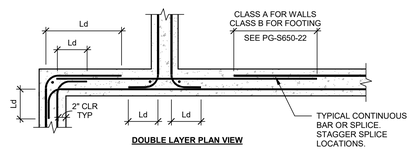
7 SLAB-ON-GRADE SAWCUT JOINT DETAIL



6 TYPICAL WALL / SLAB OPENING DETAIL

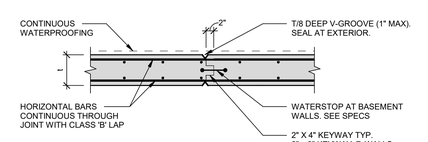


SINGLE LAYER BARS - ONE FACE OR CENTER PLAN VIEW

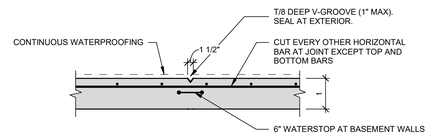


DOUBLE LAYER PLAN VIEW

5 TYP WALL/FOOTING REINFORCING SPLICES - UN

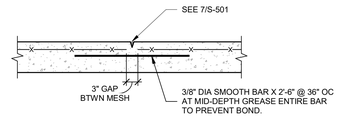


4 VERTICAL WALL CONSTRUCTION JOINT

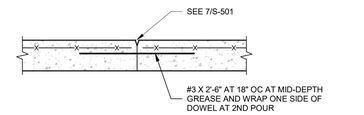


NOTE: JOINT SPACING EQUAL TO WALL HEIGHT: 20'-0" MAXIMUM AND NO MORE THAN 10'-0" FROM CORNER.

3 VERTICAL WALL CONTROL JOINT



2 SLAB CONTROL JOINT



1 SLAB CONSTRUCTION JOINT

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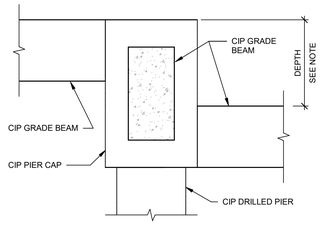
SHEET NAME

TYPICAL DETAILS

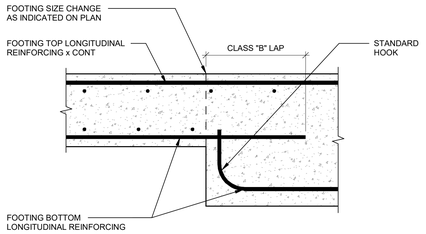
SHEET NO.

S-501

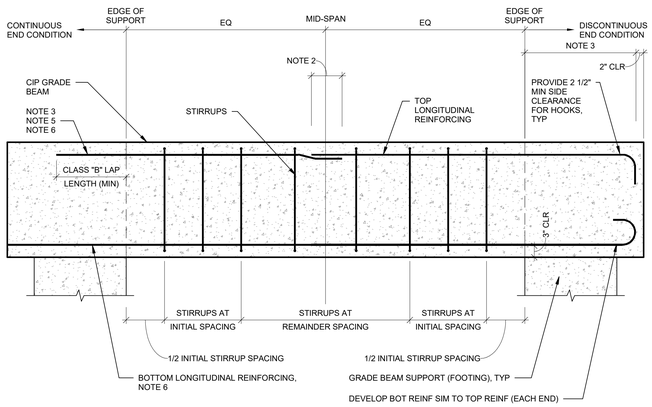


NOTE: DEPTH SHALL ENCOMPASS ALL GRADE BEAMS. MINIMUM DEPTH SHALL BE 3'-0"

11 DRILLED PIER CAP DETAIL

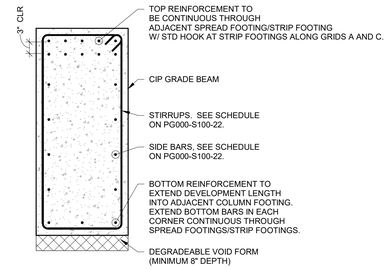


10 REINFORCING DETAIL AT FOOTING DEPTH CHANGE

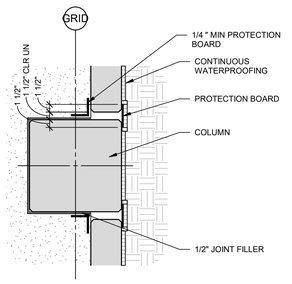


NOTES:
1. PROVIDE CONTINUOUS TOP REINFORCEMENT OVER SUPPORT WHERE POSSIBLE, OTHERWISE SEE NOTE 3.
2. PROVIDE CONTINUOUS TOP REINFORCING OR PROVIDE LAP SPLICE AT MID-SPAN.
3. DEVELOP TOP REINFORCEMENT INTO SUPPORT.
4. SEE PG-S650-22 FOR SPLICE LENGTH AND DEVELOPMENT LENGTH REQUIREMENTS.
5. WHERE GRADE BEAM CANTILEVERS, TOP REINFORCING SHALL RUN CONTINUOUS TO END OF BEAM.
6. WHERE REINFORCING VARIES BETWEEN CONTINUOUS BEAMS FRAMING AT SAME SUPPORT, PROVIDE LARGER QUANTITY AND EXTEND INTO BEAM WITH LESSER REINFORCING.

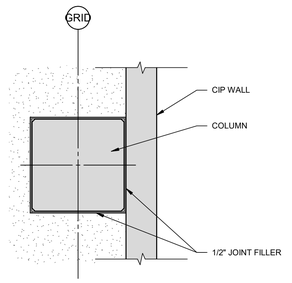
9 GRADE BEAM DETAIL



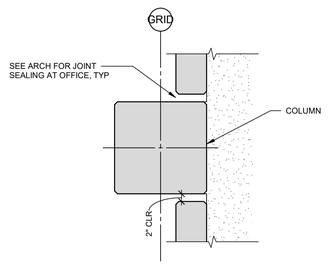
8 GRADE BEAM DETAIL



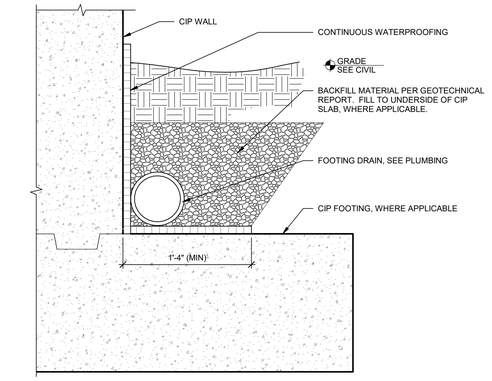
7 FOUNDATION WALL - JOINT BELOW GRADE



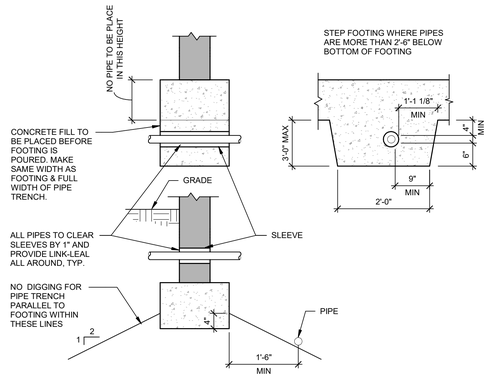
6 FOUNDATION WALL - JOINT BELOW GRADE



5 COLUMN / WALL JOINT

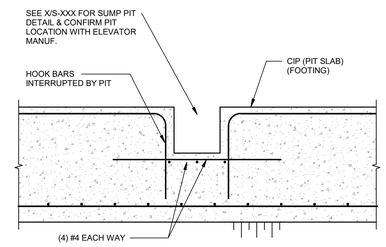


4 FOOTING DRAIN DETAIL

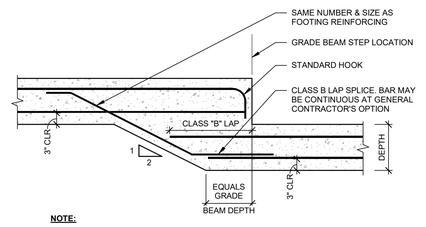


NOTE: INCREASE CLEARANCE IF REQUIRED PER SETTLEMENT REQUIREMENTS.

3 PIPE @ WALL & FOOTING DETAIL



2 SUMP PIT DETAIL



NOTE:
1. GRADE BEAM SHALL STEP A MAXIMUM OF 2'-0" VERTICAL IN 4'-0" HORIZONTAL.
2. SEE GRADE BEAM SCHEDULE ON S-605 FOR DEPTH DIMENSION.
3. SEE PLANS FOR GRADE BEAM STEP LOCATIONS

1 GRADE BEAM STEP DETAIL

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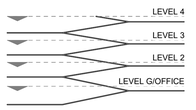
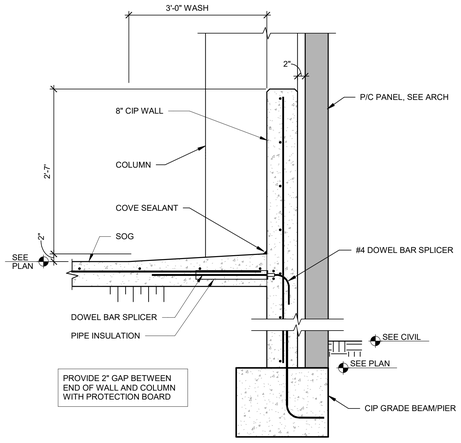


SHEET NAME

FOUNDATION DETAILS

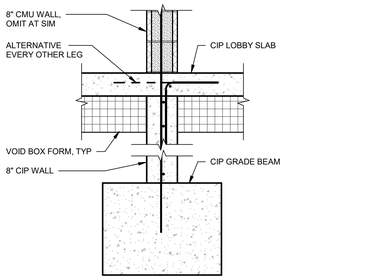
SHEET NO.

S-510



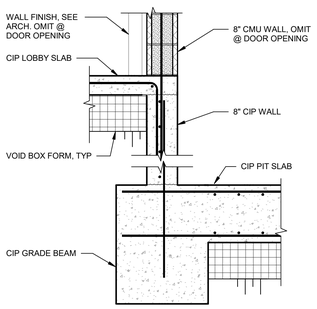
NOTE: SEE 3/S-511 FOR REMAINDER OF INFORMATION

12 EXTERIOR FOUNDATION WALL DETAIL



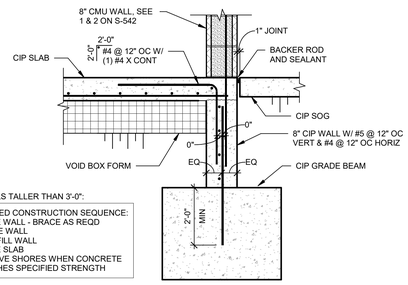
NOTE: SEE 9/S-511 FOR REMAINDER OF INFORMATION

11 CONTINUOUS SLAB/WALL DETAIL



NOTE: SEE 9/S-511 FOR REMAINDER OF INFORMATION

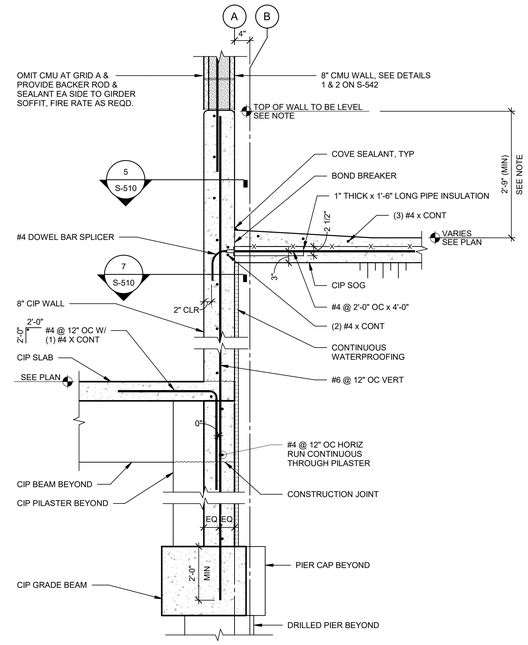
10 SLAB/WALL DETAIL @ ELEVATOR PIT



FOR WALLS TALLER THAN 3'-0":

SUGGESTED CONSTRUCTION SEQUENCE:
1. PLACE WALL - BRACE AS REQD
2. SHORE WALL
3. BACKFILL WALL
4. PLACE SLAB
5. REMOVE SHORES WHEN CONCRETE REACHES SPECIFIED STRENGTH

9 SLAB/WALL DETAIL

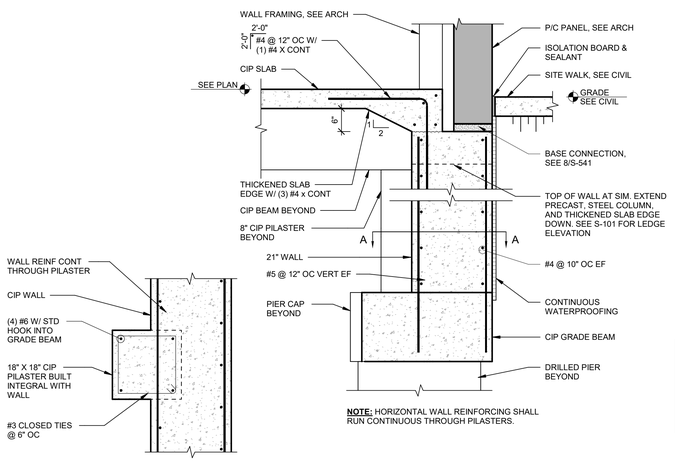


NOTE: STEP TOP OF CIP WALL TO CMU BLOCK COURSING AS NEEDED. ASSUMED STEP LOCATIONS AND TOP OF WALL ELEVATIONS SHOWN ON PLAN ARE APPROXIMATE.

8 INTERIOR RETAINING WALL SECTION AT OFFICE

NOTE: HORIZONTAL WALL REINFORCING SHALL RUN CONTINUOUS THROUGH PILASTERS.

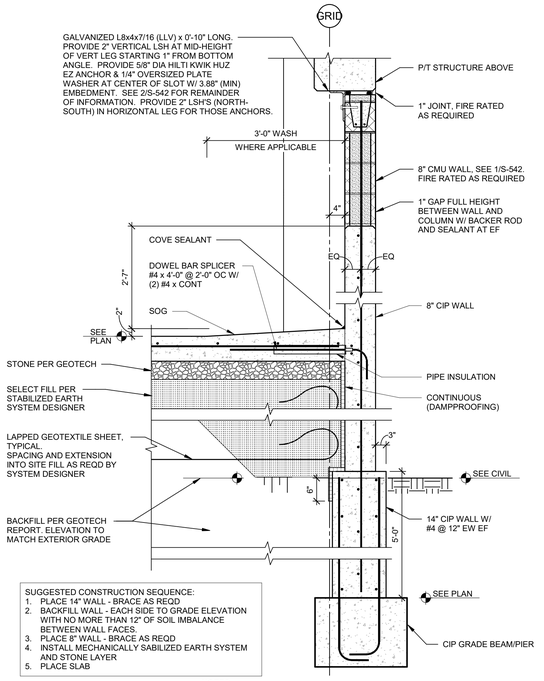
7 EXTERIOR RETAINING WALL SECTION



NOTE: HORIZONTAL WALL REINFORCING SHALL RUN CONTINUOUS THROUGH PILASTERS.

6 EXTERIOR RETAINING WALL SECTION AT OFFICE

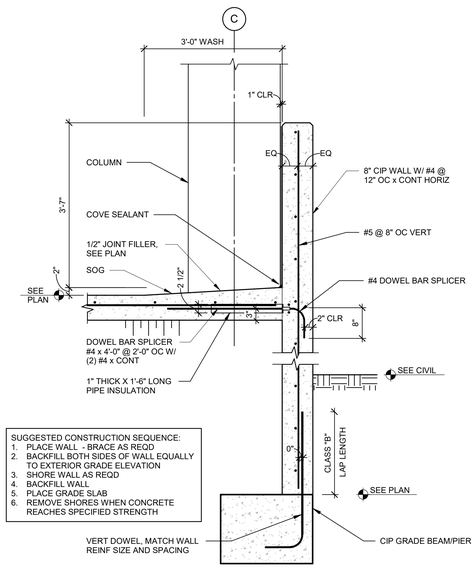
5 NOT USED



SUGGESTED CONSTRUCTION SEQUENCE:
1. PLACE 14" WALL - BRACE AS REQD
2. BACKFILL WALL - EACH SIDE TO GRADE ELEVATION WITH NO MORE THAN 12" OF SOIL IMBALANCE BETWEEN WALL FACES.
3. PLACE 8" WALL - BRACE AS REQD
4. INSTALL MECHANICALLY SABILIZED EARTH SYSTEM AND STONE LAYER
5. PLACE SLAB

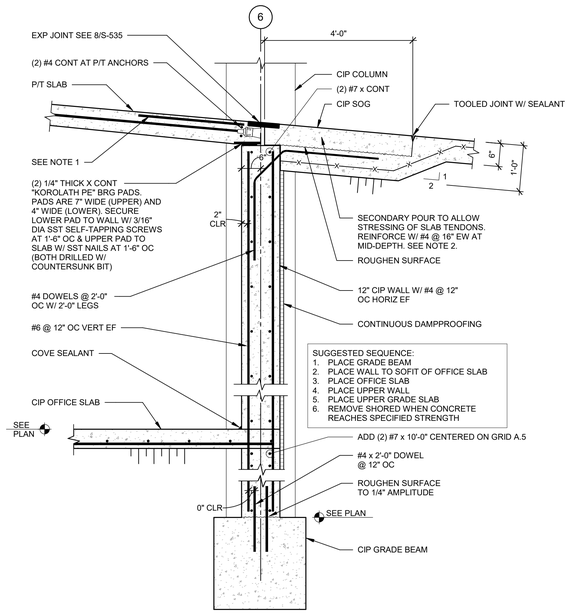
NOTES:
1. SEE 3/S-511 FOR REMAINDER OF WALL AND SLAB REINFORCING.
2. MECHANICALLY STABILIZED EARTH SYSTEM IS PERFORMANCE DESIGN. DESIGNER SHALL COORDINATE WITH GEOTECHNICAL ENGINEER FOR REQUIREMENTS.

4 EXTERIOR FOUNDATION WALL DETAIL



SUGGESTED CONSTRUCTION SEQUENCE:
1. PLACE WALL - BRACE AS REQD
2. PLACE LOWER GRADE SLAB
3. SHORE WALL AS REQUIRED
4. BACKFILL WALL
5. PLACE UPPER GRADE SLAB
6. REMOVE SHORES WHEN CONCRETE REACHES SPECIFIED STRENGTH

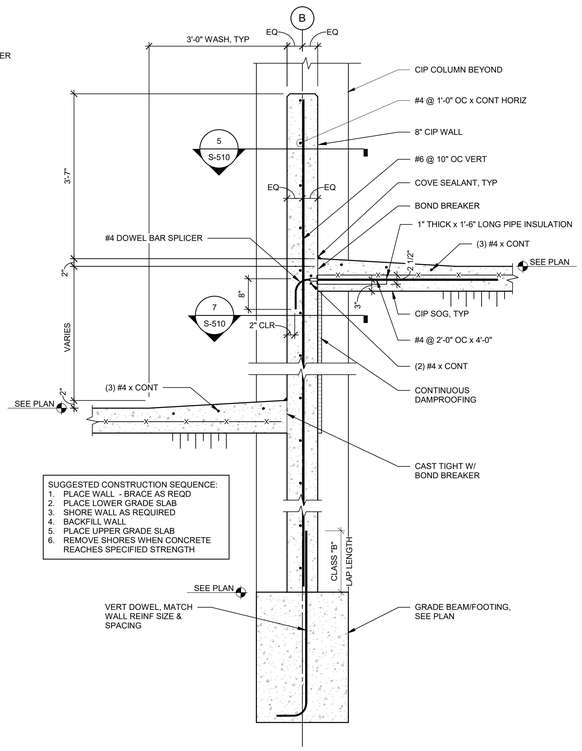
3 EXTERIOR FOUNDATION WALL DETAIL



SUGGESTED SEQUENCE:
1. PLACE GRADE BEAM
2. PLACE WALL TO SOFIT OF OFFICE SLAB
3. PLACE OFFICE SLAB
4. PLACE UPPER WALL
5. PLACE UPPER GRADE SLAB
6. REMOVE SHORED WHEN CONCRETE REACHES SPECIFIED STRENGTH

NOTES:
1. P/T SLAB MILD REINFOCEMENT TO EXTEND BENEATH EXPANSION JOINT HEADER BLOCKOUT TO END OF SLAB.
2. POUR SECONDARY SLAB MONOLITHIC WITH REMAINDER OF SLAB ON GRADE IF P/T STRESSING ACCESS IS NOT NEEDED.

2 CIP / PT SLAB TO TRANSITION FOUNDATION WALL DETAIL



SUGGESTED CONSTRUCTION SEQUENCE:
1. PLACE WALL - BRACE AS REQD
2. PLACE LOWER GRADE SLAB
3. SHORE WALL AS REQUIRED
4. BACKFILL WALL
5. PLACE UPPER GRADE SLAB
6. REMOVE SHORES WHEN CONCRETE REACHES SPECIFIED STRENGTH

1 INTERIOR FOUNDATION WALL DETAIL

SCHWARZ HANSON ARCHITECTS
2570 RIVER PARK PLAZA, SUITE 100
FORT WORTH, TX 76116
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Houston, TX 77058
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STATE OF TEXAS
JAMES E. WARNER
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2-18-22

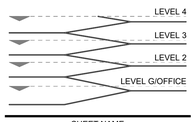
100% CONSTRUCTION DOCUMENTS

PROJECT NO.: 27-001147.00

DATE: 02-18-2022

REVISION SCHEDULE

Δ	Description	Date

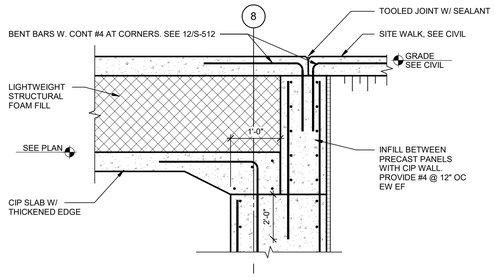


SHEET NAME

FOUNDATION WALL DETAILS

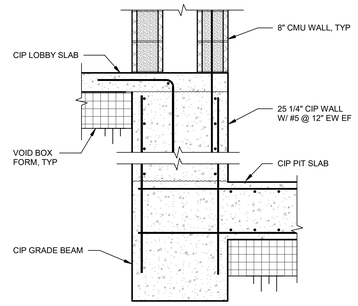
SHEET NO.

S-511



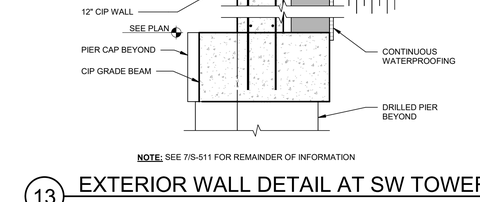
NOTE: SEE 14/S-511 FOR REMAINDER OF INFORMATION

16 WALL/SLAB DETAIL AT DOORWAY



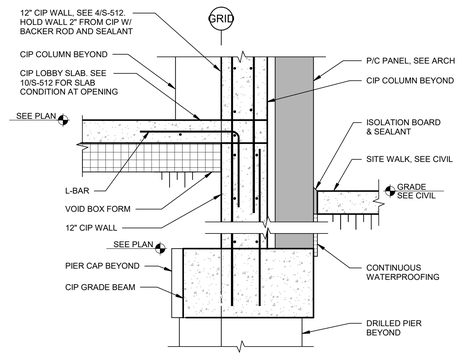
NOTE: SEE 9/S-511 FOR REMAINDER OF INFORMATION

15 SLAB/WALL DETAIL @ ELEVATOR PIT



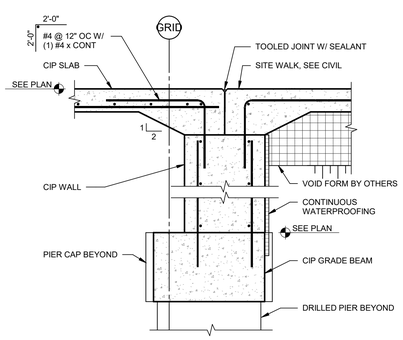
NOTE: HORIZONTAL WALL REINFORCING SHALL RUN CONTINUOUS THROUGH PILASTERS.

14 EXTERIOR RETAINING WALL SECTION



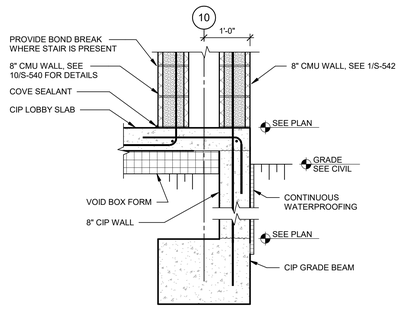
NOTE: SEE 7/S-511 FOR REMAINDER OF INFORMATION

13 EXTERIOR WALL DETAIL AT SW TOWER



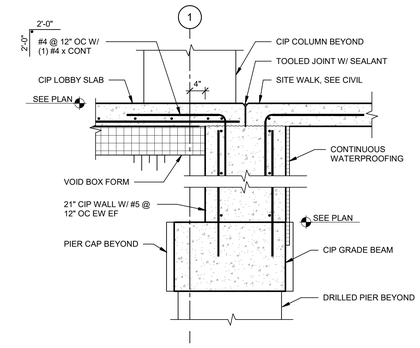
NOTE: FOR REMAINDER OF INFORMATION SEE 14/S-512

12 WALL/SLAB DETAIL AT DOORWAY

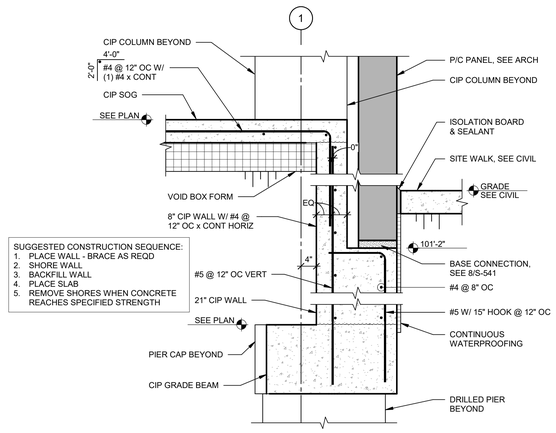


NOTE: SEE 9/S-511 FOR REMAINDER OF INFORMATION

11 EXTERIOR WALL DETAIL AT NE STAIR

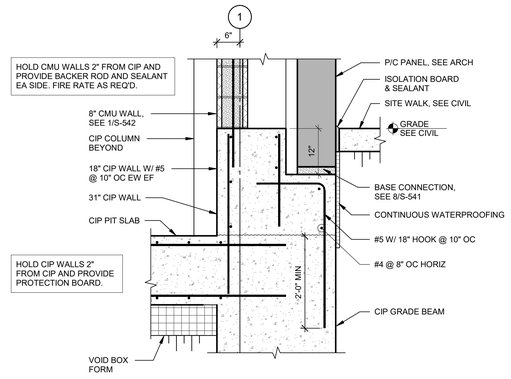


10 WALL/SLAB DETAIL AT ENTRY

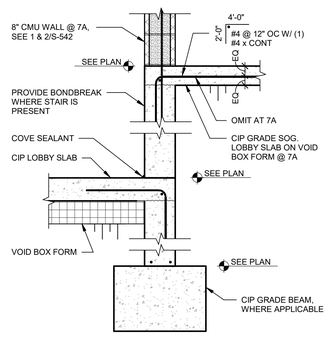


SUGGESTED CONSTRUCTION SEQUENCE:
1. PLACE WALL - BRACE AS REQD
2. SHORE WALL
3. BACKFILL WALL
4. PLACE SLAB
5. REMOVE SHORES WHEN CONCRETE REACHES SPECIFIED STRENGTH

9 EXTERIOR WALL DETAIL EDGE OF SLAB

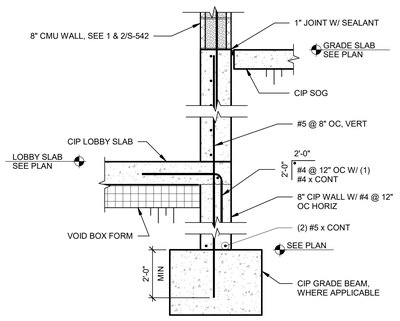


8 EXTERIOR WALL DETAIL AT ELEVATOR PIT

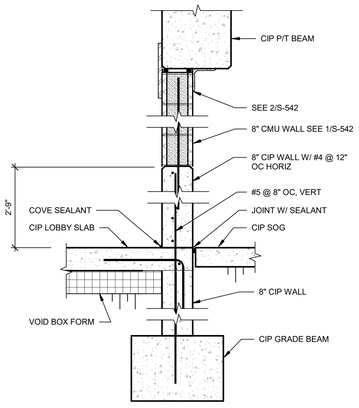


NOTE: SEE 6/S-512 FOR REMAINDER OF INFORMATION

7 INTERIOR WALL DETAIL AT NE TOWER LOBBY

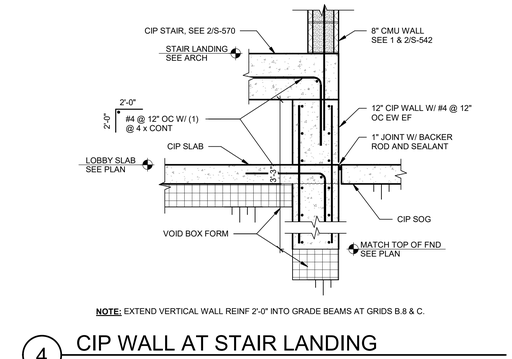


6 INTERIOR WALL DETAIL AT NE TOWER LOBBY



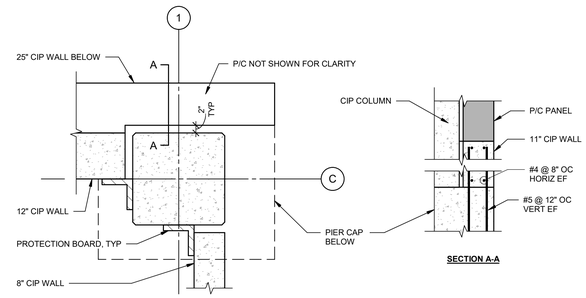
NOTE: SEE 9/S-511 FOR REMAINDER OF INFORMATION

5 INTERIOR WALL DETAIL AT NE STAIR

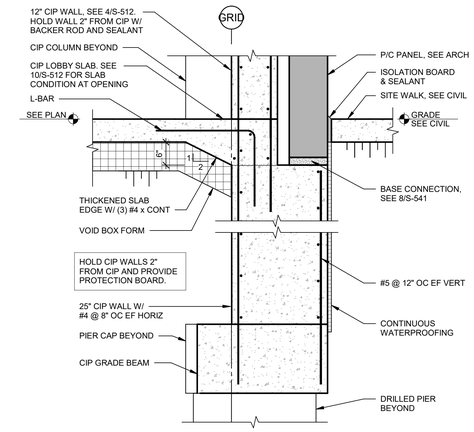


NOTE: EXTEND VERTICAL WALL REINF 2'-0" INTO GRADE BEAMS AT GRIDS B.8 & C.

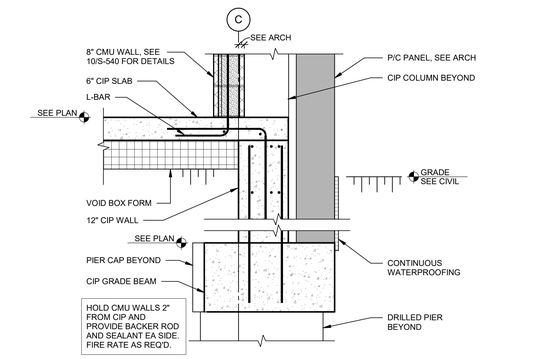
4 CIP WALL AT STAIR LANDING



3 CIP WALL DETAIL AT CORNER



2 EXTERIOR WALL DETAIL AT NE TOWER



NOTE: SEE 7/S-511 FOR REMAINDER OF INFORMATION

1 EXTERIOR WALL DETAIL AT SW TOWER

SCHWARZ HANSON ARCHITECTS
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mail@schwarz-hanson.com
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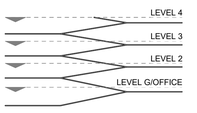
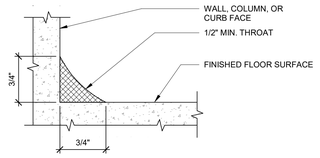


SHEET NAME

FOUNDATION DETAILS

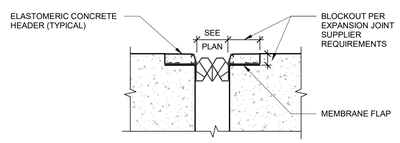
SHEET NO.

S-512

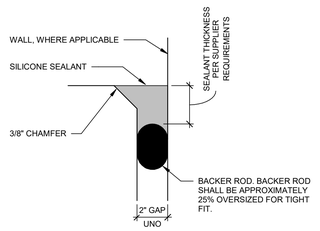


NOTES:
1. PREPARE & ALLOW FOR PRIMER TO CURE PROPERLY PRIOR TO INSTALLING SEALANT.
2. SEE SPECIFICATIONS FOR APPROVED MATERIALS.
3. DETAIL NOT TO SCALE.

13 COVE SEALANT

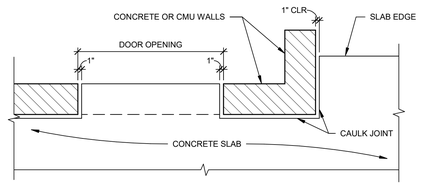


12 EXTRUDED RUBBER EJ DETAIL



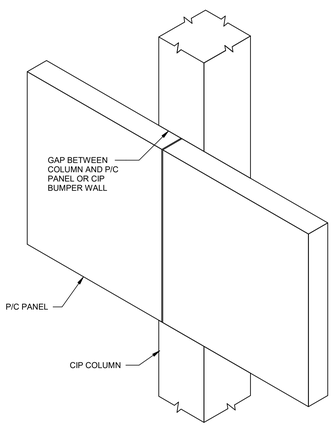
NOTE: JOINT SHALL BE FIRE RATED AS REQUIRED.

11 FIELD APPLIED SILICONE SEALANT EXPANSION JOINT DETAIL



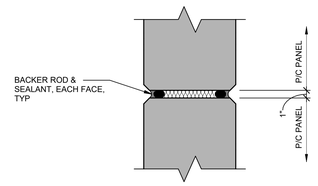
PLAN VIEW

10 WALL/SLAB PLAN DETAIL

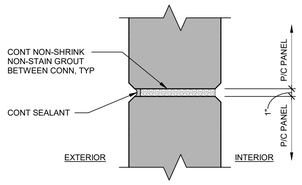


NOTE: ADDITIONALLY, CAULK ALL EDGES OF PRECAST PILASTER WHEN PRESENT IN FRONT OF THIS SECTION

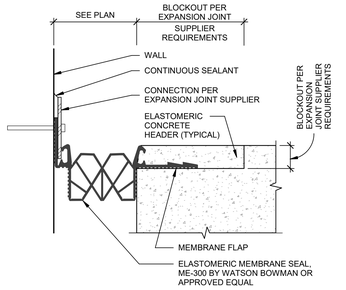
9 EXTERIOR FACADE SEALANT



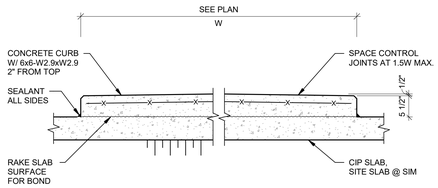
8 VERTICAL PANEL/PANEL DETAIL



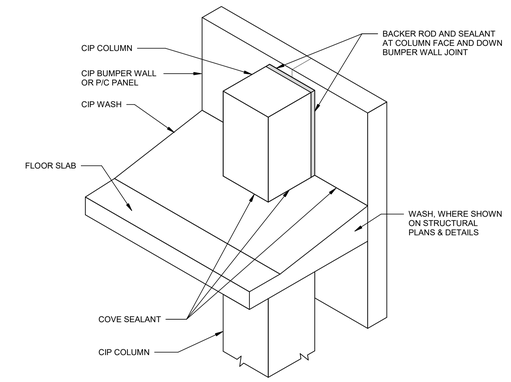
7 HORIZONTAL PANEL/PANEL DETAIL



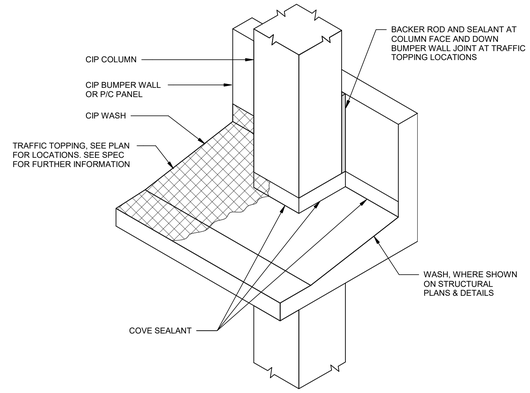
6 ELASTOMERIC CONC EDGED, EXTRUDED RUBBER EJ DETAIL



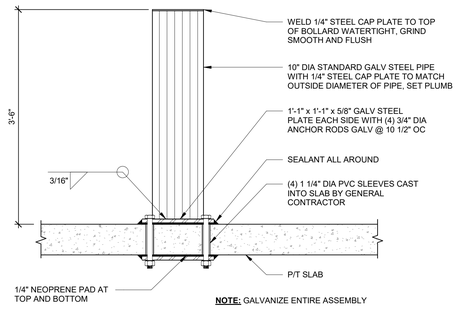
5 CURB DETAIL



4 INSIDE FACE OF WALL/CURB/COLUMN SEALANT TOP TIER ONLY

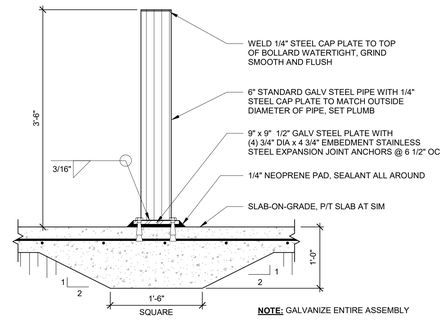


3 INSIDE FACE OF WALL/CURB/COLUMN SEALANT TYPICAL AT LOWER LEVELS



NOTE: GALVANIZE ENTIRE ASSEMBLY

2 PIPE BOLLARD DETAIL



NOTE: GALVANIZE ENTIRE ASSEMBLY

1 PIPE BOLLARD DETAIL

SCHWARZ HANSON ARCHITECTS
2570 RIVER PARK PLAZA, SUITE 100
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REVISION SCHEDULE

Δ	Description	Date

LEVEL 4
LEVEL 3
LEVEL 2
LEVEL G/OFFICE

SHEET NAME

STRUCTURAL DETAILS

SHEET NO.

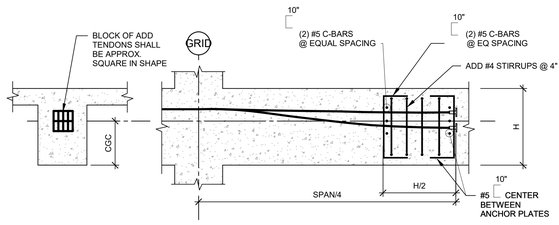
S-520

POST-TENSION CONCRETE BEAM AND GIRDER SCHEDULE

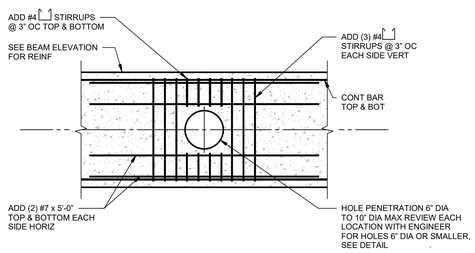
MARK	SECTION	TYPE	SIZE (INCHES) W	SIZE (INCHES) D	P/T FORCE Fe (kips)	TENDON LOCATIONS A	TENDON LOCATIONS B	TENDON LOCATIONS C	MILD REINFORCEMENT: TOP REINFORCEMENT TRa	TRb	TRc	MILD REINFORCEMENT: BOTTOM REINFORCEMENT BRa	BRb	BRc	#4 STIRRUPS U.N. SPACING EA. END	REMARKS
B01	T	I	16	34	556.5	24	4	24	3 #9	2 #4	3 #9	3 #6	2 #8	3 #6	(3) @ 2", (8) @ 6", (15) @ 12", REM @ 22"	
B02	T	II	16	34	450.5	24	4	30	3 #9	2 #4	3 #9	3 #6	2 #8	3 #6	(3) @ 2", (8) @ 6", (10) @ 15", REM @ 22"	
B03	L	II	16	34	503.5	21	4	30	2 #9	2 #4	3 #9	3 #6	2 #8	3 #6	(3) @ 2", (8) @ 6", (10) @ 12", (7) @ 16", REM @ 22" (3) @ 2", REM @ 6" BETWEEN GRIDS B.8 & C	TYPE "L" BEAM AT STAIR, TYPE "T" BEAM ELSEWHERE.
B04	T	II	16	34	503.5	24	6	30	3 #9	2 #4	3 #9	3 #6	2 #8	3 #6	3@2", 8@6", 9@12", 6@18", REM@22"	
B05	R	II	16	37	583	18.5	4	33	2 #9	2 #6	3 #9	2 #6	2 #9	2 #6		TYPE "R" BEAM AT STAIR, TYPE "L" BEAM ELSEWHERE. Fe = 291.5k @ B05A
B06	L	II	16	37	583	22.5	22.5	33	2 #9	2 #6	3 #9	2 #6	2 #9	2 #6		
B07	L	I	16	34	636	21	4	24.5	2 #9	2 #6	4 #9	3 #6	2 #9	3 #6	(3) @ 2", (8) @ 6", (18) @ 9", REM @ 22"	TYPE "L" BEAM AT BUILDING INSET, TYPE "T" BEAM ELSEWHERE.
B08	L	I	25	24	265	13.5	4	13.5	3 #8	3 #8	3 #8	2 #8	2 #8	2 #8		TYPE "R" BEAM AT ELEVATOR SHAFT, TYPE "L" BEAM ELSEWHERE.
B09	T	I	16	36	662.5	25.5	4	22	3 #9	2 #4	3 #9	3 #6	2 #9	3 #6	(3) @ 2", (8) @ 6", (14) @ 8", (6) @ 12", REM @ 22" (3) @ 2", REM @ 6" BETWEEN GRIDS A & A.4	Fe = 768.5k @ B09A. TYPE "L" BEAM AT ELEVATOR SHAFT, TYPE "T" BEAM ELSEWHERE.
B10	L	I	12	24	106	15	4	15	2 #8	2 #6	2 #8	2 #6	2 #8	2 #6		ORD "B" = 15" @ B10A, ORD"B" = 8" @ B10B
B11	L	I	16	34	424	21	4	21	2 #9	2 #6	2 #9	2 #6	2 #8	2 #6		
B12	L	II	16	34	159	21	4	30	2 #9	2 #6	2 #9	2 #6	2 #8	2 #6		Fe = 238.5k @ B12A
B13	L	III	16	34	159	30	12	30	2 #9	2 #6	2 #9	2 #6	2 #8	2 #6		END "A" AT GRID B; Fe = 238.5k @ B13A
B14	R	II	24	34	159	17	17	30	2 #9	2 #9	2 #9	2 #6	2 #9	2 #6		Fe = 238.5k @ B14A
B15	T	II	16	20	185.5	14	4	16	3 #8	2 #4	3 #8	3 #6	2 #8	3 #6	(3) @ 2", (8) @ 6", REM @ 15"	
B16	L	II	16	48	530	24	4	44	2 #9	2 #6	3 #9	2 #6	3 #8	2 #6		
B17	L	II	16	37	291.5	22.5	4	33	2 #9	2 #6	3 #9	2 #6	2 #9	2 #6		
B18	R	II	24	24	318	12	6	12	2 #8	2 #8	2 #8	2 #8	2 #8	2 #8	(3) @ 2", (8) @ 6", REM @ 18"	
B19	R	II	24	24	132.5	12	12	12	2 #8	2 #8	2 #8	2 #8	2 #8	2 #8	(3) @ 2", (8) @ 6", REM @ 18"	
G01	T	I	24	38	1166	26	4	26	4 #9	2 #4	4 #9	3 #6	5 #9	3 #6	(3) @ 2", REM @ 6"	
G02	T	I	24	38	874.5	25	4	25	4 #9	2 #4	4 #9	3 #6	3 #9	3 #6	(3) @ 2", REM @ 9"	
G03	L	I	18	34	159	19.5	4	19.5	3 #8	3 #8	3 #8	2 #8	2 #8	2 #8		
G04	R	II	18	34	212	17	17	17	2 #8	2 #8	2 #8	2 #8	2 #8	2 #8		TrC = (2) #9 WHEN ADJACENT TO G06
G05	T	III	16	28	265	18.5	4	18.5	2 #9	2 #6	2 #9	2 #6	2 #8	2 #6	(3) @ 2", (8) @ 6", REM @ 15"	MEMBER IS TYPE II @ G05A
G06	R	II	18	34	212	17	17	17	2 #9	2 #6	2 #6	3 #6	2 #9	3 #6		
G07	L	II	18	34	212	17	10	17	2 #9	2 #6	2 #9	2 #6	2 #8	2 #6		
G08	T	III	16	24	265	16	4	16	2 #9	2 #6	2 #9	2 #6	2 #8	2 #6	(3) @ 2", (8) @ 6", REM @ 14"	MEMBER IS TYPE II @ G08A
MB01	T	II	14	24					2 #8	2 #6	4 #8	3 #6	3 #9	3 #6	(3) @ 2", (8) @ 6", REM @ 12"	
MB02	T	III	14	24					4 #8	3 #6	3 #8	3 #6	3 #8	3 #6	(3) @ 2", (8) @ 6", REM @ 10"	END "C" @ GRID A
MB03	T	II	14	24					3 #6	3 #6	3 #8	3 #6	2 #8	3 #6	(3) @ 2", (8) @ 6", REM @ 10"	
MB04	T	I	14	24					2 #8	2 #8	2 #8	2 #8	2 #8	2 #8	(3) @ 2", (8) @ 6", REM @ 10"	

BEAM NOTES:

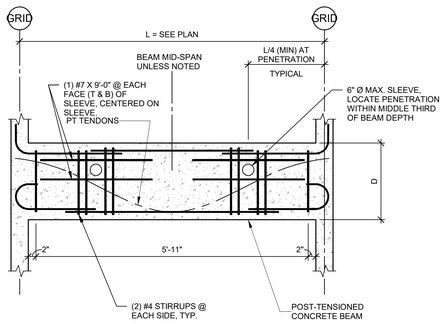
BN1. FOR GENERAL NOTES, SEE SHEET S-001.
BN2. Fe = MINIMUM EFFECTIVE FORCE AFTER LOSSES. Fe IS BASED ON 1/2" DIA, 270 KSI LOW RELAXATION STRANDS. THE MINIMUM NUMBER OF STRANDS PER BEAM MUST BE BASED ON Fe = 26.5 KIPS/STRAND.
BN3. I.P. = INFLECTION POINT.
BN4. FOR BEAMS OR GIRDERS THAT SUPPORT ANOTHER BEAM OR GIRDER, SEE DETAIL 10/S-530.
BN5. ANCHORAGES FOR ADDED BEAM TENDONS SHALL BE LOCATED AT THE QUARTER POINT OF THE ADJACENT SPAN UNO AND SHALL BE PLACED AT THE CG OF THE TEE BEAM SECTION. PROVIDE REINFORCING PER 14/S-530.
BN6. PROVIDE FOLLOWING STIRRUP SPACING EACH END UN IN BEAM SCHEDULE.
BEAM SECTION T: (3) @ 2", (8) @ 6", REM @ 22".
BEAM SECTIONS L, U, & R: (3) @ 2", (8) @ 6", REM @ 12".
BN7. FOR MEMBERS 36" OR GREATER IN DEPTH AND FOR ALL SECTION L, U, & R BEAMS, PROVIDE #4 x CONT @ 12" OC SIDE BARS EF UN SPACED EQUALLY BETWEEN TOP & BOTTOM BARS.
BN8. FOR BOTTOM BARS LARGER THAN #6 PROVIDE 180° STD HOOKS AT ENDS AS SHOWN.
BN9. TO AVOID INTERFERENCE, PLACE TOP GIRDER BARS JUST BELOW TOP BEAM BARS AND BOTTOM BEAM BARS JUST ABOVE BOTTOM GIRDER BARS AS REQUIRED, UN. SEE 8/S-530.
BN10. FOR PENETRATIONS THROUGH BEAMS OR GIRDERS, SEE DETAILS 11, 12, & 13 ON S-530.
BN11. CLASS "B" LAP BASED ON TRb BAR SIZE, SEE DETAILS ON S-530.
BN12. FOR BEAM SECTION TYPES AND OTHER BEAM DETAILS, S-530.
BN13. MINIMUM INITIAL CONCRETE STRENGTH AT TIME OF STRESSING, f'ci, SHALL BE 3,000 PSI UN.
BN14. SEE NOTE REGARDING "SUGGESTED POUR SEQUENCE" ON SHEET S-003.



14 ADDITIONAL TENDON DETAIL



13 BEAM PENETRATION DETAIL

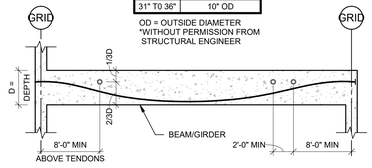


NOTE: FOR BEAM BAR LAP SPLICE LENGTH, SEE SCHEDULE. LOCATION OF SPLICE IS SHOWN FOR CONCEPT ONLY. SEE OTHER DETAILS FOR ADDITIONAL INFO.

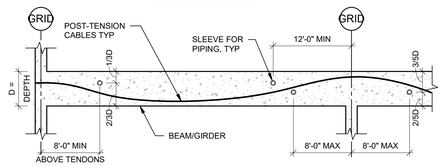
12 BEAM PENETRATION DETAIL

BEAM DEPTH	MAX SLEEVE SIZE
< 24"	NO HOLES*
25" TO 27"	6" OD
28" TO 30"	8" OD
31" TO 36"	10" OD

OD = OUTSIDE DIAMETER
*WITHOUT PERMISSION FROM STRUCTURAL ENGINEER



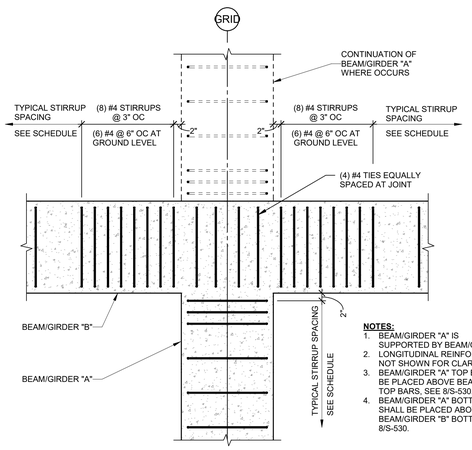
SINGLE SPAN BEAM



MULTIPLE SPAN BEAM

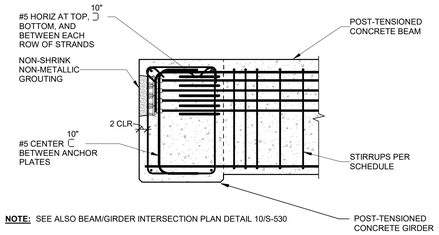
NOTE: COORDINATE EXACT NUMBER, SIZES, AND LOCATION OF SLEEVES WITH STRUCTURAL ENGINEER. PLACE SLEEVES WHERE REQUIRED TO CLEAR POST-TENSIONED CABLES AND REINFORCING STEEL.

11 SLEEVE PLACEMENT THROUGH BEAM GUIDELINES DETAIL



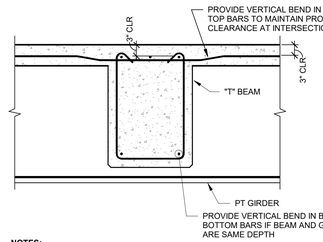
NOTES:
1. BEAM/GIRDER "A" IS SUPPORTED BY BEAM/GIRDER "B".
2. LONGITUDINAL REINFORCING NOT SHOWN FOR CLARITY.
3. BEAM/GIRDER "A" TOP BARS SHALL BE PLACED ABOVE BEAM/GIRDER "B" TOP BARS, SEE 8/S-530.
4. BEAM/GIRDER "A" BOTTOM BARS SHALL BE PLACED ABOVE BEAM/GIRDER "B" BOTTOM BARS, SEE 8/S-530.

10 BEAM/GIRDER INTERSECTION PLAN



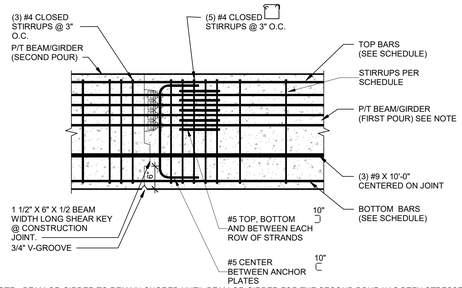
NOTE: SEE ALSO BEAM/GIRDER INTERSECTION PLAN DETAIL 10/S-530

9 BEAM/GIRDER DETAIL



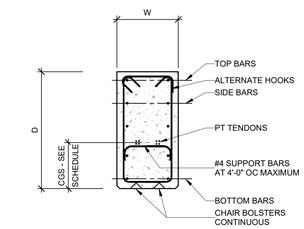
NOTES:
1. VERTICAL BENDS SHALL BE KEPT TO THE MINIMAL HORIZONTAL LENGTH.
2. PROVIDE MODIFIED HEIGHT STIRRUPS AS REQUIRED.

8 BEAM/GIRDER INTERSECTION DETAIL

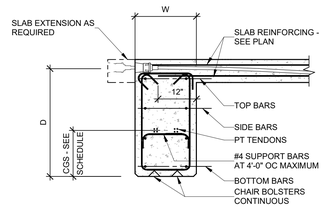


NOTE: BEAM OR GIRDER TO REMAIN SHORED UNTIL BEAM OR GIRDER FOR THE SECOND POUR HAS BEEN STRESSED.

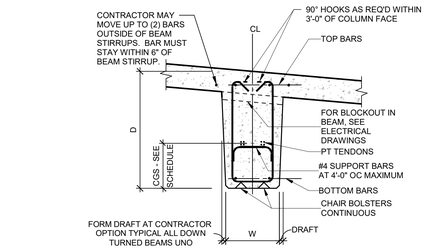
7 BEAM/GIRDER AT CONSTRUCTION JOINT



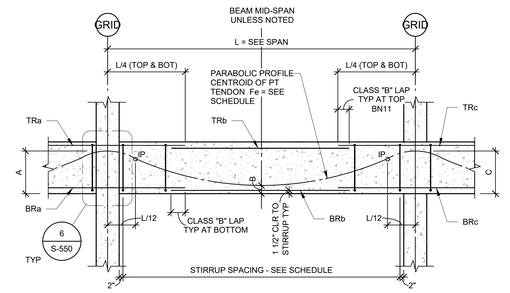
6 BEAM SECTION R



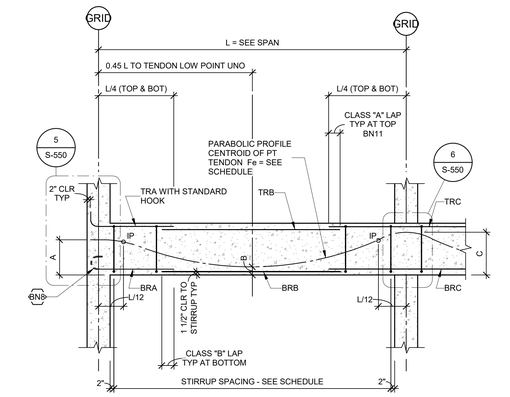
5 BEAM SECTION L



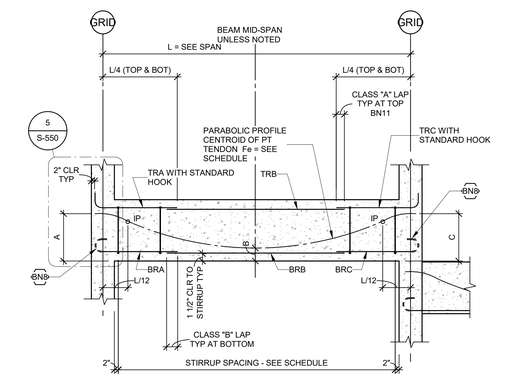
4 BEAM SECTION T



3 PT CONCRETE BEAM TYPE III



2 PT CONCRETE BEAM TYPE II



1 PT CONCRETE BEAM TYPE I

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2-18-22

100% CONSTRUCTION DOCUMENTS

PROJECT NO.: 27-001147.00

DATE: 02-18-2022

REVISION SCHEDULE

Δ	Description	Date

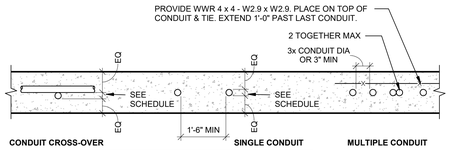
LEVEL 4
LEVEL 3
LEVEL 2
LEVEL G/OFFICE

SHEET NAME

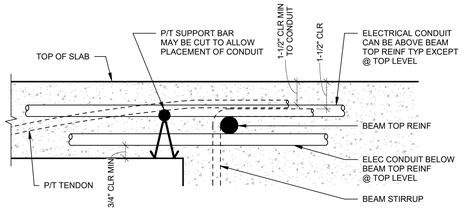
CIP BEAM SCHEDULE AND DETAILS

SHEET NO.

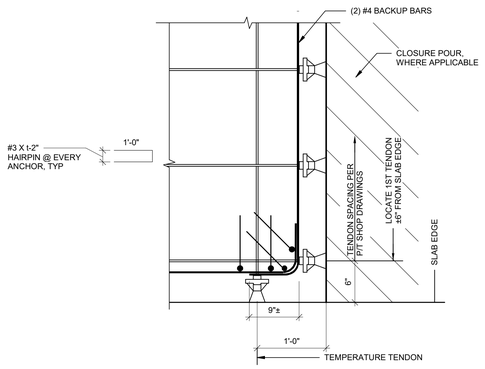
S-530



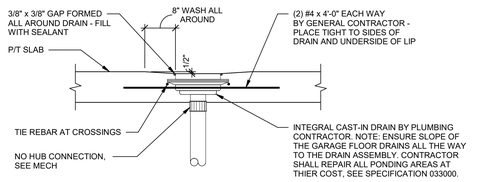
SLAB THICKNESS	SINGLE CONDUIT MAX DIAMETER	CONDUIT CROSS-OVER MAX DIAMETER
5" to 5-1/2"	1"	(2) 1/2"
6" to 7-1/4"	1-1/4"	(2) 3/4"
> 7-1/4"	1-1/2"	(2) 1"



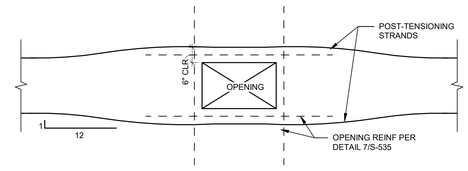
11 EMBEDDED CONDUIT IN SLAB AND BEAM DETAIL



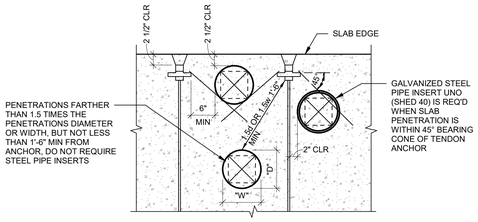
10 TENDON SLAB PLACEMENT AT CORNERS



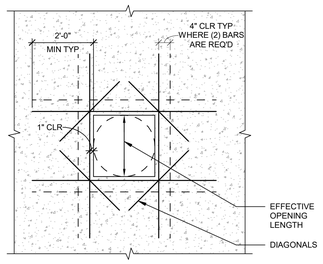
9 DRAIN INSTALLATION DETAIL - P/T CONSTRUCTION



8 TENDON LAYOUT AT OPENING



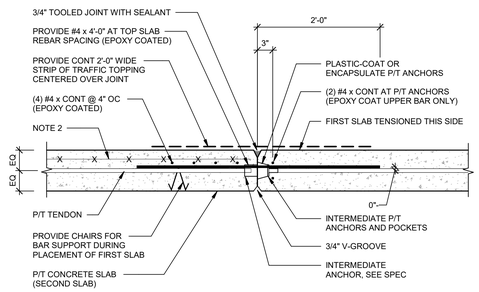
7 OPENING AT TENDON ANCHORAGE



MAX EFFECTIVE OPENING LENGTH	REINFORCING	DIAGONALS
1'-0" TO 1'-6"	(1) #5 EA SIDE	NONE REQ'D
1'-6" TO 2'-6"	(1) #5 TOP & BOTTOM EA SIDE	(1) #5 x 3'-0"
2'-6" TO 5'-0"	(2) #5 TOP & BOTTOM EA SIDE	(1) #5 x 4'-0"

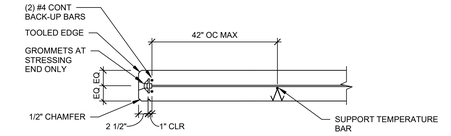
NOTES:
1. ALL OPENINGS WITH A DIMENSION OF 1'-0" OR GREATER SHALL BE TRIMMED AS SHOWN.
2. THIS REINF IS IN ADDITION TO ANY REINF INDICATED ON THE PLANS.

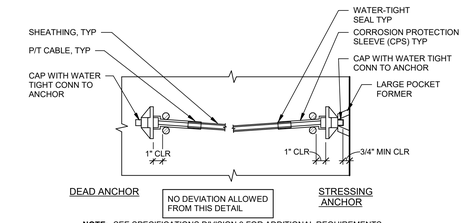
6 SLAB OPENING DETAIL



NOTES:
1. SHORE FIRST SLAB UNTIL SECOND SLAB IS STRESSED.
2. PLACE SECOND SLAB AS SOON AS POSSIBLE AFTER FIRST SLAB . IF SECOND SLAB WILL BE PLACED MORE THAN 14 DAYS AFTER FIRST SLAB, ADD WWR 4 x 4 - W2.9 x W2.9, 5' WIDE x CONTINUOUS AS SHOWN. IF MORE THAN 28 DAYS, CONSULT ENGINEER.

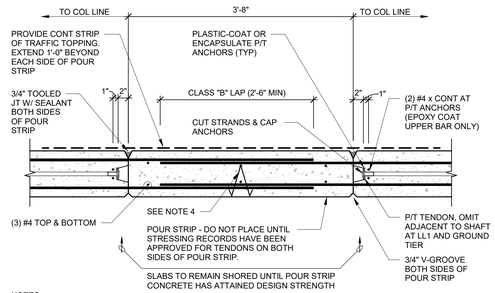
5 CONSTRUCTION JOINT DETAIL - JOINT PERPENDICULAR TO SLAB SPAN





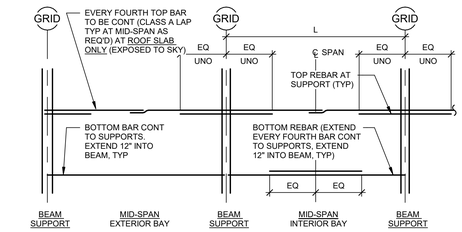
NOTE: SEE SPECIFICATIONS DIVISION 3 FOR ADDITIONAL REQUIREMENTS

4 TENDON ANCHORAGE DETAIL

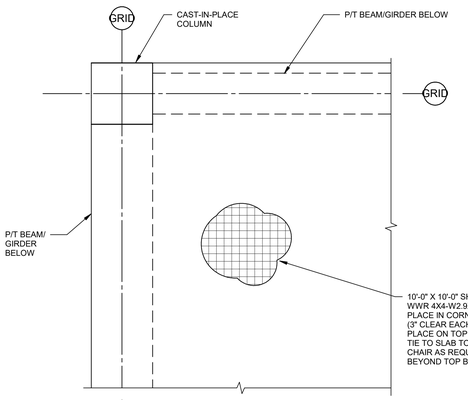


NOTES:
1. AT POUR STRIP, USE FIBER REINFORCED CONCRETE (MIN DOSAGE POLYPROPYLENE MICRO-FIBERS FOR PLASTIC SHRINKAGE-SEE SPECIFICATIONS).
2. AT TOP OF POUR STRIP, PROVIDE 3/4" DEEP TOOLED JOINTS, FILLED WITH SEALANT, IN TRANSVERSE DIRECTION AT 4'-0" OC.
3. EPOXY COAT ALL REBAR'S
4. TOP AND BOTTOM BARS IN POUR STRIP TO BE CHAIRED DURING PLACEMENT OF ADJACENT SLABS.
5. PROVIDE 1"DIA DRAIN HOLES AT MIDDLE OF BOTTOM FORM AT 4'-0" OC.

3 POUR STRIP DETAIL



2 P/T SLAB MILD REINFORCEMENT DETAIL



1 SLAB CORNER PLAN DETAIL

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STATE OF TEXAS
JAMES E. WARNER
104009
LICENSED
PROFESSIONAL ENGINEER
2-18-22
100% CONSTRUCTION DOCUMENTS

PROJECT NO.: 27-001147.00

DATE: 02-18-2022

REVISION SCHEDULE

Δ	Description	Date

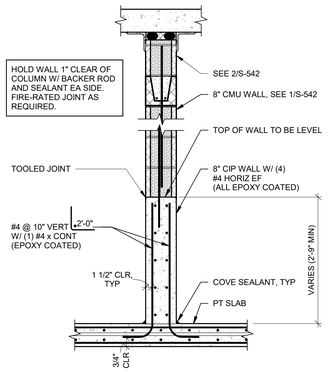
LEVEL 4
LEVEL 3
LEVEL 2
LEVEL G/OFFICE

SHEET NAME

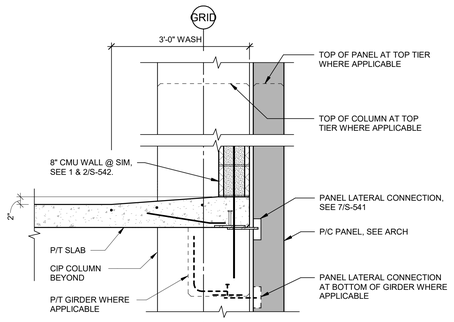
POST-TENSION SLAB DETAILS

SHEET NO.

S-535

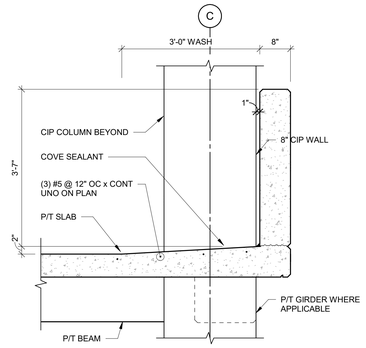


15 INTERIOR BUMPER WALL DETAIL



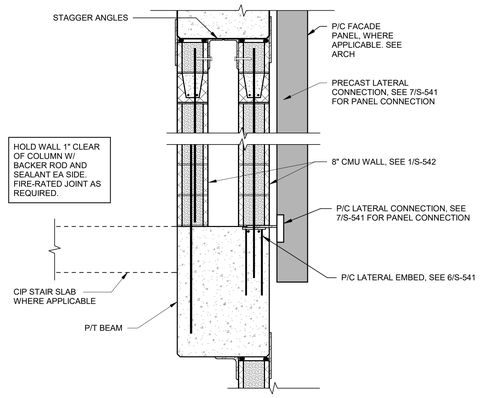
NOTE: PRECAST PANEL/CONNECTIONS SHALL BE DESIGNED FOR VEHICULAR BUMPER HIT

14 EXTERIOR EDGE DETAIL

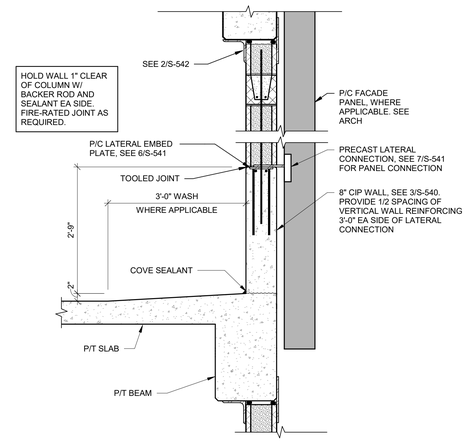


NOTE: SEE 2/PG-S540-22 FOR REMAINDER OF INFORMATION.

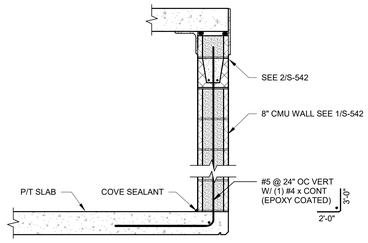
13 WALL DETAIL



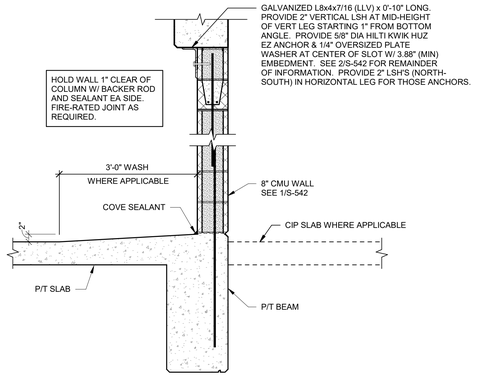
12 WALL DETAIL



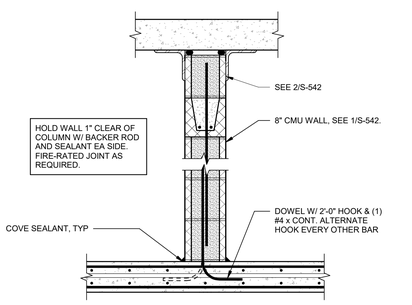
11 WALL DETAIL



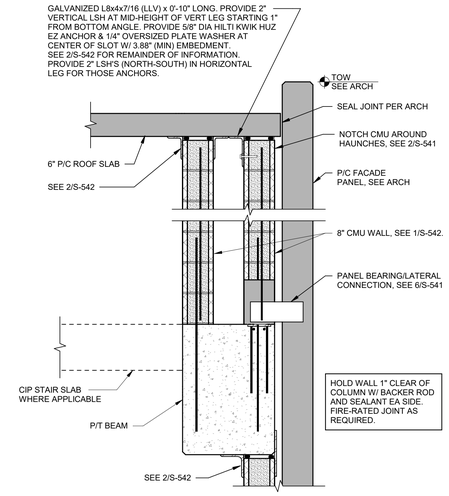
10 WALL DETAIL



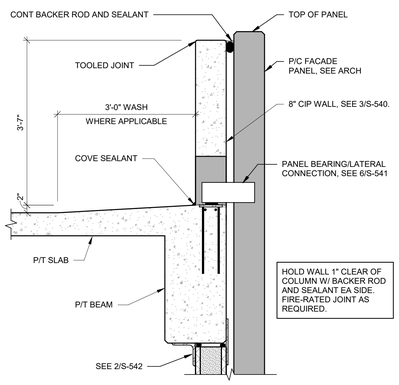
9 WALL DETAIL



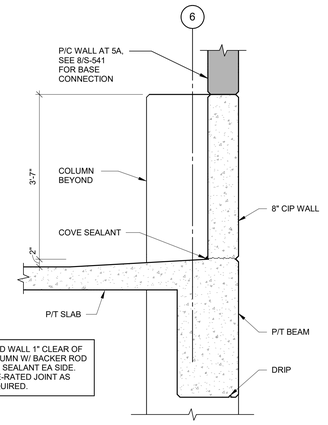
8 INTERIOR BUMPER WALL DETAIL



7 WALL DETAIL

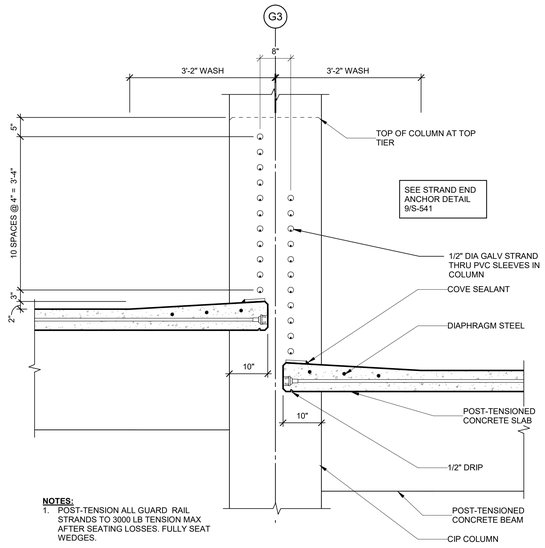


6 WALL DETAIL



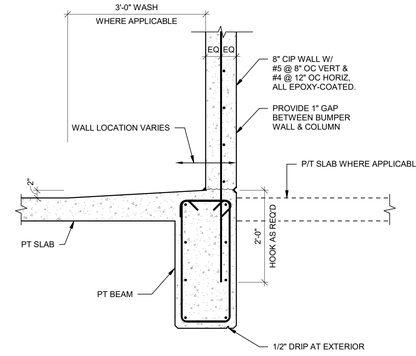
NOTE: SEE 3/S-540 FOR REMAINDER OF INFORMATION

5 BUMPER WALL DETAIL AT END OF RAMP



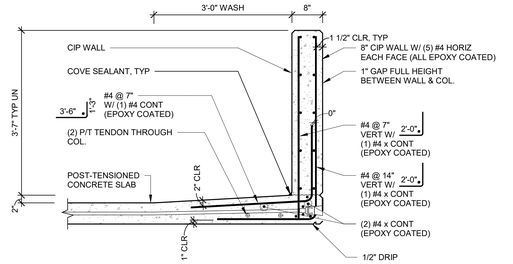
NOTES:
1. POST-TENSION ALL GUARD RAIL STRANDS TO 3000 LB TENSION MAX AFTER SEATING LOSSES. FULLY SEAT WEDGES.

4 INTERIOR SLAB / WASH DETAIL



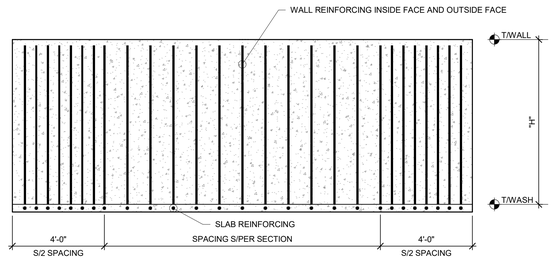
NOTE: SEE DETAIL 1/S-540 FOR WALL REINFORCING SPACING AT ENDS OF BUMPER WALL.

3 BUMPER WALL DETAIL @ BEAM



NOTE:
1. SEE DETAIL 1/S-540 FOR WALL AND SLAB REINFORCING SPACING AT ENDS OF BUMPER WALL.

2 BUMPER WALL DETAIL



1 TYPICAL VERTICAL AND SLAB BUMPER WALL REINFORCING

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FORT WORTH, TX 76116
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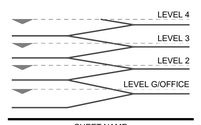
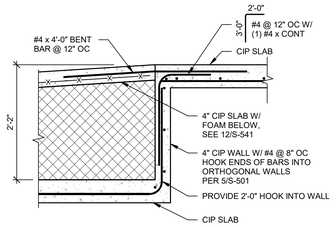


SHEET NAME

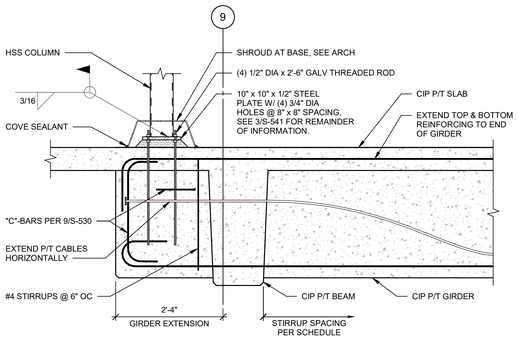
WALL DETAILS

SHEET NO.

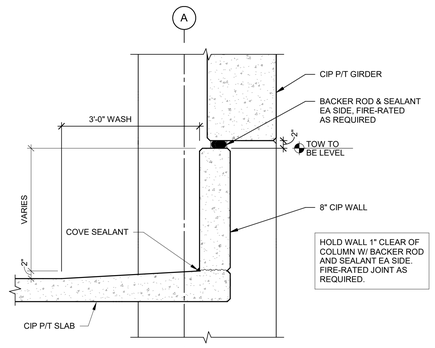
S-540



17 STEPPED FLOOR DETAIL

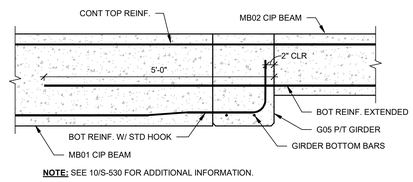


16 GIRDER EXTENSION DETAIL



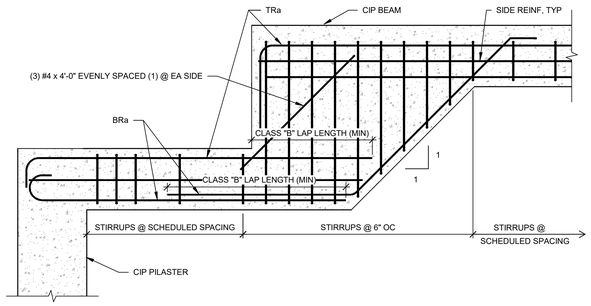
NOTE: SEE 2/S-540 FOR REMAINDER OF INFORMATION.

15 CIP BUMPER WALL DETAIL AT RAMP

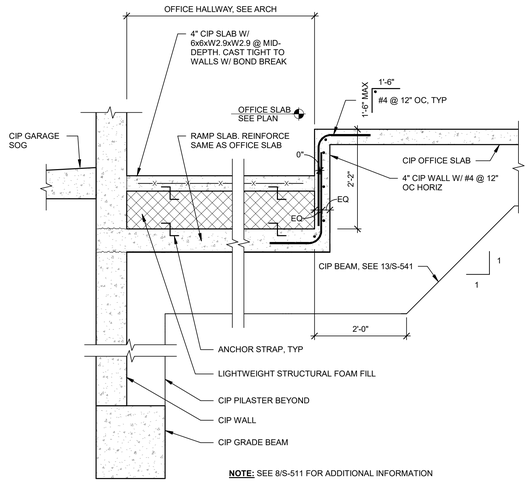


NOTE: SEE 10/S-530 FOR ADDITIONAL INFORMATION.

14 BEAM STEP DETAIL

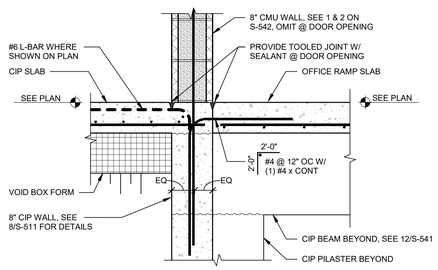


13 CIP BEM STEP DETAIL

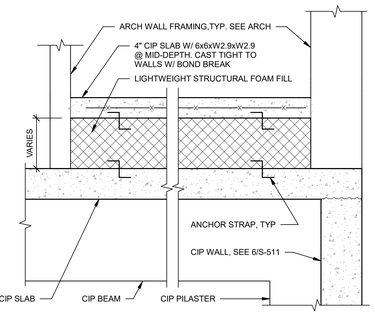


NOTE: SEE 8/S-511 FOR ADDITIONAL INFORMATION

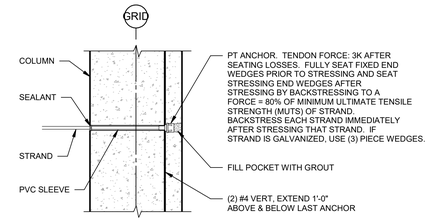
12 STEPPED FLOOR DETAIL



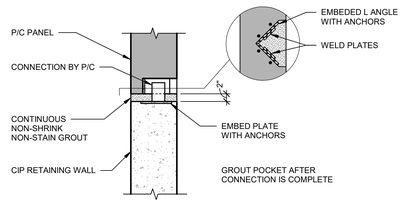
11 SLAB TRANSITION DETAIL



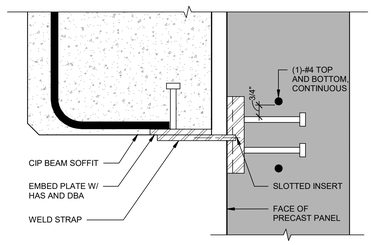
10 BUILT-UP FLOOR DETAIL



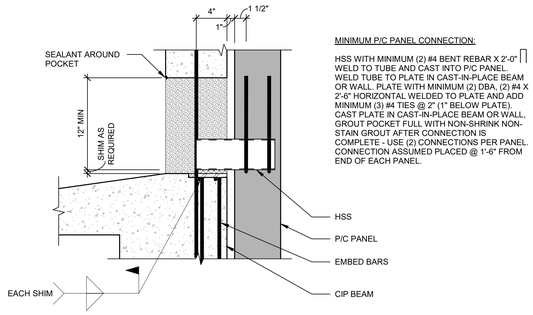
9 STRAND END ANCHOR DETAIL



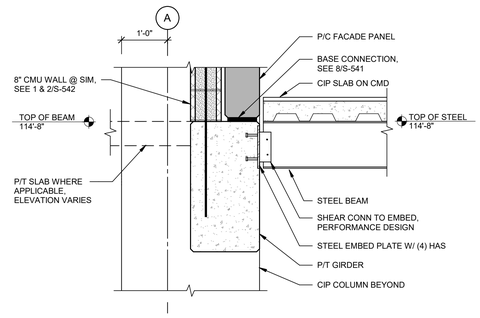
8 P/C BASE CONNECTION DETAIL (PERFORMANCE DESIGN)



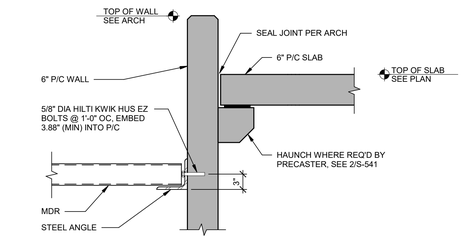
7 P/C PANEL LATERAL CONNECTION (PERFORMANCE DESIGN)



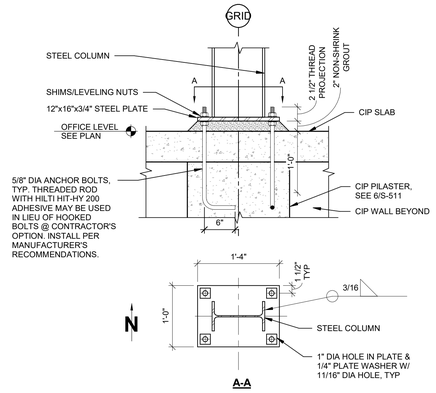
6 P/C PANEL CONNECTION DETAIL (PERFORMANCE DESIGN)



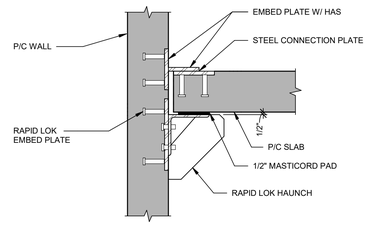
5 FRAMING DETAIL AT GIRDER



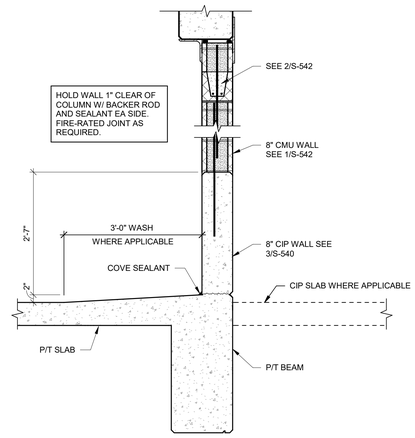
4 ROOF BEARING DETAIL



3 COLUMN BASE CONNECTION DETAIL



2 P/C HAUNCH DETAIL (PERFORMANCE DESIGN)



1 WALL DETAIL

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LEVEL 4
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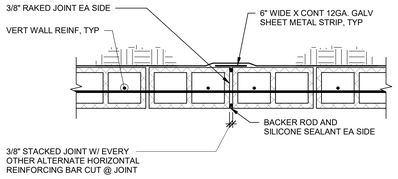
LEVEL G/OFFICE

SHEET NAME

STRUCTURAL DETAILS

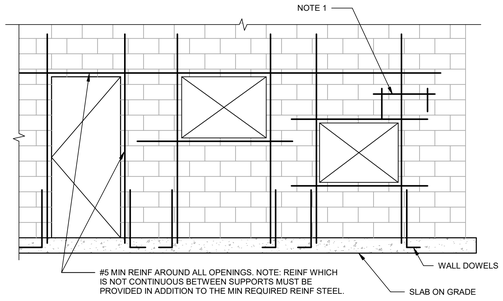
SHEET NO.

S-541



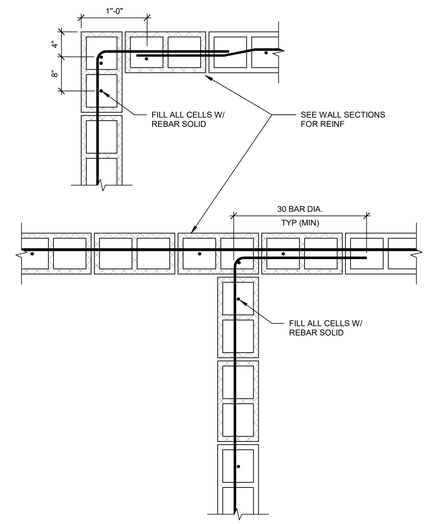
NOTE: LOCATIONS OF ALL CONTROL JOINTS MUST BE VERIFIED WITH THE ENGINEER. MAX SPACING NOT TO EXCEED 20'-0" UNO.

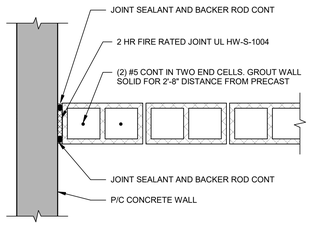
7 MASONRY WALL CONTROL JOINT



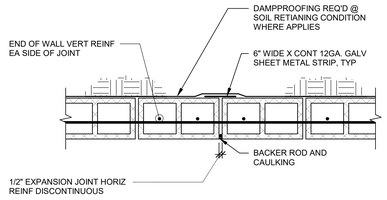
NOTES:
1. FOR MASONRY REBAR LAP SPLICE AND ANCHORAGE LENGTHS SEE 1/S-542.
2. SEE DETAILS 7 & 8/S-542 FOR CONTROL JOINT AND EXPANSION JOINT LOCATIONS.

6 TYPICAL WALL/OPENING REINFORCING IN CMU WALL



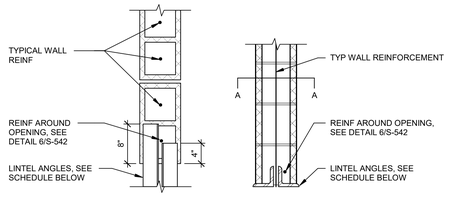


9 MASONRY DETAIL



NOTE: LOCATIONS OF ALL EXPANSION JOINTS MUST BE VERIFIED WITH THE ENGINEER. MAX SPACING NOT TO EXCEED 60'-0".

8 MASONRY WALL EXPANSION JOINT



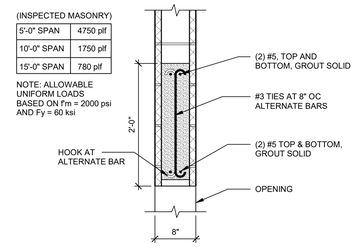
LOOSE LINTEL SCHEDULE (8" CMU WALL)		
SPAN	ANGLE SIZE	MOMENT CAPACITY
LESS THAN 3'-6"	(2) L3 1/2x3 1/2x1/4	1.46 FT-KIPS/ANGLE
3'-6" TO 5'-0"	(2) L4 x3 1/2x1/4 (LLV)	1.89 FT-KIPS/ANGLE
5'-1" TO 7'-6"	(2) L5 x3 1/2x3/8 (LLV)	4.20 FT-KIPS/ANGLE
7'-7" TO 11'-6"	(2) L6 x3 1/2x3/8 (LLV)	5.94 FT-KIPS/ANGLE

NOTES:
1. LINTEL ANGLES LENGTH EQUALS CLEAR SPAN PLUS 1'-0" FOR 8" CMU WALLS.
2. LINTEL LENGTH EQUALS CLEAR SPAN PLUS 1'-4" FOR OUTSIDE ANGLES AT 12" CMU WALLS AND CLEAR SPAN PLUS 8" INSIDE ANGLES AT 12" CMU WALLS.
3. WELD ANGLES TOGETHER WITH 1/4" WELD FULL HEIGHT OF VERTICAL LEGS EACH END.
4. WELD CMU WALL VERTICAL REINFOCEMENT TO VERTICAL LEG OF STEEL ANGLE, USING 1/4" FILLET WELD AT EACH SIDE OF BAR.
5. GALVANIZED ALL STEEL ANGELS, IF EXPOSED.

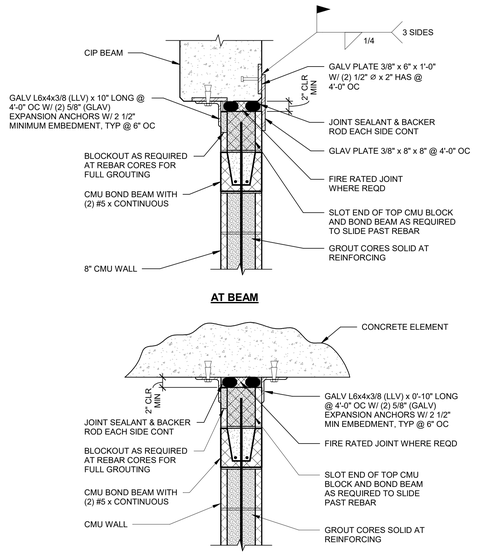
4 MASONRY LINTEL DETAIL

(INSPECTED MASONRY)	
5'-0" SPAN	4750 plf
10'-0" SPAN	1750 plf
15'-0" SPAN	780 plf

NOTE: ALLOWABLE UNIFORM LOADS BASED ON f'm = 2000 psi AND Fy = 60 ksi



3 MASONRY LINTEL DETAIL



AT BEAM

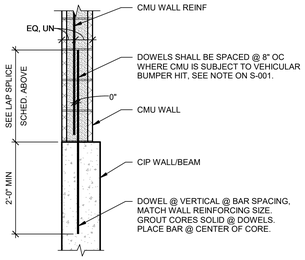
AT CONCRETE SLAB

2 TYPICAL SLAB/WALL DETAIL

FOR f'm = 2000 PSA & GRADE 60 BAR

MASONRY LAP SPLICE AND ANCHORAGE SCHEDULE (INCHES)									
BAR SIZE	#11	#10	#9	#8	#7	#6	#5	#4	#3
COMPRESSION DEVELOPMENT LENGTH	51	46	41	36	32	27	23	18	14
STRAIGHT BAR ANCHORAGE	68	61	54	48	42	36	30	24	18
TENSION LAP	102	91	81	72	63	54	45	36	27

BASED ON ACI 530.01-05



NOTE: TYPICAL WALL REINFORCING SHALL BE #5 @ 2'-0" OC UN.

1 TYPICAL CMU DOWEL DETAIL

SCHWARZ HANSON ARCHITECTS
2570 RIVER PARK PLAZA, SUITE 100
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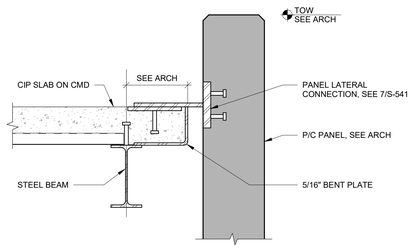
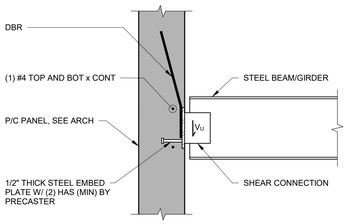
S-542

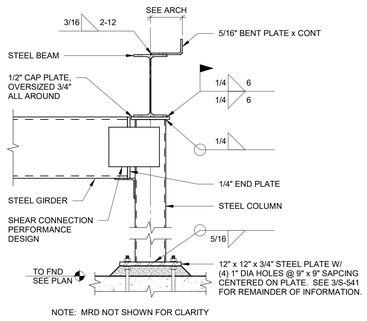


15 P/C CONNECTION AT OFFICE ROOF



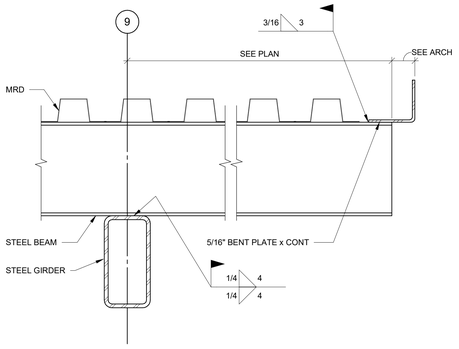
NOTES:
1. MRD NOT SHOWN FOR CLARITY.
2. V_U IS SHEAR REACTION (ULTIMATE), SEE PLAN

14 STEEL/WALL CONNECTION AT CANOPY (PERFORMANCE DESIGN)

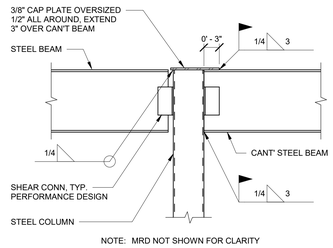


NOTE: MRD NOT SHOWN FOR CLARITY

13 STEEL CONNECTION AT CANOPY COLUMN

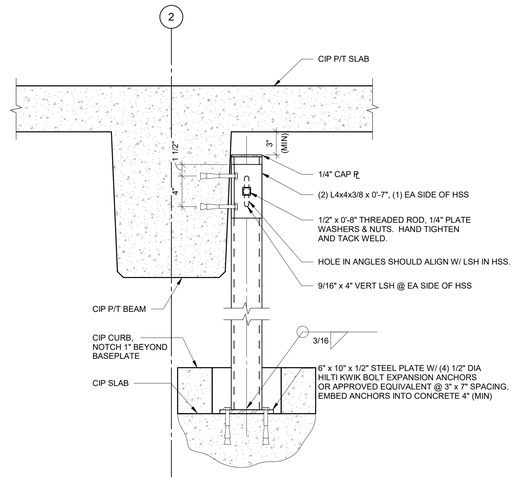


12 CANTILEVERED STEEL BEAM CONNECTION AT CANOPY

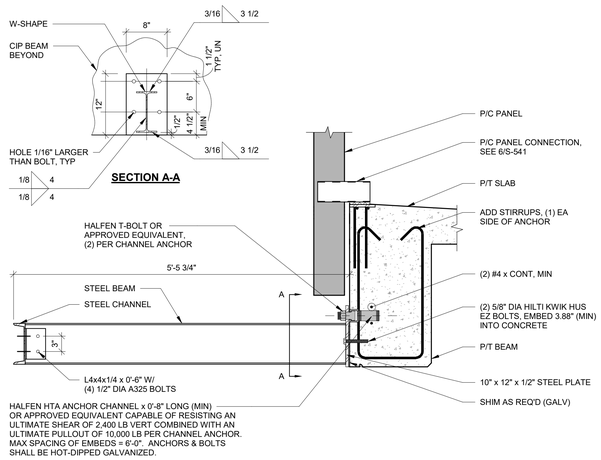


NOTE: MRD NOT SHOWN FOR CLARITY

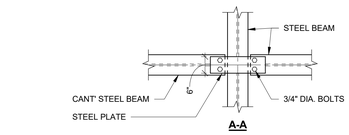
11 STEEL CONNECTION AT CANTILEVERED BEAM

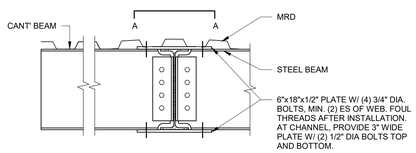


10 COILING DOOR RAIL SUPPORT DETAIL

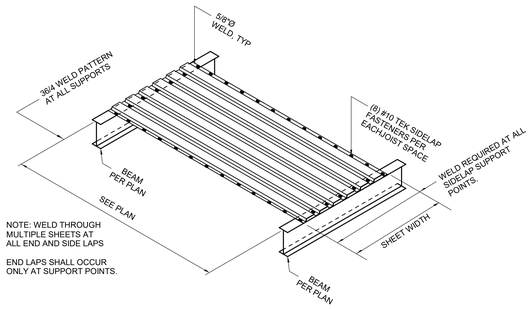


9 FRAMING DETAIL AT VEHICULAR CANOPY





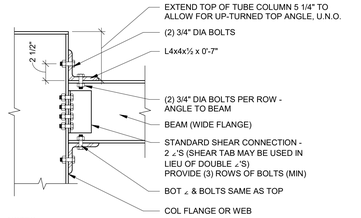
8 CANTILEVER FRAMING DETAIL



NOTE: WELD THROUGH
MULTIPLE SHEETS AT
ALL END AND SIDE LAPS

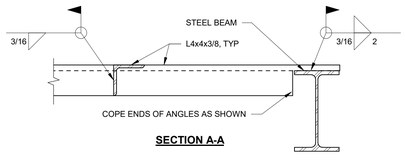
END LAPS SHALL OCCUR
ONLY AT SUPPORT POINTS.

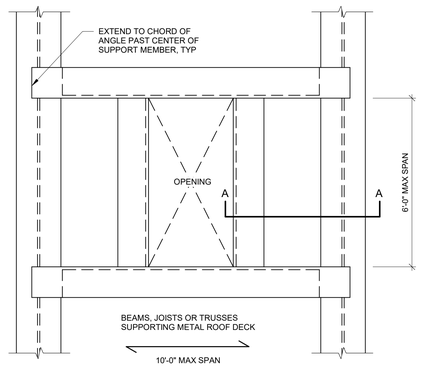
7 MRD FASTENING (3N,18 GAUGE)



NOTES:
1. PROVIDE TOP & BOT ANGLES WHERE INDICATED ON DRAWINGS BY W1, W2, ETC.
2. TOP & BOT ANGLE CONNECTION SHALL BE 3/4" DIA BOLTS. SHEAR CONNECTION SHALL BE 3/4" DIA BOLTS.
3. PROVIDE STUD BOLTS SHOP WELDED TO COLUMN FOR MOMENT ∠'S WHERE THRU BOLTS WOULD INTERFERE WITH FLANGE CONNECTION IN OTHER DIRECTION.

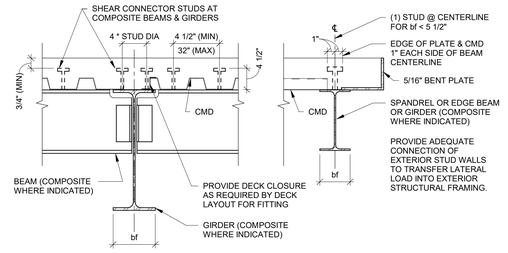
6 TYPICAL TYPE-II BEAM / COLUMN CONNECTION





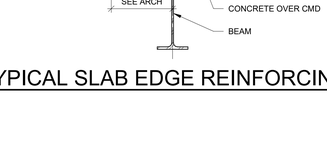
NOTES:
1. MAXIMUM ALLOWABLE LOAD AT OPENING IS 1000 LBS.
2. PROVIDE ANGLE FRAME AS SHOWN FOR ALL OPENINGS 12" SQUARE AND LARGER.

5 TYPICAL ROOF OPENING

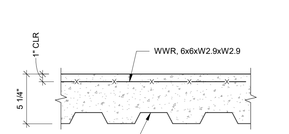


FOR MULTIPLE ROWS OF STUDS, ROWS SHALL BE CENTERED ABOUT C.L.
THERE SHALL BE NO MORE THAN (3) ROWS OF STUDS FOR ANY BEAM.

4 SHEAR CONNECTOR DETAIL

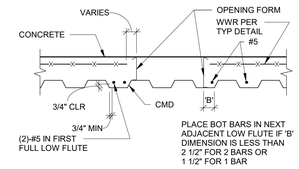


SECTION THRU FORMED OPEINING



SECTION THRU SLEEVE

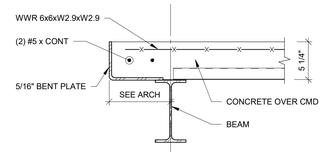
NOTES:
1. PROVIDE FORMED OPENING FOR PIPE MORE THAN 10" DIA - SEE MECH SPECS.
2. PROVIDE 2-#3 x 3'-0" DIAGONAL ABOVE #4 BARS AT EACH CORNER WHERE POSSIBLE.



SECTION THRU FORMED OPENING

NOTES:
1. SECTION THRU SLEEVE SIMILAR
2. PROVIDE (2)-#5 EA SIDE AS SHOWN FOR OPENINGS OVER 2'-0" WIDE & (1)-#5 EA SIDE OF OPENINGS 2'-0" OR LESS

3 TYPICAL SLAB OPENING & REINFORCING



2 TYPICAL SLAB EDGE REINFORCING

NOTE: PROVIDE SUPPORT ACCESSORIES AS NECESSARY TO PLACE AND HOLD REINF

1 TYPICAL COMPOSITE SLAB REINFORCING

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2-18-22

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Δ	Description	Date

LEVEL 4
LEVEL 3
LEVEL 2
LEVEL G/OFFICE

SHEET NAME

STRUCTRUAL DETAILS

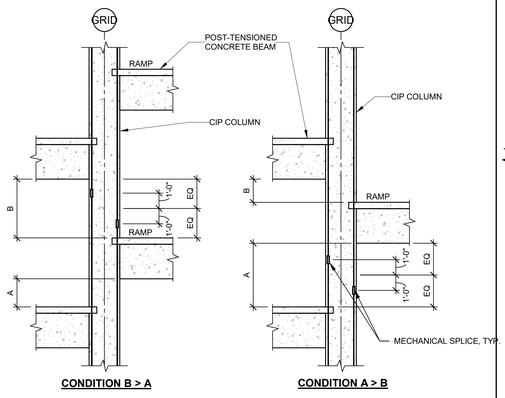
SHEET NO.

S-543

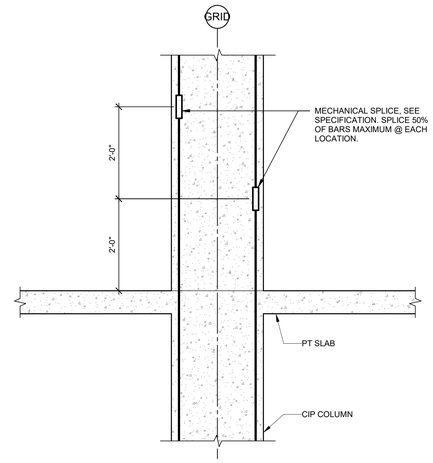
CIP COLUMN SCHEDULE

MARK	C1, C1A	C2	C3, C3A, C3B	C4	C5	C6
SIZE	24" x 24"	24" x 24"	24" x 28"	24" x 36" - T/FND TO 2ND OFFICE ROOF 24" x 24" ABOVE	18" x 18"	18" x 18"
REMARKS	-	-	CN12	-	PROVIDE #3 TIES @ 6" OC, CN14	REM OF TIES @ 6" OC
FOURTH TIER	CN10, CN9, ADD (4) #7 @ C1A, (4) #11	CN10, CN13, (8) #11	CN10, ADD (4) #7 @ GRID B-1, CN9, CN11, (4) #11 & (4) #5, (4) #11 & (4) #9 @ C3A, (8) #11 @ C3B	24" x 24", CN9, TYP, ADD (4) #7 @ GRID 1, (6) #11		
THIRD TIER						
SECOND TIER						
OFFICE TIER						
GROUND TIER				24" x 36", ADD (4) #10 @ GRID 6	(4) #9	(4) #9
TOP OF FOOTING						

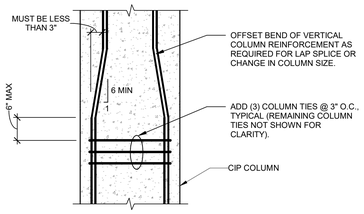
COLUMN NOTES:
CN1. SEE SHEET S-001 FOR GENERAL NOTES.
CN2. SEE SHEET S-100 FOR COLUMN MARKS.
CN3. ALL COLUMN TIES ARE #4 TIES. LOCATE TIES AS FOLLOWS:
A. AT 10" OC TYPICAL UN
B. PROVIDE (3) TIES @ 4" OC AT TOP OF COLUMN & BOTTOM OF COLUMN (@ FOUNDATION).
C. SEE DETAILS ON S-550 FOR ADDITIONAL TIES.
D. CLOSED TIES MUST CONTINUE THROUGH BEAM/COLUMN JOINT, U-BANDS WILL NOT BE ACCEPTED.
CN4. FOR ADDITIONAL EMBEDDED ITEMS, I.E. CONDUIT, LIGHTING CONNECTION, DRAIN LINES, ETC., COORDINATE WITH OTHER TRADES.
CN5. FOR COLUMN DOWELS AT FOUNDATION, SEE S/S-100.
CN6. COLUMNS MAY OR MAY NOT EXTEND ABOVE FLOOR ELEVATION, SEE STRUCTURAL DETAILS. COORDINATE WITH ELECTRICAL DRAWINGS FOR COLUMNS TO BE EXTENDED FOR LIGHT POLES AND FOR ANCHOR BOLT REQUIREMENTS.
CN7. MORE THAN ONE BAR SHOWN SIDE BY SIDE SHALL BE CONSIDERED BUNDLED BARS. BUNDLED BARS ARE GROUPS OF PARALLEL REINFORCING BARS, NO MORE THAN FOUR, BUNDLED IN CONTACT TO ACT AS A UNIT. LAP SPLICES ARE NOT ALLOWED FOR BUNDLED BARS AND MECHANICAL SPLICES MUST BE USED.
CN8. LAP SPLICES SHALL NOT BE USED FOR COLUMNS SUPPORTING OFFSET FLOORS DUE TO RAMPS. MECHANICAL SPLICES MUST BE USED. SEE DETAIL 4/S-550.
CN9. EXTEND REINFORCING MINIMUM CLASS "B" LAP SPLICE ABOVE/BELOW FLOOR LINE.
CN10. COLUMN TERMINATES ABOVE HIGHEST ELEVATED LEVEL EXPOSED TO SKY.
CN11. REMAINDER OF TIES SHALL BE AT 6" OC AT GRID B-2.
CN12. PROVIDE #5 TIES @ 4" OC FROM 0'-0" AFF TO 3'-0" AFF AT COLUMNS WITH BARRIER CABLE ANCHORAGES.
CN13. REMAINDER OF TIES SHALL BE AT 8" OC AT GRID A-9.
CN14. PROVIDE #4 TIES @ 4" OC @ GRID A.5-2.



4 MECHANICAL SPLICE DETAIL AT OFFSET FLOORS

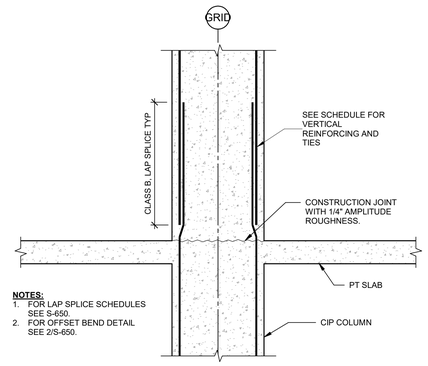


3 MECHANICAL SPLICE DETAIL



NOTE: OFFSET BENDS OF VERTICAL REINFORCING SHALL NOT OCCUR WITHIN BEAM/COLUMN INTERSECTIONS.

2 COLUMN OFFSET BEND DETAIL



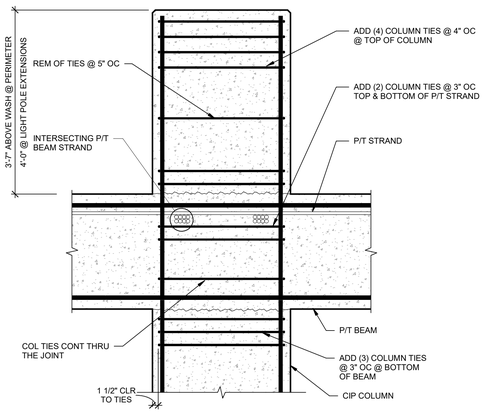
NOTES:
1. FOR LAP SPLICE SCHEDULES SEE S-650.
2. FOR OFFSET BEND DETAIL SEE 2/S-650.

1 LAP SPLICE DETAIL

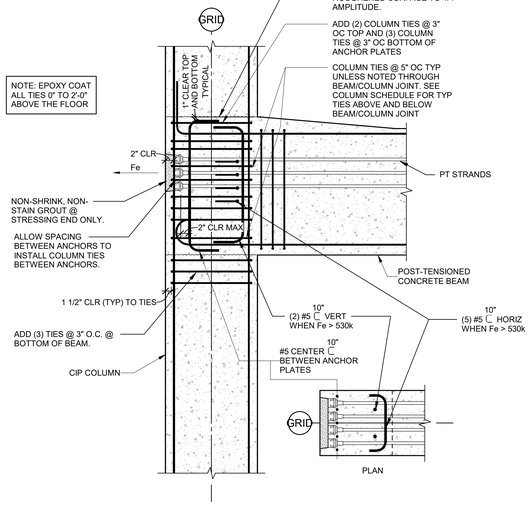
8 INTERIOR BEAM/COLUMN DETAIL

6 INTERIOR BEAM/COLUMN DETAIL

9 INTERIOR BEAM/COLUMN DETAIL



7 STUB COLUMN DETAIL



5 EXTERIOR BEAM/COLUMN DETAIL

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LICENSED PROFESSIONAL ENGINEER
2-18-22
100% CONSTRUCTION DOCUMENTS

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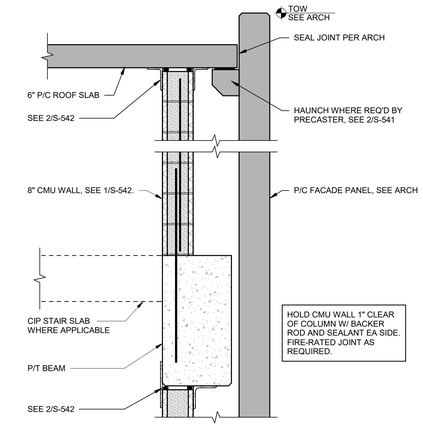
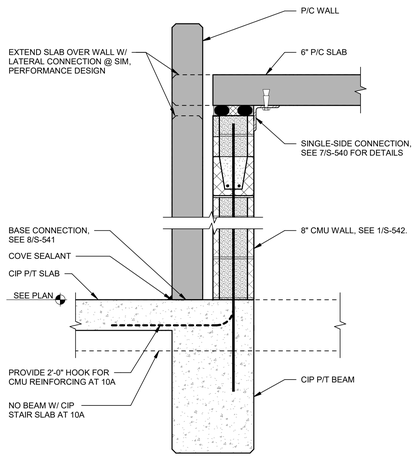
LEVEL 4
LEVEL 3
LEVEL 2
LEVEL G/OFFICE

SHEET NAME
CIP COLUMN SCHEDULE & DETAILS

SHEET NO.
S-550



11 WALL DETAIL

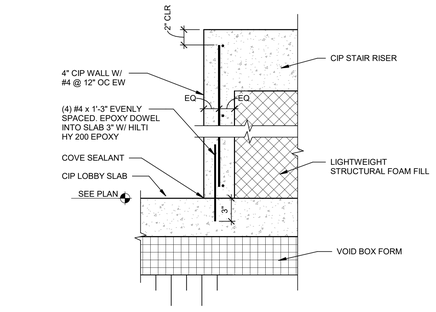


NOTE: SEE 4/S-541 FOR REMAINDER OF INFORMATION

10A 10 P/C WALL DETAIL

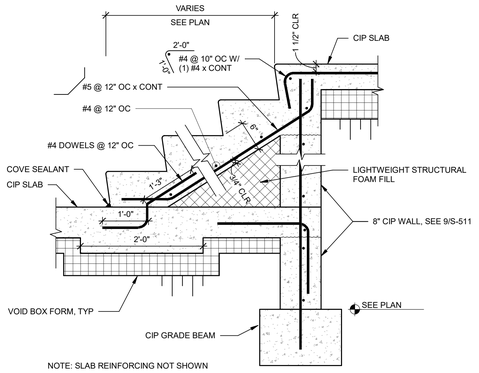
P/C CONNECTION AT STAIR ROOF (PERFORMANCE DESIGN)

12



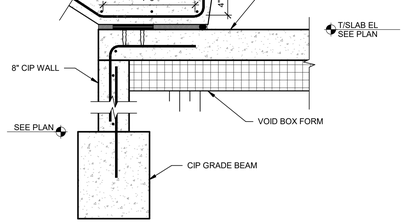
NOTE: SLAB/STAIR REINFORCING NOT SHOWN

8 CIP STAIR CLOSURE WALL



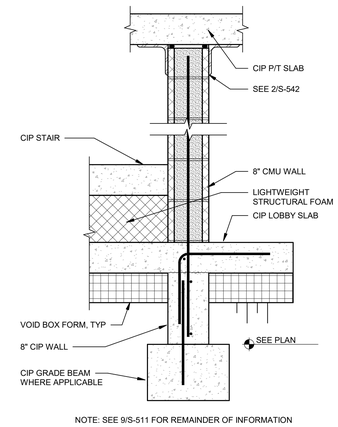
NOTE: SLAB REINFORCING NOT SHOWN

7 CIP STAIR DETAIL



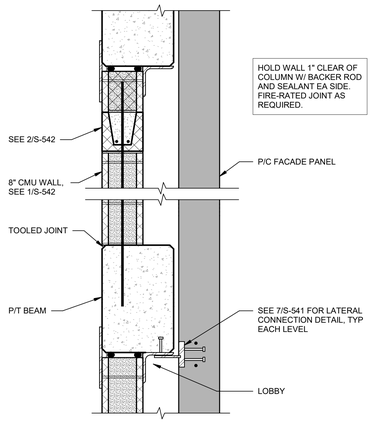
NOTE: SEE DETAILS 1/S-570 & 9/S-511 FOR REMAINDER OF INFORMATION

6 STAIR BEARING DETAIL

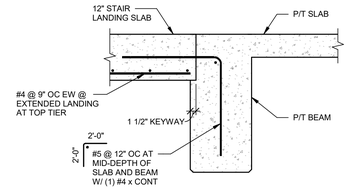


NOTE: SEE 9/S-511 FOR REMAINDER OF INFORMATION

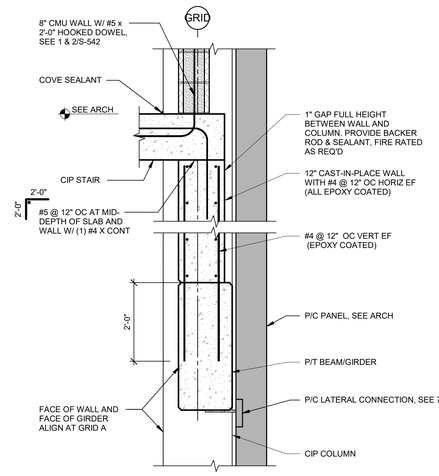
9 CIP/WALL SLAB DETAIL



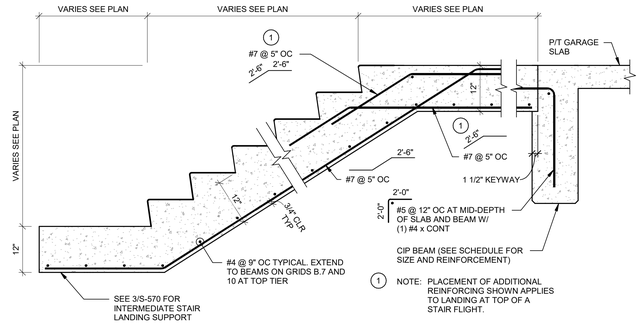
5 CMU WALL DETAIL



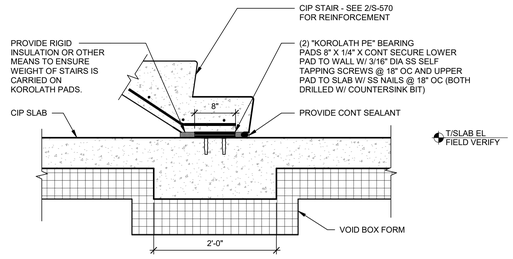
4 LANDING SUPPORT DETAIL



3 STAIR LANDING SUPPORT



2 TYPICAL STAIR SECTION



1 STAIR BEARING DETAIL

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LEVEL 2
LEVEL G/OFFICE

SHEET NAME

STAIR AND ELEVATOR DETAILS

SHEET NO.

S-570

TABLE 1 - TENSION DEVELOPMENT AND LAP SPLICE LENGTHS FOR UNCOATED BARS IN BEAMS AND COLUMNS[11]

BAR SIZE	LAP CLASS	LENGTHS (in) PER CONCRETE STRENGTH (psi)																											
		4000 psi						5000 psi						6000 psi						7000 psi						8000 psi			
		TOP BARS			OTHER BARS			TOP BARS			OTHER BARS			TOP BARS			OTHER BARS			TOP BARS			OTHER BARS			TOP BARS			OTHER BARS	
		CASE 1	CASE 2	CASE 3	CASE 1	CASE 2	CASE 3	CASE 1	CASE 2	CASE 3	CASE 1	CASE 2	CASE 3	CASE 1	CASE 2	CASE 3	CASE 1	CASE 2	CASE 3	CASE 1	CASE 2	CASE 3	CASE 1	CASE 2	CASE 3	CASE 1	CASE 2	CASE 3	CASE 1	CASE 2	CASE 3
#3	A	12	19	28	12	15	22	12	17	25	12	13	19	12	15	23	12	12	18	12	14	21	12	12	16	12	13	20	12	12	15
(#10)	B	16	24	36	16	19	28	16	22	33	16	17	25	16	20	30	16	16	23	16	18	28	16	16	21	16	17	26	16	16	20
#4	A	15	25	37	12	19	29	14	22	33	12	17	26	12	20	31	12	16	24	12	19	28	12	15	22	12	18	26	12	14	20
(#13)	B	20	32	48	16	25	37	18	29	43	16	22	33	16	26	40	16	20	31	16	25	37	16	19	28	16	23	34	16	18	26
#5	A	19	31	47	15	24	36	17	28	42	13	22	32	15	25	38	12	20	29	14	24	35	12	18	27	13	22	33	12	17	25
(#16)	B	24	40	60	19	31	47	22	36	54	17	28	42	20	33	49	16	25	38	18	31	46	16	24	35	17	29	43	16	22	33
#6	A	23	37	56	17	29	43	20	33	50	16	26	38	18	31	46	14	24	35	17	28	42	13	22	33	16	26	40	12	20	30
(#19)	B	29	48	72	23	37	56	26	43	65	20	33	50	24	40	59	18	31	46	22	37	55	17	28	42	21	34	51	16	26	40
#7	A	33	54	81	25	42	63	29	49	73	23	37	56	27	44	66	21	34	51	25	41	62	19	32	47	23	38	58	18	30	44
(#22)	B	43	70	106	33	54	81	38	63	94	29	49	73	35	58	86	27	44	66	32	53	80	25	41	62	30	50	75	23	38	58
#8	A	37	62	93	29	48	71	33	55	83	26	43	64	30	51	76	24	39	58	28	47	70	22	36	54	27	44	66	20	34	51
(#25)	B	49	80	121	37	62	93	43	72	108	33	55	83	40	66	98	31	51	76	37	61	91	28	47	70	34	57	85	27	44	66
#9	A	42	70	105	33	54	81	38	63	94	29	48	72	34	57	86	27	44	66	32	53	79	25	41	61	30	49	74	23	38	57
(#29)	B	55	91	136	42	70	105	49	81	122	38	63	94	45	74	111	34	57	86	41	69	103	32	53	79	39	64	96	30	49	74
#10	A	47	79	118	37	61	91	42	70	105	33	54	81	39	64	96	30	49	74	36	59	89	28	46	69	34	56	83	26	43	64
(#32)	B	62	102	153	47	79	118	55	91	137	42	70	105	50	83	125	39	64	96	47	77	116	36	59	89	44	72	108	34	56	83
#11	A	53	87	131	41	67	101	47	78	117	36	60	90	43	71	107	33	55	82	40	66	99	31	51	76	37	62	93	29	48	71
(#36)	B	68	113	170	53	87	131	61	101	152	47	78	117	56	93	139	43	71	107	52	86	128	40	66	99	48	80	120	37	62	93
#14 (#43)	N/A	63	105	157	49	81	121	56	94	140	43	72	108	51	86	128	40	66	99	48	79	119	37	61	91	45	74	111	34	57	85
#18 (#57)	N/A	84	139	209	65	107	161	75	125	187	58	96	144	68	114	171	53	88	131	63	106	158	49	81	122	59	99	148	46	76	114

BASED ON ACI 318-14, SECTION 25.4 & 25.5

TABLE 2 - TENSION DEVELOPMENT AND LAP SPLICE LENGTHS FOR BARS IN WALLS AND SLABS

BAR SIZE	LAP CLASS	f'c = 4000 psi															
		CONCRETE COVER = 0.75"				CONCRETE COVER = 1.00"				CONCRETE COVER = 1.50"				CONCRETE COVER = 2.00"			
		UNCOATED		EPOXY-COATED[10]		EPOXY-COATED[10]		EPOXY-COATED[10]		UNCOATED		EPOXY-COATED[10]		UNCOATED		EPOXY-COATED[10]	
		TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER
#3	A	12	12	15	13	12	12	15	13	12	12	14	12	12	12	14	12
(#10)	B	16	16	19	17	16	16	19	17	16	16	18	16	16	16	18	16
#4	A	19	15	24	22	15	12	20	17	15	12	18	14	15	12	18	14
(#13)	B	24	19	32	28	20	16	25	22	20	16	23	18	20	16	23	18
#5	A	28	21	36	32	22	17	29	26	19	15	24	22	19	15	22	17
(#16)	B	36	28	47	41	29	22	38	33	24	19	32	28	24	19	29	22
#6	A	37	29	49	43	31	24	40	35	22	17	29	26	22	17	29	26
(#19)	B	48	37	63	56	40	31	52	46	29	22	38	34	29	22	38	34
#7	A	60	46	-	-	50	38	-	-	37	28	-	-	33	25	-	-
(#22)	B	78	60	-	-	64	50	-	-	48	37	-	-	42	33	-	-
#8	A	74	57	-	-	62	48	-	-	47	36	-	-	37	29	-	-
(#25)	B	96	74	-	-	80	62	-	-	60	47	-	-	48	37	-	-
#9	A	90	69	-	-	76	58	-	-	57	44	-	-	46	36	-	-
(#29)	B	117	90	-	-	98	76	-	-	74	57	-	-	60	46	-	-
#10	A	108	83	-	-	92	70	-	-	70	54	-	-	57	44	-	-
(#32)	B	140	108	-	-	119	92	-	-	91	70	-	-	74	57	-	-
#11	A	127	98	-	-	108	83	-	-	84	64	-	-	68	53	-	-
(#36)	B	165	127	-	-	141	108	-	-	109	84	-	-	89	68	-	-

BASED ON ACI 318-14, SECTION 25.4 & 25.5

TABLE 3 - TENSION DEVELOPMENT AND LAP SPLICE LENGTHS FOR BARS IN WALLS AND SLABS

BAR SIZE	LAP CLASS	f'c = 5000 psi															
		CONCRETE COVER = 0.75"				CONCRETE COVER = 1.00"				CONCRETE COVER = 1.50"				CONCRETE COVER = 2.00"			
		UNCOATED		EPOXY-COATED[10]		UNCOATED		EPOXY-COATED[10]		UNCOATED		EPOXY-COATED[10]		UNCOATED		EPOXY-COATED[10]	
		TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER
#3	A	12	12	13	12	12	12	13	12	12	12	12	12	12	12	12	12
(#10)	B	16	16	17	16	16	16	17	16	16	16	16	16	16	16	16	16
#4	A	17	13	22	20	14	12	18	16	14	12	16	13	14	12	16	13
(#13)	B	22	17	29	25	18	16	23	20	18	16	21	16	18	16	21	16
#5	A	25	19	32	28	20	16	26	23	17	13	22	19	17	13	20	16
(#16)	B	32	25	42	37	26	20	34	30	22	17	29	25	22	17	26	20
#6	A	33	26	44	39	27	21	36	32	20	16	26	23	20	16	26	23
(#19)	B	43	33	57	50	36	27	46	41	26	20	34	30	26	20	34	30
#7	A	54	41	-	-	44	34	-	-	33	26	-	-	29	23	-	-
(#22)	B	70	54	-	-	58	44	-	-	43	33	-	-	38	29	-	-
#8	A	67	51	-	-	56	43	-	-	42	32	-	-	33	26	-	-
(#25)	B	86	67	-	-	72	56	-	-	54	42	-	-	43	33	-	-
#9	A	81	62	-	-	68	52	-	-	51	40	-	-	41	32	-	-
(#29)	B	105	81	-	-	88	68	-	-	67	51	-	-	54	41	-	-
#10	A	97	75	-	-	82	63	-	-	63	48	-	-	51	39	-	-
(#32)	B	126	97	-	-	106	82	-	-	82	63	-	-	66	51	-	-
#11	A	113	87	-	-	97	75	-	-	75	58	-	-	61	47	-	-
(#36)	B	147	113	-	-	126	97	-	-	97	75	-	-	79	61	-	-

BASED ON ACI 318-14, SECTION 25.4 & 25.5

TABLE 4 - TENSION DEVELOPMENT AND LAP SPLICE LENGTHS FOR BARS IN WALLS AND SLABS

BAR SIZE	LAP CLASS	f'c = 6000 psi															
		CONCRETE COVER = 0.75"				CONCRETE COVER = 1.00"				CONCRETE COVER = 1.50"				CONCRETE COVER = 2.00"			
		UNCOATED		EPOXY-COATED[10]		UNCOATED		EPOXY-COATED[10]		UNCOATED		EPOXY-COATED[10]		UNCOATED		EPOXY-COATED[10]	
		TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER
#3	A	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
(#10)	B	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
#4	A	16	12	20	18	12	12	16	14	12	12	15	12	12	12	15	12
(#13)	B	20	16	26	23	16	16	21	18	16	16	19	16	16	16	19	16
#5	A	23	17	29	26	18	14	24	21	16	12	20	18	16	12	18	14
(#16)	B	29	23	38	34	24	18	31	27	20	16	26	23	20	16	24	28
#6	A	31	24	40	35	25	19	33	29	18	14	24	21	18	14	24	21
(#19)	B	40	31	52	46	33	25	42	37	24	18	31	28	24	18	31	28
#7	A	49	38	-	-	41	31	-	-	30	23	-	-	27	21	-	-
(#22)	B	64	49	-	-	53	41	-	-	39	30	-	-	35	27	-	-
#8	A	61	47	-	-	51	39	-	-	38	29	-	-	31	24	-	-
(#25)	B	79	61	-	-	66	51	-	-	49	38	-	-	40	31	-	-
#9	A	74	57	-	-	62	48	-	-	47	36	-	-	38	29	-	-
(#29)	B	95	74	-	-	80	62	-	-	61	47	-	-	49	38	-	-
#10	A	88	68	-	-	75	58	-	-	57	44	-	-	47	36	-	-
(#32)	B	115	88	-	-	97	75	-	-	75	57	-	-	60	47	-	-
#11	A	104	80	-	-	88	68	-	-	68	53	-	-	56	43	-	-
(#36)	B	135	104	-	-	115	88	-	-	89	68	-	-	73	56	-	-

BASED ON ACI 318-14, SECTION 25.4 & 25.5

TABLE 5 - TENSION DEVELOPMENT AND LAP SPLICE LENGTHS FOR BARS IN WALLS AND SLABS

BAR SIZE	LAP CLASS	f'c = 7000 psi															
		CONCRETE COVER = 0.75"				CONCRETE COVER = 1.00"				CONCRETE COVER = 1.50"				CONCRETE COVER = 2.00"			
		UNCOATED		EPOXY-COATED[10]		UNCOATED		EPOXY-COATED[10]		UNCOATED		EPOXY-COATED[10]		UNCOATED		EPOXY-COATED[10]	
		TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER
#3	A	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
(#10)	B	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
#4	A	14	12	19	17	12	12	15	13	12	12	14	12	12	12	14	12
(#13)	B	19	16	24	21	16	16	19	17	16	16	18	16	16	16	18	16
#5	A	21	16	27	24	17	13	22	20	14	12	19	17	14	12	17	13
(#16)	B	27	21	35	31	22	17	29	25	19	16	24	21	19	16	22	17
#6	A	28	22	37	33	23	18	30	27	17	13	22	20	17	13	22	20
(#19)	B	37	28	48	42	30	23	39	35	22	17	29	26	22	17	29	26
#7	A	45	35	-	-	38	29	-	-	28	22	-	-	25	19	-	-
(#22)	B	59	45	-	-	49	38	-	-	36	28	-	-	32	25	-	-
#8	A	56	43	-	-	47	36	-	-	35	27	-	-	28	22	-	-
(#25)	B	73	56	-	-	61	47	-	-	46	35	-	-	37	28	-	-
#9	A	68	52	-	-	57	44	-	-	44	34	-	-	35	27	-	-
(#29)	B	88	68	-	-	74	57	-	-	56	44	-	-	46	35	-	-
#10	A	82	63	-	-	69	53	-	-	53	41	-	-	43	33	-	-
(#32)	B	106	82	-	-	90	69	-	-	69	53	-	-	56	43	-	-
#11	A	96	74	-	-	82	63	-	-	63	49	-	-	52	40	-	-
(#36)	B	125	96	-	-	106	82	-	-	82	63	-	-	67	52	-	-

BASED ON ACI 318-14, SECTION 25.4 & 25.5

TABLE 6 - TENSION DEVELOPMENT LENGTHS OF STANDARD HOOKS AND ASTM A970 TERMINATORS FOR UNCOATED BARS

BAR SIZE	LENGTHS (in) PER CONCRETE STRENGTH (psi)				
	4000 psi	5000 psi	6000 psi	7000 psi	8000 psi
#3 (#10)	7	7	6	6	6
#4 (#13)	10	9	8	7	7
#5 (#16)	12	11	10	9	9
#6 (#19)	15	13	12	11	10
#7 (#22)	17	15	14	13	12
#8 (#25)	19	17	16	15	14
#9 (#29)	22	19	18	16	15
#10 (#32)	24	22	20	19	17
#11 (#36)	27	24	22	21	19
#14 (#43)	32	29	27	25	23
#18 (#57)	43	39	35	33	31

BASED ON ACI 318-14, SECTION 25.4

TABLE 7 - TENSION DEVELOPMENT LENGTHS OF STANDARD HOOKS AND ASTM A970 TERMINATORS FOR EPOXY-COATED BARS[10]

BAR SIZE	LENGTHS (in) PER CONCRETE STRENGTH (psi)				
	4000 psi	5000 psi	6000 psi	7000 psi	8000 psi
#3 (#10)	9	8	7	7	6
#4 (#13)	12	10	10	9	8
#5 (#16)	15	13	12	11	10
#6 (#19)	17	16	14	13	12

BASED ON ACI 318-14, SECTION 25.4

TABLE 8 - COMPRESSION DEVELOPMENT AND LAP SPLICE LENGTHS FOR UNCOATED AND EPOXY-COATED BARS

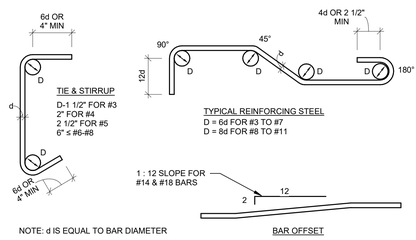
BAR SIZE	LENGTHS (in) PER CONCRETE STRENGTH (psi)					
	4000 psi	5000 psi	6000 psi	7000 psi	8000 psi	LAP SPLICE
#3 (#10)	8	8	8	8	8	12
#4 (#13)	10	9	9	9	9	15
#5 (#16)	12	12	12	12	12	19
#6 (#19)	15	14	14	14	14	23
#7 (#22)	17	16	16	16	16	27
#8 (#25)	19	18	18	18	18	30
#9 (#29)	22	21	21	21	21	34
#10 (#32)	24	23	23	23	23	38
#11 (#36)	27	26	26	26	26	43
#14 (#43)	32	31	31	31	31	N/A
#18 (#57)	43	41	41	41	41	N/A

BASED ON ACI 318-14, SECTION 25.4

TABLE 9 - TENSION DEVELOPMENT LENGTHS FOR PLAIN WELDED WIRE FABRIC

WIRE	WIRE SPACING	DEVELOPMENT LENGTHS (in) PER CROSS LAP SPLICE LENGTH (in) PER CROSS							
		WIRE SPACING (in)				WIRE SPACING (in)			
		4	6	8	12	4	6	8	12
W0.5	4	6	6	6	6	6	8	10	14
TO	6	6	6	6	6	6	8	10	14
W6	12	6	6	6	6	6	8	10	14

BASED ON ACI 318-14, SECTION 25.4



2 BAR BENDING DETAIL

SHEET NOTES

1. REINFORCING BARS CONFORMING TO ASTM A615 OR A706 AND NORMAL WEIGHT CONCRETE.
2. TABULATED VALUES FOR BEAMS AND COLUMNS ARE BASED ON TRANSVERSE REINFORCEMENT MEETING MINIMUM CODE REQUIREMENTS.
3. CASES 1, 2, AND 3 ARE DEFINED AS FOLLOWS:
   A. CASE 1: COVER AT LEAST 2.0d/b AND C-C SPACING AT LEAST 5.0d/b
   B. CASE 2: COVER AT LEAST 1.0d/b AND C-C SPACING AT LEAST 3.0d/b
   C. CASE 3: COVER LESS THAN 1.0d/b AND/OR C-C SPACING LESS THAN 3.0d/b BUT 2.0d/b MIN
4. LAP SPLICE LENGTHS ARE MULTIPLES OF TENSION DEVELOPMENT LENGTHS; CLASS A = 1.0 l/d AND CLASS B = 1.3 l/d
5. LAP SPLICES OF #14 AND #18 BARS ARE NOT ALLOWED. TABULATED VALUES ARE TENSION DEVELOPMENT LENGTHS.
6. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12" OF CONCRETE CAST BELOW.
7. FOR LIGHTWEIGHT AGGREGATE CONCRETE MULTIPLY TABULATED VALUES BY 1.3.
8. WHEN LAPPING A SMALLER BAR WITH A LARGER DIAMETER BAR USE THE LAP LENGTH FOR THE SMALLER DIAMETER BAR OR TENSION DEVELOPMENT LENGTH OF LARGER BAR, WHICHEVER IS GREATER.
9. ( ) INDICATES METRIC BAR SIZE (mm).
10. EPOXY COATING OF BARS LARGER THAN #6 IS NOT ALLOWED.
11. TABULATED VALUES APPLY ONLY TO INDIVIDUAL BARS IN COLUMNS AND NOT TO BUNDLED BARS. BUNDLED BARS ARE GROUPS OF PARALLEL REINFORCING BARS, NO MORE THAN FOUR, BUNDLED IN CONTACT TO ACT AS A UNIT. LAP SPLICES ARE NOT ALLOWED FOR BUNDLED BARS AND MECHANICAL SPLICES MUST BE USED. SEE COLUMN SCHEDULE SHEET FOR ADDITIONAL REQUIREMENTS.

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100% CONSTRUCTION DOCUMENTS

PROJECT NO.: 27-001147.00

DATE: 02-18-2022

REVISION SCHEDULE

Δ	Description	Date

LEVEL 4
LEVEL 3
LEVEL 2
LEVEL G/OFFICE

SHEET NAME

LAP SPLICE SCHEDULES

SHEET NO.

S-650

DIFFUSER, REGISTER, & GRILLE SCHEDULE

MARK	MANUFACTURER	MODEL	NECK SIZE			FACE SIZE		MOUNTING	SLOT INFORMATION	PATTERN	MATERIAL	DAMPER	COLOR	REMARKS
			Ø"	L	W	L	W							
S-1	PRICE	SCD	6"			12"	12"	SURFACE		4-WAY	STEEL	Yes	WHITE	
S-2	PRICE	SCD	6"			12"	12"	LAY-IN		4-WAY	STEEL	No	WHITE	
S-3	PRICE	SCD	8"			24"	24"	LAY-IN		4-WAY	STEEL	No	WHITE	
S-4	PRICE	SCD	8"			24"	24"	LAY-IN		4-WAY	STEEL	No	WHITE	
S-5	PRICE	SCD	10"			24"	24"	LAY-IN		4-WAY	STEEL	No	WHITE	
S-6	PRICE	TBD375	8"			48"		LAY-IN	3/4" 2 SLOT	ICE-TONG	STEEL	No	WHITE	MOUNTED IN 2x2 LAYING CEILING
S-7	PRICE	TBD375	8"			48"		SURFACE	3/4" 2 SLOT	ICE-TONG	STEEL	Yes	WHITE	
S-8	PRICE	500		8"	6"	8"	6"	SURFACE		DOUBLE DEFLECTION	STEEL	Yes	WHITE	
S-9	PRICE	500		12"	6"	12"	6"	SURFACE		DOUBLE DEFLECTION	STEEL	Yes	WHITE	
R-1	PRICE	80		12"	12"	24"	24"	LAY-IN		EGGCRATE	STEEL	No	WHITE	
T-1	PRICE	80		24"	24"	24"	24"	LAY-IN		EGGCRATE	STEEL	No	WHITE	
T-2	PRICE	500		10"	6"	10"	6"	SURFACE		DOUBLE DEFLECTION	STEEL	No	WHITE	
T-3	PRICE	500		14"	20"	14"	20"	SURFACE		DOUBLE DEFLECTION	STEEL	Yes	WHITE	
T-4	PRICE	500		14"	10"	24"	12"	SURFACE		DOUBLE DEFLECTION	STEEL	No	WHITE	
T-5	PRICE	80		12"	12"	24"	24"	LAY-IN		EGGCRATE	STEEL	No	WHITE	
T-6	PRICE	610		24"	12"	24"	12"	SURFACE		SINGLE DEFLECTION	ALUMINUM	No	WHITE	
E-1	PRICE	80		6"	6"	12"	12"	SURFACE		EGGCRATE	STEEL	Yes	WHITE	
E-2	PRICE	80		6"	6"	12"	12"	LAY-IN		EGGCRATE	STEEL	No	WHITE	
E-3	PRICE	80		8"	8"	12"	12"	LAY-IN		EGGCRATE	STEEL	No	WHITE	
E-4	PRICE	80		10"	10"	22"	22"	SURFACE		EGGCRATE	STEEL	Yes	WHITE	

ELEVATOR AIR CONDITIONING UNIT SCHEDULE

MARK	MANUFACTURER	MODEL	CFM	NOMINAL COOLING CAP (BTUH)	ELECTRICAL HEAT (KW)	ELECTRICAL			REMARKS
						VOLTAGE	PHASE	MCA	
EAC-1	BARD	W72ZAA-C09ZPXXXJ	2095	71,674	9	460 V	3	18 A	1, 2, 3

REMARKS:
1. PROVIDE WITH SUPPLY GRILLE EQUAL TO BARD MODEL SG-5W.
2. PROVIDE WITH RETURN GRILLE EQUAL TO BARD MODEL RG-5W.
3. PROVIDE WITH PACKAGED COORDINATED THERMOSTAT (100%) AVAILABLE.

HIGH INDUCTION JET FAN SCHEDULE

MARK	SERVICE	BASED ON	MODEL	TYPE	CFM	FAN RPM	ELECTRICAL					REMARKS
							HP	V	PH	HZ	FLA	
HUF-1	GARAGE CIRCULATION	SYSTEMAIR	IV50 EC	HIGH INDUCTION JET FAN	3,517	1400	1.8	277	1	60	11	1
HUF-2	GARAGE CIRCULATION	SYSTEMAIR	IV50 EC	HIGH INDUCTION JET FAN	3,517	1400	1.8	277	1	60	11	1
HUF-3	GARAGE CIRCULATION	SYSTEMAIR	IV50 EC	HIGH INDUCTION JET FAN	3,517	1400	1.8	277	1	60	11	1

REMARKS:
1. PROVIDE WITH SPEED CONTROLLER.

FAN SCHEDULE

MARK	SERVICE	BASED ON	MODEL	TYPE	CFM	E.S.P.	SONE	FAN RPM	ELECTRICAL					REMARKS
									HP	V	PH	HZ	FLA	
EF-1	CO PARKING CONSTANT EA	GREENHECK	CUE-240-VG	UPBLAST	4,300	0.50	18	870	2	208	3	60	16	1, 3
EF-2	CO PARKING EXHAUST	GREENHECK	CUBE-480-50	UPBLAST	24,250	0.50	21	430	5	460	3	60	9.5	2, 3
EF-3	CO PARKING EXHAUST	GREENHECK	CUBE-480-50	UPBLAST	24,250	0.50	21	430	5	460	3	60	9.5	2, 3
EF-4	OFFICE ZONE 1, 3,4,5	GREENHECK	GB-120-5	DOWNBLAST	1,105	0.60	9.6	1259	0.25	115	1	60	5.8	3, 4, 7
EF-5	OFFICE ZONE 6	GREENHECK	G-080-E	DOWNBLAST	280	0.50	8	1628	0.1	115	1	60	1.5	3, 4, 7
EF-6	ELECTRICAL 241	GREENHECK	SE1-12-432-D	WALL PROP.	1,000	0.25	8.8	1528	0.13	115	1	60	2	6

1. EXHAUST FAN SHALL RUN CONTINUOUSLY. FAN TO PROVIDE CODE MINIMUM VENTILATION FOR EACH LEVEL OF PARKING GARAGE.
2. EXHAUST FAN SHALL RUN UPON SENSING OF CO AND NO2. FAN SHALL RUN FOR A MINIMUM OF 30 MINUTES. DETECTION OF CO NOT TO EXCEED 25 PARTS PER MILLION AND NO2 NOT TO EXCEED 3 PPM.
3. MOUNT FAN ON 12" TALL ROOF CURB WITH WOOD NAILERS.
4. FAN SHALL OPERATE CONTINUOUSLY DURING OCCUPIED HOURS.
5. FAN TO VENTILATE ELEVATOR SHAFT, PROVIDE THERMOSTAT AND HUMIDISTAT. RUN FAN WHEN TEMPERATURE IS GREATER THAN 80 DEGREE F AND WHEN RH GREATER THAN 65%.
6. FAN TO BE CONTROLLED OFF WALL MOUNT THERMOSTAT. FAN TO ENERGIZE UPON RISE IN TEMPERATURE ABOVE 80 DEGREES. REVERSE ACTING.
7. FURNISH FAN WITH GRAVITY BACKDRAFT DAMPER.

HEAT PUMP SCHEDULE

MARK	MANUFACTURER	MODEL	NOMINAL TONS	COOLING CAP (BTUH)	HEATING CAP AT 47F (BTUH)	ELECTRICAL			DIMENSIONS (IN)			UNIT WEIGHT (lbs)	PAIRED UNIT	SEER	REMARKS
						VOLTAGE	PHASE	MCA	W	L	H				
HP-1	CARRIER	25HPB660A0030	5	53900.0	55000	208 V	1	33.9 A	35"	35"	46"	316	FCU-1	16	1, 2, 3
HP-2	CARRIER	25VNA830A0030	2.5	23000.0	22800	208 V	1	23.6 A	35"	35"	46"	250	FCU-2	18	1, 2, 3
HP-3	CARRIER	25HPB660A0030	5	53900.0	55000	208 V	1	33.9 A	35"	35"	46"	316	FCU-3	16	1, 2, 3
HP-4	CARRIER	25HPB660A0030	5	53900.0	55000	208 V	1	33.9 A	35"	35"	46"	316	FCU-4	16	1, 2, 3
HP-5	CARRIER	25HPB660A0030	5	53900.0	55000	208 V	1	33.9 A	35"	35"	46"	316	FCU-5	16	1, 2, 3
HP-6	CARRIER	25HPB660A0030	5	53900.0	55000	208 V	1	33.9 A	35"	35"	46"	316	FCU-6	16	1, 2, 3
HP-7	CARRIER	25VNA830A0030	2.0	23850.0	24100	208 V	1	23.6 A	35"	35"	46"	265	FCU-7	18	1, 2, 3

REMARKS:
1. MOUNT UNIT ON SUPPORT RAILS OR STAND, MINIMUM OF 12" ABOVE ROOF/GRADE.
2. REFER TO MANUFACTURER'S INSTALLATION GUIDE FOR LINESET SIZE BASED ON INDOOR/OUTDOOR UNIT LOCATION AND TOTAL LINE LENGTH.
3. REFRIGERANT SHALL BE R-410A (PURON).

FAN COIL UNIT SCHEDULE

MARK	MANUFACTURER	MODEL	CONFIGURATION	MOTOR HP	SA CFM	OA CFM	OUTDOOR UNIT CAPACITY (MBH)	ELECTRIC HEAT (KW)	ELECTRICAL			PAIRED UNIT	REMARKS
									VOLTAGE	PHASE	FLA		
FCU-1	CARRIER	FV4CNB006	HEAT PUMP	0.75	1975	190	60000 Btu/h	15	208 V	3	47.7 A	HP-1	1, 2
FCU-2	CARRIER	FV4CNB002	HEAT PUMP	0.5	920	220	60000 Btu/h	15	208 V	3	47.7 A	HP-2	1, 2
FCU-3	CARRIER	FV4CNB006	HEAT PUMP	0.75	1800	260	60000 Btu/h	15	208 V	3	47.7 A	HP-3	1, 2
FCU-4	CARRIER	FV4CNB006	HEAT PUMP	0.75	1945	360	60000 Btu/h	15	208 V	3	47.7 A	HP-4	1, 2
FCU-5	CARRIER	FV4CNB006	HEAT PUMP	0.75	1975	310	60000 Btu/h	15	208 V	3	47.7 A	HP-5	1, 2
FCU-6	CARRIER	FV4CNB006	HEAT PUMP	0.75	1980	280	60000 Btu/h	15	208 V	3	47.7 A	HP-6	1, 2
FCU-7	CARRIER	FV4CNB002	HEAT PUMP	0.5	800	95	24000 Btu/h	8	208 V	3	32.0 A	HP-7	1, 2

REMARKS:
1. PROVIDE HARD-WIRED THERMOSTAT AT INDOOR LOCATION.
2. PROVIDE AND INSTALL CONDENSATE PUMP, LITTLE GIANT MODEL VCMX-20ULS, WITH OVERFLOW SWITCH/PROTECTION.

DUCTLESS-SPLIT AIR CONDITIONING UNIT SCHEDULE

MARK (INDOOR UNIT)	MARK (OUTDOOR UNIT)	MANUFACTURER	MODEL (INDOOR UNIT)	MODEL (OUTDOOR UNIT)	SERVICE	NOMINAL COOLING MBH	NOMINAL HEATING MBH	ELECTRICAL			REMARKS
								V	PH	MCA	
AC-1	CU-1	SAMSUNG	AC018MNADCH/AA	AC018MXSCCC/AA	IT 155	18	0	208	1	13	1, 3
AC-2	CU-2	SAMSUNG	AC018MNADCH/AA	AC018MXSCCC/AA	IT 116	18	0	208	1	13	1, 3
AC-160	CU-160	SAMSUNG	AC012MNADCH/AA	AC012MXSCCC/AA	ELEV. LOBBY 160	12	12	208	1	12	1, 2
AC-260	CU-260	SAMSUNG	AC012MNADCH/AA	AC012MXSCCC/AA	ELEV. LOBBY 260	12	12	208	1	12	1, 2
AC-360	CU-360	SAMSUNG	AC012MNADCH/AA	AC012MXSCCC/AA	ELEV. LOBBY 360	12	12	208	1	12	1, 2
AC-460	CU-460	SAMSUNG	AC012MNADCH/AA	AC012MXSCCC/AA	ELEV. LOBBY 460	12	12	208	1	12	1, 2

REMARKS:
1. PROVIDE HARD-WIRED THERMOSTAT AT INDOOR LOCATION.
2. PROVIDE WALL MOUNT BRACKET FOR OUTDOOR UNIT.
3. MOUNT OUTDOOR UNIT ON SUPPORT RAILS A MINIMUM OF 12" ABOVE THE ROOF.

INTAKE HOOD SCHEDULE

MARK	MANUFACTURER	MODEL	CFM	INLET		OVERALL		
				WIDTH	HEIGHT	WIDTH	LENGTH	HEIGHT
IH-1	GREENHECK	FGI-16x20	1,120	16"	20"	31"	39"	29 3/4"

NOTE: MOUNT HOOD ON 12" TALL ROOF CURB.

LOUVER SCHEDULE

MARK	MANUFACTURER	MODEL	CFM	WIDTH	HEIGHT	DEPTH
L-1	GREENHECK	FDS-402	610	30"	18"	4"

GENERAL NOTES

1. CONTRACTOR IS REQUIRED TO PROVIDE OWNER WITH COMPLETE SET OF INSTALLATION, OPERATION AND MAINTENANCE MANUALS FOR MECHANICAL EQUIPMENT.
2. CONTRACTOR IS REQUIRED TO ENSURE THAT THE HVAC SYSTEMS ARE FULLY OPERATIONAL AND THAT THE OWNER RECEIVES ADEQUATE TRAINING AND INSTRUCTION IN THE OPERATION.
3. DUCTWORK SHALL BE FABRICATED AND INSTALLED PER SMACNA STANDARDS AND THE MECHANICAL CODE. PROVIDE DUCT TRANSITIONS AND FITTINGS AS REQUIRED. DUCTS INSTALLED DIFFERENT THAN SIZES SHOWN SHALL HAVE THE SAME OR GREATER EQUIVALENT CROSS-SECTIONAL AREA. DUCT DIMENSIONS SHOWN ARE INSIDE FREE AREA.
4. SEAL JOINTS, LONGITUDINAL, AND TRANSVERSE SEAMS WITH HARDCAST IRON GRIP 601, SURE GRIP 404, OR OTHER APPROVED SEALANT. SUPPLY, RETURN AND EXHAUST AIR DUCTWORK SHALL BE SEALED TO SEAL CLASS 'A'.
5. EXPOSED DUCTWORK IN FINISHED SPACES SHALL BE OIL-FREE ("PAINTGRIP") AND SUITABLE FOR PRIMING AND PAINTING.
6. DRAWINGS SHOWING LOCATIONS OF EQUIPMENT, DUCTWORK, PIPING, ETC. ARE DIAGRAMMATIC AND MAY NOT ALWAYS REFLECT EXACT INSTALLATION CONDITIONS. DRAWINGS SHOW THE GENERAL ARRANGEMENT OF DUCTWORK, PIPING, EQUIPMENT, ETC., AND MAY NOT INCLUDE ALL OFFSETS AND FITTINGS REQUIRED FOR COMPLETE INSTALLATION. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS ACTUAL BUILDING CONSTRUCTION AND THE WORK OF OTHERS WILL PERMIT.
7. VERIFY ALL PENETRATIONS LOCATION WITH ARCHITECTURAL AND STRUCTURAL PLANS.
8. DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS AND CLEARANCES FROM ARCHITECTURAL, STRUCTURAL, SUBMITTALS, AND OTHER APPROPRIATE DRAWINGS OR PHYSICALLY AT SITE. REVIEW ALL DRAWINGS, INCLUDING THOSE OF OTHER TRADES.
9. COORDINATE ALL WORK WITH ALL OTHER TRADES PRIOR TO INSTALLATION TO PROVIDE CLEARANCES REQUIRED FOR OPERATION, MAINTENANCE, CODE COMPLIANCE, AND TO VERIFY NON-INTERFERENCE WITH OTHER WORK. DO NOT FABRICATE PRIOR TO VERIFICATION OF NECESSARY CLEARANCES FOR ALL TRADES. BRING ANY INTERFERENCES OR CONFLICTS TO THE ATTENTION OF THE ARCHITECT/ENGINEER BEFORE PROCEEDING WITH FABRICATION OR EQUIPMENT ORDERS. REVIEW SPACE REQUIREMENTS OF EQUIPMENT SPECIFIED OR SUBSTITUTED AND MAKE REASONABLE ACCOMMODATIONS IN LAYOUT AND POSITIONING TO PROVIDE PROPER ACCESS. ANY CHANGES REQUIRED TO ELIMINATE CONFLICTS OR THAT RESULT FROM A FAILURE TO COORDINATE SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL COST OR EXPENSE TO OTHERS.
10. EACH CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH ELECTRICAL CHANGES REQUIRED FOR EQUIPMENT PROPOSED THAT DIFFERS FROM THE BASIS OF DESIGN.
11. SEAL ALL FLOOR, WALL, AND ROOF PENETRATIONS AIRTIGHT WHERE PIPING, AND DUCTS PENETRATE. PENETRATIONS THROUGH EXTERIOR WALLS AND ROOF SHALL BE SEALED AIRTIGHT WITH WATERPROOFING MATERIALS RECOMMENDED BY MANUFACTURER FOR OUTDOOR USE. PROVIDE 10 GAUGE SLEEVE AT EACH PENETRATION, INSTALLED PER SMACNA STANDARDS,. PATCH PENETRATIONS TO MATCH EXISTING AND FIRE STOP PENETRATIONS WHERE REQUIRED TO MAINTAIN FIRE SEPARATION INTEGRITY USING U.L. LISTED MATERIAL.
12. EQUIPMENT SIZES AND SERVICE CLEARANCE REQUIREMENTS VARY BETWEEN DIFFERENT MANUFACTURERS. CONSULT APPROVED SHOP DRAWINGS FOR EQUIPMENT SIZES AND REQUIRED SERVICE CLEARANCES. COORDINATE WITH LAYOUT OF EQUIPMENT PADS, PIPING, DUCTWORK, ETC.
13. PROVIDE CONCRETE EQUIPMENT PAD FOR ALL FLOOR MOUNTED EQUIPMENT. PAD SHALL EXTEND MINIMUM 6" BEYOND ALL SIDES OF EQUIPMENT.
14. ISOLATE AIR MOVING EQUIPMENT WITH SPRING OR NEOPRENE HANGING VIBRATION ISOLATORS AND WITH FLEXIBLE CANVAS CONNECTIONS TO DUCTWORK.
15. TEST AND BALANCE AIR DISTRIBUTION SYSTEM WITHIN 10% OF CFM INDICATED ON DRAWINGS. PROVIDE CERTIFIED REPORT BY INDEPENDENT, CERTIFIED TEST AND BALANCE CONTRACTOR.
16. PROVIDE TRAPPED CONDENSATE DRAIN AT EACH AIR-CONDITIONING UNIT COOLING COIL AND CONDENSING TYPE EQUIPMENT ACCORDING TO MANUFACTURER'S INSTRUCTIONS. DRAIN LINE SHALL BE PIPED WITH AN INDIRECT CONNECTION TO A NEARBY DEDICATED FUNNEL FLOOR DRAIN.
17. REFRIGERANT PIPING SHALL BE INSULATED. INSULATION, INCLUDING FIBERGLASS FITTING INSERTS, SHALL BE GLASS FIBER WITH A MAXIMUM K FACTOR OF .24 AT 75F MEAN TEMPERATURE WITH FACTORY APPLIED ALL-SERVICE JACKET WITH SELF-SEALING LIP. SEAL BUTT JOINTS WITH 3 INCH WIDE BUTT STRIPE ADHERED NEATLY IN PLACE.
18. COORDINATE THERMOSTAT AND SENSOR LOCATIONS WITH ELECTRICAL CONTRACTOR.
19. COORDINATE VENTILATION OPERATIONS WITH CO/NO MONITORING SYSTEM.
20. CO SENSORS TO BE MOUNTED AT 4' ABOVE FINISHED FLOOR. MAXIMUM SPACING FOR SENSORS SHALL BE NO MORE THAN A 50' RADIUS. COORDINATE LOCATION.
21. NO2 SENSORS TO BE MOUNTED AT 2' ABOVE FINISHED FLOOR. MAXIMUM SPACING FOR SENSORS SHALL BE NO MORE THAN A 50' RADIUS. COORDINATE LOCATION.
22. PROVIDE A NETWORK MONITORING SYSTEM TO MONITOR CO AND NO2 LEVELS.

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A NEW FACILITY FOR
GREGG COUNTY - PARKING GARAGE & OFFICE
100 E. METHVIN ST.
LONGVIEW, TX 75601

PROJECT NO.: 20011

DATE: 02/18/2022

REVISION SCHEDULE

Δ	Description	Date

STATE OF TEXAS
THOMAS LOREN FREY
109004
02/18/2022
LICENSED
PROFESSIONAL ENGINEER

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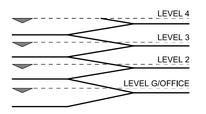
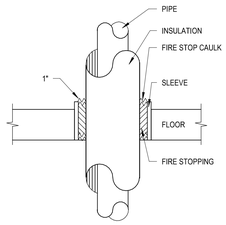


SHEET NAME

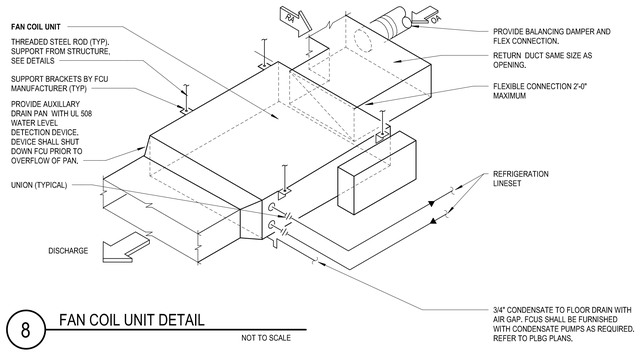
MECHANICAL EQUIPMENT SCHEDULE, GENERAL NOTES, SYMBOLS & ABBREVIATIONS

SHEET NO.

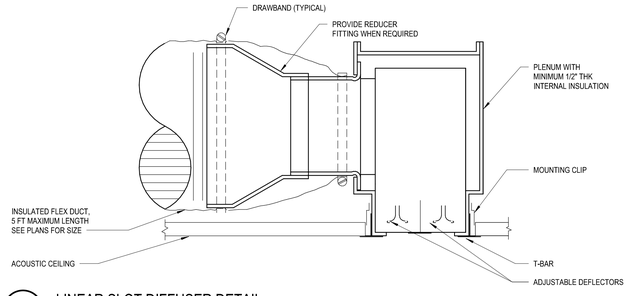
M-001



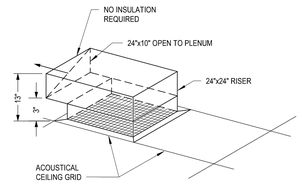
12 PIPE FLOOR PENTRATION DETAIL
NOT TO SCALE



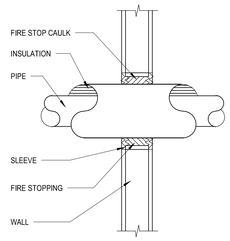
8 FAN COIL UNIT DETAIL
NOT TO SCALE



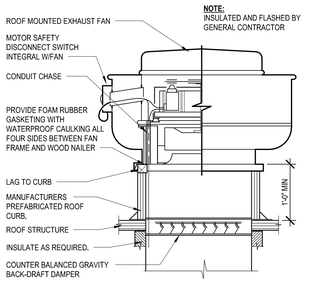
1 LINEAR SLOT DIFFUSER DETAIL
NOT TO SCALE



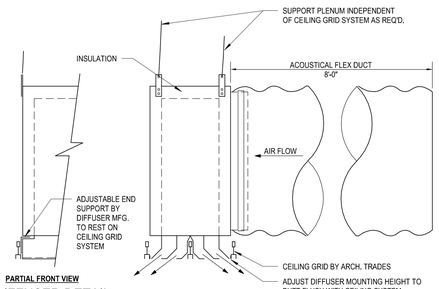
2 RETURN AIR TO PLENUM DETAIL
NOT TO SCALE



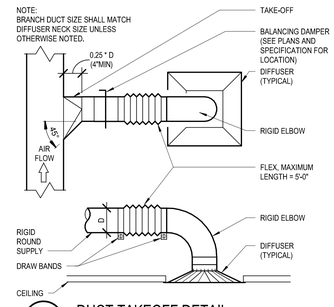
11 PIPE WALL PENTRATION DETAIL
NOT TO SCALE



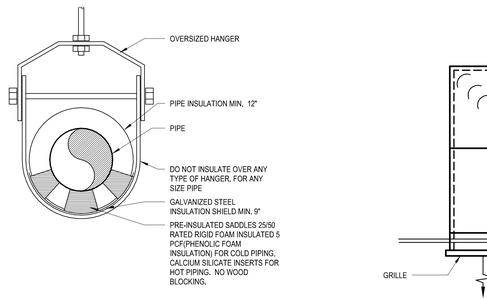
9 UPBLAST EXHAUST FAN
NOT TO SCALE



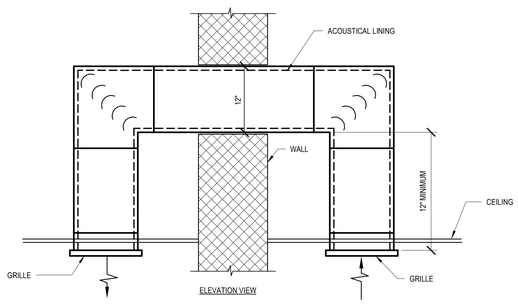
3 SLOT DIFFUSER DETAIL
NOT TO SCALE



4 DUCT TAKEOFF DETAIL
NOT TO SCALE



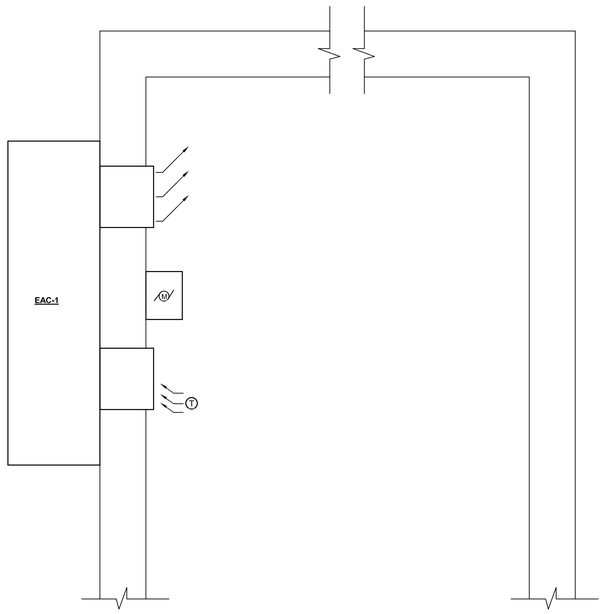
10 PIPE HANGER DETAIL
NOT TO SCALE



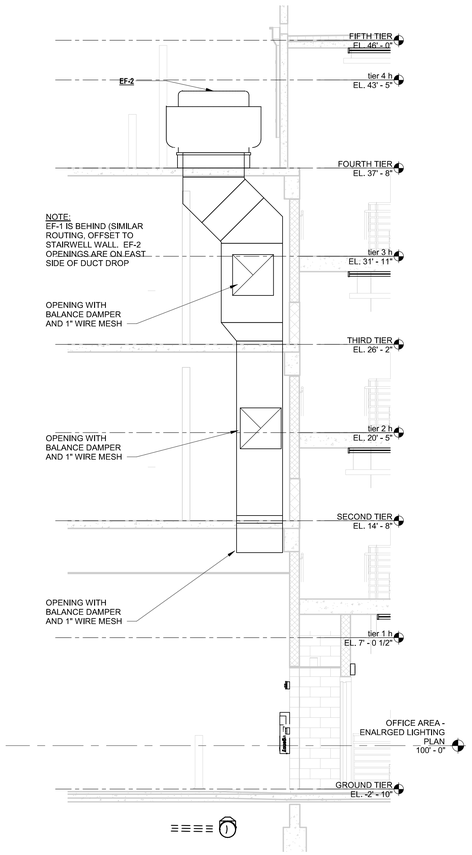
5 DUCT TRANSFER DETAIL
NOT TO SCALE

NOTES:

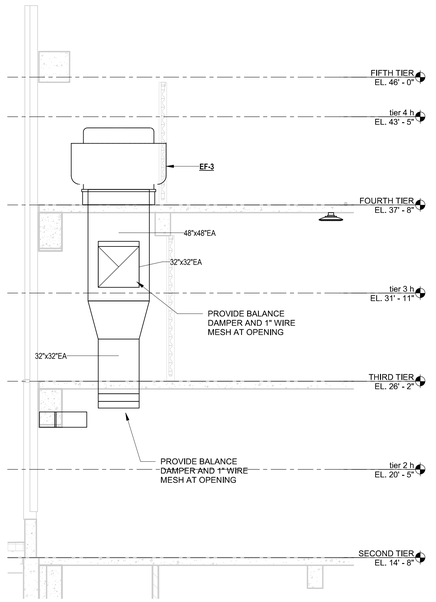
WALL MOUNT HEAT PUMP, R-410A REFRIGERANT 480 VOLT, 3 PHASE SINGLE POINT CONNECTION, LOW AMBIENT OPERATION, AUTO CHANGE OVER THERMOSTAT, GRAY COLOR. HEAT PUMP IS TO BE CENTERED ON SHAFT AND POSITIONED VERTICALLY SO THAT THE SUPPLY AIR OPENING FROM THE UNIT IS LOCATED ABOVE THE ELEVATOR MOTOR AND THE RETURN AIR OPENING IS LOCATED BELOW THE MOTOR. INSTALL FULL SIZE GALVANIZED STEEL GRILLES W/ 35° LONGITUDIAL BLADES SPREAD 3/4" APART OVER SUPPLY AND RETURN OPENINGS IN SHAFT. POSITION GRILLES TO DIRECT SUPPLY AIR UP AND RETURN DOWN. LOCATE AUTO CHANGE OVER THERMOSTAT EVEN W/ THE RETURN AIR INTAKE ON BACK WALL. SET THERMOSTAT TO MAINTAIN TEMPERATURE BETWEEN 50°F AND 90°F. COORDINATE INSTALLATION W/ ELEVATOR INSTALLER AND PRECASTER. HEAT PUMP SHALL BE BARD W722AA-C09ZPXXXJ OR MIRVAIR, MARC, OR APPROVED EQUIVALENT.



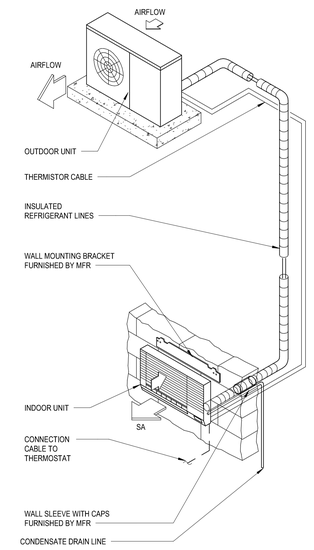
7 ELEVATOR SHAFT COOLING UNIT DETAIL
3/4" = 1'-0"



13 HVAC SECTION - PARKING EF-1&2
1/4" = 1'-0"



14 HVAC SECTION - PARKING EF-3
1/4" = 1'-0"



6 WALL MOUNT SPLIT SYSTEM DETAIL
NOT TO SCALE

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Δ	Description	Date

STATE OF TEXAS
THOMAS LOREN FREY
109004
LICENSED
PROFESSIONAL ENGINEER

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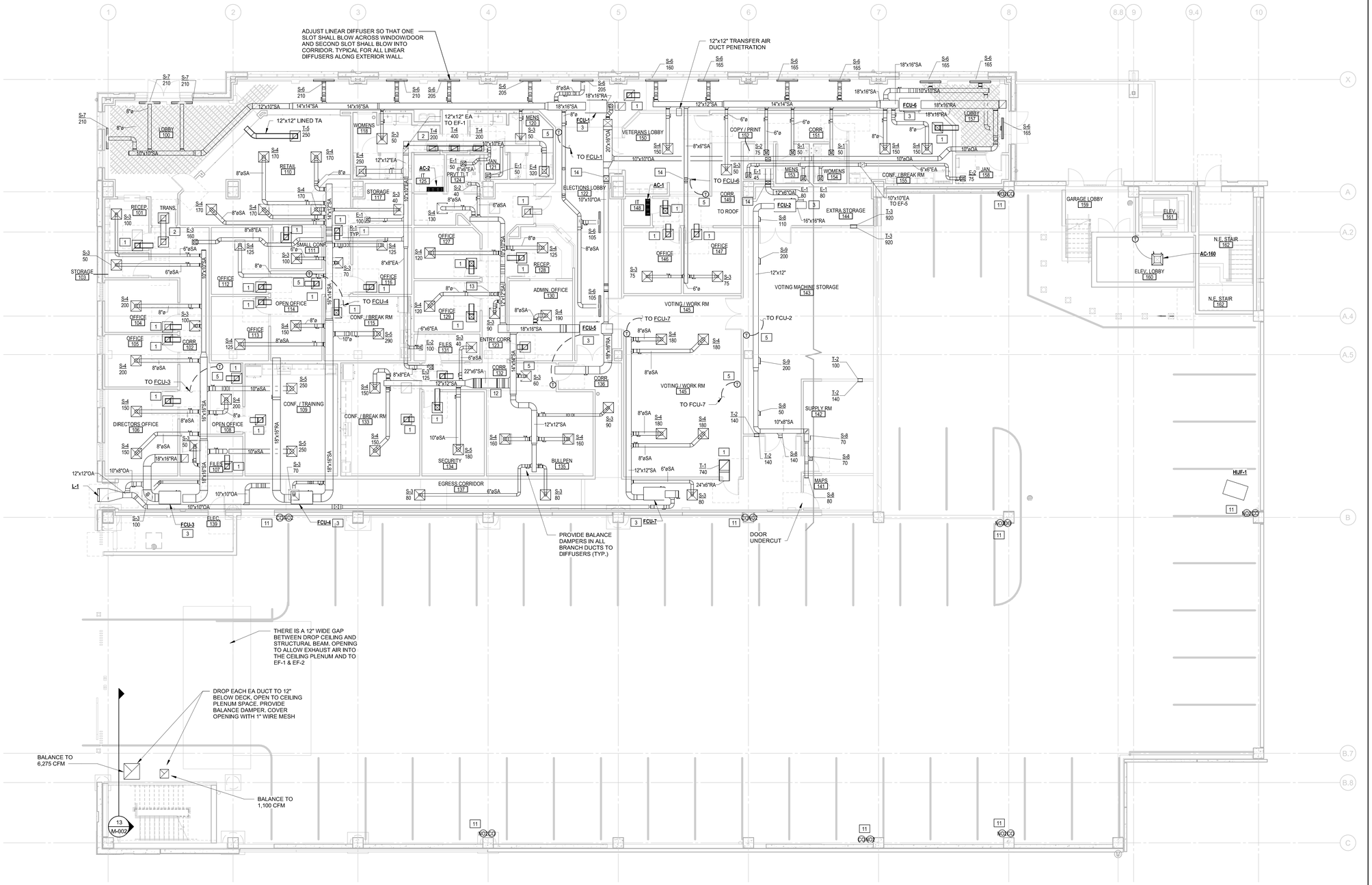
LEVEL 4
LEVEL 3
LEVEL 2
LEVEL G/OFFICE

SHEET NAME
DETAILS

SHEET NO.
M-002



HVAC KEYNOTES

1. RETURN AIR TRANSFER GRILLE AND DUCT. PROVIDE 2'x2' LAYING CEILING EGGCRATE GRILLE, CONNECT ACOUSTICALLY LINED TRANSFER DUCT UP A MINIMUM OF 12" ABOVE THE CEILING TO A MITERED ELBOW. EXTEND HORIZONTAL DUCT 2'-0" FROM ELBOW EDGE. WHERE LOCATED ADJACENT TO A FULL HEIGHT WALL, EXTEND DUCT THRU WALL TO OPEN CEILING PLENUM. PLENUM DUCT TO BE 12"x12" UNLESS NOTED OTHERWISE.
2. RETURN TRANSFER PLENUM. SAME AS KEYNOTE 1, EXCEPT TRANSFER BETWEEN TWO CEILING GRILLES.
3. INDOOR FAN COIL UNIT. UNIT TO CONNECT TO OUTDOOR HEAT PUMP UNIT. FAN COIL TO HANG FROM STRUCTURE ABOVE. PROVIDE RETURN SIDE ACOUSTICALLY LINED PLENUM FOR RETURN AND OUTDOOR AIR CONNECTIONS.
4. OUTDOOR HEAT PUMP UNIT OR CONDENSING UNIT. MOUNT ON A MINIMUM 12" STAND. MOUNT DISCONNECT ADJACENT TO UNIT. ROUTE REFRIGERATION LINESET THRU APPROVED PIPE CURB, THEN TO INDOOR FAN COIL UNIT. PROVIDE CONDENSATE TRAP AND LINESET SIZING PER MANUFACTURER'S GUIDELINES.
5. WALL MOUNT PROGRAMMABLE THERMOSTAT. UNLESS NOTED OTHERWISE, MOUNT ADJACENT TO ROOM LIGHT SWITCH.
6. OUTDOOR HEATPUMP UNIT. MOUNT OFF WALL WITH WALL MOUNTING BRACKET. MOUNT AS HIGH AS POSSIBLE. PROVIDE 6" AIR GAP BETWEEN WALL AND UNIT. ROUTE MFG LINESET TO INDOOR CEILING CASSETTE UNIT. PROVIDE CONDENSATE TRAP. ROUTE 3/4" DRAIN DOWN TO FLOOR AND DISCHARGE 2" AFF.
7. ROOF MOUNT EXHAUST FAN. MOUNT ON MINIMUM 12" TALL ROOF CURB. FAN TO RUN CONTINUOUSLY DURING OCCUPIED HOURS. MOUNT MINIMUM 10' FROM BUILDING EDGE AND FROM FRESH AIR INTAKE.
8. ROOF MOUNT INTAKE HOOD. MOUNT ON MINIMUM 12" ROOF CURB.
9. CONSTANT VOLUME GARAGE EXHAUST FAN AND DUCTWORK SYSTEM. FAN TO RUN CONTINUOUSLY TO PROVIDE CODE MINIMUM EXHAUST RATE. MOUNT FAN ON 12" TALL ROOF CURB. PROVIDE DUCT OPENINGS ON EACH GARAGE LEVEL WITH BALANCE DAMPER.
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13. DROP DUCT BELOW BEAM.
14. DROP DUCT DOWN TO LOWER CEILING LEVEL BELOW 2ND TIER PARKING DECK.

1 GROUND TIER PLAN

1/8" = 1'-0"

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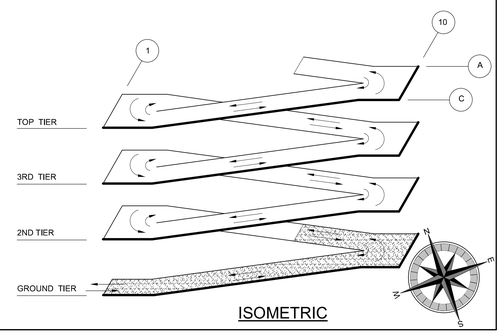

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A NEW FACILITY FOR
GREGG COUNTY - PARKING GARAGE & OFFICE
100 E. METHVIN ST.
LONGVIEW, TX 75601

PROJECT NO.: 20011
DATE: 02/18/2022

REVISION SCHEDULE

Δ	Description	Date

STATE OF TEXAS
THOMAS LOREN FREY
109004
LICENSED
PROFESSIONAL ENGINEER

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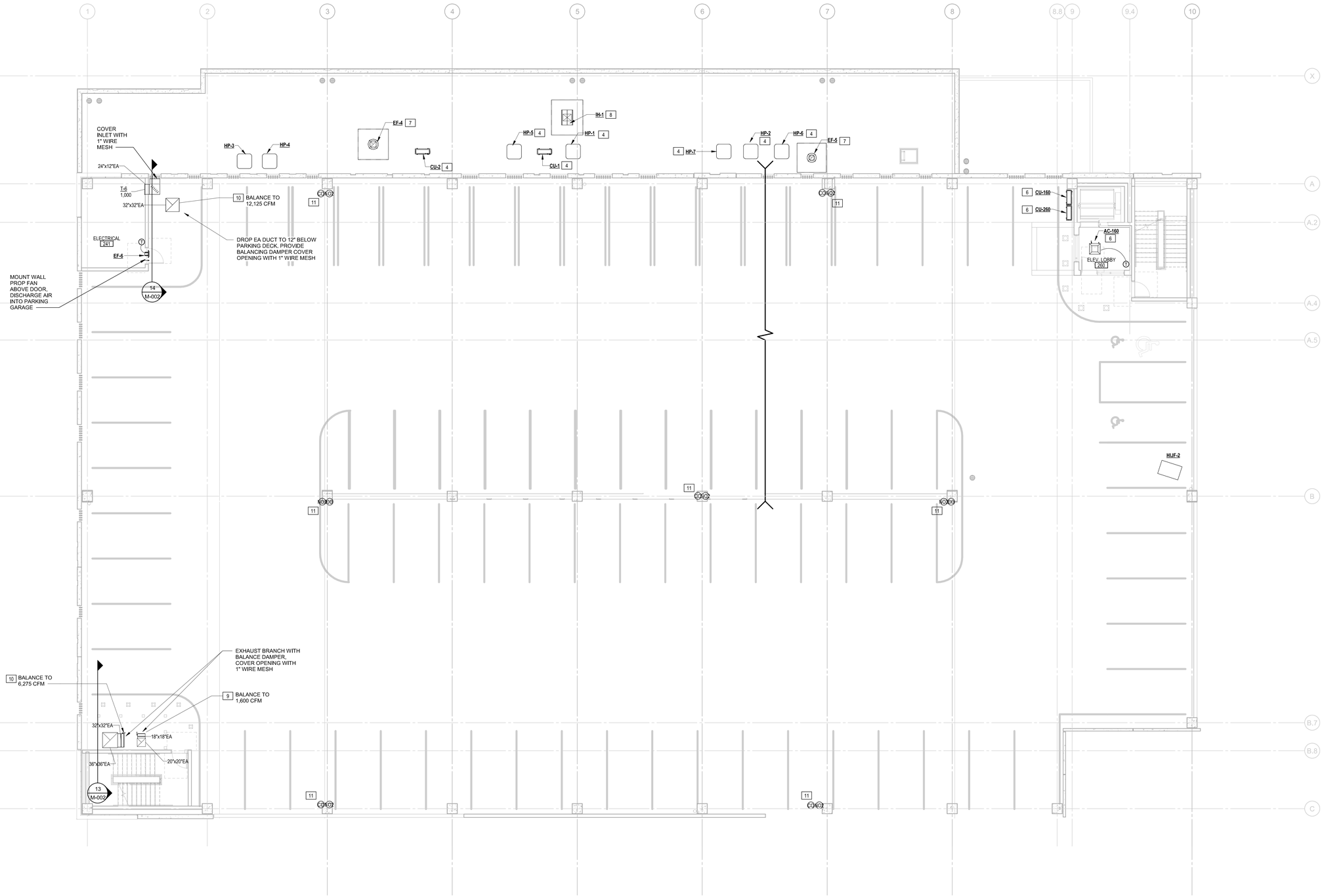
LEVEL 4
LEVEL 3
LEVEL 2
LEVEL G/OFFICE

SHEET NAME
GROUND TIER PLAN

SHEET NO.
M-101



HVAC KEYNOTES

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1 SECOND TIER PLAN

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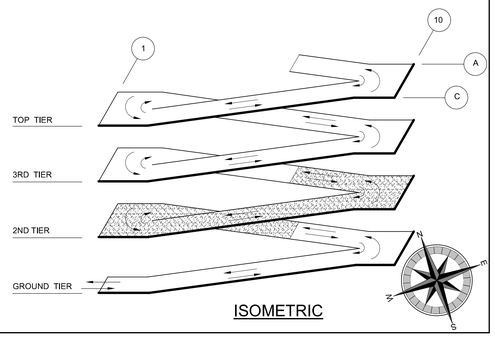

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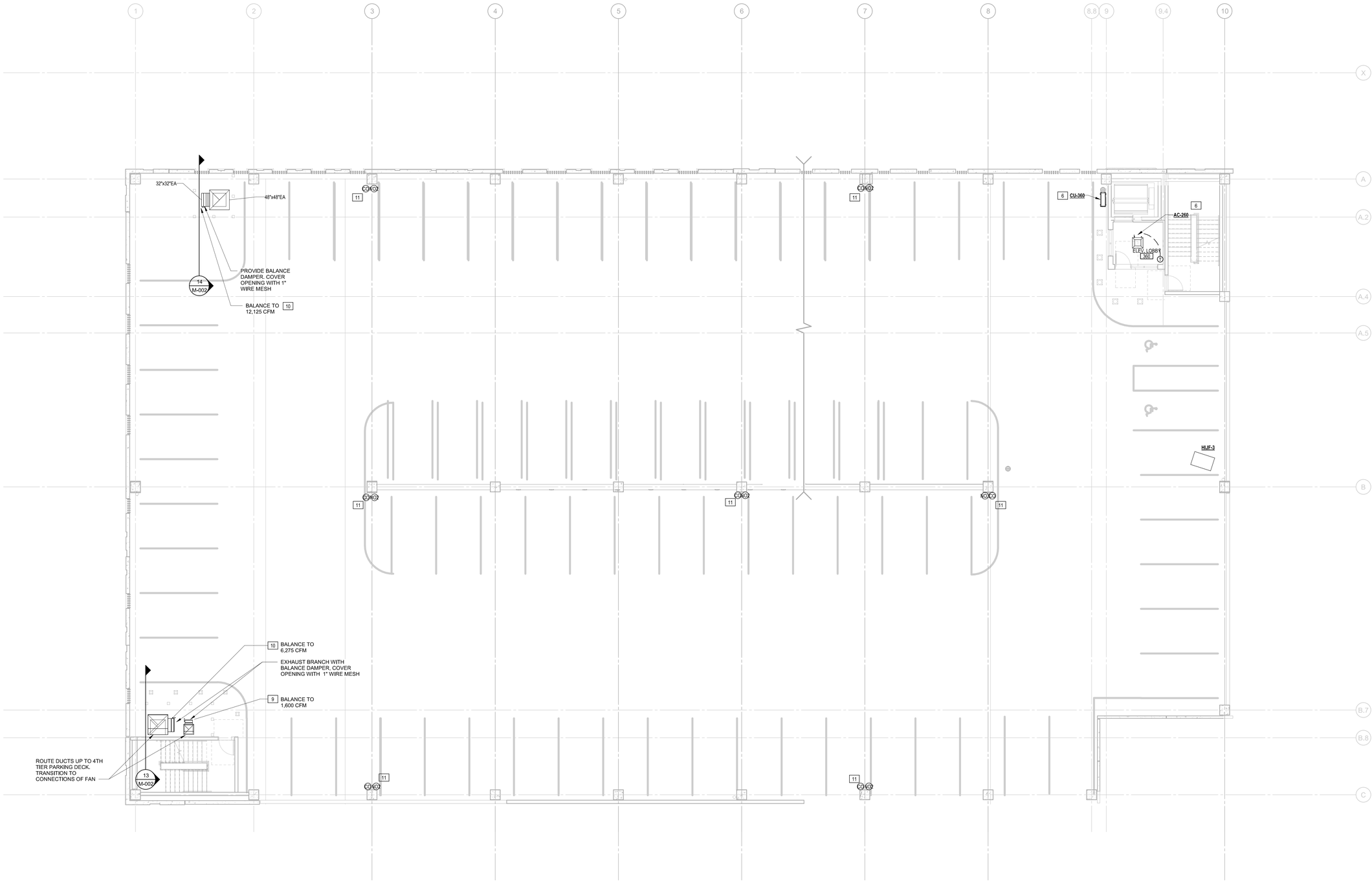
LEVEL 2
LEVEL G/OFFICE

SHEET NAME
SECOND TIER PLAN

SHEET NO.
M-102



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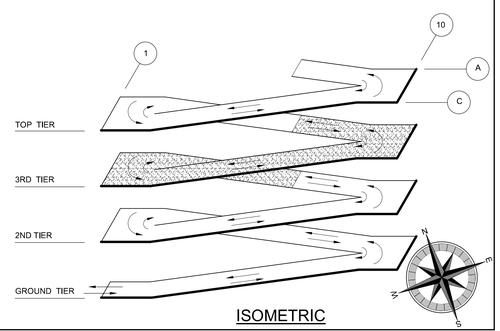

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PROJECT NO.: 20011

DATE: 02/18/2022

REVISION SCHEDULE

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STATE OF TEXAS
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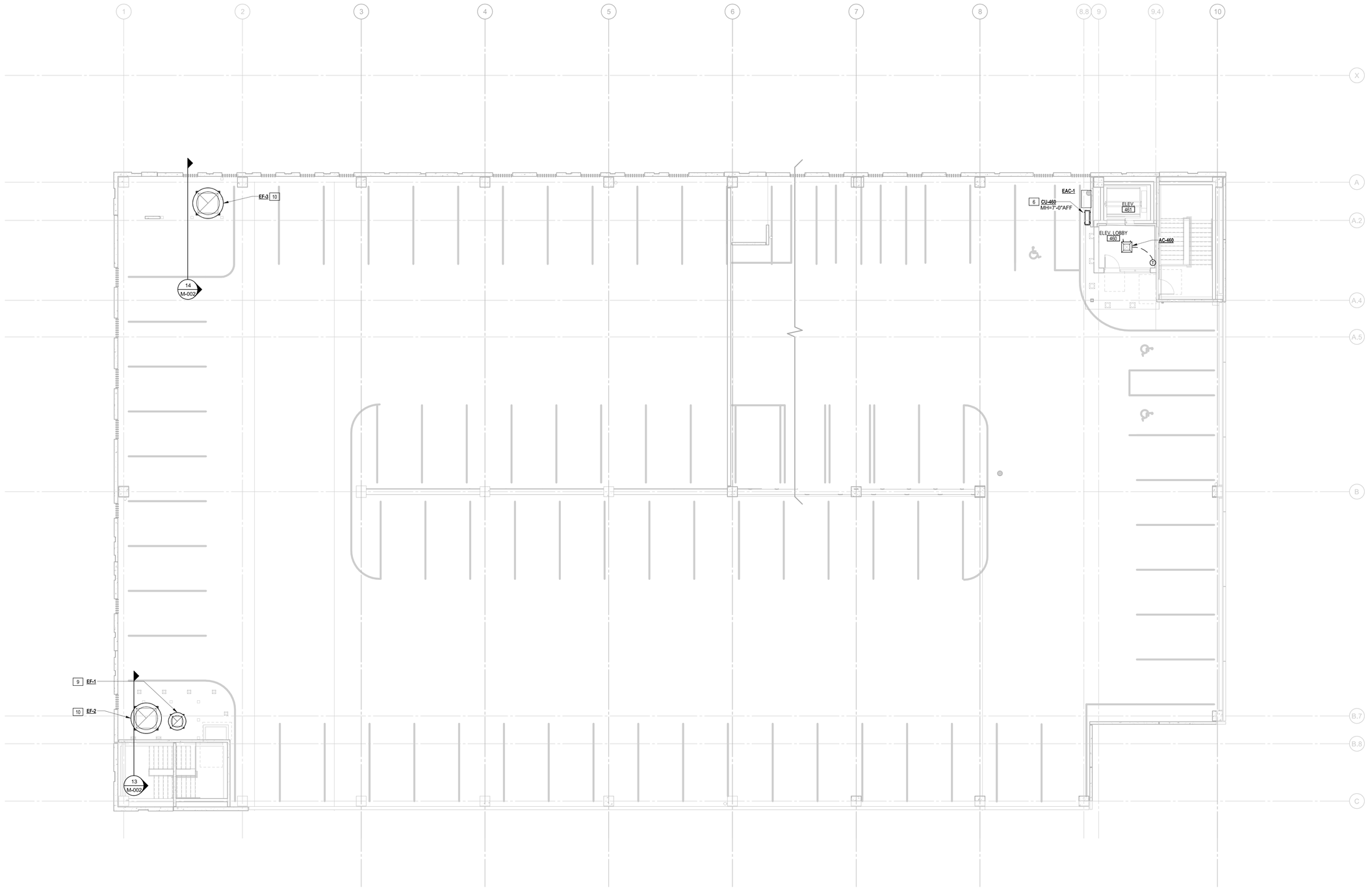
LEVEL 2
LEVEL G/OFFICE

SHEET NAME

THIRD TIER PLAN

SHEET NO.

M-103



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1 TOP TIER PLAN

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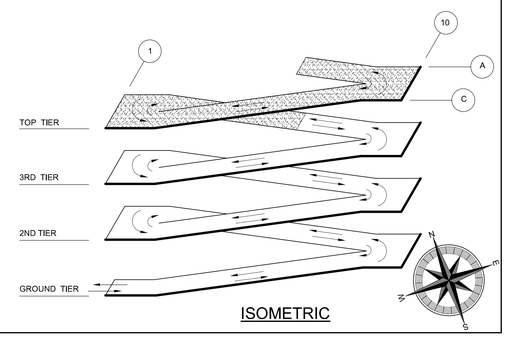

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LEVEL 4
LEVEL 3
LEVEL 2
LEVEL G/OFFICE

SHEET NAME
TOP TIER PLAN

SHEET NO.
M-104

PLUMBING SYMBOLS

◎	FLOOR DRAIN
○	PLUMBING RISER
⊗	SEWER VALVE
⊙	CLEANOUT
	WALL FAUCET
	OS & Y VALVE
	GATE VALVE
	CHECK VALVE (ARROW INDICATES DIRECTION OF FLOW)
Ⓜ	WATER METER
——ST——	STORM SEWER LINE
— —SS— —	SANITARY LINE
——V——	VENT LINE
——►	ARROW INDICATES DIRECTION OF FLOW
— — F — —	FOUNDATION DRAINAGE
— — — —	PIPING BELOW GRADE
———	PIPING ABOVE GRADE

PLUMBING ABBREVIATIONS

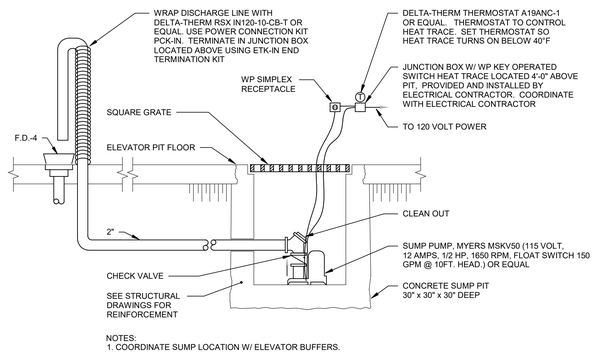
A.F.F.	ABOVE FINISHED FLOOR	MT	MOUNT
ARCH.	ARCHITECT (ARCHITECTURAL)	O.S. & Y.	OUTSIDE SCREW & YOKE
BLK.	BLOCK	P/C	PRECAST
C.I.P.	CAST IN PLACE	P.S.I.	POUNDS PER SQUARE INCH
C.O.	CLEANOUT	R.W.C.	RAIN WATER COLLECTOR
CONC.	CONCRETE	SHT.	SHEET
CONN.	CONNECTION	SIM.	SIMILAR
C.W.R.	COLD WATER RISER	S.O.G.	SLAB ON GRADE
D.I.	DUCTILE IRON	SP	STANDPIPE
DET.	DETAIL	SQ. FT.	SQUARE FEET
DIA.	DIAMETER	STRUCT.	STRUCTURAL
F.D.	FLOOR DRAIN	S.V.	SEWER VALVE
GALV.	GALVANIZED	T.D.	TRENCH DRAIN
GEN'L	GENERAL	T.F.A.	TO FLOOR ABOVE
G.P.M.	GALLON PER MINUTE	T.F.B.	TO FLOOR BELOW
INV.	INVERT	TYP.	TYPICAL
M.C.	MECHANICAL CONTRACTOR	U.N.O.	UNLESS NOTED OTHERWISE
M.H.	MANHOLE	W/	WITH

DRAINAGE SCHEDULE

TYPE	SIZE	MANUFACTURER & CAT. NO.	REMARKS
F.D.-1	4"	SMITH 2140C-M-B-U (+7080)	12" DIA. HEAVY DUTY CAST IRON DECK DRAIN, VANDAL RESISTANT DUCTILE IRON GRATE EQUIPPED, SEDIMENT BUCKET & BACKWATER VALVE. (29 SQ. IN. GRATE FREE AREA)
F.D.-2	4"	SMITH 2140C-M-B-U (+2646Y)	12" DIA. HEAVY DUTY CAST IRON DECK DRAIN, VANDAL RESISTANT DUCTILE IRON GRATE EQUIPPED, SEDIMENT BUCKET & NO-HUB ADAPTOR. (29 SQ. IN. GRATE FREE AREA)
F.D.-3	4" OR 6" TO MATCH RISER	SMITH 2295-Y-FBS-U (+2646Y)	15" SQ. HEAVY DUTY CAST IRON DECK DRAIN, VANDAL RESISTANT DUCTILE IRON GRATE, FLASHING COLLAR & FLAT BOTTOM STRAINER. NO HUB OUTLET. (75 SQ. IN. GRATE FREE AREA)
F.D.-4	4"	WATTS BV-600	DRAIN PIT SIDEWALL DRAIN/BACKWATER VALVE W/ CAST IRON SECURED GRATE.
F.D.-5	4"	WATTS FD-200-DD-5-8	5" DIA. EPOXY COATED CAST IRON FLOOR DRAIN W/ ANCHOR FLANGE, CAST IRON HUB FUNNEL, SEDIMENT BUCKET & BACKWATER VALVE. BACKWATER VALVE ONLY REQUIRED AT GROUND TIER.
R.D.-1	4"	WATTS RD-260	ROOF DRAIN/OVERFLOW W/ EPOXY COATED CAST IRON DRAIN BODY, FLASHING CLAMPS & SELF LOCKING POLY DOME.

GENERAL NOTES

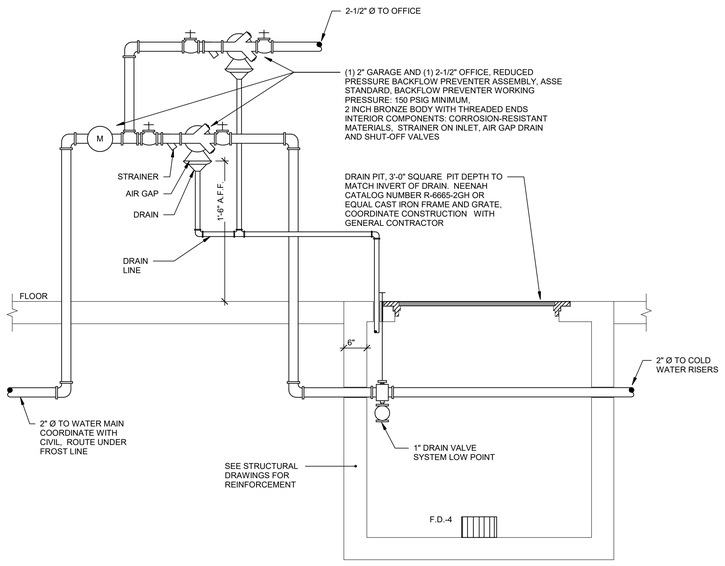
1. ALL DRAINAGE PIPING SHALL BE SCHEDULE 40 PVC W/ SOLVENT CEMENTED JOINTS. INSTALL EXPANSION FITTINGS IN ALL VERTICAL RISERS AT EVERY LEVEL. SLOPE ALL DRAINAGE PIPING AT 1/8" PER FOOT MINIMUM UNLESS NOTED OTHERWISE.
2. PIPING FOR COLD WATER RISER SHALL BE 2" TYPE "L" COPPER PIPE ABOVE GRADE AND 2" TYPE "K" COPPER PIPE BELOW GRADE. COLD WATER PIPING IS TO BE ROUTED A MINIMUM OF 1'-6" BELOW SLAB ON GRADE. SLOPE AT 1/4" PER 10'-0" MINIMUM TO DRAIN POINTS U.N.O. SYSTEM IS DESIGNED FOR NON POTABLE USE.
3. TOP OF DRAIN GRATE SHALL BE 1/2" BELOW FINISHED FLOOR, TYPICAL FOR ALL DRAINS. SEE STRUCTURAL DRAWINGS FOR FLOOR ELEVATIONS.
4. ALL PIPING AND RISERS EXPOSED TO POSSIBLE BUMPER DAMAGE SHALL BE PROTECTED W/ PIPE GUARDS. SEE STRUCTURAL DRAWINGS.
5. PROVIDE CAST IRON PIPE SLEEVES 2" LARGER THAN PIPE OUTSIDE DIA. AT GRADE SLAB PENETRATIONS. WRAP PIPES W/ 1/2" FIBERGLASS AND SEAL OPENING W/ APPROVED SEALANT. TYPICAL AT GRADE SLAB.
6. PROVIDE 1/3 CU. YD. CONCRETE THRUST BLOCK AT BASE OF ALL RAIN WATER COLLECTORS AND COLD WATER RISERS AND AT ALL BENDS BELOW GRADE, FOR SUPPORT.
7. PIPE HANGERS AND SUPPORTS SHALL BE ARRANGED SO THAT THEY WILL SUSTAIN THE LOADS AND RETAIN THE PIPING SECURELY IN POSITION UNDER FULLY LOADED CONDITIONS. SEE DETAILS 1 & 2/P-001.
8. COORDINATE ALL BLOCK-OUTS REQUIRED W/ GENERAL CONTRACTOR.
9. CLEANOUTS SHALL BE LOCATED AT THE BASE OF ALL DRAINAGE RISERS AND AT OTHER LOCATIONS SHOWN ON THE DRAWINGS. CLEANOUTS AT THE BASE OF RISERS SHALL BE INSTALLED SO THAT THE TOP OF CLEANOUT IS 11" A.F.F. TO CLEAR PIPE GUARD.
10. POWDER PROPELLED FASTENERS PROHIBITED.
11. PROVIDE EXPANSION LOOPS AT ALL LOCATIONS PIPING CROSSES EXPANSION JOINTS.



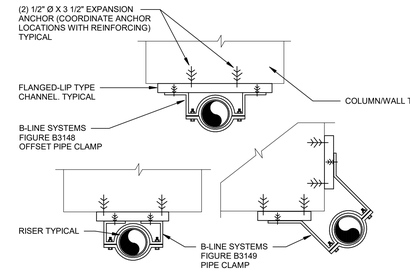
NOTES:
1. COORDINATE SUMP LOCATION W/ ELEVATOR BUFFERS.

6 ELEVATOR SUMP PIT DETAIL W/ DAYLIGHT DRAIN DETAIL

3/4" = 1'-0"

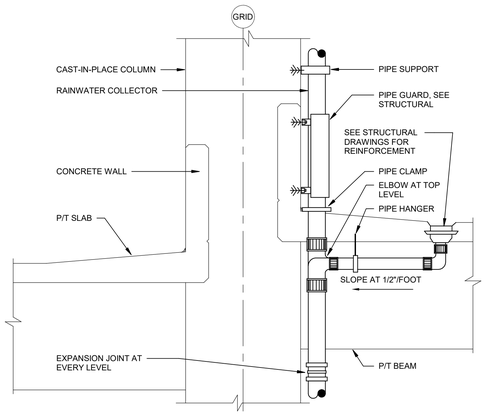


4 COLD WATER DRAIN PIT DETAIL

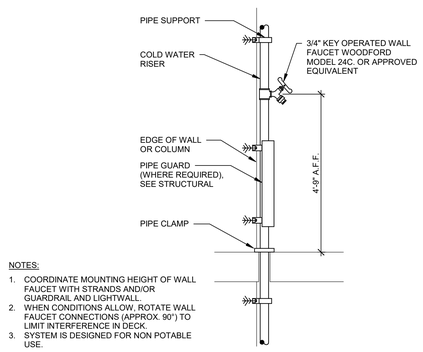


NOTES
1. IF ADDITIONAL DISTANCE FROM COLUMN OR WALL IS REQUIRED OR IF RISER IS MOUNTED AT EDGE OF COLUMN, USE B-LINE SYSTEMS FIGURE B3149 CLAMP. BEND AND DRILL HOLES IN LEGS AS REQUIRED.
2. CHANNEL OR CLAMP ARE NOT TO EXTEND PAST EDGE OF COLUMN OR WALL. IF OUTSIDE DIMENSION OF CLAMP IS GREATER THAN THICKNESS OF WALL OR COLUMN, USE A B-LINE SYSTEMS FIGURE B3149 HANGER, BEND LEGS INWARD AND DRILL HOLES AS REQUIRED.
3. ALL MATERIALS AND HARDWARE SHALL BE HOT DIPPED GALVANIZED OR STAINLESS STEEL.
4. SPECIFY TYPE OF PIPE FOR SIZING PIPE CLAMPS.

2 PIPE SUPPORT DETAIL

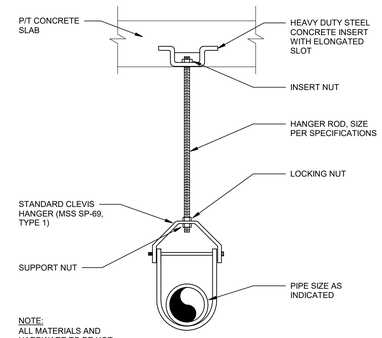


5 TYPICAL SUPPORTED SLAB DRAINAGE DETAIL



NOTES:
1. COORDINATE MOUNTING HEIGHT OF WALL FAUCET WITH STRANDS AND/OR GUARDRAIL AND LIGHTWALL.
2. WHEN CONDITIONS ALLOW, ROTATE WALL FAUCET CONNECTIONS (APPROX. 90°) TO LIMIT INTERFERENCE IN DECK.
3. SYSTEM IS DESIGNED FOR NON POTABLE USE.

3 TYPICAL COLD WATER FAUCET 3/4" DETAIL



NOTE:
ALL MATERIALS AND HARDWARE TO BE HOT DIPPED GALVANIZED OR STAINLESS STEEL.

1 PIPE HANGER DETAIL

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LONGVIEW, TX 75601

STATE OF TEXAS
GABRIEL G SALAZAR
97504
LICENSED
PROFESSIONAL ENGINEER
2-18-22

PROJECT NO.: 20011

DATE: 02/18/2022

REVISION SCHEDULE

Δ	Description	Date

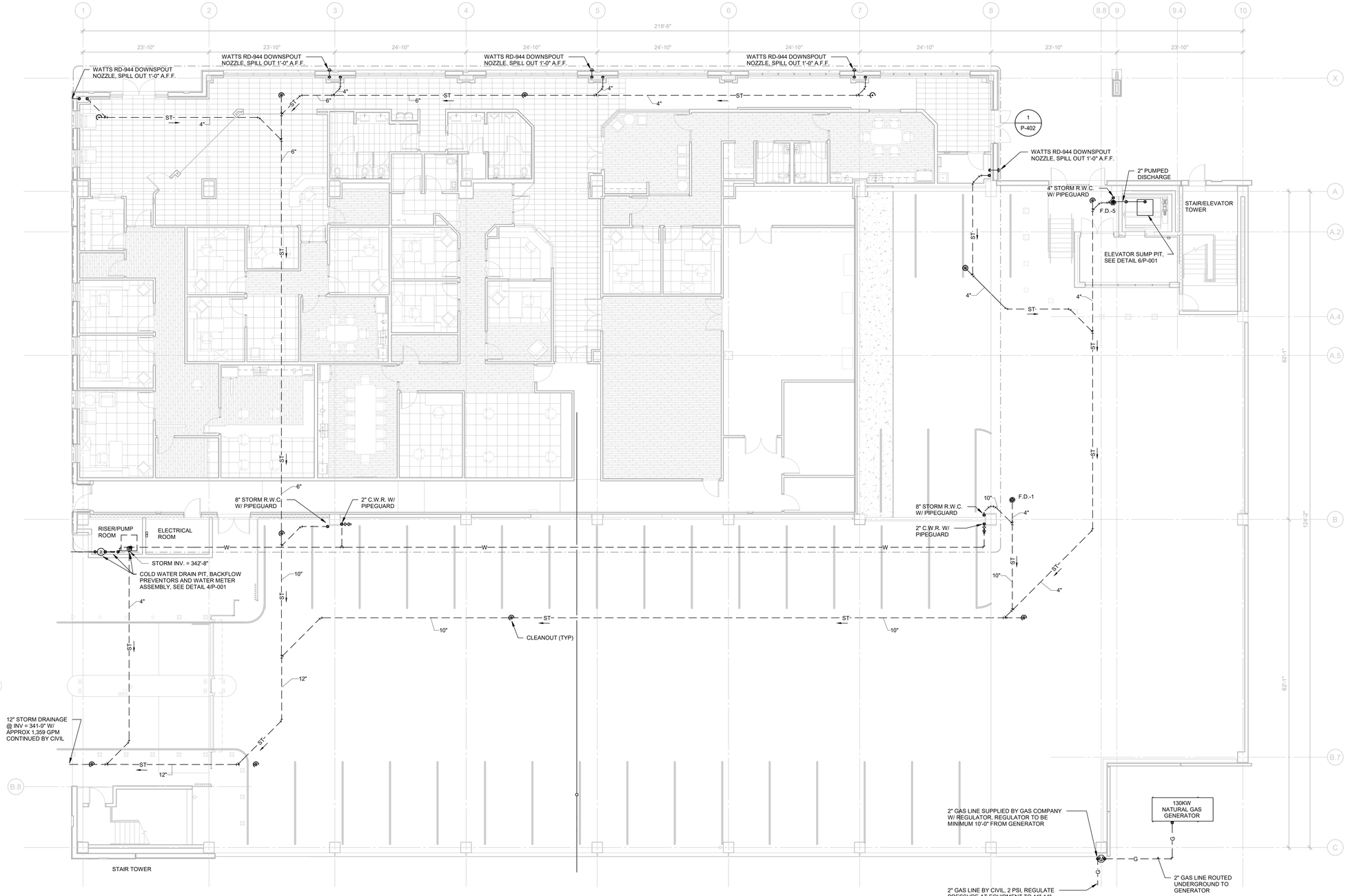
LEVEL 4
LEVEL 3
LEVEL 2
LEVEL G/OFFICE

SHEET NAME

GENERAL NOTES, SYMBOLS & ABBREVIATIONS

SHEET NO.

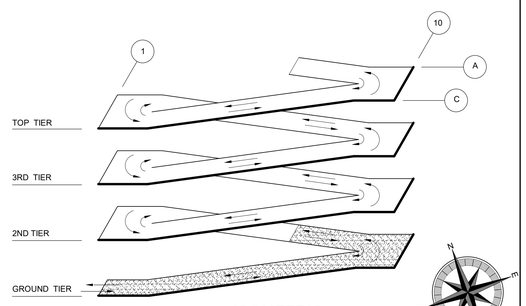
P-001



1 GROUND TIER PLAN

1/8" = 1'-0"

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THERE IS A MINIMUM OF 7'-2" HEADROOM BETWEEN ALL DRIVING SURFACES AND OVERHEAD ELECTRICAL, MECHANICAL, FIRE PROTECTION AND PLUMBING EQUIPMENT BEFORE INSTALLING.



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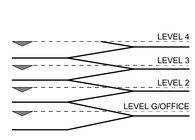
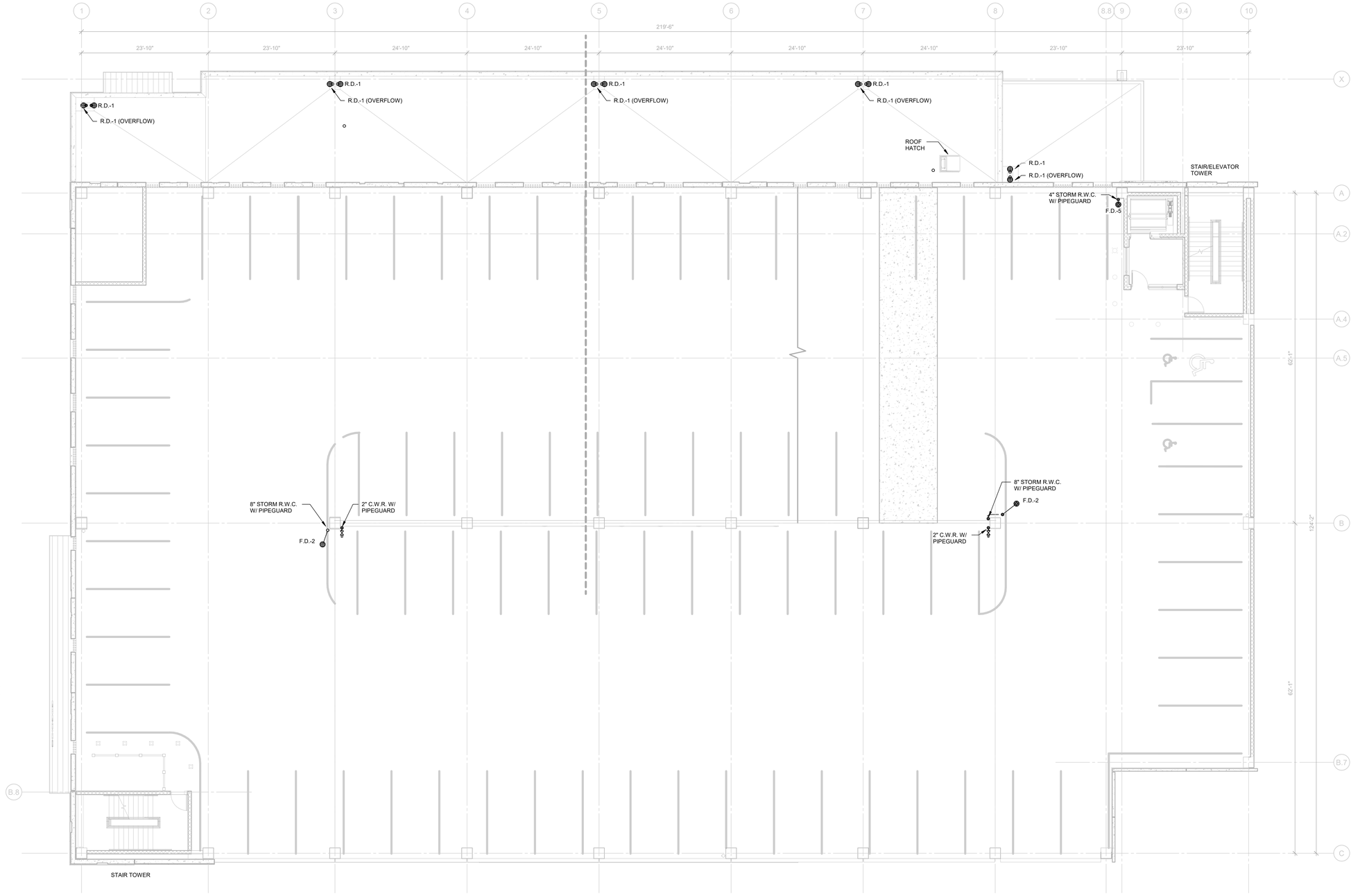


SHEET NAME

GROUND TIER PLAN

SHEET NO.

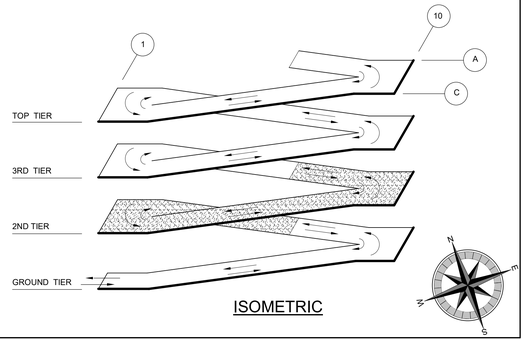
P-101



1 SECOND TIER PLAN

1/8" = 1'-0"

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THERE IS A MINIMUM OF 7'-2" HEADROOM BETWEEN ALL DRIVING SURFACES AND OVERHEAD ELECTRICAL, MECHANICAL, FIRE PROTECTION AND PLUMBING EQUIPMENT BEFORE INSTALLING.



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2-18-22

PROJECT NO.: 20011

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REVISION SCHEDULE		
Δ	Description	Date

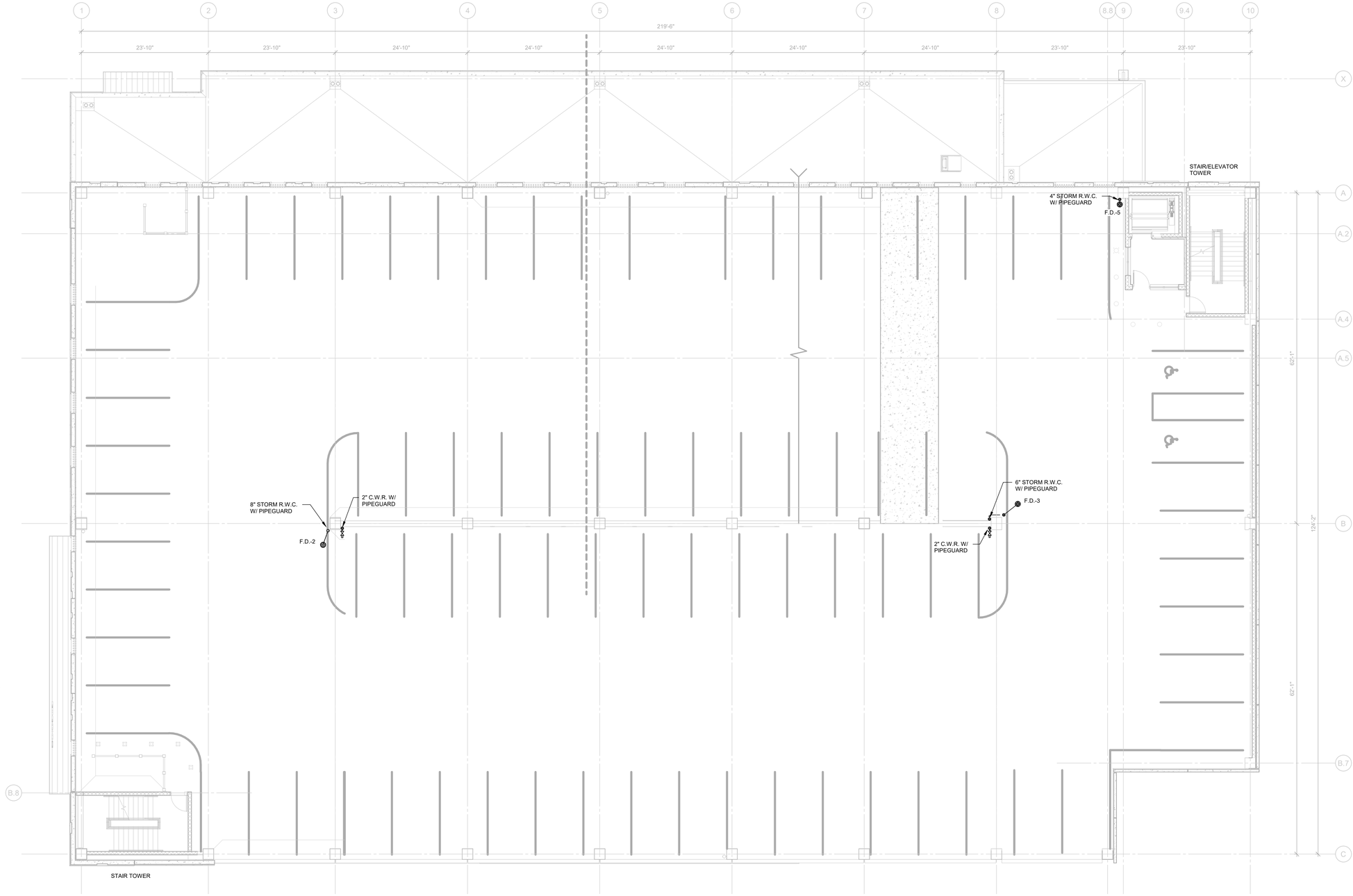
LEVEL 4
LEVEL 3
LEVEL 2
LEVEL G/OFFICE

SHEET NAME

SECOND TIER PLAN

SHEET NO.

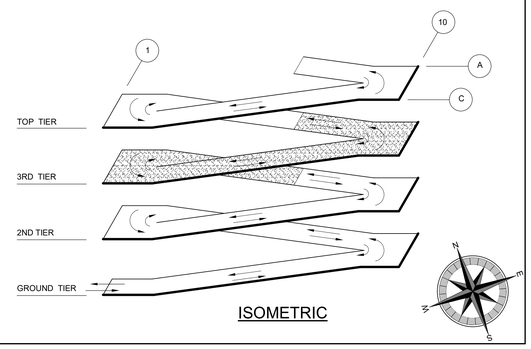
P-102



1 THIRD TIER PLAN

1/8" = 1'-0"

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THERE IS A MINIMUM OF 7'-2" HEADROOM BETWEEN ALL DRIVING SURFACES AND OVERHEAD ELECTRICAL, MECHANICAL, FIRE PROTECTION AND PLUMBING EQUIPMENT BEFORE INSTALLING.



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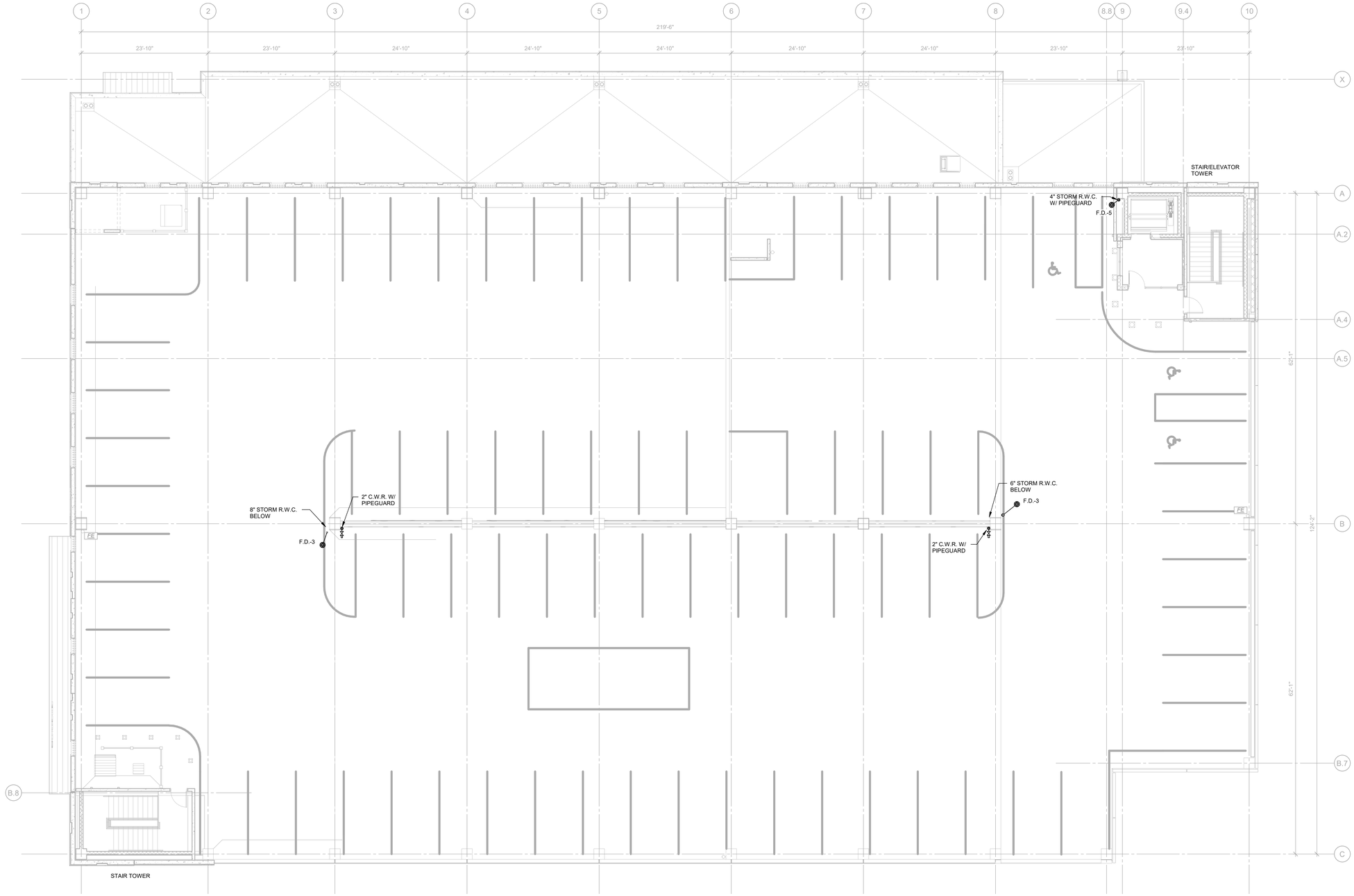
LEVEL 4
LEVEL 3
LEVEL 2
LEVEL G/OFFICE

SHEET NAME

THIRD TIER PLAN

SHEET NO.

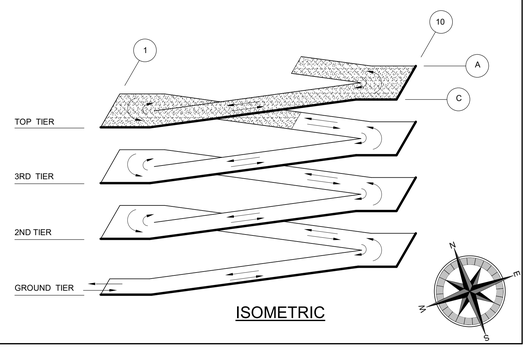
P-103



1 TOP TIER PLAN

1/8" = 1'-0"

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THERE IS A MINIMUM OF 7'-2" HEADROOM BETWEEN ALL DRIVING SURFACES AND OVERHEAD ELECTRICAL, MECHANICAL, FIRE PROTECTION AND PLUMBING EQUIPMENT BEFORE INSTALLING.



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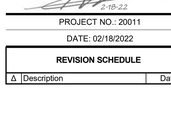


PROJECT NO.: 20011

DATE: 02/18/2022

REVISION SCHEDULE		
Δ	Description	Date

SHEET NAME

TOP TIER PLAN

SHEET NO.

P-104

OFFICE PLUMBING FIXTURE SCHEDULE

WTWT	MANUFACTURER	MODEL	ADA APPROVED	FIXTURE DISCRIPTION		MINIMUM SIZE CONNECTION					
				GENERAL	TRIM	HOT WATER	COLD WATER	WASTE	VENT	ACCESSORIES	REMARKS
3" FD-6	WATTS	FD-15-SQ		LACQUERED CAST BODY WITH BOTTOM OUTLET, NO HUB, FLASHING COLLAR AND ADJUSTABLE STRAINER HEAD (SQUARE 6x6), SEEPAGE OPENINGS, PLUGGED PRIMER TAP, WITH A 3" WASTE CONNECTION.				3"	2"		
ET-1	WESSELS	T-12		PRECHARGED THERMAL EXPANSION TANK, 4.8 GAL TANK VOLUME, 2.9 GAL. ACCEPTANCE VOLUME, DIAPHRAGM, 150 PSIG, 210 DEG F							
EWC-2A	ELKAY	LZSTL8WSSK	YES	ARI 1010; SURFACE MOUNTED, HIGH/LOW ADA MODEL WITH BOTTLE FILL STATION. MOUNT BOTTLE FILL STATION ABOVE LOWER UNIT. STAINLESS STEEL BASIN. STAINLESS STEEL BACK PLATE, ELEVATED ANTI-SQUIRT BUBBLER WITH STREAM GUARD, AUTOMATIC STREAM REGULATOR, MOUNTING BRACKET, 8 GPH, INSTALL PER ADA & MFG REQUIREMENTS.			1/2"	2"	2"		
EWH-1	LOCHINVAR	KSA030KD		26 GALLON ELECTRIC WATER HEATER; 4.5 KW HEATING ELEMENT, NON-SIMULTANEOUS OPERATION, 208/240V, 1 PHASE.							
LAV-1A	AMERICAN STANDARD	0356.421	YES	ANSI A112.19.2; WHITE VITREOUS CHINA, WALL HUNG SINK, SINGLE CENTER FAUCET HOLE, FRONT OVERFLOW, 15"x10" D-SHAPED BOWL, 6.5" DEEP.	ANSI A112.18.1 CHROME PLATED, SENSOR FAUCET, PLUG ADAPTOR POWER SUPPLY, CHROME FINISH, 0.5 GPM FLOW, INFRARED SENSOR, SLOAN MODEL EAF-100-PLG. FURNISH ONE PLUG IN TRANFORMER FOR EACH TOILET ROOM, SLOAN MODEL, 0345095. PROVIDE WITH VANDAL RESISTANT AERATOR. BELOW DECK MIXING VALVE (ASSE 1070 APPROVED) EQUAL TO POWERS MODEL E480.	1/2 1/2"	1/2"	2"	2"	1	
MB-1	FIAT	MSB 2424		24 INCH x 24 INCH x10 INCH MOLDED-STONE MOP BASIN, FLOOR MOUNTED, STAINLESS STEEL STRAINER.	ANSI A112.18.1; WALL TYPE SUPPLY WITH 2-3/8" LEVER HANDLES, SPOUT WALL BRACE, VACUUM BREAKER, HOSE END SPOUT, STRAINERS, ECCENTRIC ADJUSTABLE INLETS, INTEGRAL SCREWDRIVER STOPS WITH COVERING CAPS (CHICAGO FAUCETS MODEL 445-897SRXKCCP), AND ADJUSTABLE THREADED WALL FLANGES; 5 FEET OF 1/2 INCH DIAMETER PLAIN END, REINFORCED RUBBER HOSE, HOSE CLAMP, AND MOP HANGER.	3/4"	3/4"	3"	2"		
PP-1	GRUNDFOS	UP 15-29 SF		DOMESTIC WATER RECIRCULATION PUMP, 120V, 1 PHASE, 87 WATTS.							
SK-2A	ELKAY	LRAD3321	YES	ANSI A112.19.3; TWO COMPARTMENT DROP IN SINK, 13.5"x16" BOWL DIMENSIONS, 6-1/2" DEEP, 18 GAUGE, TYPE 304 STAINLESS STEEL, SOUND DEADENING UNDERCOATING, STAINLESS STEEL DRAINS WITH STAINLESS STEEL OPEN GRID STRAINER.	ANSI A112.18.1 CHROME PLATED, DECK MOUNTED FAUCET WITH 8" CENTERS, 8 INCH REACH RIGID/SWING GOOSENECK SPOUT WITH 2.2 GPM LAMINAR FLOW OUTLET, QUARTER TURN CARTRIDGES, 4 INCH WRIST BLADES, CHICAGO FAUCET 200-AGN8AE3-317AB, CHROME PLATED BRASS P-TRAP, TAILPIECE AND ARM WITH ESCUTCHEON; WITH OPEN GRID STRAINER. FAUCET TO INCLUDE SIDE SPRAY.	1/2"	1/2"	2"	2"	1	
UB-1	OATEY	391XX		UTILITY BOX, CW CONNECTION ONLY, WITH 1/4 TURN SHUTOFF VALVE AND WATER ARRESTOR INSTALLED.	WATTS SD-3 DUAL CHECK VACUUM BREAKER, STAINLESS STEEL, COMPLIES WITH FDA FOOD ADDITIVE REGULATIONS, ASSE 1022.		1/2"				
UR-1	AMERICAN STANDARD	WASHBROOK 6590.525	NO	ANSI A117.1; WALL MOUNT, BLOWOUT, WHITE, VITREOUS CHINA, 3/4 INCH TOP SPUD, CHINA BOLT CAPS; MOUNT FIXTURE ATSTANDARD HEIGHT, REFER TO ARCHITECTURAL ELEVATIONS.	ANSI A112.18.1; BATTERY POWERED SENSOR FLUSH VALVE, LOW WATER CONSUMPTION, SELECTRONIC MODEL 6063.013, 0.125 GPF, EXPOSED, CHROME PLATED, DIAPHRAGM TYPE, WITH ESCUTCHEON, SEAT BUMPER, INTEGRAL SCREWDRIVER STOP, AND VACUUM BREAKER.		3/4"	2"	2"	3	
UR-1A	AMERICAN STANDARD	WASHBROOK 6590.525	YES	ANSI A117.1; WALL MOUNT, BLOWOUT, WHITE, VITREOUS CHINA, 3/4 INCH TOP SPUD, CHINA BOLT CAPS; MOUNT FIXTURE AT ADA HEIGHT, REFER TO ARCHITECTURAL ELEVATIONS.	ANSI A112.18.1; BATTERY POWERED SENSOR FLUSH VALVE, LOW WATER CONSUMPTION, SELECTRONIC MODEL 6063.013, 0.125 GPF, EXPOSED, CHROME PLATED, DIAPHRAGM TYPE, WITH ESCUTCHEON, SEAT BUMPER, INTEGRAL SCREWDRIVER STOP, AND VACUUM BREAKER.		3/4"	2"	2"	3	
WC-1	AMERICAN STANDARD	MADERA 3451.528	NO	ANSI A112.19.2; FLOOR MOUNTED, SIPHON JET, WHITE, VITREOUS CHINA WITH ELONGATED RIM, 1-1/2 INCH TOP SPUD, CHINA BOLT CAPS. SEAT AT 15.0"H.	ANSI A112.18.1; EXPOSED, SENSOR TYPE, BATTERY POWERED, CHROME PLATED, DIAPHRAGM TYPE, ESCUTCHEON, SEAT BUMPER, INTEGRAL SCREWDRIVER STOP, AND VACUUM BREAKER, SELECTRONIC MODEL 6065.121, 1.28 GPM, ADA COMPLIANT, WITH MECHANICAL OVERRIDE FLUSH OPERATION.		1-1/4"	4"	2"	2	
WC-1A	AMERICAN STANDARD	MADERA 3043.528	YES	ANSI A112.19.2; FLOOR MOUNTED, SIPHON JET, WHITE, VITREOUS CHINA WITH ELONGATED RIM, 1-1/2 INCH TOP SPUD, CHINA BOLT CAPS. SEAT AT 16.5"H.	ANSI A112.18.1; EXPOSED, SENSOR TYPE, BATTERY POWERED, CHROME PLATED, DIAPHRAGM TYPE, ESCUTCHEON, SEAT BUMPER, INTEGRAL SCREWDRIVER STOP, AND VACUUM BREAKER, SELECTRONIC MODEL 6065 121, 1.28 GPM, ADA COMPLIANT, WITH MECHANICAL OVERRIDE FLUSH OPERATION.		1-1/4"	4"	2"	2	
WH-1	PRIER	C-633		HEAVY DUTY COMMERCIAL WALL HYDRANT, MILD CLIMATE, ANTI-SIPHON, BACKFLOW CHECK VALVE, SELF DRAINING, PROVIDE WITH OPTIONAL HYDRANT BOX.			3/4"				
WH-2	PRIER	C-634		HEAVY DUTY COMMERCIAL WALL HYDRANT, NON-FREEZE, ANTI-SIPHON, BACKFLOW CHECK VALVE, SELF DRAINING, PROVIDE WITH OPTIONAL HYDRANT BOX.			3/4"				

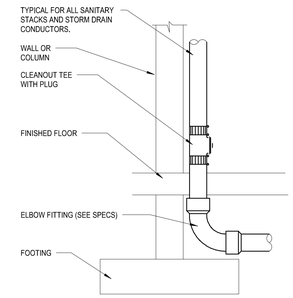
ACCESSORIES:

1. **SUPPLIES:** LOOSE KEY STOP AND FLEXIBLE SUPPLY; CHICAGO FAUCET NO. 1006.
2. **SEAT:** SOLID WHITE PLASTIC, OPEN FRONT, EXTENDED BACK, BRASS BOLTS, NO COVER, ANTIMICROBIAL GUARD, STA-TITE FASTENER, BEMIS MODEL 2155CT.
3. **CARRIER:** CAST IRON AND STEEL FRAMES WITH TUBULAR LEGS, LUGS FOR FLOOR AND WALL ATTACHMENT, THREADED FIXTURE STUDS FOR FIXTURE HANGER, BEARING STUDS, ZURN 1200 SERIES.

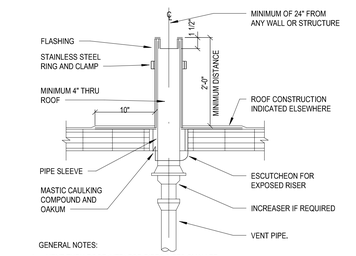
PLUMBING GENERAL NOTES

1. COORDINATE ROUTING OF PIPING WITH ALL OTHER TRADES PRIOR TO INSTALLATION TO AVOID CONFLICTS.
2. COMPLY WITH ALL APPLICABLE LOCAL AND STATE CODE REQUIREMENTS AS A MINIMUM UNLESS EXCEEDED BY PROJECT CONSTRUCTION DOCUMENTS. THE OWNER EXPECTS THE HIGHEST LEVEL OF WORKMANSHIP AND QUALITY STANDARDS.
3. PROVIDE ROUGH-INS AND FINAL CONNECTIONS TO FIXTURES AND EQUIPMENT FURNISHED BY EQUIPMENT CONTRACTOR . USE ONLY APPROVED EQUIPMENT AND FIXTURE SHOP DRAWINGS FOR ROUGH-IN SIZES AND LOCATIONS.
4. PROVIDE TRAP SEAL PROTECTION ON ALL FLOOR DRAINS, FLOOR SINKS AND HUB DRAINS SUBJECT TO EVAPORATION. INSTALL PER MANUFACTURERS RECOMMENDATIONS.
5. PROVIDE ASSE 1070 MIXING VALVE AT ALL BARRIER FREE SINKS AND ALL HAND WASHING SINKS TO PROVIDE TEMPERED WATER TO HOT WATER SIDE OF FAUCET.
6. PIPING INSTALLED IN THE WAY OF ACCESS OR MAINTENANCE TO EQUIPMENT SHALL BE RELOCATED AT THE EXPENSE OF THE INSTALLING CONTRACTOR.
7. PROVIDE SHUTOFF VALVES AT ALL FIXTURES AND EQUIPMENT.
8. COORDINATE LOCATIONS OF FLOOR DRAINS AND FLOOR SINKS WITH LOCATIONS OF EQUIPMENT AND EQUIPMENT HOUSEKEEPING PADS. COORDINATE WITH SLOPING OF FLOOR SO THAT RIM OF DRAIN IS FLUSH WITH FINISH FLOOR.
9. COORDINATE HANGING AND SUPPORT OF PIPING WITH STRUCTURAL.
10. PROVIDE PIPE SLEEVES WHERE PIPES PENETRATE WALLS.
11. PROVIDE PIPE SLEEVES WHERE PIPES RUN BELOW FOOTING.
12. INSTALL EXTERIOR CLEAN OUTS FLUSH WITH SURFACE.
13. SECURE WALL CLEANOUTS TO WALL STUDS IN LOCATIONS WHERE A WALL CLEANOUT IS USED IN A STUD WALL. WALL CLEANOUTS SHALL NOT SHIFT OR MOVE WHEN A DRAIN CLOG REMOVING DEVICE IS USED.
14. INSTALL PIPING IN AN ORGANIZED MANNER. DO NOT ROUTE IN FRONT OF WINDOWS.
15. THE INSTALLATION OF ALL PIPING SHALL BE CLOSELY COORDINATED WITH NEW FIRE PROTECTION PIPING, SHEET METAL, HVAC PIPING, ELECTRICAL, AND STRUCTURAL CONDITIONS. NOT ALL REQUIRED OFFSETS AND FITTINGS ARE INDICATED, BUT SHALL BE PROVIDED. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR CLEARANCES. THE LOCATION OF SANITARY, STORM AND VENT LINES SHALL TAKE PRECEDENCE OVER HVAC AND FIRE PROTECTION PIPING AND ELECTRICAL CONDUIT AND CABLE TRAY.
16. PROVIDE WATER HAMMER ARRESTORS PER POI WH-201 AND UP STREAM OF ALL AUTOMATIC AND FAST CLOSING VALVES INCLUDING BUT NOT LIMITED TO SOLENOID VALVES.
17. ALL LAVATORY AND WATER CLOSET SENSOR WIRING SHALL BE CONCEALED WITHIN WALLS AND ABOVE CEILINGS.
18. PROVIDE AND INSTALL CLEANOUTS AT THE BASE OF ALL STORM, SANITARY, AND VENT PIPE RISERS. INSTALL CLEANOUTS AT 12" A.F.F.

REFER TO P0.01 FOR ADDITIONAL GENERAL NOTES, ABBREVIATIONS, AND SYMBOL LEGEND



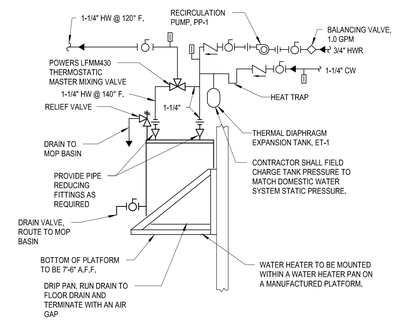
3 RISER CLEAN OUT DETAIL



GENERAL NOTES:

1. VENT THRU ROOF (VTR) FOR PIPES SIZES SMALLER THAN 3" MUST BE INCREASED TO MINIMUM OF 4".
2. INCREASE IN PIPE DIAMETER MUST BE MADE A MINIMUM OF 12" INSIDE THE BUILDING.

2 PLUMBING VENT THROUGH ROOF DETAIL



1 ELECTRIC WATER HEATER PIPING DETAIL (EWH-1)

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LONGVIEW, TX 75601

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REVISION SCHEDULE		
Δ	Description	Date

STATE OF TEXAS
THOMAS LOREN FREY
109004
Exp. 01.31.2023
LICENSED PROFESSIONAL ENGINEER

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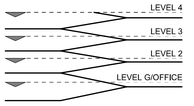
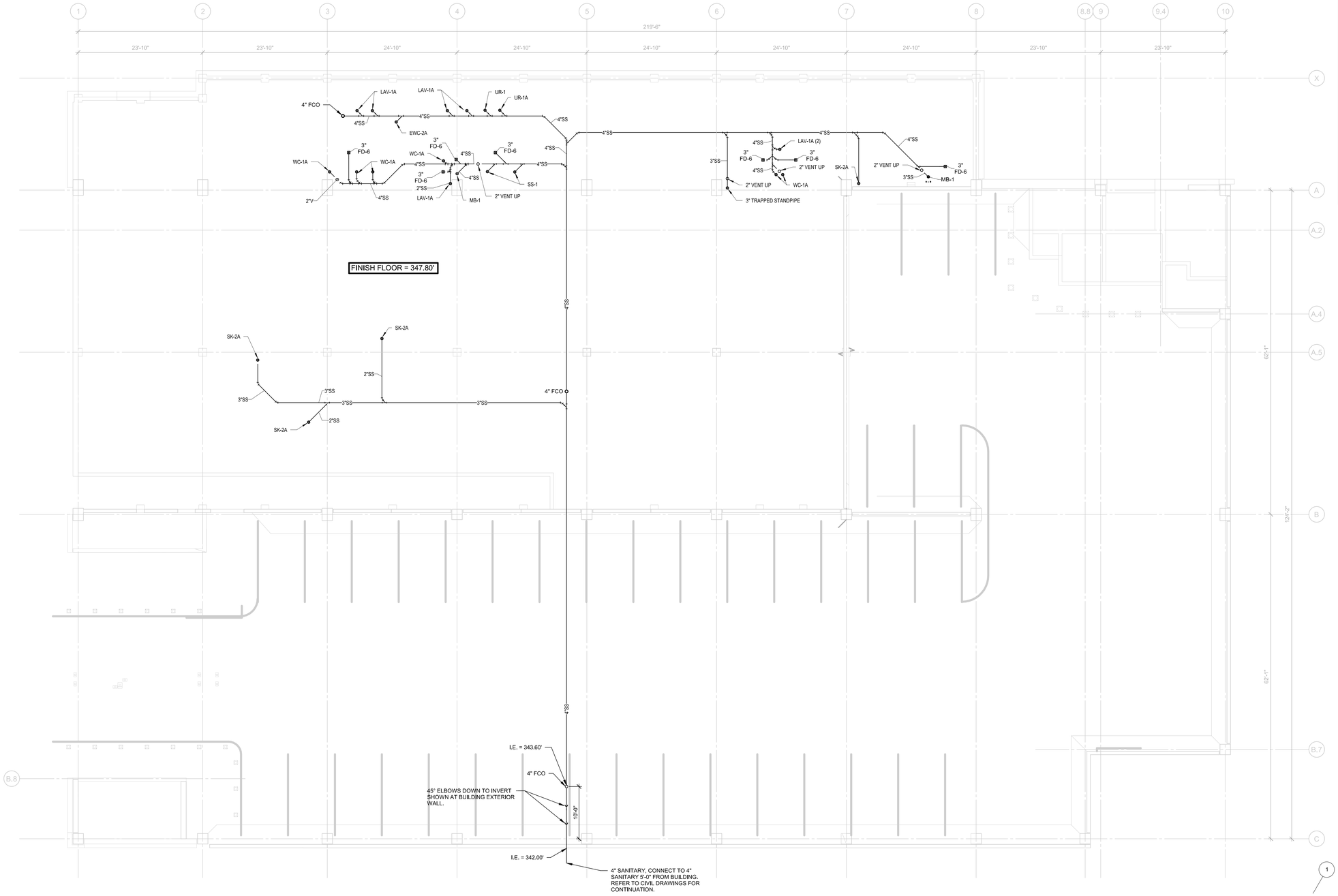


SHEET NAME

GENERAL OFFICE PLUMBING INFORMATION

SHEET NO.

P-400



1 FOUNDATION OFFICE PLUMBING PLAN
1/8" = 1'-0"

PLUMBING KEYNOTES

1. PROVIDE AND INSTALL 4" SANITARY WASTE CONNECTION TO EACH FLOOR MOUNT WATER CLOSET. PROVIDE 1 1/4" CW TO EACH FLUSH VALVE. PROVIDE AND INSTALL WATER HAMMER ARRESTOR FOR EACH DROP.
2. PROVIDE AND INSTALL 2" WASTE CONNECTION TO EACH WALL MOUNT URINAL. CONTINUE VERTICALLY WITH 2" VENT. PROVIDE 3/4" CW TO FLUSH VALVE. PROVIDE AND INSTALL WATER HAMMER ARRESTOR FOR EACH DROP.
3. PROVIDE AND INSTALL 1-1/4" WASTE PIPE WITH P-TRAP TO DRAIN OF LAVATORY. CONNECT TO 2" WASTE PIPE IN WALL. CONTINUE UP IN WALL WITH 2" VENT PIPE. PROVIDE 1/2" H&CW DOWN IN WALL TO ANGLE VALVES AT APPROXIMATELY 1'-0" AFF. ROUTE H&CW TO ASSE 1070 MIXING VALVE. ROUTE OUTLET TO FAUCET CONNECTION. GENERAL TRADES SHALL PROVIDE APRON BELOW THE COUNTERTOP TO HIDE/PROTECT PIPING. PROVIDE WALL CLEANOUT IN 2" W STACK. MOUNT 18" A.F.F AND INSTALL STAINLESS STEEL COVER. PROVIDE AND INSTALL WATER HAMMER ARRESTOR FOR EACH DROP.
4. EACH FLOOR DRAIN AND FLOOR SINK SHALL BE PROTECTED WITH A TRAP SEAL INSERT, AS NOTED IN SPECIFICATIONS. INSTALL FLOOR DRAIN/SINK FLUSH AND LEVEL WITH FINISHED FLOOR.
5. PROVIDE AND INSTALL 1-1/4" WASTE CONNECTION TO HIGH/LOW WATER COOLER. PROVIDE 1/2" CW TO CONNECTION OF UNIT. INSTALL PER MFG INSTALLATION INSTRUCTIONS. INSTALL BOTTLE FILL STATION ABOVE LOWER WATER COOLER.
6. MOP BASIN SERVICE SINK. PROVIDE TRAPPED 3" WASTE LINE TO FIXTURE. PROVIDE 3/4"H&CW TO SERVICE FAUCET WITH BUCKET HOOK. WALL SUPPORT AND VACUUM BREAKER.
7. PROVIDE AND INSTALL 1-1/2" WASTE TO P-TRAPS FOR EACH BOWL OF SINK. CONNECT TO 2" WASTE LINES IN THE WALL. CONTINUE UP IN WALL WITH MINIMUM 2" VENT LINES. PROVIDE 1/2"H&CW DOWN TO ANGLE STOP VALVE UNDER THE SINK COUNTERS. ROUTE H&CW TO ASSE 1070 MIXING VALVE. ROUTE OUTLET TO FAUCET CONNECTION. ROUTE BRAIDED STAINLESS STEEL SUPPLIES TO CONNECTIONS OF FAUCET. PROVIDE AND INSTALL WATER HAMMER ARRESTOR FOR EACH DROP.
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10. INTERIOR HOSE BIBB OR WALL HYDRANT. ROUTE 3/4" CW DOWN IN WALL AND INSTALL HYDRANT AT 18" A.F.F., PROVIDE AND INSTALL SHUTOFF VALVE NEAR THE COLD WATER MAIN IN AN ACCESSIBLE LOCATION. PROVIDE AND INSTALL WATER HAMMER ARRESTOR.
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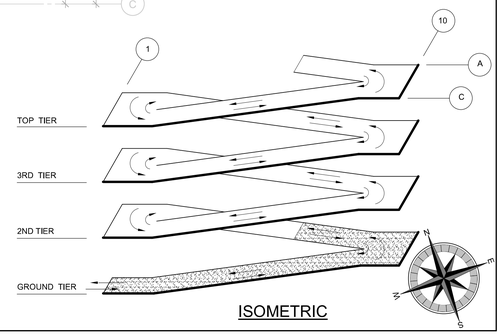
13. ROUTE 3/4" CONDENSATE PIPING FROM HVAC UNIT TO FLOOR DRAIN, MOP BASIN, OR STANDPIPE. SLOPE ALL CONDENSATE PIPING AT 1/8" PER FOOT MINIMUM. TERMINATE CONDENSATE PIPE WITH CODE APPROVED AIR GAP AND CUT PIPE AT 45° ANGLE. COORDINATE CONDENSATE PIPE ROUTING WITH OTHER TRADES.



ISOMETRIC

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A NEW FACILITY FOR
GREGG COUNTY - PARKING GARAGE & OFFICE
100 E. METHVIN ST.
LONGVIEW, TX 75601

PROJECT NO.: 20011
DATE: 02/18/2022

REVISION SCHEDULE

Δ	Description	Date

STATE OF TEXAS
THOMAS LOREN FREY
109004
LICENSED
PROFESSIONAL ENGINEER
02-18-22

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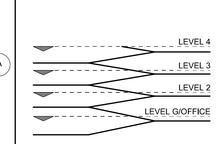

SHEET NAME
FOUNDATION OFFICE PLUMBING PLAN

SHEET NO.
P-401

PLUMBING KEYNOTES

1. PROVIDE AND INSTALL 4" SANITARY WASTE CONNECTION TO EACH FLOOR MOUNT WATER CLOSET. PROVIDE 1 1/4" CW TO EACH FLUSH VALVE. PROVIDE AND INSTALL WATER HAMMER ARRESTOR FOR EACH DROP.
2. PROVIDE AND INSTALL 2" WASTE CONNECTION TO EACH WALL MOUNT URINAL, CONTINUE VERTICALLY WITH 2" VENT. PROVIDE 3/4" CW TO FLUSH VALVE. PROVIDE AND INSTALL WATER HAMMER ARRESTOR FOR EACH DROP.
3. PROVIDE AND INSTALL 1-1/4" WASTE PIPE WITH P-TRAP TO DRAIN OF LAVATORY. CONNECT TO 2" WASTE PIPE IN WALL. CONTINUE UP IN WALL WITH 2" VENT PIPE. PROVIDE 1/2" H&CW DOWN IN WALL TO ANGLE VALVES AT APPROXIMATELY 1'-0" AFF. ROUTE H&CW TO ASSE 1070 MIXING VALVE. ROUTE OUTLET TO FAUCET CONNECTION. GENERAL TRADES SHALL PROVIDE APRON BELOW THE COUNTERTOP TO HIDE/PROTECT PIPING. PROVIDE WALL CLEANOUT IN 2" H STACK, MOUNT 18" A.F.F AND INSTALL STAINLESS STEEL COVER. PROVIDE AND INSTALL WATER HAMMER ARRESTOR FOR EACH DROP.
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5. PROVIDE AND INSTALL 1-1/4" WASTE CONNECTION TO HIGH/LOW WATER COOLER. PROVIDE 1/2" CW TO CONNECTION OF UNIT. INSTALL PER MFG INSTALLATION INSTRUCTIONS. INSTALL BOTTLE FILL STATION ABOVE LOWER WATER COOLER.
6. MOP BASIN SERVICE SINK. PROVIDE TRAPPED 3" WASTE LINE TO FIXTURE. PROVIDE 3/4"H&CW TO SERVICE FAUCET WITH BUCKET HOOK. WALL SUPPORT AND VACUUM BREAKER.
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9. PROVIDE AND INSTALL 1/2" CW LINE DOWN TO REFRIGERATOR UTILITY BOX, PROVIDE WATER CONNECTIONS PER MANUFACTURERS INSTRUCTION TO REFRIGERATOR. PROVIDE AND INSTALL WATTS MODEL SD3 BACKFLOW DEVICE.
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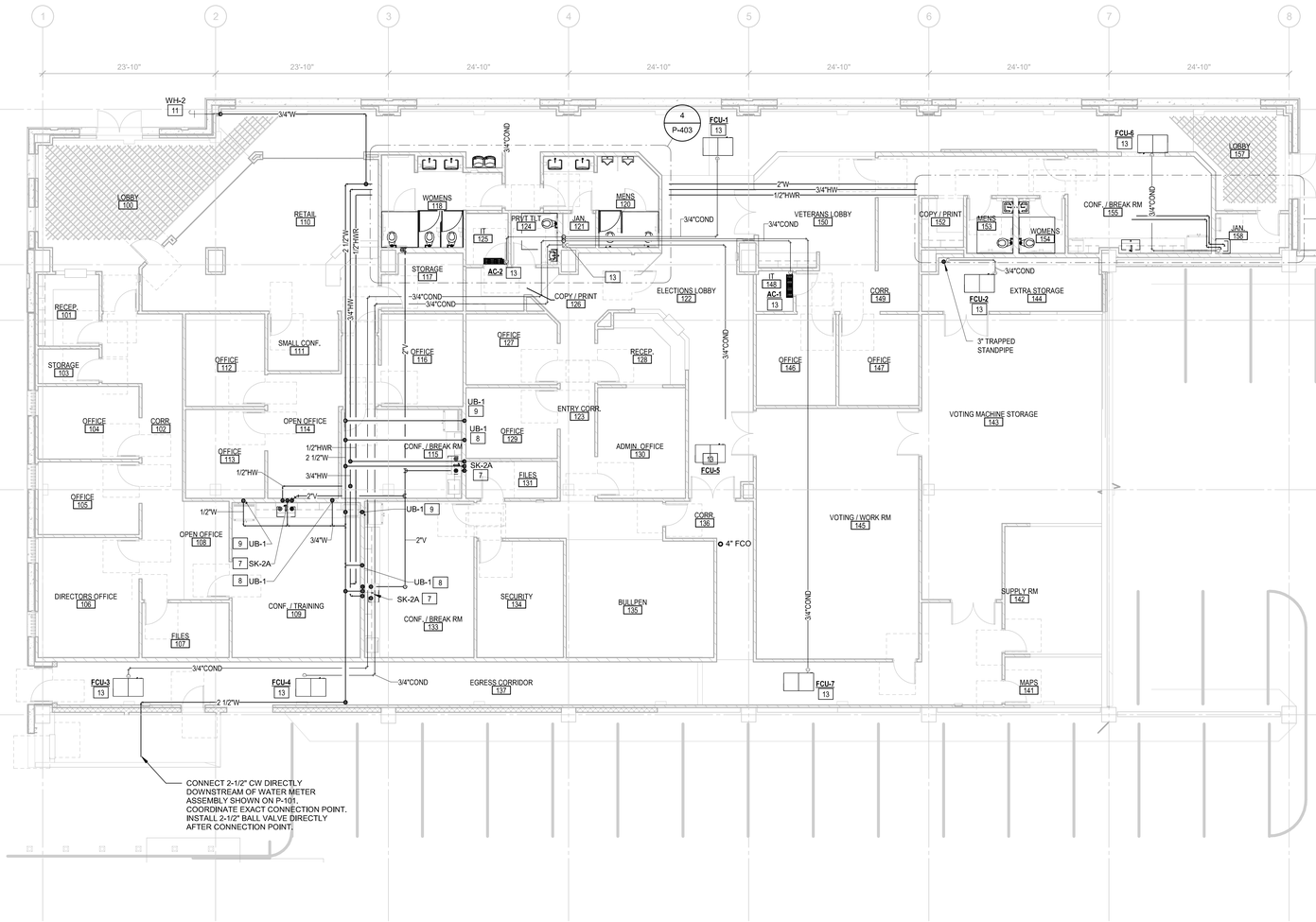

1 OFFICE PLUMBING PLAN

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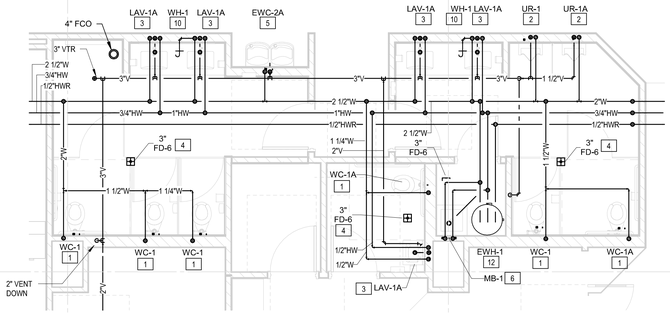
LEVEL 4
LEVEL 3
LEVEL 2
LEVEL G/OFFICE

SHEET NAME

OFFICE PLUMBING PLAN

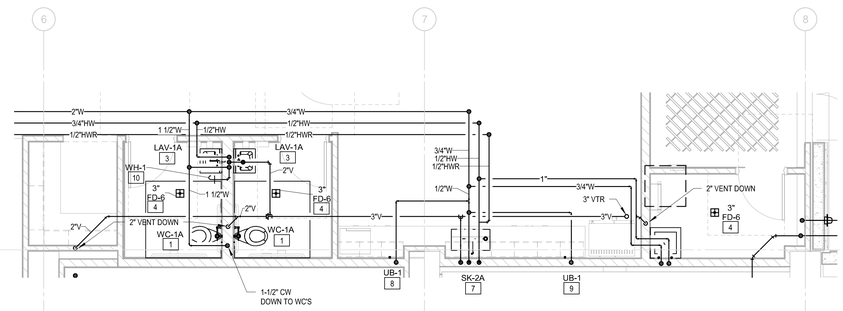
SHEET NO.

P-402



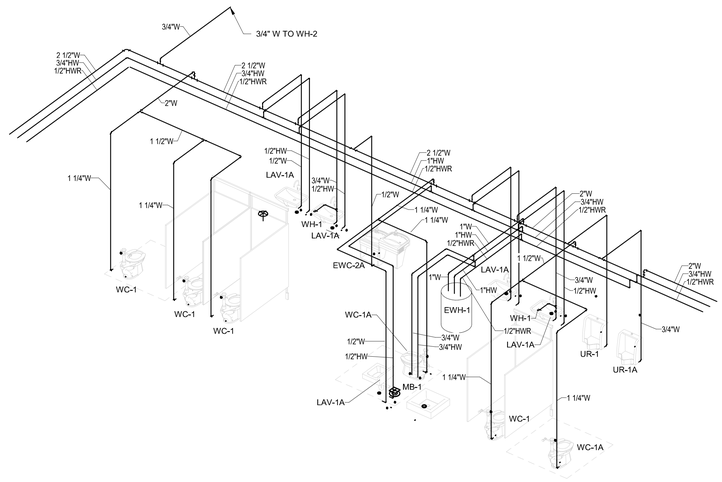
4 ENLARGED WEST PLUMBING PLAN

1/4" = 1'-0"

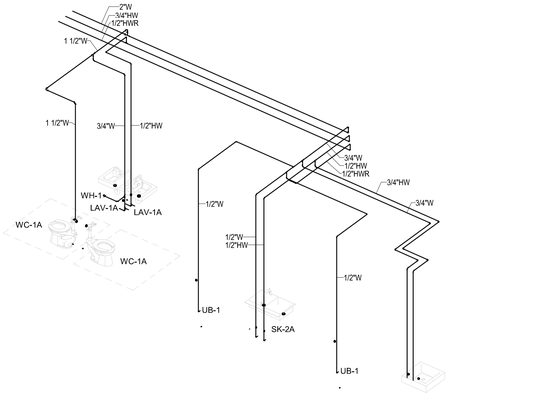


1 ENLARGED EAST PLUMBING PLAN

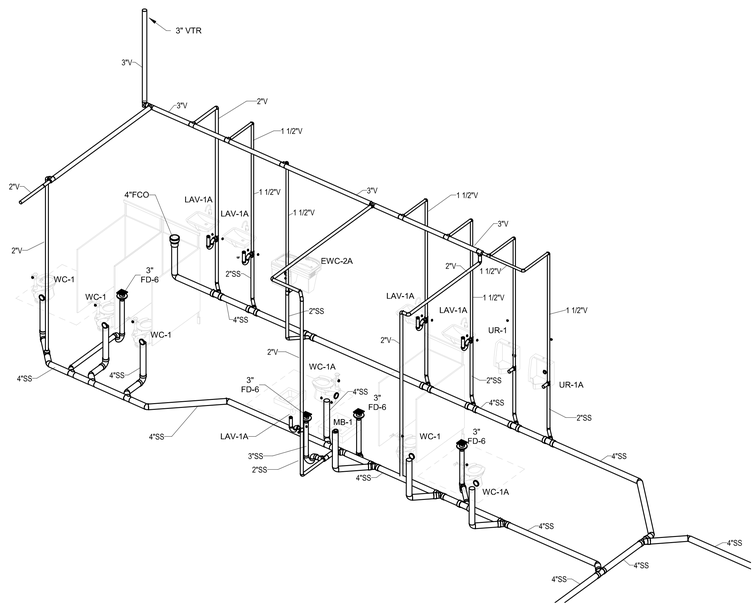
1/4" = 1'-0"



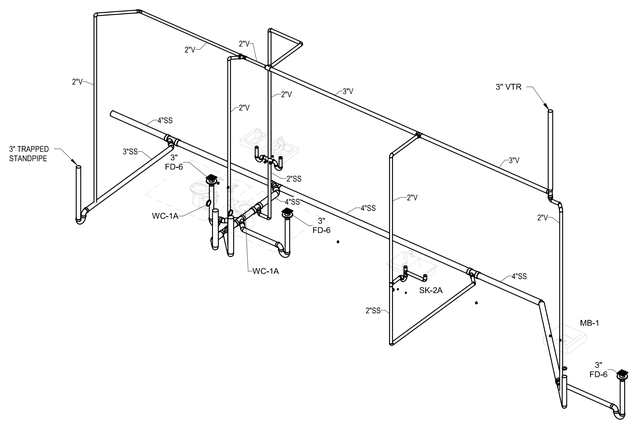
5 WEST DOMESTIC WATER ISOMETRIC



2 EAST DOMESTIC WATER ISOMETRIC



6 WEST SANITARY WASTE ISOMETRIC



3 EAST SANITARY WASTE ISOMETRIC

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?

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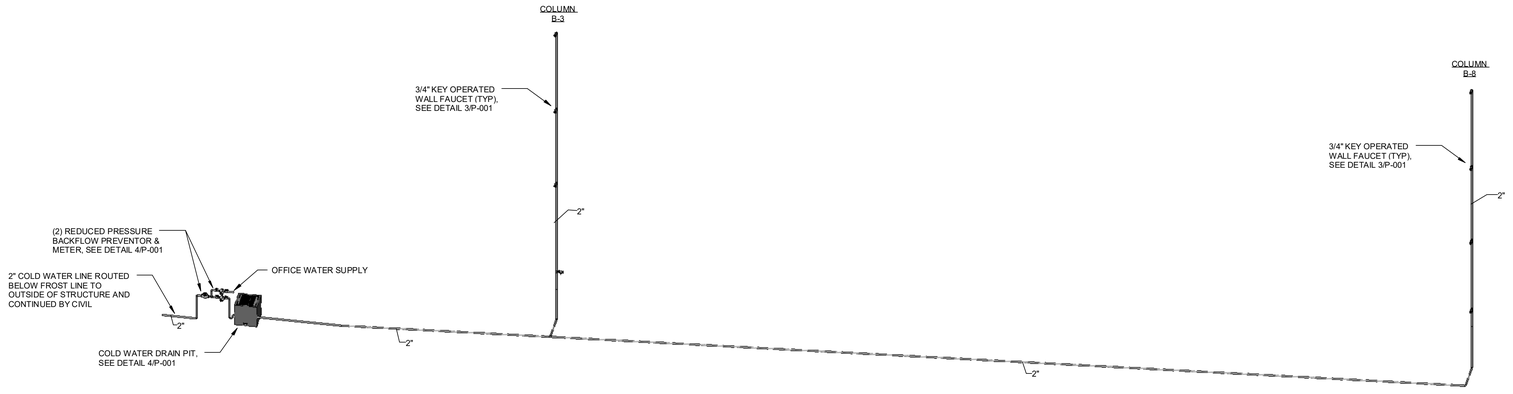
LEVEL 4
LEVEL 3
LEVEL 2
LEVEL G/OFFICE

SHEET NAME
ENLARGED OFFICE PLUMBING PLANS

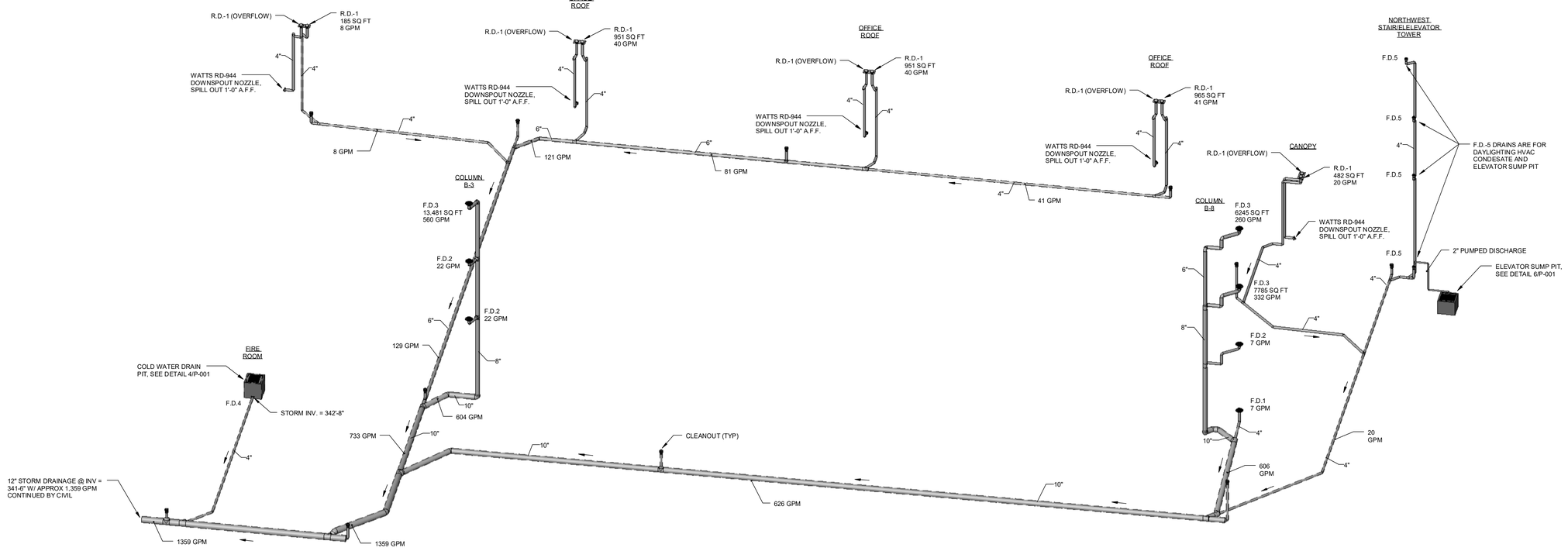
SHEET NO.
P-403

SHEET NOTES

1. GPM CALCULATIONS ARE BASED ON A RAINFALL RATE OF 4.0" PER HOUR. COVERED TIER CONTRIBUTIONS FROM WIND BLOWN RAIN IS BASED ON 50% OF OPEN WALL AREA TIMES THAT THE TOP TIER RATE.
2. SLOPE ALL DRAINAGE PIPING AT 1/8" PER FOOT MINIMUM UNLESS NOTED OTHERWISE.
3. SLOPE ALL WATER PIPING AT 1/40" PER FOOT MINIMUM UNLESS NOTED OTHERWISE SO SYSTEM CAN BE DRAINED TO COLD WATER PIT DURING COLD WEATHER.



2 DOMESTIC WATER RISER DIAGRAM



1 STORM DRAINAGE RISER DIAGRAM

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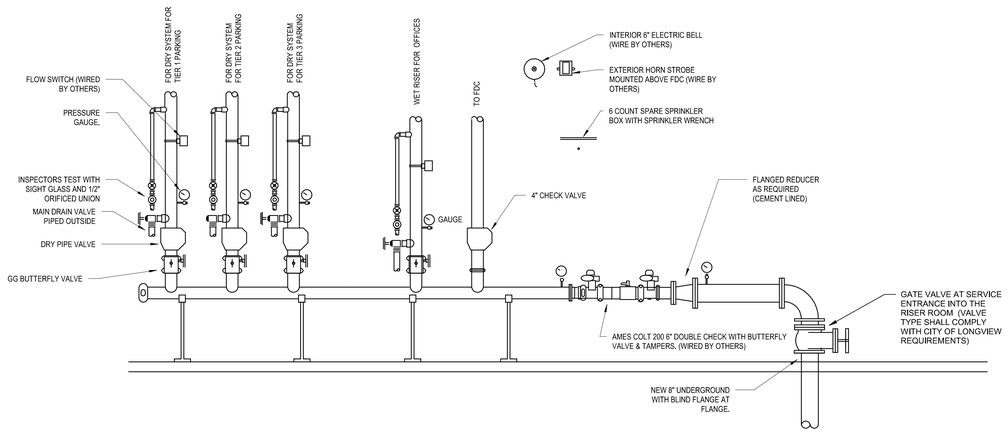
LEVEL 4
LEVEL 3
LEVEL 2
LEVEL G/OFFICE

SHEET NAME

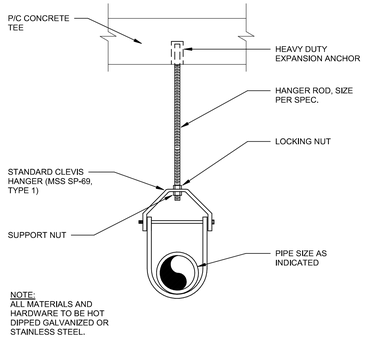
RISER DIAGRAMS

SHEET NO.

P-601

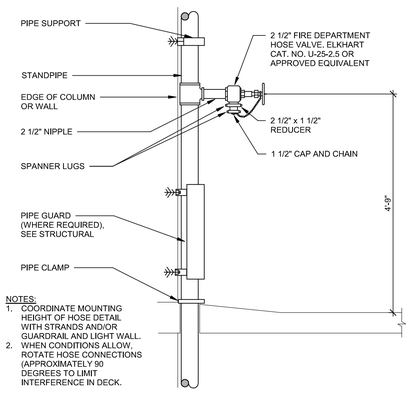


2 FIRE SPRINKLER RISER DETAIL
12" = 1'-0"



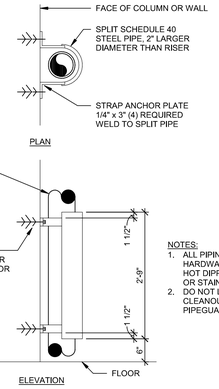
NOTE:
ALL MATERIALS AND HARDWARE TO BE HOT DIPPED GALVANIZED OR STAINLESS STEEL.

5 PIPE HANGER DETAIL
3/4" = 1'-0"



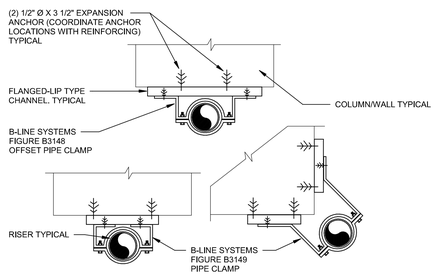
NOTES:
1. COORDINATE MOUNTING HEIGHT OF HOSE DETAIL WITH STRANDS AND/OR GUARDRAIL AND LIGHT WALL.
2. WHEN CONDITIONS ALLOW, ROTATE HOSE CONNECTIONS (APPROXIMATELY 90 DEGREES TO LIMIT INTERFERENCE IN DECK.

7 FIRE DEPARTMENT HOSE CONNECTION DETAIL
3/4" = 1'-0"



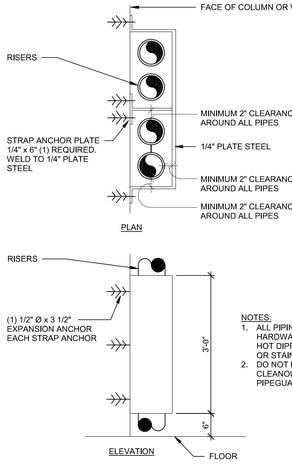
NOTES:
1. ALL PIPING, PLATES, HARDWARE, ETC., TO BE HOT DIPPED GALVANIZED OR STAINLESS STEEL.
2. DO NOT LOCATE CLEANOUTS BEHIND PIPEGUARDS.

4 PIPE GUARD DETAIL
3/4" = 1'-0"



NOTES
1. IF ADDITIONAL DISTANCE FROM COLUMN OR WALL IS REQUIRED OR IF RISER IS MOUNTED AT EDGE OF COLUMN, USE B-LINE SYSTEMS FIGURE B3149 CLAMP. BEND AND DRILL HOLES IN LEGS AS REQUIRED.
2. CHANNEL OR CLAMP ARE NOT TO EXTEND PAST EDGE OF COLUMN OR WALL. IF OUTSIDE DIMENSION OF CLAMP IS GREATER THAN THICKNESS OF WALL OR COLUMN, USE A B-LINE SYSTEMS FIGURE B3149 HANGER, BEND LEGS INWARD AND DRILL HOLES AS REQUIRED.
3. ALL MATERIALS AND HARDWARE SHALL BE HOT DIPPED GALVANIZED OR STAINLESS STEEL.
4. SPECIFY TYPE OF PIPE FOR SIZING PIPE CLAMPS.

6 PIPE SUPPORT DETAIL
3/4" = 1'-0"



NOTES:
1. ALL PIPING, PLATES, HARDWARE, ETC., TO BE HOT DIPPED GALVANIZED OR STAINLESS STEEL.
2. DO NOT LOCATE CLEANOUTS BEHIND PIPEGUARDS.

3 MULTIPLE RISER PIPE GUARD DETAIL
3/4" = 1'-0"

FIRE SPRINKLER GENERAL NOTES

1. ALL WORK SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH NFPA 13 AND STATE CODES. ALL COMPONENTS SHALL BE UL LISTED AND FM APPROVED.
2. ALL NEW SPRINKLERS SHALL MATCH EXISTING INSTALLED.
3. REFER TO "G" DRAWINGS AND TITLE SHEET "T" FOR CODE COMPLIANCE AND ADDITIONAL INFORMATION.
4. PROVIDE ALL NECESSARY OFFSETS, RAISES OR DROPS IN PIPING AND AUXILIARY DRAINS REQUIRED BY BUILDING CONDITIONS.
5. EXAMINE THE JOB CONDITIONS AND VERIFY ALL MEASUREMENTS, DISTANCES, ELEVATIONS, CLEARANCES ETC.
6. ARCHITECTURAL, HVAC AND ELECTRICAL BACKGROUND INFORMATION IS SHOWN FOR COORDINATION PURPOSES ONLY. REFER TO THE PROPER DRAWINGS FOR EXACT LOCATIONS, SIZES AND QUANTITIES OF OTHER TRADES' WORK.
7. AUTOCAD (DWG) COMPATIBLE FILES WILL BE MADE AVAILABLE TO THE FIRE SPRINKLER CONTRACTOR IN ELECTRONIC FORMAT ON REQUEST.
8. SYSTEMS SHALL BE DESIGNED AND SIZED HYDRAULICALLY IN ACCORDANCE WITH NFPA 13, OWNERS INSURER, AND ALL STATE AND LOCAL CODES AS INTERPRETED BY THE AUTHORITY HAVING JURISDICTION.
9. ALL SYSTEM PIPING SHALL BE INSTALLED TO ALLOW DRAINAGE BACK TO THE SYSTEM RISERS WHEN POSSIBLE. WHERE IMPRACTICAL, AUXILIARY DRAINS SHALL BE INSTALLED AND DRAINED TO AN ACCEPTABLE LOCATION AS AGREED TO BY THE OWNER AND ENGINEER.
10. COORDINATE SPRINKLER HEAD LOCATIONS AND PIPE ROUTING WITH OTHER TRADES TO AVOID INTERFERENCE REFER TO ARCHITECTURAL REFLECTED CEILING PLANS AND THE MECHANICAL AND ELECTRICAL PLANS FOR LOCATIONS OF CEILINGS, DIFFUSERS, LIGHTS AND OTHER CEILING ORNAMENTATION.
11. ALL MAINS RUNNING PARALLEL WITH BUILDING JOISTS/BEAMS SHALL BE HUNG USING HANGERS ATTACHED TO SUPPORTING STEEL SUPPORTED AT PANEL POINTS OF JOISTS AND IN ACCORDANCE WITH NFPA STANDARDS.
12. REFER TO GENERAL AND SUPPLEMENTAL CONDITIONS OF BID INSTRUCTIONS FOR CUTTING AND PATCHING OF WALLS AND ROOFS. THE FIRE PROTECTION CONTRACTOR IS RESPONSIBLE FOR ALL PENETRATIONS REQUIRED TO COMPLETE THE WORK. SEE MECHANICAL SPECIFICATIONS FOR PIPE SEALS, WATERPROOFING AND SLEEVES, AND ESCUTCHEON REQUIREMENTS.
13. REFER TO SPRINKLER SCHEDULE FOR SPRINKLER TYPES. DEFAULT SPRINKLER SHALL BE BRASS UPRIGHTS FOR EXPOSED WAREHOUSE AREAS AND CONCEALED PENDANT HEADS FOR NEW SPACES WITH LAYIN OR HARD LID CEILINGS. WHERE LOCATED IN A LAYIN CEILING, HEADS SHALL BE CENTERED ON 2'x2' PAD OR 2'x4' PAD.
14. ALL FIRE PROTECTION PIPING SHALL BE PROVIDED IN ACCORDANCE WITH NFPA 13, THREADING OF LIGHT WALL PIPING (LESS THAN SCHEDULE 40) SHALL BE PROHIBITED, OUTLETS AND TEES BEING APPLIED TO EXISTING PIPING MUST BE OF THE, WELDED, THREADED OR GROOVED DESIGN, "TAP-ON" TYPE TEES THAT ARE NOT FULL CIRCUMFERENCE, BOLTED TYPE CONNECTIONS WILL NOT BE ALLOWED.
15. ALL SPRINKLERS SHALL BE UL LISTED AND FM APPROVED FOR THE INTENDED APPLICATION WHEN APPLIED IN ACCORDANCE WITH THE MANUFACTURERS LISTINGS. SPRINKLERS SHALL BE GLASS BULB TYPE AND SHALL COMPLY WITH THE REQUIREMENTS OF NFPA 13. INTERMEDIATE TEMPERATURE HEADS RECOMMENDED.
16. REFER TO ARCHITECTURAL DRAWINGS. SPECIFICALLY WALL SECTIONS AND REFLECTED CEILING PLANS, THE CONTRACTOR SHALL COORDINATE WITH DUCTWORK, PLUMBING AND ELECTRICAL CONDUIT. DESIGN INTENT IS FOR FIRE PROTECTION PIPING TO ROUTE AROUND MECHANICAL CONDITIONS.
17. FOR EXPOSED SPRINKLERS IN THE PARKING AREA, SPRINKLERS SHALL BE DRY BRASS UPRIGHTS PROVIDE PROTECTIVE GUARD.
18. AN INSPECTOR'S TEST VALVE STATION SHALL BE PROVIDED AT THE HYDRAULICALLY MOST REMOTE POINT IN EACH SPRINKLER SYSTEM. A SINGLE WET ZONE OR DRY PARKING ZONE SHALL NOT EXCEEED 52,000 FT2.

FIRE SPRINKLER DESIGN CRITERIA

OFFICE AREAS, CORRIDORS, RESTROOMS

CLASSIFICATION:	LIGHT HAZARD
DENSITY:	0.10 GPM/SQFT
TYPICAL OPERATING AREA:	1,500 SQ. FT.
TYPICAL SPRINKLER SPACING:	225 SQ. FT. MAX.
TEMPERATURE RATING:	165°F.

ELECTRICAL ROOMS, MECHANICAL ROOMS, STORAGE

CLASSIFICATION:	ORDINARY HAZARD, GROUP I
DENSITY:	0.20 GPM/SQFT
TYPICAL OPERATING AREA:	1,500 SQ. FT.
TYPICAL SPRINKLER SPACING:	130 SQ. FT. MAX.
TEMPERATURE RATING:	165°F.

PARKING AREAS (DRY FREEZE PROOF SYSTEM)

CLASSIFICATION:	ORDINARY HAZARD, GROUP I
DENSITY:	0.20 GPM/SQFT
TYPICAL OPERATING AREA:	1,500 SQ. FT. (PLUS 30%)
TYPICAL SPRINKLER SPACING:	130 SQ. FT. MAX.
TEMPERATURE RATING:	165°F.

GENERAL INSTALLATION NOTES:

1. THE AWARDED FPC SHALL BE RESPONSIBLE TO REVIEW ALL AVAILABLE WATER FLOW DATA. RECIENT FLOW DATA INDICATED 70 PSI STATIC, 65 PSI RESIDUAL, 1,077 PILOT GPM, AND 3,734 GPM @ 20 PSI.
2. DESIGN CALCULATIONS FOR NEW SPRINKLERS SHALL ALLOW FOR 10 PERCENT SAFETY FACTOR.
3. PROVIDE FIRE DEPARTMENT CONNECTION. LONGVIEW FD HAS REQUESTED A 5" STORZ FDC WITH 30 DEGREE TURN DOWN ELBOW.
4. LOCKABLE KNOX COVERS REQUIRED FOR FDC AND ALL HOSE CONNECTIONS.

NEW CONSTRUCTION WITH SPRINKLERS LIGHT HAZARD COVERAGE.

NEW CONSTRUCTION WITH ORDINARY HAZARD FIRE PROTECTION SYSTEM.

NEW CONSTRUCTION WITH DRY SPRINKLER PROTECTION, ORDINARY HAZARD GROUP I

STANDPIPE NOTES

1. MANUAL DRY PIPE STANDPIPES APPROVED FOR THIS PROJECT. STANDPIPES WILL BE CLASS I.
2. DESIGN CRITERIA BASED ON FULLY SPRINKLED BUILDING.
3. PER NFPA-14, SECTION 7.3.2.12, TRAVEL DISTANCE SHALL BE REDUCED DOWN TO 130 FT. WHEN MANUAL DRY STANDPIPES ARE INSTALLED IN OPEN PARKING GARAGE.
4. PROVIDE 2-1/2" HOSE CONNECTION ON EACH FLOOR OF EACH STAIRWELL.
5. CONTRACTOR TO VERIFY WITH THE CITY FIRE DEPARTMENT FOR AVAILABLE WATER FLOW AND PRESSURE TO SERVE THE RISER SYSTEM.

DEFERRED SUBMISSION

THE FIRE PROTECTION DRAWINGS AND SPECIFICATIONS WITHIN THE PROGRESSIVE AE DOCUMENT SET ARE PERFORMANCE-BASED AND INTENDED TO CONVEY SCOPE OF THE WORK. THE FIRE PROTECTION CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL AS A DEFERRED SUBMITTAL TO THE LOCAL AHJ SHOP DRAWINGS AND HYDRAULIC CALCULATIONS INDICATING THE SPRINKLER SYSTEM LAYOUT, INCLUDING FINAL HEAD LOCATIONS AND MAIN/LEADER PIPE SIZING. THE FIRE PROTECTION CONTRACTOR SHALL PROVIDE THESE DOCUMENTS SEALED BY A LICENSED FIRE PROTECTION ENGINEER.

FIRE PROTECTION SYMBOLS

○	PLUMBING RISER
SD	STANDPIPE
⊗	SEWER VALVE
	FIRE DEPARTMENT SIAMESE CONNECTION
	FIRE DEPARTMENT STORZ CONNECTION
	FIRE DEPARTMENT HOSE CONNECTION (PLAN VIEW)
2½"	FIRE DEPARTMENT HOSE CONNECTION (ELEVATION VIEW)
OS	OS & Y VALVE
	GATE VALVE
	CHECK VALVE (ARROW INDICATES DIRECTION OF FLOW)
M	WATER METER
SP	STANDPIPE LINE
V	VENT LINE
	ARROW INDICATES DIRECTION OF FLOW
	PIPING BELOW GRADE
	PIPING ABOVE GRADE

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PROJECT NO.: 20011
DATE: 02/18/2022

REVISION SCHEDULE		
Δ	Description	Date

STATE OF TEXAS
THOMAS LOREN FREY
109004
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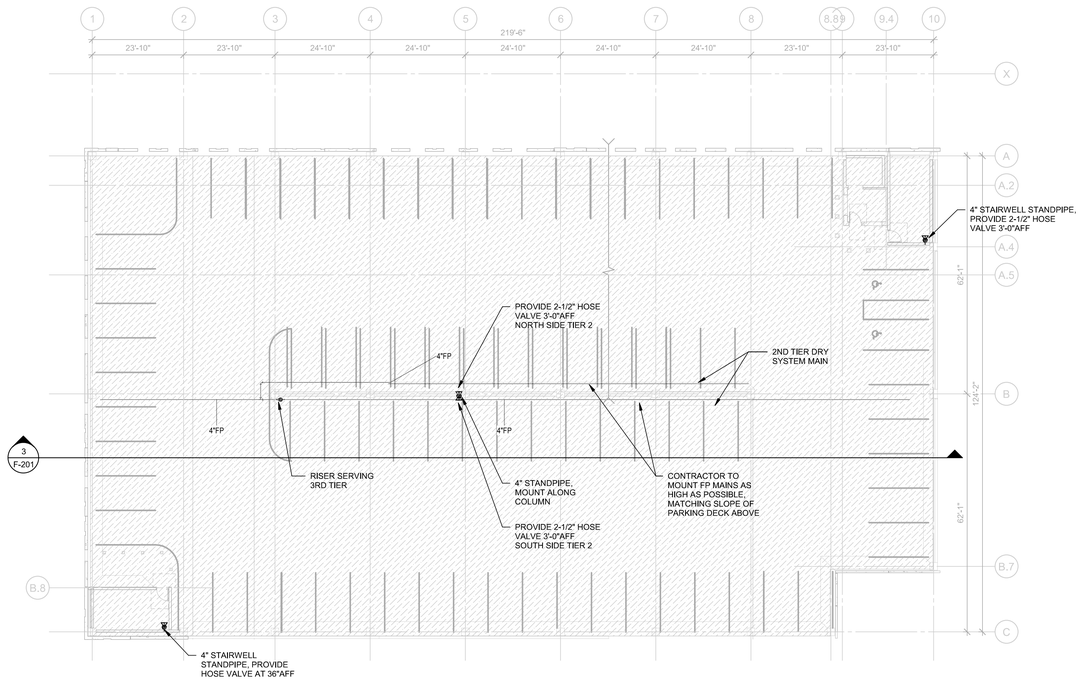
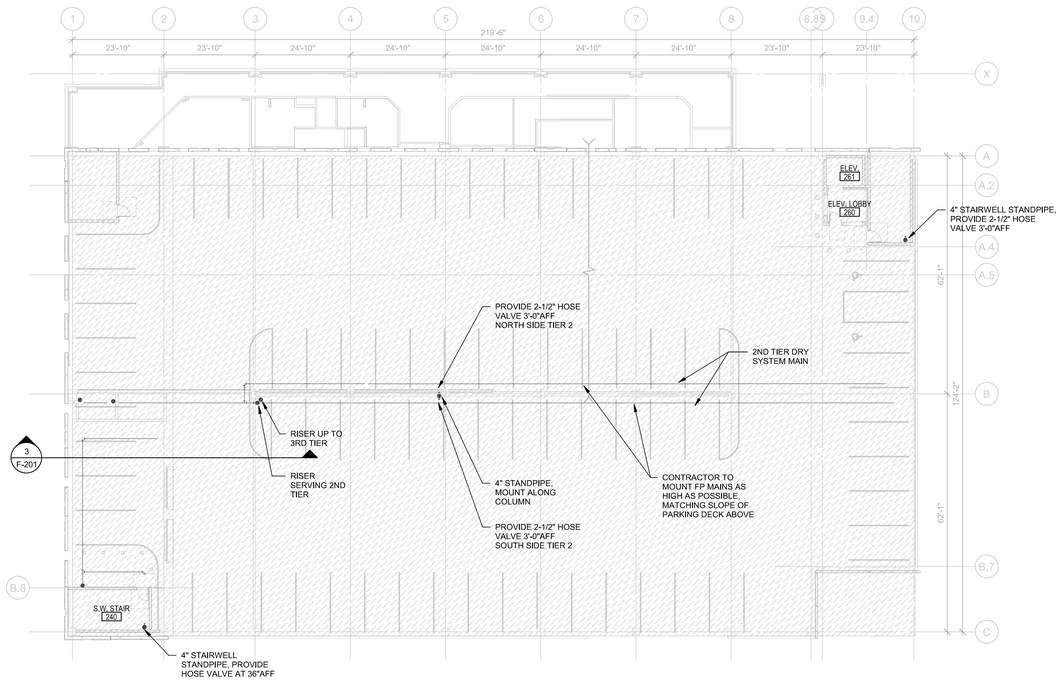
SHEET NAME
GENERAL NOTES, SYMBOLS & ABBREVIATIONS

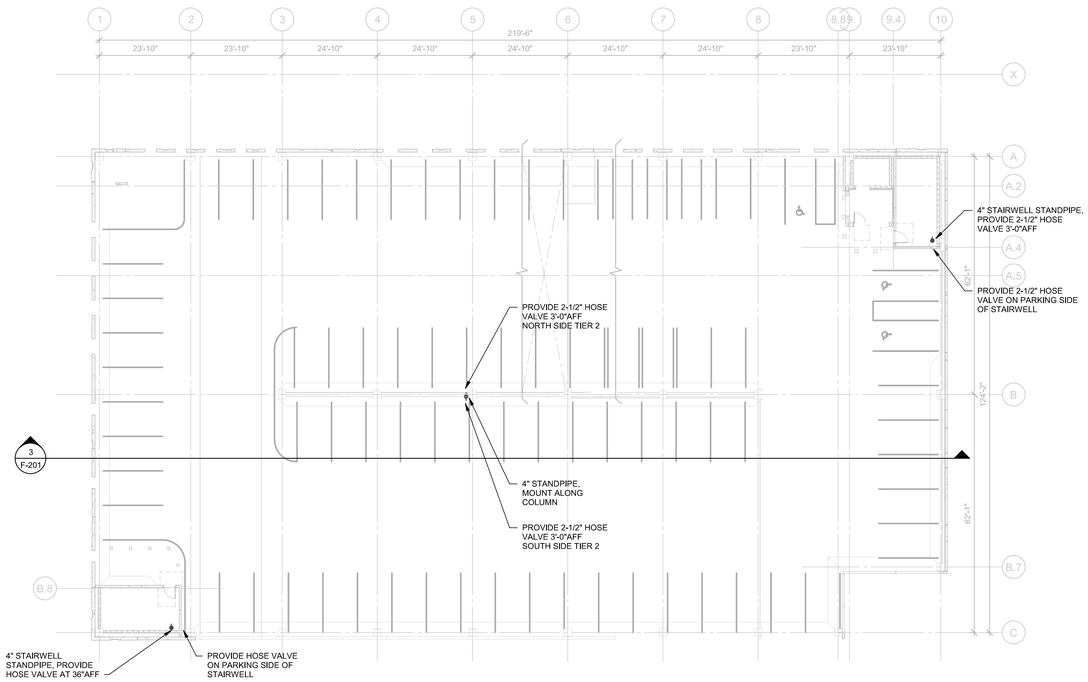
SHEET NO.
F-001



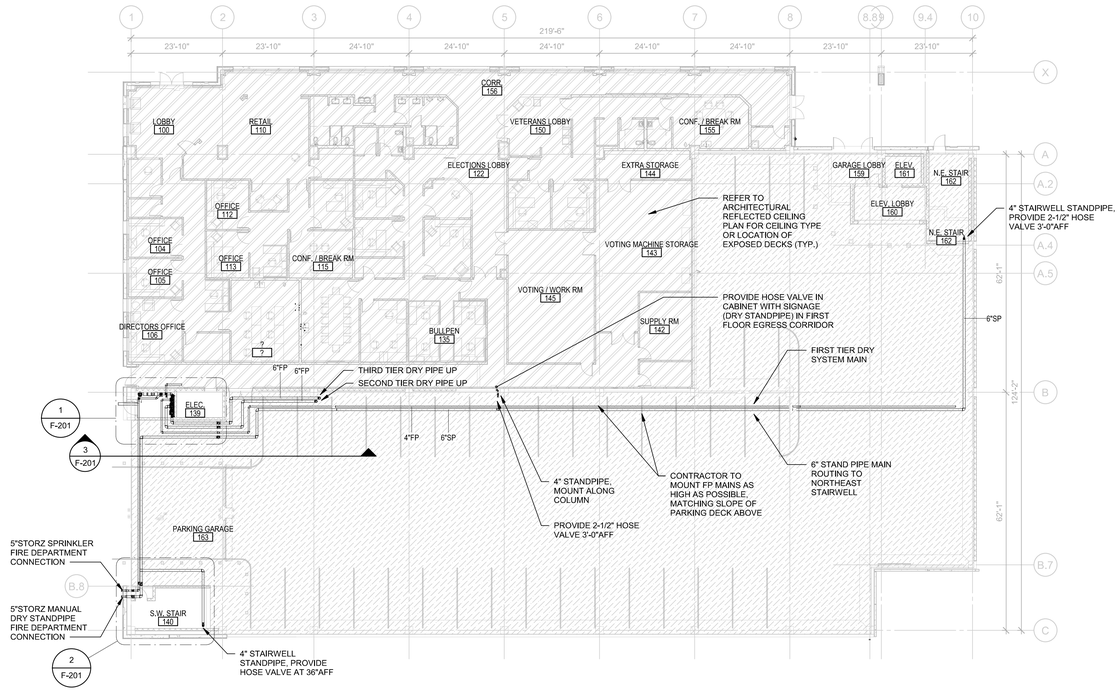
3 THIRD TIER PLAN
1/16" = 1'-0"



2 SECOND TIER PLAN
1/16" = 1'-0"



4 TOP TIER PLAN
1/16" = 1'-0"



1 GROUND TIER PLAN
1/16" = 1'-0"

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PROJECT NO.: 20011
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REVISION SCHEDULE

Δ	Description	Date

STATE OF TEXAS
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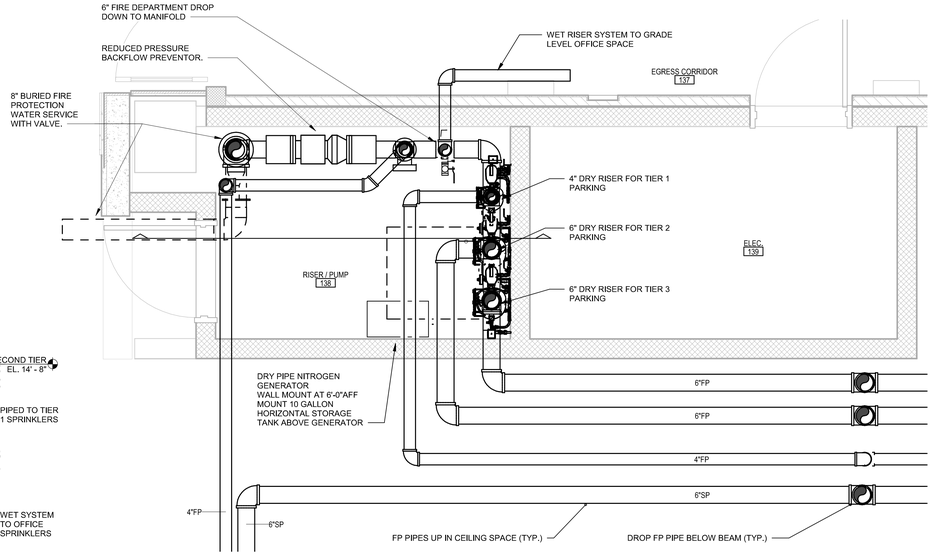
SHEET NAME

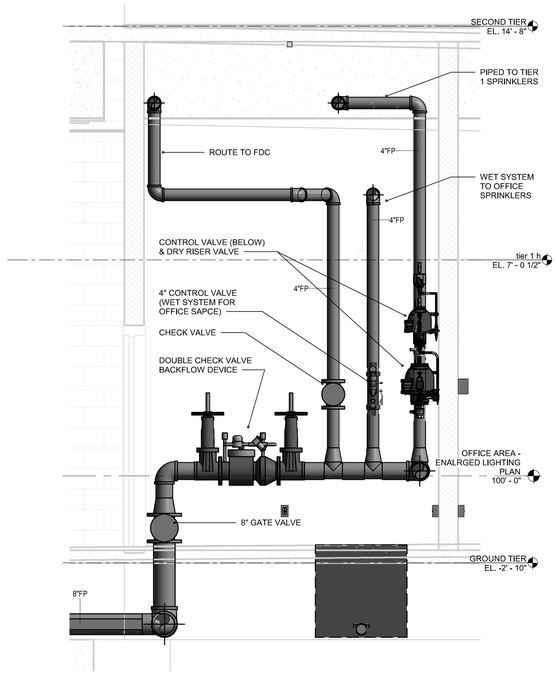
FIRE PROTECTION PLANS

SHEET NO.

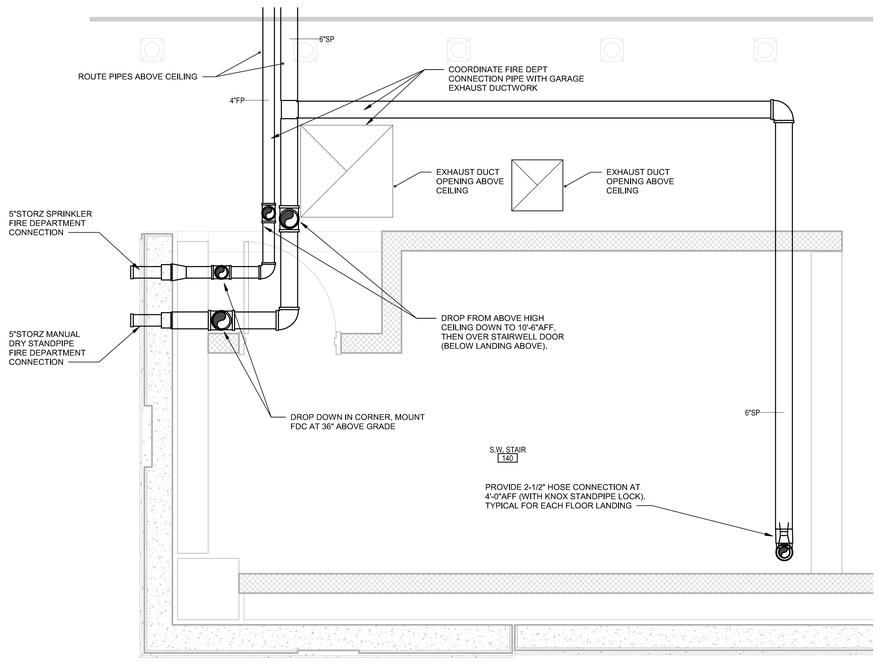
F-101



1 PARTIAL FIRE PROTECTION PLAN
1/2" = 1'-0"

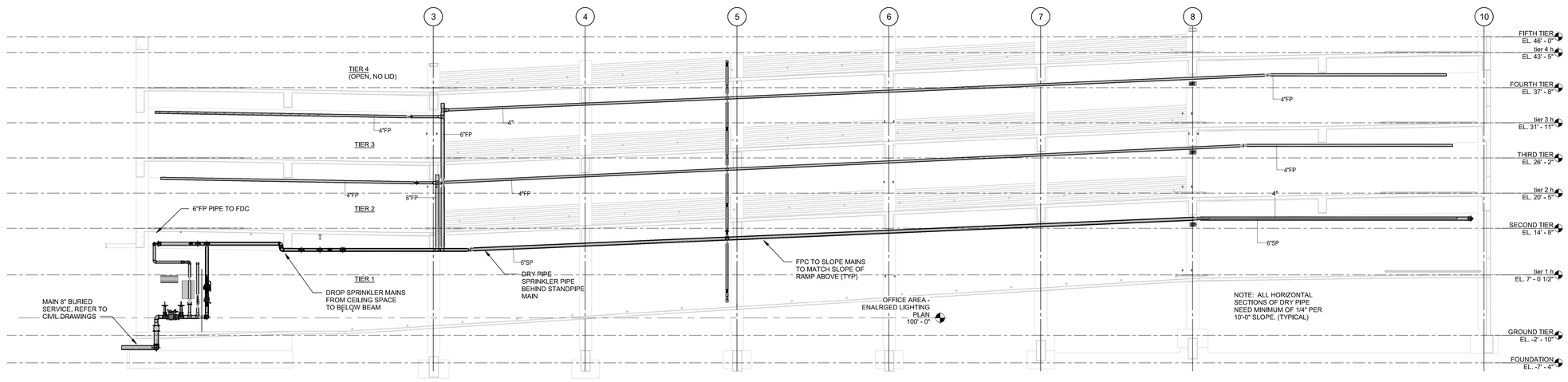


4 FP SECTION AT FIRE SERVICE ROOM
1/2" = 1'-0"



2 PARTIAL FIRE PROTECTION PLAN - FDC LOCATION
1/2" = 1'-0"

FIRE SPRINKLER DRY PIPE NITROGEN GENERATOR:
BASED ON GENERAL AIR PRODUCTS
WALL MOUNT
MODEL NGP-WM600-1A
MAINTENANCE CAPACITY AT 40 PSI: 3880 GALLONS
FILL CAPACITY AT 40 PSI: 600 GAL
COMPRESSOR: OIL-LESS, 3/4 HP
POWER: 115V, 12 AMPS
N2 TANK: 10 GALLONS
UNIT WEIGHTS: CABINET = 155 LBS, TANK = 50 LBS
UNIT INCLUDES THE FOLLOWING; FIRE PROTECTOIN AIR COMPRESSOR, 10 GALLON N2 STORAGE TANK, PORTABLE ANALYZER, 30" STAINLESS FLEX HOSE, VIBRATION ISOLATION PADS.



3 FIRE SRPINKLER SECTION
1/8" = 1'-0"

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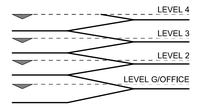
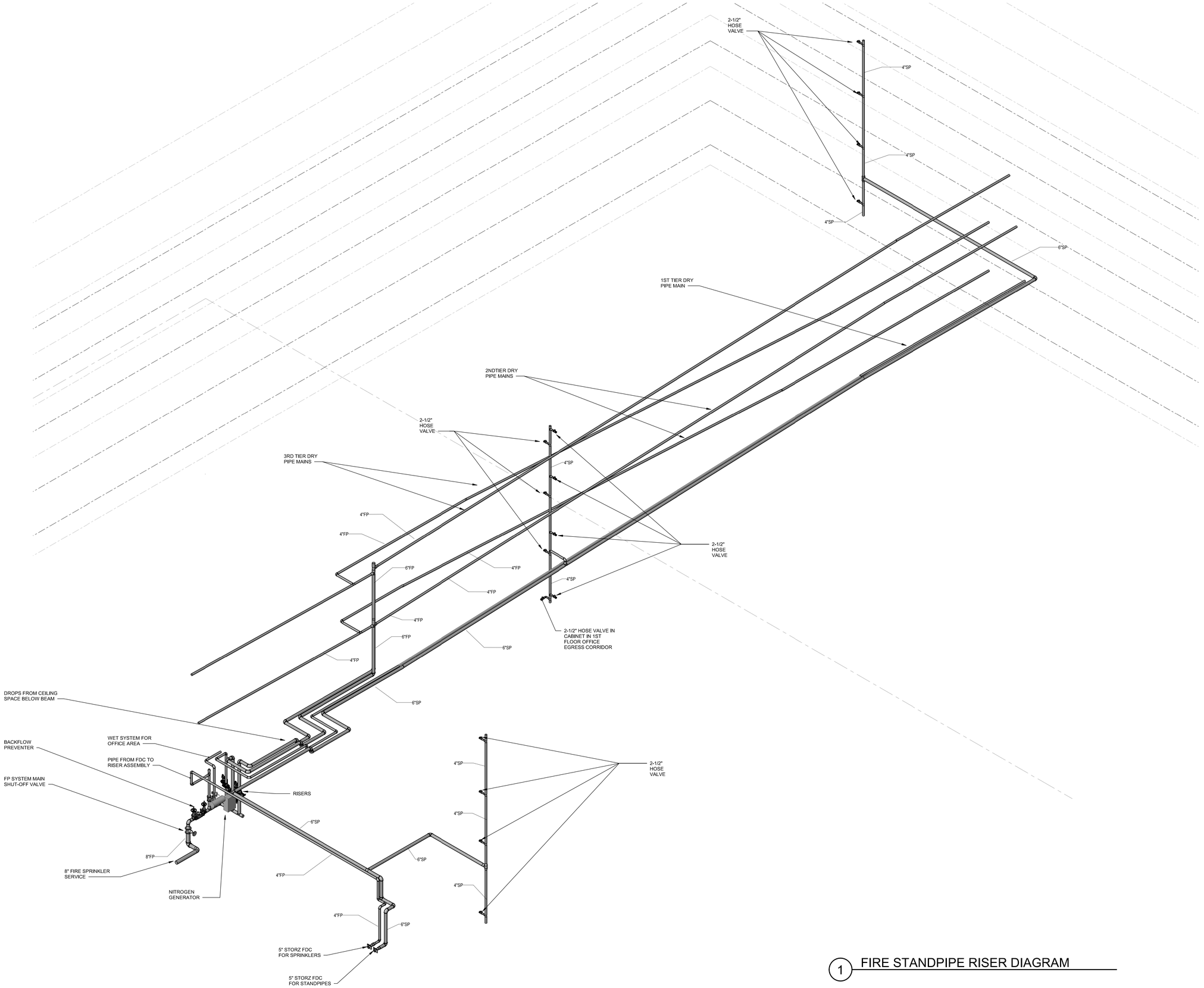


SHEET NAME
PARTIAL FIRE PROTECTION PLAN

SHEET NO.
F-201



1 FIRE STANDPIPE RISER DIAGRAM

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SHEET NAME
FIRE STANDPIPE RISER DIAGRAM

SHEET NO.
F-301

LIGHT FIXTURE SCHEDULE

TYPE	MOUNTING	LAMP	MANUFACTURER	CATALOG NUMBER	REMARKS
F1, F1-NL, F1-DL, F1-DO	JUNCTION BOX MOUNT	LED 4000K	LITHONIA OR EATON	VCPG-P4-40K-T5W-MVOLT-SRM-SF-DWHXD TT-D4-740-U-WQ	TYPICAL LEVEL LIGHT FIXTURE. 4000K, U.L. LISTED FOR WET LOCATIONS, TAMPERPROOF, FUSED, 277V, (56W, 0.2A). COORDINATE COLOR WITH ARCHITECT. SEE NOTE E-602 FOR LIGHTING CONTROL REQUIREMENTS.
F2	POLE MOUNT	LED 4000K	LITHONIA OR EATON	RSX2-LED-P4-40K-R5-MVOLT-SPA-SF-DDBXD GLEON-AF-03-LED-E1-5WQ-BZ-FUSING	TOP LEVEL LIGHT FIXTURE. 4000K, U.L. LISTED FOR WET LOCATIONS, 277V, FUSED, (187W, 0.67A). 24'-0" MOUNTING HEIGHT, 20'-0" SQUARE STRAIGHT HINGED POLES MOUNTED ON 4'-0" COLUMN EXTENSION VALMONT DS OR KW STSP. PROVIDE OWNER WITH ONE LOWERING WINCH. POLES ARE TO BE INTERNALLY COATED. BRONZE FINISH. SEE E-602 FOR LIGHTING CONTROL REQUIREMENTS.
F3	WALL ARM MOUNT	LED 4000K	EATON OR LITHONIA	GWC-AF-02-LED-E1-T3-BZ-F-600 DSXW1-LED-20C-1000-40K-T3M-MVOLT-BBW-SF-DDBXD	STAIRTOWER/ENTRANCE LIGHT FIXTURE. 4000K, U.L. LISTED FOR WET LOCATIONS. 277V, (102W, 0.39A), FUSED, WITH INTEGRAL PHOTOCELL, WITH WALL MOUNTING ARM. BRONZE FINISH. SEE E-602 FOR LIGHTING CONTROL REQUIREMENTS.
F4	CEILING SURFACE MOUNT	LED 4000K	LITHONIA OR ECLIPSE	STL4-48L-EZ1-LP840-SC2-(FUSED) 574-SPL-277-50WLED-4K-WH-FUS	STAIRTOWER/ELEVATOR LOBBY LIGHT FIXTURE. 4000K, VANDAL RESISTANT, FUSED, 277V, (60W, 0.21A). U.L. LISTED FOR WET LOCATIONS. PROVIDE (2) TAMPER-PROOF TOOLS. WHITE FINISH. SEE E-602 FOR LIGHTING CONTROL REQUIREMENTS.
F5	WALL MOUNT	LED	LITHONIA OR EATON	LV-S-WB-1-R-277-WL-CD (FUSED) LPXW-6-1-R-WH (FUSED)	SINGLE FACE L.E.D. EXIT SIGN WITH SIDE CONDUIT ENTRY. FUSED, 277V, VANDAL RESISTANT WITH TWO (2) TAMPERPROOF TOOLS W/ARROWS AS INDICATED ON DRAWINGS. U.L. LISTED FOR WET LOCATIONS.
F5A	CEILING MOUNT	LED	LITHONIA OR PATHWAY	LV-S-WB-1-R-277-UM-WL-CD (FUSED) JSLX1CR-WL-TP-277 (FUSED)	SINGLE FACE L.E.D. EXIT SIGN. FUSED, 277V, VANDAL RESISTANT WITH TWO (2) TAMPERPROOF TOOLS W/ARROWS AS INDICATED ON DRAWINGS. U.L. LISTED FOR WET LOCATIONS.
F6	RECESSED CEILING	LED	LITHONIA	EDGR-1-R	RECESSED MOUNT EXIT SIGN. FUSED, 277V
F7	CEILING SURFACE MOUNT	LED 4000K	LITHONIA OR COLUMBIA	ZL1N-L48-7000LM-FST-277-40K-80CRI-WH LCL4-40K-HL-E-U	GENERAL PURPOSE 4'-0" LENGTH UTILITY LIGHT FIXTURE. 277V, (73W, 0.27A), SUSPEND FIXTURE SO BOTTOM OF FIXTURE IS EVEN WITH BOTTOM OF TEE STEMS. U.L. LISTED.
F7A	CEILING SURFACE MOUNT	LED 4000K	LITHONIA OR COLUMBIA	ZL1N-L48-7000LM-FST-277-40K-80CRI-E7W-WH LCL4-40K-HL-E-U-ELL14	ELECTRICAL ROOM 4'-0" LENGTH UTILITY LIGHT FIXTURE. 277V, (73W, 0.27A), WITH SELF CONTAINED EMERGENCY LIGHTING PACK. SUSPEND FIXTURE SO BOTTOM OF FIXTURE IS EVEN WITH BOTTOM OF TEE STEMS. U.L. LISTED.
F8	WALL MOUNT	LED 4000K	ECLIPSE	220-LED/25W-4K-120-BZ-5110	ELEVATOR SHAFT LIGHT FIXTURE. 120V, WITH BACK BOX. U.L. LISTED FOR WET LOCATIONS.
A1-VE	RECESSED CEILING	LED	LITHONIA	EPANL-2X2-2000LMHE-80CRI-MIN10-ZT-MVOLT	2X2 RECESSED LIGHT FIXTURE. COORDINATE FINISH WITH ARCHITECT.
B	CEILING MOUNT	LED	LITHONIA	LDN6-40-30-L06-MVOLT-GZ10	DOWNLIGHT LED 6" ROUND, 4000K MULTIVOLT LIGHT FIXTURE WITH 0-10V DIMMABLE DRIVER.
H	TRACK MOUNT	LED	LITHONIA	LTHMSBK-MR16GU10 LED- 27K-90CRI-DBL	TRACK LIGHTING FOR MONUMENT WALL, LED LMAP 'MESH BACK' TRACK HEAD.
E	WALL MOUNT	LED	LUMENS	AFXP370267	LUMENS LIGHT AND LIVING. 24" SATIN BRASS 21 WATT 120V LIGHT FIXTURE, 300K.
C1	RECESSED MOUNT	LED	AXISLIGHTING	DRLED-400-80-40-SO-4'-UNV-DP	AXIS LIGHTING BEAM 2 SERIES. RECESSED MOUNT 4' LIGHT FIXTURE.
C2	SURFACE MOUNT	LED	AXISLIGHTING	B2SQSLED-750-80-40-4-UNV-DP	CEILING MOUNT LED LIGHT FIXTURE.
C3	RECESSED MOUNT	LED	AXISLIGHTING	WBRLED-900-80-40-S-4-UNIV-DP-1	RECESSED HORIZONTAL MOUNT LED LIGHT FIXTURE.
C4	PENDANT MOUNT	LED	AXISLIGHTING	B2SQDLED-750-80-40-4-UNV-DP	PENDANT LED LIGHT FIXTURE.
F	WALL MOUNT	LED	YLIGHTING	HVLP211691	BARKLEY 2-LIGHT TALL LED WALL SCONCE - AGED BRASS FINISH.
I	WALL MOUNT	LED	HAWTHORNE	EW36203	WALL MOUNTED DECORATIVE LIGHT FIXTURE. COORDINATE FINISH WITH ARCHITECT.
J	ROOF/SURFACE MOUNT	LED	HYDREL	4750L-4FT-2000LMF-30K-MVOLT-WFL-KM-ELV	ROOF SURFACE MOUNTED DECORATIVE LIGHT FIXTURE WITH DIMMABLE DRIVER. E.C. TO PROVIDE DIMMER. COORDINATE FINISH AND ALL OPTIONS WITH ARCHITECT.

ELECTRICAL SYMBOLS

- LIGHT FIXTURE
- LIGHT FIXTURE (NL) CONNECTED TO EMERGENCY POWER
- LINEAR LED FIXTURE (NL) CONNECTED TO EMERGENCY POWER
- STRIP LED FIXTURE
- WALL MOUNTED FIXTURE
- POLE MOUNTED FIXTURE EMERGENCY LIGHT CONNECTED TO EMERGENCY POWER
- EXIT SIGN CONNECTED TO EMERGENCY POWER

F1, F2, ETC. = FIXTURE TYPE
C, D, NL, ETC. = SWITCHING

MOUNT SO TOP OF UNIT IS 6" BELOW BOTTOM OF TEE STEMS BUT NEVER HIGHER THAN 9'-0" A.F.F.

- EMERGENCY PHONE
- PHONE
- DATA OUTLET
- CCTV FIXED
- CCTV PTZ
- DISCONNECT SWITCH
- FUSED DISCONNECT SWITCH
- EUH — ELECTRIC UNIT HEATER
- EXHAUST FAN
- INTAKE LOUVER
- A/C UNIT
- FIRE ALARM PULL STATION
- FIRE ALARM HORN/STROBE
- INDICATES DIRECTION OF AIR FLOW
- JUNCTION BOX
- QUAZITE JUNCTION BOX
- MOTOR
- STARTER
- KEY OPERATED SWITCH
- PHOTOELECTRIC CONTROL
- OCCUPANCY SENSOR
- SMOKE DETECTOR
- HEAT DETECTOR
- CARBON MONOXIDE DETECTOR
- THERMOSTAT
- S — LIGHT SWITCH
- S_3 — 3 WAY LIGHT SWITCH
- 20 AMP DUPLEX RECEPTACLE

MOUNT 18" A.F.F.
EXCEPT IN PARKING AREAS MOUNT 36" A.F.F.

- ELECTRICAL PANEL
- VERTICAL CONDUIT
- EXPOSED CONDUIT
- CONCEALED CONDUIT
- GROUND ROD

ELECTRICAL ABBREVIATIONS

A OR AMP	AMPERE
AFF	ABOVE FINISHED FLOOR
ARCH	ARCHITECT (ARCHITECTURAL)
BB	BACKBOARD
CKT	CIRCUIT
C	CONDUIT
/C	CONDUCTOR
CIP	CAST IN PLACE
COMM	COMMUNICATIONS
CONC	CONCRETE
CWA	CONSTANT WATTAGE AUTO-TRANSFORMER
DET	DETAIL
DIA	DIAMETER
EJ	EXPANSION JOINT
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GRD	GROUND
GT, T2	TIER DESIGNATION: GROUND TIER, 2ND TIER, ETC.
JB	JUNCTION BOX
HP	HORSEPOWER
HZ	HERTZ
HX-HPF	HIGH REACTANCE HIGH POWER FACTOR BALLAST
INCAND	INCANDESCENT
KVA	KILOVOLT-AMPERE
KW	KILOWATT
PARCS	PARKING ACCESS & REVENUE CONTROL SYSTEM
PC	PHOTOELECTRIC CONTROL
PH	PHASE
PNL	PANEL
RECEPT	RECEPTACLE
RC	RIGID METAL CONDUIT
SHT	SHEET
SIM	SIMILAR
SOG	SLAB ON GRADE
SP	STATIC PRESSURE
STRUCT	STRUCTURAL
SW	SWITCH
TFA	TO FLOOR ABOVE
TFB	TO FLOOR BELOW
TRANS	TRANSFORMER
TYP	TYPICAL
UL	UNDERWRITER'S LABORATORIES
UNO	UNLESS NOTED OTHERWISE
V	VOLT
W	WATT
WP	WEATHERPROOF
W/	WITH

GENERAL NOTES

1. ALL FIXTURES ARE TYPE F1 UNLESS NOTED OTHERWISE. SEE FIXTURE MOUNTING DETAIL 1/E-501. SEE LIGHT FIXTURE SCHEDULE ON THIS SHEET.
2. LIGHT FIXTURES AND CONDUIT ARE SHOWN IN REFLECTED CEILING ORIENTATION.
3. ALL CONDUITS SHALL CONTAIN A GREEN COLORED EQUIPMENT GROUNDING CONDUCTOR PROVIDING CONTINUITY TO ALL BOXES, DEVICES AND FIXTURES. LIGHT FIXTURE CONDUCTORS SHALL BE NO.10 THWN UNLESS NOTED OTHERWISE. ALL HOMERUN CONDUCTOR SIZES SHALL BE AS NOTED ON THE PANEL SCHEDULES. CONDUIT SIZING SHALL BE BASED ON USE OF THWN INSULATION AND NEC REQUIREMENTS.
4. ALL ABOVE GROUND CONDUIT SHALL BE SCHEDULE 80 P.V.C. UTILIZING P.V.C. JUNCTION BOXES. PROVIDE SUPPORT AND EXPANSION FITTINGS PER NEC 352 USING 120°F TEMPERATURE CHANGE. (MAXIMUM DISTANCE BETWEEN SUPPORTS FOR 3/4" AND 1" CONDUIT IS 3'-0" AND A CONDUIT EXPANSION FITTING WILL BE REQUIRED IN ALL P.V.C. CONDUIT RUNS LONGER THAN 5'-0" BETWEEN JUNCTION BOXES, OR OTHER SECURELY MOUNTED POINTS.) ALL CONDUIT SUPPORTS SHALL BE DESIGNED AND INSTALLED TO ALLOW CONDUIT TO SLIDE DURING EXPANSION/CONTRACTION CYCLES. ALL JUNCTION BOXES THAT ARE ATTACHED TO LIGHT FIXTURES SHALL BE CAST METAL. ALL UNDERGROUND CONDUIT SHALL ALSO BE P.V.C. MINIMUM CONDUIT SIZE IS 3/4" UNLESS NOTED OTHERWISE. USE SEAL TIGHT FLEXIBLE CONDUIT IN LENGTHS NO GREATER THAN 2'-0" TO CONNECT MOTORS, TRANSFORMERS AND FOR WHIPS CONNECTING TRUNNION MOUNTED FIXTURES TO JUNCTION BOXES. DO NOT INSTALL FLEXIBLE CONDUIT AT OTHER LOCATIONS WITHOUT WRITTEN APPROVAL OF ENGINEER.
5. ALL HORIZONTAL CONDUIT RUNS ARE TO BE ROUTED CONCEALED IN CEILINGS AND CIP DECK PER STRUCTURAL DRAWINGS. ALL VERTICAL CONDUIT RUNS SHALL BE ROUTED CONCEALED IN COLUMNS/WALLS IN PARKING AREAS. COORDINATE WITH STRUCTURAL THE AMOUNT OF VERTICAL CONDUITS ALLOWED IN A COLUMN TO AVOID STRUCTURAL INTERFERENCE. HOMERUNS TO ELECTRICAL ROOM ARE TO BE ROUTED DOWN CONCEALED IN COLUMNS/WALLS THEN UNDERGROUND TO THE ELECTRICAL ROOM. CONDUIT SHALL NOT BE ROUTED BEHIND SIGNS, OR LOCATED SUCH A WAY THAT IT OBSTRUCTS THE OPERATION OF A DEVICE OR RESTRICTS OPENING AN ACCESS POINT, ENCLOSURE DOOR OR ANY OTHER PIECE OF EQUIPMENT.
6. AT STAIRS AND ELEVATOR TOWERS RUN CONDUITS BELOW SLAB AND FROM BOTTOM UP AND DO NOT CROSS EXPANSION JOINTS AT SUPPORTED TIERS UNLESS NOTED OTHERWISE. DO NOT ROUTE VERTICAL CONDUIT RISERS THROUGH EXPANSION JOINTS.
7. PROVIDE CONDUIT EXPANSION FITTINGS FOR ALL CONDUIT THAT CROSS EXPANSION JOINT AT LOCATIONS REQUIRED.
8. THE USE OF POWDER PROPELLED FASTENERS FOR MOUNTING CONDUIT, SUPPORTS, JUNCTION BOXES, FIXTURES OR OTHER EQUIPMENT IS PROHIBITED.
9. PROVIDE APPROVED, HOT DIPPED GALVANIZED STEEL GUARDS AROUND JUNCTION BOXES, CONDUITS AND OTHER EQUIPMENT WHICH MAY BE EXPOSED TO POSSIBLE BUMPER DAMAGE. SEE STRUCTURAL DRAWINGS.
10. LOCATE EXIT SIGNS AT EACH STAIR TOWER ON EACH LEVEL, AT ALL PEDESTRIAN EXITS AND AT OTHER LOCATIONS SHOWN ON PLANS.
11. ALL RECEPTACLES IN PARKING GARAGE SHALL BE G.F.C.I. WEATHER RESISTANT TYPE. ALL RECEPTACLES EXCEPT THOSE IN ENCLOSED ROOMS SHALL HAVE WEATHERPROOF COVERS.
12. LOCATE RECEPTACLES AT ALL MAIN LANDINGS ON STAIR TOWERS, ELEVATOR PITS, TOP OF ELEVATOR SHAFTS, IN ALL EQUIPMENT AND MISCELLANEOUS ROOMS AND AT OTHER LOCATIONS SHOWN ON PLANS.
13. ROUTE POWER TO ELECTRIC SIGNS AND ADDITIONAL LIGHT FIXTURES SHOWN ON ARCHITECTURAL DRAWINGS.
14. COORDINATE POWER AND CONTROL REQUIREMENTS WITH MECHANICAL FOR VENTILATION FANS, PUMPS, HEAT TRACE AND OTHER LOADS.
15. PROVIDE FIRE ALARM SYSTEM AND INSTALL PER NFPA AND LOCAL CODES. SEE DRAWINGS FOR LOCATION OF HORN/STROBES AND PULL STATIONS. COORDINATE LOCATION OF WHERE FIRE ALARM SYSTEM REPORTS WITH OWNER.
16. CONDUITS ARE TO BE LOCATED IN THE GARAGE INTERIOR TO MINIMIZE VISUAL IMPACT. DO NOT ROUTE CONDUITS ON THE EXTERIOR OF ANY PART OF THE STRUCTURE. FIXTURES LOCATED ON THE EXTERIOR OF THE STRUCTURE ARE TO BE FED FROM BEHIND WITH NO CONDUIT VISIBLE FROM THE OUTSIDE. FIXTURES LOCATED ON BRICK (INSIDE OR OUTSIDE THE STRUCTURE) ARE TO BE FED FROM BEHIND WITH NO CONDUIT VISIBLE.
17. IN LOCATIONS WHERE LIGHT FIXTURES, EXIT SIGNS, FIRE ALARM STROBES OR OTHER PIECES OF EQUIPMENT NEED TO BE MOUNTED TO A COLUMN OR WALL OVER PIPING OR OTHER OBSTACLES, PROVIDE EXTENSION BRACKETS MADE OUT OF 1/4" HOT DIPPED GALVANIZED STEEL PLATES AS REQUIRED.
18. ELECTRICAL CONTRACTOR TO HIRE AN FCC LICENSED CONTRACTOR FOR THE EMERGENCY RADIO SYSTEM (ERS). THE SUB CONTRACTOR SHALL VISIT THE DECK AND VERIFY SIGNAL STRENGTH OF 450-500 AND 800 MHZ RADIO SIGNALS FOR FIRST RESPONDERS. SUB TO PROVIDE AMPLIFIERS WHERE REQUIRED. MAIN SYSTEM TO BE INSTALLED IN DATA ROOM.
19. PARKING STRUCTURE FIXTURES ARE TO BE CIRCUITED AND CONTROLLED SO THAT ALL FIXTURES ARE SWITCHED THRU CONTACTORS IN A CONTROL PANEL OR THROUGH CONTROLLABLE CIRCUIT BREAKERS. TIME SWITCH AND PHOTOELECTRIC CONTROL SHALL BE PROVIDED. ALL FIXTURES ARE TO BE SWITCHABLE BY TIER.

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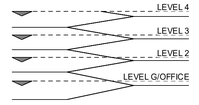
STATE OF TEXAS
GABRIEL G SALAZAR
97504
LICENSED
PROFESSIONAL ENGINEER
2-18-22

PROJECT NO.: 20011

DATE: 02/18/2022

REVISION SCHEDULE

Δ	Description	Date



SHEET NAME

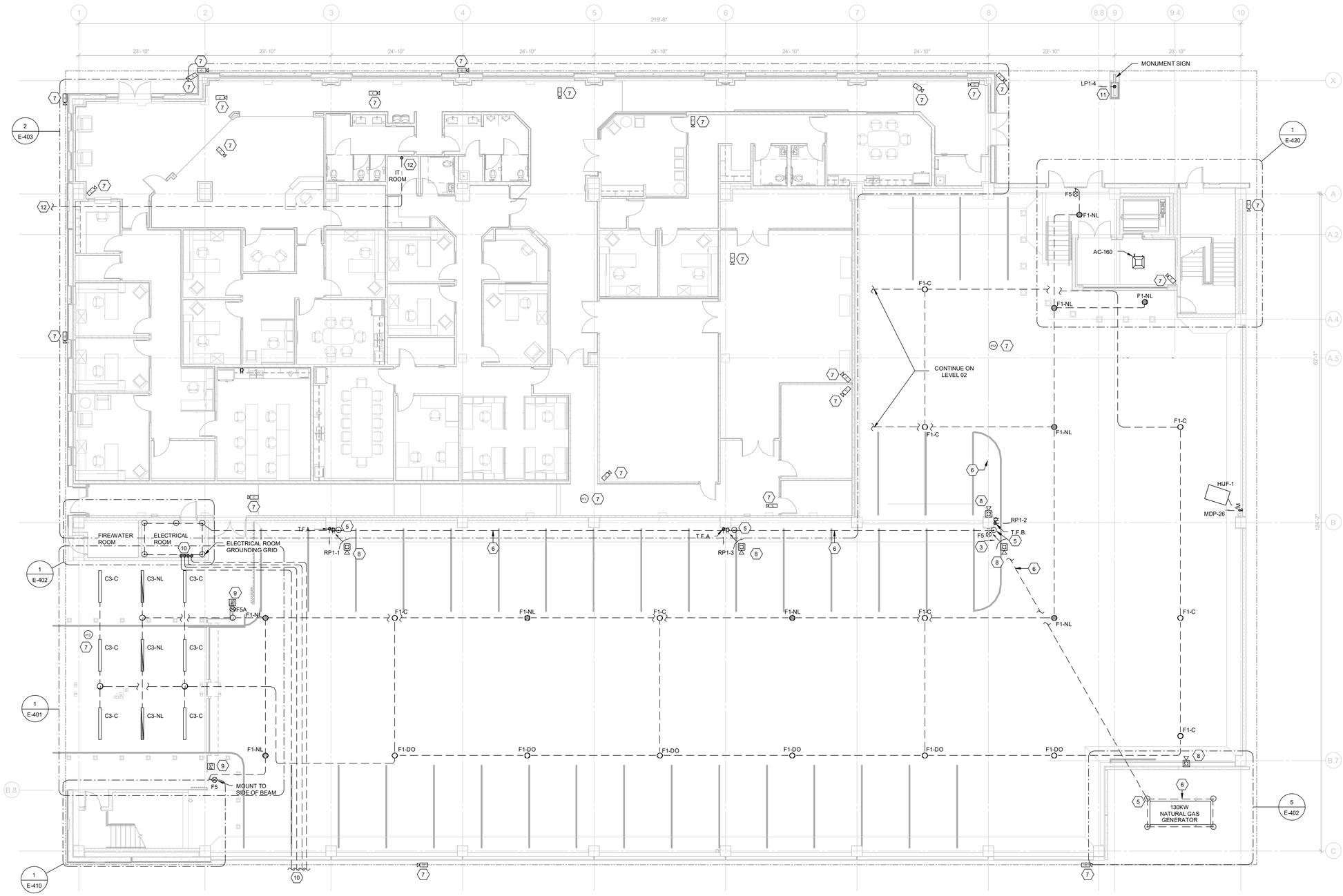
LIGHT FIXTURE SCHEDULE, GENERAL NOTES, SYMBOLS & ABBREVIATIONS

SHEET NO.

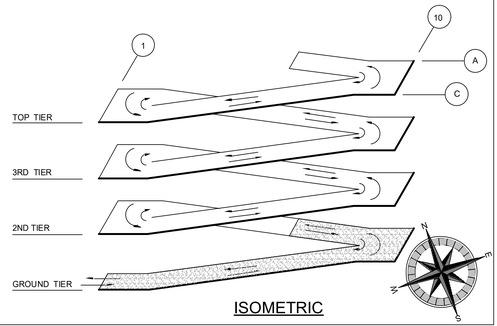
E-001

SHEET NOTES

1. HOMERUNS TO PANEL LP1 IN THE ELECTRICAL ROOM.
2. HOMERUNS TO PANEL ELP1 IN THE ELECTRICAL ROOM.
3. CONNECT EXIT SIGN TO NEAREST NL CIRCUIT.
4. MOUNT F3 FIXTURES EVEN WITH THE FLOOR ABOVE. FIXTURES ARE TO BE FED THROUGH PRECAST WITH EMBEDDED CONDUIT. COORDINATE WITH PRECAST CONTRACTOR.
5. DRIVE 10'-0" x 3/4" DIAMETER COPPER CLAD GROUND RODS AT LOCATIONS SHOWN. CONNECT TO TOP TIER LIGHT POLES WITH #4/0 COPPER CABLE IN 1" P.V.C. CONDUIT. PROVIDE PVC EXPANSION JOINT AS REQUIRED BY NEC.
6. CONNECT ALL LIGHT POLE GROUND RODS AND ELECTRICAL ROOM GROUNDING SYSTEM TOGETHER WITH BARE #4/0 COPPER CABLE LOCATED 1'-6" UNDER SLAB ON GRADE. CONNECT TO CABLES FROM TOP LEVEL LIGHT POLES.
7. CAMERA LOCATION. PROVIDE JUNCTION BOX AND CONDUIT FOR CAMERA INSTALLATION. ROUTE COMMUNICATIONS/POWER CONDUITS TO IT ROOM IN OFFICE AREA. CAMERAS BY OTHERS. COORDINATE CONDUIT SIZE, CABLE/WIRE, POWER REQUIREMENTS, POE EXTENDERS, MOUNTING REQUIREMENTS AND EXACT LOCATION WITH CAMERA INSTALLER.
8. FIRE ALARM/HORN/STROBE, 184 CD. MOUNT FIRE ALARM/HORN/STROBE 72" A.F.F. DO NOT ROUTE CONDUIT RISERS IN EXPANSION JOINT. SEE FIRE ALARM RISER DIAGRAM ON SHEET E-601 FOR ADDITIONAL INFORMATION.
9. FIRE ALARM PULL STATION. MOUNT TOP OF PULL STATION 48" A.F.F. DO NOT ROUTE CONDUIT RISERS IN EXPANSION JOINT. SEE FIRE ALARM RISER DIAGRAM ON SHEET E-601 FOR ADDITIONAL INFORMATION.
10. FOUR 4" CONDUITS FROM MDP TO UTILITY TRANSFORMER. TWO CONDUITS FOR POWER, TWO SPARE. TAKE CONDUITS 5'-0" OUTSIDE GARAGE AND CIVIL TO CONTINUE. COORDINATE WITH CIVIL.
11. ONE 3/4" CONDUIT FROM MONUMENT SIGN TO PANEL RP1 IN THE ELECTRICAL ROOM FOR SIGN POWER. COORDINATE EXACT LOCATION AND ALL REQUIREMENTS WITH SIGN INSTALLER. SIGN BY OTHERS.
12. ONE 4" CONDUIT FROM IT ROOM FOR FIBER CONNECTION. ROUTE CONDUIT 5'-0" OUTSIDE GARAGE AND CIVIL TO CONTINUE. COORDINATE WITH CIVIL.



1 GROUND TIER - ELECTRICAL
1/8" = 1'-0"



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STATE OF TEXAS
GABRIEL G SALAZAR
97504
LICENSED PROFESSIONAL ENGINEER
2-16-22

PROJECT NO.: 20011
DATE: 02/18/2022

REVISION SCHEDULE		
Δ	Description	Date

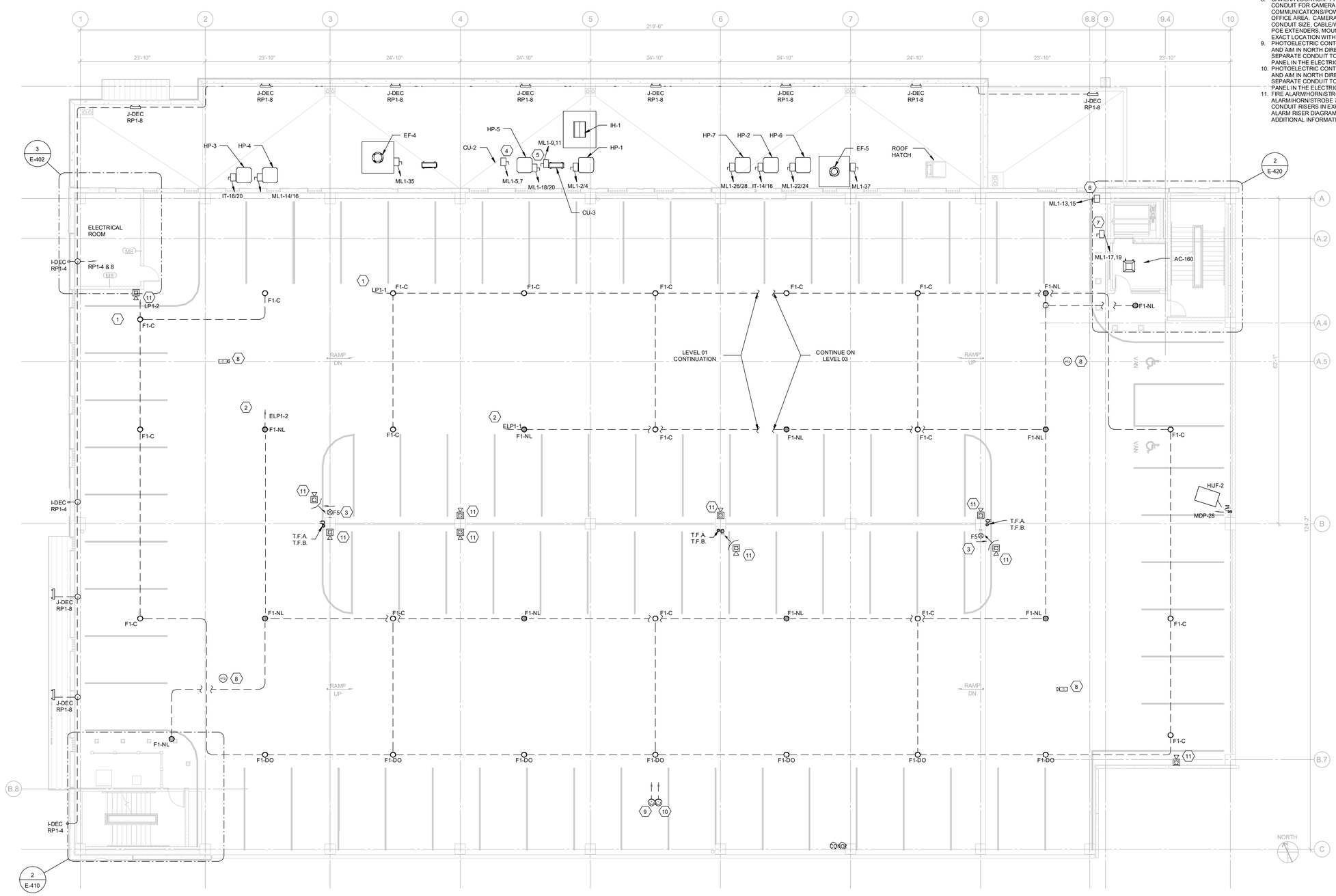
LEVEL 4
LEVEL 3
LEVEL 2
LEVEL G/OFFICE

SHEET NAME
GROUND TIER PLAN

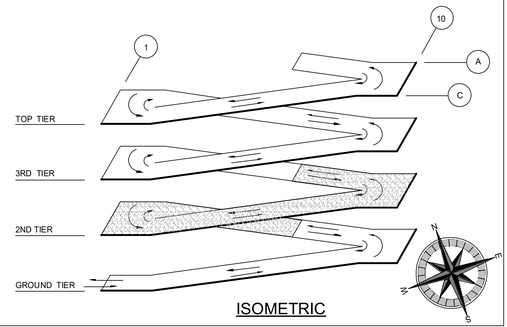
SHEET NO.
E-101

SHEET NOTES (#)

1. HOMERUNS TO PANEL LP1 IN THE ELECTRICAL ROOM.
2. HOMERUNS TO PANEL ELP1 IN THE ELECTRICAL ROOM.
3. CONNECT EXIT SIGN TO NEAREST NL CIRCUIT.
4. CONNECT TO AC-2
5. CONNECT TO AC-3
6. CONNECT TO AC-160
7. CONNECT TO AC-280
8. CAMERA LOCATION. PROVIDE JUNCTION BOX AND CONDUIT FOR CAMERA INSTALLATION. ROUTE COMMUNICATIONS/POWER CONDUITS TO IT ROOM IN OFFICE AREA. CAMERAS BY OTHERS. COORDINATE CONDUIT SIZE, CABLE/WIRE, POWER REQUIREMENTS, POE EXTENDERS, MOUNTING REQUIREMENTS AND EXACT LOCATION WITH CAMERA INSTALLER.
9. PHOTOELECTRIC CONTROL "DO". MOUNT TO CEILING AND AIM IN NORTH DIRECTION. RUN CIRCUIT IN SEPARATE CONDUIT TO THE LIGHTING SWITCHING PANEL IN THE ELECTRICAL ROOM.
10. PHOTOELECTRIC CONTROL "DEC". MOUNT TO CEILING AND AIM IN NORTH DIRECTION. RUN CIRCUIT IN SEPARATE CONDUIT TO THE LIGHTING SWITCHING PANEL IN THE ELECTRICAL ROOM.
11. FIRE ALARM/HORN/STROBE, 184 CD. MOUNT FIRE ALARM/HORN/STROBE 72" A.F.F. DO NOT ROUTE CONDUIT RISERS IN EXPANSION JOINT. SEE FIRE ALARM RISER DIAGRAM ON SHEET E-601 FOR ADDITIONAL INFORMATION.



1 SECOND TIER - ELECTRICAL
1/8" = 1'-0"



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PROFESSIONAL ENGINEER
2-18-22

PROJECT NO.: 20011
DATE: 02/18/2022

REVISION SCHEDULE	
Δ Description	Date

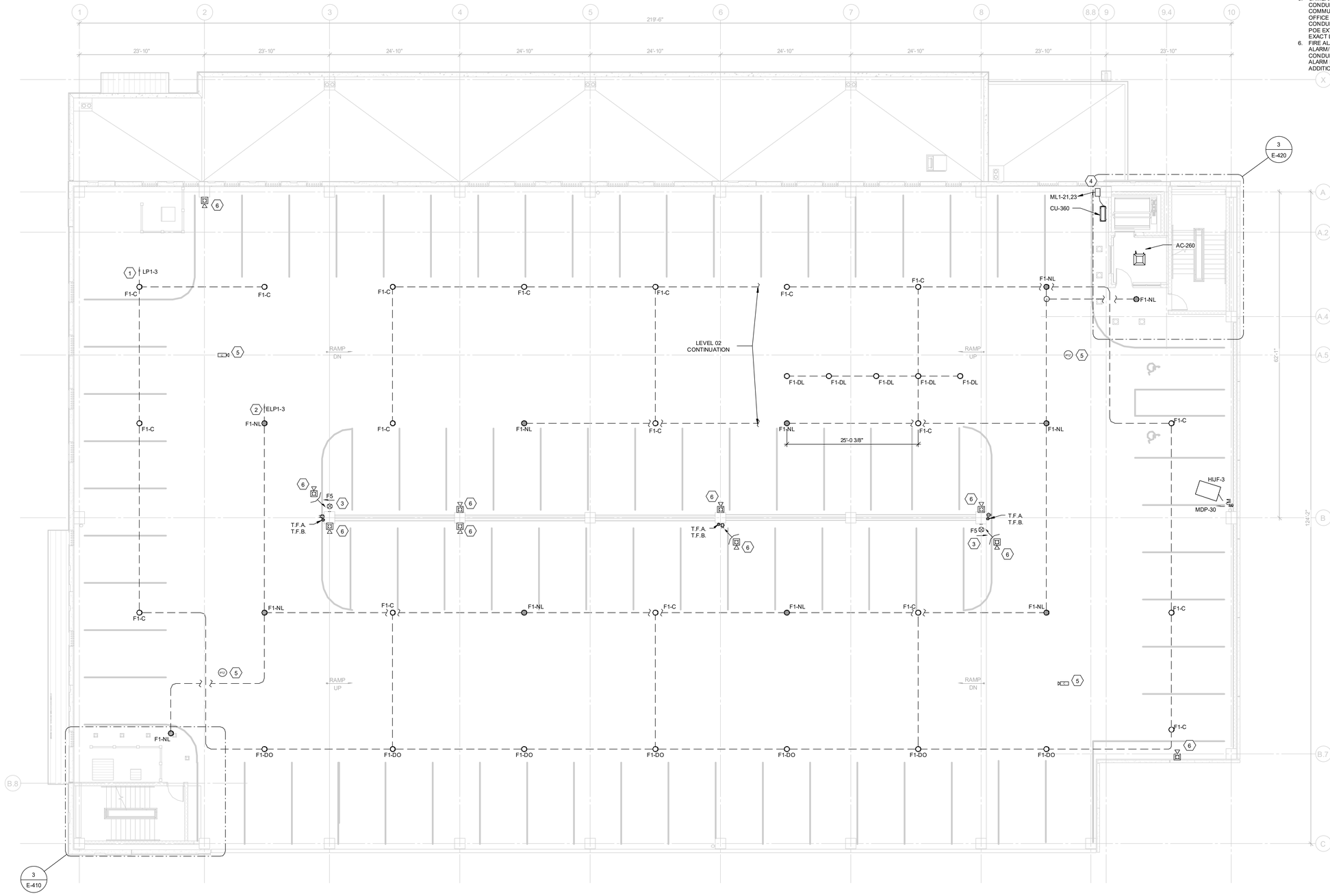
LEVEL 4
LEVEL 3
LEVEL 2
LEVEL G/OFFICE

SHEET NAME
SECOND TIER PLAN

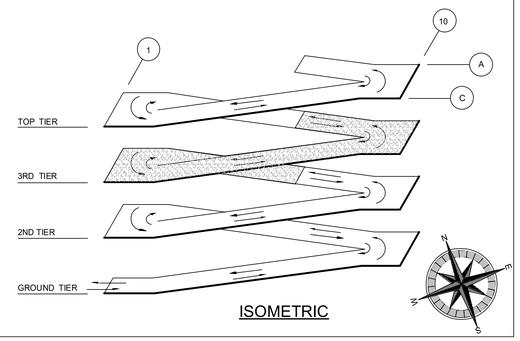
SHEET NO.
E-102

SHEET NOTES (#)

1. HOMERUNS TO PANEL LP1 IN THE ELECTRICAL ROOM.
2. HOMERUNS TO PANEL ELP1 IN THE ELECTRICAL ROOM.
3. CONNECT EXIT SIGN TO NEAREST NL CIRCUIT.
4. CONNECT TO AC-1.
5. CAMERA LOCATION. PROVIDE JUNCTION BOX AND CONDUIT FOR CAMERA INSTALLATION. ROUTE COMMUNICATIONS/POWER CONDUITS TO IT ROOM IN OFFICE AREA. CAMERAS BY OTHERS. COORDINATE CONDUIT SIZE, CABLE/WIRE, POWER REQUIREMENTS, POE EXTENDERS, MOUNTING REQUIREMENTS AND EXACT LOCATION WITH CAMERA INSTALLER.
6. FIRE ALARM/HORN/STROBE, 184 CD. MOUNT FIRE ALARM/HORN/STROBE 72" A.F.F. DO NOT ROUTE CONDUIT RISERS IN EXPANSION JOINT. SEE FIRE ALARM RISER DIAGRAM ON SHEET E-601 FOR ADDITIONAL INFORMATION.



1 THIRD TIER - ELECTRICAL
1/8" = 1'-0"



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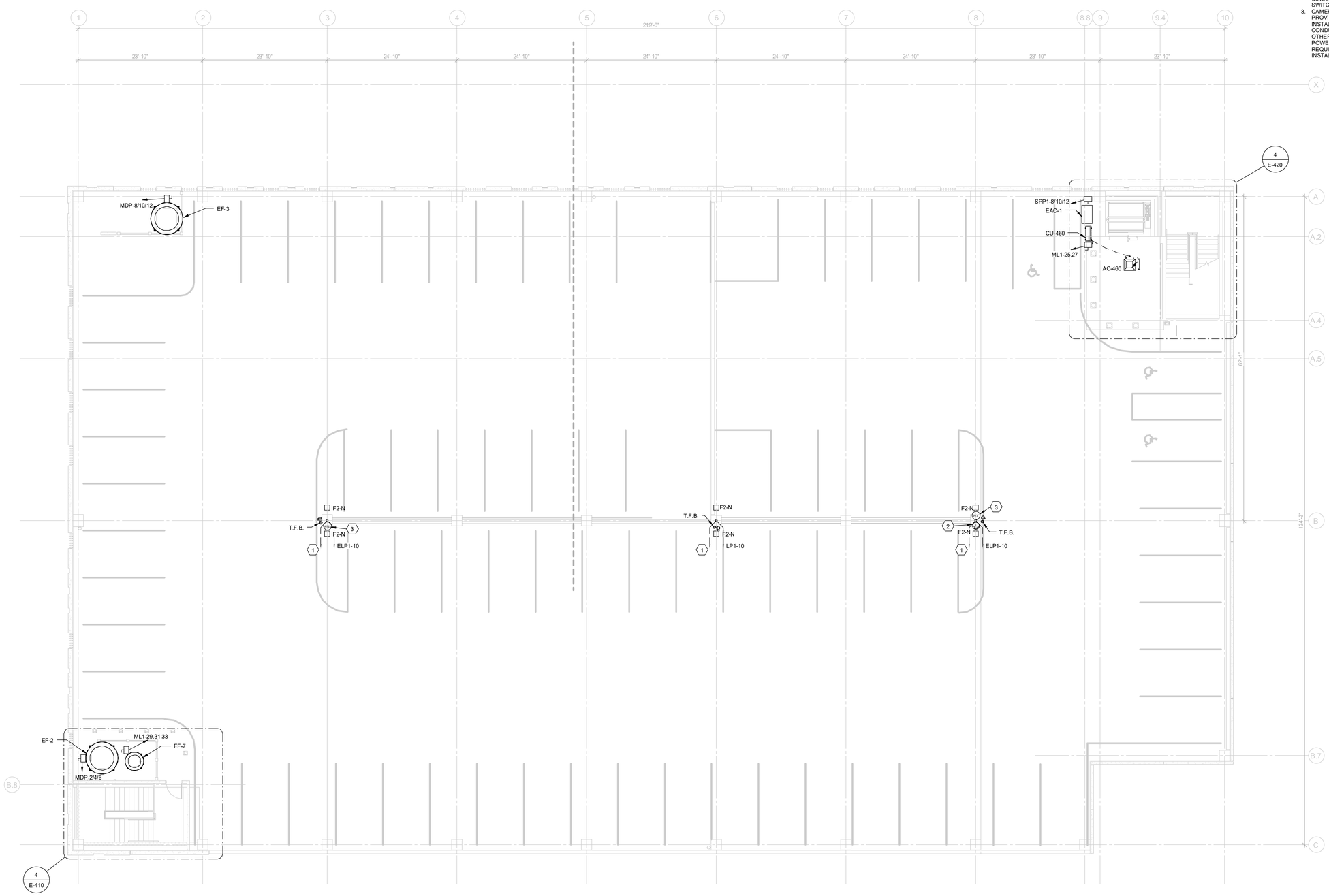
LEVEL 4
LEVEL 3
LEVEL 2
LEVEL G/OFFICE

SHEET NAME
THIRD TIER PLAN

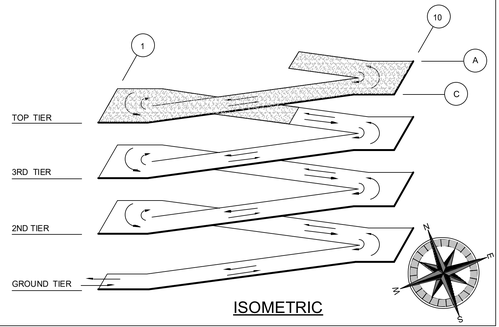
SHEET NO.
E-103

SHEET NOTES (#)

1. #4/0 BARE COPPER CABLE IN 1" PVC CONDUIT DOWN TO GROUND TIER GROUND RODS. SEE SHEET E-101 FOR ADDITIONAL INFORMATION.
2. PHOTOELECTRIC CONTROL "N". MOUNT TO TOP OF LIGHT POLE AND AIM IN NORTH DIRECTION. RUN CIRCUIT IN SEPARATE CONDUIT TO THE LIGHTING SWITCHING PANEL IN THE ELECTRICAL ROOM.
3. CAMERA LOCATION MOUNTED TO LIGHT POLE. PROVIDE JUNCTION BOX AND CONDUIT FOR CAMERA INSTALLATION. ROUTE COMMUNICATIONS/POWER CONDUITS TO IT ROOM IN OFFICE AREA. CAMERAS BY OTHERS. COORDINATE CONDUIT SIZE. CABLE/WIRE, POWER REQUIREMENTS, POE EXTENDERS, MOUNTING REQUIREMENTS AND EXACT LOCATION WITH CAMERA INSTALLER.



1 TOP TIER - ELECTRICAL
1/8" = 1'-0"



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Δ	Description	Date

LEVEL 4
LEVEL 3
LEVEL 2
LEVEL G/OFFICE

SHEET NAME

TOP TIER PLAN

SHEET NO.

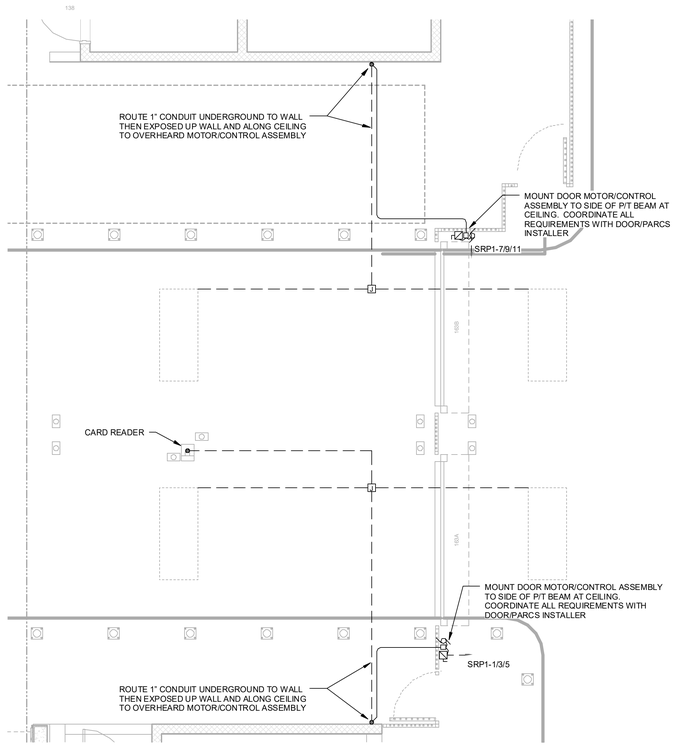
E-104

SHEET NOTES (#)

1. POWER WIRES SHALL BE 90 DEGREES C.
2. THE DRAWINGS REPRESENT THE GENERAL SCOPE OF A TYPICAL ACCESS CONTROL INSTALLATION. THE CONTRACTOR SHALL VERIFY EXACT LOCATIONS & REQUIREMENTS WITH ACCESS EQUIPMENT SUPPLIER BEFORE INSTALLING CONDUIT, BOXES, FIXTURES, DETECTOR LOOPS OR OTHER RELATED EQUIPMENT.

NOTES:
A. VERIFY SIZE OF LOOP, SIZE OF WIRE AND NUMBER OF TURNS WITH DETECTOR SUPPLIER BEFORE INSTALLATION; LOOP WIRE TO BE CONTINUOUS WITHOUT SPLICES.
B. LEAD-IN (FEEDER) CABLE RUNS ARE LIMITED TO 100 FEET.
C. LOOP AND LEAD-IN CABLE SHALL BE LOCATED AT LEAST 18" FROM ANY ELECTRICAL POWER SERVICE OR RUNS, AND STEEL REINFORCING IF POSSIBLE.
D. LEAD-IN CABLE SHALL BE IN SEPARATE CONDUIT BETWEEN LOOP AND DETECTOR. IT MUST NOT SHARE CONDUIT WITH OTHER WIRING OR LEADS FROM OTHER LOOPS.
E. LOOP WIRE SHALL BE #14 THHN SINGLE CONDUCTOR STRANDED WIRE.
F. LEAD-IN (FEEDER) CABLE SHALL HAVE TWO #14, 600 VOLT, INSULATED, STRANDED CONDUCTORS WITH AN OVERALL MYLAR/ALUMINUM SHIELD AND DRAIN WIRE. THE JACKET SHALL BE HIGHLY MOISTURE-AND WEATHER-RESISTANT BLACK POLYETHYLENE.
G. COORDINATE INSTALLATION WITH GENERAL CONTRACTOR.

2 LOOP DETAIL



1 SW ENTRY/EXIT ELECTRICAL PLANS

1/4" = 1'-0"

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LEVEL 4
LEVEL 3
LEVEL 2
LEVEL G/OFFICE

SHEET NAME

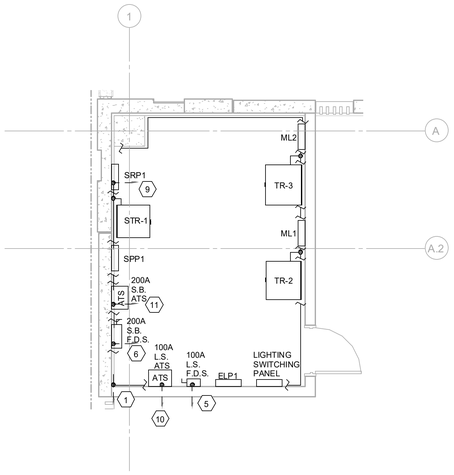
ENTRY/EXIT PLANS

SHEET NO.

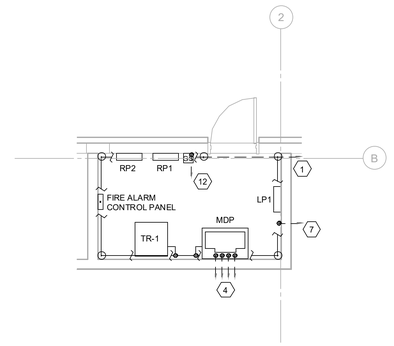
E-401

SHEET NOTES (#)

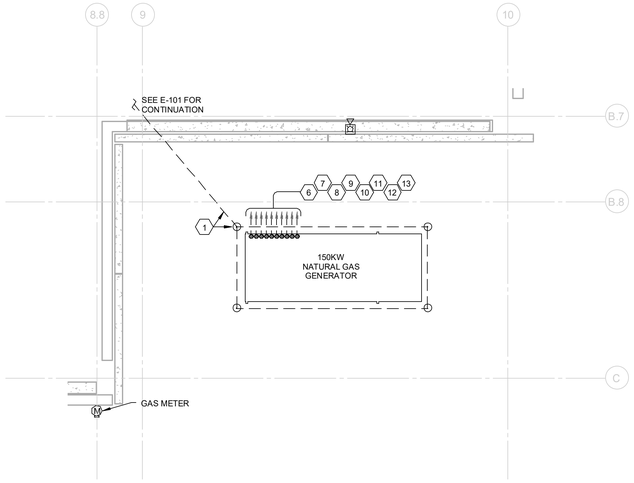
1. ROUTE #4/0 COPPER CABLE IN 1" CONDUIT FROM THE ELECTRICAL ROOM TO GROUNDING GRID SHOWN ON E-101. PANEL MDP, TRANSFORMERS TR-1, TR-2, TR-3 AND STR-1 SHALL BE GROUNDED TO THIS GROUND GRID WITH #4/0 COPPER CABLE. IN ADDITION, THIS GROUNDING GRID SHALL BE CONNECTED TO REBAR IN FOUNDATION, METAL SERVICE PIPE AND ANY ADDITIONAL GROUNDS WITH #4/0 COPPER CABLE PER SECTION 250 OF THE N.E.C. CONNECT TO LIGHT POLE GROUND GIRD, GENERATOR GROUND GRID AND SECOND TIER ELECTRICAL ROOM GRID. SEE SHEET E-101 FOR ADDITIONAL INFORMATION.
2. CONNECT F6A AND F7A FIXTURES PER MANUFACTURERS INSTRUCTIONS SO IT IS SWITCHABLE BUT WILL AUTOMATICALLY TRANSFER TO BATTERY POWER UPON LOSS OF AC POWER.
3. WIRE HEAT/SMOKE DETECTORS TO ELEVATOR RECALL PANEL IN ELECTRICAL ROOM.
4. FOUR 4" CONDUITS FROM MDP TO UTILITY TRANSFORMER. TWO CONDUITS FOR POWER, TWO SPARE. SEE E-101 FOR CONTINUATION. COORDINATE WITH CIVIL.
5. ONE 2" CONCRETE ENCASED CONDUIT TO GENERATOR FROM THE LIFE SAFETY POWER FUSED DISCONNECT.
6. ONE 2-1/2" CONCRETE ENCASED CONDUIT TO GENERATOR FROM THE STANDBY POWER FUSED DISCONNECT.
7. ONE 4" CONCRETE ENCASED CONDUIT FROM GENERATOR STUBBED UP AND CAPPED IN ELECTRICAL ROOM FOR SPARE.
8. ONE 1" CONDUIT FROM COMMUNICATIONS BACKBOARD TO GENERATOR FOR FUTURE GENERATOR MONITORING.
9. ONE 1" CONDUIT FROM PANEL SRP1 FOR GENERATOR 208/120V POWER.
10. ONE 3/4" CONDUIT WITH 5-#10 TO GENERATOR FROM LIFE SAFETY ATS FOR REMOTE START SIGNAL.
11. ONE 3/4" CONDUIT WITH 5-#10 TO GENERATOR FROM STANDBY ATS FOR REMOTE START SIGNAL.
12. ONE 3/4" CONDUIT WITH 5-#10 TO GENERATOR FROM SHUNT TRIP FOR REMOTE START SIGNAL.
13. ONE 4" CONDUIT FROM COMMUNICATIONS BOARD IN ELECTRICAL ROOM STUBBED UP 5'-0" OUTSIDE OF THE GARAGE. CIVIL TO CONTINUE. COORDINATE EXACT STUB UP LOCATIONS WITH CIVIL.



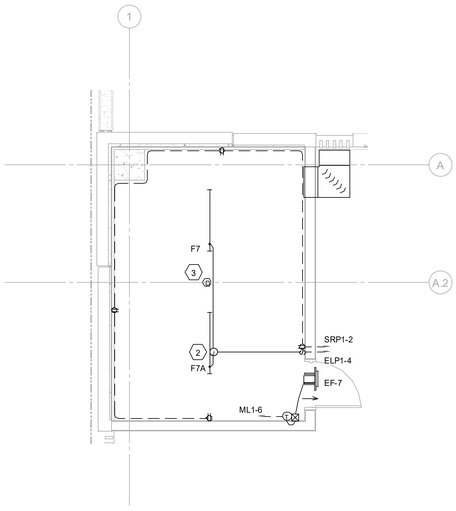
4 SECOND TIER ELECTRICAL ROOM PANEL ARRANGEMENT AND GROUNDING PLAN
1/4" = 1'-0"



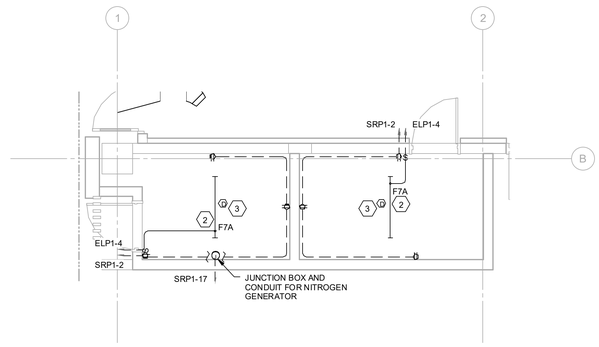
2 GROUND TIER ELECTRICAL ROOM PANEL ARRANGEMENT AND GROUNDING PLAN
1/4" = 1'-0"



5 GENERATOR PLAN
1/4" = 1'-0"



3 SECOND TIER ELECTRICAL ROOM PLAN
1/4" = 1'-0"



1 GROUND TIER ELECTRICAL AND FIRE ROOM PLAN
1/4" = 1'-0"

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PROJECT NO.: 20011

DATE: 02/18/2022

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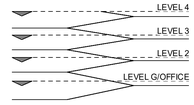
Δ	Description	Date

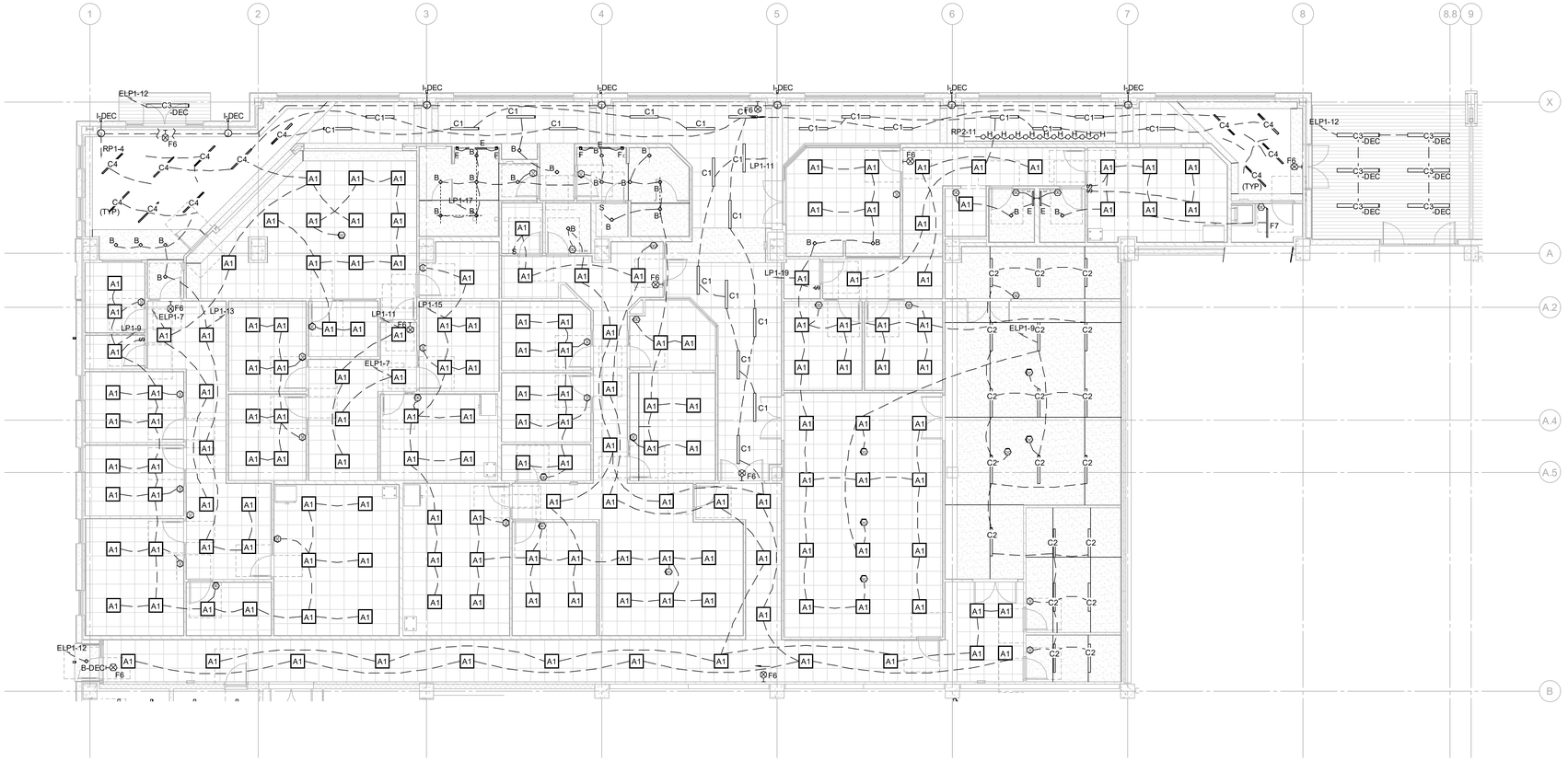


SHEET NAME

ELECTRICAL ROOM PLAN

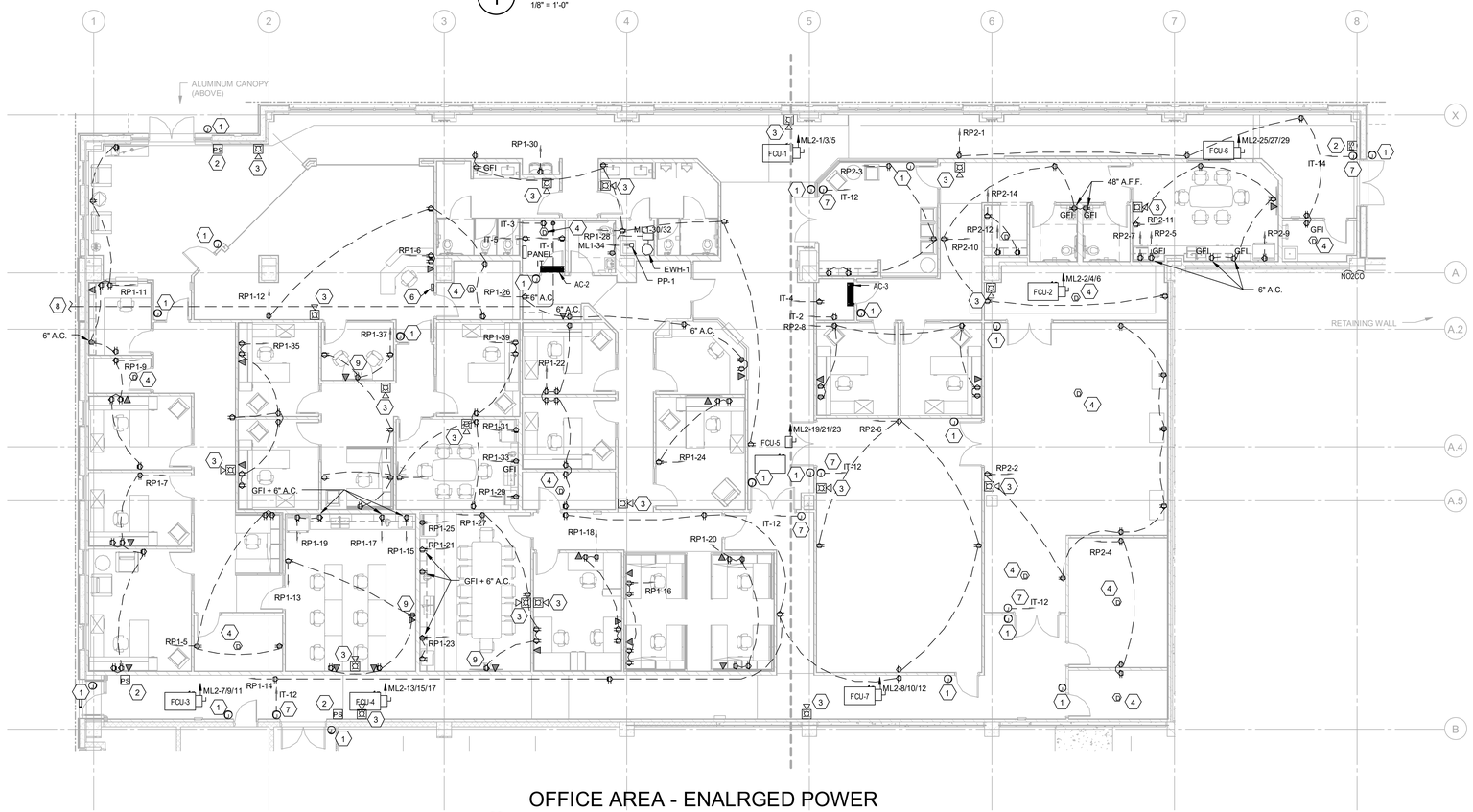
SHEET NO.

E-402



1 OFFICE AREA - ENALRGED LIGHTING PLAN

1/8" = 1'-0"



2 OFFICE AREA - ENALRGED POWER PLAN

1/8" = 1'-0"

SHEET NOTES

1. PROVIDE EMPTY JUNCTION BOX AND 3/4" CONDUIT WITH PULL STRING TO IT ROOM. COORDINATE EXACT LOCATION AND ADDITIONAL INFORMATION WITH SECURITY AND DOOR INSTALLER.
2. FIRE ALARM PULL STATION. MOUNT TOP OF PULL STATION 48" A.F.F. DO NOT ROUTE CONDUIT RISERS IN EXPANSION JOINT. SEE FIRE ALARM RISER DIAGRAM ON SHEET E-601 FOR ADDITIONAL INFORMATION.
3. FIRE ALARM/HORN/STROBE. MOUNT FIRE ALARM/HORN/STROBE 72" A.F.F. DO NOT ROUTE CONDUIT RISERS IN EXPANSION JOINT. SEE FIRE ALARM RISER DIAGRAM ON SHEET E-601 FOR ADDITIONAL INFORMATION.
4. WIRE HEAT/SMOKE DETECTORS TO FIRE ALARM PANEL IN ELECTRICAL ROOM.
5. CONNECT EXIT SIGNS IN OFFICE AREA TO CLOSET EMERGENCY CIRCUIT FROM PANEL ELP1.
6. FIRE ALARM ANNUNCIATOR PANEL.
7. PROVIDE JUNCTION BOX AND 3/4" CONDUIT TO IT PANEL FOR 120V DOOR OPERATOR POWER IN IT ROOM. COORDINATE EXACT LOCATION AND ADDITIONAL INFORMATION WITH SECURITY AND DOOR INSTALLER.
8. ONE 4" CONDUIT FROM IT ROOM FOR FIBER CONNECTION. ROUTE CONDUIT 5'-0" OUTSIDE GARAGE AND CIVIL TO CONTINUE. COORDINATE WITH CIVIL.
9. VERIFY MOUNTING HEIGHT WITH ARCHITECTURAL PLANS.

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97504
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PROFESSIONAL ENGINEER
2-18-22

PROJECT NO.: 20011
DATE: 02/18/2022

REVISION SCHEDULE

Δ	Description	Date

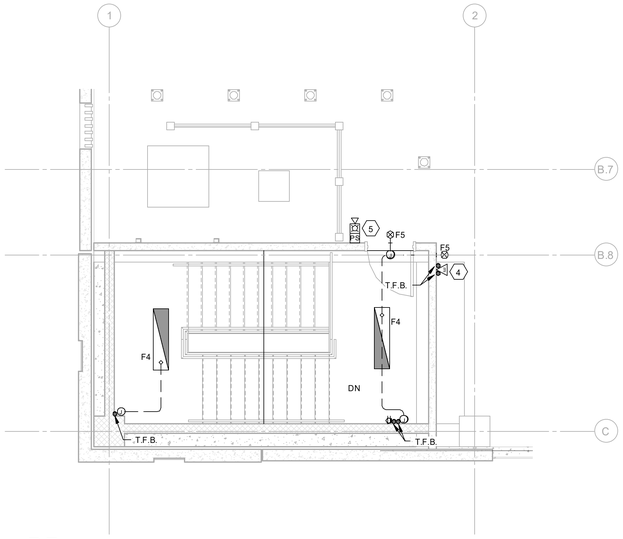
LEVEL 4
LEVEL 3
LEVEL 2
LEVEL G/OFFICE

SHEET NAME
OFFICE AREA - ENLARGED POWER & LIGHTING PLAN

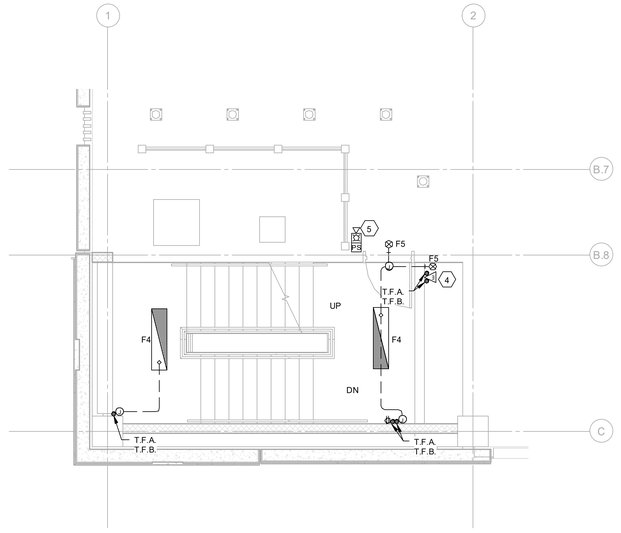
SHEET NO.
E-403

SHEET NOTES (#)

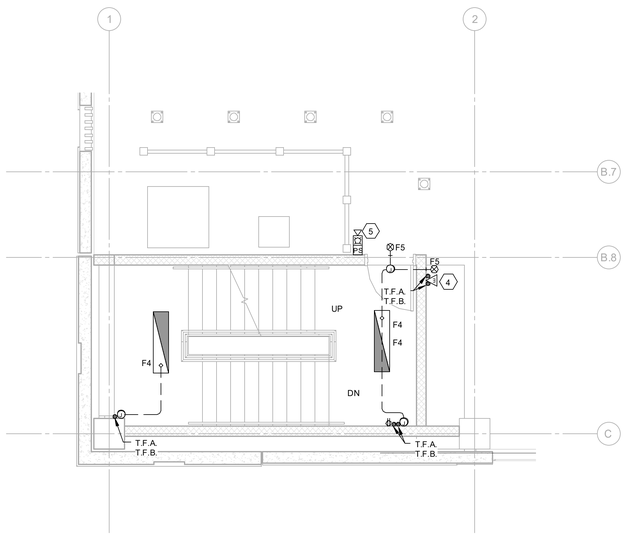
1. CONNECT ALL LIGHT FIXTURES IN STAIR MAIN LANDINGS TO CIRCUIT ELP1-19. CONNECT ALL FIXTURES IN STAIR INTERMEDIATE LANDINGS TO CIRCUIT ELP1-17.
2. SEAL ALL OPENINGS IN TOP OF ALL F4 LIGHT FIXTURES BEFORE MOUNTING IN PLACE.
3. MOUNT F3 FIXTURES 10'-0" A.F.F. FIXTURES ARE TO BE FED THROUGH CONCRETE WITH EMBEDDED CONDUIT. COORDINATE WITH GENERAL CONTRACTOR.
4. EMERGENCY SPEAKER PHONE WITH BLUE LIGHT. PROVIDE TWO JUNCTION BOXES.
5. FIRE ALARM PULL STATION AND HORN/STROBE, 184 CD. MOUNT TOP OF PULL STATION 48" A.F.F. MOUNT FIRE ALARM/HORN/STROBE 72" A.F.F. DO NOT ROUTE CONDUIT RISERS IN EXPANSION JOINT. SEE FIRE ALARM RISER DIAGRAM ON SHEET E-601 FOR ADDITIONAL INFORMATION.



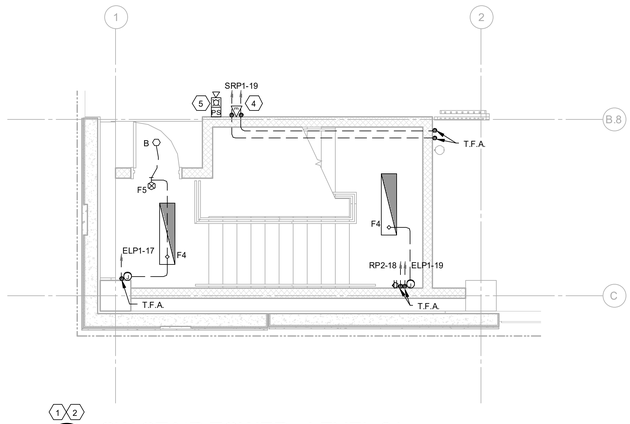
1 2
4 SW STAIR TOWER - LEVEL 04
1/4" = 1'-0"



1 2
2 SW STAIR TOWER - LEVEL 02
1/4" = 1'-0"



1 2
3 SW STAIR TOWER - LEVEL 03
1/4" = 1'-0"



1 2
1 SW STAIR TOWER - LEVEL 01
1/4" = 1'-0"

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2-18-22

PROJECT NO.: 20011
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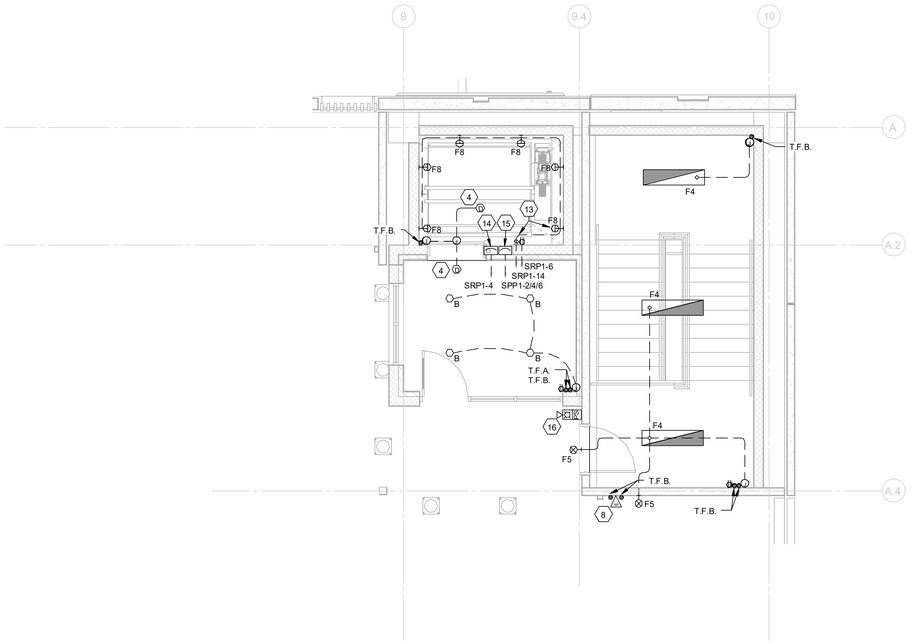
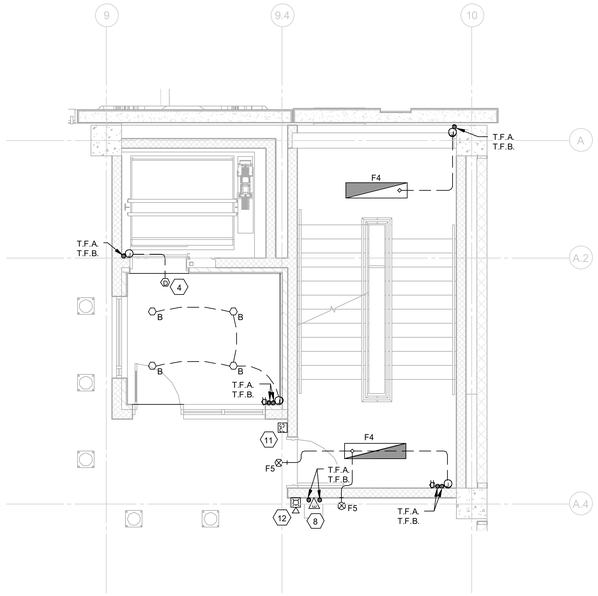
REVISION SCHEDULE		
Δ	Description	Date

SHEET NAME
SW STAIR TOWER

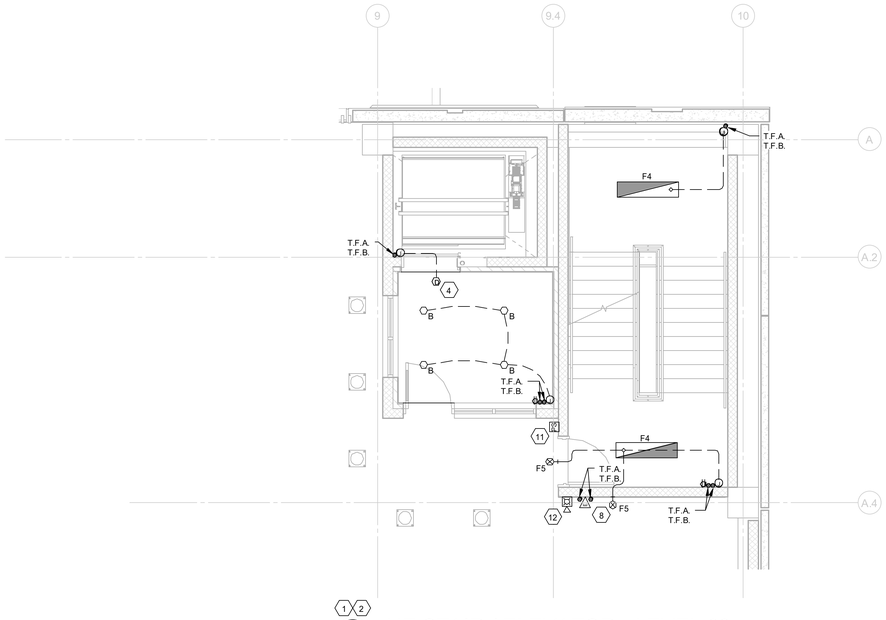
SHEET NO.
E-410



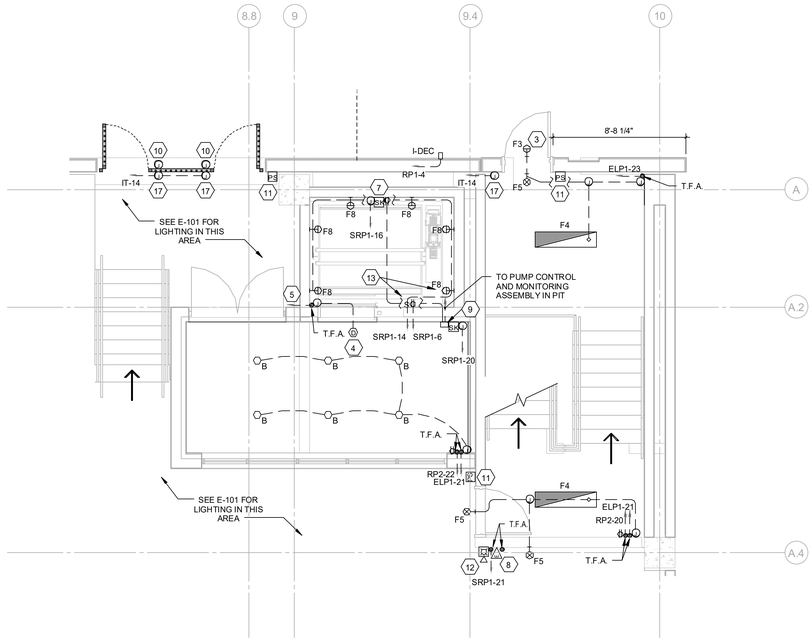
1 2
4 NE STAIR / ELEVATOR - LEVEL 04
1/4" = 1'-0"



1 2
2 NE STAIR / ELEVATOR - LEVEL 02
1/4" = 1'-0"



1 2
3 NE STAIR / ELEVATOR - LEVEL 03
1/4" = 1'-0"



1 2
1 NE STAIR / ELEVATOR - LEVEL 01
1/4" = 1'-0"

SHEET NOTES

1. CONNECT ALL LIGHT FIXTURES IN STAIR MAIN LANDINGS TO CIRCUIT ELP1-21. CONNECT ALL FIXTURES IN STAIR INTERMEDIATE LANDINGS TO CIRCUIT ELP1-23. CONNECT ALL LIGHT FIXTURES IN ELEVATOR LOBBY TO CIRCUIT ELP1-21.
2. SEAL ALL OPENINGS IN TOP OF ALL F4 LIGHT FIXTURES BEFORE MOUNTING IN PLACE.
3. MOUNT F3 FIXTURES 10'-0" A.F.F. FIXTURES ARE TO BE FED THROUGH CONCRETE WITH EMBEDDED CONDUIT. COORDINATE WITH GENERAL CONTRACTOR.
4. WIRE SMOKE AND HEAT DETECTORS TO FIRE ALARM PANEL IN ELECTRICAL ROOM. RUN CIRCUIT WITH DRY CONTACT OUTPUTS FROM ELEVATOR RECALL AND SUPERVISORY PANEL TO ELEVATOR SEQUENCING EQUIPMENT. COORDINATE INSTALLATION WITH ELEVATOR INSTALLER.
5. 1" CONDUIT TO FIRE ALARM PANEL IN ELECTRICAL ROOM.
6. ONE 1" CONDUIT TO FIRE ALARM PANEL IN THE ELECTRICAL ROOM FOR ELEVATOR SEQUENCING.
7. SUPPLY WEATHERPROOF KEY OPERATED SWITCHES FOR SUMP PUMP AND HEAT TRACING. MOUNT SWITCHES 1'-0" ABOVE PIT COVER IN A JUNCTION BOX. HARDWIRE SUMP PUMP AND HEAT TRACE TO SWITCHES. SEE PLUMBING DRAWINGS FOR ADDITIONAL INFORMATION.
8. EMERGENCY SPEAKER PHONE WITH BLUE LIGHT. PROVIDE TWO JUNCTION BOXES.
9. OIL DETECTION PANEL. ROUTE ONE 3/4" CONDUIT TO PUMP CONTROL/MONITORING ASSEMBLY IN SUMP PIT AND ONE 3/4" CONDUIT TO WEATHERPROOF SIMPLEX RECEPTACLE IN ELEVATOR PIT. SEE PLUMBING PLANS FOR ADDITIONAL INFORMATION.
10. PROVIDE EMPTY JUNCTION BOX AND 3/4" CONDUIT WITH PULL STRING TO IT ROOM. COORDINATE EXACT LOCATION AND ADDITIONAL INFORMATION WITH SECURITY AND DOOR INSTALLER.
11. FIRE ALARM PULL STATION. MOUNT TOP OF PULL STATION 48" A.F.F. DO NOT ROUTE CONDUIT RISERS IN EXPANSION JOINT. SEE FIRE ALARM RISER DIAGRAM ON SHEET E-601 FOR ADDITIONAL INFORMATION.
12. FIRE ALARM/HORN/STROBE. MOUNT FIRE ALARM/HORN/STROBE 72" A.F.F. DO NOT ROUTE CONDUIT RISERS IN EXPANSION JOINT. SEE FIRE ALARM RISER DIAGRAM ON SHEET E-601 FOR ADDITIONAL INFORMATION.
13. LOCATE LIGHTS, LIGHT SWITCH, AND G.F.C.I. RECEPTACLE IN ELEVATOR PIT AND TOP OF SHAFT. MOUNT LIGHT SWITCH AND RECEPTACLE ADJACENT TO ENTRANCE OR LADDER.
14. 30 AMP, 120 VOLT, CIRCUIT BREAKER SUPPLIED BY ELEVATOR MANUFACTURER LOCATED IN ELEVATOR DOOR JAM FOR 120V ELEVATOR CAR POWER. ELEVATOR INSTALLER WILL CONTINUE CIRCUIT TO ELEVATOR CAR.
15. 80 AMP, 3 PHASE, 480 VOLT, CIRCUIT BREAKER SUPPLIED BY ELEVATOR MANUFACTURER LOCATED IN ELEVATOR DOOR JAM. COORDINATE EXACT LOCATION WITH ELEVATOR MANUFACTURER. FOR 480V ELEVATOR POWER.
16. FIRE ALARM PULL STATION AND HORN/STROBE, 184 CD. MOUNT TOP OF PULL STATION 48" A.F.F. MOUNT FIRE ALARM/HORN/STROBE 72" A.F.F. DO NOT ROUTE CONDUIT RISERS IN EXPANSION JOINT. SEE FIRE ALARM RISER DIAGRAM ON SHEET E-601 FOR ADDITIONAL INFORMATION.
17. PROVIDE JUNCTION BOX AND 3/4" CONDUIT TO IT PANEL FOR 120V DOOR OPERATOR POWER IN IT ROOM. COORDINATE EXACT LOCATION AND ADDITIONAL INFORMATION WITH SECURITY AND DOOR INSTALLER.

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2-10-22

PROJECT NO.: 20011

DATE: 02/18/2022

REVISION SCHEDULE

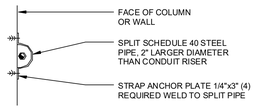
Δ	Description	Date

SHEET NAME

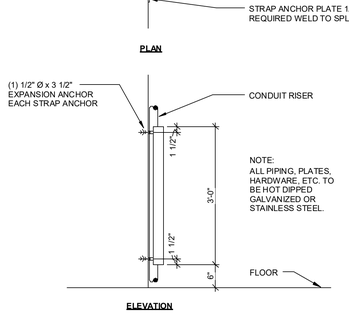
NE STAIR / ELEVATOR TOWER

SHEET NO.

E-420



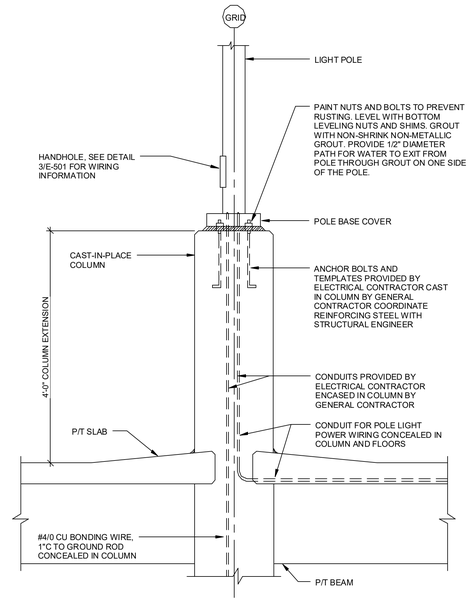
PLAN



ELEVATION

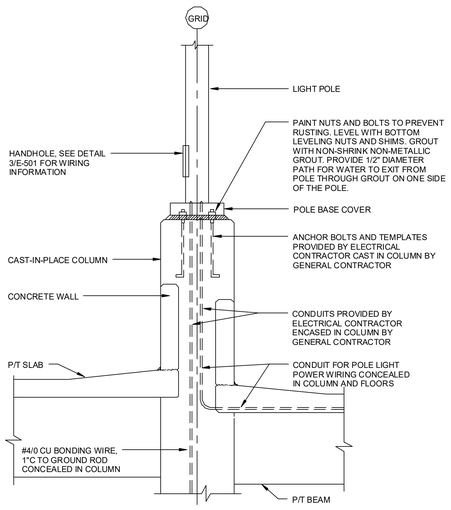
5 CONDUIT RISER GUARD DETAIL

3/4" = 1'-0"



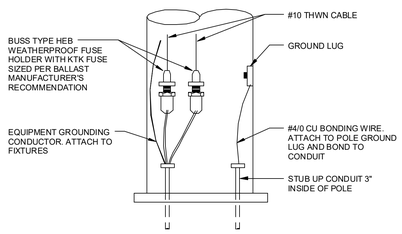
2 POLE MOUNTING DETAIL AT COLUMN

3/4" = 1'-0"



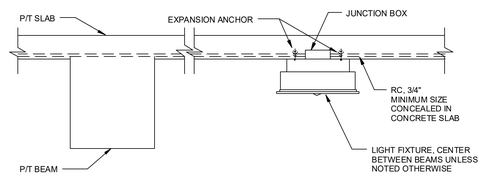
6 POLE MOUNTING DETAIL AT COLUMN/RAMP

3/4" = 1'-0"



3 POLE WIRING DETAIL

3/4" = 1'-0"



NOTES:
1. ALL JUNCTION BOXES ATTACHED TO FIXTURES MUST BE CAST METAL.
2. ALL OPENINGS IN TOP OF FIXTURE MUST BE SEALED.

1 FIXTURE F1 MOUNTING DETAIL

3/4" = 1'-0"

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2-18-22

PROJECT NO.: 20011

DATE: 02/18/2022

REVISION SCHEDULE

Δ	Description	Date

LEVEL 4
LEVEL 3
LEVEL 2
LEVEL G/OFFICE

SHEET NAME

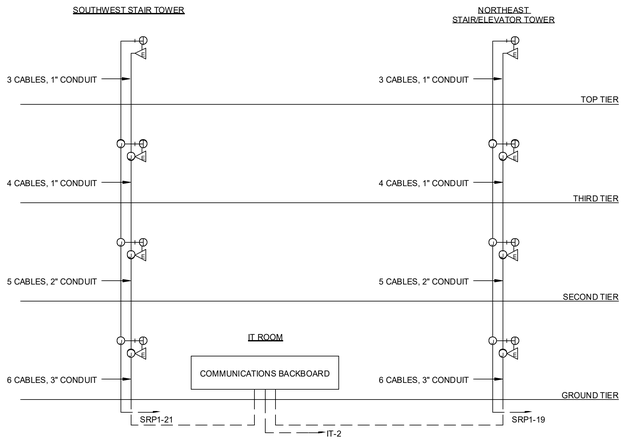
DETAILS

SHEET NO.

E-501

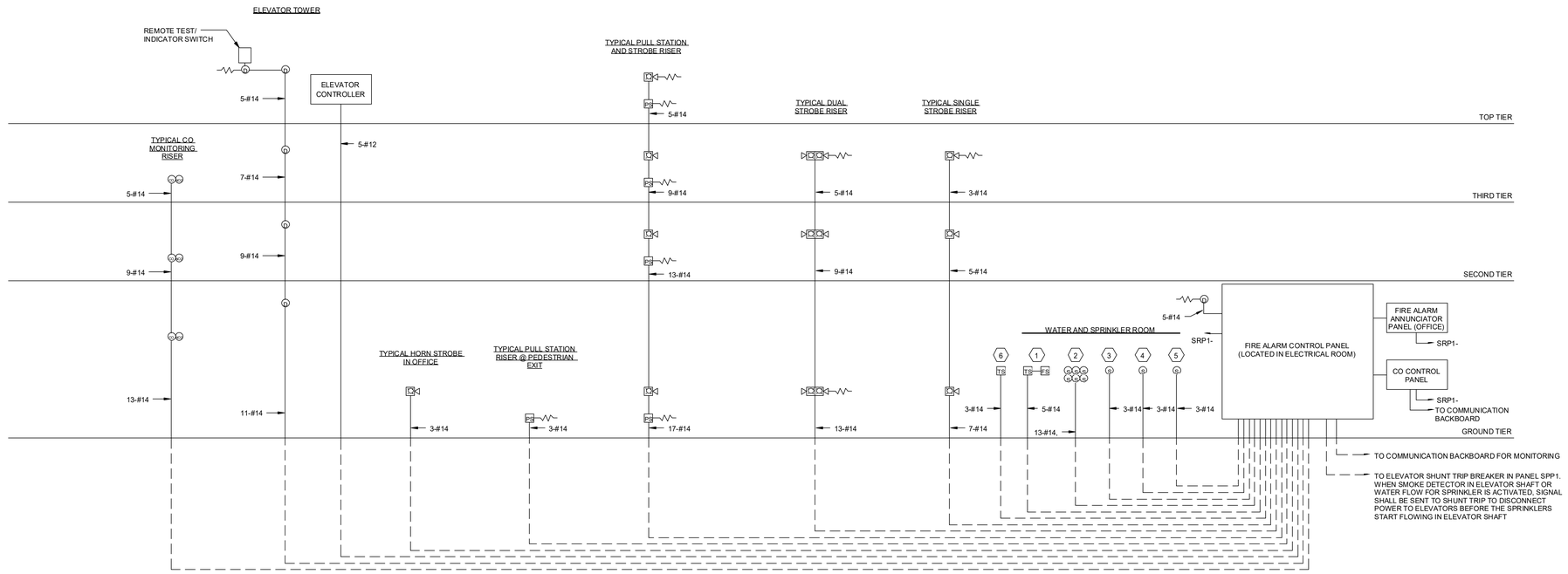
SHEET NOTES (#)

1. WATER VALVE TAMPER SWITCHES.
2. DRY PIPE VALVE SWITCHES.
3. SPRINKLER/WATER ROOM LOW TEMPERATURE ALARM.
4. SPRINKLER MAIN HEAT TRACE ALARM.
5. AIR COMPRESSOR LOW AIR SWITCH.
6. OSY2 SUPERVISORY SWITCH FOR OS&Y VALVE. TYPICAL FOR EIGHT TOTAL LOCATIONS.
7. COORDINATE RETURN TIERS AND ALTERNATE TIERS WITH AUTHORITY HAVING JURISTICTION.
8. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.



2 EMERGENCY PHONE RISER DIAGRAM

3/4" = 1'-0"



(7) (8)

1 FIRE ALARM RISER DIAGRAM

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2-18-22

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REVISION SCHEDULE		
Δ	Description	Date

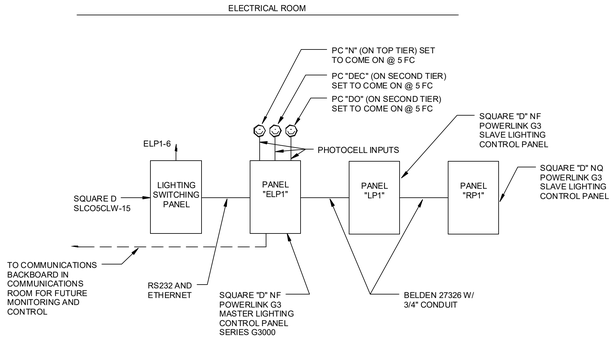
LEVEL 4
LEVEL 3
LEVEL 2
LEVEL G/OFFICE

SHEET NAME

RISER DIAGRAMS

SHEET NO.

E-601

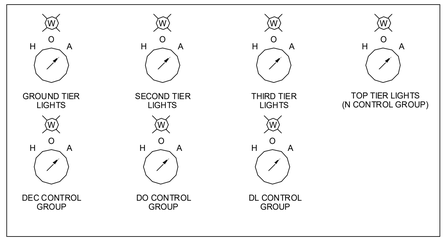


LIGHTING CONTROL SYSTEM SCHEMATIC DIAGRAM

NO SCALE

NOTES:
1. ALL PANELS SHALL HAVE THE CAPABILITY TO REPLACE ALL NON SWITCHED CIRCUIT BREAKERS WITH SWITCHABLE CIRCUIT BREAKERS.
2. MANUFACTURER SHALL MODIFY LIGHTING SWITCHING PANEL TO PROVIDE THE NUMBER OF OVERRIDE SWITCHES AND INDICATED LIGHTS SHOWN IN LIGHTING SWITCHING PANEL.

LIGHTING SWITCHING PANEL OPERATION
1. TIER H.O.A. SWITCHES, WHEN IN THE "HAND" OR "OFF" POSITION, WILL OVERRIDE THE TIMECLOCK.
2. THE DEC, DO, DL AND N H.O.A. CONTROL GROUP SWITCHES, WHEN IN THE "HAND" OR "OFF" POSITIONS WILL OVERRIDE THE PHOTOCELL CONTROL FOR THAT GROUP.
3. THE DEC, DO, DL AND N H.O.A. CONTROL GROUPS CAN ONLY BE MANUALLY TURNED ON AFTER BOTH THE TIMER AND PHOTOCELL CONTROLS HAVE BEEN TURNED ON.
4. INSCRIBE: "DO NOT MANUALLY OPERATE CONTROLLABLE BREAKERS" ON THE COVER OF ALL MASTER AND SLAVE POWERLINK PANELS.



LIGHTING SWITCHING PANEL

NO SCALE

NOTES:
1. MOUNT IN PANEL LSP COVER.
2. LIGHTING SWITCHING PANEL SWITCHES ARE TO BE INSTALLED AS INDICATED ON THIS DRAWING.

LIGHTING CONTROL TERMINOLOGY

A	AUTOMATIC
CR	CONTROL RELAY
H	HAND
NEUT.	NEUTRAL
O	OFF
PC	PHOTOELECTRIC CONTROL
RC	REMOTE CONTACTOR
TBA	TERMINAL BLOCK A
TBB	TERMINAL BLOCK B
SW	SWITCH
(W)	WHITE LED PILOT LIGHT
EXAMPLE	CONTROL AND CIRCUIT DESIGNATION
C2-T2	C = CONTROL GROUP ON DURING OPEN HOURS 2 = SECOND "C" CIRCUIT NUMBER T2 = SECOND TIER CONTROL GROUP
DO-GT	DO = CONTROL GROUP CONTROLLED BY DO PHOTOCELL AS LONG AS GT CONTROL IS ON FOR OPEN HOURS 1 = FIRST "DO" CIRCUIT NUMBER GT = GROUND TIER CONTROL GROUP

CONTROL IDENTIFICATION SCHEDULE

(INSCRIBE THIS SEQUENCE ON THE LOWER RIGHT CORNER OF THE LIGHTING CONTROL PANEL.)

		CONTROL	
IDENT.	FUNCTION	ON	OFF
"C"	OPEN HOURS	TIMER	TIMER
"DL"	OPEN HOURS, DAY TIME SUPPLEMENTAL ENTRY/EXIT LIGHTING	PC "N" (INVERSE) & TIMER	PC "N" (INVERSE) OR TIMER
"DEC"	OPEN HOURS, DUSK TO DAWN	PC "N" & TIMER	PC "N" OR TIMER
"DO"	OPEN HOURS, DARK DAYS DUSK TO DAWN (EXTERIOR ROW)	PC "DO" & TIMER	PC "DO" OR TIMER
"NL"	24 HOURS	MANUAL (CIRCUIT BREAKER)	MANUAL (CIRCUIT BREAKER)
"N"	OPEN HOURS, DUSK TO DAWN	PC "N" & TIMER	PC "N" OR TIMER

NOTE: TIME SWITCHES AND PHOTOELECTRIC CONTROLS HAVE MANUAL OVERRIDE.

LIGHTING SEQUENCE

(INSCRIBE THIS SEQUENCE ON THE LOWER RIGHT CORNER OF THE LIGHTING CONTROL PANEL.)

1. ALL CONTROL SWITCHES IN "AUTO" POSITION.
2. TIMER ACTIVATES ALL CONTROLLED LIGHTS. ON DARK DAYS AND JUST BEFORE DUSK, PHOTOELECTRIC CONTROL "DO" INITIATES SEQUENCE TO TURN ON "DO" LIGHTS. IF DAY BRIGHTENS, PHOTOELECTRIC CONTROL "DO" WILL AGAIN INITIATE SEQUENCE TO TURN "DO" LIGHTS OFF.
3. AT DUSK PHOTOELECTRIC CONTROL "N" INITIATES SEQUENCE TO TURN ON "N", AND "DEC" LIGHTS AND TO TURN OFF "DL" LIGHTS.
4. AT PRESET TIME (CLOSING TIME) TIMER SIGNALS SWITCHABLE BREAKERS TURNING OFF "C", "DEC", "DO", "DL" & "N" LIGHTS.
5. "NL" LIGHTS ARE MANUALLY CONTROLLED AND OPERATE CONTINUOUSLY FOR SECURITY LIGHTING.

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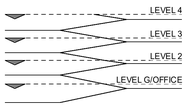
PROJECT NO.: 20011

DATE: 02/18/2022

REVISION SCHEDULE

Δ	Description	Date



SHEET NAME

LIGHTING CONTROL

SHEET NO.

E-602

LIGHTING CLASS PANELBOARD **MDP**

MOUNTING: FLUSH, X SURFACE | **VOLTAGE:** 277 / 480 | **PHASE:** 3 | **WIRE:** 4 | **BUS AMPS:** 600A | **MAIN BREAKER AMPS:** 600A | **NEMA ENCLOSURE:** 1 | **SECTION LUGS:** 1 | **INTERRUPTING RATING:**

	NOTE	SERVES	KVA	WIRE	CB	Ø	CKT	A B C	CKT	Ø	CB	WIRE	KVA	SERVES	NOTE	
P		PANEL 'ML1'	23.82	#1	125A	3	1	25.92	2	3	20A	#10	6.30	EF-2		M
P			21.67	#1			3	23.77	4			#10				
P			17.36	#1			5	19.46	6			#10				
P		PANEL 'ML2'	37.39	#2/0	175A	3	7	39.49	8	3	20A	#10	6.30	EF-3		M
P			37.39	#2/0			9	39.49	10			#10				
P			37.39	#2/0			11	39.49	12			#10				
P		PANEL 'RP1'	14.46	#4	70A	3	13	19.38	14	3	100A	#1	4.92	PANEL 'LP1'		P
P			12.10	#4			15	17.10	16			#1	5.00			P
P			11.43	#4			17	13.38	18			#1	1.95			P
P		PANEL 'SPP1'	26.13	#3/0	200A	3	19	29.08	20	3	100A	#1	2.95	PANEL 'ELP1'		P
P			25.31	#3/0			21	27.07	22			#1	1.76			P
P			23.77	#3/0			23	24.09	24			#1	0.32			P
		SPACE					25	1.67	26	1	20A	#10	1.67	JET FAN		M
		SPACE					27	1.67	28	1	20A	#10	1.67	JET FAN		M
		SPACE					29	1.67	30	1	20A	#10	1.67	JET FAN		M
		SPACE					31	0.00	32					SPACE		
		SPACE					33	0.00	34					SPACE		
		SPACE					35	0.00	36					SPACE		
		SPACE					37	0.00	38					SPACE		
		SPACE					39	0.00	40					SPACE		
		SPACE					41	0.00	42					SPACE		
			288.23										34.51			

CONNECTED LOAD (KVA) BY TYPE

15.83	INTERIOR LIGHTING (IL)	CONNECTED LOAD - PHASE A:	115.54 KVA
1.52	EXTERIOR LIGHTING (EL)	CONNECTED LOAD - PHASE B:	109.10 KVA
0.00	SIGNAGE (S)	CONNECTED LOAD - PHASE C:	98.09 KVA
35.28	RECEPTACLES (R)		
0.00	CAR CHARGER (CC)	CONNECTED FED-THRU LOAD:	0.00 KVA
0.00	ELECTRIC HEAT (EH)		
18.54	MISCELLANEOUS (X)	TOTAL CONNECTED LOAD:	322.74 KVA
86.85	MOTORS (M)		
14.94	HVAC - HEATING/COOLING (AC)	NEC DERATED LOAD:	310.51 KVA
116.68	HVAC - HEATING ONLY (H)		
33.10	HVAC - COOLING ONLY (C)	NEC DERATED AMPS:	373.48 AMPS

NOTES TO PANELBOARD:

SQUARE 'D' NF POWERLINK G3 PANEL **LP1**

MOUNTING: FLUSH, X SURFACE | **VOLTAGE:** 277 / 480 | **PHASE:** 3 | **WIRE:** 4 | **BUS AMPS:** 100A | **MAIN BREAKER AMPS:** 100A | **NEMA ENCLOSURE:** 1 | **SECTION LUGS:** 1 | **INTERRUPTING RATING:**

	NOTE	SERVES	KVA	WIRE	CB	Ø	CKT	A B C	CKT	Ø	CB	WIRE	KVA	SERVES	NOTE	
IL		LEVEL 1 LIGHTING	0.90	#10	20A	1	1	1.85	2	1	20A	#10	0.95	LEVEL 2 LIGHTING		IL
IL		LEVEL 3 LIGHTING	1.25	#10	20A	1	3	1.75	4	1	20A	#10	0.50	SIGN		S
		SPARE			20A	1	5	0.00	6	1	20A			SPARE		
		SPARE			20A	1	7	0.00	8	1	20A			SPARE		
IL		OFFICE LIGHTING	1.15	#10	20A	1	9	1.70	10	1	20A	#10	0.55	ROOF LIGHTING		EL
IL		CORRIDOR LIGHTING	1.20	#10	20A	1	11	1.20	12	1	20A			SPARE		
IL		CORRIDOR LIGHTING	1.05	#10	20A	1	13	1.05	14	1	20A			SPARE		
IL		OFFICE LIGHTING	2.05	#10	20A	1	15	2.05	16	1	20A			SPARE		
IL		OFFICE & RESTROOM LIGHTING	0.75	#10	20A	1	17	0.75	18	1	20A			SPARE		
IL		OFFICE LIGHTING	1.97	#10	20A	1	19	1.97	20	1	20A			SPARE		
		SPARE			20A	1	21	0.00	22	1	20A			SPARE		
		SPARE			20A	1	23	0.00	24					SPACE		
		SPARE			20A	1	25	0.00	26					SPACE		
		SPARE			20A	1	27	0.00	28					SPACE		
		SPACE					29	0.00	30					SPACE		
		SPACE					31	0.00	32					SPACE		
		SPACE					33	0.00	34					SPACE		
		SPACE					35	0.00	36					SPACE		
		SPACE					37	0.00	38					SPACE		
		SPACE					39	0.00	40					SPACE		
		SPACE					41	0.00	42					SPACE		
			10.32										2.00			

CONNECTED LOAD (KVA) BY TYPE

11.27	INTERIOR LIGHTING (IL)	CONNECTED LOAD - PHASE A:	4.87 KVA
0.55	EXTERIOR LIGHTING (EL)	CONNECTED LOAD - PHASE B:	5.50 KVA
0.50	SIGNAGE (S)	CONNECTED LOAD - PHASE C:	1.95 KVA
0.00	RECEPTACLES (R)		
0.00	CAR CHARGER (CC)	CONNECTED FED-THRU LOAD:	0.00 KVA
0.00	ELECTRIC HEAT (EH)		
0.00	MISCELLANEOUS (X)	TOTAL CONNECTED LOAD:	12.32 KVA
0.00	MOTORS (M)		
0.00	HVAC - HEATING/COOLING (AC)	NEC DERATED LOAD:	15.40 KVA
0.00	HVAC - HEATING ONLY (H)		
0.00	HVAC - COOLING ONLY (C)	NEC DERATED AMPS:	18.52 AMPS

NOTES TO PANELBOARD:

SQUARE 'D' NQ POWERLINK G3 PANEL **RP1**

MOUNTING: FLUSH, X SURFACE | **VOLTAGE:** 120 / 208 | **PHASE:** 3 | **WIRE:** 4 | **BUS AMPS:** 200A | **MAIN BREAKER AMPS:** 150A | **NEMA ENCLOSURE:** 1 | **SECTION LUGS:** 1 | **INTERRUPTING RATING:**

	NOTE	SERVES	KVA	WIRE	CB	Ø	CKT	A B C	CKT	Ø	CB	WIRE	KVA	SERVES	NOTE	
R		RECEPTACLES COLUMN B,3	0.72	#10	20A	1	1	1.44	2	1	20A	#10	0.72	RECEPTACLES COLUMN B,8		R
R		RECEPTACLES COLUMN B,6	0.72	#10	20A	1	3	0.82	4	1	20A	#10	0.10	EXTERIOR LIGHTING		EL
R		RECEPTACLES 107 AND 109	0.72	#10	20A	1	5	1.08	6	1	20A	#10	0.36	RECEPTACLES LOBBY		R
R		RECEPTACLES 105 & 106	1.08	#10	20A	1	7	1.68	8	1	20A	#10	0.60	EXT FRONT LIGHTS		EL
R		RECEPTACLES 104 & 103	0.72	#10	20A	1	9	0.72	10	1	20A			SPARE		
R		RECEPTACLES 101	1.08	#10	20A	1	11	2.16	12	1	20A	#10	1.08	RECEPTACLES 111		R
R		RECEPTACLES 108 & 110	0.72	#10	20A	1	13	1.80	14	1	20A	#10	1.08	RECEPTACLES CORRIDOR		R
R		COFFEE MAKER 110	0.70	#10	20A	1	15	1.42	16	1	20A	#10	0.72	RECEPTACLES 135		R
R		MICROWAVE 110	0.80	#10	20A	1	17	1.52	18	1	20A	#10	0.72	RECEPTACLES 134		R
R		REFRIGERATOR 110	0.80	#10	20A	1	19	1.52	20	1	20A	#10	0.72	RECEPTACLES 135		R
R		COFFEE MAKER 133	0.90	#10	20A	1	21	1.62	22	1	20A	#10	0.72	RECEPTACLES 126, 128		R
R		MICROWAVE 133	0.80	#10	20A	1	23	1.70	24	1	20A	#10	0.90	RECEPTACLES 127, 129		R
R		REFRIGERATOR 133	0.90	#10	20A	1	25	1.98	26	1	20A	#10	1.08	RECEPTACLES 124, 125		R
R		RECEPTACLES 133	0.90	#10	20A	1	27	1.98	28	1	20A	#10	1.08	RECEPTACLES 119, 121		R
R		MICROWAVE 116	0.80	#10	20A	1	29	1.60	30	1	20A	#10	0.80	WATER FOUNTAIN	1	X
R		REFRIGERATOR 116	0.80	#10	20A	1	31	0.80	32	1	20A			SPARE		
R		COFFEE MAKER 116	0.70	#10	20A	1	33	0.70	34	1	20A			SPARE		
R		RECEPTACLES 113 ,114	1.26	#10	20A	1	35	1.26	36	1	20A			SPARE		
R		RECEPTACLES 112 , 116	1.26	#10	20A	1	37	6.56	38	3	50A	#6	5.30	PANEL ' RP2'		P
R		RECEPTACLES 116, 117	1.08	#10	20A	1	39	5.66	40			#6	4.58			P
		SPARE			20A	1	41	3.19	42			#6	3.19			P
			17.46										23.75			

CONNECTED LOAD (KVA) BY TYPE

0.05	INTERIOR LIGHTING (IL)	CONNECTED LOAD - PHASE A:	15.78 KVA
0.70	EXTERIOR LIGHTING (EL)	CONNECTED LOAD - PHASE B:	12.92 KVA
0.00	SIGNAGE (S)	CONNECTED LOAD - PHASE C:	12.51 KVA
36.36	RECEPTACLES (R)		
0.00	CAR CHARGER (CC)	CONNECTED FED-THRU LOAD:	0.00 KVA
0.00	ELECTRIC HEAT (EH)		
4.10	MISCELLANEOUS (X)	TOTAL CONNECTED LOAD:	41.21 KVA
0.00	MOTORS (M)		
0.00	HVAC - HEATING/COOLING (AC)	NEC DERATED LOAD:	28.22 KVA
0.00	HVAC - HEATING ONLY (H)		
0.00	HVAC - COOLING ONLY (C)	NEC DERATED AMPS:	78.32 AMPS

NOTES TO PANELBOARD:
1. PROVIDE GFPE BREAKER

LIGHTING CLASS PANELBOARD **RP2**

MOUNTING: FLUSH, X SURFACE | **VOLTAGE:** 120 / 208 | **PHASE:** 3 | **WIRE:** 4 | **BUS AMPS:** 100A | **MAIN BREAKER AMPS:** 100A | **NEMA ENCLOSURE:** 1 | **SECTION LUGS:** 1 | **INTERRUPTING RATING:**

	NOTE	SERVES	KVA	WIRE	CB	Ø	CKT	A B C	CKT	Ø	CB	WIRE	KVA	SERVES	NOTE	
R		RECEPTACLES CORRIDOR	0.90	#10	20A	1	1	2.34	2	1	20A	#10	1.44	RECEPTACLES 143		R
R		RECEPTACLES 150	0.72	#10	20A	1	3	1.44	4	1	20A	#10	0.72	RECEPTACLES 141, 142		R
X		COFFEE MAKER 155	0.70	#10	20A	1	5	1.42	6	1	20A	#10	0.72	RECEPTACLES 145		R
X		MICROWAVE 155	0.80	#10	20A	1	7	1.88	8	1	20A	#10	1.08	RECEPTACLES 146, 147		R
X		REFRIGERATOR 155	0.80	#10	20A	1	9	1.70	10	1	20A	#10	0.90	RECEPTACLES		R
IL	1	TRACK LIGHTING	0.05	#10	20A	1	11	1.05	12	1	20A	#10	1.00	COPY MACHINE		X
		SPARE			20A	1	13	0.36	14	1	20A	#10	0.36	RECEPTACLES 152		R
		SPARE			20A	1	15	0.72	16	1	20A	#10	0.72	RECEPTACLES		R
		SPARE			20A	1	17	0.72	18	1	20A	#10	0.72	RECEPTACLES SW STAIRS		R
		SPACE					19	0.72	20	1	20A	#10	0.72	RECEPTACLES NE STAIRS		R
		SPACE					21	0.72	22	1	20A	#10	0.72	RECEPTACLES ELEV. LOBBY		R
		SPACE					23	0.00	24	1	20A			SPARE		
		SPACE					25	0.00	26	1	20A			SPARE		
		SPACE					27	0.00	28	1	20A			SPARE		
		SPACE					29	0.00	30	1	20A			SPARE		
		SPACE					31	0.00	32					SPACE		
		SPACE					33	0.00	34					SPACE		
		SPACE					35	0.00	36					SPACE		
		SPACE					37	0.00	38					SPARE		
		SPACE					39	0.00	40					SPARE		
		SPACE					41	0.00	42					SPARE		
			3.97										9.10			

CONNECTED LOAD (KVA) BY TYPE

0.05	INTERIOR LIGHTING (IL)	CONNECTED LOAD - PHASE A:	5.30 KVA
0.00	EXTERIOR LIGHTING (EL)	CONNECTED LOAD - PHASE B:	4.58 KVA
0.00	SIGNAGE (S)	CONNECTED LOAD - PHASE C:	3.19 KVA
9.72	RECEPTACLES (R)		
0.00	CAR CHARGER (CC)	CONNECTED FED-THRU LOAD:	0.00 KVA
0.00	ELECTRIC HEAT (EH)		
3.30	MISCELLANEOUS (X)	TOTAL CONNECTED LOAD:	13.07 KVA
0.00	MOTORS (M)		
0.00	HVAC - HEATING/COOLING (AC)	NEC DERATED LOAD:	13.08 KVA
0.00	HVAC - HEATING ONLY (H)		
0.00	HVAC - COOLING ONLY (C)	NEC DERATED AMPS:	36.31 AMPS

NOTES TO PANELBOARD:
1 THRU TIMER

LIGHTING CLASS PANELBOARD **ML1**

MOUNTING: FLUSH, X SURFACE | **VOLTAGE:** 120 / 208 | **PHASE:** 3 | **WIRE:** 4 | **BUS AMPS:** 250A | **MAIN BREAKER AMPS:** 250A | **NEMA ENCLOSURE:** 1 | **SECTION LUGS:** 1 | **INTERRUPTING RATING:**

	NOTE	SERVES	KVA	WIRE	CB	Ø	CKT	A B C	CKT	Ø	CB	WIRE	KVA	SERVES	NOTE	
M		CU-1, AC-1	2.70	#10	20A	2	1	4.88	2	2	45A	#6	7.05	HP-1		C
				#10			3	4.88	4			#6				
M		CU-2, AC-2	2.70	#10	20A	2	5	1.59	6	1	20A	#10	0.24	EF-7		M
				#10			7	1.35	8					SPACE		
M		CU-3, AC-3	2.70	#10	20A	2	9	1.35	10					SPACE		
				#10			11	1.35	12					SPACE		
M		CU-160, AC-160	2.49	#10	20A	2	13	4.77	14	2	45A	#6	7.05	HP-4		C
				#10			15	4.77	16			#6				
M		CU-260, AC-260	2.49	#10	20A	2	17	4.77	18	2	45A	#6	7.05	HP-5		C
				#10			19	4.77	20			#6				
M		CU-360, AC-360	2.49	#10	20A	2	21	4.77	22	2	45A	#6	7.05	HP-6		C
				#10			23	4.77	24			#6				
M		CU-460, AC-460	2.49	#10	20A	2	25	3.70	26	2	30A	#8	4.90	HP-7		C
				#10			27	3.70	28			#8				
M		EF-1	5.78	#8	25A	3	29	4.18	30	2	30A	#8	4.50	EWH-1		H
				#8			31	4.18	32			#8				
				#8			33	2.03	34	1	20A	#10	0.10	RECIRCULATING PUMP		M
M		EF-4	0.70	#10	20A	1	35	0.70	36	1	20A			SPARE		
M		EF-5	0.18	#10	20A	1	37	0.18	38	1	20A			SPARE		
M		EF-6	0.18	#10	20A	1	39	0.18	40	1	20A			SPARE		
		SPACE					41	0.00	42	1	20A			SPARE		
			24.90										37.94			

CONNECTED LOAD (KVA) BY TYPE

0.00	INTERIOR LIGHTING (IL)	CONNECTED LOAD - PHASE A:	23.82 KVA
0.00	EXTERIOR LIGHTING (EL)	CONNECTED LOAD - PHASE B:	21.67 KVA
0.00	SIGNAGE (S)	CONNECTED LOAD - PHASE C:	17.36 KVA
0.00	RECEPTACLES (R)		
0.00	CAR CHARGER (CC)	CONNECTED FED-THRU LOAD:	0.00 KVA
0.00	ELECTRIC HEAT (EH)		
0.00	MISCELLANEOUS (X)	TOTAL CONNECTED LOAD:	62.84 KVA
25.24	MOTORS (M)		
0.00	HVAC - HEATING/COOLING (AC)	NEC DERATED LOAD:	58.34 KVA
4.50	HVAC - HEATING ONLY (H)		
33.10	HVAC - COOLING ONLY (C)	NEC DERATED AMPS:	161.94 AMPS

NOTES TO PANELBOARD:

LIGHTING CLASS PANELBOARD **ML2**

MOUNTING: FLUSH, X SURFACE | **VOLTAGE:** 120 / 208 | **PHASE:** 3 | **WIRE:** 4 | **BUS AMPS:** 400A | **MAIN BREAKER AMPS:** 400A | **NEMA ENCLOSURE:** 1 | **SECTION LUGS:** 1 | **INTERRUPTING RATING:**

	NOTE	SERVES	KVA	WIRE	CB	Ø	CKT	A B C	CKT	Ø	CB	WIRE	KVA	SERVES	NOTE	
H		FCU-1	17.18	#4	55A	3	1	11.45	2	3	55A	#4	17.18	FCU-2		H
				#4			3	11.45	4			#4				
				#4			5	11.45	6			#4				
H		FCU-3	17.18	#4	55A	3	7	8.76	8	3	30A	#8	9.10	FCU-7		H
				#4			9	8.76	10			#8				
				#4			11	8.76	12			#8				
H		FCU-4	17.18	#4	55A	3	13	5.73	14					SPACE		
				#4			15	5.73	16					SPACE		
				#4			17	5.73	18					SPACE		
H		FCU-5	17.18	#4	55A	3	19	5.73	20					SPACE		
				#4			21	5.73	22					SPACE		
				#4			23	5.73	24					SPACE		
H		FCU-6	17.18	#4	55A	3	25	5.73	26					SPACE		
				#4			27	5.73	28					SPACE		
				#4			29	5.73	30					SPACE		
		SPACE					31	0.00	32					SPACE		
		SPACE					33	0.00	34					SPACE		
		SPACE					35	0.00	36					SPACE		
		SPACE					37	0.00	38					SPACE		
		SPACE					39	0.00	40					SPACE		
		SPACE					41	0.00	42					SPACE		
			85.90										26.28			

CONNECTED LOAD (KVA) BY TYPE

0.00	INTERIOR LIGHTING (IL)	CONNECTED LOAD - PHASE A:	37.39 KVA
0.00	EXTERIOR LIGHTING (EL)	CONNECTED LOAD - PHASE B:	37.39 KVA
0.00	SIGNAGE (S)	CONNECTED LOAD - PHASE C:	37.39 KVA
0.00	RECEPTACLES (R)		
0.00	CAR CHARGER (CC)	CONNECTED FED-THRU LOAD:	0.00 KVA
0.00	ELECTRIC HEAT (EH)		
0.00	MISCELLANEOUS (X)	TOTAL CONNECTED LOAD:	112.18 KVA
0.00	MOTORS (M)		
0.00	HVAC - HEATING/COOLING (AC)	NEC DERATED LOAD:	140.23 KVA
112.18	HVAC - HEATING ONLY (H)		
0.00	HVAC - COOLING ONLY (C)	NEC DERATED AMPS:	389.23 AMPS

NOTES TO PANELBOARD:
1. PROVIDE FULL RATED MAIN BREAKER

SCHWARZ HANSON ARCHITECTS
2570 RIVER PARK PLAZA, SUITE 100
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A NEW FACILITY FOR
GREGG COUNTY - PARKING GARAGE & OFFICE
100 E. METHVIN ST.
LONGVIEW, TX 75601

STATE OF TEXAS
GABRIEL G SALAZAR
97504
LICENSED
PROFESSIONAL ENGINEER
2-18-22

PROJECT NO.: 20011

DATE: 02/18/2022

REVISION SCHEDULE

Δ	Description	Date

LEVEL 4
LEVEL 3
LEVEL 2
LEVEL G/OFFICE

SHEET NAME

NORMAL POWER PANEL SCHEDULES

SHEET NO.

E-603

SQUARE 'D' NF POWERLINK G3 PANEL **ELP1**

MOUNTING: FLUSH, X SURFACE | **VOLTAGE:** 120 / 208 | **PHASE:** 3 | **WIRE:** 4 | **BUS AMPS:** 100A | **MAIN BREAKER AMPS:** 100A | **NEMA ENCLOSURE:** 1 | **SECTION LUGS:** 1 | **INTERRUPTING RATING:**

	NOTE	SERVES	KVA	WIRE	CB	Ø	CKT	A B C	CKT	Ø	CB	WIRE	KVA	SERVES	NOTE	
IL		LEVEL 1 LIGHTING	0.65	#10	20A	1	1	1.10	2	1	20A	#10	0.45	LEVEL 2 LIGHTING		IL
IL		LEVEL 3 LIGHTING	0.65	#10	20A	1	3	0.97	4	1	20A	#10	0.32	ELECTRICAL RMOOMS LTG		IL
					20A	1	5	0.10	6	1	20A	#10	0.10	LIGHTING SWITCHING PANEL		X
IL	1	OFFICE CORRIDOR NIGHT LIGHTS	1.85	#10	20A	1	7	1.85	8	1	20A			SPARE		
IL		OFFICE LIGHTING	0.04	#10	20A	1	9	0.79	10	1	20A	#10	0.75	ROOF LIGHTING	1	EL
		SPARE			20A	1	11	0.22	12	1	20A	#10	0.22	EXTERIOR LIGHTING	1	EL
		SPARE			20A	1	13	0.00	14	1	20A			SPARE		
		SPARE			20A	1	15	0.00	16	1	20A			SPARE		
IL		STAIR SW LIGHTING	0.24	#10	20A	1	17	0.24	18	1	20A			SPARE		
IL		STAIR SW LIGHTING	0.18	#10	20A	1	19	0.18	20	1	20A			SPARE		
IL		STAIR NE LIGHTING	0.24	#10	20A	1	21	0.24	22	1	20A			SPARE		
IL		STAIR NE LIGHTING	0.18	#10	20A	1	23	0.18	24					SPACE		
		SPACE					25	0.00	26					SPACE		
		SPACE					27	0.00	28					SPACE		
		SPACE					29	0.00	30					SPACE		
		SPACE					31	0.00	32					SPACE		
		SPACE					33	0.00	34					SPACE		
		SPACE					35	0.00	36					SPACE		
		SPACE					37	0.00	38					SPACE		
		SPACE					39	0.00	40					SPACE		
		SPACE					41	0.00	42					SPACE		
			4.03										1.84			

CONNECTED LOAD (KVA) BY TYPE

4.80	INTERIOR LIGHTING (IL)	CONNECTED LOAD - PHASE A:	3.13 KVA
0.97	EXTERIOR LIGHTING (EL)	CONNECTED LOAD - PHASE B:	2.00 KVA
0.00	SIGNAGE (S)	CONNECTED LOAD - PHASE C:	0.74 KVA
0.00	RECEPTACLES (R)		
0.00	CAR CHARGER (CC)	CONNECTED FED-THRU LOAD:	0.00 KVA
0.00	ELECTRIC HEAT (EH)		
0.10	MISCELLANEOUS (X)	TOTAL CONNECTED LOAD:	5.87 KVA
0.00	MOTORS (M)		
0.00	HVAC - HEATING/COOLING (AC)	NEC DERATED LOAD:	7.31 KVA
0.00	HVAC - HEATING ONLY (H)		
0.00	HVAC - COOLING ONLY (C)	NEC DERATED AMPS:	20.30 AMPS

NOTES TO PANELBOARD:

LIGHTING CLASS PANELBOARD **SPP1**

MOUNTING: FLUSH, X SURFACE | **VOLTAGE:** 277 / 480 | **PHASE:** 3 | **WIRE:** 4 | **BUS AMPS:** 200A | **MAIN BREAKER AMPS:** 200A | **NEMA ENCLOSURE:** 1 | **SECTION LUGS:** 1 | **INTERRUPTING RATING:**

	NOTE	SERVES	KVA	WIRE	CB	Ø	CKT	A B C	CKT	Ø	CB	WIRE	KVA	SERVES	NOTE	
P		PANEL 'SRP1'	10.49	#1/0	125A	3	1	21.15	2	3	70A	#4	32.00	ELEVATOR		M
P			9.67	#1/0			3	20.33	4			#4				
P			8.13	#1/0			5	18.79	6			#4				
		SPARE			20A	1	7	4.98	8	3	25A	#8	14.94	ELEVATOR SHAFT A/C		AC
		SPARE			20A	1	9	4.98	10			#8				
		SPARE			20A	1	11	4.98	12			#8				
		SPARE			20A	1	13	0.00	14					SPACE		
		SPACE					15	0.00	16					SPACE		
		SPACE					17	0.00	18					SPACE		
		SPACE					19	0.00	20					SPACE		
		SPACE					21	0.00	22					SPACE		
		SPACE					23	0.00	24					SPACE		
		SPACE					25	0.00	26					SPACE		
		SPACE					27	0.00	28					SPACE		
		SPACE					29	0.00	30					SPACE		
		SPACE					31	0.00	32					SPACE		
		SPACE					33	0.00	34					SPACE		
		SPACE					35	0.00	36					SPACE		
		SPACE					37	0.00	38					SPACE		
		SPACE					39	0.00	40					SPACE		
		SPACE					41	0.00	42					SPACE		
			28.28										46.94			

CONNECTED LOAD (KVA) BY TYPE

0.50	INTERIOR LIGHTING (IL)	CONNECTED LOAD - PHASE A:	26.13 KVA
0.00	EXTERIOR LIGHTING (EL)	CONNECTED LOAD - PHASE B:	25.31 KVA
0.00	SIGNAGE (S)	CONNECTED LOAD - PHASE C:	23.77 KVA
1.44	RECEPTACLES (R)		
0.00	CAR CHARGER (CC)	CONNECTED FED-THRU LOAD:	0.00 KVA
0.00	ELECTRIC HEAT (EH)		
14.34	MISCELLANEOUS (X)	TOTAL CONNECTED LOAD:	75.22 KVA
44.00	MOTORS (M)		
14.94	HVAC - HEATING/COOLING (AC)	NEC DERATED LOAD:	75.35 KVA
0.00	HVAC - HEATING ONLY (H)		
0.00	HVAC - COOLING ONLY (C)	NEC DERATED AMPS:	90.63 AMPS

NOTES TO PANELBOARD:

LIGHTING CLASS PANELBOARD **SRP1**

MOUNTING: FLUSH, X SURFACE | **VOLTAGE:** 120 / 208 | **PHASE:** 3 | **WIRE:** 4 | **BUS AMPS:** 200A | **MAIN BREAKER AMPS:** 125A | **NEMA ENCLOSURE:** 1 | **SECTION LUGS:** 1 | **INTERRUPTING RATING:**

	NOTE	SERVES	KVA	WIRE	CB	Ø	CKT	A B C	CKT	Ø	CB	WIRE	KVA	SERVES	NOTE	
M		COILING OVERHEAD DOOR	5.80	#10	20A	3	1	2.65	2	1	20A	#10	0.72	RECEPTACLES - ELEC RM		R
				#10			3	2.23	4	1	30A	#8	0.30	ELEVATOR		X
				#10			5	2.29	6	1	20A	#10	0.36	RECEPTACLES - ELEV SHAFT		R
M		COILING OVERHEAD DOOR	5.80	#10	20A	3	7	5.93	8	3	100A	#1	4.00	PANEL IT		P
				#10			9	5.93	10			#1	4.00			P
				#10			11	4.29	12			#1	2.36			P
X		FIRE ALARM PANEL	0.40	#10	20A	1	13	0.90	14	1	20A	#10	0.50	LIGHTS - ELEV SHAFT		IL
X		FIRE ALARM ANUNCIATOR	0.10	#10	20A	1	15	0.50	16	1	20A	#10	0.40	SUMP PUMP		M
X		NITROGEN COMPRESSOR	1.44	#10	20A	1	17	1.54	18	1	20A	#10	0.10	CO CONTROL PANEL		X
X		BLUE PHONES	1.00	#10	20A	1	19	1.10	20	1	20A	#10	0.10	OIL MINDER PANEL		X
X		BLUE PHONES	1.00	#10	20A	1	21	1.00	22	1	20A			SPARE		
		SPACE					23	0.00	24	1	20A			SPARE		
		SPACE					25	0.00	26	1	20A			SPARE		
		SPACE					27	0.00	28	1	20A			SPARE		
		SPACE					29	0.00	30	1	20A			SPARE		
		SPACE					31	0.00	32					SPACE		
		SPACE					33	0.00	34					SPACE		
		SPACE					35	0.00	36					SPACE		
		SPACE					37	0.00	38					SPACE		
		SPACE					39	0.00	40					SPACE		
		SPACE					41	0.00	42					SPACE		
			15.54										12.84			

CONNECTED LOAD (KVA) BY TYPE

0.50	INTERIOR LIGHTING (IL)	CONNECTED LOAD - PHASE A:	10.59 KVA
0.00	EXTERIOR LIGHTING (EL)	CONNECTED LOAD - PHASE B:	9.67 KVA
0.00	SIGNAGE (S)	CONNECTED LOAD - PHASE C:	8.13 KVA
1.44	RECEPTACLES (R)		
0.00	CAR CHARGER (CC)	CONNECTED FED-THRU LOAD:	0.00 KVA
0.00	ELECTRIC HEAT (EH)		
14.44	MISCELLANEOUS (X)	TOTAL CONNECTED LOAD:	28.38 KVA
12.00	MOTORS (M)		
0.00	HVAC - HEATING/COOLING (AC)	NEC DERATED LOAD:	28.51 KVA
0.00	HVAC - HEATING ONLY (H)		
0.00	HVAC - COOLING ONLY (C)	NEC DERATED AMPS:	79.12 AMPS

NOTES TO PANELBOARD:

LIGHTING CLASS PANELBOARD **IT**

MOUNTING: FLUSH, X SURFACE | **VOLTAGE:** 120 / 208 | **PHASE:** 3 | **WIRE:** 4 | **BUS AMPS:** 100A | **MAIN BREAKER AMPS:** 100A | **NEMA ENCLOSURE:** 1 | **SECTION LUGS:** 1 | **INTERRUPTING RATING:**

	NOTE	SERVES	KVA	WIRE	CB	Ø	CKT	A B C	CKT	Ø	CB	WIRE	KVA	SERVES	NOTE	
X		IT ROOM 130	1.00	#10	20A	1	1	2.00	2	1	20A	#10	1.00	COMMUNICATION BOARD		X
X		IT ROOM 130	1.00	#10	20A	1	3	2.00	4	1	20A	#10	1.00	SERVER		X
X		IT ROOM 130	1.00	#10	20A	1	5	2.00	6	1	20A	#10	1.00	SERVER		X
X		IT ROOM 130	1.00	#10	20A	1	7	2.00	8	1	20A	#10	1.00	SERVER		X
X		IT ROOM 130	1.00	#10	20A	1	9	2.00	10	1	20A	#10	1.00	SERVER		X
R		RECEPT RECEPTION DESK	0.36	#10	20A	1	11	0.73	12	1	20A	#10	0.37	DOOR OPERATORS		X
		SPARE			20A	1	13	0.30	14	1	20A	#10	0.30	DOOR OPERATORS		X
		SPARE			20A	1	15	0.00	16					SPACE		
		SPARE			20A	1	17	0.00	18					SPACE		
		SPARE			20A	1	19	0.00	20					SPACE		
		SPARE			20A	1	21	0.00	22					SPACE		
		SPARE			20A	1	23	0.00	24					SPACE		
		SPARE					25	0.00	26					SPACE		
		SPARE					27	0.00	28					SPACE		
		SPARE					29	0.00	30					SPACE		
		SPARE					31	0.00	32					SPACE		
		SPARE					33	0.00	34					SPACE		
		SPARE					35	0.00	36					SPACE		
		SPARE					37	0.00	38					SPACE		
		SPARE					39	0.00	40					SPACE		
		SPARE					41	0.00	42					SPACE		
			5.36										5.67			

CONNECTED LOAD (KVA) BY TYPE

0.00	INTERIOR LIGHTING (IL)	CONNECTED LOAD - PHASE A:	4.30 KVA
0.00	EXTERIOR LIGHTING (EL)	CONNECTED LOAD - PHASE B:	4.00 KVA
0.00	SIGNAGE (S)	CONNECTED LOAD - PHASE C:	2.73 KVA
0.36	RECEPTACLES (R)		
0.00	CAR CHARGER (CC)	CONNECTED FED-THRU LOAD:	0.00 KVA
0.00	ELECTRIC HEAT (EH)		
10.67	MISCELLANEOUS (X)	TOTAL CONNECTED LOAD:	11.03 KVA
0.00	MOTORS (M)		
0.00	HVAC - HEATING/COOLING (AC)	NEC DERATED LOAD:	11.03 KVA
0.00	HVAC - HEATING ONLY (H)		
0.00	HVAC - COOLING ONLY (C)	NEC DERATED AMPS:	30.62 AMPS

NOTES TO PANELBOARD:

SCHWARZ HANSON ARCHITECTS
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Houston TX 77058
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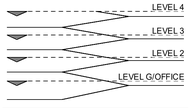
A NEW FACILITY FOR
GREGG COUNTY - PARKING GARAGE & OFFICE
100 E. METHVIN ST.
LONGVIEW, TX 75601

PROJECT NO.: 20011

DATE: 02/18/2022

REVISION SCHEDULE

Δ	Description	Date

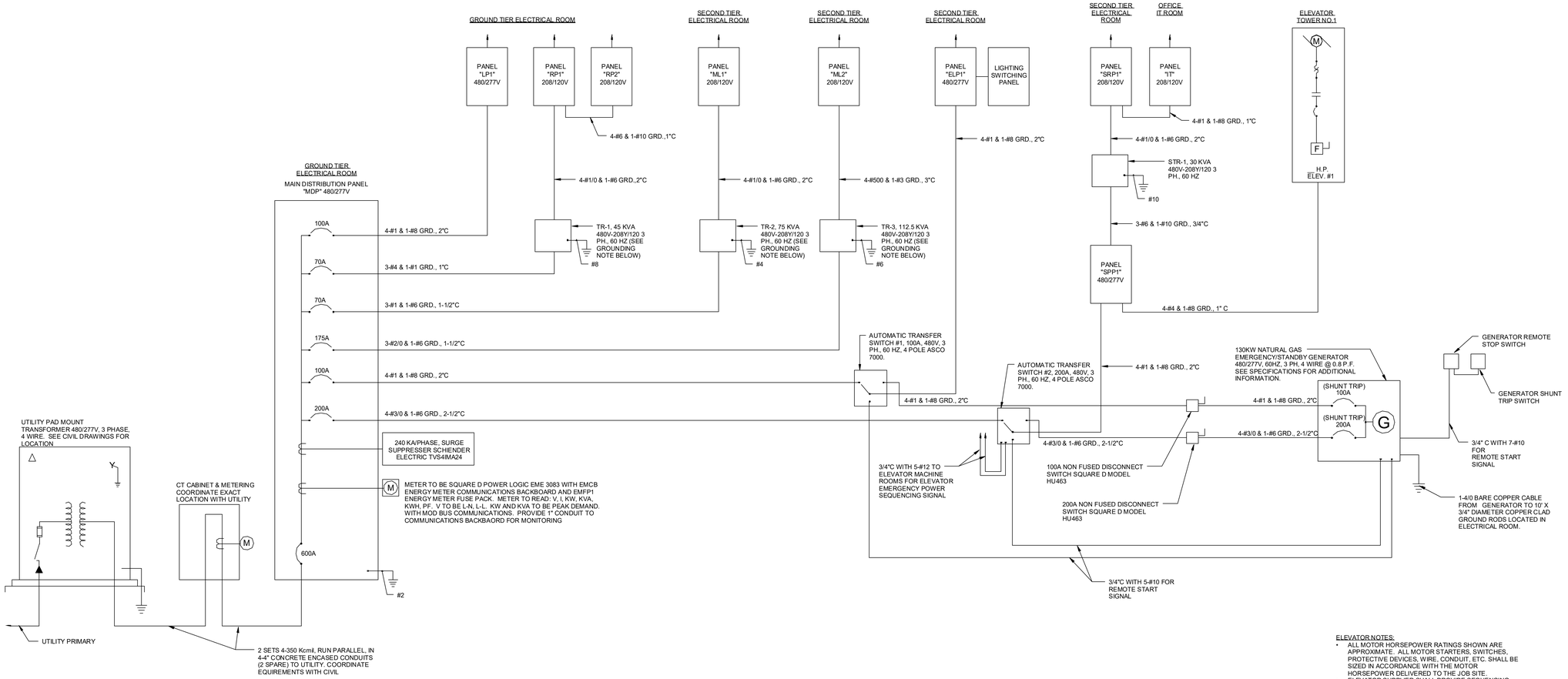


SHEET NAME

EMERGENCY AND STANDBY POWER PANEL SCHEDULES

SHEET NO.

E-604



1 POWER ONE LINE DIAGRAM

ELEVATOR NOTES:
- ALL MOTOR HORSEPOWER RATINGS SHOWN ARE APPROXIMATE. ALL MOTOR STARTERS, SWITCHES, PROTECTIVE DEVICES, WIRE, CONDUIT, ETC. SHALL BE SIZED IN ACCORDANCE WITH THE MOTOR HORSEPOWER DELIVERED TO THE JOB SITE.
- ELEVATOR SUPPLIER SHALL PROVIDE SEQUENCING AND CONTROL TO ALLOW ONLY ONE ELEVATOR TO OPERATE AT A TIME UNDER STANDBY POWER.

GROUNDING NOTE:
THE MDP PANEL, TRANSFORMERS AND THE EMERGENCY GENERATOR ARE TO BE GROUNDED TO THE GROUND GRID WITH #4/0 CU. CABLE.

FUSE NOTE:
ALL FUSES ARE TO BE BUSS FRS-R TYPE.

SHORT CIRCUIT COORDINATION STUDY:
EQUIPMENT SUPPLIER SHALL PERFORM A COMPLETE SYSTEM SHORT CIRCUIT COORDINATION STUDY AND SUPPLY EQUIPMENT THAT IS PROPERLY RATED TO MEET THE CALCULATED VALUES.

SCHWARZ HANSON ARCHITECTS
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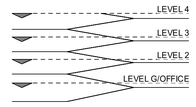

SHEET NAME

POWER ONE LINE DIAGRAM

SHEET NO.

E-605