
APPENDIX A1

PROJECT PLANS

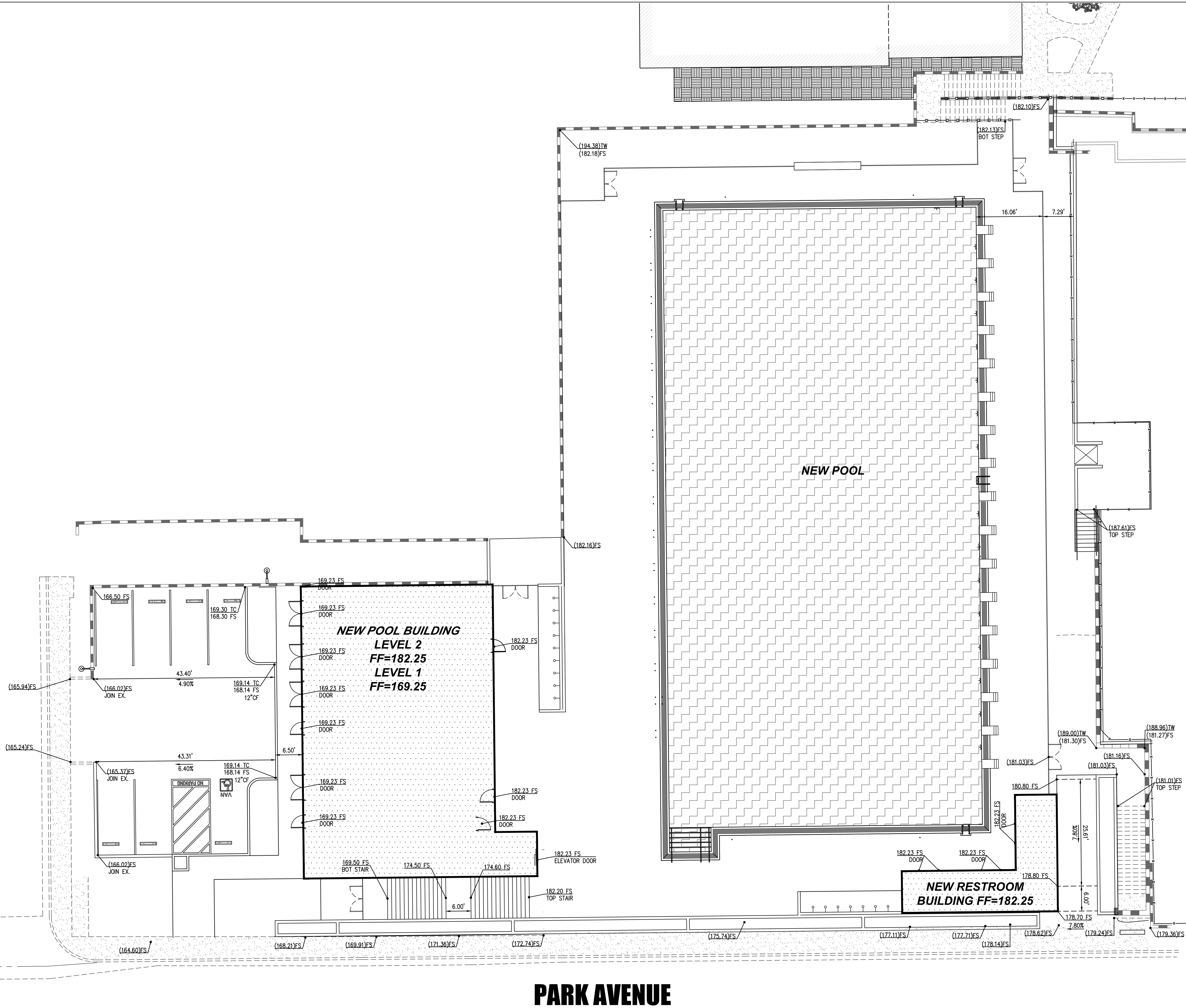


SHEET INDEX

TITLE SHEET	T-1	TITLE SHEET
CIVIL	C1.00	CONCEPTUAL GRADING PLAN
LANDSCAPE	LPB.1	LANDSCAPE CONCEPTUAL
	LIM.1	PRELIMINARY PROPOSED
ARCHITECTURAL SITE	AS-1.0	DEMOLITION SITE PLAN
	AS-1.1	OVERALL SITE PLAN
ARCHITECTURE POOL BUILDING	A1-1.1	FIRST & SECOND LEVEL FLOOR PLANS
	A1-2.1	REFLECTED CEILING PLANS & ROOF PLAN
	A1-4.1	BUILDING EXTERIOR ELEVATIONS
	A1-5.1	BUILDING & WALL SECTIONS
ARCHITECTURE RESTROOM BUILDING	A2-1.1	FLOOR, REFLECTIVE CEILING & ROOF PLAN
	A2-4.1	BUILDING EXTERIOR ELEVATIONS
	A2-5.1	BUILDING & WALL SECTIONS
STRUCTURAL	S1-1.1	POOL BUILDING PUMP ROOM FOUNDATION, FLOOR & ROOF FRAMING PLANS
	S2-1.1	RESTROOM BUILDING FOUNDATION & ROOF FRAMING PLANS
MECHANICAL	MS-1.1	OVERALL SITE PLAN
	M1-1.1	POOL BUILDING PUMP ROOM FLOOR PLANS
	M2-1.1	BUILDING FLOOR, REFLECTIVE CEILING & ROOF PLAN
PLUMBING	PS-1.1	OVERALL SITE PLAN
	P1-1.1	POOL PUMP ROOM FLOOR PLANS
	P2-1.1	FLOOR, REFLECTIVE CEILING & ROOF PLAN
ELECTRICAL	ES-1.1	OVERALL PLAN
	E1-1.1	POOL BUILDING PUMP ROOM FLOOR PLANS
	E2-1.1	FLOOR, REFLECTIVE CEILING & ROOF PLAN
SWIMMING POOL	SP-1	SWIMMING POOL LAYOUT PLAN (SWIMMING)
	SP-2	SWIMMING POOL LAYOUT PLAN (WATERPOLO)
	SP-3	SWIMMING POOL SECTIONS
	SP-4	SWIMMING POOL PIPING PLAN
	SP-5	DETAILS
	SP-6	DETAILS
	SP-7	DETAILS
	SP-8	DETAILS
	SP-9	DETAILS
	SP-11	DETAILS
	MR-1	MECHANICAL ROOM LAYOUT PLAN
	MR-3	DETAILS
	MR-4	DETAILS
	MR-5	DETAILS
	MR-6	DETAILS
	MR-7	DETAILS
	MR-8	DETAILS
	TOTAL SHEET COUNT: 41	

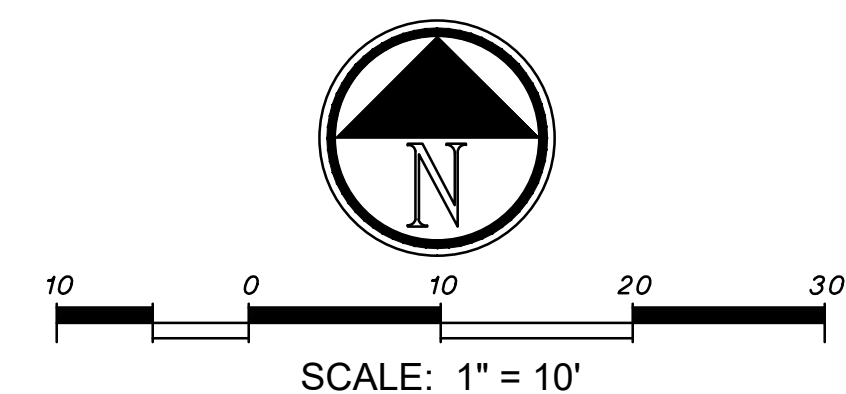
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Last Save By: ron canedy
3775 TENTH STREET, RIVERSIDE CALIFORNIA 92503 (951) 684-4664 / 5753 PALMER WAY, SUITE C, CARLSBAD CALIFORNIA 92010 (760) 438-5899

MANZANITA DRIVE



HATCH LEGEND:

- [Hatched Box] = NEW BUILDINGS
- [Hatched Box] = NEW POOL
- [Hatched Box] = EXISTING CONCRETE TO REMAIN



TREES



ARBUTUS X
'MARINA'
MARINA STRAWBERRY
TREE



LAGERSTROEMIA INDICA
'RED ROCKET'
RED ROCKET CRAPE MYRTLE



PHOENIX ROEBELENI
PYGMY DATE PALM



WASHINGTONIA ROBUSTA
MEXICAN FAN PALM



SHRUBS



AGAVE ATTENUATA
'BOUTIN BLUE'
FOXTAIL AGAVE



ALOE ARBORESCENS
TORCH ALOE



ALOE STRIATA
CORAL ALOE



ALOE RUBROVIOLEACEA
ARABIAN ALOE



BOUGAINVILLEA X
'RASPBERRY ICE'
RASPBERRY ICE BOUGAINVILLEA



BOUTELOUA GRACILIS
'BLONDE AMBITION'
BLUE GRAMA GRASS



CALAMAGROSTIS X ACUTIFLORA
'KARL FOERSTER'
FEATHER REED GRASS



DIANELLA REVOLUTA
'LITTLE REV'
LITTLE REV FLAX LILY



DODONAEA VISCOSA
'PURPUREA'
PURPLE HOPSEED BUSH



LANTANA SELLOWIANA
TRAILING LANTANA



LIRIOPE MUSCARI
'BIG BLUE'
BIG BLUE LILYTURF



NANDINA DOMESTICA
HEAVENLY BAMBOO



OLEA EUROPAEA
'MONTRA'
LITTLE OLLIE DWARF OLIVE



RHAMPHILEPIS UMBELLATA 'MINOR'
DWARF YEDDO HAWTHORN



SENECIO SERPENS
BLUE CHALK STICKS



STRELITZIA NICOLAI
GIANT BIRD OF PARADISE

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PHASE

RUHNAU
CLARKE
ARCHITECTS

SCHEMATIC DEVELOPMENT
DATE
AUGUST 9, 2024

August 7, 2024

School: Laguna Beach HS
District: Laguna Beach Unified School District

Proposed Irrigation Equipment

Please note that items below may or may not be used on this project at this time, but request overall approval in case scope expands for future reference.

Emission Devices:

- Drip Tubing (Is this allowed within the district yet?)
 - Netafim CV, Techline HCVXR
 - Rainbird quick check filter – model: PRB-QKCHK-100 (dirty water applications use Rainbird pressure reg model PSI-H50-100 +
 - Flush Valve – Spears 2000 Compact
 - Indicator Stake – hunter Eco-ID-12 + GPH indicator GDFN
- Bubblers-Tree & Shrub (Trees receive 2-4"x48" perf pipe, w/ sand sock and black grate)
 - Body: Salco or hunter IH Riser
 - Nozzle: Salco SLV-PSTM-CV-2 Series (1gph shrub and 4 gph trees)
- Spray Bodies:
 - Rainbird 1806-SAM-PRS or 1806-SAM-P45
- Medium Range Rotor Heads (17'-46' Radius)
 - Hunter I-20 Series with stainless sleeve
- long Range Rotor Heads (44'-69' Radius)
 - Hunter i-40 Series (fills to be dual opposing nozzles) with stainless steel sleeve
- Swing Joint
 - Spray heads: 12" sch.80 nipples and sch. 40 street ells or NDS TSA series (1/2")
 - Rotors and GC: Rainbird TSJ or NDS TSA models
 - No Funny Pipe permitted.

Flow Control Devices:

- Backflow Preventer (Reduced Pressure Type)
 - Febco 825YA Series (½"- 2")
 - Febco 880v w/ valve setter (2.5"+)
- Backflow Cage
 - VIT Poducts Smooth Touch
- Booster Pump
 - Barret Engineered Pumps-Irriboost
- Combination Air/ Vacuum Relief Valve (mainline)
 - Netafim 65ARIB1-150 (>3")
 - Jain Irrigation ARV-2 (4"+)

- Master Control Valves (Normally Open/ normally closed)
 - Buckner/ Superior 3300 NO / 3200 NC (3/4"-3" (140gpm max))
 - Griswold 2000 series (4"+)
- Flow Sensor
 - CST FSI SP3 Series PVC (3/4"-2")
 - Netafim Octave (3"+)
- Gate Valves
 - Nibco Model: T-113-K (3/4"-2")
 - Nibco Model: F-619-RWS-SON (2.5"+)
- Electric Control Valves (Brass)
 - Rain Bird PEB-PRS-D Series
 - *Each RCV to be installed with bronze ball valve and 2 unions
- Quick Coupling Valves (1" Brass)
 - Rain Bird #44LRC Series
 - Superior 7645BS / Acme Key (Non-potable)
- Valve Boxes (Landscape Areas Only)
 - Rainbird VB series
- Valve Boxes (Hardscape Areas Only)
 - Old Castle Concrete Valve box or Polymer Concrete depending on rating
 - Brooks Concrete
- Standard Controller
 - Rainbird ESPLXME2 Pro with remote and software and communication. Ethernet connection for smart functions.
 - *Controller to be built by imperial technical services and be equipped with surge protection.
- Flow Senor Wiring:
 - #16/1 pair Paige Shielded and Armored model P7162D-A
- Control Wiring (14 AWG UF Single Conductor, Common: 12 AWG UF Single Conductor)
 - Paige Electric P7001D; Equal
 - *Color coded: Common: White; MV: Red; RCV: Black; Future: Orange
- 2-Wire path and decoders (Where Applicable)
 - Rainbird Maxi Wire (install all wire in 1 ½" pvc conduit)
 - Rainbird decoder model LXIVMSOL (only use single station decoders)
 - Rainbird Surge Model LXIVMSD
 - Rainbird Sensor device model LXIVMSEN (used with flow sensor)
 - Rainbird Pump start module model LXIVMOUT
- Water Proof Wire Connector (Waterproof)
 - 3M DBY
 - 3M Scotchcast #3570G-N epoxy packs (must use on 2-wire systems)

Pipe and Restraints:

- Pressure Mainline (1-1/2" and Smaller)
 - Sch 40 PVC, sch. 80 threaded fittings. No male adapters allowed
- Pressure Mainline (2" through 3")
 - Class 315 PVC, sch. 80 threaded fittings, No male adapters allowed
- Pressure Mainline (4"+)
 - Class 200 bell end gasketed PVC or Equal
 - Must use mechanical joint restraints as manufactured by Leemco, inc.
- Non-Pressure Lateral Line (3/4" through 3")
 - Sch. 40 PVC
- Sleeves
 - Sch. 40 PVC
- Glue and Primer
 - Heavy body grey glue 711 and P70 Primer (No red hot blue glue allowed)

POOL MODERNIZATION: SCHEMATIC DEVELOPMENT 8/9/24

RUHNAUCLARKE.COM

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POOL MODERNIZATION

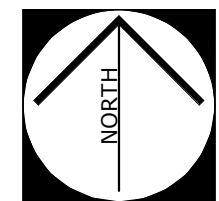
LAGUNA BEACH HIGH SCHOOL
670 PARK AVE, LAGUNA BEACH, CA 92651
LAGUNA BEACH UNIFIED SCHOOL DISTRICT

POOL
PRELIMINARY PROPOSED

LIM.1

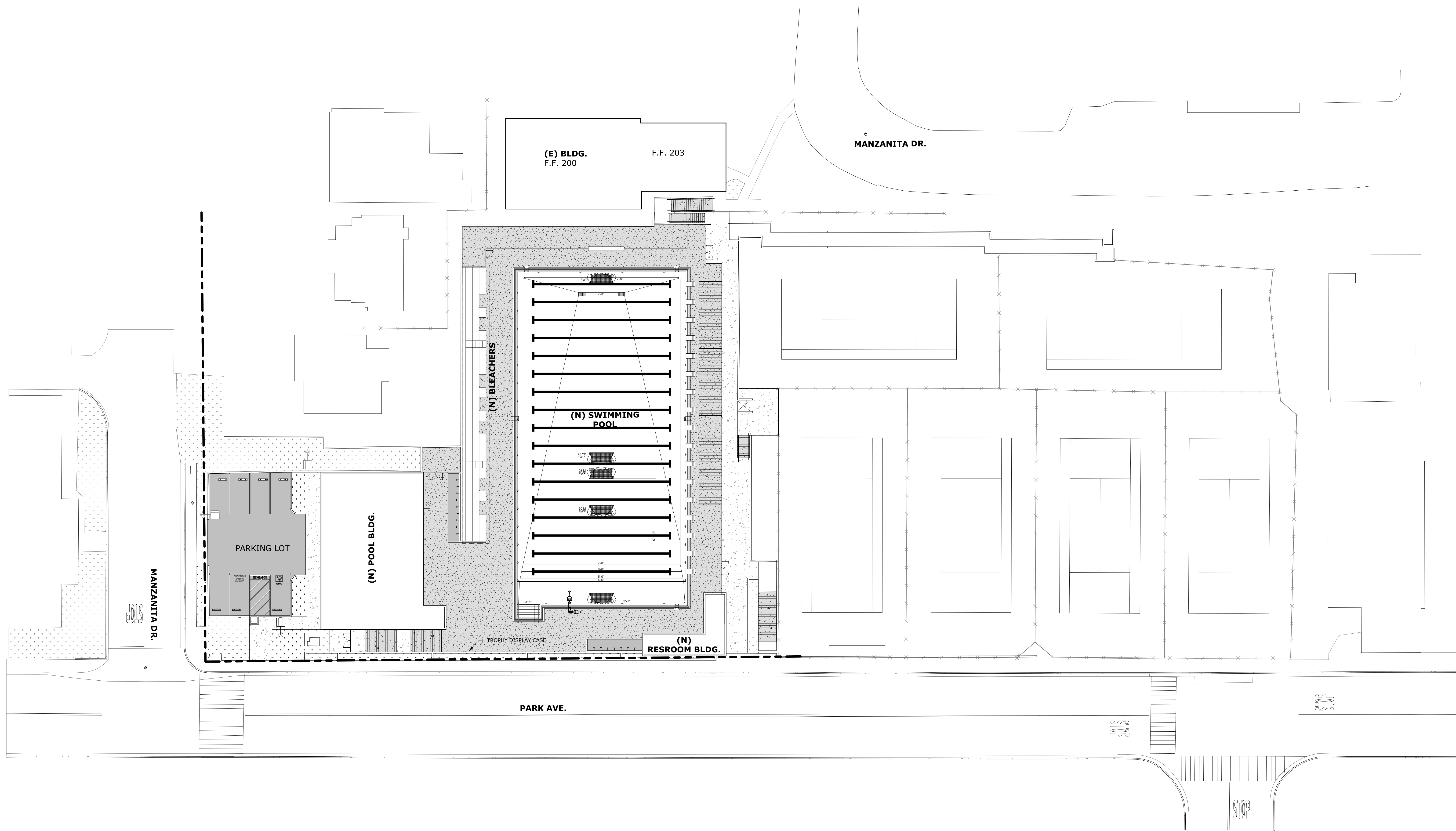


1 ENLARGED SITE PLAN - DEMO.
SCALE: 1" = 20'-0"

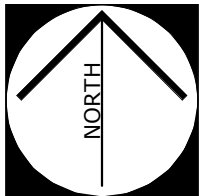


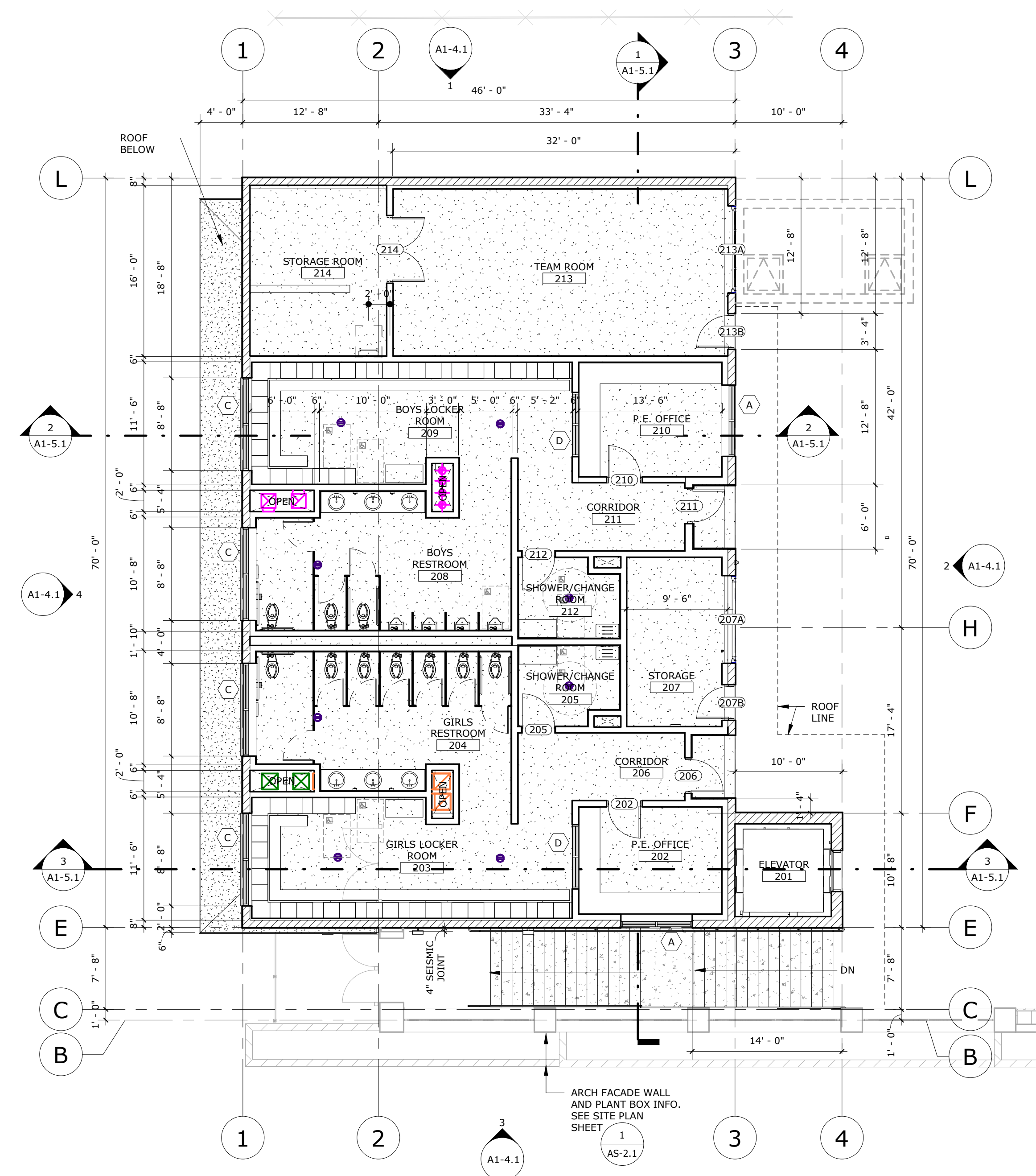
PLUMBING FIXTURE ANALYSIS (2022 CBC CH. 31B, 3116B)					
POOL SURFACE AREA (SQ. FT.):	NUMBER OF POOL OCCUPANTS	SHOWERS REQUIRED:	TOILETS REQUIRED:	LAVATORIES REQUIRED:	DRINKING FOUNTAINS REQUIRED:
75'-0" X 147'-8" = 11,073 SQ. FT.	11,073 SQ. FT. / 15 SQ. FT. = 738.2 OR 738 POOL USERS OR 370 MALES AND 370 FEMALES	740 / 50 = 14.8 = 15 SHOWERS	370 / 60 = 6.1 OR 7 FEMALE TOILETS AND 370 / 75 = 4.9 OR 5 MALE TOILETS AND 5 URINALS	739 / 80 = 9.2 OR 10 LAVATORIES	PER CBC 3117B: 4 DRINKING FOUNTAINS

PLUMBING FIXTURE ANALYSIS (2022 CPC CH. 4, TABLE 422.1 & 4-1)						
FUNCTION OF SPACE:	OCCUPANT LOAD & TYPE:	SHOWERS REQUIRED:	WATER CLOSETS REQUIRED:	LAVATORIES REQUIRED:	DRINKING FOUNTAINS REQUIRED:	URINALS REQUIRED:
ASSEMBLY WITH FIXED SEATS: (SEE CB 1004.6, USE 50% OF FIXED SEATING VALUE)	280 SEATS / 2 = 140 OCCUPANTS 70 MALES AND 70 FEMALES USE A-5 ASSEMBLY (OUTDOOR SPORTING EVENTS)	0 SHOWERS	70 FEMALES = 3 : 51-100 70 MALES = 1 : 1-100	70 FEMALES = 1 : 1-100 70 MALES = 1 : 1-200	140 OCCUPANTS = 1 1:1-250	70 MALES = 1 : 1-100

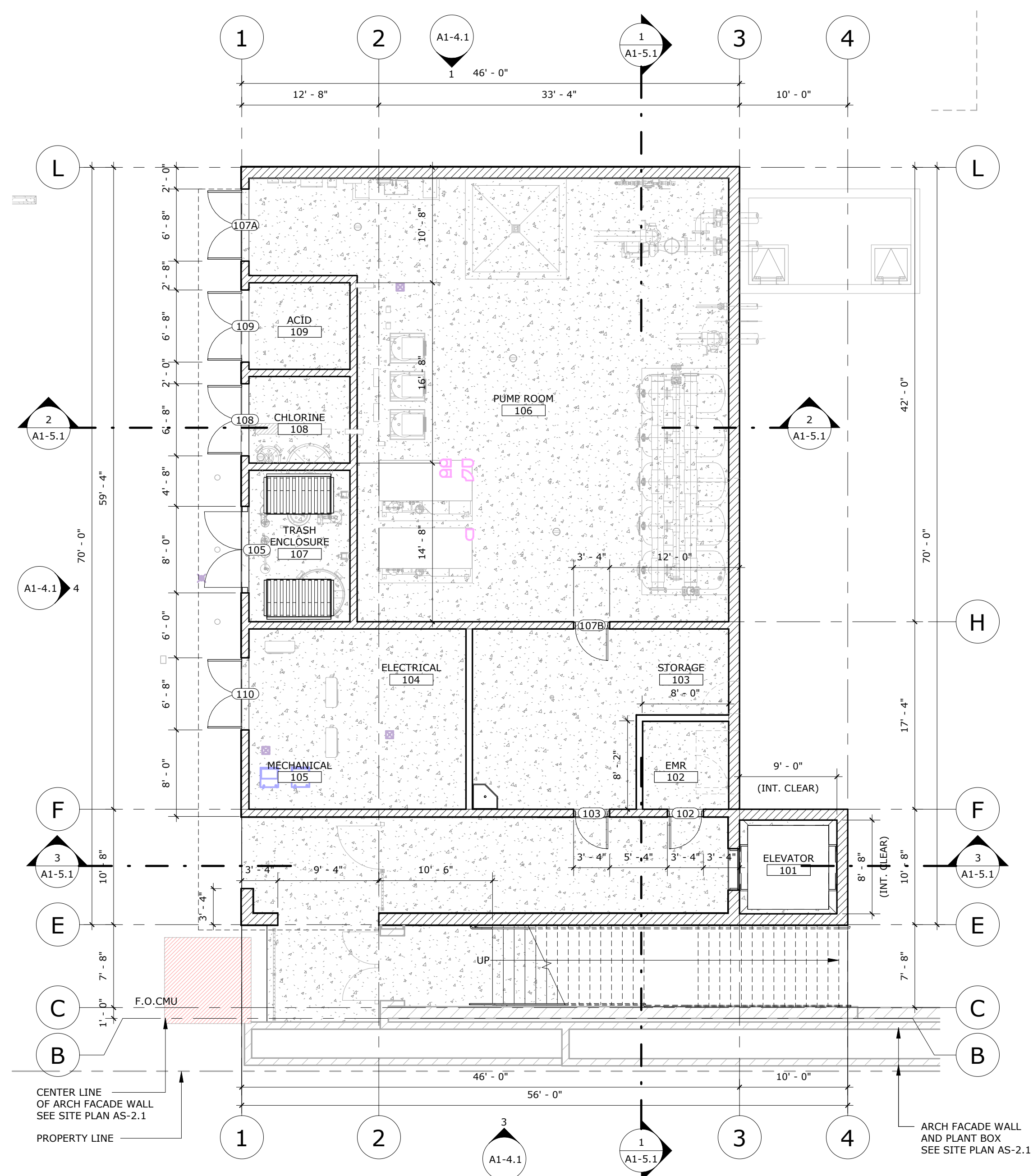


① OVERALL SITE PLAN - MOD
SCALE: 1" = 20'-0"



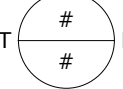


SECOND FLOOR PLAN 2



FIRST FLOOR PLAN 1

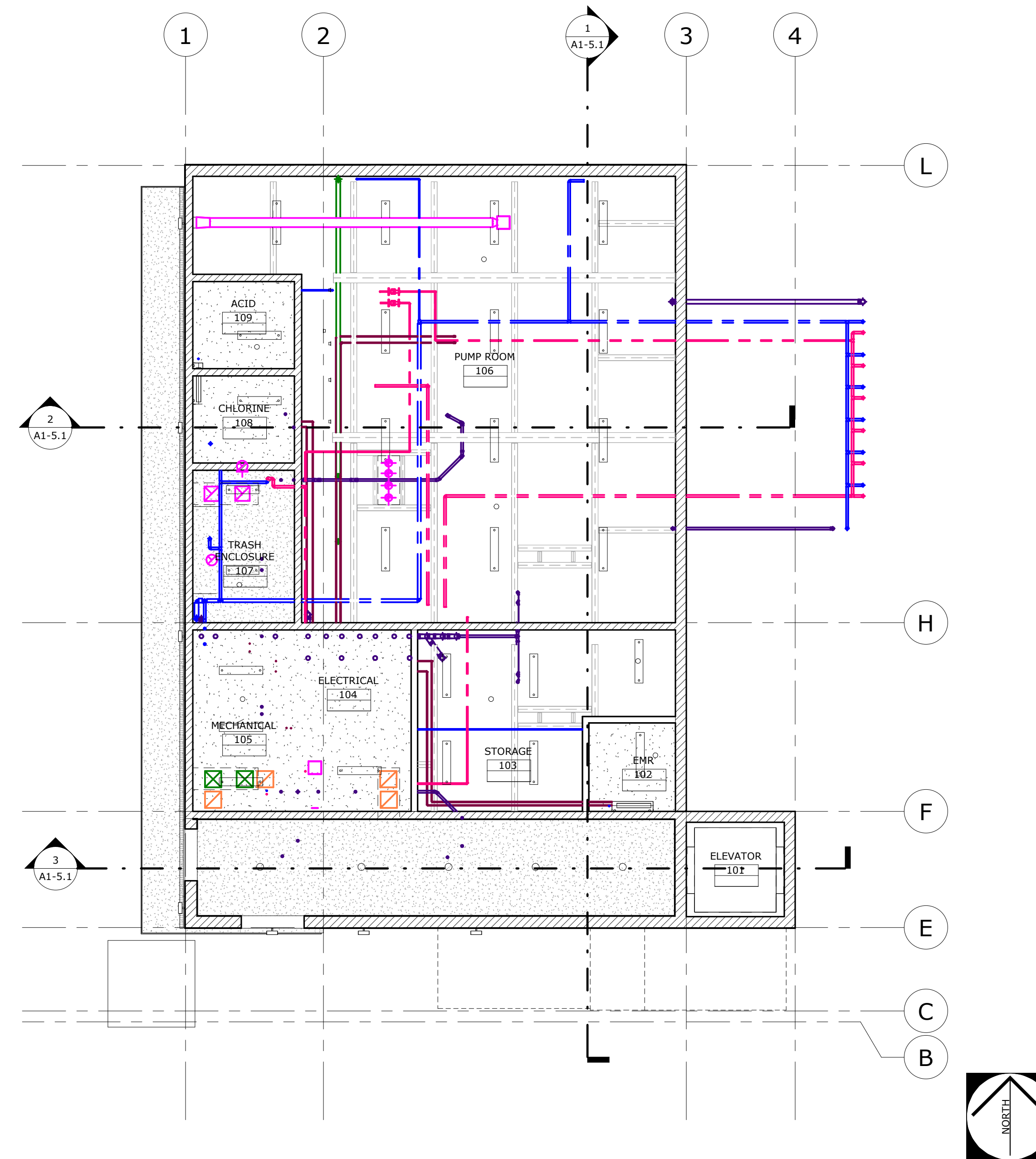
GENERAL FLOOR PLAN NOTES

1. VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
2. ALL DIMENSIONS ARE TO FACE OF STUD, CENTERLINE OF COLUMN OR EDGE OF SLAB, U.N.O.
3. SEE SHEET  FOR WALL TYPE INFORMATION.
4. PROVIDE R-19 BATT INSULATION AT ALL EXTERIOR WALLS, U.N.O. GYPSUM BOARD AND INSULATION SHALL EXTEND FULL HEIGHT OF WALL TO UNDERSIDE OF ROOF STRUCTURE.
5. PROVIDE STUD BRACING AND SUPPORT FOR ALL WALL MOUNTED FIXTURES AND ACCESSORIES. PER DETAIL .
6. SEE SHEET  FOR DOOR AND WINDOW INFORMATION.
7. SET DOORS ADJACENT TO WALLS A MIN. OF 6" AWAY FROM WALL U.N.O.

KEYNOTES

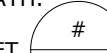
FLOOR PLAN LEGEND

-  TYP. NEW INTERIOR WALLS
ALL INTERIOR WALLS TO BE [B1-E] U.N.O.
-  TYP. NEW RATED WALL ASSEMBLY
ALL RATED WALLS TO BE [D1-12] U.N.O.
-  DEPRESSED FLOOR SLAB TO DRAIN (1/8" PER FOOT MIN. FOR ADDITIONAL INFORMATION, SEE STRUCTURAL DRAWINGS)
-  ROOF ACCESS LADDER AND HATCH, SEE DETAIL
-  DOOR TAG
20 MIN
-  WINDOW TAG
-  WALL TAG
STUD SIZE
WALL TYPE, FOR DETAILS SEE SHEET



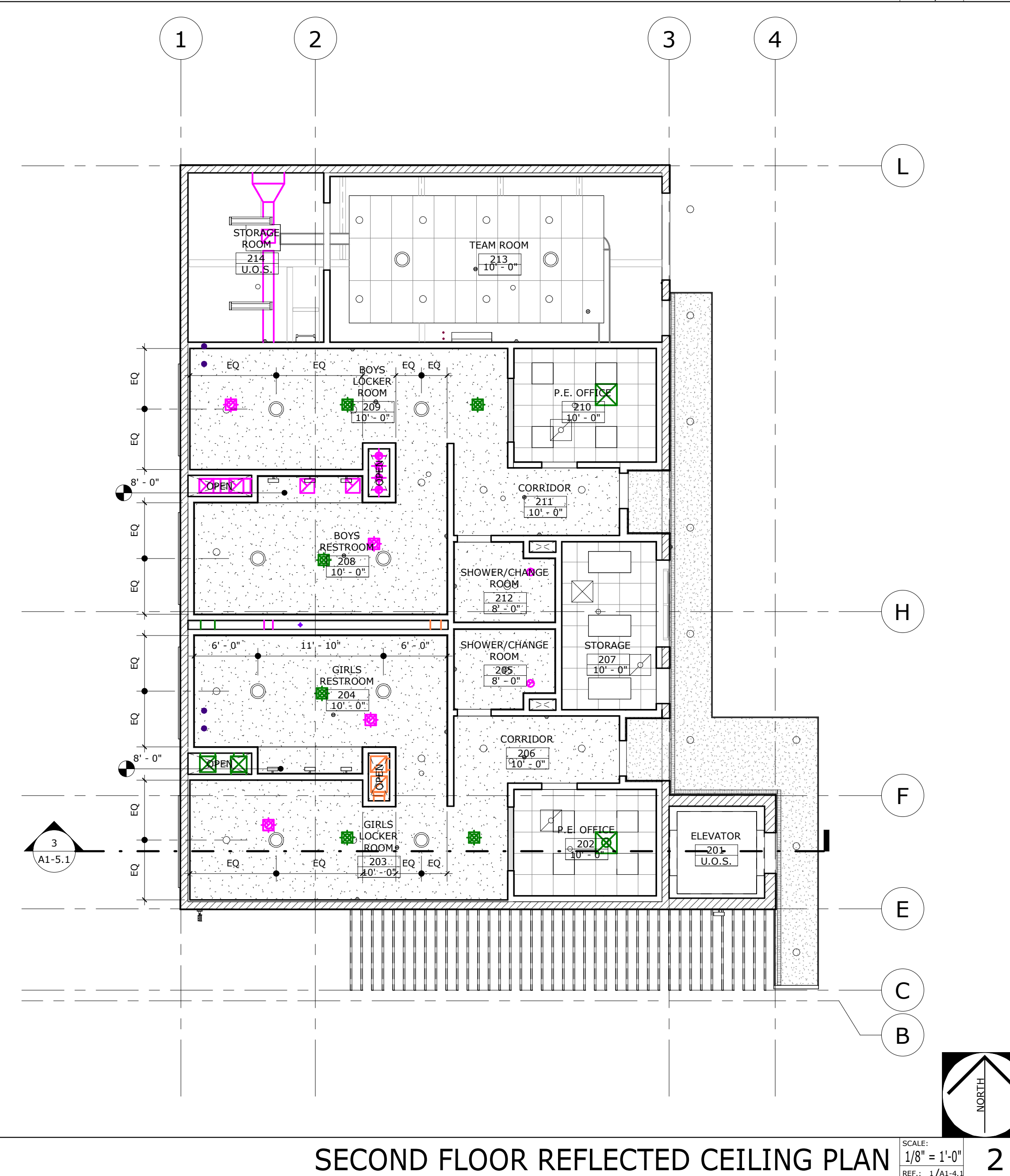
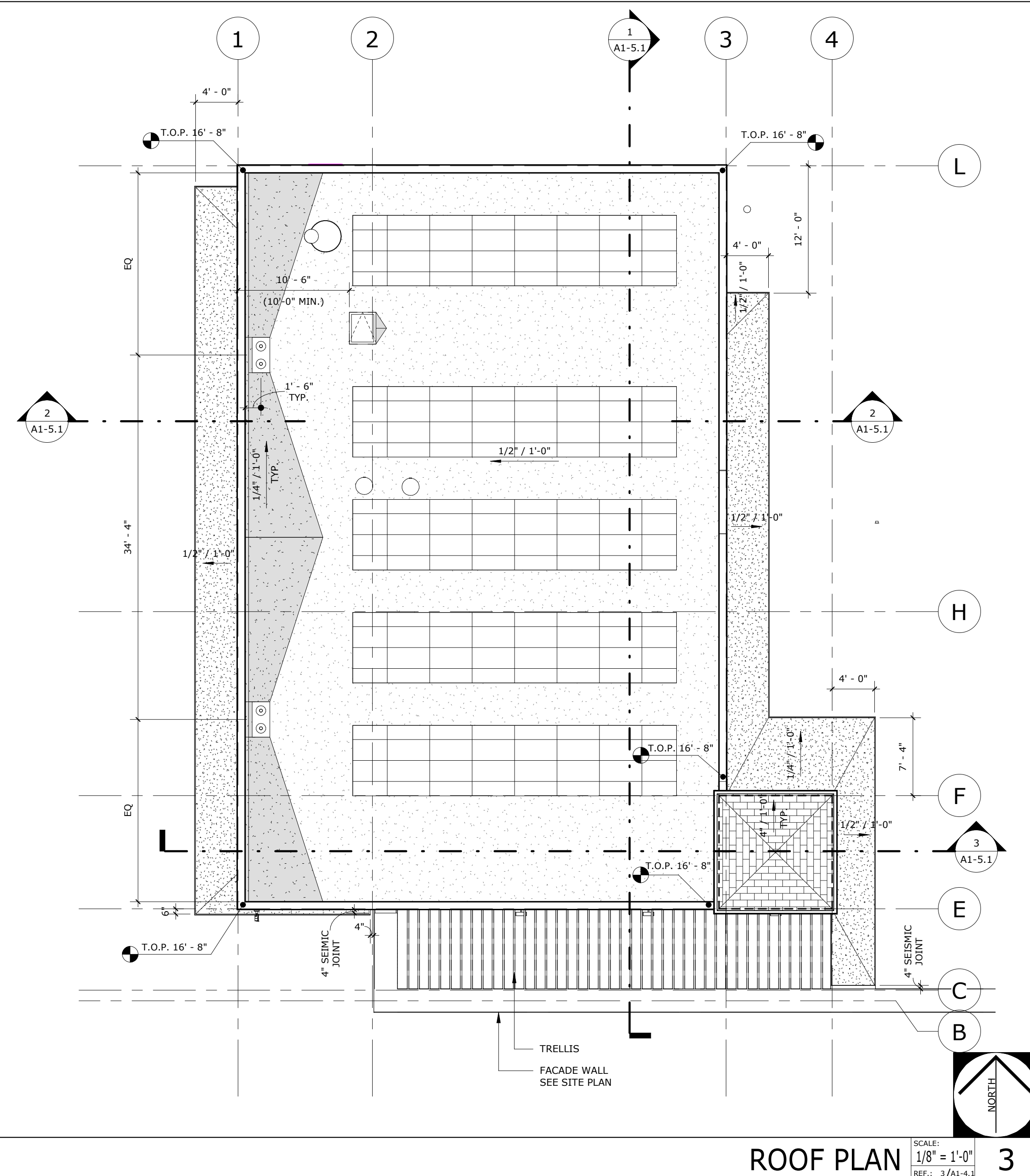
- | | | | |
|----|--|----------------------------|------------------|
| 1. | SEE DETAIL | FOR TYPICAL ROOF ASSEMBLY. | |
| 2. | FOR PIPE PENETRATIONS THROUGH ROOF, | REFER TO DETAIL | & FOR TYP. INFO. |
| 3. | ALL CRICKETS SHALL BE SHAPED WITH PLYWOOD WITH A MIN. 1.5% SLOPE TO ROOF AND OVERFLOW DRAINS. | | |
| 4. | PROVIDE 36" WIDE CONTINUOUS WALKWAY TREAD FROM THE LANDING OF EACH ROOF ACCESS HATCH TO EACH MECHANICAL UNIT. TREAD AT EACH UNIT TO SURROUND PERIMETER | | |
| 5. | AT MECHANICAL EQUIPMENT, REFER TO DETAIL | FOR ROOF CURB | |

GENERAL RCP NOTES

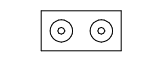
1. ALL LIGHT FIXTURES TO BE CENTERED IN SPACE, U.N.O.
2. ALL CEILING HEIGHTS ARE RELATIVE TO THE FINISH FLOOR DIRECTLY BENEATH.
3. ACOUSTICAL CEILING TILES AND GRID TO BE INSTALLED IN ROOM. SEE SHEET SUSPENDED CEILING SEISMIC BRACING DETAILS AND TRAPEZE DETAILS  FOR
4. ALL EXPOSED STRUCTURE TO BE COVERED WITH BLACK SCRIM PAPER FASTENED TO BOTTOM OF JOISTS. ALL MECHANICAL (INCLUDING REGISTERS), ELECTRICAL, PLUMBING, HANGER, BRACING, STUDS, WIRE, ETC. BEHIND BLACK SCRIM PAPER TO BE PAINTED BLACK TO MATCH. REFER TO U.O.S. CEILINGS ON RCP AND IN FINISH SCHEDULE. ALL SUPPLIES AND RETURN REGISTERS TO BE PRE-FINISHED TO MATCH SCRIM PAPER COLOR.
5. ALL MECHANICAL, ELECTRICAL AND PLUMBING EQUIPMENT TO BE HELD AS TIGHT AS POSSIBLE TO CEILING STRUCTURE.
6. ALL CONDUIT IN EXPOSED AREAS WHERE CEILING STRUCTURE IS EXPOSED CAN ONLY PENETRATE WALLS AT ROOF / FLOOR DECK
7. REFER TO ELECTRICAL & MECHANICAL DRAWINGS FOR CEILING COMPONENT CALLOUTS AND FIXTURE TYPES
8. PAINT ALL SUPPLY & RETURN OF ALL ACCENT PAINTED CEILING AREAS

KEYNOTES

KEYNOTES

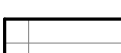
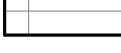


ROOF LEGEND

- | | |
|---|--|
|  | CLASS 'A' ROOF ASSEMBLY |
|  | ADHESIVE ROOF PADS |
|  | ROOF CRICKET - MIN. 1.5% SLOPE TO ROOF AND OVERFLOW DRAINS
MAINTAIN MIN. SLOPE PER SPECS ALONG FLOW LINES, U.N.O. |
|  | ROOF ACCESS HATCH, SEE DETAIL |
|  | ROOF DRAIN WITH SEPARATE OVERFLOW LINE, SEE DETAIL |

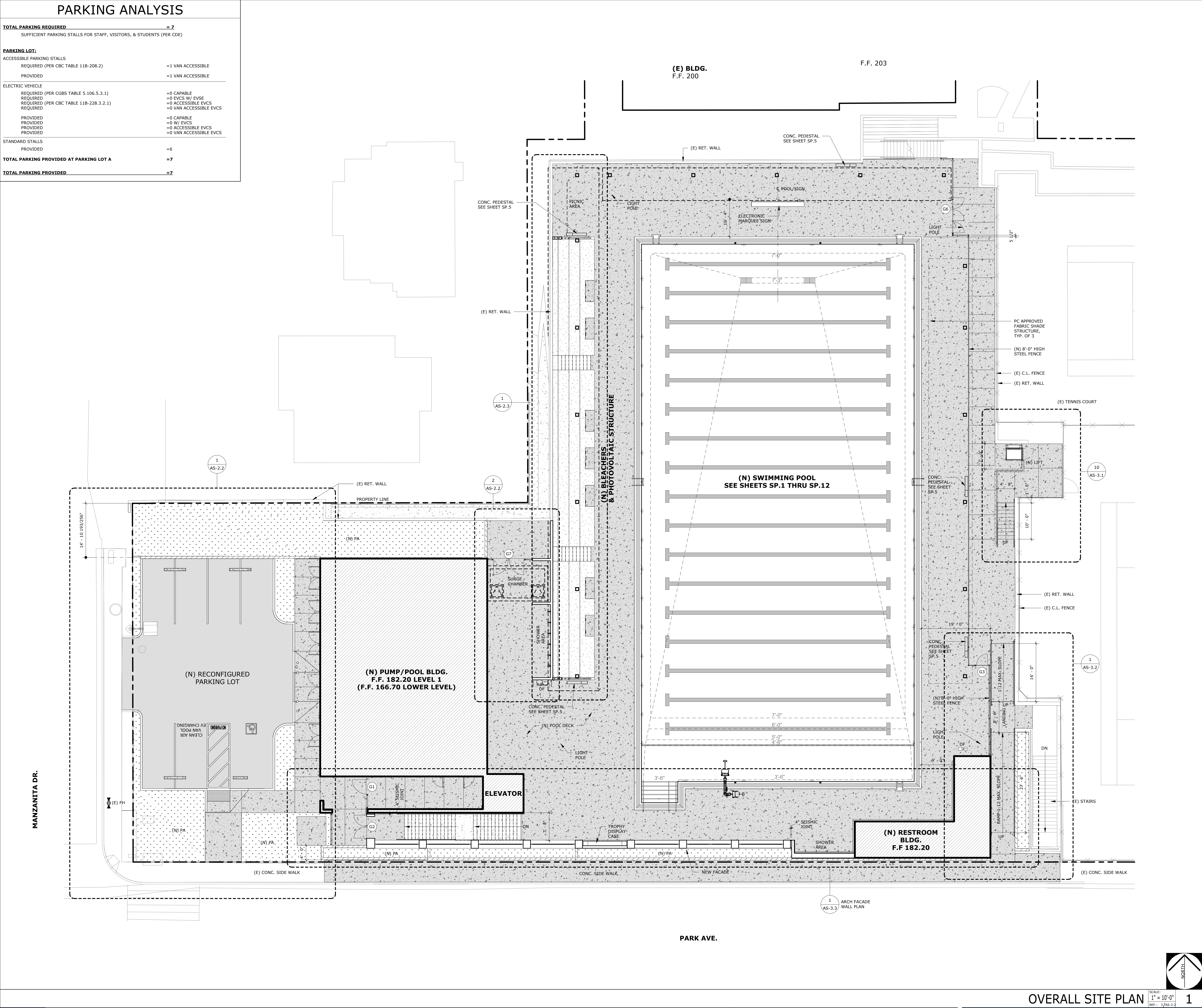
NOTE:
REFER TO COLORS, MATERIALS, AND FINISHES LEGEND FOR ADDITIONAL INFORMATION

CEILING LEGEND

- | | |
|---|--|
|  | EXTERIOR PLASTER CEILING SYSTEM |
|  | GYPSUM BOARD CEILING SYSTEM |
|  | 2'-0" x 4'-0" SUSPENDED TEE BAR ACOUSTICAL CEILING |
|  | 2'-0" x 2'-0" SUSPENDED TEE BAR ACOUSTICAL CEILING |
|  | ROOF ACCESS LADDER AND HATCH, SEE DETAIL |
|  | CEILING ACCESS PANEL, SEE DETAIL |

NOTE:
REFER TO COLORS, MATERIALS, AND FINISHES LEGEND FOR ADDITIONAL INFORMATION

PARKING ANALYSIS	
TOTAL PARKING REQUIRED	= 7
SUFFICIENT PARKING STALLS FOR STAFF, VISITORS, & STUDENTS (PER CDE)	
PARKING LOT:	
ACCESSIBLE PARKING STALLS	
REQUIRED (PER CBC TABLE 11B-208.2)	= 1 VAN ACCESSIBLE
PROVIDED	= 1 VAN ACCESSIBLE
ELECTRIC VEHICLE	
REQUIRED (PER CGBS TABLE 5.106.5.3.1)	= 0 CAPABLE
REQUIRED (PER CBC TABLE 11B-228.3.2.1)	= 0 EVCS W/ EVSE
REQUIRED	= 0 ACCESSIBLE EVCS
REQUIRED	= 0 VAN ACCESSIBLE EVCS
PROVIDED	= 0 CAPABLE
PROVIDED	= 0 W/ EVCS
PROVIDED	= 0 ACCESSIBLE EVCS
PROVIDED	= 0 VAN ACCESSIBLE EVCS
STANDARD STALLS	
PROVIDED	= 6
TOTAL PARKING PROVIDED AT PARKING LOT A	= 7
TOTAL PARKING PROVIDED	= 7



GENERAL NOTES

1. THIS SITE IS NOT LOCATED WITHIN A FLOOD HAZARD ZONE PER FIRM PANEL: 0417K, 3/21/2019

KEYNOTES

GATE SCHEDULE									
NO.	GATE SIZE (W X H)	TYPE	MATERIAL	FINISH	DETAIL	PANIC	HOW	GROUP	NOTES
G1	4'-0" x 8'-0"	ORNAMENTAL	STEEL	PT OR PD	##ASD-2	YES	No	06	1, 6, 7
G2	(PR) 3'-0" x 8'-0"				##ASD-2	YES	No	06	
G3	3'-0" x 8'-0"				##ASD-2	YES	No	06	
G4	4'-0" x 8'-0"				##ASD-2	YES	No	06	
G5	3'-0" x 8'-0"				##ASD-2	YES	No	06	
G6	(PR) 3'-0" x 8'-0"				##ASD-2	YES	No	06	
G7	SDF SDF		SDF		SDF		YES	No	06

NOTES:

1. PEDESTRIAN GATE

2. NO-LINE GATE

3. SERVICE GATE

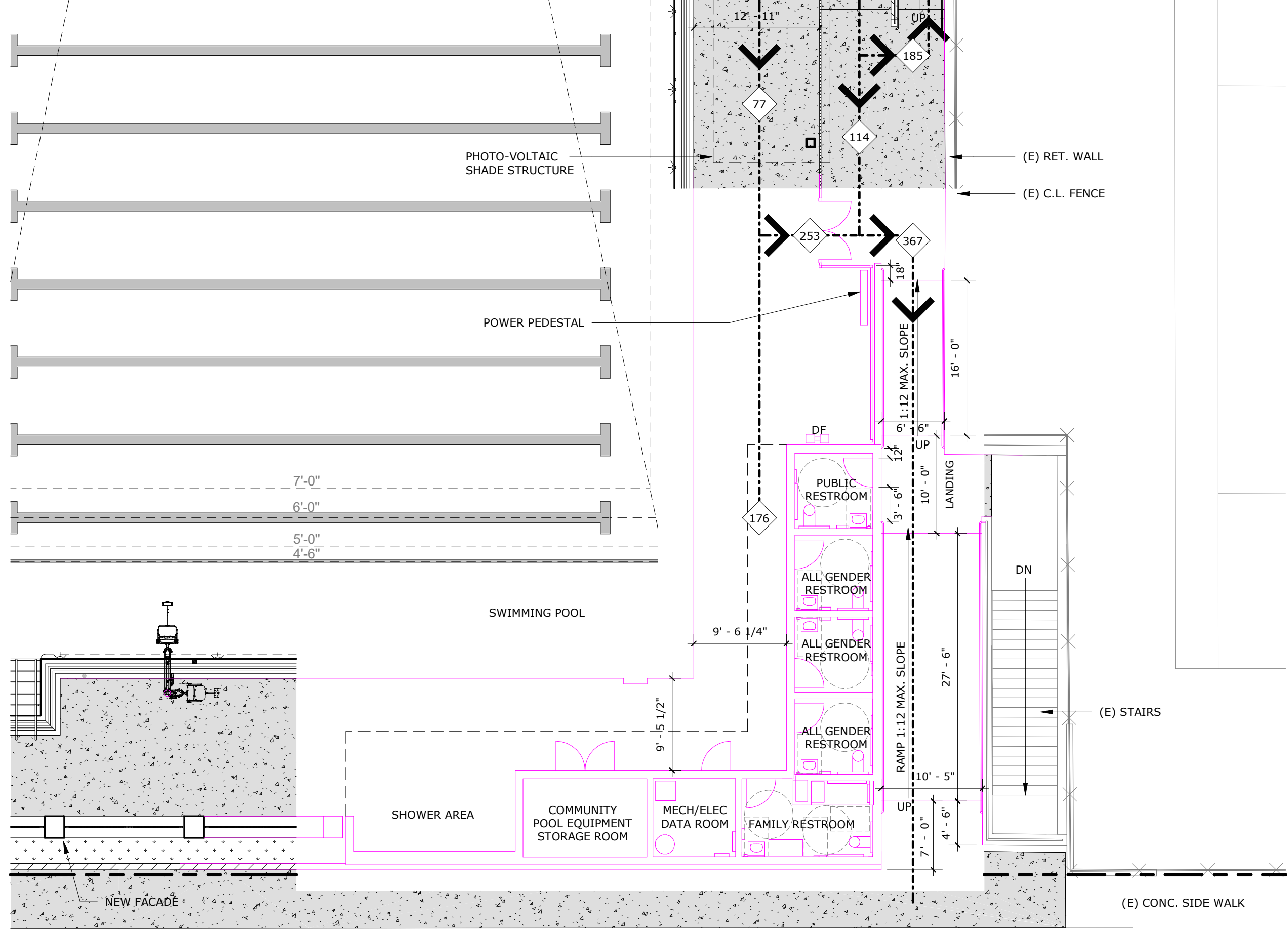
4. FOUR-LANE ACCESS GATE

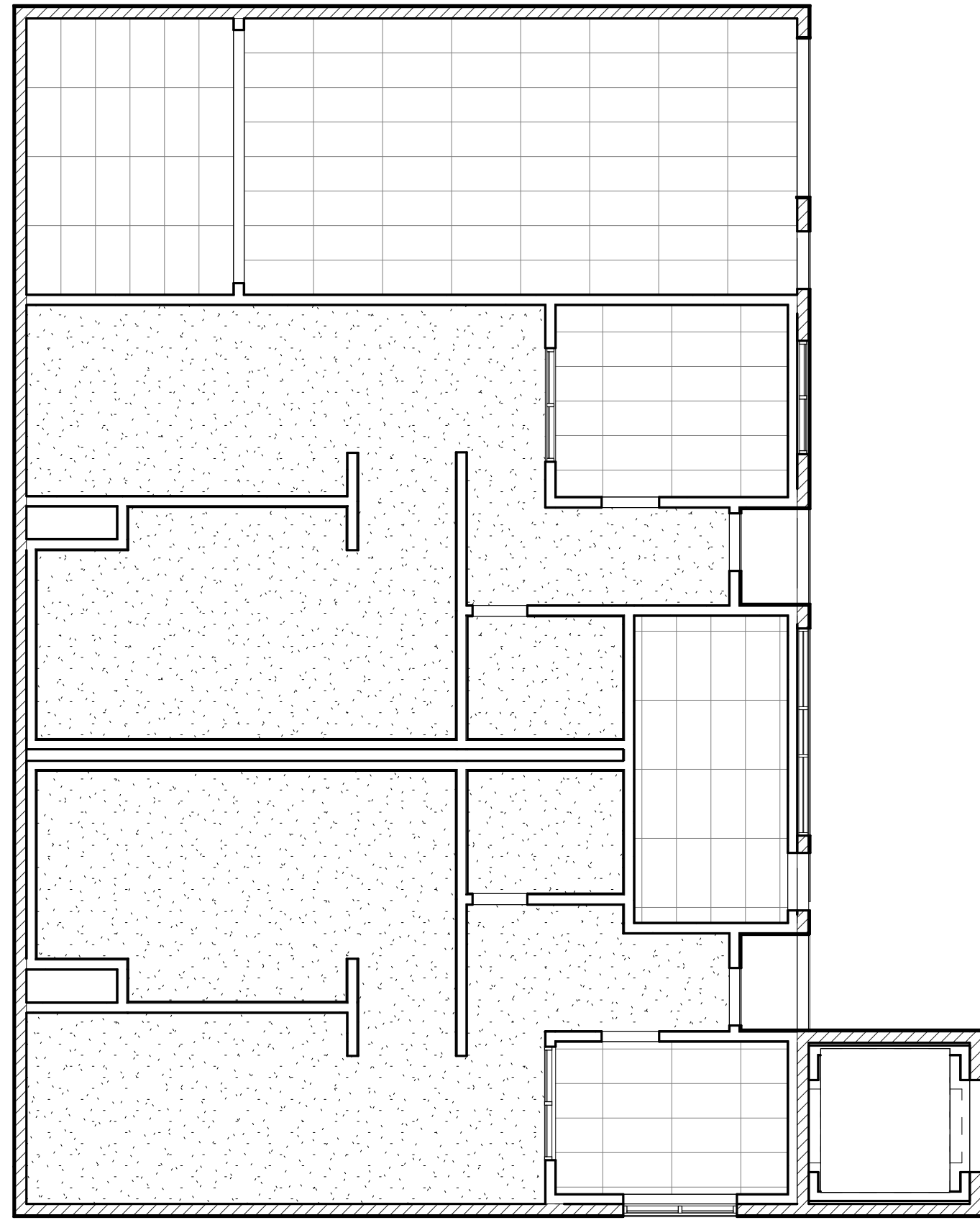
5. PROVIDE NEW KNOX BOX, SEE DET.

6. ACCESSIBLE GATE IN COMPLIANCE WITH CBC

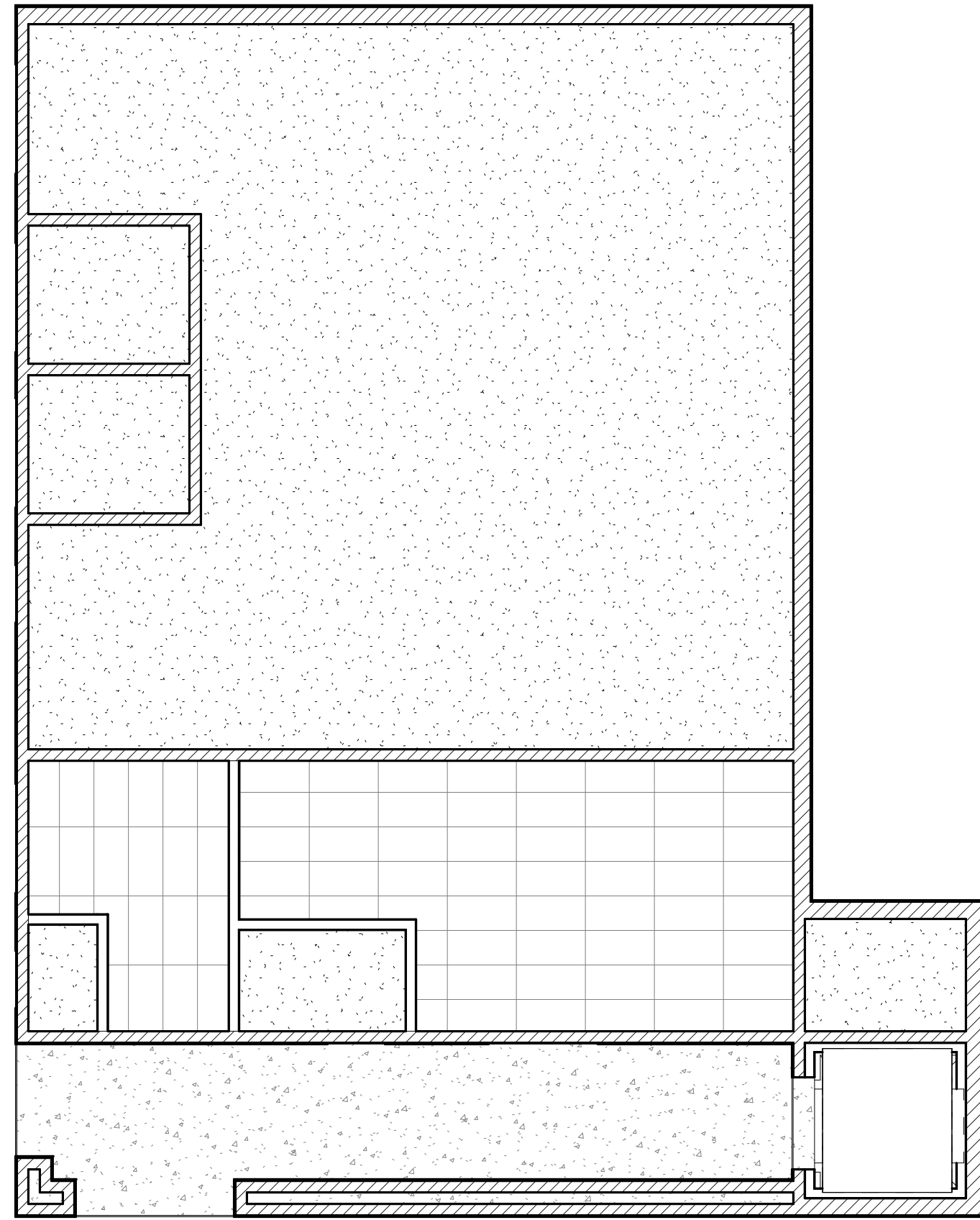
7. COORDINATE LOCATION OF NEW GATE POST FOOTINGS WITH EXISTING UTILITIES

LEGEND	
	PROPERTY LINE
	(N) BUILDING
	(N) CONCRETE PAVING, SEE CIVIL DRAWINGS SHEET C2.00 & C3.00
	(N) ASPHALT PAVING, SEE CIVIL DRAWINGS SHEET C2.00 & C3.00
	(N) LANDSCAPE PER LANDSCAPE DRAWINGS LI-1.0 THRU LPD-1.0

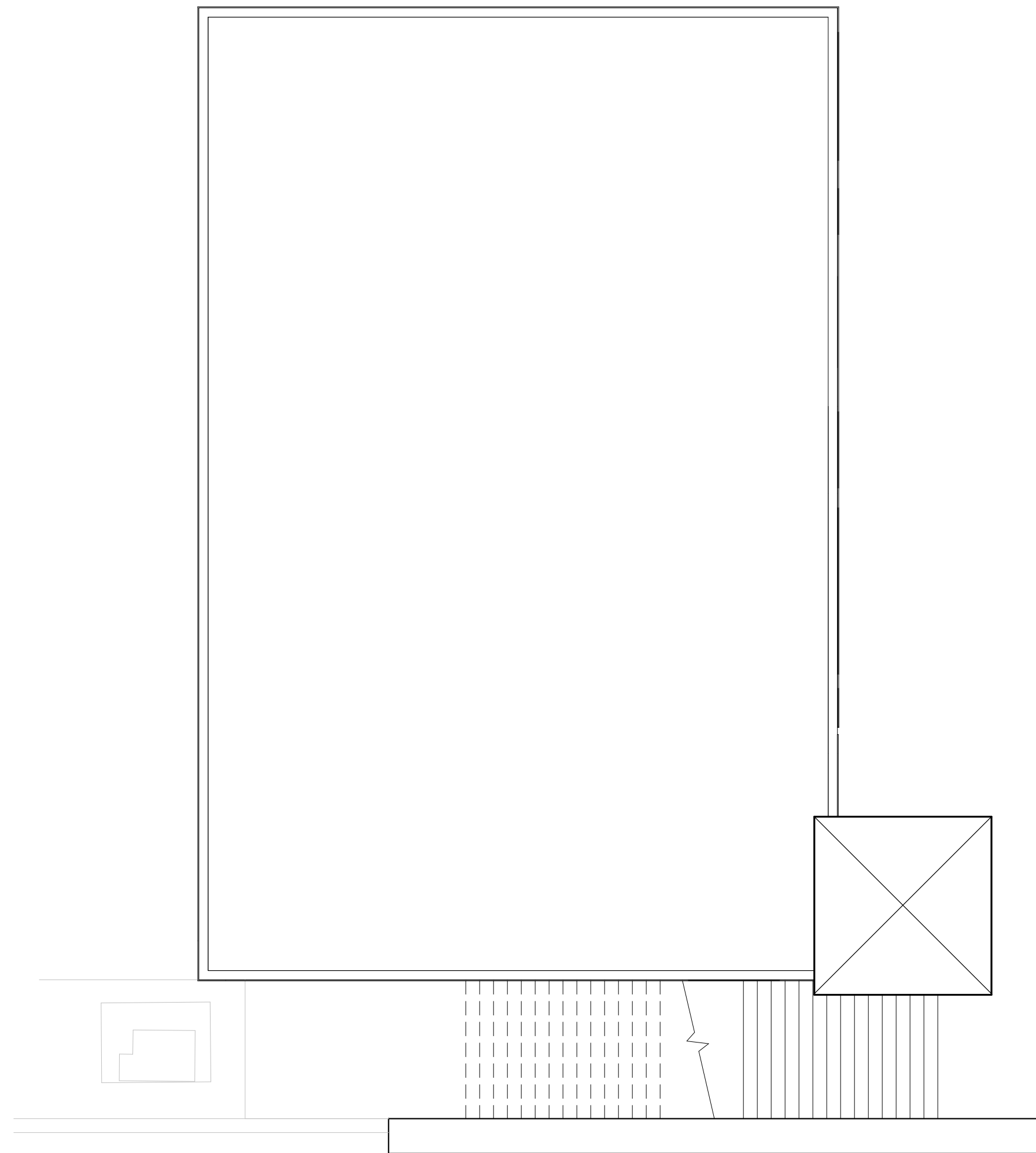




① SECOND LEVEL RCP
SCALE: 1/8" = 1'-0"

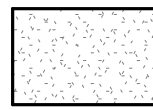
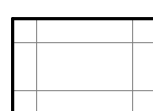
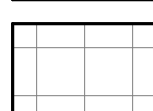
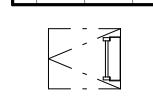
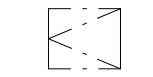


② FIRST LEVEL RCP
SCALE: 1/8" = 1'-0"



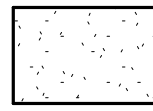
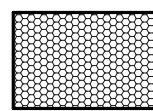
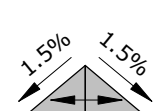
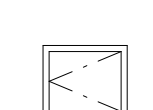
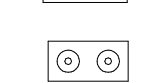
③ ROOF PLAN
SCALE: 1/8" = 1'-0"

CEILING LEGEND

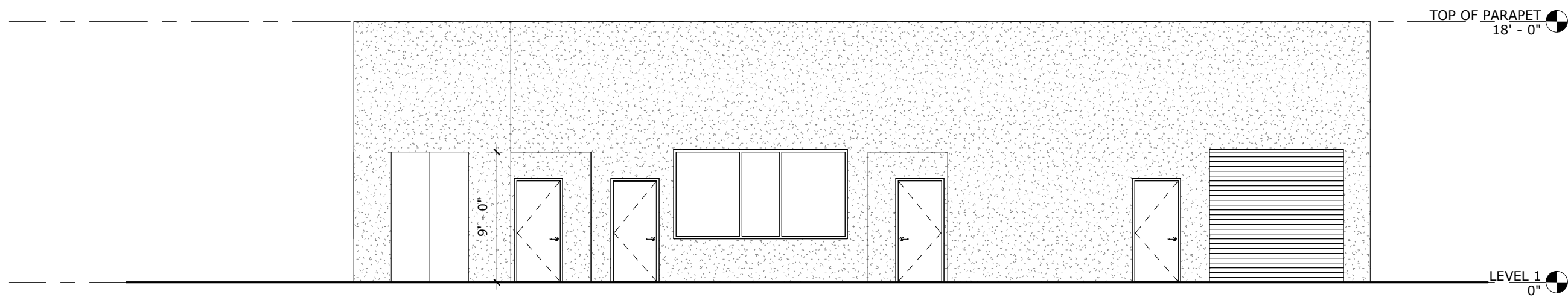
-  EXTERIOR PLASTER CEILING SYSTEM
-  GYPSUM BOARD CEILING SYSTEM
-  2'-0" x 4'-0" SUSPENDED TEE BAR ACOUSTICAL CEILING
-  2'-0" x 2'-0" SUSPENDED TEE BAR ACOUSTICAL CEILING
-  ROOF ACCESS LADDER AND HATCH, SEE DETAIL
-  CEILING ACCESS PANEL, SEE DETAIL

NOTE:
REFER TO COLORS, MATERIALS, AND FINISHES LEGEND FOR ADDITIONAL INFORMATION

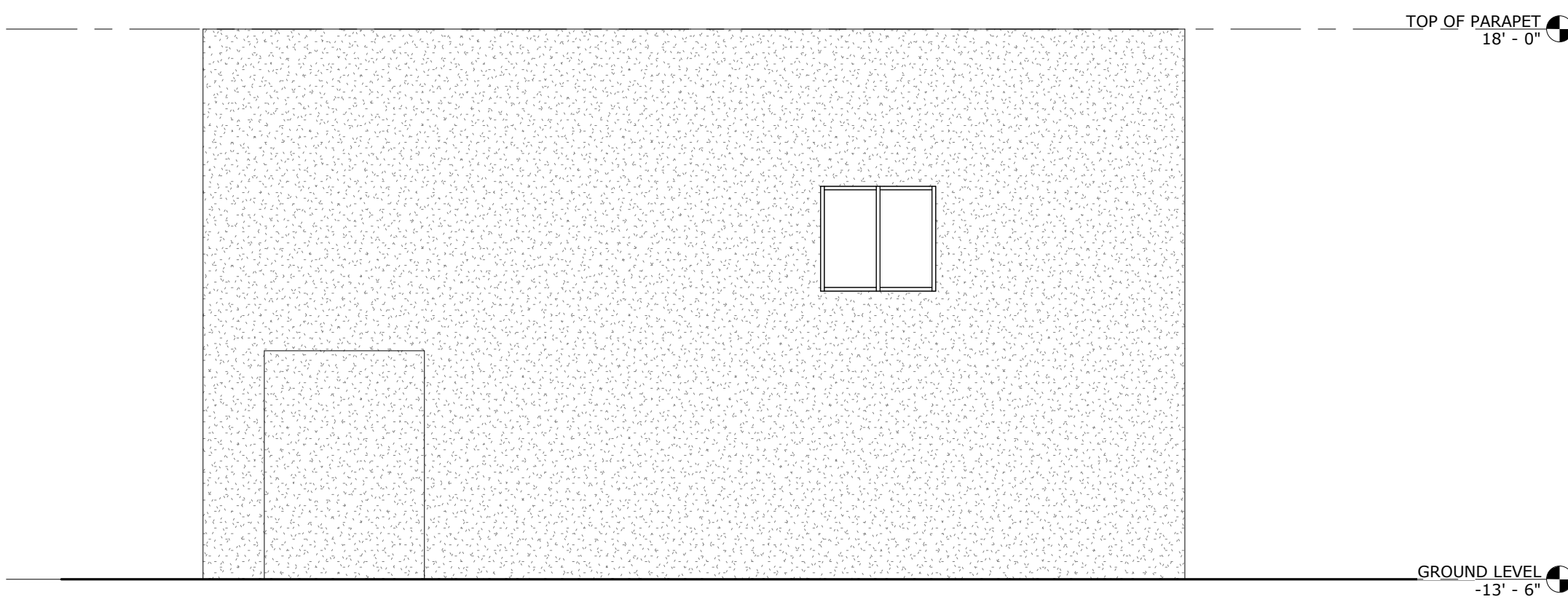
ROOF LEGEND

-  CLASS 'A' ROOF ASSEMBLY
-  ADHESIVE ROOF PADS
-  ROOF CRICKET - MIN. 1.5% SLOPE TO ROOF AND OVERFLOW DRAINS
MAINTAIN MIN. SLOPE PER SPECS ALONG FLOW LINES, U.N.O.
-  ROOF ACCESS HATCH, SEE DETAIL
-  ROOF DRAIN WITH SEPARATE OVERFLOW LINE, SEE DETAIL

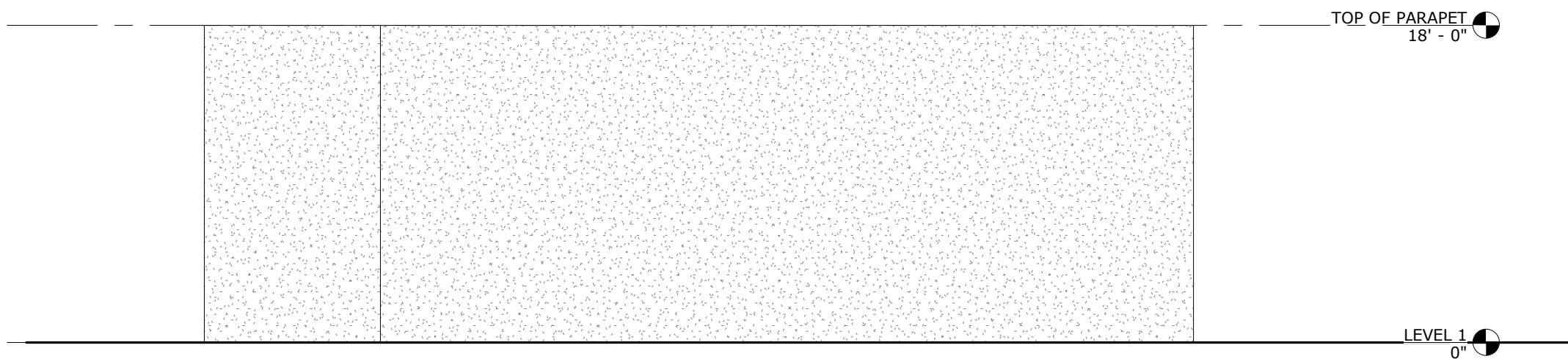
NOTE:
REFER TO COLORS, MATERIALS, AND FINISHES LEGEND FOR ADDITIONAL INFORMATION



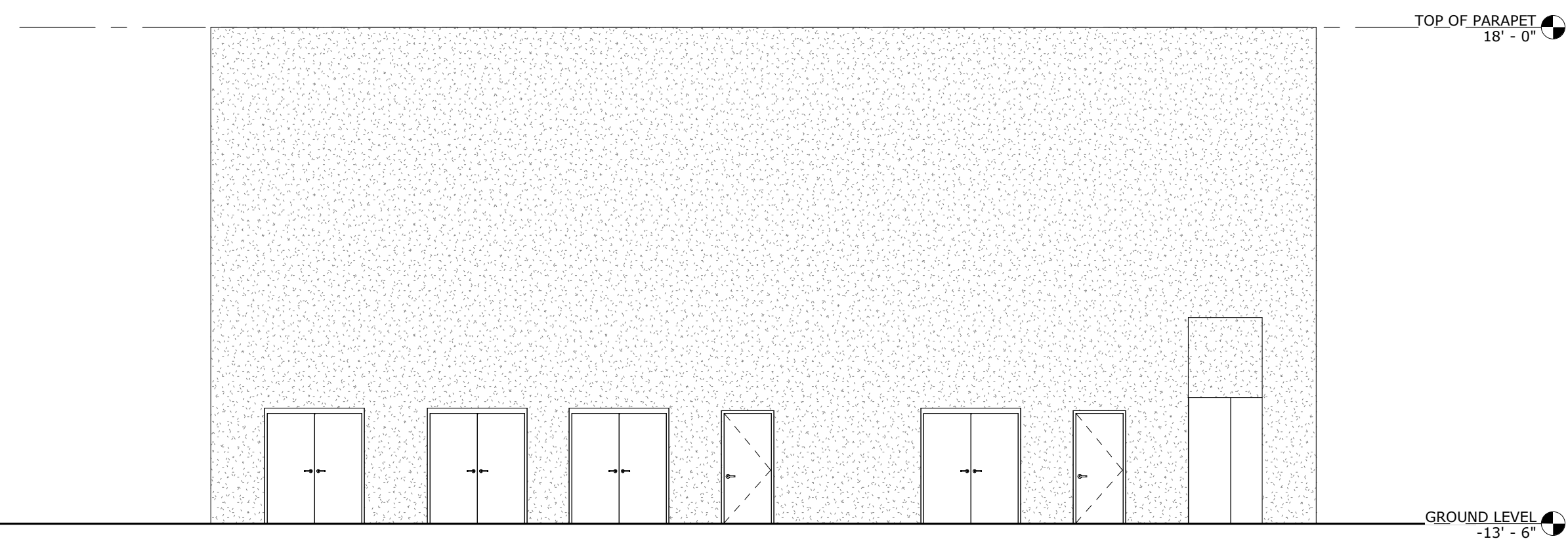
1 EAST ELEVATION
SCALE: 1/8" = 1'-0"



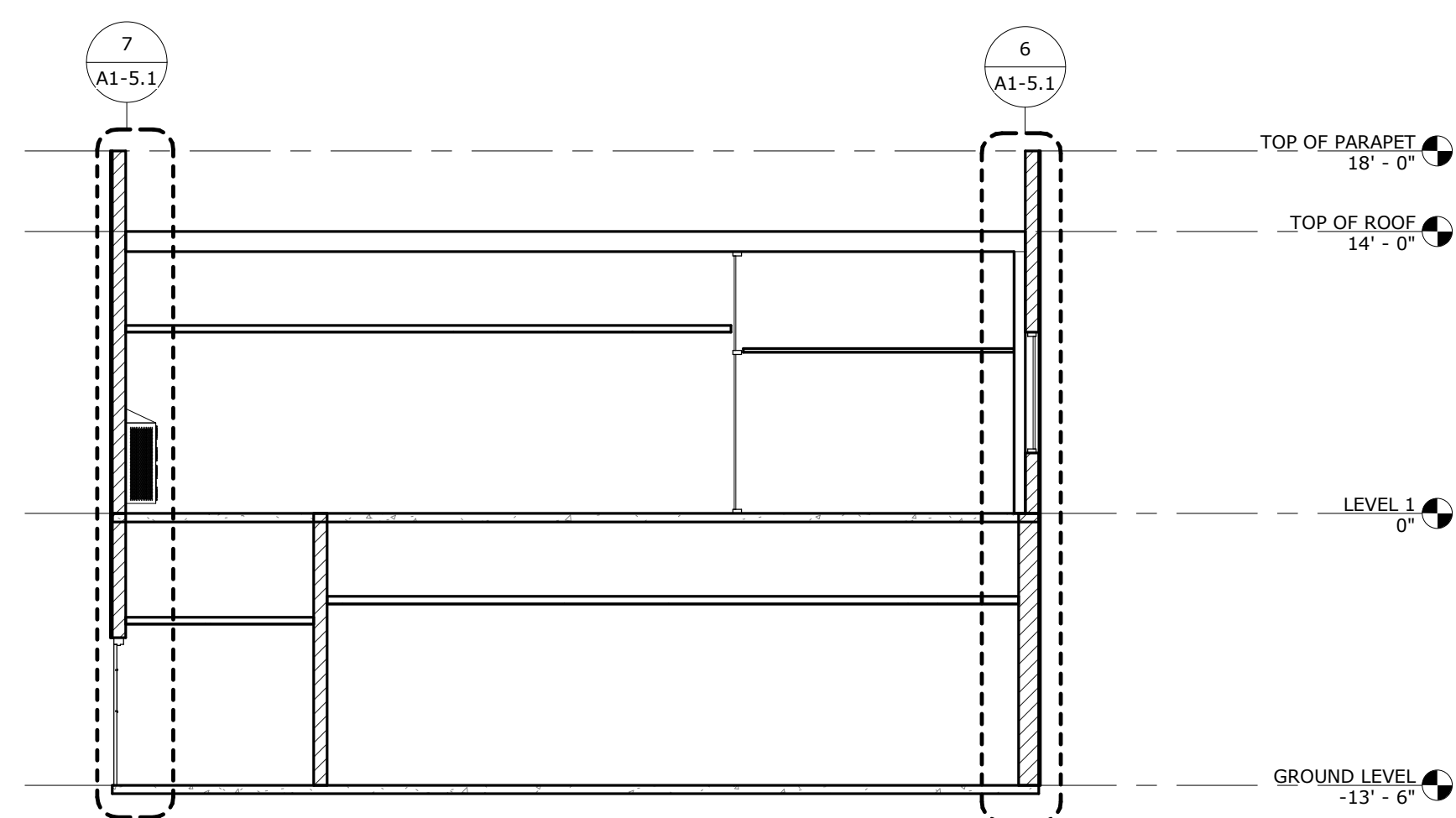
3 SOUTH ELEVATION
SCALE: 1/8" = 1'-0"



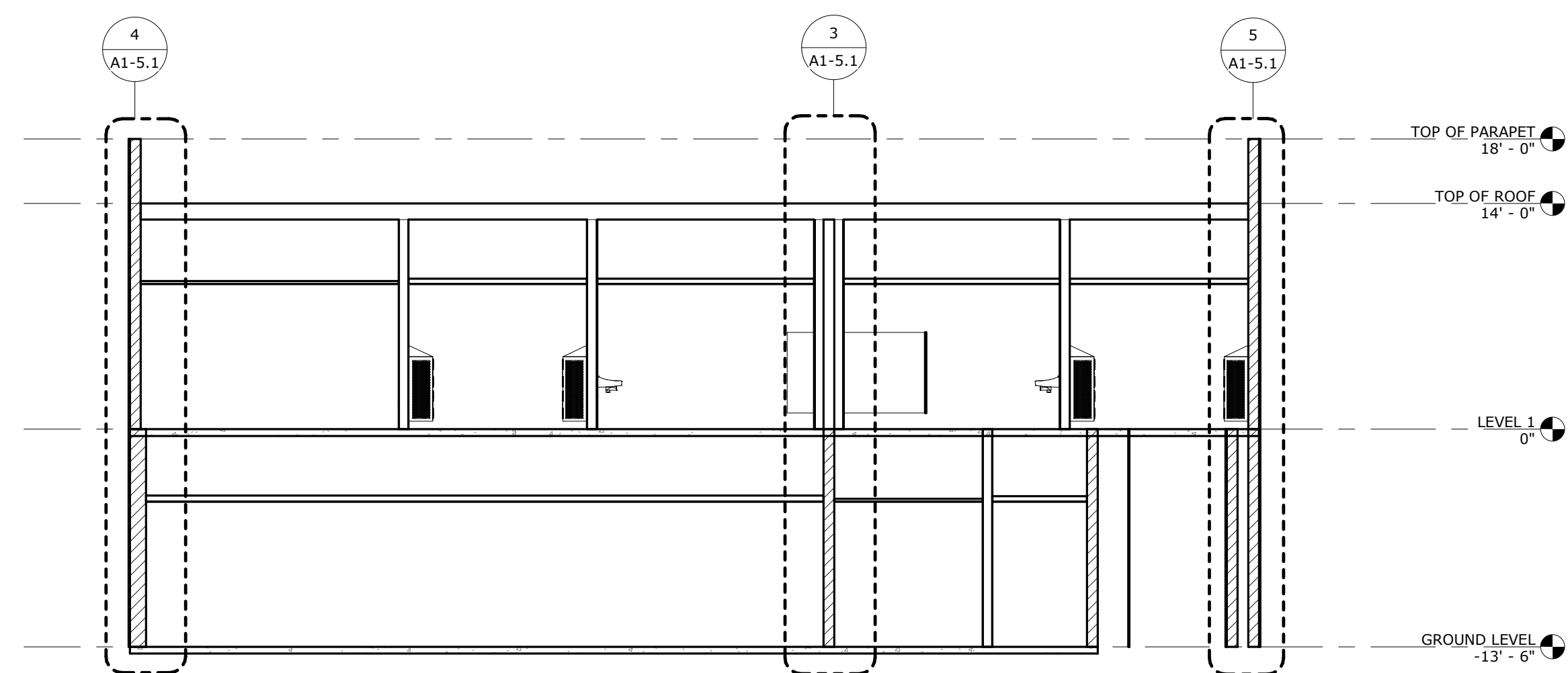
2 NORTH ELEVATION
SCALE: 1/8" = 1'-0"



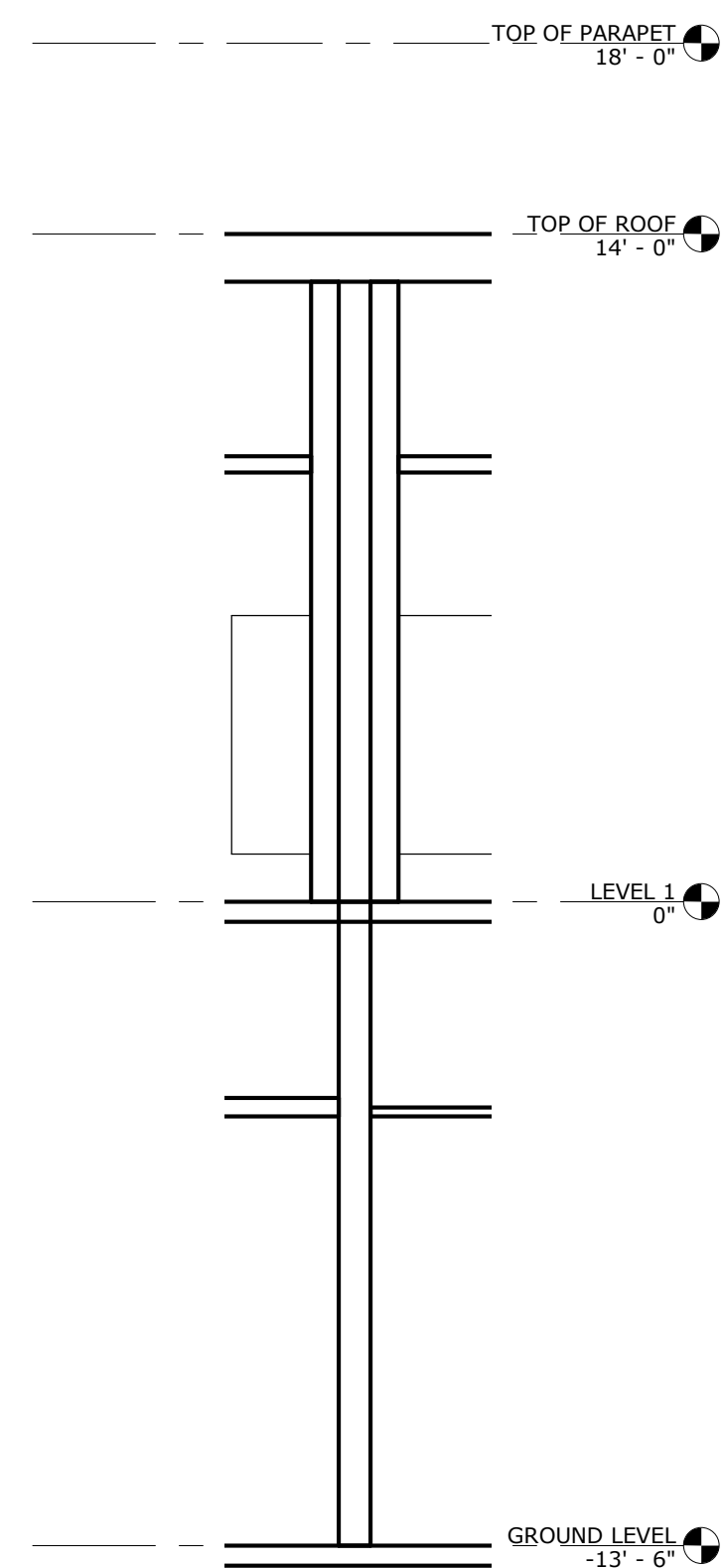
4 WEST ELEVATION
SCALE: 1/8" = 1'-0"



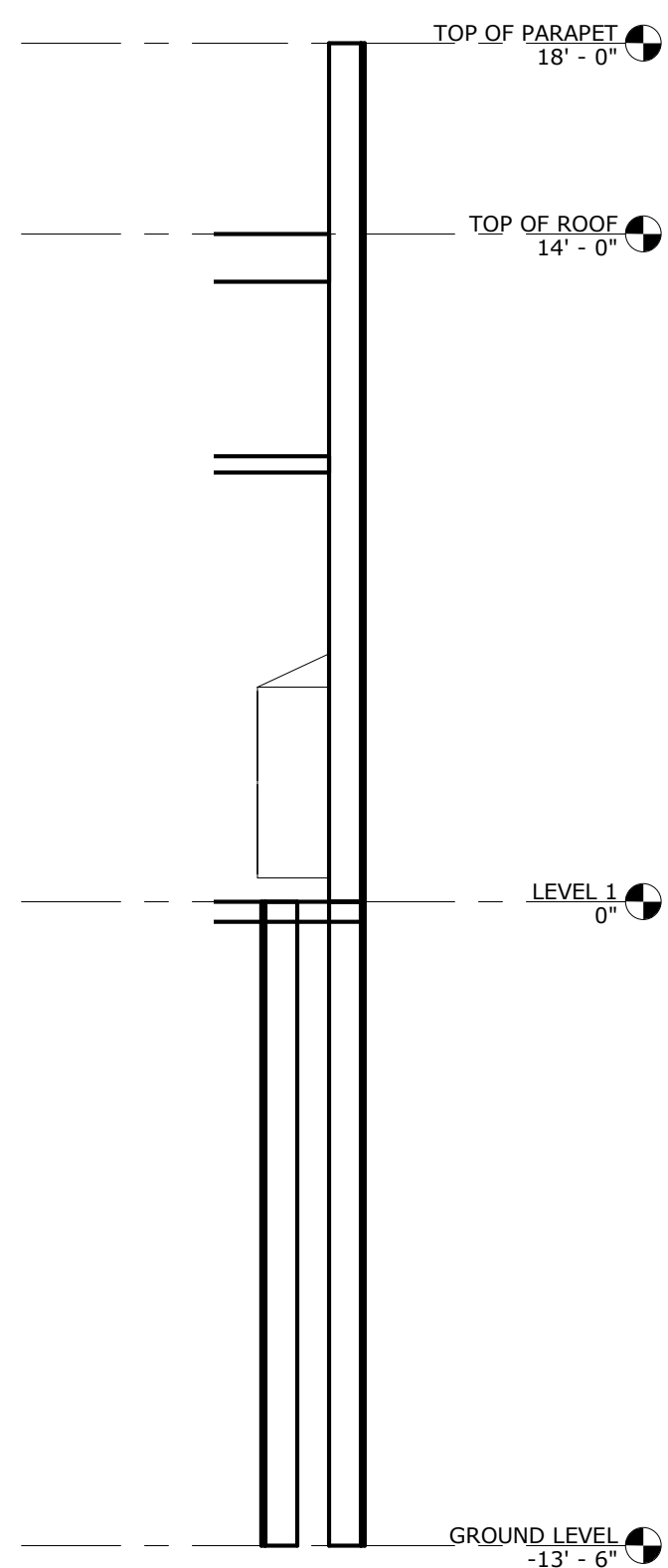
2 Section 2
SCALE: 1/8" = 1'-0"



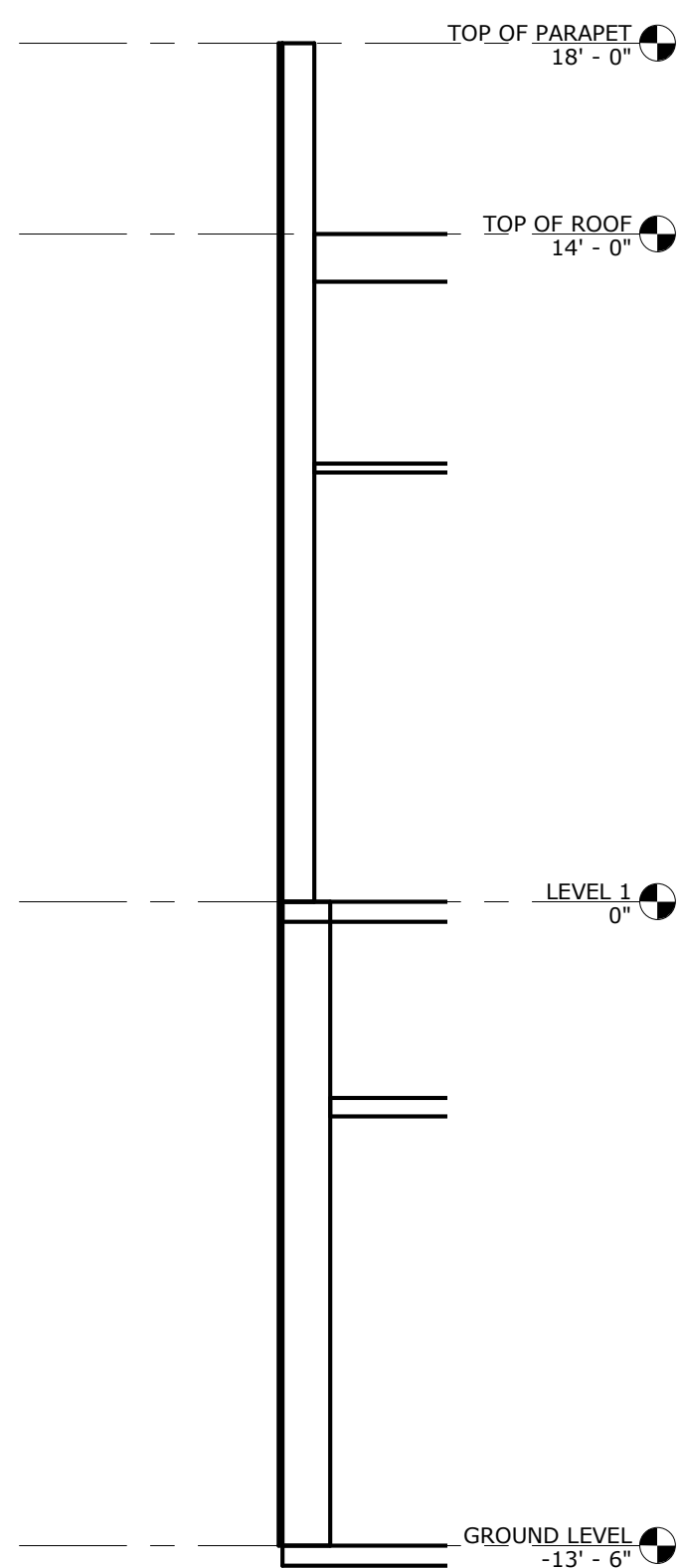
1 Section 1
SCALE: 1/8" = 1'-0"



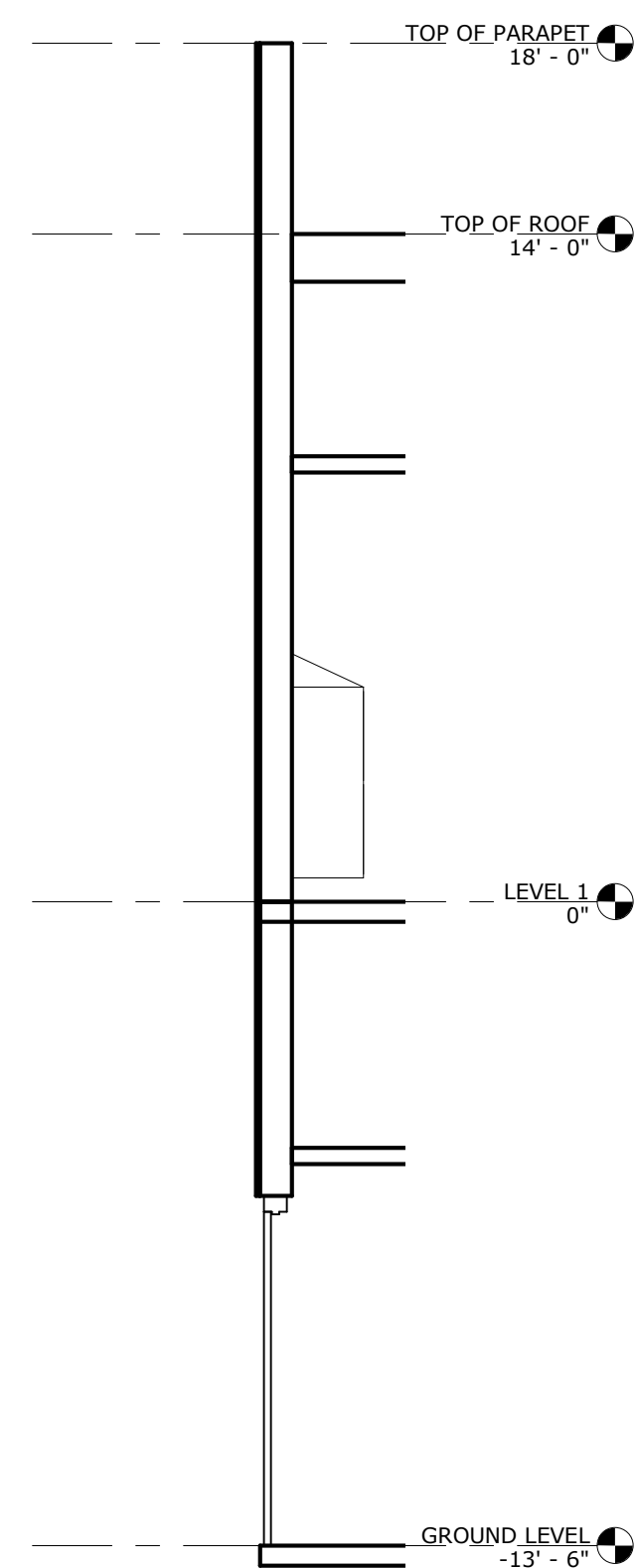
3 WALL SECTION
SCALE: 1/4" = 1'-0"



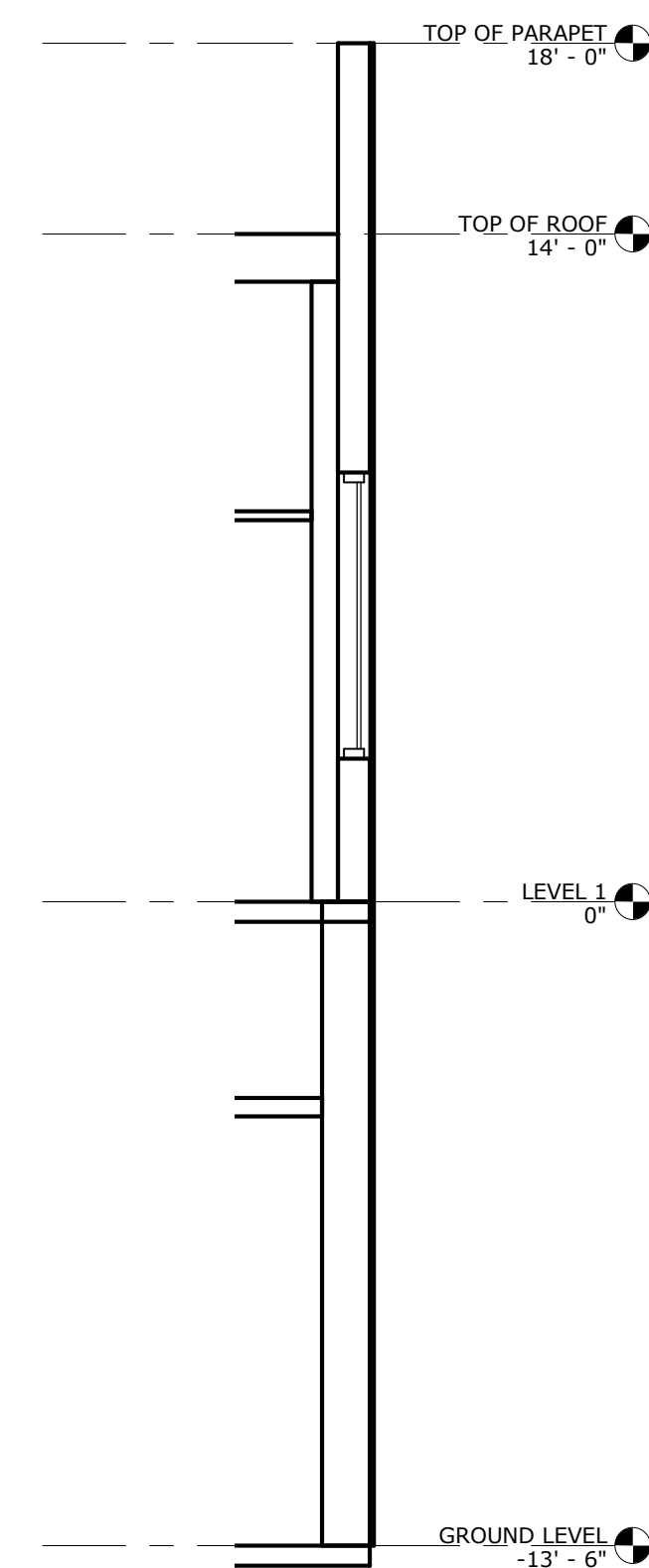
5 WALL SECTION
SCALE: 1/4" = 1'-0"



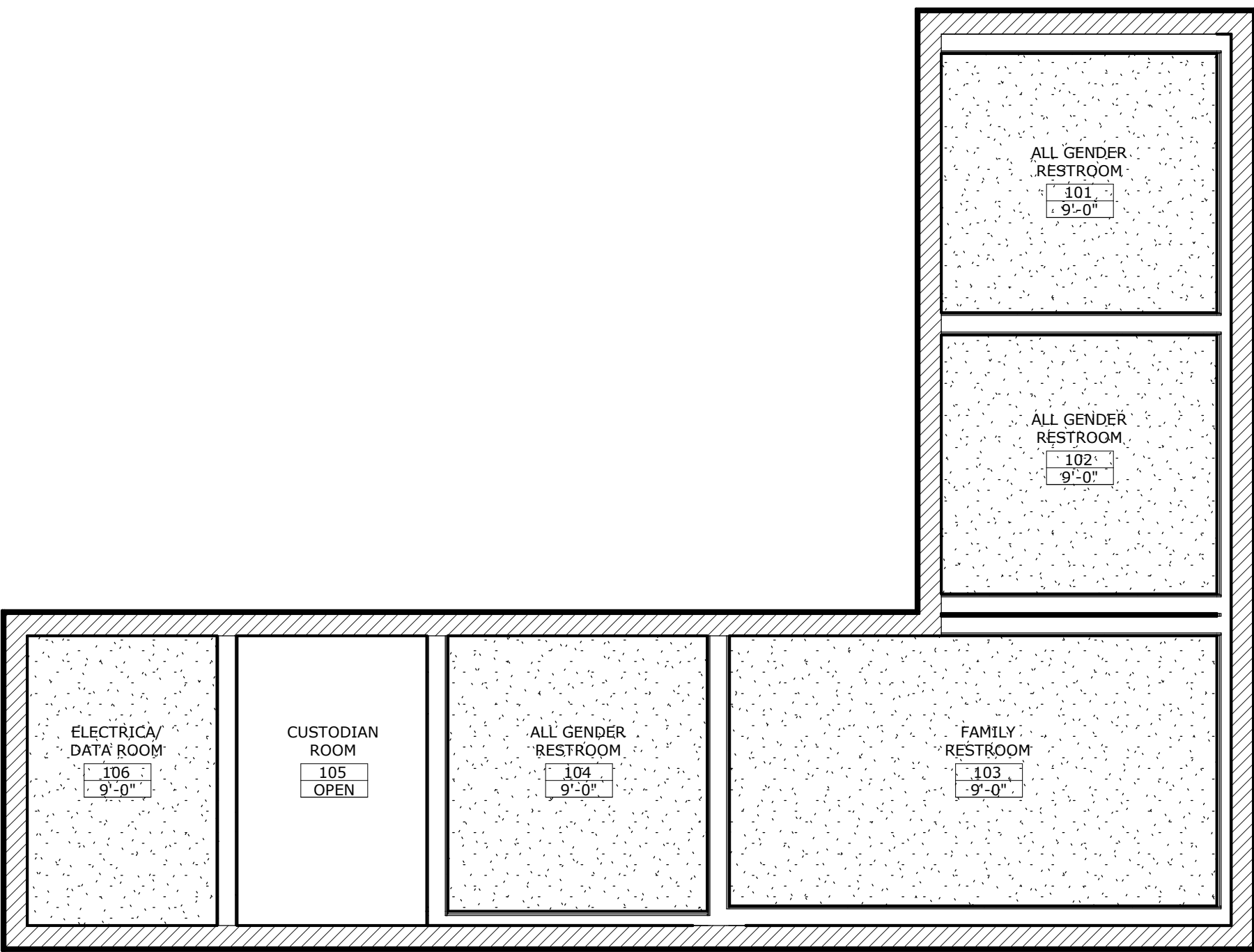
4 WALL SECTION
SCALE: 1/4" = 1'-0"



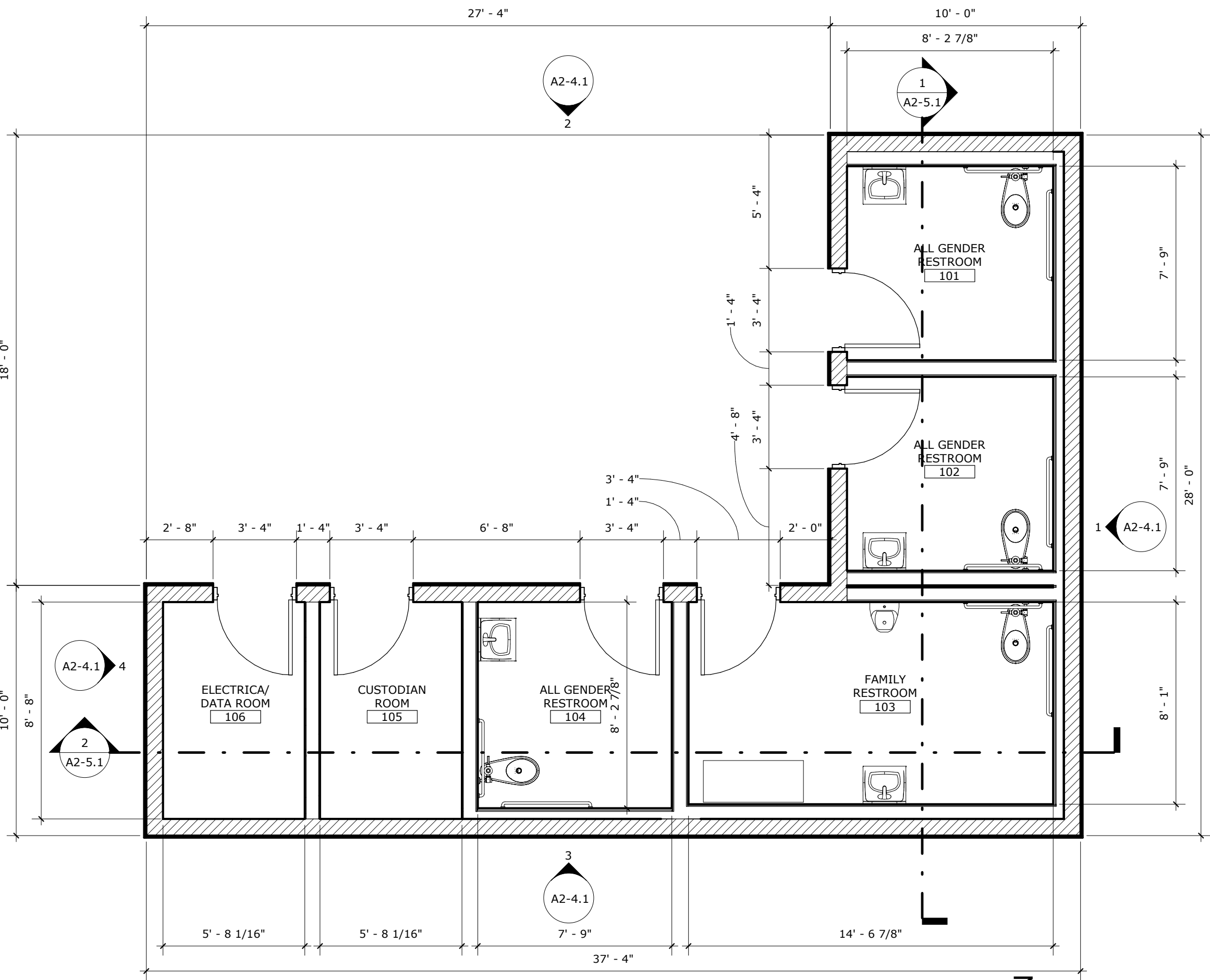
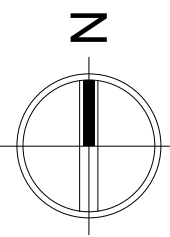
7 WALL SECTION
SCALE: 1/4" = 1'-0"



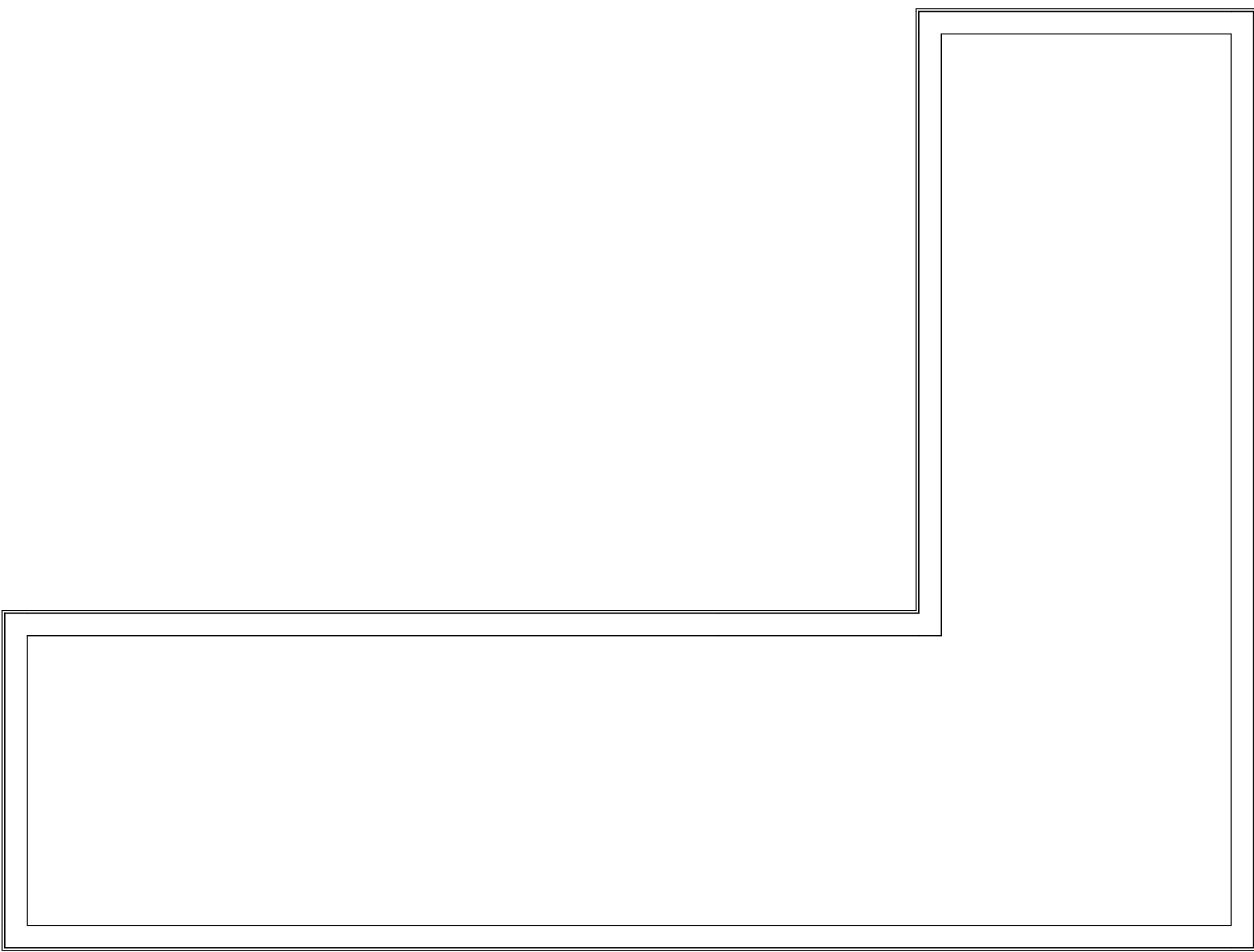
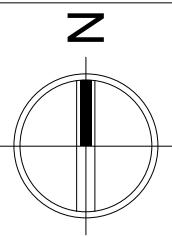
6 WALL SECTION
SCALE: 1/4" = 1'-0"



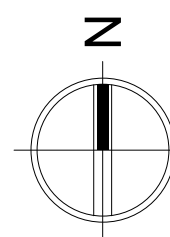
2 RCP PLAN
SCALE: 1/4" = 1'-0"

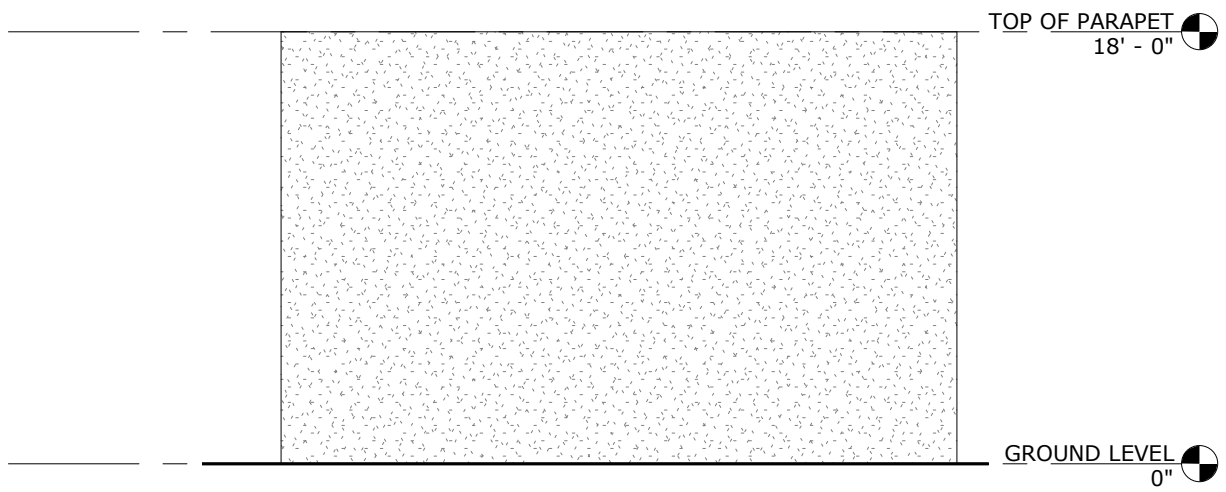


1 RESTROOM FLOOR PLAN
SCALE: 1/4" = 1'-0"

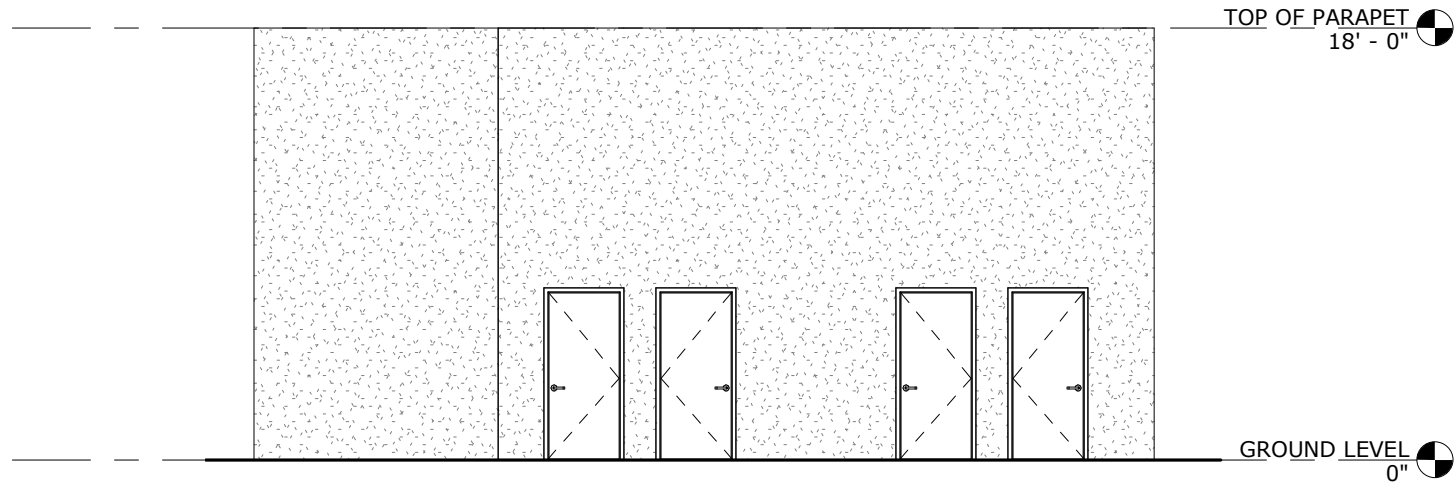


3 ROOF PLAN
SCALE: 1/4" = 1'-0"

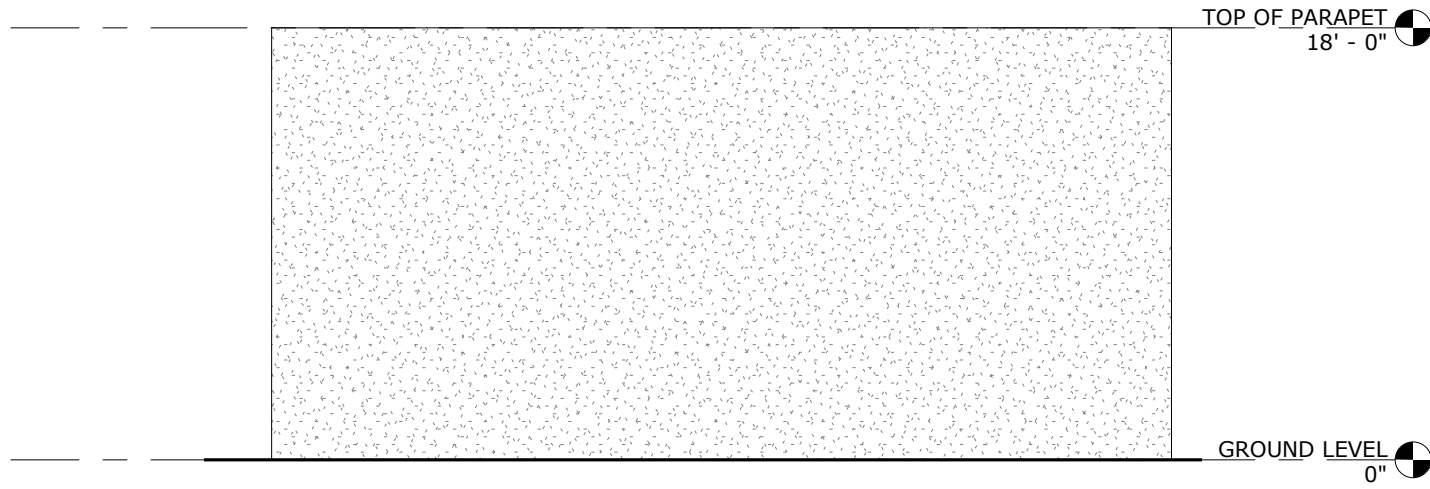




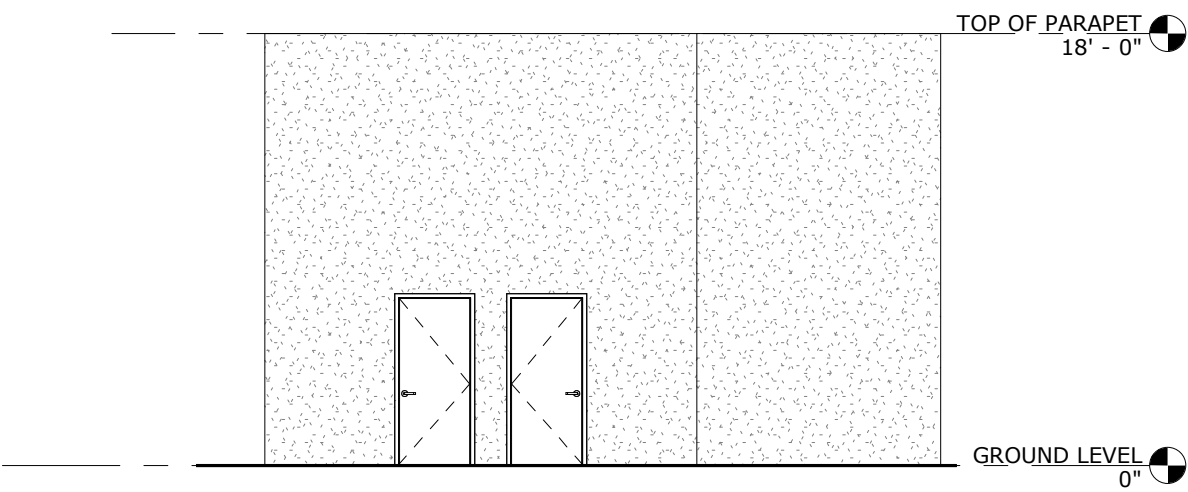
① EAST ELEVATION
SCALE: 1/8" = 1'-0"



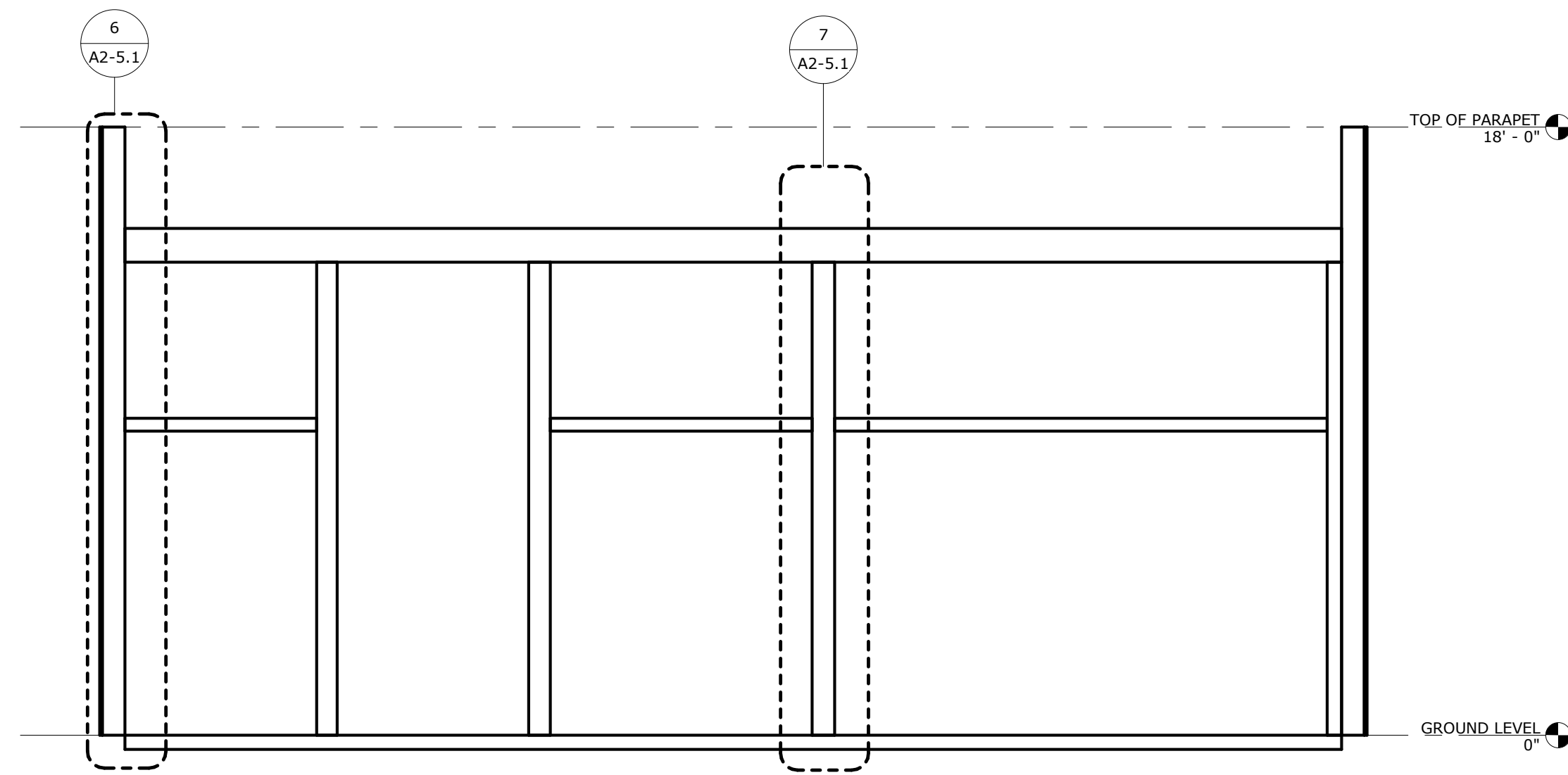
② NORTH ELEVATION
SCALE: 1/8" = 1'-0"



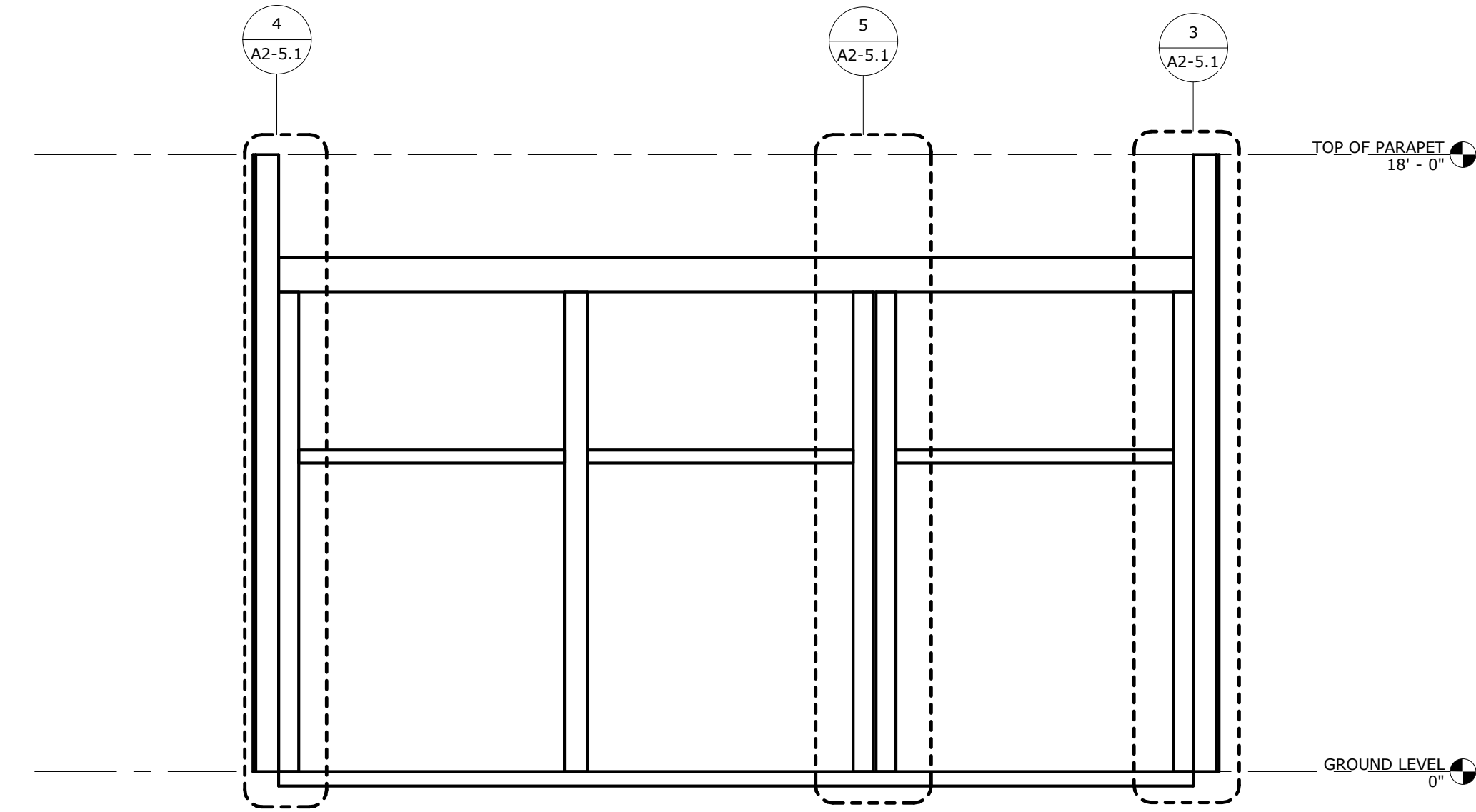
③ SOUTH ELEVATION
SCALE: 1/8" = 1'-0"



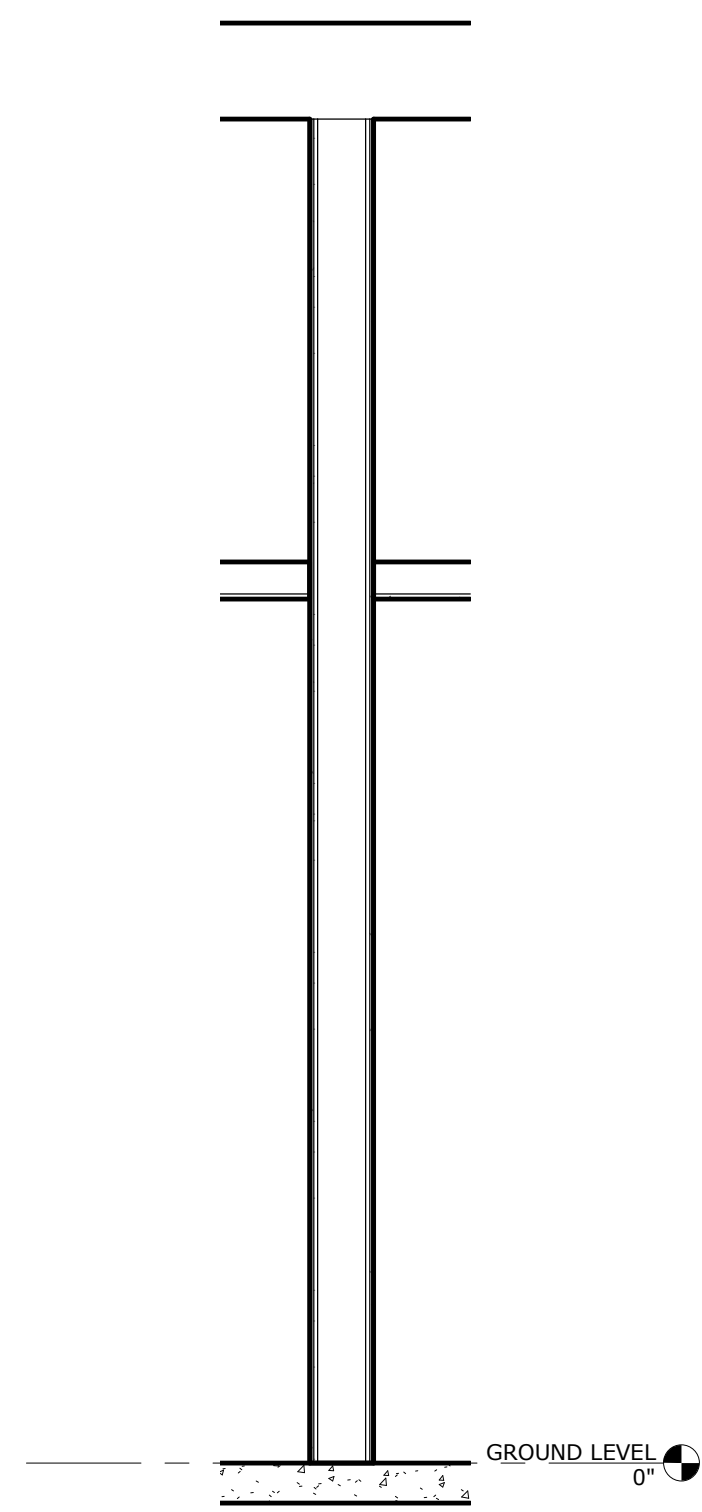
④ WEST ELEVATION
SCALE: 1/8" = 1'-0"



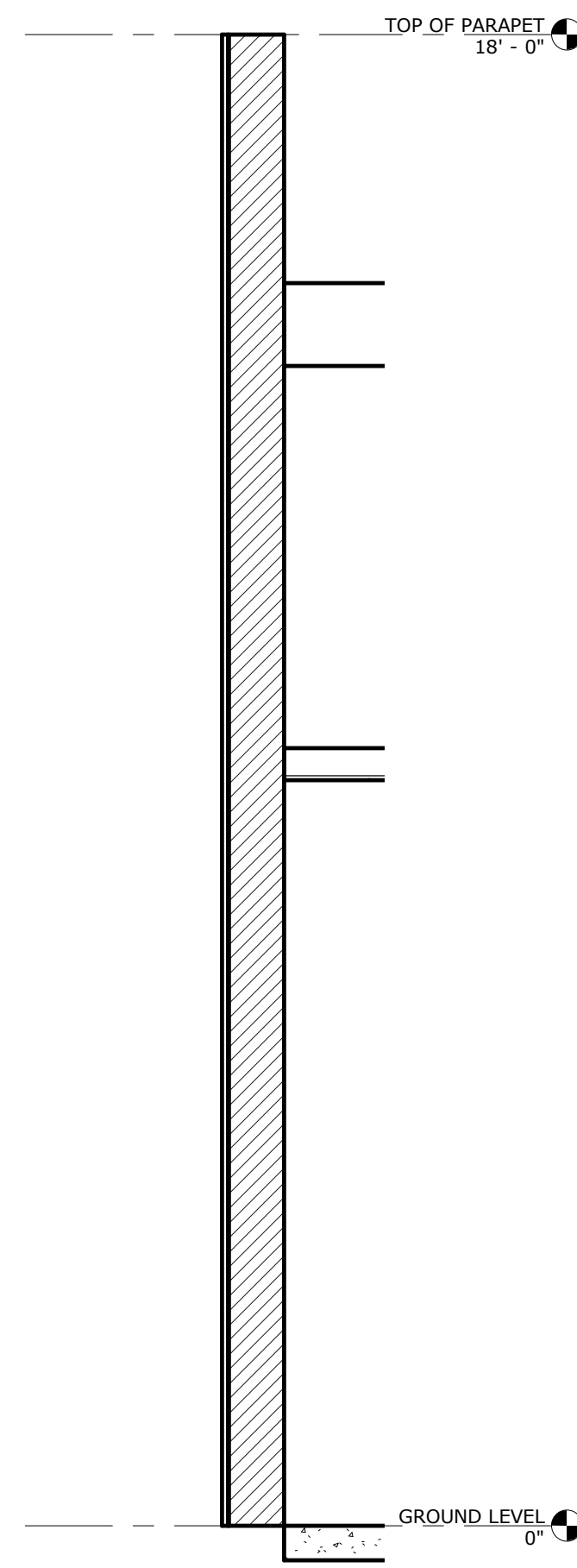
② Section 2
SCALE: 1/4" = 1'-0"



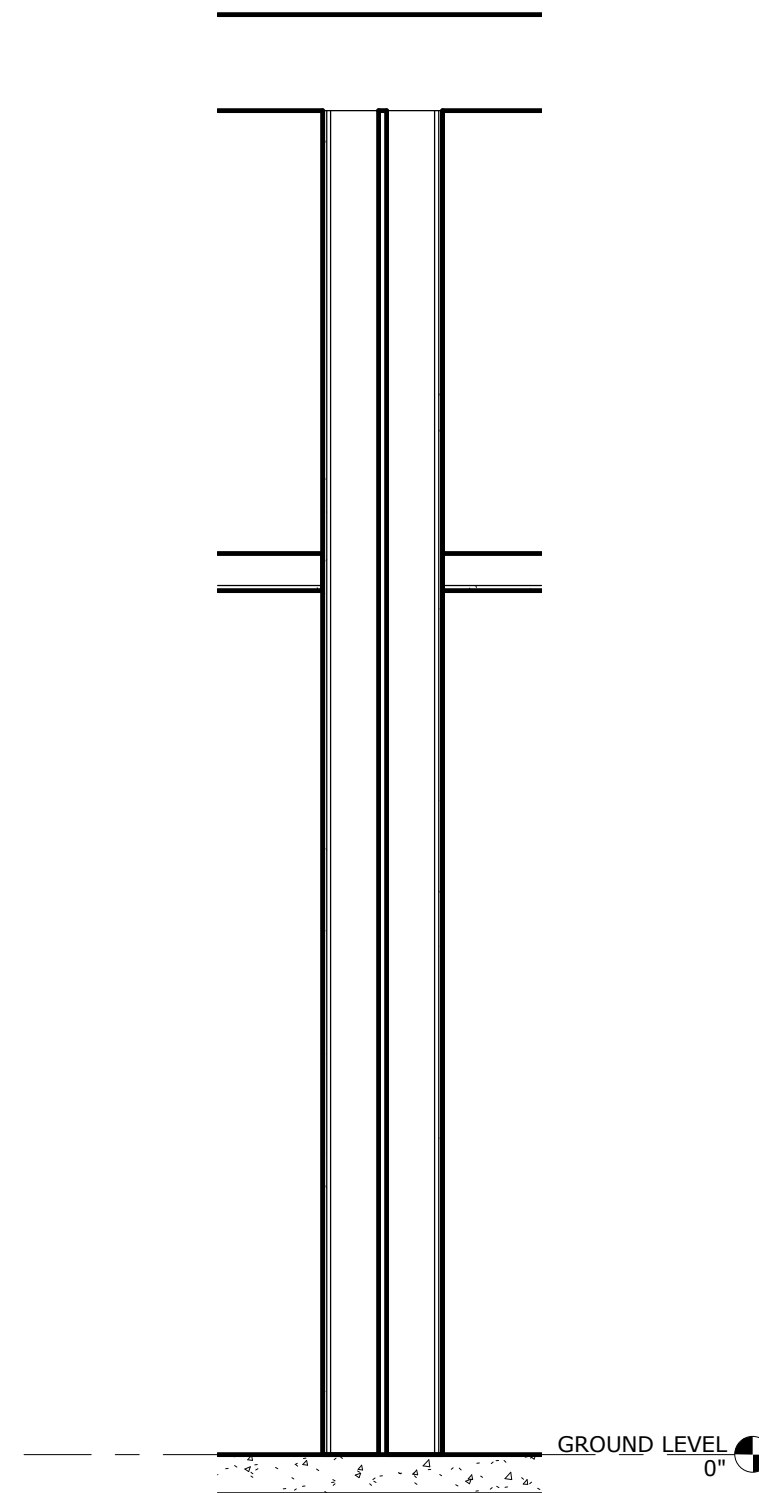
① Section 1
SCALE: 1/4" = 1'-0"



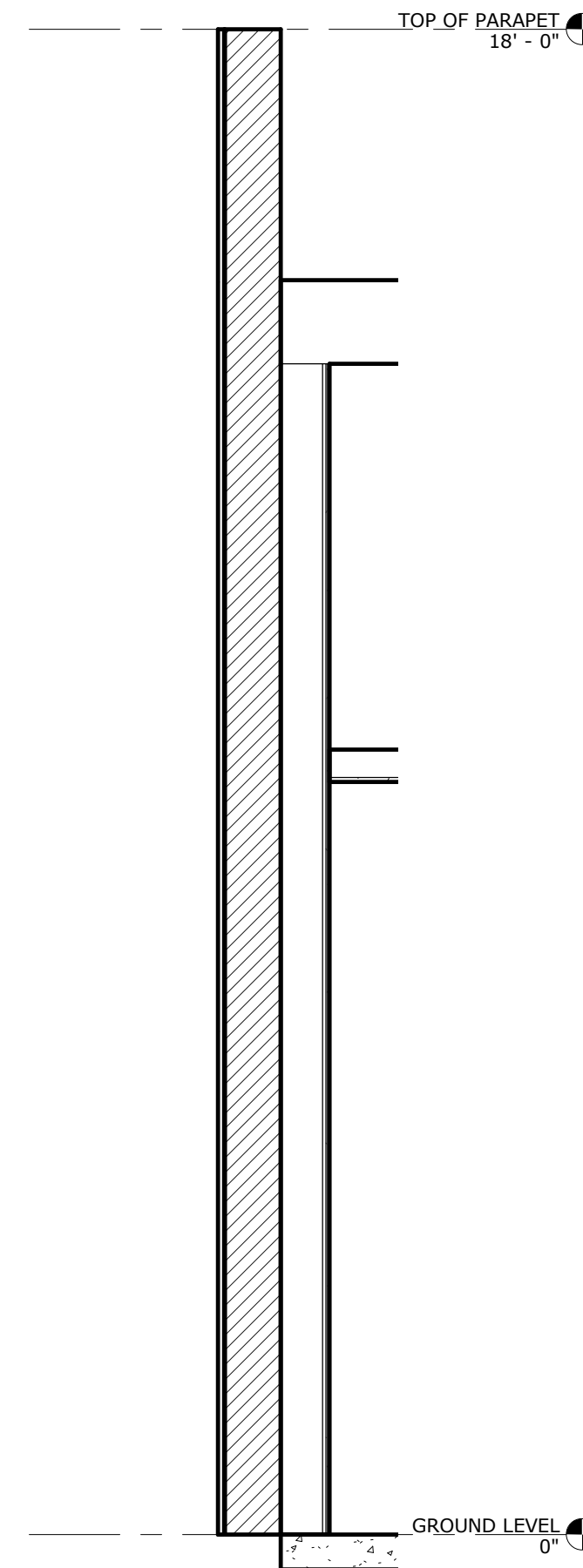
⑦ WALL SECTION
SCALE: 1/2" = 1'-0"



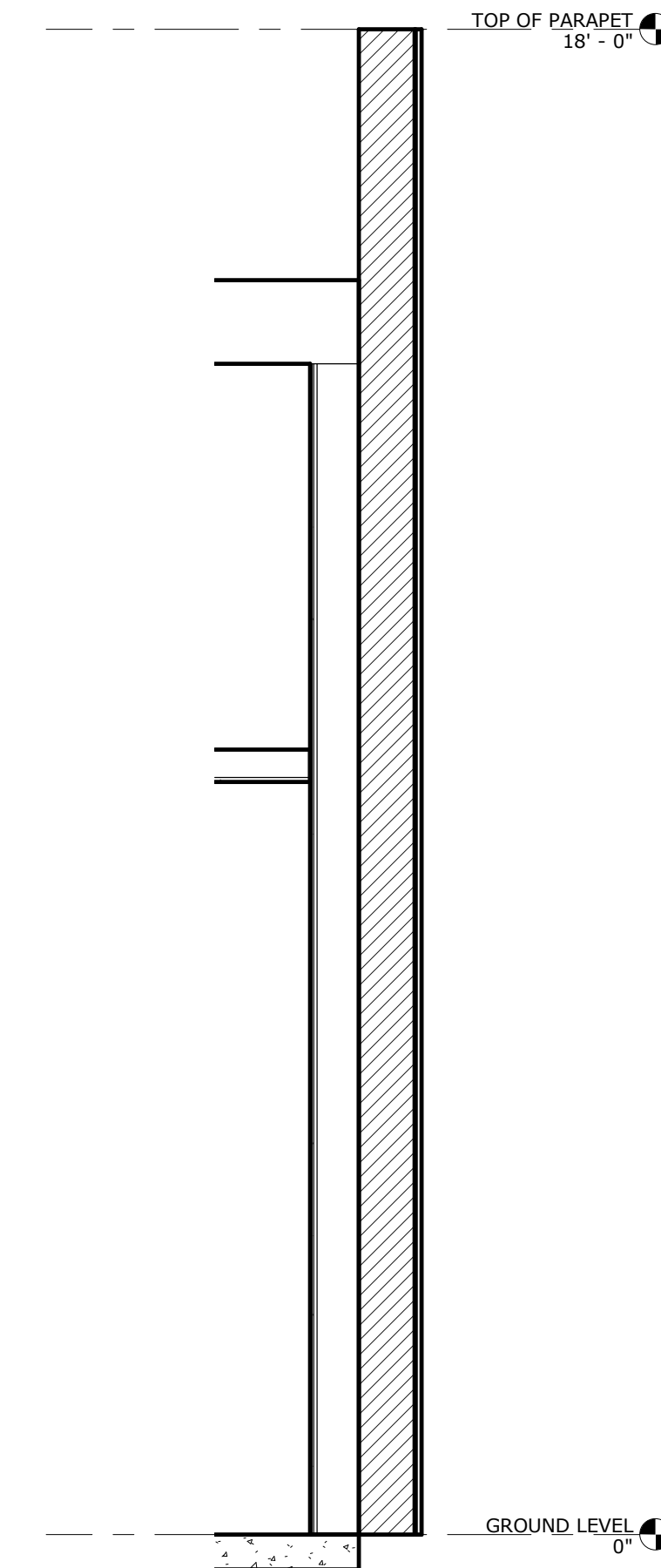
⑥ WALL SECTION
SCALE: 1/2" = 1'-0"



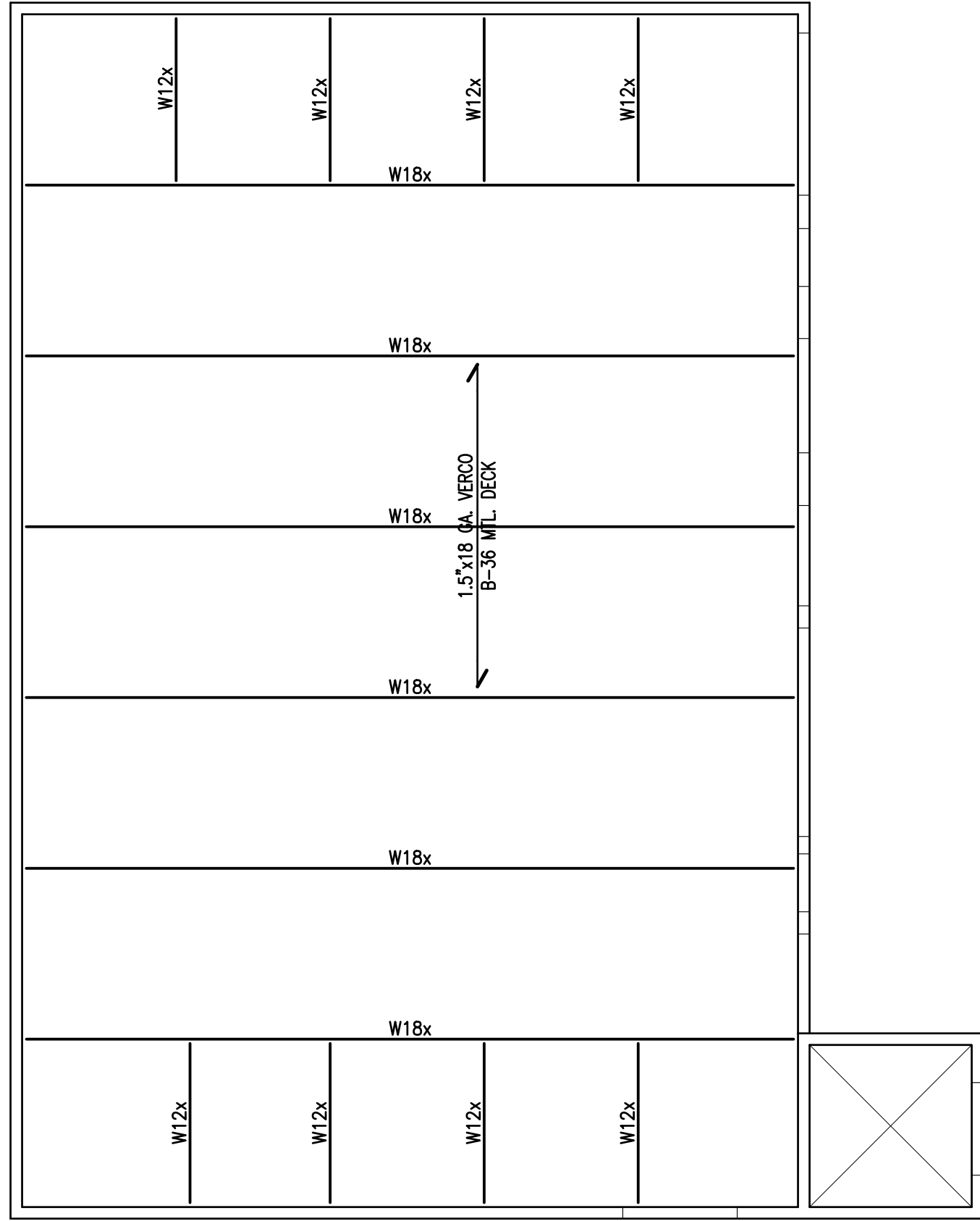
⑤ WALL SECTION
SCALE: 1/2" = 1'-0"



④ WALL SECTION
SCALE: 1/2" = 1'-0"

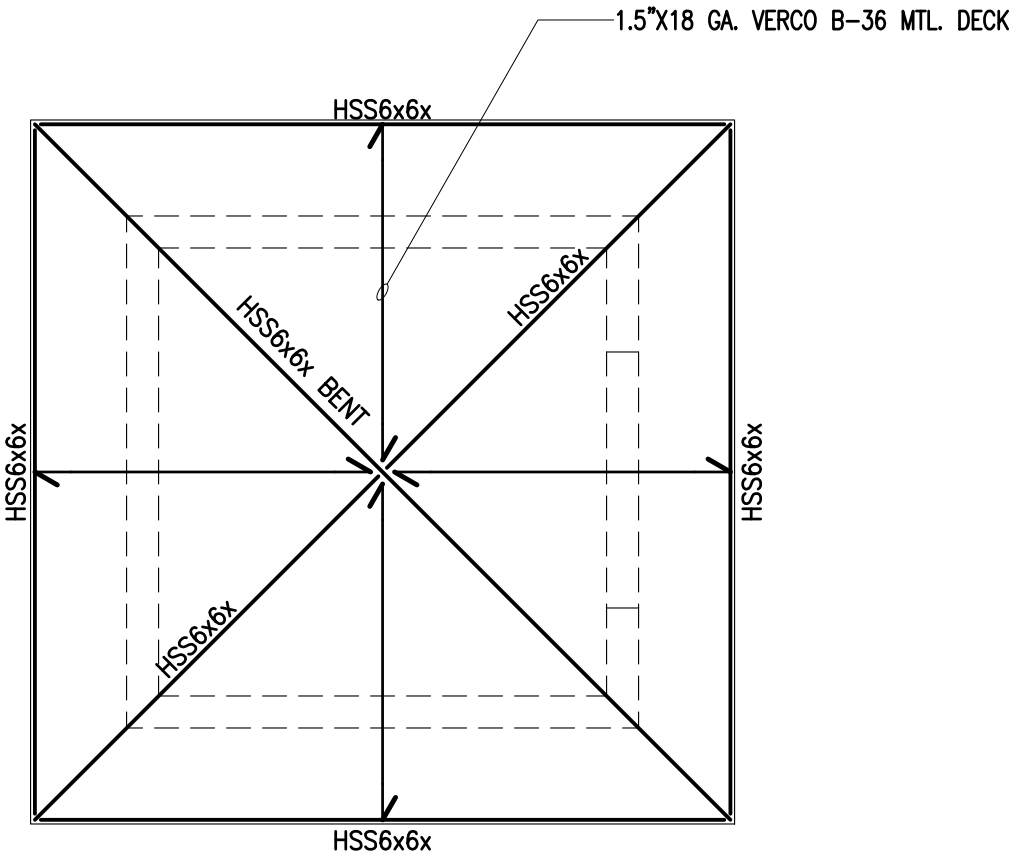


③ WALL SECTION
SCALE: 1/2" = 1'-0"



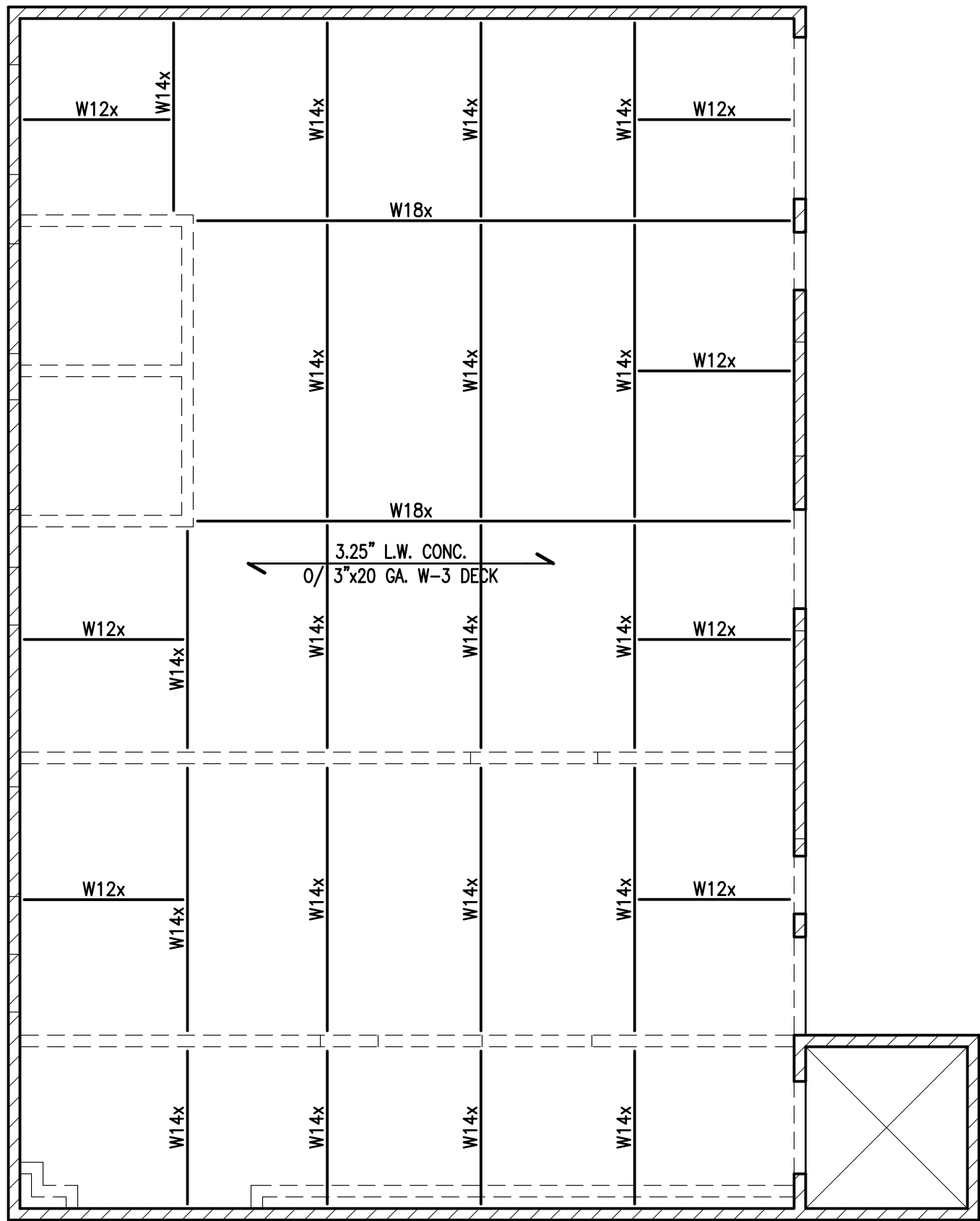
ROOF FRAMING PLAN

SCALE: $\frac{3}{8}" = 1'-0"$



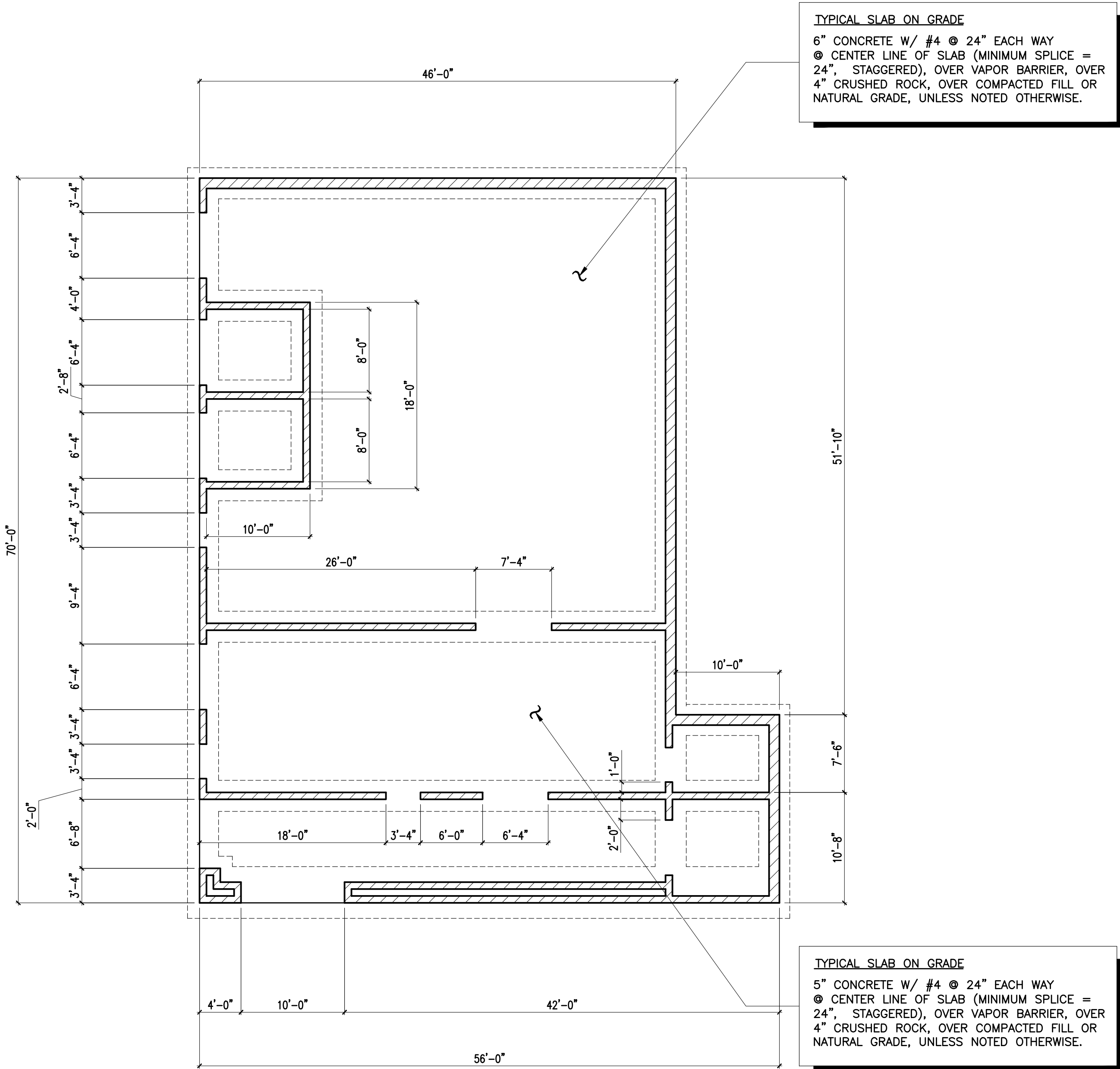
HIGH ROOF FRAMING PLAN

SCALE: $\frac{1}{4}" = 1'-0"$



FLOOR FRAMING PLAN

SCALE: $\frac{3}{8}" = 1'-0"$



FOUNDATION PLAN

SCALE: $\frac{3}{8}" = 1'-0"$

FRAMING PLAN NOTES

- SEE SHEETS _____ THROUGH _____ FOR GENERAL NOTES AND TYPICAL DETAILS.
- SEE ARCHITECTURAL DRAWINGS FOR ALL TOP OF SHEATHING AND TOP OF WALL/PARAPET ELEVATIONS.
- SEE ARCHITECTURAL, PLUMBING, MECHANICAL, AND ELECTRICAL DRAWINGS FOR SIZE AND LOCATION OF ROOF OPENINGS NOT SHOWN ON ROOF FRAMING PLANS. SEE DETAIL _____ FOR TYPICAL OPENING, UNLESS NOTED OTHERWISE.
- SEE ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS IN BEARING AND NON-BEARING WALLS.
- PROVIDE 2" BY 8" FULL DEPTH SOLID BLOCKING AT 8'-0" MAXIMUM FOR ROOF JOISTS OR RAFTERS MORE THAN 8" IN DEPTH. FOR ADDITIONAL INFORMATION SEE DETAIL _____.
- ALL LINES AND/OR MEMBERS INDICATED AS "STRUT" SHALL RECEIVE (2) ROWS OF BOUNDARY NAILING (B.N.), STAGGERED.
- "MU" DENOTES MECHANICAL UNIT. MAXIMUM ALLOWABLE WEIGHT IS SHOWN. SEE MECHANICAL AND ARCHITECTURAL DRAWINGS FOR EXACT SIZE AND WEIGHT OF MECHANICAL UNITS. FOR TYPICAL FRAMING AT MECHANICAL UNITS, SEE DETAIL _____.
- WOOD I-JOIST HANGERS SHALL BE SIMPSON HIT HANGERS, UNLESS NOTED OTHERWISE.
- SAWN LUMBER HANGERS SHALL BE SIMPSON W HANGERS, UNLESS NOTED OTHERWISE.
- ALL WOOD I-JOIST BLOCKING PANELS SHALL RECEIVE END BLOCKS PER DETAIL _____.

LEGEND

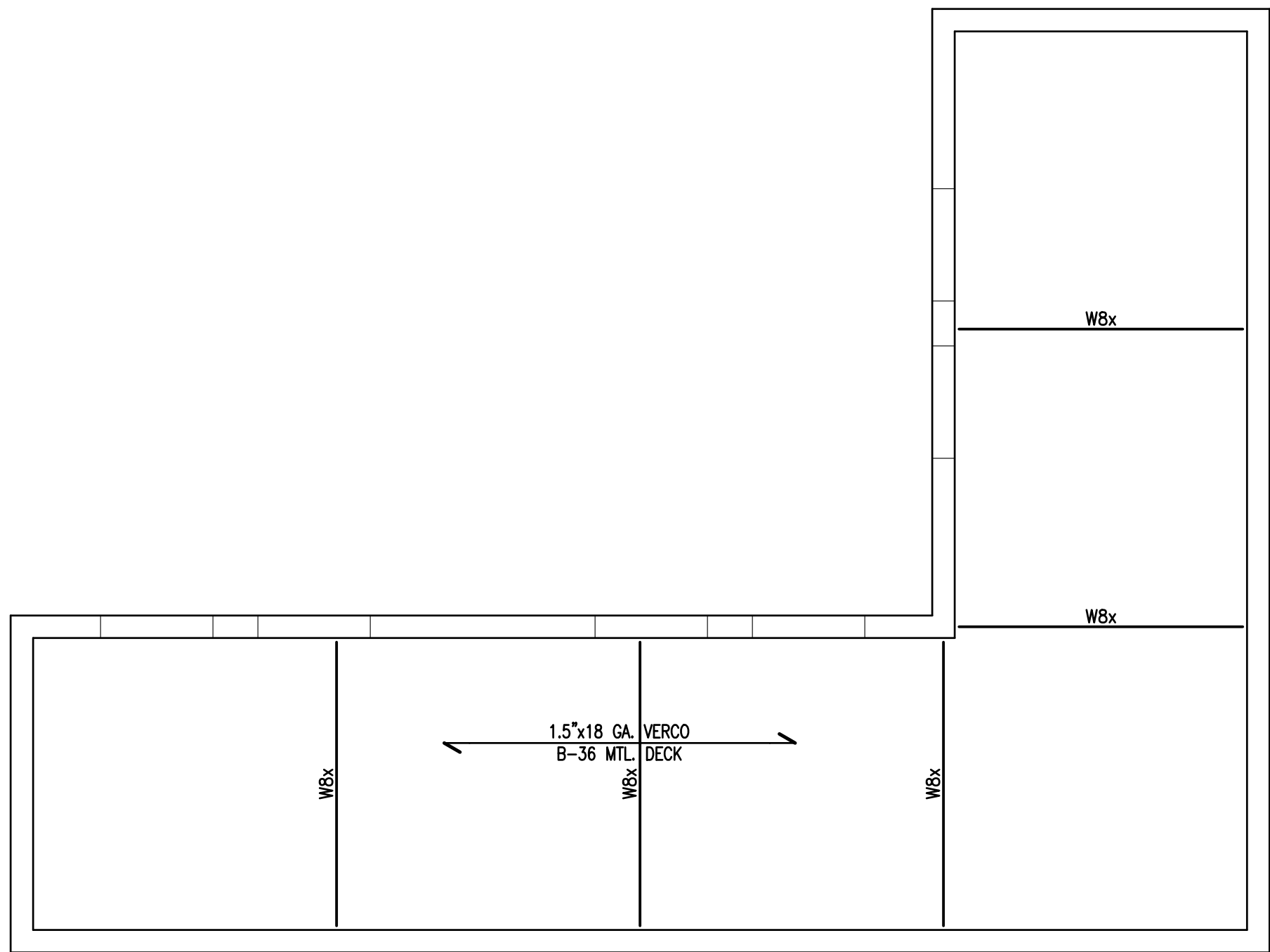
- : INDICATES WOOD HEADER OVER OPENING BELOW. SEE DETAIL _____ FOR SIZE & FRAMING UNLESS NOTED OTHERWISE ON PLAN.
- : INDICATES SPAN OF JOISTS.
- : INDICATES EXTENT OF JOISTS.

FOUNDATION PLAN NOTES

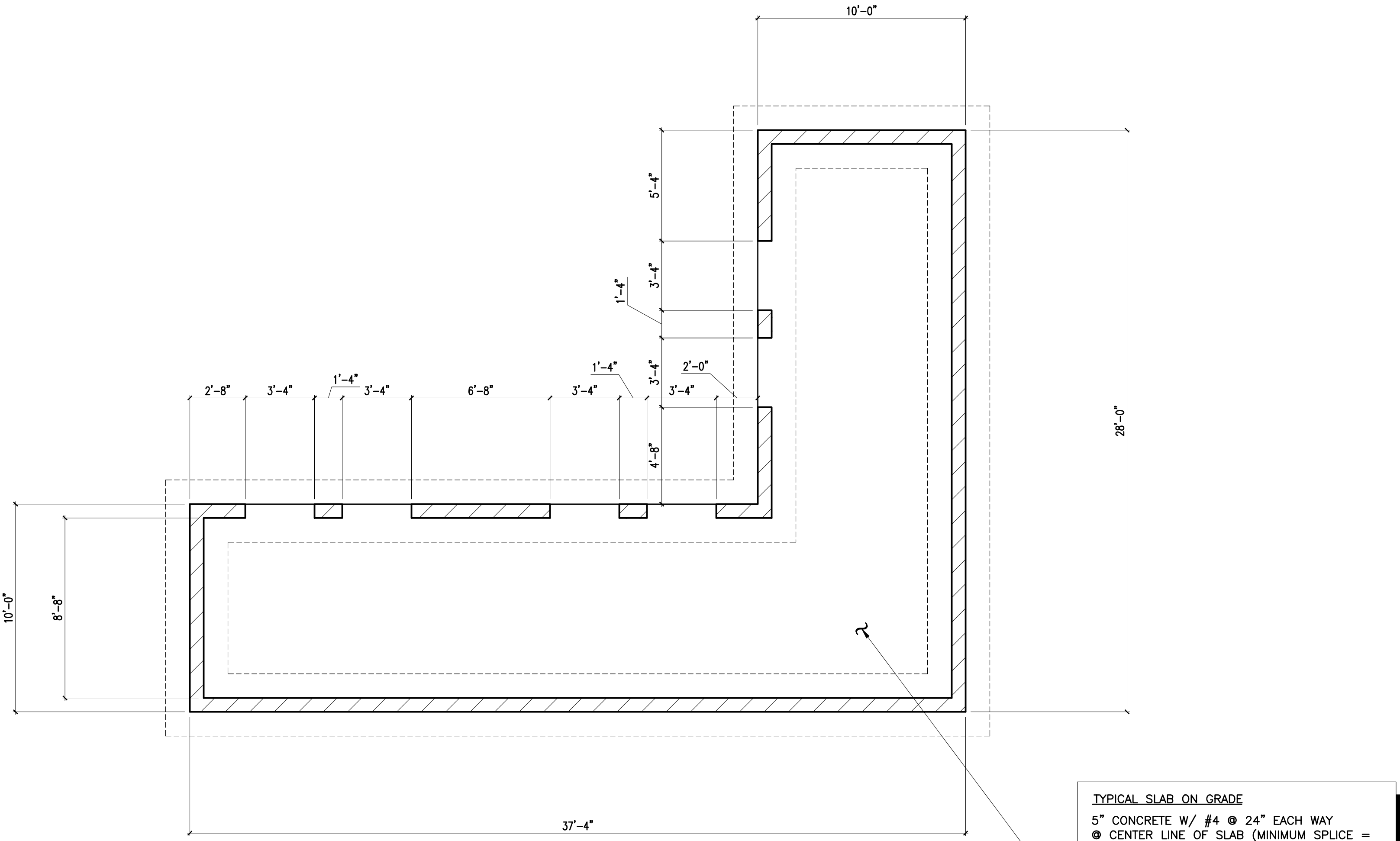
- SEE SHEETS _____ THROUGH _____ FOR GENERAL NOTES AND TYPICAL DETAILS.
- SEE SPECIFICATIONS FOR ALL SITE AND SUBGRADE PREPARATIONS.
- SEE ARCHITECTURAL AND/OR CIVIL DRAWINGS FOR FINISH FLOOR ELEVATIONS.
- SEE ARCHITECTURAL AND CIVIL DRAWINGS FOR ALL EXTERIOR CONCRETE PAVING, SLABS, BASES, CURBS, SITE WALLS, ETC.
- FOR ANY DIMENSIONAL INFORMATION NOT SHOWN, SEE ARCHITECTURAL DRAWINGS.
- SEE PLANS AND ARCHITECTURAL DRAWINGS FOR DEPRESSIONS AND/OR SLOPES IN CONCRETE SLABS.
- ALL DIMENSIONS SHOWN ARE FROM FACE OF STUD, CENTER LINE OF COLUMN, OR CENTER LINE OF WALL, UNLESS NOTED OTHERWISE. ALL COLUMNS ARE CENTERED IN STUD WALL, UNLESS NOTED OTHERWISE.
- SEE ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS IN BEARING AND NON-BEARING WALLS.
- SEE ARCHITECTURAL DRAWINGS FOR LOCATION OF INTERIOR NON-BEARING PARTITIONS. INTERIOR NON-BEARING PARTITION WALLS THAT DO NOT REQUIRE CONCRETE CURBS ARE NOT SHOWN ON STRUCTURAL DRAWINGS.
- SEE ARCHITECTURAL, PLUMBING, MECHANICAL, ELECTRICAL, AND KITCHEN DRAWINGS FOR ADDITIONAL EMBEDDED ITEMS AND SLAB PENETRATIONS.
- ALL WALLS SHOWN WITH PLYWOOD SHEAR PANELS SHALL BE CONTINUOUSLY SHEATHED FOR THE FULL LENGTH OF THE WALL WITH THE SAME SHEATHING AS INDICATED. ALL EXTERIOR WALLS SHALL HAVE TYPE A PLYWOOD SHEATHING APPLIED TO THE OUTSIDE FACE PER DETAIL _____, UNLESS NOTED OTHERWISE.
- FOR TYPICAL PIPE CHASE IN CONCRETE STEM WALL, SEE DETAIL _____.
- FOR TYPICAL SLAB JOINTS, SEE DETAIL _____.

LEGEND

- : INDICATES CONCRETE CURB. SEE PLANS AND DETAIL _____ FOR ADDITIONAL INFORMATION.
- : INDICATES STEP IN CONTINUOUS FOOTING. SEE DETAILS C104-0 AND C108-0 FOR ADDITIONAL INFORMATION. STEP CONTINUOUS FOOTING TO MATCH BOTTOM OF LOWEST ADJACENT FOOTING ELEVATION. (NOTE-STEPPED FOOTING SHOWN ON PLAN ARE PROVIDED TO AVOID UNDERGROUND UTILITIES AND ACTUAL LOCATION AND NUMBER OF STEPS SHALL BE COORDINATED IN THE FIELD, AND VERIFIED BY THE CONTRACTOR. ADDITIONAL LOCATIONS MAY BE REQUIRED. PROVIDE COMPLIANCE WITH DETAIL C103-0).
- : INDICATES CHANGE IN ELEVATION.
- : INDICATES TOP OF SLAB ELEVATION (WHERE INDICATED).



ROOF FRAMING PLAN
SCALE: 1/4" = 1'-0"

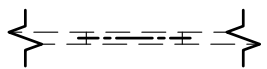
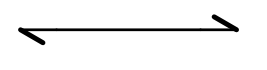


FOUNDATION PLAN
SCALE: 1/4" = 1'-0"

ROOF FRAMING PLAN NOTES

1. SEE SHEETS _____ THROUGH _____ FOR GENERAL NOTES AND TYPICAL DETAILS.
2. SEE ARCHITECTURAL DRAWINGS FOR ALL TOP OF SHEATHING AND TOP OF WALL/PARAPET ELEVATIONS.
3. SEE ARCHITECTURAL, PLUMBING, MECHANICAL, AND ELECTRICAL DRAWINGS FOR SIZE AND LOCATION OF ROOF OPENINGS NOT SHOWN ON ROOF FRAMING PLANS. SEE DETAIL _____ FOR TYPICAL OPENING, UNLESS NOTED OTHERWISE.
4. SEE ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS IN BEARING AND NON-BEARING WALLS.
5. PROVIDE 2" BY FULL DEPTH SOLID BLOCKING AT 8'-0" MAXIMUM FOR ROOF JOISTS OR RAFTERS MORE THAN 8' IN DEPTH. FOR ADDITIONAL INFORMATION SEE DETAIL _____.
6. ALL LINES AND/OR MEMBERS INDICATED AS "STRUT" SHALL RECEIVE (2) ROWS OF BOUNDARY NAILING (B.N.), STAGGERED.
7. "MU" DENOTES MECHANICAL UNIT. MAXIMUM ALLOWABLE WEIGHT IS SHOWN. SEE MECHANICAL AND ARCHITECTURAL DRAWINGS FOR EXACT SIZE AND WEIGHT OF MECHANICAL UNITS. FOR TYPICAL FRAMING AT MECHANICAL UNITS, SEE DETAIL _____.
8. WOOD I-JOIST HANGERS SHALL BE SIMPSON HIT HANGERS, UNLESS NOTED OTHERWISE.
9. SAWN LUMBER HANGERS SHALL BE SIMPSON W HANGERS, UNLESS NOTED OTHERWISE.
10. ALL WOOD I-JOIST BLOCKING PANELS SHALL RECEIVE END BLOCKS PER DETAIL _____.

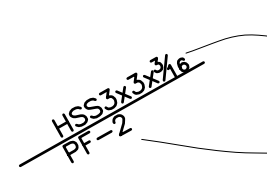
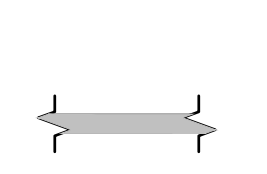
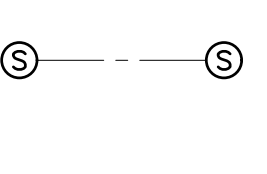
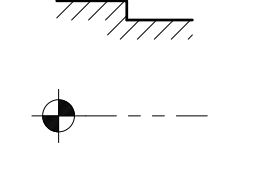
LEGEND

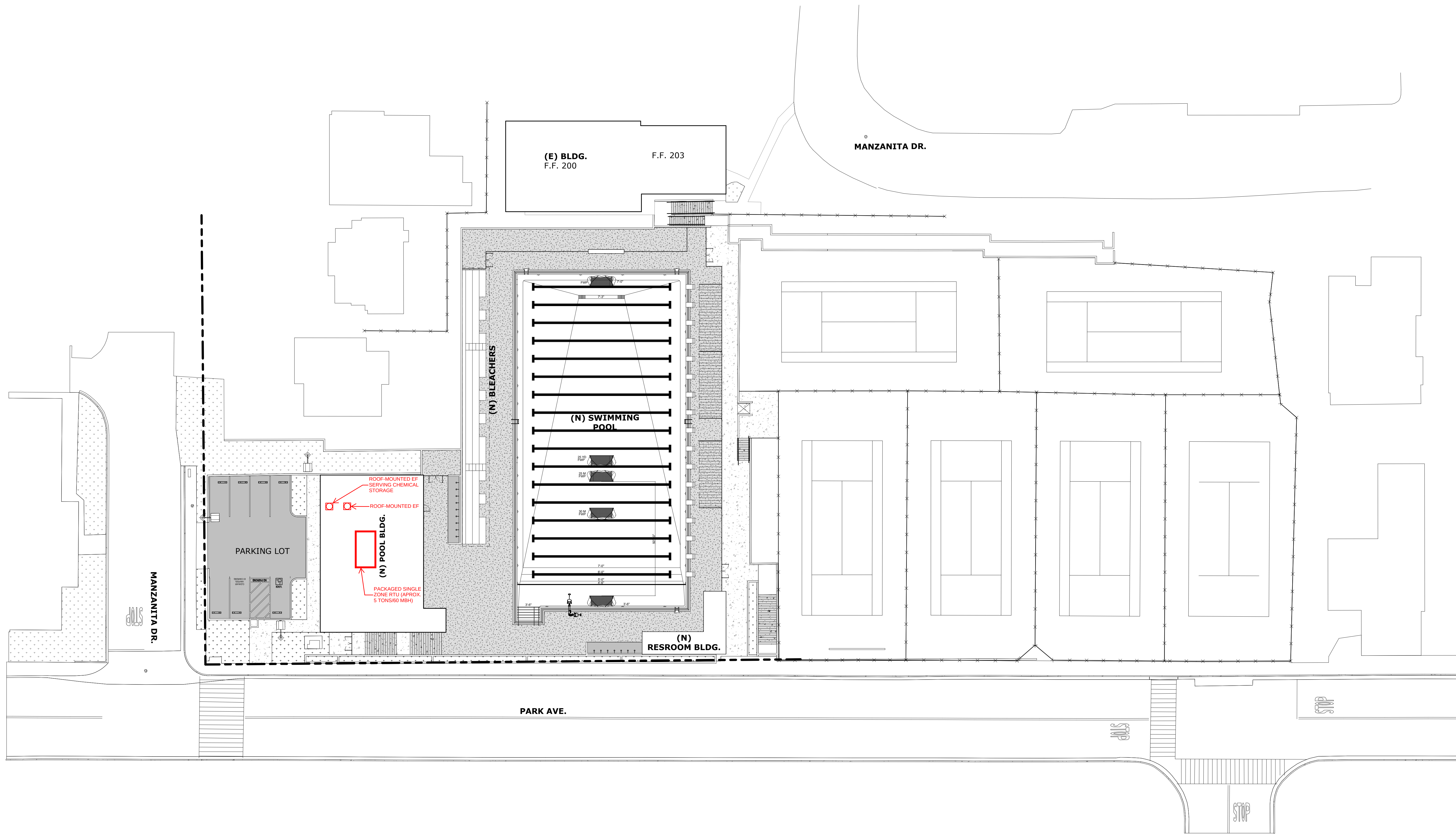
-  : INDICATES WOOD HEADER OVER OPENING BELOW. SEE DETAIL _____ FOR SIZE & FRAMING UNLESS NOTED OTHERWISE ON PLAN.
-  : INDICATES SPAN OF JOISTS.
-  : INDICATES EXTENT OF JOISTS.

FOUNDATION PLAN NOTES

1. SEE SHEETS _____ THROUGH _____ FOR GENERAL NOTES AND TYPICAL DETAILS.
2. SEE SPECIFICATIONS FOR ALL SITE AND SUBGRADE PREPARATIONS.
3. SEE ARCHITECTURAL AND/OR CIVIL DRAWINGS FOR FINISH FLOOR ELEVATIONS.
4. SEE ARCHITECTURAL AND CIVIL DRAWINGS FOR ALL EXTERIOR CONCRETE PAVING, SLABS, BASES, CURBS, SITE WALLS, ETC.
5. FOR ANY DIMENSIONAL INFORMATION NOT SHOWN, SEE ARCHITECTURAL DRAWINGS.
6. SEE PLANS AND ARCHITECTURAL DRAWINGS FOR DEPRESSIONS AND/OR SLOPES IN CONCRETE SLABS.
7. ALL DIMENSIONS SHOWN ARE FROM FACE OF STUD, CENTER LINE OF COLUMN, OR CENTER LINE OF WALL, UNLESS NOTED OTHERWISE. ALL COLUMNS ARE CENTERED IN STUD WALL, UNLESS NOTED OTHERWISE.
8. SEE ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS IN BEARING AND NON-BEARING WALLS.
9. SEE ARCHITECTURAL DRAWINGS FOR LOCATION OF INTERIOR NON-BEARING PARTITIONS. INTERIOR NON-BEARING PARTITION WALLS THAT DO NOT REQUIRE CONCRETE CURBS ARE NOT SHOWN ON STRUCTURAL DRAWINGS.
10. SEE ARCHITECTURAL, PLUMBING, MECHANICAL, ELECTRICAL, AND KITCHEN DRAWINGS FOR ADDITIONAL EMBEDDED ITEMS AND SLAB PENETRATIONS.
11. ALL WALLS SHOWN WITH PLYWOOD SHEAR PANELS SHALL BE CONTINUOUSLY SHEATHED FOR THE FULL LENGTH OF THE WALL WITH THE SAME SHEATHING AS INDICATED. ALL EXTERIOR WALLS SHALL HAVE TYPE A PLYWOOD SHEATHING APPLIED TO THE OUTSIDE FACE PER DETAIL _____, UNLESS NOTED OTHERWISE.
12. FOR TYPICAL PIPE CHASE IN CONCRETE STEM WALL, SEE DETAIL _____.
13. FOR TYPICAL SLAB JOINTS, SEE DETAIL _____.

LEGEND

-  : INDICATES STEEL OR WOOD COLUMN SIZE. SEE DETAIL _____ FOR STEEL COLUMN BASE PLATE, U.N.O.
-  : INDICATES CONCRETE FOOTING. SEE DETAIL _____ FOR ADDITIONAL INFORMATION.
-  : INDICATES CONCRETE CURB. SEE PLANS AND DETAIL _____ FOR ADDITIONAL INFORMATION.
-  : INDICATES STEP IN CONTINUOUS FOOTING. SEE DETAILS C104-0 AND C108-0 FOR ADDITIONAL INFORMATION. STEP CONTINUOUS FOOTING TO MATCH BOTTOM OF LOWEST ADJACENT FOOTING ELEVATION. (NOTE: STEPPED FOOTING SHOWN ON PLAN ARE PROVIDED TO AVOID UNDERGROUND UTILITIES AND ACTUAL LOCATION AND NUMBER OF STEPS SHALL BE COORDINATED IN THE FIELD, AND VERIFIED BY THE CONTRACTOR. ADDITIONAL LOCATIONS MAY BE REQUIRED. PROVIDE COMPLIANCE WITH DETAIL C103-0).
-  : INDICATES CHANGE IN ELEVATION.
-  : INDICATES TOP OF SLAB ELEVATION (WHERE INDICATED).



① OVERALL SITE PLAN - MOD
SCALE: 1" = 20'-0"

GENERAL NOTES

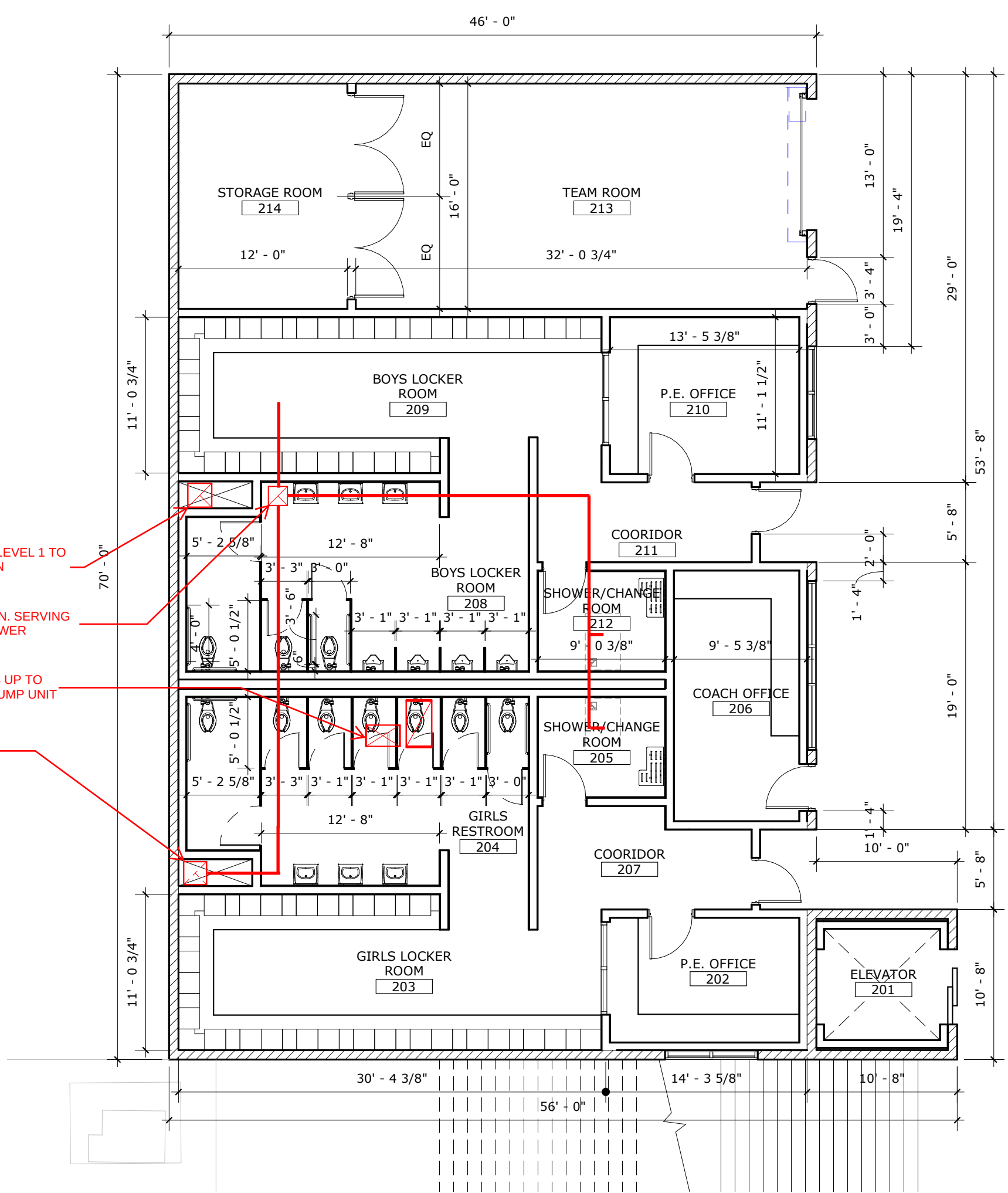
1. VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.

KEYNOTES

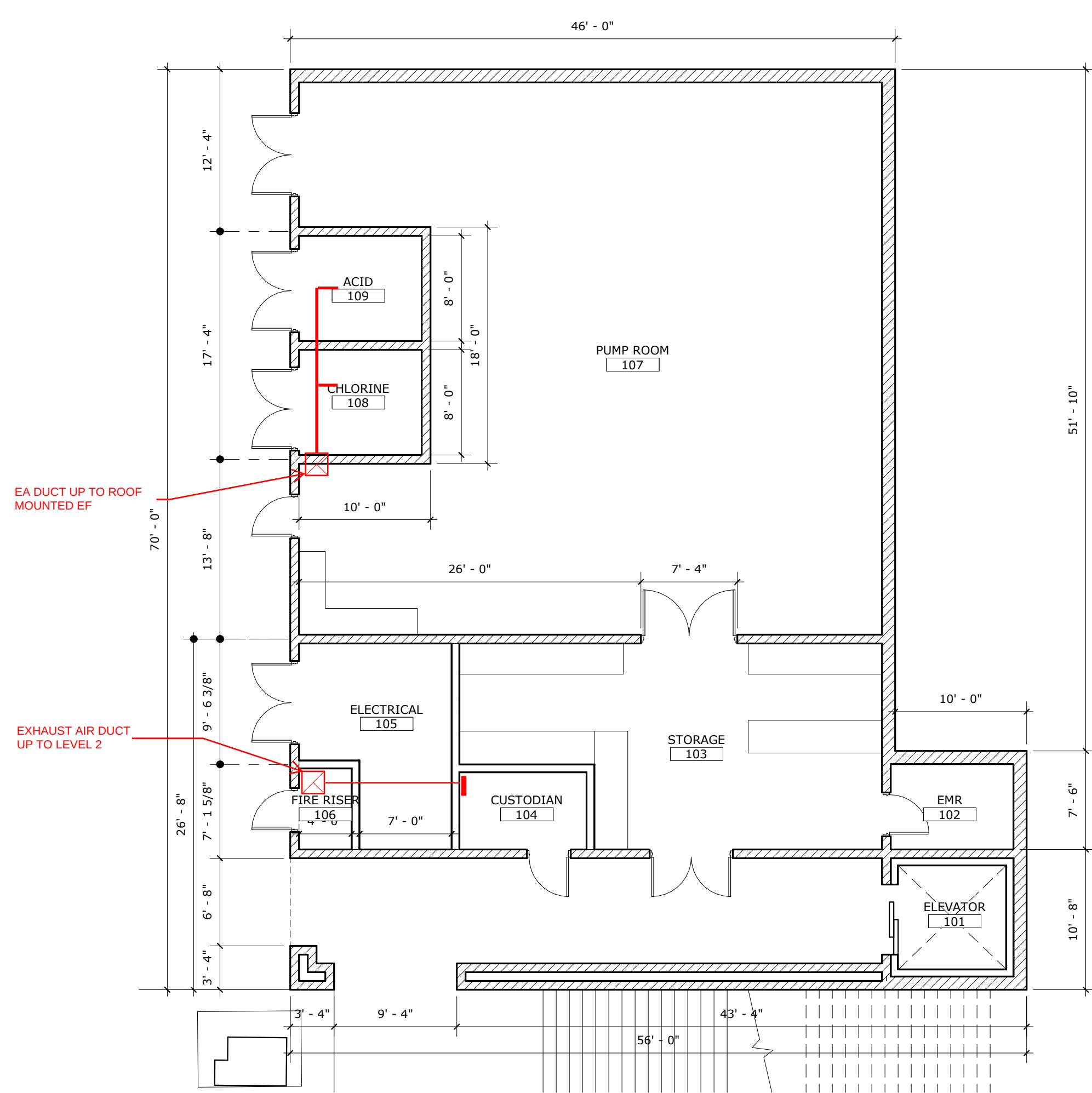
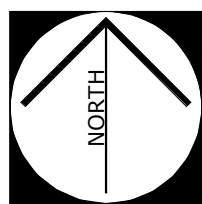
GENERAL NOTES

KEYNOTES

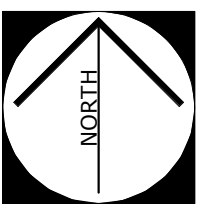
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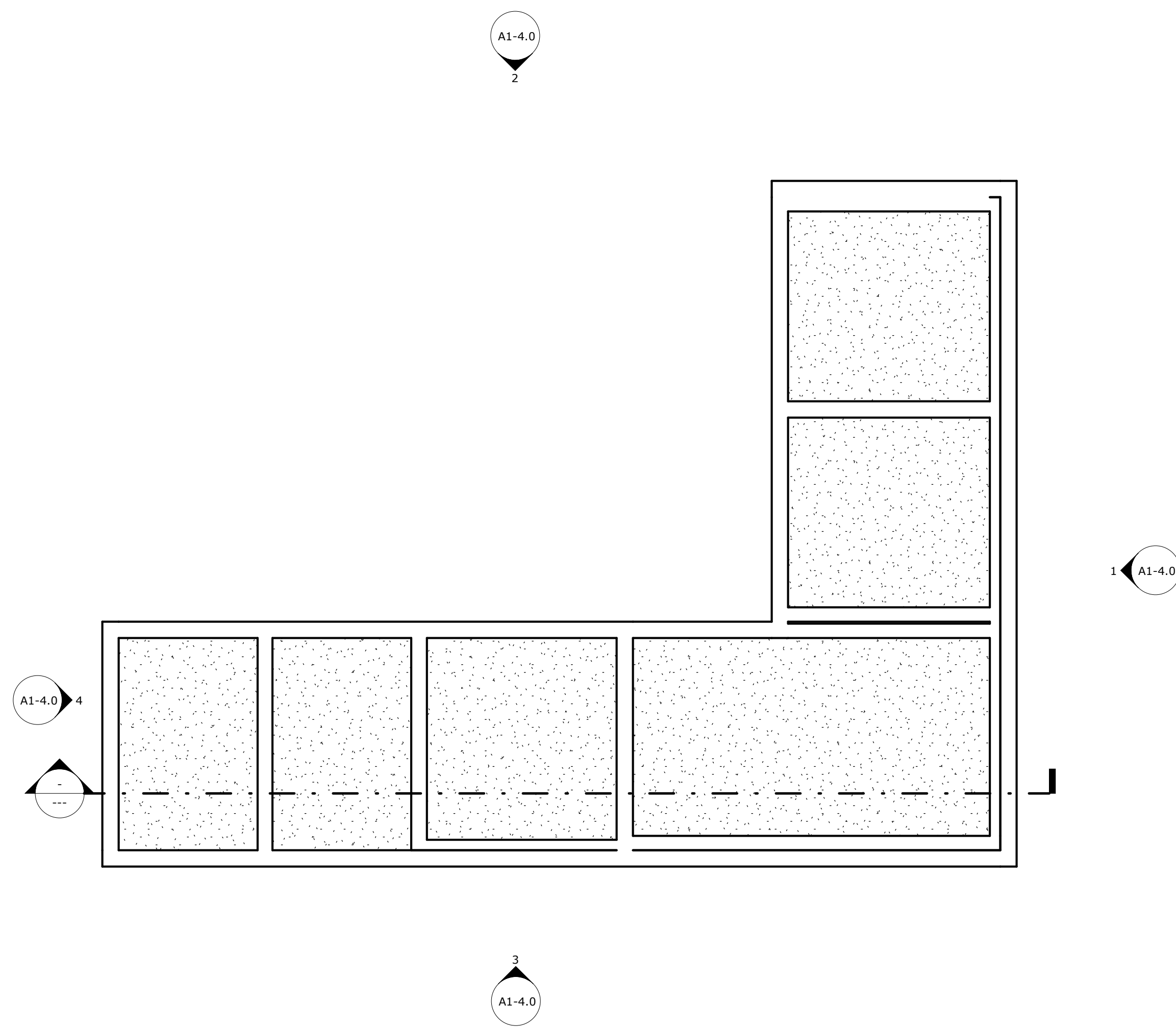


2 PUMP ROOM FLOOR PLAN LEVEL 2
SCALE: 1/8" = 1'-0"

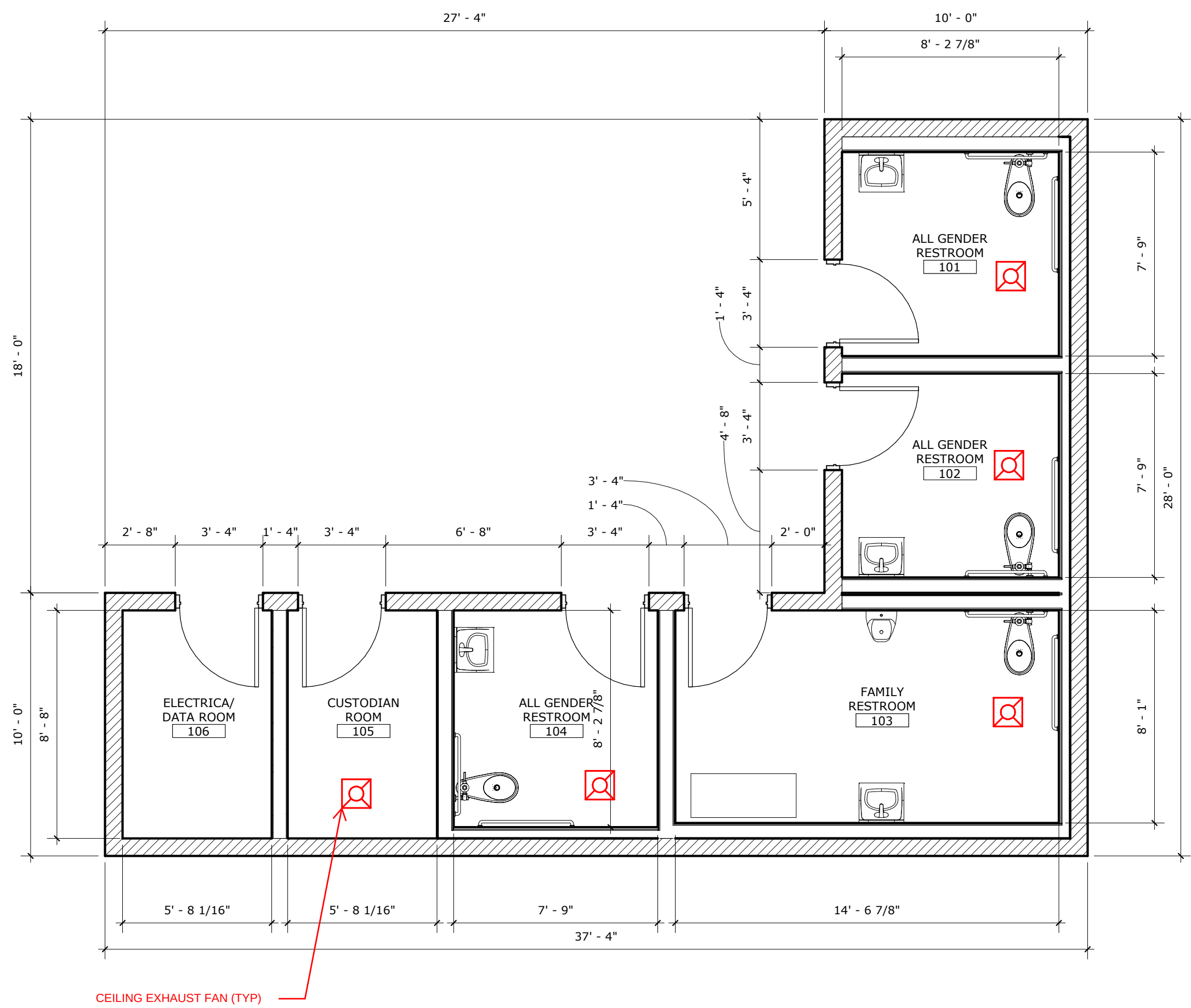


1 PUMP ROOM FLOOR PLAN LEVEL 1
SCALE: 1/8" = 1'-0"

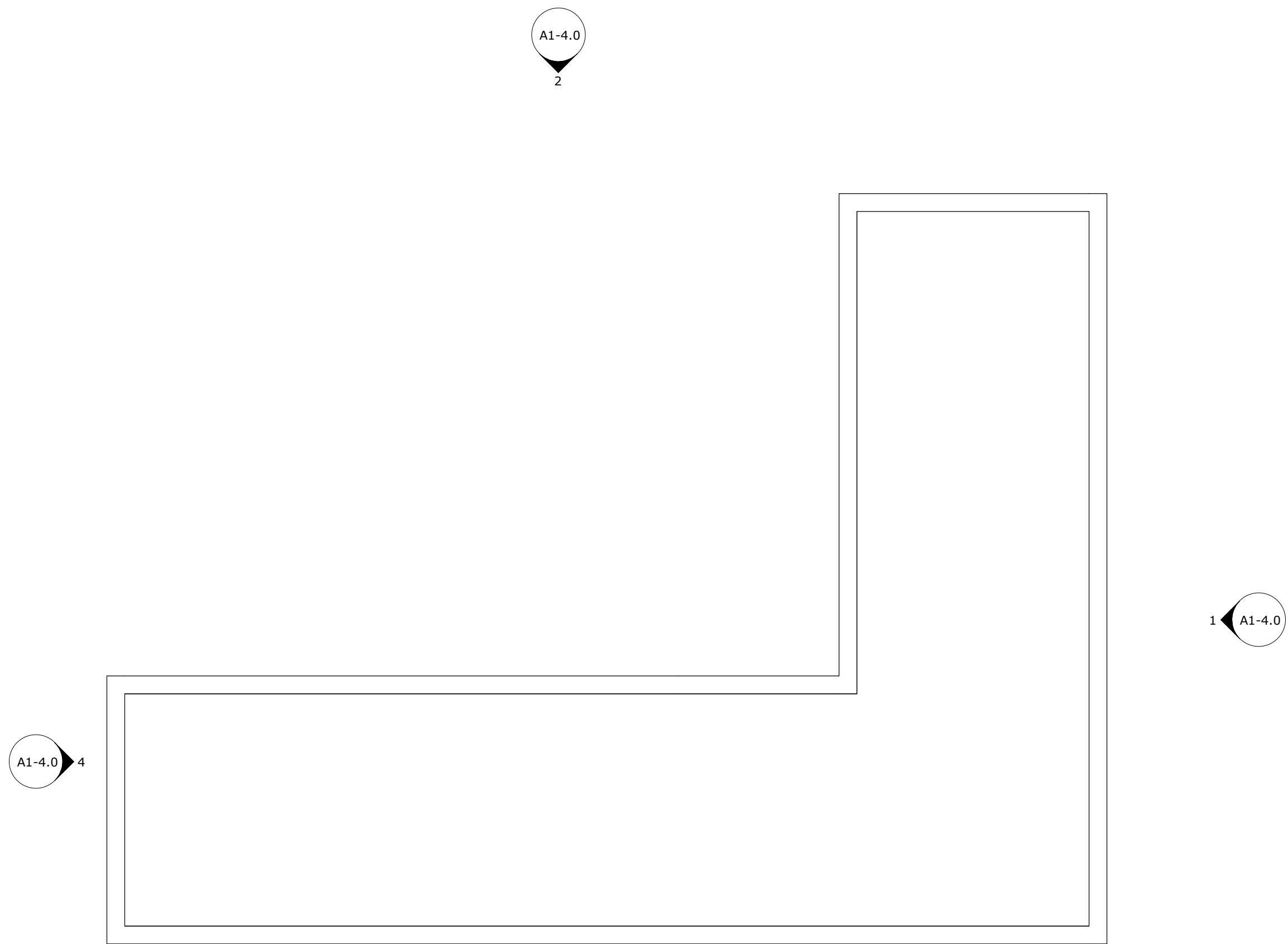




2 GROUND LEVEL
SCALE: 1/4" = 1'-0"



1 RESTROOM FLOOR PLAN
SCALE: 1/4" = 1'-0"

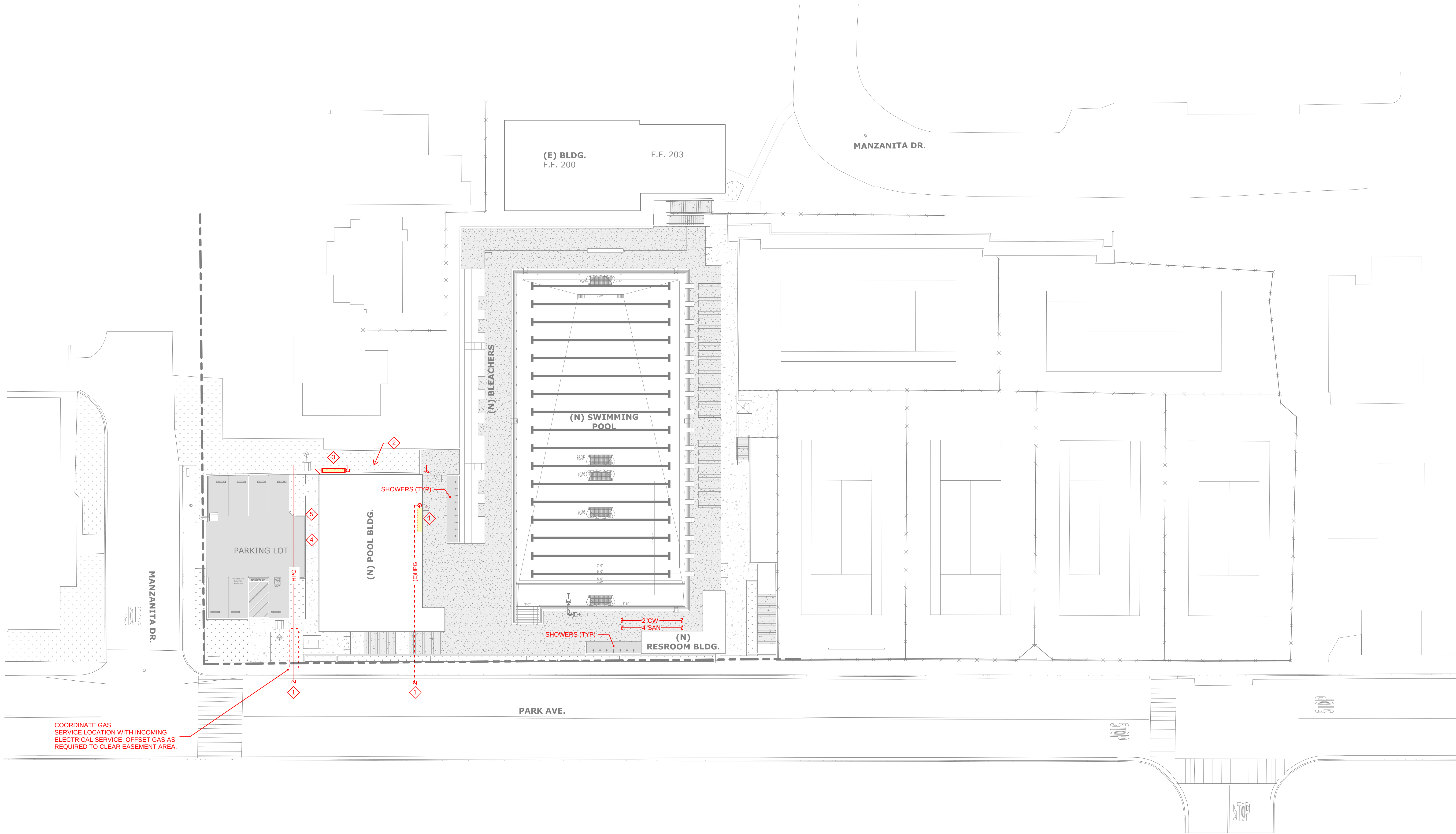


3 ROOF PLAN
SCALE: 1/4" = 1'-0"

GENERAL NOTES

KEYNOTES

LEGEND



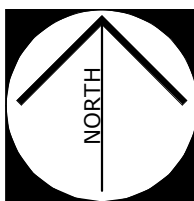
GENERAL NOTES

1. VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.

KEYNOTES

1. COORDINATE THE RELOCATION OF THE GAS METER AND NEW SERVICE MAIN FROM THE STREET TO THE PROPOSED NEW METER LOCATION WITH SOUTHERN CALIFORNIA GAS COMPANY.
2. TEMPORARY GAS SUPPLY TO EXISTING PUMP HOUSE ASSUMING PUMP HOUSE REMAINS OPERATIONAL DURING NEW BUILDING CONSTRUCTION.
3. PROPOSED NEW 3000 CFH RATED GAS METER LOCATION.
4. PROPOSED 4" DOMESTIC WATER SERVICE.
5. PROPOSED 6" SANITARY SEWER.

① OVERALL SITE PLAN - MOD
SCALE: 1" = 20'-0"



ASTRAL
ENGINEERS

RUHNAU
CLARKE
ARCHITECTS

PHASE
SCHEMATIC DEVELOPMENT
DATE
AUGUST 9, 2024

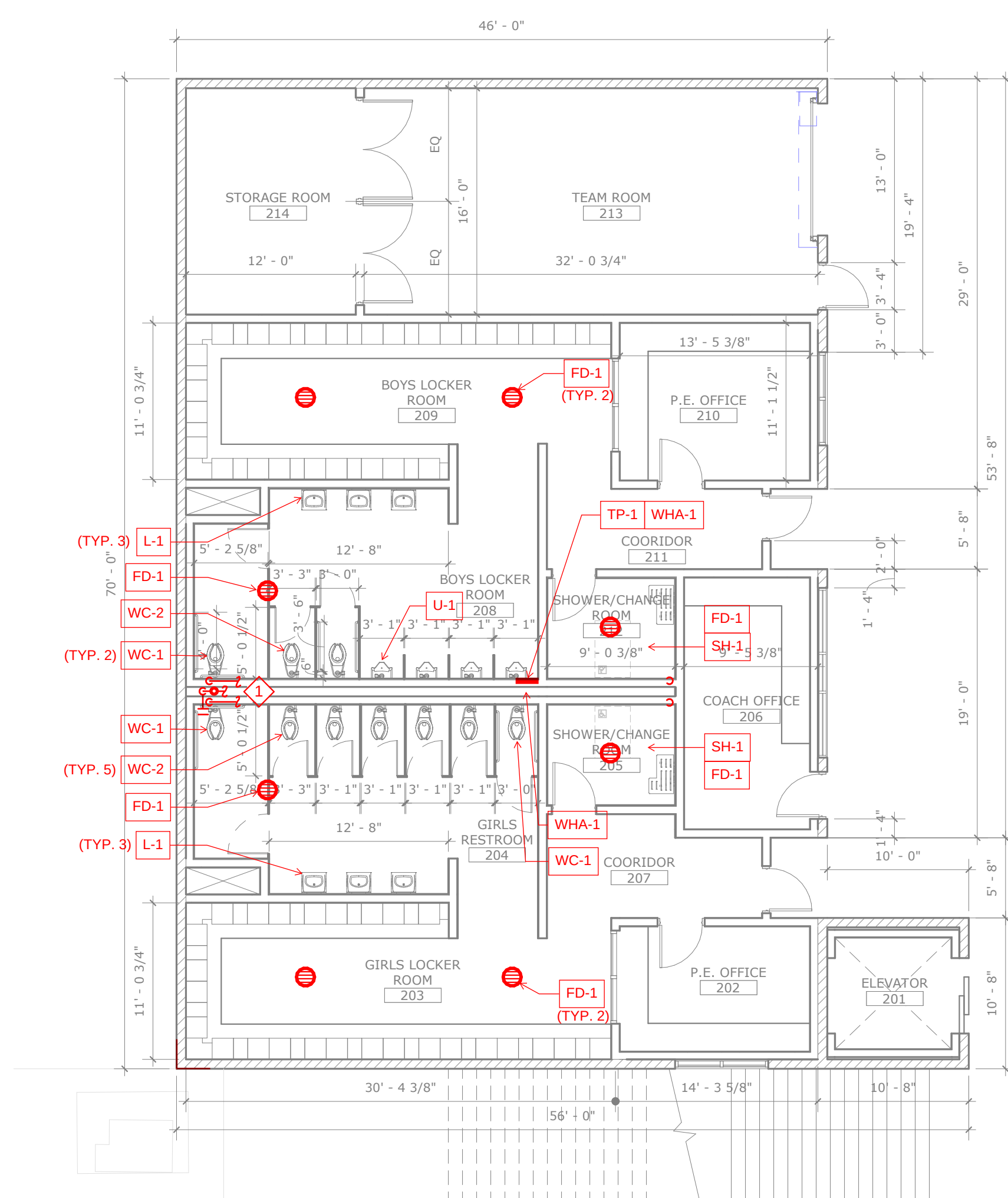
RUHNAUCLARKE.COM

3725 TENTH STREET, RIVERSIDE CALIFORNIA 92501 (951) 684-4664 / 5751 PALMER WAY, SUITE C, CARLSBAD CALIFORNIA 92010 (760) 438-5899

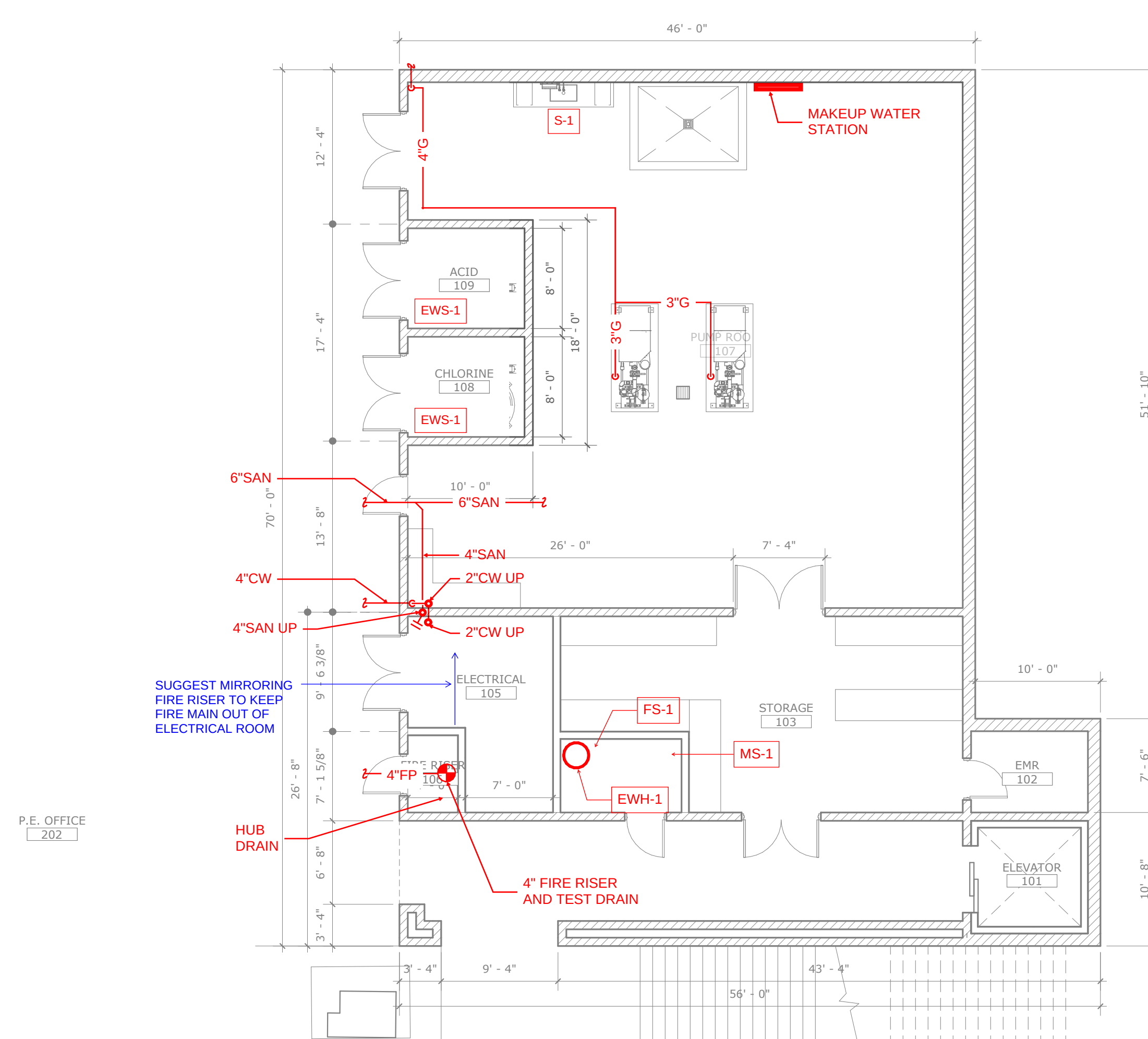
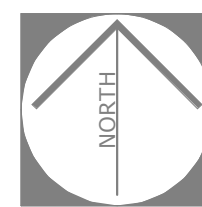
POOL MODERNIZATION
LAGUNA BEACH HIGH SCHOOL
670 PARK AVE, LAGUNA BEACH, CA 92651
LAGUNA BEACH UNIFIED SCHOOL DISTRICT

OVERALL SITE PLAN

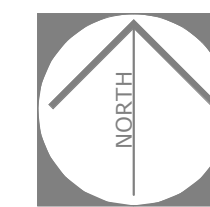
PS-1.1



2 PUMP ROOM FLOOR PLAN LEVEL 2
SCALE: 1/8" = 1'-0"



1 PUMP ROOM FLOOR PLAN LEVEL 1
SCALE: 1/8" = 1'-0"



GENERAL NOTES

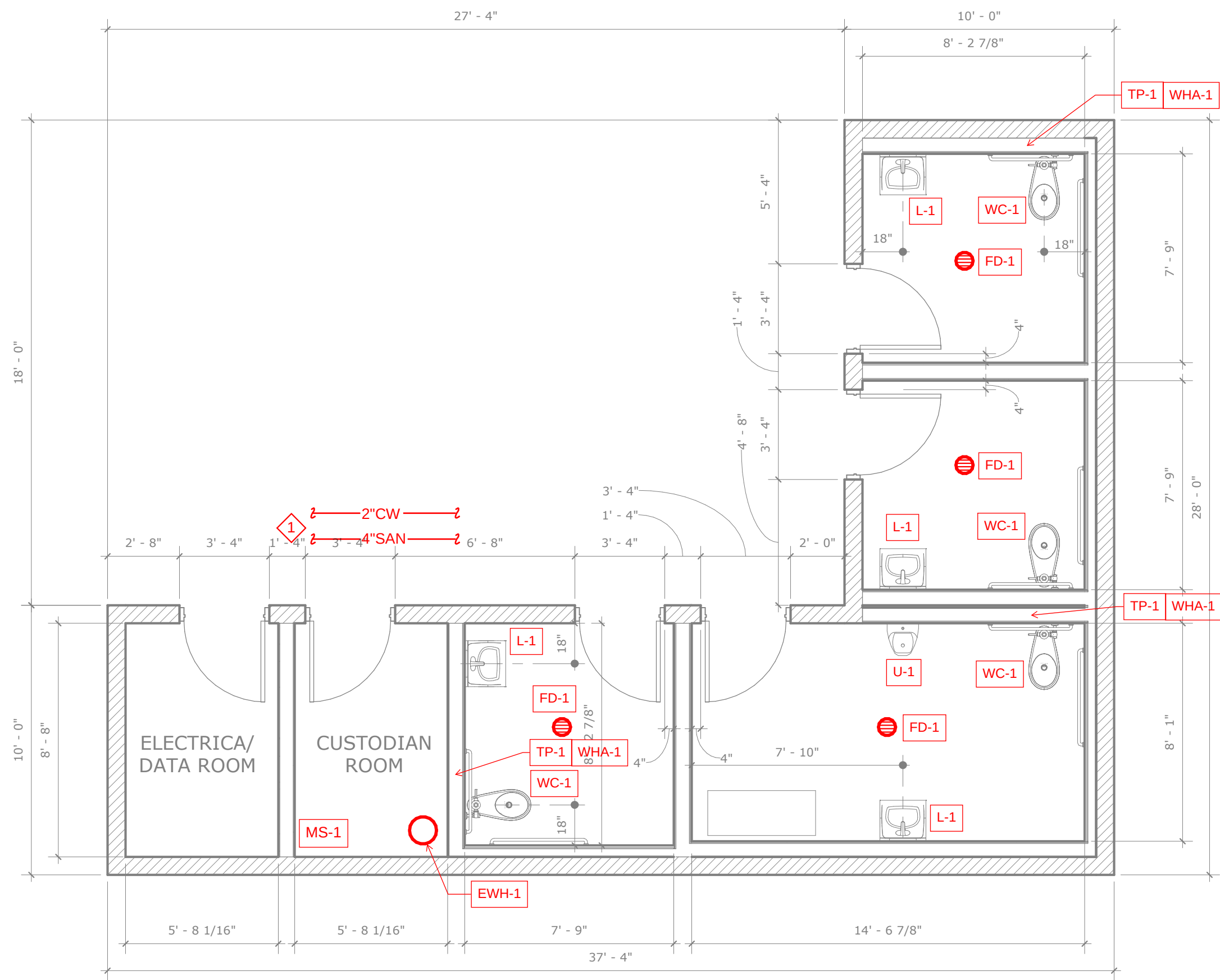
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KEYNOTES

1 (2)2" CW, 4" SAN, 4" VENT HEADERS WITHIN THE WET WALL. SEE FLOOR PLAN BELOW FOR RISER LOCATIONS.

LEGEND

EW-1	COMBINATION SHOWER FACE WASH STATION WITH ASSE LISTED MIXING VALVE
FD-1	FLOOR DRAIN WITH HEEL PROOF GRATE
FS-1	FLOOR SINK
L-1	ACCESSIBLE WALL MOUNTED LAVATORY, .5 GPM METERED FAUCET
MS-1	FLOOR MOUNT MOP SINK
SH-1	ACCESSIBLE SHOWER STATION WITH HAND HELD SHOWER
S-1	ACCESSIBLE SINK WITH MANUAL FAUCET
TP-1	AUTOMATIC TRAP PRIMER, PRESSURE ACTIVATED WITH DISTRIBUTION CUP
U-1	ACCESSIBLE URINAL WITH .125 GPF SENSOR OPERATED FLUSH VALVE
WC-1	ACCESSIBLE WATER CLOSET WITH 1.28 GPF HAND FREE FLUSH VALVE
WC-2	WATER CLOSET WITH 1.28 GPF HAND FREE FLUSH VALVE
WHA-1	WATER HAMMER ARRESTOR
WH-1	100 GALLON VERTICAL STORAGE GAS FIRED WATER HEATER, 200,000 BTU, WITH DIRECT VENT



1 RESTROOM FLOOR PLAN
SCALE: 1/4" = 1'-0"

GENERAL NOTES

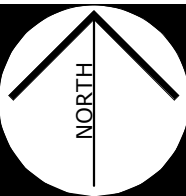
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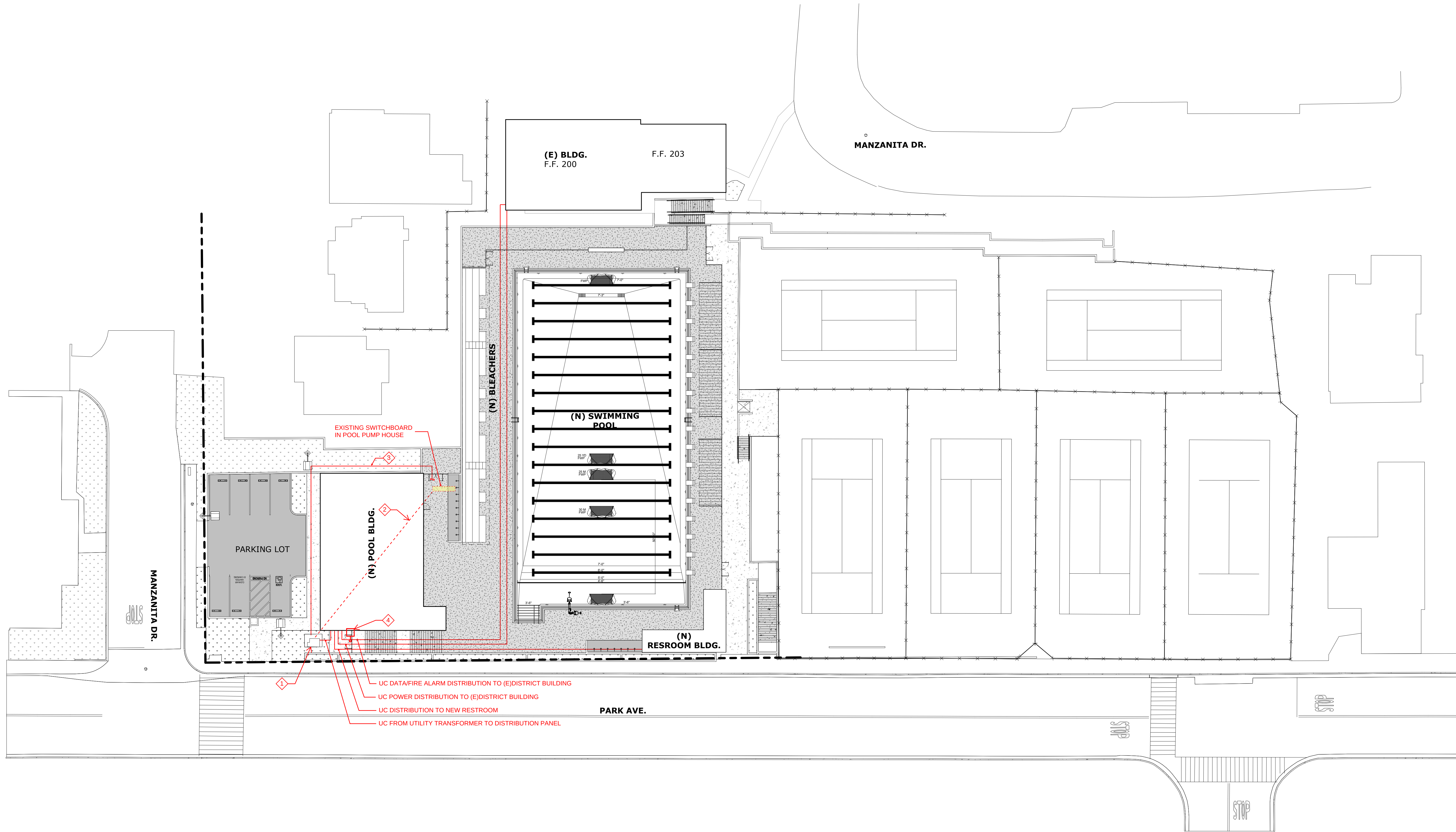
KEYNOTES

2" CW AND 4" SAN BUILDING SERVICE.

LEGEND

- FD-1 FLOOR DRAIN WITH HEEL PROOF GRATE
- FS-1 FLOOR SINK
- L-1 ACCESSIBLE WALL MOUNTED LAVATORY, .5 GPM METERED FAUCET
- MS-1 FLOOR MOUNT MOP SINK
- SH-1 ACCESSIBLE SHOWER STATION WITH HAND HELD SHOWER
- S-1 ACCESSIBLE SINK WITH MANUAL FAUCET
- TP-1 AUTOMATIC TRAP PRIMER, PRESSURE ACTIVATED WITH DISTRIBUTION FOR MULTIPLE DRAINS
- U-1 ACCESSIBLE URINAL WITH .125 GPF SENSOR OPERATED FLUSH VALVE
- WC-1 ACCESSIBLE WATER CLOSET WITH 1.28 GPF HAND FREE FLUSH VALVE
- WC-2 WATER CLOSET WITH 1.28 GPF HAND FREE FLUSH VALVE
- WHA-1 WATER HAMMER ARRESTOR
- EWH-1 20 GALLON VERTICAL STORAGE ELECTRIC WATER HEATER, 9 KW





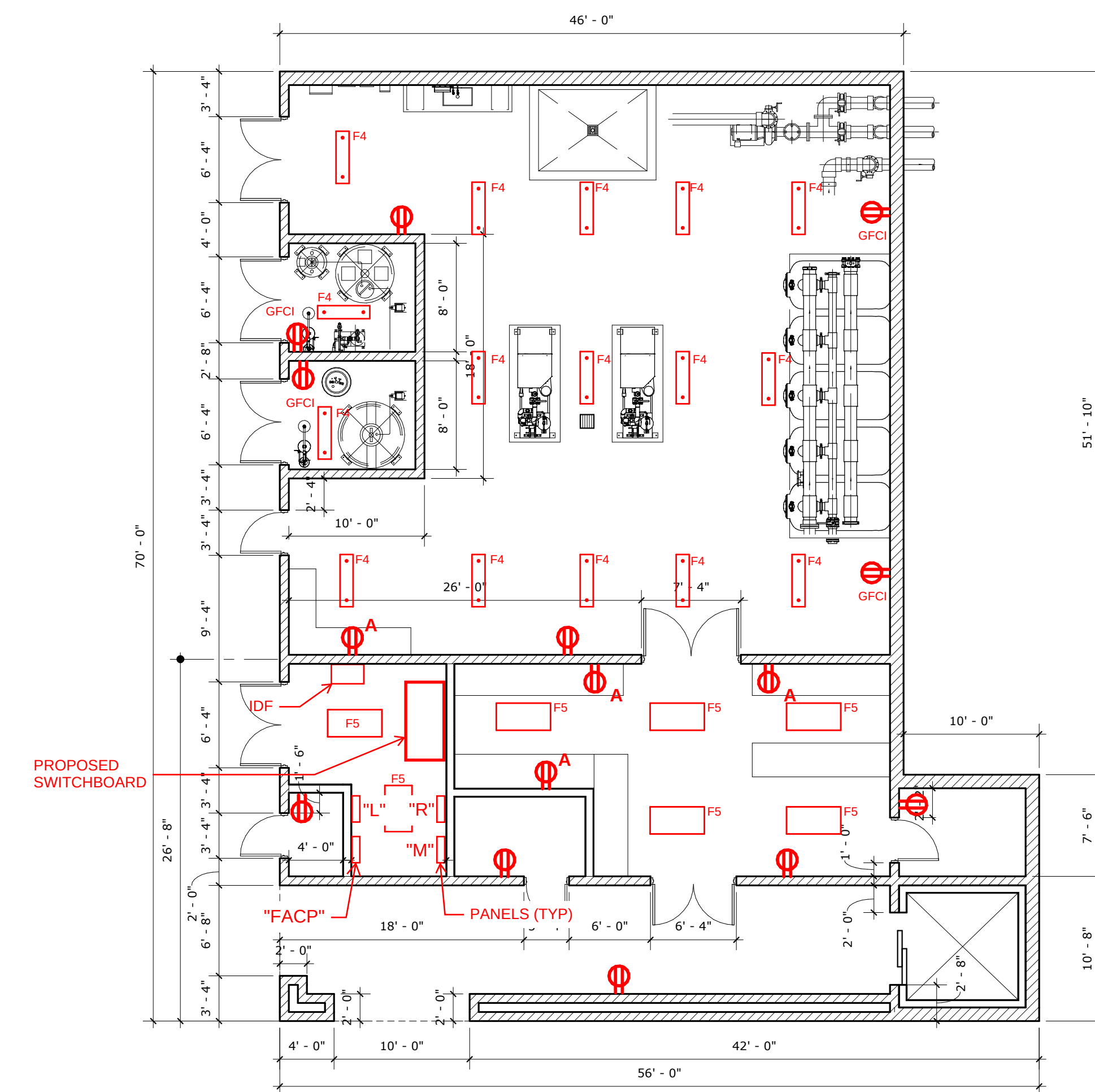
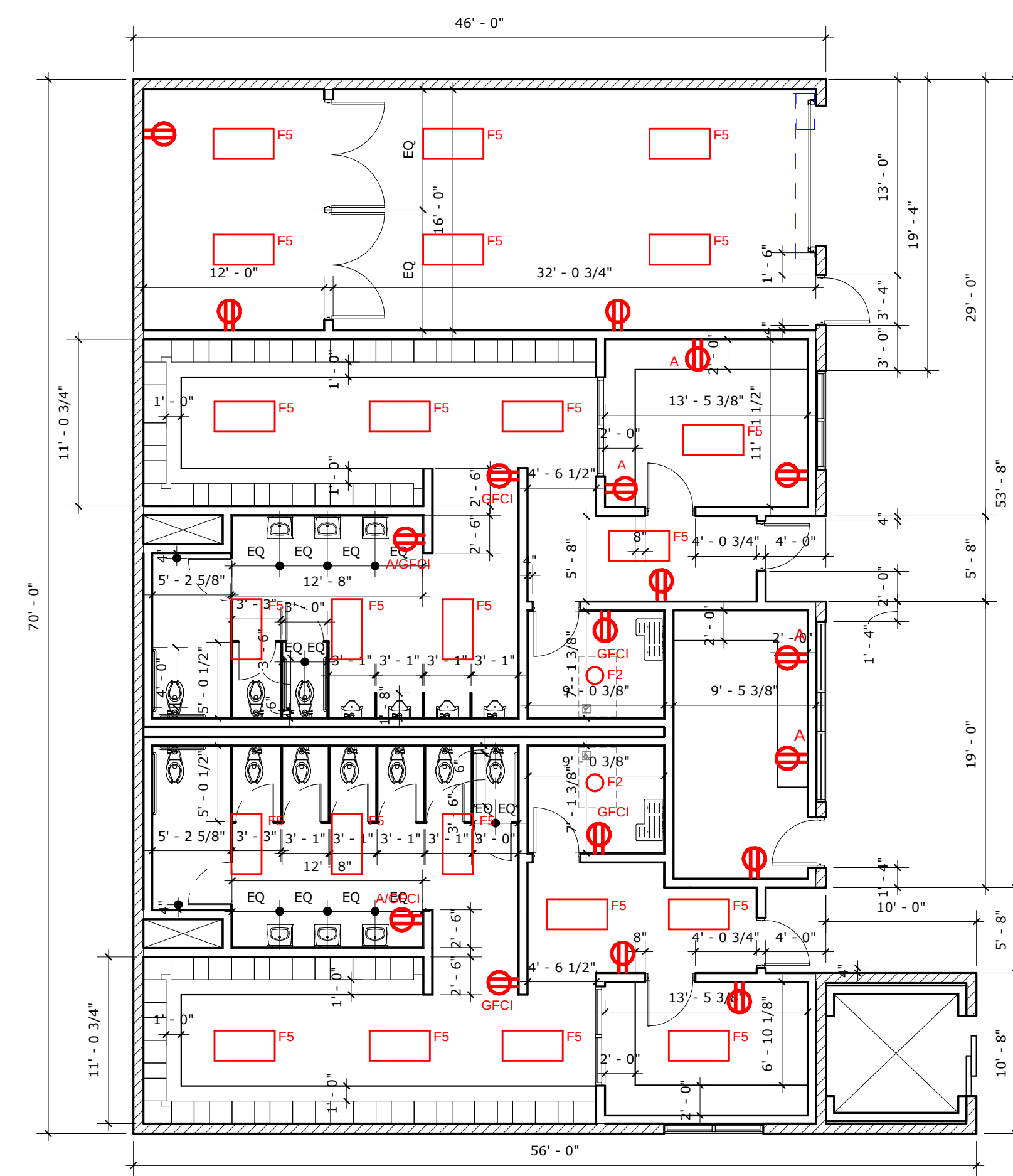
① OVERALL SITE PLAN - MOD
SCALE: 1" = 20'-0"

GENERAL NOTES

1. VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.

KEYNOTES

1. UTILITY TRANSFORMER TO BE RELOCATED TO MEET UTILITY SERVICE CLEARANCES FROM NEW BUILDING. COORDINATE RELOCATION WITH SOUTHERN CALIFORNIA EDISON.
2. UNDERGROUND UTILITY SERVICE ENTRANCE FROM EXISTING TRANSFORMER TO EXISTING PUMP HOUSE SWITCHBOARD TO BE REMOVED.
3. TEMPORARY ELECTRICAL SERVICE ENTRANCE TO EXISTING PUMP HOUSE SWITCHBOARD ASSUMING PUMP HOUSE REMAINS OPERATIONAL DURING NEW BUILDING CONSTRUCTION.
4. EXISTING POLE LIGHT FIXTURE TO BE REMOVED.

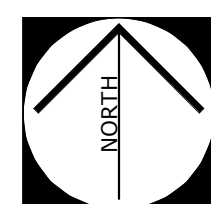


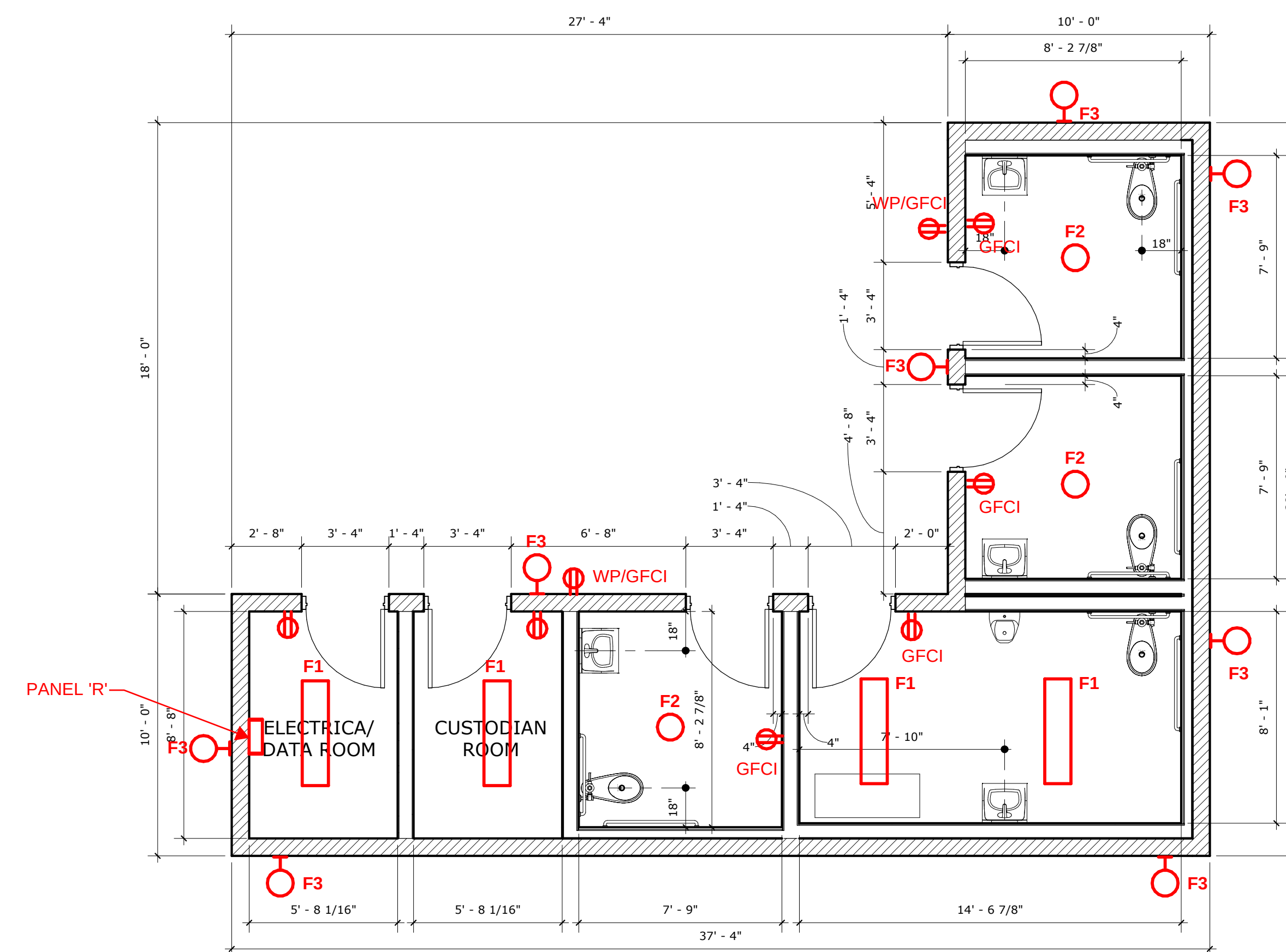
GENERAL NOTES

1.

KEYNOTES

LEGEND





1 RESTROOM FLOOR PLAN
SCALE: 1/4" = 1'-0"

RESTROOM FLOOR PLAN

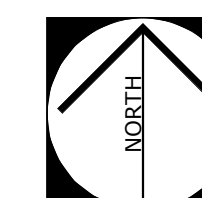
SCALE: 1/4" = 1'-0"

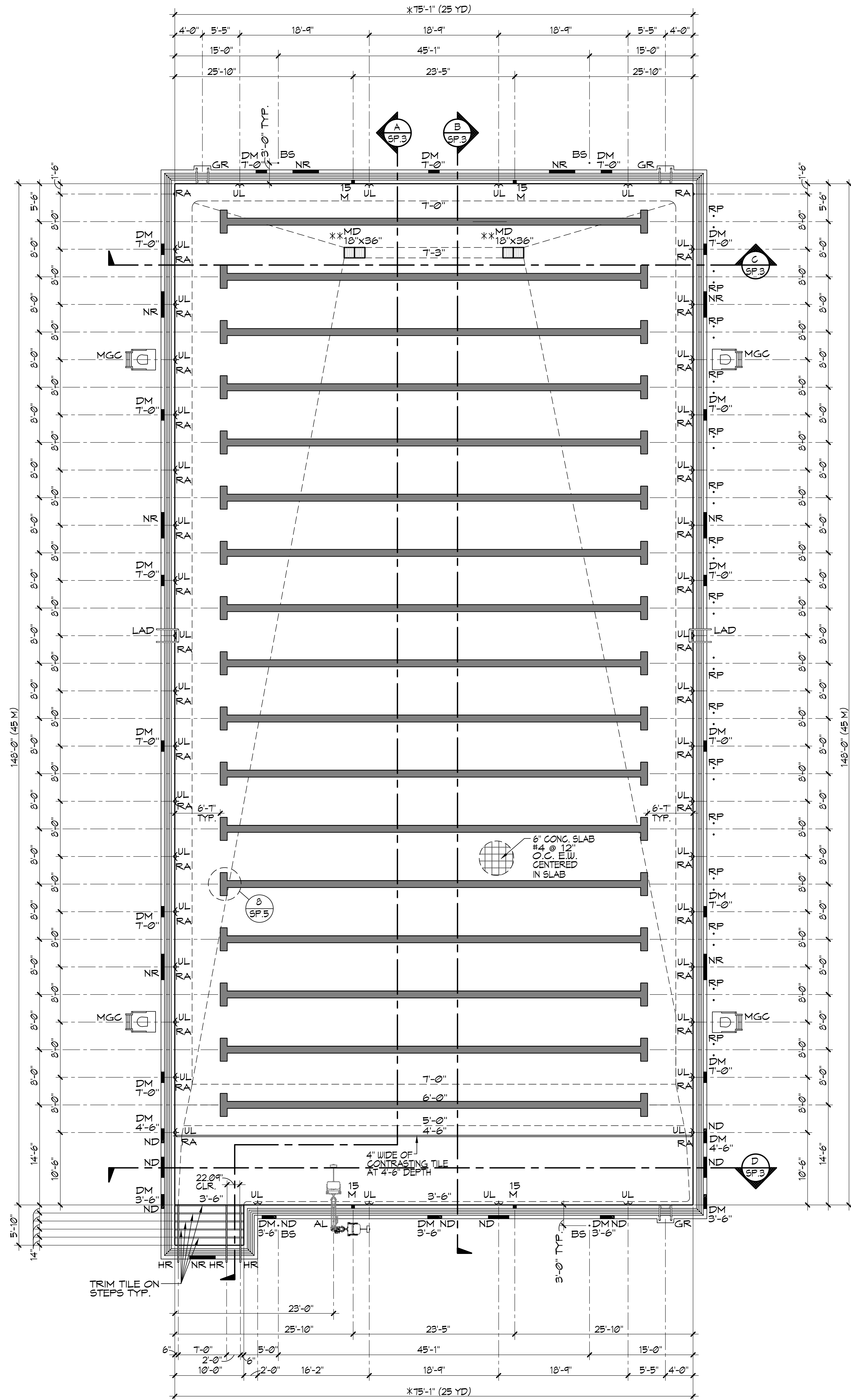
GENERAL NOTES

1.

KEYNOTES

LEGEND





SWIMMING POOL DATA

SURFACE AREA	=	11,171 SQ. FT.
PERIMETER	=	450 FT.
DEPTHS	=	3'-6" TO 7'-3"
VOLUME	=	569,701 GAL.
6 HR TURNOVER	=	1,503 GPM

LEGEND

** MD	=	MAIN DRAIN	4 SP. 5
GR	=	GRABRAIL	1 SP. 7
DM	=	DEPTH MARKER	1 SP. 6
NR	=	NO RUNNING	2 SP. 6
ND	=	NO DIVING	2.3 SP. 6
RA	=	ROPE ANCHOR	5 SP. 7
RP	=	RAGING PLATFORM	0 SP. 6
BS	=	BACKSTROKE STANCHION	3 SP. 7
15M	=	15 METER MARKER	4 SP. 5
UL	=	UNDERWATER LIGHT	4 SP. 7
MGC	=	MOVEABLE GUARD CHAIR	4 SP. 7
AL	=	ACCESSIBLE LIFT	2 SP. 6
LAD	=	LADDER	2 SP. 6
HR	=	HANDRAIL	1 SP. 6

CERTIFICATION REQUIREMENTS

* THE CONTRACTOR SHALL RETAIN AN INDEPENDENT LICENSED SURVEYOR TO PROVIDE PROOF OF COMPLIANCE FOR REQUIRED POOL LENGTHS AS FOLLOWS: (RECOMMEND PATRELL ENG. GROUP (626) 335-4362)

SHORT COURSE-25YDS: (ALLOWS FOR TOUCH PADS AT ONE END) 75'-0" 5/16" MIN.; 75'-1" 3/16" MAX.

TOLERANCE AGAINST LENGTH SHALL EXTEND IN A VERTICAL PLANE 0.3M (12") ABOVE AND 0.3M (12-1/2") BELOW THE SURFACE OF THE WATER AT ALL POINTS OF BOTH END WALLS TYP. OF ALL COURSES.

THE INDEPENDENT LICENSED SURVEYOR SHALL FILL OUT, NOTARIZE AND FILE OFFICIAL CERTIFICATION FORM(S) WITH USA SWIMMING.

** CONTRACTOR SHALL RETAIN A LICENSED ENGINEER TO CERTIFY THE FIELD BUILT MAIN DRAIN SYSTEMS AS V.G.B. COMPLIANT.

1

RUHNAU
CLARKE
ARCHITECTS

PHASE
SCHEMATIC DEVELOPMENT
DATE
AUGUST 9, 2024

SWIMMING POOL LAYOUT PLAN (SWIMMING)

1/8"=1'-0"

AQUATIC
DESIGN GROUP
1000 WEST 10TH STREET, SUITE 100
CARLSBAD, CALIFORNIA 92008

RUHNAUCLARKE.COM

3775 TENTH STREET, RIVERSIDE CALIFORNIA 92501 (951) 584-4664 / 5753 PALMER WAY, SUITE C, CARLSBAD CALIFORNIA 92008 (760) 438-5899

POOL MODERNIZATION

LAGUNA BEACH HIGH SCHOOL
670 PARK AVE, LAGUNA BEACH, CA 92651
LAGUNA BEACH UNIFIED SCHOOL DISTRICT

**SWIMMING POOL
LAYOUT PLAN
(SWIMMING)**

SP.1

1-43-22

A

SWIMMING POOL SECTION

$$\frac{1}{8}'' = 1' - 0''$$

B

SWIMMING POOL SECTION

$$\frac{1}{8}'' = 1' - 0''$$

C

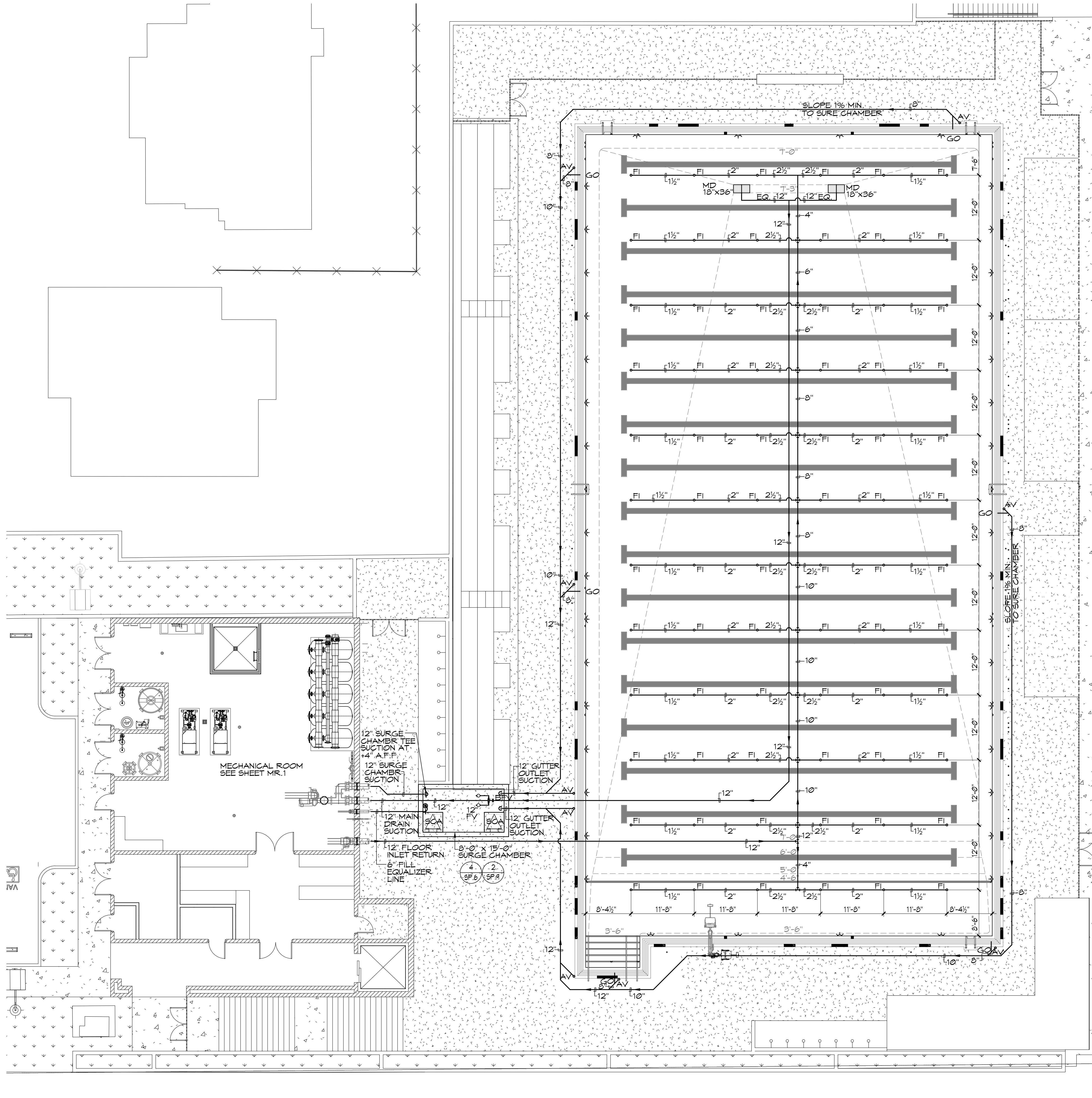
SWIMMING POOL SECTION

$$\frac{1}{8}'' = 1' - 0''$$

©

SWIMMING POOL SECTION

 $\frac{1}{8}'' = 1' - 0''$



SWIMMING POOL DATA			
SURFACE AREA	=	11,171	SQ. FT.
PERIMETER	=	450	FT.
DEPTHS	=	3'-6" TO 7'-3"	
VOLUME	=	569,701	GAL.
6 HR TURNOVER	=	1,503	GPM

SWIMMING POOL SURGE DATA			
REQUIRED SURGE CAPACITY	=	11,171	GAL.
SURGE IN PERIMETER GUTTER	=	5,145	GAL.
SURGE IN GUTTER PIPING	=	1,670	GAL.
8' x 15' SURGE IN SURGE CHAMBER	=	4,494	GAL.
TOTAL SUPPLIED SURGE	=	11,309	GAL.
∴ 11,309 GAL. > 11,171 GAL. <u>OK</u>			

LEGEND			
MD	=	MAIN DRAIN	
FI	=	FLOOR INLET	
GO	=	GUTTER OUTLET	
AV	=	AIR VENT	
SCA	=	SURGE CHAMBER ACCESS	
BFV	=	BUTTERFLY VALVE	
FV	=	FLOAT VALVE	
A.F.F.	=	ABOVE FINISH FLOOR	

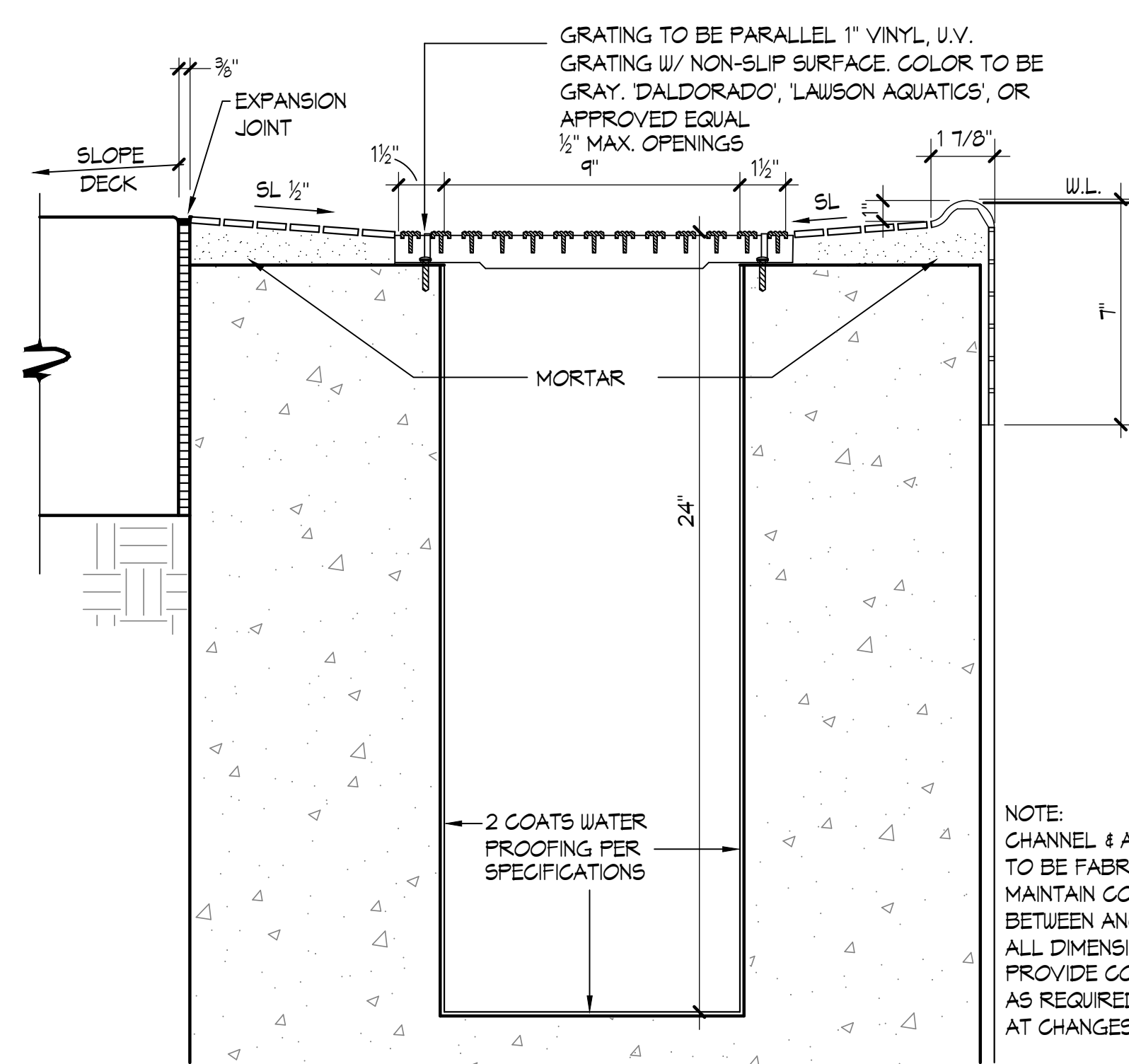
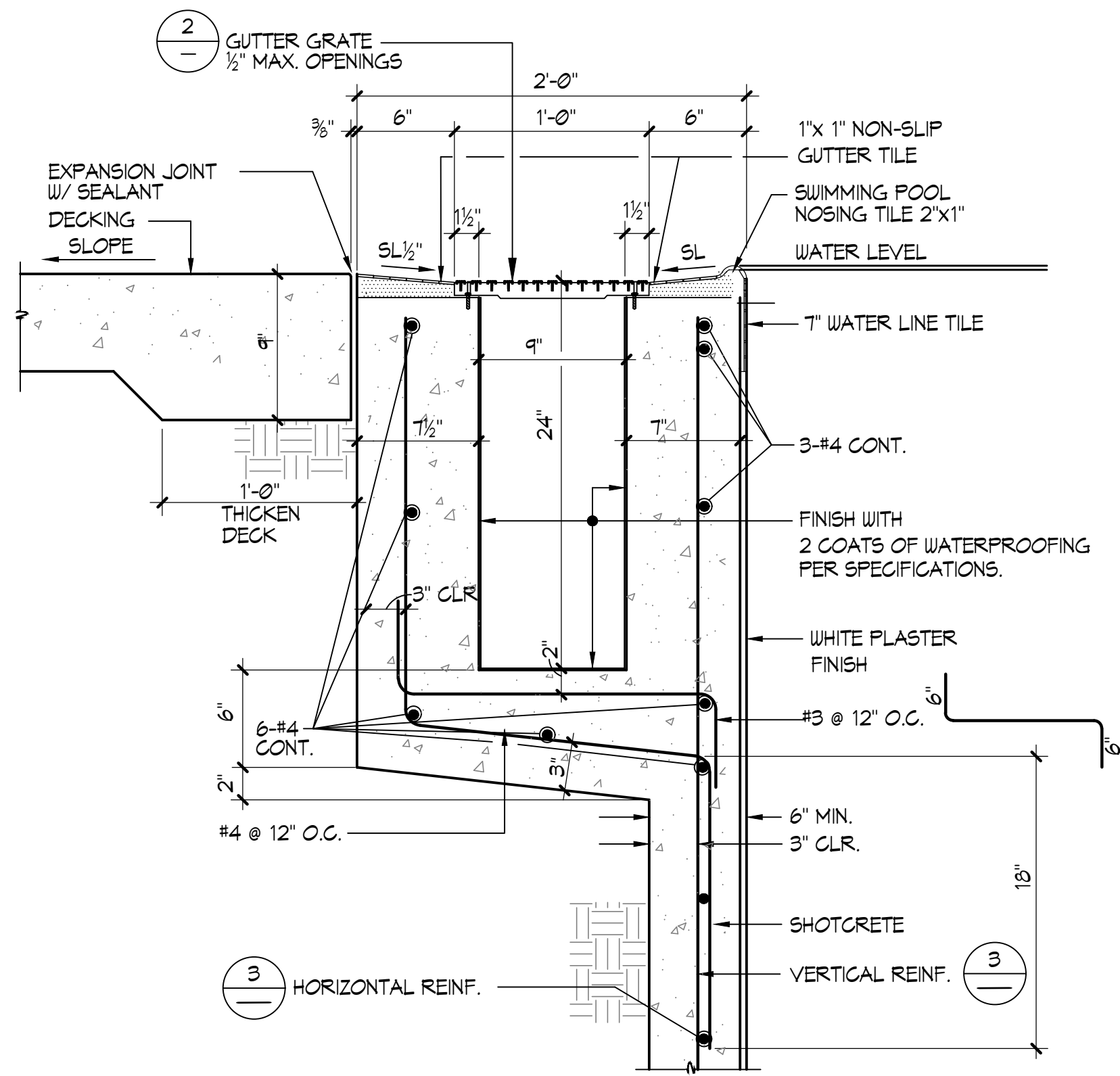
- NOTES:
1. PIPING ROUTES ARE SCHEMATIC IN NATURE AND SHOWN ON PLANS FOR CLARITY. CONTRACTOR SHALL ROUTE PIPING ACCORDINGLY TO MEET NOTED INVERT ELEVATIONS. REFER TO REFERENCED DETAIL FOR PIPE SPACING REQUIREMENTS.
 2. ALL BELOW GRADE POOL PIPING SHALL BE SCHEDULE 40 PVC AND ALL ABOVE GRADE POOL PIPING SHALL BE SCHEDULE 80 PVC.
 3. COORDINATE ALL PIPING WITH SITE AND BUILDING UTILITIES INCLUDING PIPING, CONDUITS / STRUCTURES AND THE LIKE. COORDINATE ROUTING OF PIPING THROUGH STRUCTURAL SLAB. ALL PIPING SHALL HAVE UNIFORM SLOPE IN ONE DIRECTION.
 4. SURGE CHAMBER TEE SUCTION SHALL BE SET AT 16" A.F.F. MAINTAIN MAXIMUM SEPARATION BETWEEN SUCTION AND INFLUENT PIPING WITHIN THE SURGE CHAMBER.
 5. EACH MAIN DRAIN SHALL BE EQUIPPED WITH HYDROSTATIC RELIEF VALVE PER RECOMMENDATIONS OF GEOTECHNICAL REPORT



1

SWIMMING POOL PIPING PLAN

1/8"=1'-0"



REINFORCEMENT TABLE					
WATER DEPTH	1'	2'	RADIUS	VERTICAL REINF.	HORIZONTAL REINF.
3'-6"	6"	3"	6"	#4 @ 12" O.C.	#4 @ 12" O.C.
3'-7" TO 5'-0"	8"	5"	6" TO 18"	#4 @ 12" O.C.	#4 @ 12" O.C.
5'-1" TO 7'-3"	10"	7"	18" TO 2'-6"	#4 @ 6" O.C.	#4 @ 6" O.C.

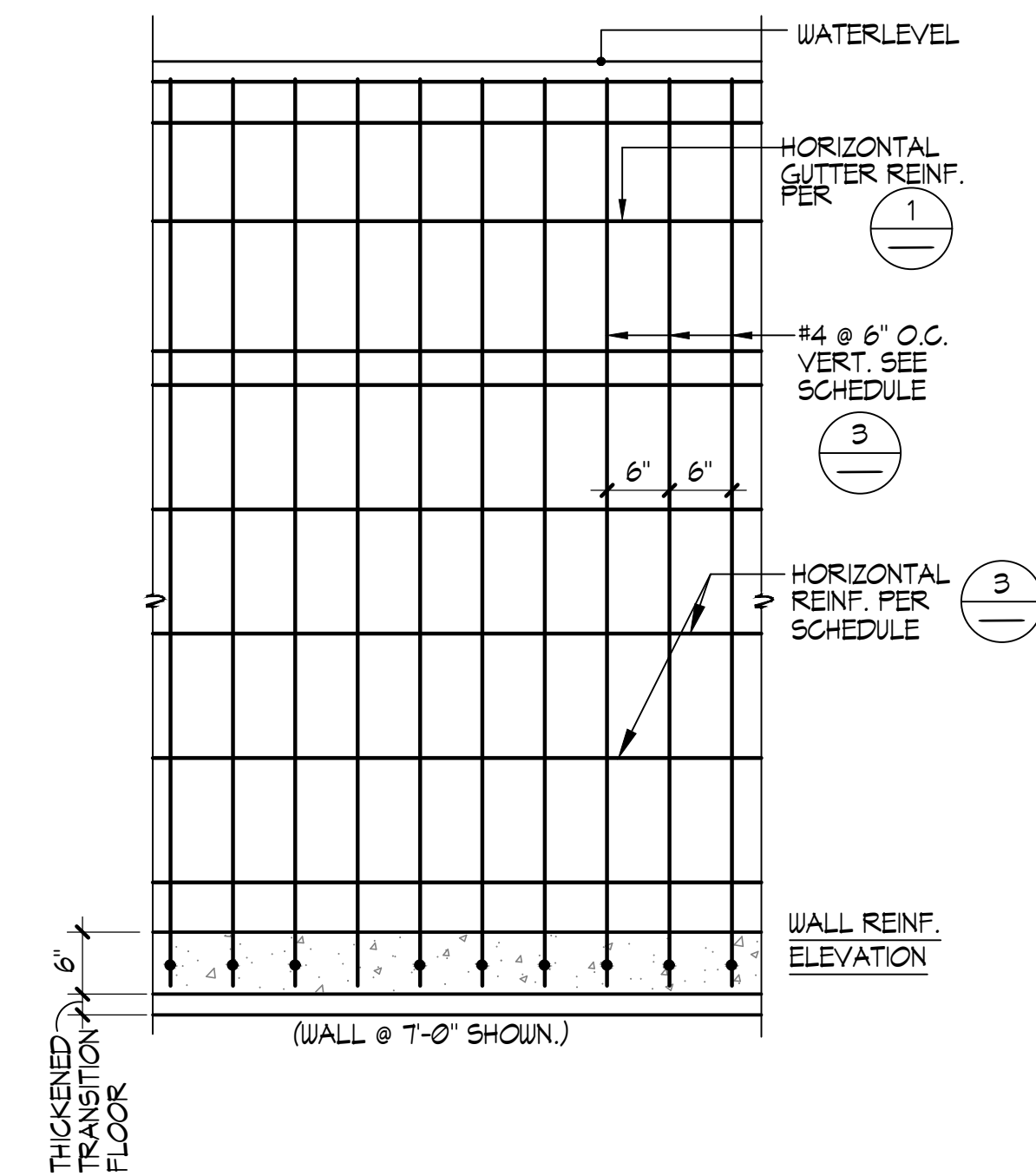
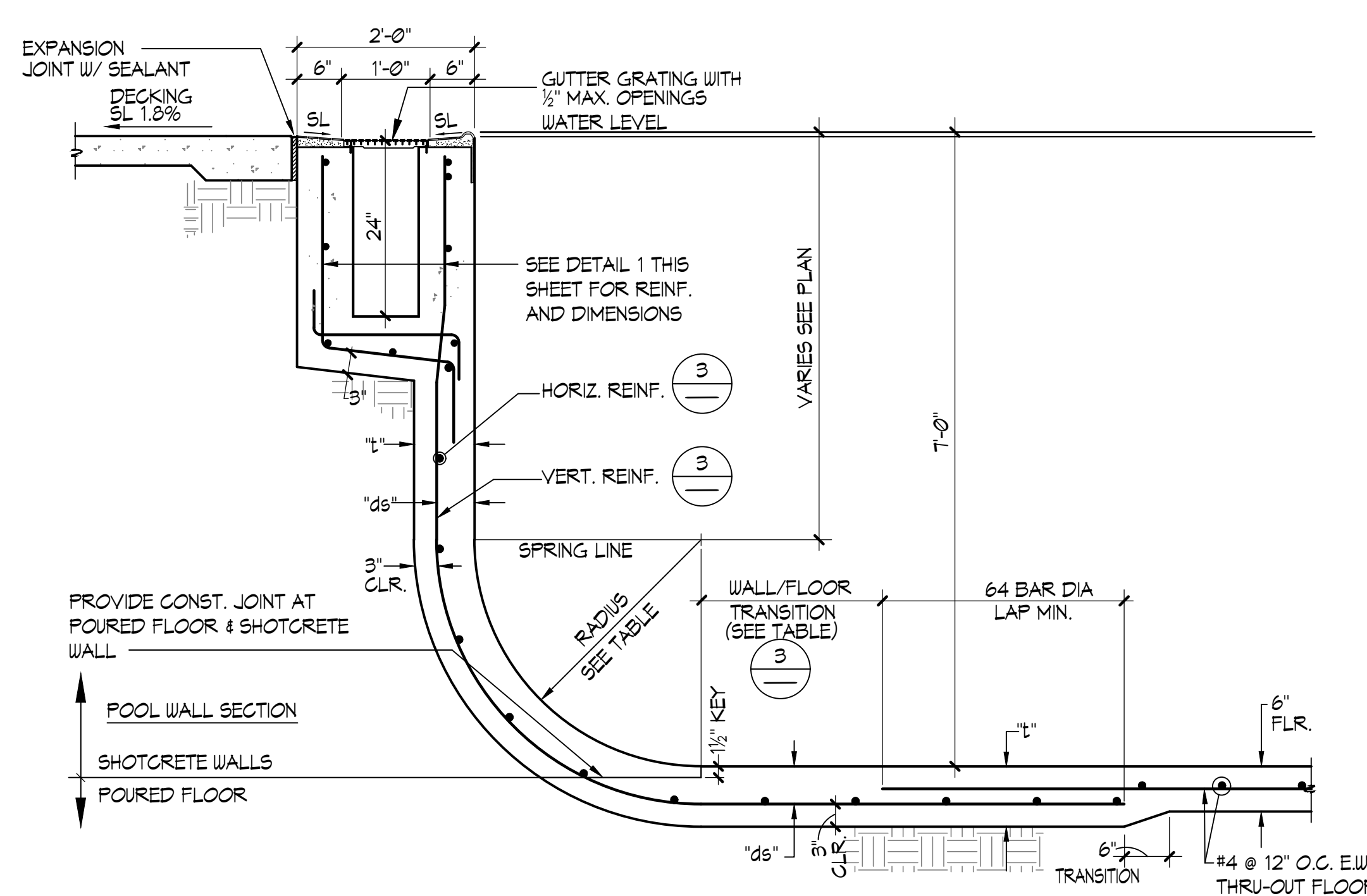
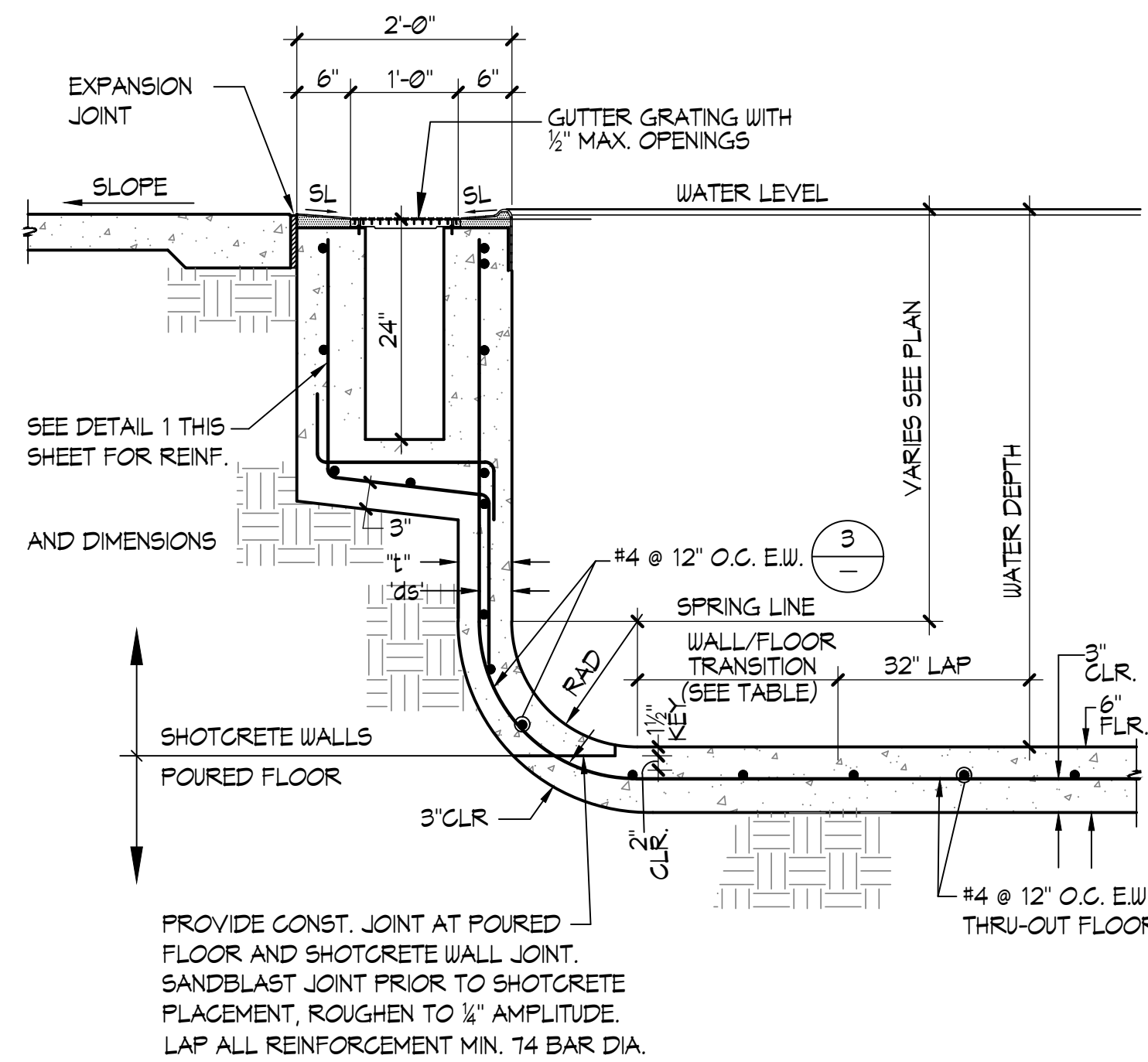
- CONCRETE NOTES:**
- THE MINIMUM ULTIMATE COMPRESSIVE STRENGTH AT 28 DAYS WITH A 0.40 MIN. TO 0.45 MAX. WATER/CEMENT RATIO
POOL = 4000 PSI
SLAB-ON-GRADE = 4000 PSI
 - CONTINUOUS INSPECTION BY A DSA APPROVED INSPECTOR IS REQUIRED OF ALL CONCRETE PLACEMENT.
 - ALL CEMENT USED SHALL CONFORM TO A.S.T.M. C-150 TYPE II
 - FINE AND COARSE AGGREGATE SHALL CONFORM TO A.S.T.M. C-33, MAXIMUM SIZE OF AGGREGATE TO BE 1"
 - CONCRETE MIX DESIGNS SHALL BE BASED UPON ACI-318 SECTIONS 19.3.2 AND 26.4.2.
 - CONCRETE SHALL BE TESTED AND INSPECTED PER SECTION CBC 1105A.3 AND ACI 318, SECTION 26.12 AND MODIFIED PER 1905A.1.17.
 - REMOVAL OF FORMS SHALL COMPLY WITH ACI-318 SECTION 26.11.2.
 - ALL REINFORCING SHALL BE ASTM A-615, GRADE 60, UNLESS OTHERWISE NOTED. LAPS SHALL BE 64 BAR DIA.

- SHOTCRETE NOTES:**
- SHOTCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS. SHOTCRETE MATERIAL SHALL HAVE A WATER/CEMENT RATIO OF 0.40 MIN. TO 0.45 MAX. PER ACI 506R, PART 2, PRODUCTS, SECTION 2.5.3.3, WET-MIX PROCESS.
 - CONTINUOUS INSPECTION BY A DSA APPROVED INSPECTOR IS REQUIRED OF ALL SHOTCRETE PLACEMENT.
 - ALL CEMENT USED SHALL CONFORM TO A.S.T.M. C-150 TYPE II
 - FINE AND COARSE AGGREGATE SHALL CONFORM TO A.S.T.M. C-33, AND SHALL CONFORM TO COARSE AGGREGATE GRADING NO. 2 PER ACI 506R, TABLE 1.1.1, MAXIMUM SIZE OF AGGREGATE TO BE 3/4"
 - SHOTCRETE MIX DESIGNS SHALL BE PER CBC ACI 318-19 SECTION 26.4
 - SHOTCRETE SHALL BE TESTED AND INSPECTED PER CBC 1105A.3 AND ACI 318-19 SECTIONS 26.12 AND 26.13.
 - ANCHOR BOLTS, ANCHORS, DOUELS, INSERTS, ETC. SHALL BE SECURELY TIED IN PLACE PRIOR TO PLACING OF SHOTCRETE.
 - ALL REINFORCEMENT WITHIN SHOTCRETE SHALL MAINTAIN THE GREATER OF 6d AND 2 1/2" CLEAR SPACING BETWEEN BARS, NON-CONTACT SPLICES.
 - THE FILM OF LATANCE WHICH FORMS ON THE SURFACE OF THE SHOTCRETE SHALL BE REMOVED WITHIN APPROXIMATELY TWO HOURS AFTER APPLICATION BY BRUSHING WITH A STIFF BROOM. IF THIS IS NOT REMOVED WITHIN TWO HOURS, IT SHALL BE REMOVED BY THOROUGH WIRE BRUSHING OR SAND BLASTING. CONSTRUCTION JOINTS OVER EIGHT HOURS OLD SHALL BE THOROUGHLY CLEANED WITH AIR AND WATER PRIOR TO RECEIVING SHOTCRETE.
 - ALL REINFORCING SHALL BE ASTM A-615, GRADE 60, UNLESS OTHERWISE NOTED. LAPS SHALL BE 64 BAR DIA.
 - PRE-CONSTRUCTION TEST AND REPORT IS REQUIRED PER ACI-318 AND CBC 1105A.3.4.2.

1 RIM FLOW GUTTER 1 1/2" x 1'-0"

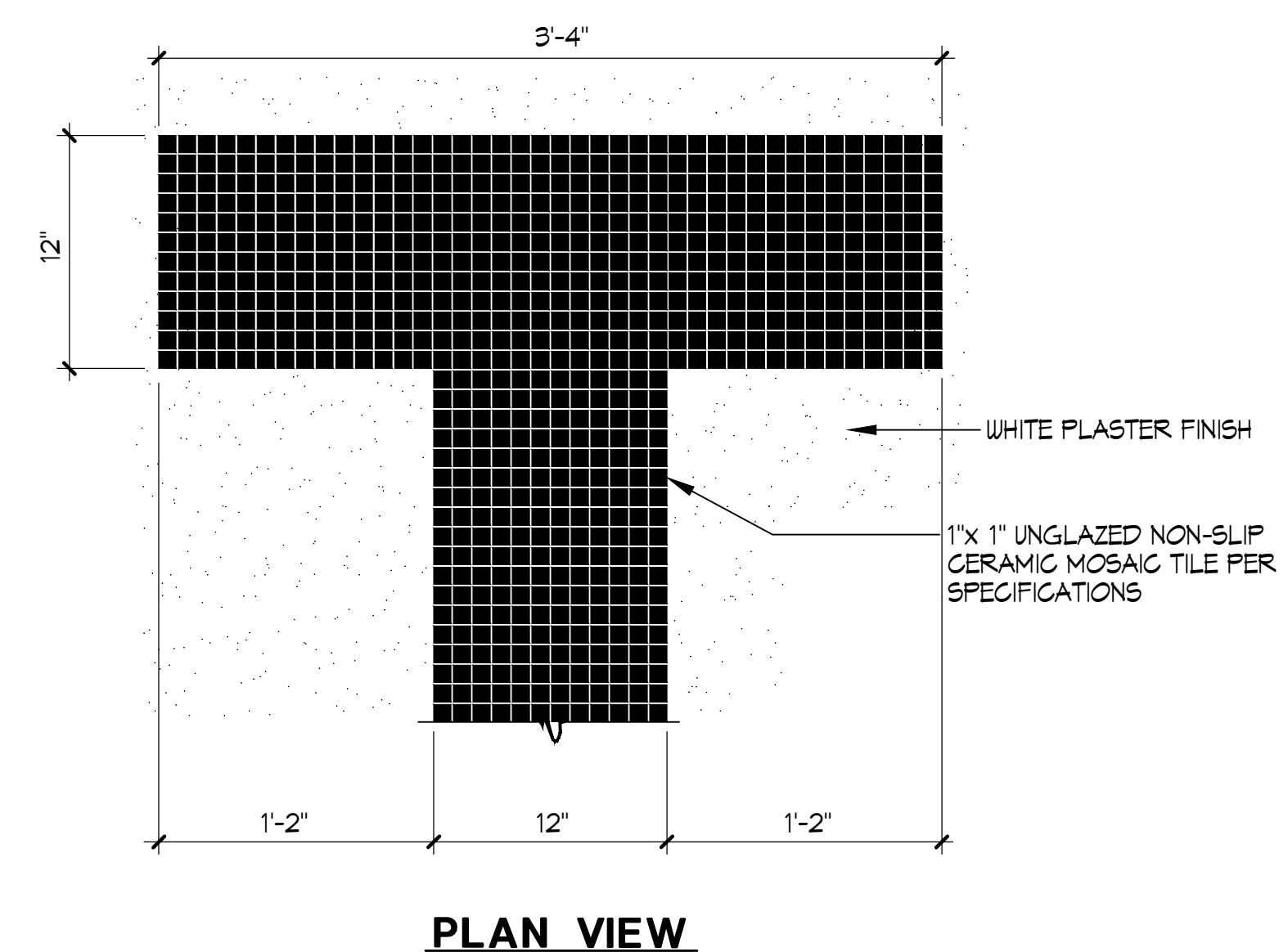
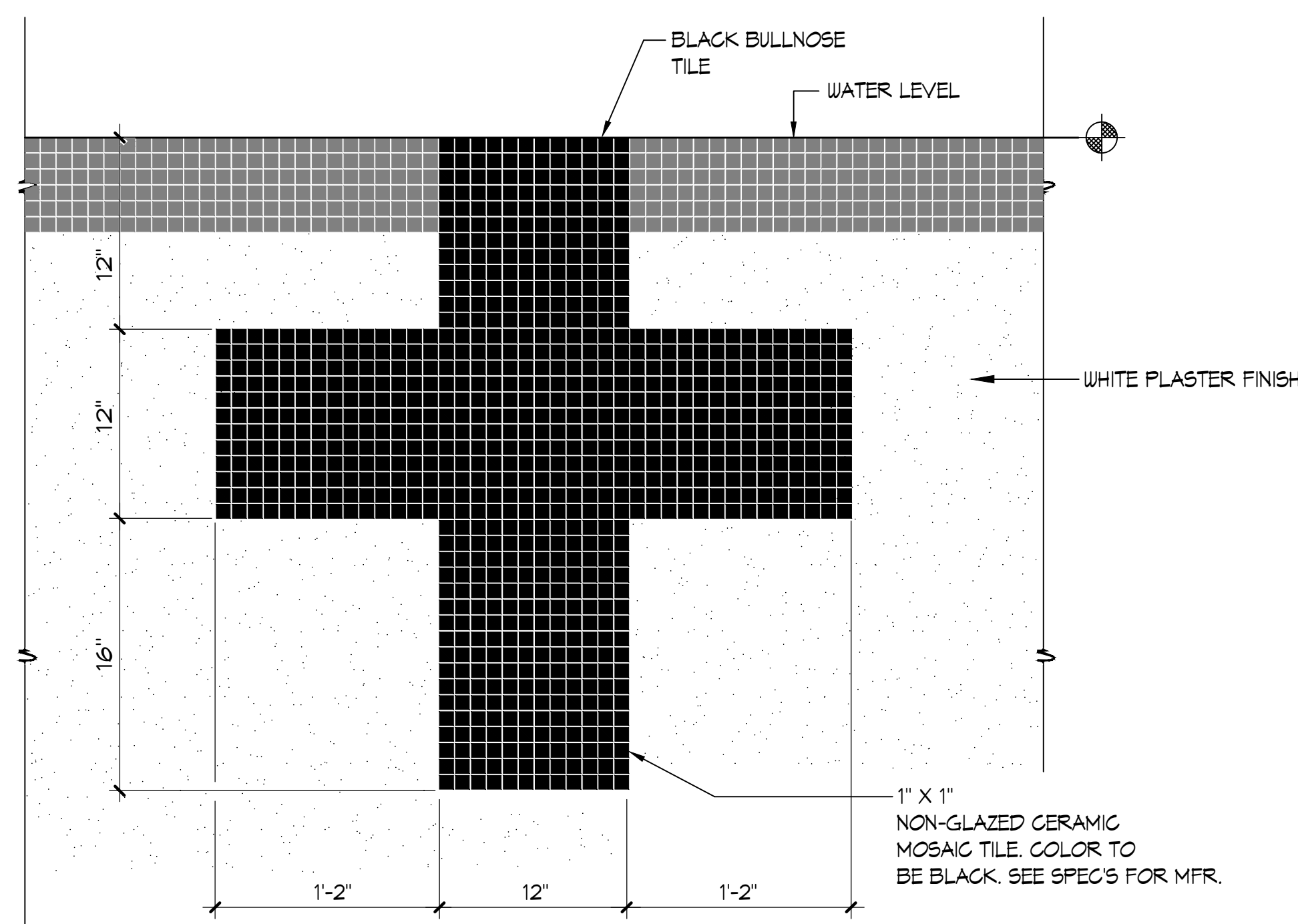
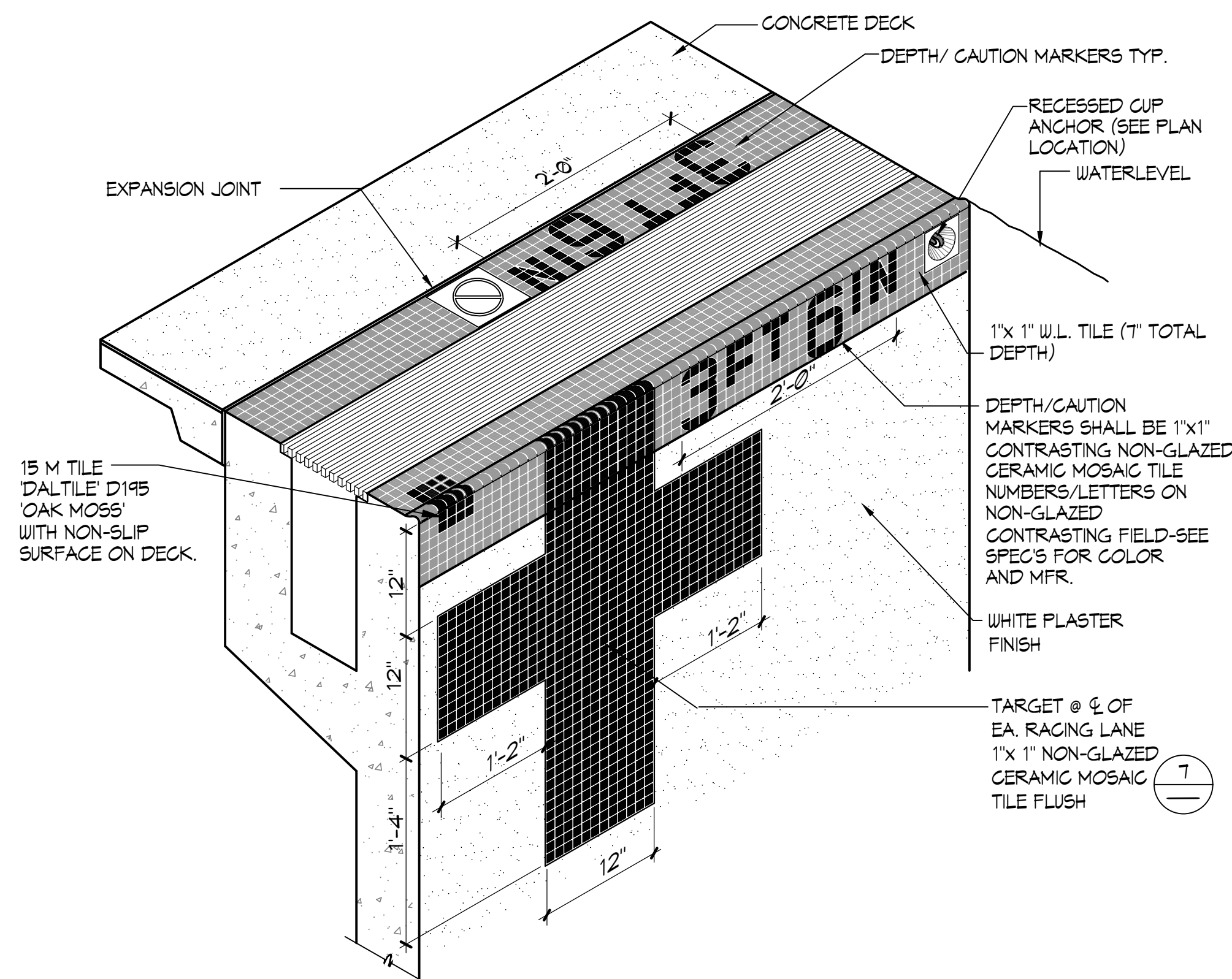
2 RIM FLOW GUTTER/GRATE 3' x 1'-0"

3 REINFORCEMENT TABLE



4 POOL WALL 3'-6" TO 5'-0" 3/4" x 1'-0"

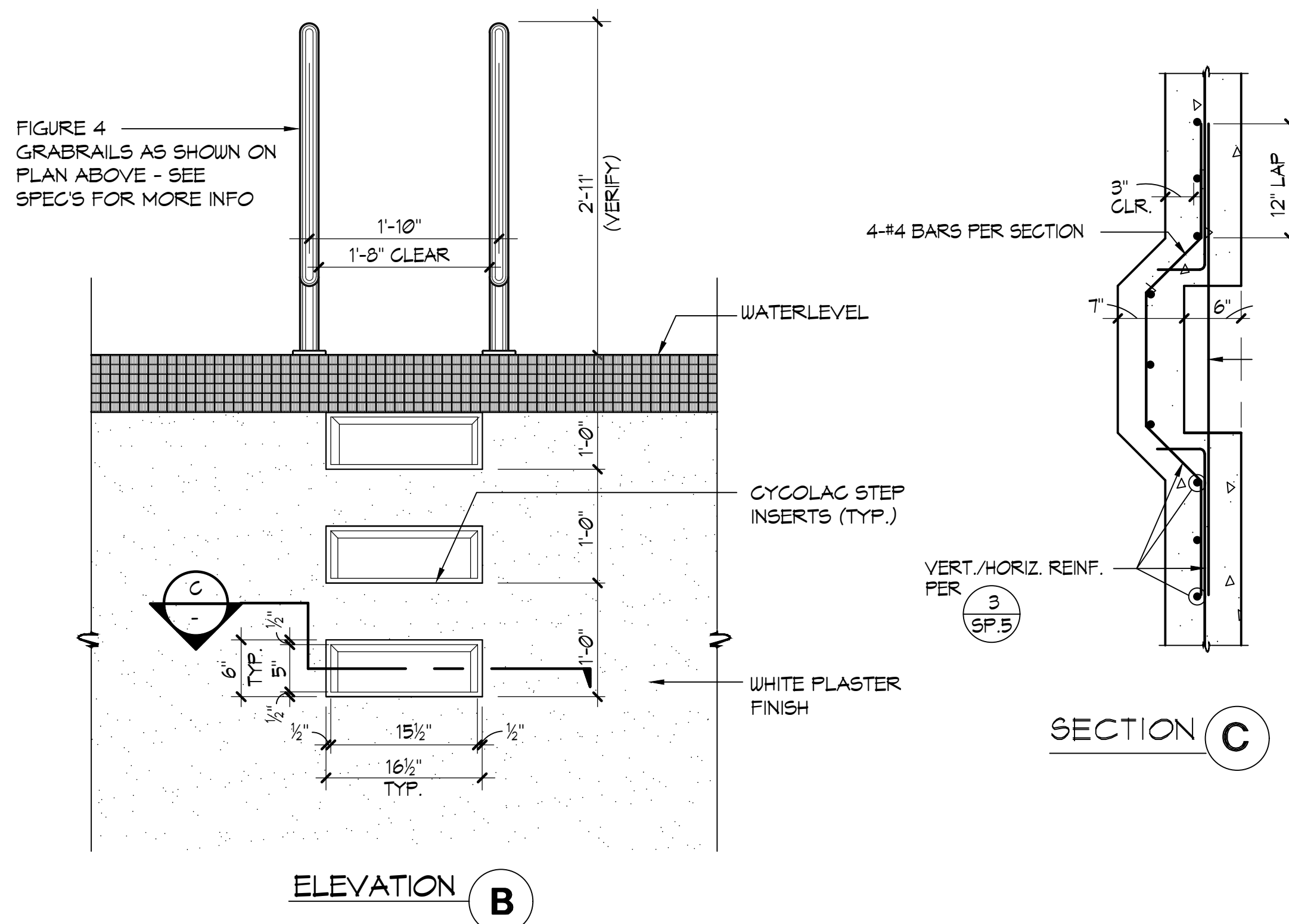
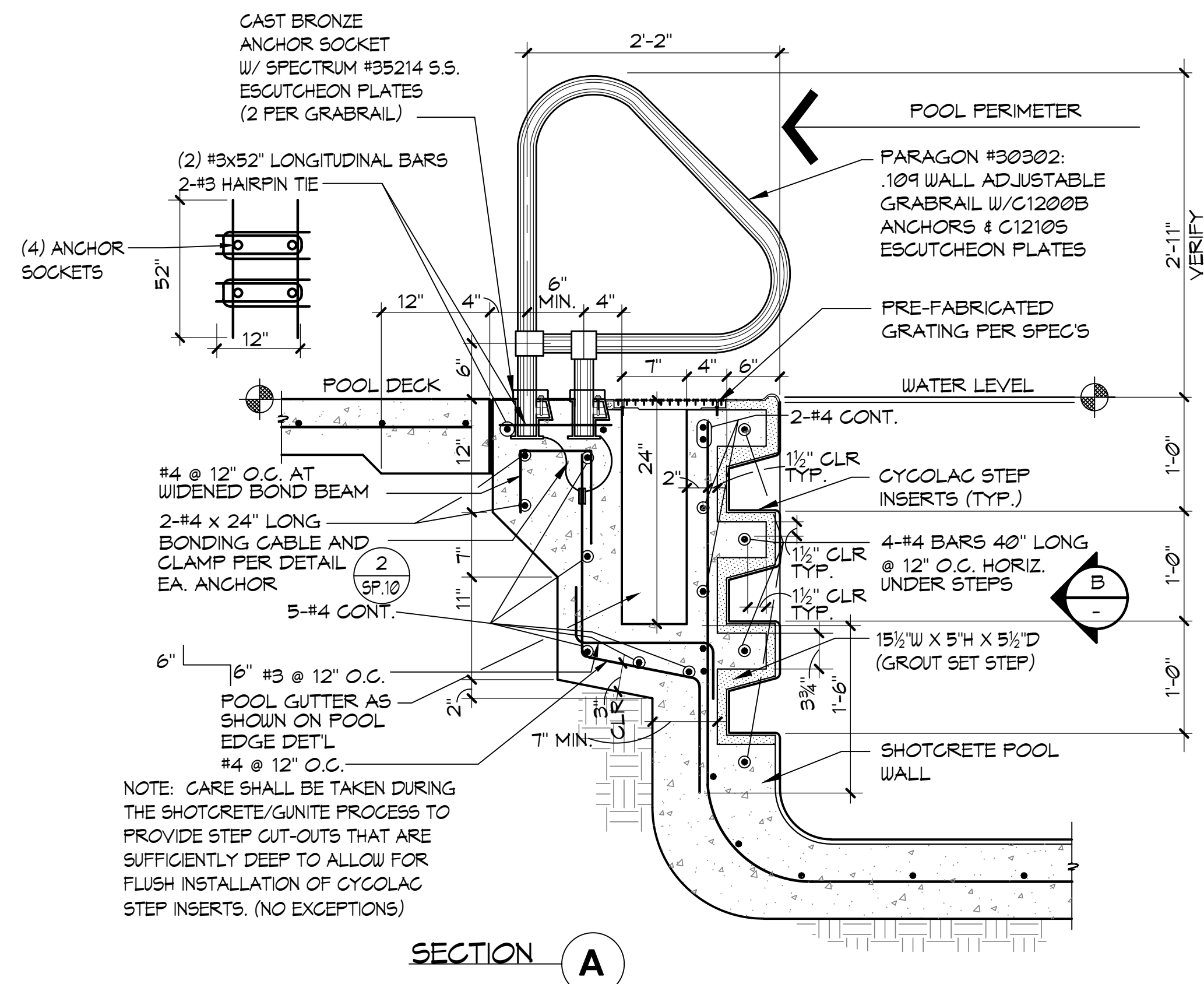
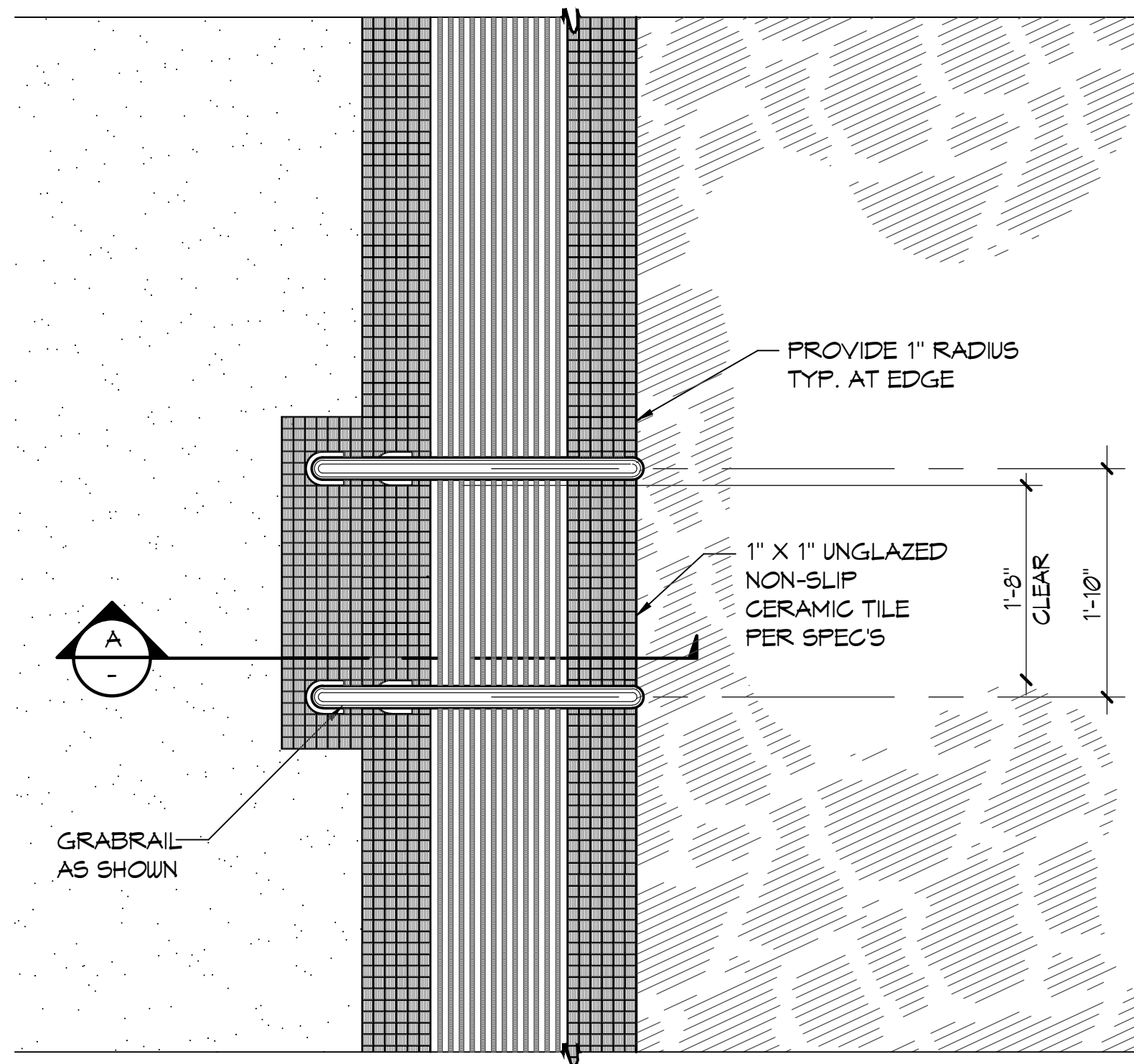
5 POOL WALL 5'-1" TO 7'-3" 3/4" x 1'-0"



6 TYPICAL RIM FLOW GUTTER PERSPECTIVE NO SCALE

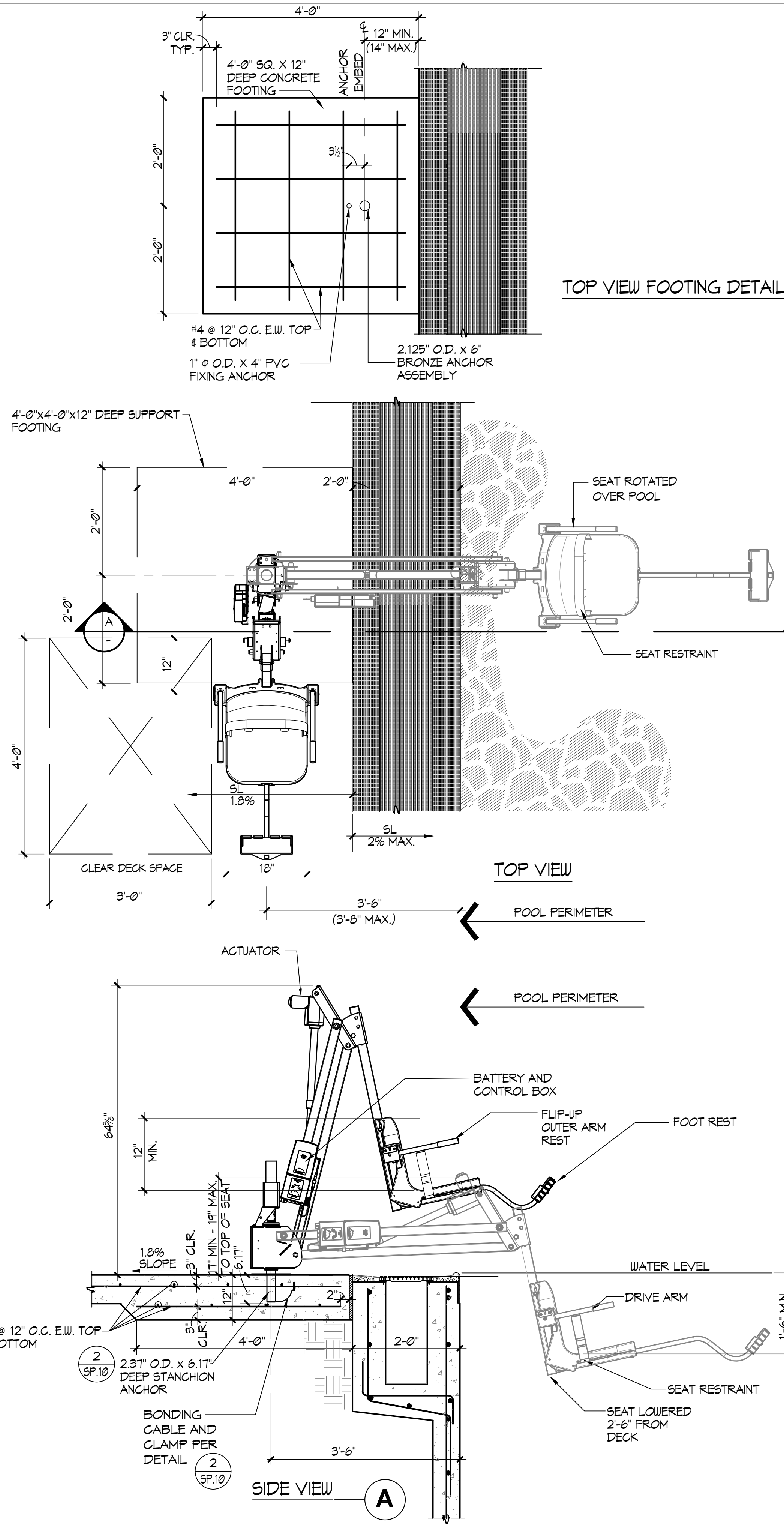
7 END WALL TARGETS 1 1/2" x 1'-0"

8 RACING LANE LINE 1 1/2" x 1'-0"



1 GRABRAIL WITH STEPS

1" = 1'-0"

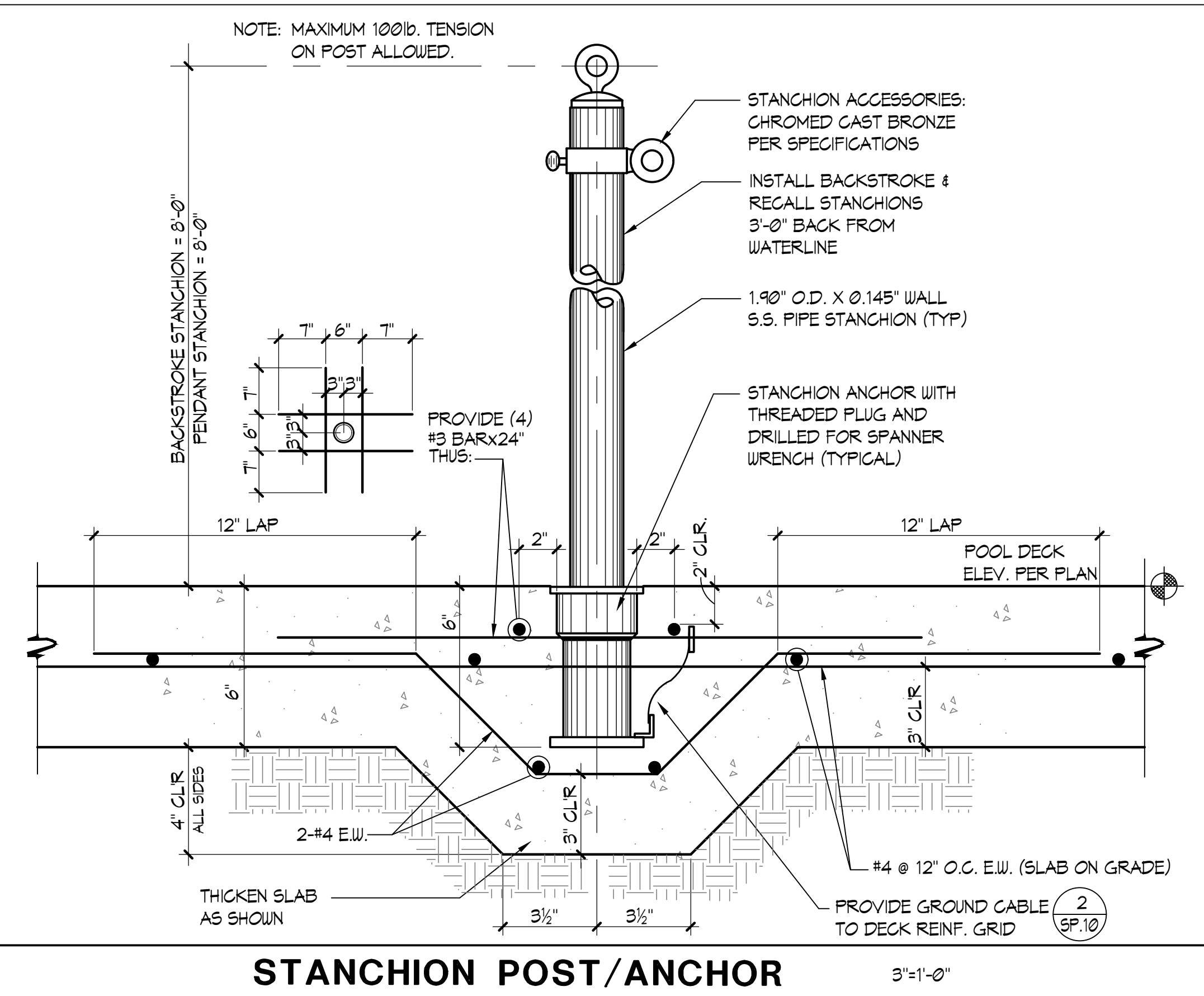


NOTES:

1. AQUA CREEK MIGHTY 400 F-MTY-400 (350 lbs. MIN. LIVE LOAD AND 400 lbs. MAX. LIFTING CAPACITY)
2. GUSSET COVER PLATE TO BE ATTACHED REQUIRING A TOOL FOR REMOVAL.
3. CONTRACTOR SHALL PROVIDE COVER FOR LIFT 'SPECTRUM' #21365, EXTRA BATTERY PACK 'SPECTRUM' #13257, AND TRANSPORTER CART 'SPECTRUM' #26080.
4. UTILIZE OUTLET FOR POOL LIFT BATTERY CHARGE STATION.
5. POOL LIFT SHALL BE LOCATED WHERE THE WATER LEVEL IS AT LEAST 36" AND DOES NOT EXCEED 48" DEEP, UNLESS ENTIRE POOL IS GREATER THAN 48" DEEP.
6. ON THE RAISED POSITION, THE CENTERLINE OF THE SEAT SHALL BE LOCATED OVER THE DECK AND 16" MINIMUM FROM THE EDGE OF THE POOL. THE DECK SURFACE BETWEEN THE CENTERLINE OF THE SEAT AND THE POOL EDGE SHALL HAVE A 2% MAX. SLOPE.
7. CLEAR DECK SPACE SHALL BE PROVIDED ON SIDE OF SEAT OPPOSITE THE WATER PARALLEL TO THE WATER 36" WIDE X 48" MINIMUM FROM A LINE LOCATED 12" BEHIND THE REAR EDGE OF THE SEAT. THE CLEAR SPACE SHALL HAVE A 2% MAX. SLOPE.
8. THE HEIGHT OF THE LIFT SEAT SHALL BE DESIGNED TO ALLOW A STOP AT 17" MIN. TO 19" MAX. MEASURED FROM THE DECK TO THE TOP OF THE SEAT SURFACE WHEN IN THE RAISED POSITION.
9. THE SEAT SHALL BE RIGID AND 17" MIN. TO 19" MAX. WIDE. THE LIFT SEAT SHALL HAVE A BACK SUPPORT 12" MIN. TALL.
10. FOOTRESTS SHALL BE PROVIDED, EXCEPT FOR SPA LIFTS, AND SHALL MOVE WITH THE SEAT. LIFT SHALL HAVE TWO ARMRESTS. THE ARMREST POSITIONED OPPOSITE THE WATER SHALL BE REMOVABLE OR SHALL FOLD CLEAR OF THE SEAT WHEN THE SEAT IS IN THE RAISED POSITION.
11. THE LIFT SHALL BE CAPABLE OF UNASSISTED OPERATION FROM BOTH THE DECK AND WATER LEVELS. CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL BE UNOBSTRUCTED WHEN THE LIFT IS IN USE. LIFT MUST BE STABLE AND NOT PERMIT UNINTENDED MOVEMENT WHEN A PERSON IS GETTING INTO OR OUT OF THE SEAT.
12. THE LIFT SHALL BE DESIGNED SO THAT THE SEAT WILL SUBMERGE TO A WATER DEPTH OF 18" MIN. BELOW THE STATIONARY WATER LEVEL.
13. LIFT SEAT MUST HAVE AN OCCUPANT RESTRAINT FOR USE BY THE OCCUPANT OF THE SEAT AND THE RESTRAINT MUST MEET THE STANDARDS FOR OPERABLE CONTROLS.

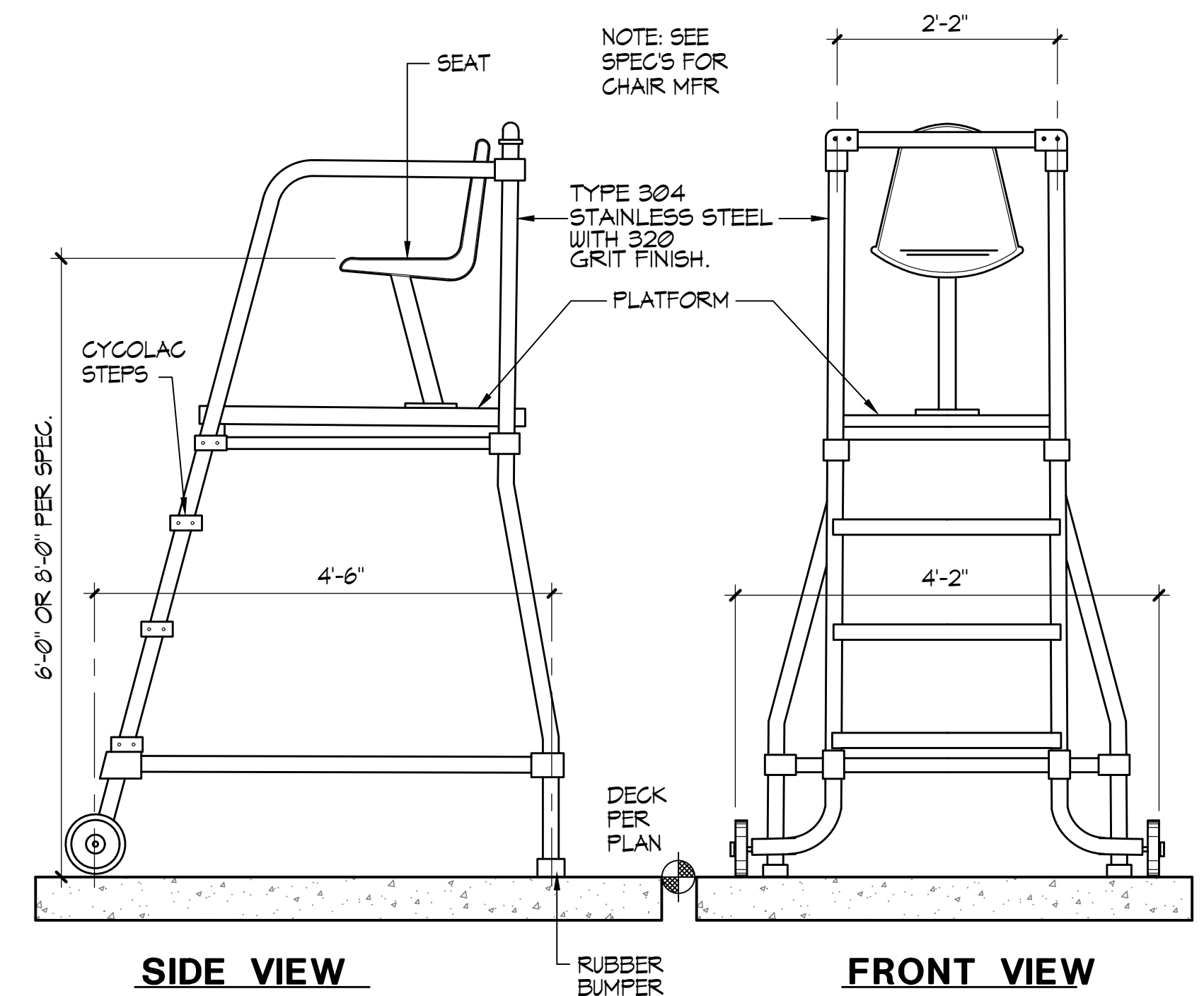
2 ACCESSIBLE LIFT

3/4" = 1'-0"



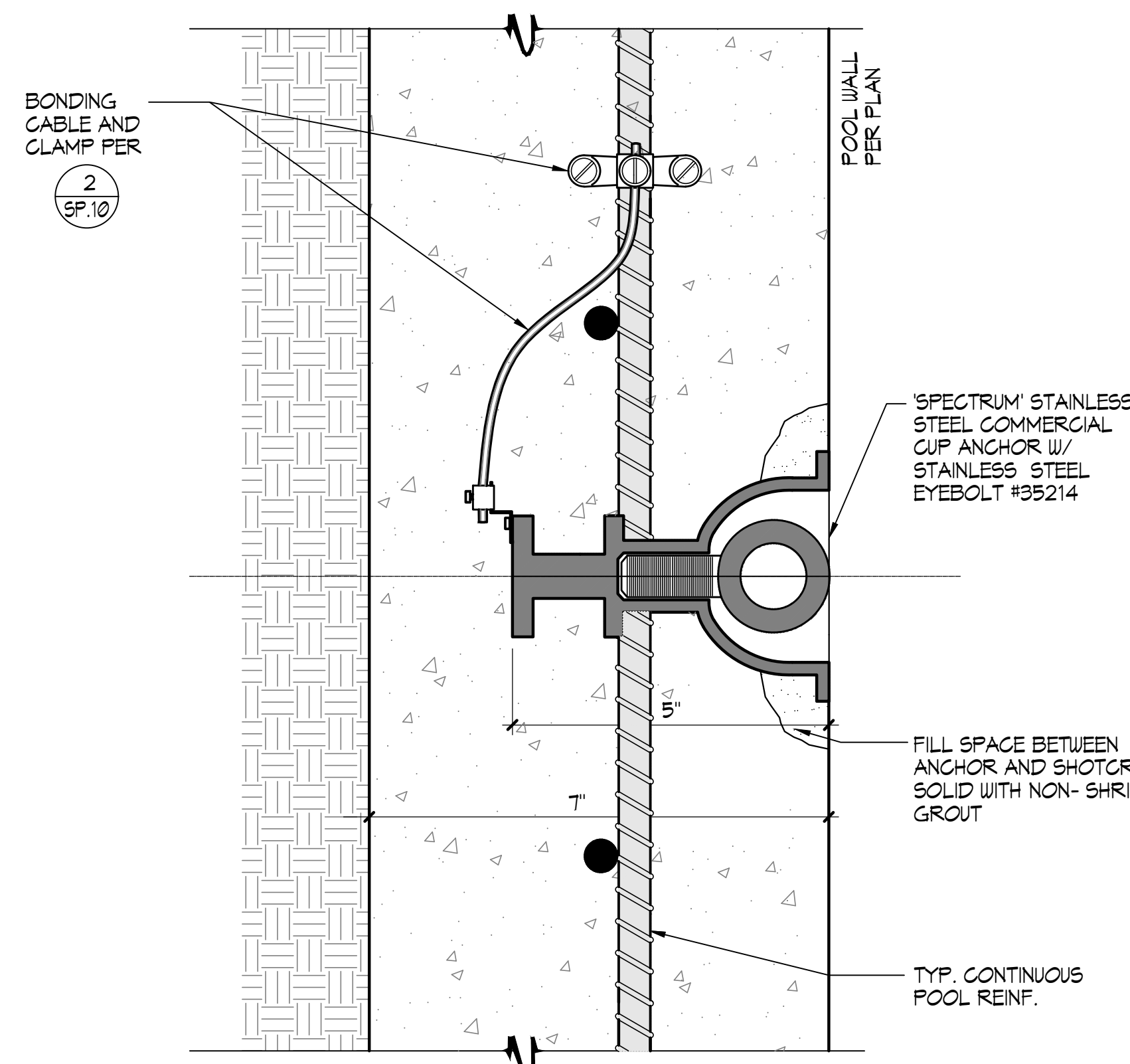
3 STANCHION POST/ANCHOR

3/4" = 1'-0"



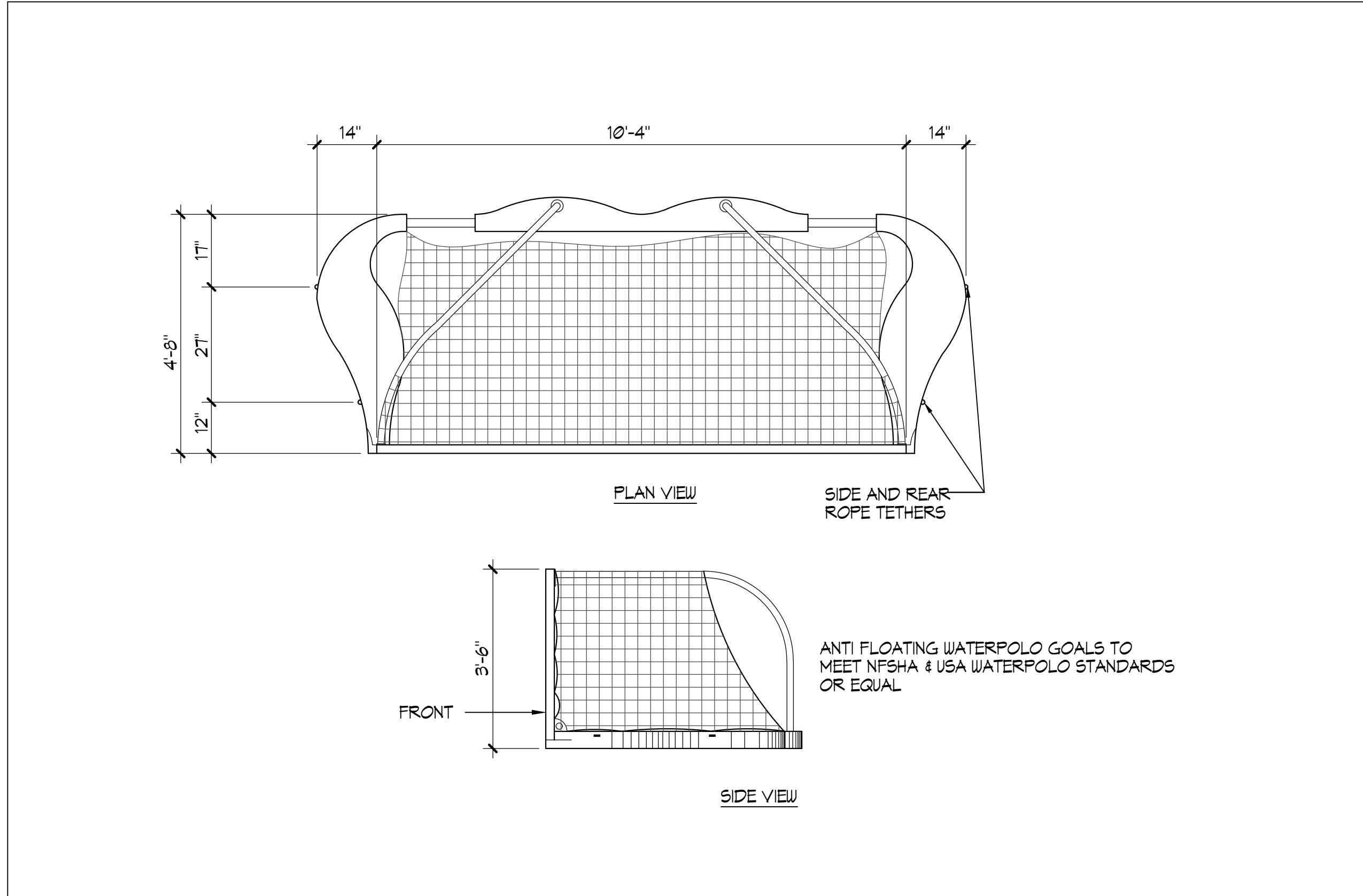
4 MOVEABLE LIFEGUARD CHAIR

3/4" = 1'-0"

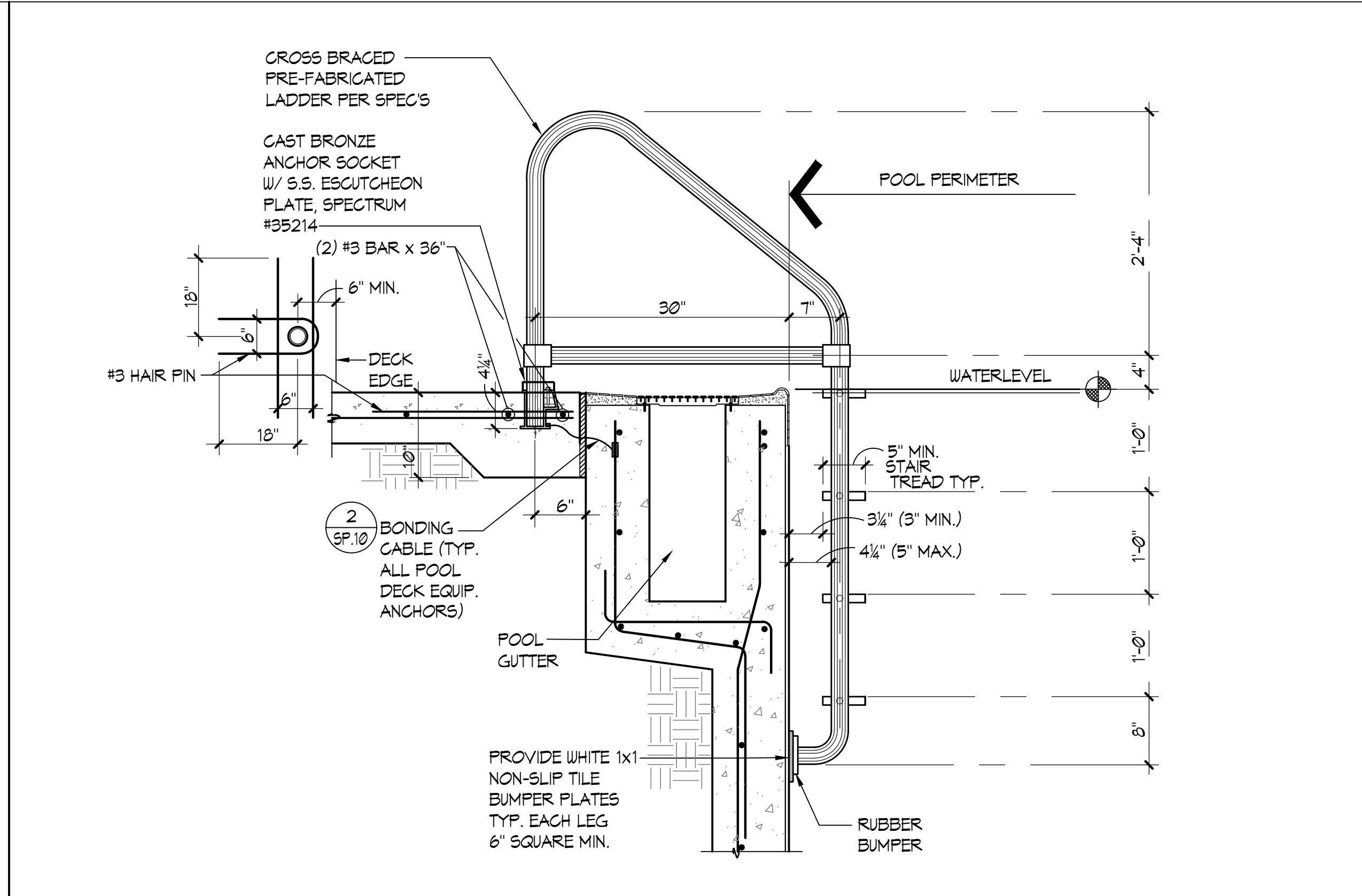


5 CUP ANCHOR

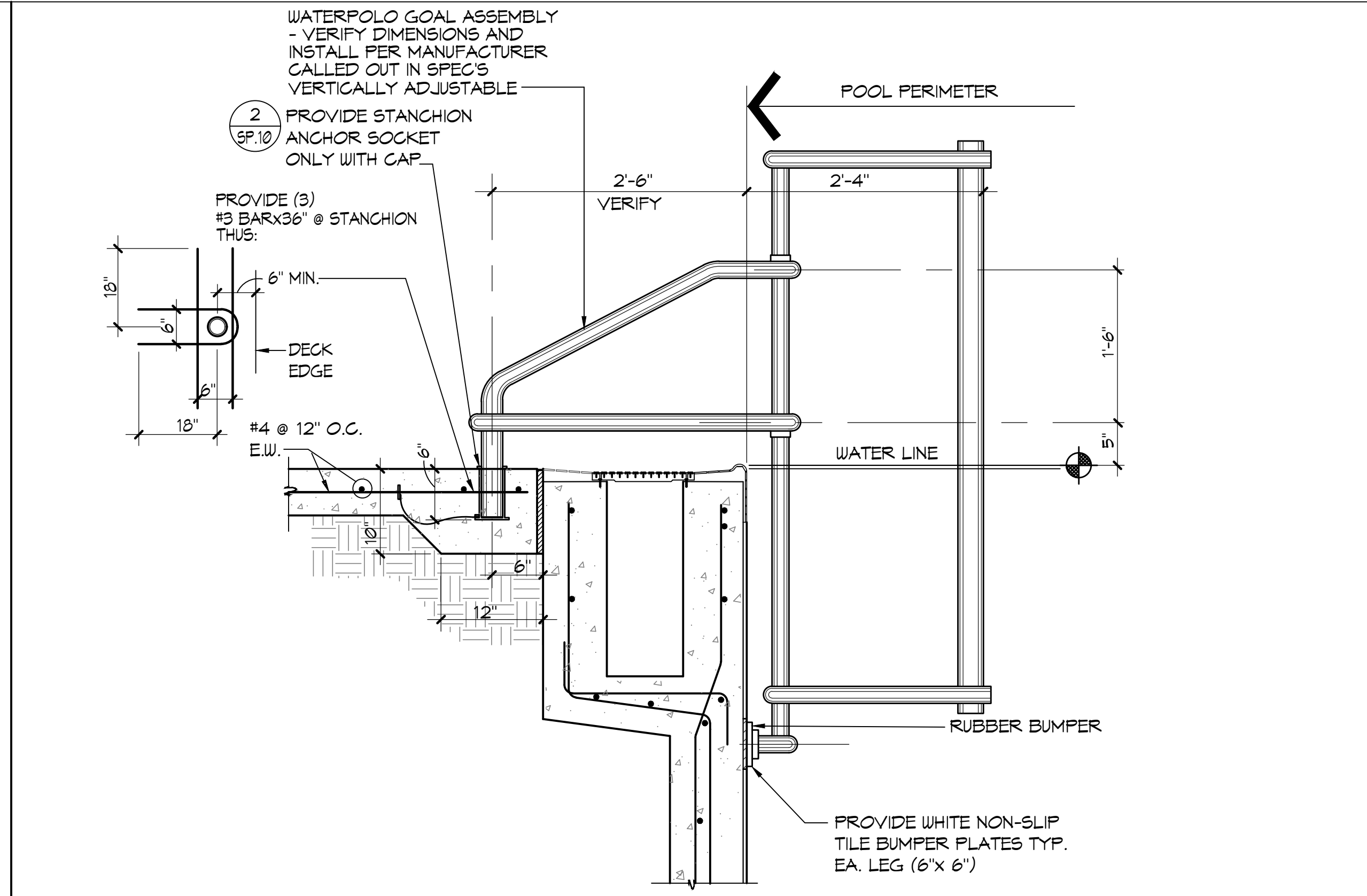
1/2" = 1'



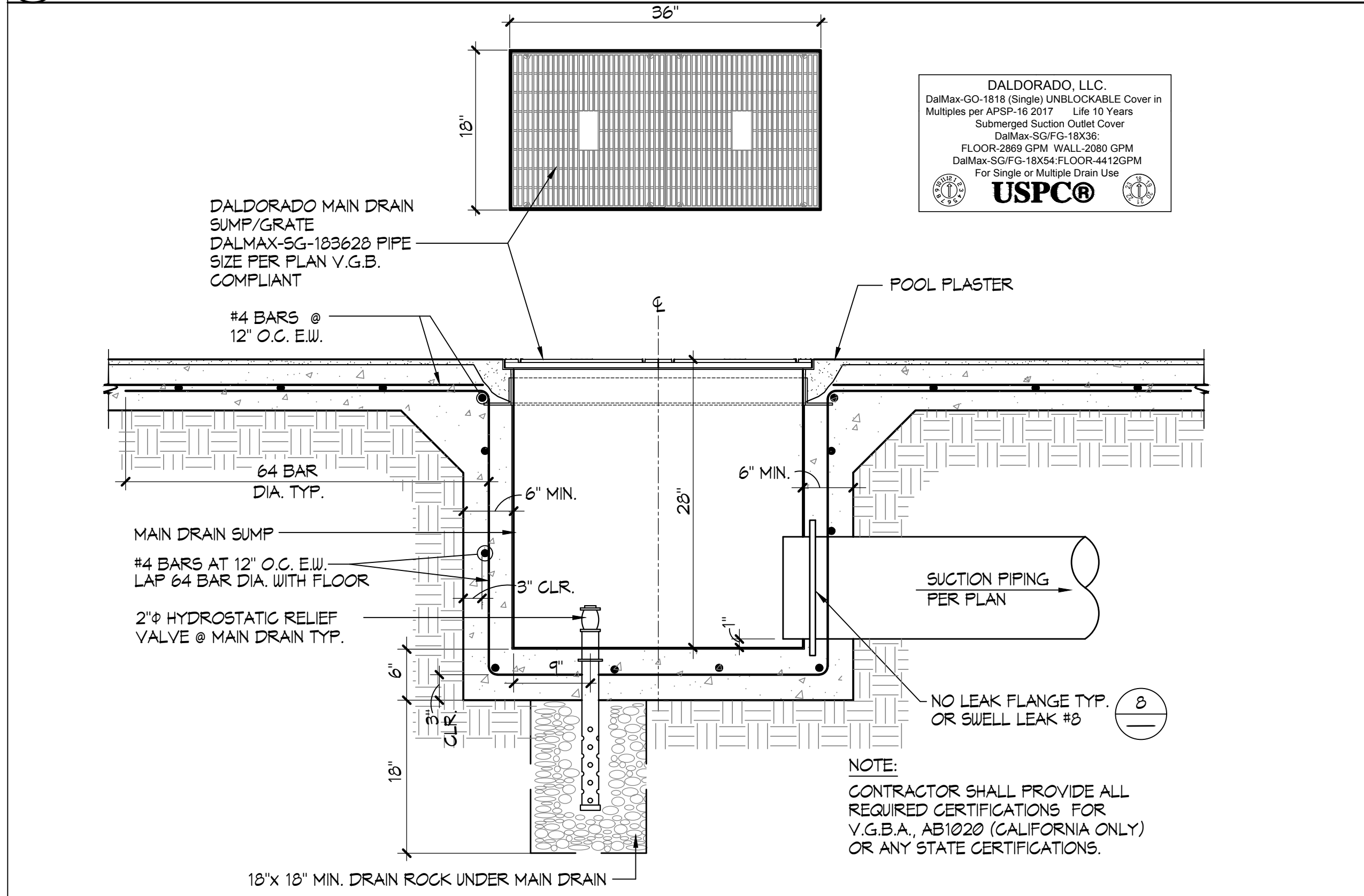
① **FLOATING WATER POLO GOALS** 1/2"=1'-0"



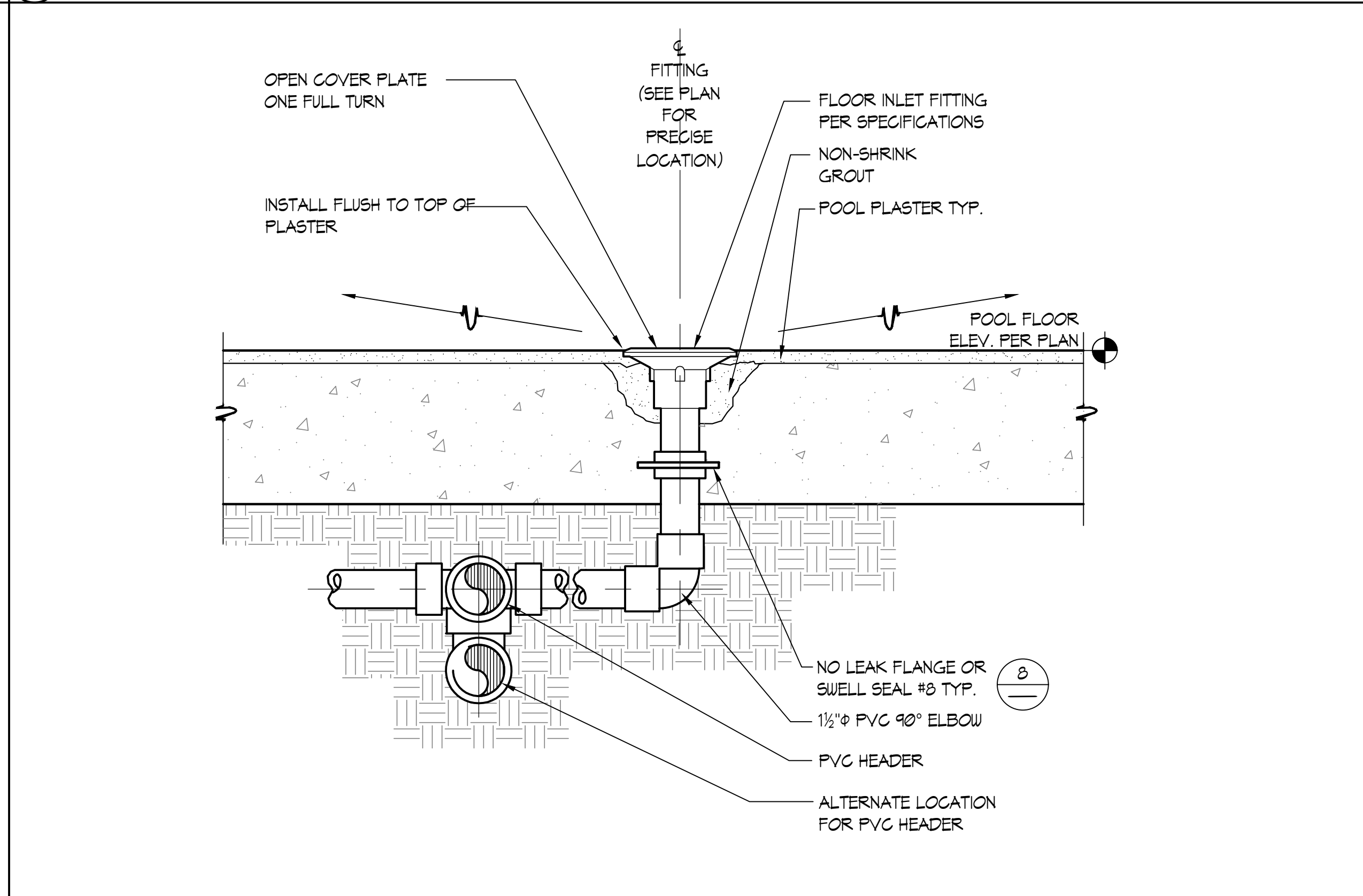
② **POOL LADDER** 1"=1'-0"



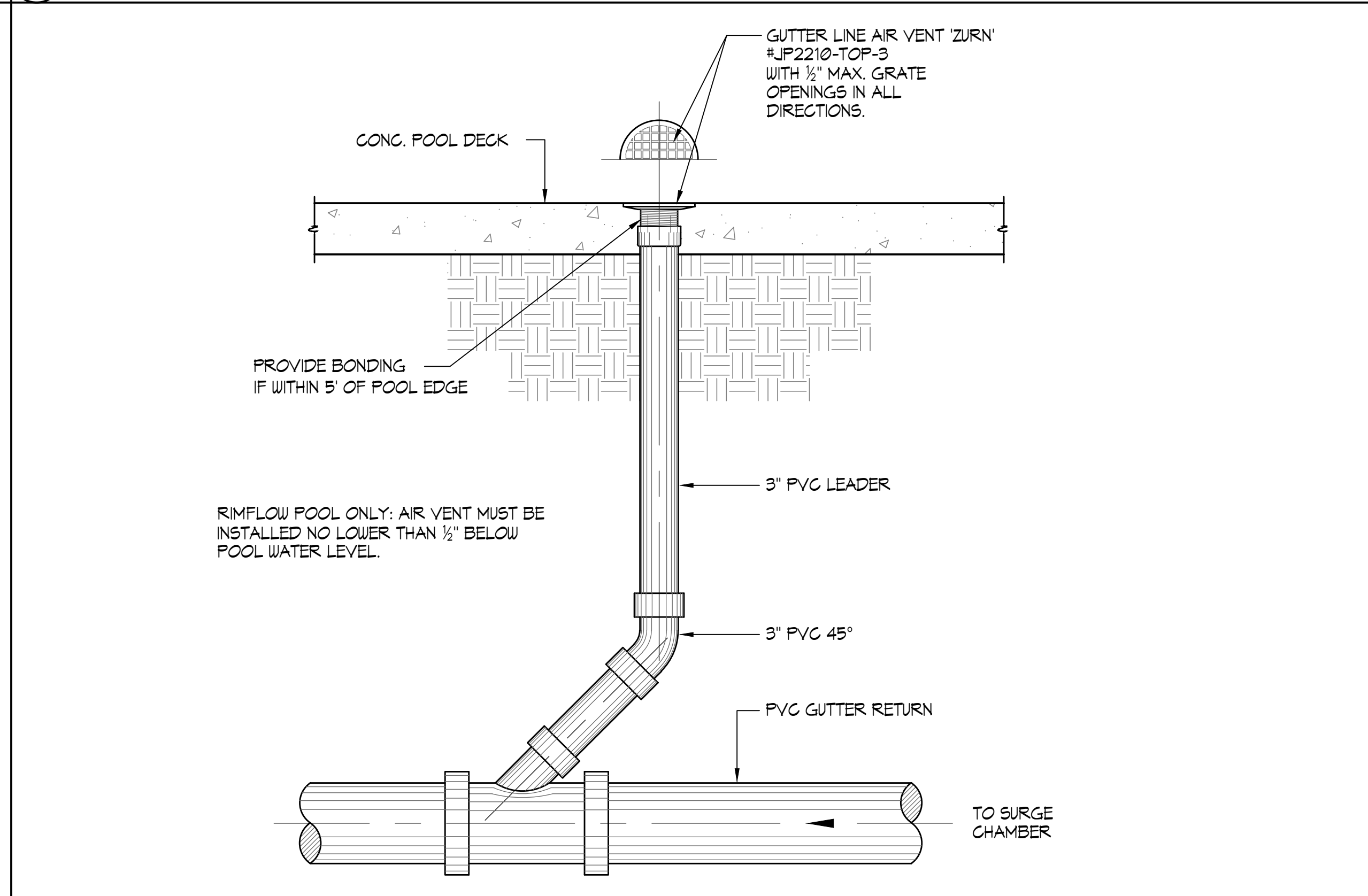
③ **WATERPOLO GOAL** 1"=1'-0"



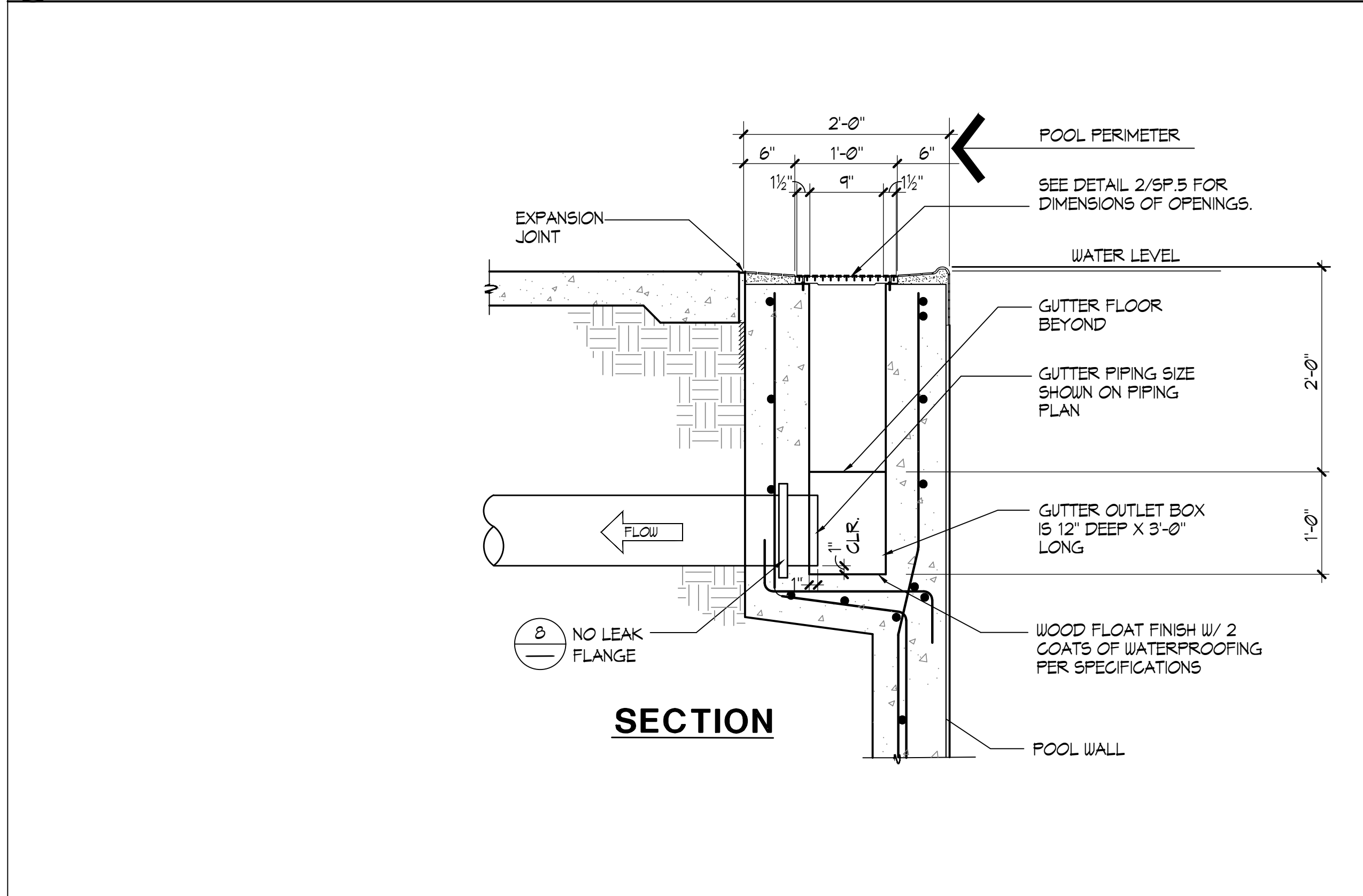
④ **MAIN DRAIN** 1"=1'-0"



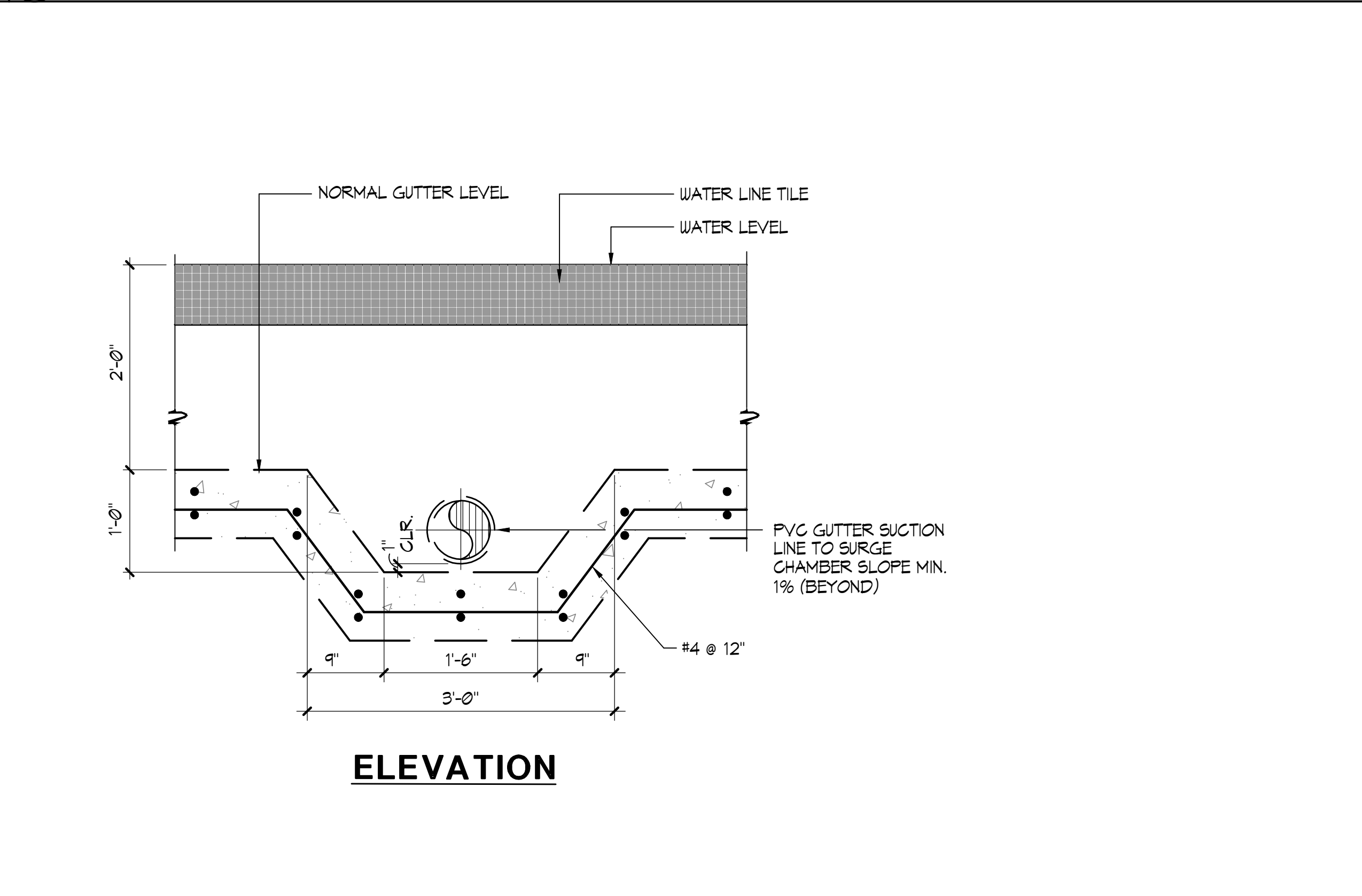
⑤ **FLOOR INLET** 3/8"=1'-0"



⑥ **AIR VENT** 1"=1'-0"



⑦ **GUTTER OUTLET** 1"=1'-0"

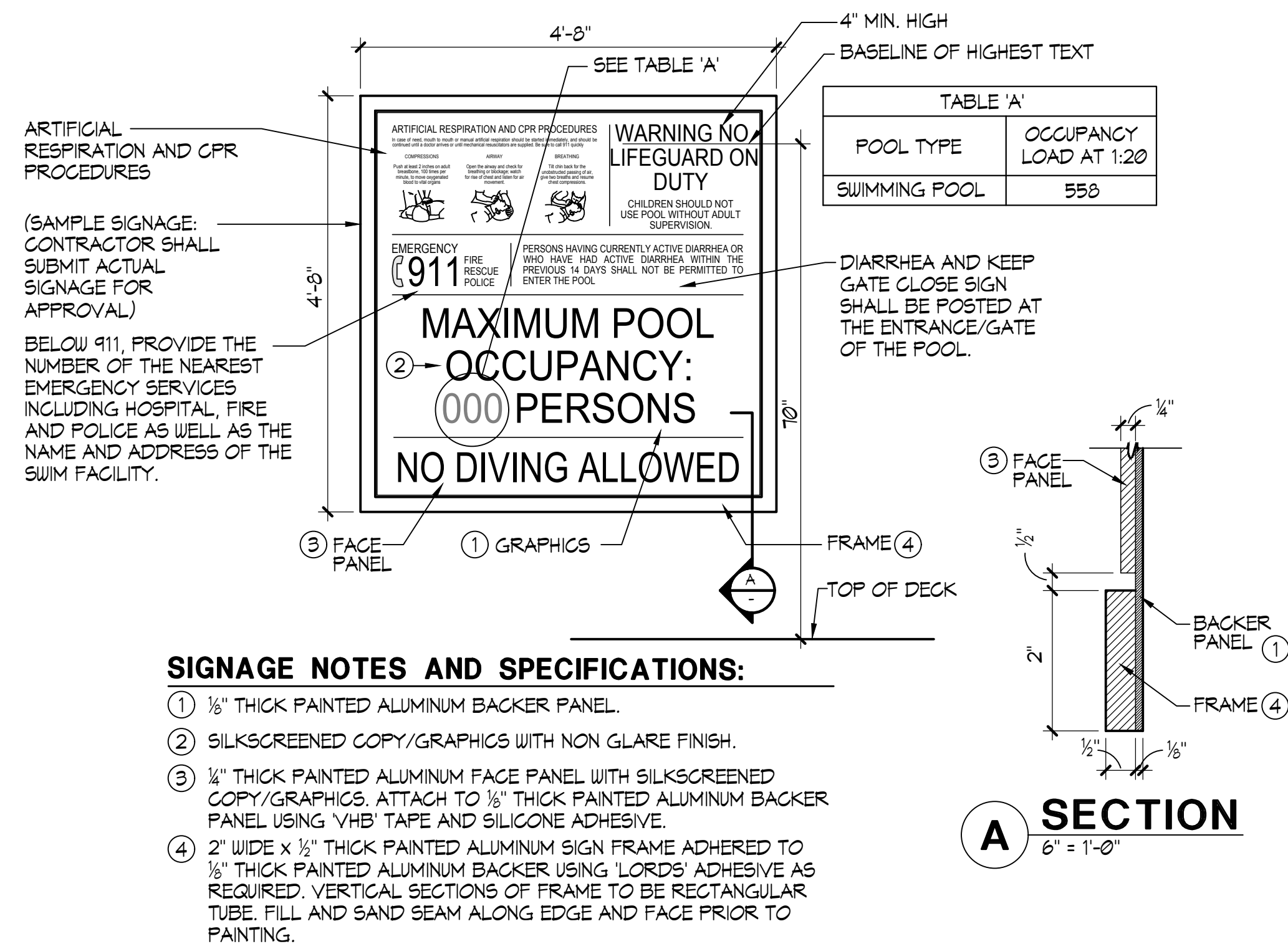


⑧ **WATER STOP DETAIL** NO SCALE



- 6 UNDERWATER LIGHT JUNCTION BOX / HOSE BIB CONCRETE SURROUND DETAIL 1"=1'-0"**





REQUIRED SIGNAGE:

- ALL SIGNS SHALL HAVE CLEARLY LEGIBLE LETTERS OR NUMBERS NOT LESS THAN 4 INCHES HIGH, UNLESS OTHERWISE NOTED; AFFIXED TO A WALL, POLE, GATE, OR SIMILAR PERMANENT STRUCTURE IN A LOCATION VISIBLE TO ALL POOL USERS.
 - POOL USER CAPACITY SIGN; A SIGN SHALL INDICATE THE MAXIMUM NUMBER OF POOL USERS PERMITTED FOR EACH POOL. LETTERS AND NUMBERS TO BE NOT LESS THAN 4 INCHES HIGH.
 - NO LIFEGUARD SIGN; WHERE NO LIFEGUARD SERVICE IS PROVIDED, A WARNING SIGN SHALL BE POSTED STATING, "NO LIFEGUARD ON DUTY." THE SIGN ALSO SHALL STATE IN LETTERS AT LEAST 1 INCH HIGH, "CHILDREN SHOULD NOT USE POOL WITHOUT ADULT SUPERVISION."
 - ARTIFICIAL RESPIRATION AND CARDIO PULMONARY RESUSCITATION SIGN; AN ILLUSTRATED DIAGRAM WITH TEXT AT LEAST 1/4 INCH HIGH OF ARTIFICIAL RESPIRATION AND CARDIO PULMONARY RESUSCITATION PROCEDURES SHALL BE POSTED.
 - EMERGENCY SIGN; THE EMERGENCY TELEPHONE NUMBER 911, WITH NUMBERS NOT LESS THAN 4 INCHES. THE NUMBER OF THE NEAREST EMERGENCY SERVICES AND THE NAME AND STREET ADDRESS OF THE POOL FACILITY SHALL BE POSTED WITH NUMBERS AND TEXT AT LEAST 1 INCH HIGH.
 - NO USE AFTER DARK; WHERE POOLS WERE CONSTRUCTED FOR WHICH LIGHTING WAS NOT REQUIRED, A SIGN SHALL BE POSTED AT EACH POOL ENTRANCE ON THE OUTSIDE OF THE GATE(S) STATING, "NO USE OF POOL ALLOWED AFTER DARK."
 - KEEP CLOSED; A SIGN SHALL BE POSTED ON THE EXTERIOR SIDE OF GATES AND DOORS LEADING INTO THE POOL ENCLOSURE AREA STATING, "KEEP GATE CLOSED" OR "KEEP DOOR CLOSED".
 - DIARRHEA; THE POOL OPERATOR SHALL POST AT THE ENTRANCE AREA OF A PUBLIC POOL A SIGN IN LETTERS AT LEAST ONE INCH HIGH THAT CLEARLY STATES THAT PERSONS WITH DIARRHEA AND PERSONS WHO HAVE HAD DIARRHEA WITHIN THE PRIOR 14 DAYS SHALL NOT ENTER THE POOL WATER.
- DIRECTION OF FLOW SIGNAGE AND LABELS.
 - THE DIRECTION OF FLOW FOR THE REGULATION EQUIPMENT SHALL BE LABELED CLEARLY WITH DIRECTIONAL SYMBOLS SUCH AS ARROWS ON ALL PIPING IN THE EQUIPMENT AREA.
 - WHERE THE REGULATION EQUIPMENT FOR MORE THAN ONE POOL IS LOCATED ON SITE, THE EQUIPMENT SHALL BE MARKED AS TO WHICH POOL THE SYSTEM SERVES.
 - VALVES AND PLUMBING LINES SHALL BE LABELED CLEARLY WITH THE SOURCE OR DESTINATION DESCRIPTIONS.

1

POOL SIGNAGE DETAIL

3/4" = 1'-0"

① SWIMMING POOL STRAINER: FLUIDTROL® RSW SERIES FRP REDUCING BASKET STRAINER RSJ16112231; ONE (1) 12"X8" STANDARD, WITH ACRYLIC LID AND TWO (2) STAINLESS STEEL STRAINERS EA. (141lbs.)

② SWIMMING POOL CIRCULATION PUMP: PACO® #60151, 5"X8"X15" TYPE LC END SUCTION CENTRIFUGAL PUMP; 115 GPM @ 460V, 3PH, RATED AT 1,465 GPM @ 60 FT. TDH, 82.84% EFFICIENT, PREMIUM EFFICIENCY TEFC MOTOR, EPOXY COAT ALL WET SURFACES, PACO®, AURORA® OR EQUAL, (760 lbs.) PROVIDE SPCS EKO-FLEX PUMP CONTROL SYSTEM VARIABLE SPEED DRIVE MODEL SPCS040N4X4 (26"X9"X10" DRIVE AND 24"X24"X10" PANEL), COORDINATE MOUNTING LOCATION TO MAINTAIN DESIRED CLEARANCES, 460V 3PH. (316 lbs.)

③ SWIMMING POOL FILTERS: TWO (2) EKO-42230-1206-15" AUTOMATIC FILTER CONTROL (AFC) FULLY AUTOMATIC HIGH PRESSURE SYSTEMS FILT WITH 115 SQ. FT. OF FILTER AREA, RATED AT 1,125 GPM AT 15' WATER HEAD, COMPLETE WITH 12" FACE PIPING, 6" BACKWASH, 3" SEISMIC ANCHORAGE PROVIDED UTILITIES, PIPING, VALVING ETC. (9,155 lbs EACH TANK) EKO® SYSTEMS GEN 2' OR EQUAL. PROVIDE SIGNET PS1530-PX FLOSENSOR WITH DIGITAL READ-OUT, ONE (1) SYSTEM TOTAL.

④ SWIMMING POOL HEATER(S): INDIRECT FIRED POOL HEATING PACKAGE SYSTEM, AQUAS GREST WITH SMARTTOUCH CONTROL CONDENSING MODULATING BURNER, TITANIUM PLATE AND FRAME HEAT EXCHANGER WITH CPVC CONNECTIONS, FACTORY ASSEMBLED SKID MOUNTED PACKAGE, AQUACODE CODE CONTROLS, 1½" NATURAL GAS CONNECTION, 3" WATER CONNECTIONS, 8" DIAMETER VENT SIZE, 8" AIR INLET, PVC VENTED, 1,999,000 BTU PER HOUR INPUT, 91% EFFICIENT, PROVIDE ¾" COLD WATER TO EACH UNIT WITH ADJACENT FLOOR SINK FOR CONDENSATE. LOCHINVAR AF02000, WEIGHT = 3,391 lbs. EA. TWO (2) TOTAL.

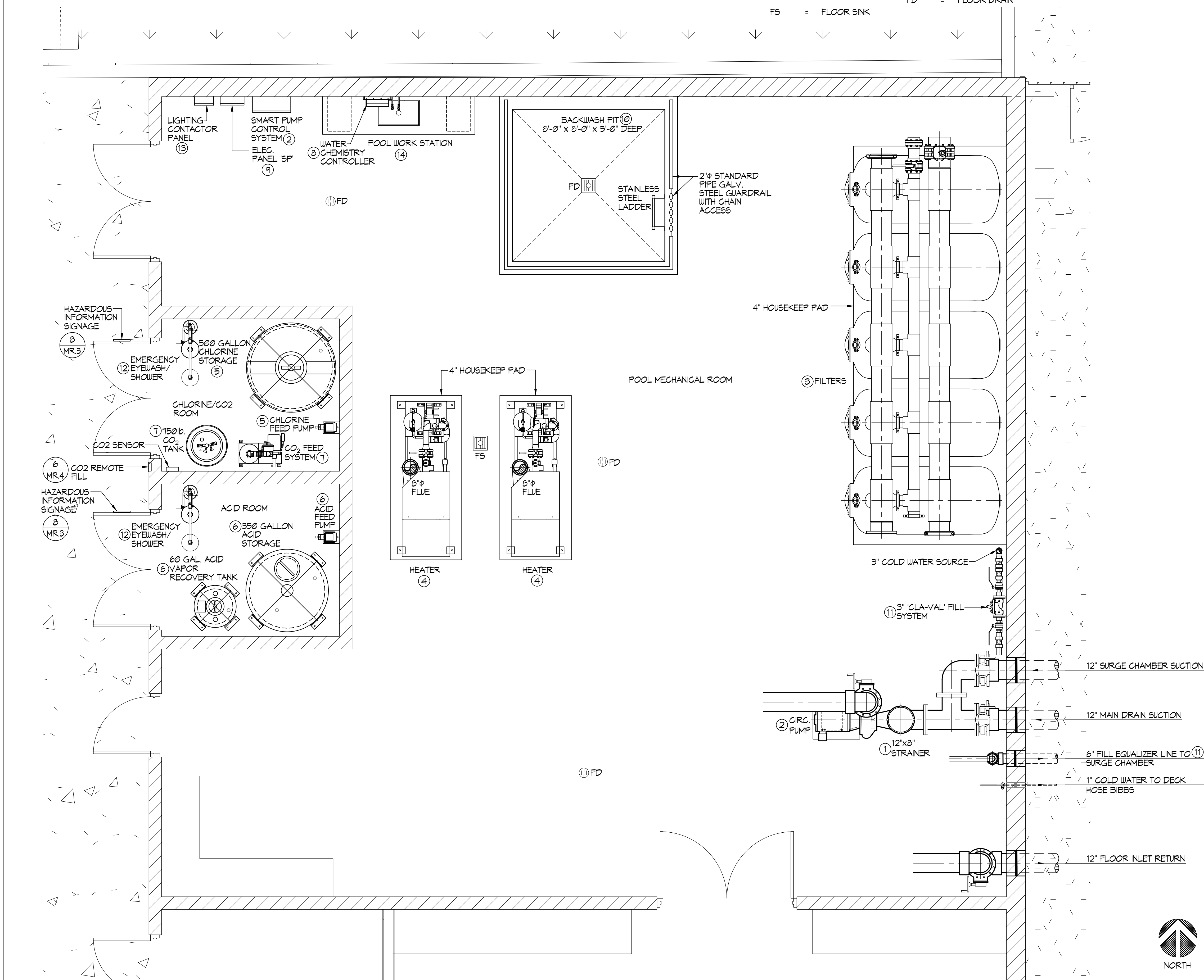
⑤ CHLORINE STORAGE/FEED SYSTEM: PROVIDE CHEM-TAINER® 300 GALLON HCS591TDC, DUAL STORAGE/CONTAINMENT TANK WITH LID SEISMICALLY RESTRAINED, OPERATING WEIGHT = (4,165 lbs). TWO (2) TOTAL, COMPLIES WITH FEED, REG #40CFR-264-193. FEED PUMPS SHALL BE STENNER® #170DM5, 110 GPD @ 25 PSI WITH FRP SPLIT BRACKETS. ONE (1) TOTAL, HARD PIPE TO POINT OF INJECTION.

⑥ ACID STORAGE/FEED SYSTEM: PROVIDE CHEM-TAINER® 350 GALLON HCS256D2, DUAL STORAGE/CONTAINMENT TANK WITH LID SEISMICALLY RESTRAINED, OPERATING WEIGHT = (2,415 lbs), COMPLIES WITH FEED, REG #40CFR-264-193, PROVIDE 60 GALLON ACID VAPOR RECOVERY SYSTEM, ONE (1) TOTAL, FEED PUMP SHALL BE STENNER® #25M-5, 85 GPD @ 25 PSI WITH FRP SPLIT BRACKETS. PROVIDE SPARE PARTS KIT.

⑦ CARBON DIOXIDE STORAGE FEED SYSTEM: PROVIDE ONE (1) NOVO-750®, 750 lb. CRYOGENIC LIQUID CO2 STORAGE TANK WITH REMOTE FILL PORT, 594 LIQUID LBS., (9,198 CUBIC FEET OF GASEOUS CO2 AT NTP) ONE (1) 1/2" PIPING SYSTEM CO2 HIGH PRESSURE FEED PUMP, 110 GPD @ 25 PSI, 1/2" PIPING TO 12 TO 160 SCFH FEED CAPACITY BOOSTER PUMP, PIPING INJECTOR, FLOUMETER, FLOUMETER, RELAYS AND ACID FEED ALKALINITY CONTROL, ONE (1) SYSTEM TOTAL (92lbs. EA) PROVIDE HARD WIRED ANALOX® #API KIT CO2 DETECTOR WITH AUDIBLE AND VISUAL ALARMS IN EACH CHEMICAL ROOM, UL 1911 STANDARD LISTED, ONE (1) TOTAL.

- | | | | | | |
|------|------|---|---|---|---|
| 5 | 7 | 2 | 4.5 | 8 | WATER CHEMISTRY CONTROLLER: PROVIDE ETHERNET CONNECTION TO BECSYS CS-BECSYS-BP-E WATER CHEMISTRY CONTROLLER. PROVIDE COMPLETE SYSTEM CONTROL PACKAGE. BECSYS SYSTEM T, IMPACT, WALLACE & TIERNAN OR APPROVED EQUAL. |
| MR.4 | MR.4 | MR.5 | MR.5 | | |
| 5 | 6 | 9 | ELECTRICAL: PROVIDE ALL ELECTRICAL WIRING, CONDUIT, PANEL(S), STARTER/DISCONNECT INTERCONNECT(S) ETC. AS REQUIRED FOR PROPER EQUIPMENT INSTALLATION PER MANUFACTURERS RECOMMENDATIONS AND SHOP DRAWINGS. COORDINATE ALL WORK WITH OTHER TRADES AS REQUIRED. REFER TO ELEC. PLANS FOR ALL ADDITIONAL INFO. | | |
| MR.4 | MR.5 | | | | |
| 8 | 10 | BACKWASH PIT: 8'-0" x 8'-0" x 5'-0" DEEP WITH 6" P-TRAP OUTLET TO SEWER. PROVIDE WATERPROOFING PER SPECIFICATIONS. PROVIDE 2" GALV. STANDARD STEEL PIPE GUARDRAIL. ACCESS LADDER TO BE CUSTOM STAINLESS STEEL LADDER. COORDINATE WITH STRUCTURAL AND PLUMBING PLANS. | | | |
| MR.5 | | | | | |
| 8 | 11 | FILL SYSTEM: 3" CLAY-VALV. FILL SYSTEM TO INCLUDE 3" CLAY-VALV. SOLENOID CONTROL VALVE 1/32-01BY, 3" CAST IRON 150# RETAINER AND 1/2" DIA. 150# RETAINER. DISCONNECT AND PUMP OUT THE TRIM, FLANGED GLOBE PATTERN, 120" AT 60HZ. SOLIDWIRING SHALL BE WIRED TO WATER CHEMISTRY CONTROLLER. PROVIDE 6" AIR GAP AT FILL POINT. | | | |
| MR.5 | | | | | |
| 7 | 12 | EYEWASH/SHOWER: HAWS MODEL #3030-3304CRP BARRIER FREE COMBINATION SHOWER AND EYE/FACE WASH WITH CORROSION RESISTANT PROTECTION. SEE MEP SHEETS FOR SUPPLY PIPING, TWO (2) TOTAL. | | | |
| MR.5 | | | | | |
| 9 | 13 | LIGHTING CONTACTOR PANEL: ALLEN BRADLEY #500L, OR APPROVED EQUAL. PANEL SHALL BE MOUNTED IN A NEMA 12 HINGED COVER - LOCKABLE ENCLOSURE. CONTACTORS TO BE SWITCHED BY MOMENTARY SWITCH GEAR TO HUBBED IN J-BOX IN MECHANICAL ROOM. REFER TO ELECTRICAL PLANS FOR LOCATION OF QUINER COORDINATED REMOTE UNDERWATER LIGHT SWITCH. | | | |
| MR.7 | | | | | |
| 1 | 14 | POOL OPERATOR WORKSTATION DESK: TOTAL LAB SOLUTIONS' EPOXY COUNTERTOP WITH DROP-IN SINK AND TWO (2) END CABINETS. FURNISH WITH WALL MOUNTED TWO (2) FAUCETS BROEN BOSS' OR APPROVED EQUAL. SEE MEP PLANS FOR WATER SUPPLY PIPING. | | | |
| MR.6 | | | | | |

BV	=	BALL VALVE	AI	=	ACID INJECTION
BFV	=	BUTTERFLY VALVE	CI	=	CHLORINE INJECTION
CV	=	CHECK VALVE	PH / PS	=	PIPE HANGER / PIPE SUPPORT
FM	=	FLOWMETER	PG/VG	=	VACUUM / PRESSURE GAUGE
BW	=	BACKWASH	FD	=	FLOOR DRAIN
FS	=	FLOOR SINK			



SWIMMING POOL CIRCULATION PUMP: 40 HP @ 460V = 52 AMPS

1. THE PIPING SYSTEM SHALL HAVE DIRECTION OF FLOW ARROWS INDICATED ON THE PIPES.
2. PUBLIC POOLS SHALL HAVE A FLOW DIAGRAM OF THE POOL'S PIPING SYSTEM WITH OPERATION INSTRUCTIONS.
3. THE FLOW DIAGRAM AND INSTRUCTIONS SHALL BE AVAILABLE ON THE PREMISES AT ALL TIME
4. ALL MECHANICAL ROOM FLOORS SHALL BE SLOPED A MIN 1/8" PER FOOT TO A DRAIN PER CBC 3122B. SEE ARCHITECTURAL SHEETS FOR SPOT ELEVATIONS AND SLOPES.
5. ALL ELECTRICAL CONDUITS WITHIN MECHANICAL ROOMS SHALL BE Labeled WITH THE FLUID NEMA 3B SUITABLE FOR CORROSIVE ATMOSPHERE.
6. ALL CHEMICAL FEED SYSTEMS ARE INTERLOCKED WITH THEIR ASSOCIATED CIRCULATION PUMPS AND SHALL NOT OPERATE WHEN THE PUMP IS OFF DURING THE FILTER BACKWASH.

GAS FIRED POOL HEATER(S) INSTALLED ON A GAS SUPPLY SYSTEM UTILIZING A 2 PSI OR 5 PSI SUPPLY. GAS PRESSURE SHALL REQUIRE A REGULATOR TO REDUCE THE SUPPLY PRESSURE. A PROPERLY SIZED AND INSTALLED LOCK-UP-TYPE HIGH GAS PRESSURE REGULATOR (HGPR) SHALL BE USED TO REDUCE THE GAS PRESSURE AT THE UNIT INLET TO A MINIMUM OF 4" TO A MAXIMUM OF 11" WATER COLUMN.

LOCKHVAR RECOMMENDS THAT ANY REQUIRED LINE LOCK-UP-TYPE HIGH GAS PRESSURE REGULATOR BE INSTALLED WITH A MINIMUM OF 2 FEET TO 3 FEET OF PIPE FROM ITS DISCHARGE TO THE UNIT'S GAS INLET. IF A STRAIGHT DISCHARGE OF GAS PIPE IS NOT AVAILABLE, THE ADDITION OF A VERTICAL V IN THE GAS PIPING DOWN STREAM FROM THE HGPR CAN BE USED TO ACHIEVE THE 8 FEET TO 10 FEET OF DISTANCE.

CONTRACTOR IS RESPONSIBLE FOR HEATER VENTING, EXHAUST DUCTING, FUELE TERMINUS AND PENETRATIONS(S) THROUGH BUILDING STRUCTURE.

1. EXPANSION OR WEDGE ANCHORS INTO CONCRETE: HLTI KB T2 2 (ICC ESR-4266) TO BE INSTALLED IN ACCORDANCE WITH ICC REPORT AND MANUFACTURER'S RECOMMENDATIONS.
2. EXPANSION OR WEDGE ANCHORS INTO MASONRY: HLTI KB T2 2 (ICC ESR-4561) TO BE INSTALLED IN ACCORDANCE WITH ICC REPORT AND MANUFACTURER'S RECOMMENDATIONS.
3. FASTENERS SHALL BE STAINLESS STEEL FOR EXTERIOR USE OR WHEN EXPOSED TO WEATHER. PROVIDE GALVANIZED CARBON STEEL ANCHORS AT OTHER LOCATIONS, UNLESS OTHERWISE NOTED.
4. IF REINFORCEMENT IS ENCOUNTERED DURING DRILLING, ABANDON AND SHIFT THE HOLE LOCATION. LOOPEE THE REINFORCEMENT, PROVIDE A MINIMUM OF 2 ANCHOR DIAMETERS OR 1 INCH, WHICHEVER IS LARGER, OF SOUND CONCRETE BETWEEN THE DOUEL AND THE ABANDONED HOLE. FILL THE ABANDONED HOLE WITH NON-SHRINK GROUT WITH CONCRETE STRENGTH EQUAL TO OR GREATER THAN BASE MATERIAL. IF THE ANCHOR OR DOUEL MAY NOT BE SHIFED AS NOTED ABOVE, THE STRUCTURAL ENGINEER WILL DETERMINE A NEW LOCATION.
5. LOCATE REINFORCEMENT AND CONFIRM FINAL ANCHOR LOCATIONS PRIOR TO FABRICATING PLATES, MEMBERS, OR OTHER STEEL ASSEMBLIES ATTACHED WITH MECHANICAL ANCHORS.
6. ANCHORS SHALL BE PROOF-TESTED BY OWNER'S TESTING AND INSPECTION AGENCY.
7. TEST ANCHORS NO SOONER THAN 24 HOURS AFTER INSTALLATION.
8. APPLY TEST LOAD BY ANY METHOD THAT WILL EFFECTIVELY MEASURE THE TENSION OF THE ANCHOR SUCH AS DIRECT PULL WITH A HYDRAULIC JACK, TORQUE WRENCH, OR CALIBRATED SPRING LOAD/DEVIATION DEVICES, ETC.
9. REACTION LOADS FROM TEST FIXTURES MAY BE APPLIED CLOSE TO THE ANCHOR BEING TESTED, PROVIDED THE ANCHOR IS NOT RESTRAINED FROM WITHDRAWING BY A BASE PLATE OR OTHER FIXTURE. IF RESTRAINT IS FOUND, LOOSEN AND SHIM OR REMOVE THE FIXTURE PRIOR TO TESTING.
10. UNLESS OTHERWISE NOTED, PROVIDE MINIMUM EMBEDMENT OF ANCHORS AS SHOWN IN TABLES BELOW.
11. TEST 50% OF ANCHORS PER ONE OF THE FOLLOWING METHODS AND IN ACCORDANCE WITH THE VALUES SHOWN IN THE TABLE.
 - A. HYDRAULIC RAM METHOD: APPLY PROOF TEST LOAD WITHOUT REMOVING THE NUT. IF IT IS NOT POSSIBLE TO TEST WITH THE NUT INSTALLED, REPLACE THE NUT WITH A THREADED COUPLER TO THE LOAD. ANCHOR IS ACCEPTABLE IF NO MOVEMENT IS OBSERVED AT THE TEST LOAD. MOVEMENT MAY BE DETERMINED WHEN THE WASHER UNDER THE NUT BECOMES LOOSE.
 - B. TORQUE WRENCH METHOD: APPLY TEST ANCHORS TO THE TORQUE LOAD INDICATED IN THE TABLE WITH ONE-HALF TURN OF THE NUT.
12. IF ANY ANCHOR FAILS TESTING, REPLACE ANCHOR AND TEST ADDITIONAL ANCHORS OF THE SAME CATEGORY NOT PREVIOUSLY TESTED UNTIL TWENTY (20) CONSECUTIVE TESTS PASS, THEN RESUME INITIAL TESTING FREQUENCY. GGD WILL BE REQUIRED.

WEDGE OR EXPANSION ANCHOR EMBEDMENT DEPTH AND TEST LOAD				
SIZE	HLTI KB TZ 2 (SS) ANCHORS IN CONCRETE (ESR-4266)		KB TZ 2 (SS) ANCHORS IN CMU (ESR-4561)	
	MIN. EMBED (inEFT)	TORQUE LOAD (FT-LBS)	MIN. EMBED (inEFT)	TORQUE LOAD (FT-LBS)
¼" DIA.	1½"	6	1½"	6
⅜" DIA.	2½"	30	2½"	15
½" DIA.	3¾"	40	3¾"	25
⅝" DIA.	4"	60	4"	35
¾" DIA.	4¾"	125	4¾"	50

EPOXY REBAR PULL TESTING LOADS			
BAR SIZE	DEPTH	PRODUCT	TEST VALUE
#4	3" EMBED	HILTI HIT-HY 200 V3 (ICC ESR-4066)	1,050 LBS

INSTALLATION PARAMETERS:

- MINIMUM CONCRETE AGE: 21 DAYS
- DRILLING: HAMMER DRILLED
- TEMPERATURE: 14-114°F
- MOISTURE CONDITION: DRY OR SATURATED
- CLEANING: AUTOMATIC OR COMPRESSED-AIR

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA - APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING REQUIREMENTS SHALL BE ANCHORED OR BRED TO PROVIDE TENSILE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2022 CBC SECTIONS 1610A.1.10 THROUGH 1610A.1.26 AND ASCE 7-16 CHAPTERS 13, 26 AND 30.

1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
2. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. PERMANENTLY ATTACHED 500 INCHES OR MORE LONG CONNECTING CABLES OR CABLE PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE.
3. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE EQUIPMENT IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS:

- A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVING A CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT.
- B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH ABOVE REQUIREMENTS.

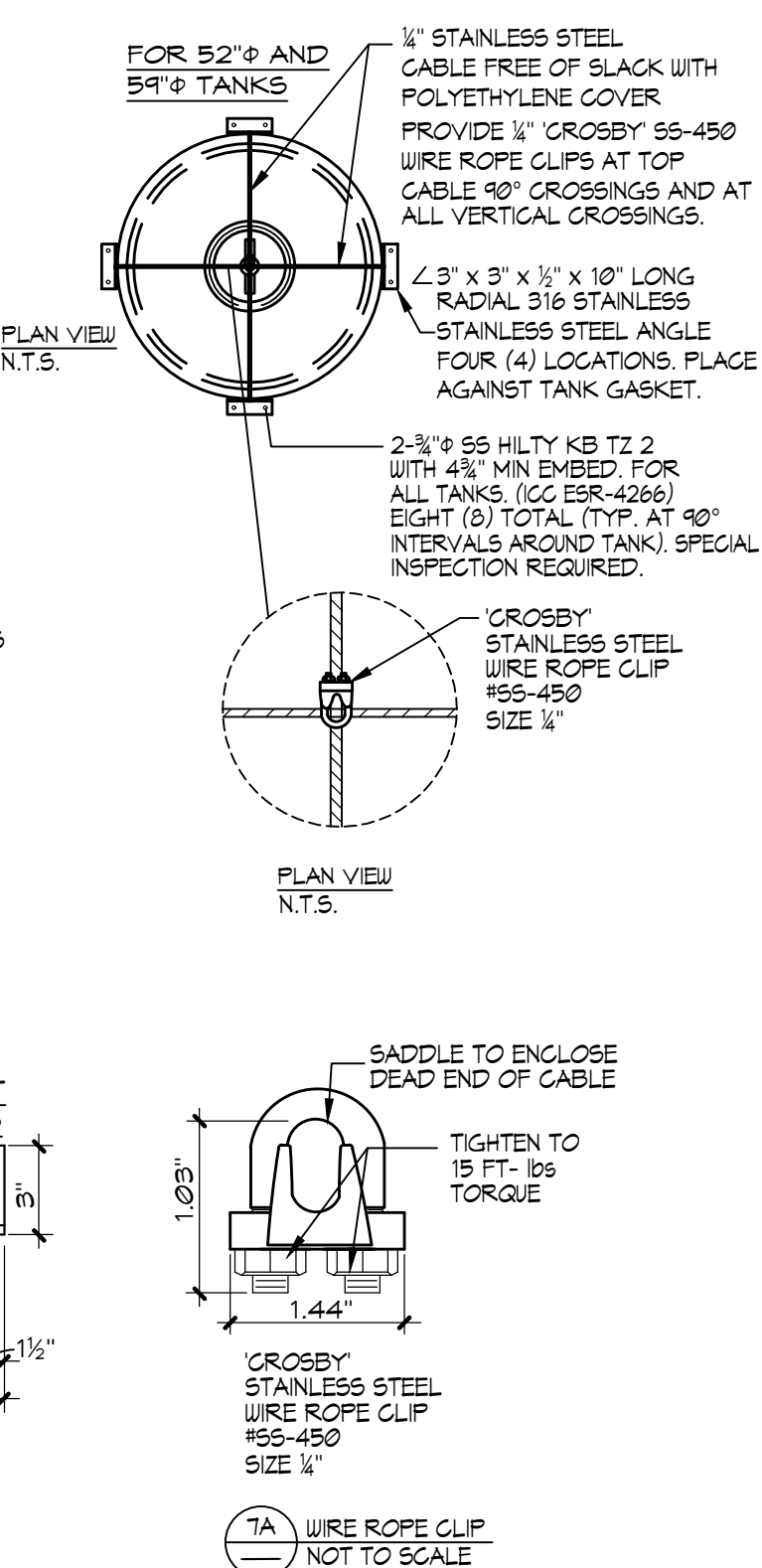
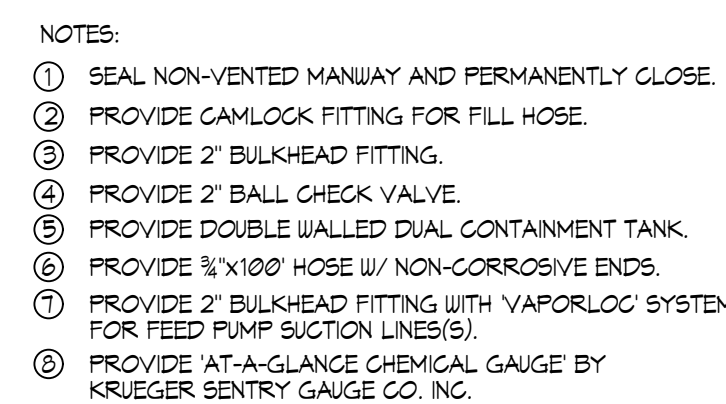
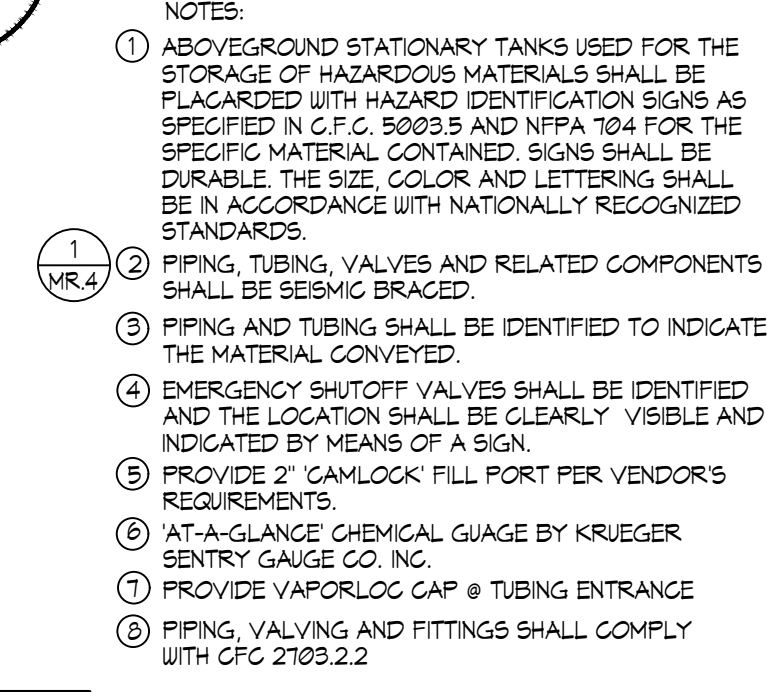
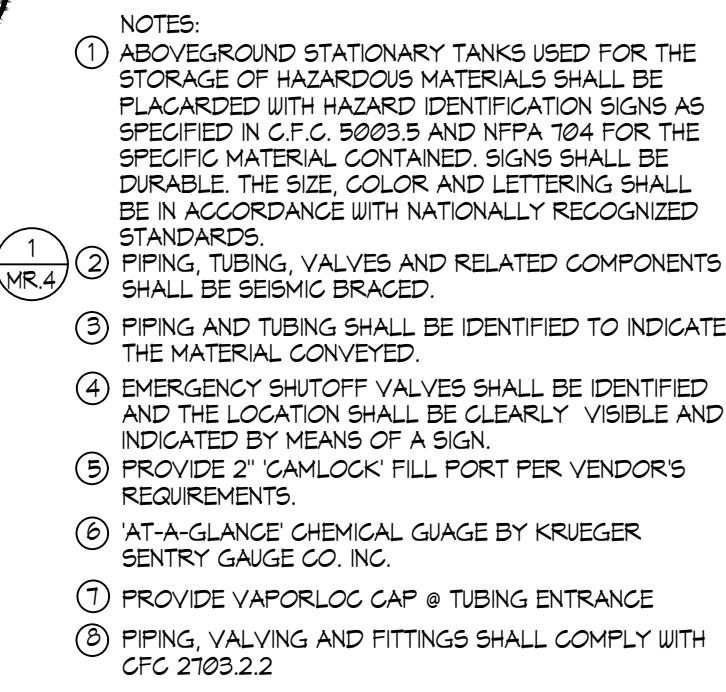
PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTION 13.6.5, 13.6.6, 13.6.7, 13.6.8; AND 2022 CBC, SECTIONS 1617A.1.24, 1617A.1.25, 1617A.1.26.

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., HCAI OPM FOR 2013 CBC OR LATER), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE TO THE JOBSITE UP TO THE START OF AND DURING THE BRACING AND RIGGING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL SUPERVISOR OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP),
ELECTRICAL DISTRIBUTION SYSTEMS (E):

MP ☒ MD ☐ PP ☐ E ☐ 1. SHALL COMPLY WITH HCAI (OSHPD) PRE-APPROVAL
(OPM #) OPM #0043-22 AS INCLUDED IN THESE
DRAWINGS WITH PROJECT SPECIFIC NOTED AND DETAILS.

$$\frac{9}{8}'' = 1' - 0'$$

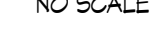
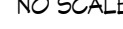
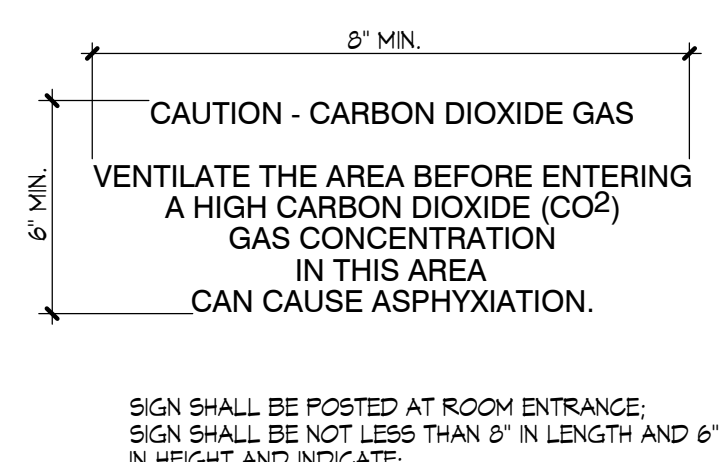


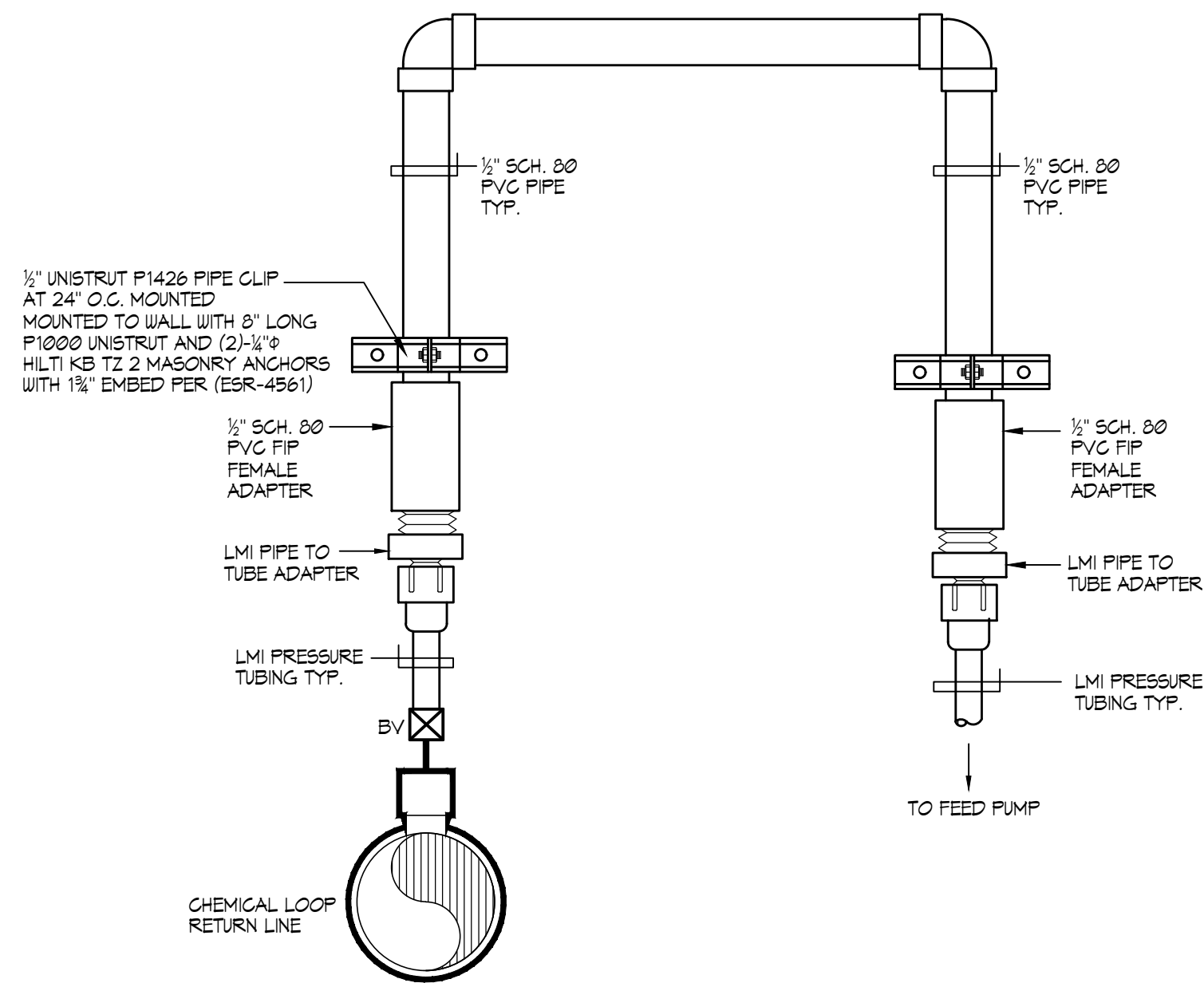
QUANTITIES OF CHEMICALS DO NOT EXCEED THE QUANTITIES LISTED IN CBC TABLES 307.1 (1) AND 307.1 (2).

FOR CARBON DIOXIDE GAS SEE TABLE 1.12.8(3) OF THE NFPA-1, 6,000 FT³ ALLOWABLE OR 656 LB. STORAGE PER CONTAINED AREA
PROVIDE HARD WIRED CO₂ DETECTOR ANALOG SENSOR TECHNOLOGY MODEL HART K1 SENSOR AND STORE UNITS 120V HARD WIRED W/ STROBE LIGHT AND
AUDIBLE ALARM. SENSOR MOUNTED 18 INCHES A.F.F. AND ALARM LEVEL BETWEEN 10-16 INCHES AND WITHIN VISIBLE EYESIGHT OF DOOR. TO BE SET TO DETECT
CO₂ GAS IN LEVELS IN EXCESS OF THE PEL. PROVIDE IN EACH ROOM CONTAINING CO₂

NOTES:

1. CONFIRM SIGNAGE WITH LOCAL FIRE MARSHALL AND/OR BUILDING CODES PRIOR TO INSTALLATION. SIGNS SHALL CONFORM TO NFPA 704.
2. SIGNS SHALL BE SIZES AND COLORS PER CODE MOUNTED AT +60" A.F.F. ON DOORS AT CHEMICAL ROOMS.

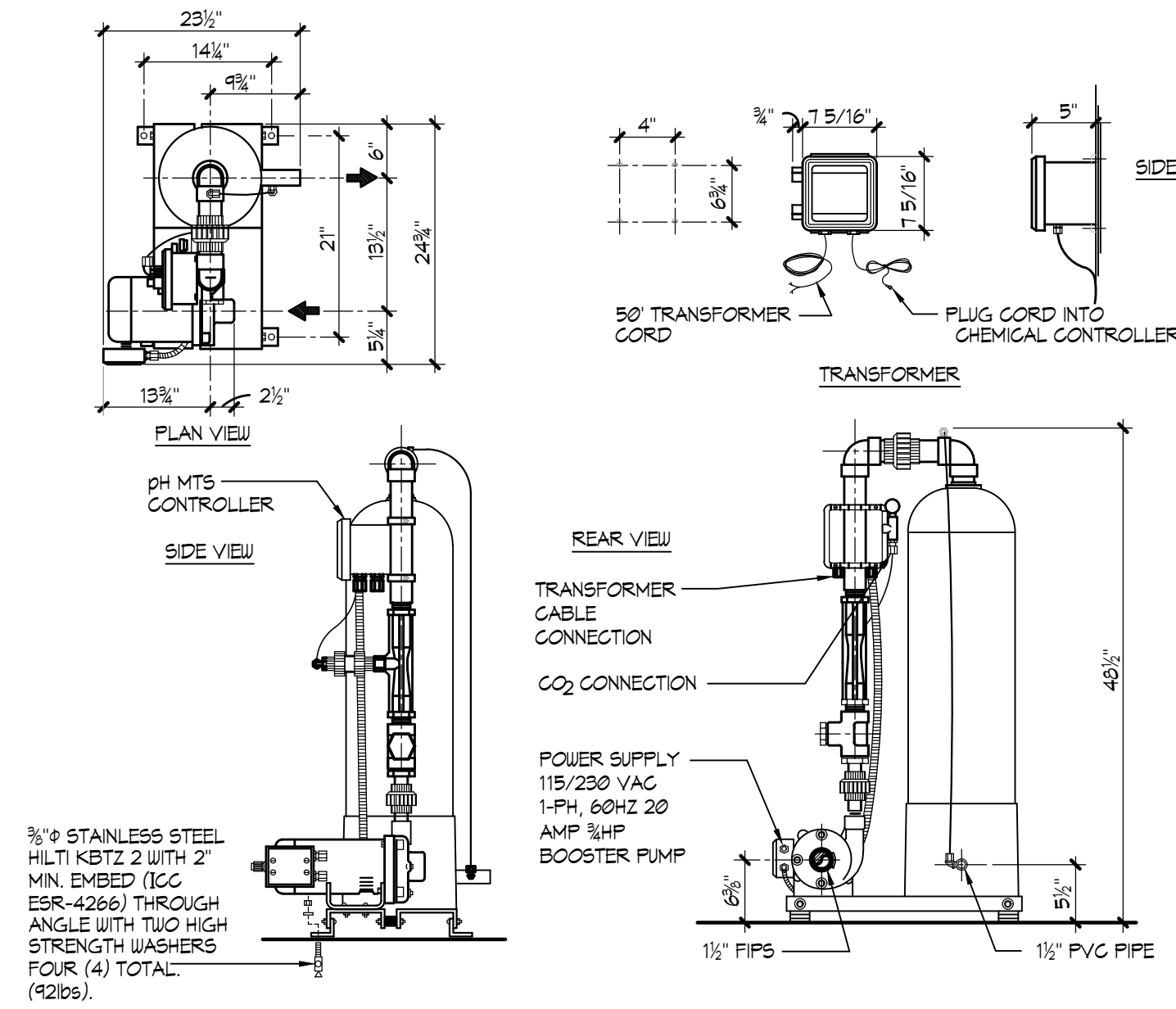




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CHEMICAL FEED PIPING DETAIL

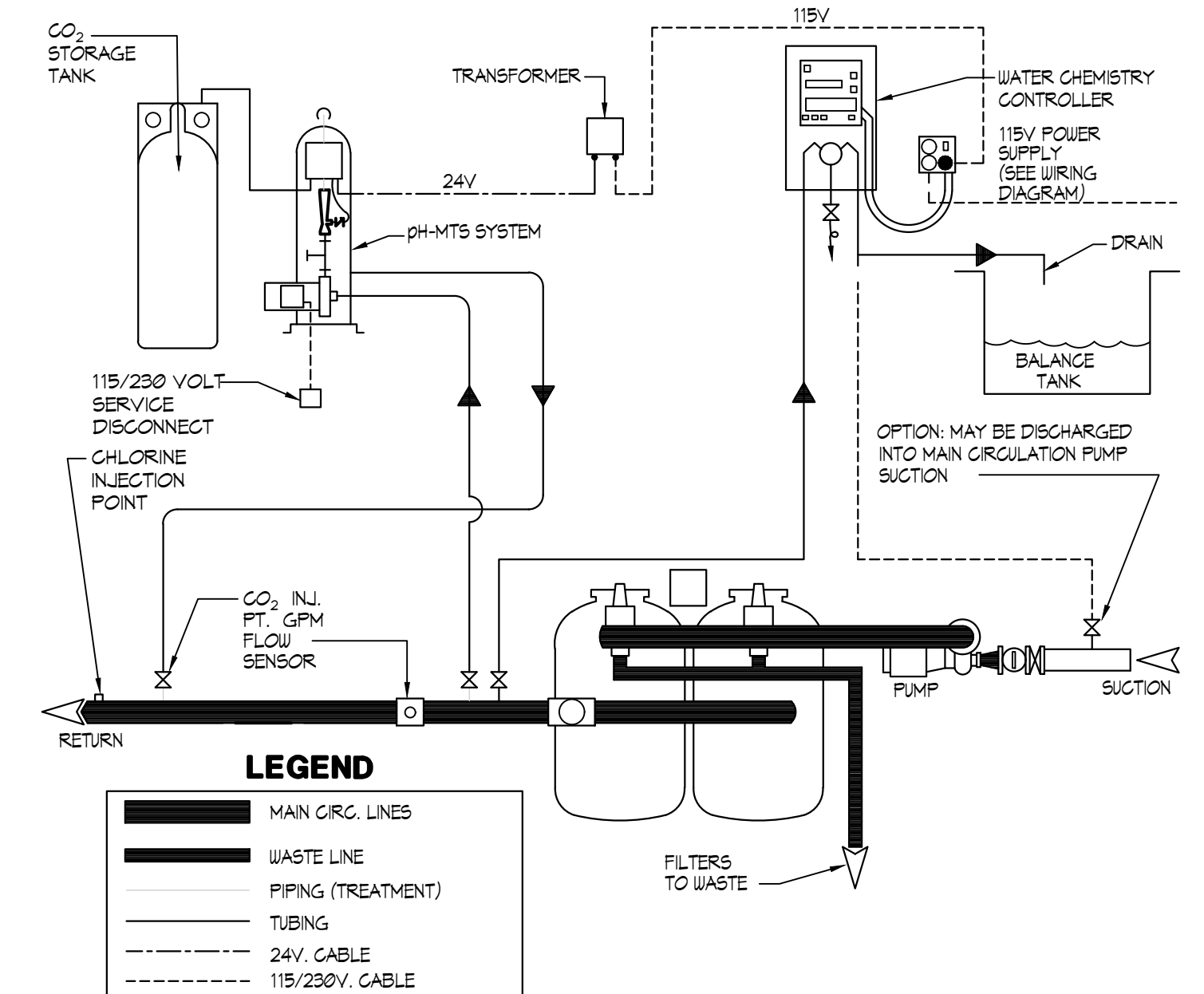
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2

CARBON DIOXIDE pH MTS CONTROLLER

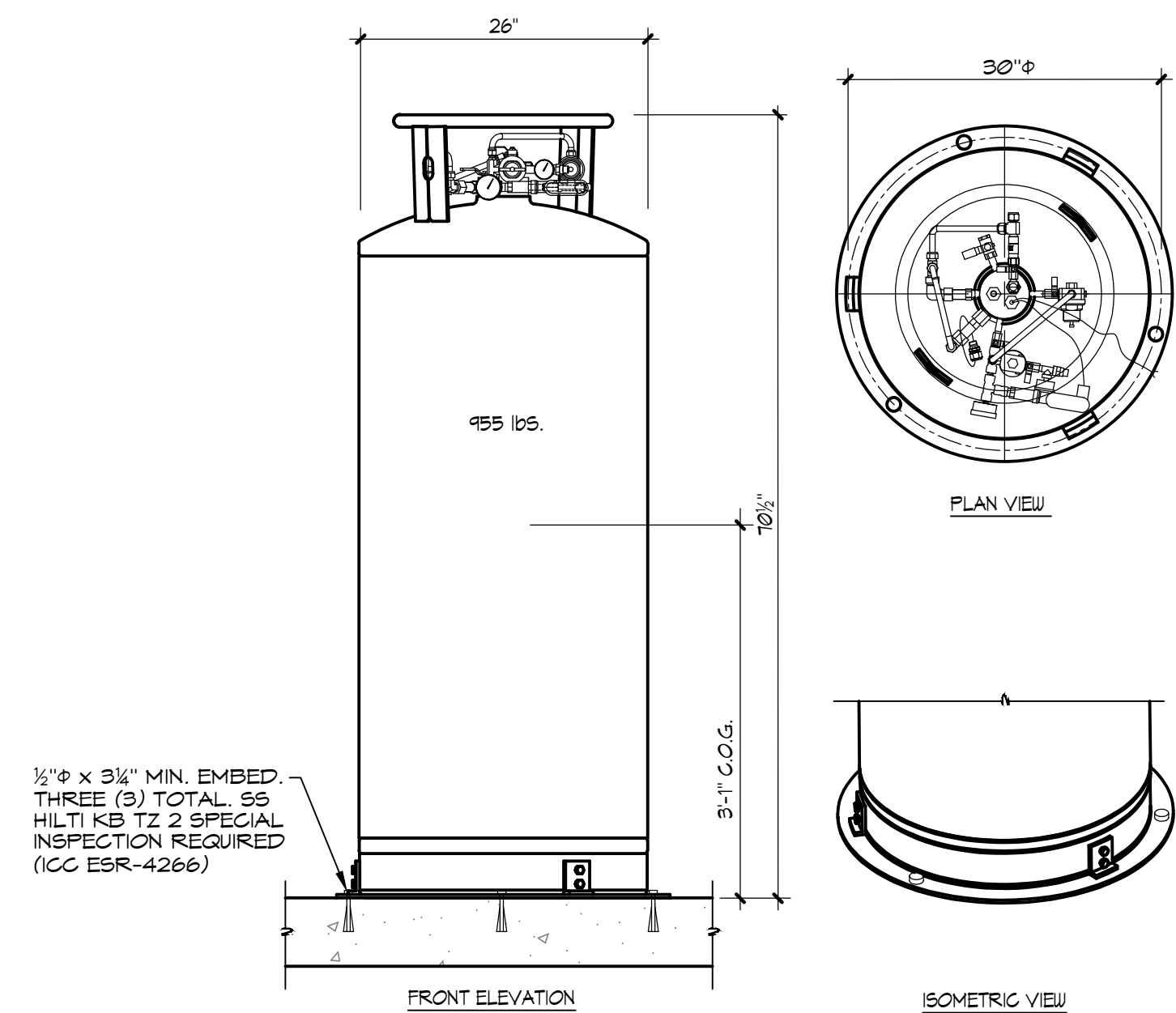
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3

TYPICAL CARBON DIOXIDE pH-MTS INSTALLATION

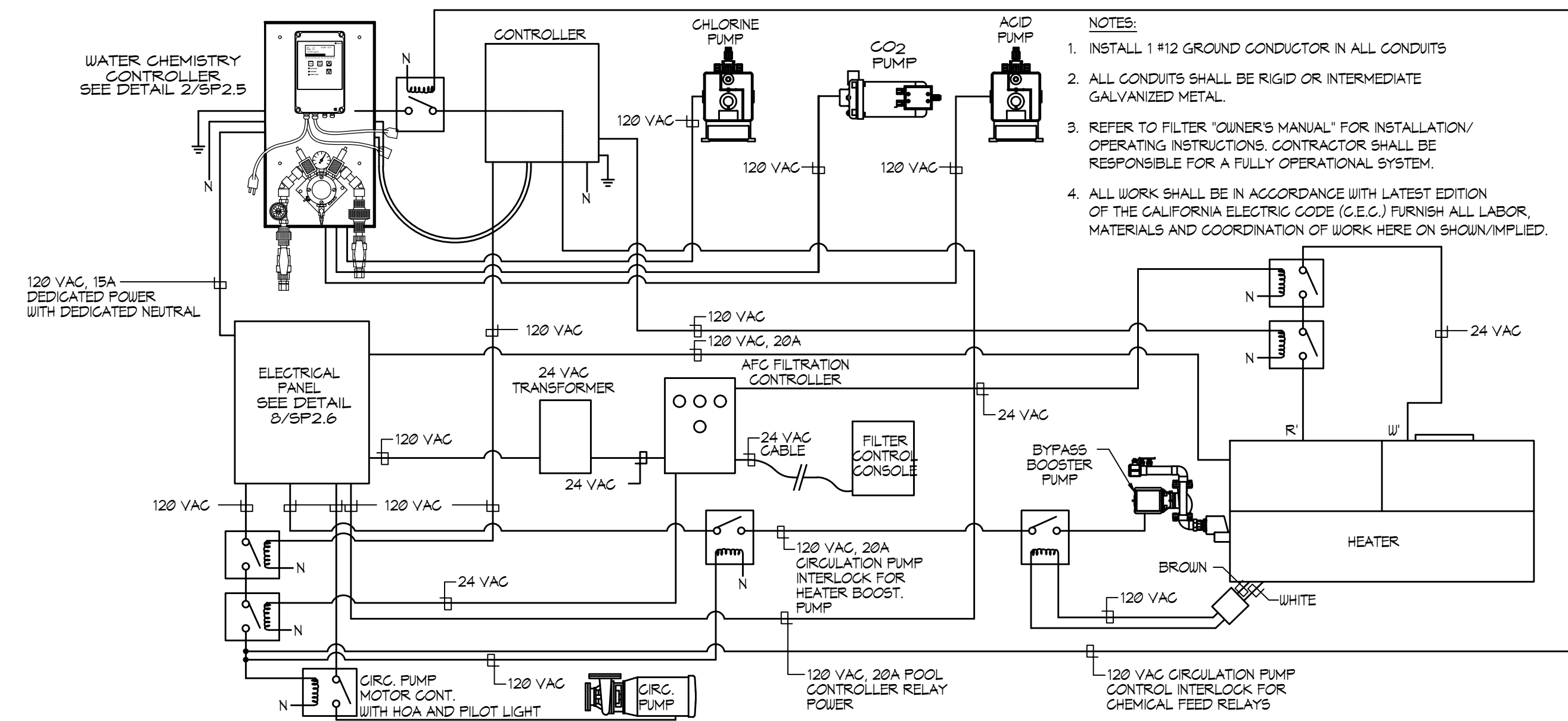
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4

CO2 TANK ANCHORAGE DETAIL

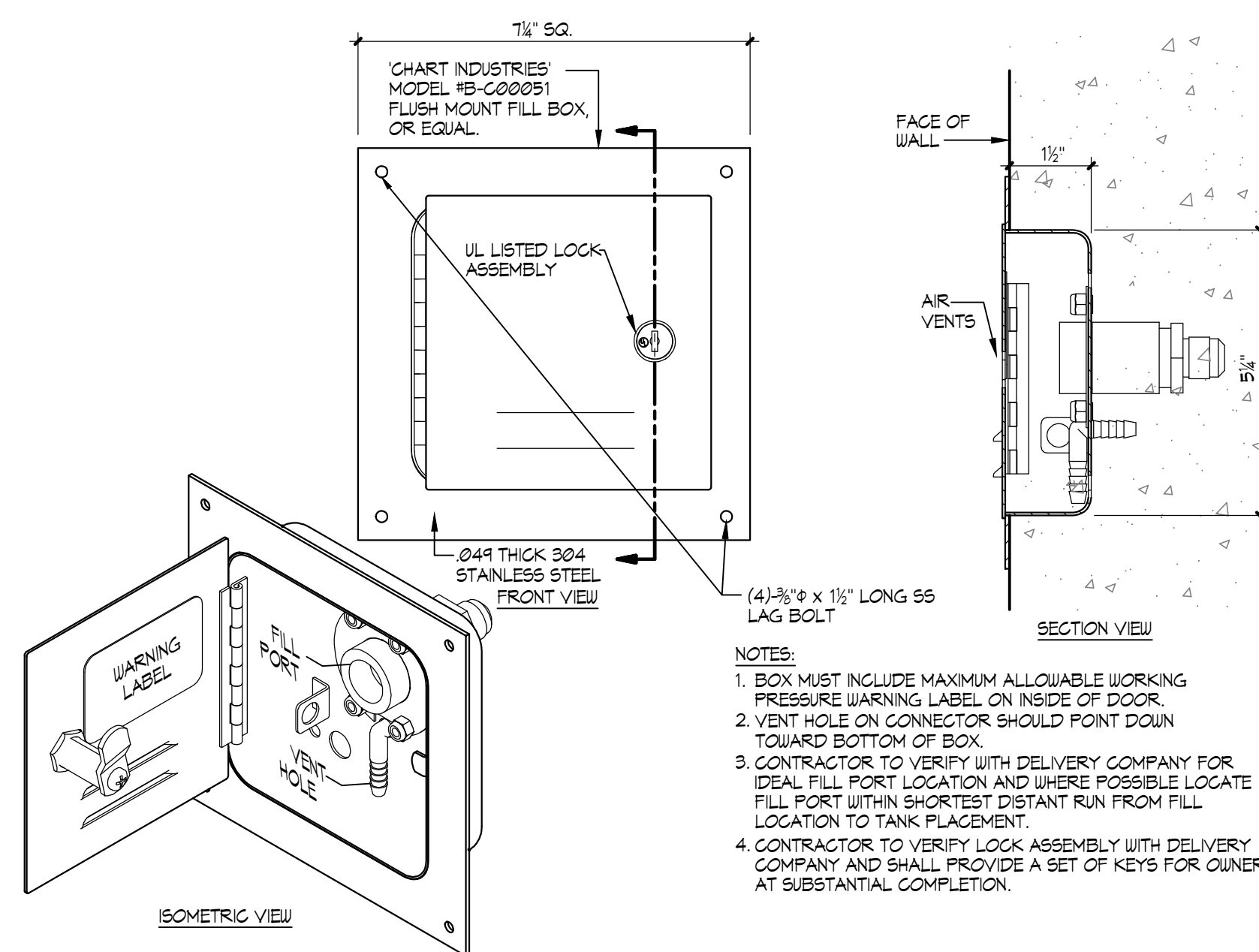
NO SCALE



5

POOL MECHANICAL ELECTRICAL INTERCONNECTION DIAGRAM

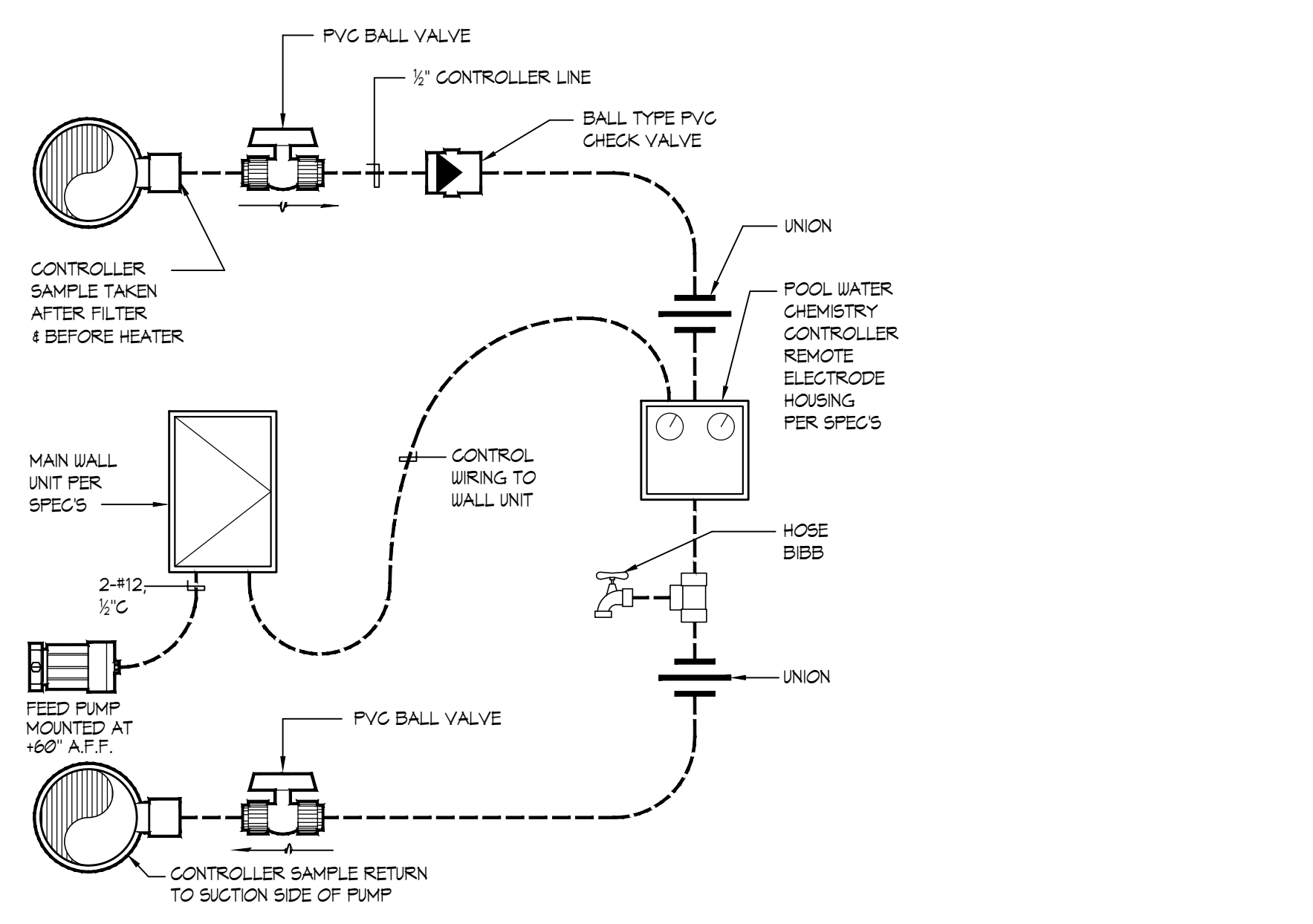
NO SCALE



6

CO2 FLUSH MOUNT FILL BOX

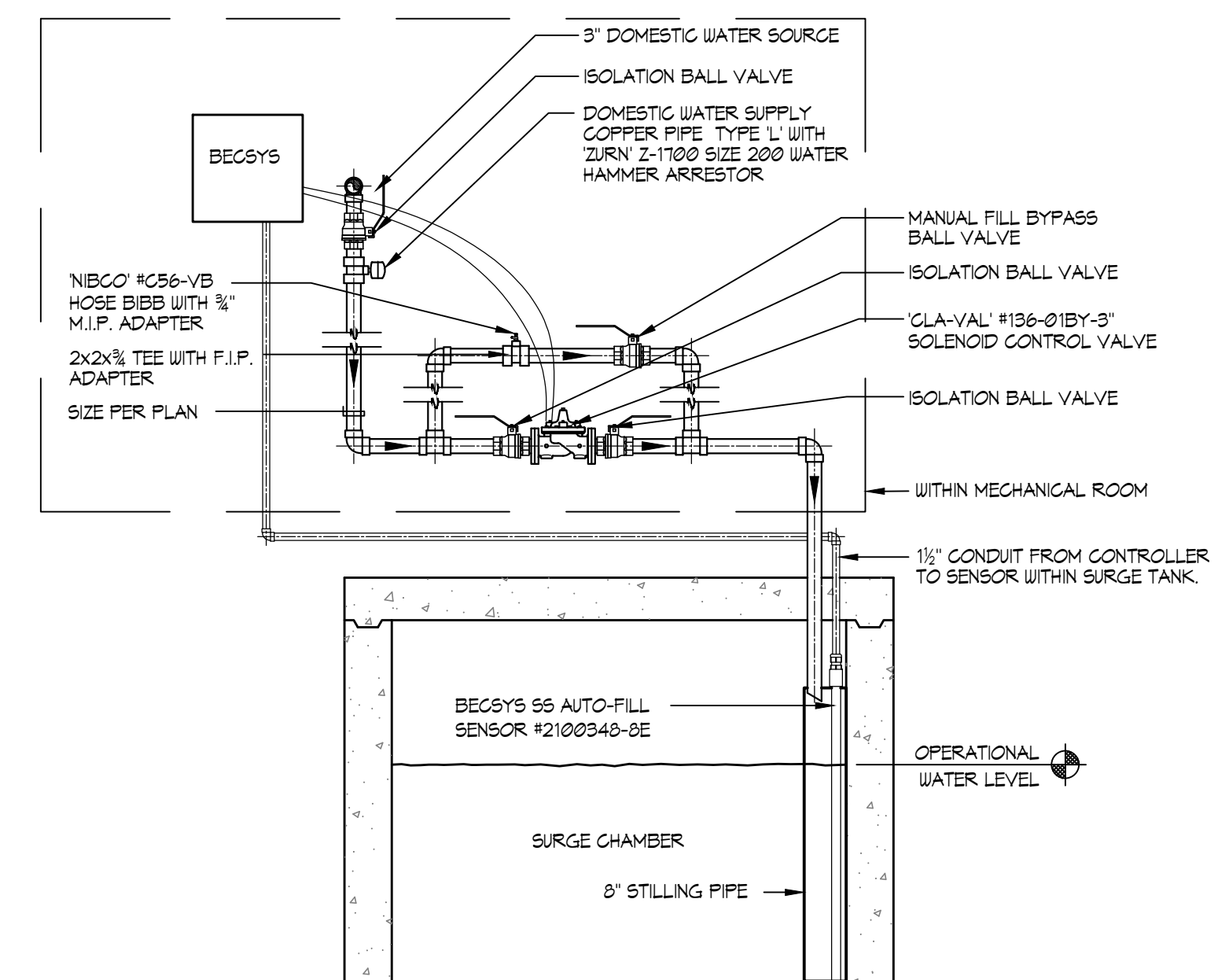
1/2" IN



7

WATER CHEMISTRY CONTROLLER SCHEMATIC

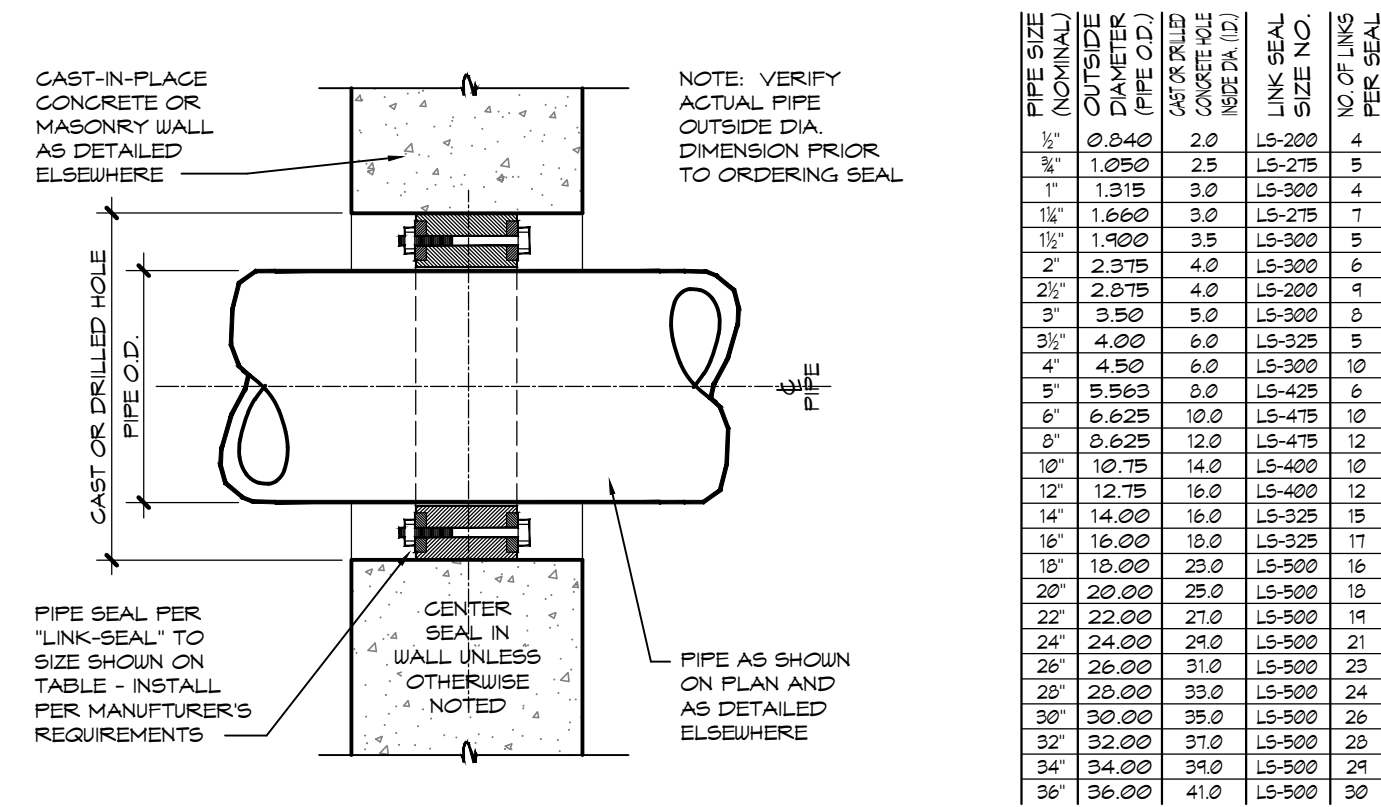
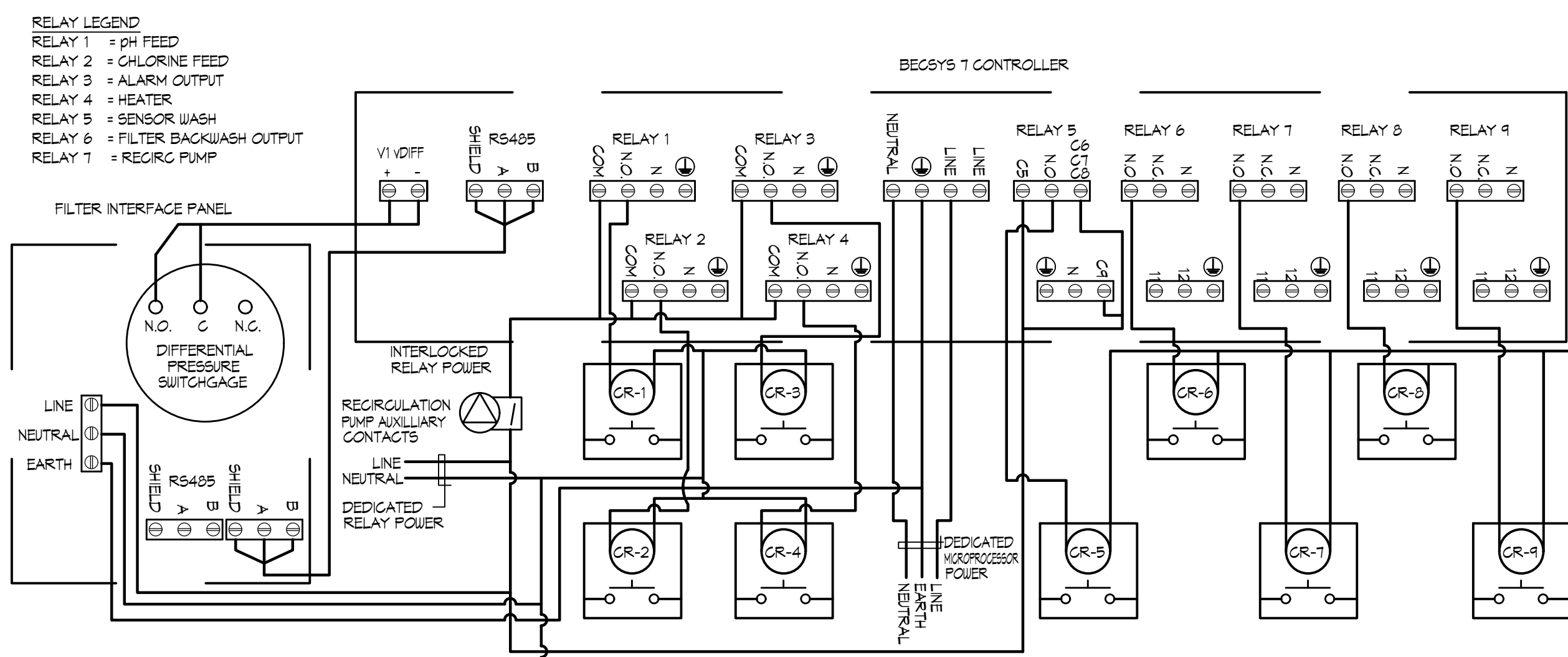
NO SCALE



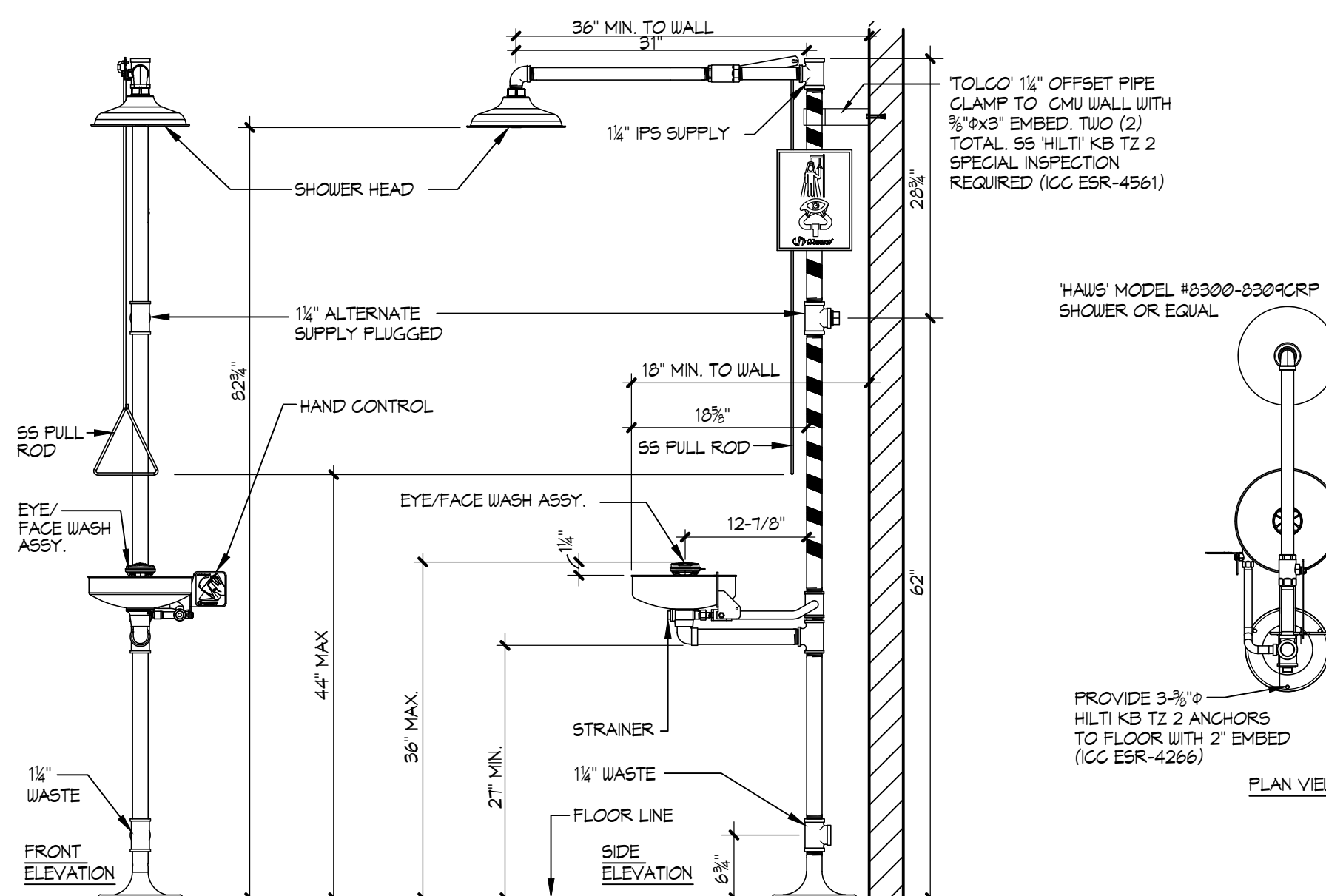
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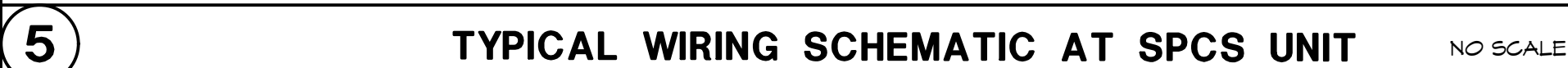
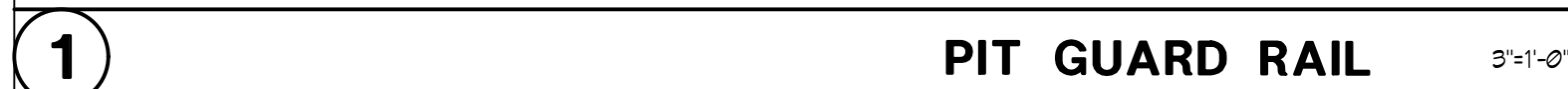
AUTOMATIC/MANUAL WATER MAKE-UP SCHEMATIC

NO SCALE

 $1\frac{1}{2}''=1''-\emptyset''$ 

NO SCALE


$$\frac{3}{4}'' = 1' - 0$$



1

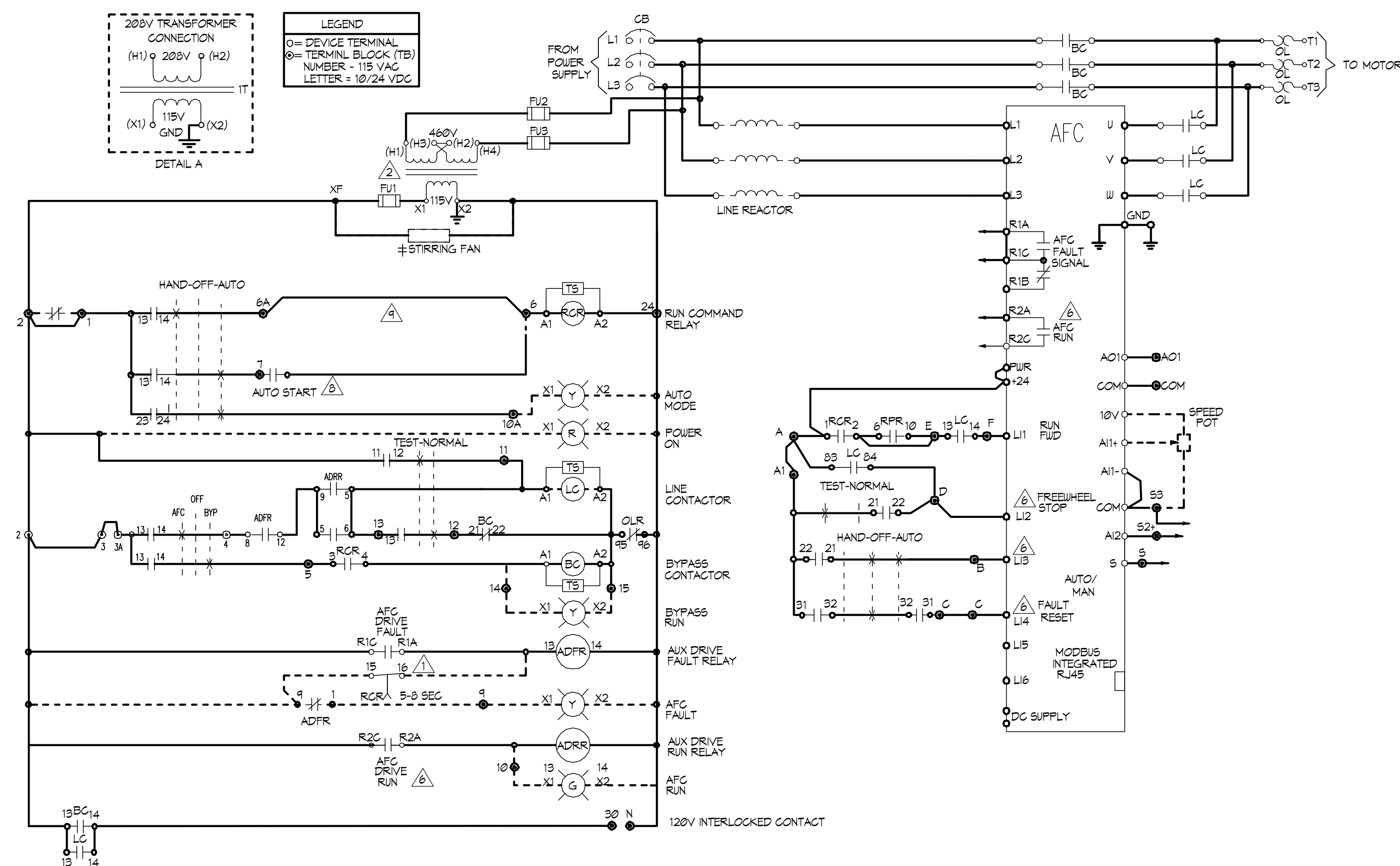
PHASE

SCHEMATIC DEVELOPMENT

DATE
AUGUST 9, 2024

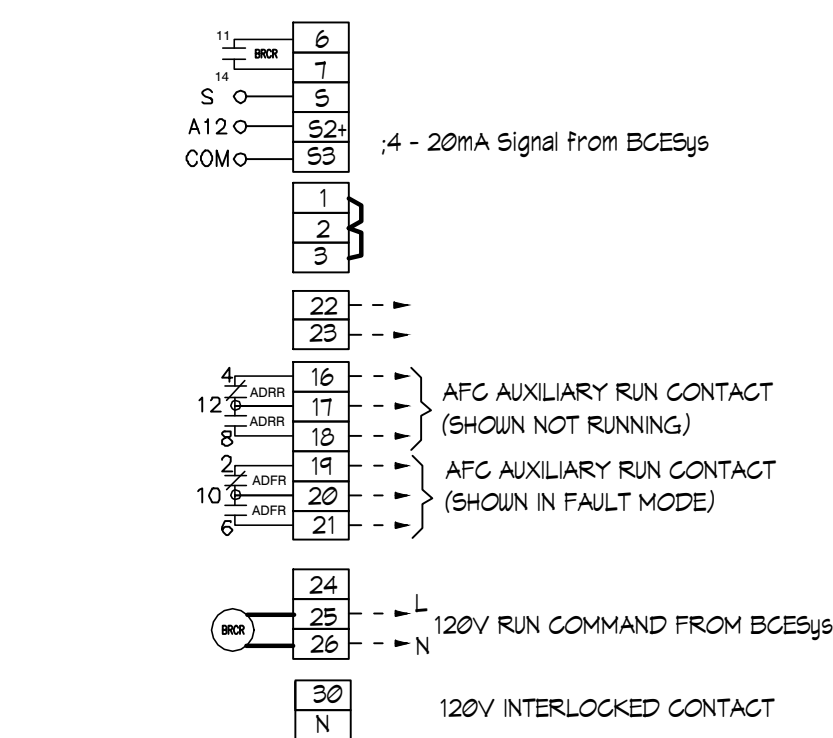
'SPCS' EKO-FLEX VARIABLE FREQUENCY DRIVE SYSTEM SCHEMATIC

NO SCALE



EKO-FLEX ATV61 FACTORY CONFIGURATION				
MENU	NO	SUB-MENU	DESCRIPTION	CODE ADJ.
SM	1.1	---	2/3 WIRE CONTROL	LCG 2C
SM	1.1	---	PUMPS FANS	CFG PHF
SM	1.1	---	STANDARD MOT FREQ (HZ)	BFF 60
SM	1.1	---	ACCELERATION (SEC)	ACC 10
SM	1.1	---	DECELERATION (SEC)	DEC 10
SM	1.1	---	LOW SPEED (HZ)	LSP 3
SM	1.3	---	SWITCHING FREQ. (HZ)	SCF 5
I-O	1.5	---	2 WIRE TYPE	LC1 LEL
I-O	1.5	---	A12 CONFIG.	A12 MIN. VALUE (MA) G12 4
I-O	1.5	---	R2 CONFIG.	R2 ASSIGN - DRIVE RUNNING F2C FM1
CLL	1.6	---	REF. 1 CHAN.	FR1 HM1
CLL	1.6	---	REF. 2 CHAN.	FR2 A11
CLL	1.6	---	PROFILE	CHGF SEP
FUN	1.7	---	STOP CONFIG.	FBT LI2
FUN	1.7	---	REFERENCE SWITCH	REF. 1B SWITCHING FCB LI3
FUN	1.7	---	REFERENCE SWITCH	REF. 1B CHAN. FCB LI3
FLI	1.8	---	FAULT RESET	FSF LI4
FLI	1.8	---	CATCH ON THE FLY	CATCH ON THE FLY FLR YES
FLI	1.8	---	OUTPUT PHASE LOSS	OUTPUT PHASE LOSS PDL NO
COM	1.8	---	FORCED LOCAL	FORCED LOCAL ASSIGN. FLI LI4

DESCRIPTION	TYPE 1	TYPE 12K	TYPE 3R
± STIRRING FANS	10-100 HP 460V 7.5-50HP 208/230V	10-100 HP 460V 7.5-50HP 208/230V	NA
± VENTILATION FAN	NA	NA	ALL HP
± SPACE HEATER	NA	NA	ALL HP

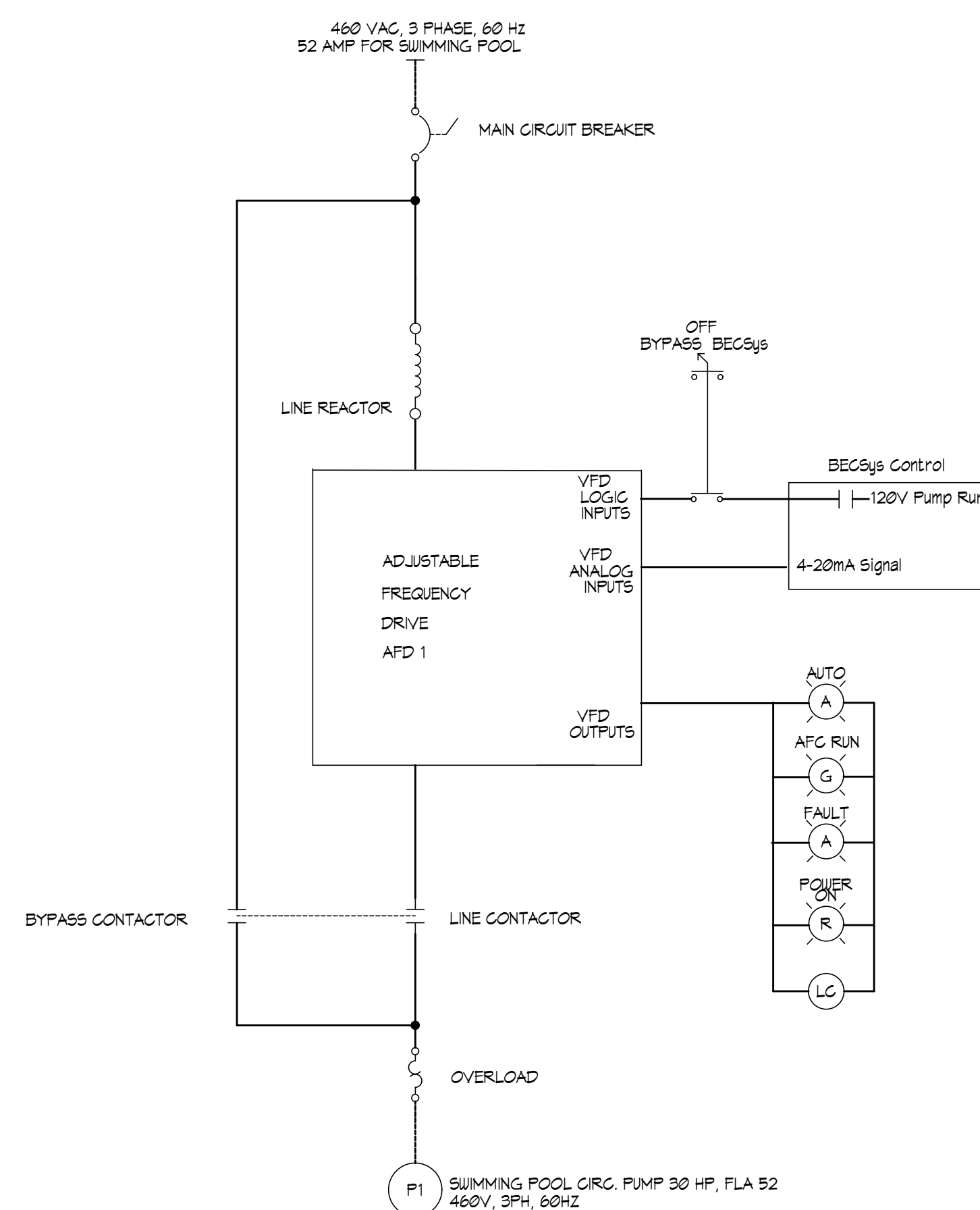


- NOTES:
- RCR TIMED CONTACT USED ONLY IF LINE CONTACTOR IS SUPPLIED
 - CONTROL TRANSFORMER SHOWN FOR 460V PRIMARY. FOR 230V PRIMARY, JUMPER H2-H3 IS
 - PROGRAMMED I/O SEE CONTROLLER FUNCTION CONFIGURATION TABLE
 - BECS RUN COMMAND RELAY (BROR)
 - JUMPER USED WHEN START-STOP PUSH BUTTONS NOT USED.

2

'SPCS' EKO-FLEX SINGLE LINE DIAGRAM

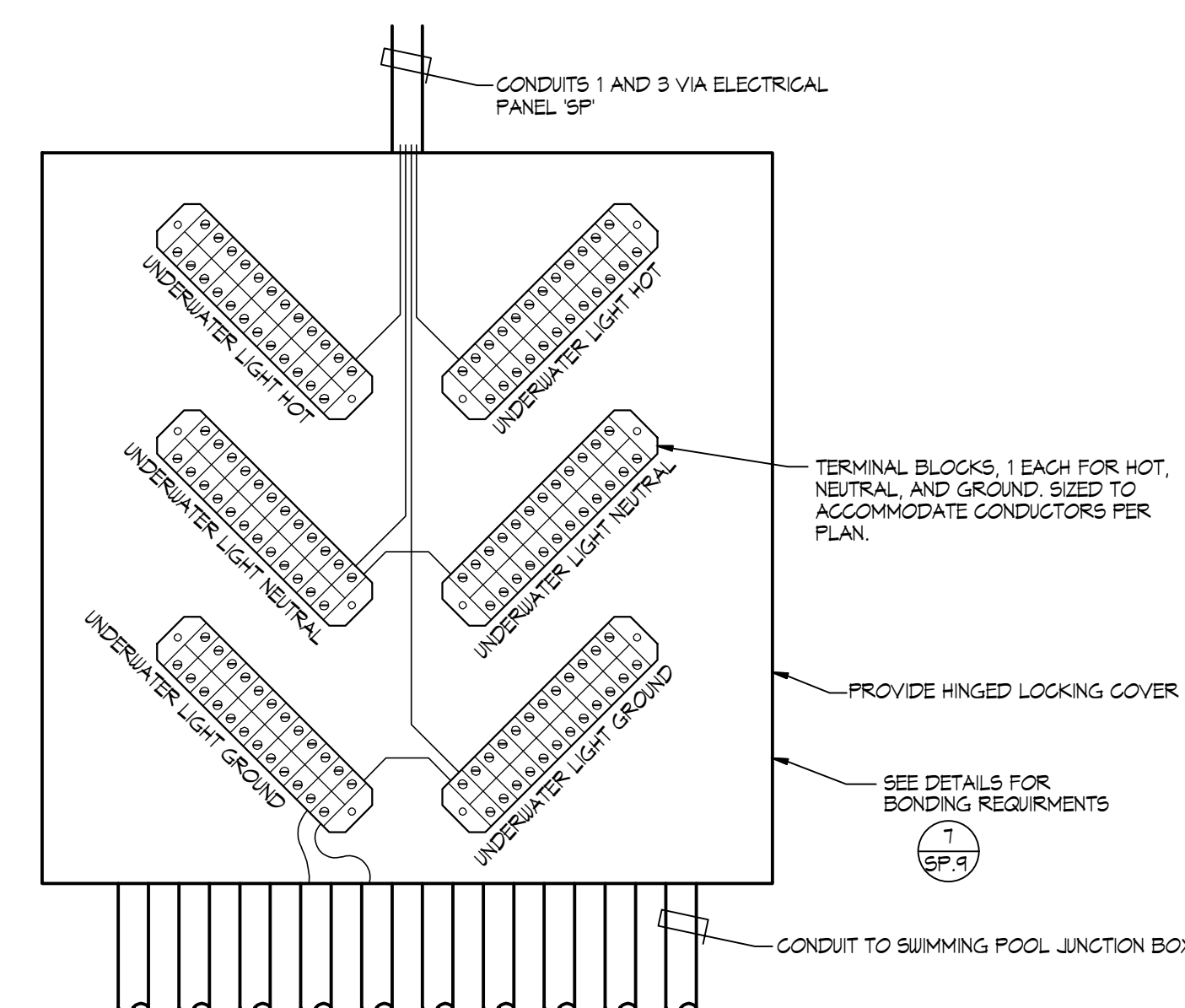
NO SCALE



3

UNDERWATER LIGHT CONTACTOR PANEL

NO SCALE



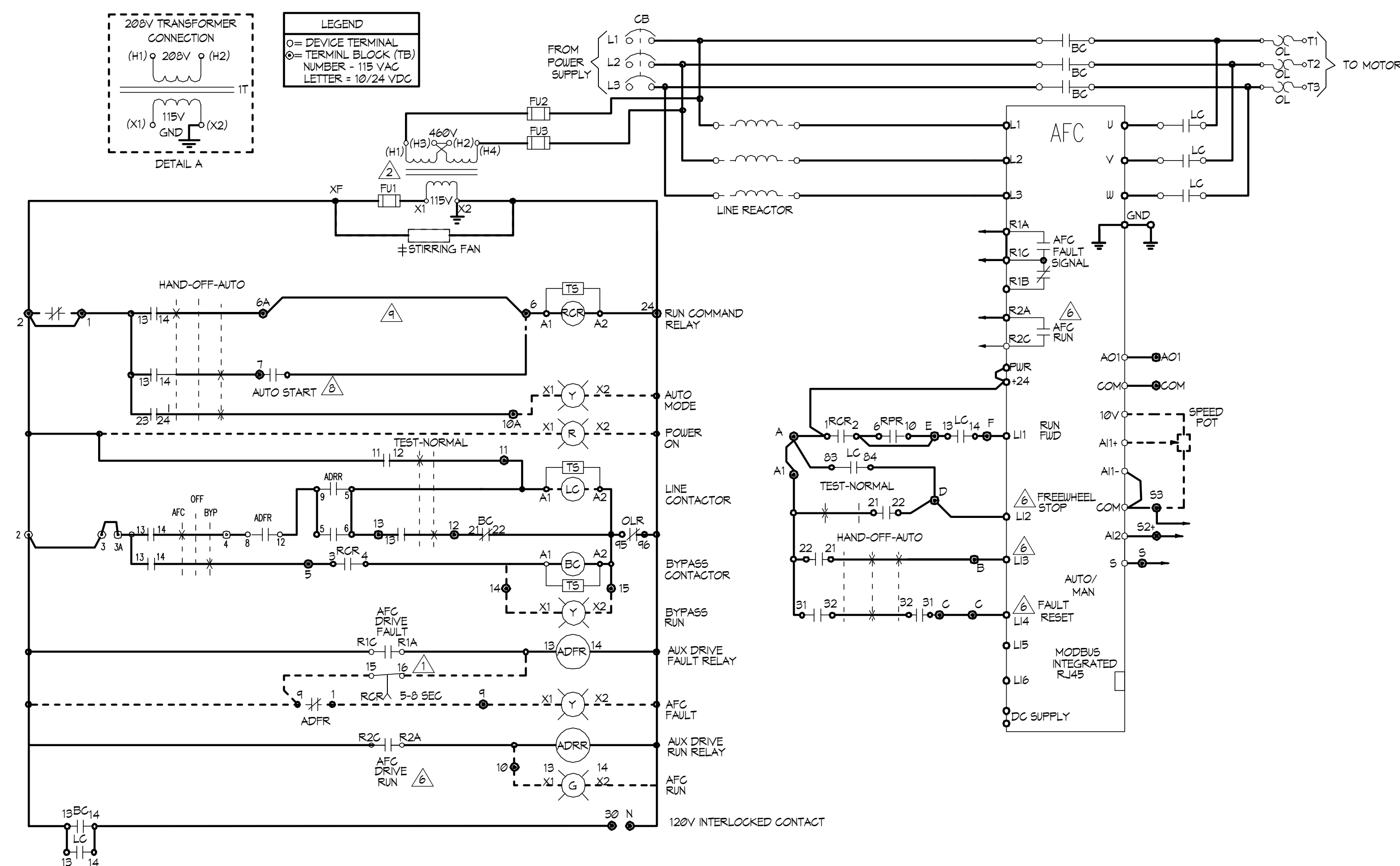
PHASE

SCHEMATIC DEVELOPMENT

DATE
AUGUST 9, 2024

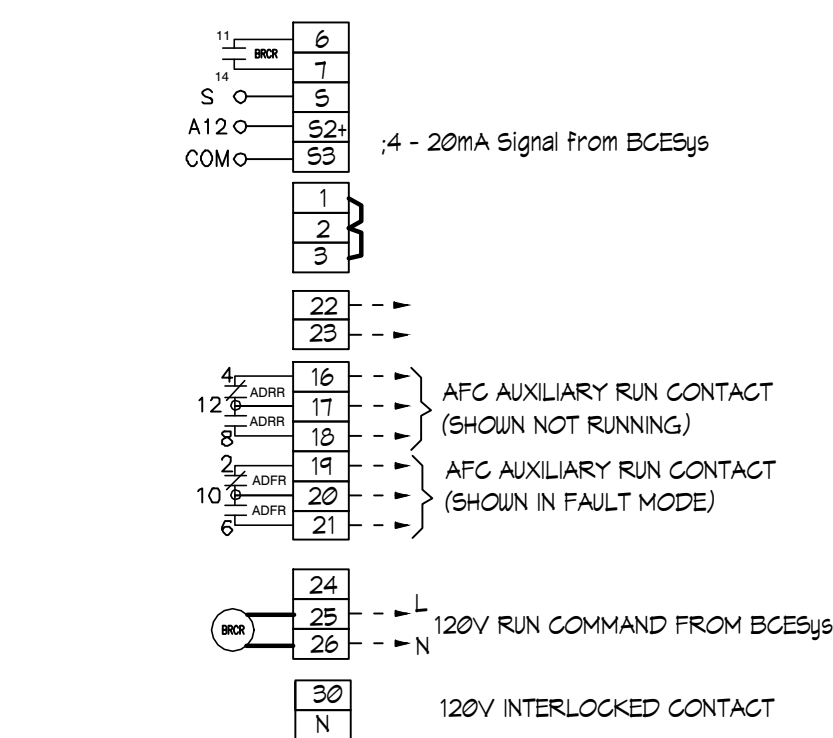
'SPCS' EKO-FLEX VARIABLE FREQUENCY DRIVE SYSTEM SCHEMATIC

NO SCALE



EKO-FLEX ATV61 FACTORY CONFIGURATION				
MENU	NO	SUB-MENU	DESCRIPTION	CODE ADJ.
SM	1.1	---	2/3 WIRE CONTROL	LCG 2C
SM	1.1	---	PUMPS FANS	CFG PHF
SM	1.1	---	STANDARD MOT FREQ (HZ)	BFF 60
SM	1.1	---	ACCELERATION (SEC)	ACC 10
SM	1.1	---	DECELERATION (SEC)	DEC 10
SM	1.1	---	LOW SPEED (HZ)	LSP 3
SM	1.3	---	SWITCHING FREQ. (HZ)	SCF 5
I-O	1.5	---	2 WIRE TYPE	LC1 LEL
I-O	1.5	---	A12 CONFIG.	A12 MIN. VALUE (MA) G12 4
I-O	1.5	---	R2 CONFIG.	R2 ASSIGN - DRIVE RUNNING F2C FM1
CLL	1.6	---	REF. 1 CHAN.	FR1 HM1
CLL	1.6	---	REF. 2 CHAN.	FR2 A11
CLL	1.6	---	PROFILE	CHGF SEP
FUN	1.7	---	STOP CONFIG.	FBT LI2
FUN	1.7	---	REFERENCE SWITCH	REF. 1B SWITCHING FCB LI3
FUN	1.7	---	REFERENCE SWITCH	REF. 1B CHAN. FCB LI3
FLI	1.8	---	FAULT RESET	FSF LI4
FLI	1.8	---	CATCH ON THE FLY	CATCH ON THE FLY FLR YES
FLI	1.8	---	OUTPUT PHASE LOSS	OUTPUT PHASE LOSS PDL NO
COM	1.8	---	FORCED LOCAL	FORCED LOCAL ASSIGN. FLI LI4

DESCRIPTION	TYPE 1	TYPE 12K	TYPE 3R
± STIRRING FANS	10-100 HP 460V 7.5-50HP 208/230V	10-100 HP 460V 7.5-50HP 208/230V	NA
± VENTILATION FAN	NA	NA	ALL HP
± SPACE HEATER	NA	NA	ALL HP

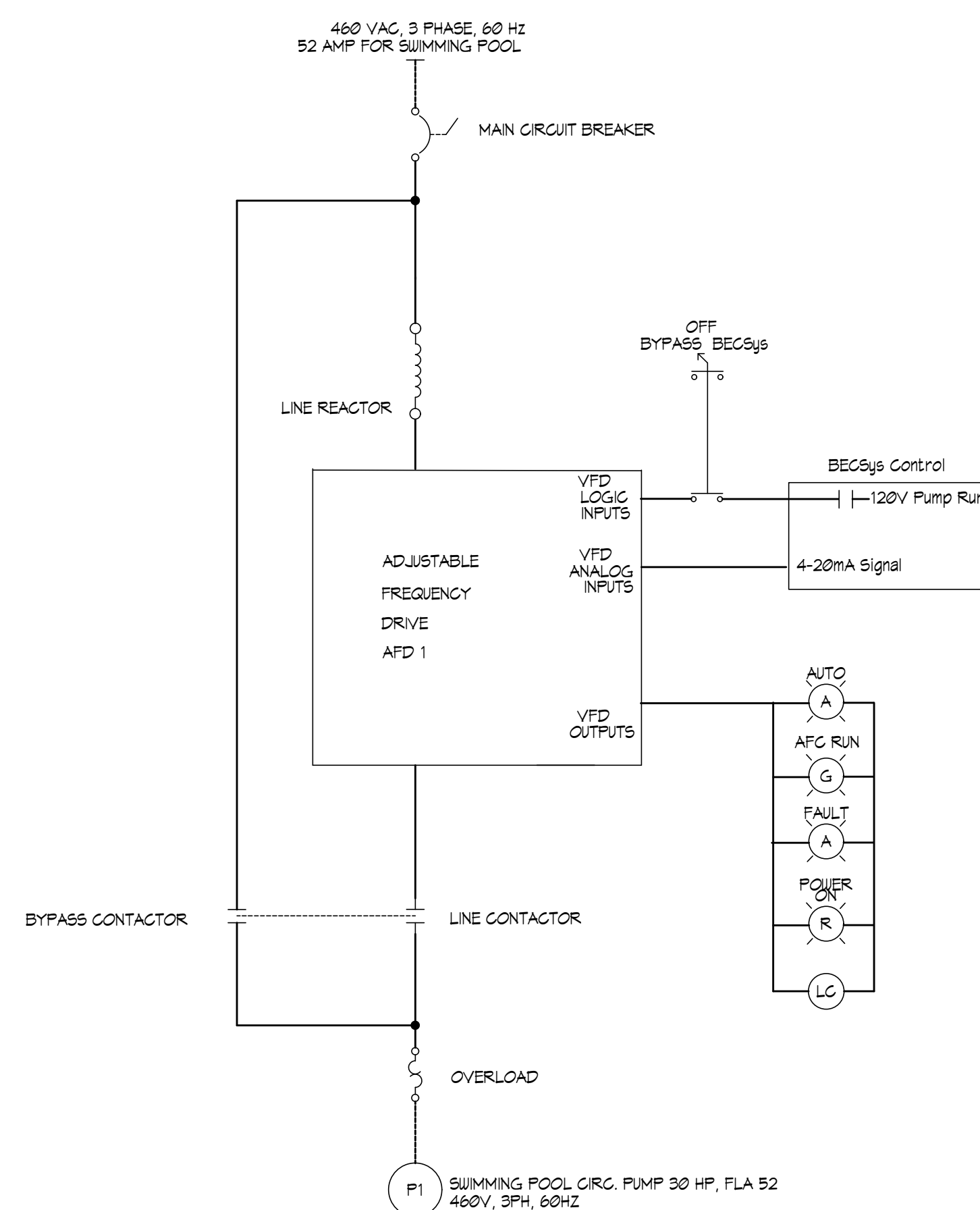


- NOTES:
- RCR TIMED CONTACT USED ONLY IF LINE CONTACTOR IS SUPPLIED
 - CONTROL TRANSFORMER SHOWN FOR 460V PRIMARY. FOR 230V PRIMARY, JUMPER H2-H3 IS
 - PROGRAMMED I/O SEE CONTROLLER FUNCTION CONFIGURATION TABLE
 - BECS RUN COMMAND RELAY (BROR)
 - JUMPER USED WHEN START-STOP PUSH BUTTONS NOT USED.

2

'SPCS' EKO-FLEX SINGLE LINE DIAGRAM

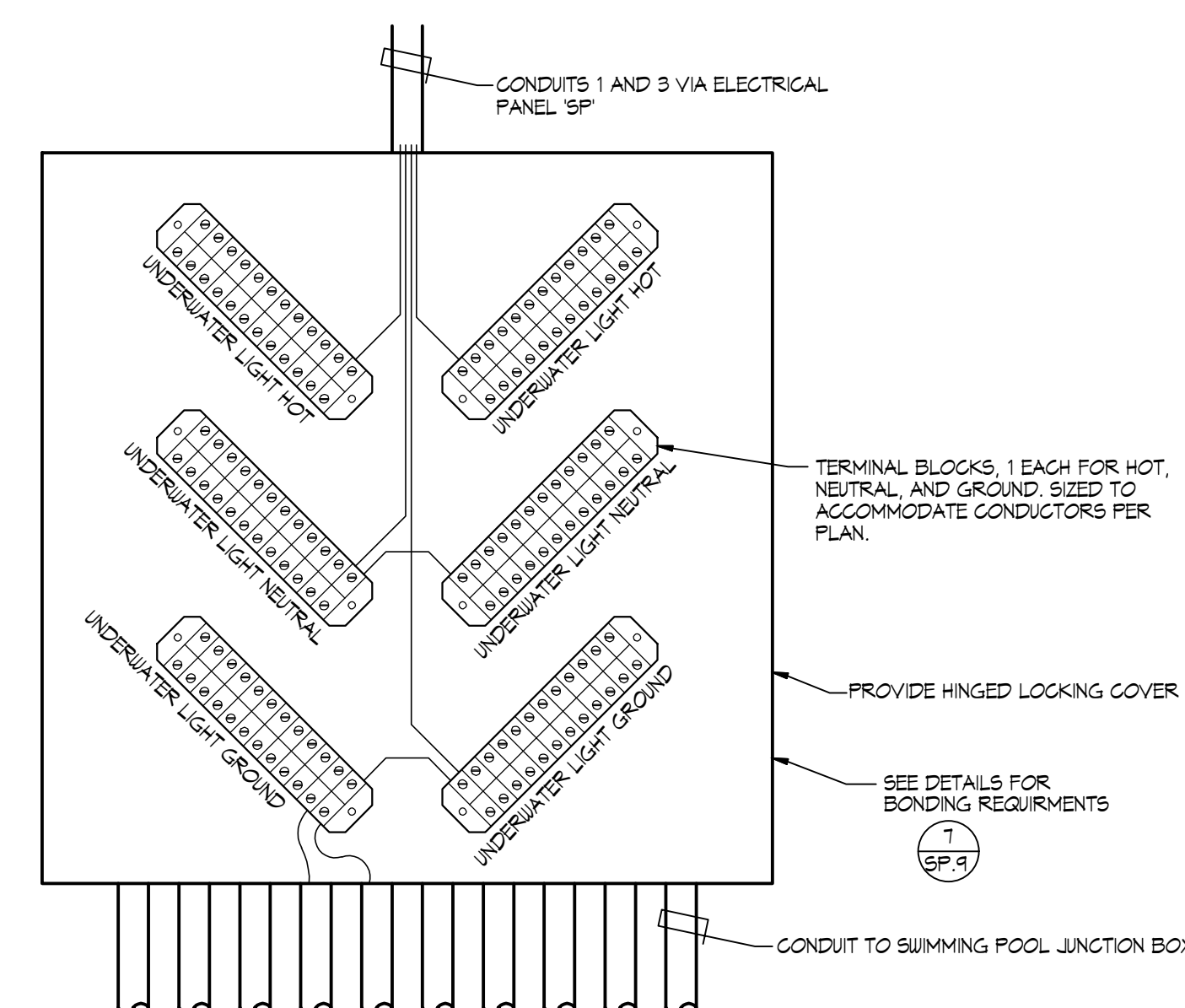
NO SCALE



3

UNDERWATER LIGHT CONTACTOR PANEL

NO SCALE



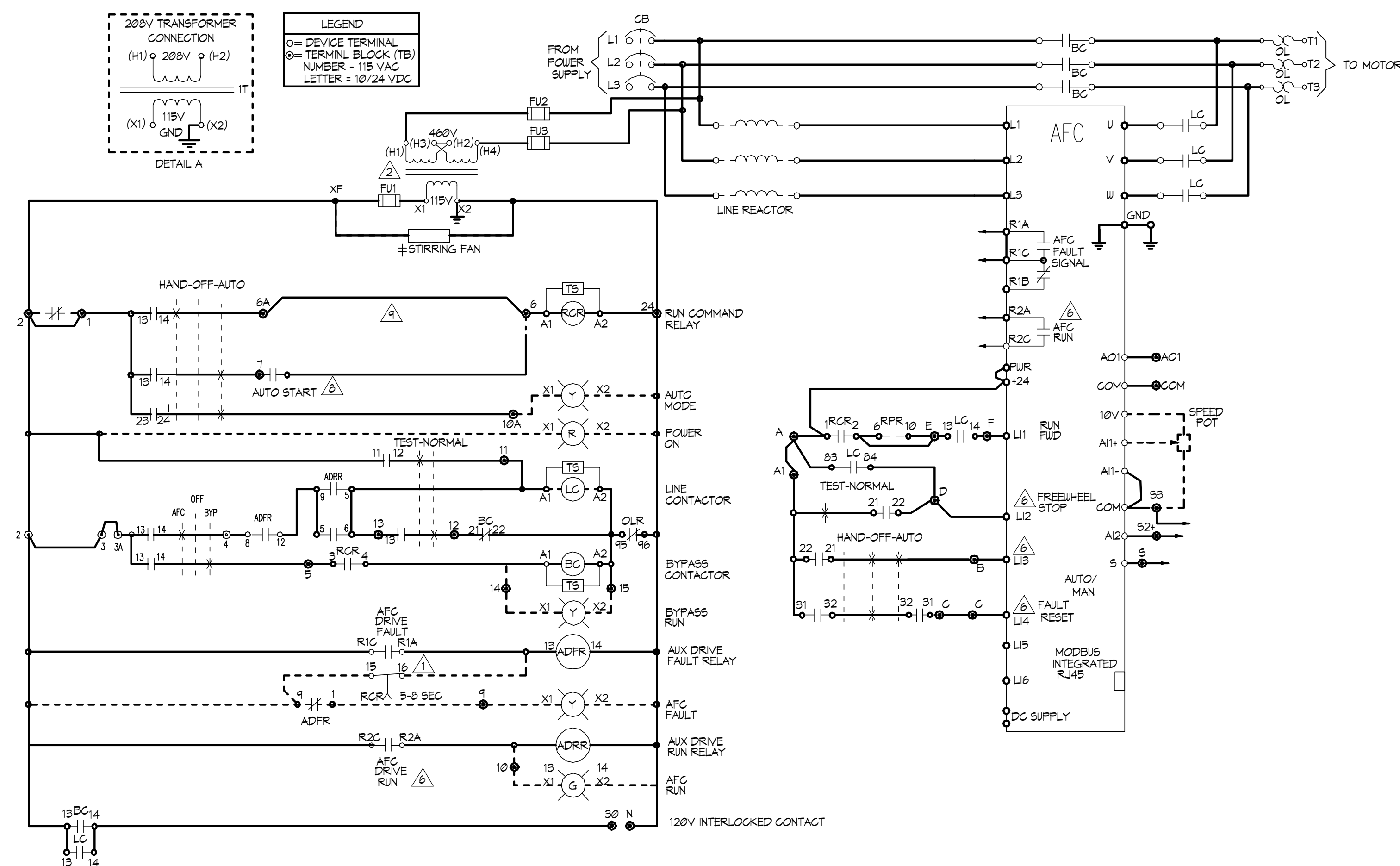
PHASE

SCHEMATIC DEVELOPMENT

DATE
AUGUST 9, 2024

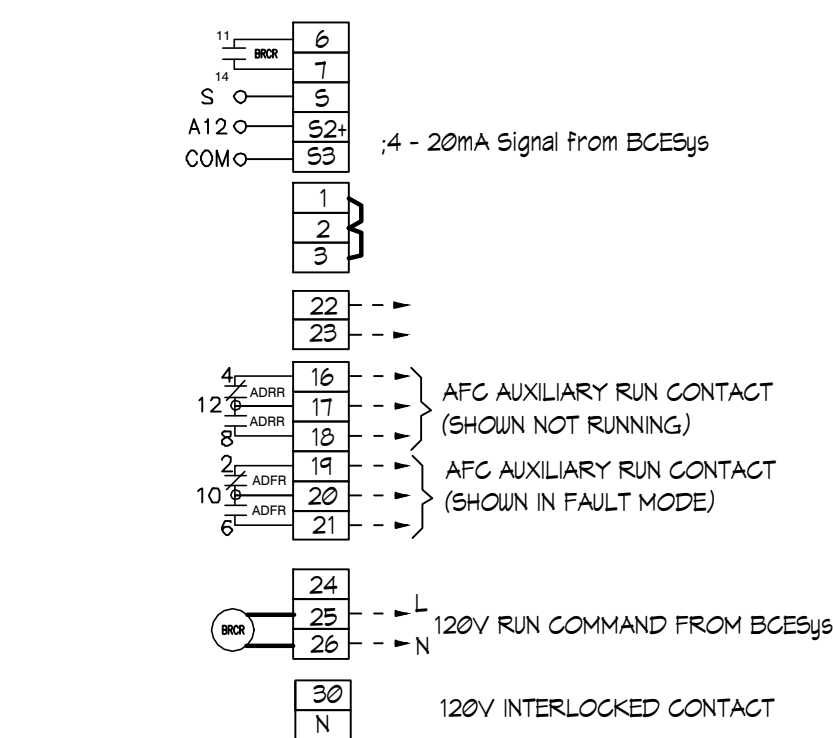
'SPCS' EKO-FLEX VARIABLE FREQUENCY DRIVE SYSTEM SCHEMATIC

NO SCALE



EKO-FLEX ATV61 FACTORY CONFIGURATION				
MENU	NO	SUB-MENU	DESCRIPTION	CODE ADJ.
SM	1.1	---	2/3 WIRE CONTROL	LCG 2C
SM	1.1	---	PUMPS FANS	CFG PHF
SM	1.1	---	STANDARD MOT FREQ (HZ)	BFF 60
SM	1.1	---	ACCELERATION (SEC)	ACC 10
SM	1.1	---	DECELERATION (SEC)	DEC 10
SM	1.1	---	LOW SPEED (HZ)	LSP 3
SM	1.3	---	SWITCHING FREQ. (HZ)	SCF 5
I-O	1.5	---	2 WIRE TYPE	LC1 LEL
I-O	1.5	---	A12 CONFIG.	A12 MIN. VALUE (MA) G12 4
I-O	1.5	---	R2 CONFIG.	R2 ASSIGN - DRIVE RUNNING F2C FM1
CLL	1.6	---	REF. 1 CHAN.	FR1 HM1
CLL	1.6	---	REF. 2 CHAN.	FR2 A11
CLL	1.6	---	PROFILE	CHGF SEP
FUN	1.7	---	STOP CONFIG.	FBT LI2
FUN	1.7	---	REFERENCE SWITCH	REF. 1B SWITCHING FCB LI3
FUN	1.7	---	REFERENCE SWITCH	REF. 1B CHAN. FCB LI3
FLI	1.8	---	FAULT RESET	FSF LI4
FLI	1.8	---	CATCH ON THE FLY	CATCH ON THE FLY FLR YES
FLI	1.8	---	OUTPUT PHASE LOSS	OUTPUT PHASE LOSS PDL NO
COM	1.8	---	FORCED LOCAL	FORCED LOCAL ASSIGN. FLI LI4

DESCRIPTION	TYPE 1	TYPE 12K	TYPE 3R
± STIRRING FANS	10-100 HP 460V 7.5-50HP 208/230V	10-100 HP 460V 7.5-50HP 208/230V	NA
± VENTILATION FAN	NA	NA	ALL HP
± SPACE HEATER	NA	NA	ALL HP

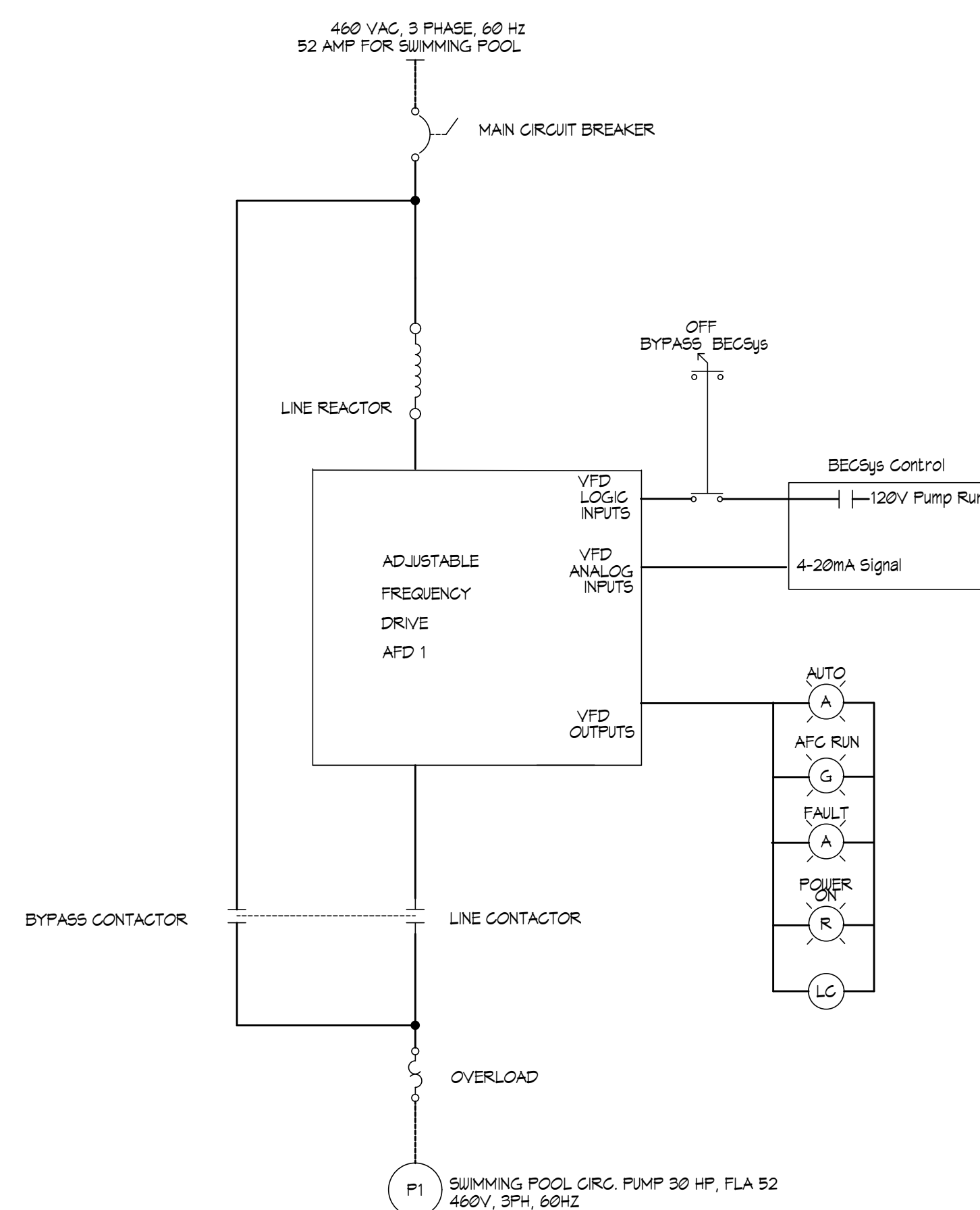


- NOTES:
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 - CONTROL TRANSFORMER SHOWN FOR 460V PRIMARY. FOR 230V PRIMARY, JUMPER H2-H3 IS
 - PROGRAMMED I/O SEE CONTROLLER FUNCTION CONFIGURATION TABLE
 - BECS RUN COMMAND RELAY (BROR)
 - JUMPER USED WHEN START-STOP PUSH BUTTONS NOT USED.

2

'SPCS' EKO-FLEX SINGLE LINE DIAGRAM

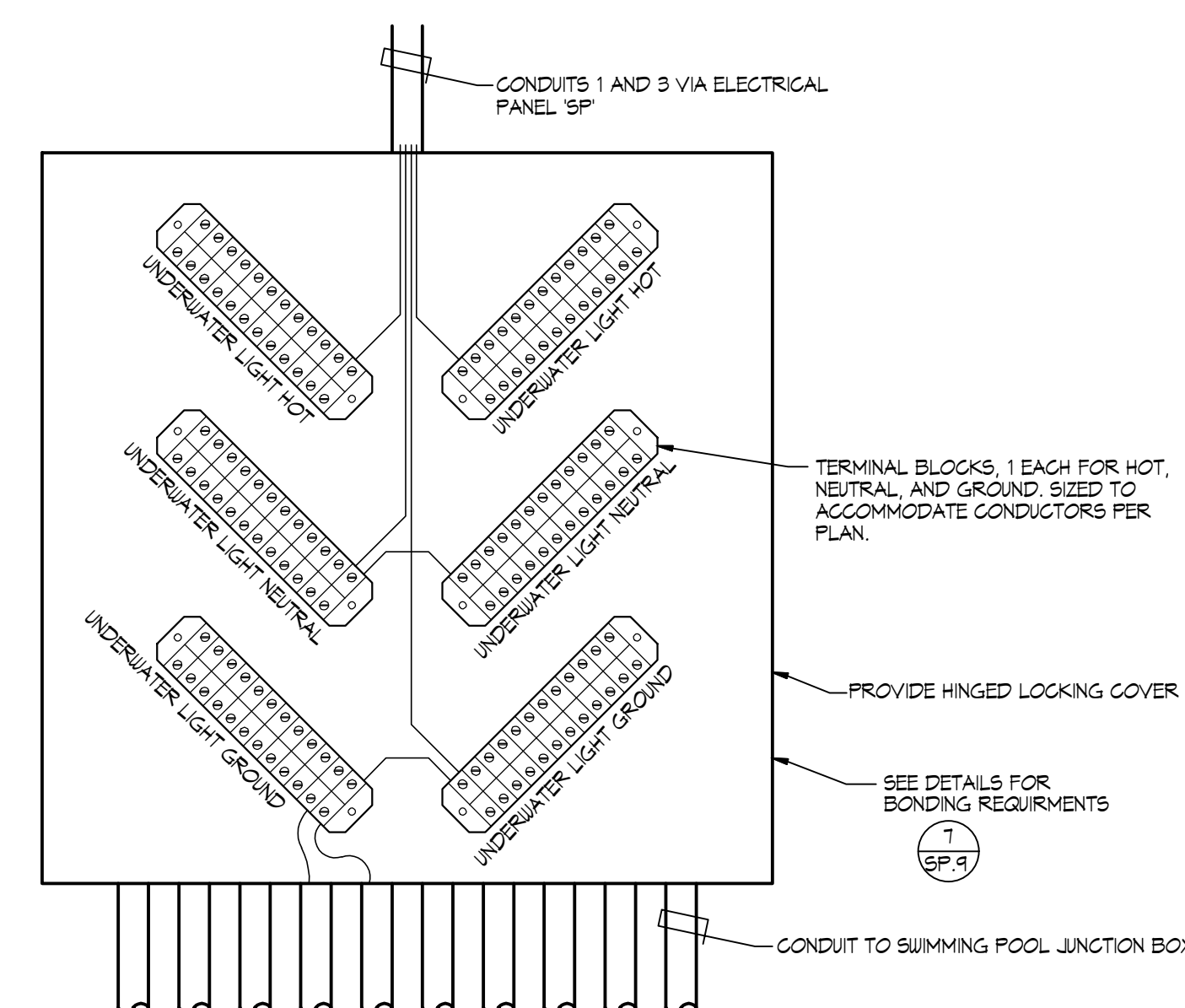
NO SCALE



3

UNDERWATER LIGHT CONTACTOR PANEL

NO SCALE



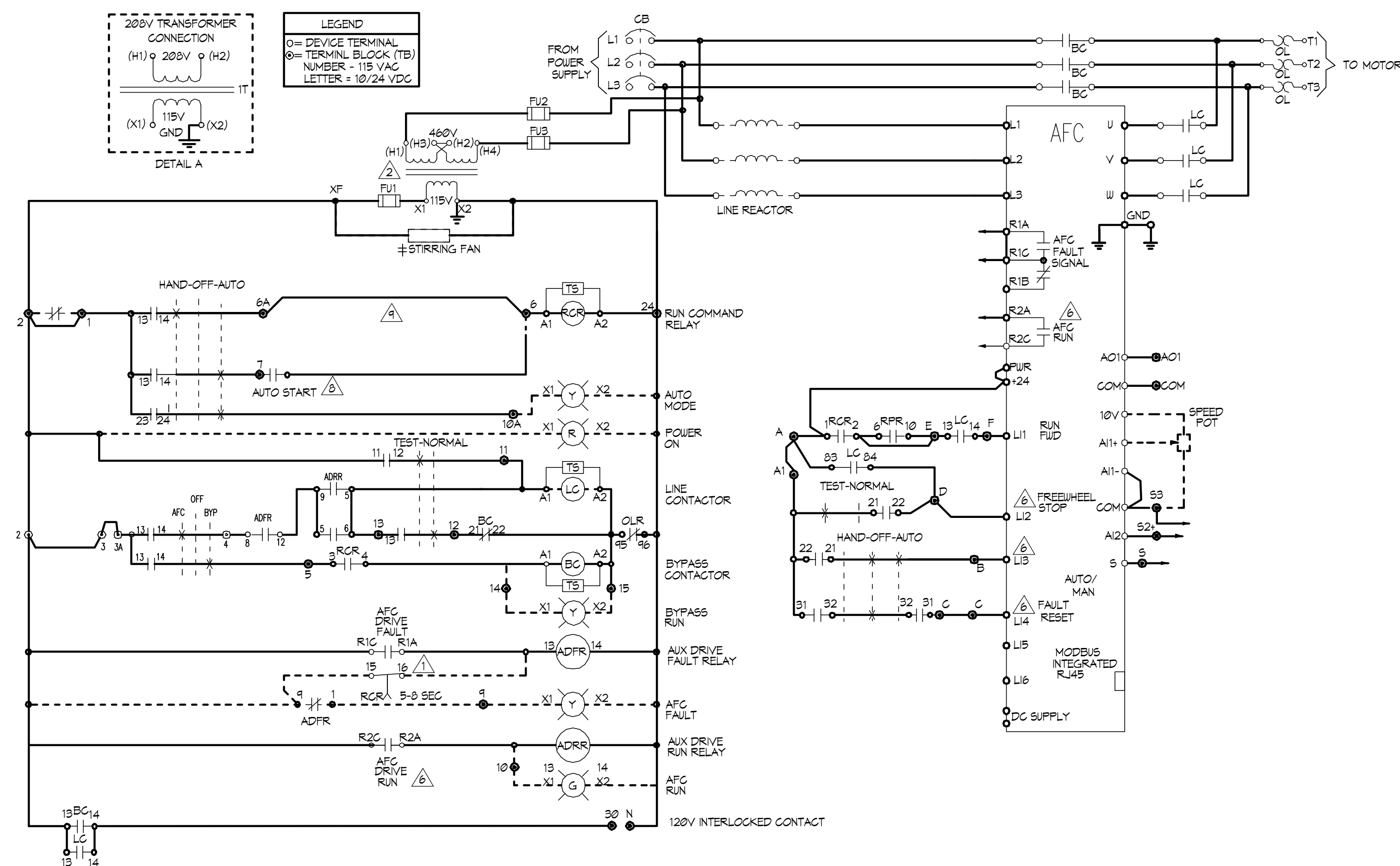
PHASE

SCHEMATIC DEVELOPMENT

DATE
AUGUST 9, 2024

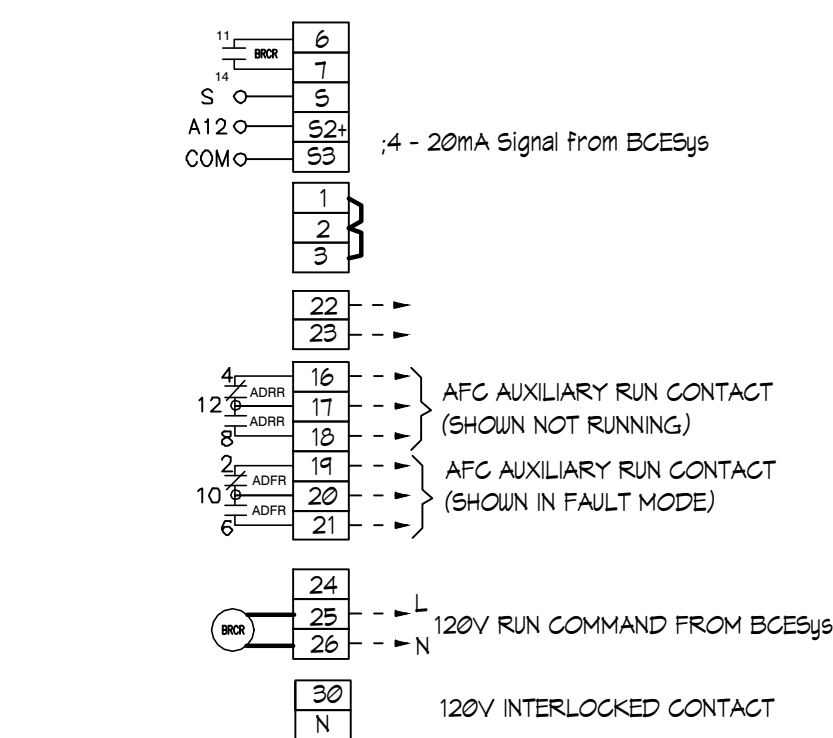
'SPCS' EKO-FLEX VARIABLE FREQUENCY DRIVE SYSTEM SCHEMATIC

NO SCALE



EKO-FLEX ATV61 FACTORY CONFIGURATION				
MENU	NO	SUB-MENU	DESCRIPTION	CODE ADJ.
SM	1.1	---	2/3 WIRE CONTROL	LCG 2C
SM	1.1	---	PUMPS FANS	CFG PHF
SM	1.1	---	STANDARD MOT FREQ (HZ)	BFF 60
SM	1.1	---	ACCELERATION (SEC)	ACC 10
SM	1.1	---	DECELERATION (SEC)	DEC 10
SM	1.1	---	LOW SPEED (HZ)	LSP 3
SM	1.3	---	SWITCHING FREQ. (HZ)	SCF 5
I-O	1.5	---	2 WIRE TYPE	LC1 LEL
I-O	1.5	---	A12 CONFIG.	A12 MIN. VALUE (MA) G12 4
I-O	1.5	---	R2 CONFIG.	R2 ASSIGN - DRIVE RUNNING F2C FM1
CLL	1.6	---	REF. 1 CHAN.	FR1 HM1
CLL	1.6	---	REF. 2 CHAN.	FR2 A11
CLL	1.6	---	PROFILE	CHGF SEP
FUN	1.7	---	STOP CONFIG.	FBT LI2
FUN	1.7	---	REFERENCE SWITCH	REF. 1B SWITCHING FCB LI3
FUN	1.7	---	REFERENCE SWITCH	REF. 1B CHAN. FCB LI3
FLI	1.8	---	FAULT RESET	FSF LI4
FLI	1.8	---	CATCH ON THE FLY	CATCH ON THE FLY FLR YES
FLI	1.8	---	OUTPUT PHASE LOSS	OUTPUT PHASE LOSS PDL NO
COM	1.8	---	FORCED LOCAL	FORCED LOCAL ASSIGN. FLI LI4

DESCRIPTION	TYPE 1	TYPE 12K	TYPE 3R
± STIRRING FANS	10-100 HP 460V 7.5-50HP 208/230V	10-100 HP 460V 7.5-50HP 208/230V	NA
± VENTILATION FAN	NA	NA	ALL HP
± SPACE HEATER	NA	NA	ALL HP

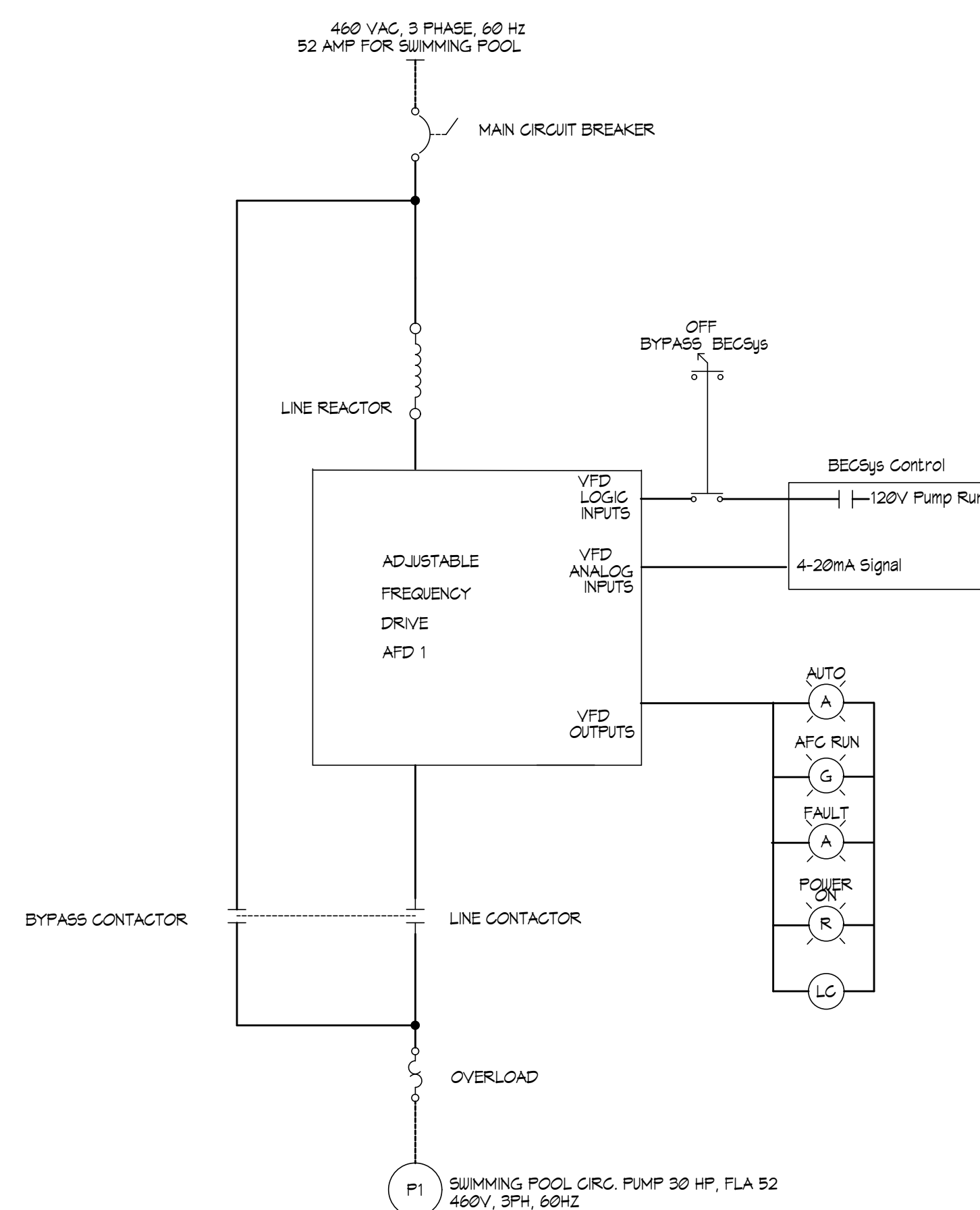


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 - CONTROL TRANSFORMER SHOWN FOR 460V PRIMARY. FOR 230V PRIMARY, JUMPER H2-H3 IS
 - PROGRAMMED I/O SEE CONTROLLER FUNCTION CONFIGURATION TABLE
 - BECS RUN COMMAND RELAY (BROR)
 - JUMPER USED WHEN START-STOP PUSH BUTTONS NOT USED.

2

'SPCS' EKO-FLEX SINGLE LINE DIAGRAM

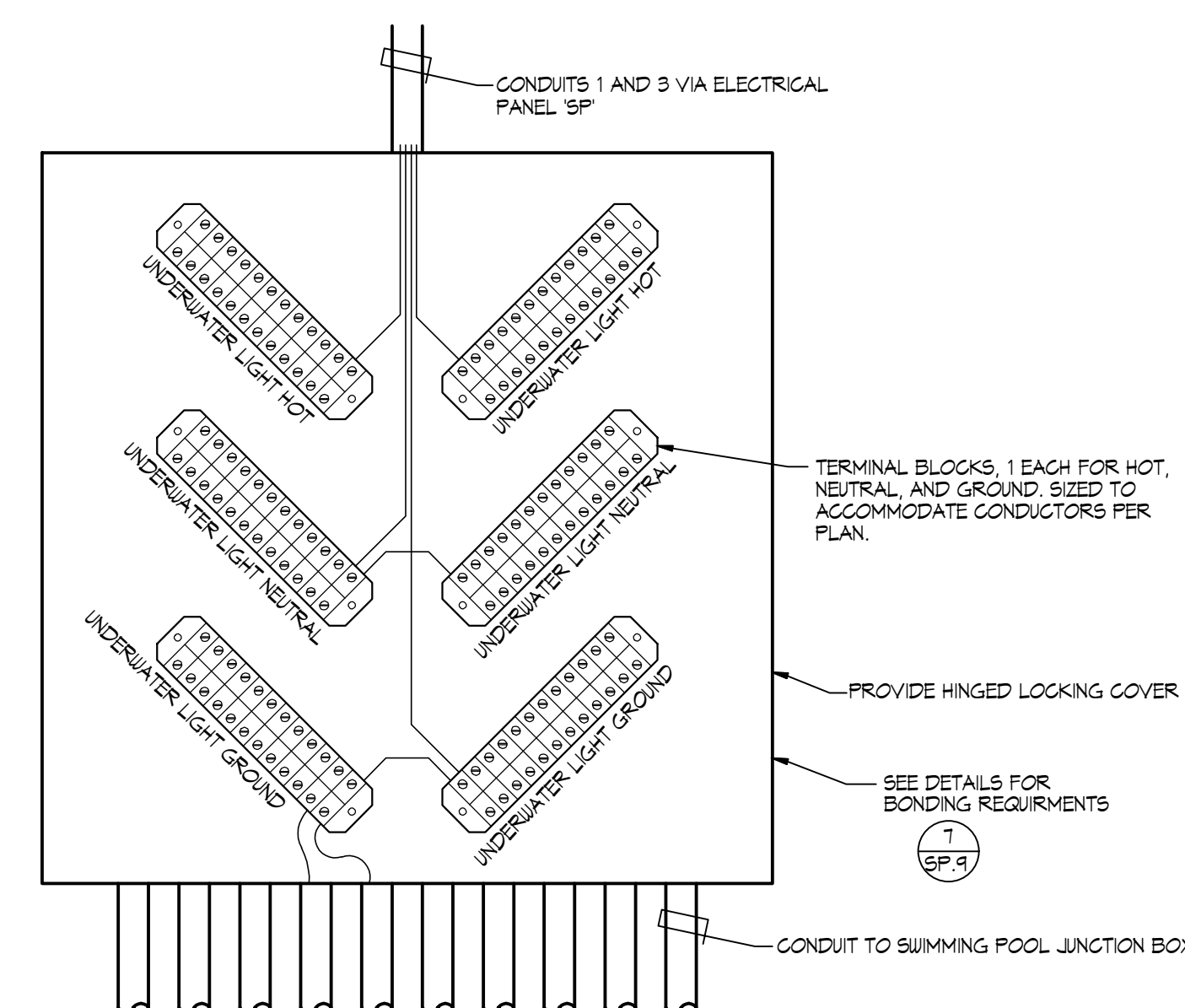
NO SCALE



3

UNDERWATER LIGHT CONTACTOR PANEL

NO SCALE



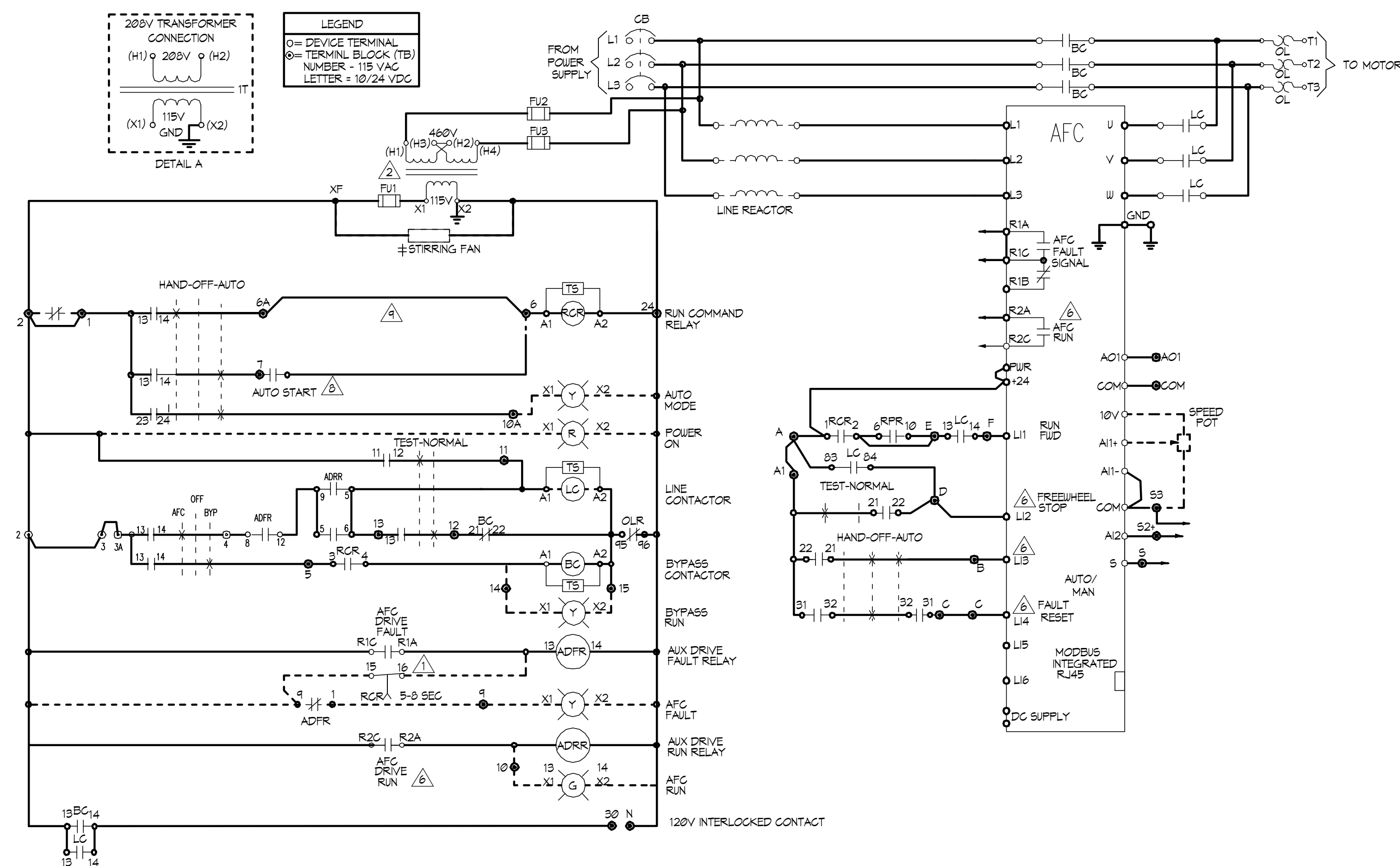
PHASE

SCHEMATIC DEVELOPMENT

DATE
AUGUST 9, 2024

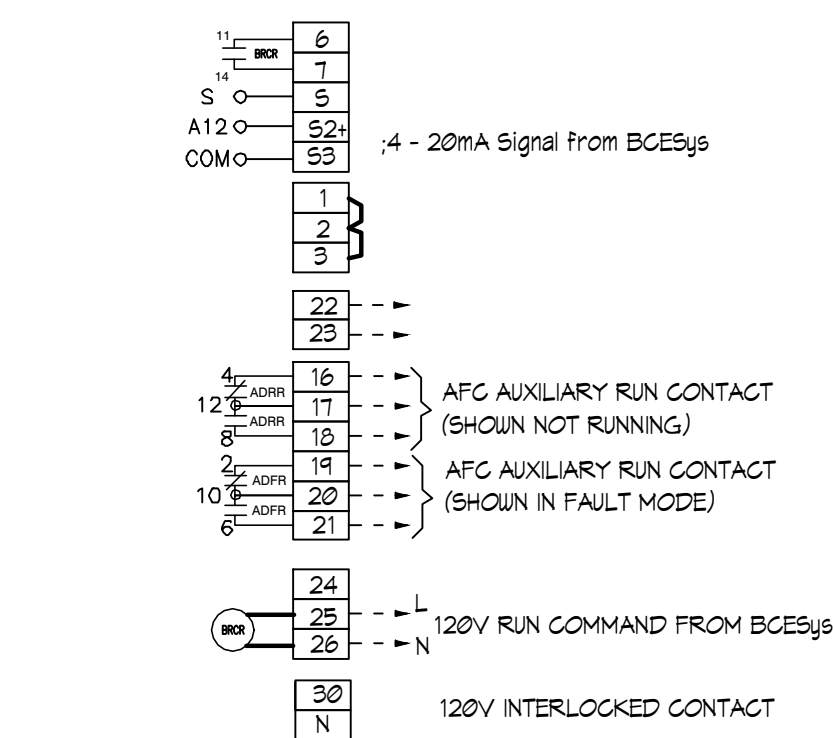
'SPCS' EKO-FLEX VARIABLE FREQUENCY DRIVE SYSTEM SCHEMATIC

NO SCALE



EKO-FLEX ATV61 FACTORY CONFIGURATION				
MENU	NO	SUB-MENU	DESCRIPTION	CODE ADJ.
SM	1.1	---	2/3 WIRE CONTROL	LCG 2C
SM	1.1	---	PUMPS FANS	CFG PHF
SM	1.1	---	STANDARD MOT FREQ (HZ)	BFF 60
SM	1.1	---	ACCELERATION (SEC)	ACC 10
SM	1.1	---	DECELERATION (SEC)	DEC 10
SM	1.1	---	LOW SPEED (HZ)	LSP 3
SM	1.3	---	SWITCHING FREQ. (HZ)	SCF 5
I-O	1.5	---	2 WIRE TYPE	LC1 LEL
I-O	1.5	---	A12 CONFIG.	A12 MIN. VALUE (MA) G12 4
I-O	1.5	---	R2 CONFIG.	R2 ASSIGN - DRIVE RUNNING F2C FM1
CLL	1.6	---	REF. 1 CHAN.	FR1 HM1
CLL	1.6	---	REF. 2 CHAN.	FR2 A11
CLL	1.6	---	PROFILE	CHGF SEP
FUN	1.7	---	STOP CONFIG.	FBT LI2
FUN	1.7	---	REFERENCE SWITCH	REF. 1B SWITCHING FCB LI3
FUN	1.7	---	REFERENCE SWITCH	REF. 1B CHAN. FCB LI3
FLI	1.8	---	FAULT RESET	FSF LI4
FLI	1.8	---	CATCH ON THE FLY	CATCH ON THE FLY FLR YES
FLI	1.8	---	OUTPUT PHASE LOSS	OUTPUT PHASE LOSS PDL NO
COM	1.8	---	FORCED LOCAL	FORCED LOCAL ASSIGN. FLI LI4

DESCRIPTION	TYPE 1	TYPE 12K	TYPE 3R
± STIRRING FANS	10-100 HP 460V 7.5-50HP 208/230V	10-100 HP 460V 7.5-50HP 208/230V	NA
± VENTILATION FAN	NA	NA	ALL HP
± SPACE HEATER	NA	NA	ALL HP

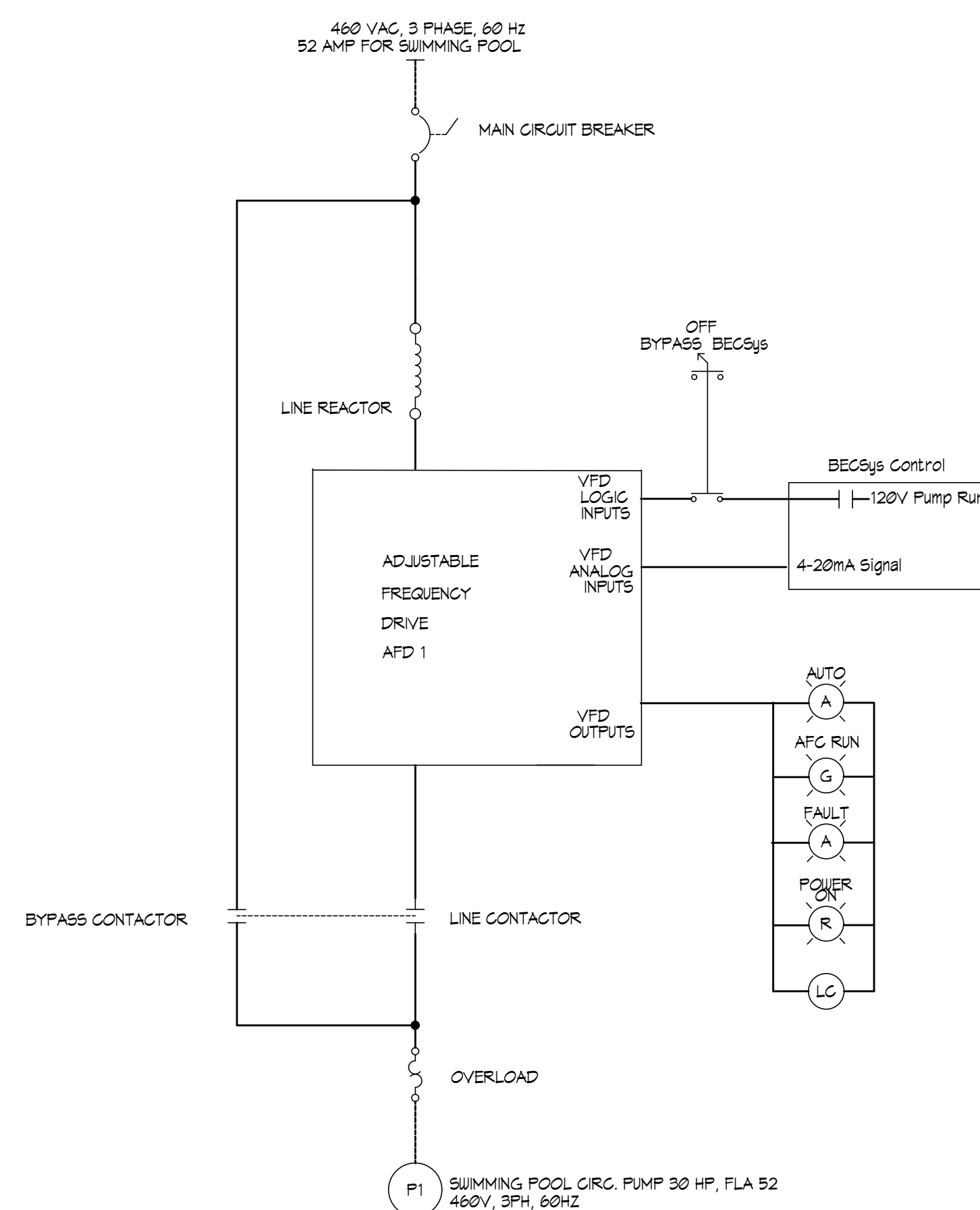


- NOTES:
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 - CONTROL TRANSFORMER SHOWN FOR 460V PRIMARY. FOR 230V PRIMARY, JUMPER H2-H3 IS
 - PROGRAMMED I/O SEE CONTROLLER FUNCTION CONFIGURATION TABLE
 - BECS RUN COMMAND RELAY (BROR)
 - JUMPER USED WHEN START-STOP PUSH BUTTONS NOT USED.

2

'SPCS' EKO-FLEX SINGLE LINE DIAGRAM

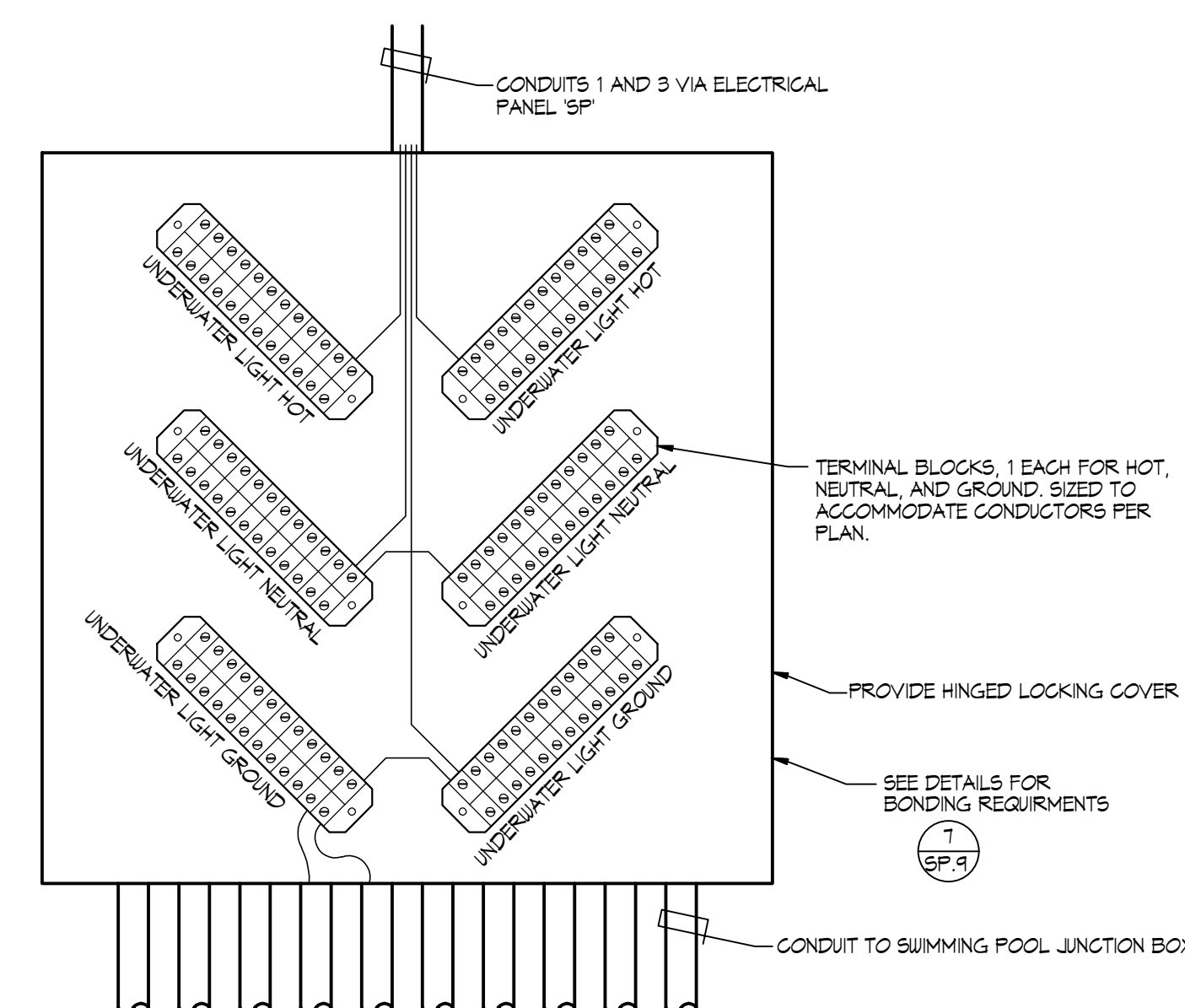
NO SCALE



3

UNDERWATER LIGHT CONTACTOR PANEL

NO SCALE



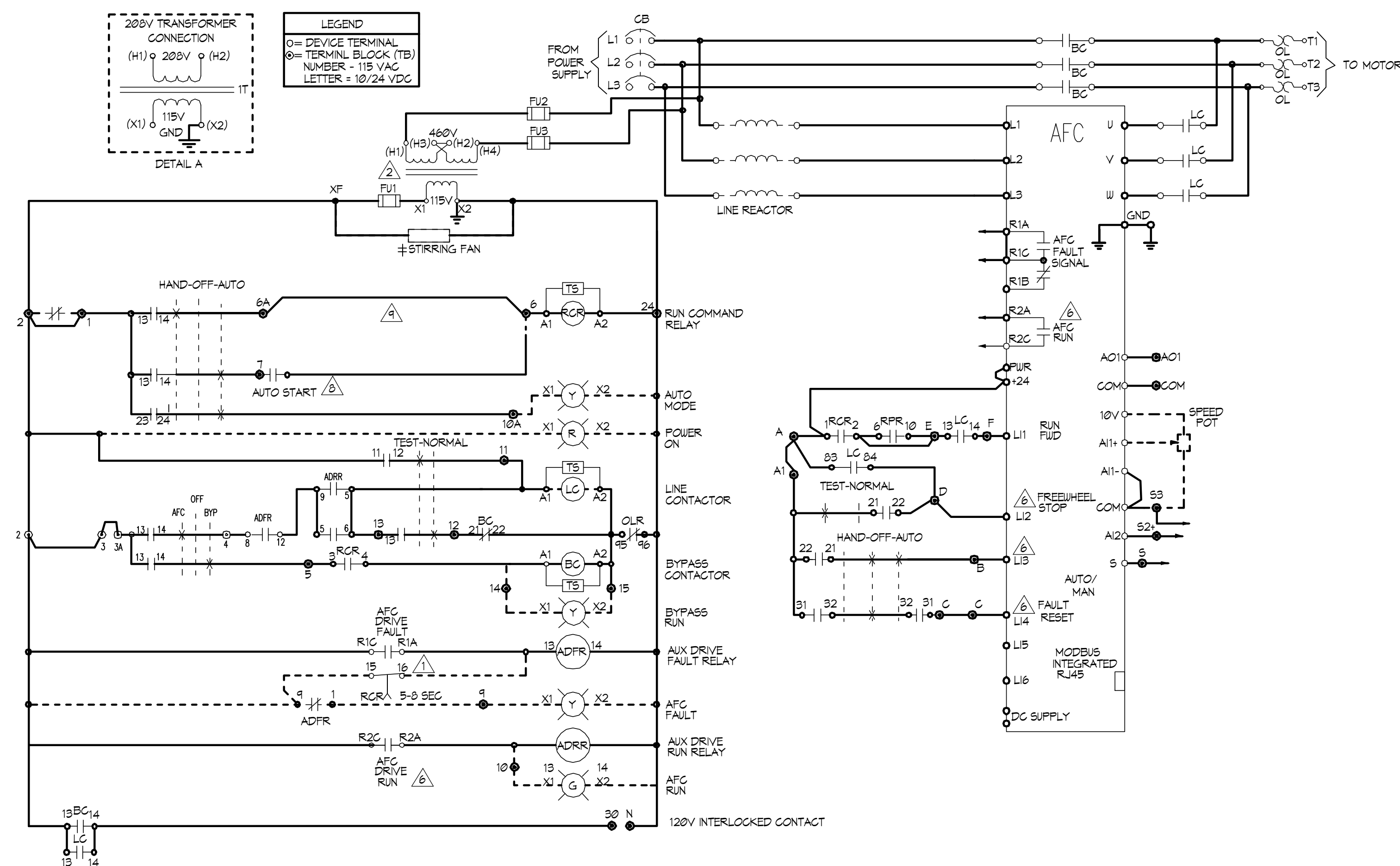
PHASE

SCHEMATIC DEVELOPMENT

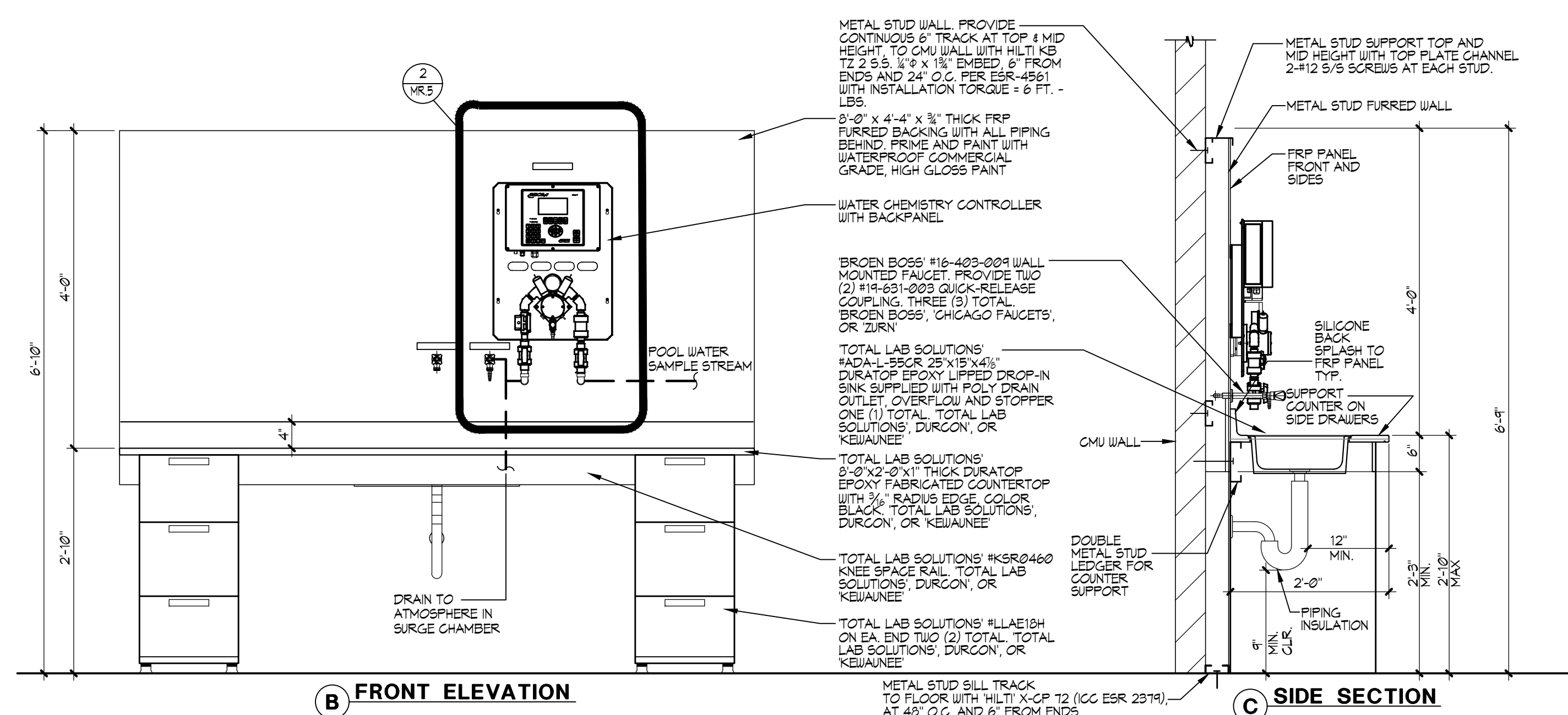
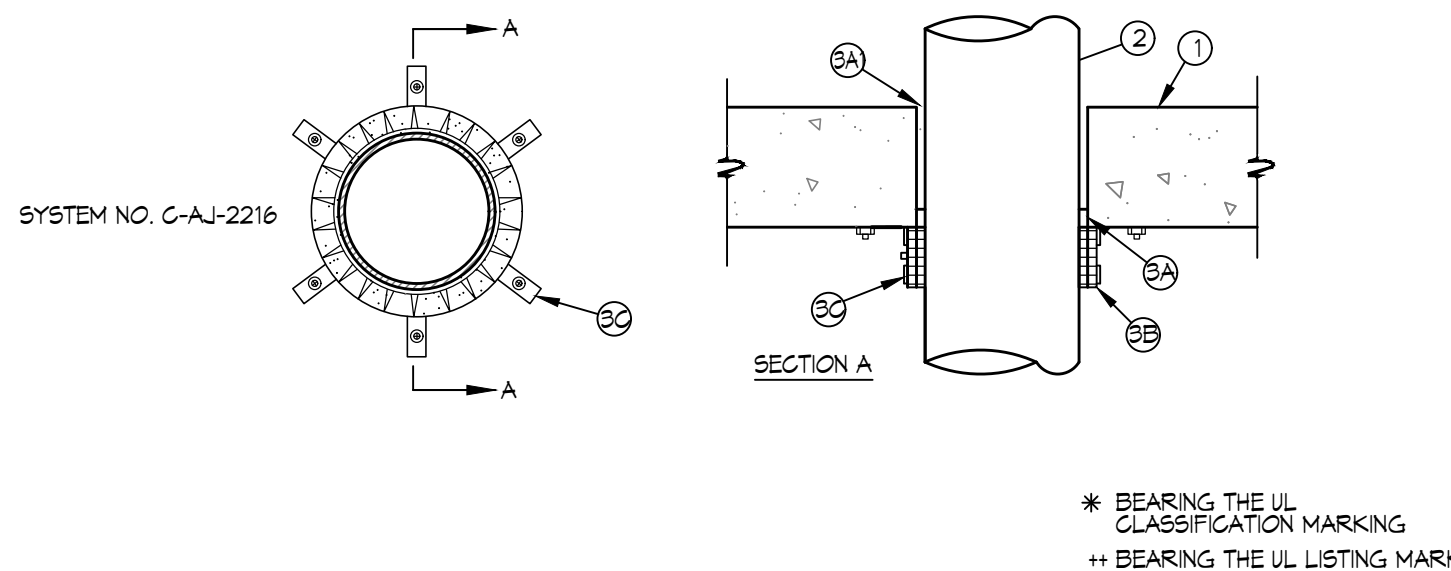
DATE
AUGUST 9, 2024

'SPCS' EKO-FLEX VARIABLE FREQUENCY DRIVE SYSTEM SCHEMATIC

NO SCALE



EKO-FLEX ATV61 FACTORY CONFIGURATION					
MENU	NO	SUB-MENU	DESCRIPTION	CODE	ADJ.
SM	1.1	-----	2/3 WIRE CONTROL	LCG	2C
SM	1.1	-----	PUMPS FANS	CFG	PHF
SM	1.1	-----	STANDARD MOT. FREQ. (HZ)	BFF	60
SM	1.1	-----	ACCELERATION (SEC)	ACC	10
SM	1.1	-----	DECELERATION (SEC)	DEC	10
SM	1.1	-----	LOW SPEED (HZ)	LSP	3
SM	1.3	-----	SWITCHING FREQ. (HZ)	SCF	5
I - O	1.5	-----	2 WIRE TYPE	LC1	LEL
I - O	1.5	A12 CONFIG.	A12 MIN. VALUE (MA)	G12	4
I - O	1.5	R2 CONFIG.	R2 ASSIGN - DRIVE RUNNING	F2C	FM1
CLL	1.6	-----	REF. 1 CHAN.	FR1	HM1
CLL	1.6	-----	REF. 2 CHAN.	FR1	A11
CLL	1.6	-----	PROFILE	GNCF	SEP
FUN	1.7	STOP CONFIG.	FREEDWHEEL STOP ASSIGN	1ST	L12
FUN	1.7	REFERENCE SWITCH	REF. 1B SWITCHING	FGD	L13
FUN	1.7	REFERENCE SWITCH	REF. 1B CHAN.	FL1D	A13
FL1	1.3	FAULT RESET	FAULT RESET	FSP	Y4
FL1	1.6	CATCH ON THE FLY	CATCH ON THE FLY	FLR	LY6
FL1	1.9	OUTPUT PHASE LOSS	OUTPUT LOSS	PDL	N0
COM	1.4	FORCED LOSS	FORCED LOSS ASSIGN.	PL1	LI4
DESCRIPTION			TYPE 1	TYPE 12K	TYPE 3R
#	STIRRING FANS		10-100 HP 480V 15-200HP 200-230V	10-100 HP 480V 15-200HP 200-230V	NA
#	VENTILATION FAN		NA	NA	ALL HP
#	SPACE HEATER		NA	NA	ALL HP


$$1'' = 1' - \phi'$$


- [illegible]

NO SCALE

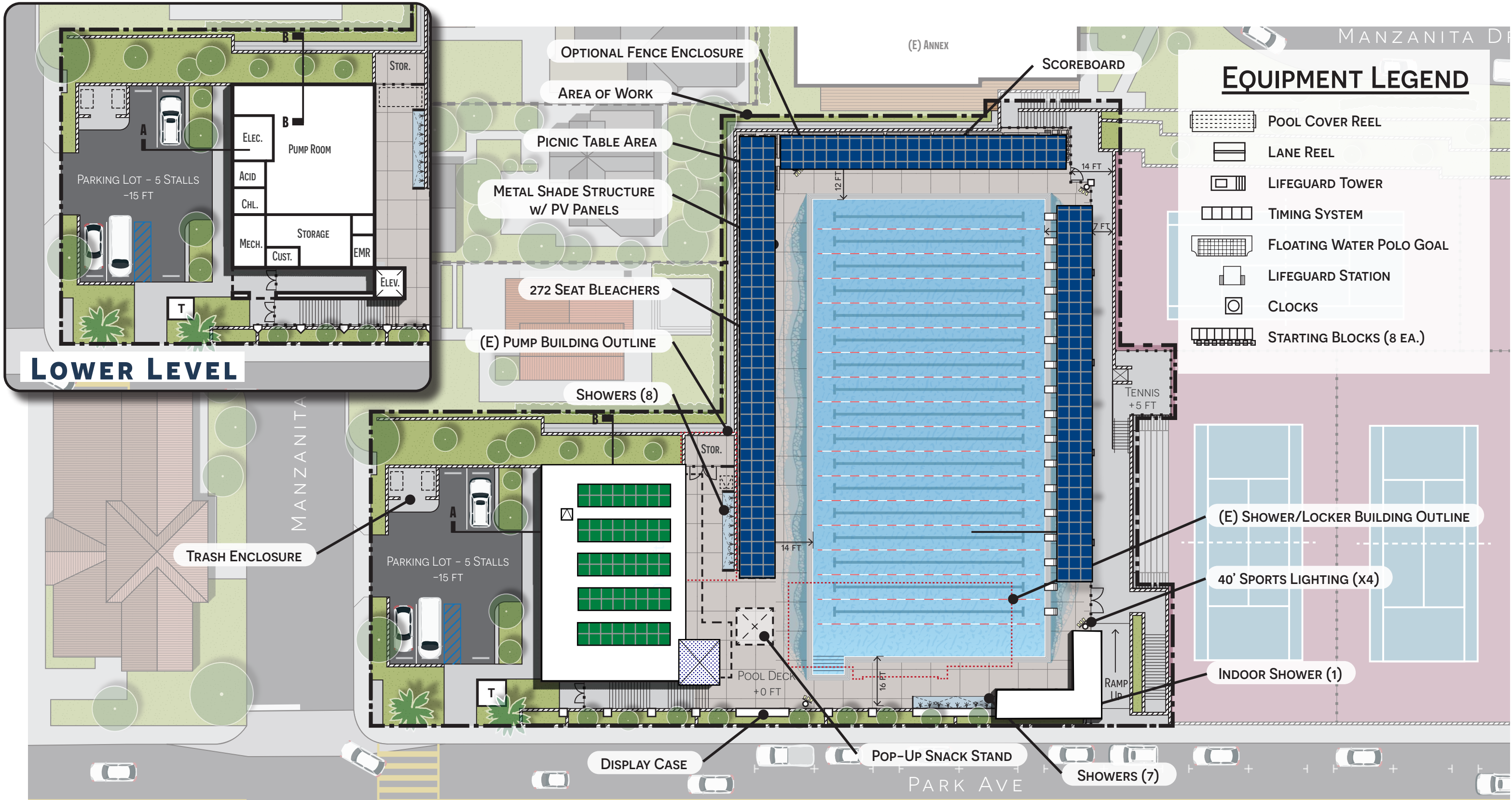
NO SCALE



MAX. PIPE SUPPORT SPACING

3" PIPING OR SMALLER = 6'-0" O.C.
6" PIPING = 6'-0" O.C.
8" PIPING = 6'-0" O.C.
10" PIPING = 6'-0" O.C.

NO SCALE



SITE PLAN

LAGUNA BEACH HIGH SCHOOL POOL

Solar photovoltaic

Solar water heating

SCALE: 1" = 30'

0' 15' 30' 60'