

### SWIMMING POOL DATA

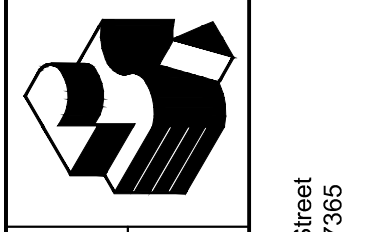
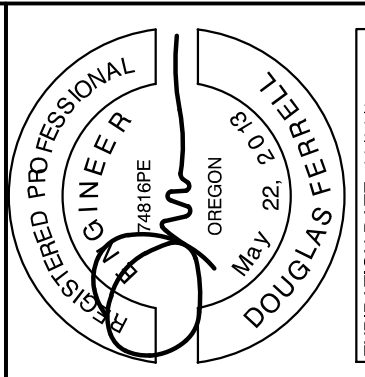
SURFACE AREA	=	4,604 SQ. FT.
PERIMETER	=	279 FT.
DEPTHS	=	3'-6" TO 10'-0"
VOLUME	=	188,072 GAL.
6 HR TURNOVER	=	523 GPM

### LEGEND

***MD	=	MAIN DRAIN	(3)
RA	=	ROPE ANCHOR	(4) (5) (6) (9) (10) (11) (12)
UL	=	UNDERWATER LIGHT	(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12)
DM	=	DEPTH MARKER	(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12)
NR	=	NO RUNNING	(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12)
ND	=	NO DIVING	(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12)
GR	=	GRABRAIL	(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12)
RP	=	RACING PLATFORM	(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12)
BS	=	BACKSTROKE STANCHION	(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12)
HR	=	HANDRAIL	(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12)
AL	=	ACCESSIBLE LIFT	(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12)
MGC	=	MOVEABLE GUARD CHAIR	(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12)
***3/4M	=	THREE QUARTER METER DIVE STAND	(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12)
WP	=	WATERPOLO GOAL	(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12)
OF/CI	=	OWNER FURNISHED/CONTRACTOR INSTALLED	

### CERTIFICATION REQUIREMENTS

- \* THE CONTRACTOR SHALL RETAIN AN INDEPENDENT LICENSED SURVEYOR TO PROVIDE PROOF OF COMPLIANCE FOR REQUIRED POOL LENGTHS AS FOLLOWS:  
 SHORT COURSE: 25 YDS. (ALLOW FOR TOUCH PADS AT ONE END) 15'-0" 5/16" MIN.; 15'-1 3/16" MAX.  
 TOLERANCE AGAINST LENGTH SHALL EXTEND IN A VERTICAL PLANE 0.2M (8 1/8") ABOVE AND 0.2M (7 7/8") BELOW THE SURFACE OF THE WATER AT ALL POINTS OF BOTH END WALLS TYP. OF ALL COURSES.
- \*\* ADDITIONALLY ALL POOL DEPTHS SHALL BE CERTIFIED AND DIVING DIMENSIONS SHALL BE CERTIFIED AND PROVIDED TO THE OWNER.
- 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.A. COMPLIANT.



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### SWIMMING POOL LAYOUT PLAN

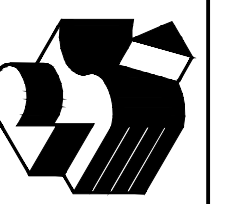
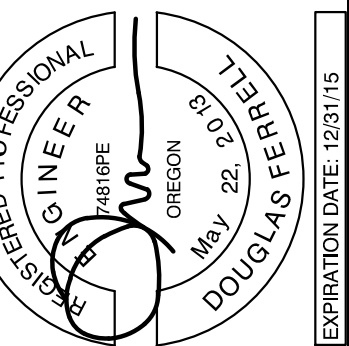
Drawn By	NFC
Checked	SJF
Date	17 JUNE 2015
Project	1419

### SP1

SWIMMING POOL LAYOUT PLAN 1/4"=1'-0"







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SWIMMING POOL/ACTIVITY POOL/HYDROTHERAPY SPA PIPING PLAN

Drawn By: NFC  
 Checked: SJF  
 Date: 17 JUNE 2015  
 Project: 1419

SP2

**SWIMMING POOL DATA**

SURFACE AREA	=	4,604 SQ. FT.
PERIMETER	=	279 FT.
DEPTHS	=	3'-6" TO 10'-0"
VOLUME	=	188,072 GAL.
6 HR TURNOVER	=	523 GPM

**SWIMMING POOL SURGE DATA**

REQUIRED SURGE CAPACITY	=	4,604 GAL.
SURGE IN PERIMETER GUTTER	=	2,351 GAL.
SURGE IN GUTTER PIPING	=	1,086 GAL.
SURGE IN SURGE CHAMBER	=	1,881 GAL.
TOTAL SUPPLIED SURGE	=	5,324 GAL.
∴ 5,324 GAL. > 4,604 GAL. + 16% OK		

**ACTIVITY POOL DATA**

SURFACE AREA	=	2,512 SQ. FT.
PERIMETER	=	216 FT.
DEPTHS	=	0'-0" TO 6'-6"
VOLUME	=	52,033 GAL.
2 HR TURNOVER	=	434 GPM

**ACTIVITY POOL SURGE DATA**

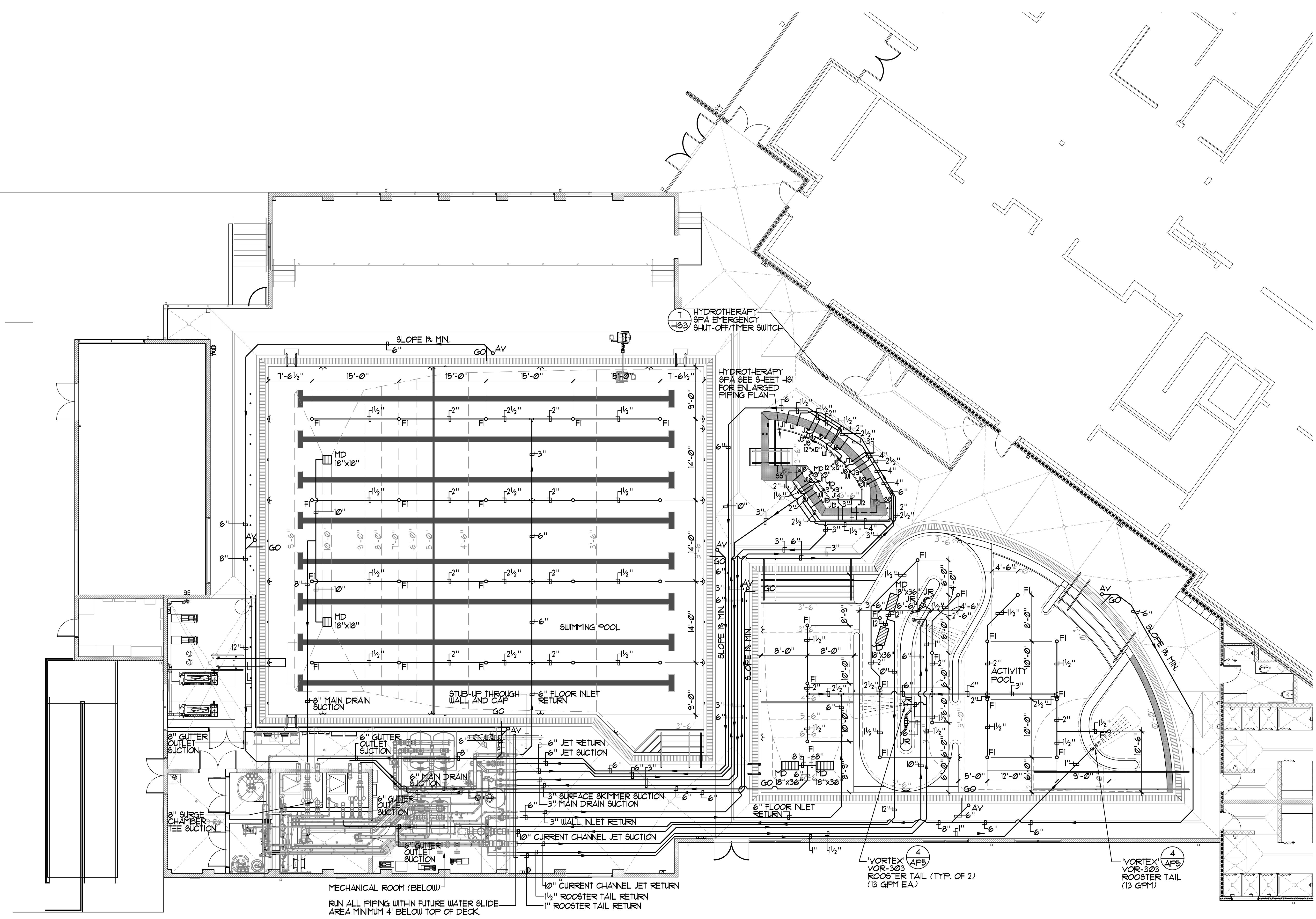
REQUIRED SURGE CAPACITY	=	2,512 GAL.
SURGE IN PERIMETER GUTTER	=	1,820 GAL.
SURGE IN SURGE CHAMBER	=	1,348 GAL.
TOTAL SUPPLIED SURGE	=	3,168 GAL.
∴ 3,168 GAL. > 2,512 GAL. + 23% OK		

**HYDROTHERAPY SPA DATA**

SURFACE AREA	=	152 SQ. FT.
PERIMETER	=	59 FT.
DEPTHS	=	3'-6"
VOLUME	=	3,130 GAL.
30 MIN TURNOVER	=	104 GPM

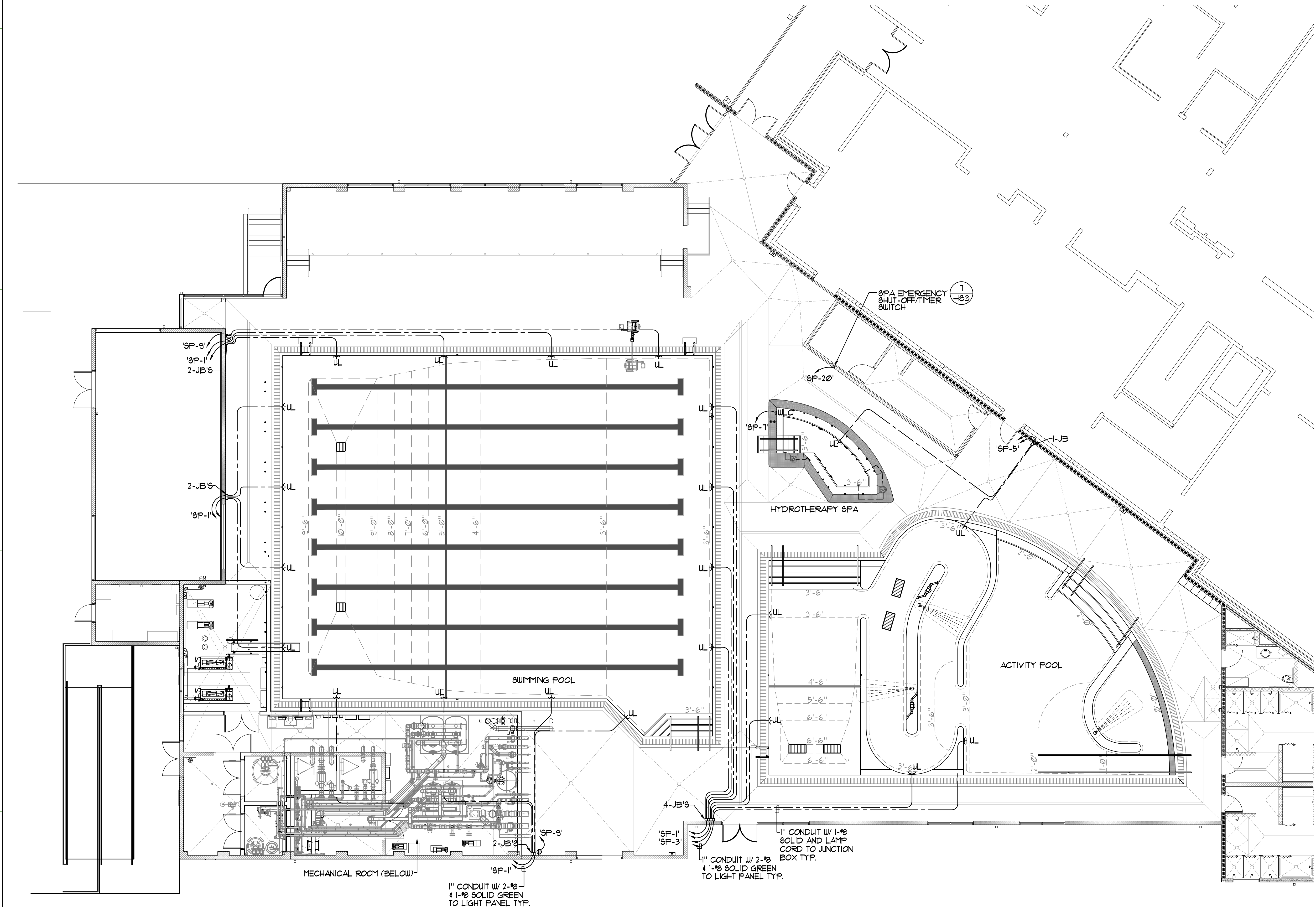
**LEGEND**

MD	=	MAIN DRAIN	3	2
JS	=	JET SUCTION	5	8
WI	=	WALL INLET	1	8
J1 - J18	=	JET RETURNS	3	4
WLC	=	WATER LEVEL CONTROL	3	4
SS	=	SURFACE SKIMMER	5	6
FI	=	FLOOR INLET	1	6
GO	=	GUTTER OUTLET	1	6
AV	=	AIR VENT	1	6
RJ	=	RIVER JET	1	6



SWIMMING POOL/ACTIVITY POOL/HYDROTHERAPY SPA PIPING PLAN 1/8"=1'-0"

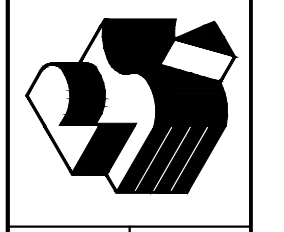
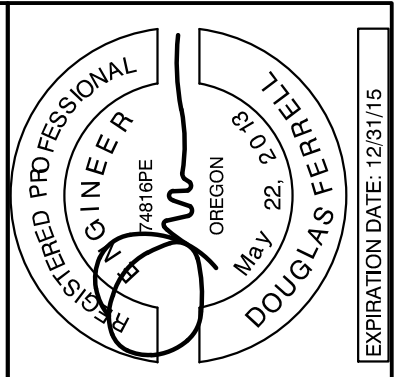




**LEGEND**

- UL = UNDERWATER LIGHT
- JB = JUNCTION BOX
- WLC = WATER LEVEL CONTROLLER

NOTE:  
REFER TO ELECTRICAL PLANS FOR LOCATION OF OWNER  
COORDINATED REMOTE UNDERWATER LIGHT SWITCH.



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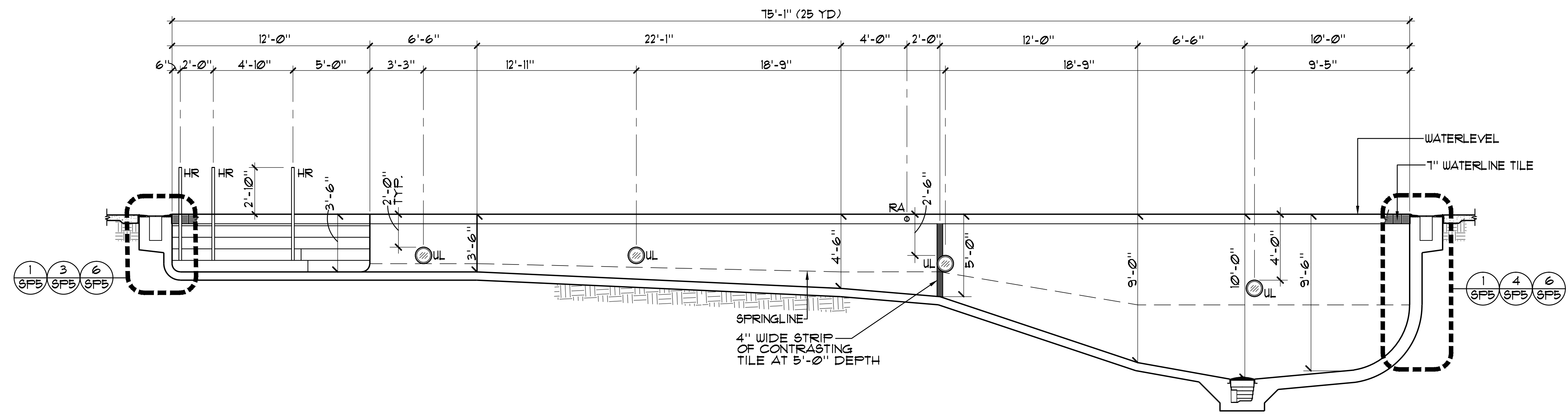
**SWIMMING POOL/ACTIVITY POOL/HYDROTHERAPY SPA UNDERWATER LIGHT PLAN**

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Project	1419

**SP3**

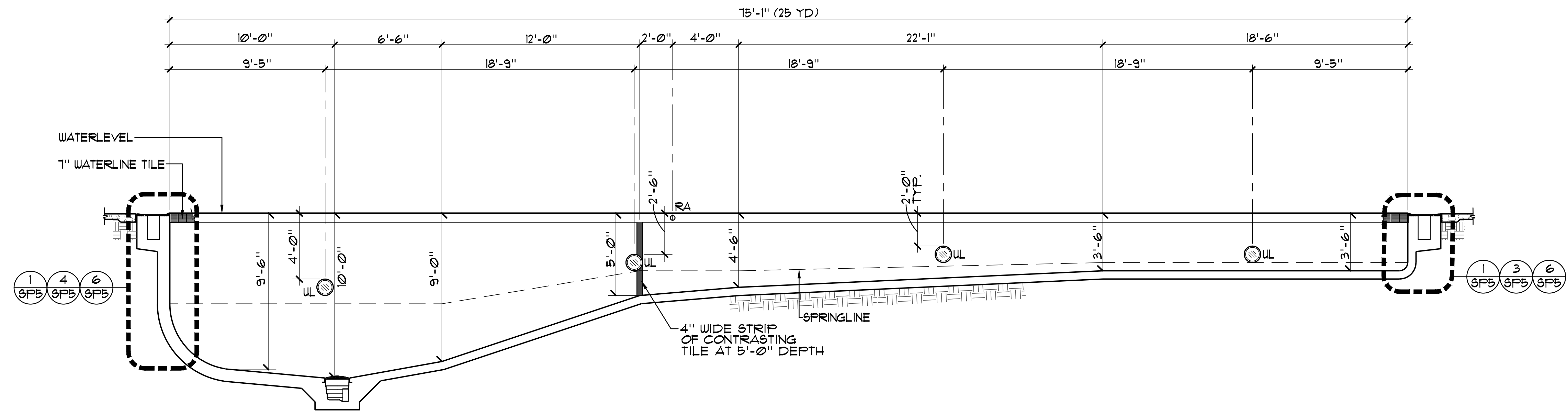






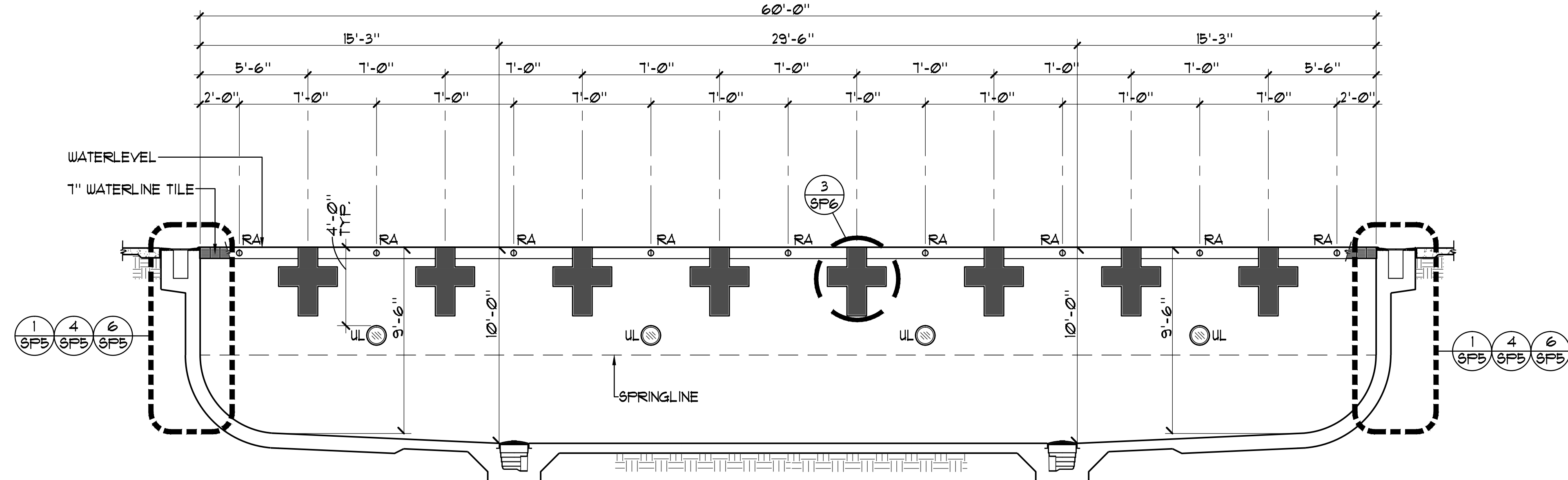
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1/4"=1'-0"



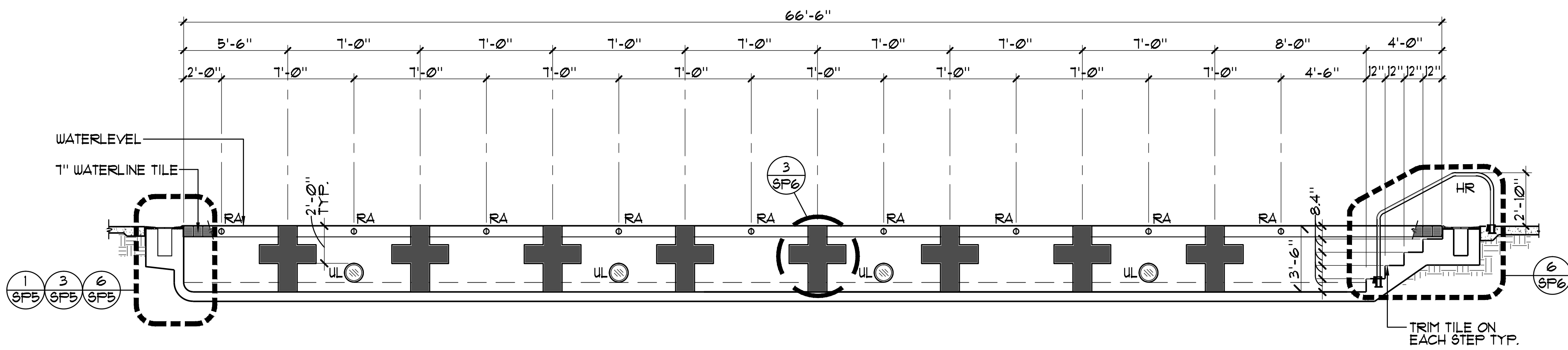
**SWIMMING POOL SECTION**

1/4"=1'-0"



**SWIMMING POOL SECTION**

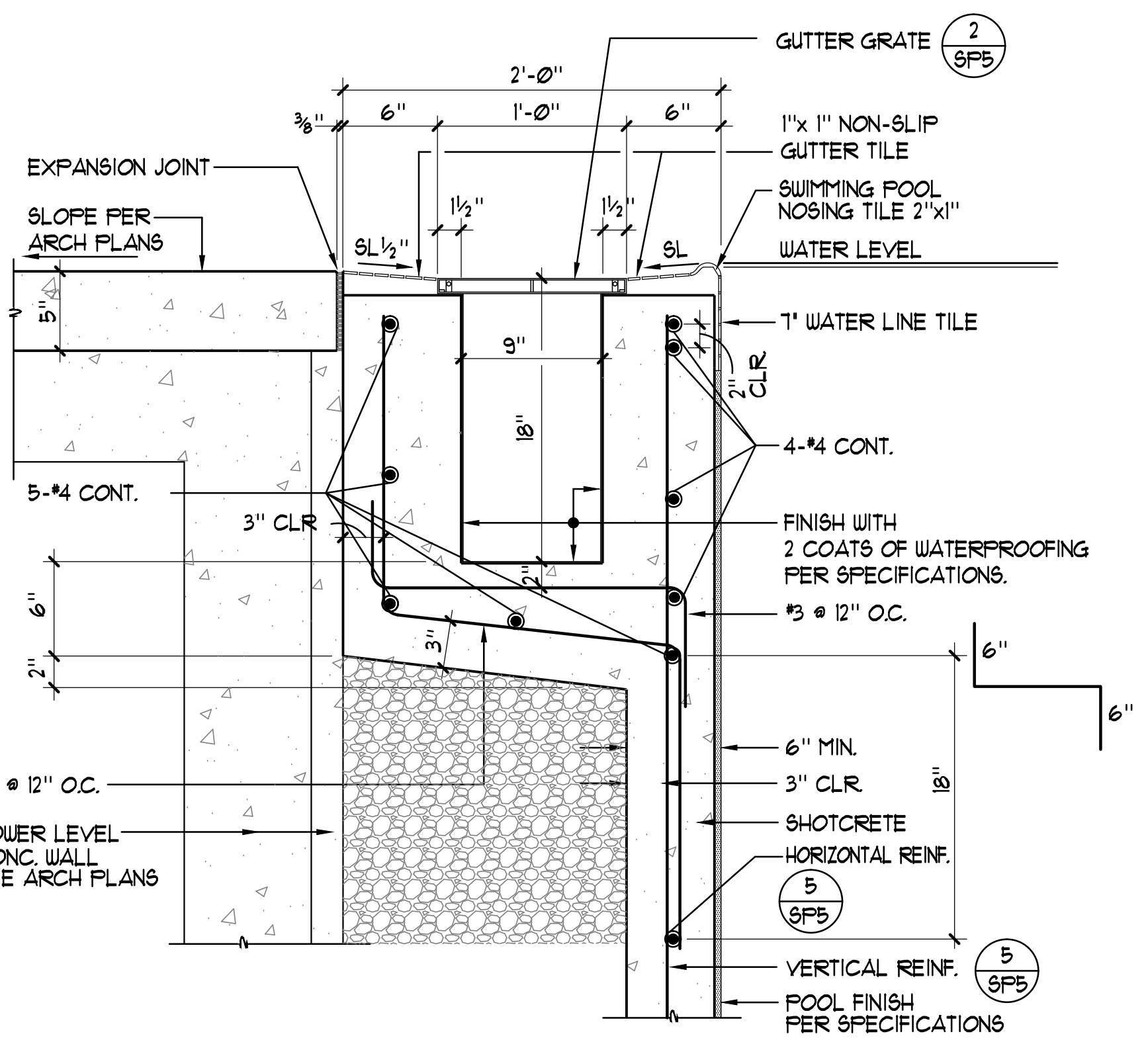
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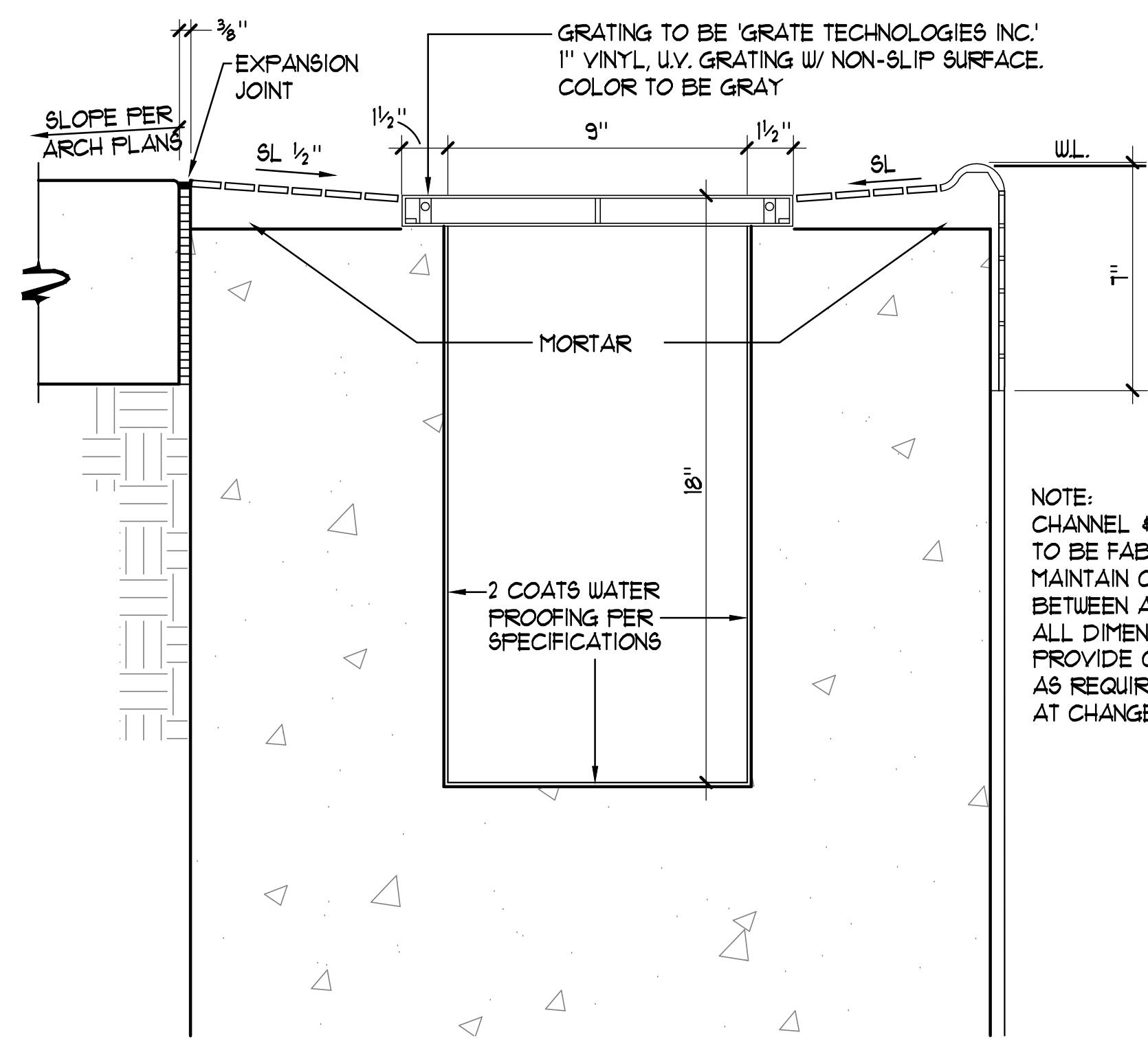
**SWIMMING POOL SECTION**

1/4"=1'-0"

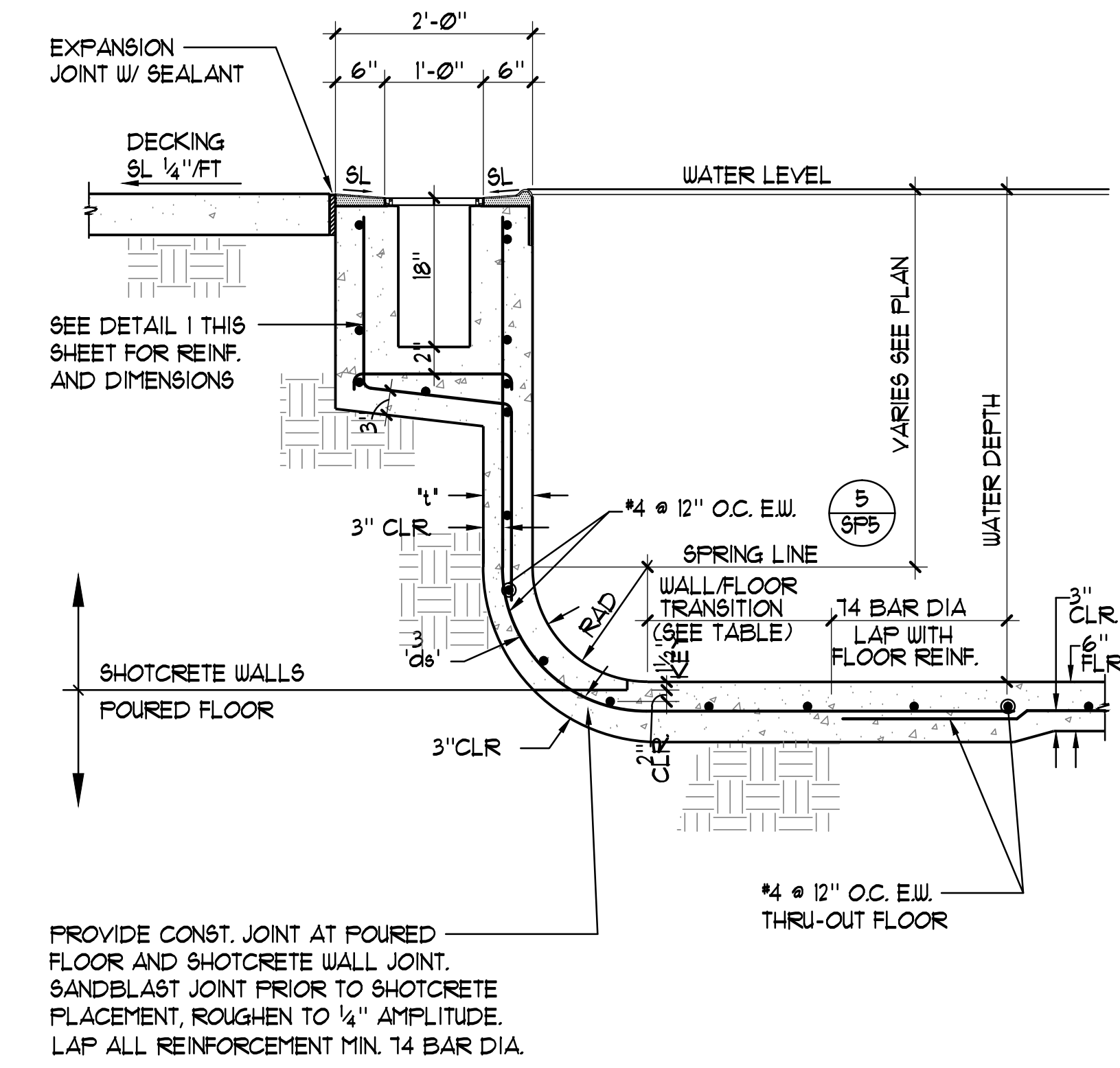




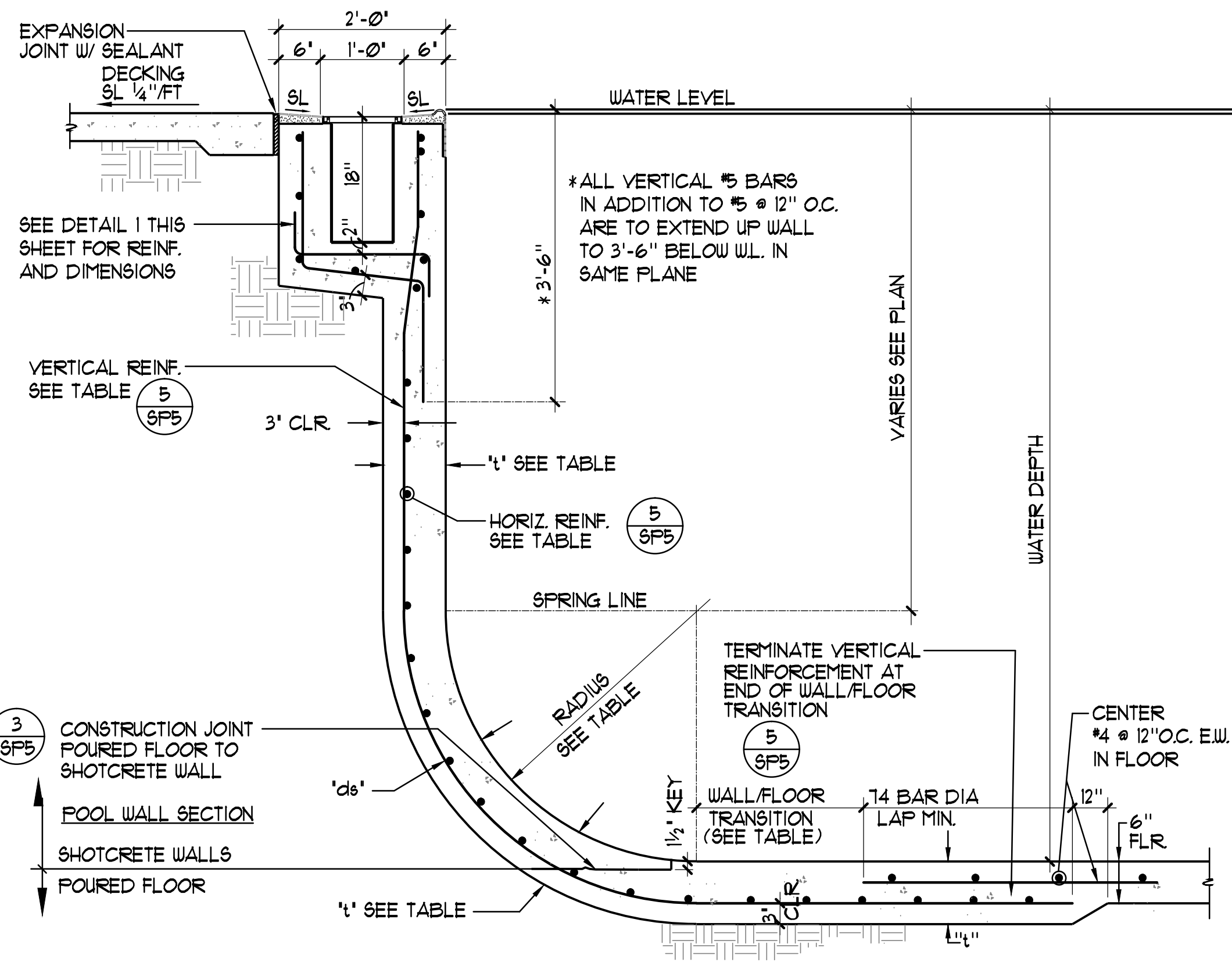
1 RIM-FLOW GUTTER 1 1/2\"/>



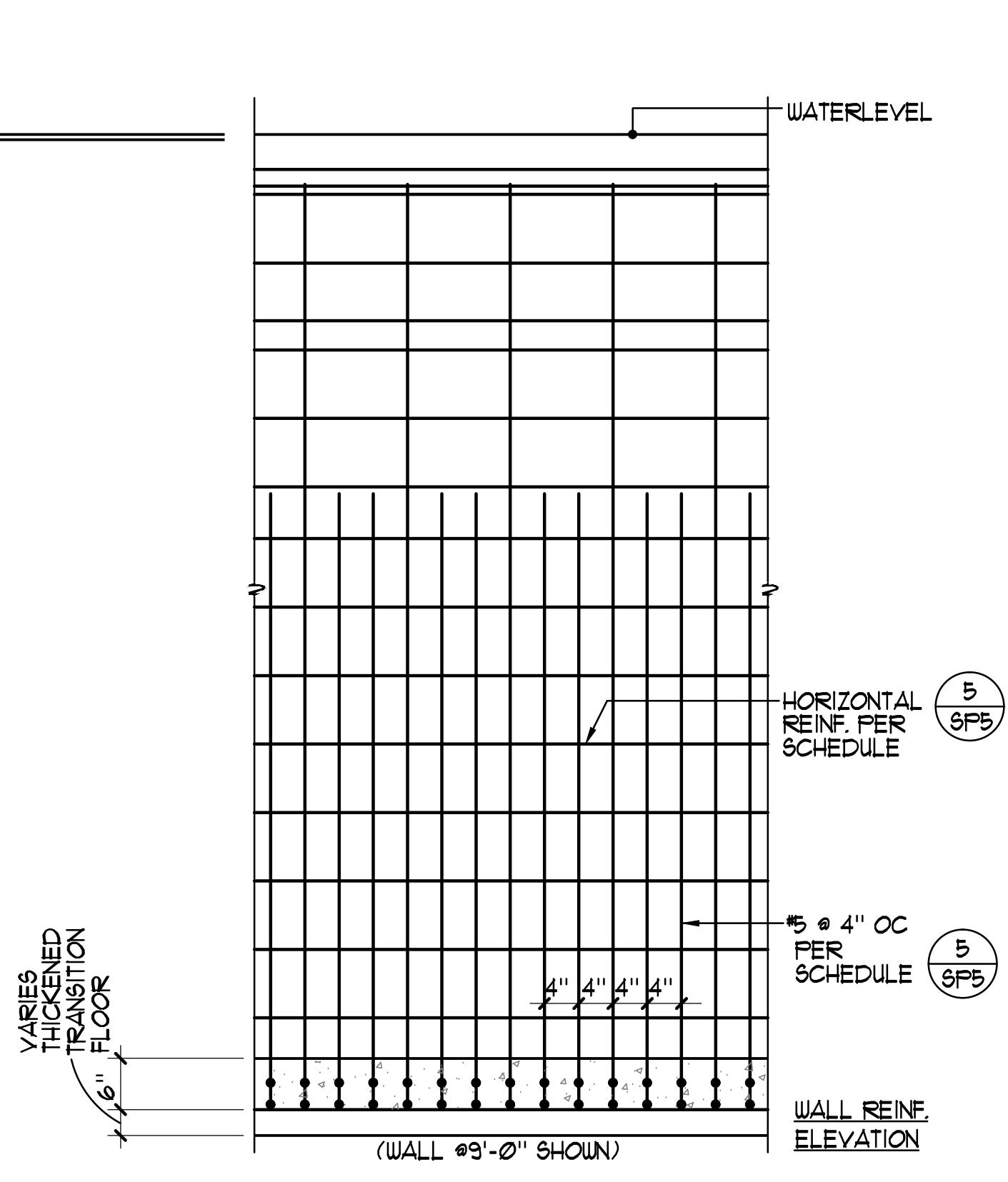
2 RIM FLOW GUTTER GRATE 3\"/>



3 POOL WALL 3'-6\"/>



4 POOL WALL 5'-1\"/>

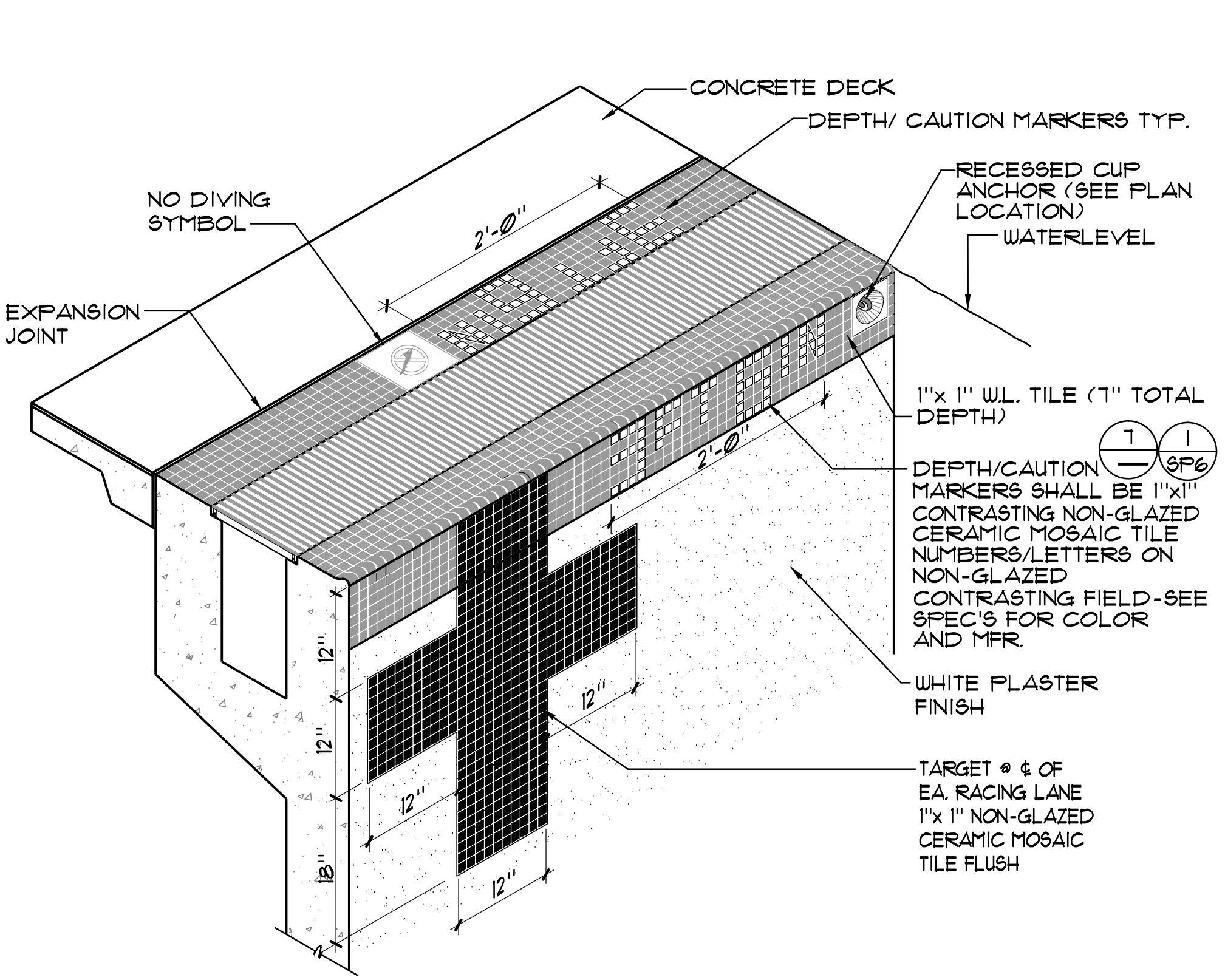


5 POOL WALL 5'-1\"/>

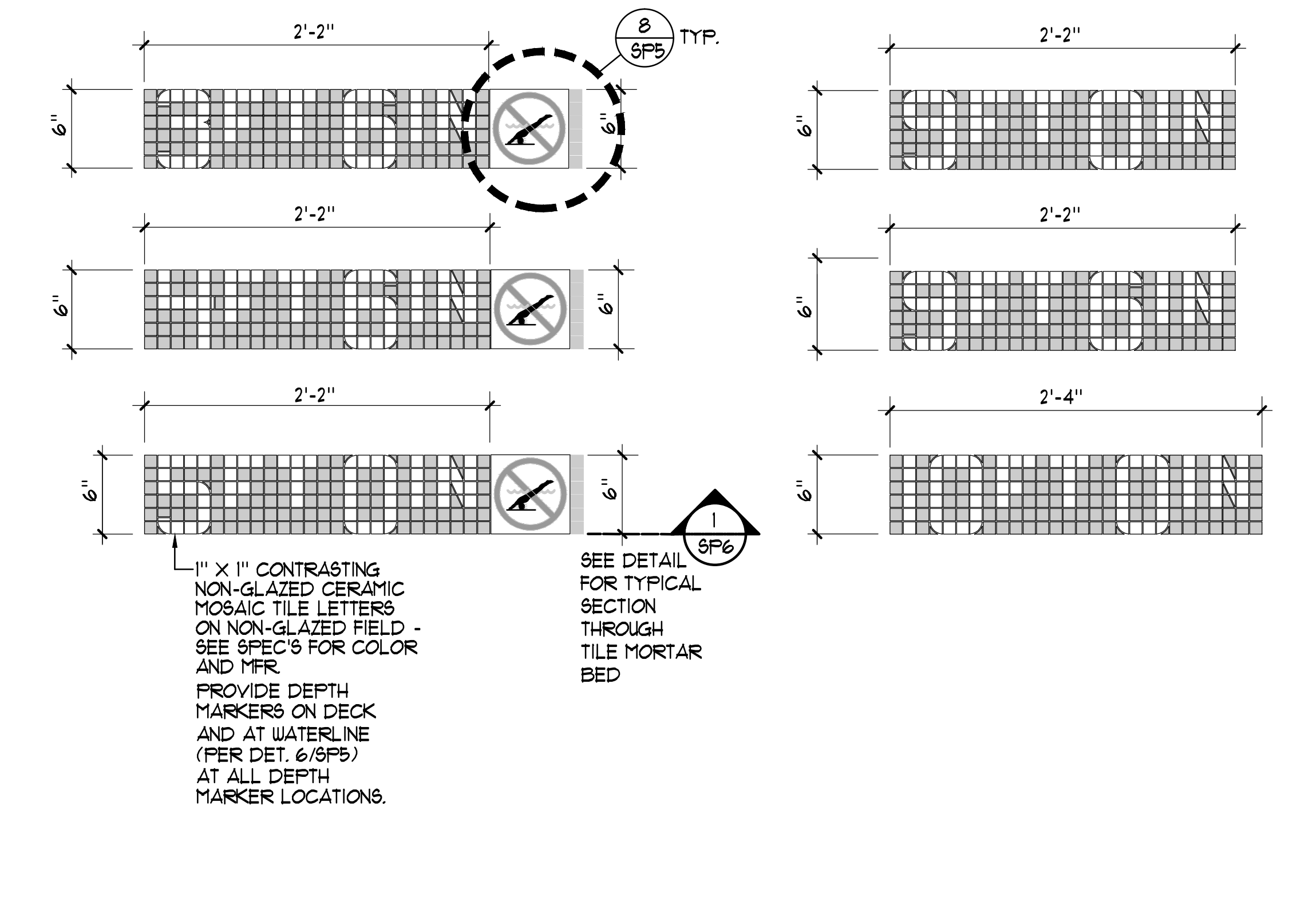
REINFORCEMENT TABLE						
WATER DEPTH	'L	'ds	RADIUS	VERTICAL REINF.	HORIZONTAL REINF.	WALL/FLOOR TRANSITION
3'-6\"/>	6'	3"	6\"/>	#4 @ 12\"/>	#4 @ 12\"/>	24"
5'-1\"/>	7'	4"	18\"/>	#5 @ 6\"/>	#4 @ 12\"/>	24"
8'-1\"/>	9'	6"	3'-0\"/>	#5 @ 6\"/>	#4 @ 8\"/>	24"

- CONCRETE NOTES:**
- THE MINIMUM ULTIMATE COMPRESSIVE STRENGTH AT 28 DAYS  
POOL = 3000 PSI  
SLAB-ON-GRADE = 3000 PSI
  - CONTINUOUS INSPECTION BY AN 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 3/8"
  - SHOTCRETE MIX DESIGNS SHALL BE PER 2014 OSGC SECTION 1910.2
  - 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 2014 OSGC SECTION 1905.
  - CONCRETE SHALL BE TESTED AND INSPECTED PER 2014 OSGC SECTION 1104.4 AND 1905.
  - REMOVAL OF FORMS SHALL COMPLY WITH 2014 OSGC SECTION 1905.
  - ALL REINFORCING SHALL BE ASTM A-615, GRADE 60, UNLESS OTHERWISE NOTED. LAPS SHALL BE 14 BAR DIA.
- SHOTCRETE NOTES:**
- THE MINIMUM ULTIMATE COMPRESSIVE STRENGTH AT 28 DAYS  
POOL WALLS = 3000 PSI.
  - CONTINUOUS INSPECTION BY AN 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, MAXIMUM SIZE OF AGGREGATE TO BE 3/8"
  - SHOTCRETE MIX DESIGNS SHALL BE PER 2014 OSGC SECTION 1910.5
  - ANCHOR BOLTS, ANCHORS, DOUELS, INSERTS, ETC. SHALL BE SECURELY TIED IN PLACE PRIOR TO PLACING OF SHOTCRETE.
  - ALL REINFORCING WITHIN SHOTCRETE SHALL MAINTAIN MINIMUM 2" CLEAR NON-CONTACT SPACES.
  - THE FILM OF LAITANCE 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 14 BAR DIA.

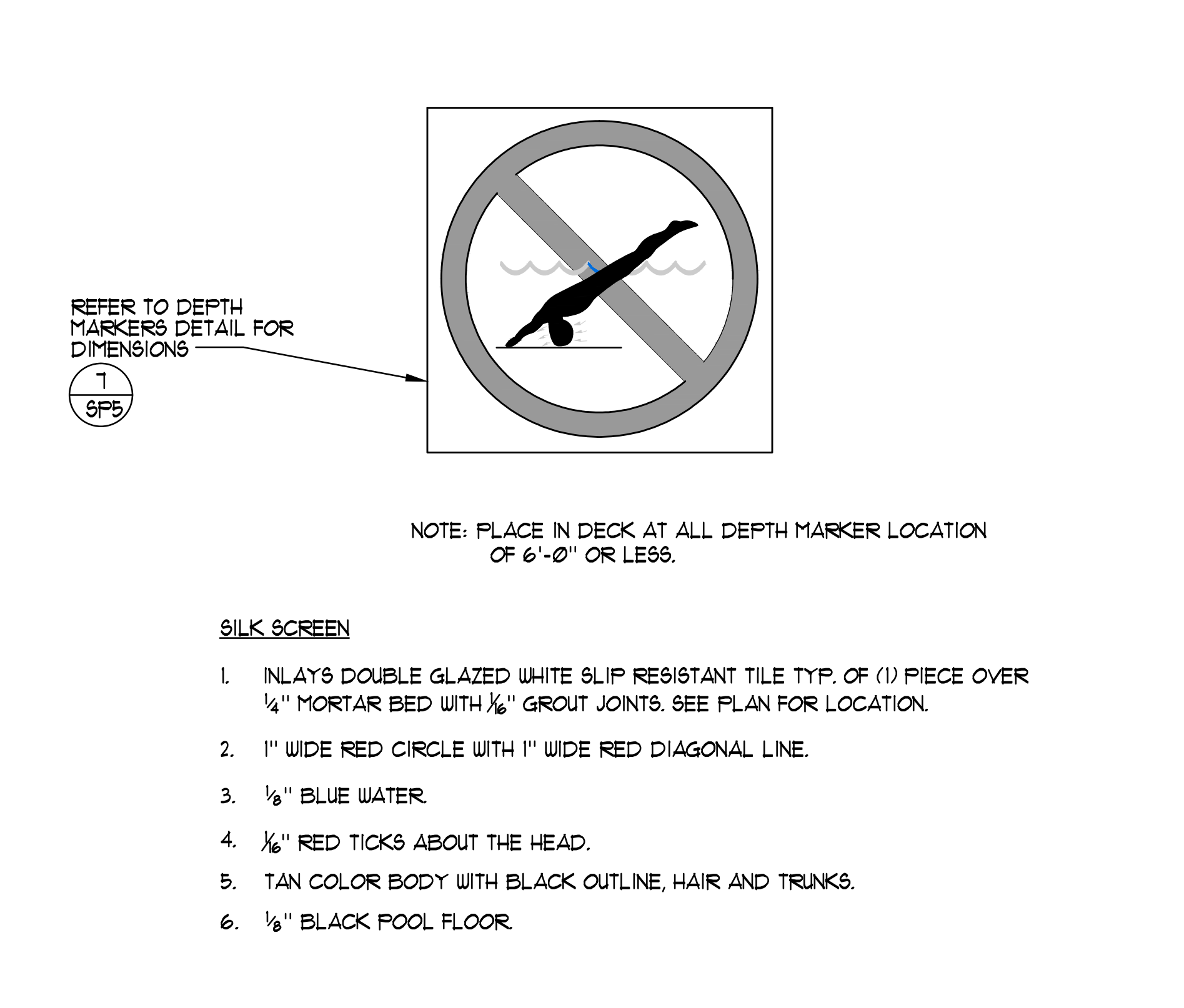
6 REINFORCEMENT TABLE



7 RIM FLOW GUTTER PERSPECTIVE NO SCALE

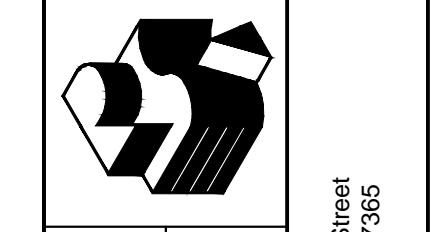
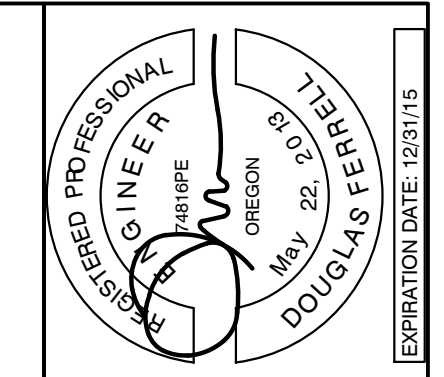


8 DEPTH MARKERS 1 1/2\"/>

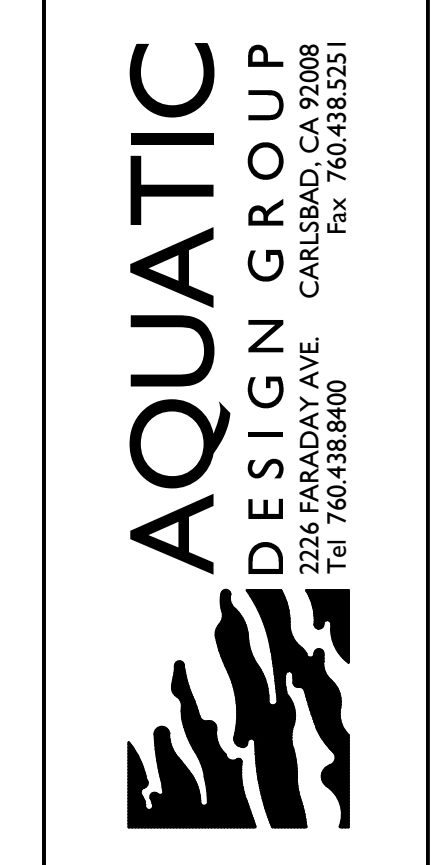


9 INTERNATIONAL "NO DIVING" MARKER 3\"/>

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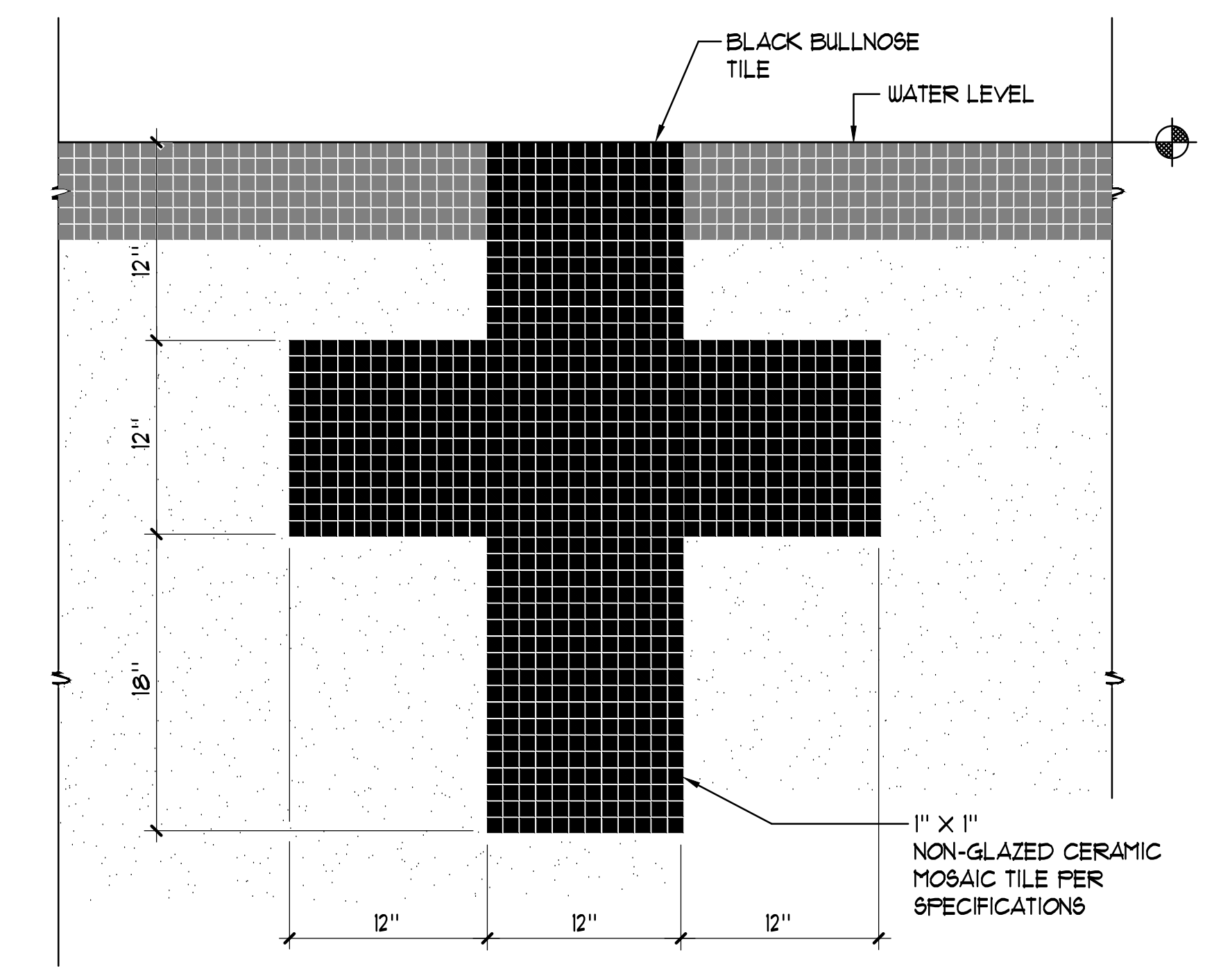
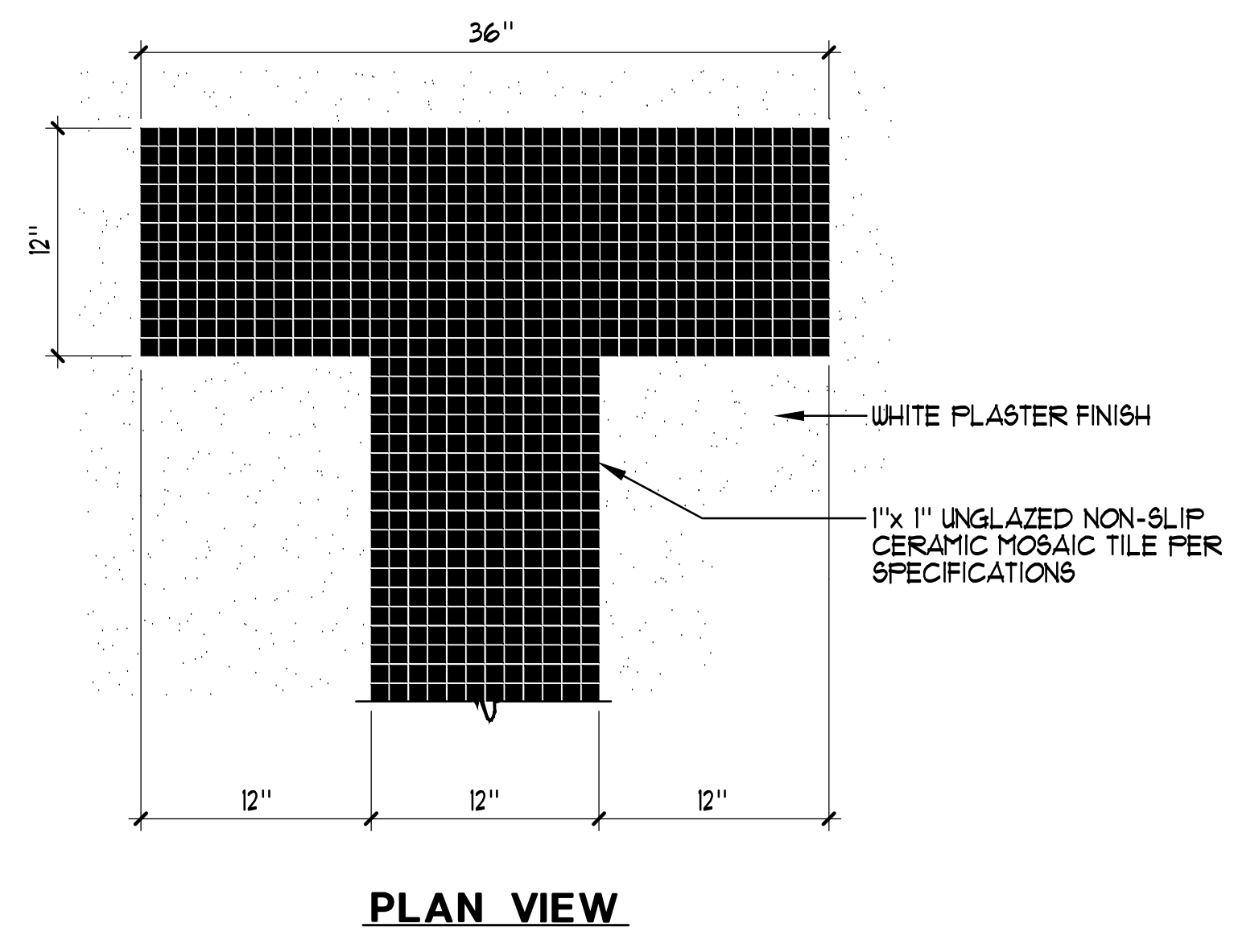
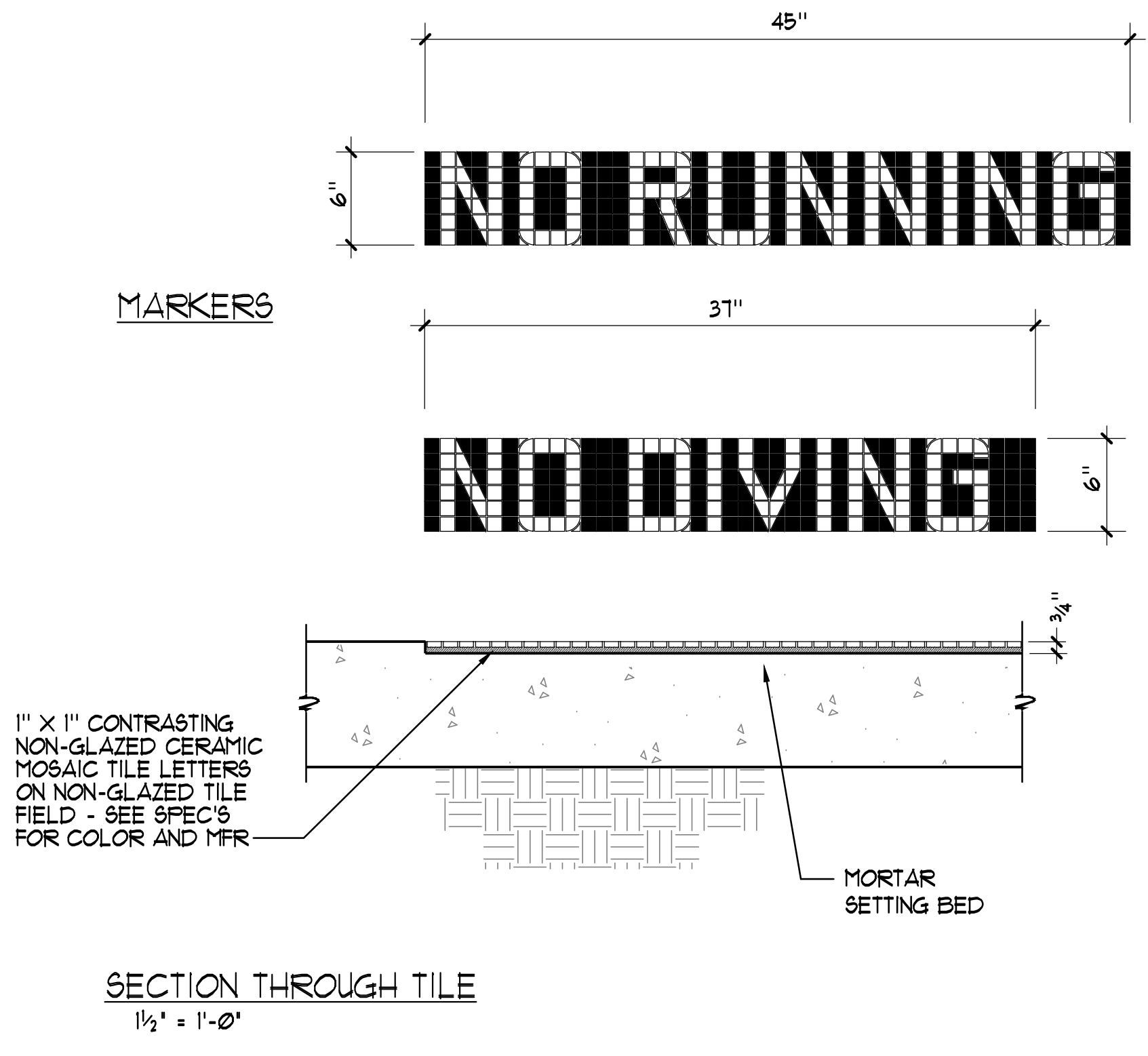


**DETAILS**

Drawn By: NFC  
 Checked: S/JF  
 Date: 17 JUNE 2015  
 Project: 1419

**SP5**

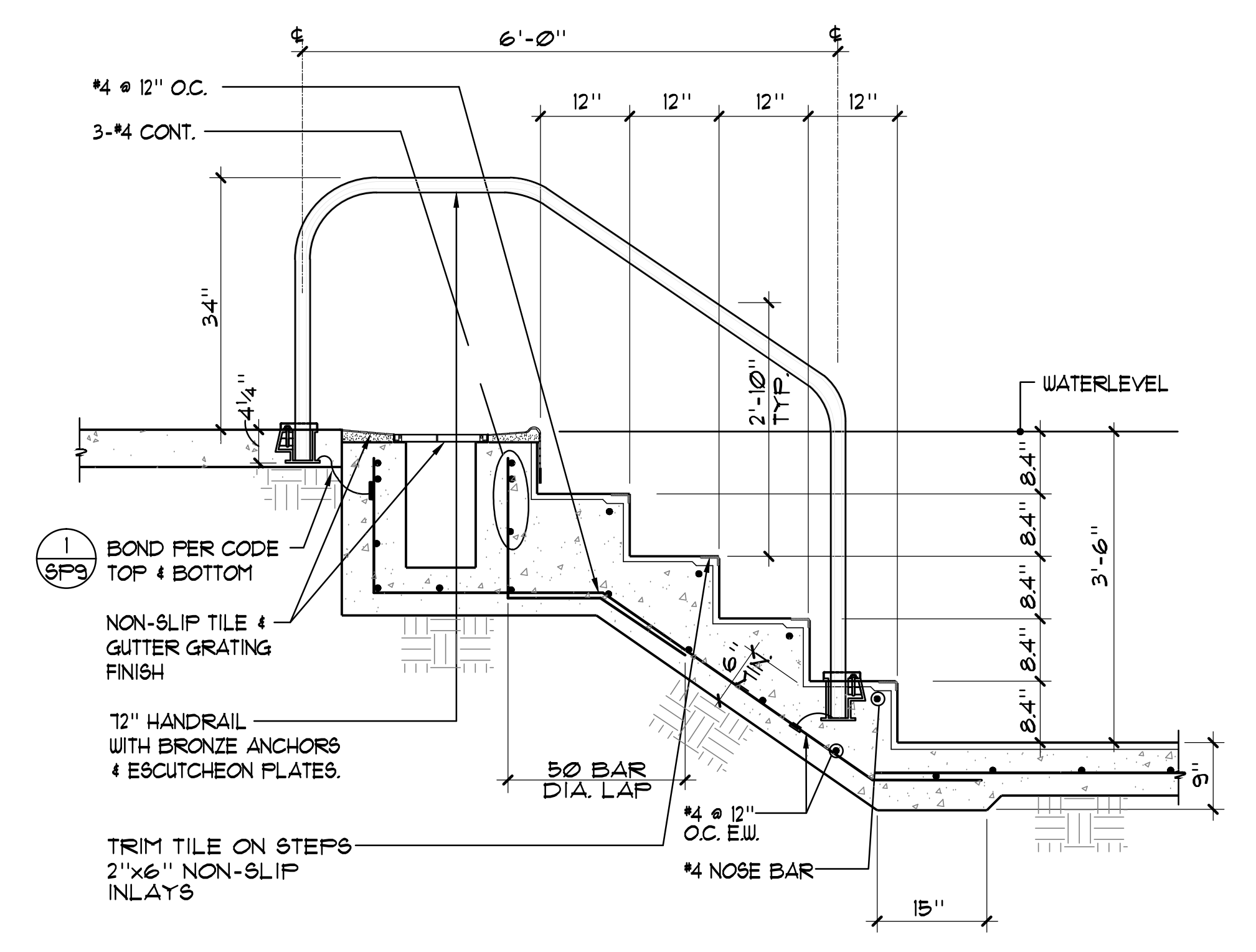
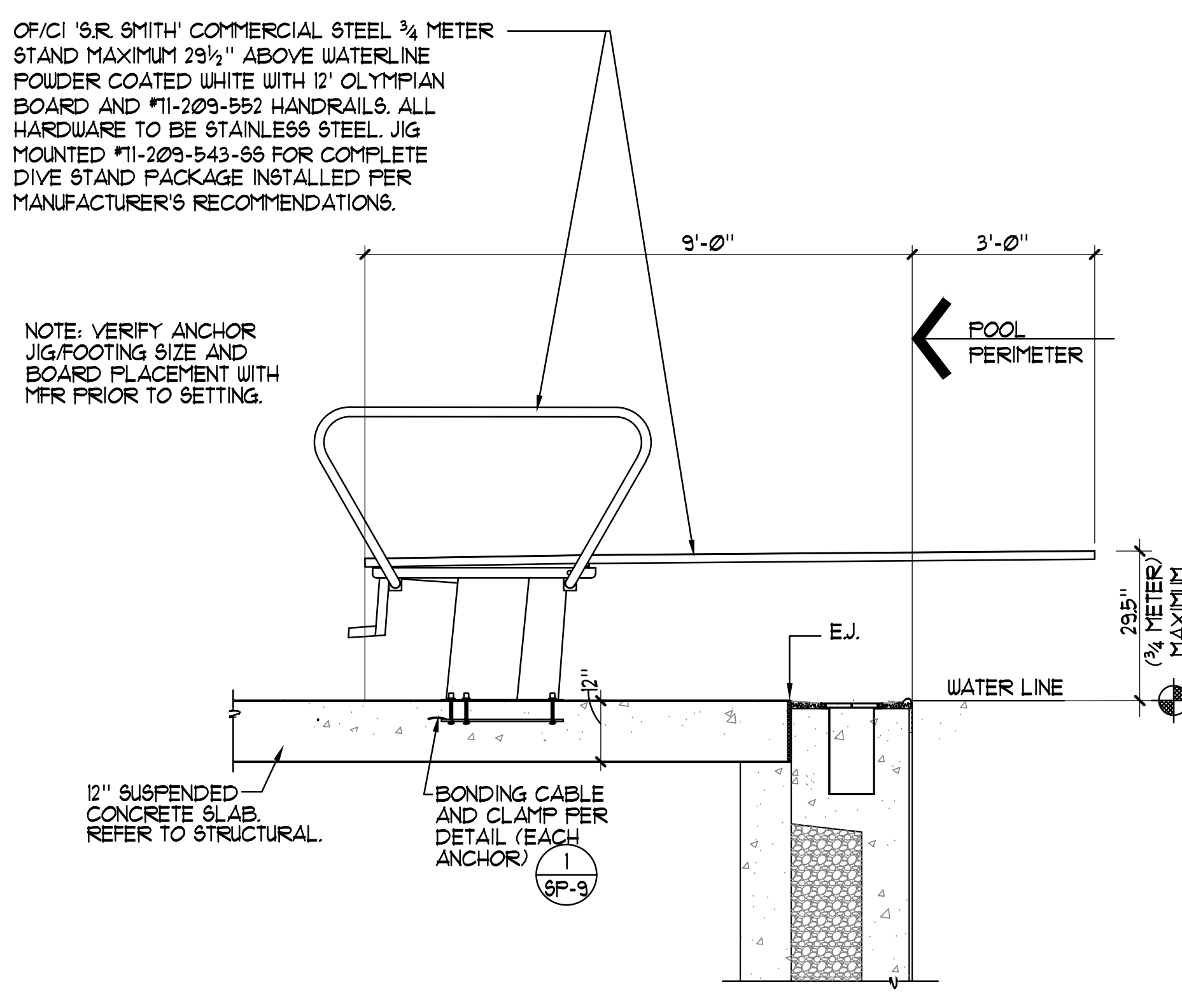
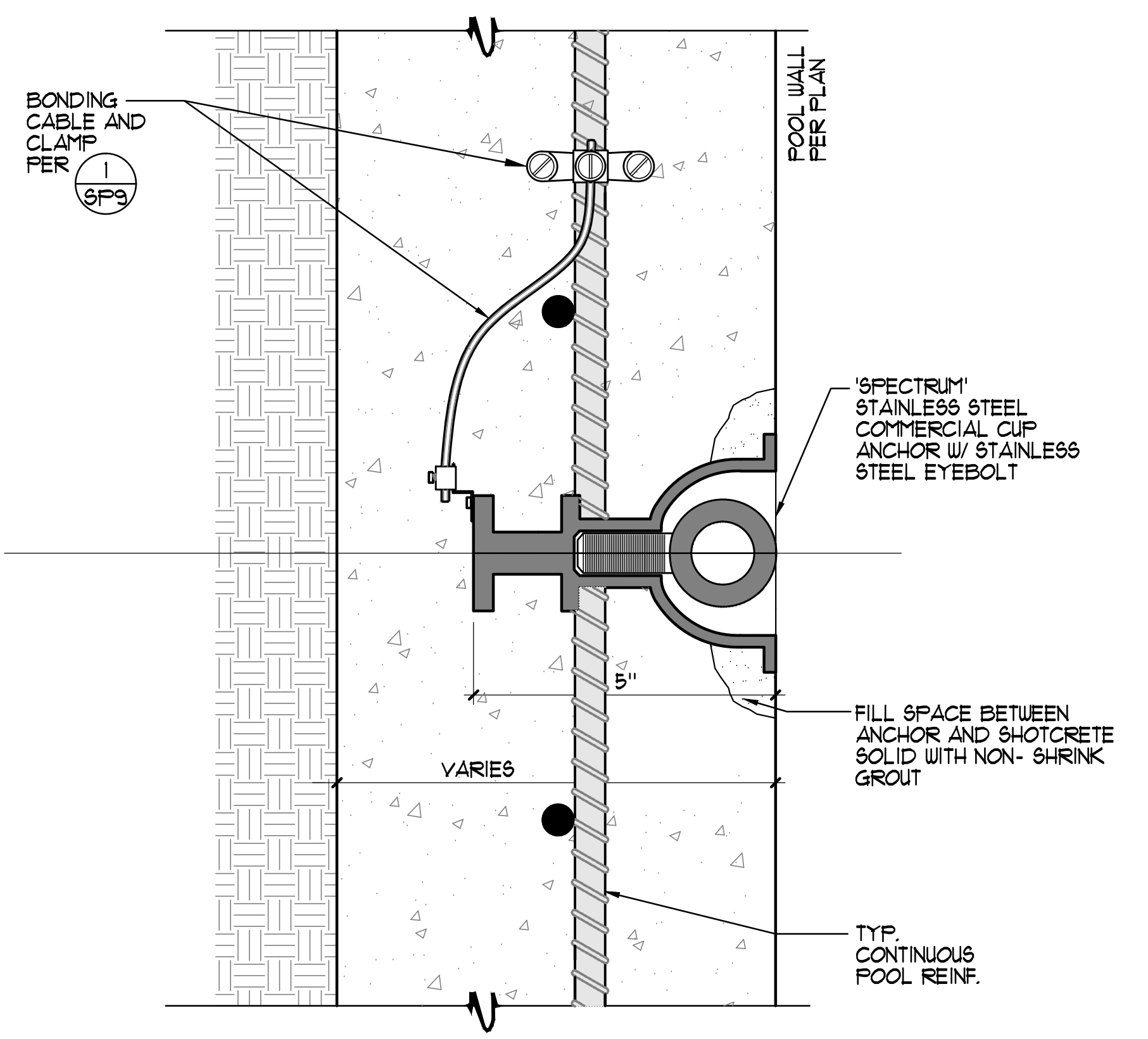




1 'NO RUNNING'/'NO DIVING' MARKERS 1 1/2" x 1'-0"

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

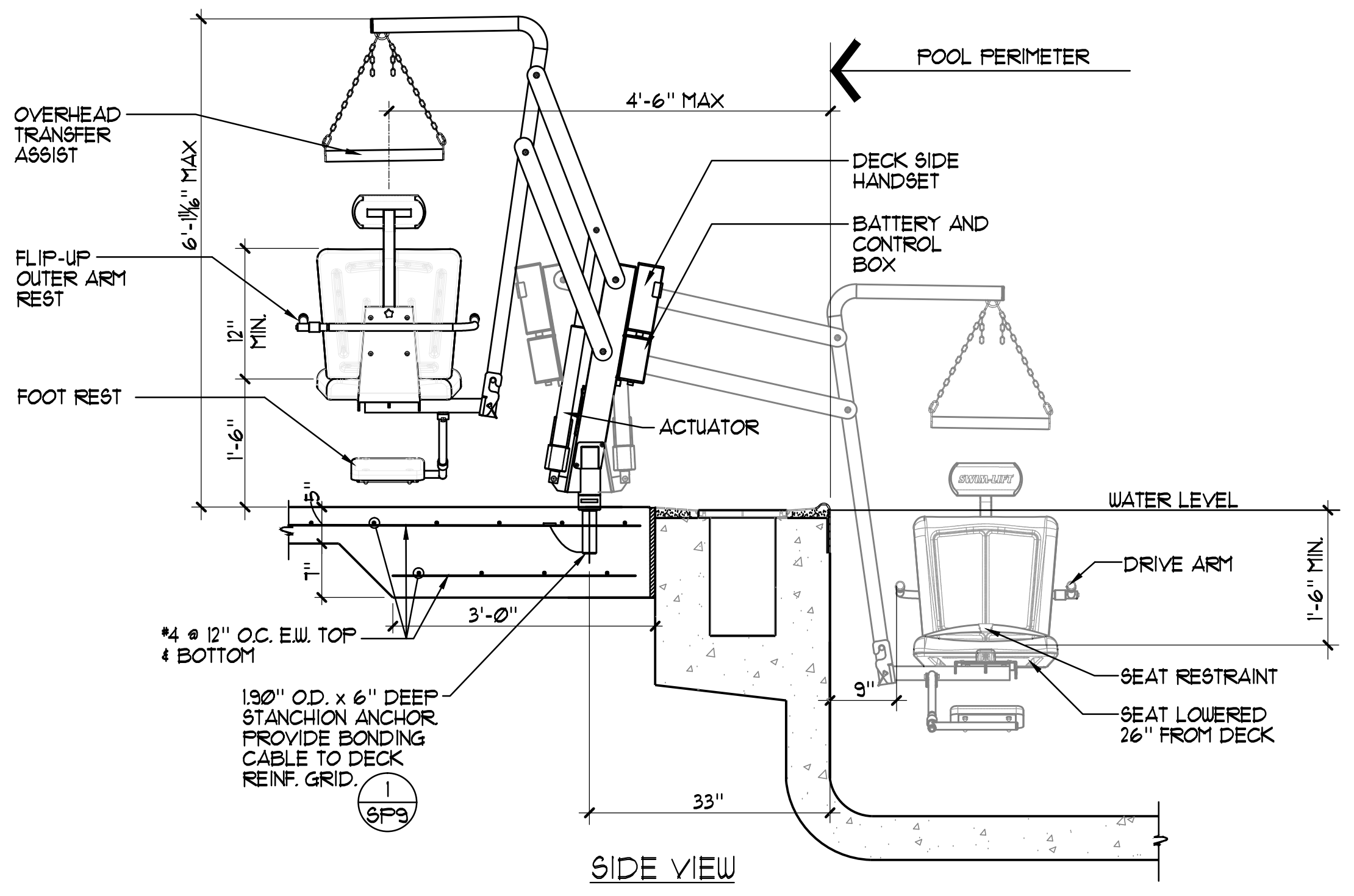
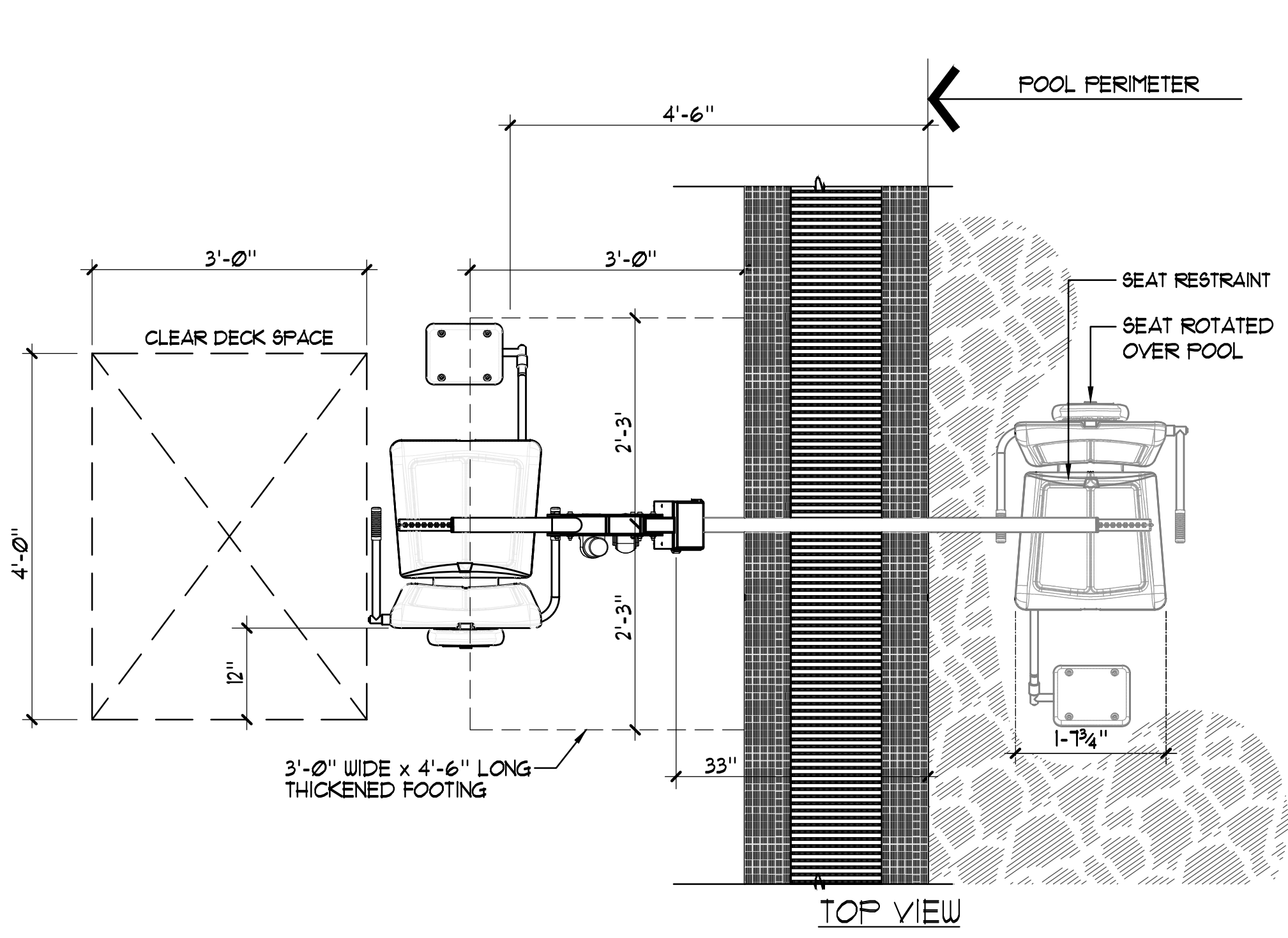
3 END WALL TARGETS 1 1/2" x 1'-0"



4 ROPE ANCHOR 6" x 1'-0"

5 3/4 METER DIVE STAND 1 1/2" x 1'-0"

6 HANDRAIL DETAIL 3/4" x 1'-0"



- NOTES:**
1. OF/CI 'SPECTRUM' TRAVELER II XRC500 (500 LB. LIVE LOAD CAPACITY MIN.)
  2. GUSSET COVER PLATE TO BE ATTACHED REQUIRING A TOOL FOR REMOVAL.
  3. OWNER SHALL PROVIDE COVER FOR LIFT 'SPECTRUM' #13265, EXTRA BATTERY PACK 'SPECTRUM' #13261, AND TRANSPORTER CART 'SPECTRUM' #20060.
  4. REFER TO ARCH. PLANS FOR LOCATION OF DISABLED LIFT BATTERY CHARGE STATION.
  5. POOL LIFT OPERATOR 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 11" 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 11" 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 OPERATOR 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.

7 ACCESSIBLE LIFT 3/4" x 1'-0"

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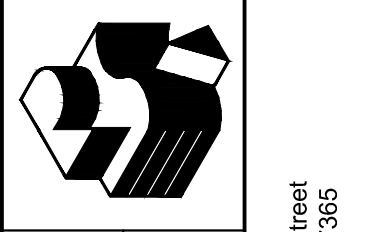
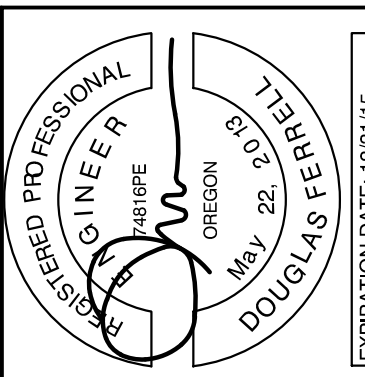
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SP6

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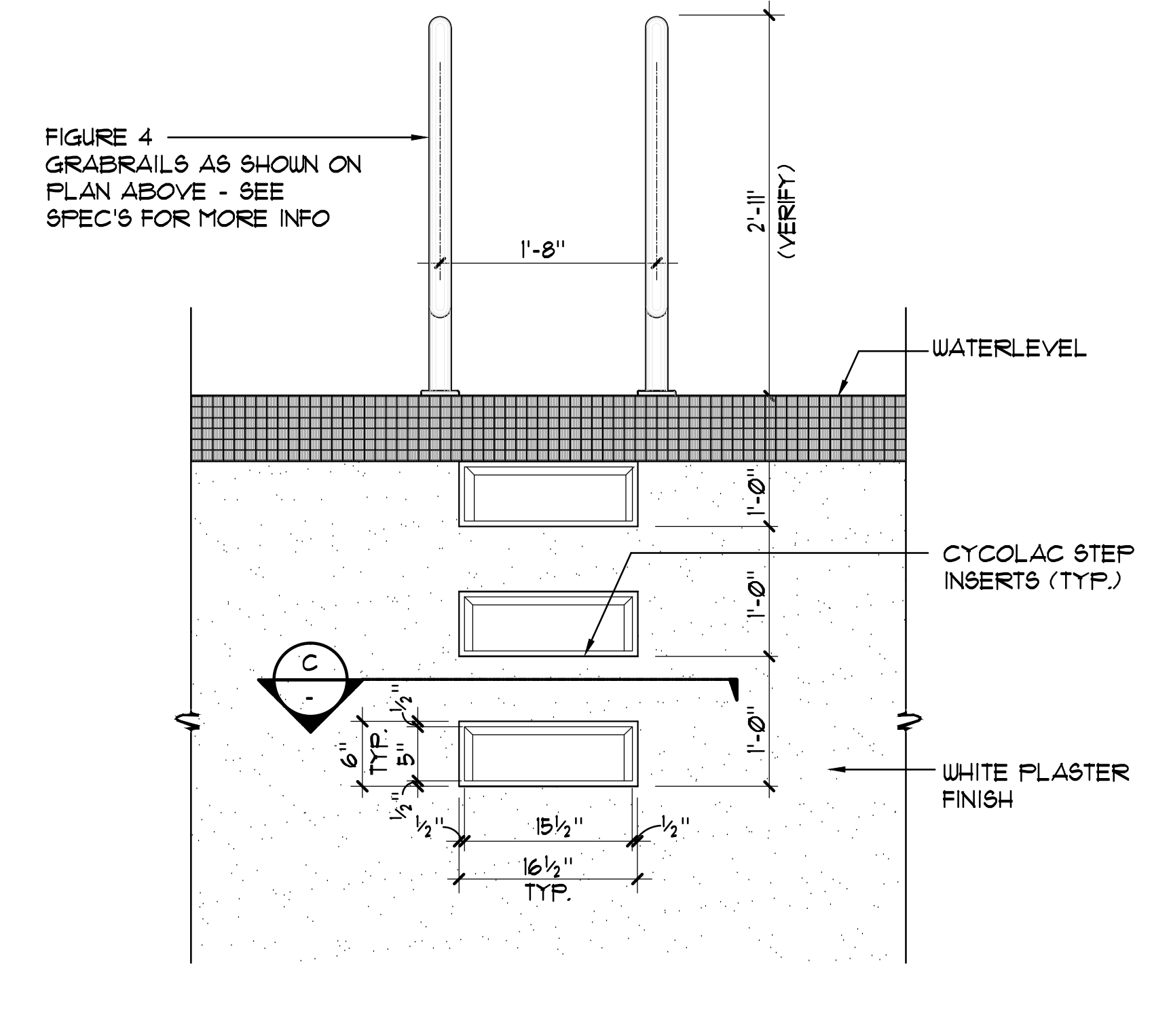
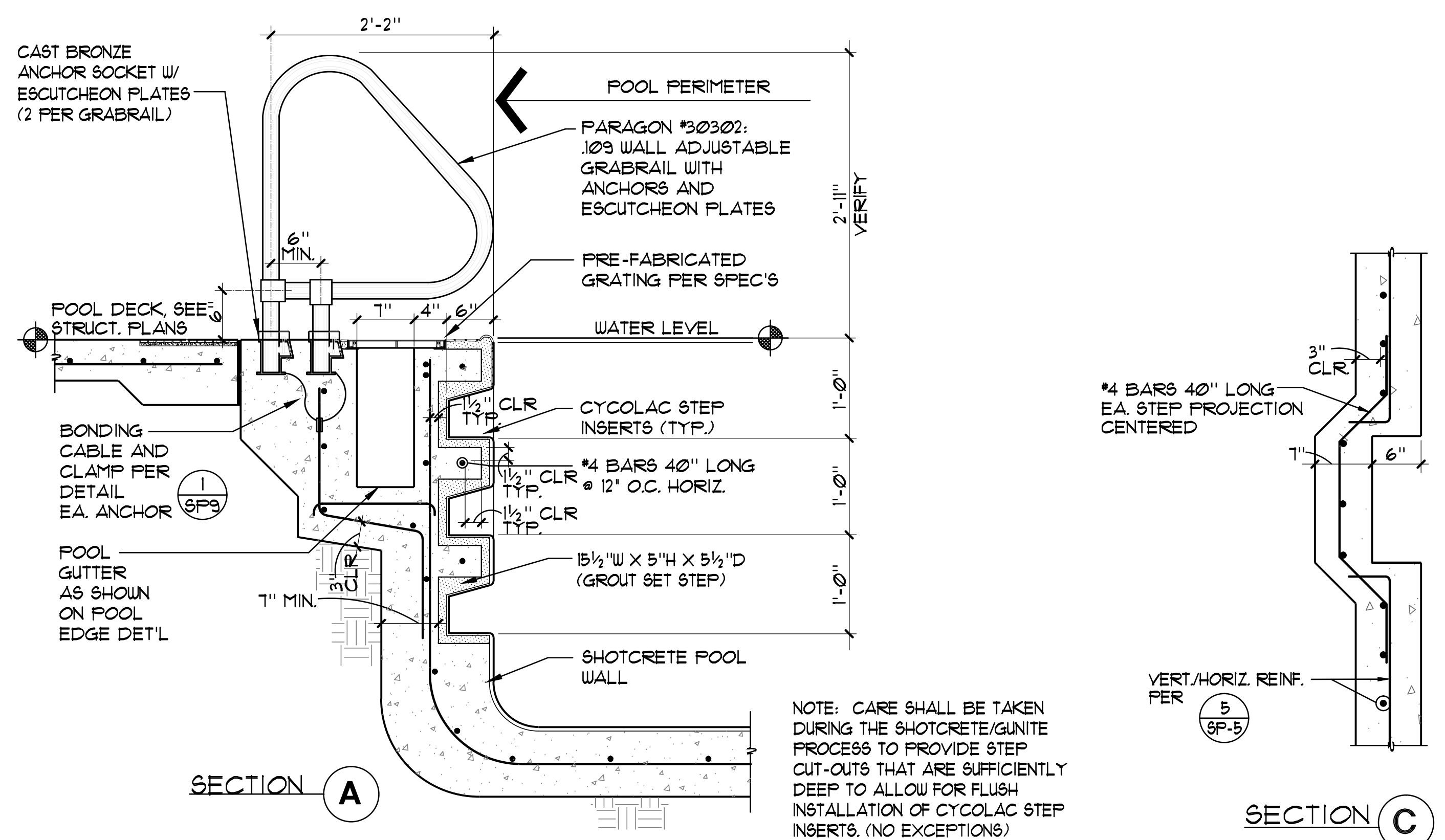
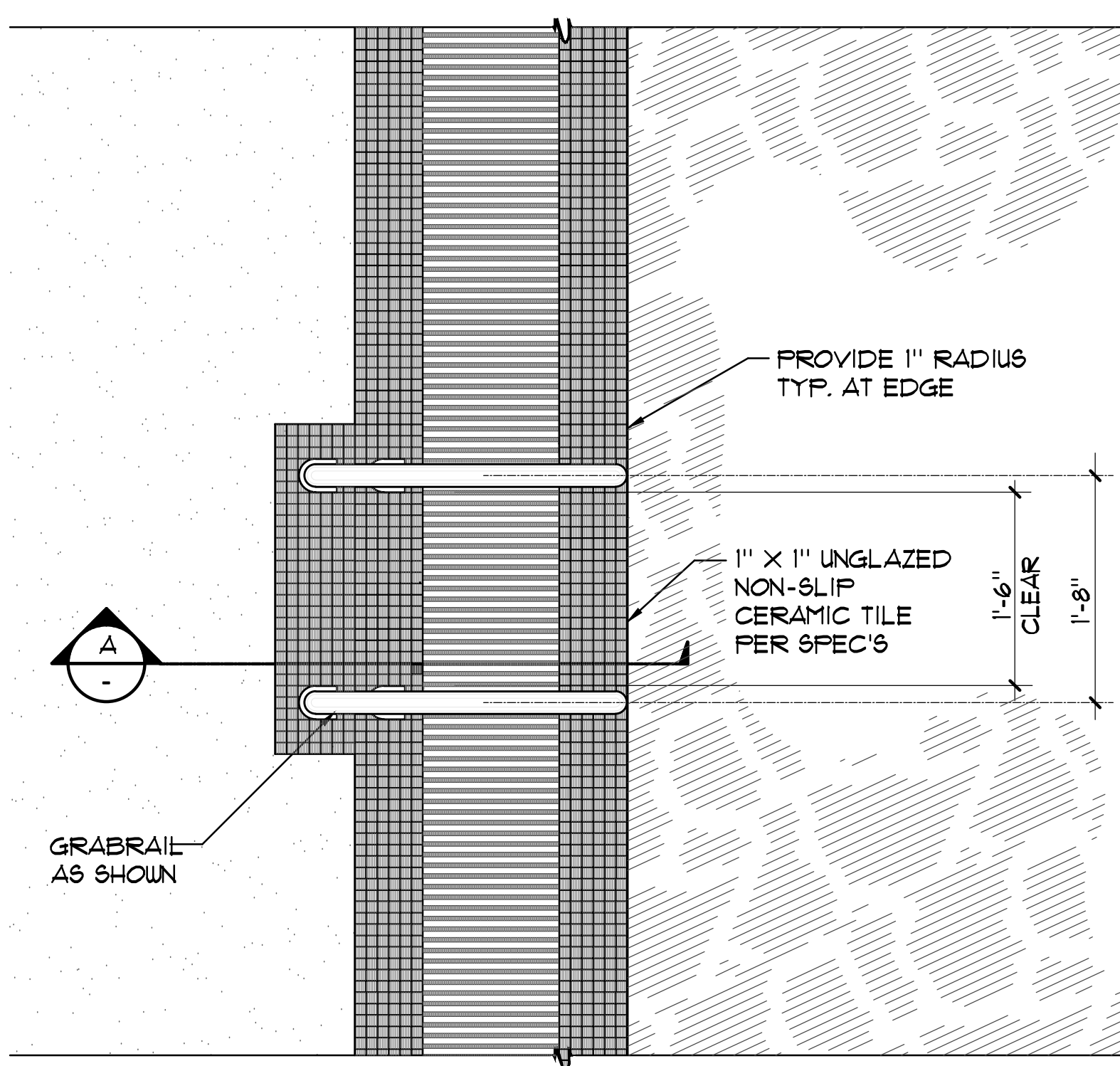
Newport Aquatics Center



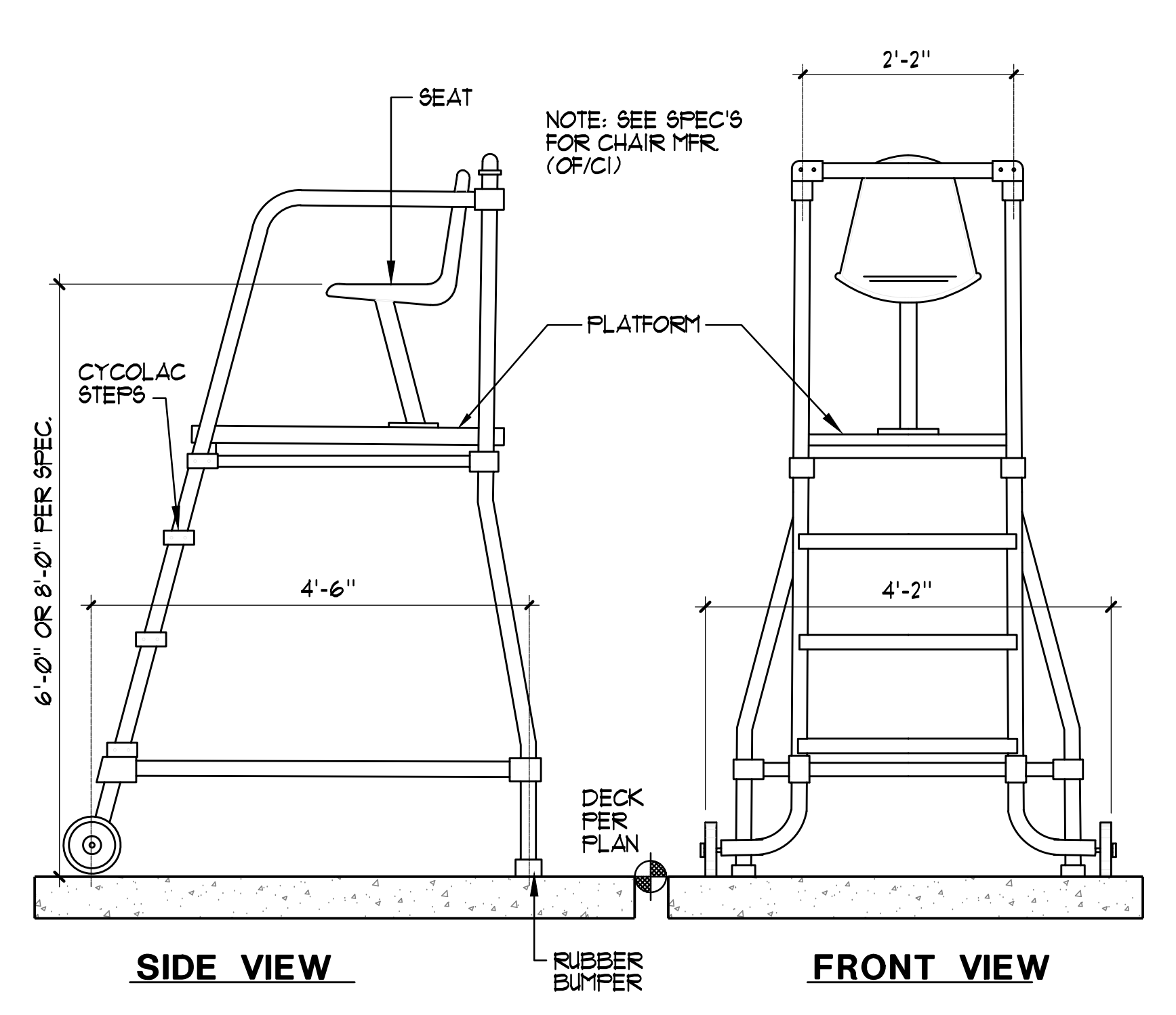
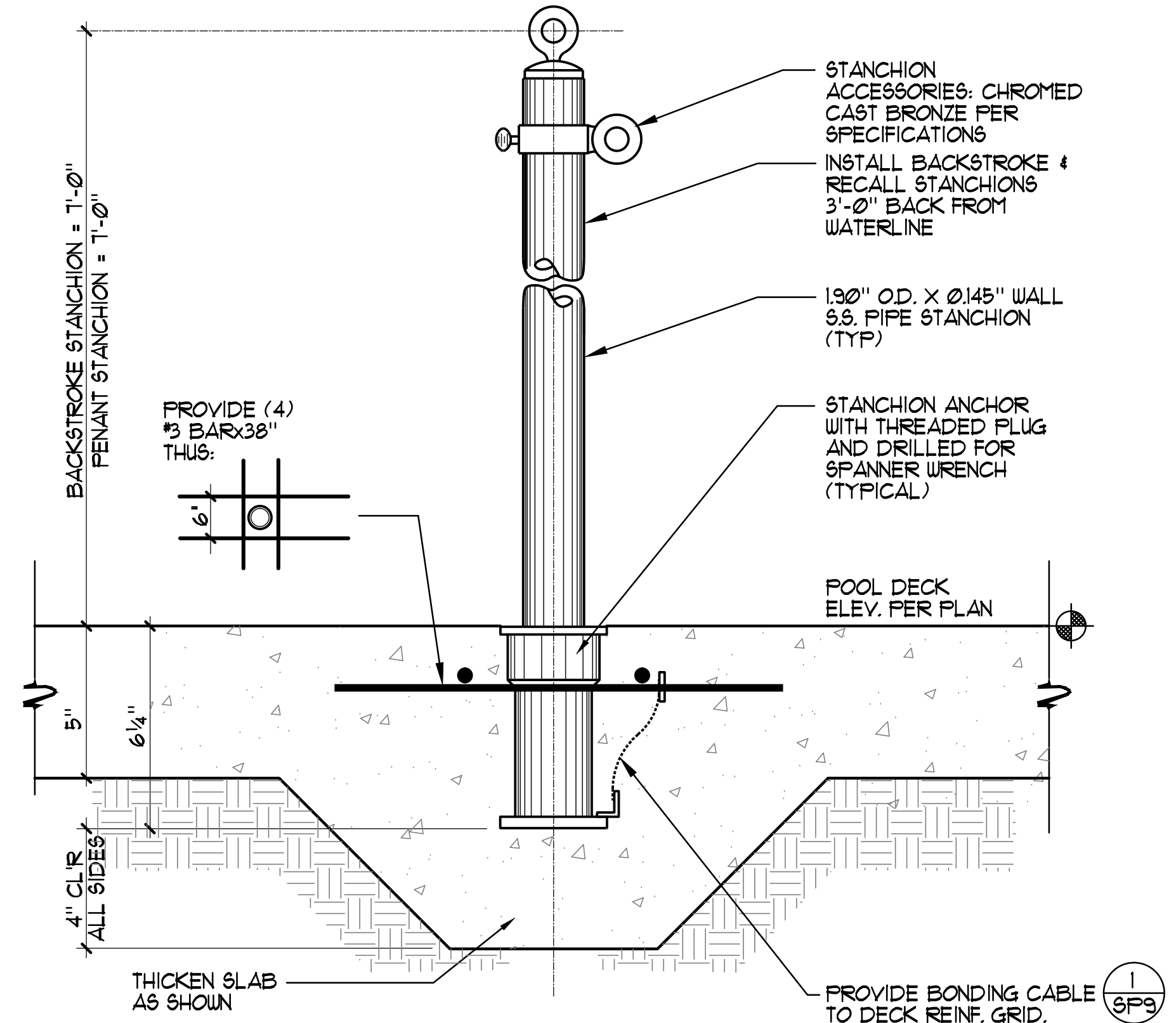
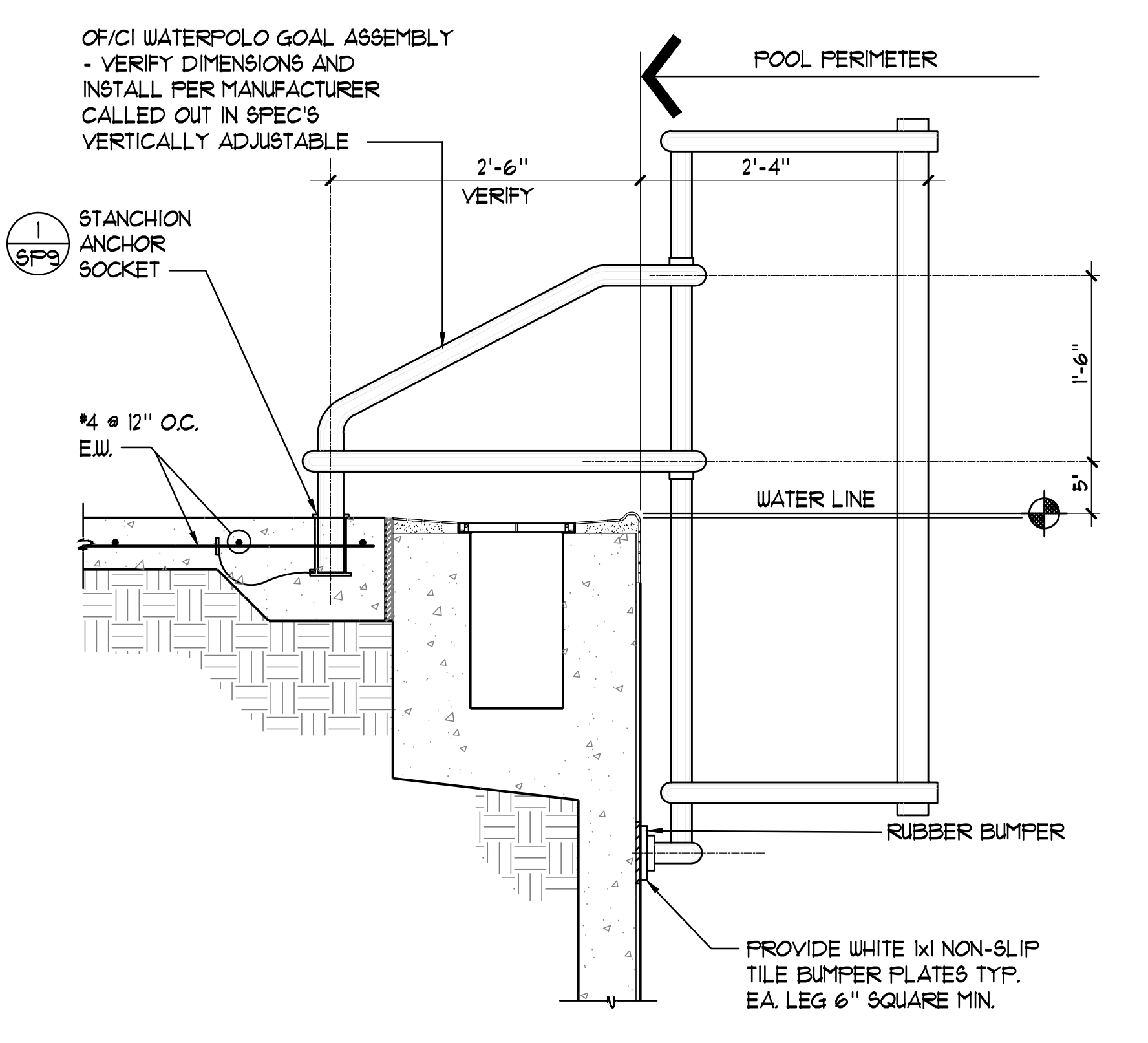
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SP7



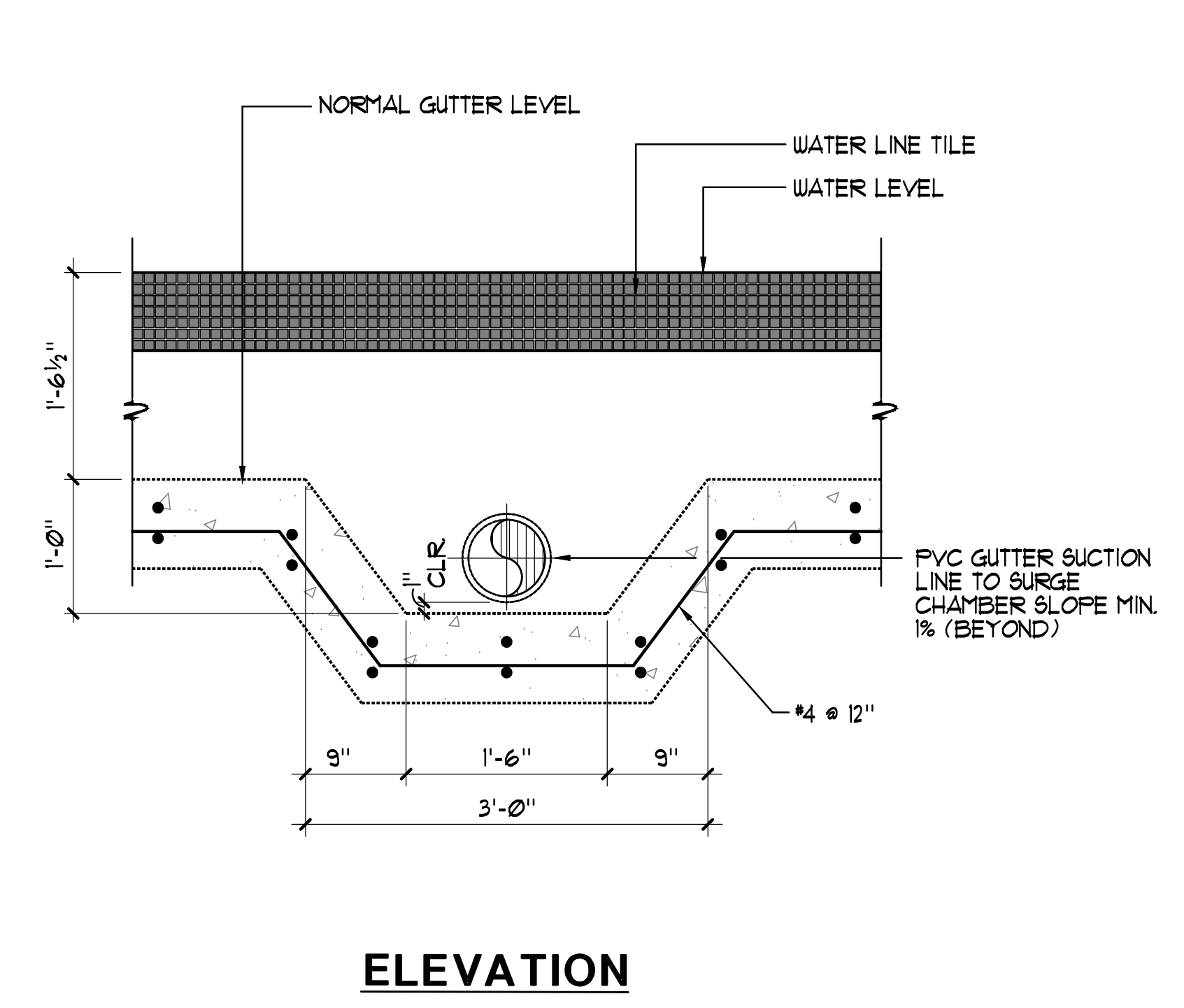
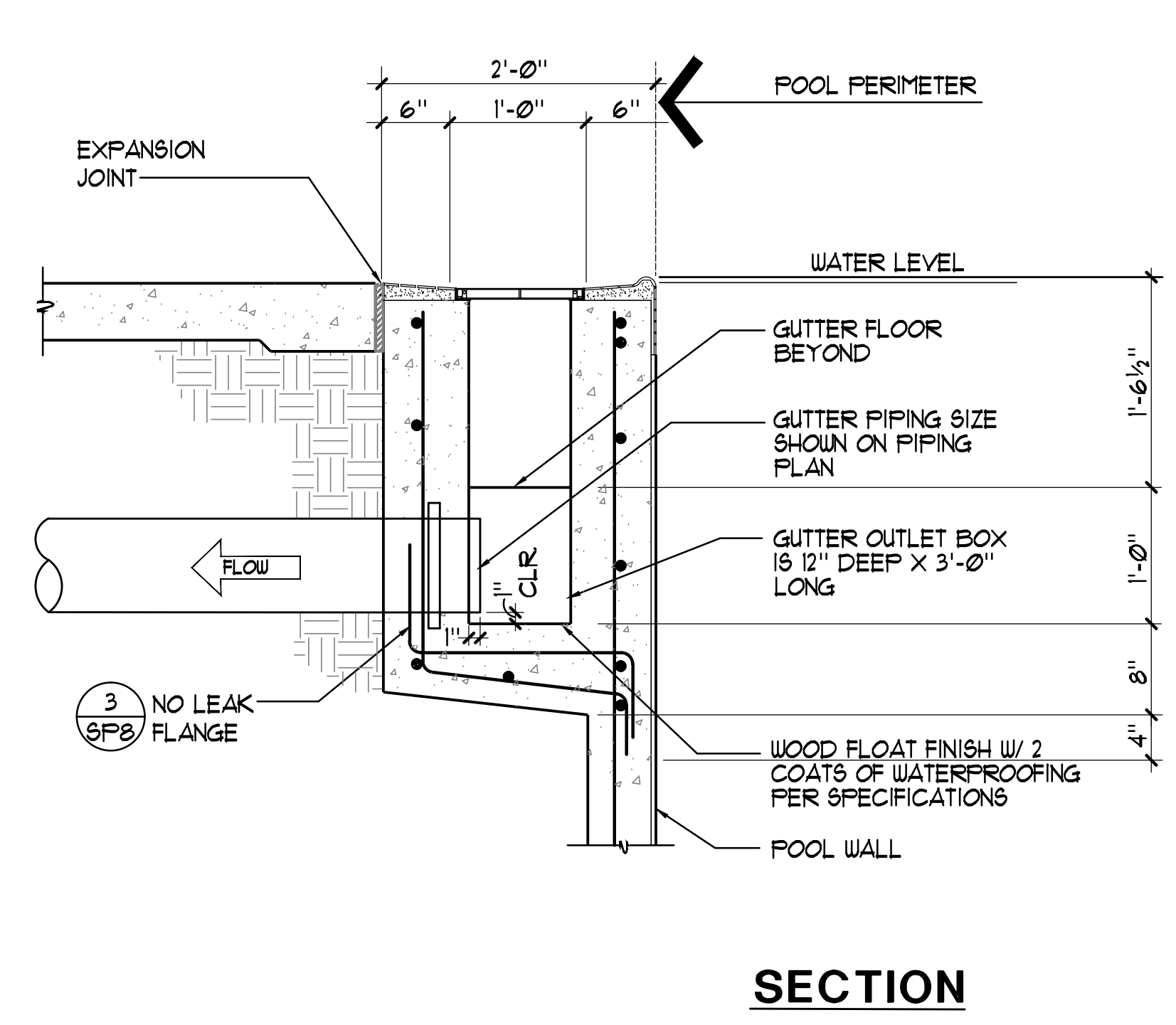
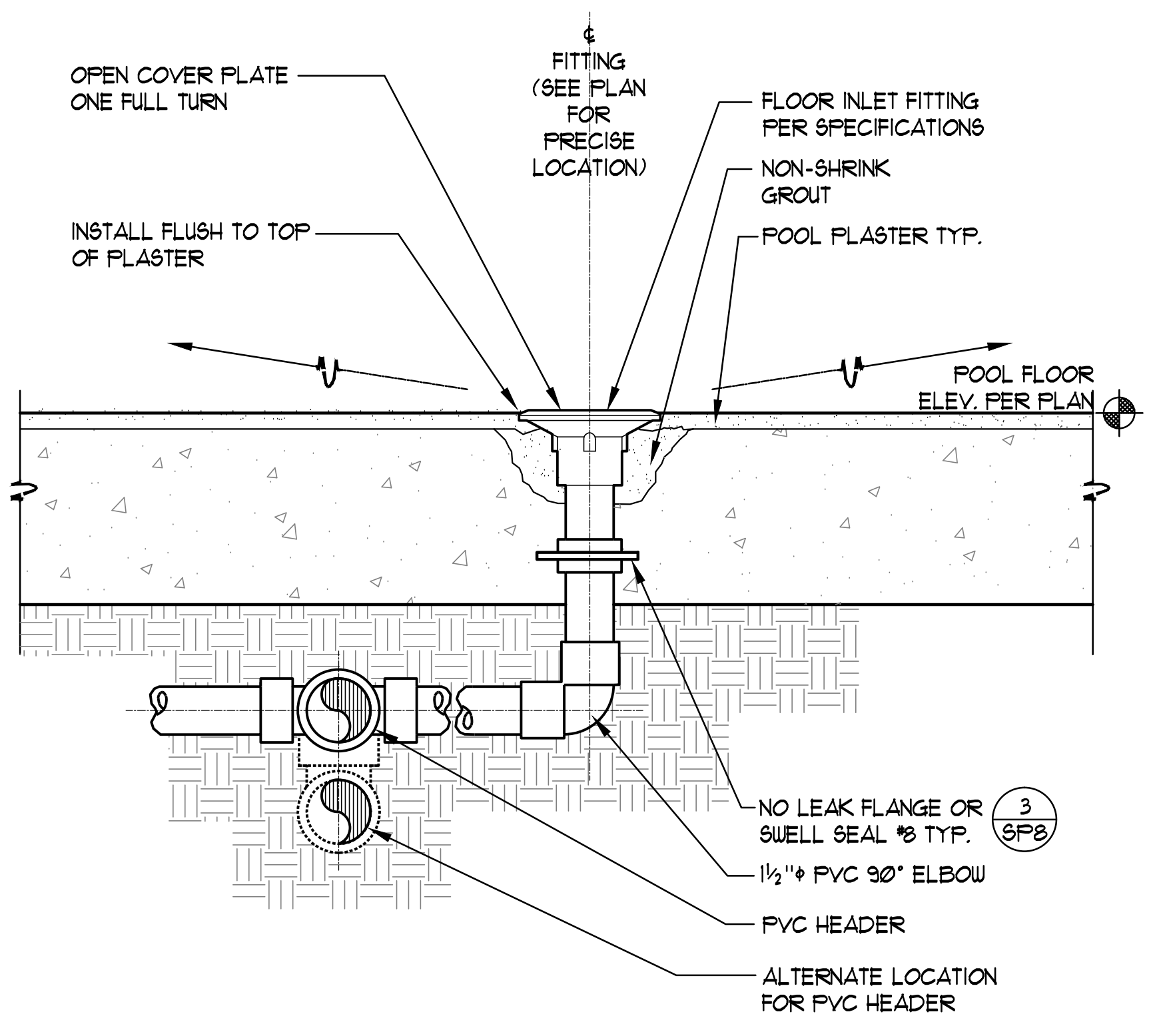
GRABRAIL WITH STEPS 1" = 1'-0"



WATERPOLO GOAL 1" = 1'-0"

STANCHION POST/ANCHOR 3/4" = 1'-0"

MOVEABLE LIFEGUARD CHAIR 3/4" = 1'-0"

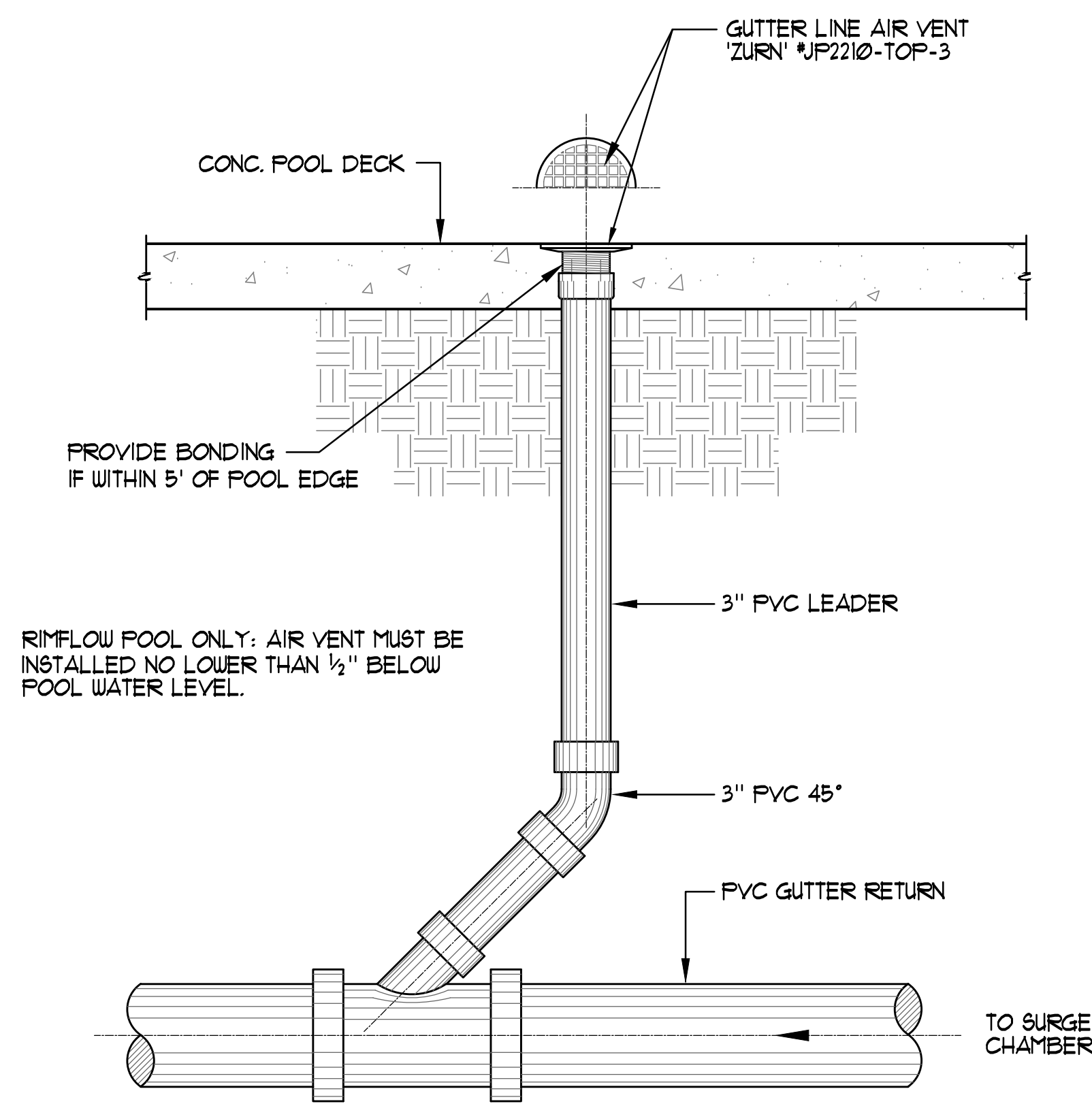


FLOOR INLET 3" = 1'-0"

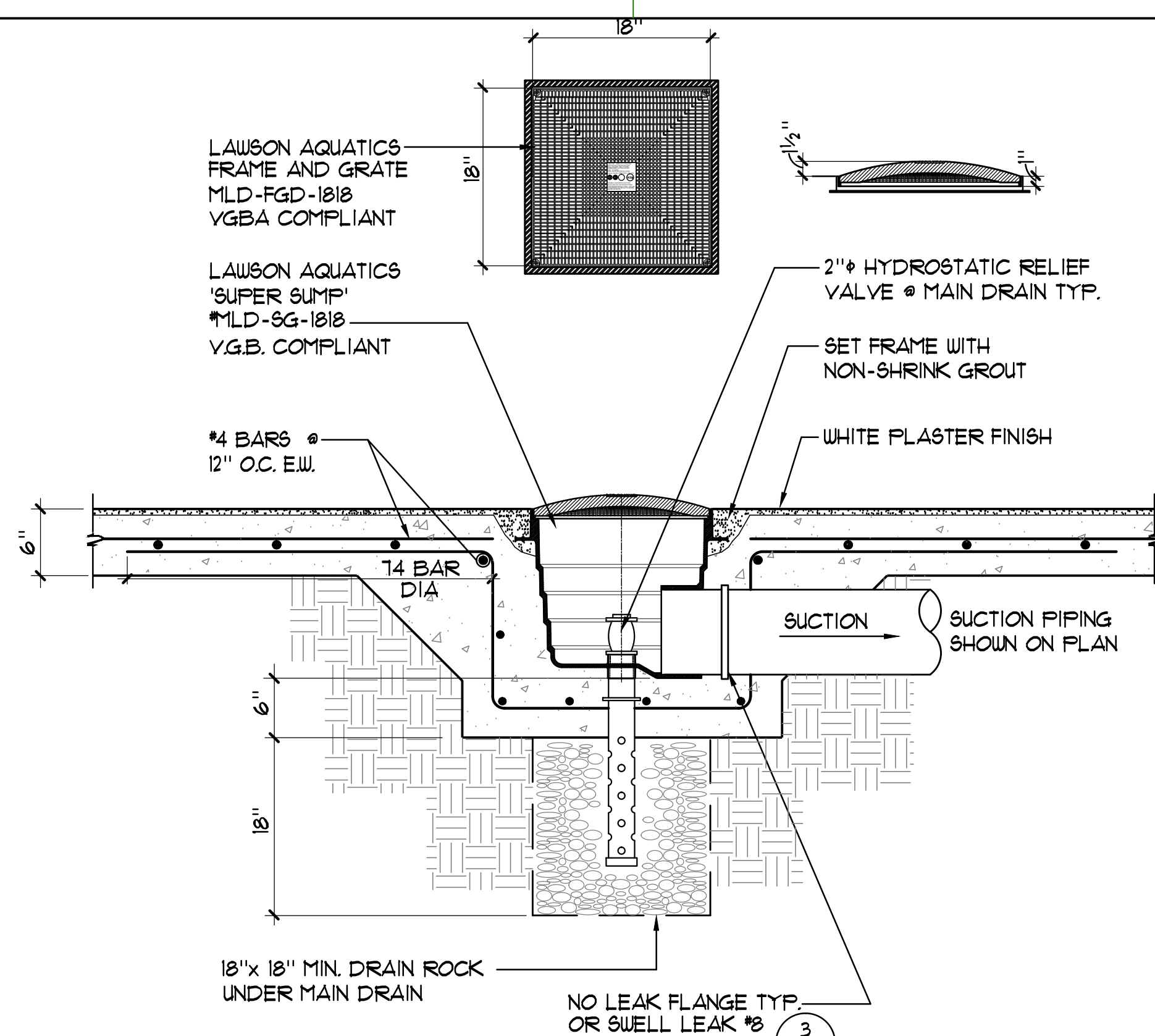
GUTTER OUTLET 1" = 1'-0"

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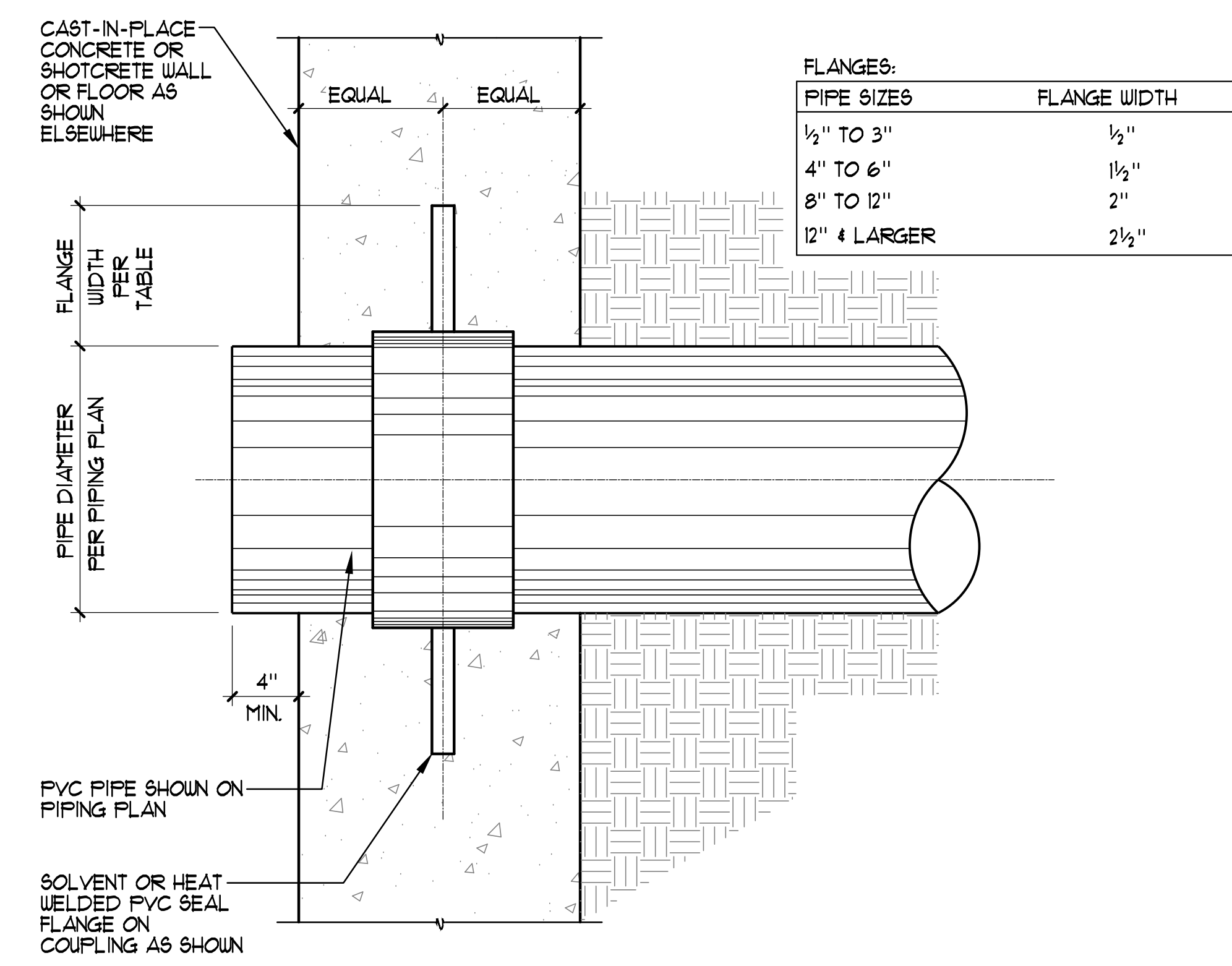




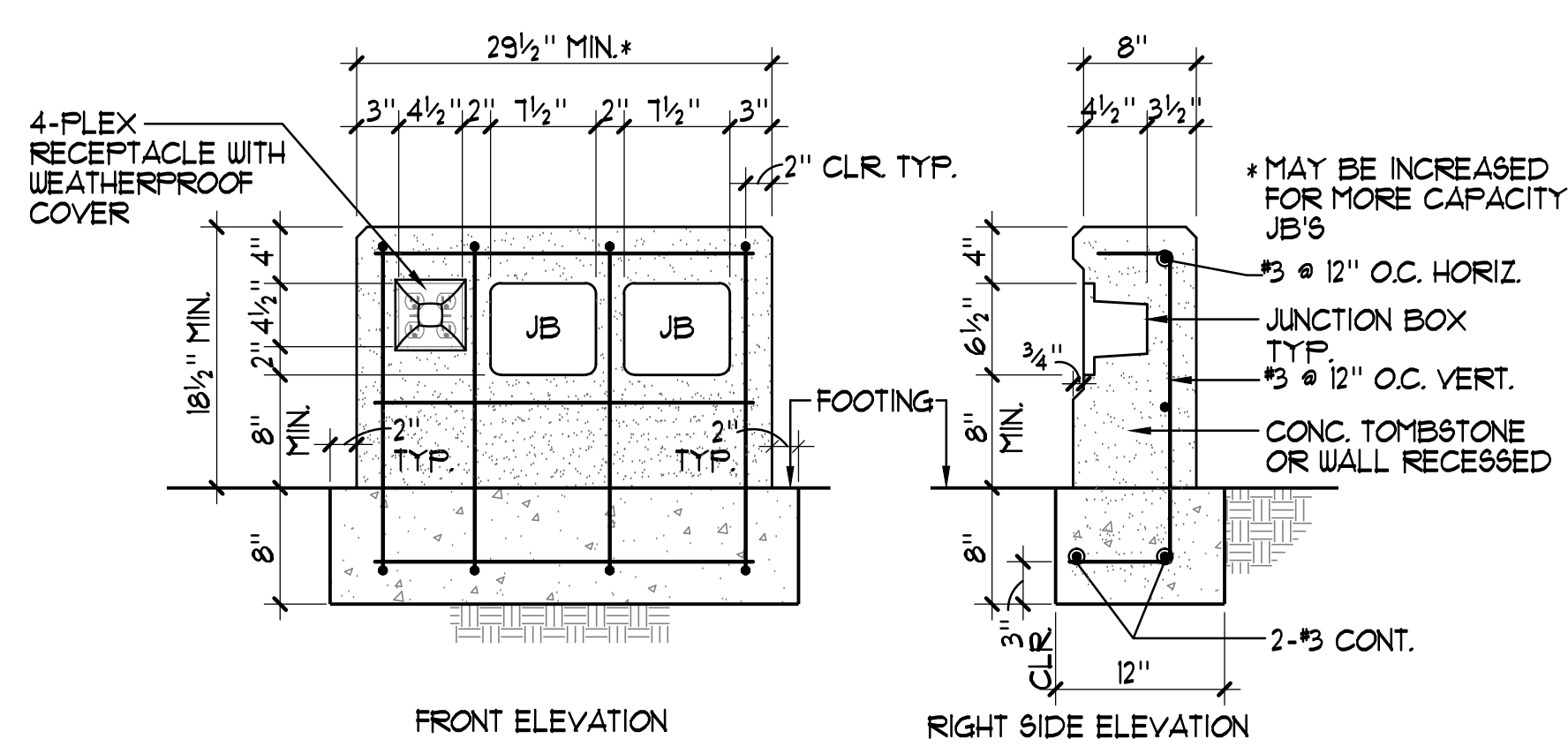
**1 AIR VENT** 1" = 1'-0"



**2 MAIN DRAIN** 1" = 1'-0"



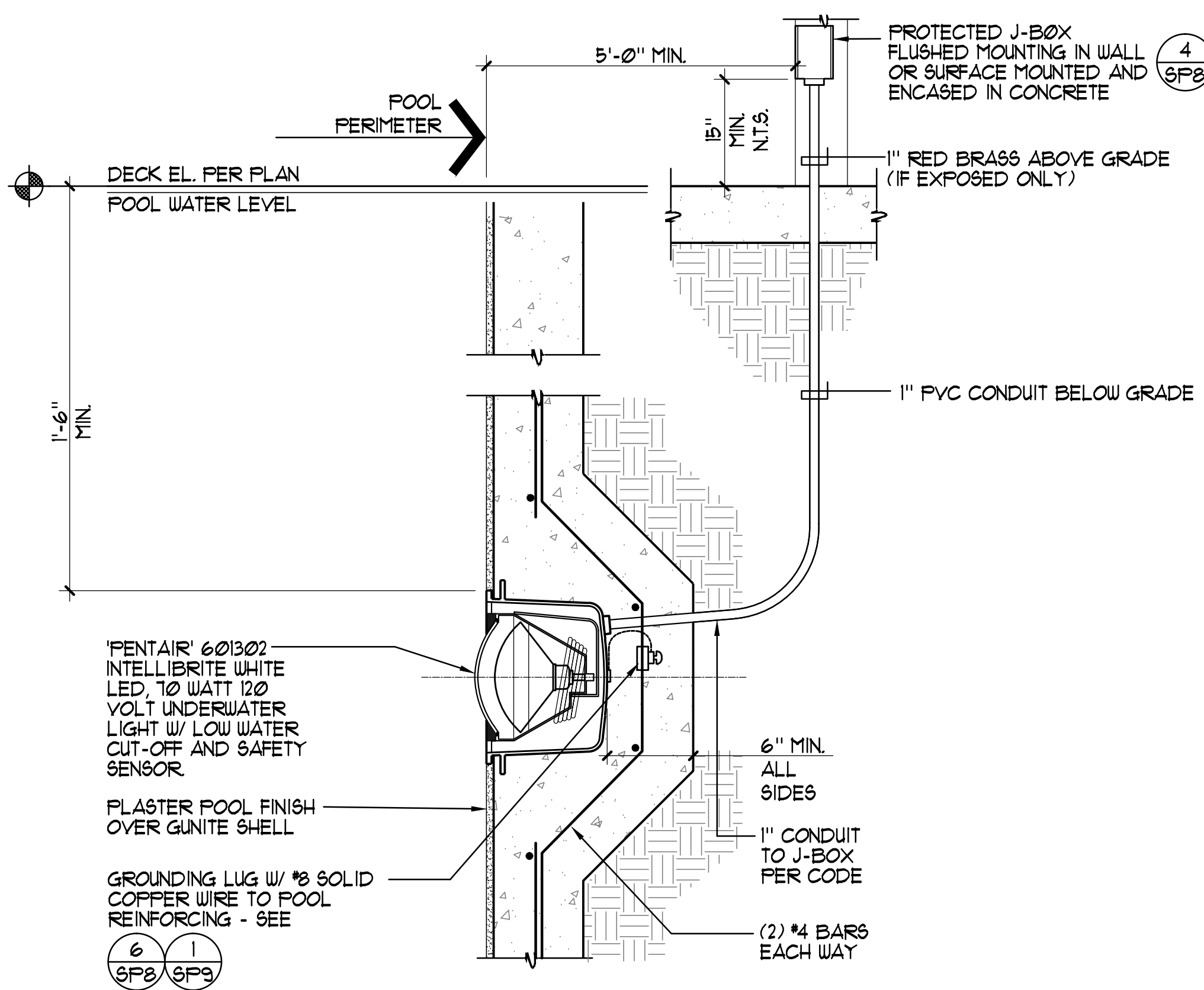
**3 WATER STOP DETAIL** NO SCALE



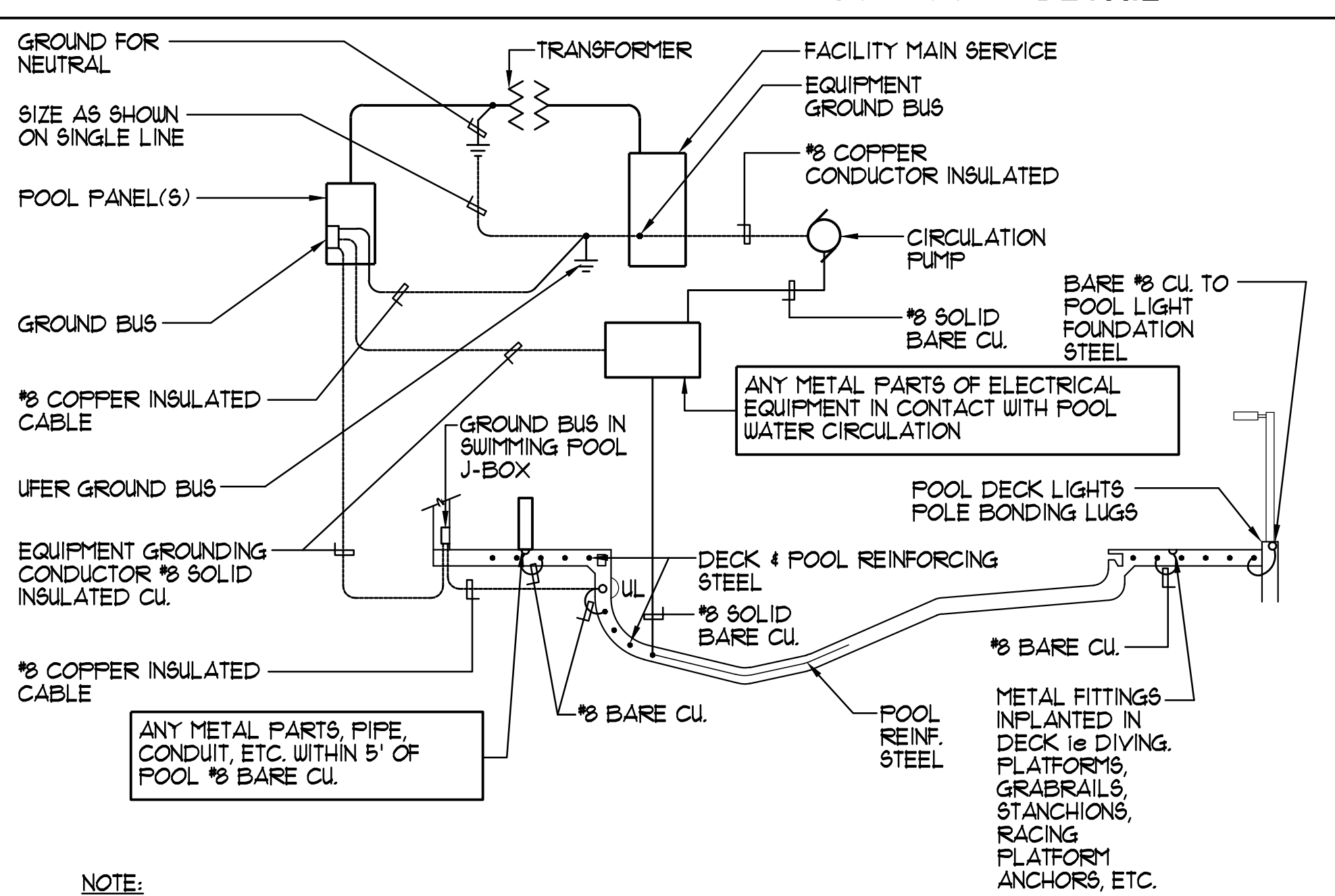
**NOTES:**

1. PROVIDE 3/4" CHAMFER ON ALL CONCRETE CORNERS.
2. THIS DETAIL SHALL BE UTILIZED IF FLUSH MOUNTING IN BUILDING WALL IS NOT POSSIBLE.

**4 UNDERWATER LIGHT JUNCTION BOX CONCRETE SURROUND DETAIL** 1" = 1'-0"



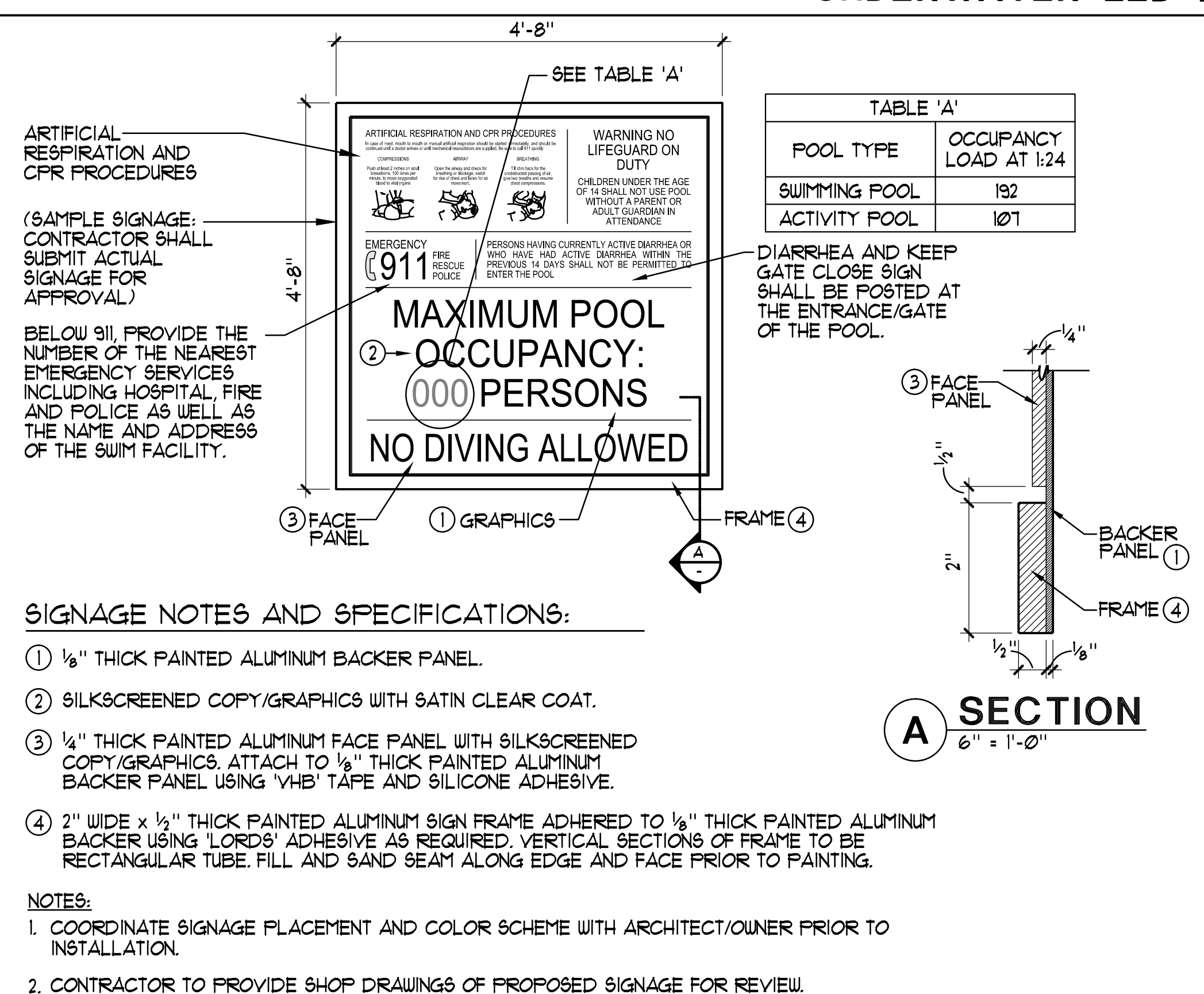
**5 UNDERWATER LED LIGHT** 1/2" = 1'-0"



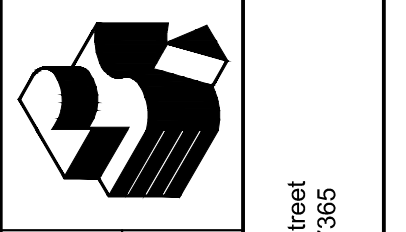
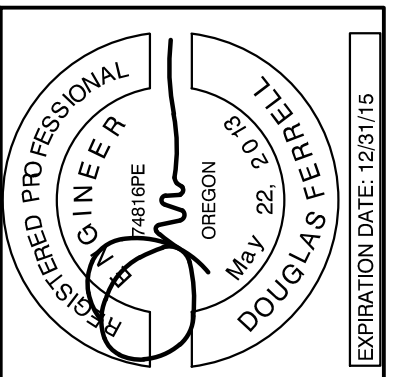
**NOTE:**

1. STRUCTURAL STEEL IN POOL DECK AND POOL SHALL BE BONDED TOGETHER (TIGHTLY MADE STEEL TIE-WIRES ARE APPROVED FOR BONDING STRUCTURAL ELEMENTS).
2. BONDING CONNECTOR TO COMMON GRID. (POOL STEEL MAY BE USED FOR THAT PURPOSE) SHALL BE MADE BY PRESSURE CONNECTORS OR CLAMPS OF BRASS, COPPER, OR COPPER ALLOY.
3. ALL GROUND BUSES SHALL BE SIZED FOR CONNECTION TO AWG SIZE 8 WIRE PROVIDING ONE SPARE TERMINAL.
4. GROUND AND BOND IN ACCORDANCE WITH ARTICLE 680 OF THE CALIFORNIA ELECTRICAL CODE. i.e. LADDERS, FENCING, POLE LIGHTS, DIVING & STARTING STANCHIONS, DISABLED LIFT ETC.
5. PROVIDE BONDING OF AUTOMATIC POOL COVER MOTORS REGARDLESS OF PROXIMITY TO POOL.

**6 TYPICAL POOL BONDING AND GROUND DETAIL** NO SCALE



**7 POOL SIGNAGE DETAIL** 3/8" = 1'-0"



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NEWPORT AQUATICS CENTER

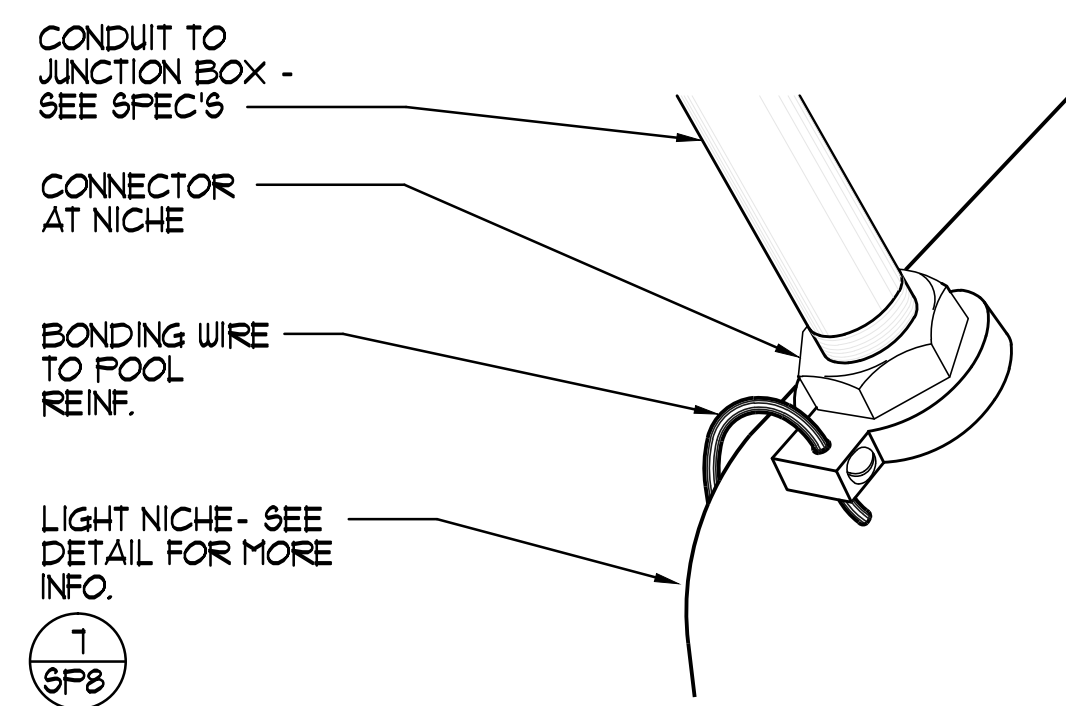


**DETAILS**

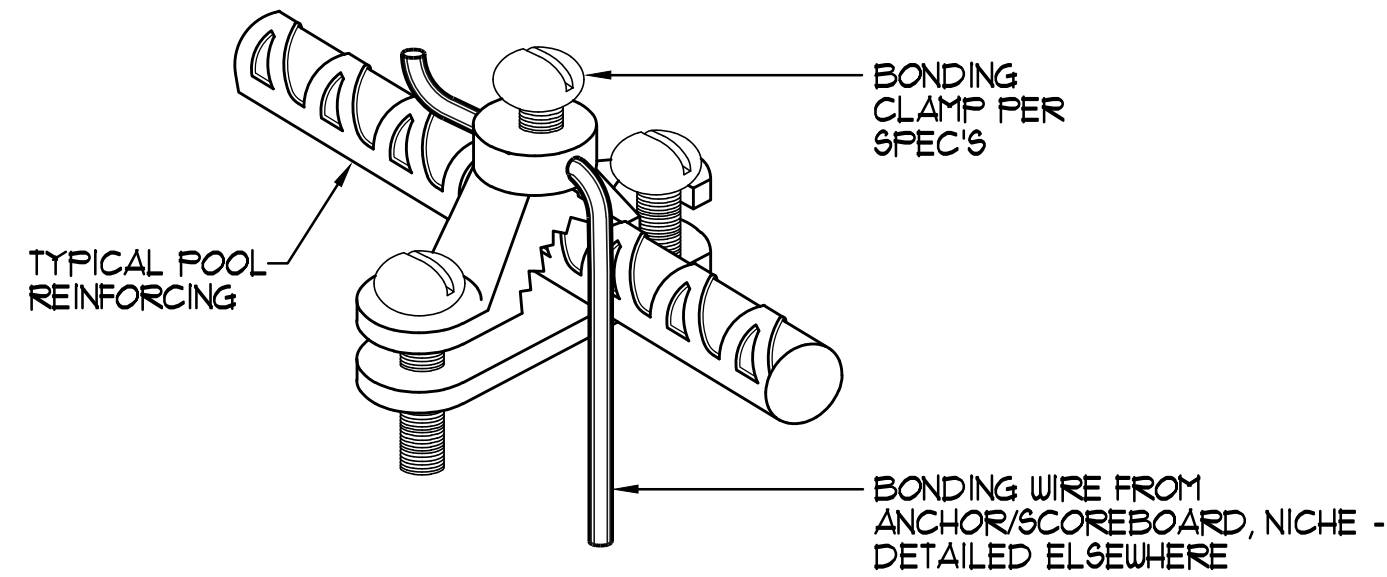
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Checked			17_JUNE_2015	
Date				

**SP8**

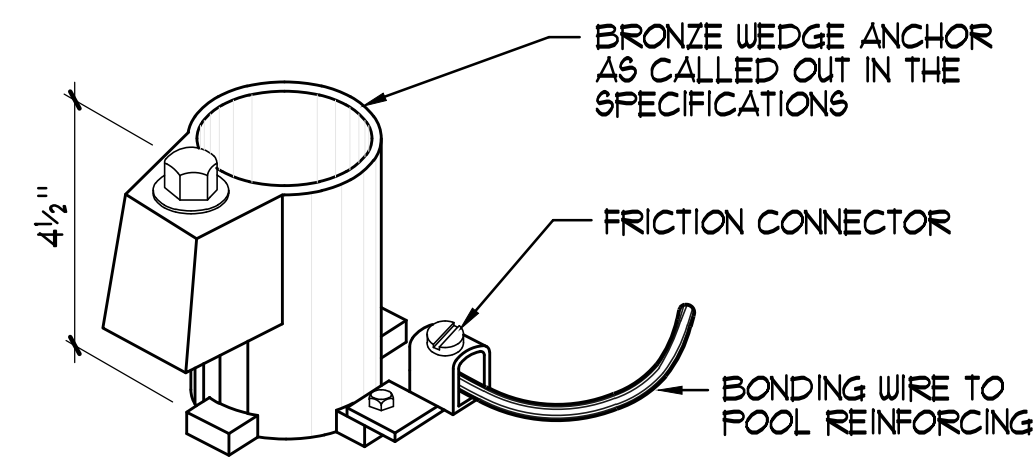




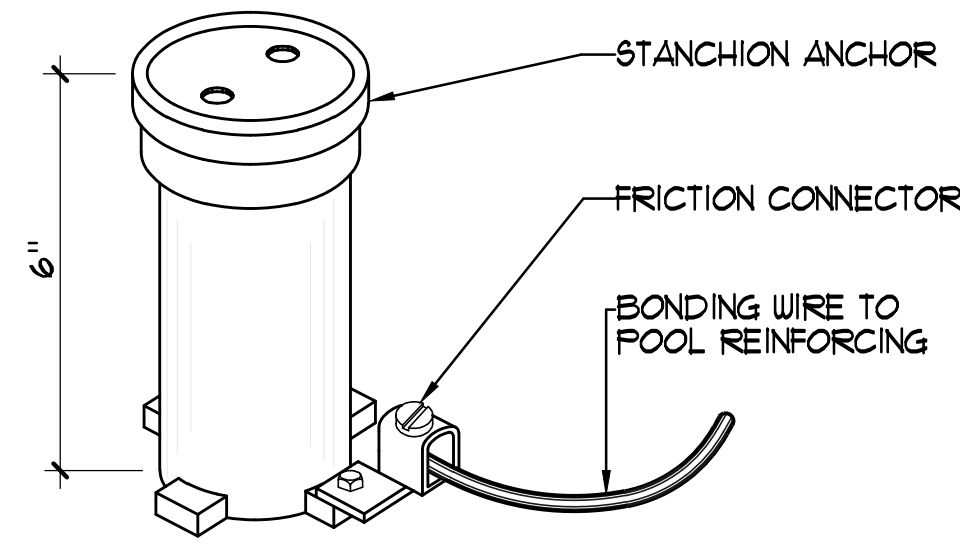
**NICHE CONNECTOR**  
NO SCALE



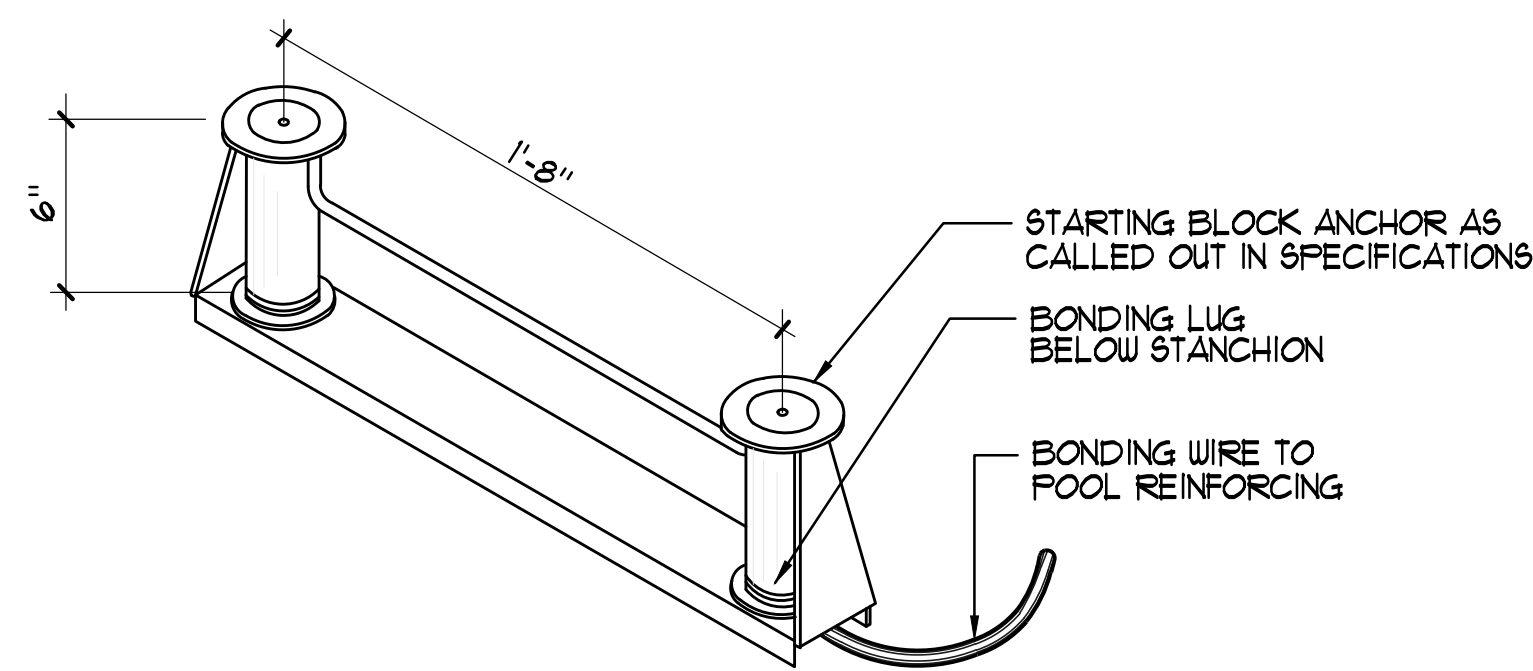
**BONDING CLAMP**  
NO SCALE



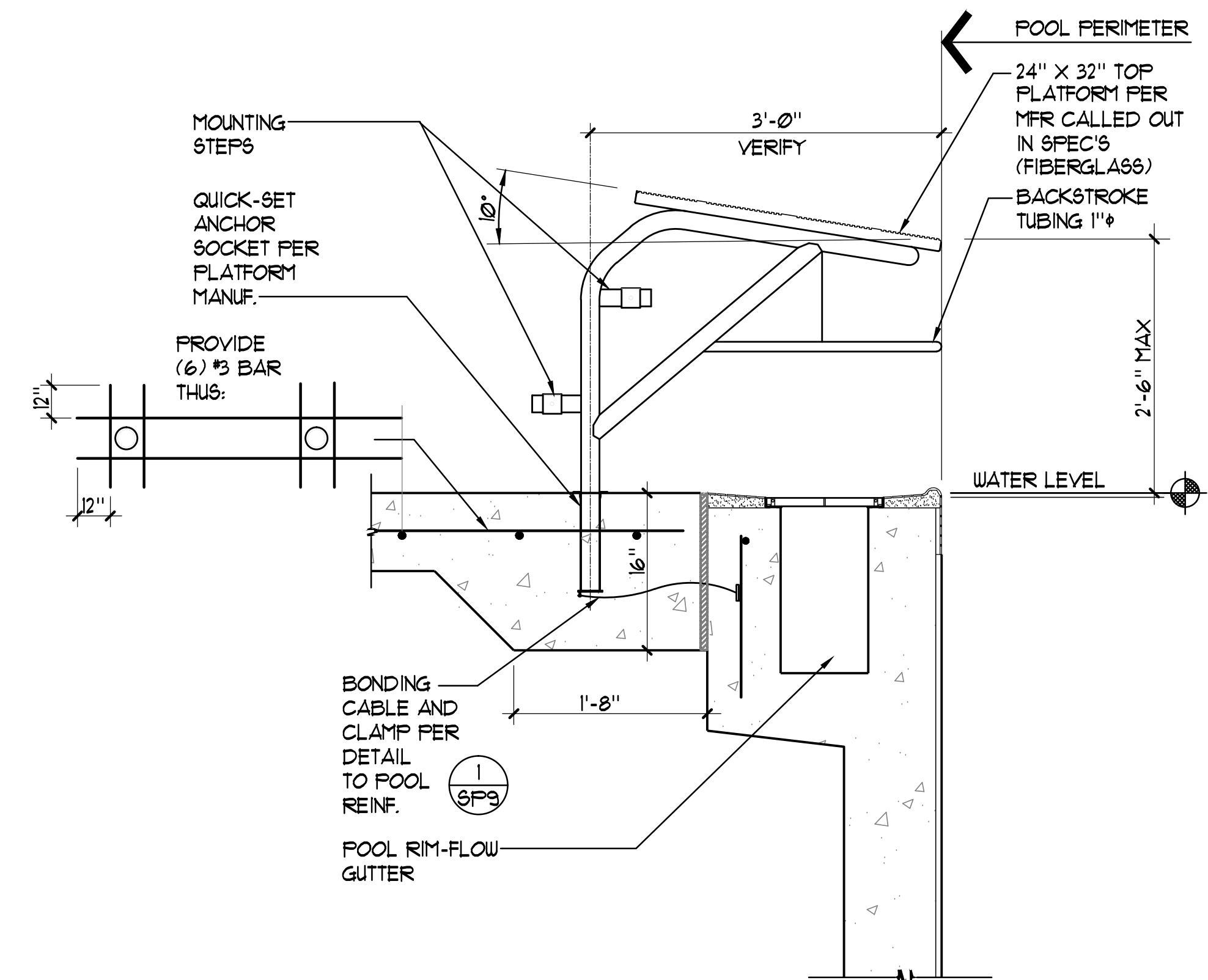
**WEDGE ANCHOR**  
NO SCALE



**STANCHION ANCHOR**  
NO SCALE



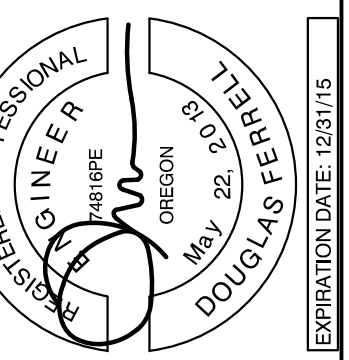
**STARTING BLOCK ANCHOR**  
NO SCALE



**STARTING PLATFORM**  
1"=1'-Ø"

**1 BONDING DETAILS** NO SCALE

**2 STARTING PLATFORM** 1"=1'-Ø"



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Newport Aquatics Center



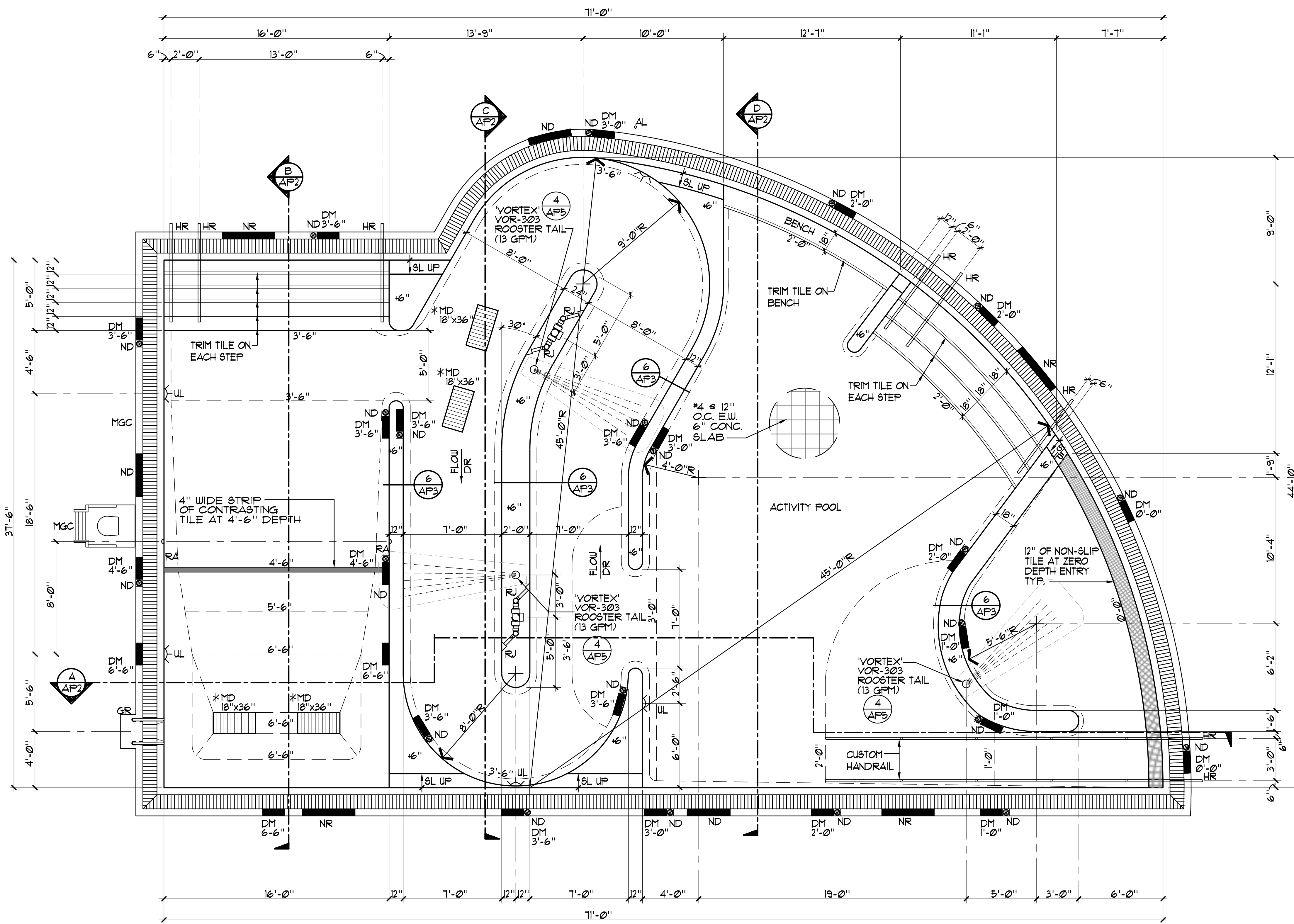
AQUATIC DESIGN GROUP  
2224 FAUCAY AVE. CALISBAO, CA 92008  
Tel: 760.488.8000 Fax: 760.488.2251

DETAILS

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**SP9**





**ACTIVITY POOL DATA**

SURFACE AREA	=	2,572 SQ. FT.
PERIMETER	=	216 FT.
DEPTHS	=	0'-0" TO 6'-6"
VOLUME	=	52,033 GAL.
2 HR TURNOVER	=	434 GPM

**LEGEND**

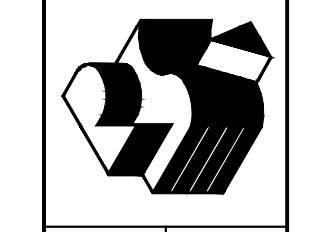
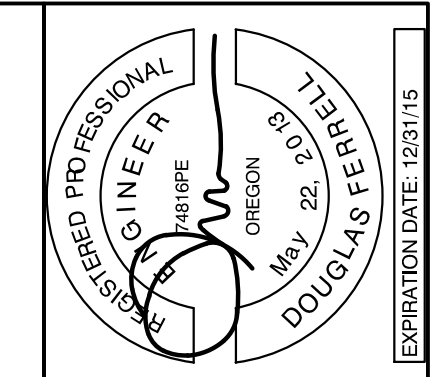
* MD	=	MAIN DRAIN	3	AP5
HR	=	HANDRAIL	3	AP4
UL	=	UNDERWATER LIGHT	5	SPB
DM	=	DEPTH MARKER	1	AP3
NR	=	NO RUNNING	9	AP3
ND	=	NO DIVING	8	AP3
GR	=	GRABRAIL	9	AP3
RJ	=	RIVER JET	1	AP5
RA	=	ROPE ANCHOR	4	AP4
MGC	=	MOVEABLE GUARD CHAIR	4	SP1
AL	=	ACCESSIBLE LIFT (ANCHORS ONLY)		

**CERTIFICATION REQUIREMENTS**

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



**ACTIVITY POOL LAYOUT PLAN** 1/4"=1'-0"



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**ACTIVITY POOL LAYOUT PLAN**

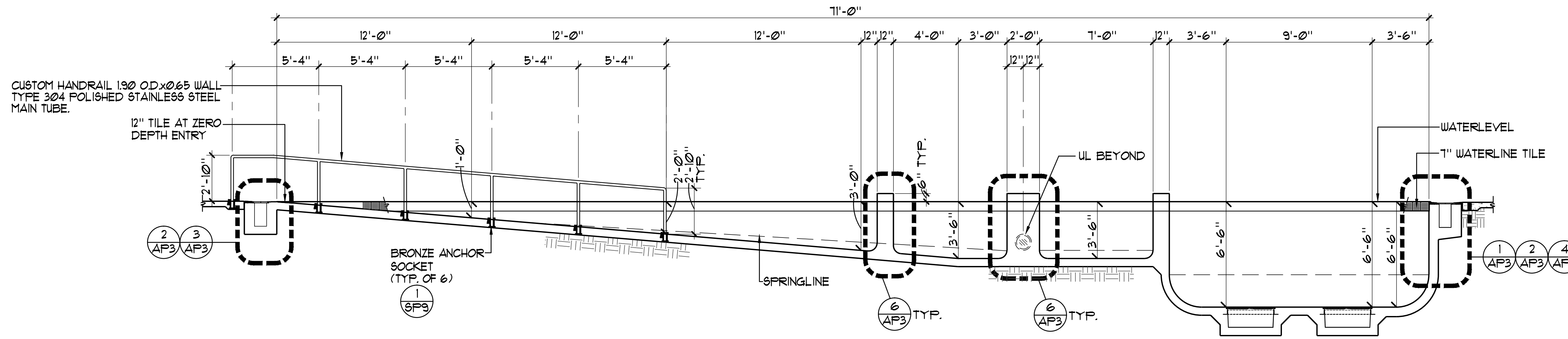
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**AP1**

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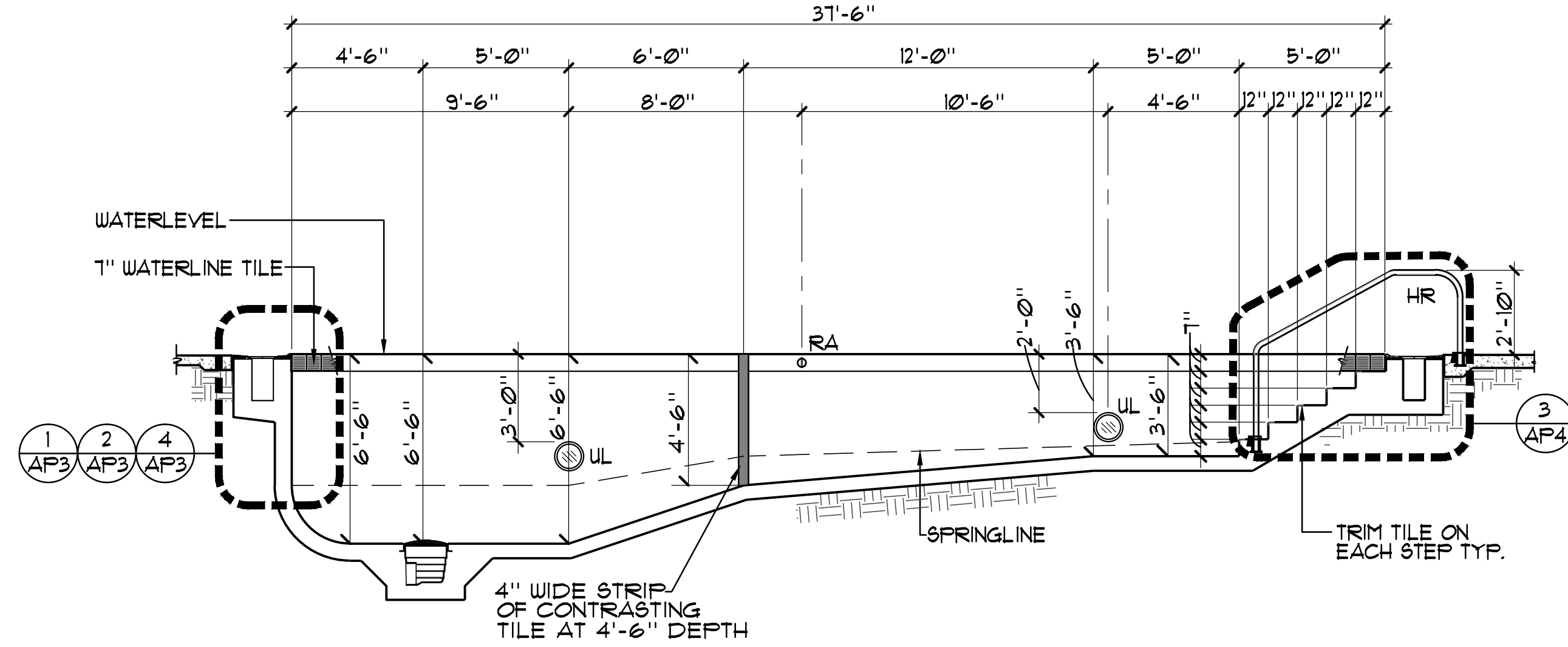




A

ACTIVITY POOL SECTION

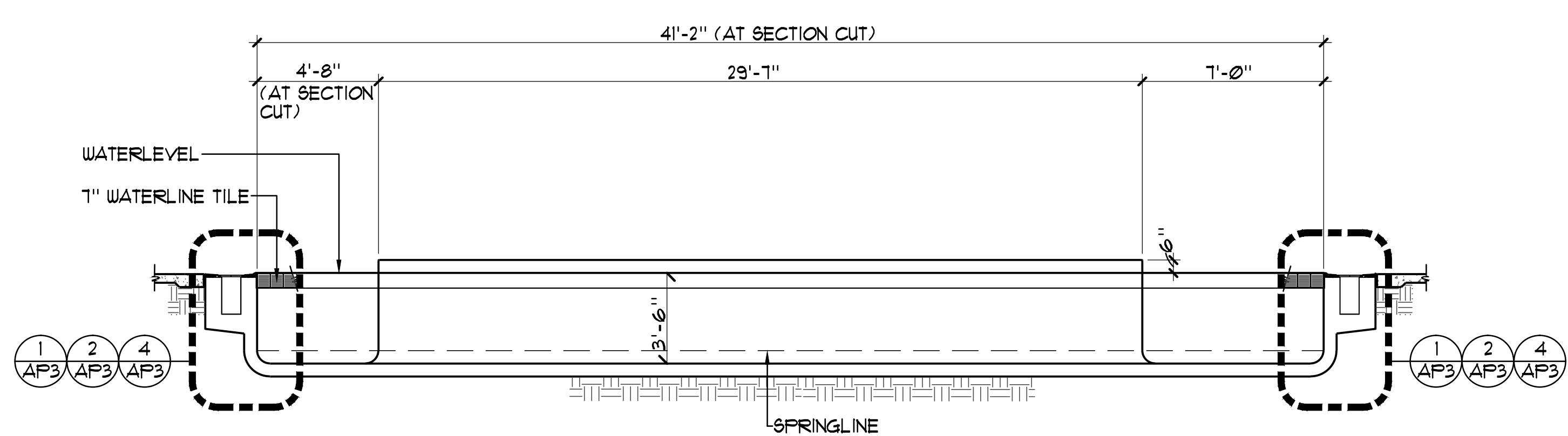
1/4"=1'-0"



B

ACTIVITY POOL SECTION

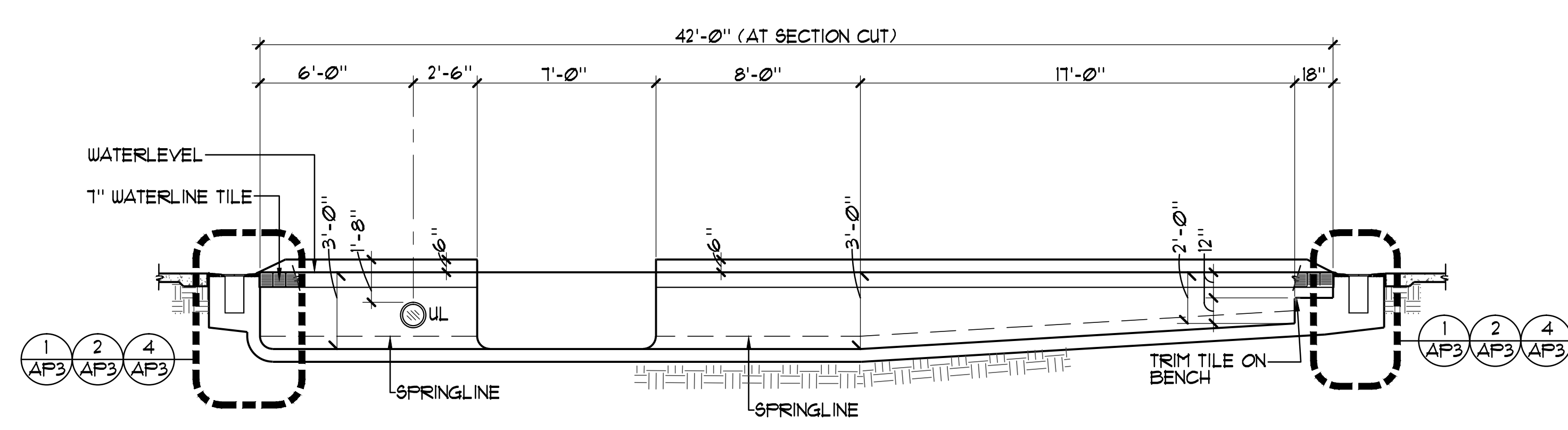
1/4"=1'-0"



C

ACTIVITY POOL SECTION

1/4"=1'-0"

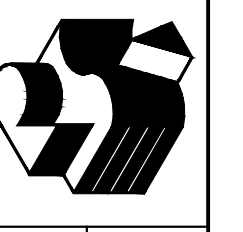
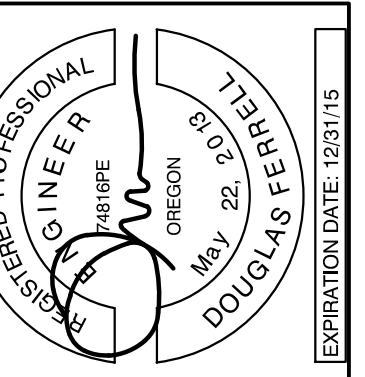


D

ACTIVITY POOL SECTION

1/4"=1'-0"

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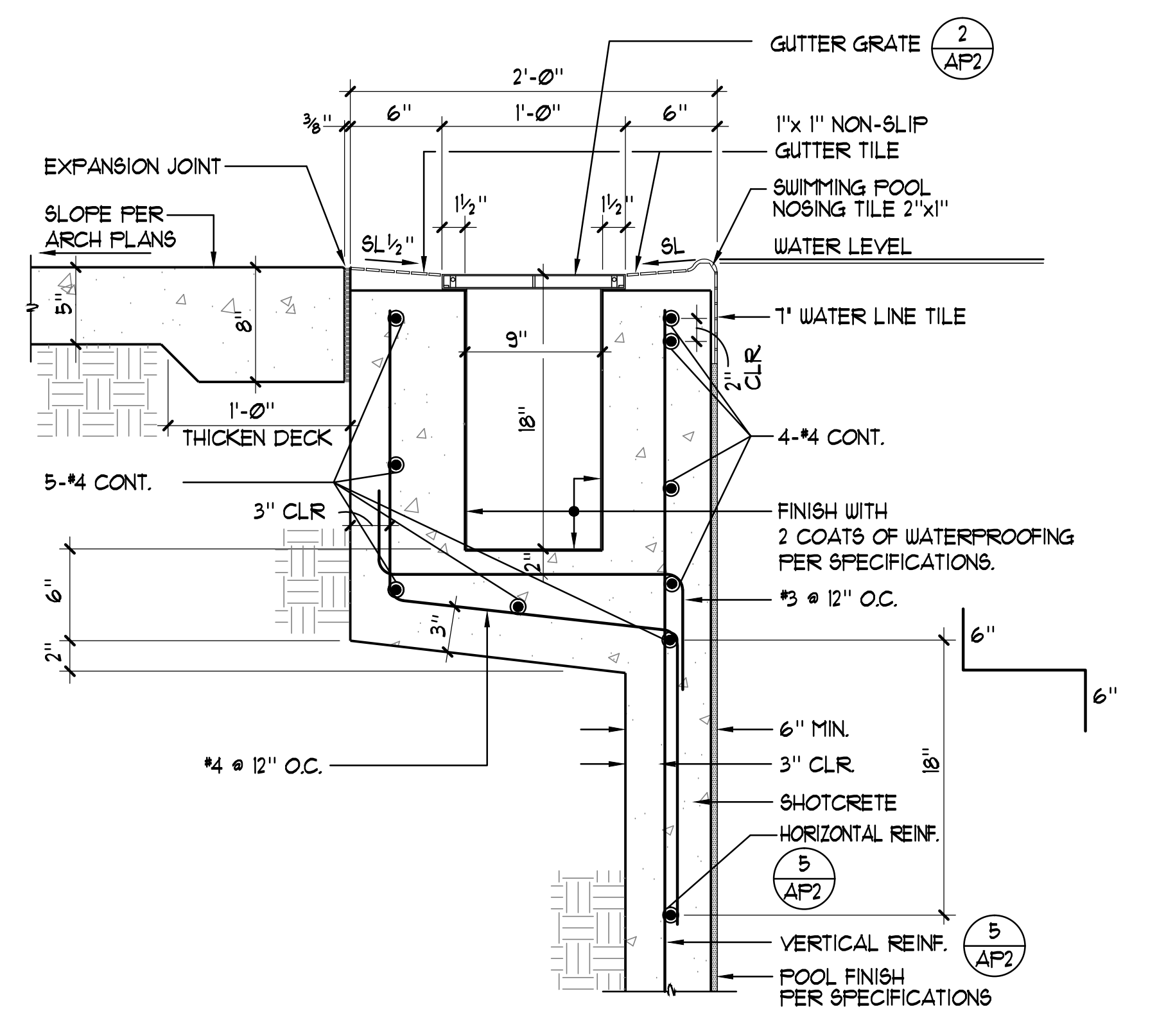
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 Fax: 541.345.4302

ACTIVITY POOL SECTIONS

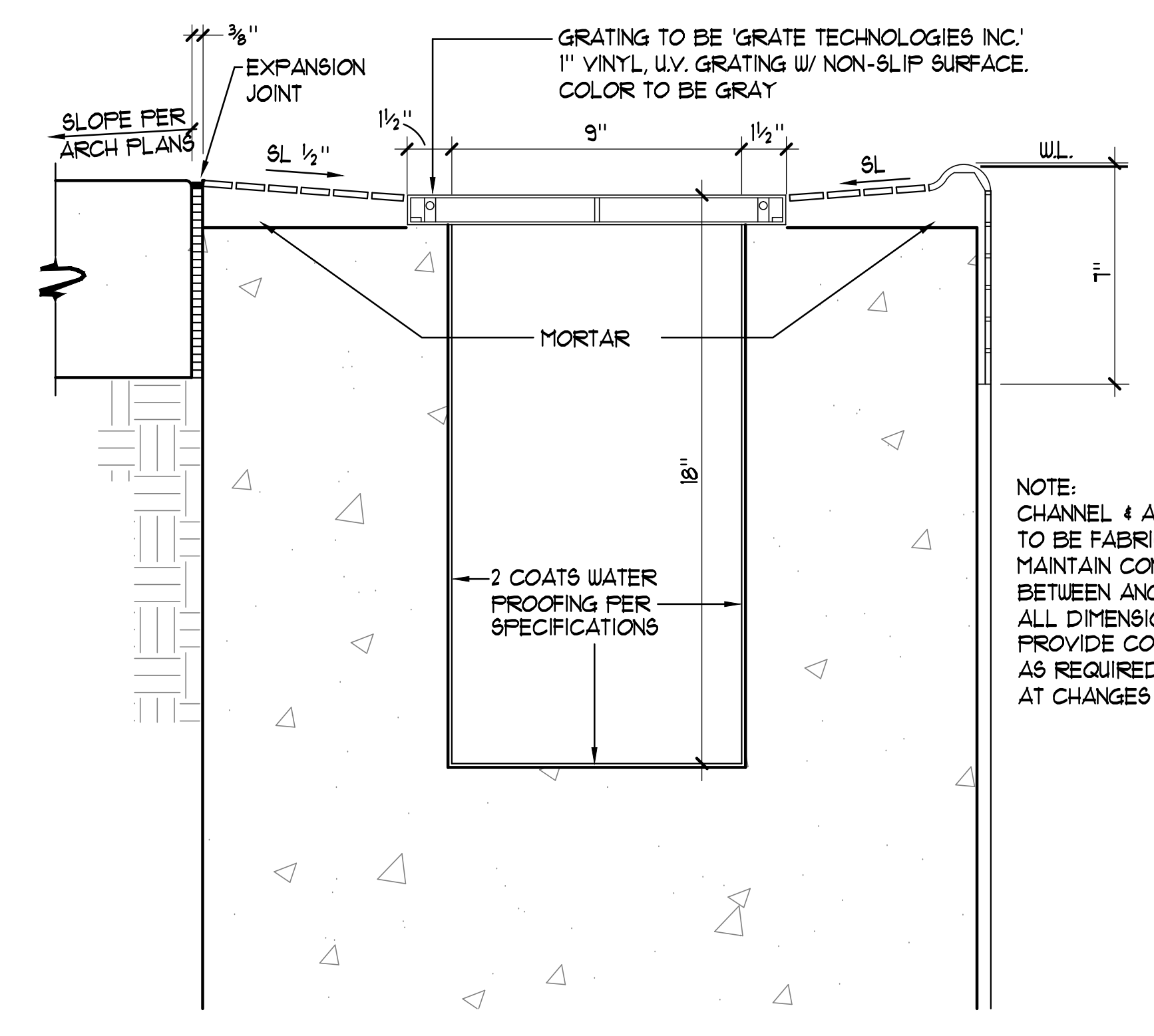
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AP2

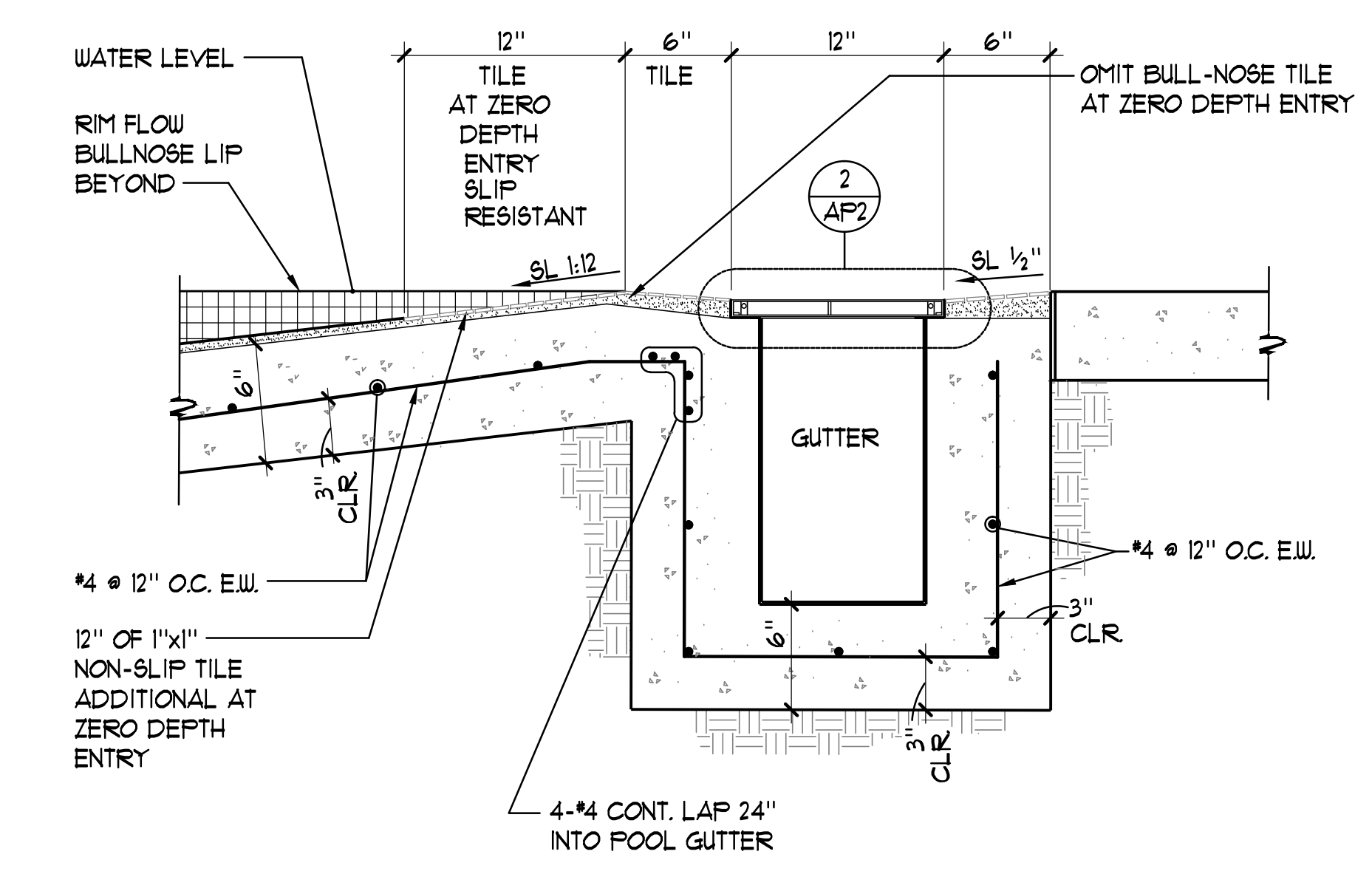




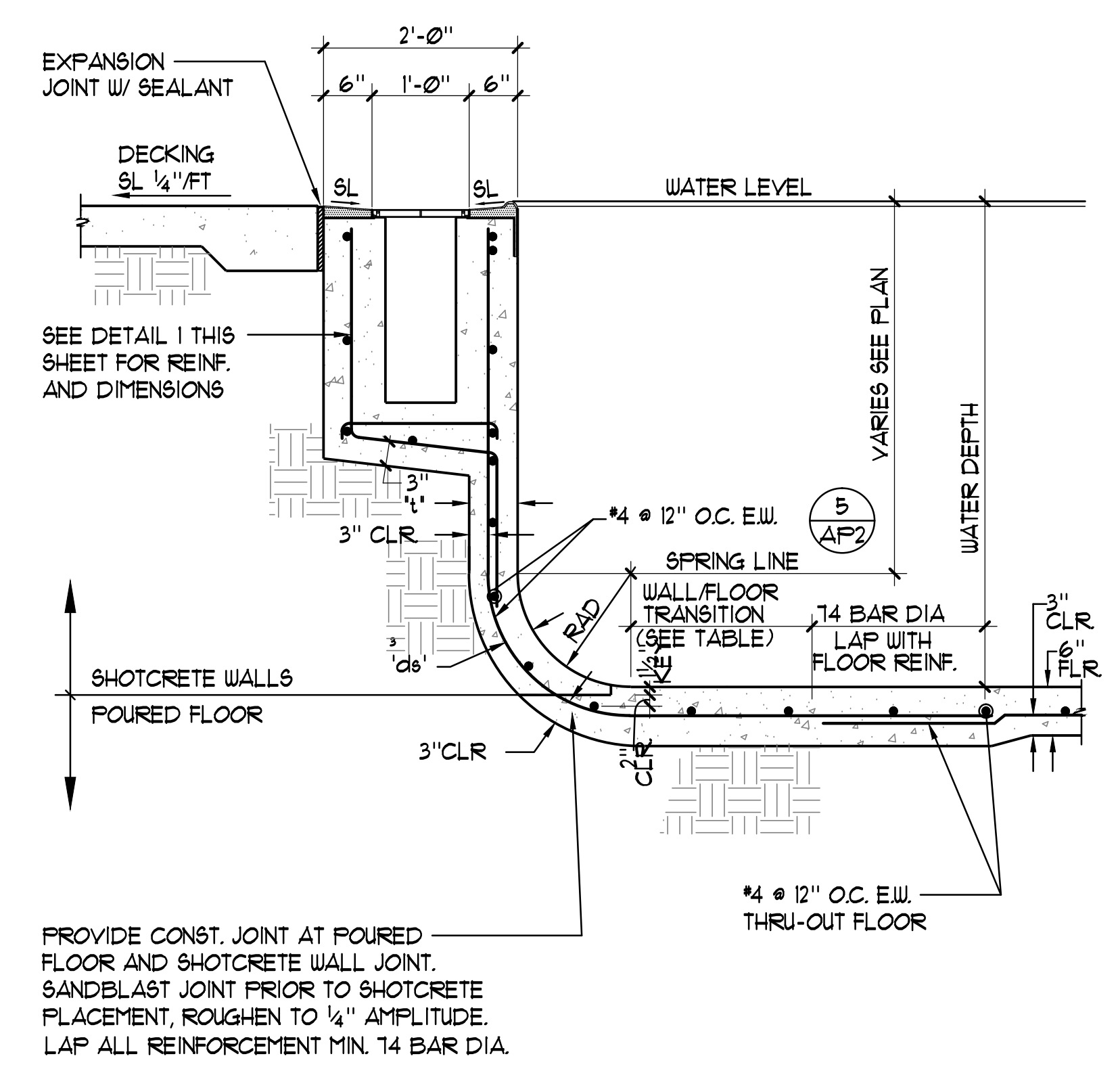
1 RIM-FLOW GUTTER 1 1/2" x 1'-0"



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



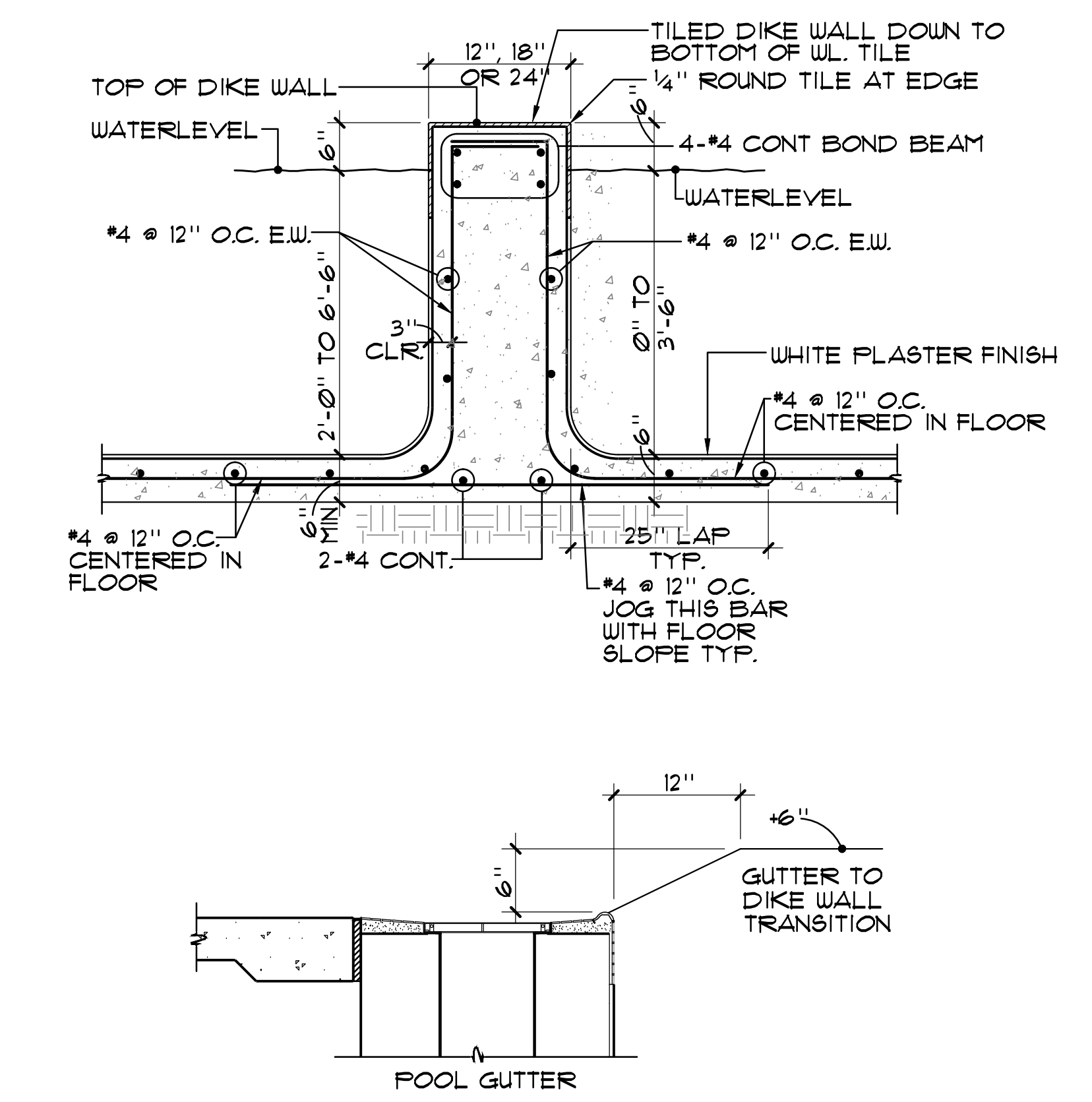
3 ZERO DEPTH RIM-FLOW GUTTER GRATE 1 1/2" x 1'-0"



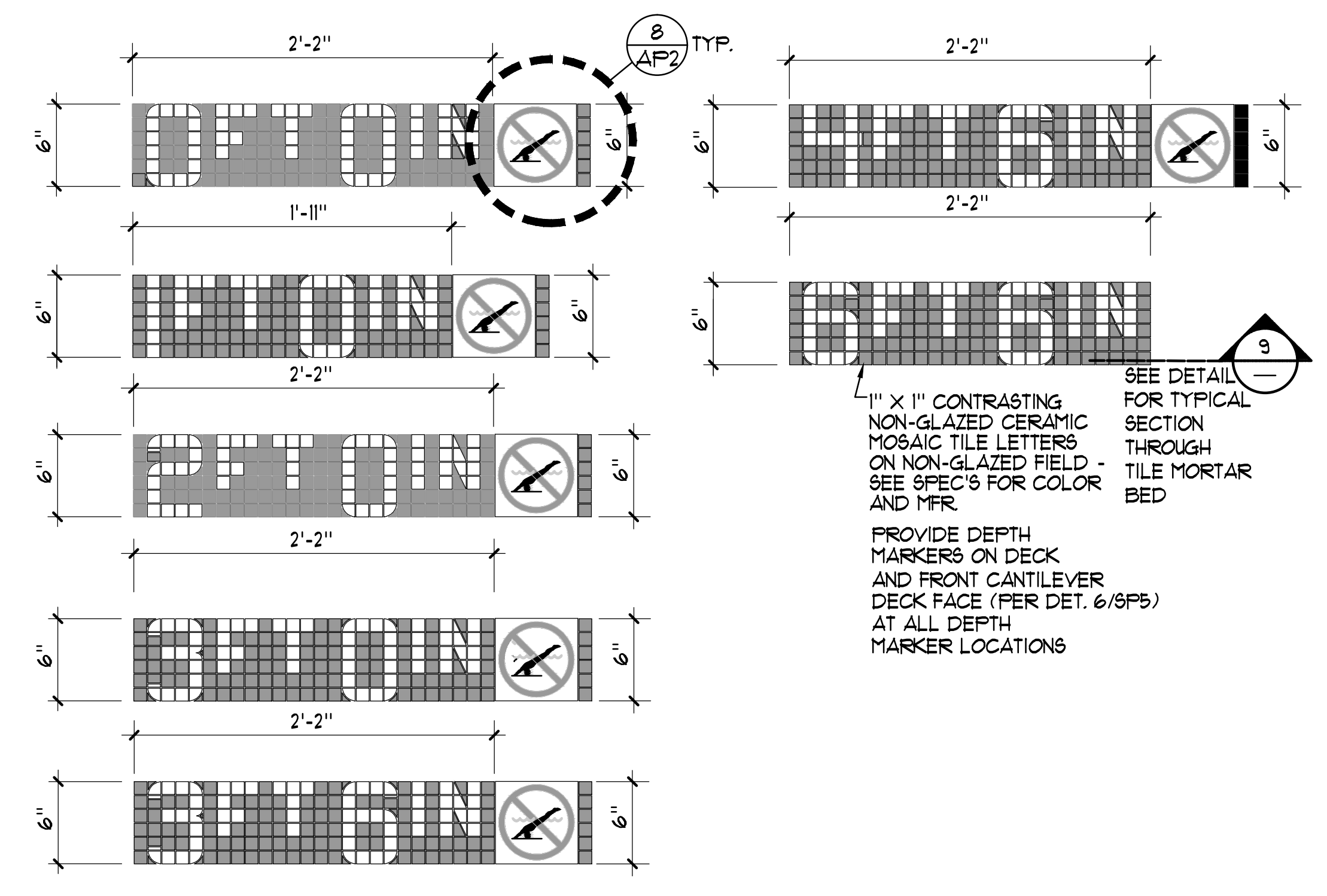
4 POOL WALL 1'-0" TO 6'-6" 3/4" x 1'-0"

REINFORCEMENT TABLE						
WATER DEPTH	L'	'd <sub>s</sub>	RADIUS	VERTICAL REINF.	HORIZONTAL REINF.	WALL/FLOOR TRANSITION
0'-0" TO 3'-6"	6"	3"	0" TO 6"	#4 @ 12" O.C.	#4 @ 12" O.C.	24"
3'-7" TO 6'-6"	7"	4"	6" TO 24"	#4 @ 6" O.C.	#4 @ 12" O.C.	24"

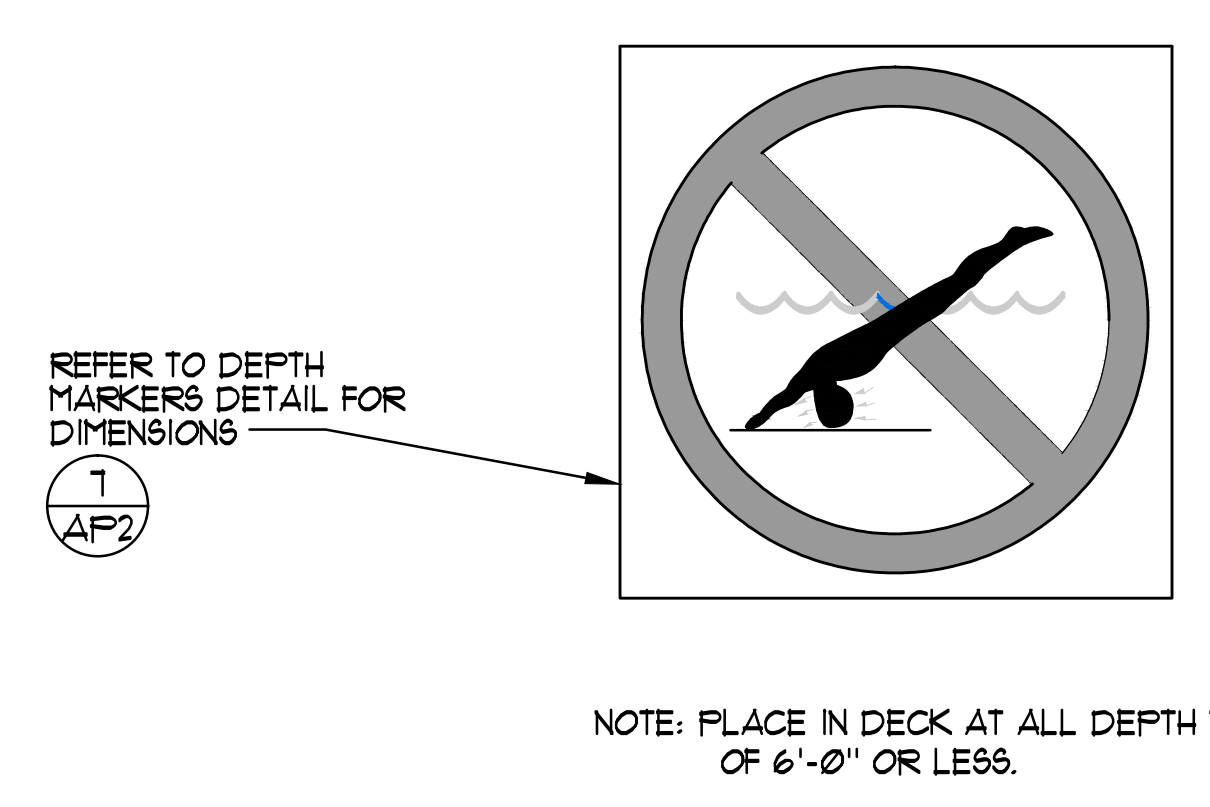
- CONCRETE NOTES:**
- THE MINIMUM ULTIMATE COMPRESSIVE STRENGTH AT 28 DAYS  
POOL = 3000 PSI  
SLAB-ON-GRADE = 3000 PSI
  - CONTINUOUS INSPECTION BY AN APPROVED INSPECTOR IS REQUIRED OF ALL CONCRETE PLACEMENT.
  - ALL CEMENT USED SHALL CONFORM TO A.S.T.M. C-150 TYPE II
  - FINE AND COARSE AGGREGATE SHALL CONFORM TO A.S.T.M. C-33, MAXIMUM SIZE OF AGGREGATE TO BE 1".
  - CONCRETE MIX DESIGNS SHALL BE BASED UPON 2014 OSSC SECTION 1905.
  - CONCRETE SHALL BE TESTED AND INSPECTED PER 2014 OSSC SECTION 1904 AND 1905.
  - REMOVAL OF FORMS SHALL COMPLY WITH 2014 OSSC SECTION 1905.
  - ALL REINFORCING SHALL BE A571 A-615, GRADE 60, UNLESS OTHERWISE NOTED. LAPS SHALL BE 14 BAR DIA.
- SHOTCRETE NOTES:**
- THE MINIMUM ULTIMATE COMPRESSIVE STRENGTH AT 28 DAYS  
POOL WALLS = 3000 PSI
  - CONTINUOUS INSPECTION BY AN 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, MAXIMUM SIZE OF AGGREGATE TO BE 3/8".
  - SHOTCRETE MIX DESIGNS SHALL BE PER 2014 OSSC SECTION 1910.2.
  - SHOTCRETE SHALL BE TESTED AND INSPECTED PER 2014 OSSC SECTION 1910.5 AND 1910.10.
  - ANCHOR BOLTS, ANCHORS, DOUELS, INSERTS, ETC. SHALL BE SECURELY TIED IN PLACE PRIOR TO PLACING OF SHOTCRETE.
  - ALL REINFORCEMENT WITHIN SHOTCRETE SHALL MAINTAIN MINIMUM 2" CLEAR NON-CONTACT SPACERS.
  - THE FILM OF LAITANCE WHICH FORMS ON THE SURFACE OF THE SHOTCRETE SHALL BE REMOVED WITHIN APPROXIMATELY TWO HOURS AFTER APPLICATION BY BRUSHING WITH A STIFF BRUSH. 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 A571 A-615, GRADE 60, UNLESS OTHERWISE NOTED. LAPS SHALL BE 14 BAR DIA.



6 DIKE WALL DETAIL 3/4" x 1'-0"

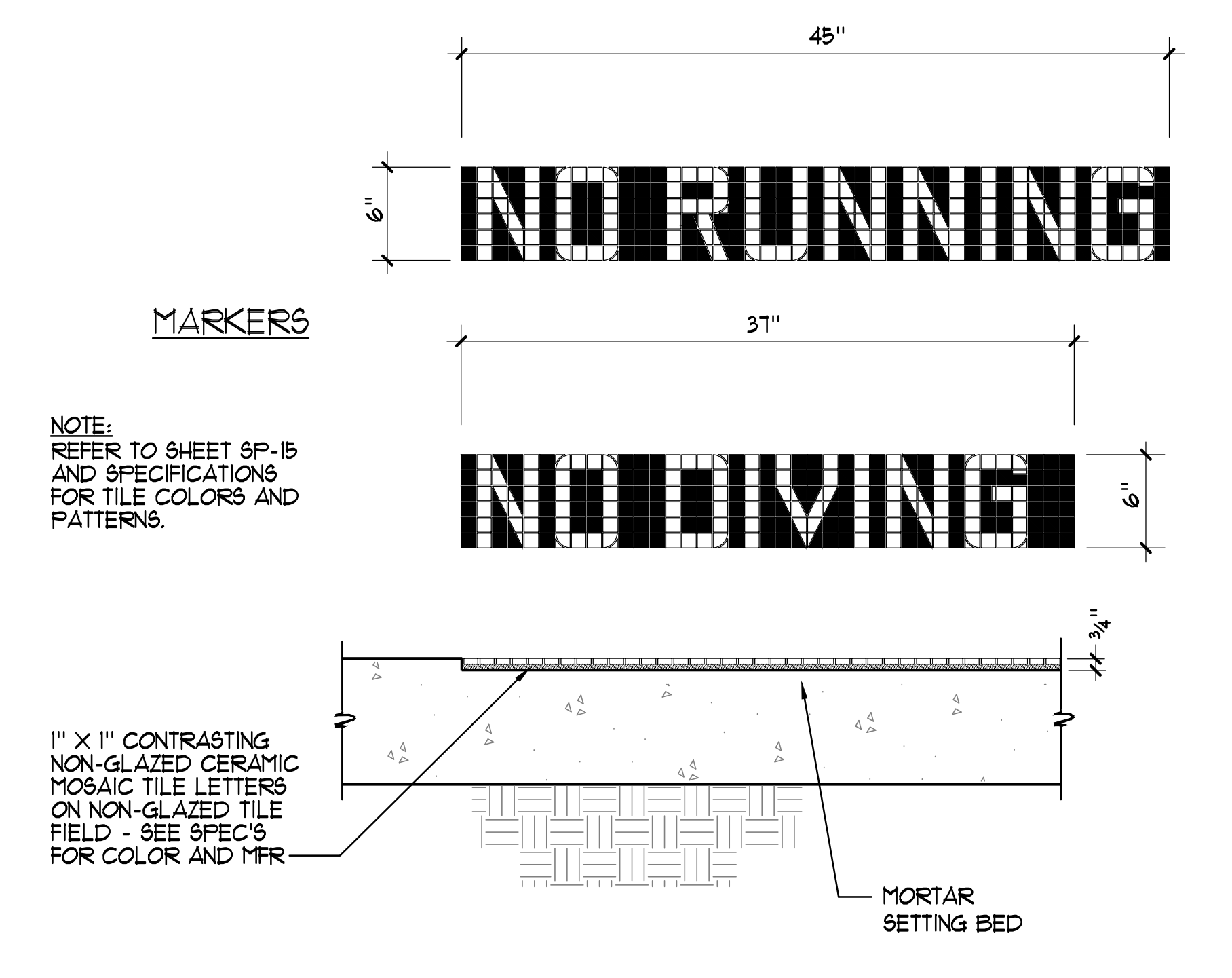


7 DEPTH MARKERS 1 1/2" x 1'-0"



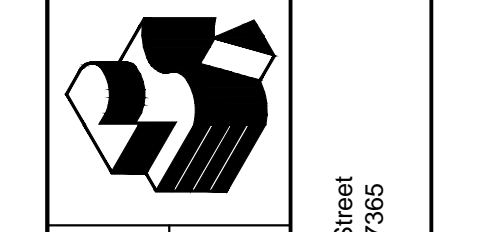
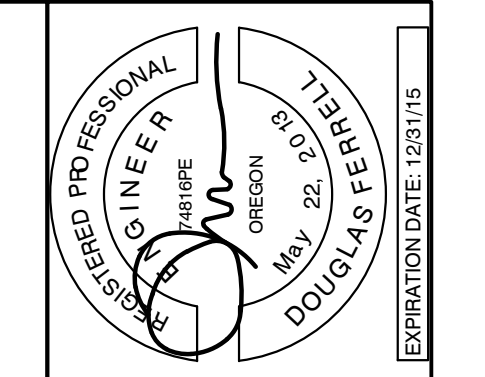
- REFER TO DEPTH MARKERS DETAIL FOR DIMENSIONS
- NOTE: PLACE IN DECK AT ALL DEPTH MARKER LOCATION OF 6'-0" OR LESS.
- SILK SCREEN**
- INLAYS DOUBLE GLAZED WHITE SLIP RESISTANT TILE TYP. OF (1) PIECE OVER 1/4" MORTAR BED WITH 1/8" GROUT JOINTS. SEE PLAN FOR LOCATION.
  - 1" WIDE RED CIRCLE WITH 1" WIDE RED DIAGONAL LINE.
  - 1/8" BLUE WATER.
  - 1/8" RED TICKS ABOUT THE HEAD.
  - TAN COLOR BODY WITH BLACK OUTLINE, HAIR AND TRUNKS.
  - 1/8" BLACK POOL FLOOR.

8 INTERNATIONAL "NO DIVING" MARKER 3" x 1'-0"



9 'NO RUNNING'/'NO DIVING' MARKERS 1 1/2" x 1'-0"

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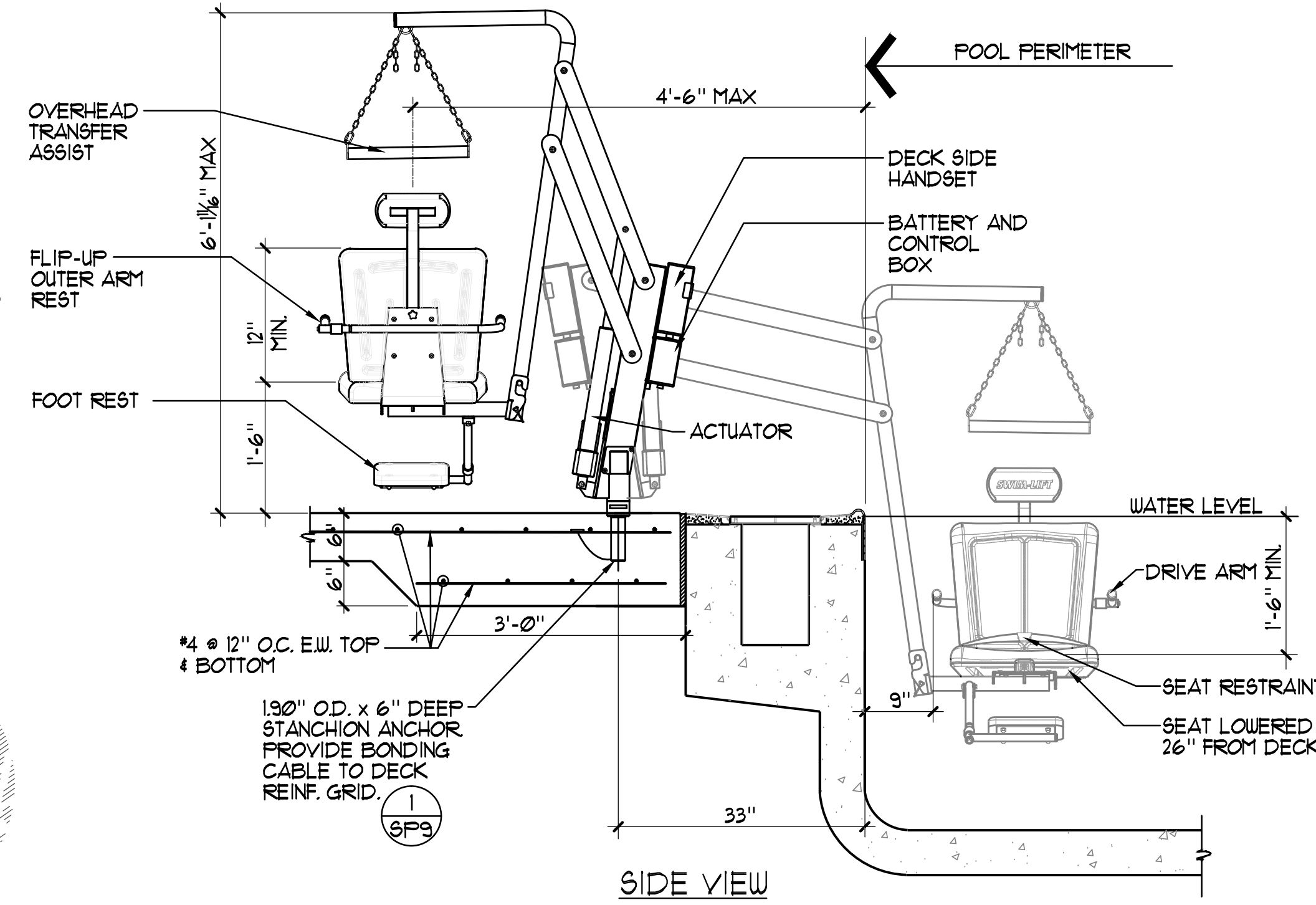
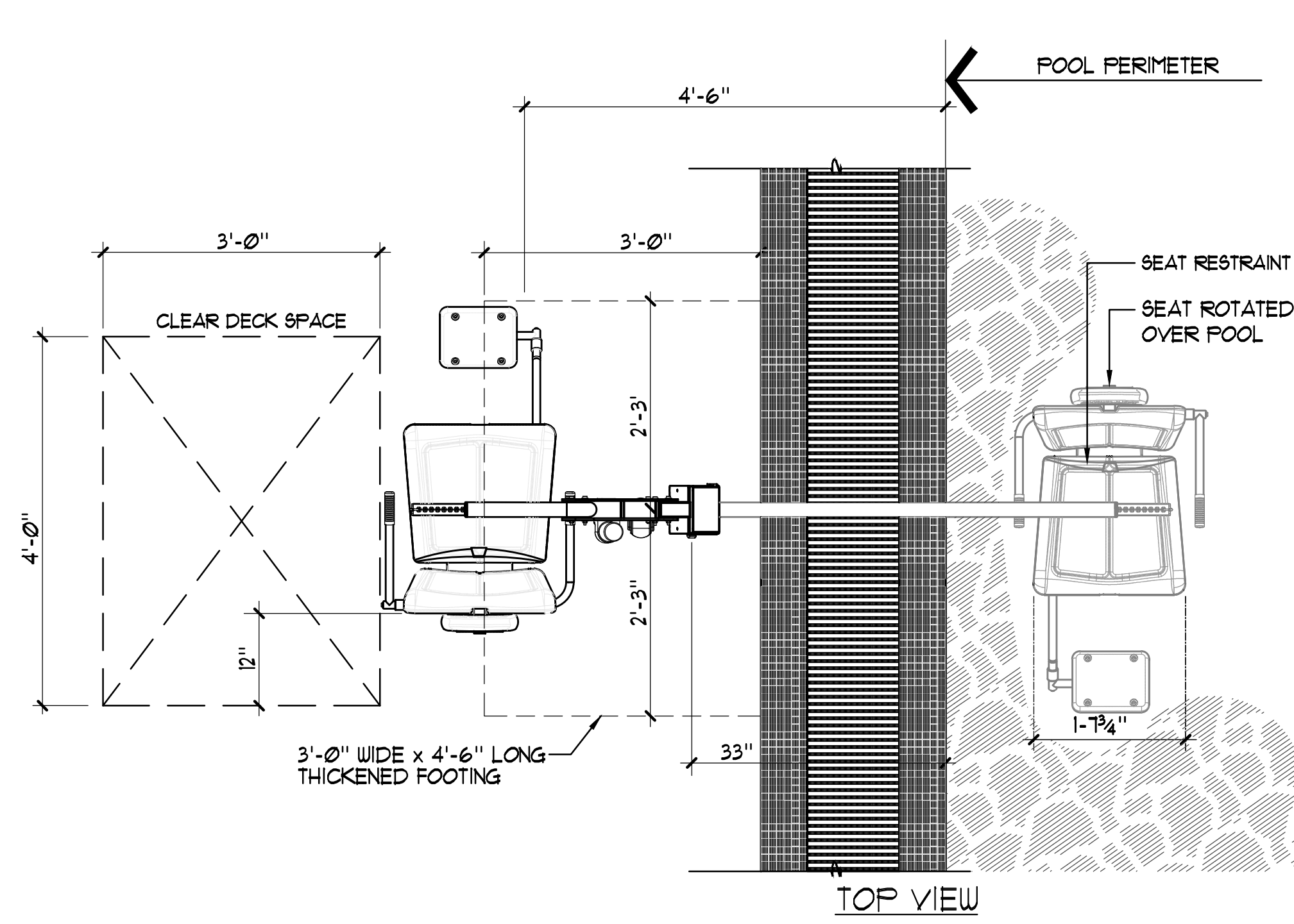


AP3

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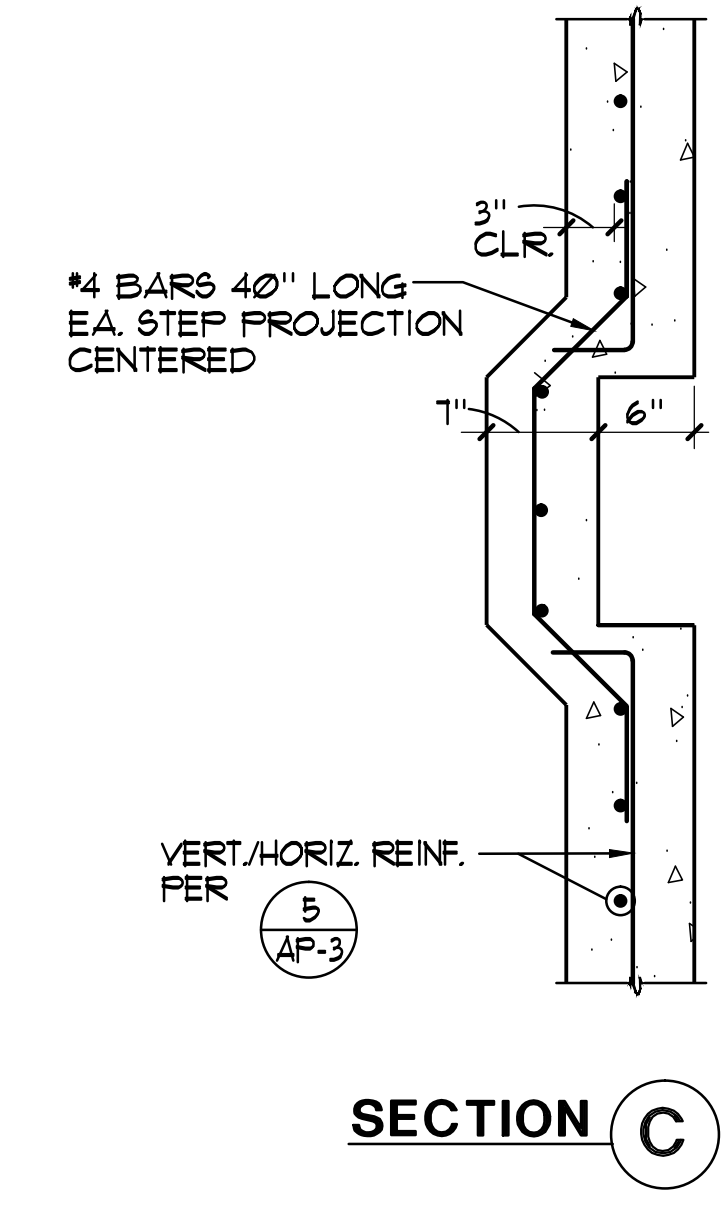
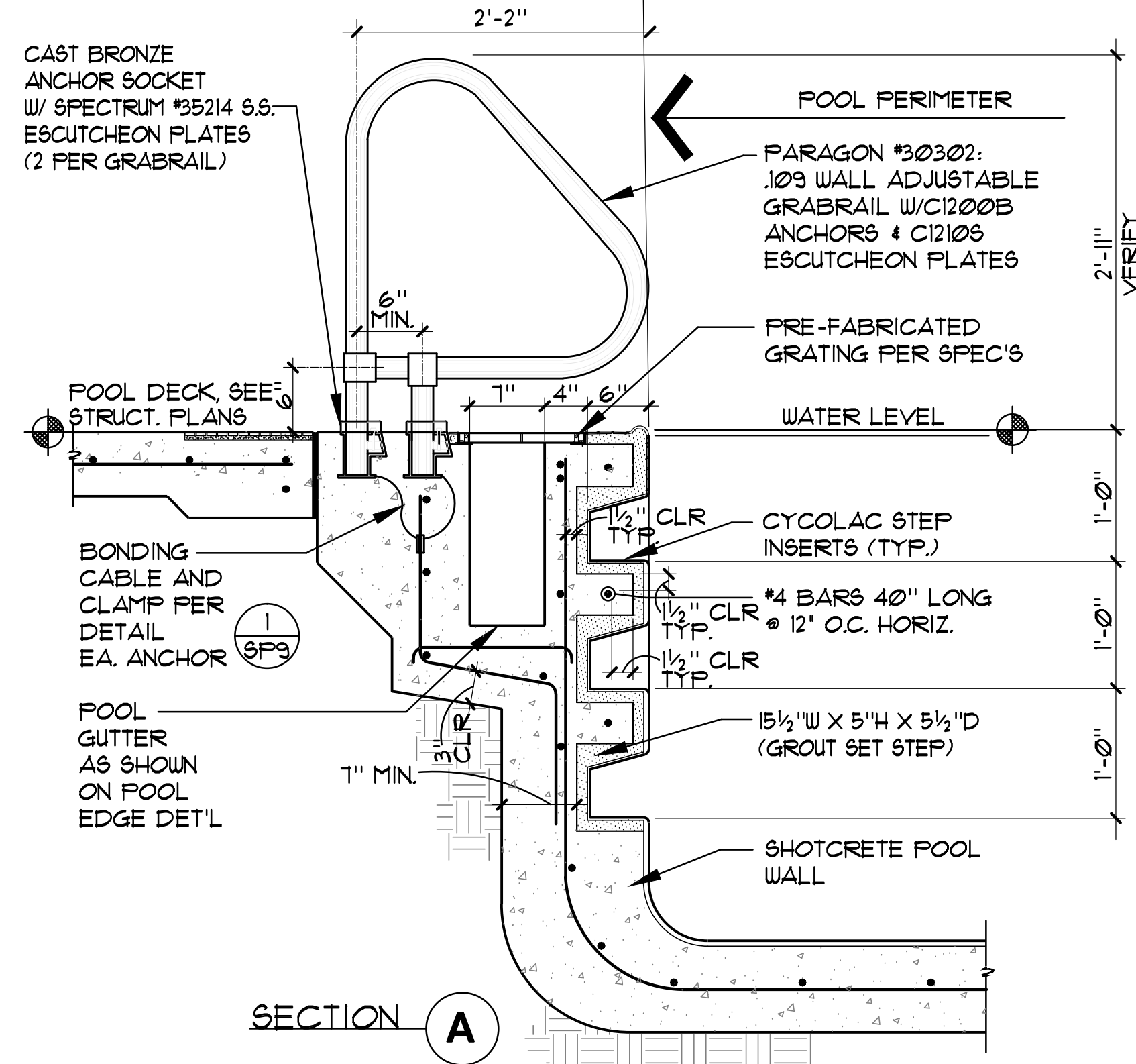
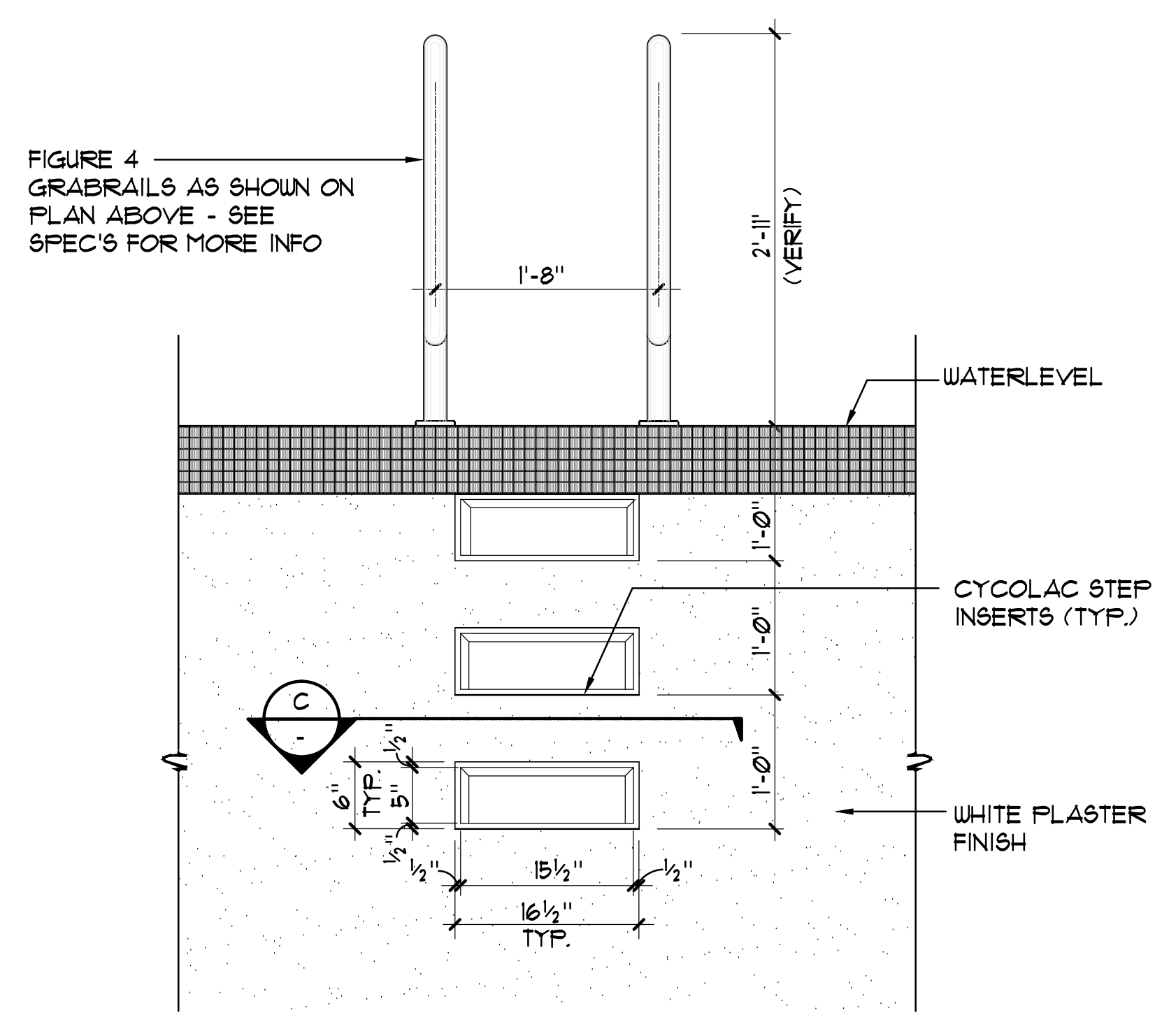
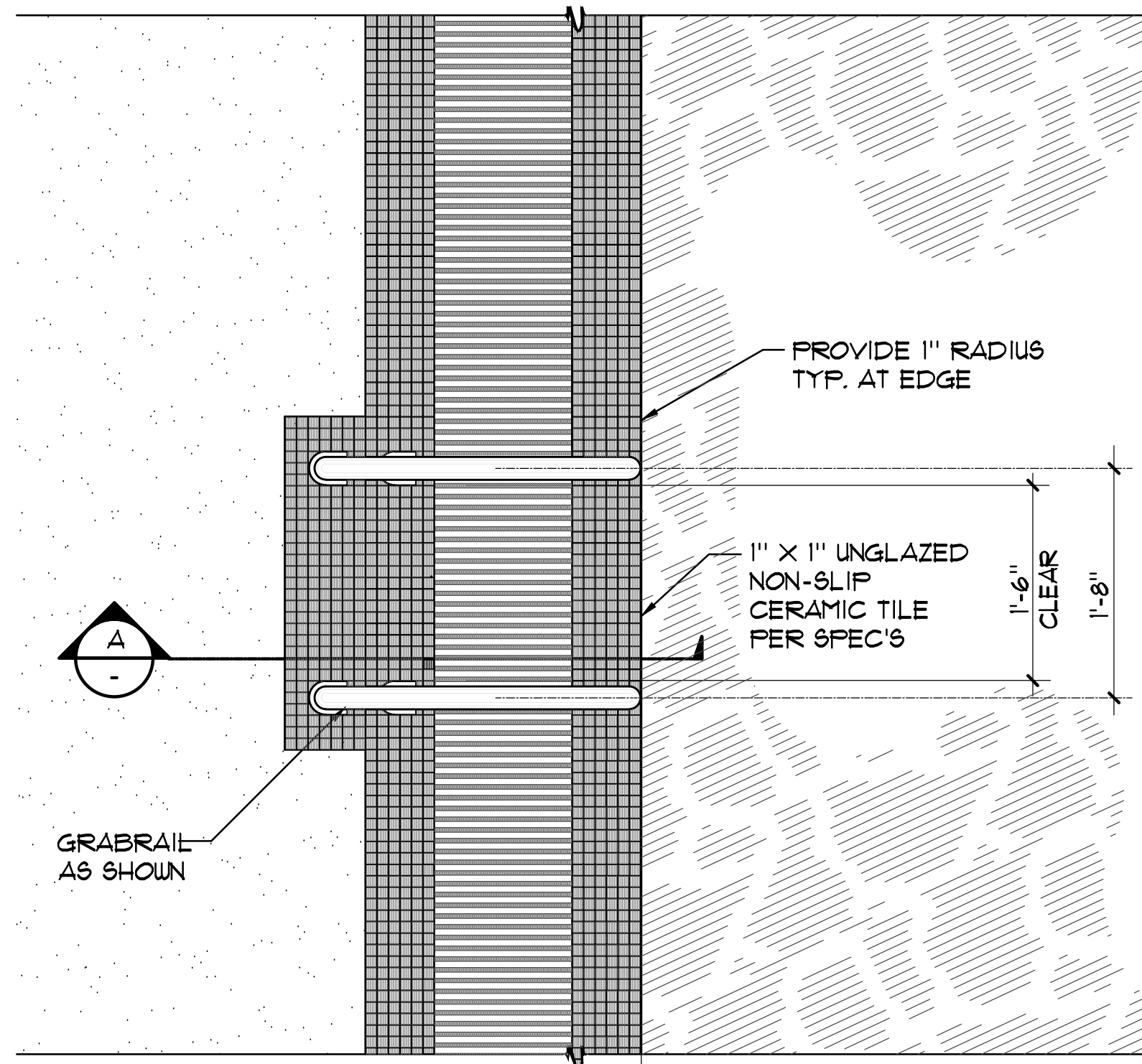
AP3





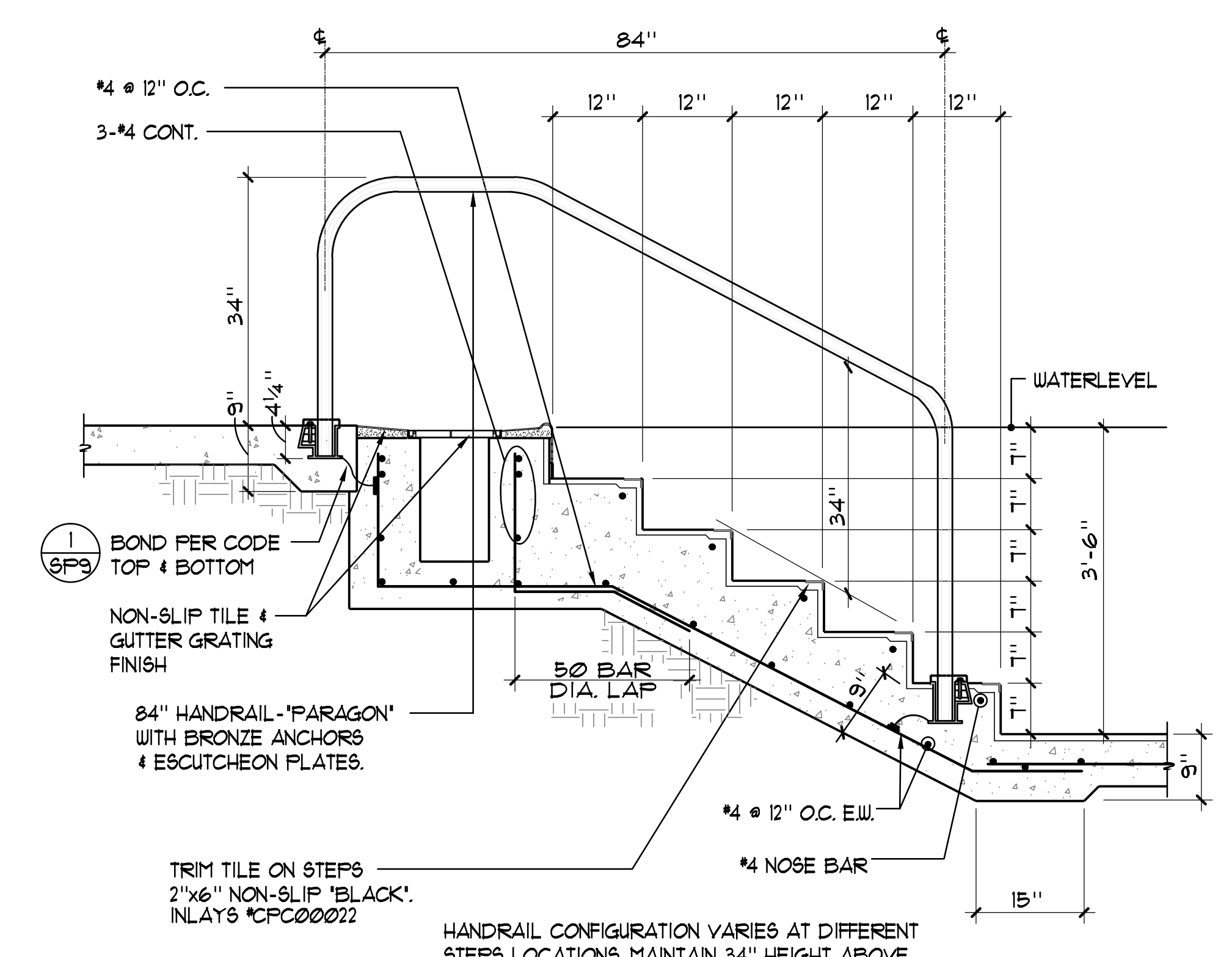
- NOTES:**
1. O/GC 'SPECTRUM' TRAVELER II XRC500 (500 LB. LIVE LOAD CAPACITY MIN.)
  2. GUSSET COVER PLATE TO BE ATTACHED REQUIRING A TOOL FOR REMOVAL.
  3. CONTRACTOR SHALL PROVIDE COVER FOR LIFT 'SPECTRUM' #1365; EXTRA BATTERY PACK 'SPECTRUM' #325; AND TRANSPORTER CART 'SPECTRUM' #6060.
  4. REFER TO ARCH. PLANS FOR LOCATION OF DISABLED LIFT BATTERY CHARGE STATION.
  5. POOL LIFT OPERATOR 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 11" 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 11" 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 OPERATOR 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.

**ACCESSIBLE LIFT** 3/4"=1'-0"

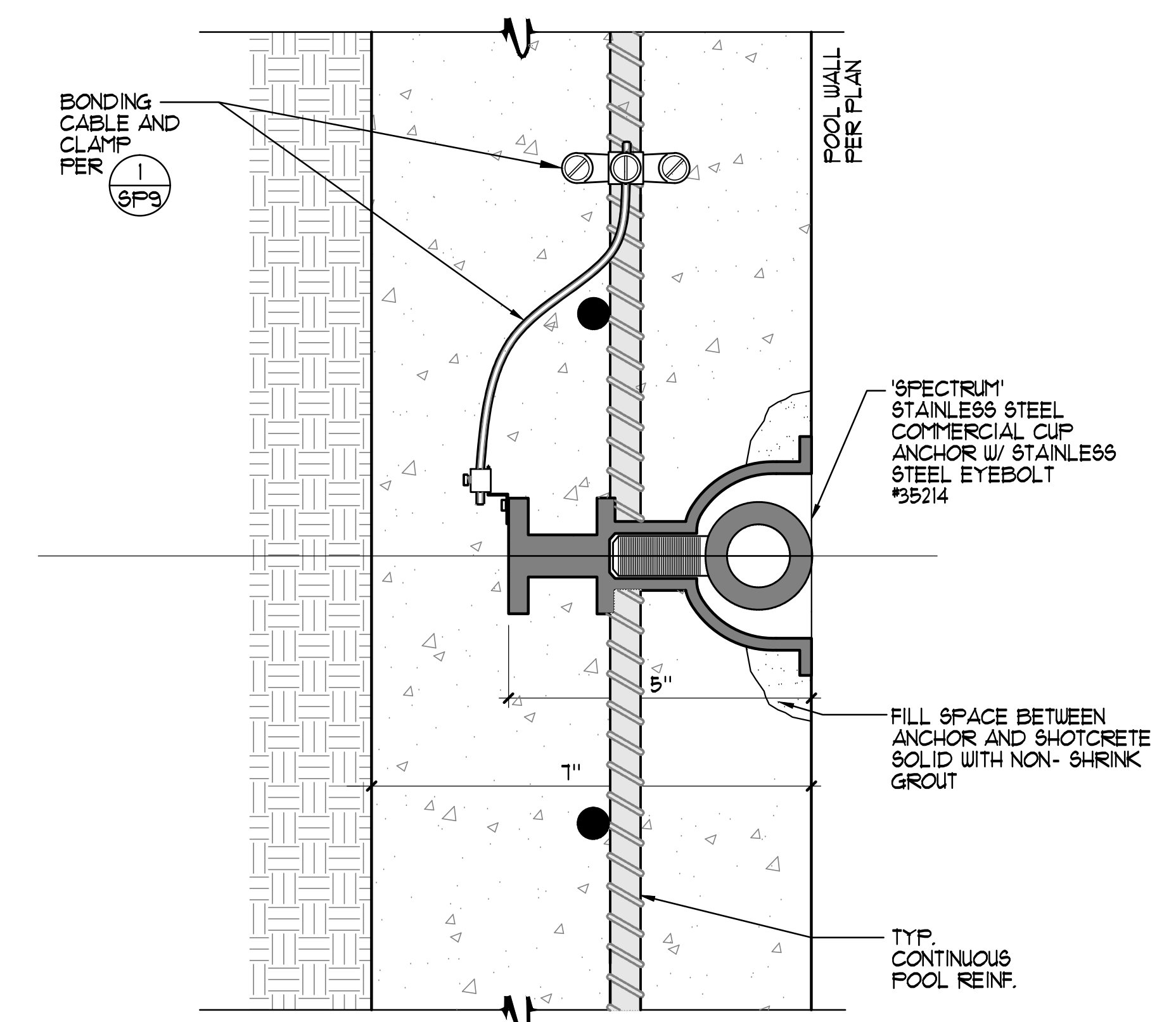


NOTE: CARE SHALL BE TAKEN DURING THE SHOTCRETE/GUNITE PROCESS TO PROVIDE STEP CUT-OUTS THAT ARE SUFFICIENTLY DEEP TO ALLOW FOR FLUSH INSTALLATION OF CYCLOCAC STEP INSERTS. (NO EXCEPTIONS)

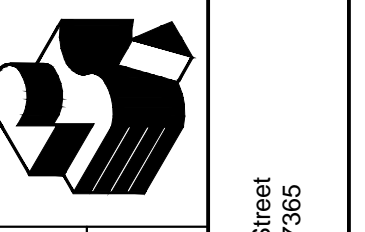
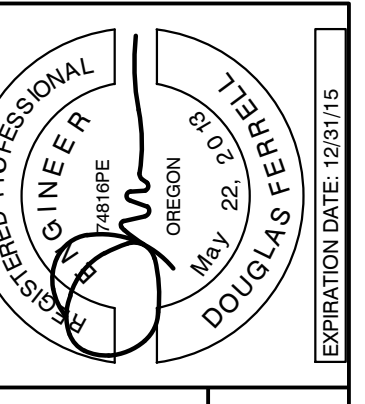
**GRABRAIL WITH STEPS** 1"=1'-0"



**ACTIVITY POOL HANDRAIL DETAIL** 3/4"=1'-0"



**ROPE ANCHOR** 6"=1'-0"



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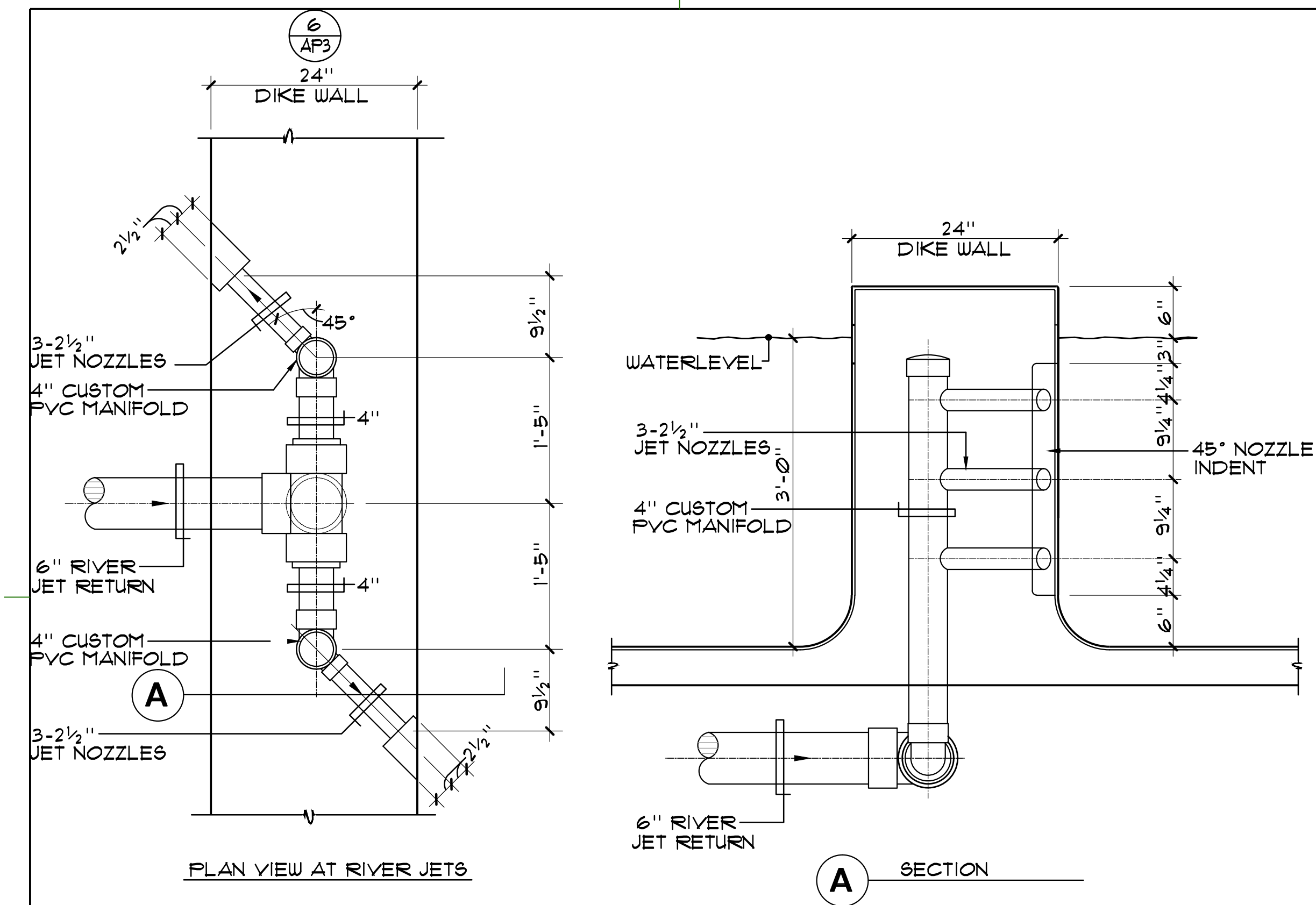
AQUATIC DESIGN GROUP  
 132 East Broadway, Suite 540  
 Eugene, Oregon 97401  
 Tel 541.342.8077  
 Fax 541.345.4302

**DETAILS**

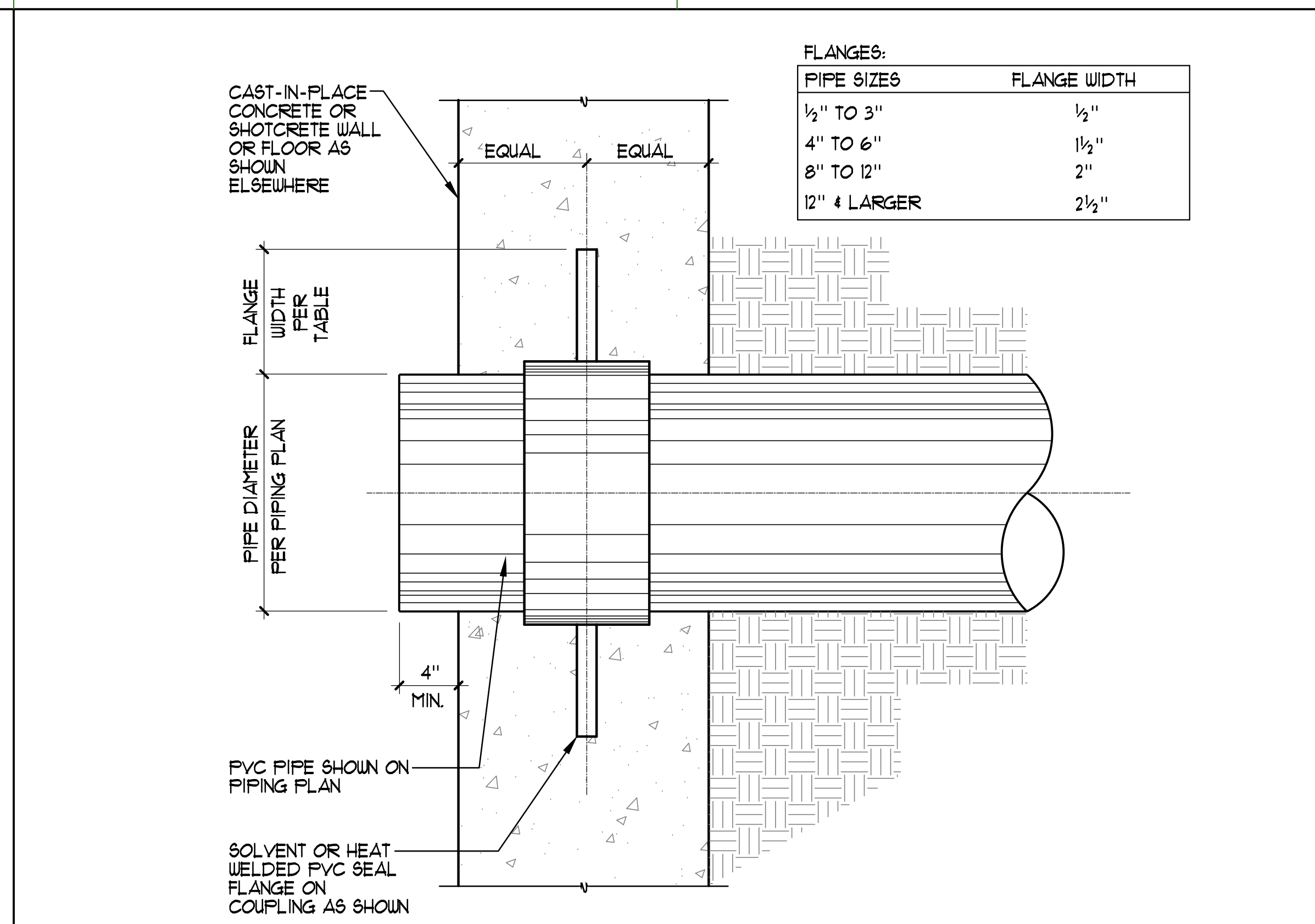
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Date	17 JUNE 2015
Project	1419

**AP4**

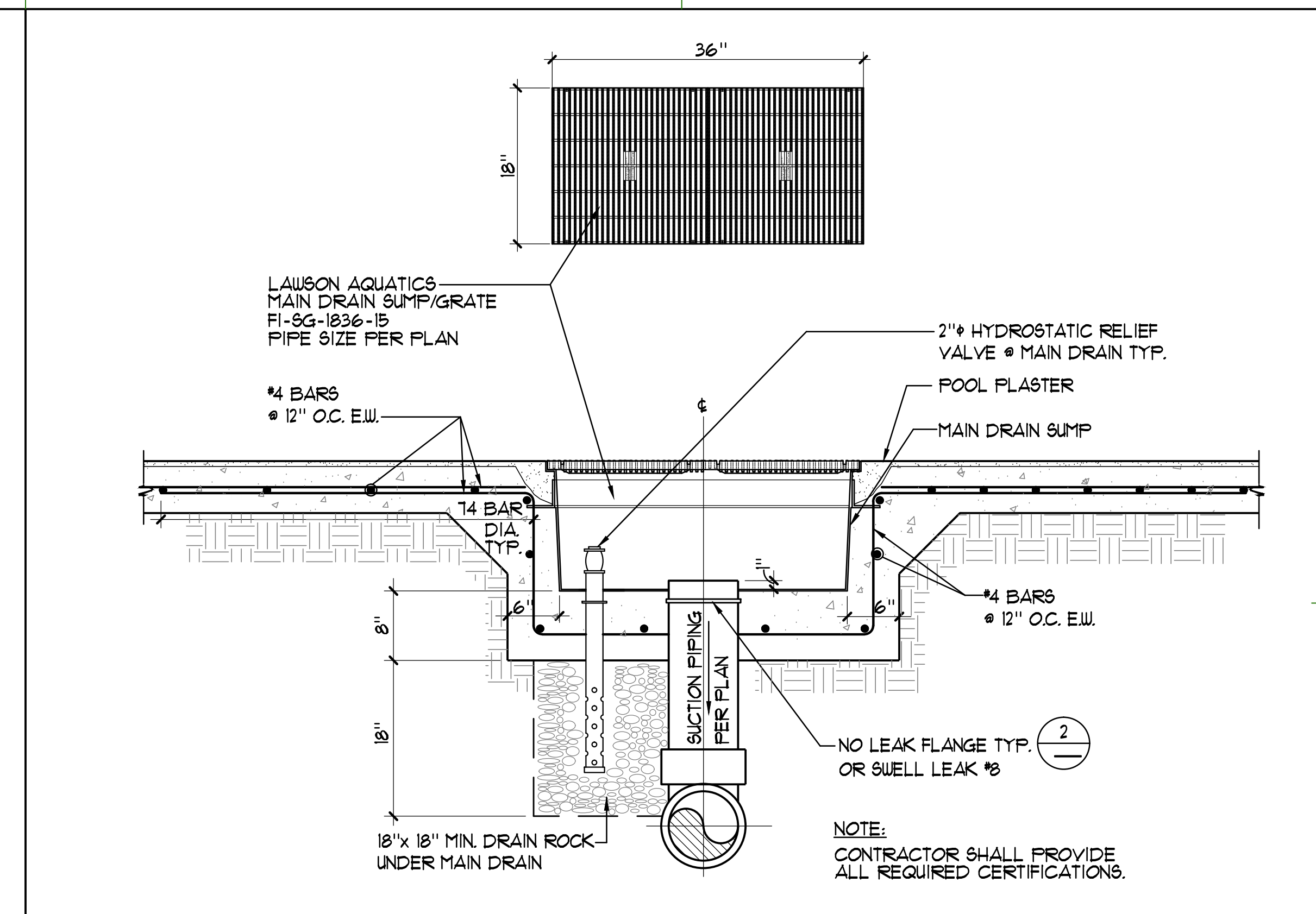




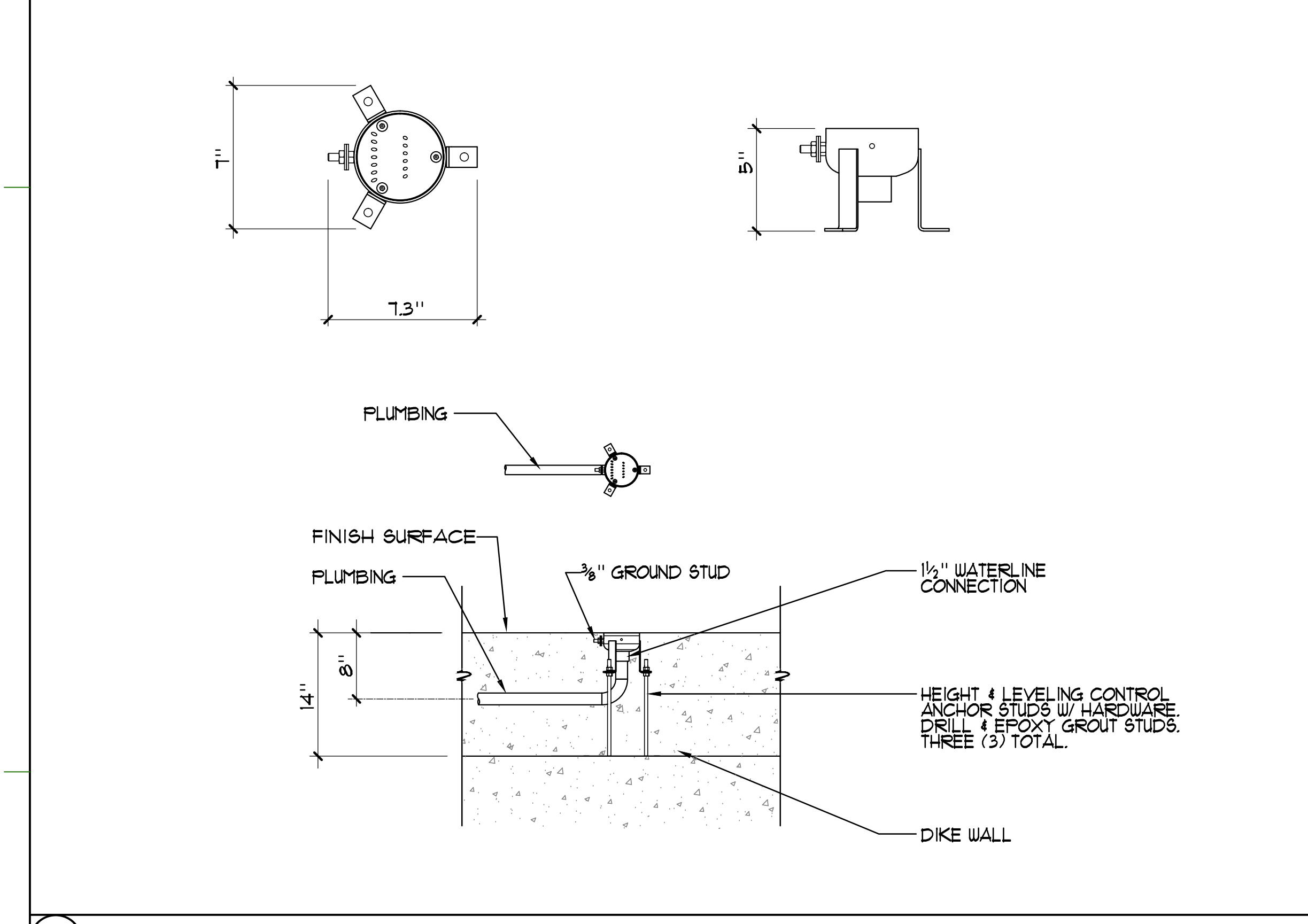
1 RIVER JET DETAIL 1"=1'-0"



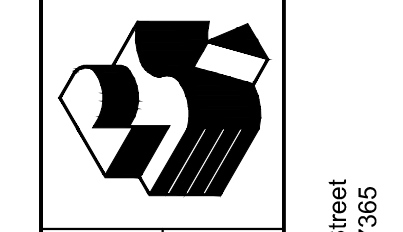
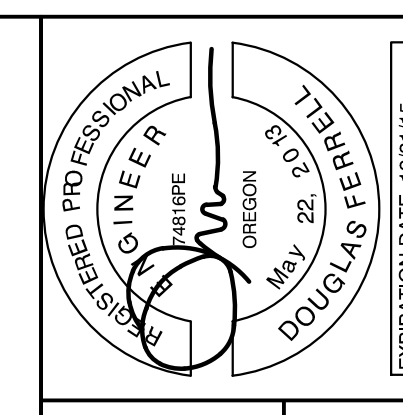
2 WATER STOP DETAIL NO SCALE



3 ACTIVITY POOL MAIN DRAIN 1"=1'-0"



4 ROOSTER TAIL NO SCALE



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DETAILS

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AP5



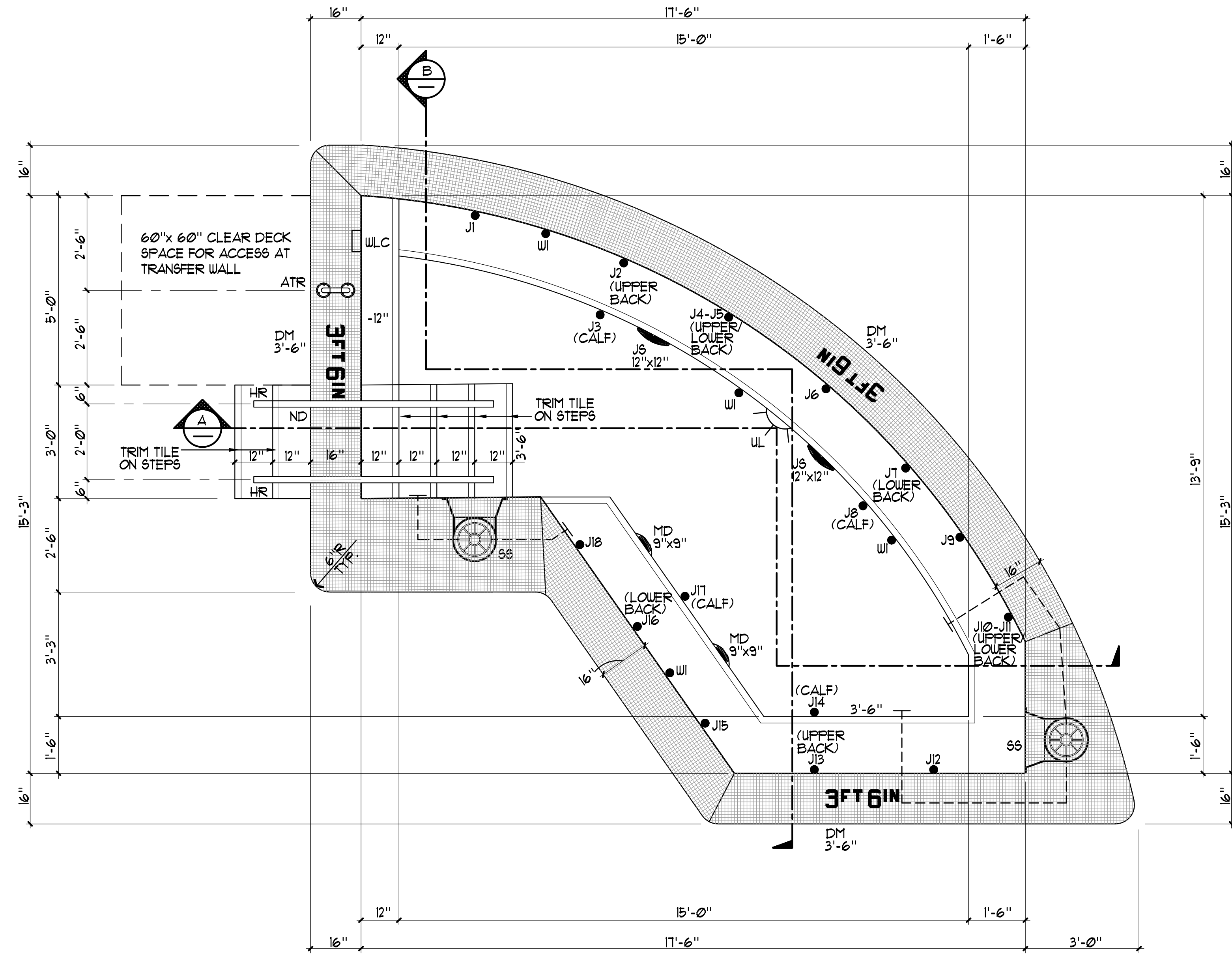
**HYDROTHERAPY SPA DATA**

SURFACE AREA	=	152 SQ. FT.
PERIMETER	=	59 FT.
DEPTHS	=	3'-6"
VOLUME	=	3,130 GAL.
30 MIN TURNOVER	=	104 GPM

**LEGEND**

MD	=	MAIN DRAIN	②	H83
DM	=	DEPTH MARKER	⑥	H82
WI	=	WALL INLET	①	H83
J1 - J18	=	JET RETURNS	⑧	H82
WLC	=	WATER LEVEL CONTROL	③	H83
SS	=	SURFACE SKIMMER	④	H83
HR	=	HANDRAIL	①	H82
UL	=	UNDERWATER LIGHT	⑤	SP8
ATR	=	ACCESSIBLE TRANSFER RAIL	⑤	H82
JS	=	JET SUCTION	⑤	H83

NOTE:  
SPA SURFACE FINISH SHALL BE WHITE PLASTER.



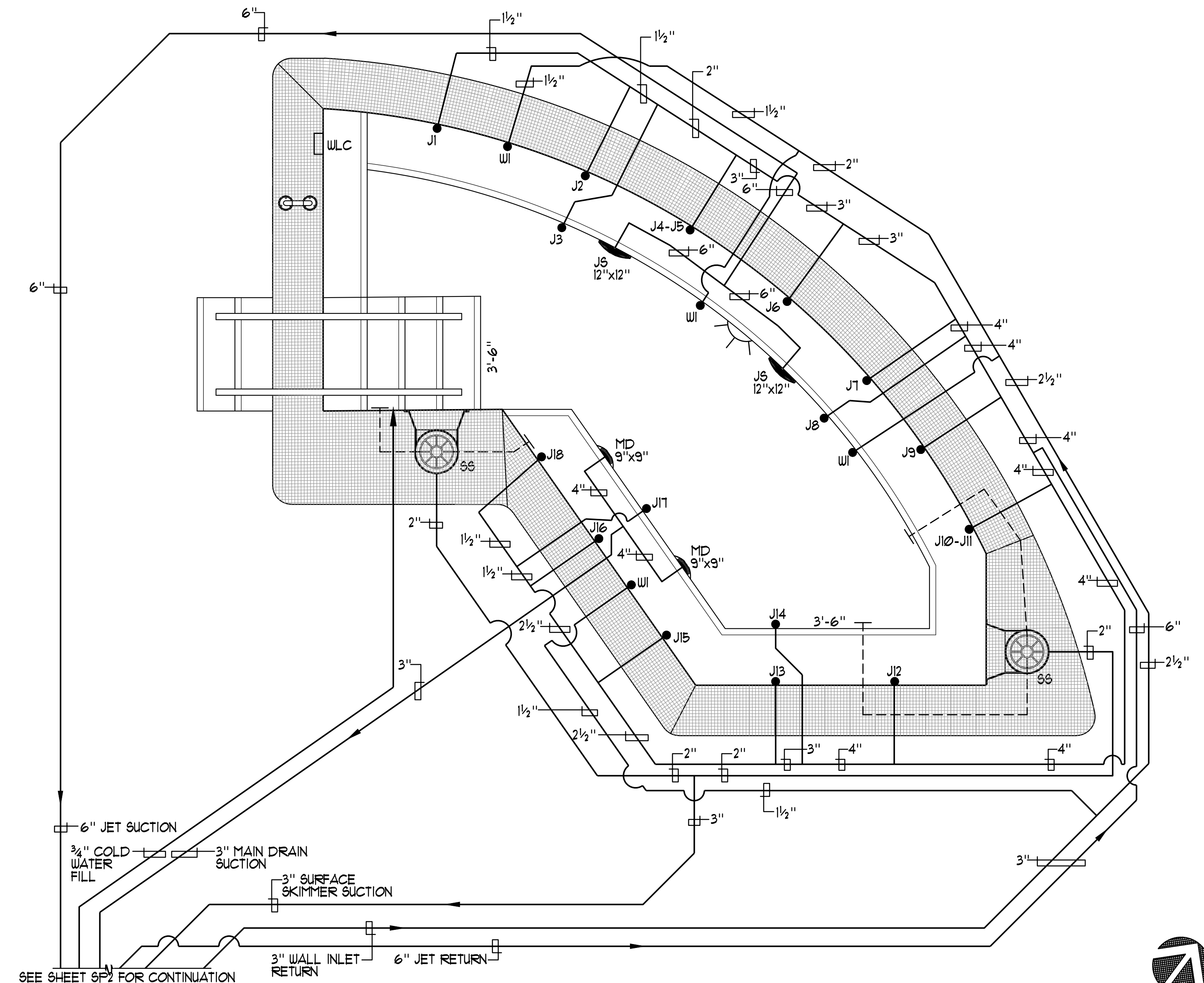
1 HYDROTHERAPY SPA LAYOUT PLAN 1/2"=1'-0"

**HYDROTHERAPY SPA DATA**

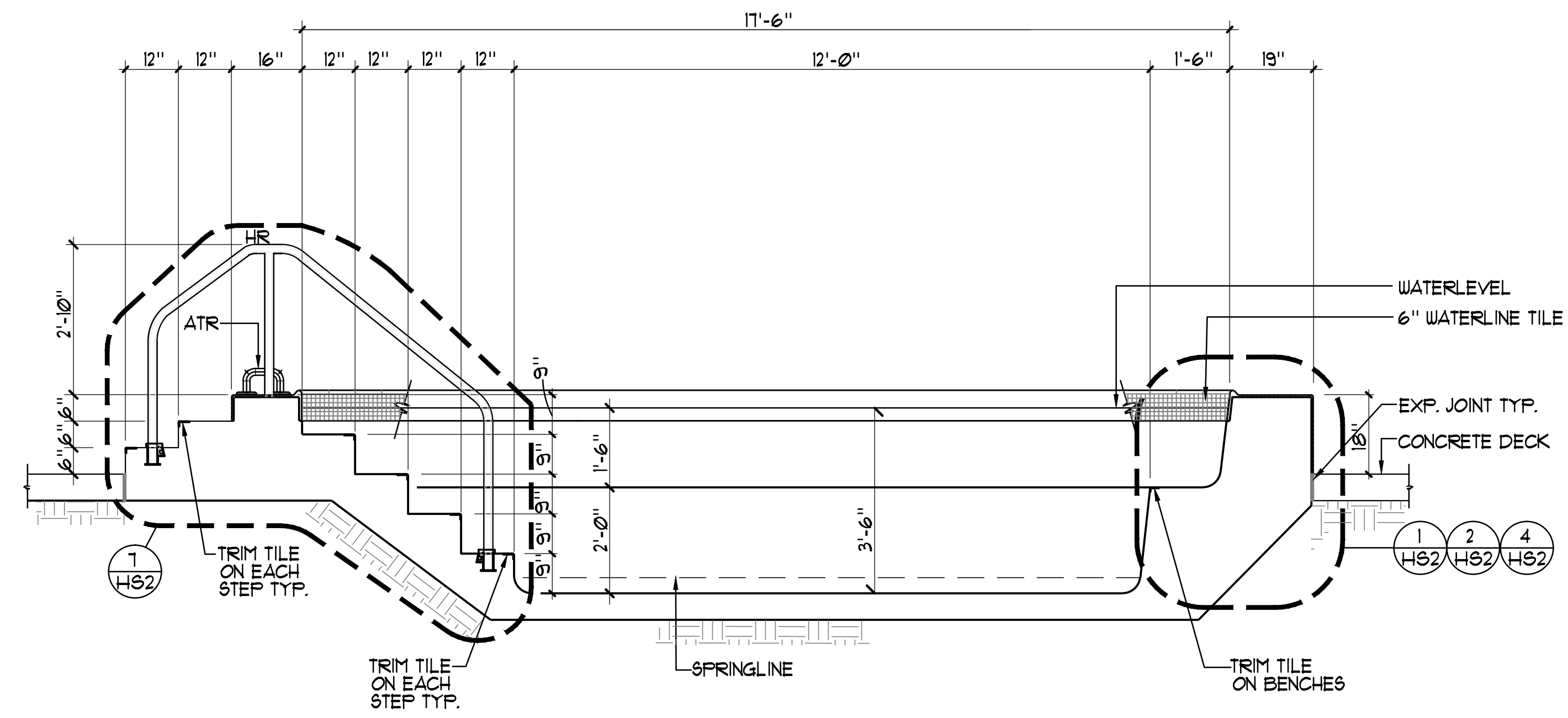
SURFACE AREA	=	152 SQ. FT.
PERIMETER	=	59 FT.
DEPTHS	=	3'-6"
VOLUME	=	3,130 GAL.
30 MIN TURNOVER	=	104 GPM

**LEGEND**

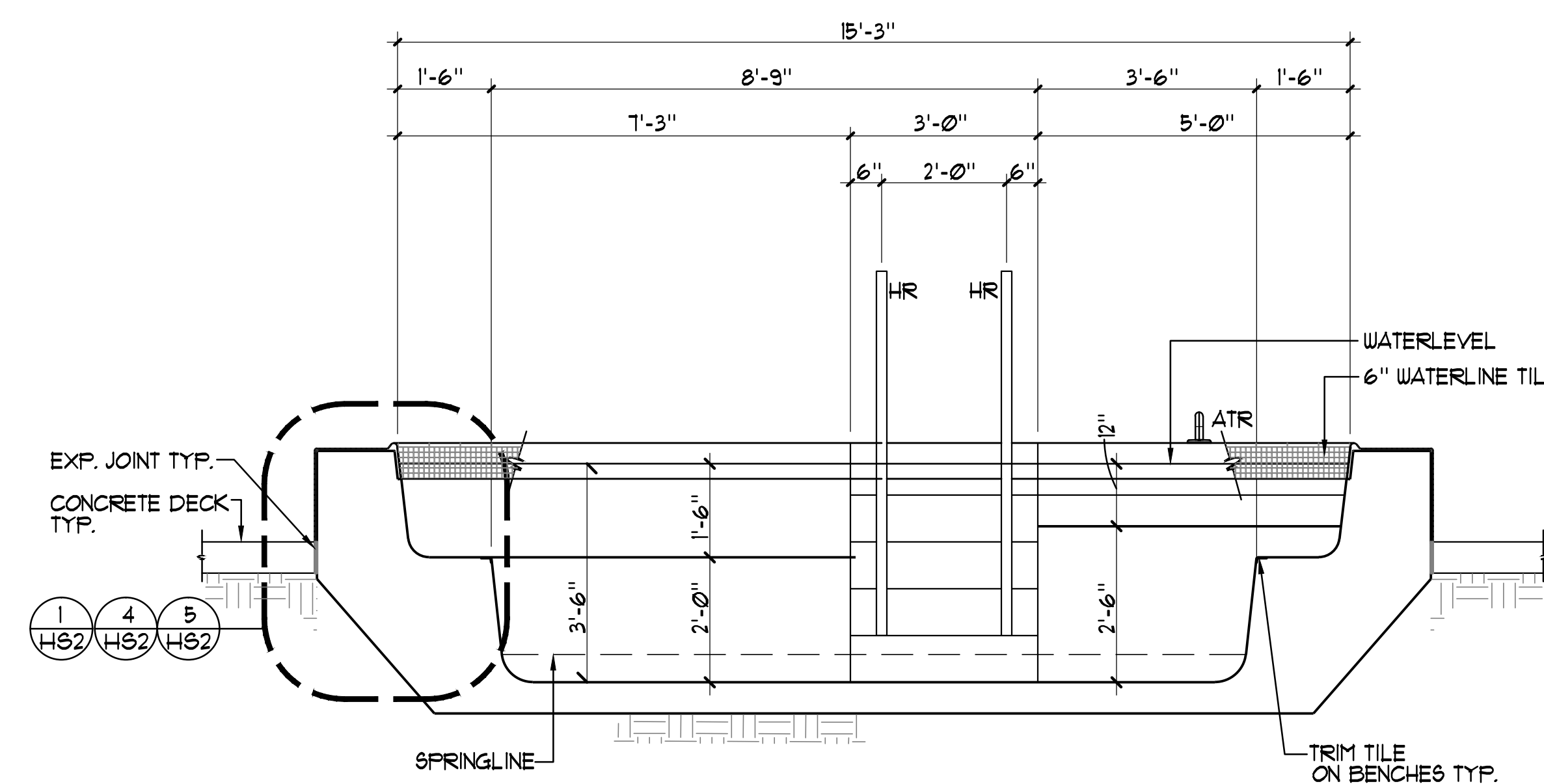
MD	=	MAIN DRAIN	②	H83
JS	=	JET SUCTION	⑤	H83
WI	=	WALL INLET	①	H83
J1 - J18	=	JET RETURNS	⑧	H82
WLC	=	WATER LEVEL CONTROL	③	H83
SS	=	SURFACE SKIMMER	④	H83



2 HYDROTHERAPY SPA PARTIAL PIPING PLAN 1/2"=1'-0"

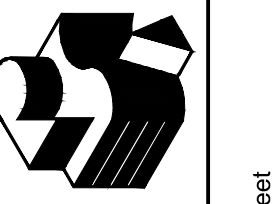
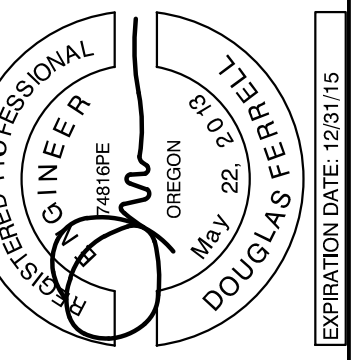


A HYDROTHERAPY SPA SECTION 1/2"=1'-0"



B HYDROTHERAPY SPA SECTION 1/2"=1'-0"

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**HYDROTHERAPY SPA LAYOUT/PIPING PLAN AND SECTIONS**

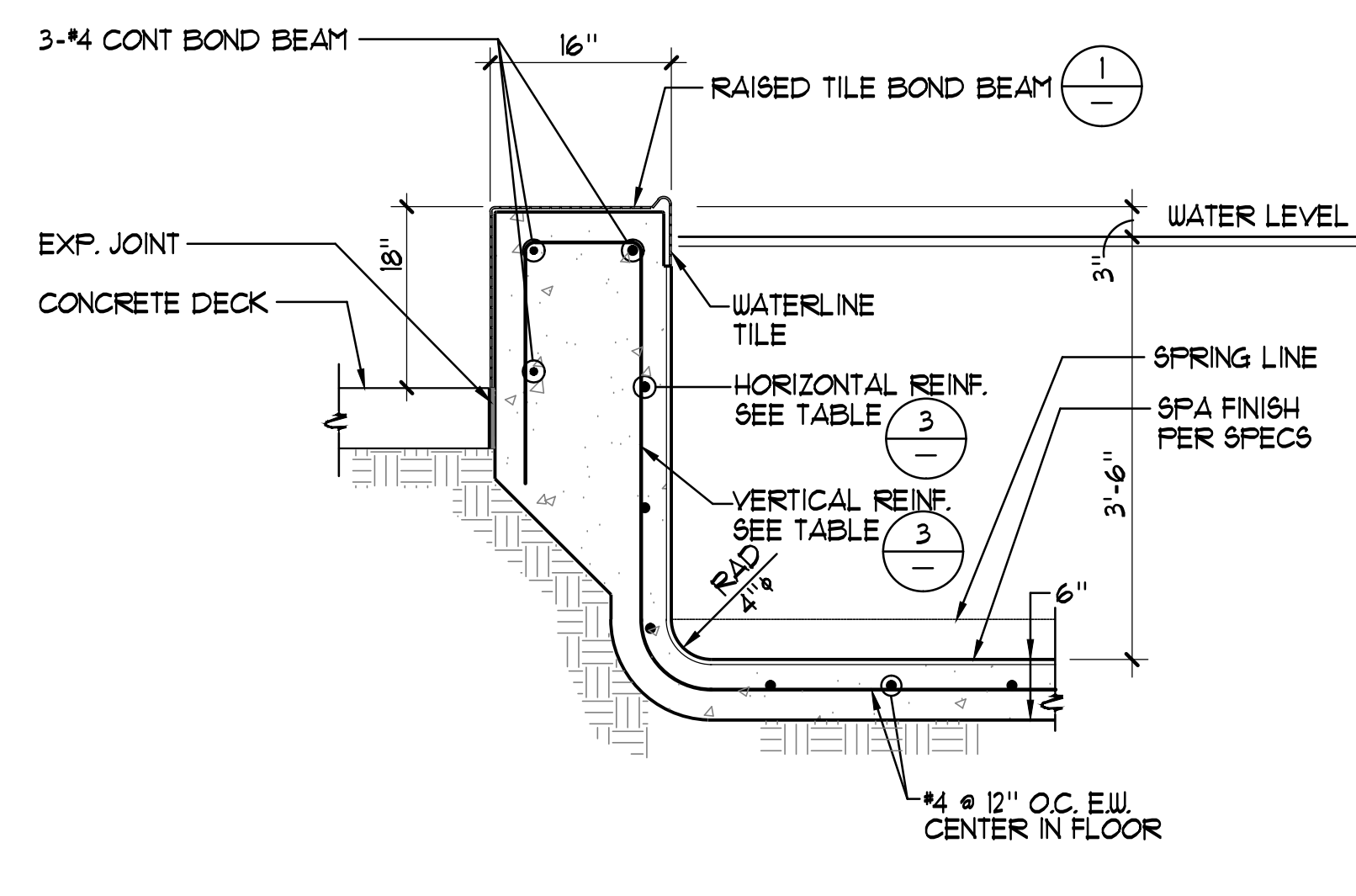
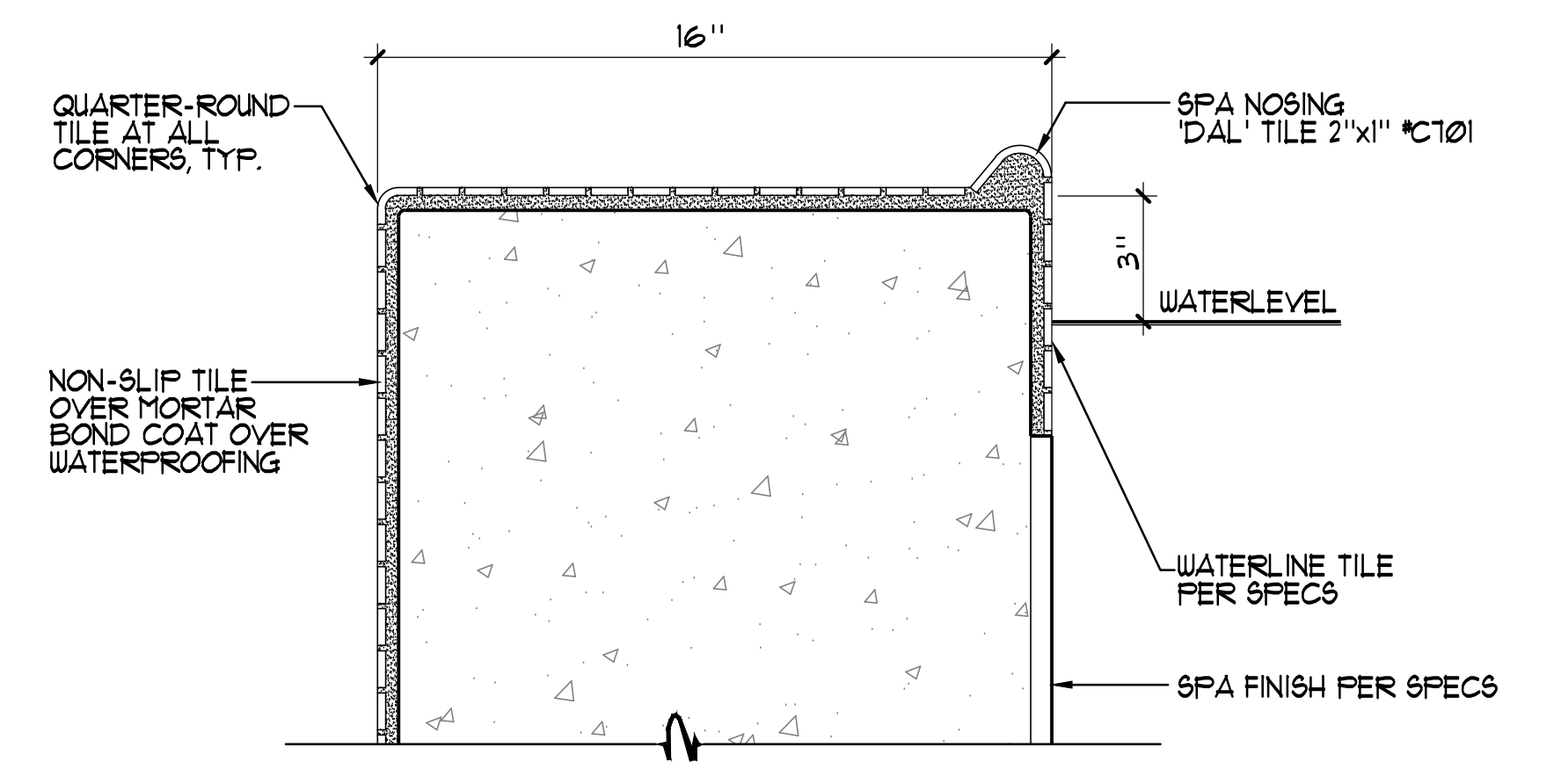
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Project	1419

**H81**



REINFORCEMENT TABLE					
WATER DEPTH	'L'	'd6'	RADIUS	VERTICAL REINF.	HORIZONTAL REINF.
3'-6"	6"	3"	4"	#4 @ 12" O.C.	#4 @ 12" O.C.

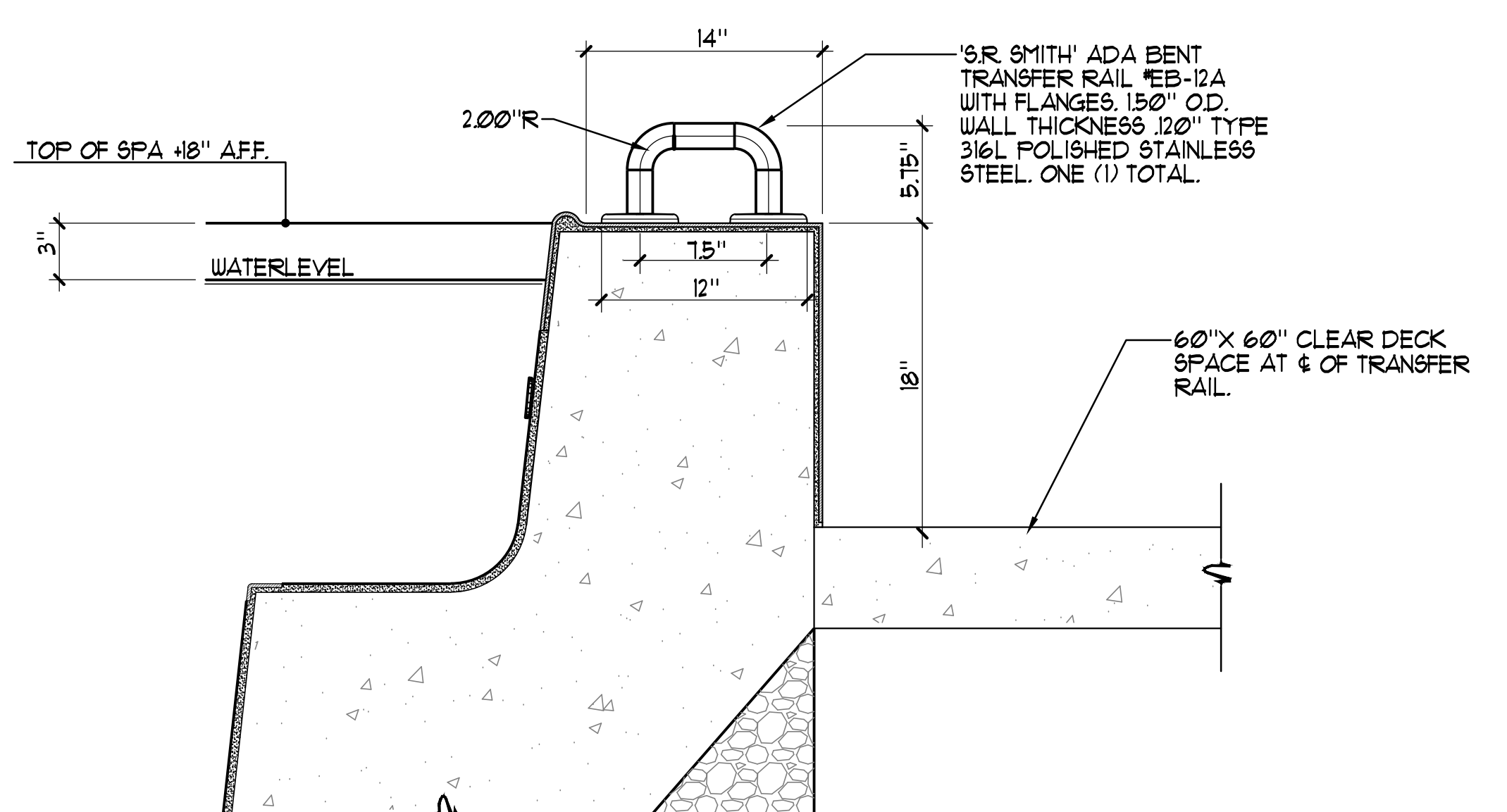
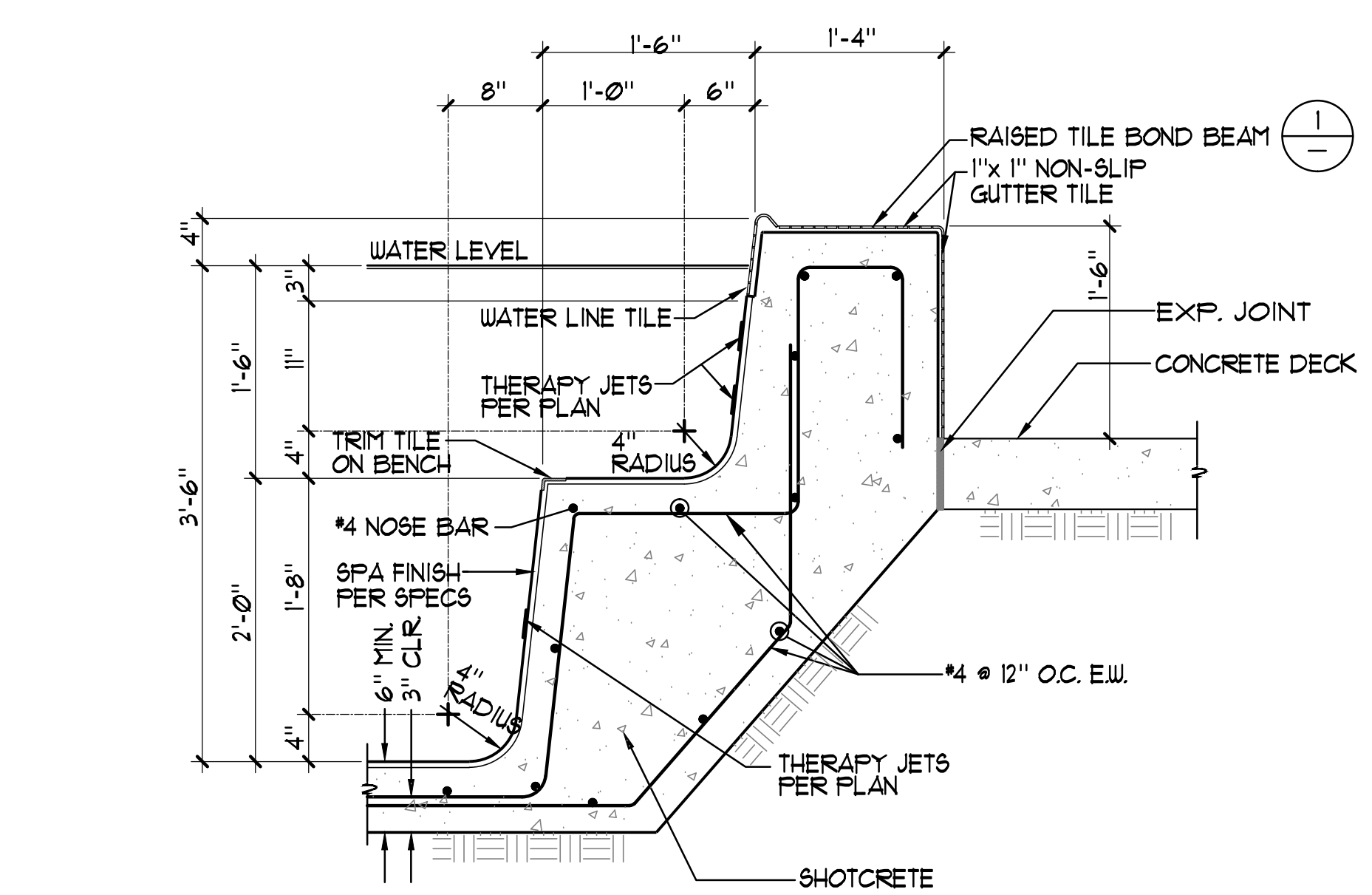
- CONCRETE NOTES:**
- THE MINIMUM ULTIMATE COMPRESSIVE STRENGTH AT 28 DAYS  
 POOL = 3000 PSI  
 SLAB-ON-GRADE = 3000 PSI
  - CONTINUOUS INSPECTION BY AN APPROVED INSPECTOR IS REQUIRED OF ALL CONCRETE PLACEMENT.
  - ALL CEMENT USED SHALL CONFORM TO A.S.T.M. C-150 TYPE II
  - FINE AND COARSE AGGREGATE SHALL CONFORM TO A.S.T.M. C-33. MAXIMUM SIZE OF AGGREGATE TO BE 3/4".
  - SHOTCRETE MIX DESIGNS SHALL BE PER 2014 OREGON SECTION 1910.2.
  - SHOTCRETE SHALL BE TESTED AND INSPECTED PER 2014 OREGON SECTION 1910.5 AND 1910.10.
  - ANCHOR BOLTS, ANCHORS, DOUELS, INSERTS, ETC. SHALL BE SECURELY TIED IN PLACE PRIOR TO PLACING OF SHOTCRETE.
  - ALL REINFORCEMENT WITHIN SHOTCRETE SHALL MAINTAIN MINIMUM 2" CLEAR NON-CONTACT SPLICES.
  - THE FILM OF LAITANCE 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 14 BAR DIA.
- SHOTCRETE NOTES:**
- THE MINIMUM ULTIMATE COMPRESSIVE STRENGTH AT 28 DAYS POOL WALLS = 3000 PSI.
  - CONTINUOUS INSPECTION BY AN 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. MAXIMUM SIZE OF AGGREGATE TO BE 3/4".
  - SHOTCRETE MIX DESIGNS SHALL BE PER 2014 OREGON SECTION 1910.2.
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  - ANCHOR BOLTS, ANCHORS, DOUELS, INSERTS, ETC. SHALL BE SECURELY TIED IN PLACE PRIOR TO PLACING OF SHOTCRETE.
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  - ALL REINFORCING SHALL BE ASTM A-615, GRADE 60, UNLESS OTHERWISE NOTED. LAPS SHALL BE 14 BAR DIA.



1 TYPICAL HYDROTHERAPY SPA BOND BEAM TILE DETAIL 3/4"=1'-0"

2 HYDROTHERAPY SPA WALL DETAIL 3/4"=1'-0"

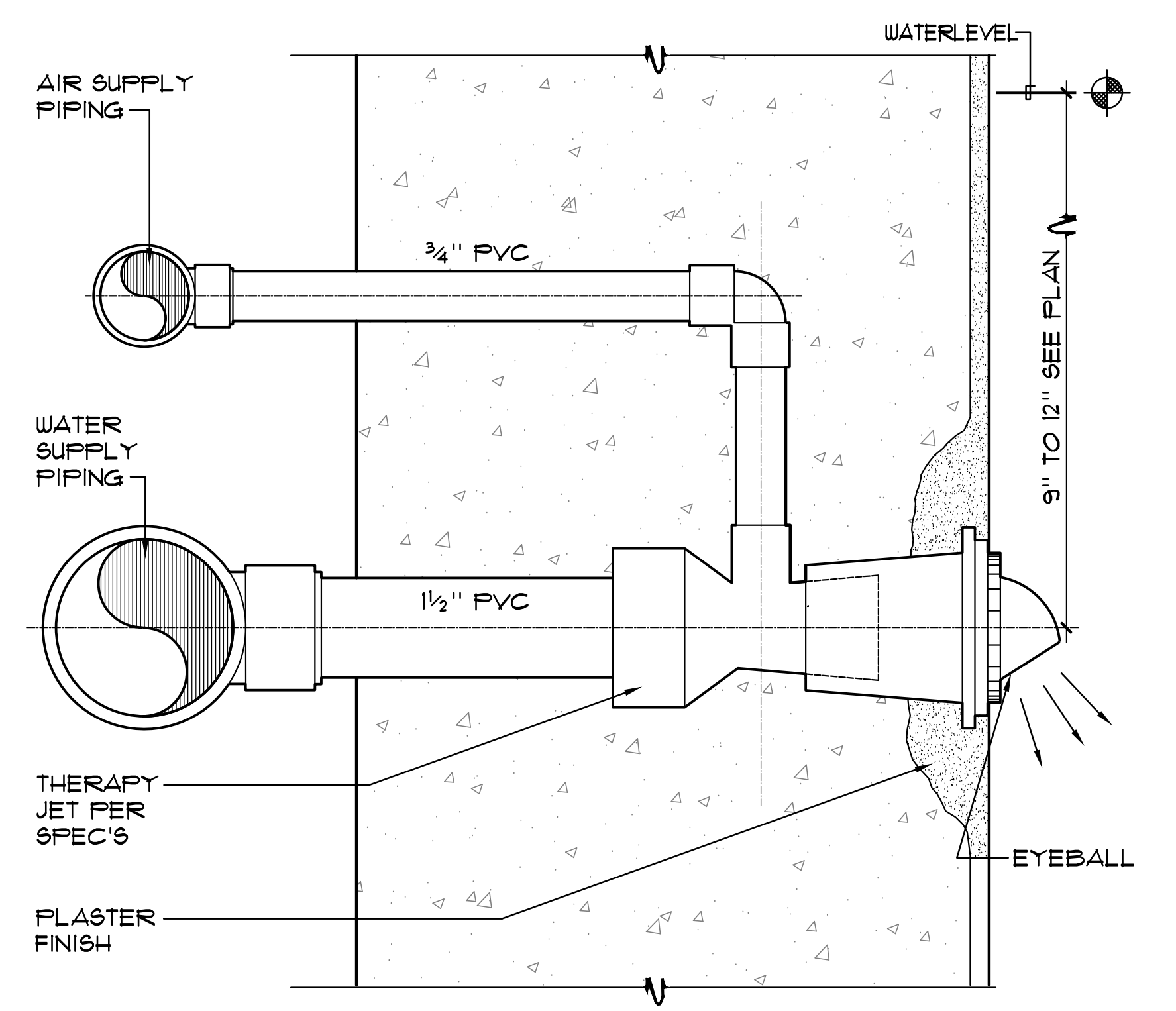
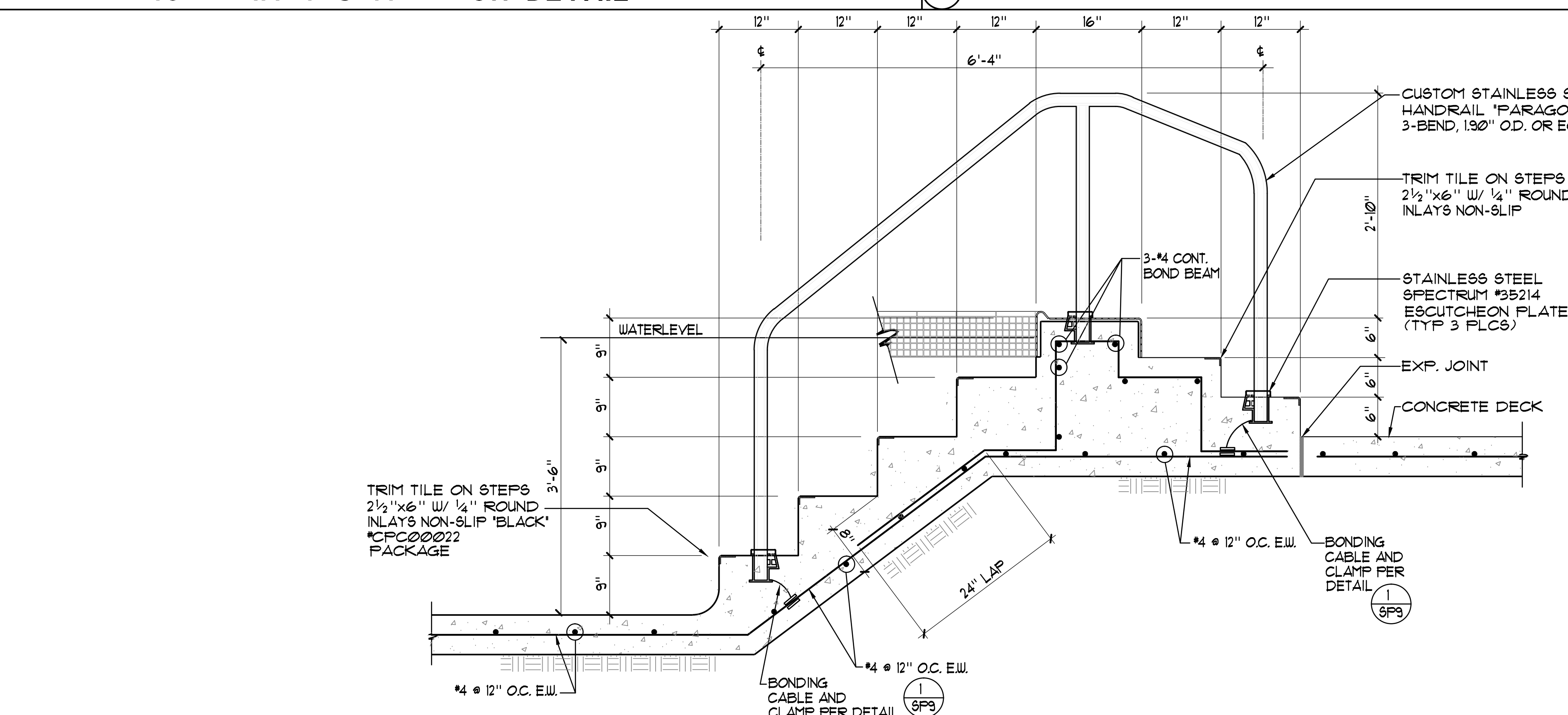
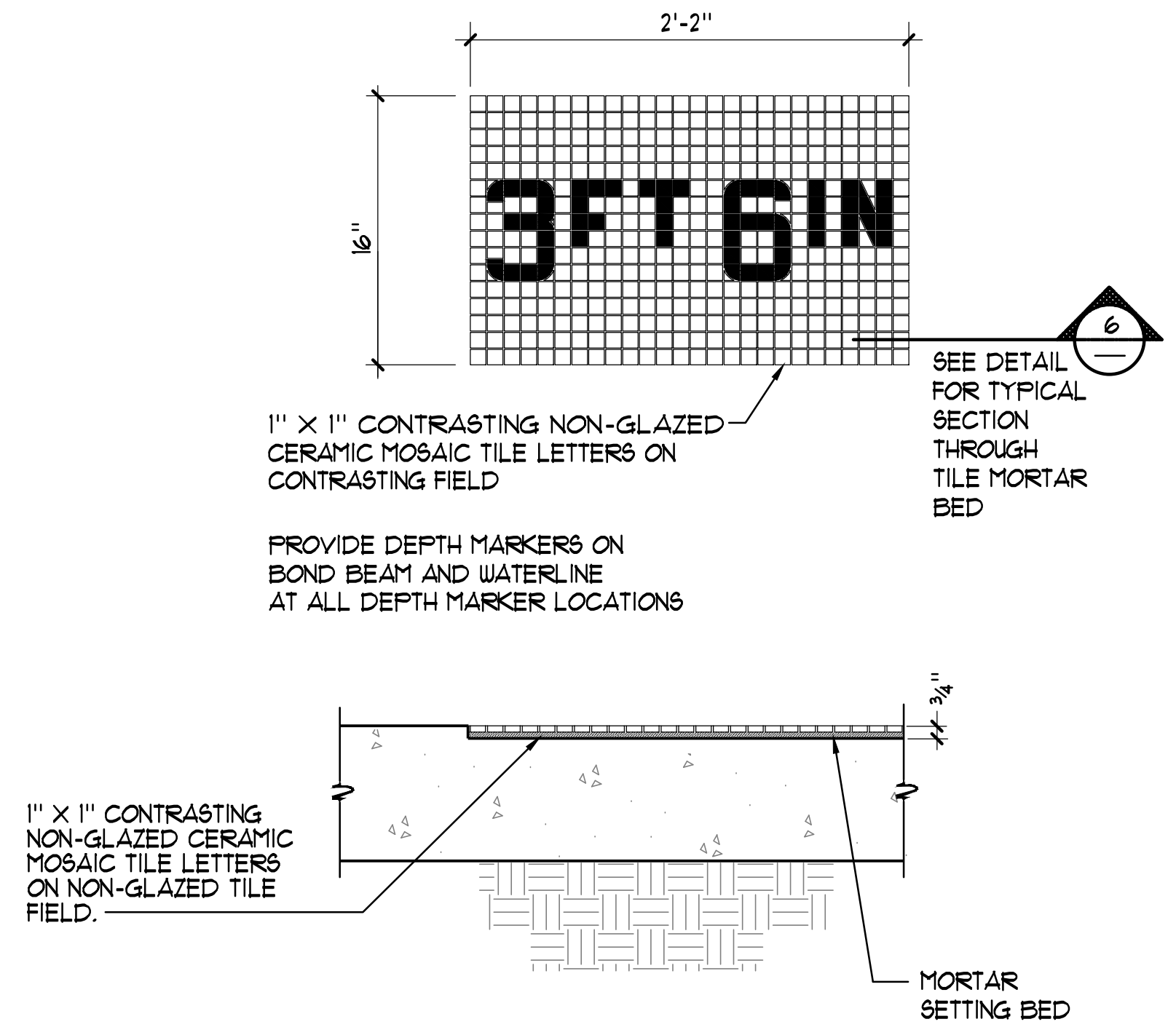
3 REINFORCEMENT TABLE



4 HYDROTHERAPY SPA BENCH DETAIL 1"=1'-0"

5 HYDROTHERAPY SPA ADA TRANSFER RAIL DETAIL 1 1/2"=1'-0"

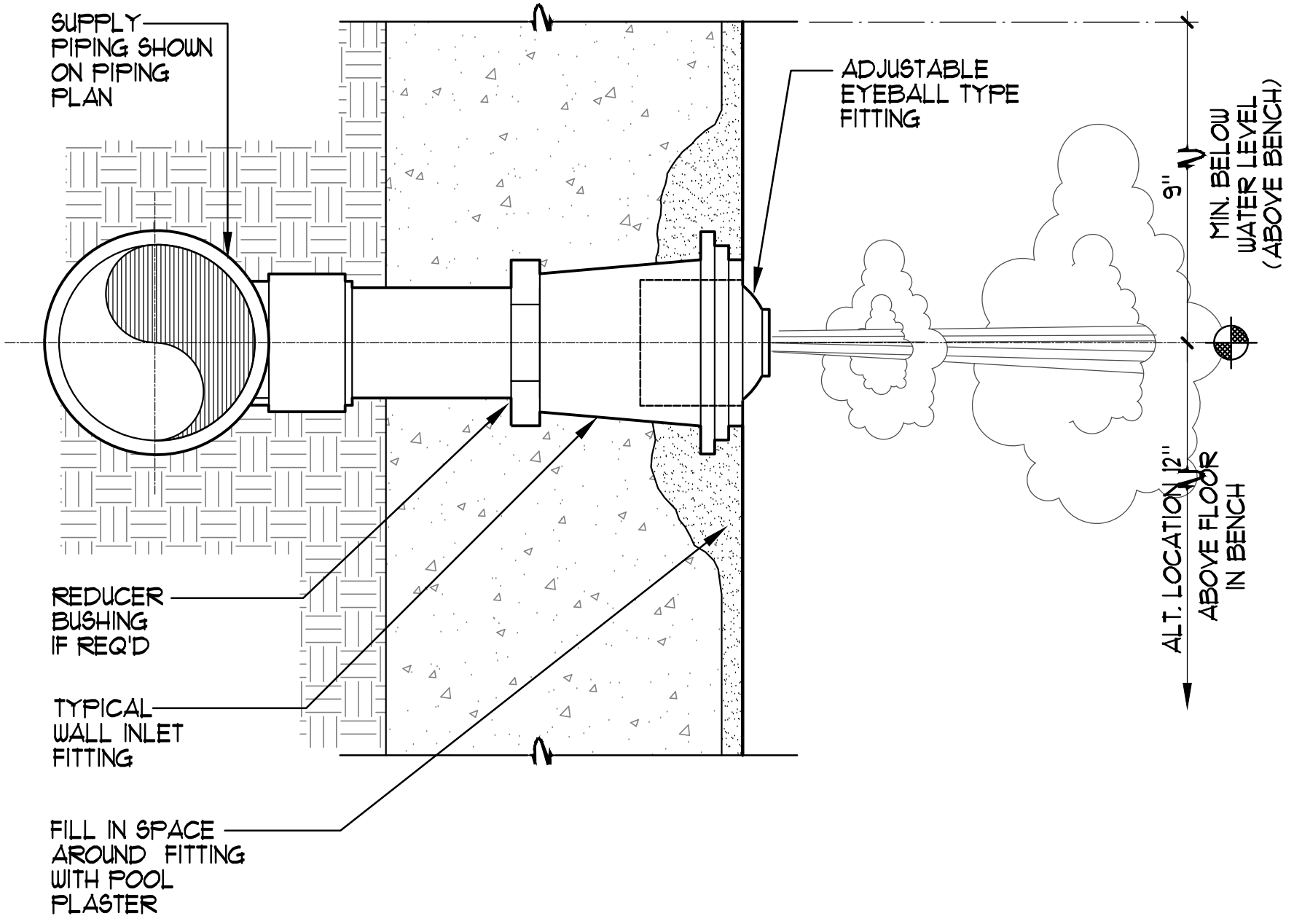
6 DEPTH MARKER 1 1/2"=1'-0"



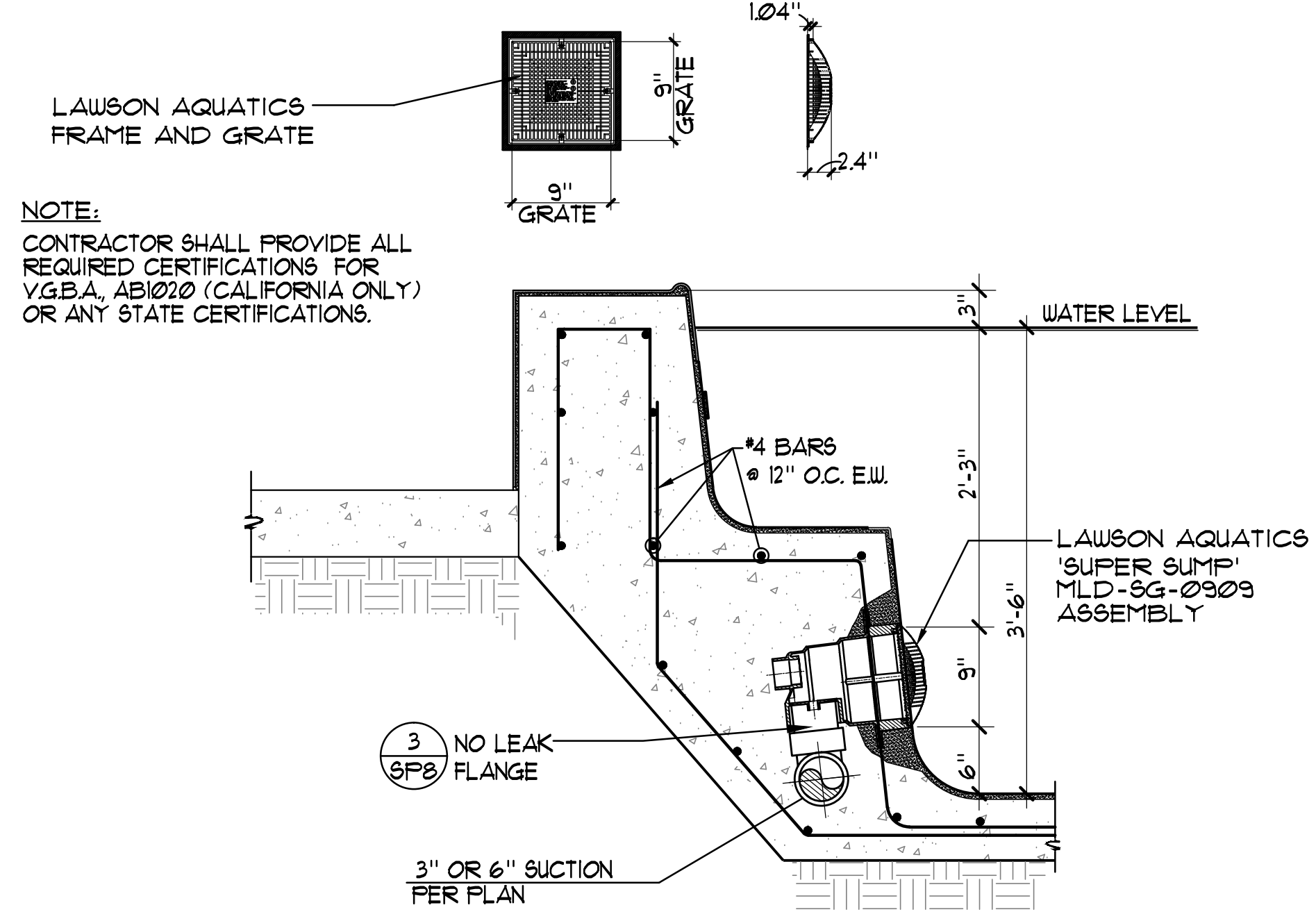
7 HANDRAIL DETAIL 1"=1'-0"

8 HYDROTHERAPY JET NO SCALE

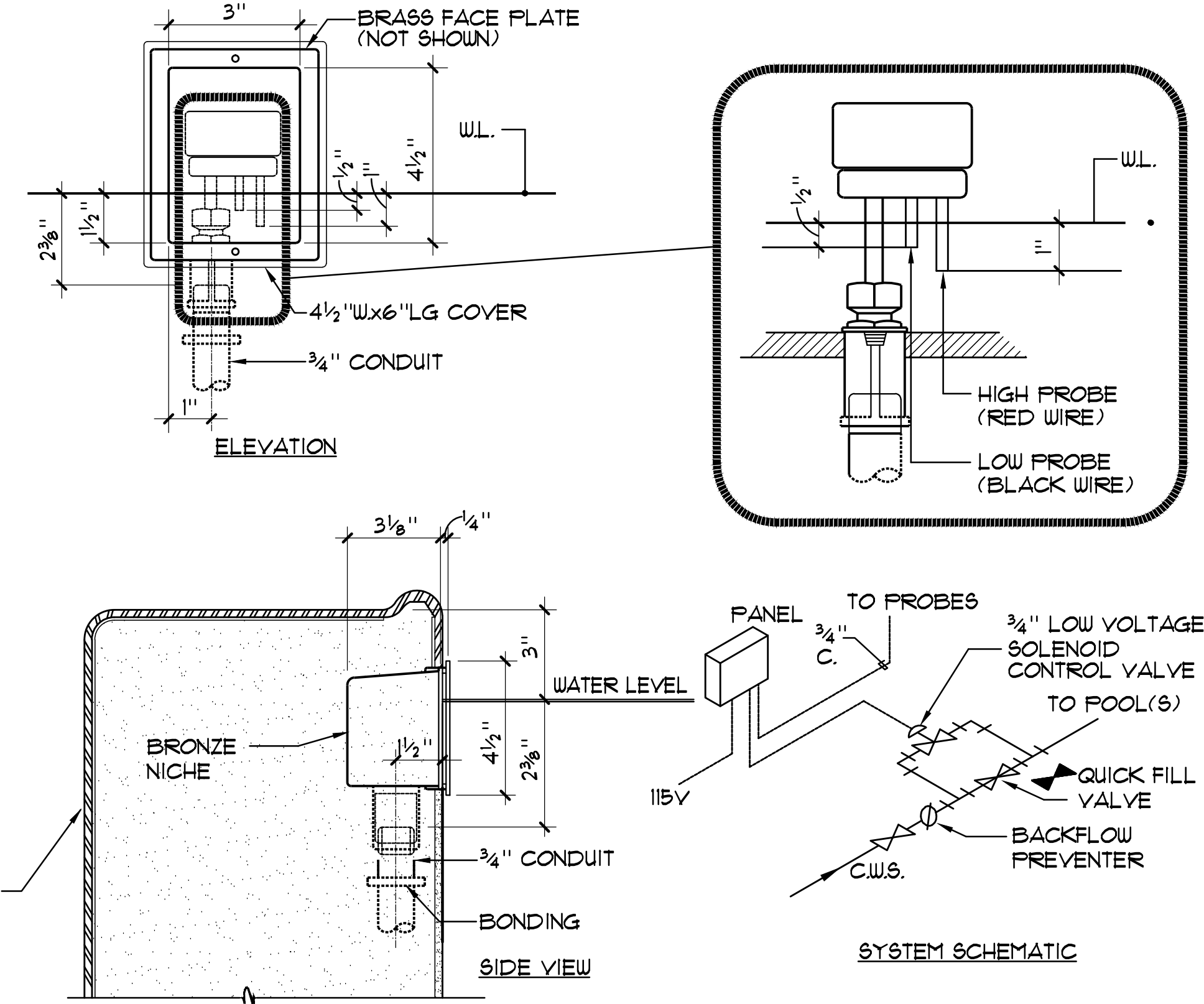




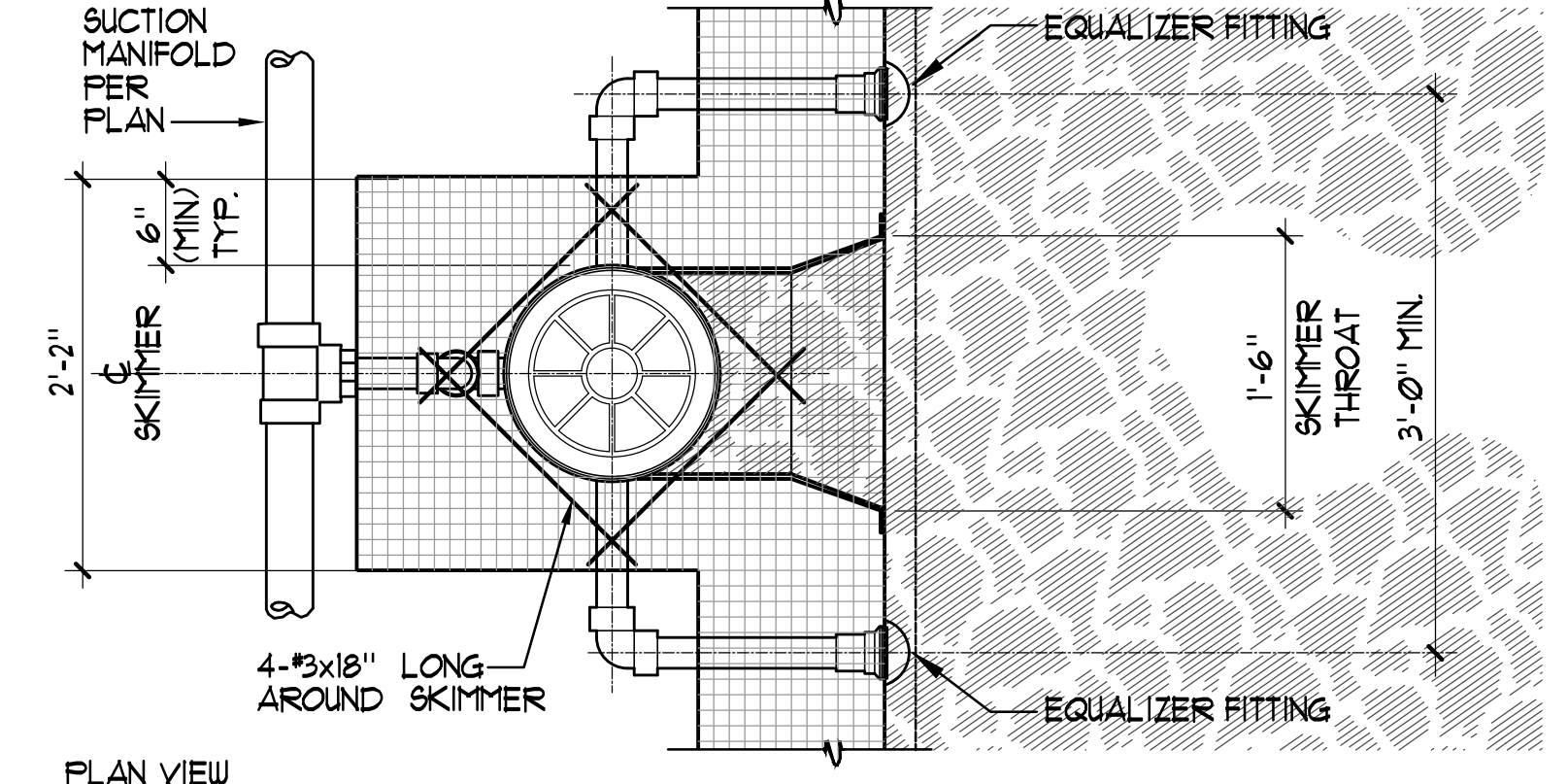
1 WALL INLET NO SCALE



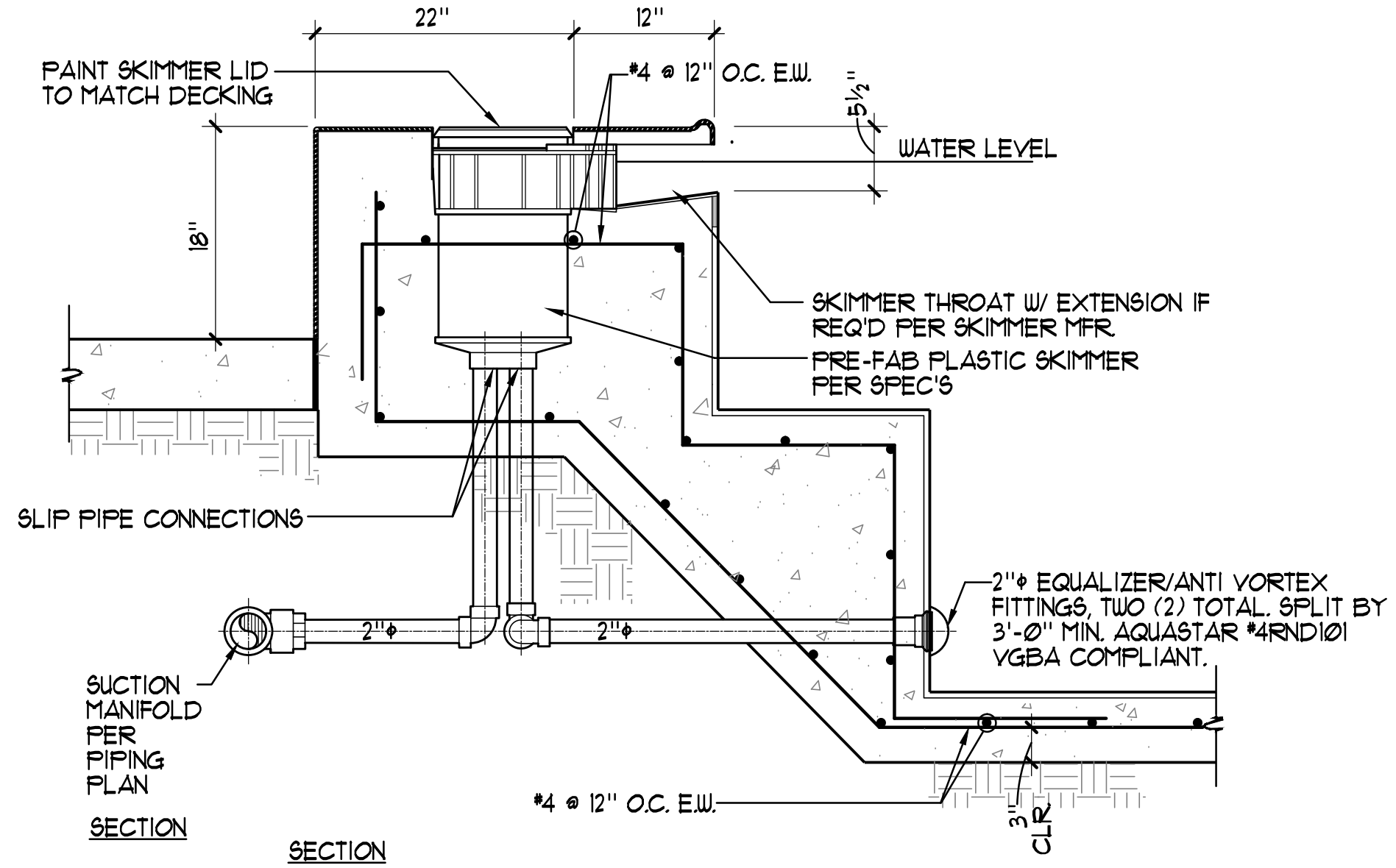
2 MAIN DRAIN 1"=1'-0"



3 NICHE MOUNTED WATER LEVEL CONTROLLER NO SCALE



4 HYDROTHERAPY SPA SURFACE SKIMMER 1"=1'-0"



5 JET SUCTION 1"=1'-0"



**SIGNAGE NOTES AND SPECIFICATIONS:**

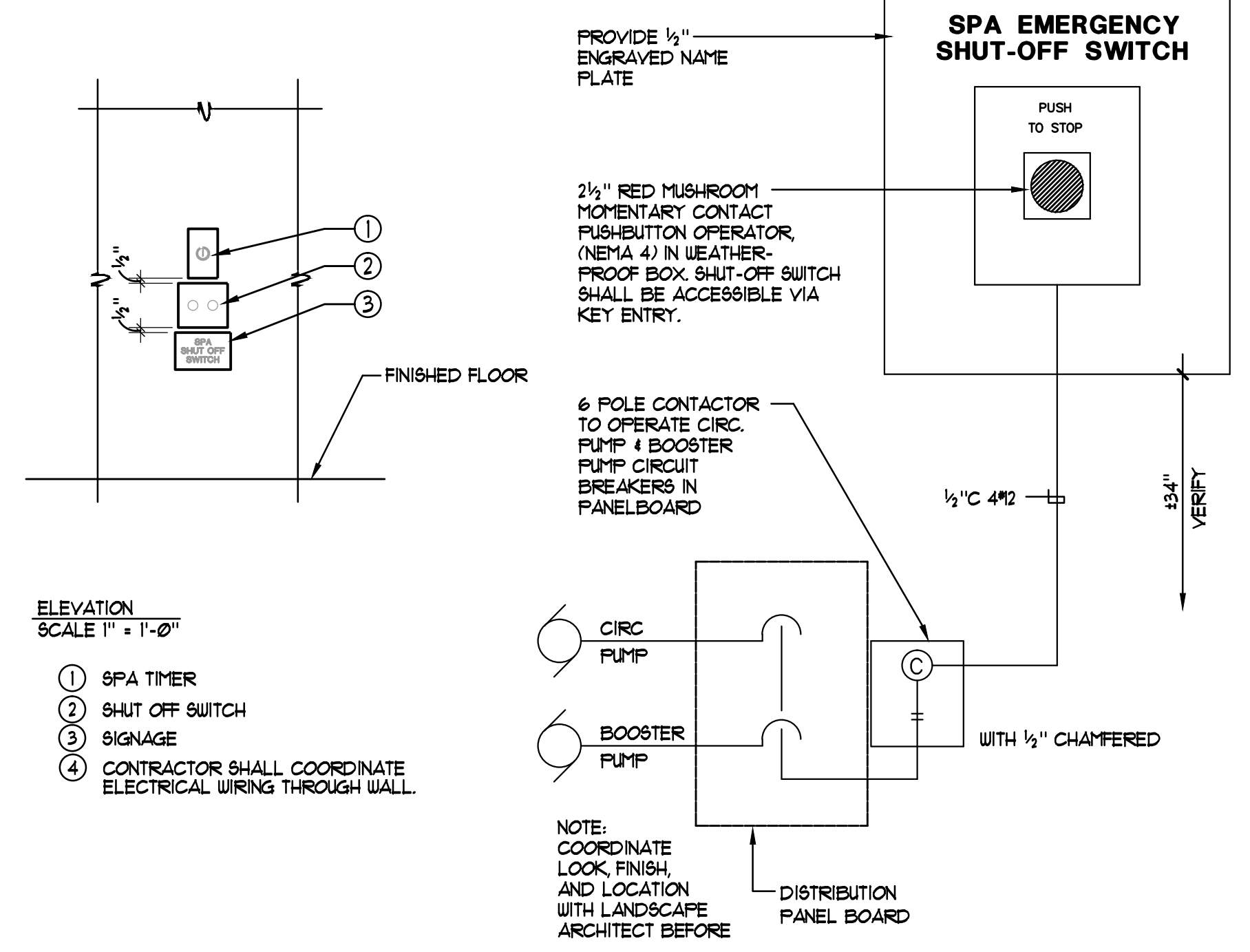
- 1/8" THICK PAINTED ALUMINUM BACKER PANEL.
- SILKSCREENED COPY/GRAPHICS WITH SATIN CLEAR COAT.
- 1/4" THICK PAINTED ALUMINUM FACE PANEL WITH SILKSCREENED COPY/GRAPHICS. ATTACH TO 1/8" THICK PAINTED ALUMINUM BACKER PANEL USING VHB TAPE AND SILICONE ADHESIVE.
- 2" WIDE x 1/2" THICK PAINTED ALUMINUM SIGN FRAME ADHERED TO 1/8" THICK PAINTED ALUMINUM BACKER USING LORDS ADHESIVE AS REQUIRED. VERTICAL SECTIONS OF FRAME TO BE RECTANGULAR TUBE. FILL AND SAND BEAM ALONG EDGE AND FACE PRIOR TO PAINTING.

TABLE 'A'	
POOL TYPE	OCCUPANCY LOAD AT 1:10
HYDROTHERAPY SPA	15

- NOTES:**
1. COORDINATE SIGNAGE PLACEMENT AND COLOR SCHEME WITH ARCHITECT/OWNER PRIOR TO INSTALLATION.
  2. CONTRACTOR TO PROVIDE SHOP DRAWINGS OF PROPOSED SIGNAGE FOR REVIEW.

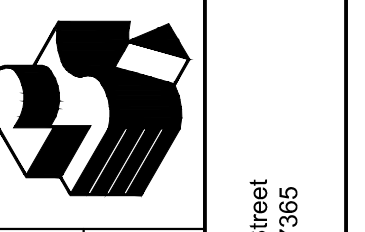
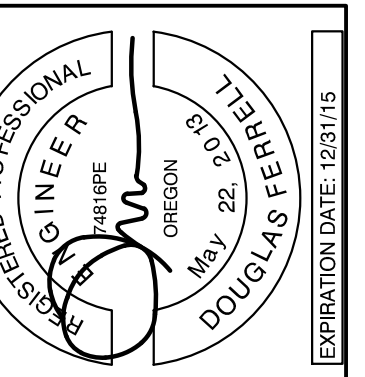
**REQUIRED SIGNAGE:**

1. 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.
  - A. SPA USER CAPACITY SIGN; A SIGN SHALL INDICATE THE MAXIMUM NUMBER OF POOL USERS PERMITTED FOR EACH POOL.
  - B. NO DIVING SIGN; SIGNS SHALL BE POSTED IN CONSPICUOUS PLACES AND SHALL STATE NO DIVING AT POOLS WITH A MAXIMUM WATER DEPTH OF 6 FEET OR LESS.
  - C. NO LIFEGUARD SIGN; WHERE NO LIFEGUARD SERVICE IS PROVIDED, A WARNING SIGN SHALL BE POSTED STATING "WARNING: NO LIFEGUARD ON DUTY". THE SIGN ALSO SHALL STATE IN LETTERS AT LEAST 1 INCH HIGH "CHILDREN UNDER THE AGE OF 14 SHALL NOT USE POOL WITHOUT A PARENT OR ADULT GUARDIAN IN ATTENDANCE".
  - D. ARTIFICIAL RESPIRATION AND CPR SIGN; AN ILLUSTRATED DIAGRAM WITH TEXT AT LEAST 1/4 INCH HIGH OF ARTIFICIAL RESPIRATION AND CPR PROCEDURES SHALL BE POSTED.
  - E. EMERGENCY SIGN; THE EMERGENCY TELEPHONE NUMBER 911, THE NUMBER OF THE NEAREST EMERGENCY SERVICES AND THE NAME AND STREET ADDRESS OF THE POOL FACILITY SHALL BE POSTED.
2. DIRECTION OF FLOW SIGNAGE AND LABELS.
  - A. THE DIRECTION OF FLOW FOR THE RECIRCULATION EQUIPMENT SHALL BE LABELED CLEARLY WITH DIRECTIONAL SYMBOLS SUCH AS ARROWS ON ALL PIPING IN THE EQUIPMENT AREA.
  - B. WHERE THE RECIRCULATION EQUIPMENT FOR MORE THAN ONE POOL IS LOCATED ON SITE, THE EQUIPMENT SHALL BE MARKED AS TO WHICH POOL THE SYSTEM SERVES.
  - C. VALVES AND PLUMBING LINES SHALL BE LABELED CLEARLY WITH THE SOURCE OR DESTINATION DESCRIPTIONS.
3. HOT WATER IMMERSION WHILE UNDER THE INFLUENCE OF ALCOHOL, NARCOTICS, DRUGS, OR MEDICINES MAY LEAD TO SERIOUS CONSEQUENCES AND IS NOT RECOMMENDED.
4. DO NOT USE ALONE.
5. LONG EXPOSURE MAY RESULT IN HYPERHERMIA, NAUSEA, DIZZINESS OR FAINTING.
6. EMERGENCY SHUT OFF; IN LETTERS AT LEAST ONE INCH HIGH A SIGN SHALL BE POSTED AT THE SPA EMERGENCY SHUT OFF SWITCH STATING "EMERGENCY SHUT OFF SWITCH."
7. WARNING SIGN FOR A SPA POOL; A WARNING SIGN FOR THE SPA POOLS SHALL BE POSTED STATING "CAUTION" AND SHALL INCLUDE THE FOLLOWING LANGUAGE IN LETTERS AT LEAST 1 INCH HIGH:
  1. ELDERLY PERSONS, PREGNANT WOMEN, INFANTS AND THOSE WITH HEALTH CONDITIONS REQUIRING MEDICAL CARE SHOULD CONSULT WITH A PHYSICIAN BEFORE ENTERING THE SPA.
  2. UNSUPERVISED USE BY CHILDREN UNDER THE AGE OF 14 IS PROHIBITED.
  3. HOT WATER IMMERSION WHILE UNDER THE INFLUENCE OF ALCOHOL, NARCOTICS, DRUGS, OR MEDICINES MAY LEAD TO SERIOUS CONSEQUENCES AND IS NOT RECOMMENDED.
  4. DO NOT USE ALONE.
  5. LONG EXPOSURE MAY RESULT IN HYPERHERMIA, NAUSEA, DIZZINESS OR FAINTING.
  6. EMERGENCY SHUT OFF; IN LETTERS AT LEAST ONE INCH HIGH A SIGN SHALL BE POSTED AT THE SPA EMERGENCY SHUT OFF SWITCH STATING "EMERGENCY SHUT OFF SWITCH."



- ELEVATION SCALE 1"=1'-0"**
- 1 SPA TIMER
  - 2 SHUT OFF SWITCH
  - 3 SIGNAGE
  - 4 CONTRACTOR SHALL COORDINATE ELECTRICAL WIRING THROUGH WALL.

NOTE: COORDINATE LOCK FINISH AND LOCATION WITH LANDSCAPE ARCHITECT BEFORE.



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**DETAILS**

Drawn By	NFC
Checked	SJF
Date	17 JUNE 2015
Project	1419

**HS3**



**EQUIPMENT LIST**

- 1 SWIMMING POOL STRAINER: MER-MADE F.O. SERIES FRP REDUCING BASKET STRAINER, ONE (1) 8"x5" STANDARD ONE (1) 6"x4" AND ONE (1) 10"x8" WITH ACRYLIC LID AND TWO (2) STAINLESS STEEL STRAINERS EA. (150lbs.) THREE (3) TOTAL.
- 2 SWIMMING POOL CIRCULATION PUMP: PACO #4035-1, 4"x5"x3 1/2" TYPE 'LC' END SUCTION CENTRIFUGAL PUMP, 150 RPM 460V, 3PH, 15HP, RATED AT 550 GPM @ 60 FT. TDH, 79% EFFICIENT, PREMIUM EFFICIENCY TEFC MOTOR, EPOXY COAT ALL WET SURFACES, PACO, AURORA OR EQUAL, (425 lbs.) PROVIDE SPC5 SMART PUMP CONTROL SYSTEM VARIABLE SPEED DRIVE MODEL SPC502FD4 SYSTEM 3 1/2"x30"x12" DEEP, COORDINATE MOUNTING LOCATION TO MAINTAIN DESIRED CLEARANCES, 460V 3PH, (102 lbs.)
- 3 FUTURE SWIMMING POOL SLIDE BOOSTER PUMP: PACO #5012-3, 5"x6"x12" TYPE 'LC' END SUCTION CENTRIFUGAL PUMP, 150 RPM 460V, 3PH, 10HP, RATED AT 200 GPM @ 40 FT. TDH, 82% EFFICIENT, PREMIUM EFFICIENCY TEFC MOTOR, EPOXY COAT ALL WET SURFACES, PACO, AURORA OR EQUAL, (160 lbs.)
- 4 ACTIVITY POOL CIRCULATION PUMP: PACO #3035-1, 3"x4"x3 1/2" TYPE 'LC' END SUCTION CENTRIFUGAL PUMP, 150 RPM 460V, 3PH, 10HP, RATED AT 450 GPM @ 60 FT. TDH, 80% EFFICIENT, PREMIUM EFFICIENCY TEFC MOTOR, EPOXY COAT ALL WET SURFACES, PACO, AURORA OR EQUAL, (160 lbs.)
- 5 ACTIVITY POOL RIVER BOOSTER PUMP: PACO #6012-3, 6"x6"x12" TYPE 'LC' END SUCTION CENTRIFUGAL PUMP, 150 RPM 460V, 3PH, 15HP, RATED AT 1200 GPM @ 35 FT. TDH, 84% EFFICIENT, PREMIUM EFFICIENCY TEFC MOTOR, EPOXY COAT ALL WET SURFACES, PACO, AURORA OR EQUAL, (160 lbs.)
- 6 SPA CIRCULATION PUMP: PENTAIR WHISPERFLO WFK-2, 2 HP, 220V/230V 3PH, RATED AT 113 GPM AT 60 FT. TDH WITH INTEGRAL STRAINER, ONE (1) TOTAL, (FIELD VERIFY MOTOR VOLTAGE PRIOR TO ORDERING.) (55 lbs.)
- 7 SPA BOOSTER PUMP: PENTAIR CMK-15, 1 1/2 HP 460V 3PH, RATED AT 400 GPM AT 55 FT. TDH WITH INTEGRAL STRAINER, ONE (1) TOTAL, (FIELD VERIFY MOTOR VOLTAGE PRIOR TO ORDERING.) (346 lbs.)
- 8 SWIMMING POOL FILTERS: EKO SYSTEMS #42-200-2 AUTOMATIC FILTER CONTROL (AFC) FULLY AUTOMATIC HI-RATE PERMANENT MEDIA FILTER WITH 40 SQ. FT. OF FILTER AREA RATED AT 600 GPM AT 15 GPM/SQ. FT. COMPLETE WITH 8" FACE PIPING, 6" BACKWASH, SEISMIC ANCHORAGE, PROVIDE ALL UTILITIES, PIPING, VALVING ETC. (5360 lbs. EACH TANK) EKO SYSTEMS OR EQUAL, PROVIDE SIGNET MK-515 FLOSENSOR WITH DIGITAL READ-OUT, ONE (1) SYSTEM TOTAL.
- 9 ACTIVITY POOL FILTERS: EKO SYSTEMS #34-153-2 AUTOMATIC FILTER CONTROL (AFC) FULLY AUTOMATIC HI-RATE PERMANENT MEDIA FILTER WITH 30.6 SQ. FT. OF FILTER AREA RATED AT 450 GPM AT 15 GPM/SQ. FT. COMPLETE WITH 6" FACE PIPING, 6" BACKWASH, SEISMIC ANCHORAGE, PROVIDE ALL UTILITIES, PIPING, VALVING ETC. (3425 lbs. EACH TANK) EKO SYSTEMS OR EQUAL, PROVIDE SIGNET MK-515 FLOSENSOR WITH DIGITAL READ-OUT, ONE (1) SYSTEM TOTAL.
- 10 SPA FILTER: NEMATO NFS-42-100-036V-5-1 HI-RATE PERMANENT MEDIA FILTERS WITH 9.6 SQ. FT. OF FILTER AREA RATED AT 144 GPM AT 15 GPM/SQ. FT. COMPLETE WITH 3" PRE-MANUFACTURED AUTOMATIC MULTI-PORT VALVE, 3" BACKWASH, SEISMIC ANCHORAGE, PROVIDE ALL UTILITIES, PIPING, VALVING, ETC. ONE (1) TOTAL, (1200 lbs.)
- 11 CHLORINE STORAGE/FEED SYSTEM: PROVIDE 'CHEM-TAINER' 500 GALLON TC3591DC, DUAL STORAGE/CONTAINMENT TANK WITH LID SEISMICALLY RESTRAINED, OPERATING WEIGHT = (4165lbs), COMPLETES WITH FED. REG #40CFR-264.193, SWIMMING POOL/ACTIVITY POOL FEED PUMPS SHALL BE 'STENNER' #85M5, 85 GPD @ 25 PSI TWO (2) TOTAL AND SPA FEED PUMP SHALL BE 'STENNER' #45MHP10, 10 GPD @ 100 PSI ALL COMPLETE WITH FRP SHELF BRACKETS, HARD PIPE TO POINT OF INJECTION.
- 12 ACID STORAGE/FEED SYSTEM: PROVIDE 'CHEM-TAINER' 150 GALLON TC3448DC, DUAL STORAGE/CONTAINMENT TANK WITH LID SEISMICALLY RESTRAINED, OPERATING WEIGHT = (1250lbs), COMPLETES WITH FED. REG #40CFR-264.193, PROVIDE A COMPLETE PROMINENT (AFC) ACID VAPOR RECOVERY SYSTEM, ONE (1) TOTAL.
- 13 CARBON DIOXIDE STORAGE FEED SYSTEM: PROVIDE 'CARBO-MAX' 150 HIGH FLOW = 150lb, CRYOTENIC STORAGE TANK WITH REMOTE FILL PORT, FULL WEIGHT (1219 lbs.) PROVIDE EKO3 PH-MTS CO2 HIGH EFFICIENCY FEED SYSTEM WITH ALKALINITY CONTROL, 0 TO 160 SCFH FEED CAPACITY BOOSTER PUMP, PIPING INJECTOR FLOWMETER, RELAYS AND ACID FEED ALKALINITY CONTROL, THREE (3) SYSTEM TOTAL, (3216 lbs.)
- 14 SWIMMING POOL/ACTIVITY POOL WATER CHEMISTRY CONTROLLER(S): PROVIDE ETHERNET CONNECTION TO BECSYS C5-BECSYS1-BP-E WATER CHEMISTRY CONTROLLER, PROVIDE COMPLETE SYSTEM CONTROL PACKAGE, BECSYS SYSTEM 1 'IMPACT' WALLACE TIERNAN OR APPROVED EQUAL, TWO (2) TOTAL AND PROVIDE SPA WITH BECSYS SYSTEM 5, ONE (1) TOTAL.
- 15 SWIMMING POOL/ACTIVITY POOL ULTRA VIOLET TREATMENT SYSTEM(S): ETS ECF-215-6V, 2 @ 15 KW (3 KW TOTAL) 220V 1 PH, 30 AMP RATED AT 580 GPM INDOOR USE, COMPLETE WITH ECF-A-220 220V/220V-1PH CONTROL UNIT (250 lbs.) PROVIDE PIPING BYPASS, VALVING, STRAINER AND INSTALLATION AND PIPING PER MANUFACTURER'S RECOMMENDATIONS, TWO (2) SYSTEMS TOTAL.
- 16 SPA ULTRA VIOLET TREATMENT SYSTEM(S): ETS ECF-115-58V-THY, VALIDATED AT 150 GPM, 3" FLANGED CONNECTION IN-LINE UV WITH ONE (1) 11 AMP @ 1300 WATTS, 220V 1PH, CONTROL UNIT, SP-A-220, 208V 1 PH, 24"x24"x8 1/2" DEEP, (301lbs.) ONE (1) TOTAL, PROVIDE PIPING BYPASS, VALVING, STRAINER AND INSTALLATION AND PIPING PER MANUFACTURER'S RECOMMENDATIONS, ONE (1) SYSTEM TOTAL.
- 17 FILL SYSTEM: 3" 'CLA-VAL' FILL SYSTEM TO INCLUDE 3" 'CLA-VAL' SOLENOID CONTROL VALVE #36-01EY 3" DUCT IRON, EPOXY COATED BODY WITH CAST IRON DISC RETAINER AND DIAPHRAGM WASHER, BRONZE TRIM, FLANGED GLOBE PATTERN, 120V AT 60HZ, SOLENOID WIRING SHALL BE WIRED TO WATER CHEMISTRY CONTROLLER, PROVIDE 6" AIR GAP AT FILL POINT, TWO (2) TOTAL.
- 18 SPA FILL SYSTEM: NICHE MOUNTED 'FEM' MODEL L104-100A, 115V UL LISTED CONTROL PANEL, SOLENOID VALVES, ETC. SPA = 3/4", ONE (1) TOTAL.
- 19 SPA FLOWMETER: 'BLUE/WHITE' F-300, SPA = 3" LINE SIZE ONE (1) TOTAL.
- 20 EYEWASH/SHOWER: SEE PLUMBING SHEET P-4-01. SEE MEP SHEETS FOR WATER SUPPLY PIPING, ONE (1) TOTAL.
- 21 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 EQUAL TO 'HUBBELL' #551 MOUNTED IN J-BOX IN MECHANICAL EQUIPMENT ROOM, REFER TO ELECTRICAL PLANS FOR LOCATION OF OWNER COORDINATED REMOTE UNDERWATER LIGHT SWITCH.
- 22 ELECTRICAL: PROVIDE ALL ELECTRICAL WIRING CONDUIT PANEL(S), STARTER/DISCONNECT INTERCONNECT(S) ETC. AS REQUIRED FOR PROPER EQUIPMENT INSTALLATION PER MANUFACTURER'S RECOMMENDATIONS AND SHOP DRAWINGS, COORDINATE ALL WORK WITH OTHER TRADES AS REQUIRED, REFER TO ELEC. PLANS FOR ALL ADDITIONAL INFO.
- 23 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.
- 24 BACKWASH TANK: 3'-0"x10'-6"x6'-0" TALL WITH MIN 6" P-TRAP OUTLET TO SEWER AT MIN 150 GPM OUTFLOW CAPACITY, PROVIDE TWO COATS OF WATERPROOFING FOR SPECIFICATIONS, ACCESS LADDERS INTO AND OUT OF THE TANK.

**LEGEND**

- BV = BALL VALVE
- BFV = BUTTERFLY VALVE
- CV = CHECK VALVE
- FM = FLOWMETER
- AI = ACID INJECTION
- VG = VACUUM GAUGE
- CI = CHLORINE INJECTION
- PH = PIPE HANGER
- SCA = SURGE CHAMBER/ACCESS COVER
- FD = FLOOR DRAIN

**PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE**

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 1-08 SECTION 19.3 AS DEFINED IN ASCE 1-10 SECTION 19.6.1, 19.6.2, 19.6.3.6, AND 2013 CBC, SECTIONS 19.6A.1.2 THROUGH 19.6A.1.2.6. THE BRACING AND ATTACHMENTS TO THE STRUCTURE SHALL BE DETAILED ON THE APPROVED DRAWINGS OR THEY SHALL COMPLY WITH ONE OF THE OSHPD PRE-APPROVALS (OPAs) AS MODIFIED TO SATISFY ANCHORAGE REQUIREMENTS OF ACI 318, APPENDIX D. COPIES OF THE MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF HANGING AND BRACING OF THE PIPE, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

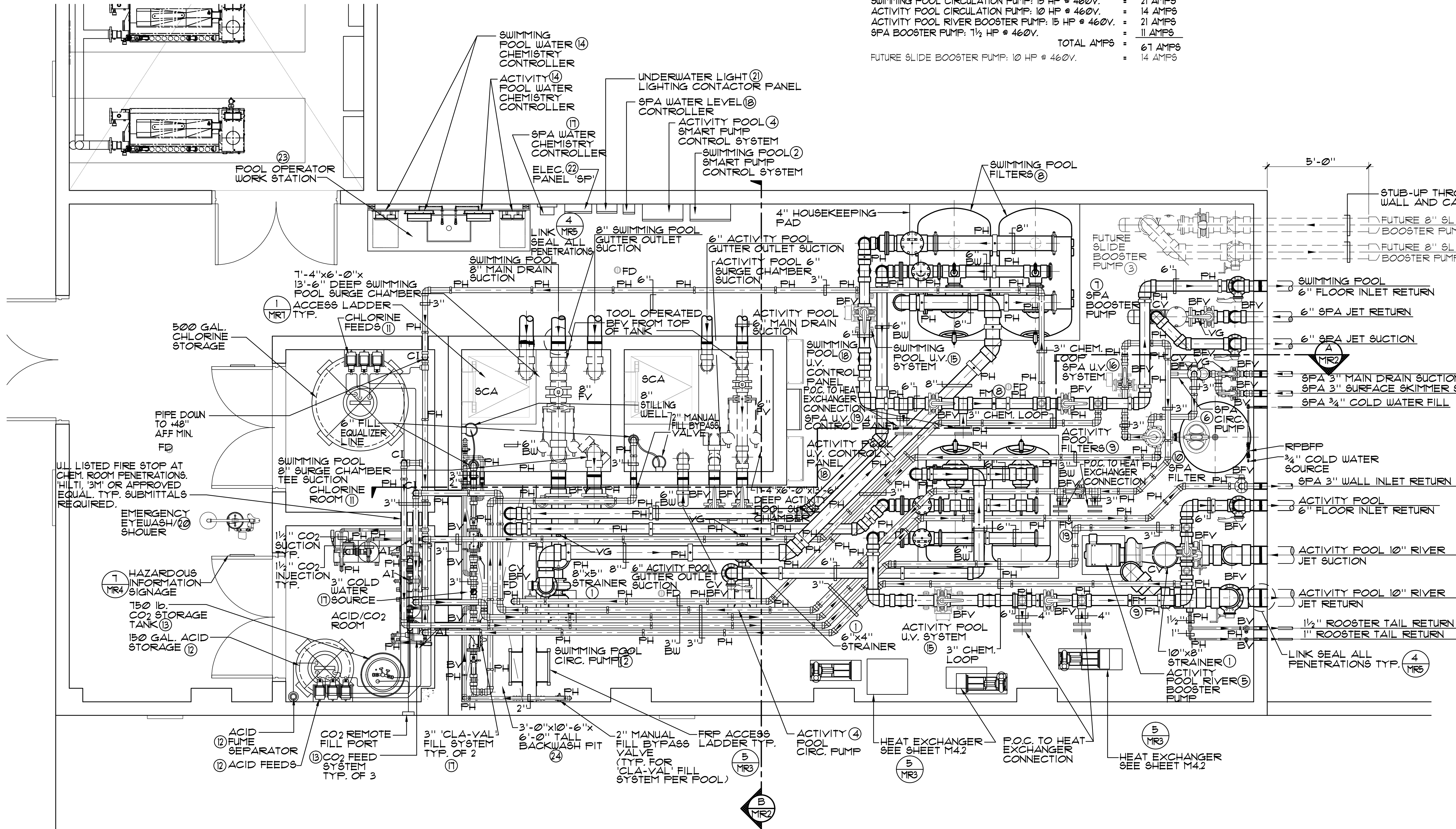
ANCHOR DIAMETER	MIN. EMBED. DIST.	ANCHORS IN CONCRETE		ANCHORS IN MASONRY	
		TENSION LOAD (LBS)	TORQUE LOAD (FT-LBS)	TENSION LOAD (LBS)	TORQUE LOAD (FT-LBS)
3/8"	2"	1500	25	500	15
1/2"	3 1/2"	3000	40	1000	25
5/8"	4"	4900	60	1250	65
3/4"	4 3/4"	6300	110	1700	120

**MECHANICAL ANCHORS**

- 1 EXPANSION OR WEDGE ANCHORS INTO CONCRETE: HILTI KB TZ (ICC ESR-1917) OR SIMPSON STRONG BOLT (ICC ESR-1111) TO BE INSTALLED IN ACCORDANCE WITH ICC REPORT AND MANUFACTURER'S RECOMMENDATIONS.
- 2 EXPANSION OR WEDGE ANCHORS INTO MASONRY: HILTI KB 3 (ICC ESR-1385) OR SIMPSON WEDGE-ALL (ICC ESR-1396) TO BE INSTALLED IN ACCORDANCE WITH ICC REPORT AND MANUFACTURER'S RECOMMENDATIONS.
- 3 UNDERCUT ANCHORS INTO CONCRETE: HILTI HDA (ICC ESR-1546) TO BE INSTALLED IN ACCORDANCE WITH ICC REPORT AND MANUFACTURER'S RECOMMENDATIONS.
- 4 HEAVY DUTY SLEEVE ANCHORS INTO CONCRETE: HILTI HSL-3 (ICC ESR-1545) TO BE INSTALLED IN ACCORDANCE WITH ICC REPORT AND MANUFACTURER'S RECOMMENDATIONS.
- 5 FASTENERS SHALL BE STAINLESS STEEL FOR EXTERIOR USE OR WHEN EXPOSED TO WEATHER, PROVIDE GALVANIZED CARBON STEEL ANCHORS AT OTHER LOCATIONS, UNLESS OTHERWISE NOTED.
- 6 IF REINFORCEMENT IS ENCOUNTERED DURING DRILLING, ABANDON AND SHIFT THE HOLE LOCATION TO AVOID THE REINFORCEMENT, PROVIDE A MINIMUM OF 2 ANCHOR DIAMETERS OR 1 INCH, WHICHEVER IS LARGER, OF SOUND CONCRETE BETWEEN THE DOWEL AND THE ABANDONED HOLE, FILL THE ABANDONED HOLE WITH NON-SHRINK GROUT, IF THE ANCHOR OR DOWEL MAY NOT BE SHIFTED AS NOTED ABOVE, THE STRUCTURAL ENGINEER WILL DETERMINE A NEW LOCATION.
- 7 LOCATE REINFORCEMENT AND CONFIRM FINAL ANCHOR LOCATIONS PRIOR TO FABRICATING PLATES, MEMBERS, OR OTHER STEEL ASSEMBLIES ATTACHED WITH MECHANICAL ANCHORS.
- 8 ANCHORS SHALL BE PROOF-TESTED BY OWNER'S TESTING AND INSPECTION AGENCY.
- 9 TEST ANCHORS NO SOONER THAN 24 HOURS AFTER INSTALLATION.
- 10 APPLY TEST LOAD BY ANY METHOD THAT WILL EFFECTIVELY MEASURE THE TENSION OF THE ANCHOR SUCH AS DIRECT FULL WITH A HYDRAULIC JACK, TORQUE WRENCH, OR CALIBRATED SPRING LOADING DEVICES, ETC.
- 11 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.
- 12 UNLESS OTHERWISE NOTED, PROVIDE MINIMUM EMBEDMENT OF ANCHORS AS SHOWN IN TABLES ABOVE.
- 13 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 SAME TORQUE MEASURED WITH A TORQUE WRENCH, AND THEN APPLY 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: TEST ANCHORS TO THE TORQUE LOAD INDICATED IN THE TABLE WITH ONE-HALF TURN OF THE NUT.
- 14 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.

**THREE PHASE MOTOR LOADS AT 460V**

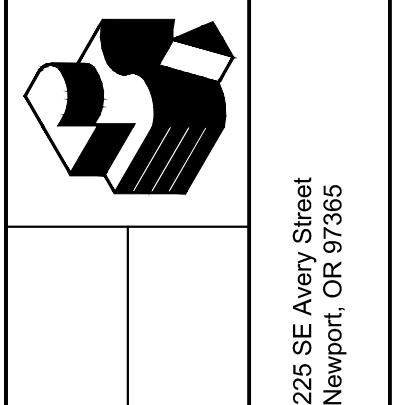
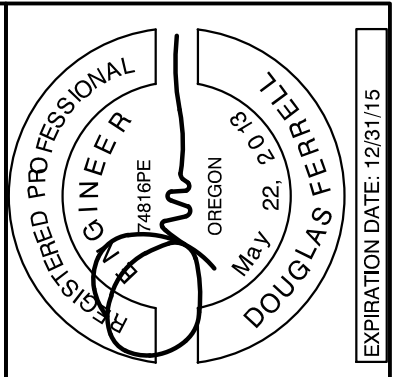
SWIMMING POOL CIRCULATION PUMP: 15 HP @ 460V.	21 AMPS
ACTIVITY POOL CIRCULATION PUMP: 10 HP @ 460V.	14 AMPS
ACTIVITY POOL RIVER BOOSTER PUMP: 15 HP @ 460V.	21 AMPS
SPA BOOSTER PUMP: 1 1/2 HP @ 460V.	11 AMPS
<b>TOTAL AMPS</b>	<b>67 AMPS</b>
FUTURE SLIDE BOOSTER PUMP: 10 HP @ 460V.	14 AMPS



**MECHANICAL ROOM LAYOUT PLAN**

3/8"=1'-0"

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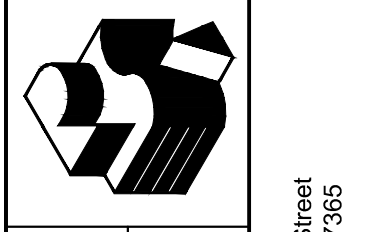
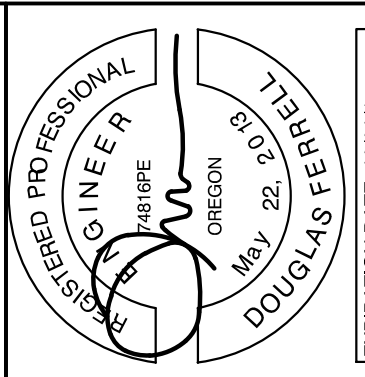


**MECHANICAL ROOM LAYOUT PLAN**

Drawn By	NFC
Checked	SJF
Date	17 JUNE 2015
Project	1419

**MR-1**





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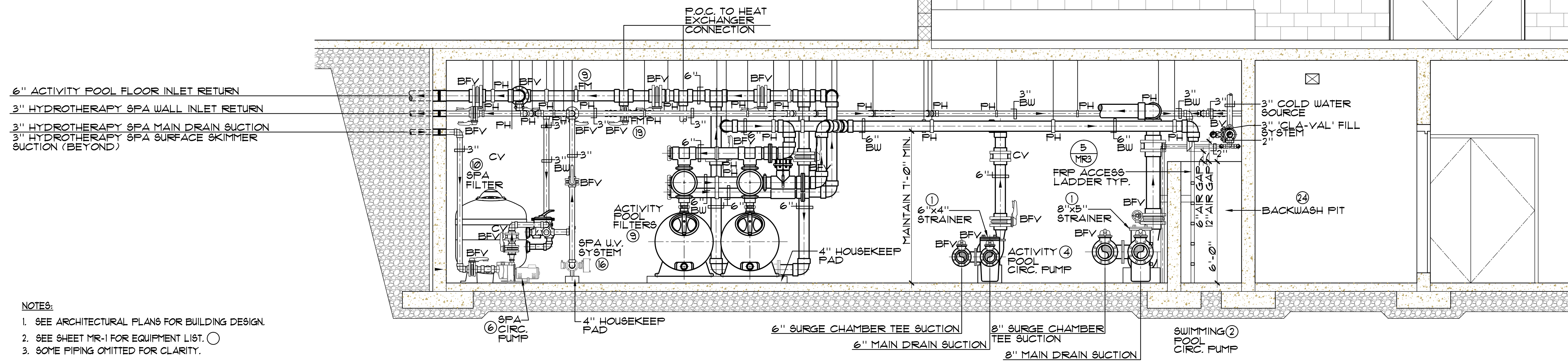
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DESIGN GROUP  
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MECHANICAL ROOM SECTIONS

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MR-2

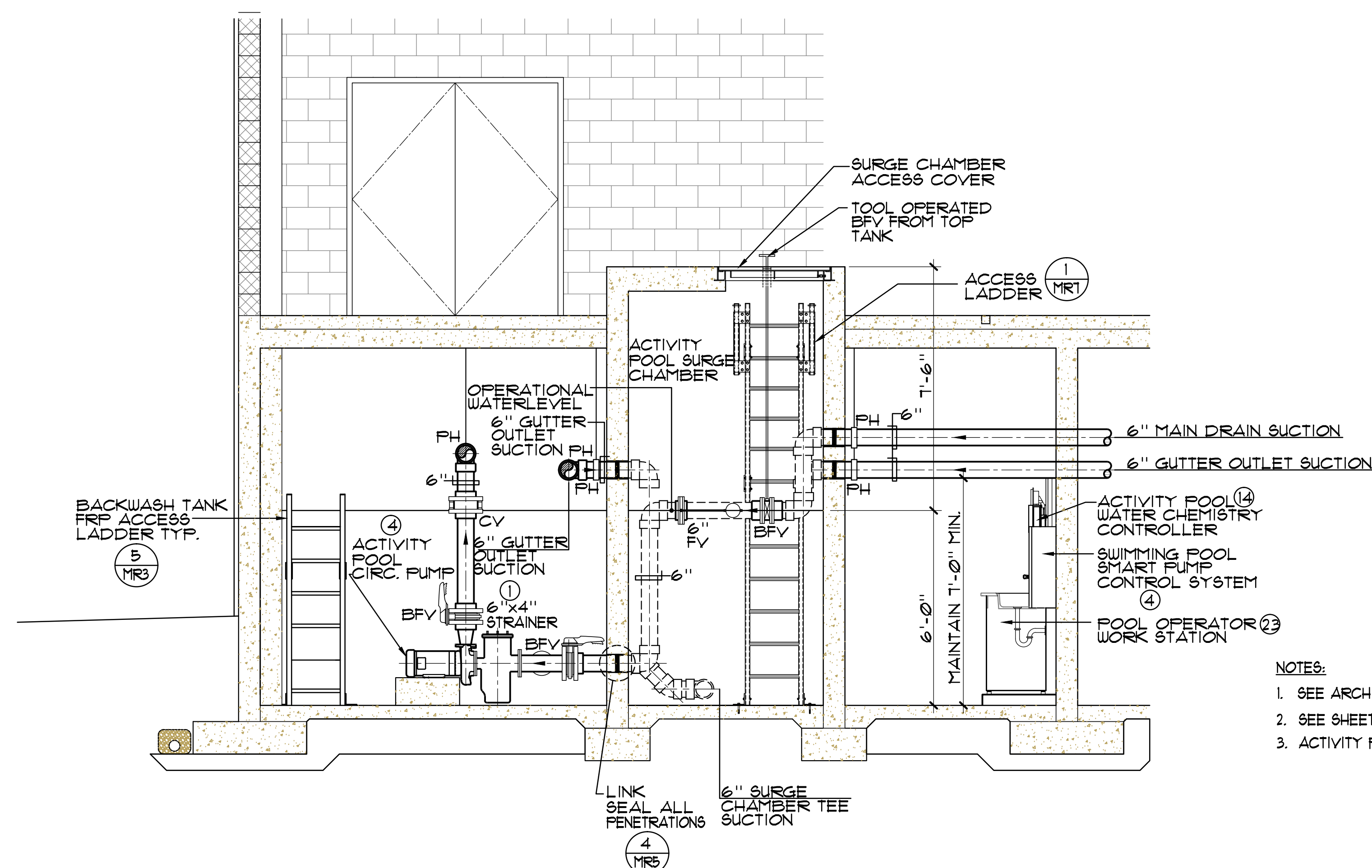


NOTES:

1. SEE ARCHITECTURAL PLANS FOR BUILDING DESIGN.
2. SEE SHEET MR-1 FOR EQUIPMENT LIST.
3. SOME PIPING OMITTED FOR CLARITY.

MECHANICAL ROOM SECTION

3/8"=1'-0"



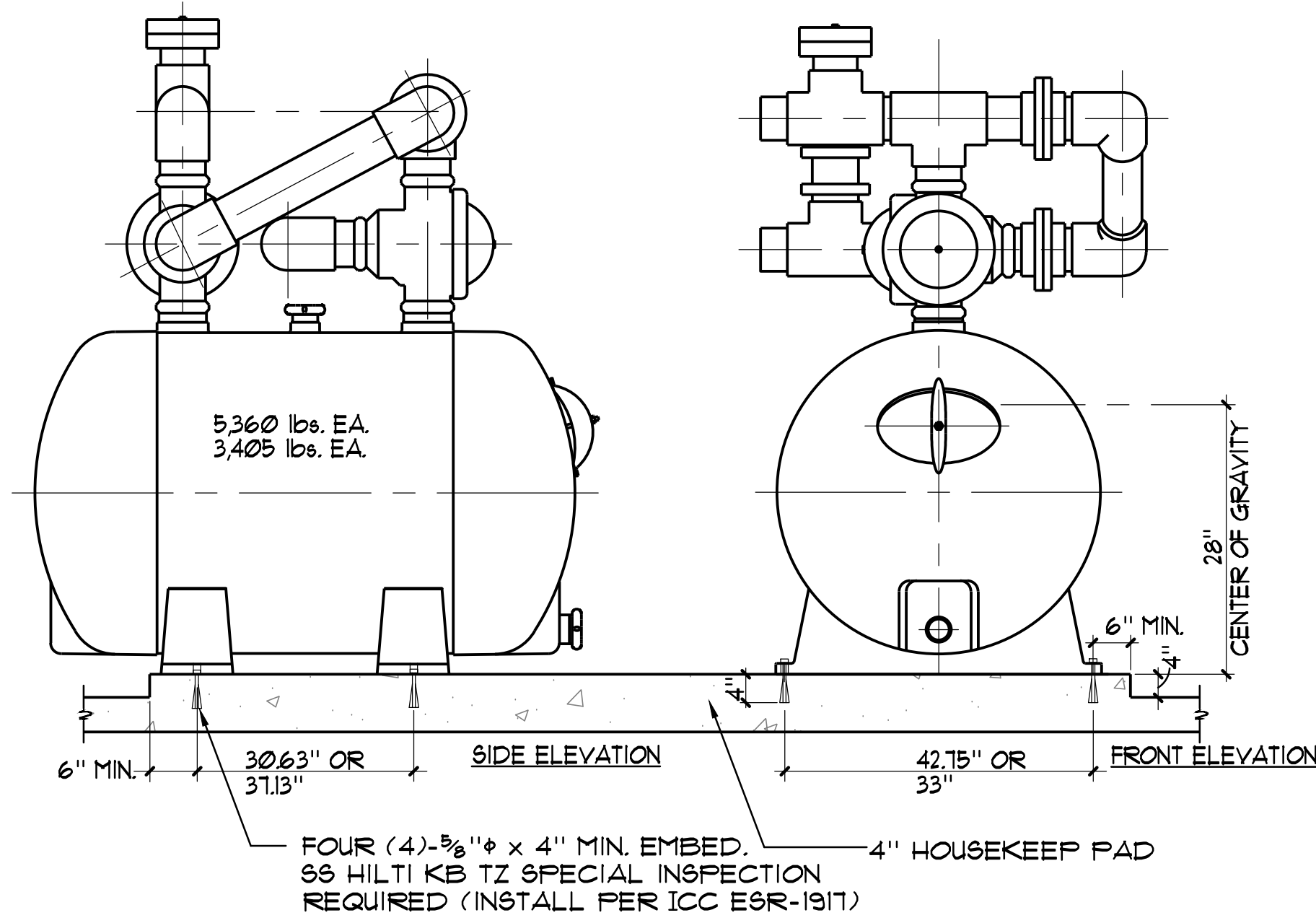
NOTES:

1. SEE ARCHITECTURAL PLANS FOR BUILDING DESIGN.
2. SEE SHEET MR-1 FOR EQUIPMENT LIST.
3. ACTIVITY POOL PIPING ONLY SHOWN FOR CLARITY.

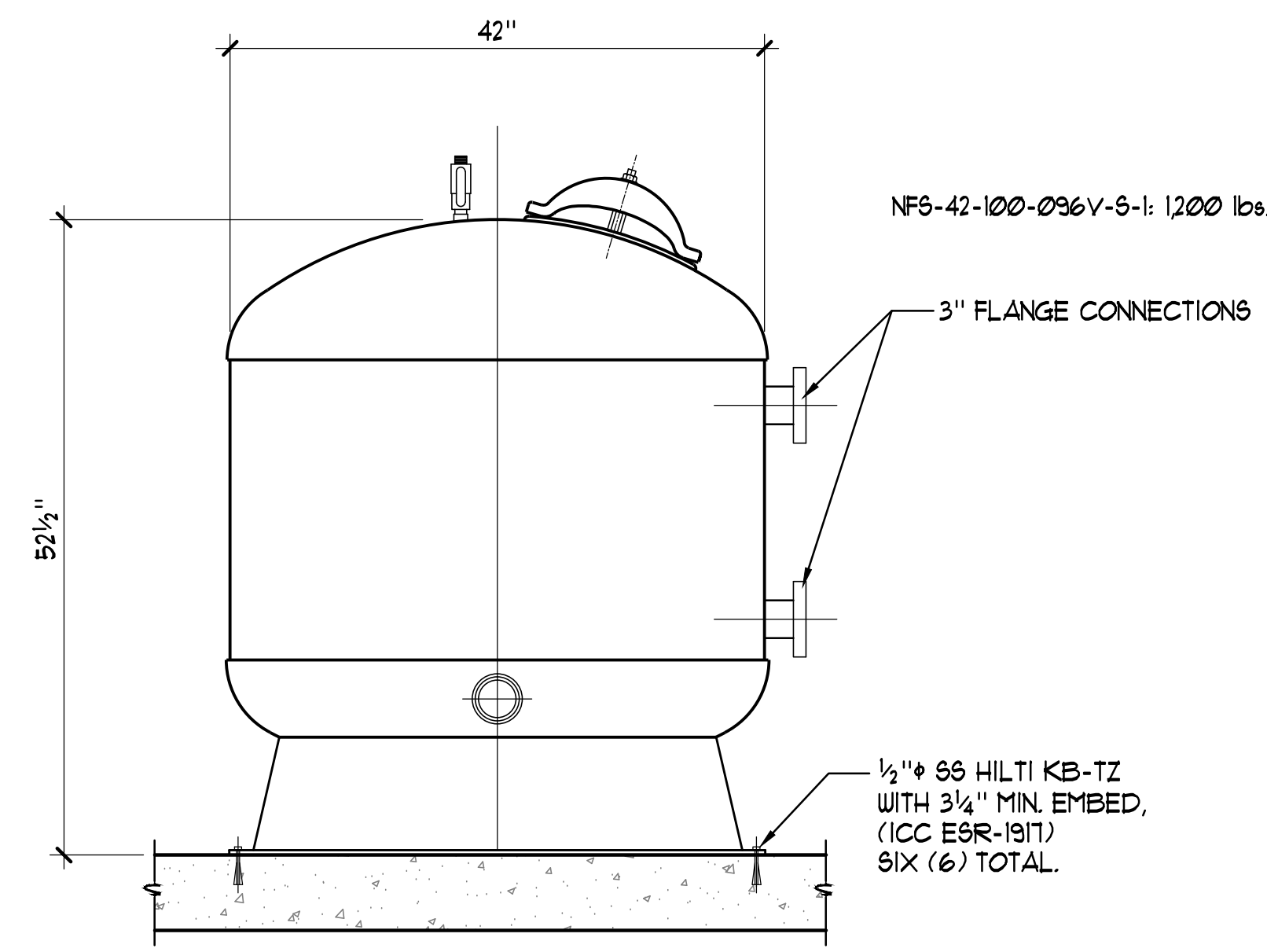
MECHANICAL ROOM SECTION

3/8"=1'-0"

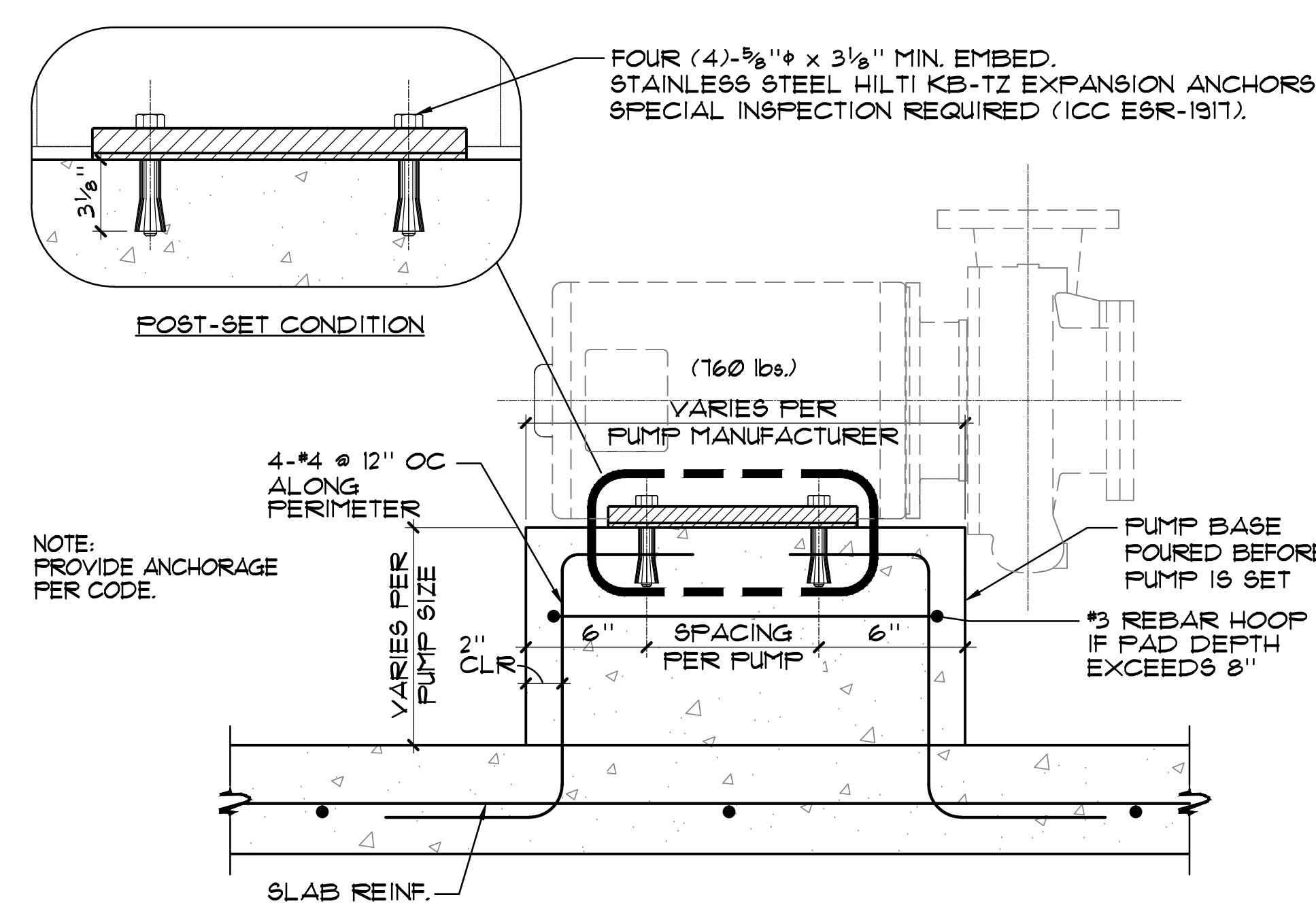




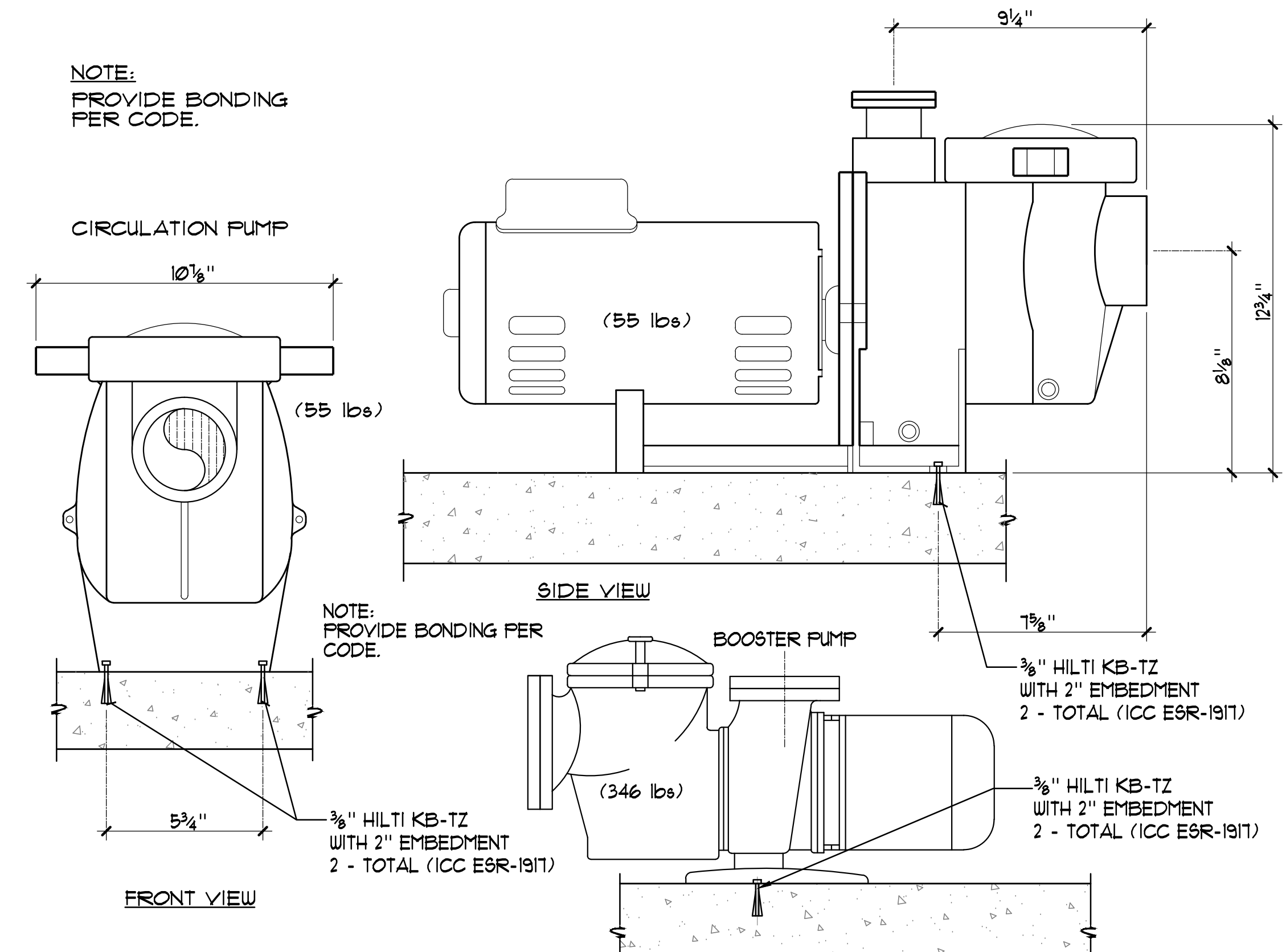
**1 FILTER ANCHORAGE** NO SCALE



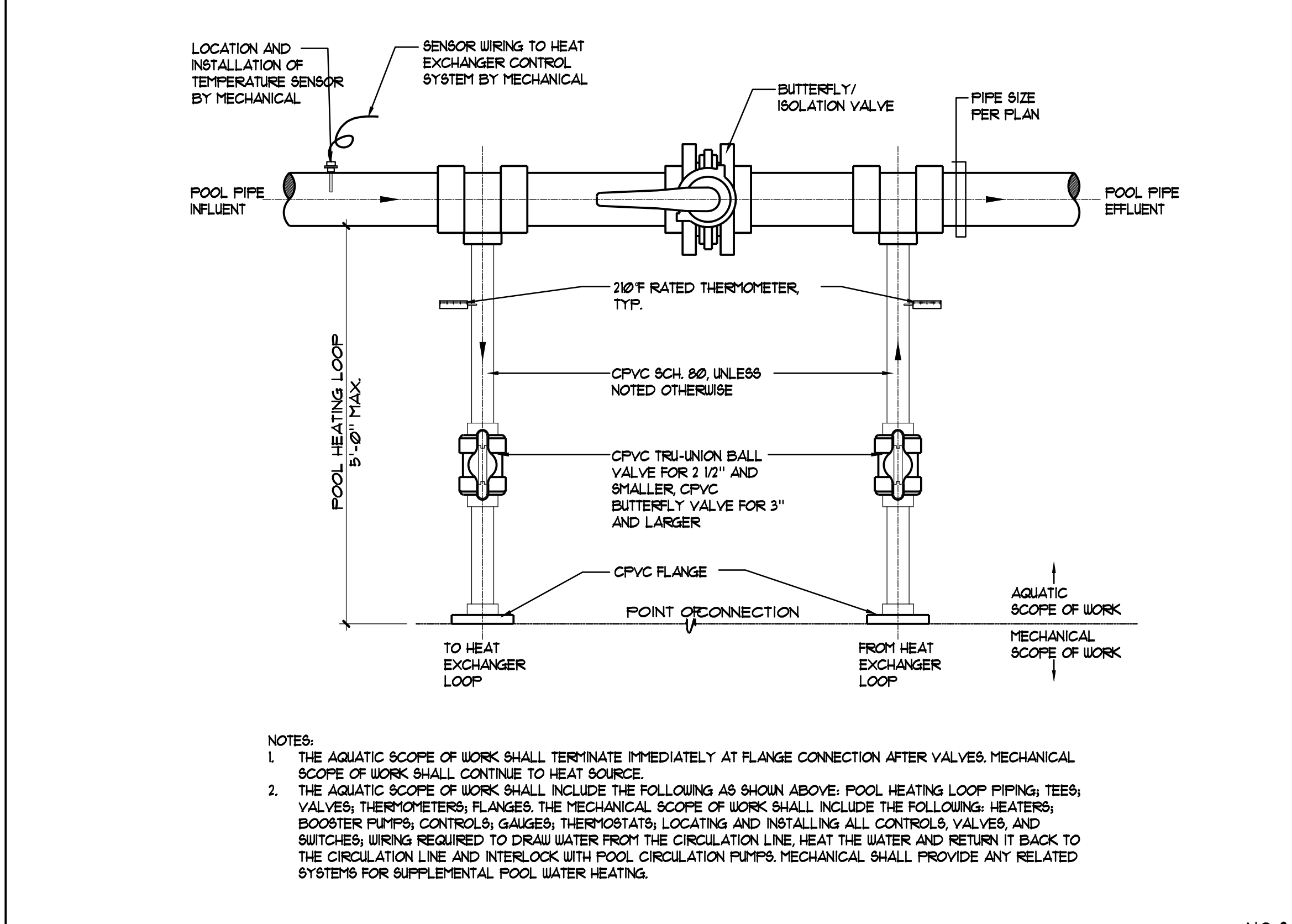
**2 FILTER ANCHORAGE** NO SCALE



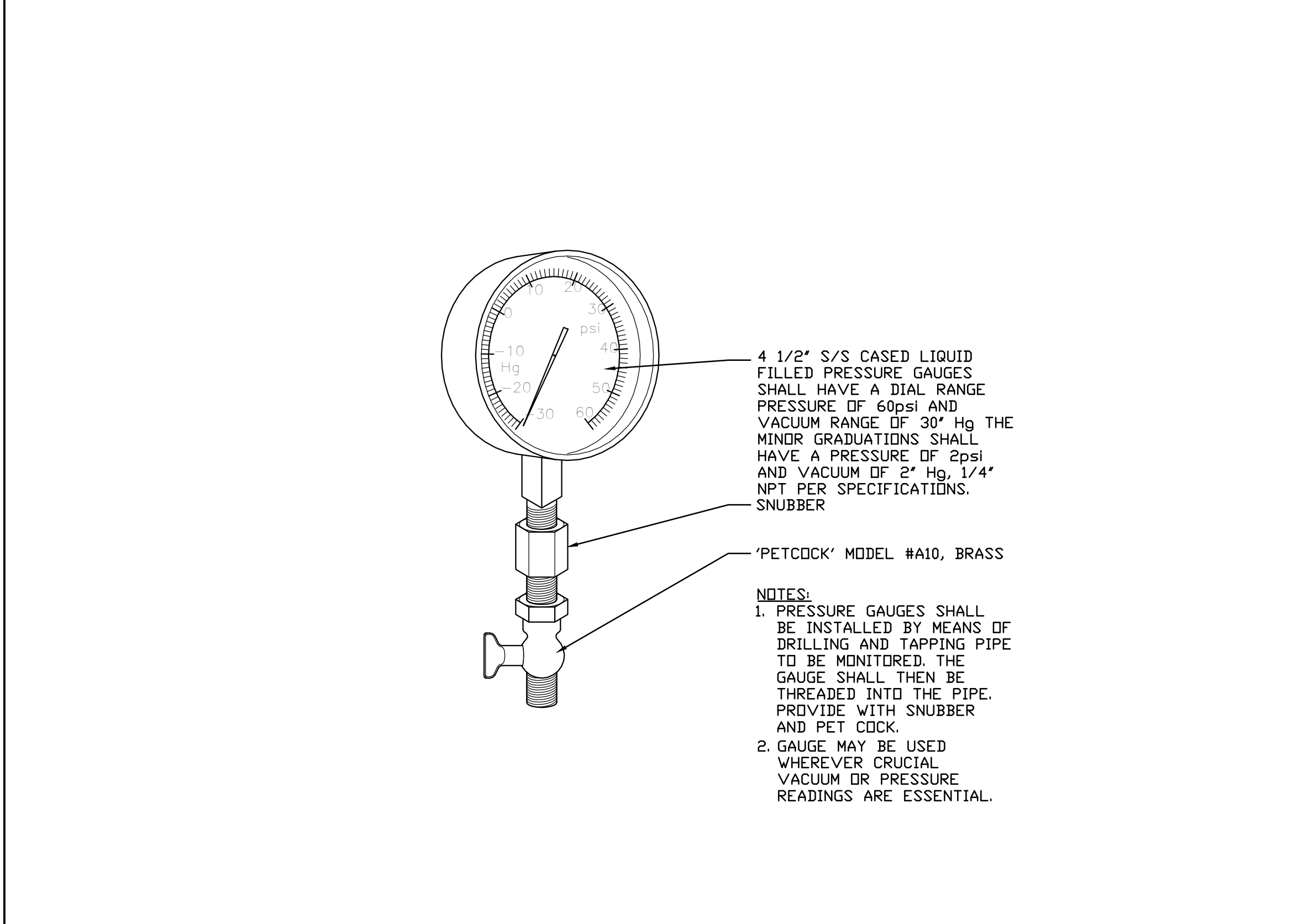
**3 SWIMMING POOL/ACTIVITY POOL PUMP ANCHORAGE** NO SCALE



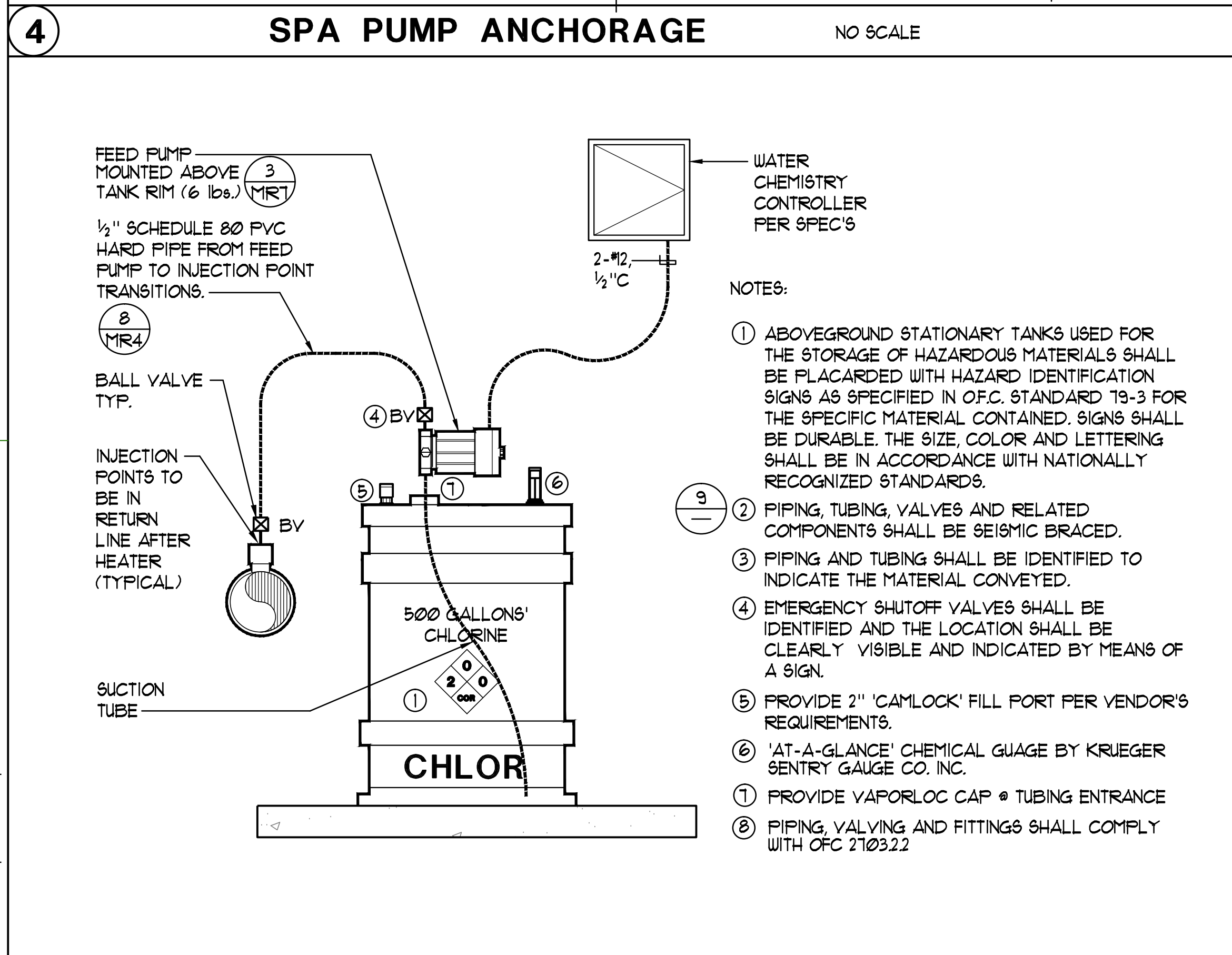
**4 SPA PUMP ANCHORAGE** NO SCALE



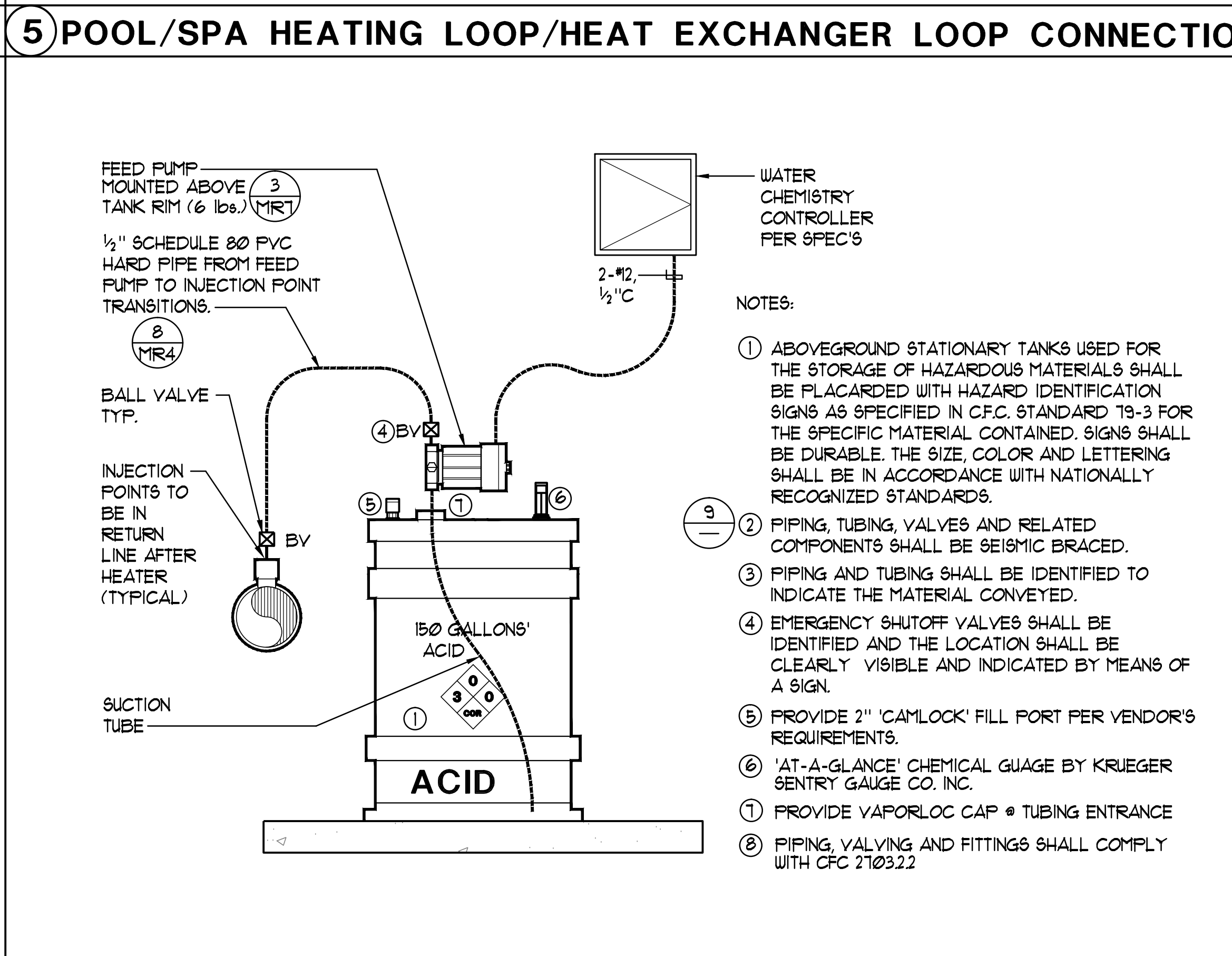
**5 POOL/SPA HEATING LOOP/HEAT EXCHANGER LOOP CONNECTION** NO SCALE



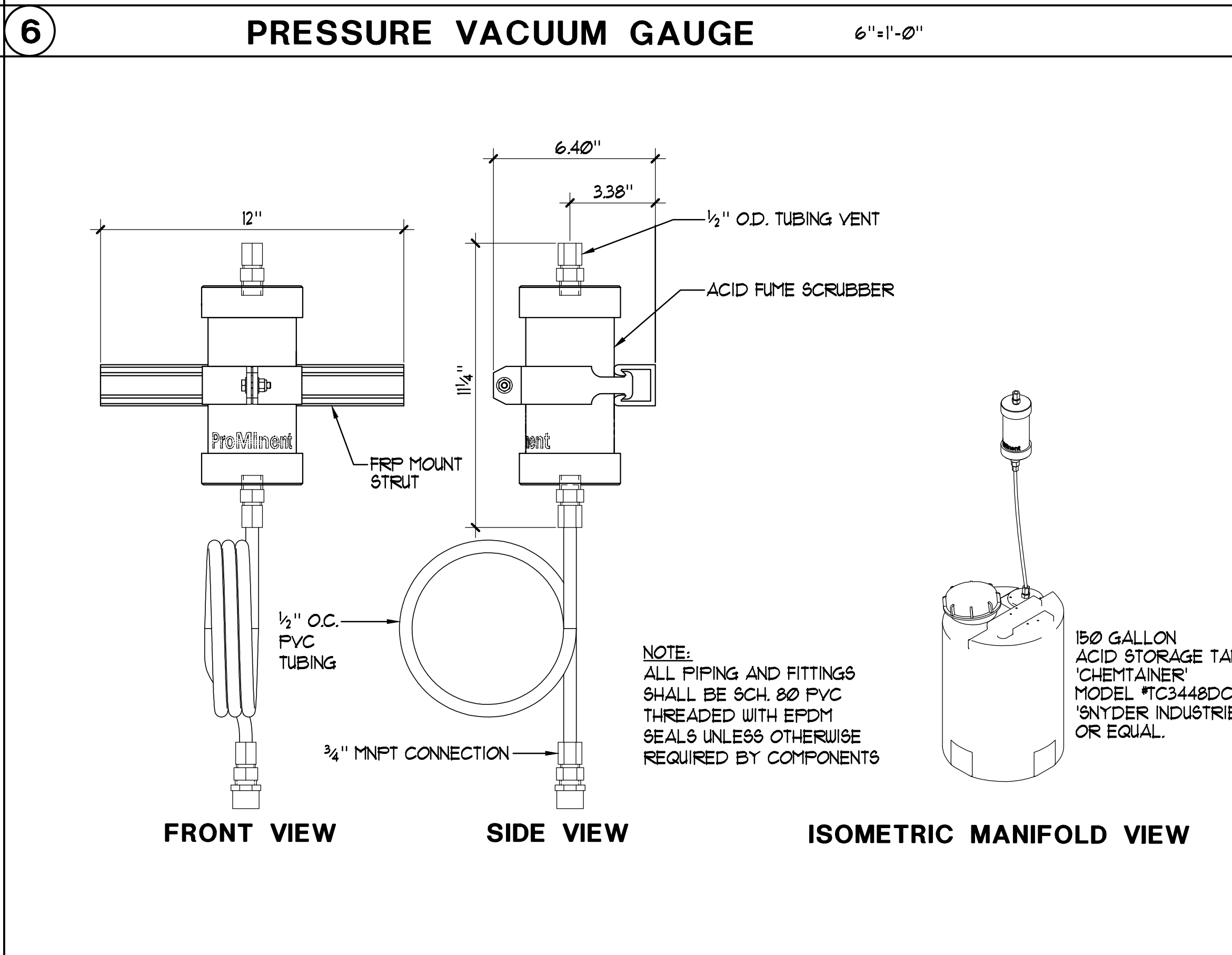
**6 PRESSURE VACUUM GAUGE** 6"-1'-0"



**7 SODIUM HYPOCHLORITE FEED SCHEMATIC** NO SCALE



**8 MURIATIC ACID FEED SCHEMATIC** NO SCALE



**9 ACID VAPOR SEPARATOR** 3'-1'-0"

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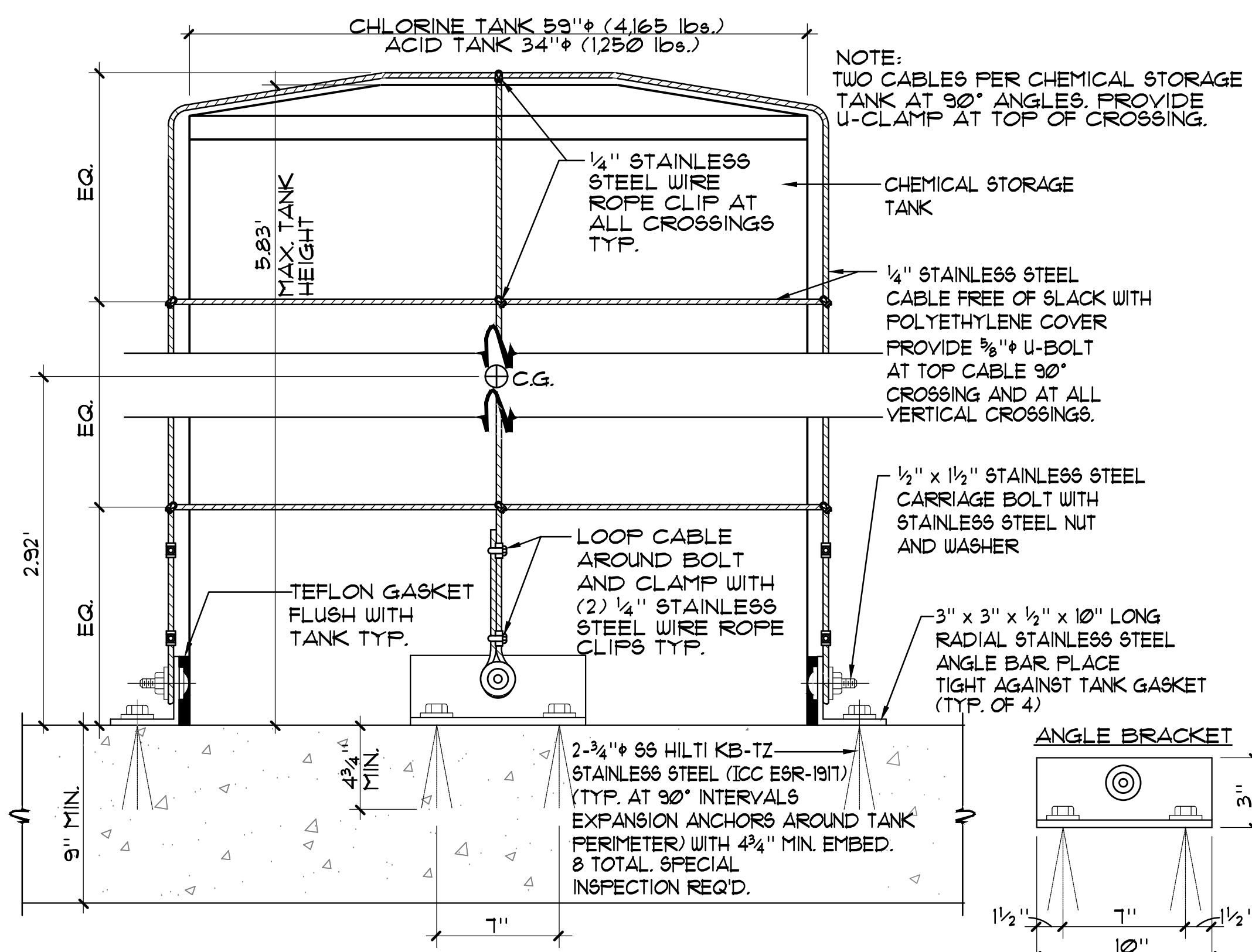
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**DETAILS**

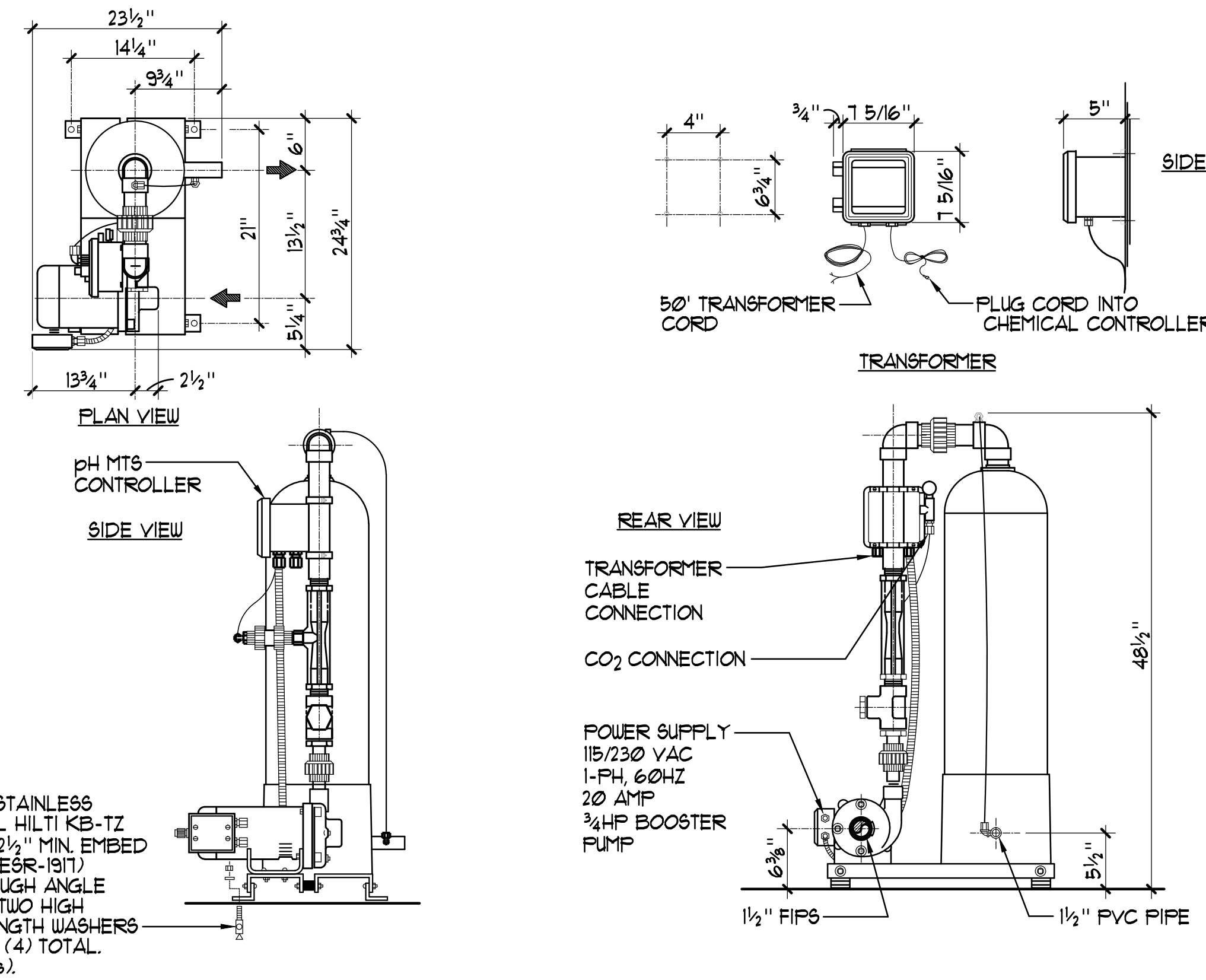
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 Date: 17 JUNE 2015  
 Project: MR3

1419

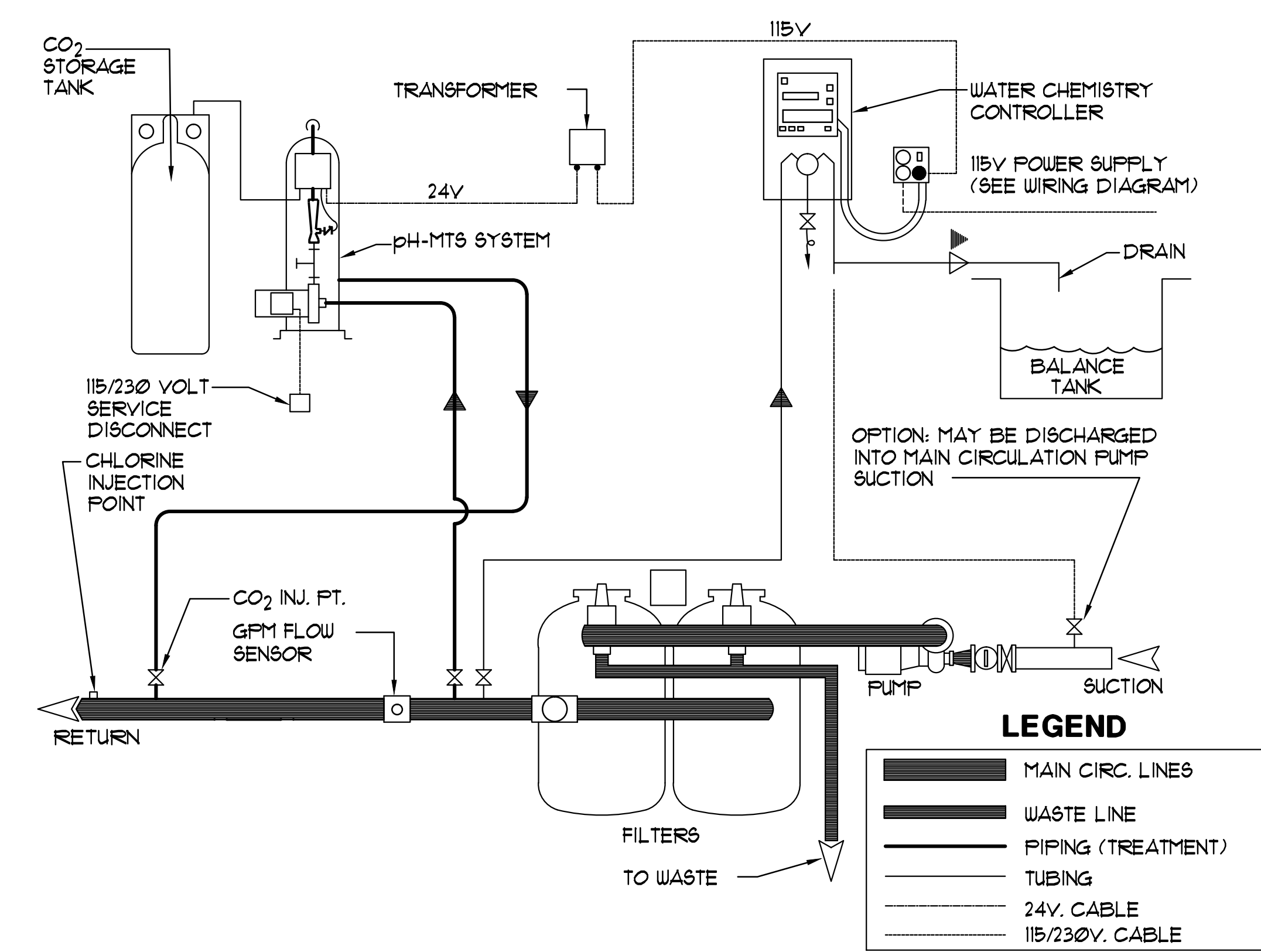




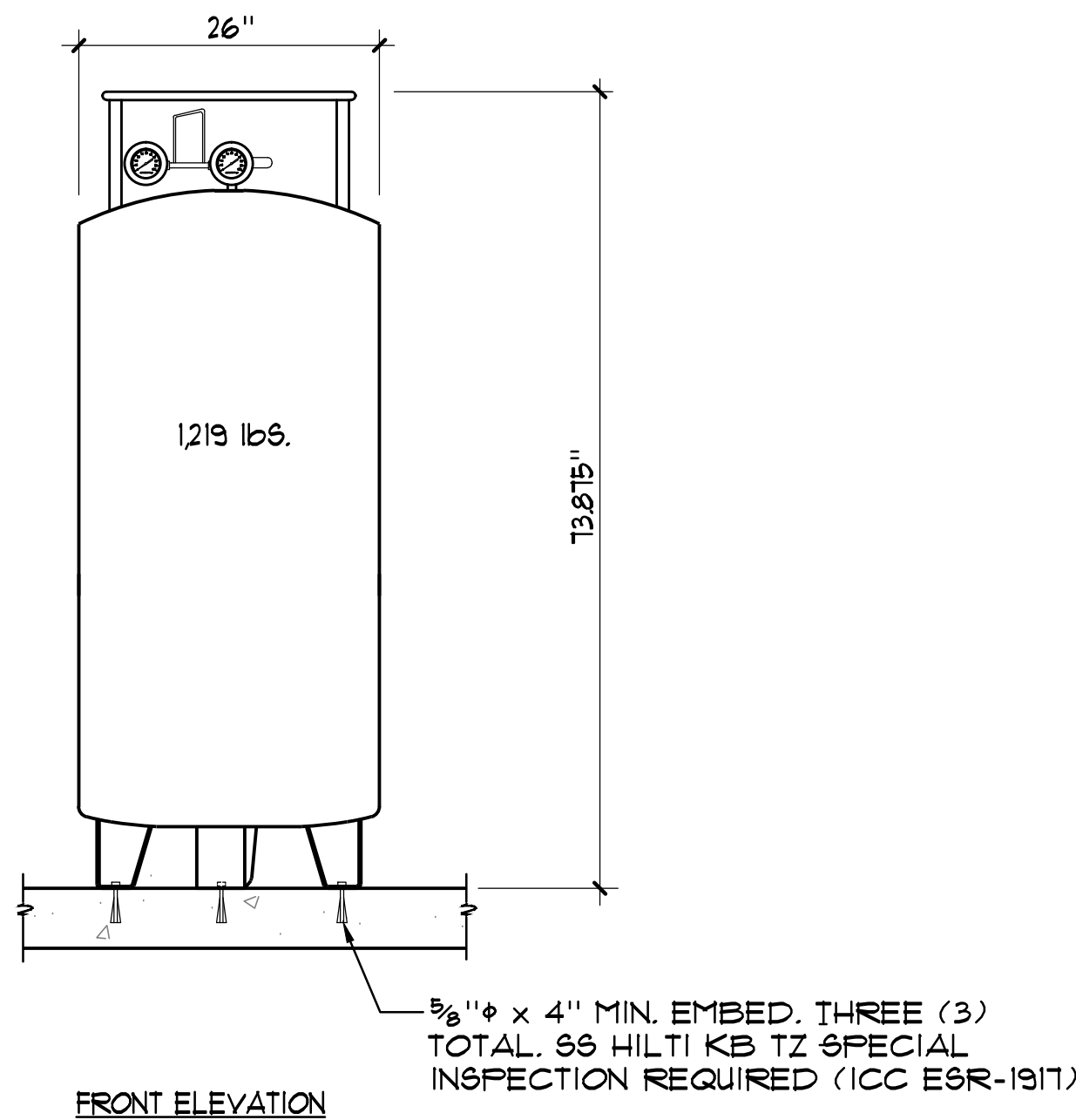
1 CHEMICAL TANK ANCHOR (TYP. 2 TANKS) NO SCALE



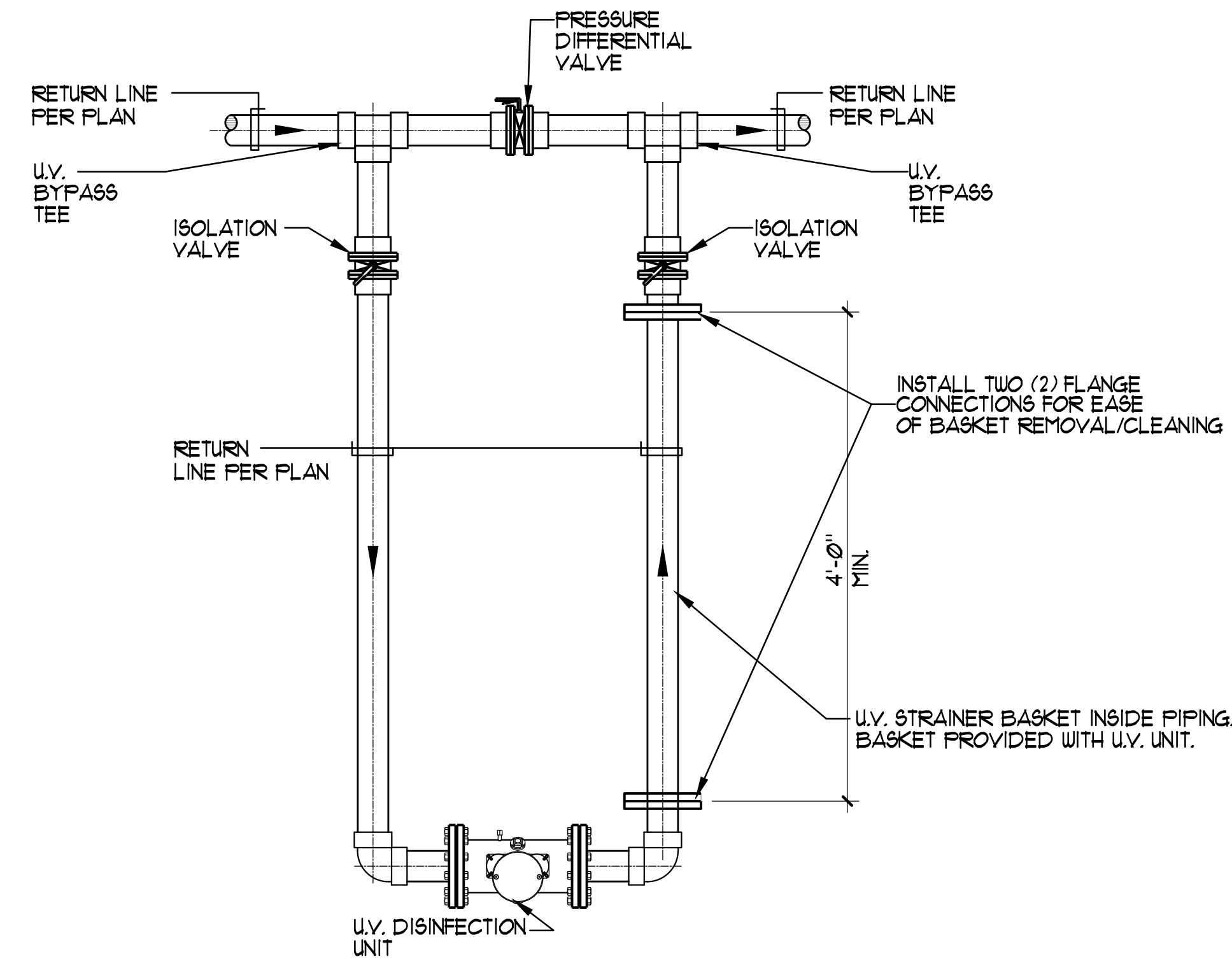
2 CARBON DIOXIDE pH MTS CONTROLLER NO SCALE



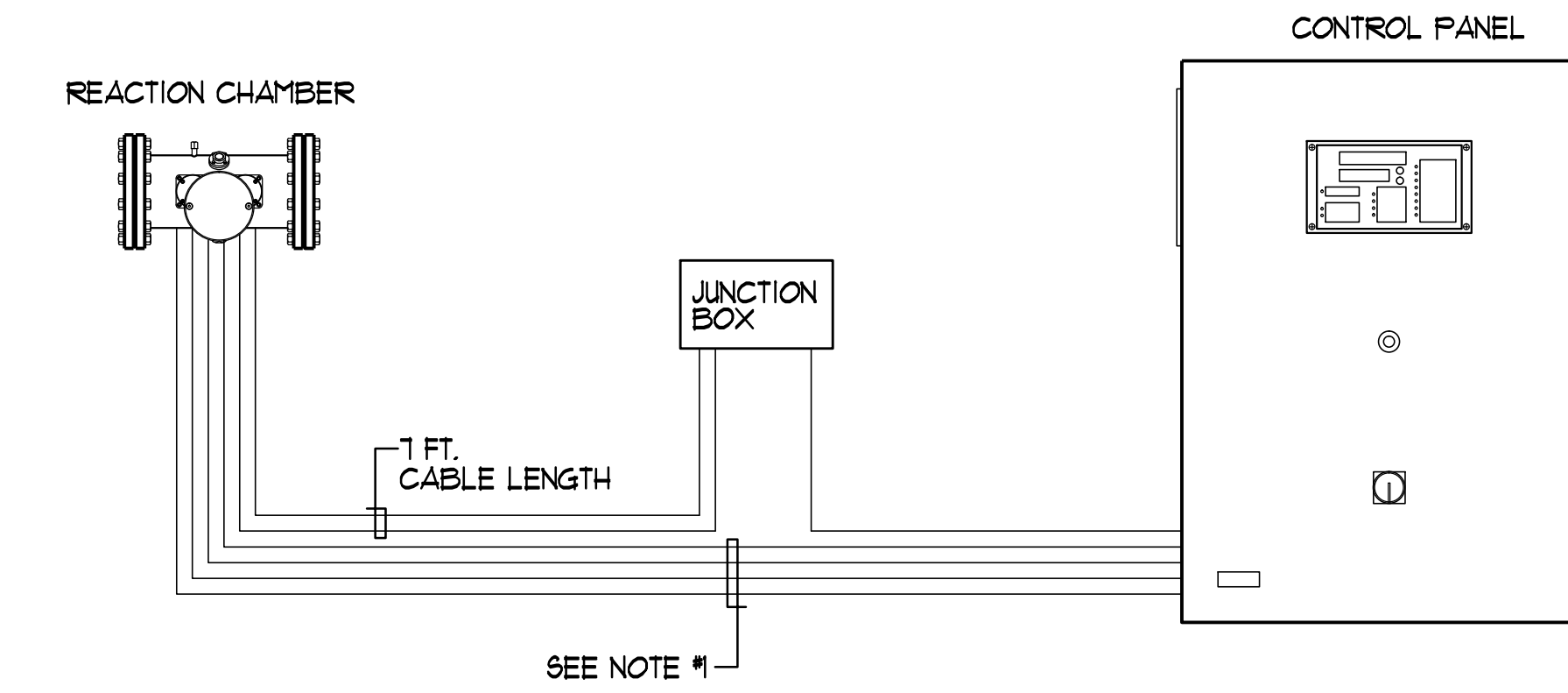
3 TYPICAL CARBON DIOXIDE pH-MTS INSTALLATION NO SCALE



4 CO2 TANK ANCHORAGE DETAIL AS NOTED



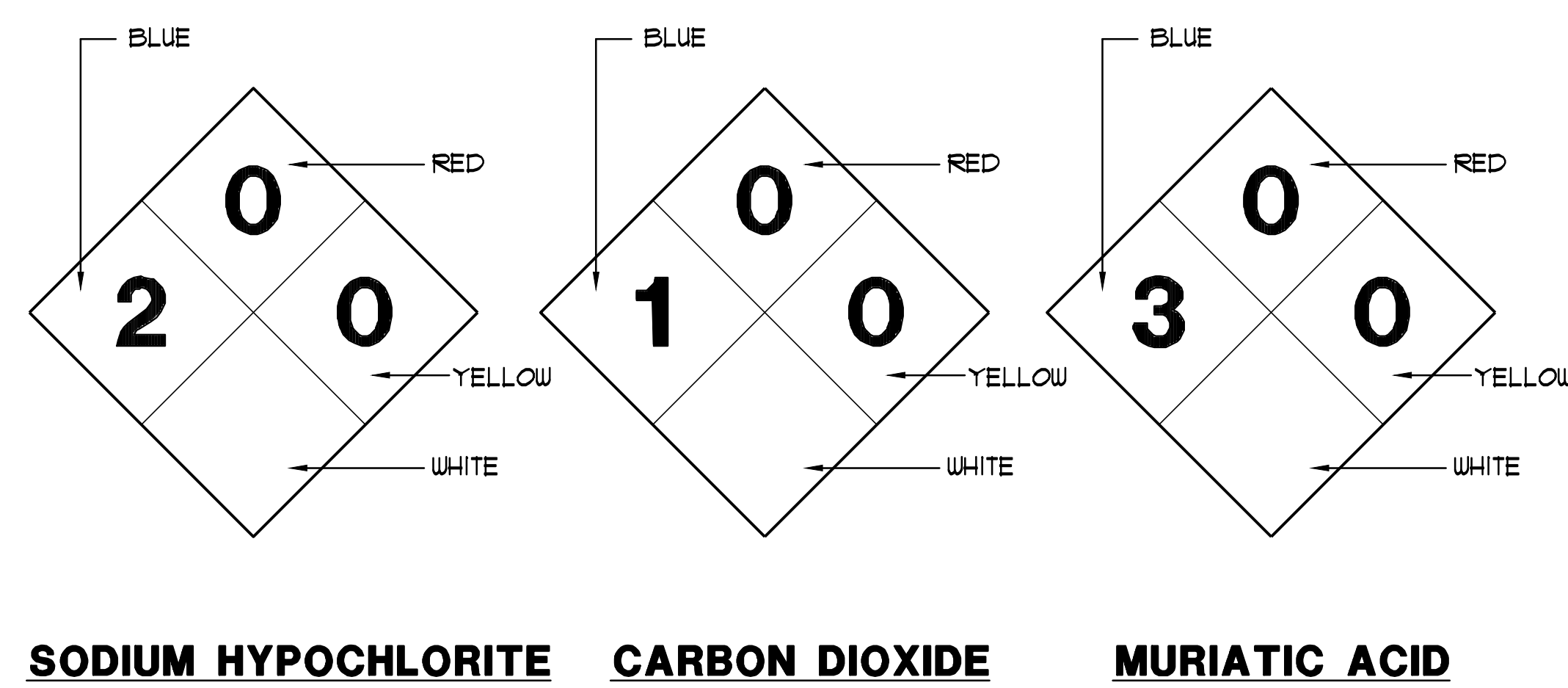
5 ECP U.V. DISINFECTION UNIT INSTALLATION DETAIL NO SCALE



NOTES:

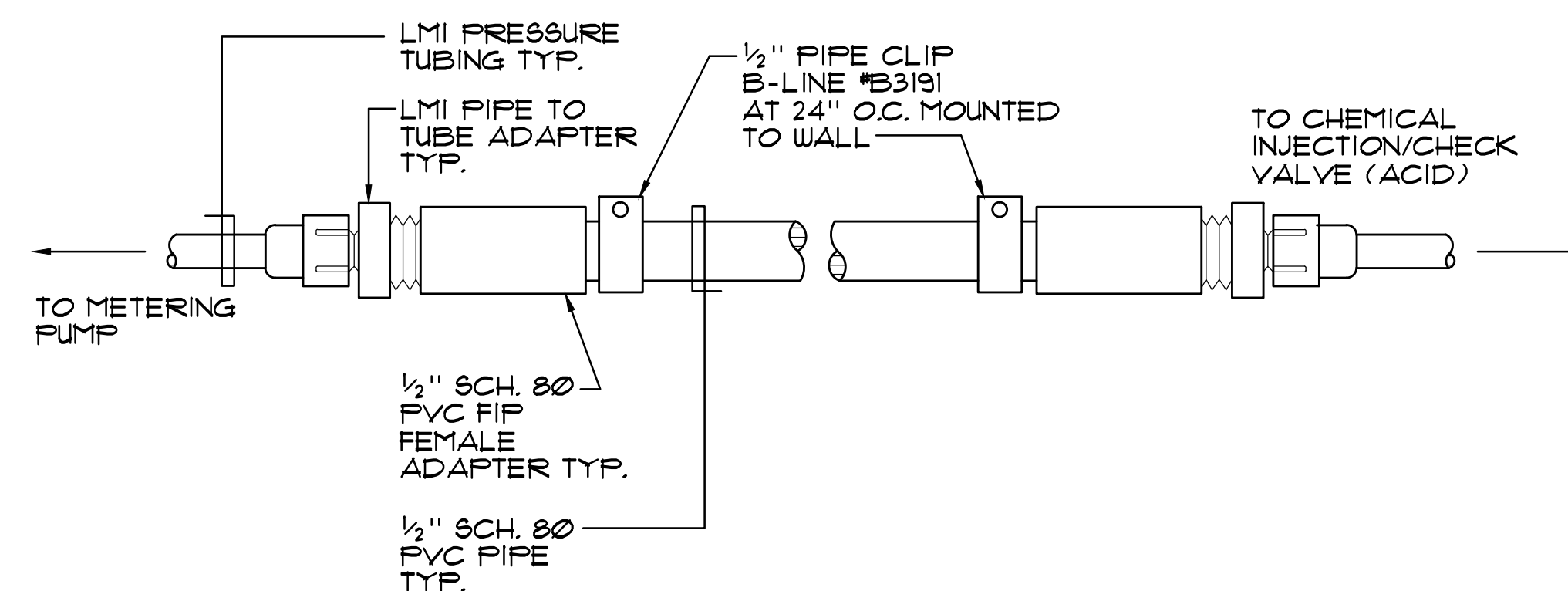
- STANDARD CABLE LENGTH FROM REACTION CHAMBER TO CONTROL PANEL IS 16 FEET. OPTIONAL CABLE LENGTHS AVAILABLE IN 33 FT, 66 FT, AND 164 FT.
- SEE SPECIFICATIONS FOR BARRIER M UNIT, CONTROL PANEL, AND JUNCTION BOX DIMENSIONS.

6 U.V. DISINFECTION UNIT TYPICAL INSTALLATION NO SCALE

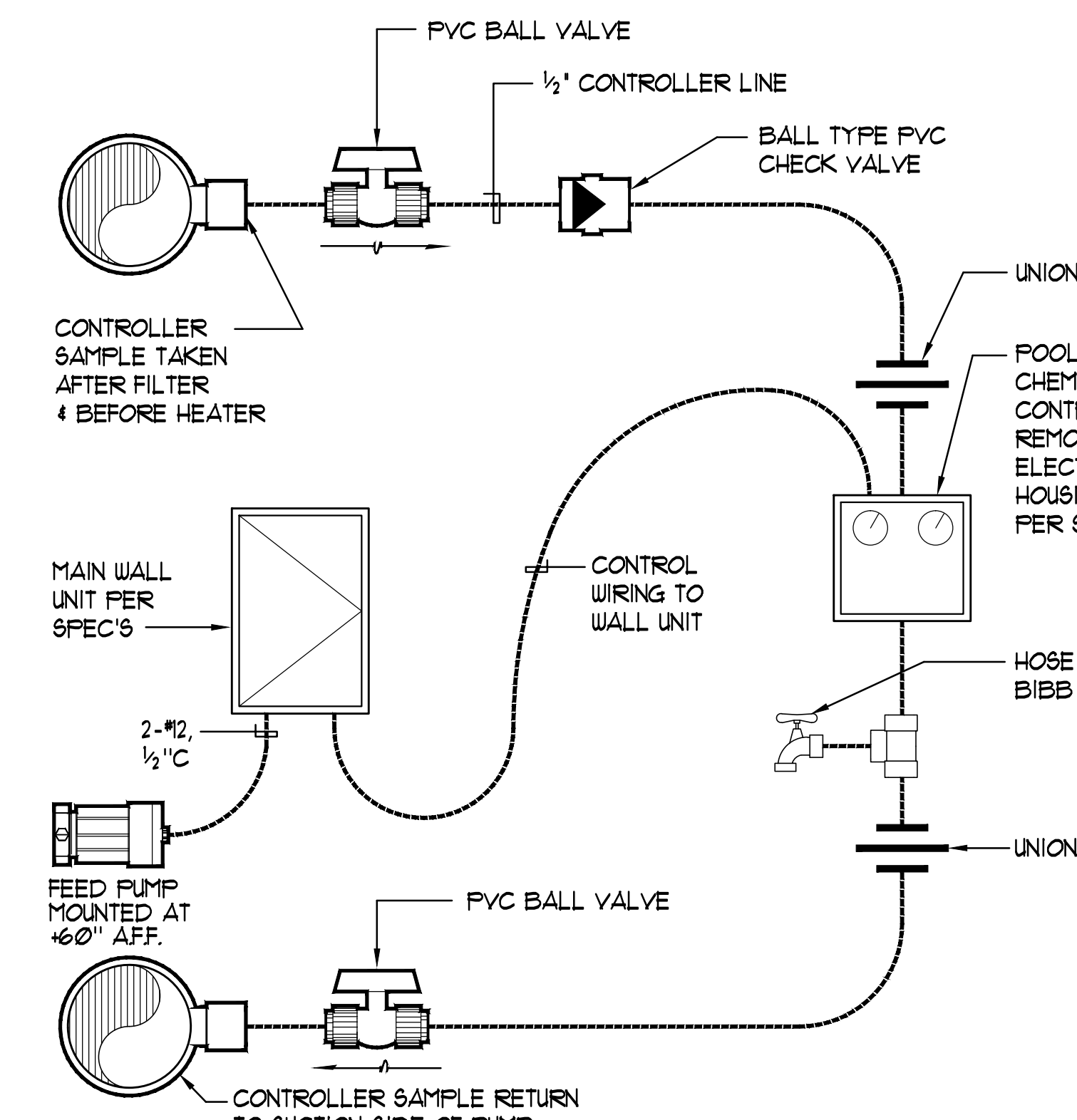


NOTE: SIGNS SHALL BE SIZES AND COLORS PER CODE MOUNTED AT 48" AFF. ON DOORS AT CHEMICAL ROOMS.

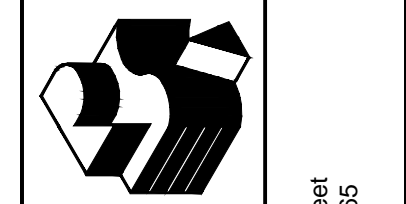
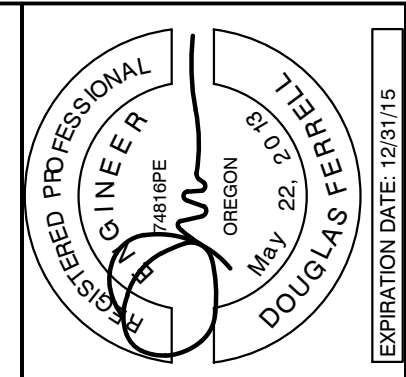
7 HAZARDOUS INFORMATION SIGNAGE NO SCALE



8 CHEMICAL FEED PIPING DETAIL NO SCALE



9 WATER CHEMISTRY CONTROLLER SCHEMATIC NO SCALE



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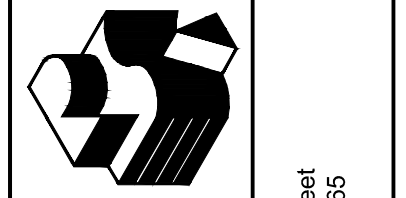
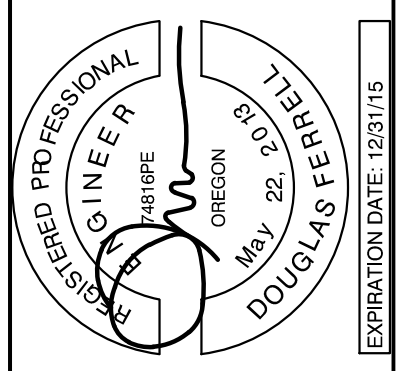
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Project: MR4

MR4





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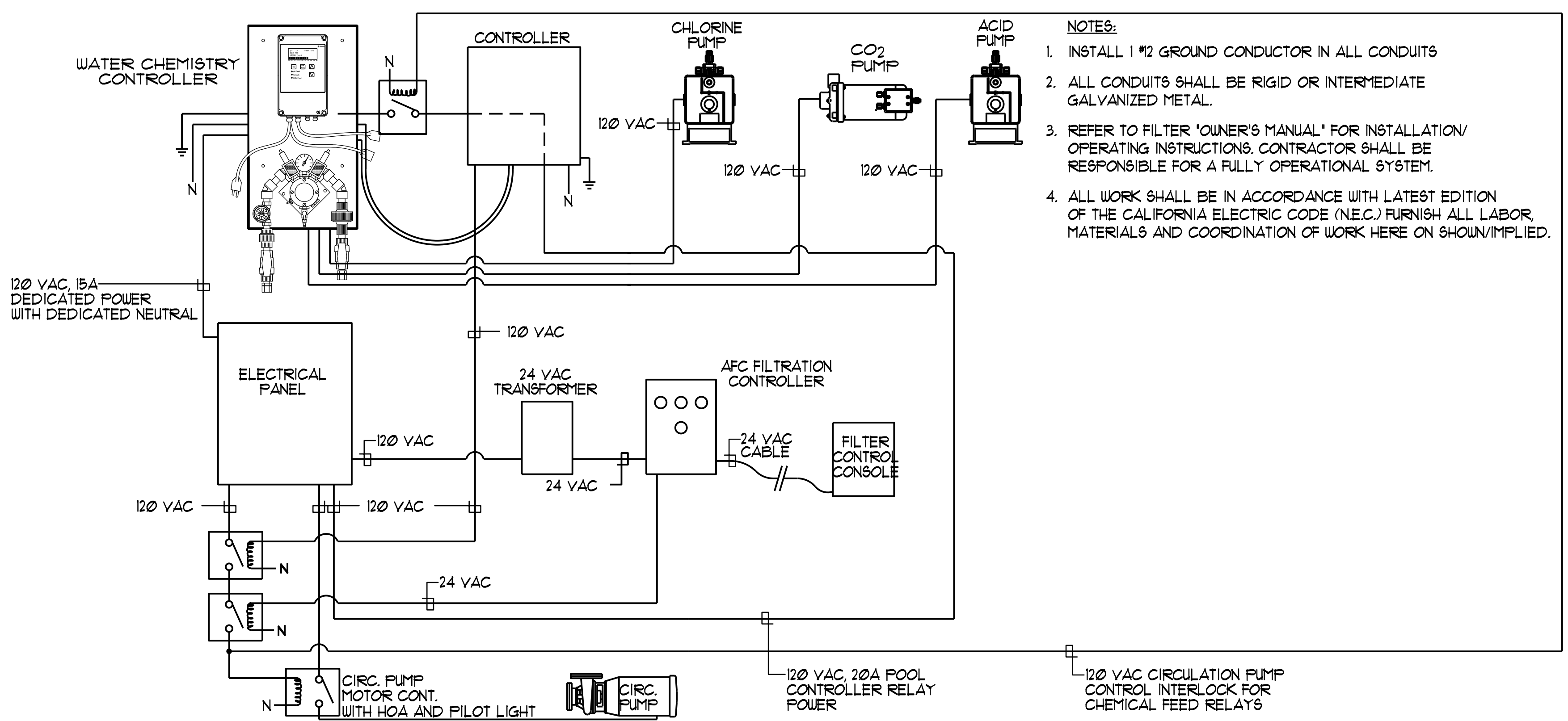
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Date: 17 JUN 2015  
Project: 1419

MR5

DESIGNATION: 'SP' VOLTAGE: 120/208V 3PH 4W LOCATION: MECHANICAL EQUIP. RM.  
200AMP MAIN BREAKER MAIN LUG MINIMUM DEVICE 10,000 PANELBOARD KEY NOTES  
RECESSED SURFACE A.I.C. RATING 14,000

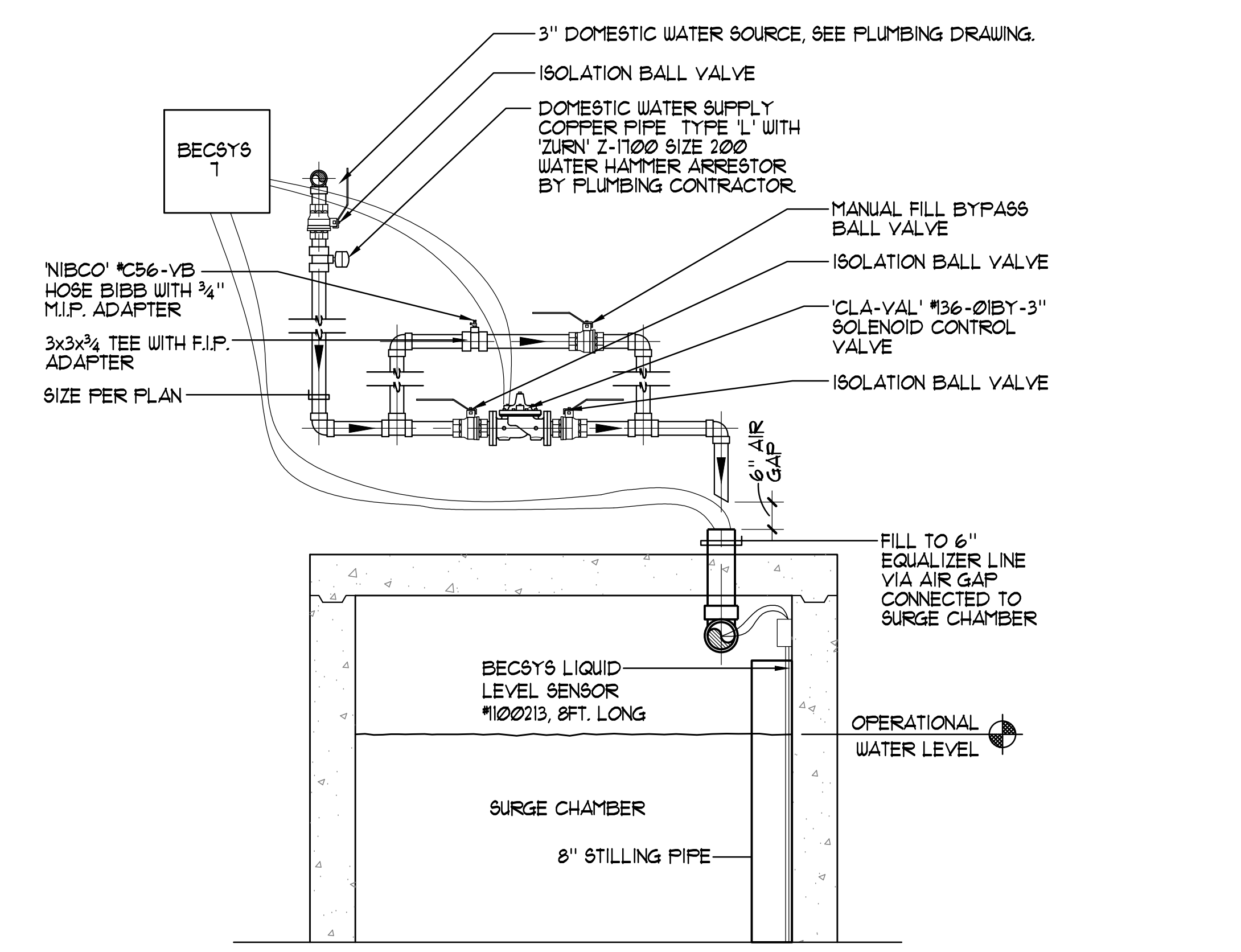
DESCRIPTION:	C/B/S	A	B	C	D	DESCRIPTION:	C/B/S
SP UNDERWATER LIGHTS	1	1200				AP FILTER AFC	1
AP UNDERWATER LIGHTS	3		580			AP PRESSURE AMP SYSTEM	4
AP/SPA UNDERWATER LIGHTS	5			430	1200	AP WATER CHEM. CONTROL	6
SPA WATER LEVEL CONTROL	7	380				AP WATER CHEM. RELAY	8
SP ELECTRICAL OUTLETS	9		380			AP CIRC. PUMP INTERCONN.	10
SPARE	11			720	580	AP CIRC. PUMP MOTOR CONTROL	12
SP FILTER AFC	13	1200				SPA CIRC. PUMP	14
SP PRESS. AMP PUMP	15		1200			2 HP	16
SP WATER CHEM. CONTROL	17			1200	900	SPA TIME CLOCK	20
SP WATER CHEM. RELAY	19	380				SPA WATER CHEM.	22
SP CIRC. PUMP INTERCONN.	21		380			SPARE	24
SP CIRC. PUMP CONTR.	23			380	720	CHLORINE FEEDS	28
SP U.V. SYSTEM	30/25	3080				ACID FEEDS	28
AP U.V. SYSTEM	2/27		3080			SP CO2 FEED	30
SPA U.V. SYSTEM	30/29			3000	912	3/4 HP	32
SPACE	2/31	3000				AP CO2 FEED	34
	20/33		1500			SPA CO2 FEED	36
	2/35			1500	912	3/4 HP	38
	37					3/4 HP	40
	39	912				SPARE	42
	41						
TOTAL PER PHASE		14204	13904	12924		16669 ± 120V • 139 AMPS	
+ 25% L.C.L.		2465	2570	2595			
TOTAL		16669	16474	15519			

① GFI CIRCUIT  
SP = SWIMMING POOL  
AP = ACTIVITY POOL  
SPA = HYDROTHERAPY SPA

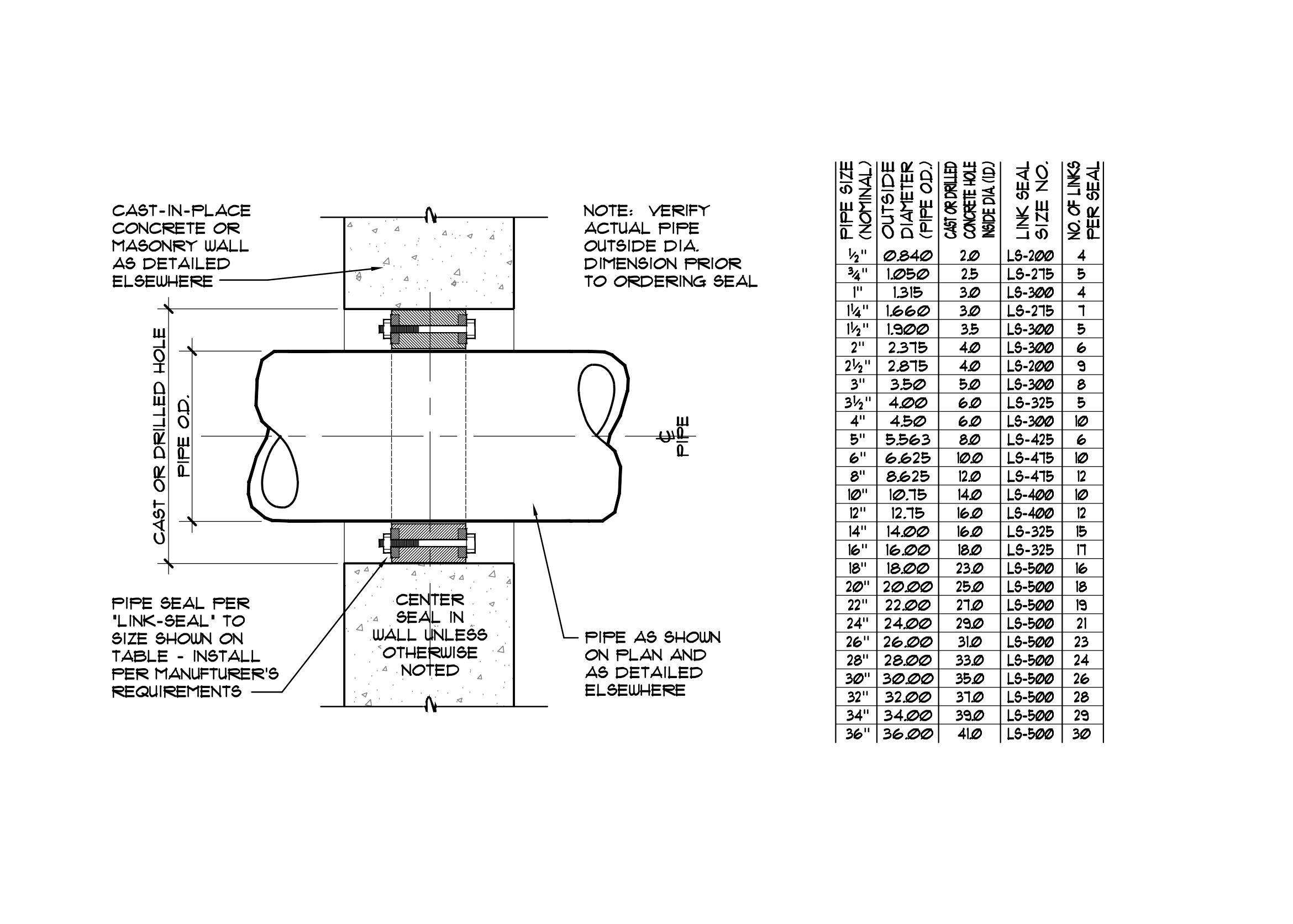


1 POOL MECHANICAL ELECTRICAL INTERCONNECTION DIAGRAM NO SCALE

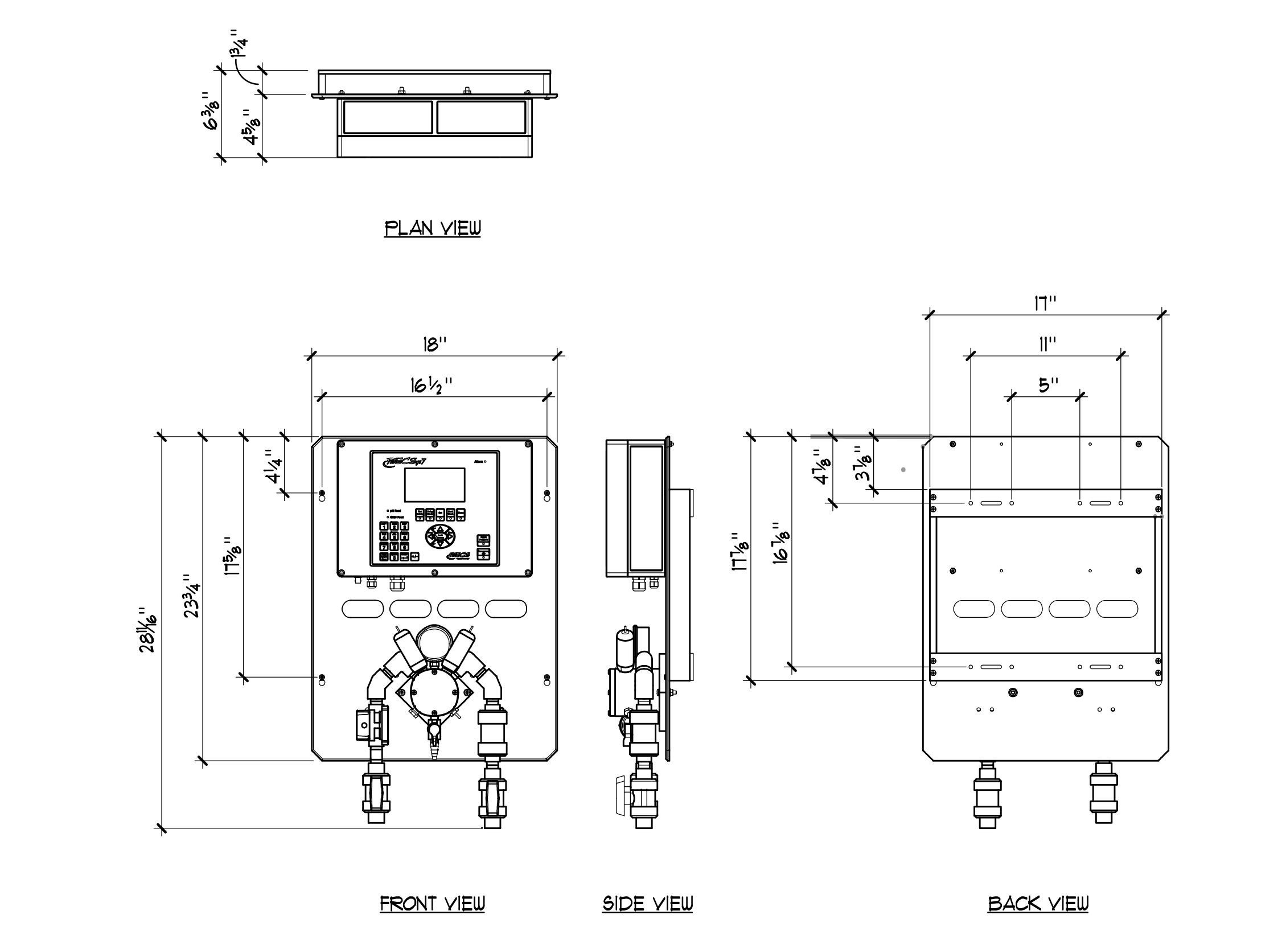
2 PANEL SCHEDULE NO SCALE



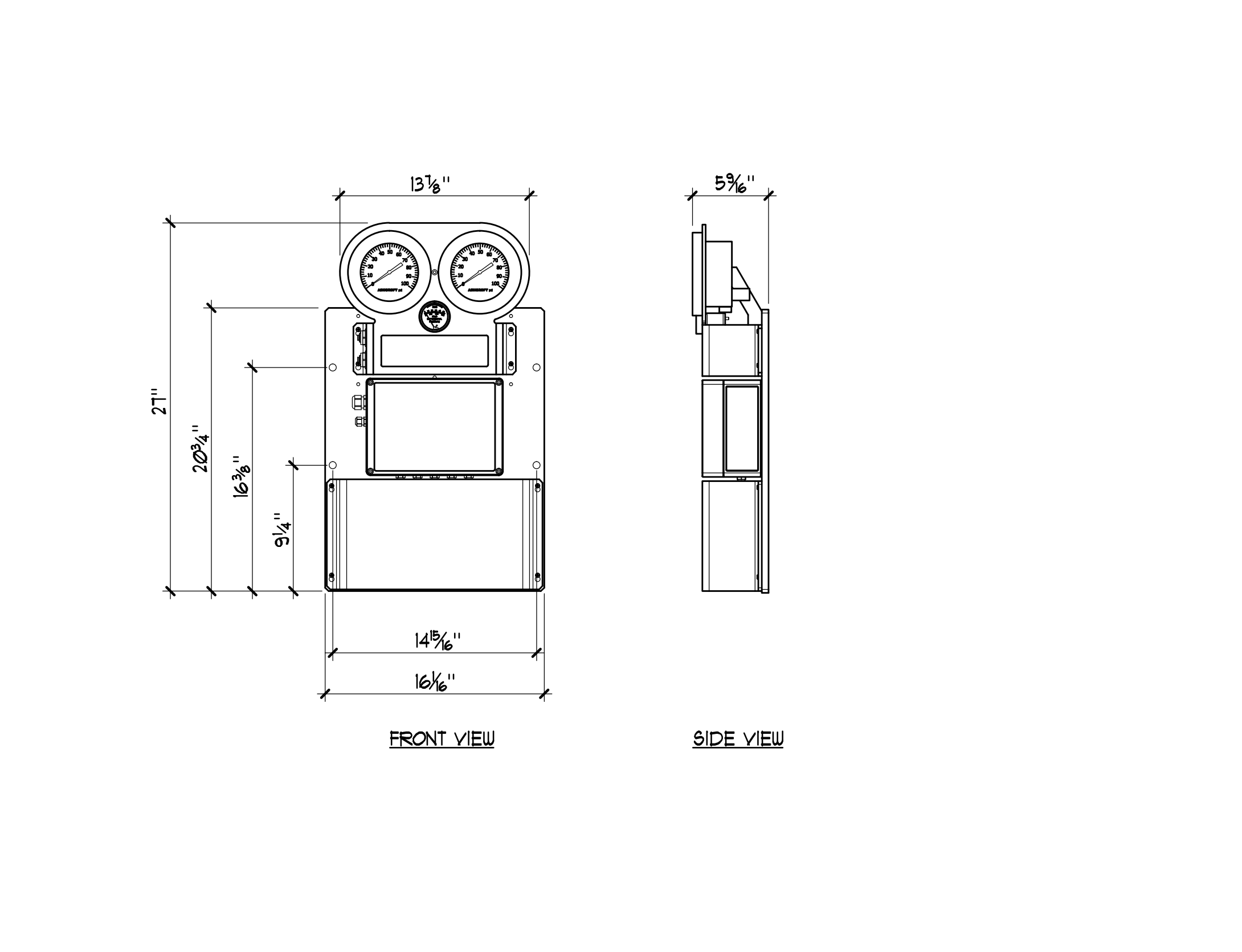
3 AUTOMATIC/MANUAL WATER MAKE-UP SCHEMATIC NO SCALE



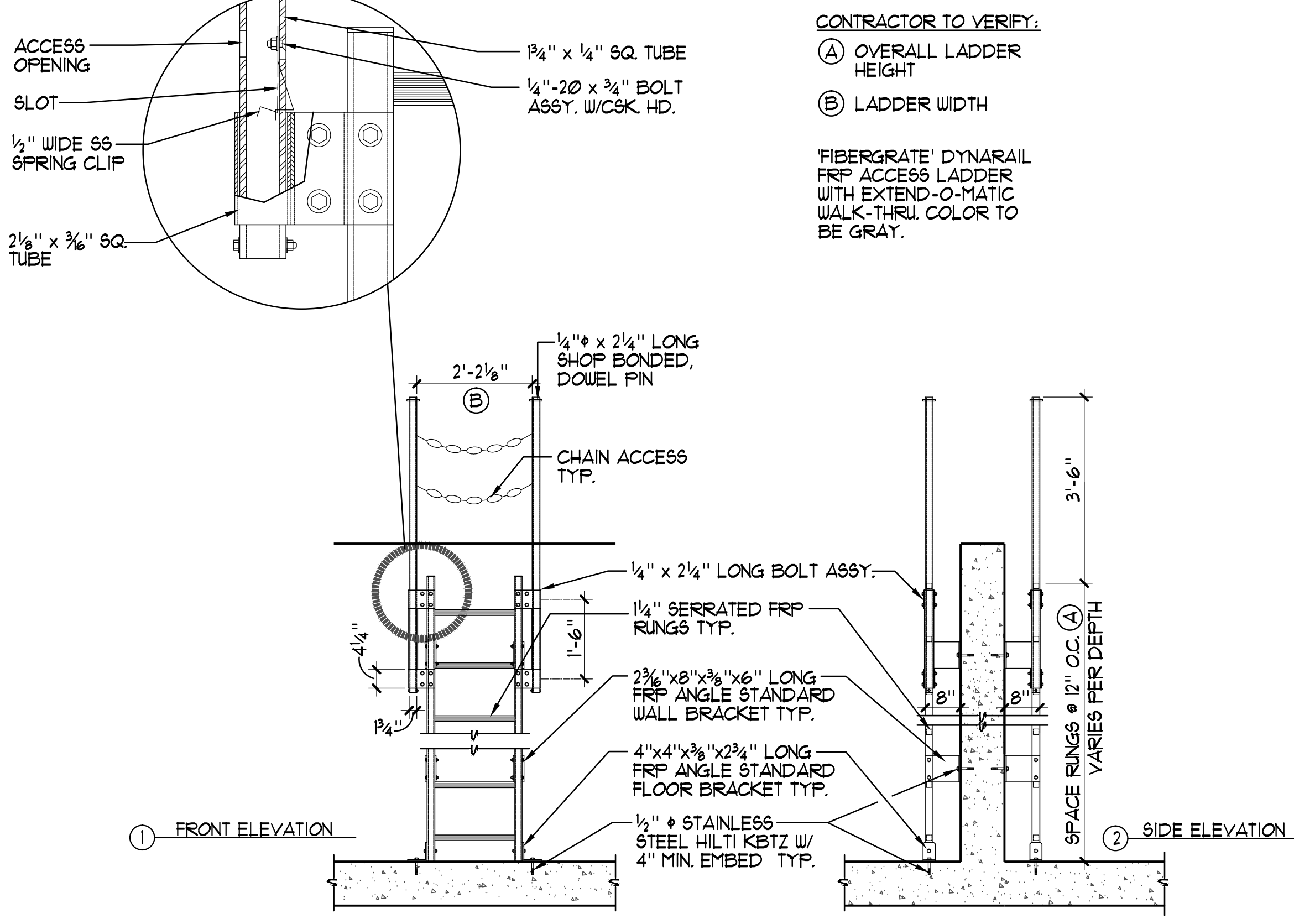
4 PIPE SEAL TO WALL / FLOOR NO SCALE



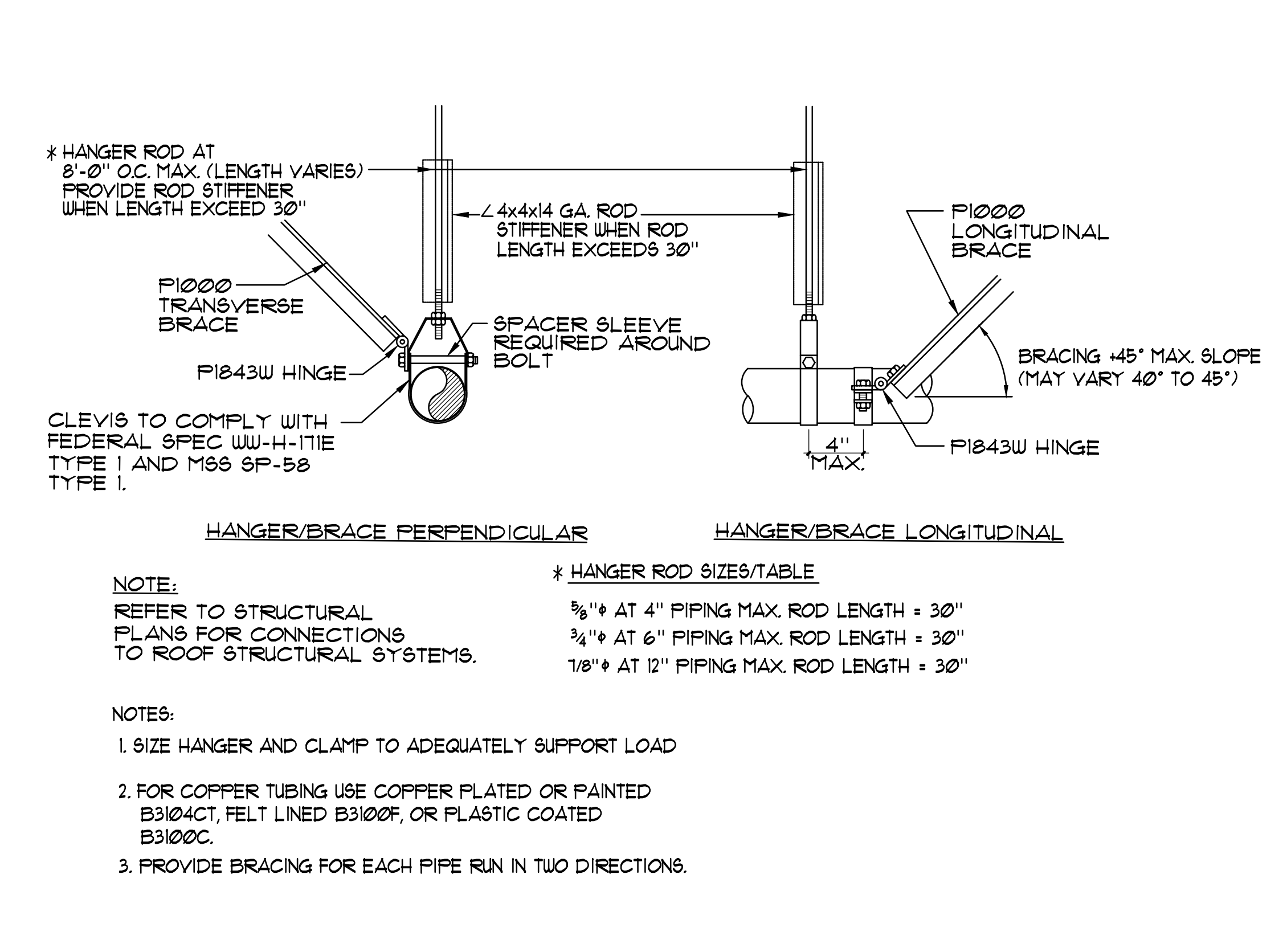
5 BECSYS 7 WATER CHEMISTRY CONTROLLER 1 1/2" x 1'-0"



6 BECSYS FILTER INTERFACE SYSTEM 1 1/2" x 1'-0"



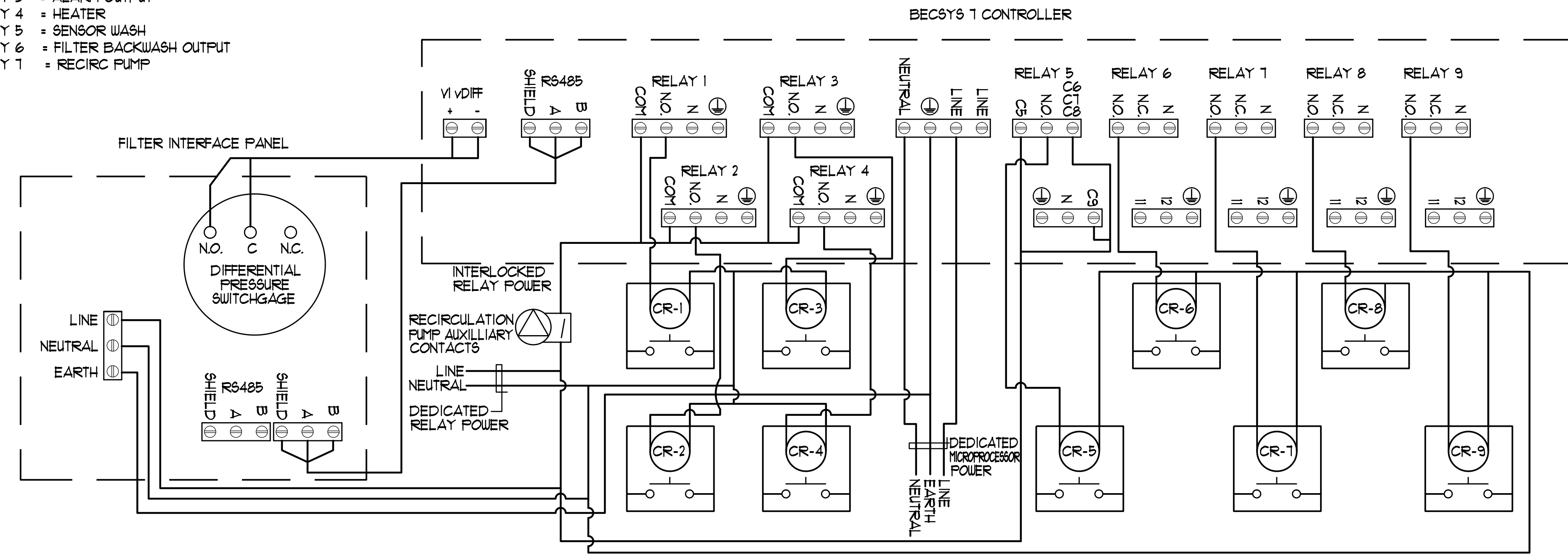
7 BACKWASH PIT ACCESS LADDERS 1 1/2" x 1'-0"



8 'UNISTRUT' PIPING HANGER/SUPPORT DETAILS NO SCALE

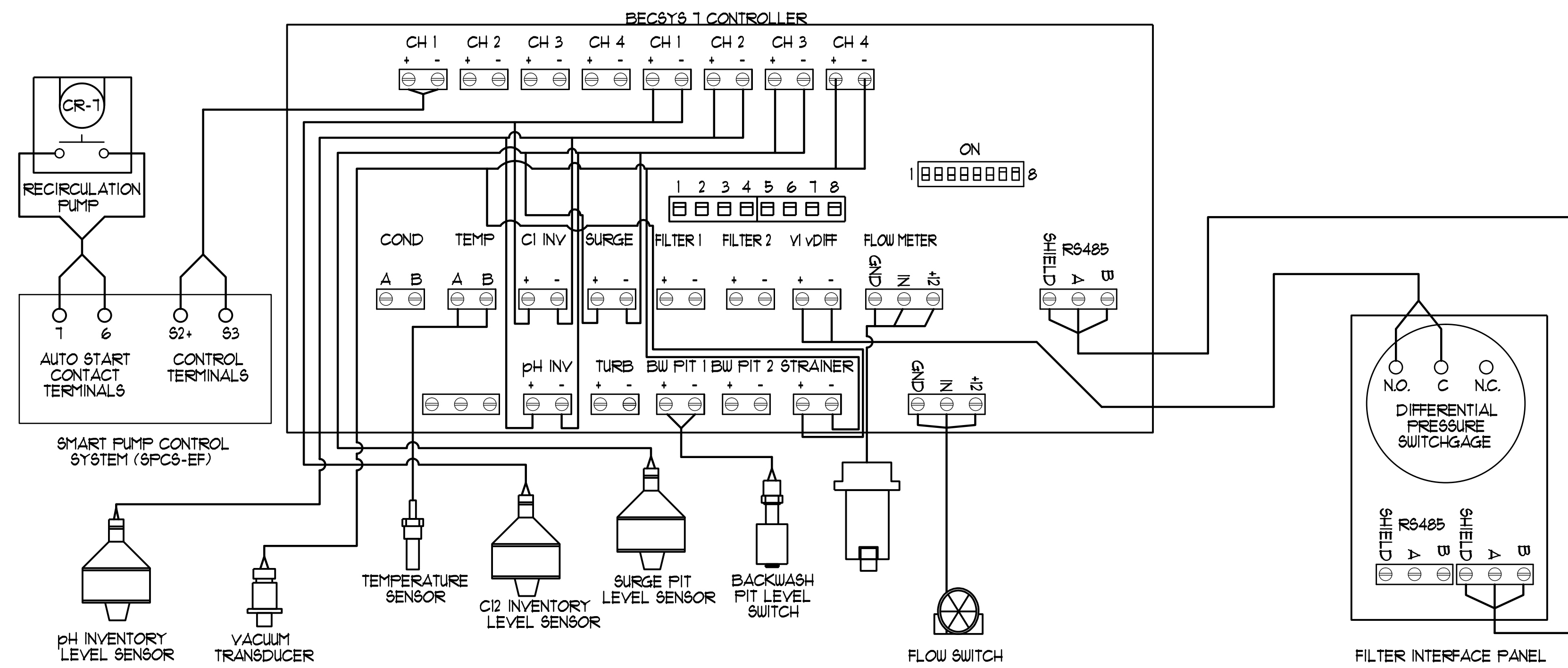


- RELAY LEGEND**  
 RELAY 1 = pH FEED  
 RELAY 2 = CHLORINE FEED  
 RELAY 3 = ALARM OUTPUT  
 RELAY 4 = HEATER  
 RELAY 5 = SENSOR WASH  
 RELAY 6 = FILTER BACKWASH OUTPUT  
 RELAY 7 = RECIRC PUMP



**BECSYS 7 CONTROLLER**

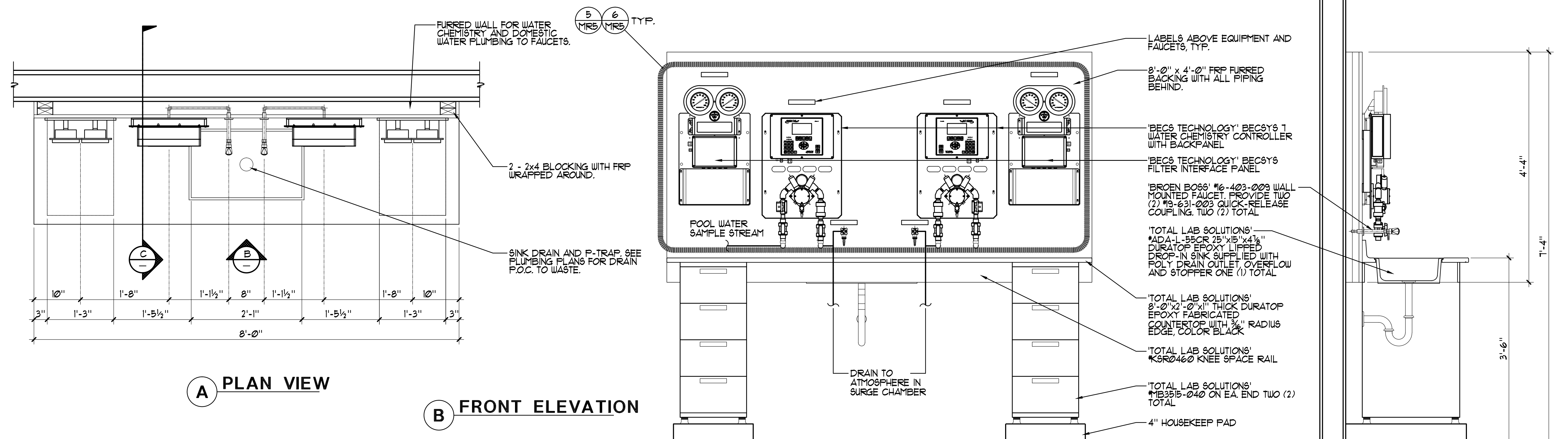
NO SCALE



**BECSYS 7 CONTROLLER**

NO SCALE

DETAIL NOT USED



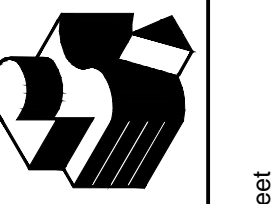
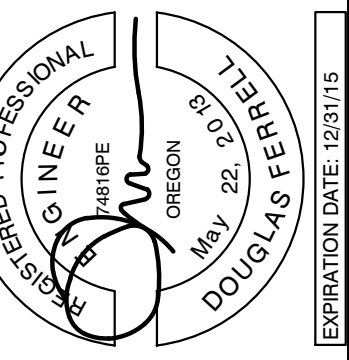
**A PLAN VIEW**

**B FRONT ELEVATION**

**C SIDE SECTION**

**POOL OPERATOR WORKSTATION DESK DETAIL**

1"=1'-0"



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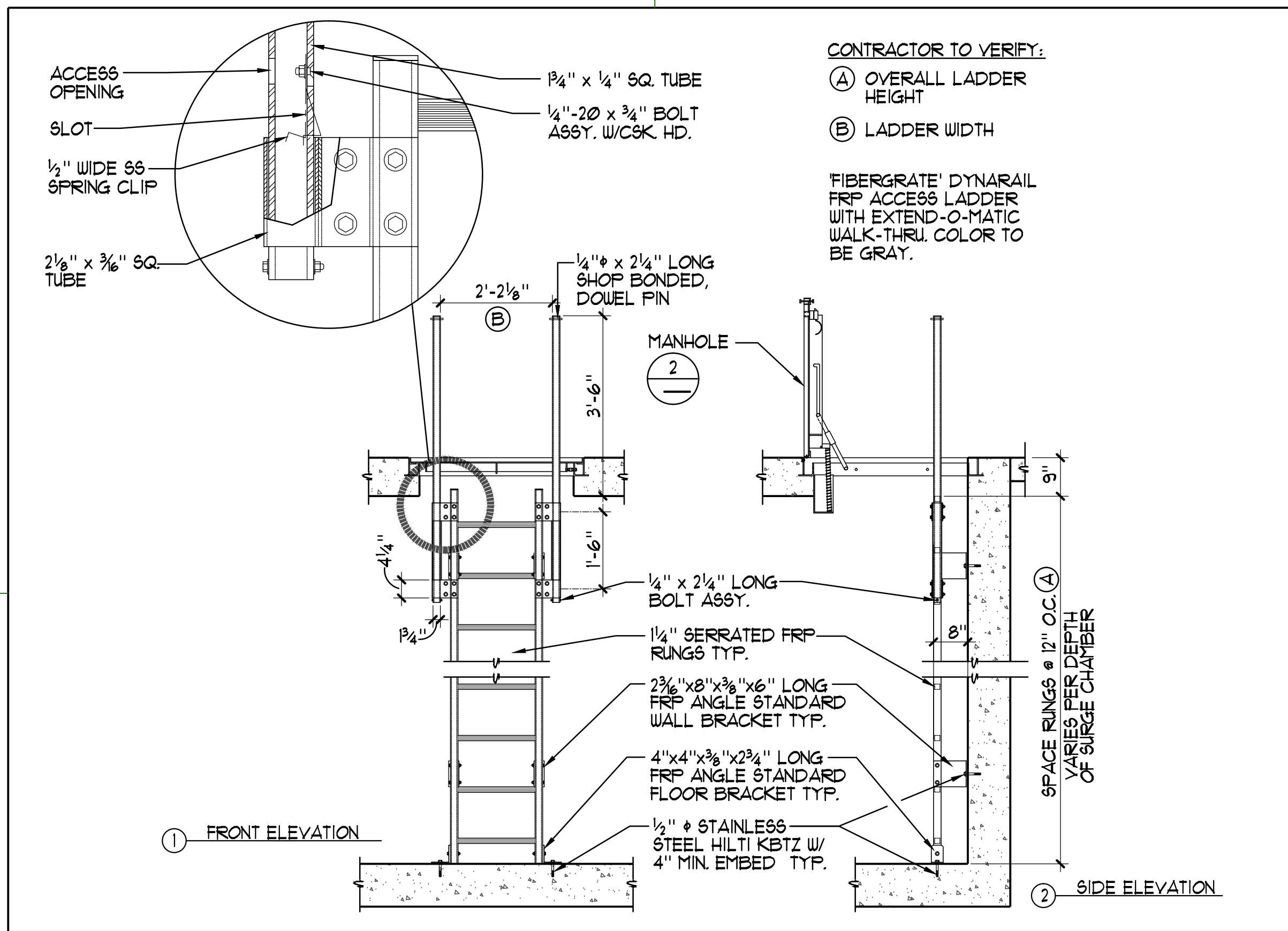
AQUATIC  
 DESIGN GROUP  
 132 East Broadway, Suite 540  
 Eugene, Oregon 97401  
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 Fax 760.438.8335

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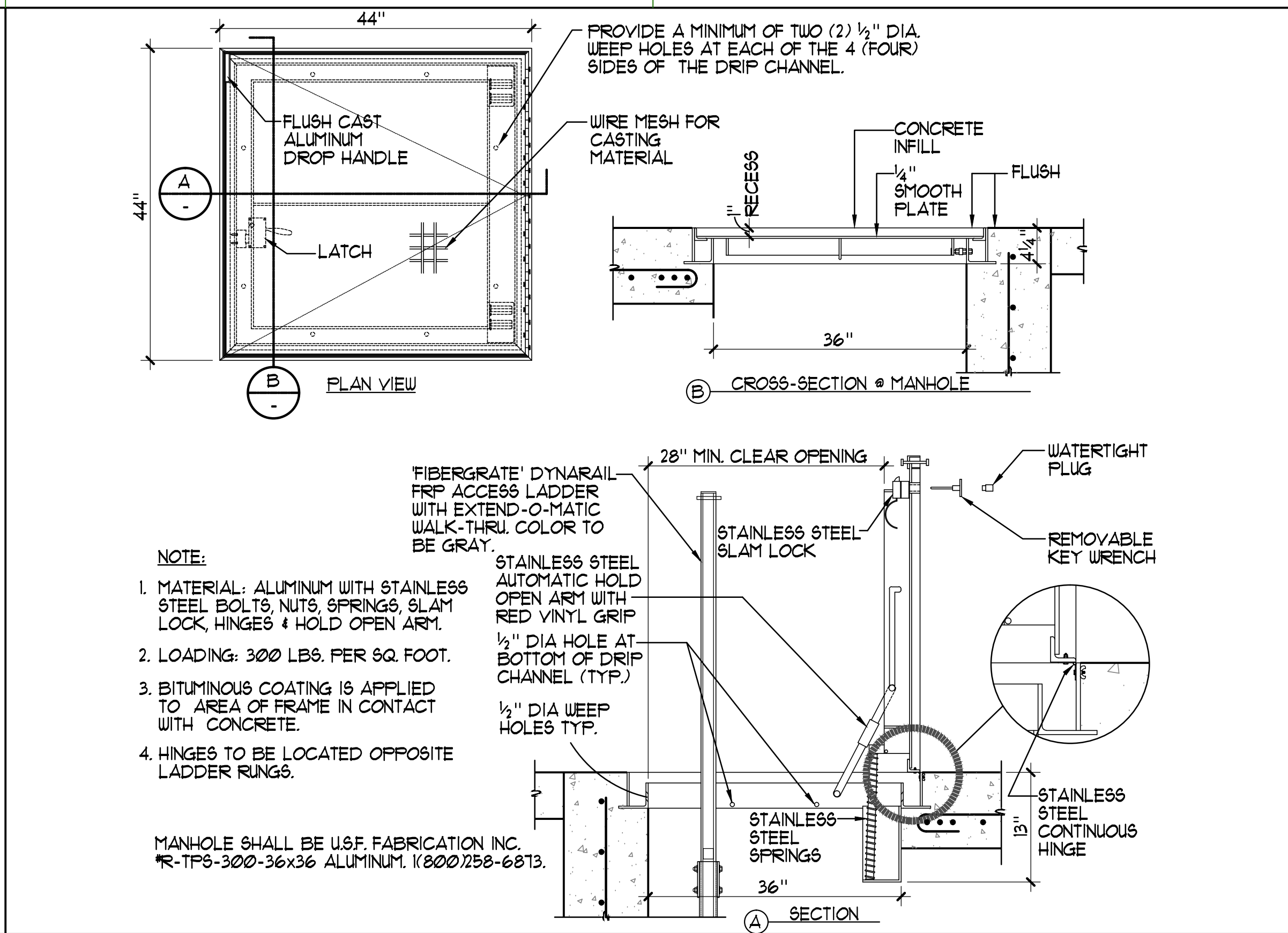
Drawn By	NFC
Checked	SJF
Date	17 JUNE 2015
Project	1419

MR6

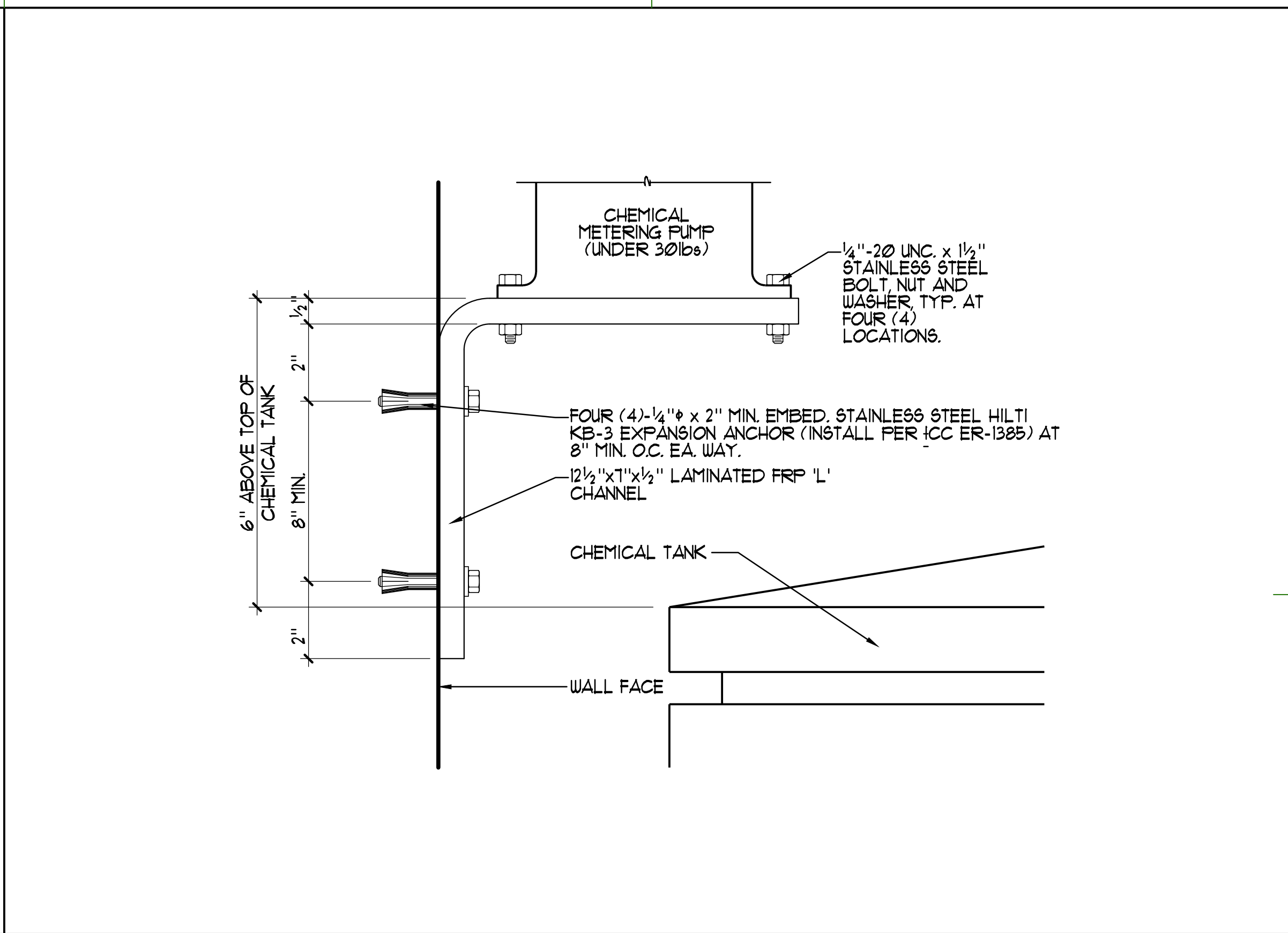




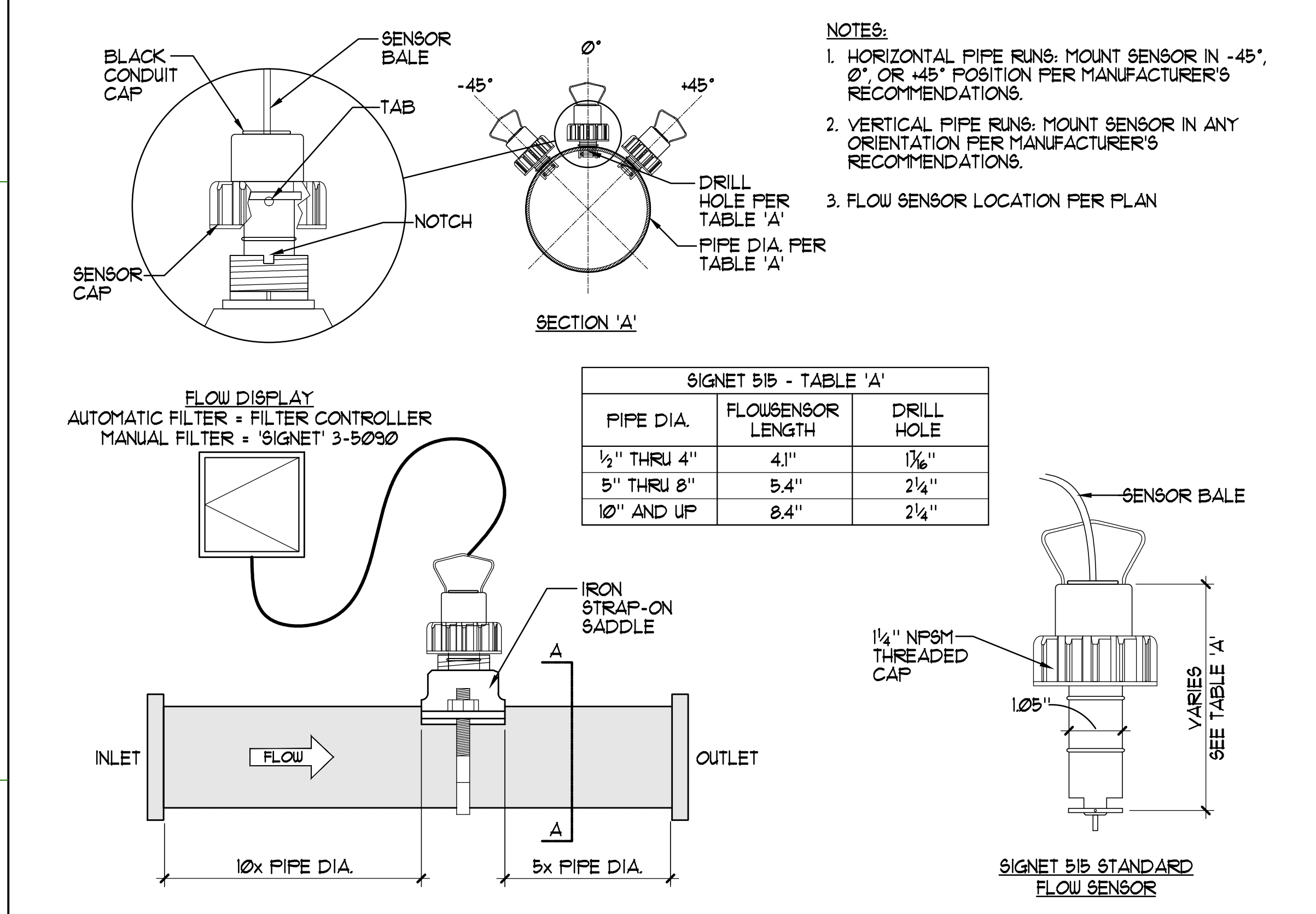
1 SURGE CHAMBER ACCESS LADDER 1/2" = 1'-0"



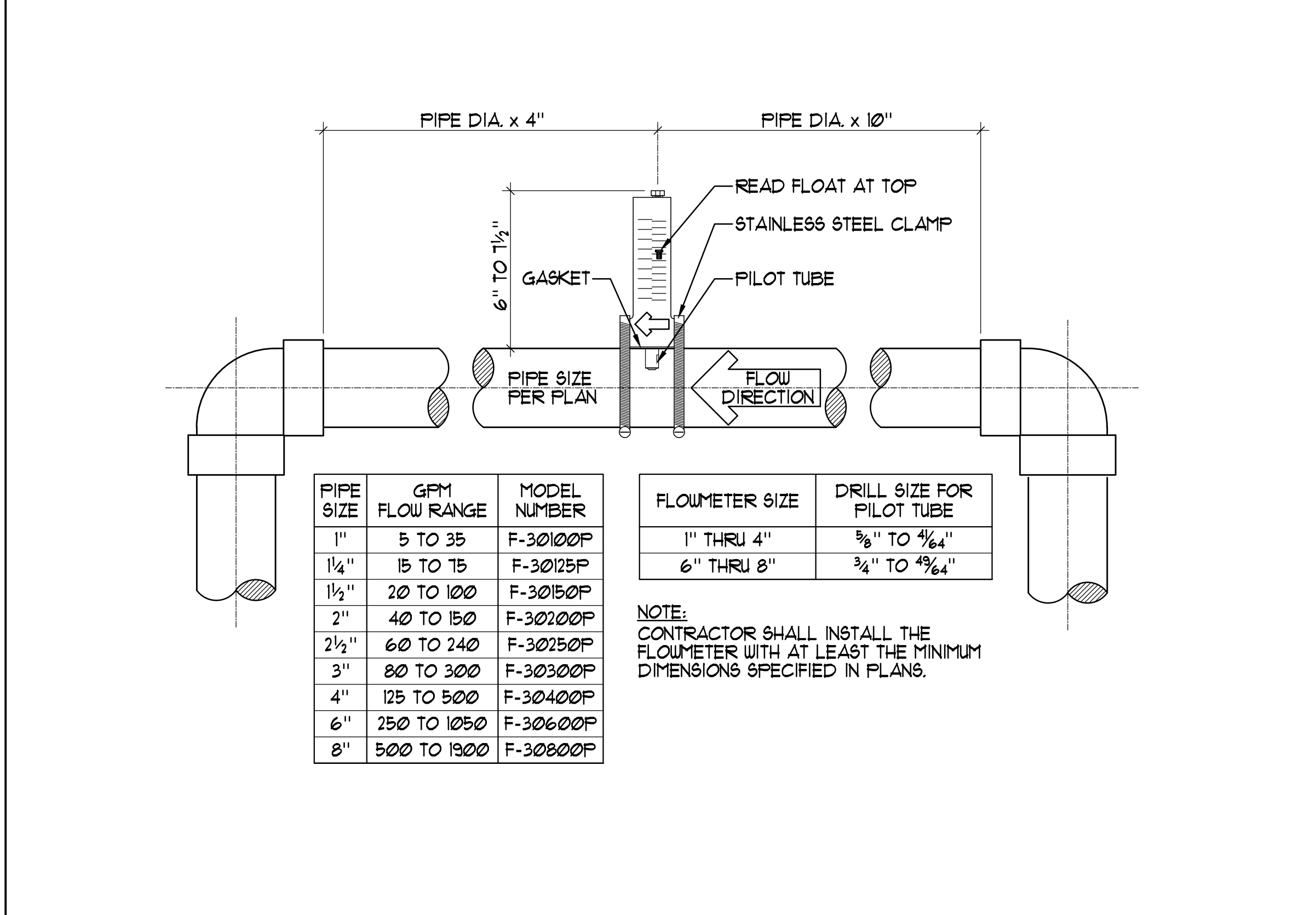
2 SURGE CHAMBER ACCESS COVER 1" = 1'-0"



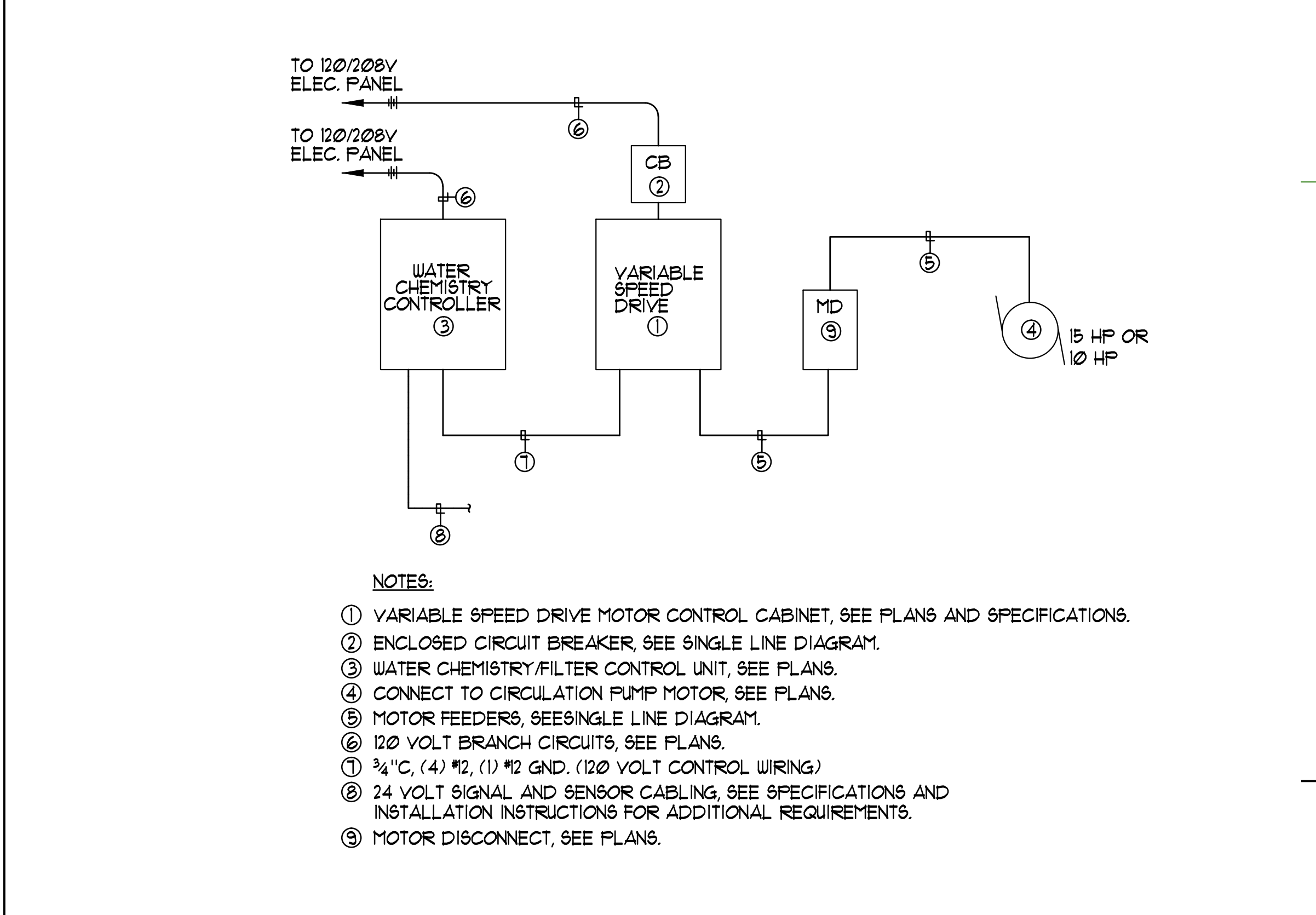
3 CHEMICAL PUMP SHELF 6" = 1'-0"



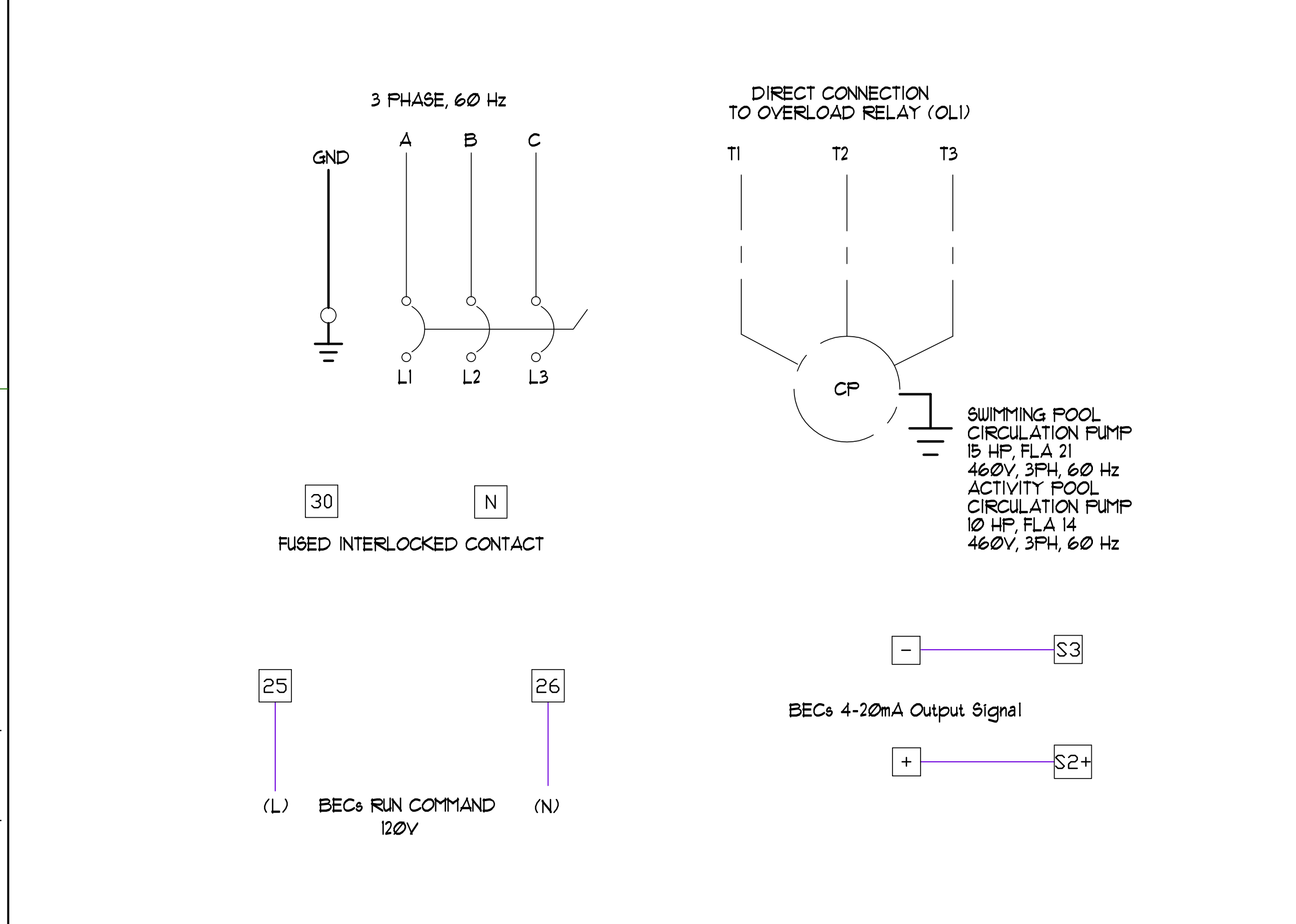
4 SIGNET FLOWMETER NO SCALE



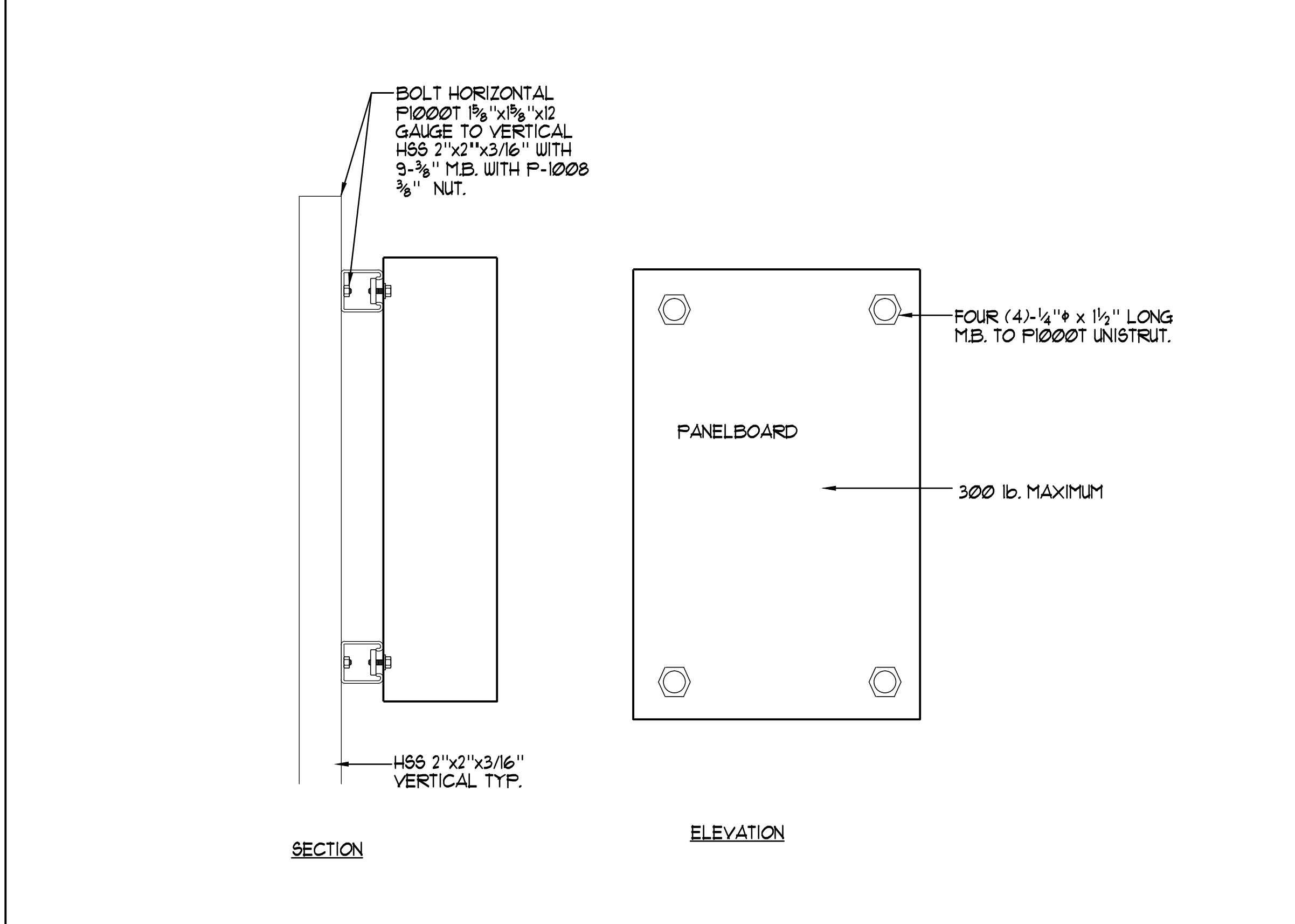
5 BLUE-WHITE FLOWMETER 3" = 1'-0"



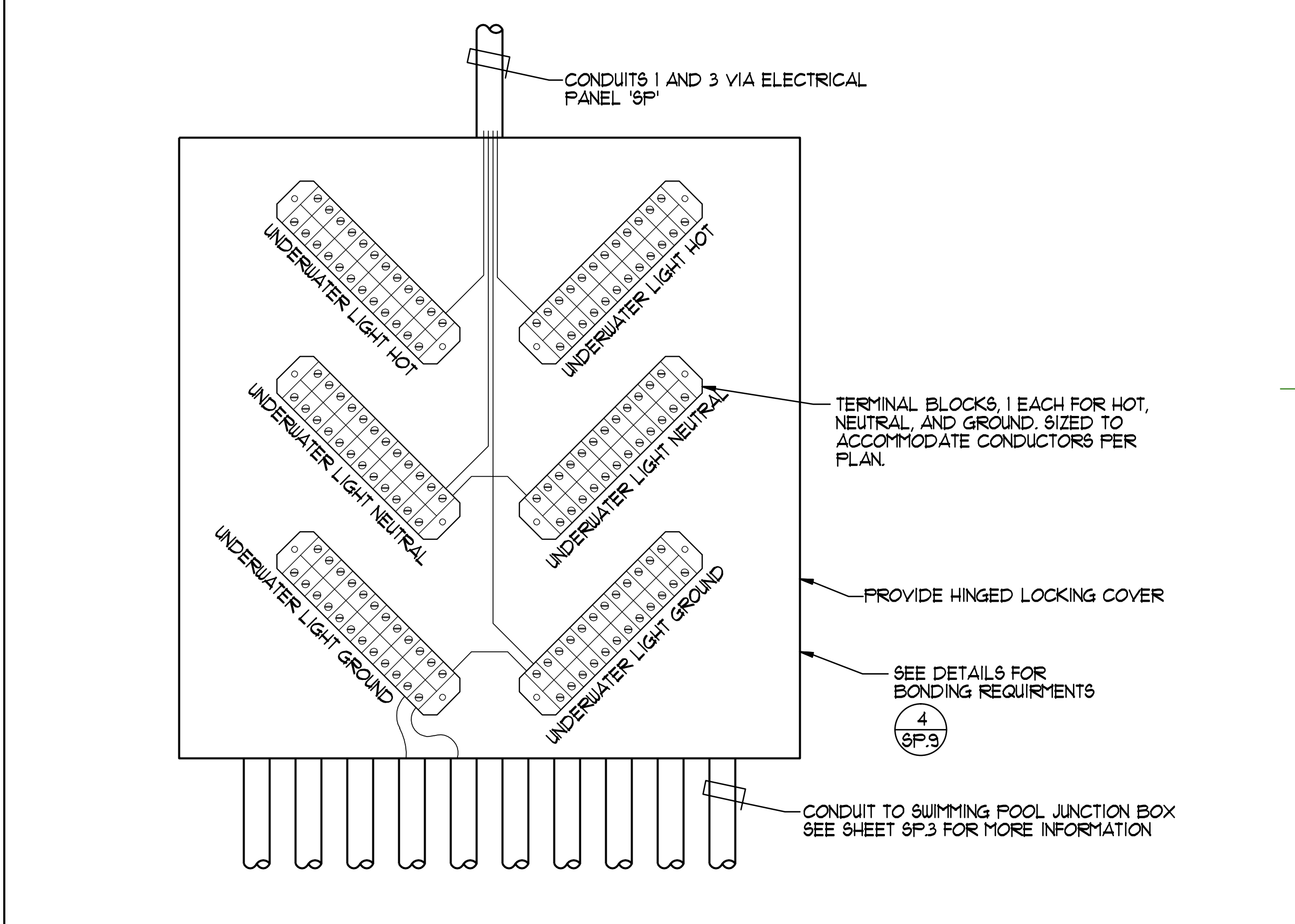
6 TYPICAL WIRING SCHEMATIC AT SPCS UNIT NO SCALE



7 'SPCS' EKO-FLEX FIELD CONNECTION DIAGRAM NO SCALE



8 VARIABLE FREQUENCY DRIVE PANEL MOUNTING DETAIL NO SCALE



9 UNDERWATER LIGHT CONNECTION PANEL NO SCALE

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 REGISTERED PROFESSIONAL ENGINEER  
 STATE OF OREGON  
 DOUGLAS M. ROBERTSON  
 EXPIRES DATE 12/31/15

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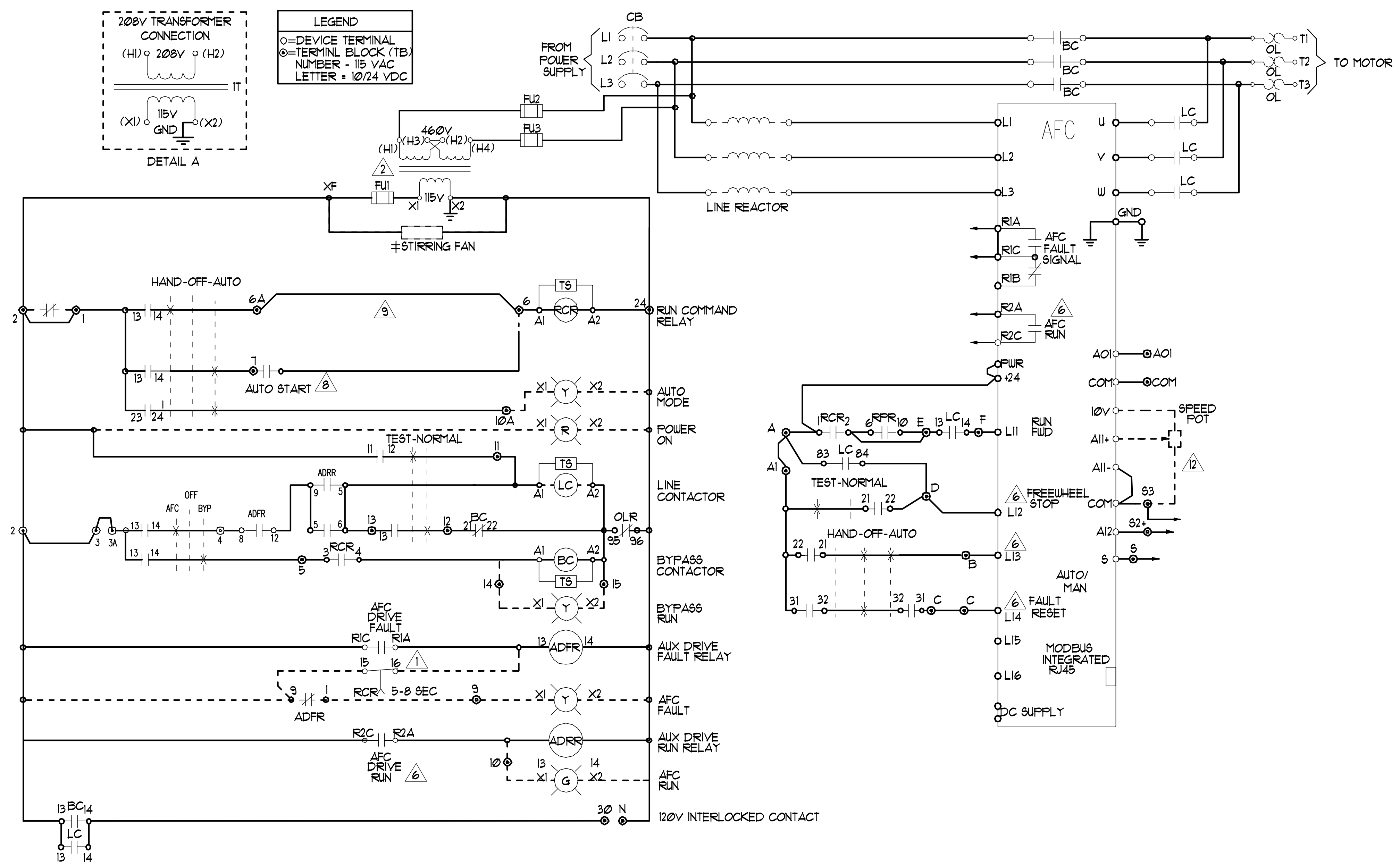
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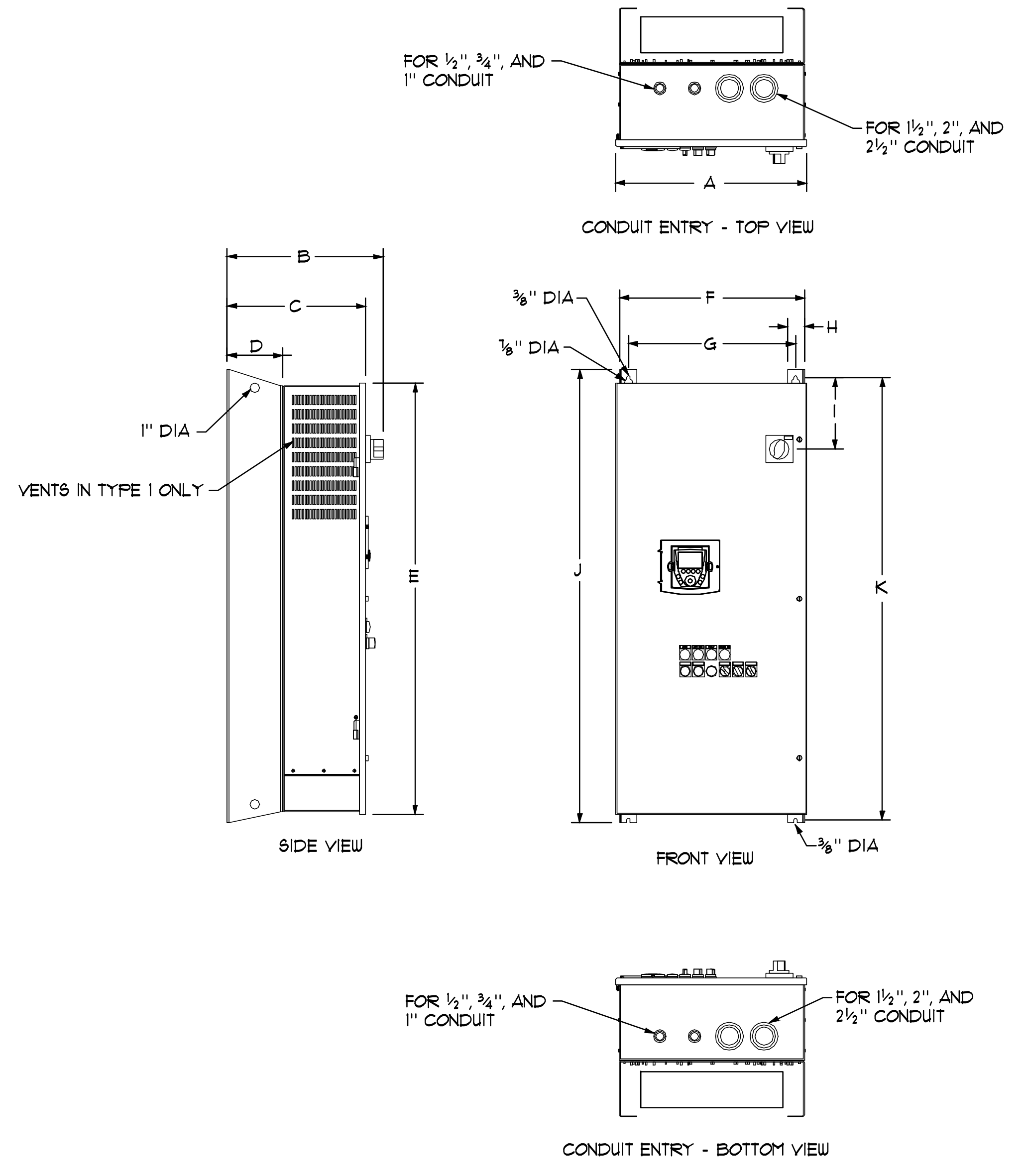
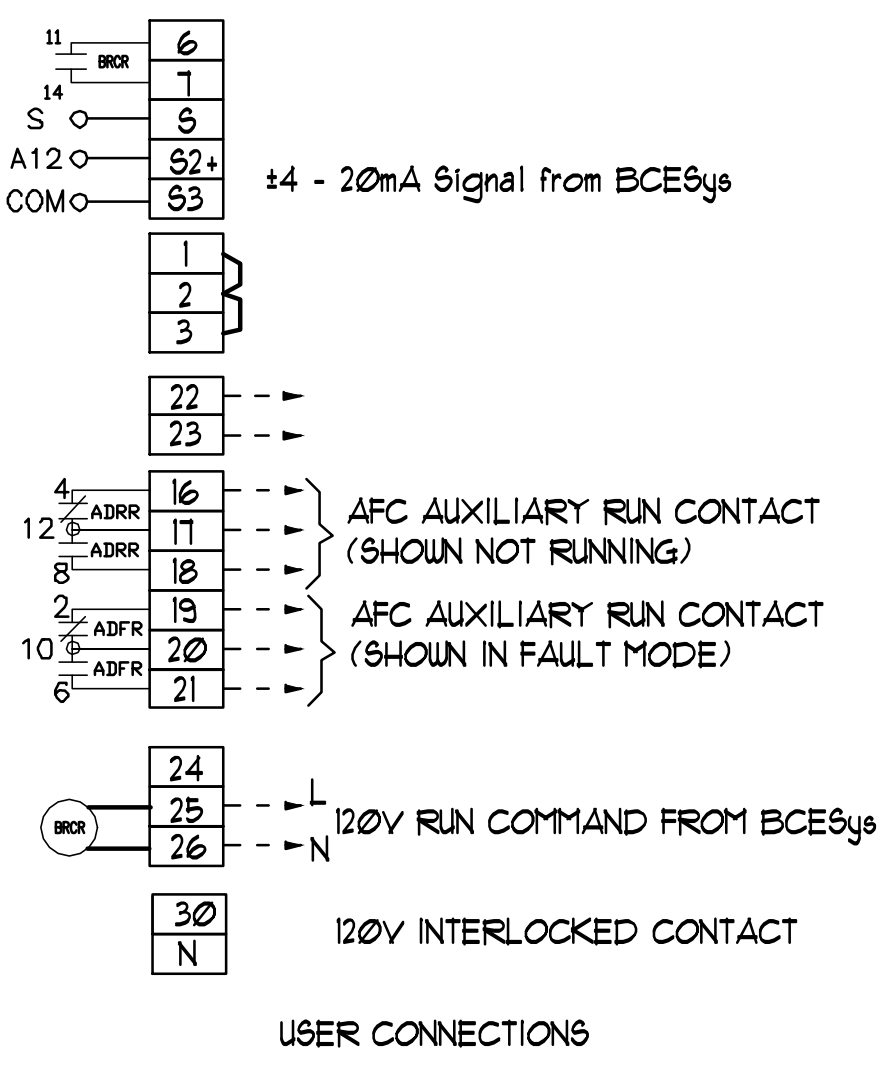




- NOTES:
- ⚠ RCR TIMED CONTACT USED ONLY IF LINE CONTACTOR IS SUPPLIED
  - ⚠ CONTROL TRANSFORMER SHOWN FOR 460V PRIMARY. FOR 230V PRIMARY, JUMPER H2-H3 IS REMOVED AND JUMPERS H1-H3, AND H2-H4 ARE INSTALLED. FOR 208V PRIMARY, REFER TO DETAIL A.
  - ⚠ PROGRAMMED I/O SEE CONTROLLER FUNCTION CONFIGURATION TABLE.
  - ⚠ BECS RUN COMMAND RELAY (BRCR)
  - ⚠ JUMPER USED WHEN START-STOP PUSH BUTTONS NOT USED.

MENU	No	SUB-MENU	DESCRIPTION	CODE	ADJ.
SIM	11	----	2/3 WIRE CONTROL	tCC	2C
SIM	11	----	PUMPS FANS	CFG	FXF
SIM	11	----	STANDARD MOT. FREQ (HZ)	bFr	60
SIM	11	----	ACCELERATION (SEC)	ACC	10
SIM	11	----	DECELERATION (SEC)	dEC	10
SIM	11	----	LOW SPEED (HZ)	LSP	3
SIM	13	----	SWITCHING FREQ. (HZ)	SCr	8
I - O	15	----	2 WIRE TYPE	tCl	LEL
I - O	15	AI2 CONFIG.	AI2 MIN. VALUE (mA)	Cr12	4
I - O	15	R2 CONFIG.	R2 ASSIGN - DRIVE RUNNING	r2C	rUn
CL	16	----	REF. 1 CHAN	FRI	H11
CL	16	----		FRI	A11
CL	16	----	PROFILE	CHCF	SEP
FL	17	STOP CONFIG.	FREEWHEEL STOP ASSIGN	nSt	L12
FL	17	REFERENCE SWITCH	REF. IB SWITCHING	rCb	L13
FL	17	REFERENCE SWITCH	REF. IB CHAN	rIb	A12
FL	18	FAULT RESET	FAULT RESET	rSF	L14
FL	18	CATCH ON THE FLY	CATCH ON THE FLY	FLR	YES
FL	18	OUTPUT PHASE LOSS	OUTPHASE LOSS	FDL	NO
COM	19	FORCED LOCAL	FORCED LOCAL ASSIGN.	FL1	L14

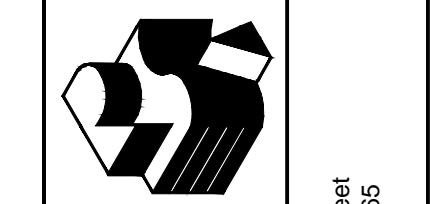
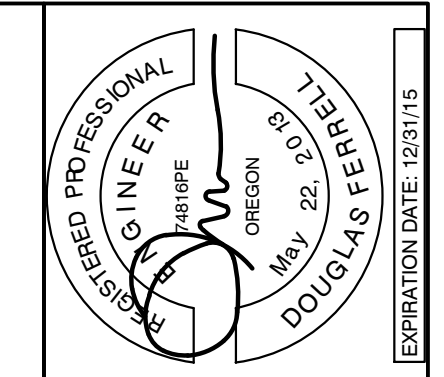
DESCRIPTION	TYPE 1	TYPE 12K	TYPE 3R
± STIRRING FANS	10-100 HP 460V, 15-50HP 208/230V	10-100 HP 460V, 15-50HP 208/230V	NA
± VENTILATION FAN	NA	NA	ALL HP
± SPACE HEATER	NA	NA	ALL HP



NOTE:  
 PROVIDE AT LEAST 3" OF MOUNTING CLEARANCE ON EACH SIDE OF THE DRIVE CONTROLLER  
 PROVIDE AT LEAST 6" OF MOUNTING CLEARANCE ON EACH TOP AND BOTTOM OF THE DRIVE CONTROLLER

'SPCS' EKO-FLEX SIZING TABLE													
HP	HP	WEIGHT	DIMENSIONS										
460V	208/230V	LBS	A	B	C	D	E	F	G	H	K		
1 TO 7.5	1 TO 5	83	14.16"	13.93"	12.08"	3.01"	37.38"	14.25"	12.30"	1.86"	6.11"	35.00"	33.75"
10 TO 25	7.5 TO 10	126	20.00"	13.93"	12.08"	3.01"	38.38"	19.49"	17.54"	1.86"	7.65"	41.00"	39.75"
30 TO 50	15 TO 25	177	20.65"	16.83"	14.83"	6.00"	46.64"	20.00"	18.04"	1.86"	7.75"	49.02"	47.83"
60 TO 100	30 TO 50	211	25.65"	16.83"	14.98"	6.00"	60.38"	25.00"	23.04"	1.86"	15.52"	63.00"	61.81"

2 'SPCS' EKO-FLEX ENCLOSURE DIMENSIONS NO SCALE

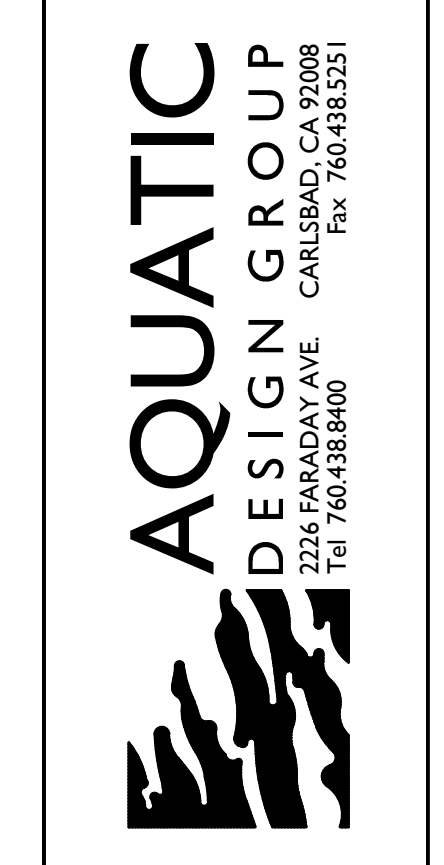


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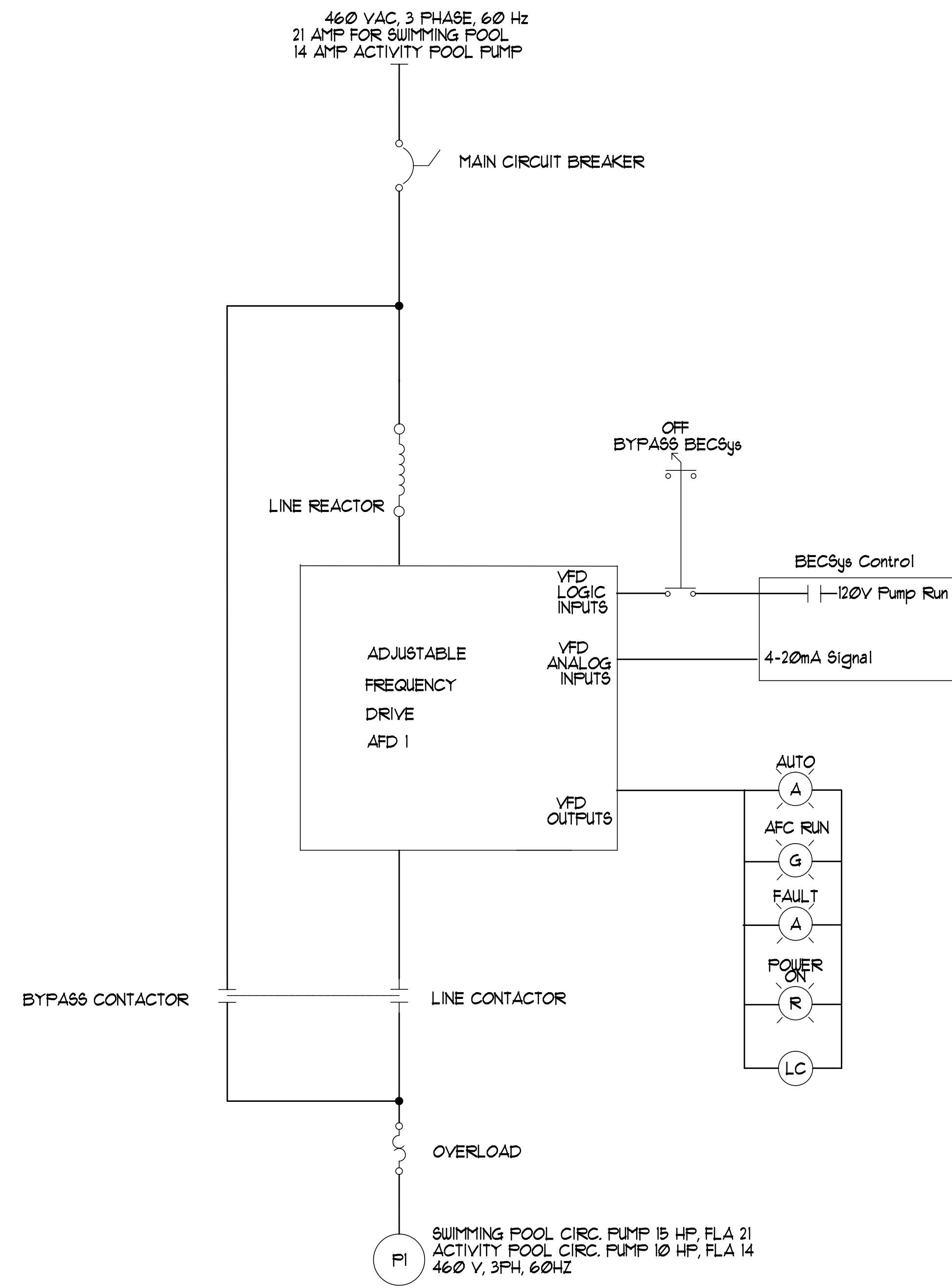


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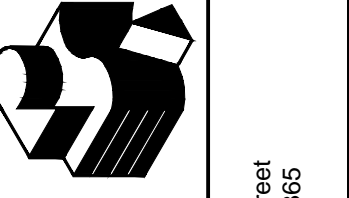
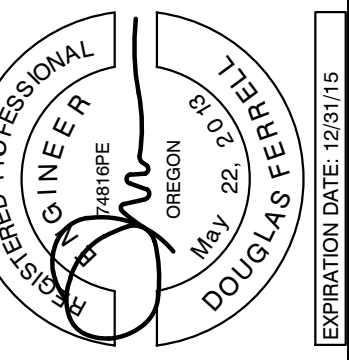
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1 'SPCS' EKO-FLEX SINGLE LINE DIAGRAM NO SCALE



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