

The Signature at West Pryor Lee's Summit, MO

RELEASED FOR
CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
03/28/2022

PROJECT INFORMATION

STATE: Missouri
COUNTY: Jackson
CITY: Lee's Summit
TYPE: Inground pool, non-diving
SCOPE: Single body pool
CONSTRUCTION METHOD: Concrete
SANITATION: Intellichem with acid and chlorine injection
COVER: YES - Winter Safety Cover
HEATED: NO

PROJECT TEAM

MIDWEST CUSTOM POOLS

GLEN WESTERVELT, PRESIDENT
785.766.1111
GLEN@MIDWESTCUSTOMPOOLS.COM

ERIK MILLER, PROJECT MANAGER
785.304.0171
ERIK@MIDWESTCUSTOMPOOLS.COM

GENERAL NOTES

- > ANY CHANGES IN CONSTRUCTION PLANS OR EQUIPMENT MUST BE APPROVED BY THE GOVERNING HEALTH DEPARTMENT. CHANGES MAY REQUIRE ADDITIONAL PLAN CHECK FEES AND RE-SUBMITTAL.
- > POOL PLAN APPROVAL DOES NOT AUTHORIZE THE VIOLATION OF ANY LAW, ORDINANCE, OR REGULATION AND FINAL APPROVAL IS SUBJECT TO FIELD INSPECTION.
- > ALL EQUIPMENT SHALL BE INSTALLED PER MANUFACTURER'S INSTRUCTIONS.
- > ALL EQUIPMENT AND MATERIALS NOT SHOWN OR SPECIFIED ON THESE PLANS, BUT REQUIRED TO COMPLETE THIS PROJECT, SHALL BE SUPPLIED BY THE POOL CONTRACTOR AS PART OF THIS CONTRACT WORK.

LOCATION MAP



POOL DATA

PERIMETER: 183 - FT
SURFACE AREA: 1667 - SQFT
APPROXIMATE VOLUME: 27,715 - GALLONS
MINIMUM TURN OVER: 6 - HOURS
MINIMUM FLOW RATE: 76.98 - GPM
MAXIMUM FLOW OF PUMP: 120 - GPM
MINIMUM DEPTH OF POOL AT SUN-LEDGE: 0' - 6"
MAXIMUM DEPTH OF POOL AT DRAIN: 4' - 0"

CODE COMPLIANCE

- > ANSI POOL AND SPA STANDARD TO PREVENT SUCTION ENTRAPMENT
- > VIRGINIA GRAEME BAKER SAFETY ACT
- > JACKSON COUNTY ENVIRONMENTAL SANITARY CODE ISPSC 2018
- > JACKSON COUNTY CODE OF REGULATIONS FOR BUILDINGS AND CONSTRUCTION.

SHEET INDEX

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600 Lincoln Street
Lawrence, KS 66044
P: 785.843.9119
F: 785.843.6524
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2100 & 2150 NW LOWENSTEIN DR.
LEE'S SUMMIT, MO 64081

Plan Date:

01.2022

Drawn By: EM

SHEET NO.

P0.00

03/28/2022

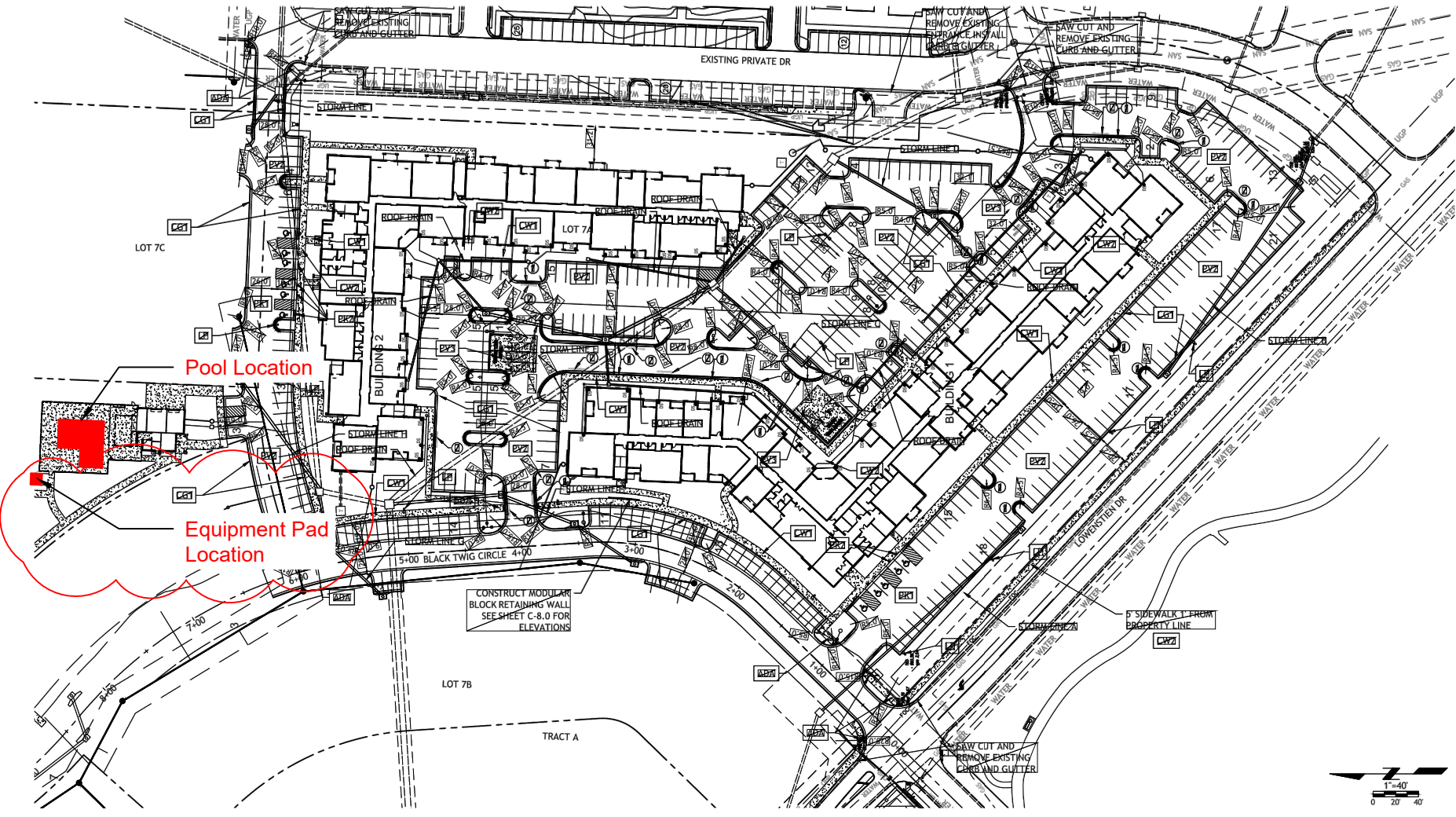
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P1.00



A Site Plan

Scale: N.T.S.

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P2.00

Reviewer requested to change pump type in first review to match building voltage.
From pool contractor: We can't change the pump to get something that will run off of 208 Voltage and still have a VS pump. The Electrician will need provide a buckboost transformer to change the voltage for that pump from 208 to 240. Not aware of a VS pump that will run on 208. Energy codes have pretty much eliminated single speed pump production. May be able to get a single speed 3 HP pump, and they are cheaper, however they hammer the piping so much when they start and stop it is not advisable to use them.

Equipment						
Equipment Name	Manufacturer Part#	Warehouse Part#	Qty	Power Requirements	Hookup Responsibility	Notes
2"-2.5" FloVis Flow Gauge	FV-C	EMO-56-1000	1	N/A	MCP	
Hayward Skimmer	SP1082	HAY-25-1641	5	N/A	MCP	
Intellichem	522578	PAC-45-0596	1	110V 5A	MCP - Plumbing Electrician - Hookup	
2"-2.5" 3-Way Diverter Valve	263028	PAC-56-4102	5	N/A	MCP	
36" Sand Filter - TR140C	140316	PAC-05-708	1	N/A	MCP	
2"S Hiflow sand/quad DE SM Multiport Valve	261050	PAC-06-245	1	N/A	MCP	
3 HP Intelliflo VSP	011056	PUR-10-1662	1	230 V 20 amp breaker must be Siemens GFI breaker	MCP - Plumbing Electrician - High Voltage	Will not work on 208 VAC
Black Plastic 5-Hole J-Box	PJB4175	INT-57-110	3	N/A	MCP	
300W Transformer	PX300	INT-30-745	1	300W 120 VAC 3 A Max	MCP - Low Voltage Electrician - High Voltage	
Globrite Led Lights	602055	AMP-30-7002	9	15W 12V	MCP	
Spectrum Aquatics ADA Chair Lift w/ Battery Power	153121	SPM-42-8516	1	110 VAC (Charger Only)	MCP	
Levelor - Autofill	25514-000-000	SPG-56-5000	1	N/A	MCP	Back-flow Preventor By Others
Buck Boost Transformer	PH488489	MT-BBT	1	208V Primary - 240V Secondary, 23.4 Amps, 50/60Hz	To be provided and installed by Electrician	Install to increase voltage from 208 to 240

A Equipment schedule

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P3.00

Flow Calculations Signature at West Pryor		
Pump(s)	1	Pentair Intelliflow
Pool Capacity GALLONS	27,715	
Required Turn Over (6 hours or 4 times per day)	4	
Required Gallons Per 24 Hours	110,860	
Required Gallons Per Hour	4619.167	
Required Gallons Per Minute	76.98611	
Required Per Pump	76.98611	
Filter(s)	1	Pentair TR140-C
Filter Sq Ft (Each)	7.06	
Filter rate per Gallon	10.90	
Filter rate at max pump (sq ft per Gallon)	17.00	
Max Pump Flow GPM	120	From Pump Chart (see Submittals)
Max Velocity Suction Required	6 FPS	From Jackson County Code
Max Velocity at Max Pump Flow Feet Per Second (Suction)	5.45	https://www.engineeringtoolbox.com/pipe-velocity-d_1096.html
Max Velocity Return Required	8 FPS	From Jackson County Code
Max Velocity at Max (Return)	7.84	
Minimum Pipe Size Suction	3"	
Minimum Pipe Size Return	2.5"	
Minimum Pipe Size Suction (after first tee on suction)	2"	
Minimum Pipe Size Return (after first tee on return)	2"	
Max Flow Requirements for Main Drain - Gallons Per Minute	120	
Max Flow Requirements for Main Drain Specified		
Floor Gallons Per Minute	308	
Wall Gallons Per Minute	212	
Main Drain Specified	25506-320-000	32" Unblockable main drain. 2.5" outside connections

A Flow Calculations

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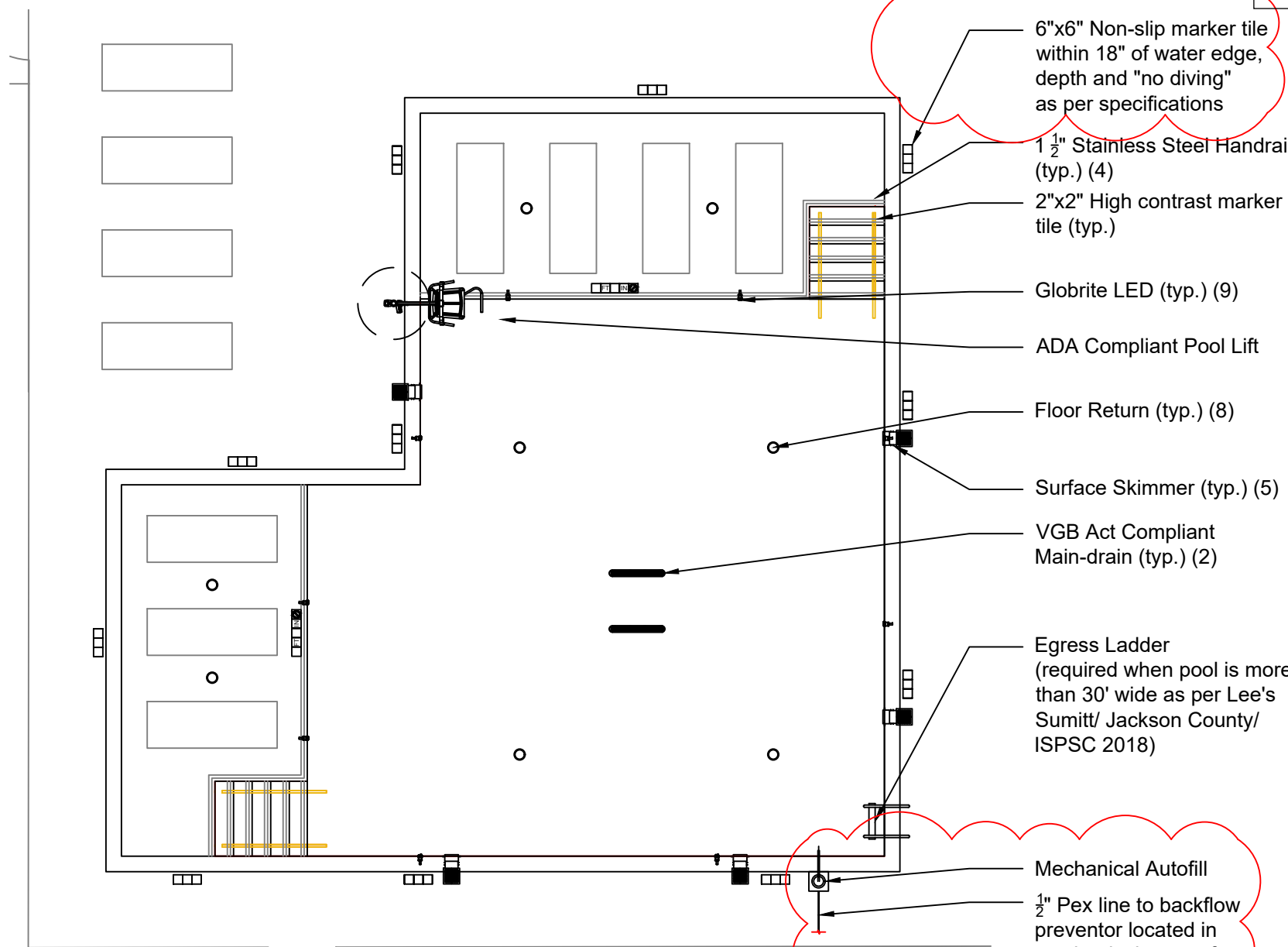
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P4.00



6"x6" Non-slip marker tile within 18" of water edge, depth and "no diving" as per specifications

1 1/2" Stainless Steel Handrail (typ.) (4)

2"x2" High contrast marker tile (typ.)

Globrite LED (typ.) (9)

ADA Compliant Pool Lift

Floor Return (typ.) (8)

Surface Skimmer (typ.) (5)

VGB Act Compliant Main-drain (typ.) (2)

Egress Ladder (required when pool is more than 30' wide as per Lee's Sumitt/ Jackson County/ ISPSC 2018)

Mechanical Autofill

1/2" Pex line to backflow preventor located in mechanical room of pool house.

A Pool Layout - Plan View Scale: 1/8" = 1'-0"

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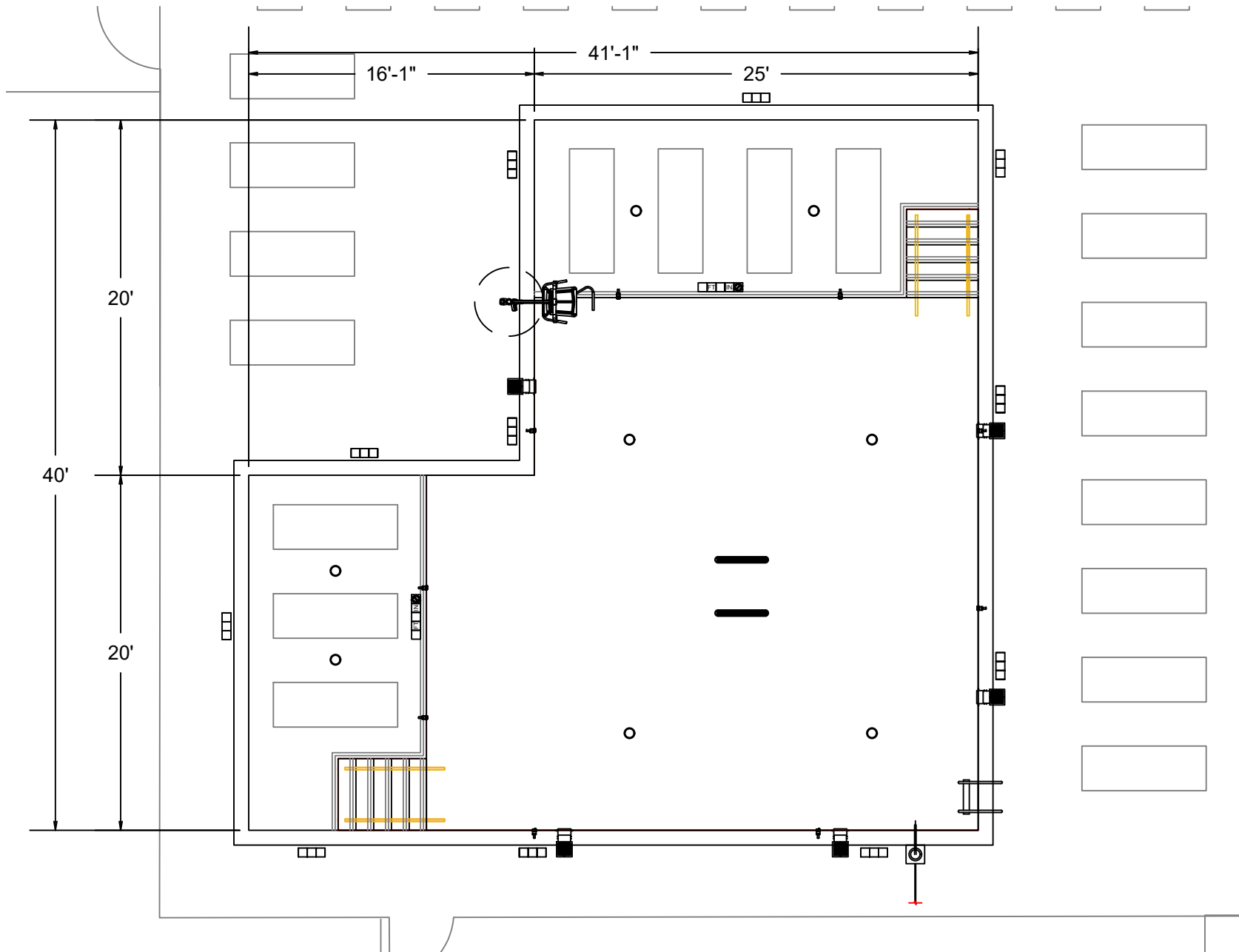
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P4.01



A Pool Layout - Plan View Scale: $\frac{1}{8}'' = 1'-0''$

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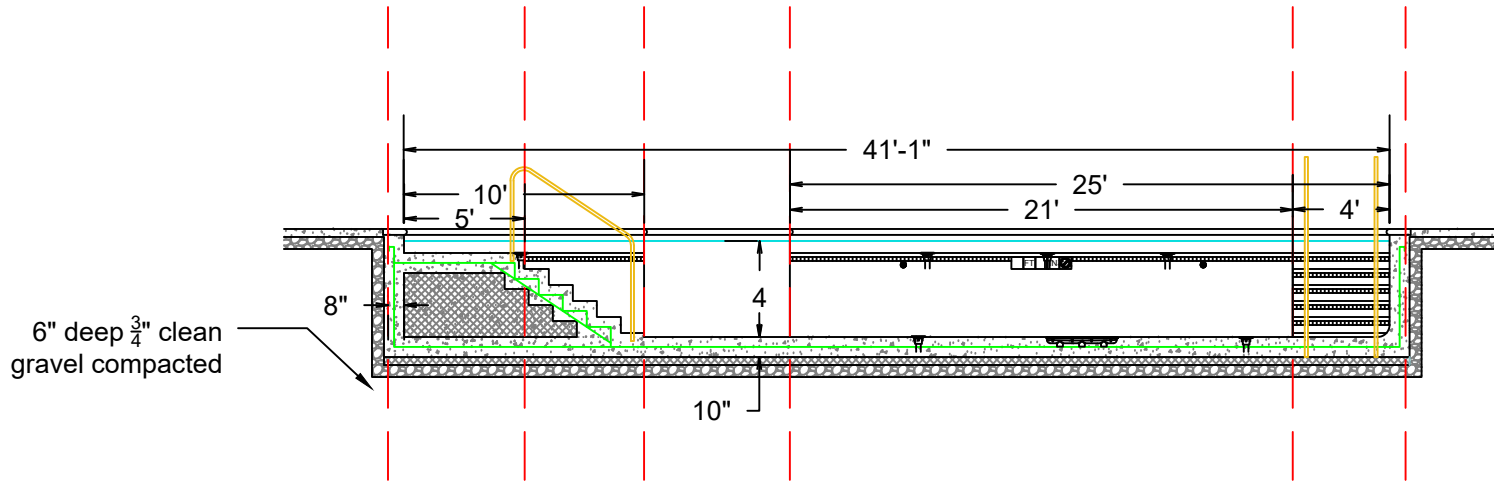
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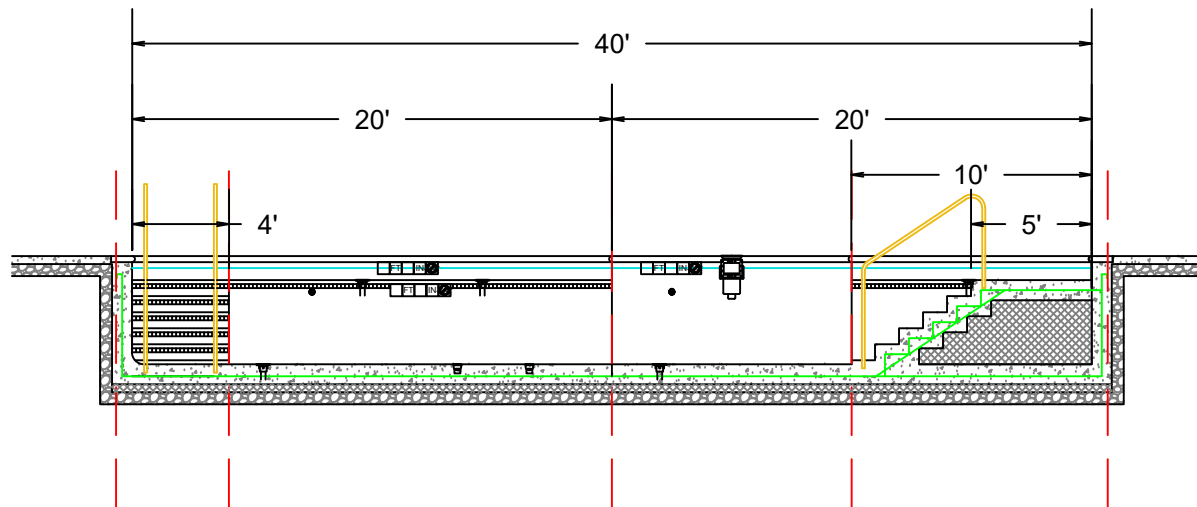
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P4.02



A North Section

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



B West Section

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

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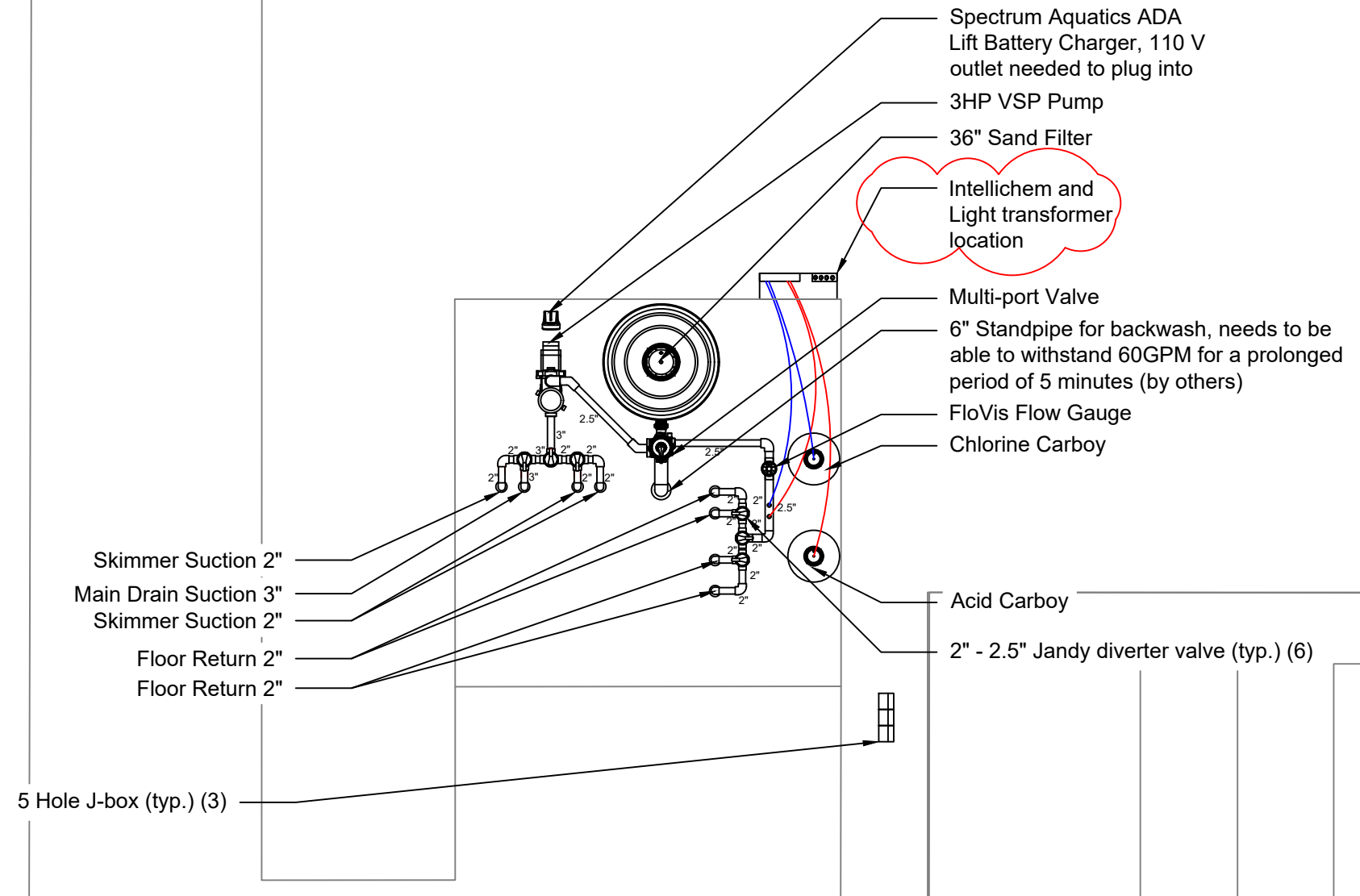
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P5.00



A Pool Layout - Equipment Pad Scale: 1/4" = 1'-0"

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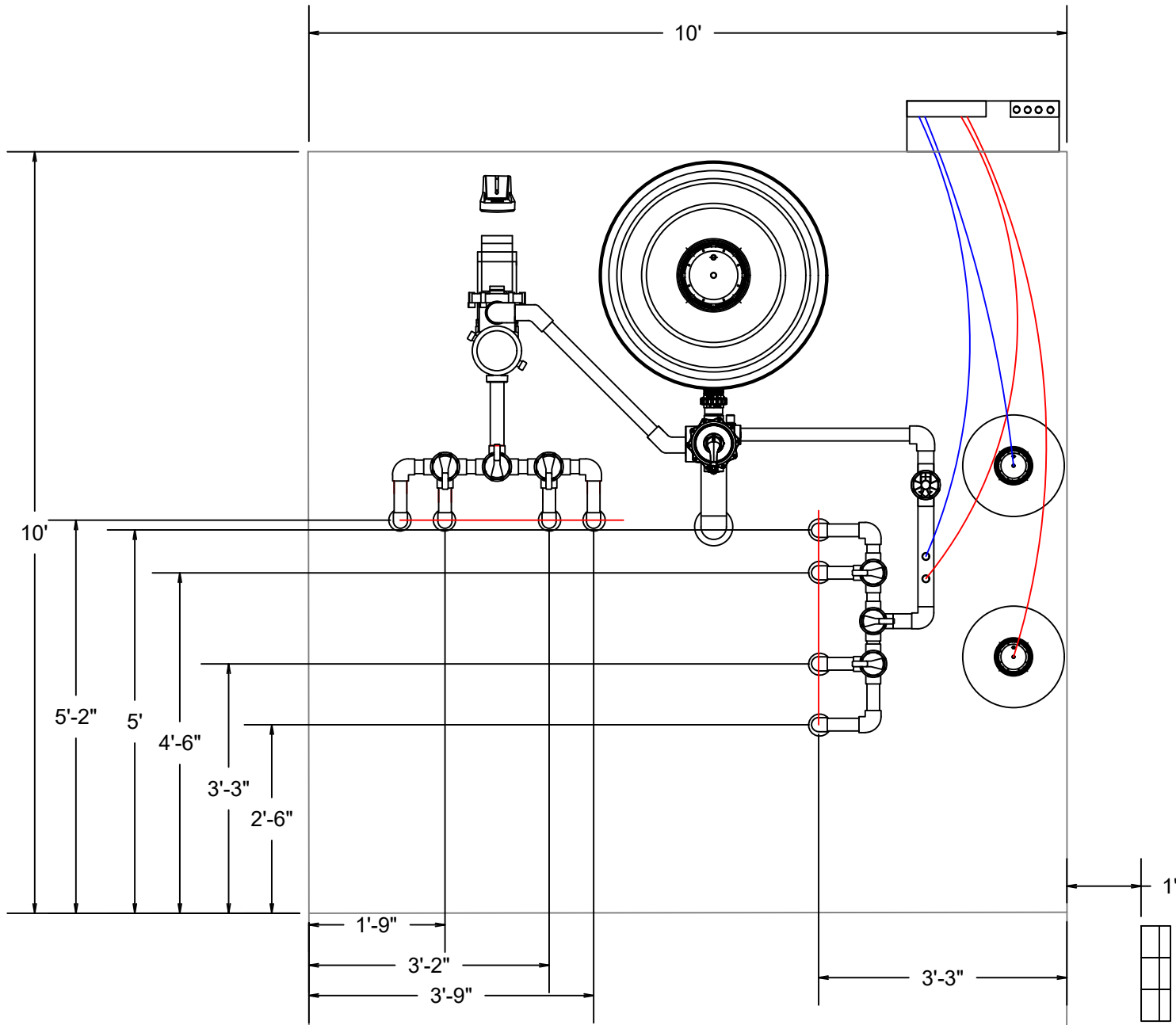
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SHEET NO.

P5.01



A Pool Layout - Equipment Pad Dimensions

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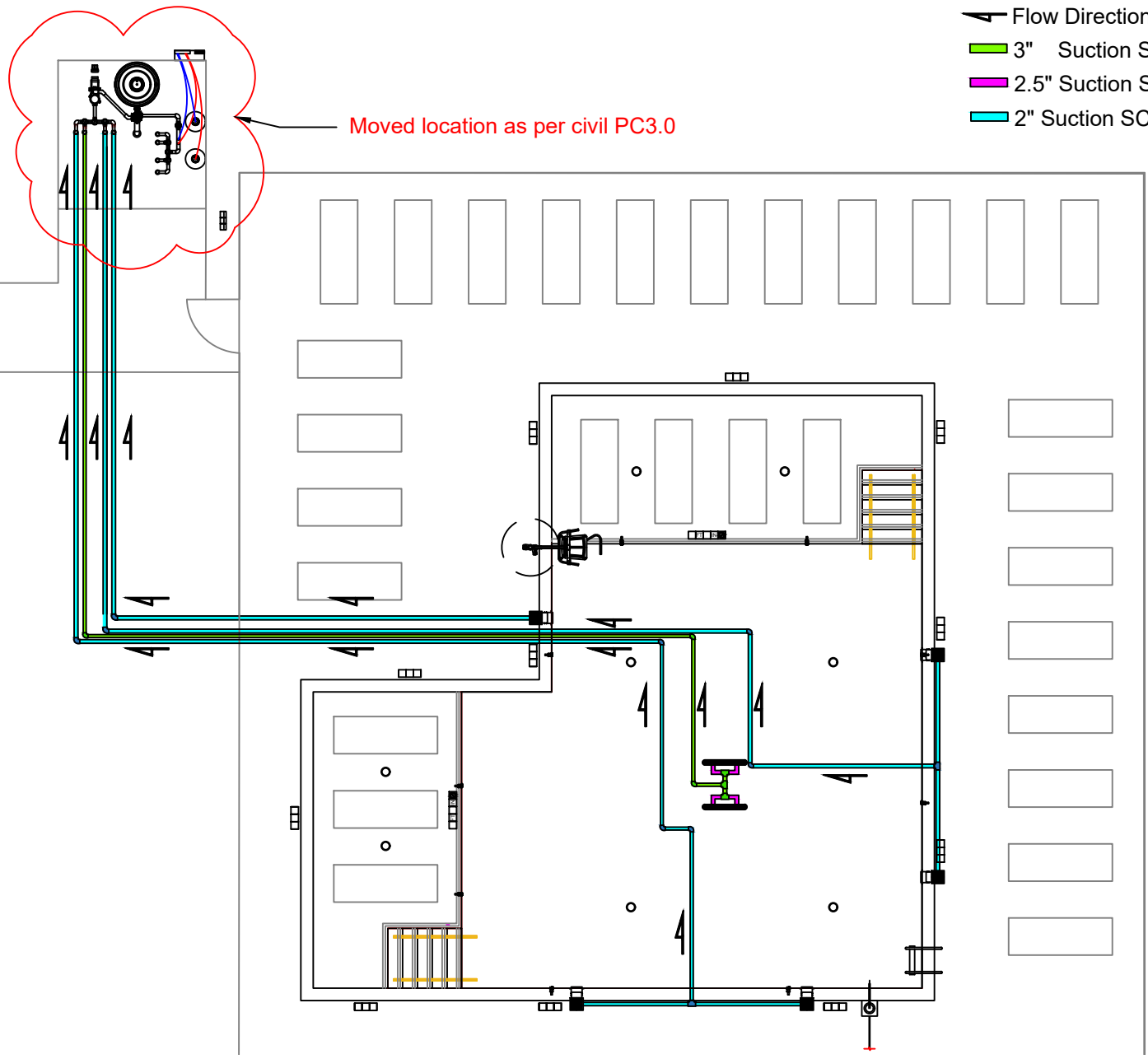
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P6.00

- ⚡ Flow Direction
- 3" Suction SCH 40 PVC
- 2.5" Suction SCH 40 PVC
- 2" Suction SCH 40 PVC



A Plumbing plan - Suction Scale: $\frac{3}{32}'' = 1'-0''$

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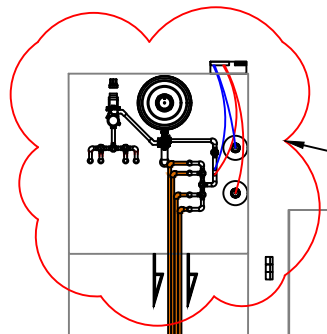


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P6.01

Flow Direction
2" Return SCH 40 PVC



Moved location as per civil PC3.0

A Plumbing plan - Return Scale: $\frac{3}{32}'' = 1'-0''$

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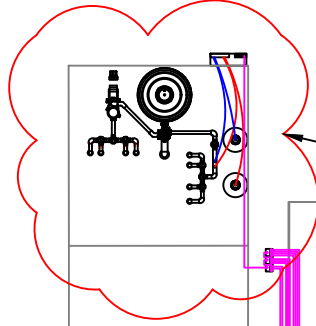
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P7.00

1" SCH 40 PVC Conduit

Moved location as per civil PC3.0



A Electrical Plan

Scale: $\frac{3}{32}'' = 1'-0''$

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P8.00

— #8 AWG Copper Bonding Wire

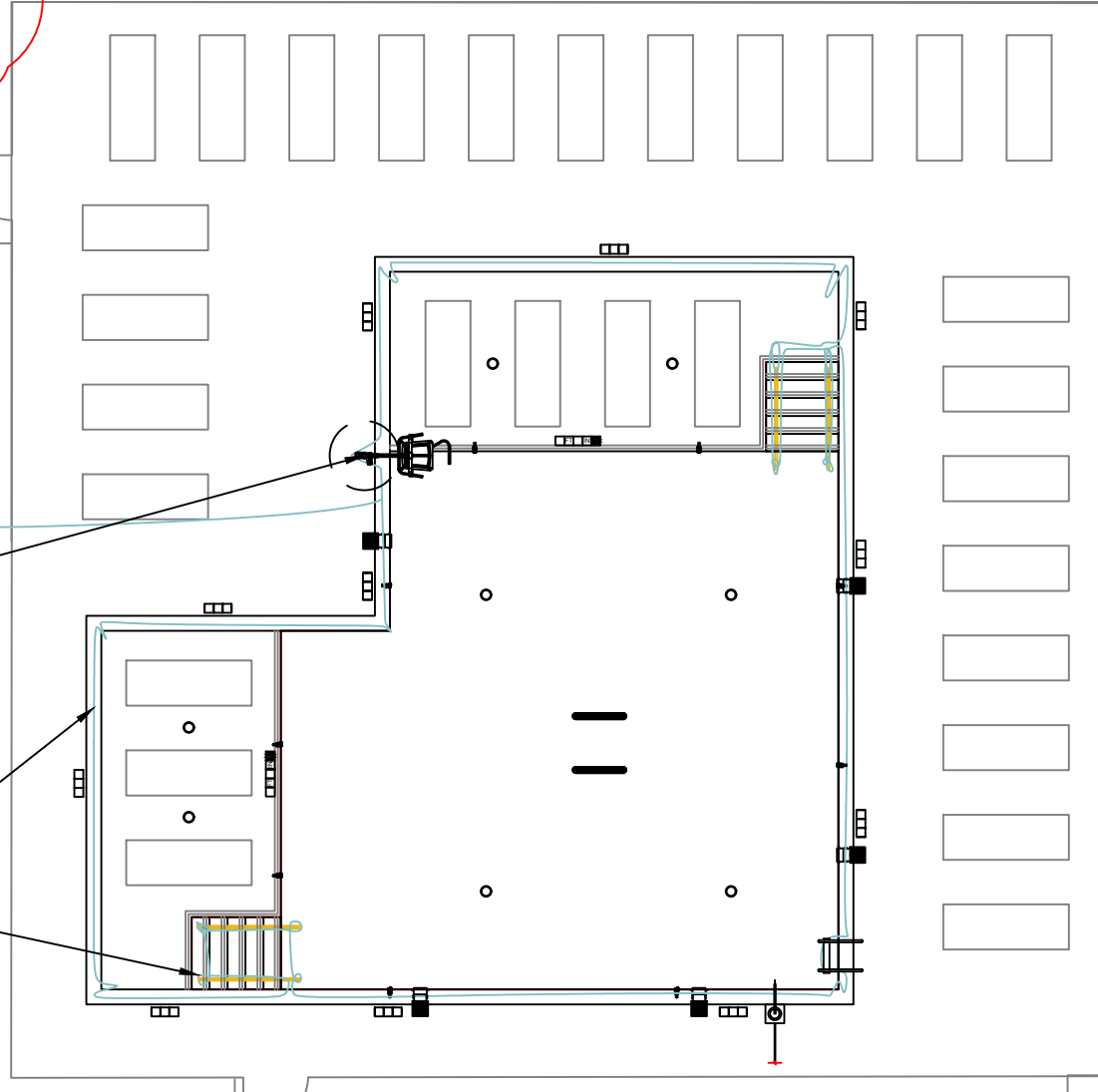
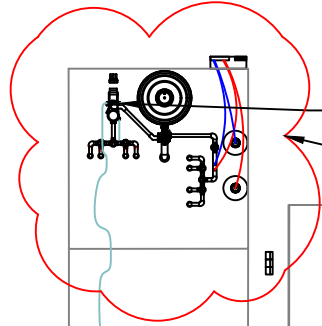
Equipment to be bonded.

Moved location as per civil PC3.0

Bond ADA Lift to rebar in deck.

Bond to rebar in deck.

Water bonding done at all
Stainless Steel hand
rails and ladder rails.



A Bonding plan

Scale: $\frac{3}{32}'' = 1'-0''$

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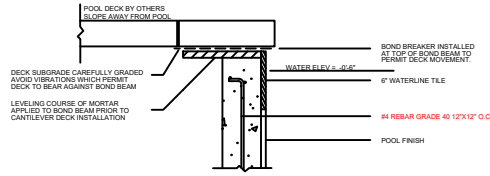
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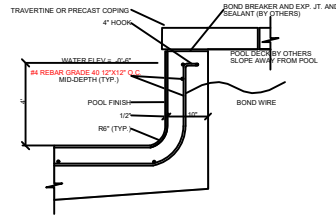
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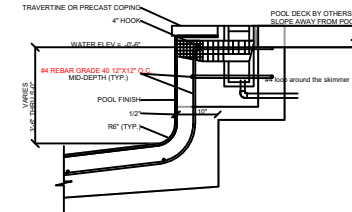
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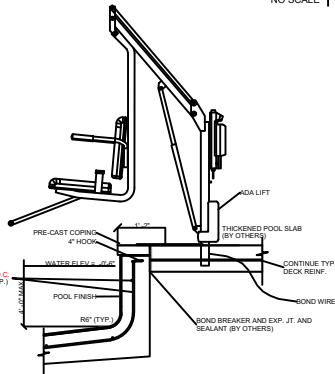
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NO SCALE



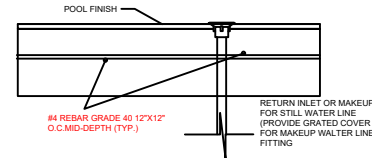
TYPICAL POOL WALL SECTION | 02
NO SCALE



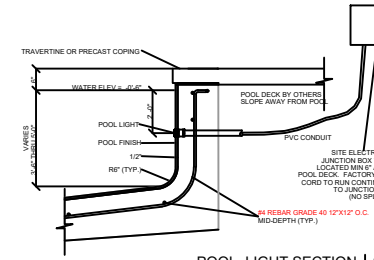
TYPICAL POOL SKIMMER SECTION | 03
NO SCALE



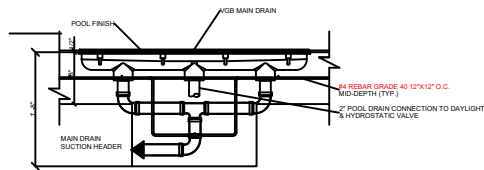
POOL ADA LIFT SECTION | 04
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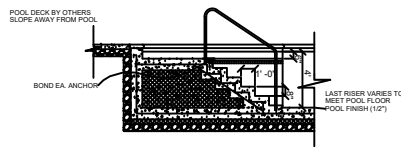
POOL FLOOR RETURN INLET SECTION | 05
NO SCALE



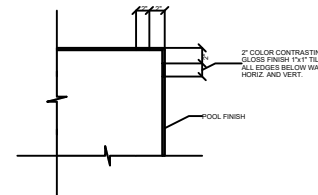
POOL LIGHT SECTION | 06
NO SCALE



POOL MAIN DRAIN SECTION | 07
NO SCALE



POOL STAIR DETAIL | 08
NO SCALE



STAIR TREAD AND UNDER WATER EDGE DETAIL | 09
NO SCALE