SUMMIT VIEW FARMS

POOL CONSTRUCTION DOCUMENTS
LEE'S SUMMIT, MISSOURI

THE ABOVE ILLUSTRATION IS AN ARTIST'S REPRESENTATION AND DOES NOT INDICATE FINAL DESIGN

CONSTRUCTION DOCUMENTS

FEBRUARY 23, 2021

PREPARED BY:

LORAX DESIGN GROUP

8021 SANTA FE DRIVE, SUITE 200
OVERLAND PARK, KS 66204
913.972.7244
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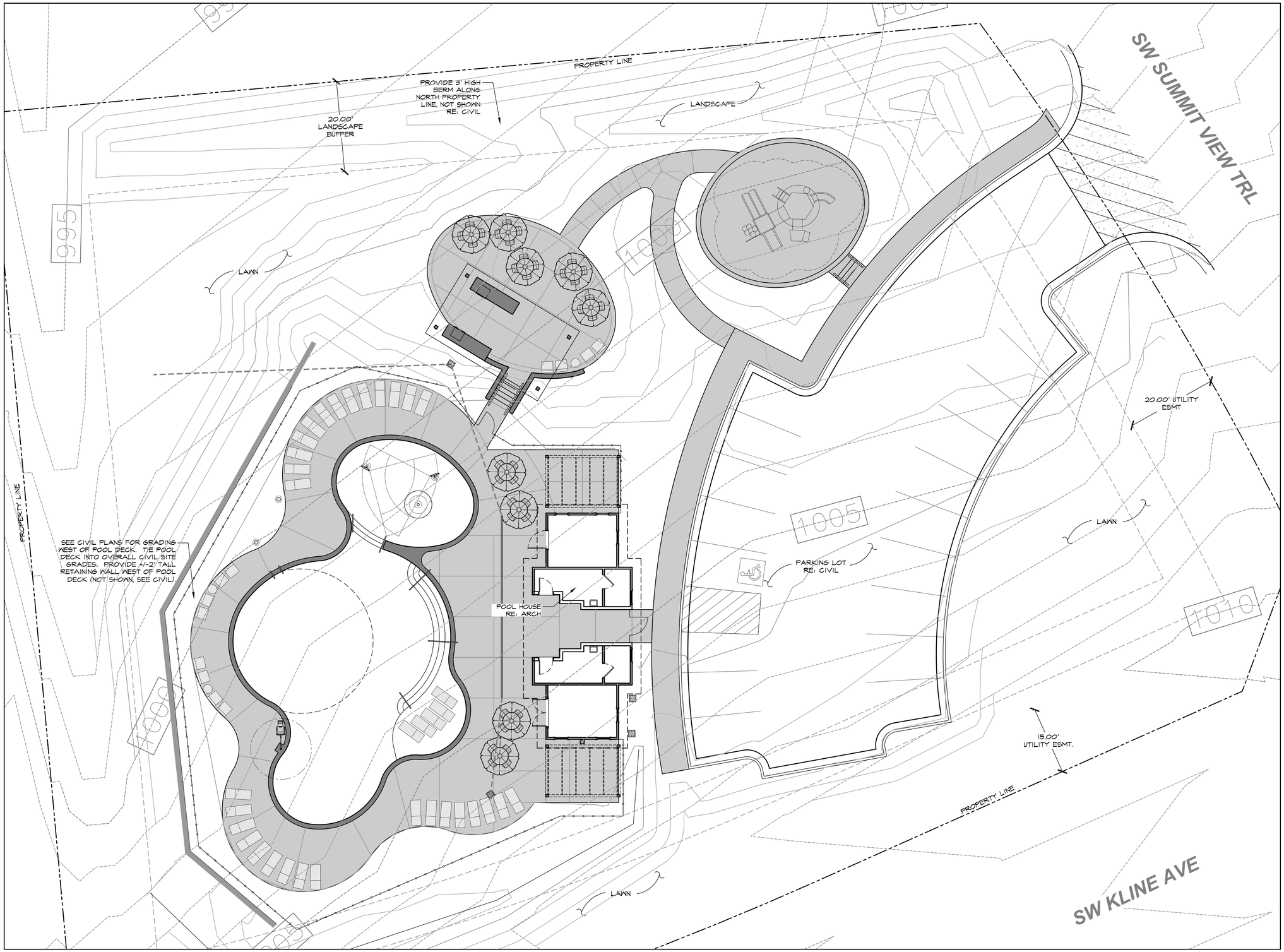

SITE REFERENCE PLAN
SCALE: 1"=10'-0"

0 10 20 30 feet
SCALE: 1" = 10'-0"

NORTH

LORAX DESIGN GROUP
8021 SANTA FE DRIVE
OVERLAND PARK, KS 66204
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STATE OF MISSOURI
KURT L. KRATSINGER
NUMBER LA-2003016222
LANDSCAPE ARCHITECT
2.23.2021

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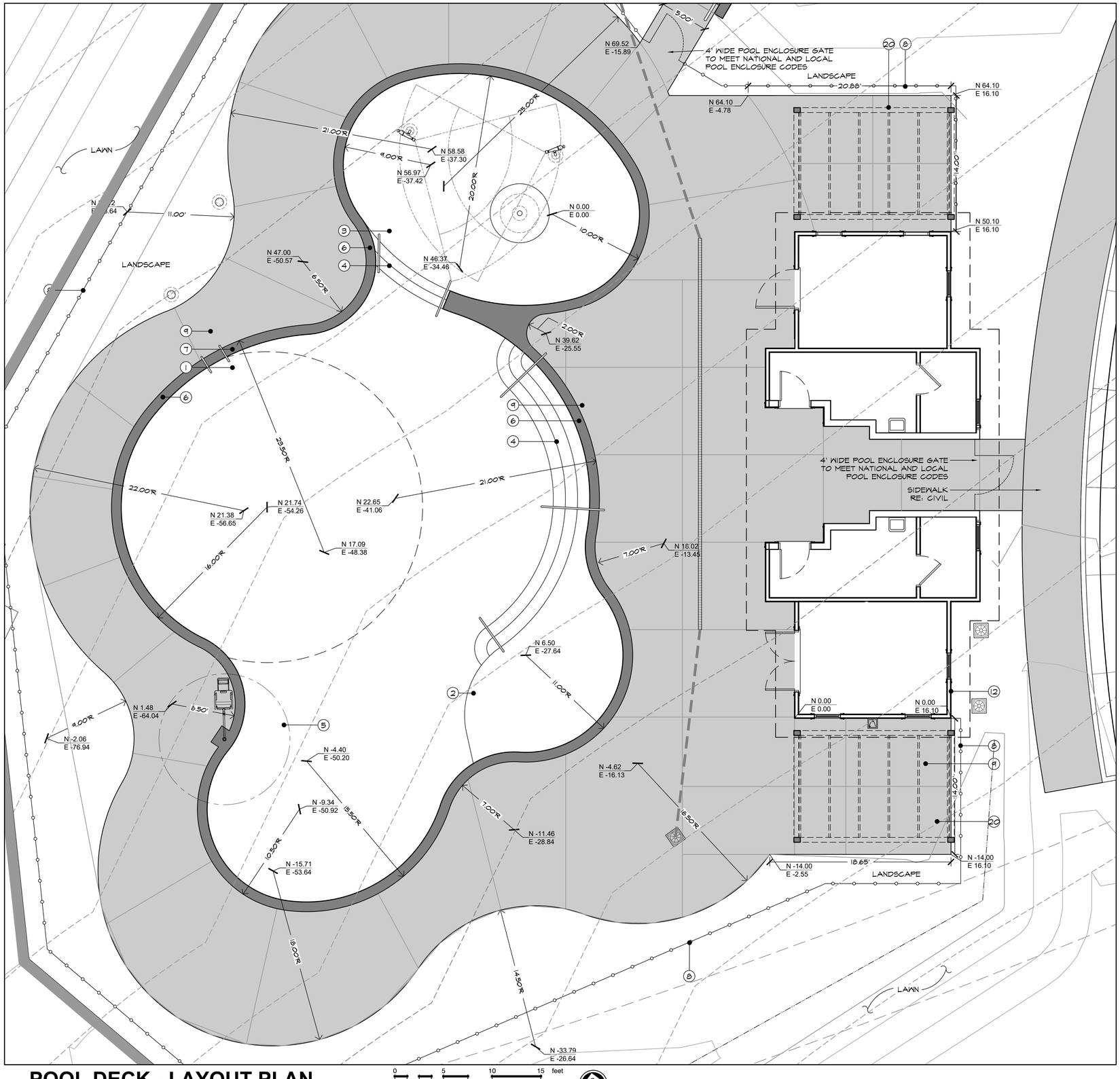
POOL CONSTRUCTION DOCUMENTS
LEE'S SUMMIT, MISSOURI

REVISION:

DECEMBER 2, 2021
SITE REFERENCE PLAN

L100



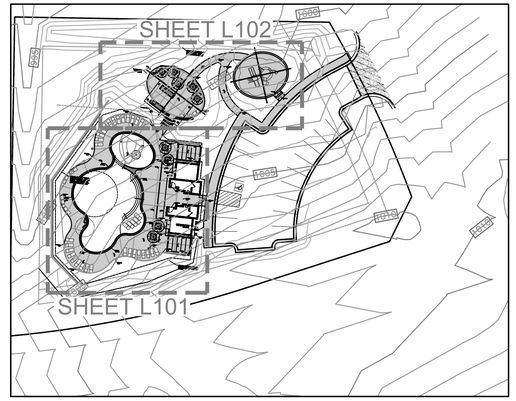
POOL DECK - LAYOUT PLAN

SCALE: 1"=5'-0"

0 5 10 15 feet

SCALE: 1" = 5'-0"

NORTH



SITE REFERENCE PLAN

SCALE: 1"=50'-0"

0 50 100 150 feet

SCALE: 1" = 50'-0"

NORTH

LEGEND

- WALL
- PAVEMENT
- POOL ENCLOSURE FENCE

GENERAL NOTES

1. ANY MASONRY WORK DONE WITHIN 5' OF THE WATERS EDGE SHALL HAVE LATICRETE ADDED
2. ANY METAL WITHIN 5' OF WATERS EDGE SHALL BE BONDED
3. N&E BASED ON SOUTH WEST CORNER OF BUILDING

DETAILS LEGEND

KEY	DETAIL	DESCRIPTION	SHEET
1	SWIMMING POOL	2,112 SF SHOTCRETE SWIMMING POOL	W001-W106
2	ENTRY REEF - ADULT	265 SF ENTRY REEF, PROVIDE SHOTCRETE FROST FOOTING AROUND PERIMETER OF REEF	5/W103
3	ENTRY REEF - CHILDREN'S SPLASH PAD	556 SF ENTRY REEF W/ WATER FEATURE EQUIPMENT, PROVIDE SHOTCRETE FROST FOOTING AROUND PERIMETER OF REEF	W103
4	SWIMMING POOL STEPS W/ HANDRAILS	SHOTCRETE STEPS W/ 3" WIDE (MIN) NON-SKID MATERIAL OF CONTRASTING COLOR TO FASTER ALONG HORIZONTAL EDGE OF EACH RISER	4 W103
5	POOL LIFT	ADA ACCESSIBLE POOL LIFT, WATER DEPTH SHALL NOT EXCEED 48" AT LIFT LOCATION	10 W105
6	POOL COPING	CIP STEGMEIER CONCRETE COPING, CLIP-LOC INTERMEDIATE FORM	6 W103
7	POOL LADDER	SWIMMING POOL LADDER FOR POOL EGRESS	1 W105
8	POOL ENCLOSURE FENCE	5' HT. BLACK POWDER COATED STEEL AMERISTAR MONTAGE COMMERCIAL MAGESTIC FENCE AT POOL ENCLOSURE, LOCATE GATES AS SHOWN ON PLAN	12,13 L201
9	POOL DECK	GREY, BROOM FINISHED CONCRETE POOL DECK	1-4 L201
10	GRILL STATION	BUILT-IN GRILL AND ACCESS DOORS W/ GRANITE COUNTERTOP & THIN STONE VENEER BASE	L202-L203
11	POOL EQUIPMENT ROOM	RE: PLUMBING PLANS	W004
12	CABANA STRUCTURE	RE: ARCH	RE: ARCH
13	SHADE STRUCTURE	SOLID ROOF SHADE STRUCTURE OVER GRILL STATIONS	L203
14	LANDSCAPE AREA DRAIN	AREA DRAIN IN LANDSCAPE AREAS W/ BEEHIVE DOME TOP	8 L201
15	HARDSCAPE AREA DRAIN	AREA DRAIN IN HARDSCAPE AREAS W/ ORNAMENTAL IRON COVER	6 L201
16	LINEAR DRAIN	IN-LINE DRAIN IN HARDSCAPE AREAS W/ ORNAMENTAL IRON COVER	6 L201
17	TRASH RECEPTACLE	BLACK ASHEBOOKE RECEPTAVLE, MODEL AH401-DT, MANUF. BY BRP BY BISON	-
18	PLAYGROUND	PB20-T1907 PLAYGROUNHD BY LITTLE TIKES COMMERCIAL	4 L204
19	PLAYGROUND SURFACE	ARTIFICIAL LAWN PLAYGROUND SURFACE BY FOREVER LAWN, INSTALL PER MANUFACTURER'S SPECIFICATIONS, SURROUND WITH CONCRETE BAND	-
20	PERGOLA STRUCTURE	STEEL & FABRIC PERGOLA STRUCTURE	L202
21	RETAINING WALL	CONCRETE RETAINING WALL WITH OPTIONAL STONE VENEER AND PRECAST CAP	1 L204
22	CONCRETE STEPS	CONCRETE STEPS WITH S.S. HANDRAIL	L204

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SUMMIT VIEW FARMS

POOL CONSTRUCTION DOCUMENTS

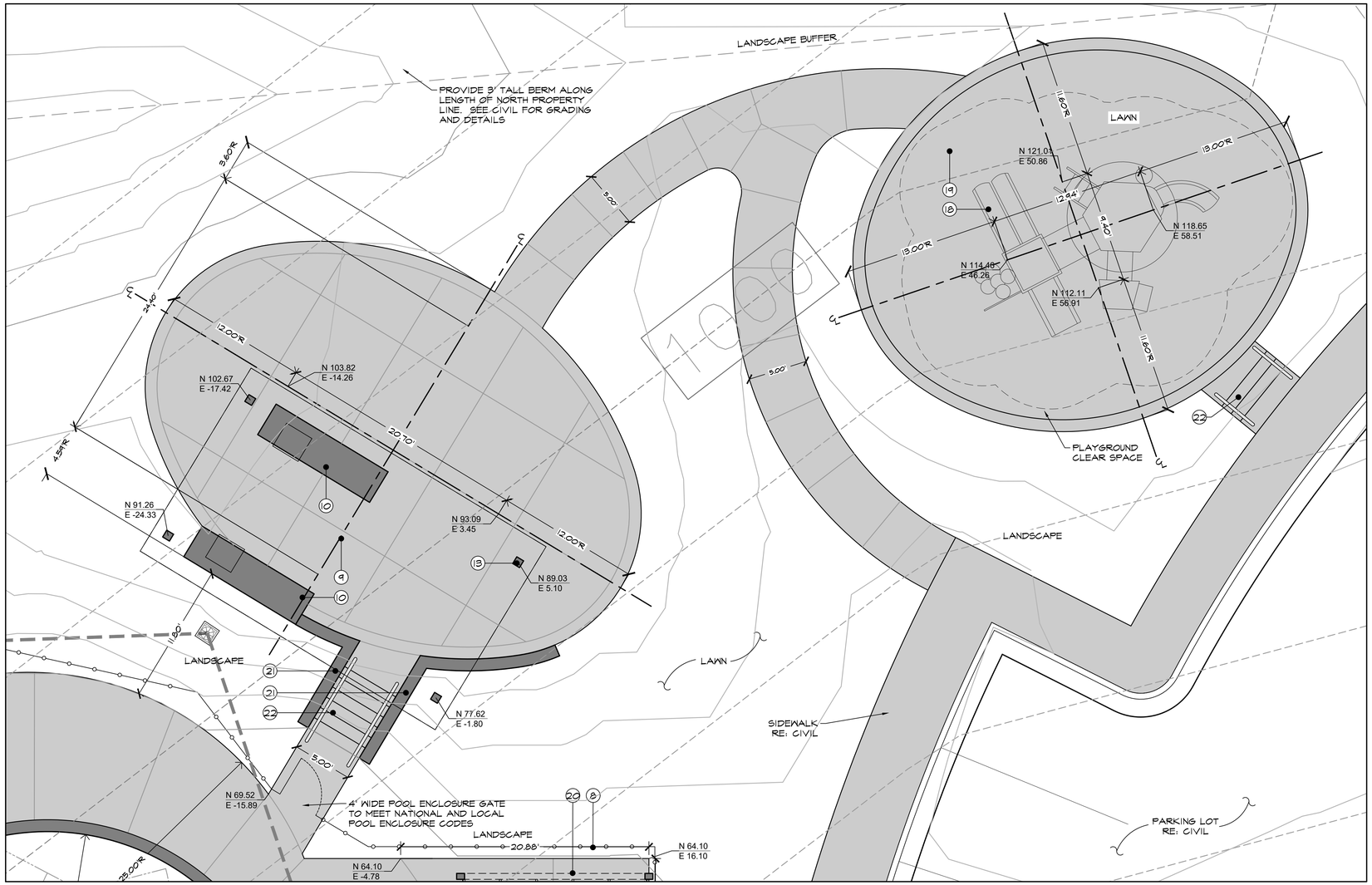
LEE'S SUMMIT, MISSOURI

REVISION:

DECEMBER 2, 2021

POOL DECK - LAYOUT PLAN

L101



GRILL PATIO - LAYOUT PLAN

SCALE: 1"=5'-0"

0 5 10 15 feet

SCALE: 1" = 5'-0"

NORTH

LEGEND

- WALL
- PAVEMENT
- POOL ENCLOSURE FENCE

GENERAL NOTES

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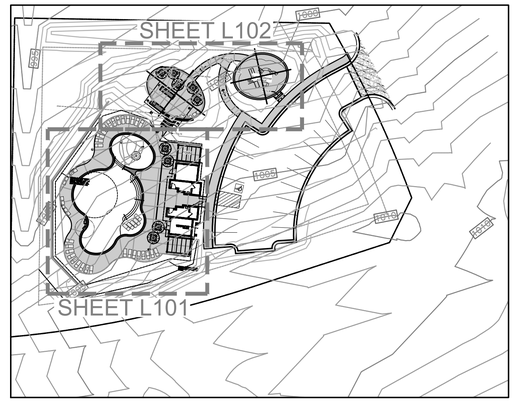

SITE REFERENCE PLAN

SCALE: 1"=50'-0"

0 50 100 150 feet

SCALE: 1" = 50'-0"

NORTH

DETAILS LEGEND

KEY	DETAIL	DESCRIPTION	SHEET
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STATE OF MISSOURI
KURT L. KRAISINGER
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SUMMIT VIEW FARMS

POOL CONSTRUCTION DOCUMENTS
LEE'S SUMMIT, MISSOURI

REVISION:

DECEMBER 2, 2021

GRILL PATIO - LAYOUT PLAN

L102

POOL DECK - GRADING PLAN

SCALE: 1"=5'-0"

0 5 10 15 feet

SCALE: 1" = 5'-0"

NORTH

LEGEND

- WALL
- PAVEMENT
- POOL ENCLOSURE FENCE
- TRENCH DRAIN
- AREA DRAIN
- 2% SLOPE AREA

ANNOTATION LEGEND

FFE	-	FINISHED FLOOR ELEVATION
BFE	-	BASEMENT FLOOR ELEVATION
TW	-	TOP WALL
BW	-	BOTTOM WALL
TS	-	TOP STEP
BS	-	BOTTOM STEP
DI	-	DRAIN INLET
RIM	-	DRAIN RIM ELEVATION
PAV	-	PAVING ELEVATION
TC	-	TOP COPING
HP	-	HIGH POINT
DS	-	DOWN SPOUT
FG	-	FINISHED GRADE
THRESH	-	THRESHOLD ELEVATION

GENERAL NOTES

1. ANY MASONRY WORK DONE WITHIN 5' OF THE WATERS EDGE SHALL HAVE LATICRETE ADDED

2. ANY METAL WITHIN 5' OF WATERS EDGE SHALL BE BONDED

3. ALL DRAINS SHALL TIE-IN TO CIVIL STORM SYSTEM. CONTRACTOR TO FIELD DETERMINE DRAIN INVERTS AND ENSURE POSITIVE DRAINAGE TO CIVIL STORM SYSTEM. COORDINATE WITH CIVIL

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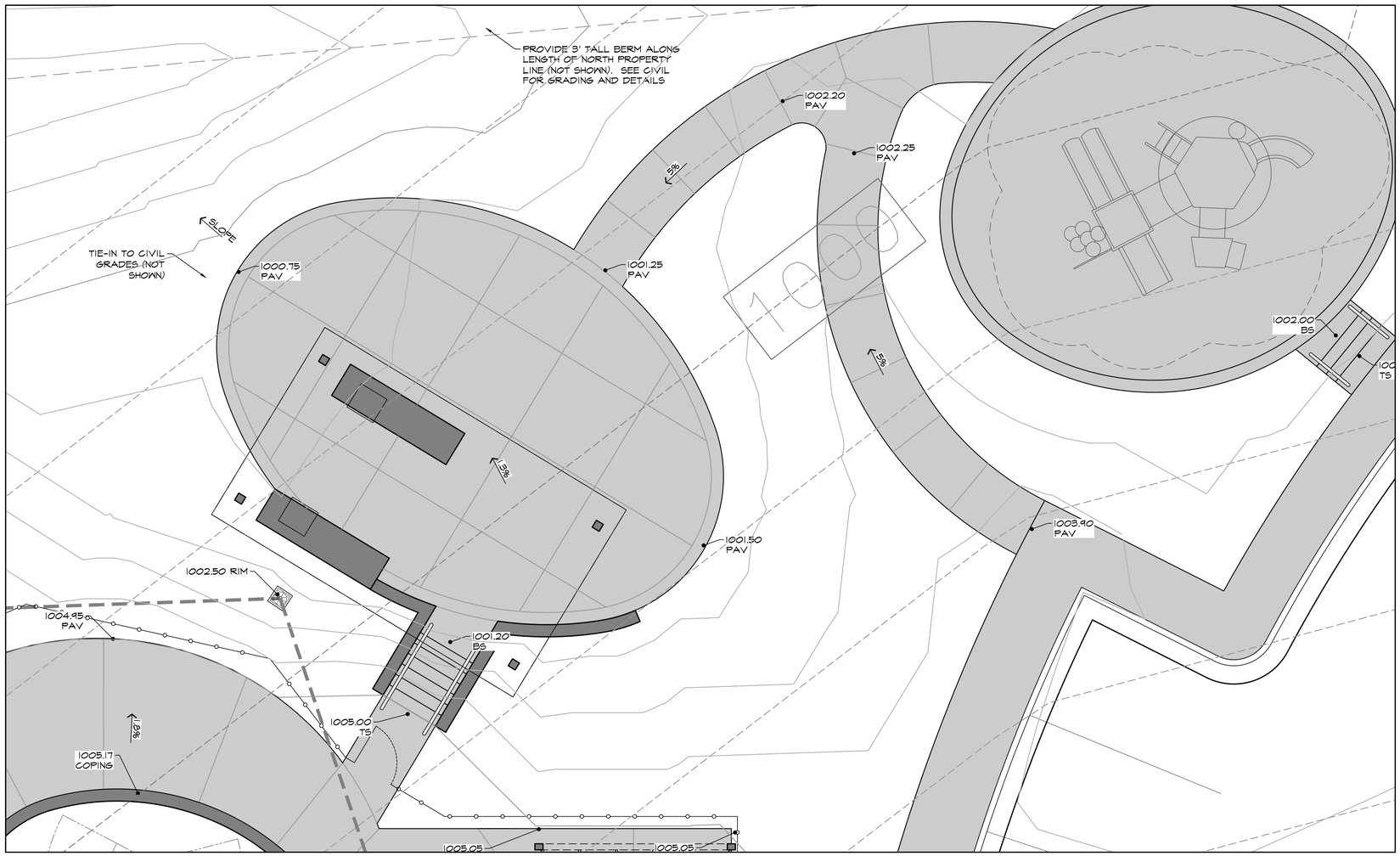
POOL DECK - GRADING PLAN

L103



GRILL PATIO - GRADING PLAN

SCALE: 1"=5'-0"

0 5 10 15 feet

SCALE: 1" = 5'-0"

NORTH

LEGEND

- WALL
- PAVEMENT
- POOL ENCLOSURE FENCE
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- AREA DRAIN
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GENERAL NOTES

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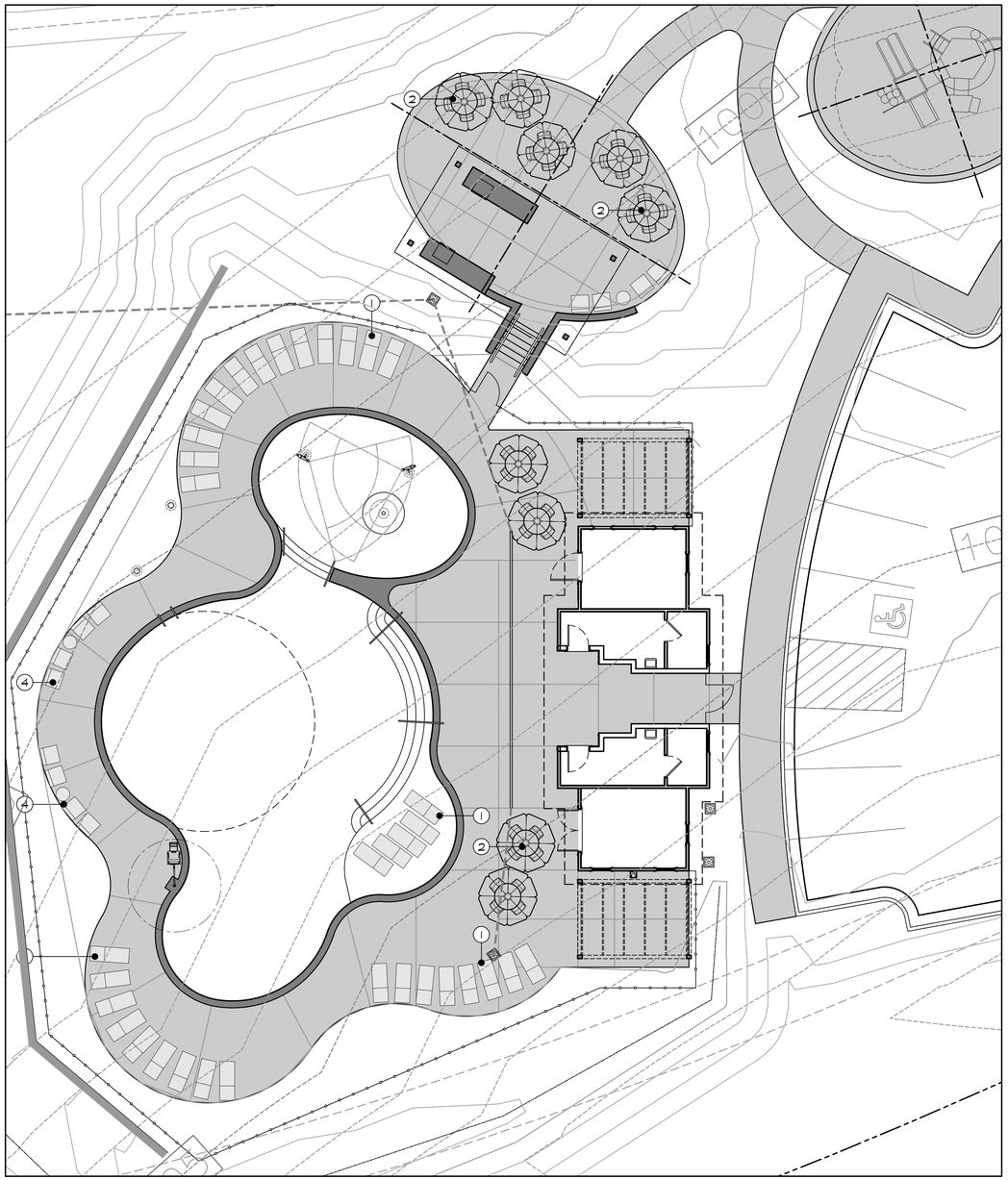
GRILL PATIO - GRADING PLAN

L104

POOL DECK SCORE JOINTS PLAN
SCALE: 1"=10'-0"

0 10 20 30 feet
SCALE: 1" = 10'-0"

NORTH



FURNITURE LAYOUT PLAN
SCALE: 1"=10'-0"

0 10 20 30 feet
SCALE: 1" = 10'-0"

NORTH

DETAILS LEGEND		
KEY	DETAIL	DESCRIPTION
1	POOL FURNITURE - LOUNGE CHAIR	BY OWNER
2	4-PERSON TABLE & CHAIRS W/ UMBRELLA	BY OWNNER
3	4-PERSON TABLE & CHAIRS	BY OWNNER
4	POOL FURNITURE - CHAIR	BY OWNNER

NOTES
FURNISHING SHOWN FOR PRICING PURPOSES ONLY.
VERIFY FINAL SELECTION w/ ARCHITECT

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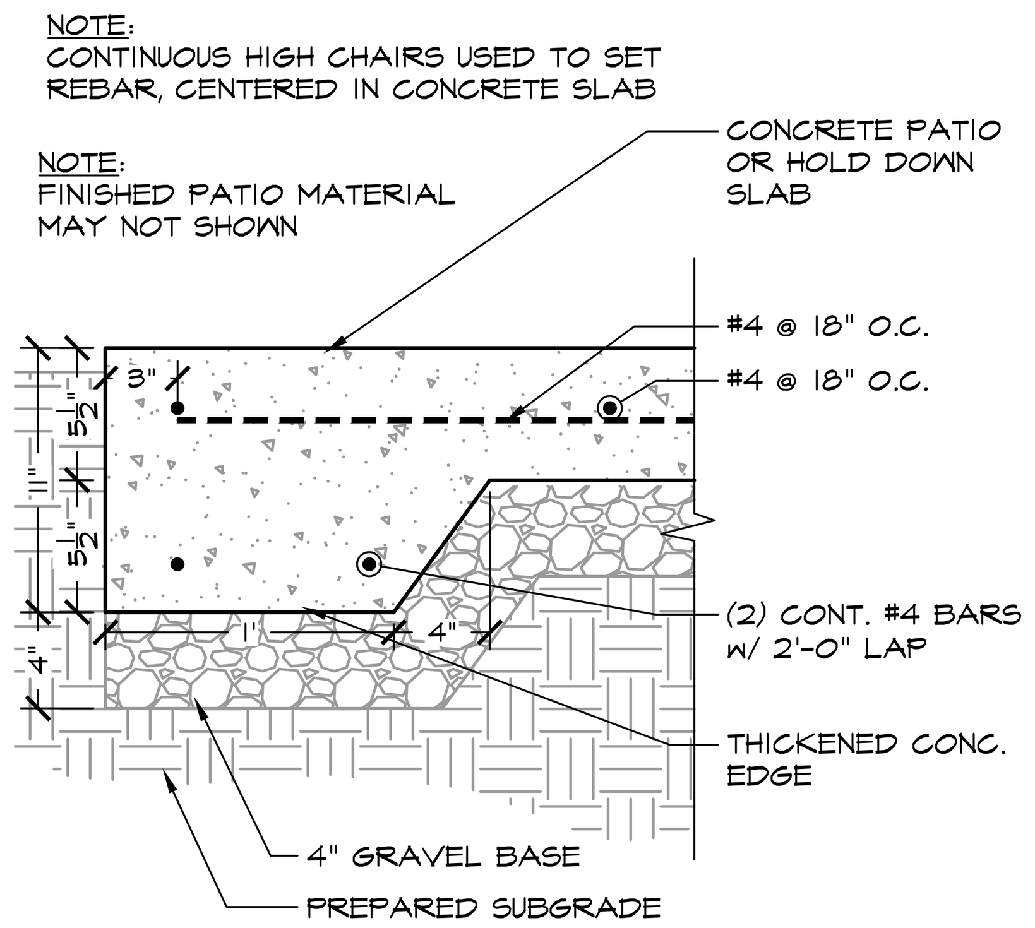
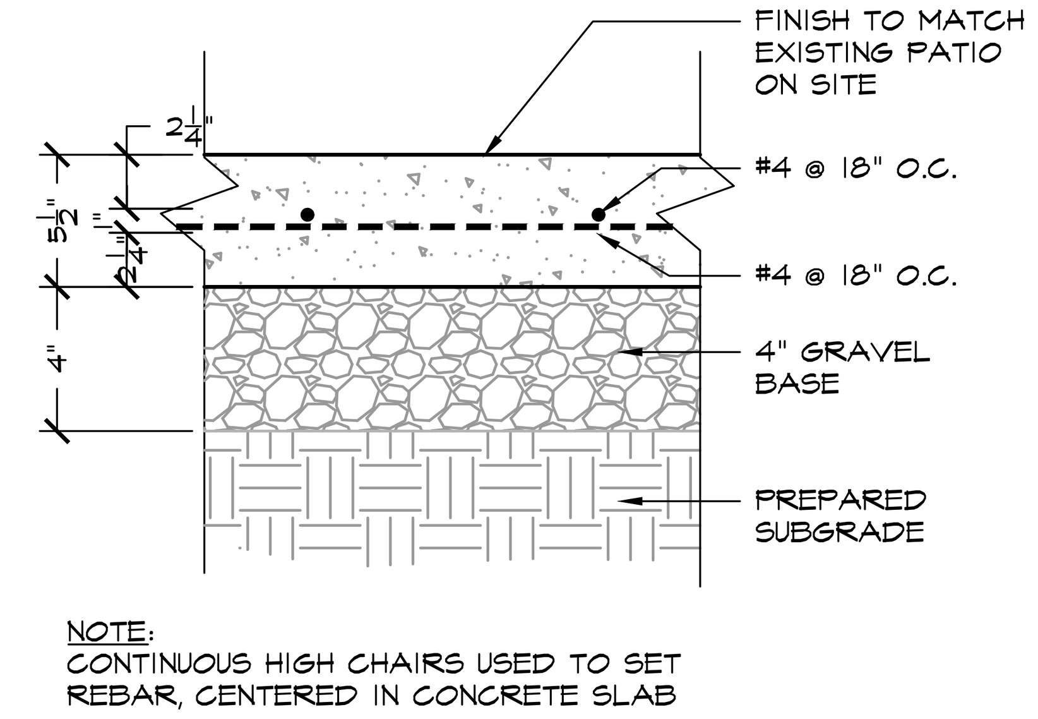
POOL DECK SCORE JOINTS PLAN

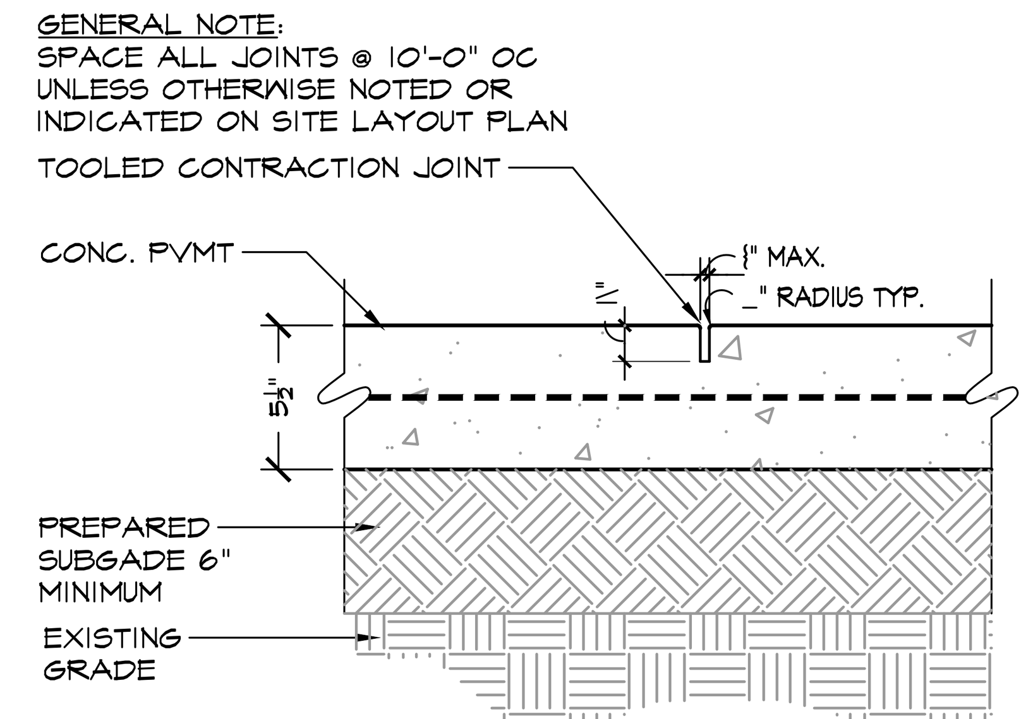
L105



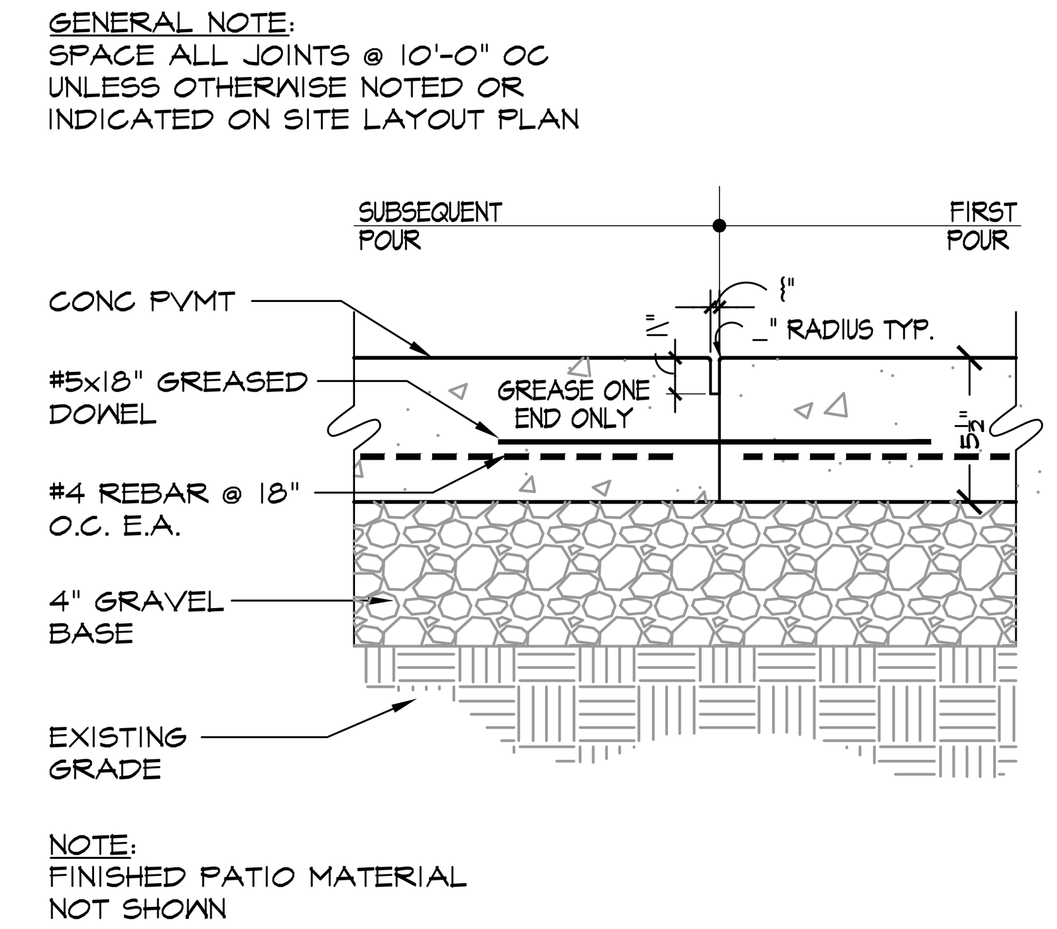
1 CONCRETE THICKENED EDGE
SCALE: 1-1/2" = 1'-0" SECTION



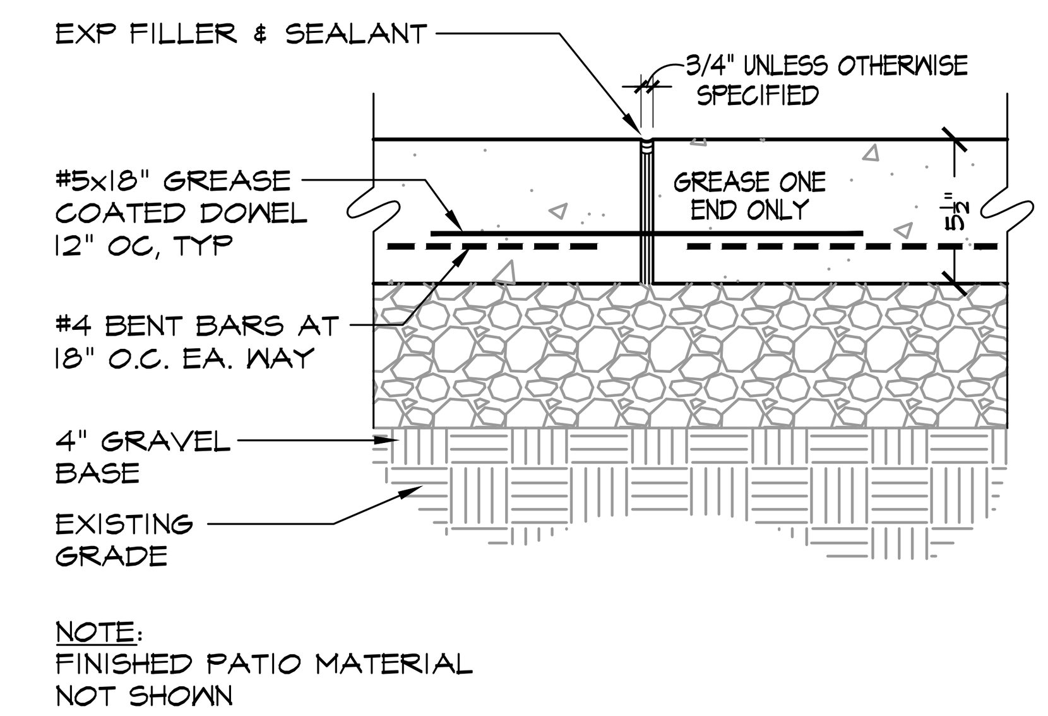
2 CONCRETE PAVEMENT
SCALE: 1-1/2" = 1'-0" SECTION



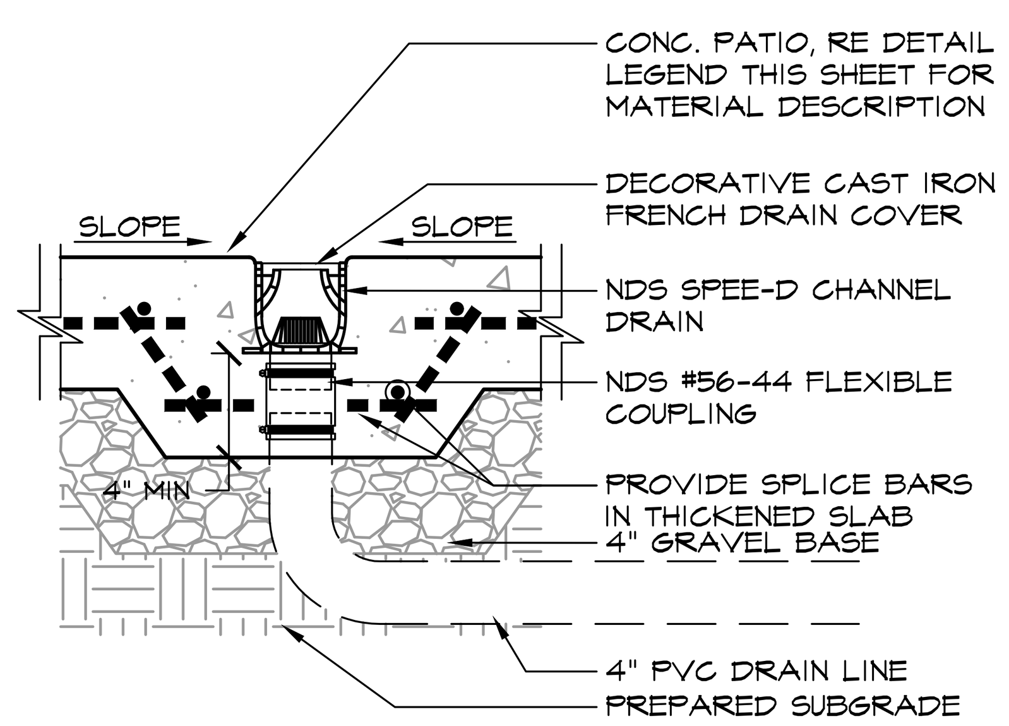
3 CONCRETE CONTRACTION JOINT
SCALE: 1-1/2" = 1'-0" SECTION



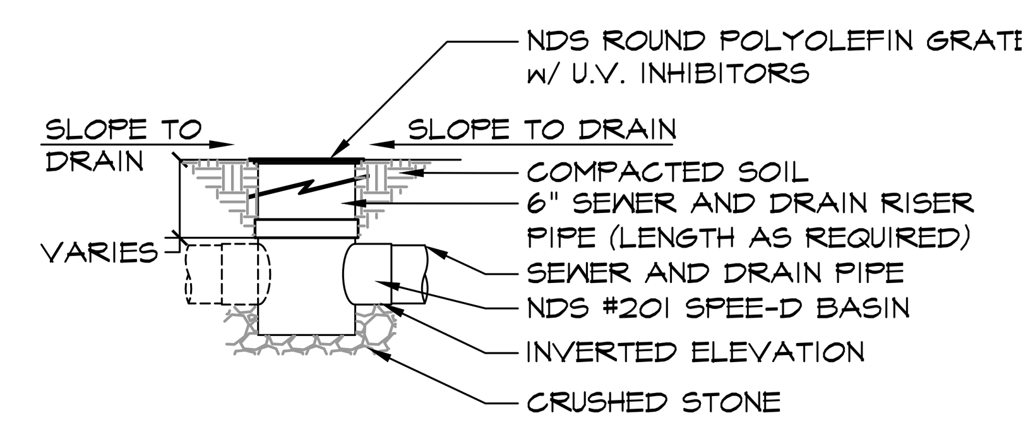
4 CONCRETE CONSTRUCTION JOINT
SCALE: 1-1/2" = 1'-0" SECTION



5 GREASE DOWEL @ EXP JOINT
SCALE: 1-1/2" = 1'-0" SECTION

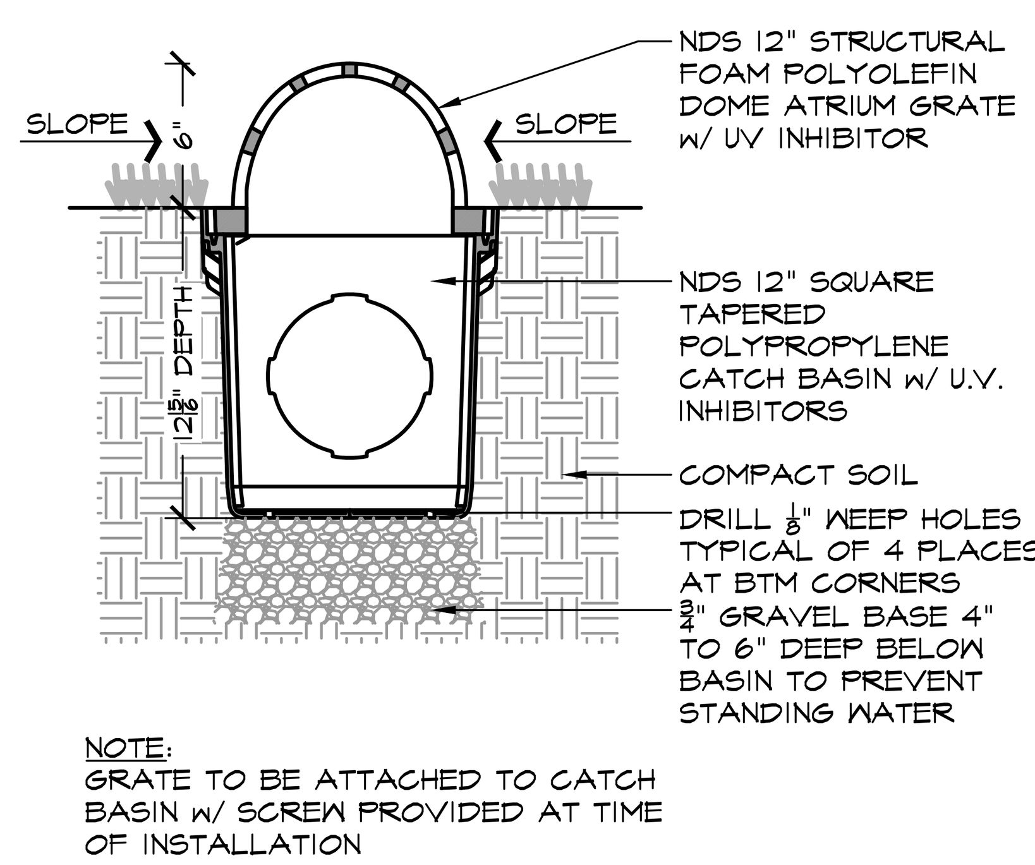


6 TRENCH DRAIN
SCALE: 1-1/2" = 1'-0" SECTION



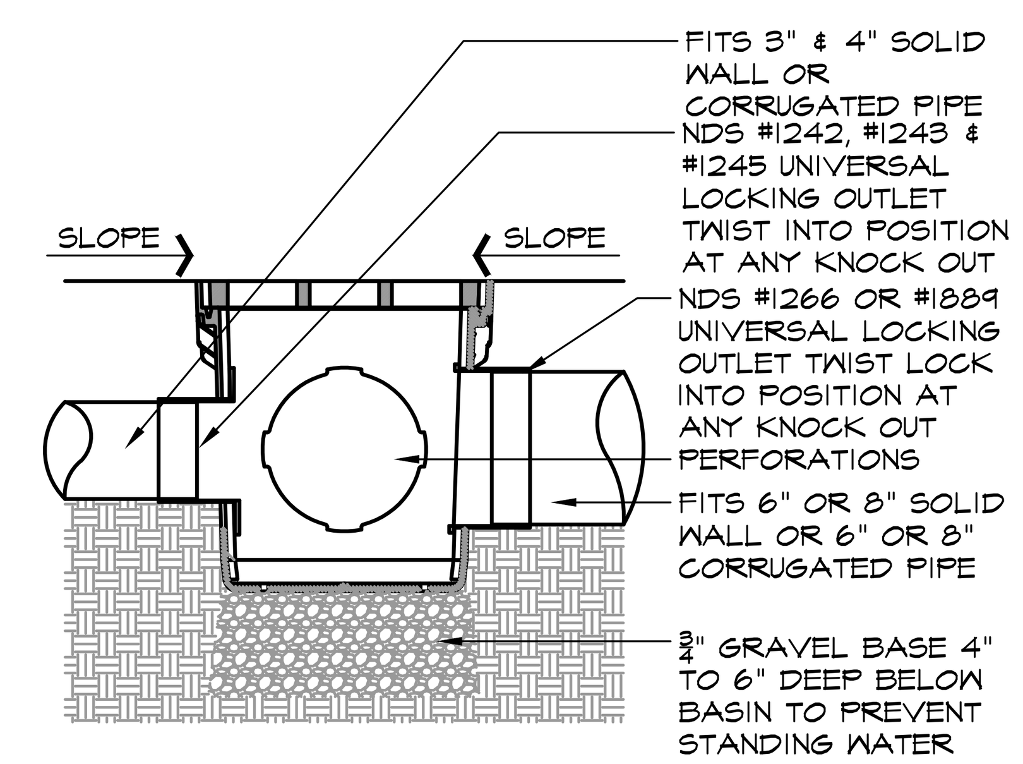
NOTES:
1. INSTALLATION TO BE COMPLETED IN ACCORDANCE w/ MANUFACTURER'S SPECIFICATIONS.
2. DO NOT SCALE DRAWING.
3. THIS DRAWING IS INTENDED FOR USE BY ARCHITECTS, ENGINEERS, CONTRACTORS, CONSULTANTS AND DESIGN PROFESSIONALS FOR PLANNING PURPOSES ONLY.
4. ALL INFORMATION CONTAINED HEREIN WAS CURRENT AT THE TIME OF DEVELOPMENT BUT MUST BE REVIEWED AND APPROVED BY THE PRODUCT MANUFACTURER TO BE CONSIDERED ACCURATE.

7 NDS ROUND SPEE-D BASIN
SCALE: 1-1/2" = 1'-0" SECTION



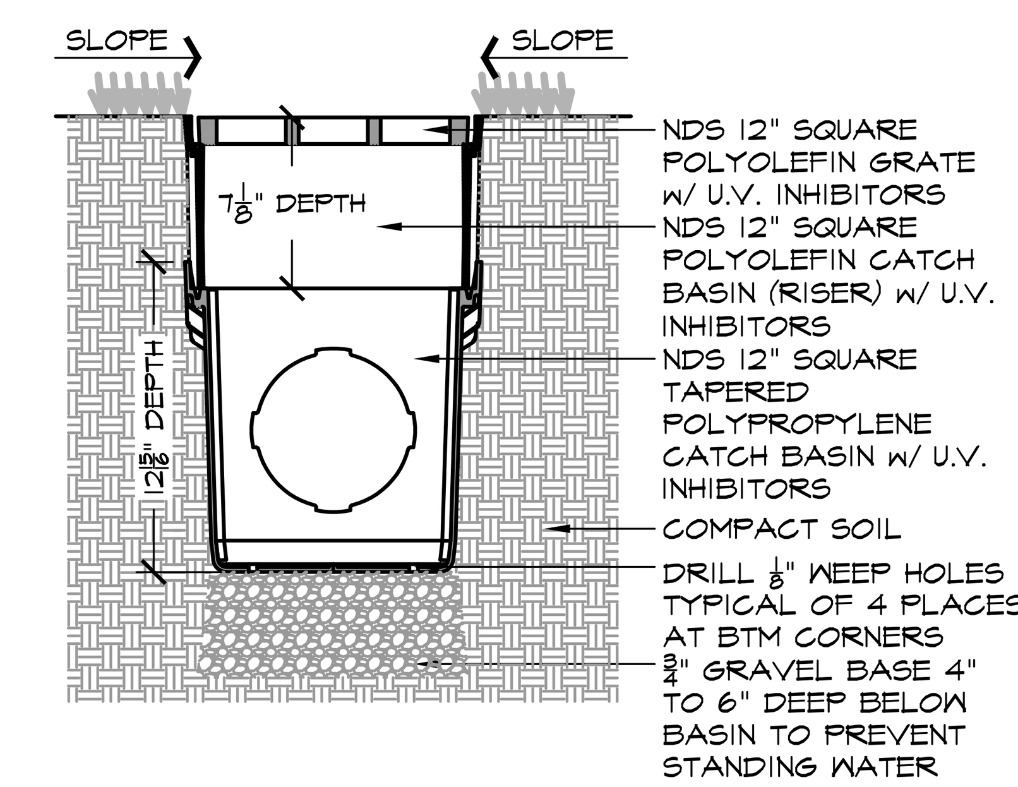
NOTE:
GRATE TO BE ATTACHED TO CATCH BASIN w/ SCREW PROVIDED AT TIME OF INSTALLATION

8 CATCH BASIN @ LANDSCAPE AREAS
SCALE: 1-1/2" = 1'-0" SECTION



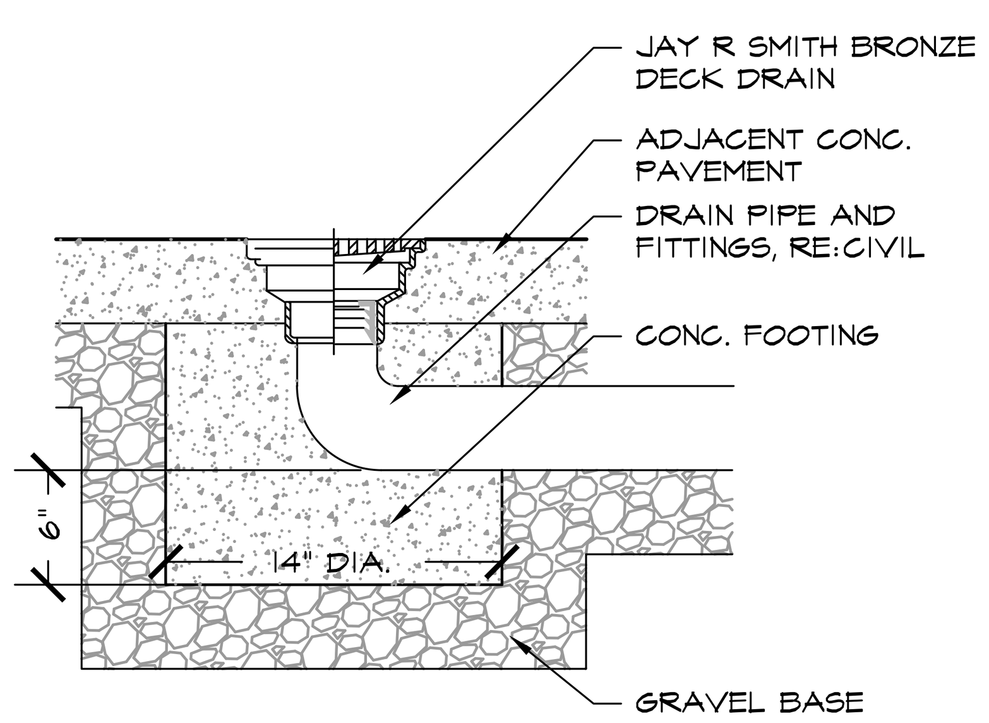
NOTE:
- NDS ADAPTERS THAT FIT THIS BASIN AREA AS FOLLOWS. #1242, #1243, #1245, #1266 & #1889 USE #1206 IF PLUGGING AN OUTLET
- PERFORATIONS ON NON OPEN SIDES AND BTM. TO BE CUT OUT WHEN ADDING EXTRA OUTLETS

9 CATCH BASIN w/ PLUMBING
SCALE: 1-1/2" = 1'-0" SECTION

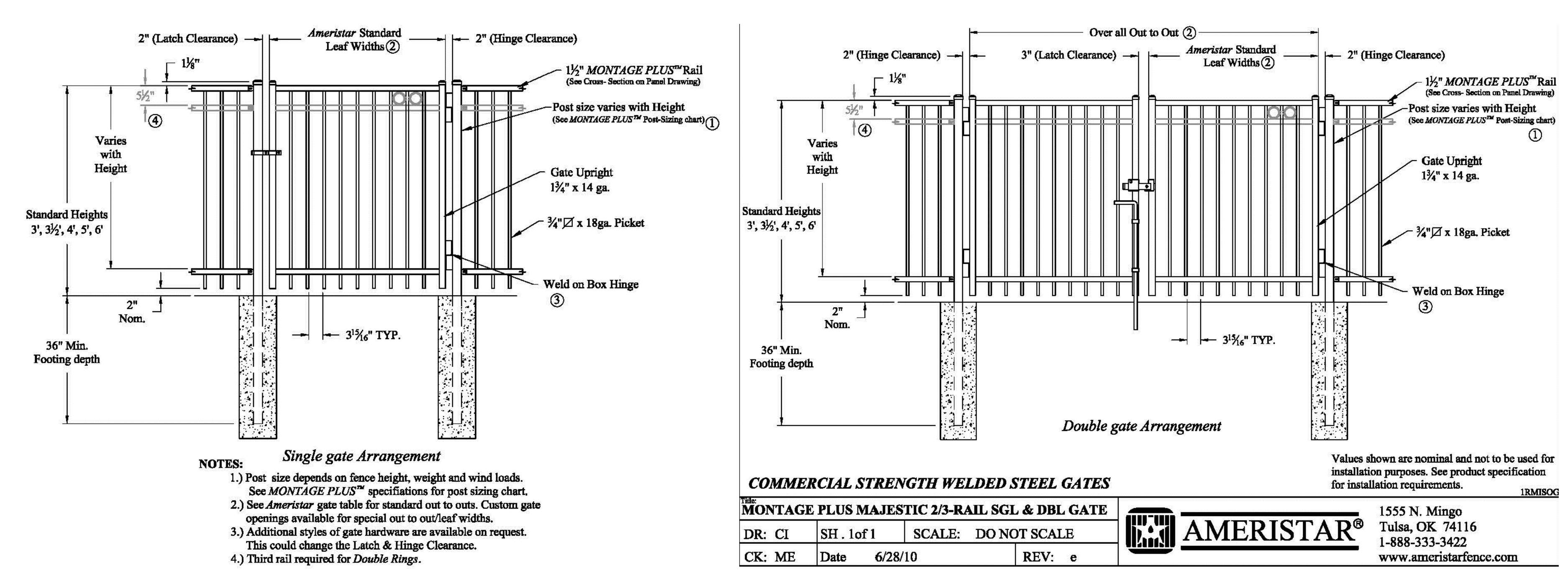


NOTE:
- GRATE TO BE ATTACHED TO BASIN w/ SCREW PROVIDED AT TIME OF INSTALLATION
- RISER CAN BE CUT TO ACHIEVE EXACT ELEVATION
- DO NOT USE OVER 5 RISERS w/ CATCH BASIN

10 CATCH BASIN w/ RISER
SCALE: 1-1/2" = 1'-0" SECTION

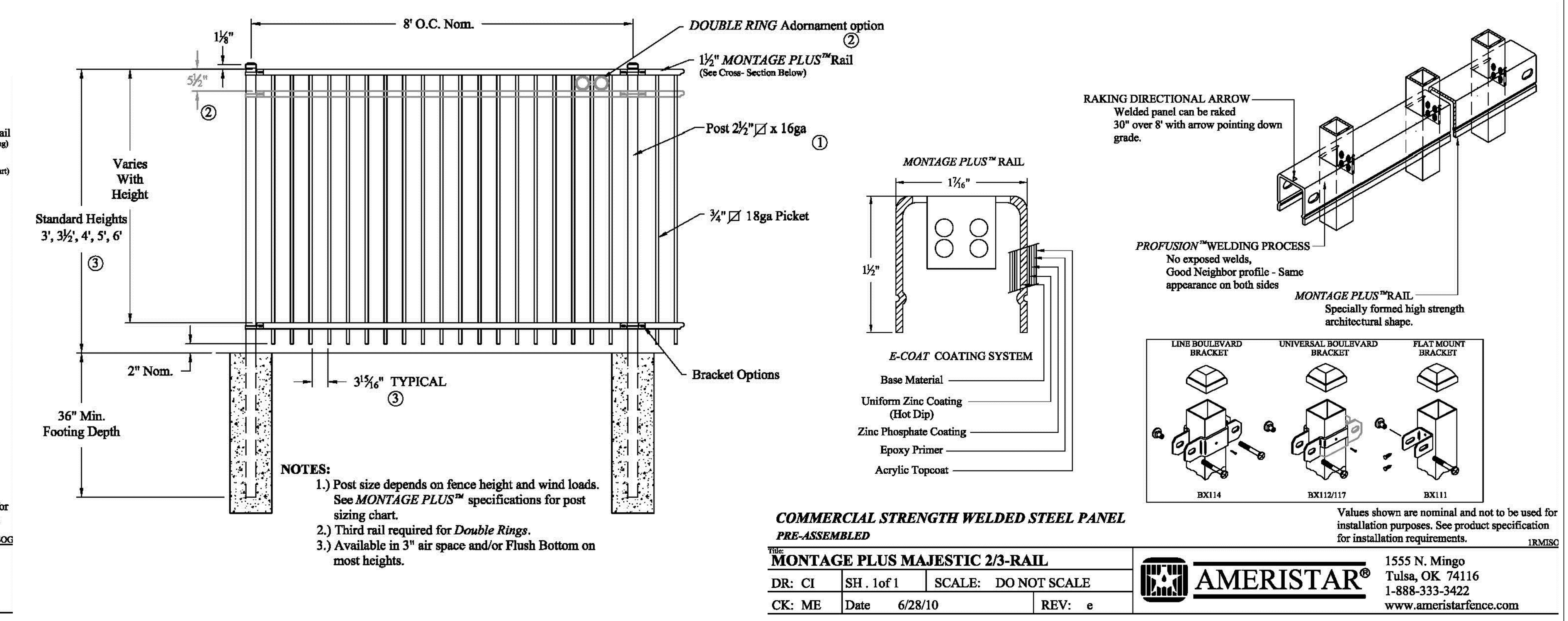


11 POOL DECK AREA DRAIN
SCALE: NTS



12 POOL GATE
SCALE: NTS

OUTWARD OPENING AWAY FROM POOL. SELF-CLOSING, SELF-LATCHING. DOUBLE GATE SHALL BE INSTALLED, 5' HT.



13 POOL FENCING
SCALE: NTS

5' HT. BLACK FENCE SUITABLE FOR POOL ENCLOSURE SHALL BE USED AT POOL DECK

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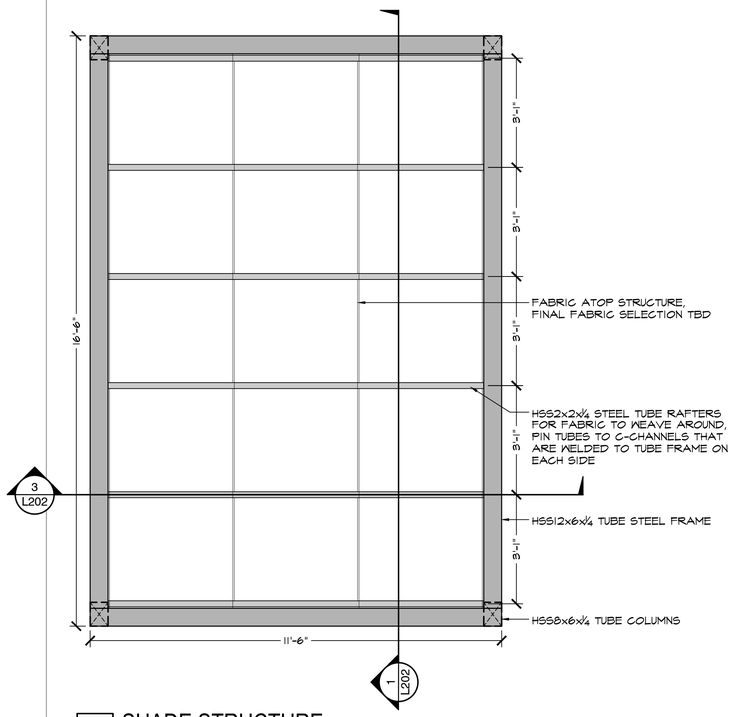
STATE OF MISSOURI
JAMES M. GRANICH
NUMBER PE-2014023909
PROFESSIONAL ENGINEER
1/10/2022
Missouri COA #001268

SUMMIT VIEW FARMS
POOL CONSTRUCTION DOCUMENTS
LEE'S SUMMIT, MISSOURI

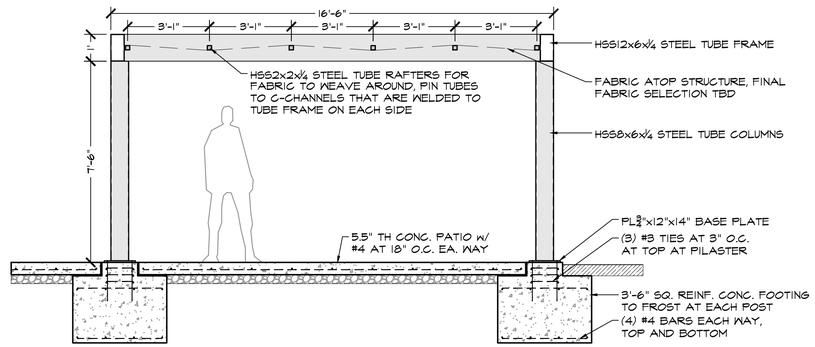
REVISION:

DECEMBER 2, 2021
SITE DETAILS

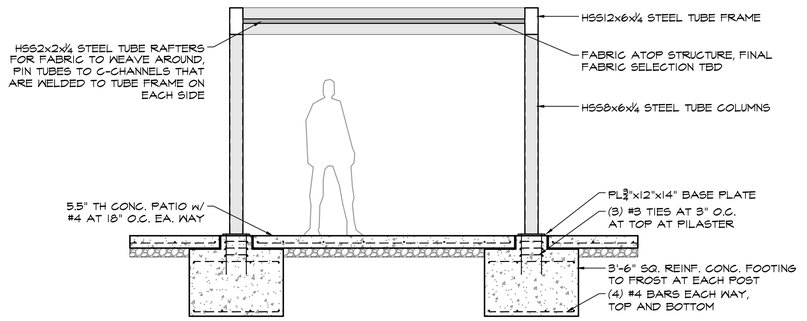
L201



2 SHADE STRUCTURE
SCALE: 1/2" = 1'-0" PLAN

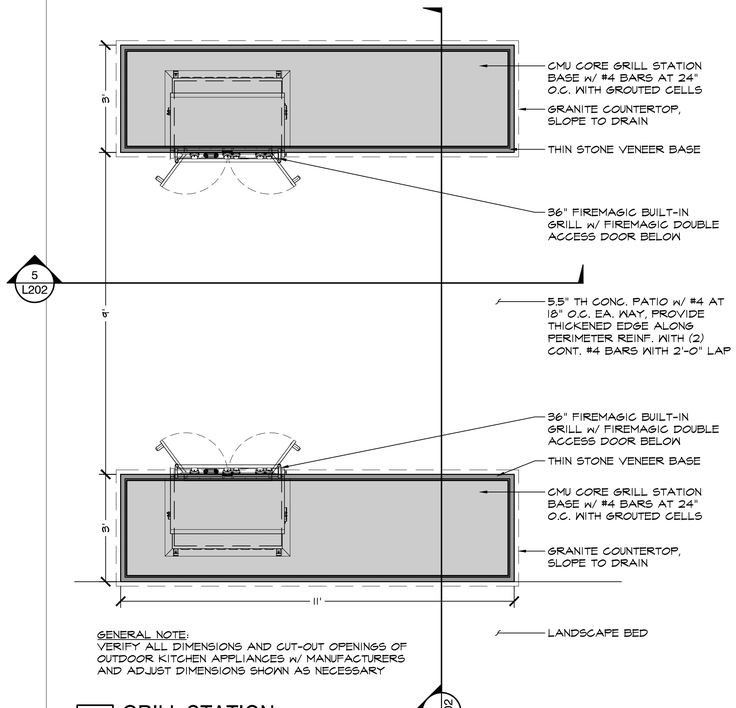


1 SHADE STRUCTURE
SCALE: 3/8" = 1'-0" SECTION

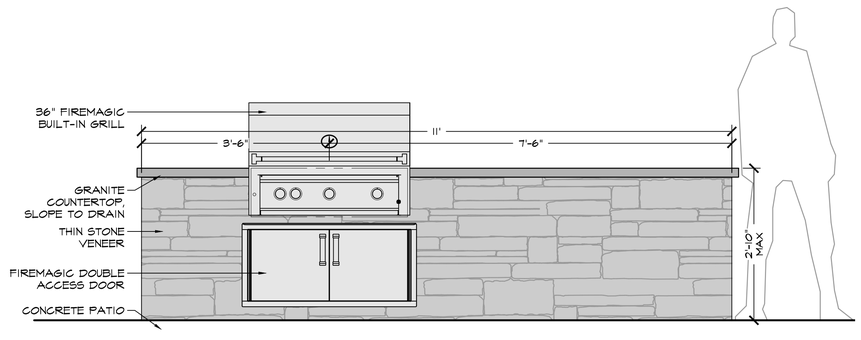


3 SHADE STRUCTURE
SCALE: 3/8" = 1'-0" SECTION

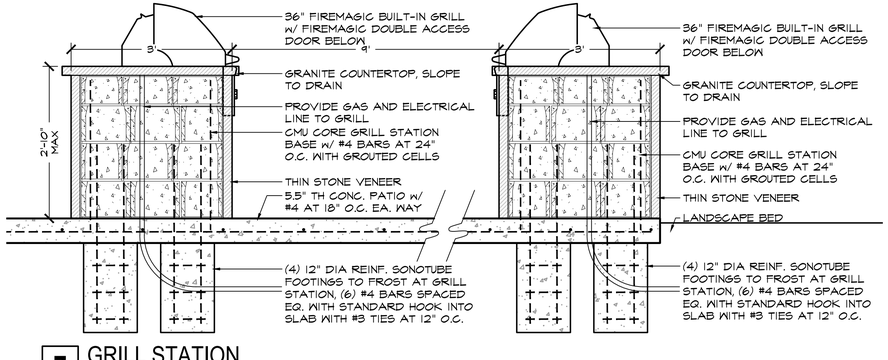
4 SHADE STRUCTURE VIGNETTE
SCALE: NTS ILLUSTRATIVE VIEW



6 GRILL STATION
SCALE: 1/2" = 1'-0" PLAN



5 GRILL STATION
SCALE: 3/4" = 1'-0" ELEVATION



7 GRILL STATION
SCALE: 3/4" = 1'-0" SECTION

8 GRILL STATION VIGNETTE
SCALE: NTS ILLUSTRATIVE VIEW

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STATE OF MISSOURI
JAMES M. GRANICH
NUMBER PE-2014023909
PROFESSIONAL ENGINEER

1/10/2022

Missouri COA #001268

SUMMIT VIEW FARMS

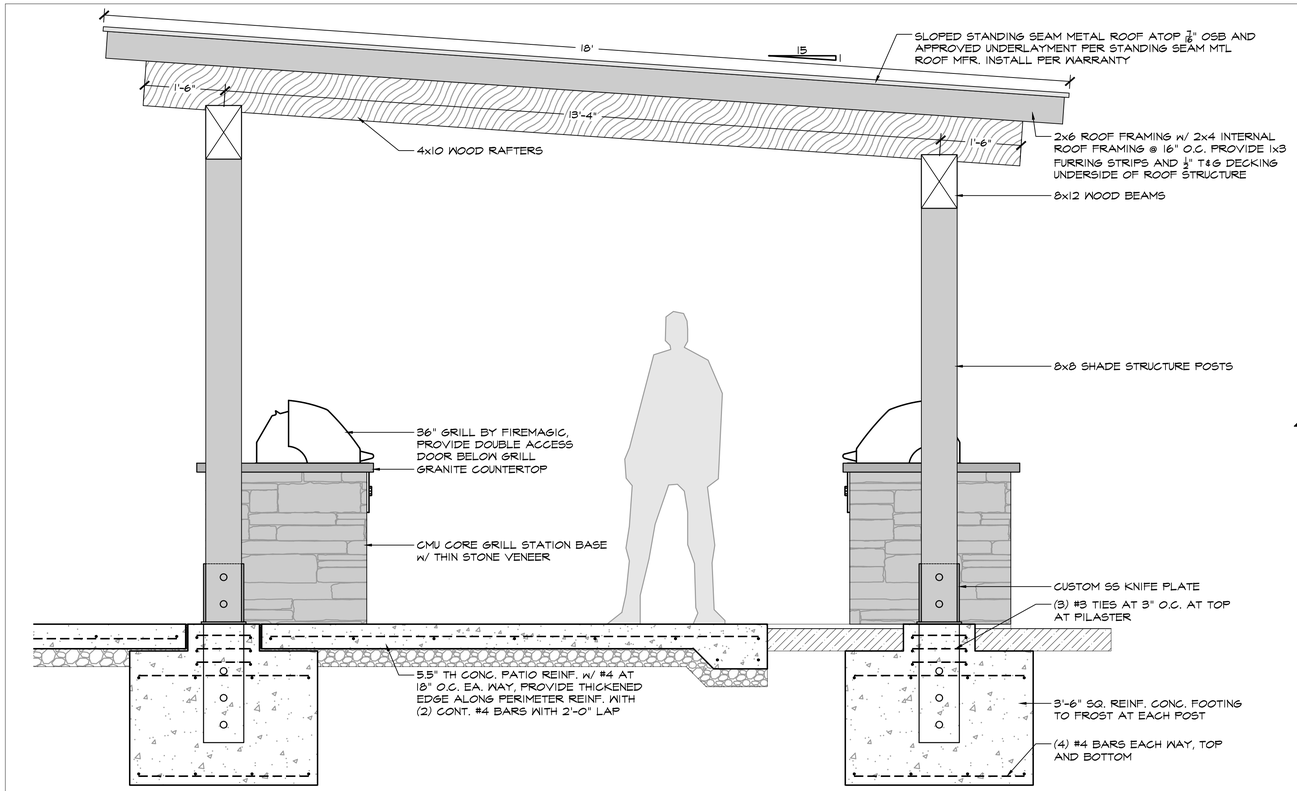
POOL CONSTRUCTION DOCUMENTS
LEE'S SUMMIT, MISSOURI

REVISION:
1 1/10/2022 CITY COMMENTS

DECEMBER 2, 2021

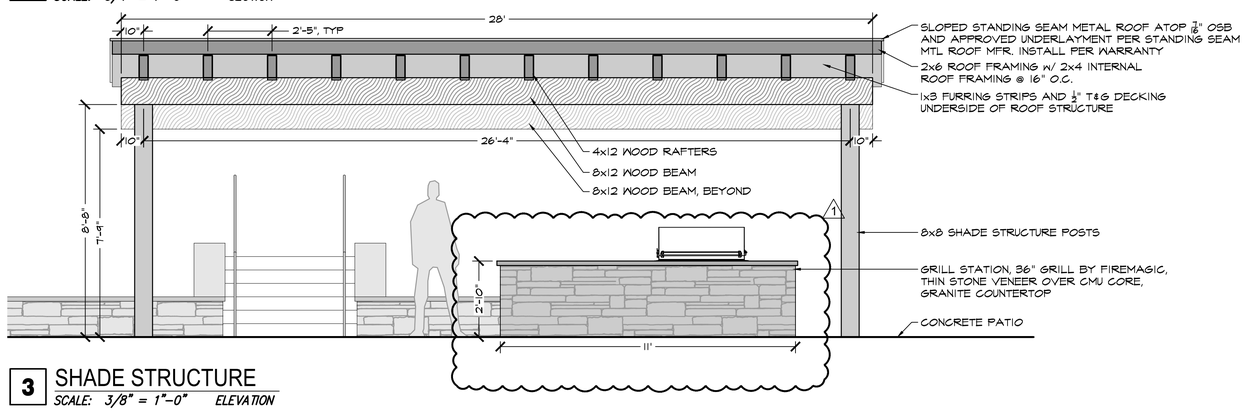
SITE DETAILS

L202



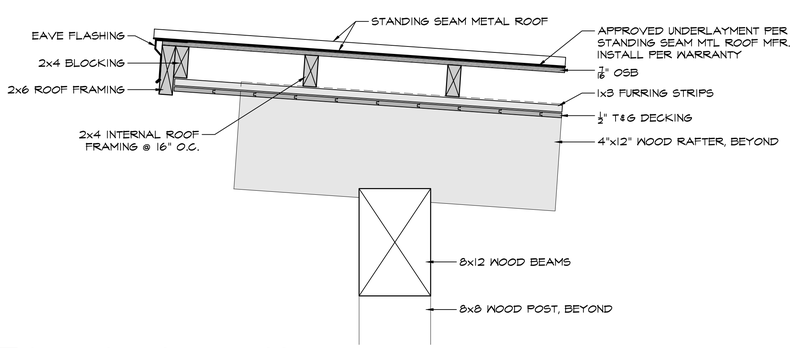
2 SHADE STRUCTURE

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



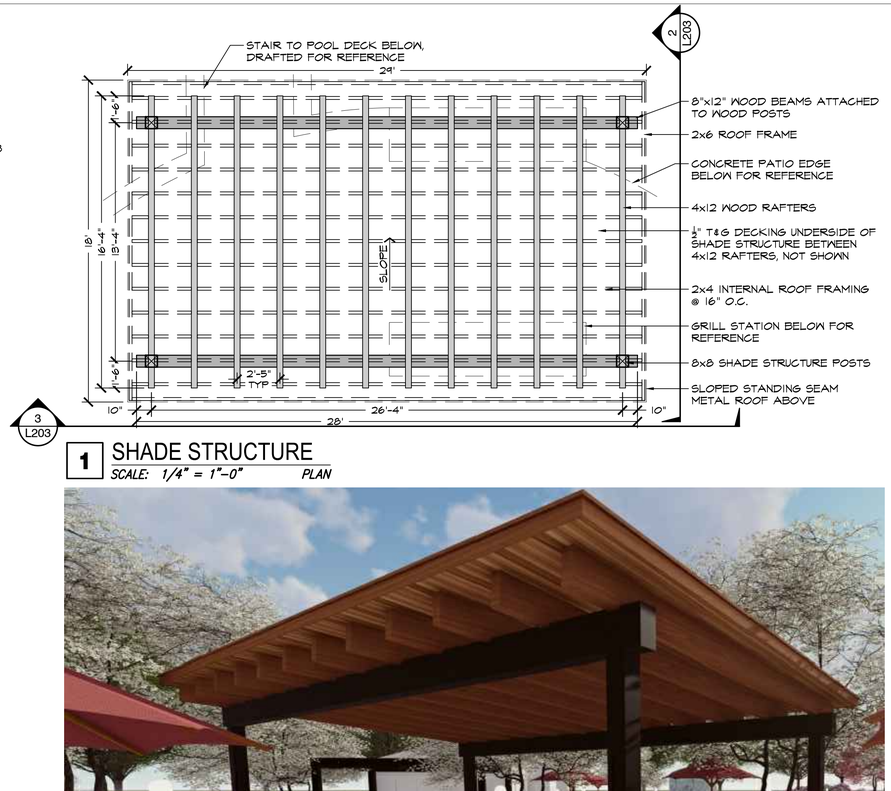
3 SHADE STRUCTURE

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



5 SHADE STRUCTURE - ROOF

SCALE: 1-1/2" = 1"-0" SECTION



1 SHADE STRUCTURE

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

4 SHADE STRUCTURE VIGNETTE

SCALE: NTS ILLUSTRATIVE VIEW

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STATE OF MISSOURI
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LEE'S SUMMIT, MISSOURI

REVISION:
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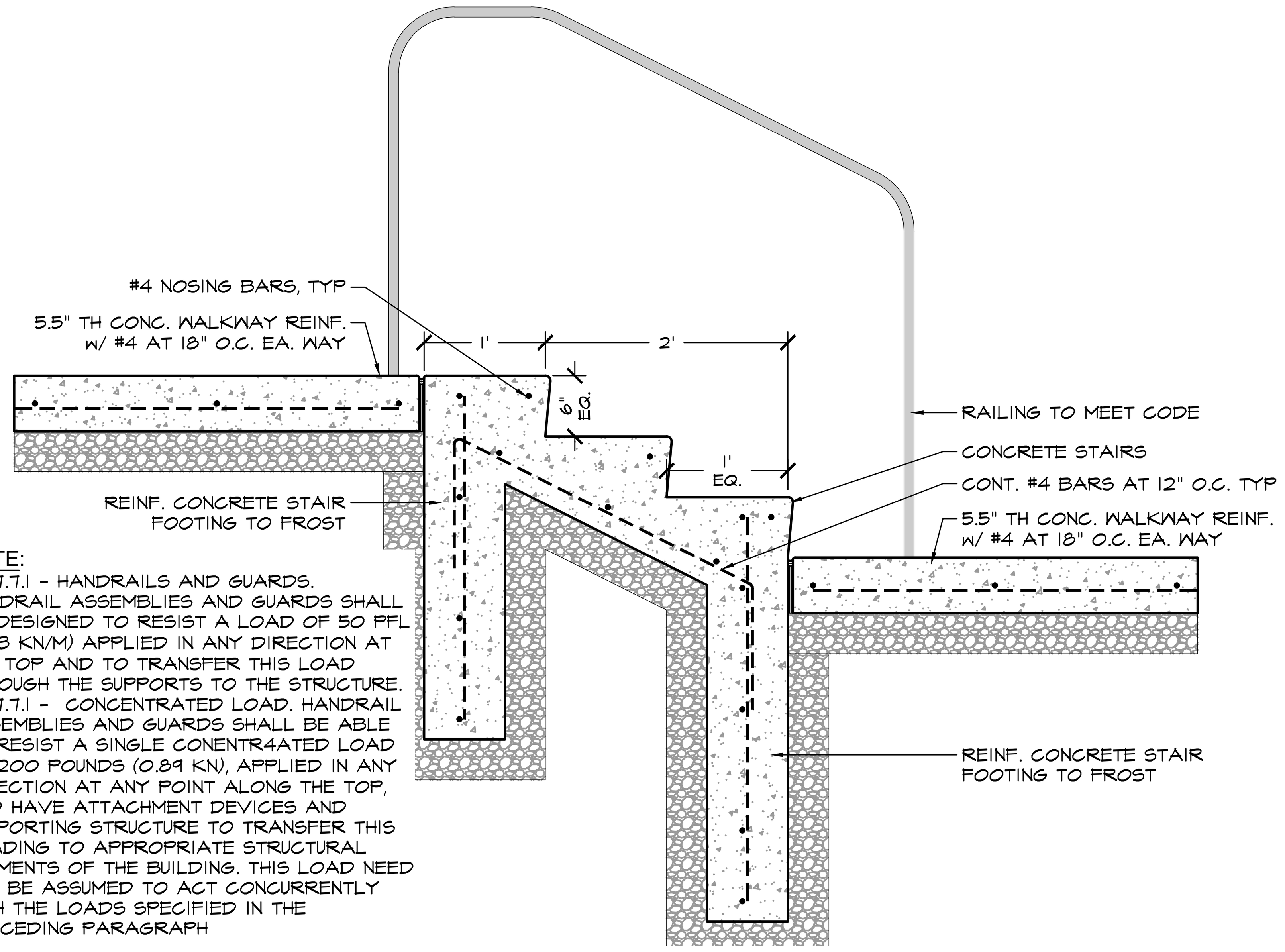
DECEMBER 2, 2021
SITE DETAILS

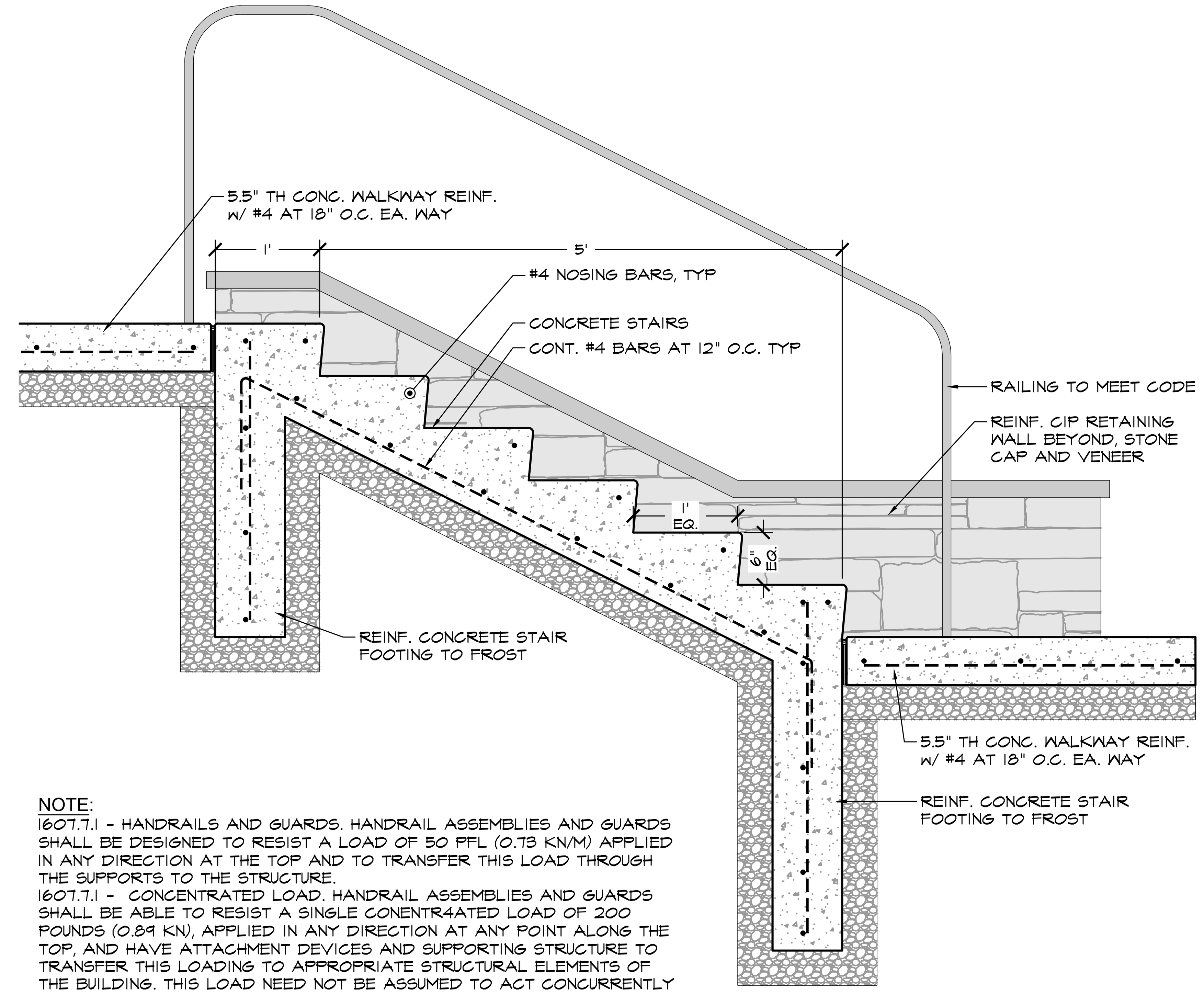
L203



#4 NOSING BARS, TYP
5.5" TH CONC. WALKWAY REINF. w/ #4 AT 18" O.C. EA. WAY
1'
2'
6" EQ.
1" EQ.
RAILING TO MEET CODE
CONCRETE STAIRS
CONT. #4 BARS AT 12" O.C. TYP
5.5" TH CONC. WALKWAY REINF. w/ #4 AT 18" O.C. EA. WAY
REINF. CONCRETE STAIR FOOTING TO FROST
REINF. CONCRETE STAIR FOOTING TO FROST

NOTE:
1607.7.1 - HANDRAILS AND GUARDS. HANDRAIL ASSEMBLIES AND GUARDS SHALL BE DESIGNED TO RESIST A LOAD OF 50 PFL (0.73 KN/M) APPLIED IN ANY DIRECTION AT THE TOP AND TO TRANSFER THIS LOAD THROUGH THE SUPPORTS TO THE STRUCTURE.
1607.7.1 - CONCENTRATED LOAD. HANDRAIL ASSEMBLIES AND GUARDS SHALL BE ABLE TO RESIST A SINGLE CONENTR4ATED LOAD OF 200 POUNDS (0.89 KN), APPLIED IN ANY DIRECTION AT ANY POINT ALONG THE TOP, AND HAVE ATTACHMENT DEVICES AND SUPPORTING STRUCTURE TO TRANSFER THIS LOADING TO APPROPRIATE STRUCTURAL ELEMENTS OF THE BUILDING. THIS LOAD NEED NOT BE ASSUMED TO ACT CONCURRENTLY WITH THE LOADS SPECIFIED IN THE PRECEDING PARAGRAPH

2 SEAT/RETAINING WALL
SCALE: 1" = 1'-0" *SECTION*



5.5" TH CONC. WALKWAY REINF. w/ #4 AT 18" O.C. EA. WAY
1'
5'
#4 NOSING BARS, TYP
CONCRETE STAIRS
CONT. #4 BARS AT 12" O.C. TYP
RAILING TO MEET CODE
REINF. CIP RETAINING WALL BEYOND, STONE CAP AND VENEER
1" EQ.
6" EQ.
REINF. CONCRETE STAIR FOOTING TO FROST
5.5" TH CONC. WALKWAY REINF. w/ #4 AT 18" O.C. EA. WAY
REINF. CONCRETE STAIR FOOTING TO FROST

NOTE:
1607.7.1 - HANDRAILS AND GUARDS. HANDRAIL ASSEMBLIES AND GUARDS SHALL BE DESIGNED TO RESIST A LOAD OF 50 PFL (0.73 KN/M) APPLIED IN ANY DIRECTION AT THE TOP AND TO TRANSFER THIS LOAD THROUGH THE SUPPORTS TO THE STRUCTURE.
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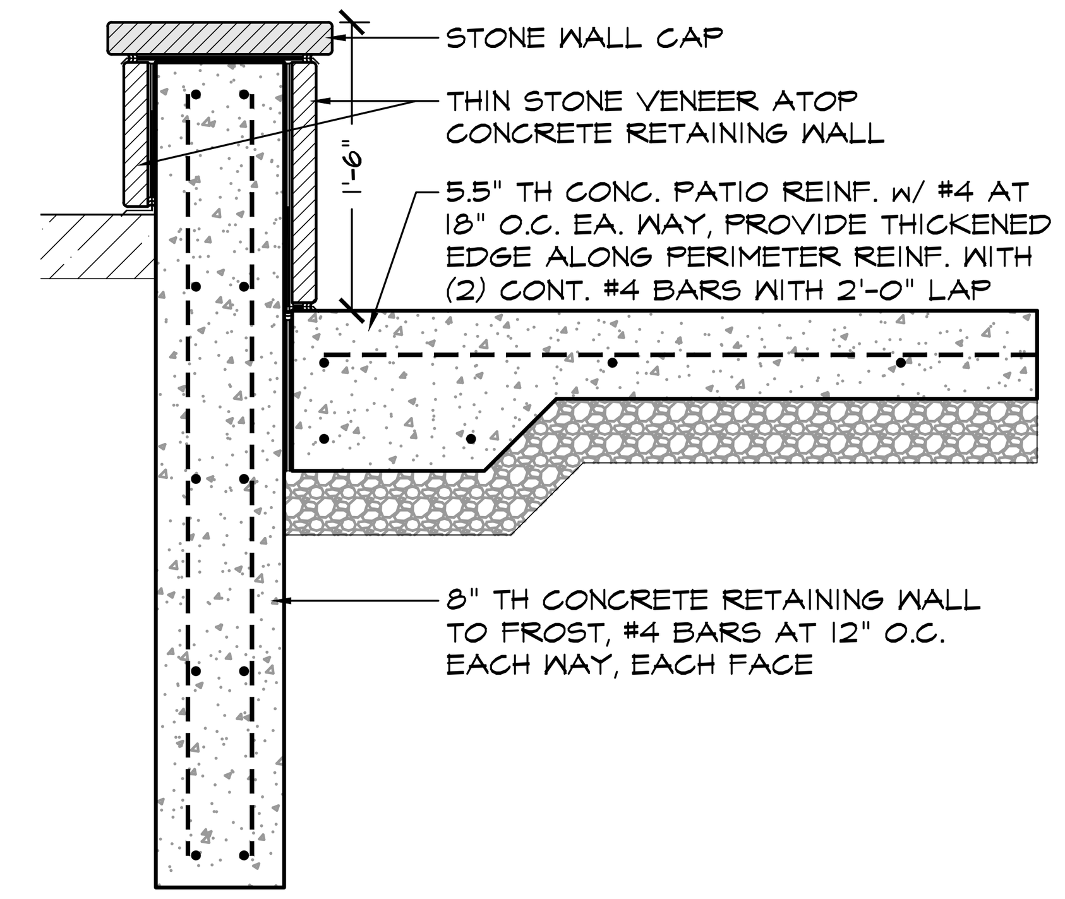
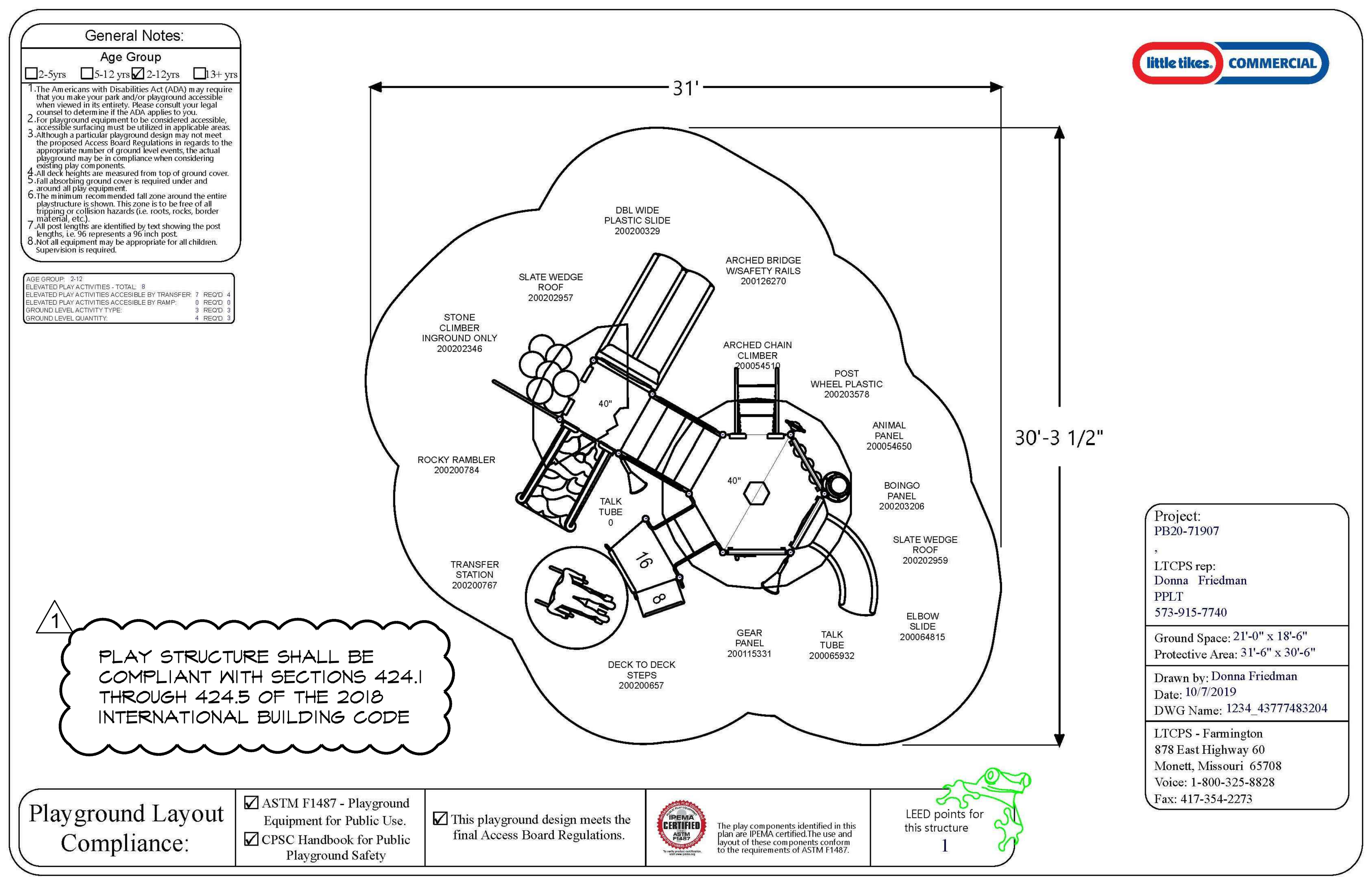
3 CONCRETE STAIRS
SCALE: 1" = 1'-0" *SECTION*



STONE WALL CAP
THIN STONE VENEER ATOP CONCRETE RETAINING WALL
1'-6"
5.5" TH CONC. PATIO REINF. w/ #4 AT 18" O.C. EA. WAY, PROVIDE THICKENED EDGE ALONG PERIMETER REINF. WITH (2) CONT. #4 BARS WITH 2'-0" LAP
8" TH CONCRETE RETAINING WALL TO FROST, #4 BARS AT 12" O.C. EACH WAY, EACH FACE

1 SEAT/RETAINING WALL
SCALE: 1" = 1'-0" *SECTION*



General Notes:
Age Group
2-5yrs 5-12 yrs 2-12yrs 13+ yrs
1. The Americans with Disabilities Act (ADA) may require that you make your park and/or playground accessible when viewed in its entirety. Please consult your legal counsel to determine if the ADA applies to you.
2. For playground equipment to be considered accessible, accessible surfacing must be utilized in applicable areas.
3. Although a particular playground design may not meet the proposed Access Board Regulations in regards to the appropriate number of ground level events, the actual playground may be in compliance when considering existing play components.
4. All deck heights are measured from top of ground cover.
5. Fall absorbing ground cover is required under and around all play equipment.
6. The minimum recommended fall zone around the entire playstructure is shown. This zone is to be free of all tripping or collision hazards (i.e. roots, rocks, border material, etc.).
7. All post lengths are identified by text showing the post lengths, i.e. 96 represents a 96 inch post.
8. Not all equipment may be appropriate for all children. Supervision is required.
little tikes COMMERCIAL
31'
30'-3 1/2"
DBL WIDE PLASTIC SLIDE 200200329
ARCHED BRIDGE W/SAFETY RAILS 200126270
SLATE WEDGE ROOF 200202957
STONE CLIMBER INGROUND ONLY 200202346
ARCHED CHAIN CLIMBER 200054510
POST WHEEL PLASTIC 200203578
ANIMAL PANEL 200054650
ROCKY RAMBLER 200200784
BOINGO PANEL 200203206
TALK TUBE 0
SLATE WEDGE ROOF 200202959
TRANSFER STATION 200200767
ELBOW SLIDE 200064815
GEAR PANEL 200115331
TALK TUBE 200065932
DECK TO DECK STEPS 200200657
40"
40"
16
8
1
PLAY STRUCTURE SHALL BE COMPLIANT WITH SECTIONS 424.1 THROUGH 424.5 OF THE 2018 INTERNATIONAL BUILDING CODE
Project: PB20-71907
LTCPS rep: Donna Friedman PPLT 573-915-7740
Ground Space: 21'-0" x 18'-6"
Protective Area: 31'-6" x 30'-6"
Drawn by: Donna Friedman
Date: 10/7/2019
DWG Name: 1234_43777483204
LTCPS - Farmington
878 East Highway 60
Monett, Missouri 65708
Voice: 1-800-325-8828
Fax: 417-354-2273
Playground Layout Compliance:
ASTM F1487 - Playground Equipment for Public Use.
CPSC Handbook for Public Playground Safety
This playground design meets the final Access Board Regulations.
The play components identified in this plan are IPEMA certified.The use and layout of these components conform to the requirements of ASTM F1487.
LEED points for this structure 1

4 PLAYGROUND LAYOUT
SCALE: NTS *MANUF. SPECS*

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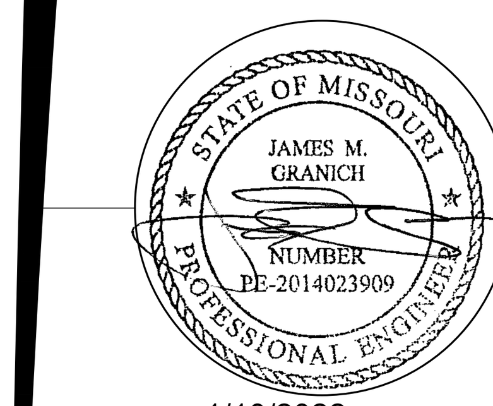

1/10/2022
Missouri COA #001268

SUMMIT VIEW FARMS
POOL CONSTRUCTION DOCUMENTS
LEE'S SUMMIT, MISSOURI

REVISION:
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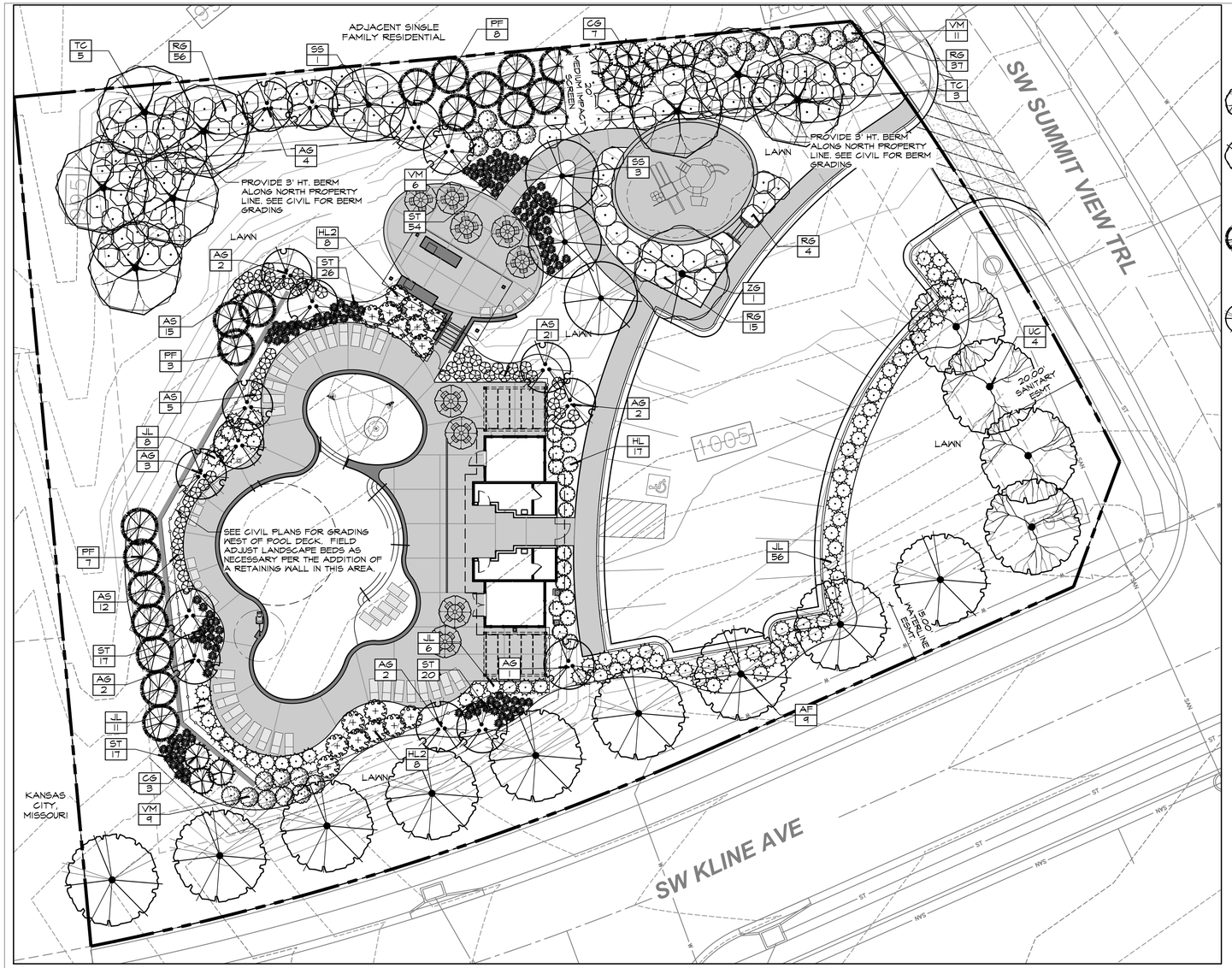
DECEMBER 2, 2021
SITE DETAILS

L204



LANDSCAPE PLAN

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

0 16 32 48 feet

SCALE: 1/16" = 10'-0"

NORTH

PLANT SCHEDULE

TREES	CODE	BOTANICAL / COMMON NAME	SIZE	CONTAINER
	AF	Acer x freemanii / Freeman Maple	3" Cal.	B&B
	TC	Tilia cordata / Littleleaf Linden	3" Cal.	B&B
	UC	Ulmus x 'Frontier' / Frontier Hybrid Elm	3" Cal.	B&B
	ZG	Zelkova serrata 'Green Vase' / Green Vase Sawleaf Zelkova	3" Cal.	B&B
EVERGREEN TREES	**CODE**	**BOTANICAL / COMMON NAME**	**SIZE**	**CONTAINER**
	CG	Cedrus atlantica 'Glauca Fastigiata' / Blue Columnar Atlas Cedar	8'-9' ht.	B&B
	PF	Pinus strobus 'Fastigiata' / Pyramidal White Pine	8'-9' ht.	B&B
ORNAMENTAL TREES	**CODE**	**BOTANICAL / COMMON NAME**	**SIZE**	**CONTAINER**
	AG	Amelanchier x grandiflora 'Autumn Brilliance' / Autumn Brilliance Serviceberry	3" Cal.	B&B
	SS	Syringa reticulata 'Summer Snow' / Summer Snow Japanese Tree Lilac	3" Cal.	B&B
SHRUBS	**CODE**	**BOTANICAL / COMMON NAME**	**SIZE**	**CONTAINER**
	AS	Aronia melanocarpa 'UCONNAM012' TM / Ground Hog Spreading Chokeberry	#3	
	HL2	Hydrangea paniculata 'Limelight' / Limelight Panicle Hydrangea	#5	
	HL	Hydrangea paniculata 'Little Lime' / Little Lime Hydrangea	#3	
	JL	Juniperus chinensis 'Gold Lace' / Gold Lace Juniper	#5, 24" ht. min.	
	RG	Rhus aromatica 'Gro-Low' / Gro-Low Fragrant Sumac	#3	
	VM	Viburnum dentatum 'Blue Muffin' / Blue Muffin Viburnum	#5, 24" ht. min.	
GRASSES	**CODE**	**BOTANICAL / COMMON NAME**	**SIZE**	**CONTAINER**
	ST	Sporobolus heterolepis 'Tara' / Prairie Dropseed	#2	

PLANT SIZE REQUIREMENTS (FOR THOSE PLANTS SATISFYING LEE'S SUMMIT REQUIREMENTS)

LANDSCAPE MATERIAL	SIZE REQUIREMENT (AT TIME OF PLANTING)
MEDIUM SHRUBS	18"-24" B&B OR 2-GAL. CONTAINER
LARGE SHRUBS	24"-30" B&B OR 5-GAL. CONTAINER
GROUNDCOVER	2½" PEA POT
DECIDUOUS TREES	3" CALIPER
EVERGREEN TREES	8' HT. MIN.

LEE'S SUMMIT LANDSCAPE REQUIREMENTS

CODE REQUIREMENT	SECTION 8.790(A) - PROVIDE 1 STREET TREE PER 30 LF OF STREET FRONTAGE		
DESCRIPTION	**CALCULATION**	**PLANTING REQUIRED**	**PLANTING PROVIDED**
- PROVIDE 1 TREE / 30 LF OF STREET FRONTAGE	- 275 LF FRONTAGE ALONG SW KLINE AVE / 30 = 9.2 - 135 LF FRONTAGE ALONG SW SUMMIT VIEW TRL / 30 = 4.5	- 10 STREET TREES REQUIRED ALONG SW KLINE AVE - 5 STREET TREES REQUIRED ALONG SW SUMMIT VIEW TRL	- 10 STREET TREES PROVIDED ALONG SW KLINE AVE - 5 STREET TREES PROVIDED ALONG SW SUMMIT VIEW TRL
CODE REQUIREMENT	SECTION 8.790(B) - PROVIDE 2 SHRUBS PER 5,000 SF OF TOTAL LOT AREA AND 1 TREE PER 5,000 SF OF LOT AREA NOT COVERED BY BUILDINGS OR STRUCTURES		
DESCRIPTION	**CALCULATION**	**PLANTING REQUIRED**	**PLANTING PROVIDED**
PROVIDE 2 SHRUBS PER 5,000 SF OF TOTAL LOT AREA AND 1 TREE PER 5,000 SF OF LOT AREA NOT COVERED BY BUILDINGS OR STRUCTURES	49,842-963 SF BUILDING = 48,956 SF (48,956 SF SITE / 5,000) =9.79 (48,956 SF SITE / 5,000) x 2 = 19.58	10 OPEN SPACE TREES REQUIRED 20 OPEN SPACE SHRUBS REQUIRED	10 OPEN SPACE TREES PROVIDED 68 OPEN SPACE SHRUBS PROVIDED
CODE REQUIREMENT	SECTION 8.820 - PROVIDE SCREENING OF THE PARKING WHERE VISIBLE FROM THE R.O.W. TO A HEIGHT OF 2.5 FEET. SCREEN SHALL CONSIST OF A HEDGE PLANTED WITH 12 SHRUBS PER 40 LF. SHRUBS SHALL BE 18" AT THE TIME OF PLANTING.		
DESCRIPTION	**CALCULATION**	**PLANTING REQUIRED**	**PLANTING PROVIDED**
PROVIDE 12 SHRUBS/40 LF ALONG PARKING FACING SW KLINE AVE & SW SUMMIT VIEW TRL	(175 LF PARKING LOT FRONTAGE / 40) x 12 = 53	53 SHRUBS REQUIRED	56 SHRUBS PROVIDED
CODE REQUIREMENT	SECTION 8.510 - PROVIDE A MEDIUM IMPACT SCREEN LOCATED ON A 3-FOOT TALL BERM ALONG ANY COMMON PROPERTY LINE SHARED WITH A RESIDENTIAL DWELLING. PROVIDE 1 SHADE TREE/500 SF, 1 ORNAMENTAL TREE/750 SF, 1 EVERGREEN TREE/300 SF AND 1 SHRUB/200 SF		
DESCRIPTION	**CALCULATION**	**PLANTING REQUIRED**	**PLANTING PROVIDED**
PROVIDE 1 SHADE TREE/500 SF, 1 ORNAMENTAL TREE/750 SF, 1 EVERGREEN TREE/300 SF, 1 SHRUB/200 SF ALONG NORTH PROPERTY LINE	4,522 SF BUFFER / 500 = 9.04 4,522 SF BUFFER / 750 = 6.03 4,522 SF BUFFER / 300 = 15.07 4,522 SF BUFFER / 200 = 22.61	9 SHADE TREES REQUIRED 6 ORNAMENTAL TREES REQUIRED 15 EVERGREEN TREES REQUIRED 22 SHRUBS REQUIRED	9 SHADE TREES PROVIDED 6 ORNAMENTAL TREES PROVIDED 15 EVERGREEN TREES PROVIDED 26 SHRUBS PROVIDED

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COMMONWEALTH OF VIRGINIA
KURT L. KRAISINGER
Lic. No. 406001746
11-10-2021
LANDSCAPE ARCHITECT

SUMMIT VIEW FARMS

POOL CONSTRUCTION DOCUMENTS
LEE'S SUMMIT, MISSOURI

REVISION:

DECEMBER 2, 2021

LANDSCAPE PLAN

L101

GENERAL NOTES

1. THE LANDSCAPE CONTRACTOR SHALL READ ALL LANDSCAPE PLANS, SPECIFICATIONS AND VISIT THE PROJECT SITE TO BECOME FAMILIAR WITH EXISTING CONDITIONS PRIOR TO BIDDING THIS PROJECT.
2. ANY AND ALL QUESTIONS CONCERNING THE LANDSCAPE PLANS AND SPECIFICATIONS SHALL BE DIRECTED TO THE LANDSCAPE ARCHITECT.
3. THE LANDSCAPE CONTRACTOR IS TO VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES (INCLUDING THOSE INDICATED ON THE PLAN) PRIOR TO INSTALLATION OF PLANT MATERIAL.
4. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR WATERING, MULCHING, AND OTHER REQUIREMENTS OF PLANT MATERIALS WHILE THEY ARE TEMPORARILY STORED ON OR OFF SITE.
5. THE LANDSCAPE CONTRACTOR SHALL COORDINATE LAYOUT OF PLANTING BEDS, PLANT MASSING, STAKED LOCATION OF TREES AND INSTALLATION OF PLANT MATERIAL WITH LANDSCAPE ARCHITECT PRIOR TO COMMENCEMENT OF WORK.
6. ALL PLANT MATERIAL (EXCEPT SHADE TREES) IS DELINEATED AT MATURE SIZE OF PLANT MATERIAL. SHADE TREES ARE DELINEATED AT 85% OF ACTUAL MATURE SIZE.
7. ALL LANDSCAPE MATERIAL SHALL MEET THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1-1996) PER THE AMERICAN ASSOCIATION OF NURSERYMEN.
8. PER OWNER'S DIRECTION, THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO INSPECT ALL PLANT MATERIAL AT THE NURSERY, PRIOR TO SELECTION OR DIGGING.
9. CONDUCT PLANTING UNDER FAVORABLE WEATHER CONDITIONS DURING EITHER THE SPRING PLANTING SEASON, MARCH 1 TO JUNE 1, OR THE FALL PLANTING SEASON, SEPTEMBER 30 UNTIL FREEZING OF THE GROUND. DURING THE FALL PLANTING SEASON, CONIFEROUS MATERIAL PLANTING SHALL BE CONDUCTED AUGUST 15 TO OCTOBER 1. DEVIATION FROM THE ABOVE PLANTING DATES WILL ONLY BE PERMITTED WITH APPROVAL IN WRITING BY THE LANDSCAPE ARCHITECT.**
10. THE PLANTING SOIL MIXTURE FOR ALL TREE PLANTINGS SHALL INCLUDE SOIL EXCAVATED FROM THE HOLE. RATIO: 50% VIRGIN SOIL + 50% AMENDED TOP SOIL.
11. ROOT STIMULATOR SHALL BE APPLIED TO ALL PLANT MATERIALS WITH THE EXCEPTION OF LAWN AREAS. APPLY AS PER THE MANUFACTURERS SPECIFICATIONS.
12. THE LANDSCAPE CONTRACTOR SHALL RESTORE FINISH GRADES IN ALL PLANTING AREAS (PER GRADING PLANS) WHICH MAY HAVE BEEN DISTURBED DURING PLANTING OPERATIONS.
13. ALL TREE SAUCERS AND PLANTING BEDS ARE TO BE MULCHED WITH A MINIMUM OF 3" DOUBLE-GROUND HARDWOOD MULCH (COLOR DYED DARK BROWN). LANDSCAPE CONTRACTOR TO PROVIDE MULCH SAMPLE TO LANDSCAPE ARCHITECT FOR REVIEW PRIOR TO INSTALLATION. WHERE PLANTING BEDS ARE ADJACENT TO WALKS AND CURBS THE SOIL LEVEL SHALL BE 3" LOWER TO ALLOW FOR MULCH LAYER. WHERE SOD IS INDICATED, ITS THICKNESS SHALL ALSO BE ACCOUNTED FOR SO THAT THE SOIL SURFACE IN THE SOD IS 1/2" BELOW THE HARDSCAPE SURFACE.
14. ALL SHRUB/PERENNIAL PLANTING BEDS SHALL BE TREATED WITH A PRE-EMERGENT HERBICIDE SUCH AS TREFLAN OR EQUAL, APPLY PER MANUFACTURER'S SPECIFICATIONS. THE PRE-EMERGENT SHALL NOT BE APPLIED UNTIL AFTER ALL PLANTING WITHIN THESE AREAS IS COMPLETE, BUT BEFORE THESE AREAS ARE MULCHED. DO NOT DISTURB AREAS AFTER APPLICATION. WATER IN AS DIRECTED.
15. MULCH, STAKES, GUY WIRE, PRE-EMERGENT HERBICIDES, ETC. SHALL BE SUBSIDIARY TO INDIVIDUAL PLANTS.
16. ALL SLOPES THAT EXCEED A 3:1 GRADE SHALL BE PROTECTED WITH AN EROSION CONTROL BLANKET WITH NORTH AMERICAN GREEN S150. INSTALL PER THE MANUFACTURER'S SPECIFICATIONS.
17. LABEL EACH TREE AND SHRUB WITH A SECURELY ATTACHED, WATERPROOF TAG BEARING LEGIBLE DESIGNATION OF BOTH BOTANICAL AND COMMON NAME. LABEL EACH ORNAMENTAL GRASS, GROUNDCOVER, PERENNIAL AND ANNUAL WITH THE LABEL PROVIDED BY THE ORIGINAL GROWER OF THE PLANT. LABELS SHALL NOT BE REMOVED UNTIL AFTER PROVISIONAL ACCEPTANCE BY LANDSCAPE ARCHITECT.
18. STAKES AND GUY WIRES SHALL BE REMOVED AT THE END OF ONE FULL GROWING SEASON.
19. LOOSEN SOIL FOR ALL PLANTING ISLANDS AND SHRUB/PERENNIAL BEDS TO A DEPTH OF 12". ALL AREAS DENOTED AS SOD (LAWN AREAS) SHALL HAVE A 6" MINIMUM TOPSOIL LAYER. TOPSOIL SHALL BE LAID IN 3" LIFTS. IN AREAS WHERE CONSTRUCTION GRADING HAS NOT OCCURRED AND THE VIRGIN GRADES YET EXIST, THE TOPSOIL LAYER MAY NOT BE REQUIRED BASED ON THE DECISION OF THE LANDSCAPE ARCHITECT.
20. TOPSOIL SHALL BE FERTILE NATURAL TOPSOIL, TYPICAL OF THE LOCALITY, OBTAINED FROM WELL DRAINED AREAS. STOCKPILED TOPSOIL MAY BE USED. IT SHALL BE WITHOUT ADMIXTURE OF SUBSOIL OR SLAG AND SHALL BE FREE OF STONES, LUMPS, STICKS, PLANTS OR THEIR ROOTS, TOXIC SUBSTANCES OR OTHER EXTRANEOUS MATTER THAT MAY BE HARMFUL TO PLANT GROWTH OR WOULD INTERFERE WITH FUTURE MAINTENANCE. TOPSOIL PH RANGE SHALL BE 5.5 TO 7.0.
21. THERE SHALL BE NO ADDITIONS, DELETIONS OR SUBSTITUTION OF PLANT MATERIAL SPECIES WITHOUT THE WRITTEN APPROVAL BY THE OWNER OR LANDSCAPE ARCHITECT. ANY SUBSTITUTION THAT HAS NOT BEEN APPROVED SHALL BE REMOVED AND REPLACED WITH THE CORRECT PLANT AT LANDSCAPE CONTRACTOR'S EXPENSE.
22. IN THE CONDITION WHERE THE PLANT MATERIAL HAS BEEN SUPPLIED BY THE OWNER THROUGH A PLANT PROCUREMENT PROGRAM WITH A MYKE PRO 2-YEAR WARRANTY, THE LANDSCAPE CONTRACTOR'S WARRANTY OF PLANT MATERIAL SHALL BEGIN FROM THE TIME OF HANDLING PLANT MATERIAL AT TIME OF DELIVERY THROUGH INSTALLATION AND END AFTER SUBSTANTIAL COMPLETION AND FINAL PUNCH-LIST APPROVAL BY LANDSCAPE ARCHITECT.
23. THE LANDSCAPE CONTRACTOR WILL BE RESPONSIBLE FOR THE COLLECTION, REMOVAL, AND PROPER DISPOSAL OF ANY AND ALL DEBRIS GENERATED DURING THE INSTALLATION OF THE LANDSCAPE CONSTRUCTION.
24. IRRIGATION SYSTEM SHALL UTILIZE A RAIN SENSOR. DRIP IRRIGATION SHALL BE UTILIZED AT LANDSCAPE BEDS.
25. COORDINATE WITH THE OWNER AND GENERAL CONTRACTOR FOR SLEEVE LOCATIONS AND TIMING OF SLEEVE INSTALLATION. ALL SLEEVING REQUIRED UNDER HARDSCAPE SURFACES FOR THE IRRIGATION SYSTEM SHALL BE THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR.
26. COORDINATE LANDSCAPE PLANTING WITH IRRIGATION CONTRACTOR. THE TREE PLANTINGS SHALL BE IN PLACE BEFORE IRRIGATION LINE ROUTING BEGINS. WATER TREES BY HAND UNTIL IRRIGATION SYSTEM IS FULLY FUNCTIONAL. SHRUBS AND PERENNIALS SHALL NOT BE INSTALLED UNTIL THE IRRIGATION SYSTEM IS FULLY FUNCTIONAL. THE IRRIGATION SYSTEM SHALL BE COMPLETE AND FULLY FUNCTIONAL BEFORE SOD IS PLACED.

DECIDUOUS TREE PLANTING NOTES:
1) DO NOT HEAVILY PRUNE THE TREE AT PRUNING. PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS & UNBROKEN OR DEAD BRANCHES. SOME INTERIOR TWIGS & LATERAL BRANCHES MAY BE PRUNED IF REQUIRED. DO NOT REMOVE THE TERMINAL BUDS OF THE BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.

2) MARK THE NORTH SIDE OF THE TREE IN THE NURSERY AND ROTATE TREE TO FACE NORTH AT THE SITE WHENEVER POSSIBLE.

3) BALL OF PLANT TO BE KEPT MOIST AND PROTECTED FROM DAMAGE PRIOR TO PLANTING. ADD ROOT STIMULATOR TO SURFACE IMMEDIATELY AFTER PLANTING AS PER MANUFACTURER'S RECOMMENDATIONS.

4) PLANTING DEPTH OF ROOTBALL SHALL BE EQUAL TO ITS ORIGINAL PLANTING DEPTH AT NURSERY. PLACE ROOTBALL ON UNEXCAVATED OR TAMPED SOIL, TYP. SCARIFY HOLE & BACKFILL WITH SOIL EXCAVATED FROM HOLE & SPECIFIED AMENDMENTS.

5) SET TOP OF ROOT BALL 1-2 INCHES HIGHER THAN SURROUNDING GRADE.

6) REMOVE ALL TWINE, ROPE, WIRE AND BURLAP FROM THE UPPER 1/3 OF THE ROOTBALL.

7) EACH TREE MUST BE PLANTED SUCH THE TRUNK FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL. TREES WHERE THE FLARE IS NOT VISIBLE SHALL BE REJECTED. DO NOT COVER THE TOP OF THE ROOT BALL W/ SOIL.

8) SOAK BACKFILL AFTER PLANTING.

9) APPLY 4"TH. MULCH LAYER AROUND TREE. DO NOT PLACE MULCH IN DIRECT CONTACT W/ CROWN OF TREE TRUNK.

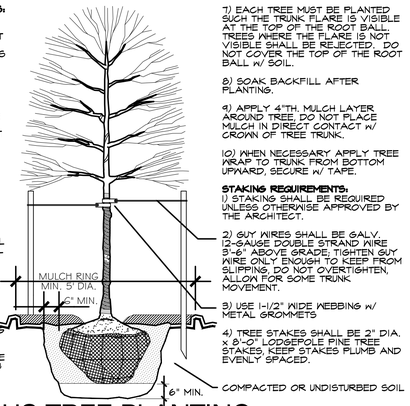
10) WHEN NECESSARY APPLY TREE WRAP TO TRUNK FROM BOTTOM UPWARD, SECURE W/ TAPE.

STAKING REQUIREMENTS:
1) STAKING SHALL BE REQUIRED UNLESS OTHERWISE APPROVED BY THE ARCHITECT.

2) GUY WIRES SHALL BE GALV. 12-GAUGE DOUBLE STRAND WIRE 3'-6" ABOVE GRADE, TIGHTEN GUY WIRE ONLY ENOUGH TO KEEP FROM SLIPPING. DO NOT OVERTIGHTEN, ALLOW FOR SOME TRUNK MOVEMENT.

3) USE 1-1/2" WIDE WEBBING W/ METAL GROMMETS

4) TREE STAKES SHALL BE 2" DIA. x 8'-0" LODGEPOLE PINE TREE STAKES. KEEP STAKES PLUMB AND EVENLY SPACED.



1 DECIDUOUS TREE PLANTING
SCALE: N.T.S.

EVERGREEN TREE PLANTING NOTES:
1) DO NOT HEAVILY PRUNE THE TREE AT PRUNING. PRUNE ONLY CROSSOVER LIMBS, CO-DOMINANT LEADERS & UNBROKEN OR DEAD BRANCHES. SOME INTERIOR TWIGS & LATERAL BRANCHES MAY BE PRUNED IF REQUIRED. DO NOT REMOVE THE TERMINAL BUDS OF THE BRANCHES THAT EXTEND TO THE EDGE OF THE CROWN.

2) MARK THE NORTH SIDE OF THE TREE IN THE NURSERY AND ROTATE TREE TO FACE NORTH AT THE SITE WHENEVER POSSIBLE.

3) BALL OF PLANT TO BE KEPT MOIST AND PROTECTED FROM DAMAGE PRIOR TO PLANTING. ADD ROOT STIMULATOR TO SURFACE IMMEDIATELY AFTER PLANTING AS PER MANUFACTURER'S RECOMMENDATIONS.

4) PLANTING DEPTH OF ROOTBALL SHALL BE EQUAL TO ITS ORIGINAL PLANTING DEPTH AT NURSERY. PLACE ROOTBALL ON UNEXCAVATED OR TAMPED SOIL, TYP. SCARIFY HOLE & BACKFILL WITH SOIL EXCAVATED FROM HOLE & SPECIFIED AMENDMENTS.

5) SET TOP OF ROOT BALL 1-2 INCHES HIGHER THAN SURROUNDING GRADE.

6) REMOVE ALL TWINE, ROPE, WIRE AND BURLAP FROM THE UPPER 1/3 OF THE ROOTBALL.

7) EACH TREE MUST BE PLANTED SUCH THE TRUNK FLARE IS VISIBLE AT THE TOP OF THE ROOT BALL. TREES WHERE THE FLARE IS NOT VISIBLE SHALL BE REJECTED. DO NOT COVER THE TOP OF THE ROOT BALL W/ SOIL.

8) SOAK BACKFILL AFTER PLANTING.

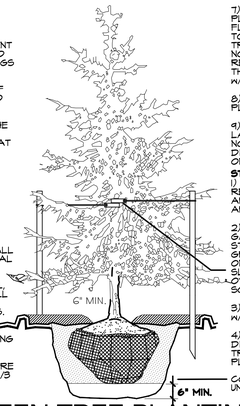
9) APPLY 4"TH. MULCH LAYER AROUND TREE. DO NOT PLACE MULCH IN DIRECT CONTACT W/ CROWN OF TREE TRUNK.

STAKING REQUIREMENTS:
1) STAKING SHALL BE REQUIRED UNLESS OTHERWISE APPROVED BY THE ARCHITECT.

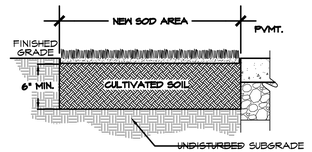
2) GUY WIRES SHALL BE GALV. 12-GAUGE DOUBLE STRAND WIRE 5'-6" ABOVE GRADE, TIGHTEN GUY WIRE ONLY ENOUGH TO KEEP FROM SLIPPING. DO NOT OVERTIGHTEN, ALLOW FOR SOME TRUNK MOVEMENT.

3) USE 1-1/2" WIDE WEBBING W/ METAL GROMMETS

4) TREE STAKES SHALL BE 2" DIA. x 8'-0" LODGEPOLE PINE TREE STAKES. KEEP STAKES PLUMB AND EVENLY SPACED.



2 EVERGREEN TREE PLANTING
SCALE: N.T.S.



SOD INSTALLATION NOTES:
1) FINISHED GRADES SHALL BE ACCURATE.

2) CULTIVATE ENTIRE AREA TO A MINIMUM 6" DEPTH. EXCEPTIONS TO AREAS MAY BE MADE IF TREE ROOTS ARE ENCOUNTERED WITHIN THE DRIPLINE OF EXISTING TREES. HAND RAKE SMOOTH.

3) ADD ADDITIVES (AS PER SOIL TEST RECOMMENDATIONS) AND TILL INTO SOIL.

4) LAY AND ROLL SOD. WATER THOROUGHLY.

3 SOD INSTALLATION
SCALE: N.T.S.

PERENNIAL PLANTING NOTES:
1) BREAK UP EXISTING TOPSOIL TO A DEPTH OF 24"

2) PROVIDE NEW TOPSOIL TO A DEPTH OF 18"

3) THOROUGHLY MIX PEAT IN TOP 3-4" OF SOIL

4) DO NOT ALLOW PERENNIALS TO DRY OUT. KEEP MOIST AND PROTECTED FROM DAMAGE PRIOR TO PLANTING.

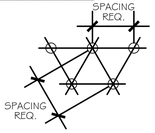
5) PLACE PLANT IN VERTICAL PLUMB POSITION

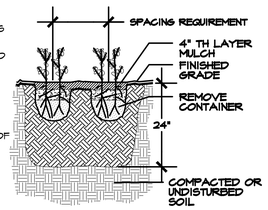
6) DIG HOLE AS DEEP AS INITIAL ROOT SYSTEM

7) BACKFILL W/ SOIL AND PACK FIRMLY BY HAND ADD ROOT STIMULATOR PER MANUFACTURER'S RECOMMENDATIONS. WATER THOROUGHLY TO FINISH PACKING SOIL AROUND ROOTS.

8) APPLY 4" TH LAYER OF MULCH ON PERENNIAL PLANT BED, DO NOT COVER PLANTS

SPACING DIAGRAM





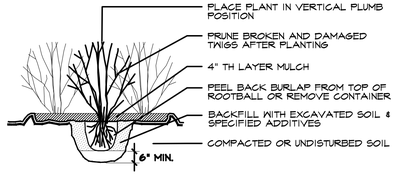
5 PERENNIAL PLANTING
SCALE: N.T.S.

SHRUB PLANTING NOTES:
1) SET SHRUB AT SAME DEPTH AT WHICH IT GREW IN THE FIELD OR CONTAINER.

2) PRUNE, THIN & SHAPE SHRUBS IN ACCORDANCE W/ STANDARD HORTICULTURAL PRACTICE

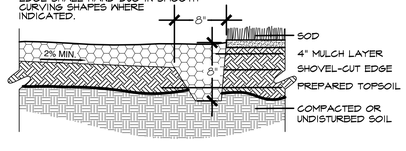
3) BALL OF PLANT TO BE KEPT MOIST AND PROTECTED FROM DAMAGE PRIOR TO PLANTING. ADD ROOT STIMULATOR TO SURFACE IMMEDIATELY AFTER PLANTING AS PER MANUFACTURER'S RECOMMENDATIONS.

4) WHEN BACKFILL IS 2/3 COMPLETE, WATER THOROUGHLY UNTIL NO MORE IS ABSORBED.



4 SHRUB PLANTING
SCALE: N.T.S.

NOTE:
EDGE SHALL HAND DUG IN SMOOTH CURVING SHAPES WHERE INDICATED.



6 SHOVEL-CUT EDGING
SCALE: N.T.S.

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COMMONWEALTH OF VIRGINIA
KURT L. KRAISINGER
Lic. No. 406001746
1-10-2022
LANDSCAPE ARCHITECT

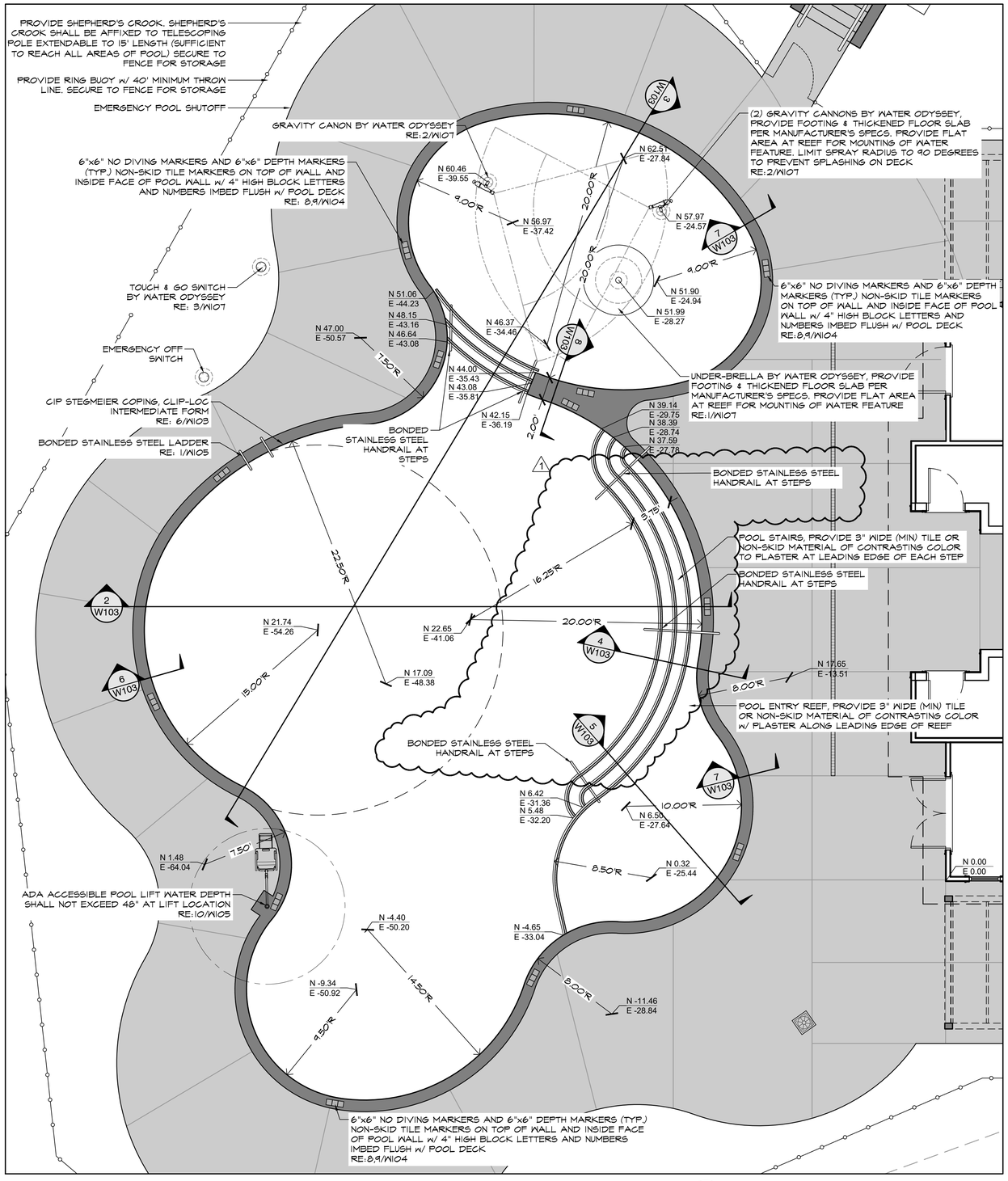
SUMMIT VIEW FARMS
POOL CONSTRUCTION DOCUMENTS
LEE'S SUMMIT, MISSOURI

REVISION:

DECEMBER 2, 2021

LANDSCAPE NOTES & DETAILS

L102



POOL LAYOUT PLAN

SCALE: 1"=5'-0"

SCALE: 1" = 5'-0"

NORTH

PLAN NOTES

1. ANY METAL WITHIN 5' OF WATERS EDGE SHALL BE BONDED

POOL GUIDELINES

1. SUPERVISE YOUR CHILDREN - YOU ALONE ARE RESPONSIBLE FOR THEIR SAFETY. DO OR RELY ON A LIFEGUARD OR SAFETY DEVICE
2. TEACH YOUR CHILDREN TO SWIM - IT IS NEVER TOO EARLY
3. LEARN TO SWIM YOURSELF. YOU CAN NOT SAVE A CHILD IF YOU CAN NOT SWIM
4. LEARN CPR. THIS IS A BASIC LIFE SKILL EVERYONE SHOULD KNOW
5. INFLATABLE 'FLOATIES' ARE NOT A REPLACEMENT FOR A LIFE VEST
6. AVOID ALCOHOL AND GUM. BAD DECISIONS AND CHOKING ARE COMMON CAUSES OF DROWNINGS
7. KEEP THE POOL AREA FREE OF TOYS WHEN THE POOL IS NOT IN USE
8. MAINTAIN THE WATER CLARITY
9. MAINTAIN THE DRAINS AND REPLACE THEM IF THEY ARE NOT OF AN ANTI-ENTRAPMENT DESIGN. DO NOT ALLOW SWIMMING TO PLAY AROUND THE DRAIN. KEEP LONG HAIR AWAY FROM THE DRAIN COVERS
10. MAINTAIN THE SAFETY BARRIERS (FENCES, COVERS, DOOR ALARMS)
11. PRACTICE SAFE DIVING TECHNIQUES - HANDS POINTED OVER THE HEAD, NEVER TO THE SIDES. NEVER DIVE INTO SHALLOW WATER
12. NEVER SWIM ALONE
13. KEEP SAFETY DEVICES HANDY

POOL SIGNAGE

1

PROVIDE POOL/ SPA RULES SIGNAGE POSTED AT EXTERIOR FACE OF POOL HOUSE WITH THE FOLLOWING VERBIAGE:

1. NO PERSON WITH OPEN CUTS, SORES, LESIONS, INFECTIONS,
2. OBVIOUS COMMUNICABLE DISEASE, OR DIARRHEA SHALL USE THE SWIMMING POOL;
3. ANIMALS ARE NOT ALLOWED IN OR AROUND THE SWIMMING POOL, EXCEPT THAT SERVICE ANIMALS AS DEFINED BY THE AMERICANS WITH DISABILITIES ACT MUST BE ALLOWED ON POOL DECKS AND ANY OTHER PLACES THE PUBLIC IS ALLOWED. SERVICE ANIMALS ARE NOT ALLOWED IN THE WATER, ON DIVING BOARDS, ON WATER SLIDES, ON FLOATATION RAFTS, ETC;
4. GLASS CONTAINERS ARE NOT ALLOWED IN OR AROUND THE SWIMMING POOL
5. CHILDREN WHO ARE NOT TOILET TRAINED SHALL WEAR TIGHT FITTING PLASTIC UNDERWEAR OR SWIM DIAPERS THAT WILL PREVENT LEAKAGE
6. NO DIVING
7. CHILDREN, AS DEFINED BY THE AQUATIC VENUE, SHALL BE ACCOMPANIED BY AN ADULT

PROVIDE SEPARATE WARNING SIGN, CONSPICUOUSLY PLACED AT ENTRANCE TO THE VENUE STATING: "WARNING - NO LIFEGUARD ON DUTY" IN LETTERS AT LEAST FOUR (4) INCHES HIGH.

POST SIGNAGE AT THE POOL DECK EXIT GATE WITH THE FOLLOWING INFORMATION:

1. SWIMMING POOL PATRON LOAD SHALL NOT EXCEED 137 PERSONS
2. POOL DECK PATRON LOAD SHALL NOT EXCEED 369 PERSONS

POOL OPERATION

1. SWIMMING POOL SHALL BE MANAGED MY A CPO/AFO CERTIFIED OPERATOR

NOTE: THIS IS NOT A DIVING POOL

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STATE OF MISSOURI
KURT L. KRITSBERGER
NUMBER LA-2003016227
LANDSCAPE ARCHITECT
1.10.2022

SUMMIT VIEW FARMS

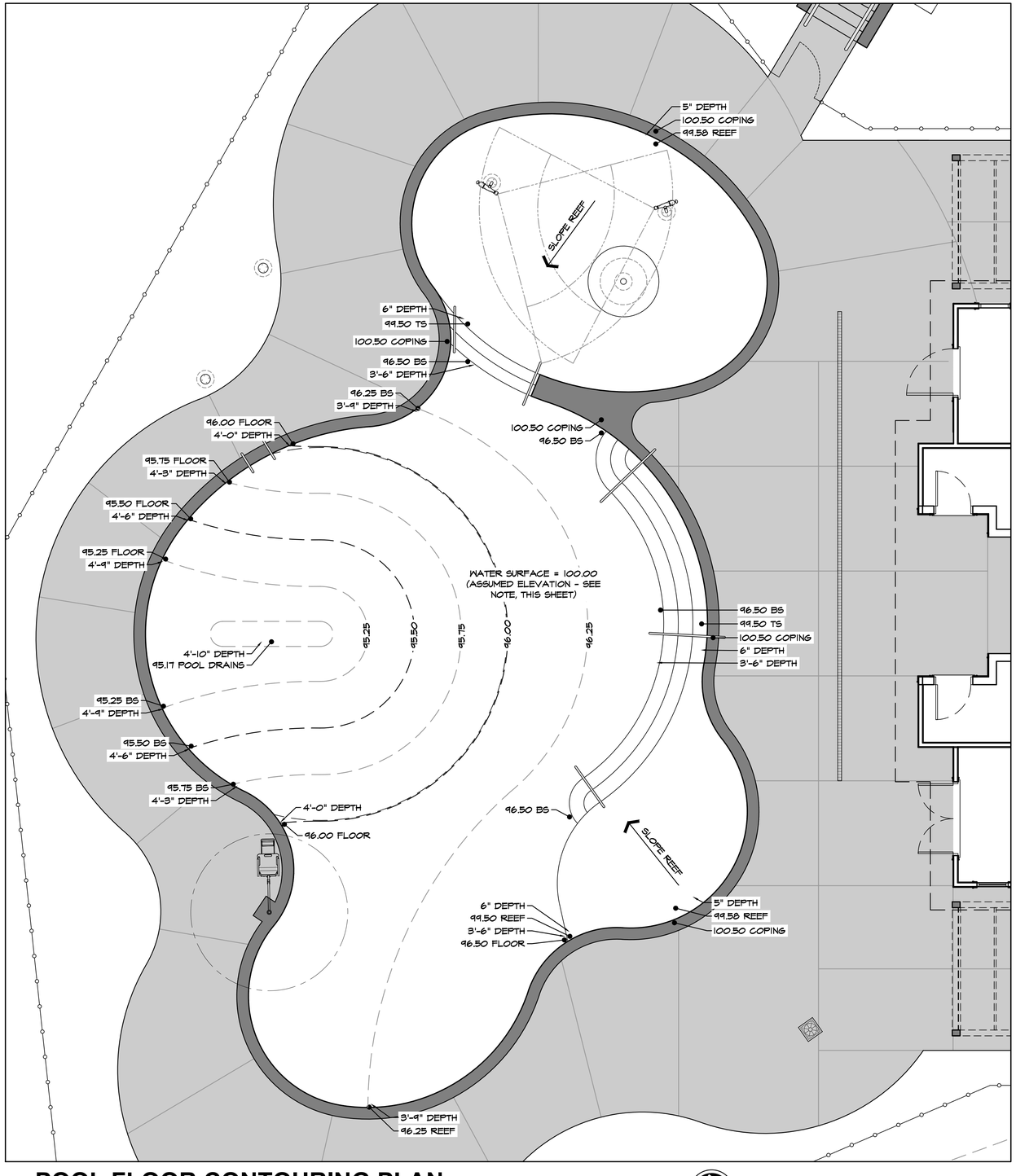
POOL CONSTRUCTION DOCUMENTS
LEE'S SUMMIT, MISSOURI

REVISION:
1 1/10/2022 CITY COMMENTS

DECEMBER 2, 2021

POOL LAYOUT PLAN

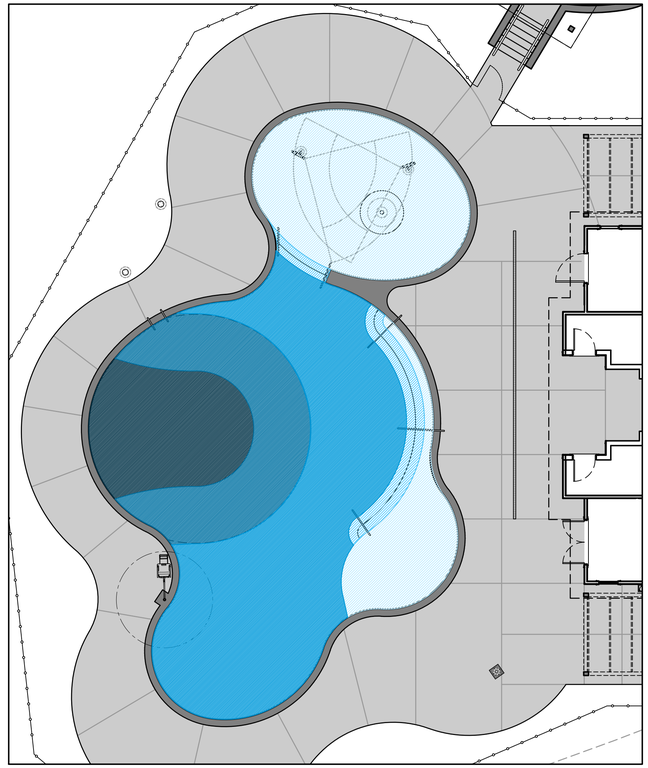
W001



POOL FLOOR CONTOURING PLAN
SCALE: 1"=5'-0"

0 5 10 15 feet
SCALE: 1" = 5'-0"

NORTH



ILLUSTRATIVE WATER DEPTH PLAN
SCALE: 1"=10'-0"

POOL WATER DEPTH

- 0' - 1' WATER DEPTH
- 1' - 3'-6" WATER DEPTH
- 3'-6" - 4' WATER DEPTH
- 4' - 4'-6" WATER DEPTH
- 4'-6"+ WATER DEPTH

PLAN NOTES

1. ANY METAL WITHIN 5' OF WATERS EDGE SHALL BE BONDED

2. ALL ELEVATIONS SHOWN ON THIS SHEET ARE ASSUMED, BASED ON AN ASSUMED WATER ELEVATION OF 100.00. SPOT ELEVATIONS DO NOT CORRELATE TO A SURVEY OR ANY BENCHMARK. TRUE WATER AND COPING ELEVATIONS ARE INDICATED ON GRADING PLAN. CONTRACTOR SHALL CORRELATE ASSUMED POOL FLOOR/WATER/COPING ELEVATIONS ON THIS PLAN TO TRUE POOL DECK AND WATER ELEVATIONS SHOWN ON GRADING PLAN IN ORDER TO ACHIEVE THE POOL WATER DEPTHS SHOWN ON THIS PLAN.

NOTE: THIS IS NOT A DIVING POOL

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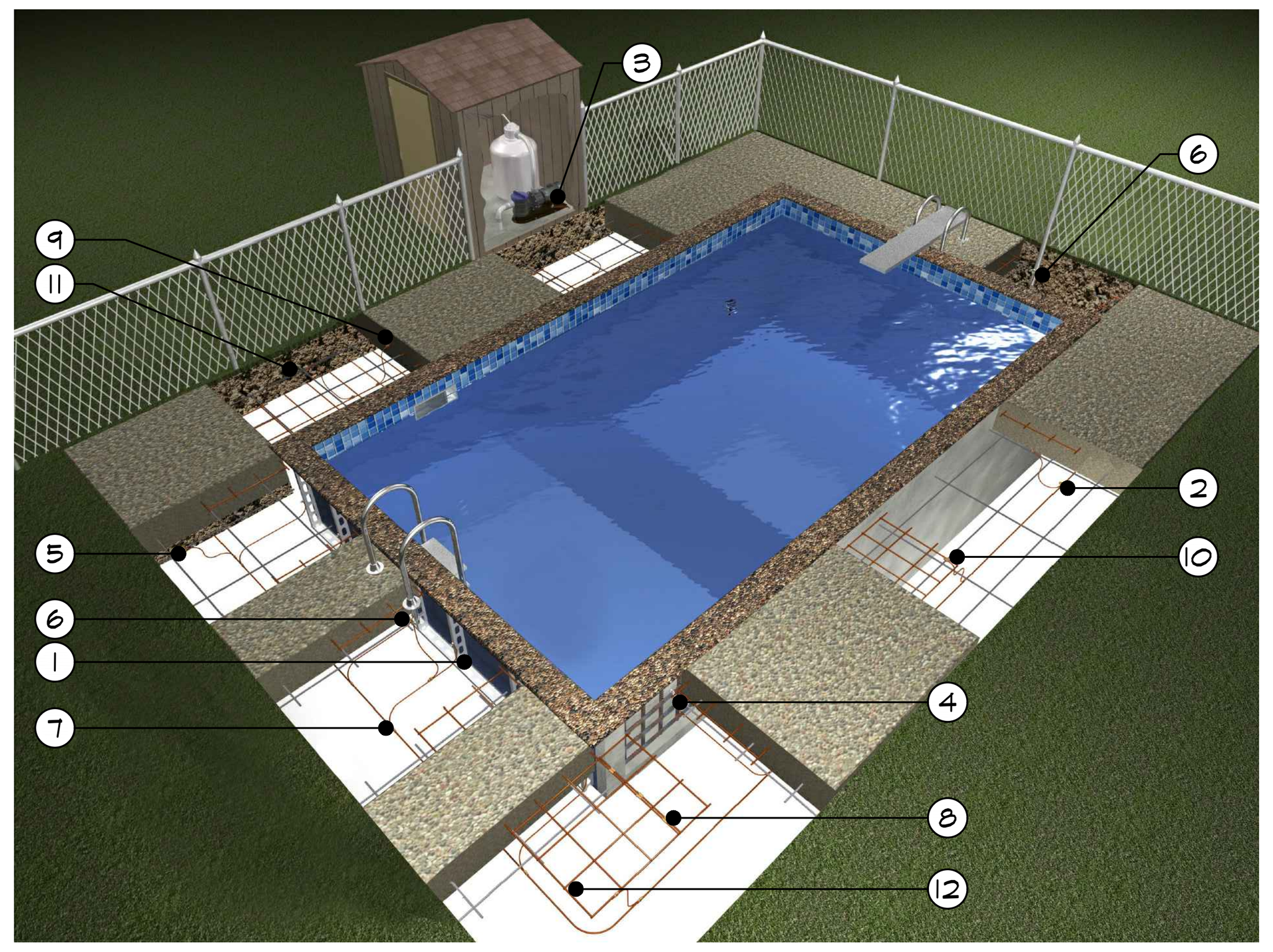
STATE OF MISSOURI
KURT L. KRAMSCHUSTER
NUMBER
LA-2003016227
LANDSCAPE ARCHITECT
1-10-2022

SUMMIT VIEW FARMS
POOL CONSTRUCTION DOCUMENTS
LEE'S SUMMIT, MISSOURI

REVISION:

DECEMBER 2, 2021
POOL FLOOR CONTOURING

W002



(4) & (5) REBAR & WATER PIPE GROUND CLAMPS

PART #	PIPE & REBAR RANGE	CONDUCTOR RANGE (AWG)
RB12A	3/8" - 1"	10 Sol. - 2 Str.
RB12B	3/8" - 1"	10 Sol. - 2 Str.

- SUITABLE FOR DIRECT BURIAL.

(6) CPC PIPE CLAMPS

PART #	MATERIAL	NOM. PIPE SIZE RANGE	PIPE OUTSIDE DIAMETER
CPC1.5/2	TINNED BRONZE	1.5" - 2"	1" - 2.4"
CPC2.5/3	TINNED BRONZE	2.5" - 3"	2.25" - 3.5"

- SUITABLE FOR DIRECT BURIAL.
- CONDUCTOR RANGE #6 - 250 MCM.
- OTHER SIZES AVAILABLE.

(7) & (8) CABLE TO CABLE ULTRAWELD EXOTHERMIC CONNECTION MOLDS

PART #	WELD METAL		REQUIRED HANDLE
	ULTRASHOT	NUWTUBE	
PT8S8SB	US25	NUWTUBE25	MHI
PS8S8SL	US25	NUWTUBE25	MH3 (INCLUDED)
PS8S6SL	US25	NUWTUBE25	MH3 (INCLUDED)

(9) & (10) CABLE TO REBAR ULTRAWELD EXOTHERMIC CONNECTION MOLDS

PART #	WELD METAL		REQUIRED HANDLE	PACKING MAT'L #
	ULTRASHOT	NUWTUBE		
RP38SB	US25	NUWTUBE25	MHI	WRPSLV
RP4L8SA	US25	NUWTUBE25	INCLUDED	CERPMI
RO38SB	US65	NUWTUBE65	MHI	WRPSLV
RO48SB	US65	NUWTUBE65	MHI	WRPSLV
RO58SB	US65	NUWTUBE65	MHI	WRPSLV

(11) REBAR GROUNDING ASSEMBLY

PART #	REBAR SIZE	CONDUCTOR TYPE (AWG)	CONDUCTOR LENGTH (FT)
RB3GA8SX5	3	8 Sol.	5

- PREFABRICATED REBAR GROUNDING ASSEMBLY WITH EXOTHERMICALLY WELDED CONNECTION.
- STANDARD 24" LONG REBAR.
- CAN BE WIRE TIED OR WELDED CAGE PRIOR TO CONCRETE POUR

(12) UL LISTED PREFABRICATED #8 SOLID COPPER GROUND MESH

PART #	WIDTH (FT)	LENGTH (FT)	CONDUCTOR SPACING (IN)	APPROX. WT. (LBS)
GM350812	3	50	12	32
GM375812	3	75	12	42
GM3100812	3	100	12	51

- OTHER MESH SIZES AND WIRE GAUGES AVAILABLE

(1) ONE-HOLE TINNED COPPER LAY-IN LUG

PART #	CONDUCTOR RANGE (AWG)	BOLT HOLE SIZE
TCL1414DB	4 - 14	#10

- SUITABLE FOR DIRECT BURIAL.

(2) COPPER SPLIT BOLT

PART #	RANGE FOR EQUAL MAIN (AWG)	MINIMUM TAP
GESB6	4 Sol. - 8 Sol.	16 Sol.

- SUITABLE FOR DIRECT BURIAL.

(3) COPPER OFFSET TERMINAL LUG

PART #	CONDUCTOR RANGE (AWG)	BOLT HOLE SIZE
GEOL2	14 Str. - 6 Str.	#8

- SUITABLE FOR DIRECT BURIAL.

TYPICAL POOL GROUNDING & BONDING VIGNETTE

BONDING LOOP GENERAL NOTES

EQUIPMENT BONDING NOTES

1. ALL METALLIC ITEMS TO BE BONDED AT PUMP ROOM PER NEC 280.26.

2. BOND ALL ITEMS AS NOTED ON THIS POOL BONDING LOOP PLAN, TO INCLUDE LADDERS, STANCHION ANCHORS, FLOATABLE ANCHORS, RAILING, PUMPS, DECK JUNCTION BOXES AND ALL OTHER METALLIC WITHIN 5'-0" OF THE POOL.

3. REINFORCEMENT STEEL AROUND POOL TO BE BONDED TO AT EACH POURED SECTION OR EVERY 20 FEET (WHICHEVER IS LESS). USE ONLY LUGS LISTED AND LABELED FOR BONDING REBAR TO A COPPER CONDUCTOR. LUGS SHOULD ALSO BE RATED FOR DIRECT BURIAL, AS LUGS WILL BE ENCLOSED WITHIN CONCRETE AFTER INSTALLED.

4. ALL METAL FITTINGS WITHIN OR ATTACHED TO THE POOL SURFACE TO BE BONDED

5. ALL FENCE POST AND GATES WITHIN 5 FEET FROM POOL SURFACE TO BE BONDED.

6. ALL PUMP MOTORS AT THE POOL TO BE BONDED TO THE BONDING LOOP UNLESS DOUBLE INSULATED. THIS INCLUDES WATER CIRCULATING, CHEMICAL FEED AND HEATER PUMPS.

7. ALL METAL RACEWAYS, PIPES, FIXED PARTS (AWNING, DOOR FRAMES, WINDOW FRAMES), AND CABLES WITHIN 5 FEET FROM THE POOL SURFACE TO BE BONDED.

8. ALL METALLIC CANOPIES, STAND, TOWERS OR OBSERVATION STANDS WITHIN 12' ABOVE THE MAXIMUM WATER LEVEL OF THE POOL AND LOCATED IN THIS AREA TO BE BONDED. BOND EACH SUPPORT LOCATED IN POOL DECK.

9. ITEMS WITH MULTIPLE ANCHOR SOCKETS, LEGS, ETC TO BE BONDED AT EACH LOCATION IN THE POOL DECK.

10. ALL PIPING TO AND FROM THE PUBLIC BATHING PLACE, INCLUDING INLET AND OUTLET PIPES SHALL BE METALLICALLY BONDED TOGETHER AND ADEQUATELY CONNECTED TO THE SAME GROUNDING ELECTRODE USED TO GROUND THE NEUTRAL CONDUCTOR OF THE ELECTRICAL SYSTEM. METAL FENCES SHALL BE GROUNDED AT BOTH SIDES OF THE ENTRANCE GATE.

11. ALL ELECTRICAL DEVICES SUCH AS PORTABLE ANNOUNCING SYSTEMS, RADIOS, AND SOFT DRINK DISPENSERS THAT MIGHT BE USED AROUND THE POOL AND IMMEDIATE ENVIRONMENT SHALL BE PROHIBITED WITHIN REACH OF BATHERS. FURTHER SPECIAL GROUNDING OF SUCH FIXTURES MUST BE PROVIDED.

12. BONDING LOOP CONDUCTOR AROUND POOL SHALL BE A SOLID COPPER CONDUCTOR AWG, NOT SMALLER THAN A #6 AWG.

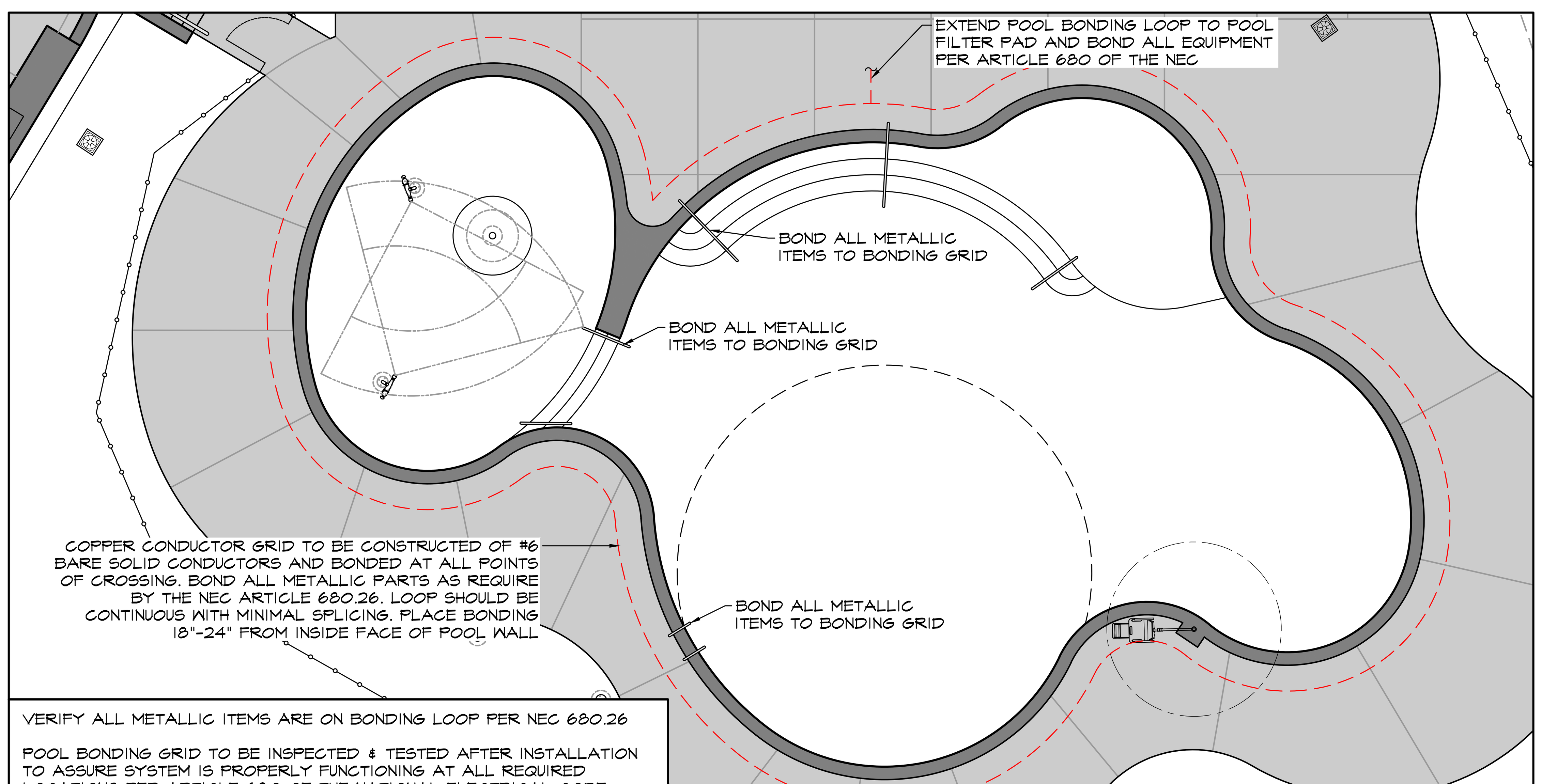
13. BONDING LOOP AROUND POOL TO BE AS CONTINUOUS AS POSSIBLE WITH A MINIMUM NUMBER OF SPLICES

14. CONNECTIONS FROM POOL BONDING LOOP CONDUCTOR TO OTHER BONDED ITEMS CAN BE MADE WITH A MINIMUM #8 AWG SOLID COPPER

15. ALL BONDING CONNECTIONS TO BE MADE WITH DEVICES LISTED AND LABELED FOR THIS ENVIRONMENT. BONDING CONNECTORS SHALL BE BRASS, COPPER, COPPER ALLOY, OR STAINLESS STEEL.

16. EXOTHERMIC WELDING IS A PERMITTED METHOD FOR BONDING THE COPPER BONDING LOOP TO THE REINFORCEMENT STEEL.

17. ALL CONNECTIONS BETWEEN BONDED ITEMS AND POOL BONDING LOOP TO BE UNDER 2 OHMS RESISTANCE.



VERIFY ALL METALLIC ITEMS ARE ON BONDING LOOP PER NEC 680.26

POOL BONDING GRID TO BE INSPECTED & TESTED AFTER INSTALLATION TO ASSURE SYSTEM IS PROPERLY FUNCTIONING AT ALL REQUIRED LOCATIONS PER ARTICLE 680 OF THE NATIONAL ELECTRICAL CODE.

POOL BONDING PLAN

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

0 8 16 24 feet

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

NORTH

POOL GROUNDING & BONDING TECHNICAL NOTES

TECHNICAL NOTES:
*680.26 EQUIPOTENTIAL BONDING * (SUMMARIZED)
(A) PERFORMANCE. THE EQUIPOTENTIAL BONDING REQUIRED BY THIS SECTION SHALL BE INSTALLED TO REDUCE VOLTAGE GRADIENTS IN THE POOL AREA.

(B) BONDED PARTS. THE PARTS SPECIFIED IN 680.26(B)(1) THROUGH (B)(7) SHALL BE BONDED TOGETHER USING SOLID COPPER CONDUCTORS, INSULATED COVERED, OR BARE, NOT SMALLER THAN 8 AWG OR WITH RIGID METAL CONDUIT OF BRASS OR OTHER IDENTIFIED CORROSION-RESISTANT METAL. CONNECTIONS TO BONDED PARTS SHALL BE MADE IN ACCORDANCE WITH 250.8**. AN 8 AWG OR LARGER SOLID COPPER BONDING CONDUCTOR PROVIDED TO REDUCE VOLTAGE GRADIENTS IN THE POOL AREA SHALL NOT BE REQUIRED OR ATTACHED TO REMOTE PANELBOARDS, SERVICE EQUIPMENT, OR ELECTRODES

(1) CONDUCTIVE POOL SHELLS. BONDING TO CONDUCTIVE POOL SHELLS SHALL BE PROVIDED AS SPECIFIED IN 680.26(B)(1)(a) OR (B)(1)(b). POURED CONCRETE, PNEUMATICALLY APPLIED OR SPRAYED CONCRETE, AND CONCRETE BLOCK WITH PAINTED PLASTERED COATINGS SHALL ALL BE CONSIDERED CONDUCTIVE MATERIALS DUE TO WATER PERMEABILITY AND POROSITY. VINYL LINERS AND FIBERGLASS COMPOSITE SHELLS SHALL BE CONSIDERED TO BE NONCONDUCTIVE MATERIALS.

(a) STRUCTURAL REINFORCING STEEL. UNENCAPSULATED STRUCTURAL REINFORCING STEEL SHALL BE BONDED TOGETHER BY STEEL TIE WIRES OR THE EQUIVALENT. WHERE STRUCTURAL REINFORCING STEEL IS ENCAPSULATED IN A NONCONDUCTIVE COMPOUND, A COPPER CONDUCTOR GRID SHALL BE INSTALLED IN ACCORDANCE WITH 680.26(B)(1)(b).

(b) COPPER CONDUCTOR GRID. A COPPER CONDUCTOR GRID SHALL BE PROVIDED AND SHALL COMPLY WITH (b)(1) THROUGH (b)(4).

(1) BE CONSTRUCTED OF MINIMUM 8 AWG BARE SOLID COPPER CONDUCTORS BONDED TO EACH OTHER AT ALL POINTS OF CROSSING. THE BONDING SHALL BE IN ACCORDANCE WITH 250.8 OR APPROVED MEANS.

(2) CONFORM TO THE CONTOUR OF THE POOL.

(3) BE ARRANGE DIN A 300mm (12in) BY 300mm (12in) NETWORK OF CONDUCTORS IN A UNIFORMLY SPACED PERPENDICULAR GRID PATTERN WITH A TOLERANCE OF 100mm (4in)

(4) BE SECURED WITHIN OR UNDER THE POOL NO MORE THAN 150mm (6in) FROM THE OUTER CONTOUR OF THE POOL SHELL.

(2) PERIMETER SURFACES. THE PERIMETER SURFACE SHALL EXTEND FOR 1m (3ft) HORIZONTALLY BEYOND THE INSIDE WALLS OF THE POOL AND SHALL INCLUDE UNPAVED SURFACES AS WELL AS POURED CONCRETE SURFACES AND OTHER TYPES OF PAVING. PERIMETER SURFACES LESS THAN 1m (3ft) SEPARATED BY A PERMANENT WALL OR BUILDING 1.5m (5ft) IN HEIGHT OR MORE SHALL REQUIRE EQUIPOTENTIAL BONDING ON THE POLL SIDE OF THE PERMANENT WALL OR BUILDING. BONDING TO PERIMETER SURFACES SHALL BE PROVIDED AS SPECIFIED IN 680.26(B)(2)(a) OR (2)(b) AND SHALL BE ATTACHED TO THE POOL REINFORCING STEEL OR COPPER CONDUCTOR GRID AT A MINIMUM OF FOUR (4) POINTS UNIFORMLY SPACED AROUND THE PERIMETER OF THE POOL. FOR NONCONDUCTIVE POOL SHELLS, BONDING AT FOUR POINTS SHALL NOT BE REQUIRED.

(a) STRUCTURAL REINFORCING STEEL. STRUCTURAL REINFORCING STEEL SHALL BE BONDED IN ACCORDANCE WITH 680.26(B)(1)(a).

(b) ALTERNATE MEANS. WHERE STRUCTURAL REINFORCING STEEL IS NOT AVAILABLE OR IS ENCAPSULATED IN A NONCONDUCTIVE COMPOUND, A COPPER CONDUCTOR(S) SHALL BE UTILIZED WHERE THE FOLLOWING REQUIREMENTS ARE MET:

(1) AT LEAST ONE MINIMUM 8 AWG BARE SOLID COPPER CONDUCTOR SHALL BE PROVIDED

(2) THE CONDUCTORS SHALL FOLLOW THE CONTOUR OF THE PERIMETER SURFACE

(3) ONLY LISTED SPLICES SHALL BE PERMITTED

(4) THE REQUIRED CONDUCTOR SHALL BE 450mm TO 600mm (18in TO 24") FORM THE INSIDE WALLS OF THE POOL.

(3) METALLIC COMPONENTS. ALL METALLIC PARTS OF THE POOL STRUCTURE, INCLUDING REINFORCING METAL NOT ADDRESSED IN 680.26(B)(1)(a), SHALL BE BONDED. WHERE REINFORCING STEEL IS ENCAPSULATED WITH A NONCONDUCTIVE COMPOUND, THE REINFORCING STEEL SHALL NOT BE REQUIRED TO BE BONDED.

(4) UNDERWATER LIGHTING.

(5) METAL FITTINGS.

(6) ELECTRICAL EQUIPMENT.

(7) FIXED METAL PARTS. ALL FIXED METAL PARTS SHALL BE BONDED INCLUDING, BUT NOT LIMITED TO, METAL-SHEATHED CABLES AND RACEWAYS, METAL PIPING, METAL AWNINGS, METAL FENCES, AND METAL DOOR AND WINDOW FRAMES.

EXCEPTION NO 1: THOSE SEPARATED FROM THE POOL BY PERMANENT BARRIER THAT PREVENTS CONTACT BY A PERSON SHALL NOT BE REQUIRED TO BE BONDED.

EXCEPTION NO 2: THOSE GREATER THAN 1.5m (5ft) HORIZONTALLY FROM THE INSIDE WALLS OF THE POOL SHALL NOT BE REQUIRED TO BE BONDED.

EXCEPTION NO 3: THOSE GREATER THAN 3.7m (12ft) MEASURED VERTICALLY ABOVE THE MAXIMUM WATER LEVEL OF THE POOL, OR AS MEASURED VERTICALLY ABOVE ANY OBSERVATION STANDS, TOWERS, OR PLATFORMS, OR ANY DIVING STRUCTURES, SHALL NO BE REQUIRED TO BONDED.

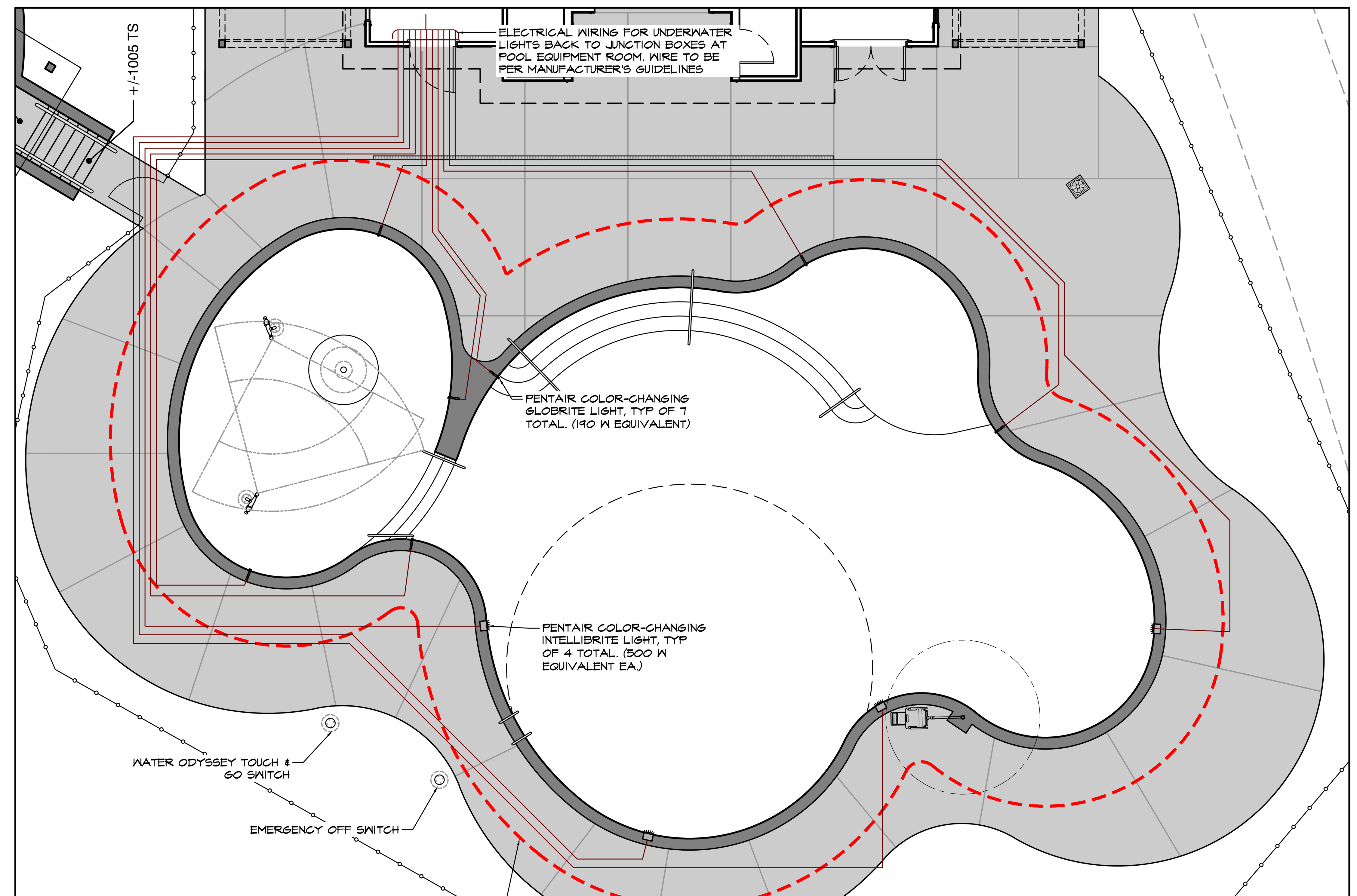
(C) POOL WATER. WHERE NONE OF THE BONDED PARTS IS IN DIRECT CONNECTION WITH THE POOL WATER, THE POOL WATER SHALL BE IN DIRECT CONTACT WITH AN APPROVED CORROSION-RESISTANT CONDUCTIVE SURFACE THAT EXPOSES NOT LESS THAN 5800mm SQ (9in SQ) OF SURFACE AREA TO THE POOL WATER AT ALL TIMES. THE CONDUCTIVE SURFACE SHALL BE LOCATED WHERE IT IS NOT EXPOSED TO PHYSICAL DAMAGE OR DISLODGEMENT DURING USUAL POOL ACTIVITIES, AND IT SHALL BE BONDED IN ACCORDANCE WITH 680.26(B).

250.8 CONNECTION OF GROUNDING AND BONDING EQUIPMENT**
(A) PERMITTED METHODS. EQUIPMENT GROUNDING CONDUCTORS, GROUNDING ELECTRODES CONDUCTORS, AND BONDING JUMPERS SHALL BE CONNECTED BY ONE OR MORE OF THE FOLLOWING MEANS:

(1) LISTED PRESSURE CONNECTORS
(2) TERMINAL BARS
(3) PRESSURE CONNECTORS LISTED AS GROUNDING AND BONDING EQUIPMENT
(4) EXOTHERMIC WELDING PROCESS
(5) MACHINE SCREW-TYPE FASTENERS THAT ENGAGE NOT LESS THAN TWO THREADS OR ARE SECURED WITH A NUT
(6) THREAD-FORMING MACHINE SCREWS THAT ENGAGE NOT LESS THAN TWO THREADS IN THE ENCLOSURE
(7) CONNECTIONS THAT ARE PART OF A LISTED ASSEMBLY
(8) OTHER LISTED MEANS

(B) METHODS NOT PERMITTED. CONNECTION DEVICES OR FITTINGS THAT DEPEND SOLELY ON SOLDER SHALL NOT BE USED

*NEC 2014 EQUIPOTENTIAL BONDING ARTICLE 680.26
**NEC 2014 CONNECTION OF GROUNDING AND BONDING EQUIPMENT ARTICLE 250.8



6' OFFSET FOR GFCI OUTLETS FROM WATERS EDGE PER NEC SECTION 680:

SECTION 680.90 - OVERHEAD CONDUCTOR CLEARANCES. REQUIRES THAT CONDUCTORS/CABLES BE INSTALLED BETWEEN 22.5'-27' ABOVE WATER LEVEL OF POOL (DEPENDING ON VOLTAGE AND CABLE TYPE). THIS WOULD PRESUMABLY APPLY TO FESTOON LIGHTING, AS OPPOSED TO THE BELOW REFERENCED 12' RULE FOR OVERHEAD LIGHTING.

SECTION 680.22 - OUTLET LOCATIONS. NO ELECTRICAL OUTLETS LOCATED CLOSER THAN 6' FROM INSIDE OF POOL WALL. ALL OUTLETS LOCATED BETWEEN 6'-20' FROM INSIDE OF POOL WALL SHALL BE GFCI PROTECTED. AT LEAST ONE OUTLET IS REQUIRED TO BE PROVIDED WITHIN THIS DISTANCE RANGE FROM THE POOL.

SECTION 680.22(B)(1) - ANY LUMINAIRE INSTALLED ABOVE THE POOL OR WITHIN 5' OF THE INSIDE WALL OF THE POOL SHALL BE INSTALLED AT A HEIGHT OF 12' ABOVE THE POOL WATER LEVEL.

SECTION 680.22(B)(6) - LISTED LOW-VOLTAGE LUMINAIRES ARE PERMITTED CLOSER THAN 5' FROM THE INSIDE WALLS OF THE POOL PROVIDED THEY ARE SUPPLIED BY A LISTED TRANSFORMER OR POWER SUPPLY THAT IS SWIMMING POOL AND SPA RATED.

SECTION 680.22(B)(4) - LINE VOLTAGE LUMINAIRES OR LIGHTING OUTLETS INSTALLED BETWEEN 5'-10' FROM THE INSIDE WALLS OF THE POOL MUST BE GFCI PROTECTED

SECTION 680.26(B)(7) - ALL FIXED METAL PARTS WITHIN 5' HORIZONTALLY AND 12' VERTICALLY OF POOLS MUST BE BONDED.

SECTION 680.26(B)(2) - ALL PERIMETER SURFACES WITHIN 3' SURROUNDING POOL (PAVED AND UNPAVED) SHALL BE BONDED

LIGHTING REQUIREMENTS

1/2 WATT PER POOL SF REQUIRED
2,750 SF POOL = 1,375 WATTS REQUIRED
(4) INTELLIBRITE LIGHTS PROVIDED AT 500 W EA = 2,000 W
(7) GLOBRITE LIGHTS PROVIDED AT 190 W EA = 1,330 W
3,330 TOTAL EQUIVALENT WATTS PROVIDED

POOL ELECTRICAL PLAN

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

0 8 16 24 feet

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

NORTH

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8021 SANTA FE DRIVE
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STATE OF MISSOURI KURT L. KRASINGER NUMBER LA-2003016227 LANDSCAPE ARCHITECT

1.10.2022

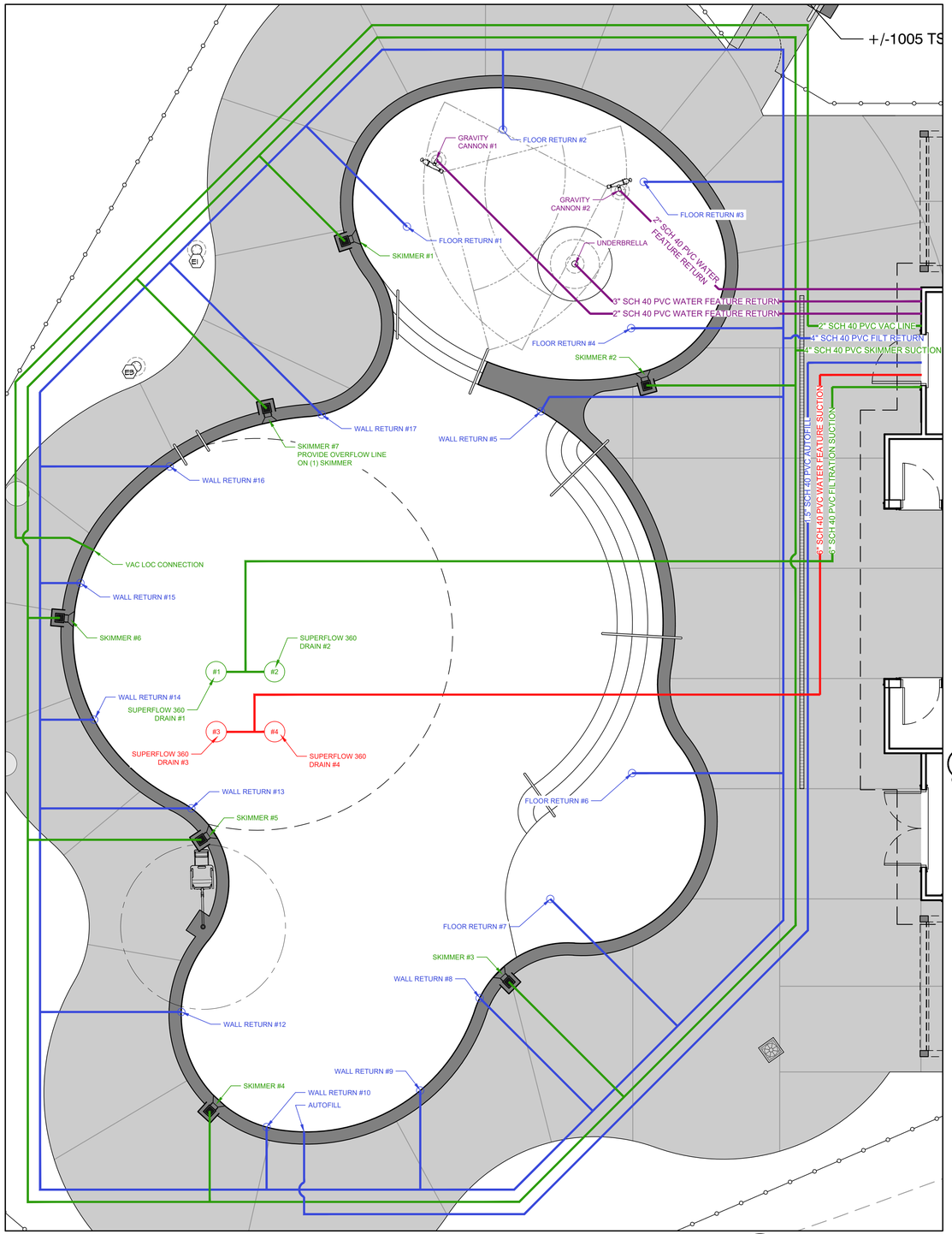
SUMMIT VIEW FARMS
POOL CONSTRUCTION DOCUMENTS
LEE'S SUMMIT, MISSOURI

REVISION:

DECEMBER 2, 2021

POOL ELECTRICAL PLAN

W003



POOL PLUMBING PLAN

SCALE: 1"=5'-0"

LEGEND

- FILTRATION SUCTION
- FILTRATION RETURN
- SPRAY EQUIPMENT (WATER FEATURE) SUCTION
- SPRAY EQUIPMENT (WATER FEATURE) RETURN

0 5 10 15 feet

SCALE: 1" = 5'-0"

NORTH

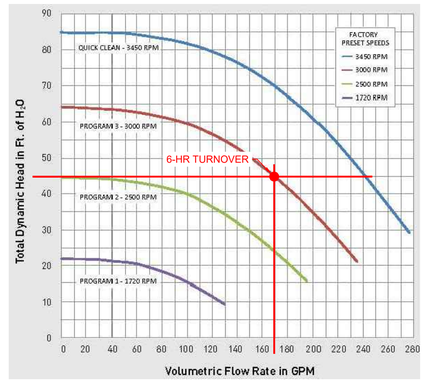
HYDRAULICS NOTES

SWIMMING POOL FILTRATION

MIN POOL DEPTH	6" (AT REEF), 3'-6" (IN POOL)
MAX POOL DEPTH	4-10"
POOL SURFACE AREA	2,750 SF
POOL VOLUME	60,416 GAL.
POOL PERIMETER	250 LF
6-HOUR FILTRATION TURNOVER RATE	168 GPM
TOTAL DYNAMIC HEAD (TDH)	+/-45
SWIMMING POOL SKIMMERS	7
SWIMMING POOL RETURNS	16
SWIMMING POOL DRAINS	DUAL VGB SUPERFLO 360 PEBBLE TOP DRAINS
SWIMMING POOL FILTRATION PUMP	PENTAIR WHISPERFLO XF VS 5-HP PUMP
SWIMMING POOL FILTER	DUAL PENTAIR TR-140C SAND FILTERS
EFFECTIVE FILTRATION AREA	14.12 SF
FILTRATION RATE	11.90 GPM/SF
SWIMMING POOL HEATER	PENTAIR ET400 NATURAL GAS HEATER
CHEMICAL CONTROLLER	PENTAIR INTELLICHEM WATER CHEMISTRY CONTROLLER
POOL LIGHTING REQUIRED	½ WATT/SF = 1,375 WATTS REQUIRED
POOL LIGHTING PROVIDED	SEE SHEET W003

WATER FEATURE PLUMBING

UNDER-BRELLA DESIGN FLOW RATE	+/-150 GPM
GRAVITY CANNON DESIGN FLOW RATE	20 GPM EA. (40 GPM TOTAL)
TOTAL WATER FEATURE FLOW RATE	+/-190 GPM
WATER FEATURE PUMP	PENTAIR INTELLIFLO XF PUMP



POOL FILTRATION PUMP CURVE - PENTAIR WHISPERFLO XF VS

POOL EQUIPMENT ROOM PROVISIONS

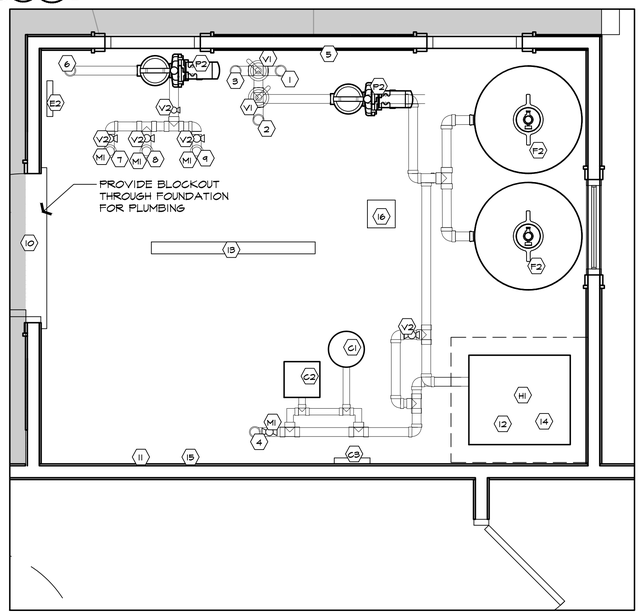
1. VENTING FOR HEATER, (1) 4" PVC PIPE RUNNING DIRECTLY FROM THE ROOF TO THE HEATER FOR COMBUSTION, AND A SEPARATE 4" PVC LINE FROM THE HEATER BACK TO THE ROOF FOR VENTILATION. THESE MAY RUN FOR A DISTANCE OF UP TO 100' (SUBTRACTING 10 LF FOR EVERY 90 DEGREE BEND IN THE PIPE) IF THE DISTANCE FROM THE HEATER TO THE ROOF EXCEEDS THIS, THEN CAN SWITCH TO A 6" PVC PIPE FOR A DISTANCE OF UP TO 300'
2. 400,000 BTU NATURAL GAS FOR HEATERS
3. 1.5" FRESH WATER LINE (WITH BACKFLOW PREVENER) FOR POOL AUTOFILL (RE: MEP)
4. DRAIN IN PUMP ROOM FOR SPILLED WATER
5. POOL BACKWASH FLOOR DRAIN - SIZED FOR 240 GPM GRAVITY FLOW RATE. BACKWASH SHALL ENTER PIPE VIA AIRGAP BETWEEN THE BACKWASH LINE AND DRAIN. DRAIN CONTINUATION BY MEP.
6. 200-AMP ELECTRICAL PANEL
7. POOL EQUIPMENT AND LINES TO BE LABELED w/ LABELING MACHINE LABELS AND NOT HAND WRITTEN ON PLUMBING OR EQUIPMENT, PROVIDE A LAMINATED WATERPROOF AS-BUILT DIAGRAM OF EQUIPMENT ROOM LAYOUT AT SERVICE CONTROL PANEL w/ 3D BINDER OF ALL EQUIPMENT CUT SHEETS
8. PROVIDE MINIMUM 48" WIDE LOUVERED DOOR TO EQUIPMENT ROOM
9. PROVIDE MECHANICAL VENTILATION IN EQUIPMENT ROOM
10. ALL VARIABLE SPEED PUMPS SHALL HAVE THEIR SETTINGS LOCKED. FLOW RATES SHALL NOT EXCEED THE GALLONS PER MINUTE (GPM) LISTED IN THE HYDRAULICS NOTES SECTION OF THIS SHEET OR ELSE PLUMBING VELOCITIES MAY EXCEED LEGAL LIMITS AND PIPES AND FIXTURES MAY BE SUBJECT TO DAMAGE.
11. PROVIDE EMERGENCY TELEPHONE ACCESSIBLE FROM POOL DECK
12. PROVIDE CARBON MONOXIDE DETECTOR IN EQUIPMENT ROOM
13. PROVIDE NFPA 704 SIGNAGE AT DOOR TO EQUIPMENT ROOM.
14. PROVIDE SHELVES IN CHEMICAL STORAGE AREA SO CHEMICALS MAY BE STORED ABOVE GROUND LEVEL.

1

LEGEND

- P2 PENTAIR WHISPERFLO XF VS 5-HP PUMP
- F2 PENTAIR TR-140C SAND FILTER
- H1 PENTAIR ET1400 NATURAL GAS HEATER (PROVIDE VENTING FOR HEATER)
- C1 ACID TANK
- C2 CHLORINE TANK
- C3 PENTAIR INTELLICHEM WATER CHEMISTRY CONTROLLER
- V1 3-WAY VALVE
- V2 BALL VALVE
- V3 CHEMICAL RESISTANT, CORROSION RESISTANT CHECK VALVE
- M1 FLOW METER
- E1 TOUCH & GO SWITCH BY WATER ODYSSEY
- E2 SINGLE TIMER CONTROLLER BY WATER ODYSSEY
- E3 EMERGENCY POOL OFF SWITCH

- 1 6" PVC FROM POOL SUPERFLO 360 DRAINS #1 & #2
- 2 4" PVC FROM POOL SKIMMER LOOP
- 3 2" PVC FROM POOL VAC LINE
- 4 4" PVC TO POOL RETURN LOOP
- 5 PROVIDE 1.5" WATERLINE TO PUMP ROOM FOR AUTOFILL. PROVIDE BACKFLOW PREVENTER ON WATER LINE
- 6 6" PVC FROM SUPERFLO 360 DRAINS #3 & #4
- 7 2" PVC TO GRAVITY CANNON #1
- 8 2" PVC TO GRAVITY CANNON #2
- 9 3" PVC TO UNDER-BRELLA
- 10 42" MIN. WIDE LOUVERED DOOR
- 11 PROVIDE 200-AMP ELECTRICAL PANEL IN PUMP ROOM (LOCATE PER MEP)
- 12 PROVIDE 400,000 BTU NATURAL GAS SERVICE TO PUMP ROOM FOR POOL HEATER
- 13 LINEAR DRAIN IN PUMP ROOM FLOOR. CONTINUATION BY OTHERS
- 14 PROVIDE FRESH AIR INTAKE & EXHAUST FOR HEATER (PER MANUFACTURER'S SPECIFICATIONS)
- 15 PROVIDE MECHANICAL VENTILATION FOR EQUIPMENT ROOM
- 16 BACKWASH LINE (RE: MEP). SEE POOL EQUIPMENT ROOM PROVISIONS NOTE #5, THIS SHEET



EQUIPMENT ROOM PLAN

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

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COMMONWEALTH OF VIRGINIA
KURT L. KRAISINGER
Lic. No. 406001746
1-10-2022
LANDSCAPE ARCHITECT

SUMMIT VIEW FARMS

POOL CONSTRUCTION DOCUMENTS
LEE'S SUMMIT, MISSOURI

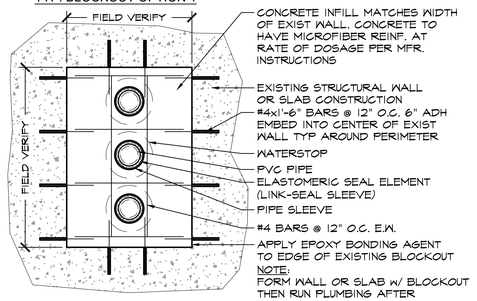
REVISION:

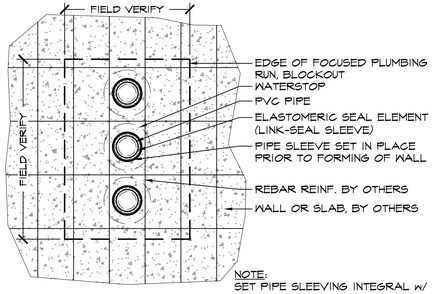
1 1/10/2022 CITY COMMENTS

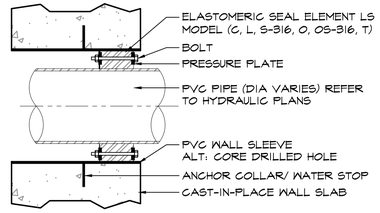
DECEMBER 2, 2021

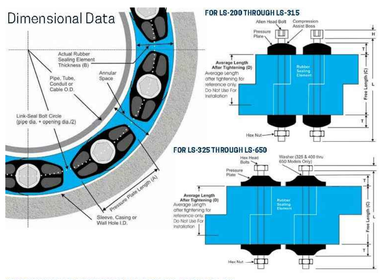
POOL PLUMBING PLAN

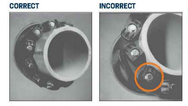
W004











GENERAL POOL STRUCTURAL NOTES

1. GENERAL INFORMATION

1.1 SPECIAL INSPECTIONS

1.1.1 THE CONTRACTOR OR OWNER SHALL PROVIDE SPECIAL INSPECTION WHICH REQUIRES THE EXPERTISE OF AN APPROVED SPECIAL INSPECTOR IN ORDER TO ENSURE COMPLIANCE WITH THE CODE AND THE APPROVED CONSTRUCTION DOCUMENTS. SPECIAL INSPECTIONS ARE IN ADDITION TO THE INSPECTIONS PERFORMED BY THE BUILDING OFFICIAL.

1.1.2 CONTINUOUS SPECIAL INSPECTION IS REQUIRED TO BE PERFORMED BY THE SPECIAL INSPECTOR WHO IS CONTINUOUSLY PRESENT WHEN AND WHERE THE WORK TO BE INSPECTED IS BEING PERFORMED. THE FOLLOWING REQUIRES CONTINUOUS SPECIAL INSPECTION:

1.1.2.1 AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATED SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.

1.1.2.2 DURING CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.

1.1.3 PERIODIC SPECIAL INSPECTION IS REQUIRED TO BE PERFORMED BY THE SPECIAL INSPECTOR WHO IS INTERMITTENTLY PRESENT WHERE THE WORK TO BE INSPECTED HAS BEEN OR IS BEING PERFORMED. THE FOLLOWING REQUIRES PERIODIC SPECIAL INSPECTION:

1.1.3.1 FOR PLACEMENT OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT.

1.2 SEE SHEET W002 FOR ADDITIONAL POOL NOTES

1.3 A SOILS INVESTIGATION SHALL BE DONE PER THE REQUIREMENTS OF INTERNATIONAL BUILDING CODE (IBC) SECTIONS 1705.6 AND 1803 OR THE INTERNATIONAL RESIDENTIAL CODE (IRC) SECTION R401.4.

1.4 THE CONTRACTOR SHALL PROTECT THE POOL STRUCTURE, DURING CONSTRUCTION AND UNTIL THE POOL IS FILLED, FROM THE PRESENCE OF HIGH GROUND WATER, SOIL EROSION, OR OTHER CONDITIONS WHICH ADVERSELY AFFECT THE POOL STRUCTURE.

1.5 THE CONTRACTOR SHALL BE RESPONSIBLE FOR SOIL STABILIZATION, BRACING, AND EXCAVATION SAFETY DURING THE CONSTRUCTION OF THE POOL STRUCTURE AND SHALL COMPLY WITH ALL OSHA WORK SAFETY REQUIREMENTS AND ALL OTHER GOVERNING REGULATIONS.

1.6 THE POOL WALL MATERIAL SHALL BE CONSTRUCTED AGAINST TEMPORARY FORMWORK AND BACKFILLED WITH A MINIMUM OF 6" OF CLEAN GRANULAR DRAINAGE FILL MATERIAL, BEHIND THE POOL WALLS AND AT THE BASE OF THE POOL WALLS.

1.7 CONCRETE FORMING: DESIGN, ENGINEER, ERECT, SHORE, BRACE, AND MAINTAIN FORWORK, SHORES, AND RESHORES IN ACCORDANCE WITH ACI 301, TO SUPPORT VERTICAL, LATERAL, STATIC, AND DYNAMIC LOADS, SO THAT RESULTING CONCRETE CONFORMS TO THE REQUIRED SHAPES, LINES, AND DIMENSIONS. DESIGN FORMWORK TO LIMIT DEFLECTION OF FORM-FACING MATERIAL TO 1/240 OF CENTER-TO-CENTER SPACING OF SUPPORTS

1.8 THE FORMWORK MUST BE CONSTRUCTED IN A STABLE MANNER WITH ADEQUATE BRACING TO PROVIDE A SOUND SUBSTRATE FOR THE POOL WALL CONSTRUCTION.

1.9 ALL FORMWORK SHALL BE REMOVED PRIOR TO PLACEMENT OF THE BACKFILL AND AFTER THE POOL WALLS HAVE ACHIEVED A MINIMUM OF 75% OF CONCRETE DESIGN COMPRESSIVE STRENGTH.

1.10 THE BACKSIDE OF THE POOL WALLS MUST BE REVIEWED TO VERIFY THAT NO SAND SEAMS OR AREAS OF DEFECTIVE GUNITE OR SHOTCRETE EXIST AND THE WALL CONSTRUCTION MUST BE APPROVED PRIOR TO BEGINNING THE BACKFILL OPERATION.

1.11 THE BACKFILL MATERIAL SHALL BE CLEAN GRANULAR DRAINAGE FILL MATERIAL CAREFULLY PLACED IN A CONTROLLED AND COMPACTED MANNER PER THE SPECIFIED REQUIREMENTS.

1.12 THE POOL UNDERDRAIN SYSTEM SHALL BE PLACED WITHIN THE ZONE OF CLEAN GRANULAR DRAINAGE FILL MATERIAL BELOW THE POOL FLOOR. A GEOTEXTILE FILTER FABRIC SHALL BE PLACED BETWEEN THE GRANULAR DRAINAGE MATERIAL AND THE UNDERLYING SOILS. CONTACT LANDSCAPE ARCHITECT IMMEDIATELY IN THE EVENT ANY SUBSURFACE ABNORMALITIES (INCLUDING BUT NOT LIMITED TO ACTIVE SPRINGS OR HIGH WATER TABLE) ARE ENCOUNTERED DURING POOL EXCAVATION.

1.12.1 THE GEOTEXTILE FABRIC SHALL BE A POLYPROPYLENE FABRIC WHICH IS RESISTANT TO ULTRAVIOLET DEGRADATION AND TO BIOLOGICAL AND CHEMICAL ENVIRONMENTS NORMALLY FOUND IN SOILS. THE GEOTEXTILE FABRIC SHALL BE MIRAFI HP270N WITH AOS OF 40, MIRAFI FW700 WITH AN AOS OF 70, OR AN APPROVED EQUAL.

1.13 ALL WATER STOPS SHALL BE FLEXIBLE PVC WATERSTOPS MEETING CE CRD-C572. INSTALL IN ALL CONSTRUCTION JOINTS IN THE CAST-IN-PLACE CONCRETE POOL CONSTRUCTION AS SHOWN IN THE DRAWING WITH THE LONGEST LENGTHS PRACTICAL WITH SPECIALLY FABRICATED SECTIONS AT INTERSECTIONS, WHERE APPLICABLE. HEAT WELD ALL JOINTS AND INSTALL IN ACCORDANCE WITH THE MANUFACTURERS WRITTEN INSTRUCTIONS. PROVIDE SPECIALLY FABRICATED SECTIONS AT INTERSECTIONS WHERE APPLICABLE.

1.14 THE CONTRACTOR'S SUBMITTED BASE BID CONSTRUCTION COST SHALL INCLUDE ALL MEANS AND METHODS NECESSARY FOR THE CONSTRUCTION OF THE POOL WALLS AND ASSOCIATED EARTHWORK.

2. REINFORCING STEEL

2.1 REINFORCING STEEL IN SHOTCRETE SHALL HAVE NON-CONTACT LAP AND SPACING PER INTERNATIONAL BUILDING CODE (IBC) SECTIONS 1913.4.2 AND 1913.4.3 OR

2.2 REINFORCING STEEL IN SHOTCRETE MAY HAVE CONTACT LAP SPLICES ONLY IF THE LAPS ARE STACKED PARALLEL TO THE DIRECTION OF THE SHOTCRETE (E.G., ONE BAR IS BEHIND THE OTHER AND NOT STACKED SIDE BY SIDE).

2.3 ALL REINFORCING STEEL TO BE ASTM A615 GRADE 60 OR BETTER. LAP ALL BARS MIN OF 59 DIAMETERS OR 2'-0" MINIMUM. WIRE TIE AT LEAST 50% OF ALL LAPS WITH AT LEAST 16 GA WIRE OR EQUAL, BEND ALL TIES DOWN.

2.3.1 THE MEANS AND METHODS OF WIRE TIES AND CHAIRS IS NOT THE RESPONSIBILITY OF THE DESIGN TEAM. THE CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY SUPPORT OF THE REINFORCING BARS SUCH THAT THE LOCATION DOES NOT DEFORM DURING CONCRETE PLACEMENT. THE TIES AND CHAIRS SHALL MEET THE REQUIREMENTS OF ACI 301.

2.4 REINFORCING STEEL SHALL HAVE A MINIMUM OF 2" CLEARANCE TO SOIL AND INSIDE FACE OF SHELL.

2.5 PLACE STEEL REINFORCEMENT IN CENTER OF CONCRETE UNLESS NOTED OTHERWISE.

2.6 ALL REINFORCING BARS INSTALLED INTO PREVIOUSLY CAST CONCRETE, SHOTCRETE, OR GUNITE SHALL BE ANCHORED INTO THE CONCRETE USING HILTI HY-200 ADHESIVE ANCHORING SYSTEM OR AN APPROVED EQUAL. ALL HOLES SHALL BE DRILLED WITH THE RECOMMENDED BIT SIZE, TO THE MINIMUM EMBEDMENT LENGTH SPECIFIED, AND SHALL BE THOROUGHLY CLEANED OUT WITH A BRUSH AND COMPRESSED AIR PRIOR TO INSTALLING THE ADHESIVE AND BARS. ALL ADHESIVE MANUFACTURERS RECOMMENDATIONS AND REQUIREMENTS MUST BE FOLLOWED. THE CONTRACTOR SHALL PERFORM A QUALITY CONTROL PROGRAM DURING THE DRILLING AND CLEANING OF THE HOLES, INSTALLING THE ADHESIVE, AND INSTALLING THE BARS TO ENSURE THAT THE RECOMMENDED PROCEDURES AND REQUIREMENTS ARE BEING IMPLEMENTED.

2.7 THE CONTRACTOR SHALL SUBMIT THE POOL REINFORCING STEEL SHOP DRAWING FOR A REVIEW A MINIMUM OF 14 DAYS PRIOR TO STARTING CONSTRUCTION. THE SUBMITTED SHOP DRAWINGS SHALL INCLUDE THE BAR SIZE AND SPACING, BENDING DIAGRAMS, AND SPECIAL BAR PLACEMENT AND BENDING DIAGRAMS FOR THE REINFORCING AROUND THE CONVERTERS, MAIN DRAIN, AND OTHER NON-TYPICAL LOCATIONS. ALL BENT BARS SHALL BE SHOP FABRICATED AND COLD BENT UNLESS SPECIFICALLY APPROVED OTHERWISE.

3. CONCRETE

3.1 POOL SHELL SHALL BE MONOLITHIC SHOTCRETE (THICKNESS PER REINFORCING SCHEDULE, DETAIL 1, SHEET W002) FREE OF JOINTS OR SEAMS (SUCH AS IN POURED POOL SHELL). SHELL SHALL BE PLACED IN ONE DAY IF POSSIBLE, IF NOT FEATHER CUT OFF SECTIONS.

3.2 CONCRETE SHALL BE PER ASTM C31 AND SHALL HAVE A MINIMUM 4000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.

3.2.1 MINIMUM WATER TO CEMENT RATIO SHALL BE 0.52 WITH A MAXIMUM SLUMP OF 4" +/-1" OR 2" +/-1" FOR SHOTCRETE. THE SLUMP MAY BE INCREASED WITH THE USE OF ADMIXTURES.

3.2.2 CONCRETE SHALL HAVE 5% TO 8% AIR-ENTRAINMENT. AIR-ENTRAINING ADMIXTURE SHALL MEET ASTM C260 AND SHALL BE COMPATIBLE WITH ALL OTHER CONCRETE ADDITIVES, PARTICULARLY THE SHRINKAGE REDUCING ADMIXTURE.

3.2.3 ALL CEMENT SHALL MEET ASTM C150, TYPE I OR II.

3.2.4 ALL AGGREGATE SHALL MEET ASTM C33 AND SHALL BE PROPORTIONED SUCH THAT THE MIX SHALL CONTAIN A MINIMUM OF 50% COARSE AGGREGATE. COARSE AGGREGATE SHALL MEET ASTM C33, NO. 57 AND NO. 67.

3.2.5 CONCRETE SHALL HAVE 3.0 POUNDS PER CUBIC YARD OF +/-1.5" LONG SYNTHETIC MACRO FIBER REINFORCEMENT COMPLYING WITH ASTM C116. USE STRUX 90/40 BY GRACE CONCRETE PRODUCTS OR FIBERMESH 650 BY PROPEX CONCRETE SYSTEMS.

3.2.6 CONCRETE SHALL HAVE 128 OUNCES OF SHRINKAGE REDUCING ADMIXTURE PER CUBIC YARD. ECLIPSE 45000 BY GRACE CONSTRUCTION PRODUCTS OR MASTERLIFE SRA20 BY BASF CHEMICAL COMPANY ARE ACCEPTABLE SHRINKAGE-REDUCING ADMIXTURES.

3.2.7 CONCRETE SHALL HAVE WATER-REDUCING ADMIXTURE MEETING ASTM C494, TYPE A OR TYPE F. WATER-REDUCING ADMIXTURES SHALL BE COMPATIBLE WITH ALL OTHER CONCRETE ADDITIVES AND SHALL BE USED AT A DOSAGE PER THE MANUFACTURER'S RECOMMENDATIONS.

3.2.8 ALL ADMIXTURES SHALL CONTAIN NO MORE THAN 0.1% CHLORIDE IONS.

3.3 THE CONTRACTOR SHALL IMPLEMENT ANY NECESSARY PLACEMENT, FINISHING, AND CURING OPERATIONS TO ACCOMMODATE ANY SPECIAL REQUIREMENT OF THE CONCRETE MIX DESIGN AND CONCRETE ADDITIVES.

3.3.1 THE DESIGN INTENT IS TO MINIMIZE CRACKING AND SHRINKAGE CRACKS. THE CONTRACTOR SHALL CAREFULLY COORDINATE THE TIMING OF CONCRETE POURS WITH THE MIX DESIGNS AND FINISH SCHEDULES TO ASSURE THAT CRACKING IS REDUCED. THE CONTRACTOR SHALL CONTACT THE DESIGN TEAM IF CONCERNS OR QUESTIONS ARE PRESENT.

3.4 WET CURE THE POOL FLOOR SLAB FOR A MIN. OF 7 DAYS PRIOR TO STARTING CONSTRUCTION OF THE POOL WALLS. WET CURE THE POOL WALLS DURING GUNITE OR SHOTCRETE PLACEMENT AND CONTINUE THE WET CURING OF THE POOL WALLS FOR A MIN OF 7 DAYS FOLLOWING THE COMPLETION OF THE WALLS.

3.5 THE POOL WALLS SHALL ONLY BE CONSTRUCTED USING WET-GUN SHOTCRETE OR DRY-GUN GUNITE CONSTRUCTION.

3.5.1 THE CONTRACTOR SHALL SUBMIT DESIGN MIXES FOR CAST-IN-PLACE CONCRETE, WET-GUN GUNITE, AND GROUT FOR REVIEW A MINIMUM OF 14 DAYS PRIOR TO STARTING CONSTRUCTION.

3.5.2 SHOTCRETE INCLUDES BOTH WET-MIX AND DRY-MIX (GUNITE).

3.5.3 SHOTCRETE SHALL BE DONE AT A HIGH VELOCITY OF 350 TO 400 FEET-PER-SECOND.

3.5.4 SHOTCRETE TERMINOLOGY SHALL FOLLOW THE AMERICAN SHOTCRETE ASSOCIATION'S POSITION STATEMENT #2.

3.5.5 REBOUND, TRIMMING, AND LOOSE DEBRIS SHALL BE REMOVED FROM THE STRUCTURE AND SHALL NOT BE USED IN ANY MANNER WITHIN THE STRUCTURE OR VESSEL.

DRY-GUN GUNITE:

3.5.6 GUNITE SHALL BE PROPORTIONED FOR ONE PART CEMENT TO FOUR PARTS SAND BY VOLUME. THE COLUMN PROPORTIONS SHALL BE BASED ON A UNIT WEIGHT METHOD, NOT AN ABSOLUTE VOLUME METHOD.

3.5.7 CEMENT AND SAND SHALL BE DRY MIXED.

3.6 ALL CONCRETE WORK SHALL BE IN STRICT CONFORMANCE WITH THE CURRENT "ACI MANUAL OF CONCRETE PRACTICE". ALL GUNITE AND SHOTCRETE WORK SHALL CONFORM WITH ACI 506.

3.7 THE CONSTRUCTION JOINT BETWEEN POURED FLOOR AND GUNITE OR SHOTCRETE POOL WALL SHALL BE SANDBLASTED CLEAN AND A LAYER OF GROUT PASTE SHALL BE APPLIED IMMEDIATELY PRIOR TO STARTING GUNITE OR SHOTCRETE WALL CONSTRUCTION. THE GROUT PASTE MUST NOT BE ALLOWED TO DRY PRIOR TO STARTING THE WALL CONSTRUCTION.

3.8 CAST-IN-PLACE CONCRETE, GUNITE, AND SHOTCRETE, SHALL BE TESTED DURING PLACEMENT AS FOLLOWS:

3.8.1 PROVIDE ONE SET OF FOUR TEST CYLINDERS PER ASTM C31 FOR EACH DAYS POUR OR FOR EACH 30 CUBIC YARDS OF MATERIAL PLACED, WHICHEVER IS GREATER.
TEST AT POINT OF DISCHARGE PER ASTM C143 FOR EACH SET OF TEST CYLINDERS TAKEN.

3.8.1.1 COMPRESSIVE STRENGTH TEST: ONE SET OF FOUR CYLINDERS PER ASTM C39. TEST ONE CYLINDER AT 7-DAYS, TWO CYLINDERS AT 28- DAYS AND HOLD ONE IN RESERVE TO BE TESTED AS DIRECTED.

3.8.2 AIR CONTENT: VOLUMETRIC METHOD PER ASTM C 173 OR PRESSURE METHOD PER ASTM C231 FOR EACH SET OF TEST CYLINDERS TAKEN.

3.8.3 CONCRETE TEMPERATURE: ONE TEST PER ASTM C1064 FOR EACH SET OF TEST CYLINDERS TAKEN HOURLY WHEN AIR TEMPERATURE IS BELOW 40 DEGREES F OR ABOVE 90 DEGREES F.

3.8.4 GUNITE OR SHOTCRETE TEST PANELS SHALL BE FABRICATED BY GUNNING ONTO A HEAVY PLYWOOD OR STEEL PLATE FORM SHOOTING FROM EACH POSITION TO BE ENCOUNTERED DURING THE POOL CONSTRUCTION.

3.8.4.1 THE TEST PANELS SHALL BE A MINIMUM OF 24"X24" BY 8" THICK AND SHALL BE OF ADEQUATE SIZE TO TAKE A SET OF FOUR 4" DIAMETER CORE SAMPLES FROM EACH TEST PANEL.

3.8.4.2 THE TEST PANELS SHALL BE CURED TO MATCH THE CURING METHODS UTILIZED ON THE POOL WALLS AND THE CORE SAMPLES SHALL BE HANDLED, SOAKED AND TESTED PER ACI 506, ASTM C42, AND ASTM C39. TEST ONE CORE AT 7-DAYS, TWO CORES AT 28-DAYS , AND HOLD ONE CORE IN RESERVE TO BE TESTED AS DIRECTED.

3.8.5 ALL CONCRETE TESTING AND SAMPLING SHALL BE PERFORMED BY PERSONNEL TRAINED AND CERTIFIED IN CONCRETE SAMPLING.

3.8.6 TEST RESULTS SHALL BE SUBMITTED TO ARCHITECT, ENGINEER, AND CONTRACTOR WITHIN 24 HOURS OF COMPLETING TESTS. CONCRETE TESTING SHALL BE PERFORMED BY AN APPROVED TESTING AGENCY.

4. FOUNDATIONS

4.1 ALL EARTHWORK AND COMPACTED FILL SHALL MEET THE REQUIREMENTS OF THE PROJECT GENERAL NOTES AND ALL THE FOLLOWING EARTHWORK RELATED NOTES.

4.2 THE POOL WALLS ARE DESIGNED FOR AN EQUIVALENT FLUID PRESSURE OF 62.4 PCF. THE BOTTOM OF THE POOL STRUCTURE SHALL BE SUPPORTED ON SOILS CAPABLE OF PROVIDING AN ALLOWABLE SOIL BEARING PRESSURE OF 2000 PSF.

4.3 A GEOTECHNICAL ENGINEER SHALL DETERMINE IF THE EXPOSED SUBGRADE SOILS ARE ACCEPTABLE TO SUPPORT THE POOL FILL MATERIAL OR IF UNSTABLE OR UNSUITABLE SOILS EXIST WHICH REQUIRE REMOVAL AND REPLACEMENT.

4.3.1 THE CONTRACTOR SHALL VERIFY WITH THE GEOTECHNICAL ENGINEER THAT THE SOILS BELOW AND ADJACENT TO THE POOL STRUCTURE ARE SATISFACTORY FOR SUPPORT OF THE POOL STRUCTURE AND MEET THE SPECIFIED REQUIREMENTS PRIOR TO STARTING CONSTRUCTION OF THE POOL STRUCTURE. THE GEOTECHNICAL ENGINEER PERFORMING THE FIELD SHALL SUBMIT A LETTER STATING THAT THE SOIL MATERIALS ADJACENT TO THE POOL STRUCTURE ARE ACCEPTABLE AND MEET THE SPECIFIED REQUIREMENTS.

4.4 ALL POOL FLOOR AREAS SHALL BE CONSTRUCTED ON A MINIMUM NEW 18" THICK ZONE OF GRANULAR DRAINAGE FILL MATERIAL, PLACED OVER RECONDITIONED AND APPROVED NATIVE SOILS OR ADDITIONAL ENGINEERED FILL SOILS

4.4.1 OVEREXCAVATE BELOW AND BEYOND THE GEOMETRY OF THE POOL STRUCTURE AS REQUIRED TO CONSTRUCT THE SPECIFIED ZONE OF DRAINAGE FILL MATERIAL.

4.4.2 FOLLOWING THE EXCAVATION OPERATIONS, THE NATIVE SOILS ENCOUNTERED SHOULD BE PROOFROLLED TO IDENTIFY ANY SOFT OR UNSTABLE AREAS. ANY EXISTING FILL MATERIAL OR OTHER UNSTABLE OR UNSUITABLE MATERIALS IDENTIFIED SHOULD BE REMOVED.

4.4.3 THE SPECIFIED MOISTURE CONTENT OF THE NATIVE SOILS ENCOUNTERED BELOW OR ADJACENT TO THE POOL STRUCTURE SHALL BE REMOVED PRIOR TO PLACING ANY NEW FILL MATERIAL.

4.4.4 THE GEOTECHNICAL ENGINEER SHALL REVIEW THE EXCAVATION, THE PROOF ROLLING OPERATION, AND APPROVED THE BASE SOILS PRIOR TO STARTING PLACEMENT OF ANY FILL MATERIAL.

4.5 THE CLEAN GRANULAR DRAINAGE FILL MATERIAL BELOW THE POOL FLOOR AND BEHIND THE POOL WALLS SHALL BE A CLEAN, WELL-GRADED, CRUSHED ROCK MEETING ASTM C33 COARSE AGGREGATE GRADING REQUIREMENTS FOR NO. 57 OR NO. 67 AGGREGATE.

4.6 ANY GENERAL FILL SOILS PLACED BELOW OR BEYOND THE ZONE OF GRANULAR SOILS WITHIN OR BEYOND THE AREA OF THE POOL MUST BE APPROVED, CLEAN, ON-SITE SOILS.

4.7 ALL PROPOSED ON-SITE OR BORROW FILL MATERIAL MUST BE APPROVED BY THE GEOTECHNICAL ENGINEER.

4.8 ALL FILL MATERIAL SHALL BE PLACED IN MAXIMUM 8" THICK LOOSE LIFTS AND BE COMPACTED TO A MINIMUM OF 95 PERCENT OF THE MATERIALS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-698, STANDARD PROCTOR PROCEDURES.

4.9 ALL SOILS SHOULD BE PLACED WITH A MOISTURE CONTENT BETWEEN -2% AND +2% OF THEIR OPTIMUM MOISTURE CONTENT VALUE.

4.10 GRANULAR SOILS SHALL BE PLACED AT A WORKABLE MOISTURE CONTENT. THE PLACEMENT OF ALL FILL MATERIAL SHALL BE MONITORED, TESTED, AND APPROVED BY THE GEOTECHNICAL ENGINEER.

4.11 THE CONTRACTOR SHALL COORDINATE WITH A GEOTECHNICAL ENGINEER TO VERIFY THAT THERE ARE NOT ANY UNDERLYING SUBSTRATES THAT COULD CREATE INSTABILITIES OR SETTLEMENTS, E.G. CAVES, MINES, BURIED TANKS, OR DEFORMITIES DUE TO KARST TOPOGRAPHY.

TYP. BLOCKOUT OPTION 1

NOTE:
FORM WALL OR SLAB w/ BLOCKOUT THEN RUN PLUMBING AFTER

TYP. BLOCKOUT OPTION 2 EXAMPLE IMAGE

THIS IS A DIAGRAM SHOWING THE GENERAL PLACEMENT OF PLUMBING AT EACH BLOCKOUT. CONTRACTOR SHALL FIELD VERIFY EXACT POOL PLUMBING PLACEMENT THROUGH WALLS AND STRUCTURAL SLAB.

TYP. BLOCKOUT OPTION 2

NOTE:
SET PIPE SLEEVING INTEGRAL w/ WALL OR SLAB REINFORCING THEN FORM WALL AND CAST CONCRETE

LINK-SEAL® MODULAR SEALS WITH CAST OR CORE DRILLED WALL OPENING MANUFACTURED BY PIPELINE SEAL & INSULATOR, INC.
HOUSTON, TEXAS, U.S.A.
TEL: 800-423-2410
E-MAIL: INFO@PSIPSI.COM

LINK-SEAL MODULAR SEAL

Installation Techniques - LINK-SEAL® Modular Seals

1. Center the pipe, cable or conduit in wall opening or casing. Make sure the pipe will be adequately supported on both ends. LINK-SEAL® modular seals are **not** intended to support the weight of the pipe.
2. Loosen rear pressure plate with nut just enough so links move freely. Connect both ends of belt around the pipe.
3. Check to be sure all bolt heads are facing the installer. Extra slack or sag is normal. Do **not** remove links if extra slack exists.

NOTE: On smaller diameter pipe, links may need to be stretched.

4. Slide belt assembly into annular space. For larger size belts, start inserting LINK-SEAL® modular seal assembly at the 6 o'clock position and work both sides up toward the 12 o'clock position in the annular space.
5. LS-200 through LS-315 Using a hand socket allen head or off-set wrench ONLY, start at 12 o'clock. Do not tighten any bolt more than 4 turns at a time. Continue in a clockwise manner until links have been uniformly compressed. (Approx. 2 or 3 rotations)

5a. LS-325 through LS-650 Using a hand socket or off-set wrench ONLY, start at 12 o'clock. Do not tighten any bolt more than 4 turns at a time. Continue in a clockwise manner until links have been uniformly compressed (Approx. 2 or 3 rotations).

6. Make 2 or 3 more passes at 4 turns per bolt MAXIMUM, tightening all bolts clockwise until all sealing elements **"bulge"** around all pressure plates. On type 316 stainless steel bolts, hand tighten ONLY without power tool.
7. If the seal doesn't appear to be correct using the instructions provided, call GPT at 1-800-423-2410.

Installation Notes: The LINK-SEAL® modular seal bolt heads are usually recessed below the wall opening or the edge of casing pipe and therefore a socket or offset wrench must be used.

Installation Techniques - LINK-SEAL® Modular Seals

ALWAYS WEAR PPE WHEN USING LINK-SEAL® MODULAR SEALS

LINK-SEAL® Modular Seal - Do's

1. Make sure pipe is centered.
2. Install the belt with the pressure plates evenly spaced.
3. Install the exact number of links indicated in sizing charts.
4. Check to make sure pipe is supported properly during backfill operations. **NOTE**: LINK-SEAL® modular seals are not intended to support the weight of the pipe.
5. Make sure seal assembly and pipe surfaces are free from dirt.
6. For tight fits, use non-polluting liquid detergent to assist installation.

LINK-SEAL® Modular Seal - Don'ts

1. Don't Install the belt with the pressure plates aimed in irregular directions. (Staggered)
2. Don't Install LINK-SEAL® modular seals where weld-beads or other irregular surfaces exist without consideration of the sealing requirements.
3. Don't torque each bolt completely before moving on to the next.
4. Don't use high speed power tools (450 rpm or more)
5. Do not use power tools on LINK-SEAL® modular seal 316 stainless steel bolts.
6. Don't use grease installing LINK-SEAL® modular seals.

If the seal doesn't appear to be correct using the techniques provided, Call GPT at 1-800-423-2410.

Hand Tools: Review provided chart below. (Tools not provided.) Tools can be purchased from hardware store, auto parts store, or home improvement store.

LINK-SEAL® Model	Tool Size/ Type Req.	Bolt Head Type
LS-200, LS-275	4mm, Allen	
LS-300, LS-315	6mm, Allen	
LS-325, LS-340, LS-360	13mm, Hex	
LS-400, LS-410, LS-425, LS-475	17mm, Hex	
LS-500, LS-525, LS-575	19mm, Hex	
LS-615	30mm, Hex	
LS-650	19mm, Hex	

Dimensional Data

* DIMENSIONAL DATA FOR MODELS C, L, O, S-316, S61, LS-316 & OS-316

LINK-SEAL® Model No.	Rubber Sealing Elements			Pressure Plates		Bolts				Weight for 10 Link Sections (lbs)	Min. Required Seating Width
	Actual Thinckness (B)	Free Length (C)	Avg. Length After Tighening (D)	(A)	(T)	Allen Head Hex Across Flats	(H)	Thread Size	(L)		
LS 200 *	0.48"	1.75"	1.38"	1.06"	0.31"	4mm Allen (0.157")	4.95mm (0.195")	M5 0.8	65mm (2.559")	0.70	2.25"
LS 275 *	0.61"	1.75"	1.38"	0.97"	0.31"	4mm Allen (0.157")	4.95mm (0.195")	M5 0.8	65mm (2.559")	0.75	2.25"
LS 300 *	0.69"	2.37"	1.87"	1.56"	0.44"	6mm Allen (0.236")	7.87mm (0.310")	M8 1.25	90mm (3.543")	2.15	3.00"
LS 315 *	0.81"	2.37"	1.87"	1.44"	0.44"	6mm Allen (0.236")	7.87mm (0.310")	M8 1.25	90mm (3.543")	2.30	3.00"
LS 325 *	0.88"	2.63"	2.00"	3.13"	1.00"	13mm (0.511")	5.30mm (0.215")	M8 1.25	110mm (4.33")	5.50	4.00"
LS 340 *	1.00"	2.70"	2.25"	1.48"	0.66"	13mm (0.511")	5.30mm (0.215")	M8 1.25	110mm (4.33")	3.30	4.00"
LS 360 *	1.24"	2.70"	2.25"	2.05"	0.77"	13mm (0.511")	5.30mm (0.215")	M8 1.25	110mm (4.33")	5.10	4.00"
LS 400 *	1.38"	3.50"	2.75"	3.50"	1.06"	17mm (0.669")	6.40mm (0.250")	M10 1.5	130mm (5.118")	12.00	5.00"
LS 410 *	1.43"	3.37"	2.87"	2.52"	0.88"	17mm (0.669")	6.40mm (0.250")	M10 1.5	130mm (5.118")	8.20	5.00"
LS 425 *	1.06"	3.00"	2.25"	3.50"	1.19"	17mm (0.669")	6.40mm (0.250")	M10 1.5	130mm (5.118")	10.00	5.00"
LS 475 *	1.56"	3.38"	2.63"	2.63"	0.88"	17mm (0.669")	6.40mm (0.250")	M10 1.5	130mm (5.118")	10.00	5.00"
LS 500 *	2.25"	3.75"	2.75"	3.63"	1.06"	19mm (0.748")	7.50mm (0.300")	M12 1.75	140mm (5.511")	22.50	5.00"
LS 525 *	2.06"	3.75"	2.87"	3.63"	1.06"	19mm (0.748")	7.50mm (0.300")	M12 1.75	140mm (5.511")	21.00	5.00"
LS 575 *	1.81"	3.75"	3.00"	3.00"	1.00"	19mm (0.748")	7.50mm (0.300")	M12 1.75	140mm (5.511")	15.50	5.00"
LS 615 *	3.09"	4.00"	3.00"	6.00"	1.90"	24mm (0.944")	10.57mm (0.416")	5/8 11	185mm (7.280")	60.60	6.00"
LS 650 *	2.71"	3.98"	3.00"	3.96"	1.19"	19mm (0.748")	7.50mm (0.300")	M12 1.75	140mm (5.511")	26.10	6.00"

STEEL AND PLASTIC PIPE WITH SAME OUTSIDE DIAMETER (IPS)

Pipe Size (Nom.)	Actual O.D. (Inches)	CENTURY-LINE® SLEEVE			STEEL SLEEVE			CAST OR CORE BIT DRILLED HOLE		
		Model Number	LINK-SEAL® Size	Links Per Seal	Model Number	LINK-SEAL® Size	Links Per Seal	Hole I.D.	LINK-SEAL® Size	Links Per Seal
½	0.840	CS 2 *	LS 200 ***	4	WS 2 15 S *	LS 275 ***	5	2.000	LS 200 ***	4
¾	1.050	CS 3 *	LS 315 ***	4	WS 2 ½ 20 S *	LS 275 ***	6	3.000	LS 315 ***	4
1	1.315	CS 3 *	LS 300 ***	4	WS 2 ½ 20 S *	LS 200 ***	5	3.000	LS 300 ***	4
1¼	1.660	CS 3 *	LS 275 ***	7	WS 3 21 S *	LS 275 ***	8	3.000	LS 275 ***	8
1½	1.900	CS 3½ *	LS 275 ***	8	WS 3 21 S *	LS 200 ***	7	4.000	LS 315 ***	6
2	2.375	CS 4 *	LS 300 ***	6	WS 3 ½ 22 S *	LS 200 ***	8	4.000	LS 300 ***	6
2½	2.875	CS 4 *	LS 200 ***	9	WS 4 23 S *	LS 200 ***	9	4.000	LS 200 ***	9
3	3.500	CS 5 *	LS 300 ***	8	WS 6 28 S *	LS 360 ***	7	5.000	LS 300 ***	8
3½	4.000	CS 6 *	LS 340 ***	10	WS 6 28 S *	LS 340 ***	9	6.000	LS 315 ***	10
4	4.500	CS 6 *	LS 300 ***	10	WS 6 28 S *	LS 300 ***	10	6.000	LS 300 ***	10
5	5.563	CS 8 *	LS 360 ***	10	WS 8 32 S *	LS 340 ***	13	8.000	LS 340 ***	13
6	6.625	CS 10 *	LS 475 ***	10	WS 10 36 S *	LS 475 ***	10	10.000	LS 475 ***	10
8	8.625	CS 12 *	LS 475 ***	12	WS 12 37 S *	LS 475 ***	12	12.000	LS 475 ***	12
10	10.750	CS 14 *	LS 410 ***	15	WS 14 37 S *	LS 425 ***	10	14.000	LS 475 ***	14
12	12.750	CS 16 *	LS 475 ***	17	WS 16 37 S *	LS 425 ***	12	16.000	LS 475 ***	17
14	14.000	CS 16 *	LS 340 ***	30	WS 18 37 S *	LS 475 ***	18	18.000	LS 575 ***	16
16	16.000	CS 20 *	LS 410 ***	21	WS 20 37 S *	LS 475 ***	21	20.000	LS 575 ***	18
18	18.000	CS 22 *	LS 340 ***	38	WS 22 37 S *	LS 475 ***	23	22.000	LS 575 ***	20
20	20.000	CS 25 *	LS 500 ***	18	WS 24 37 S *	LS 475 ***	25	24.000	LS 475 ***	26
22	22.000	CS 25 *	LS 360 ***	34	WS 26 37 S *	LS 475 ***	28	26.000	LS 575 ***	24
24	24.000	CC 30 **	LS 500 ***	21	WS 28 37 S *	LS 475 ***	30	28.000	LS 475 ***	31
26	26.000	CC 30 **	LS 400 ***	23	WS 30 37 S *	LS 400 ***	23	30.000	LS 575 ***	28
28	28.000	CC 32 **	LS 400 ***	25	WS 32 37 S *	LS 400 ***	25	32.000	LS 575 ***	30
30	30.000	CC 36 **	LS 500 ***	26	WS 34 37 S *	LS 400 ***	27	34.000	LS 575 ***	32
32	32.000	CC 38 **	LS 500 ***	28	WS 36 37 S *	LS 400 ***	29	36.000	LS 575 ***	34
34	34.000	CC 38 **	LS 400 ***	30	WS 40 37 S *	LS 500 ***	29	38.000	LS 575 ***	36
36	36.000	CC 42 **	LS 500 ***	31	WS 42 37 S *	LS 500 ***	31	40.000	LS 575 ***	38
42	42.000	CC 48 **	LS 500 ***	36	WS 48 37 S *	LS 500 ***	36	46.000	LS 575 ***	44
48	48.000	CC 54 **	LS 500 ***	40	WS 53 37 S *	LS 525 ***	40	52.000	LS 575 ***	50

* = Specify sleeve length in inches ** = See CELL-CAST® Page 25 *** = Specify LS Model C, S 316, L...etc when ordering (Example LS 475 C 17) Technically there is no limit to the pipe size that can be sealed using LINK-SEAL® modular seals. Please contact factory for sizes not listed and for CS model plastic sleeves for walls less than 8" thick.

NOTE: Contact GPT (1 800 423 2410) or your local distributor if your pipe sizing solution is not listed in the provided charts

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1 LINK-SEAL MODULAR SEALS
SCALE: NTS *AT STRUCTURAL SLAB & WALL BLOCKOUTS*

LORAX DESIGN GROUP
8021 SANTA FE DRIVE
OVERLAND PARK, KS 66204
WWW.LORAXDESIGNGROUP.COM

JAMES M. GRANICH
NUMBER PE-2014023909
1/10/2022
Missouri COA #001268

SUMMIT VIEW FARMS
POOL CONSTRUCTION DOCUMENTS
LEE'S SUMMIT, MISSOURI

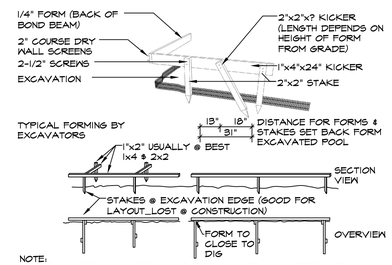
REVISION:

DECEMBER 2, 2021
STANDARD NOTES
W101

POOL WALL AND FLOOR REINFORCING SCHEDULE:								
WATER DEPTH	SPRING LINE	RADIUS "R"	POOL WALL				FLOOR SLAB	
			THICKNESS "T"	SOIL SIDE VERT. REINF.	SOIL SIDE HORIZ. REINF.	POOL SIDE WALL REINF.	THICKNESS	REINF.
0' TO 5'-0"	0'-0" TO 3'-9"	3"	8" MIN	#4 @ 12" O.C.	#4 @ 12" O.C.	-	8" MIN.	#4 @ 12" O.C. E.W.
5'-0" TO 8'-0"	3'-6" TO 7'-6"	6"	12" MIN	#4 @ 12" O.C.	#4 @ 12" O.C.	TO MATCH SOIL SIDE	8" MIN.	#4 @ 12" O.C. E.W.
8'-0" TO 10'-0"	6'-2" TO 8'-2"	1'-10"	12" MIN	#4 @ 9" O.C.	#4 @ 12" O.C.	TO MATCH SOIL SIDE	8" MIN.	#4 @ 12" O.C. E.W.

POOL REINFORCING SCHEDULE NOTES:	
1	SEE POOL PLAN FOR SECTIONS AND DETAILS AT THE SHALLOW AREAS OF THE POOL.
2	THE SPRINGLINE ELEVATION IS THE VERTICAL WATER DEPTH WHERE THE RADIUS LENGTH INTERSECTS THE SURFACE OF THE POOL FLOOR.
3	PROVIDE 2" OF CONCRETE, OR GUNITE COVER ON ALL WALL REINFORCING BARS.
4	SUPPORT FLOOR SLAB REINFORCING BARS ON BAR SUPPORTS @ 36" O.C. EACH WAY WITH CONCRETE BLOCK OR CHAIRS PER ACI 301. SEE DETAIL9 FOR BAR SUPPORT HEIGHTS.
5	REINFORCING STEEL SHOWN IN SCHEDULE IS MINIMUM REQUIRED. CONTRACTOR SHALL PROVIDE ADDITIONAL STEEL PER CROSS SECTIONS

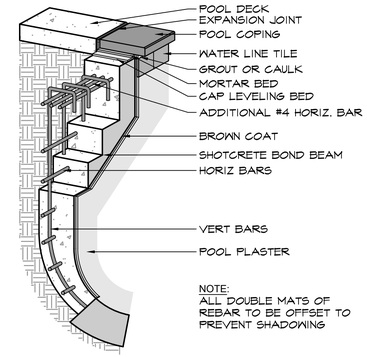
1 POOL REINFORCING SHEDULE
SCALE: NTS



NOTE:
1. KEEP THE FIRST STAKE BACK 13" FROM WATER. THIS KEEPS THE STAKE FIRM AND EXTRACT DURING EXCAVATION 7 CONSTRUCTION ALONG WITH 18" STAKE & KICKER.

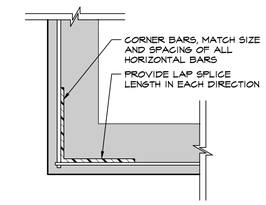
2. STAKE LENGTH VARIES TO SITE CONDITIONS & SOIL CONDITIONS. FIRMLY EMBED IN SOIL SO STAKES DO NOT MOVE.

2 STRUCTURAL FRAMING FORMWORK
SCALE: NTS



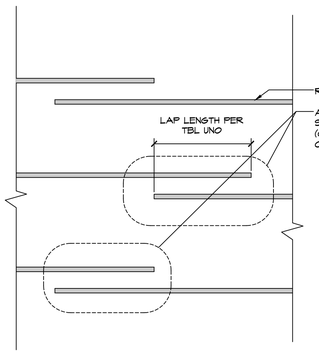
NOTE:
ALL DOUBLE MATS OF REBAR TO BE OFFSET TO PREVENT SHADOWING

3 BOND BEAM REBAR VIGNETTE
SCALE: NTS ILLUSTRATIVE VIEW



TYPICAL DETAIL @ ALL POOL WALL HORIZ. BARS PROVIDE CORNERBARS TO MATCH HORIZ. BARS ON INSIDE AND OUTSIDE FACE OF WALL WHERE APPLICABLE

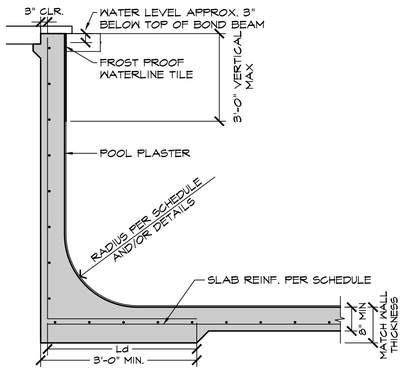
4 CORNER BAR DETAIL
SCALE: NTS



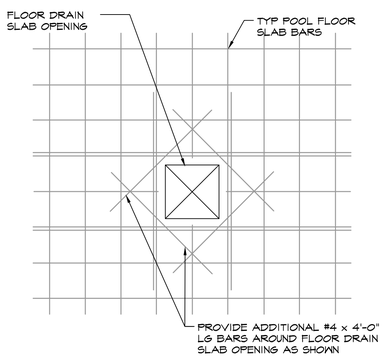
DETAIL NOTES	
1.	f'c'=4000 PSI (27.5 KPA)
2.	Fy PER TABLE BELOW.
3.	CLASS B SPLICES [ACI318 12.15.1]
4.	INCREASE LAP 20% FOR EPOXY-COATED BARS
5.	INCREASE LAP 30% FOR LIGHTWEIGHT CONCRETE

MIN REINFORCING LAP LENGTH (Ld)				
BAR SIZE	NOMINAL DIA	GRADE	Fy MIN YIELD STRENGTH	MIN LAP LENGTH
#3	3/8" (10 MM)	40	40,000 PSI (300 MPA)	20" (500 MM)
#4	1/2" (13 MM)	60	60,000 PSI (300 MPA)	25" (625 MM)
#5	5/8" (16 MM)	60	60,000 PSI (420 MPA)	32" (800 MM)
#6	3/4" (19 MM)	60	60,000 PSI (420 MPA)	38" (950 MM)
[ASTM A615 (A615M)]				[ACI318 12.15.1]

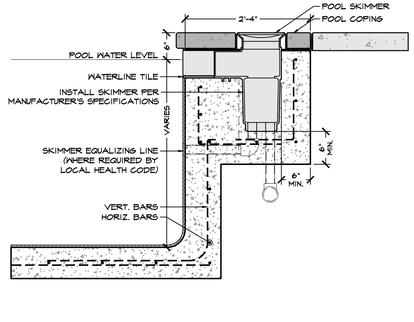
5 SHOTCRETE NON-CONTACT LAP SPLICES
SCALE: NTS



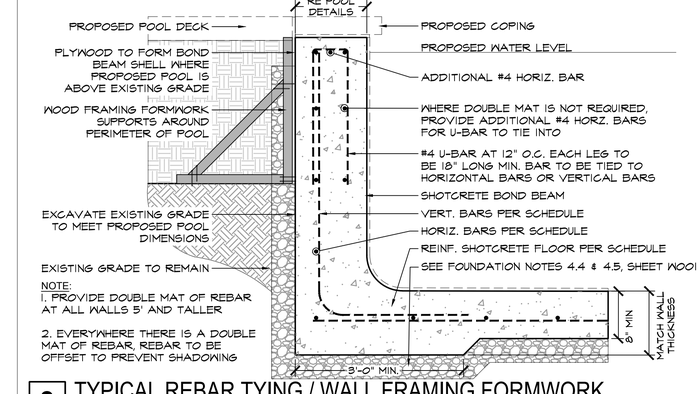
6 WALL TO BOTTOM TRANSITION
SCALE: 1/2" = 1'-0" SECTION



7 TYPICAL REBAR AT POOL DRAIN
SCALE: 1" = 1'-0" SECTION



8 REINFORCING AT SKIMMER
SCALE: N.T.S. CROSS SECTION



NOTE:
1. PROVIDE DOUBLE MAT OF REBAR AT ALL WALLS 5' AND TALLER

2. EVERYWHERE THERE IS A DOUBLE MAT OF REBAR, REBAR TO BE OFFSET TO PREVENT SHADOWING

9 TYPICAL REBAR TYING / WALL FRAMING FORMWORK
SCALE: NTS SECTION

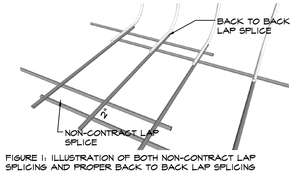


FIGURE 1: ILLUSTRATION OF BOTH NON-CONTRACT LAP SPLICING AND PROPER BACK TO BACK LAP SPLICING

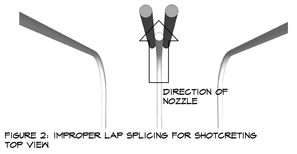
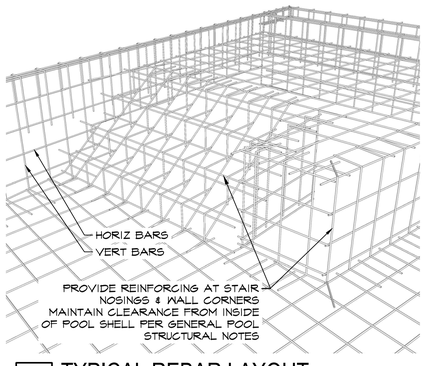
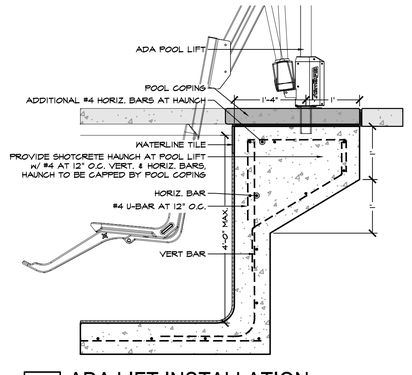


FIGURE 2: IMPROPER LAP SPLICING FOR SHOTCRETING TOP VIEW

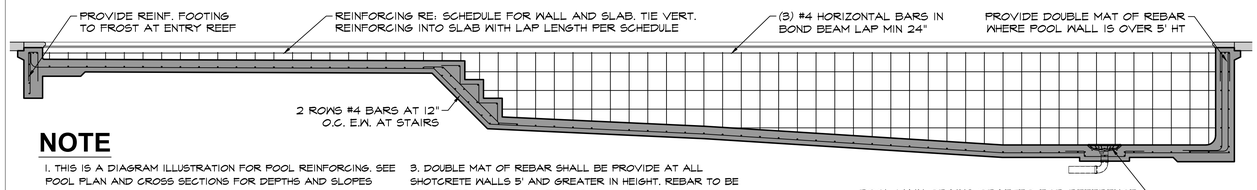
10 LAP SPLICING SHOTCRETE
SCALE: NTS ILLUSTRATIVE VIEW



11 TYPICAL REBAR LAYOUT
SCALE: N.T.S. VIGNETTE



12 ADA LIFT INSTALLATION
SCALE: N.T.S. CROSS SECTION



NOTE

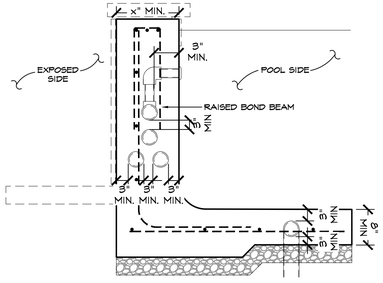
1. THIS IS A DIAGRAM ILLUSTRATION FOR POOL REINFORCING. SEE POOL PLAN AND CROSS SECTIONS FOR DEPTHS AND SLOPES

2. FOOTING DESIGNS ARE BASED ON AN ASSUMED STABLE, NON-EXPANSIVE SOIL WITH AN ALLOWABLE FOUNDATION PRESSURE OF 1500 PSF WITH A MAXIMUM DIFFERENTIAL SETTLEMENT OF ½ INCH. CONTRACTOR SHALL HIRE A GEOTECHNICAL ENGINEER TO DETERMINE WHETHER OR NOT SOIL MEETS THIS MINIMUM CRITERIA AND IF IT DOES NOT, SHALL NOTIFY ENGINEER SO THAT THE FOUNDATION MAY BE REDESIGNED ACCORDINGLY.

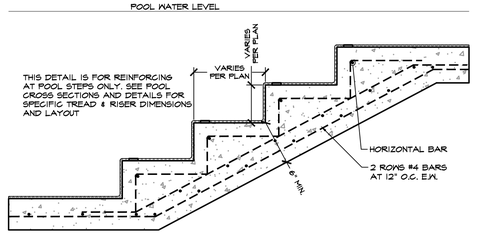
3. DOUBLE MAT OF REBAR SHALL BE PROVIDE AT ALL SHOTCRETE WALLS 5' AND GREATER IN HEIGHT. REBAR TO BE OFFSET TO PREVENT SHADOWING

4. DOUBLE MAT OF REBAR SHALL BE PROVIDED AT ALL SHOTCRETE WALL GREATER THAN 12" THICK. REBAR TO BE OFFSET TO PREVENT SHADOWING

13 TYPICAL POOL REINFORCING CROSS SECTION
SCALE: NTS



14 BOND BEAM PLUMBING CLEARANCES
SCALE: N.T.S. CROSS SECTION



15 REINFORCING AT POOL STEPS
SCALE: N.T.S. CROSS SECTION

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STATE OF MISSOURI
JAMES M. GRANICH
NUMBER PE-2014023909
PROFESSIONAL ENGINEER

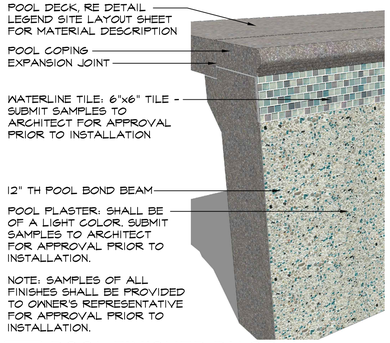
1/10/2022
Missouri COA #001268

SUMMIT VIEW FARMS
POOL CONSTRUCTION DOCUMENTS
LEE'S SUMMIT, MISSOURI

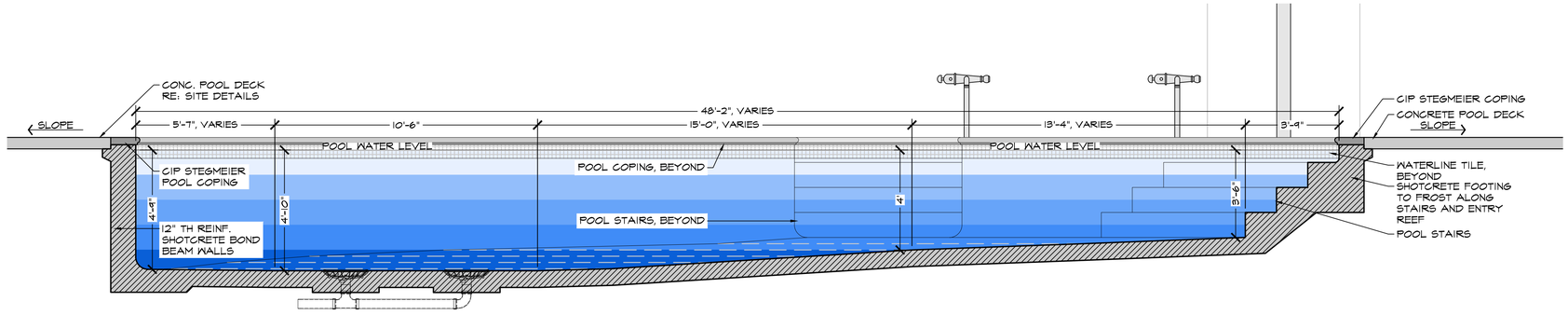
REVISION:

DECEMBER 2, 2021
STANDARD NOTES & STRUCTURAL DETAILS

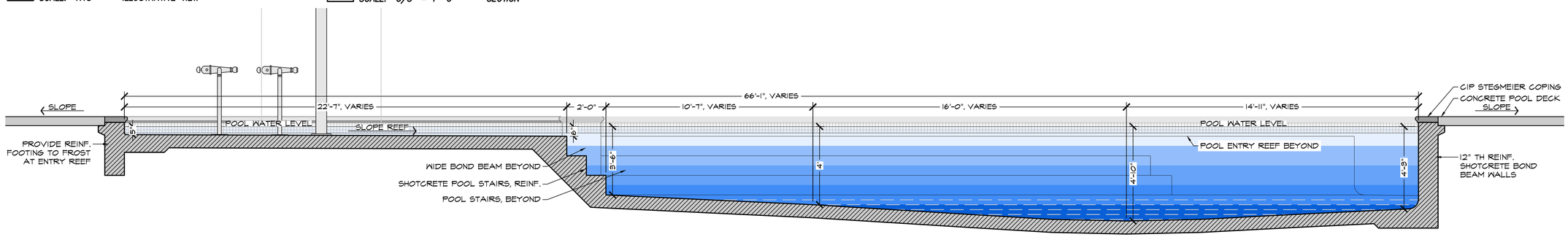
W102



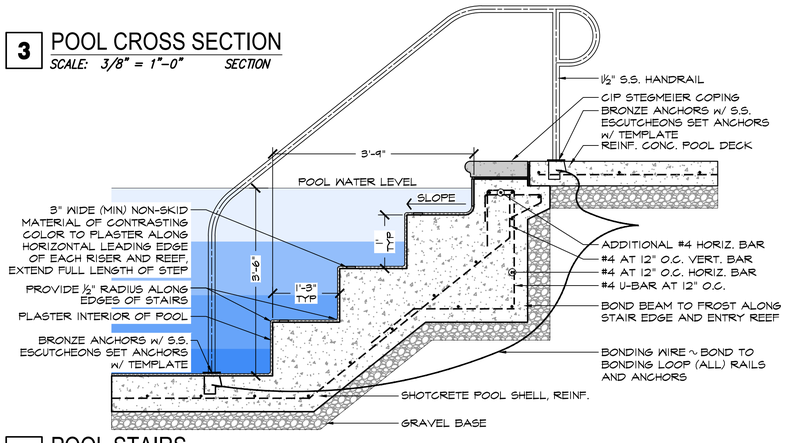
1 POOL FINISHED DIAGRAM
SCALE: NTS ILLUSTRATIVE VIEW



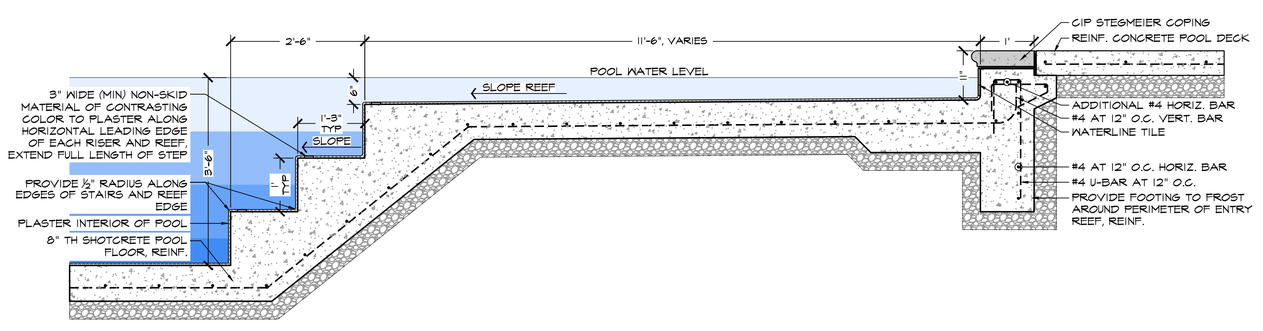
2 POOL CROSS SECTION
SCALE: 3/8" = 1"-0" SECTION



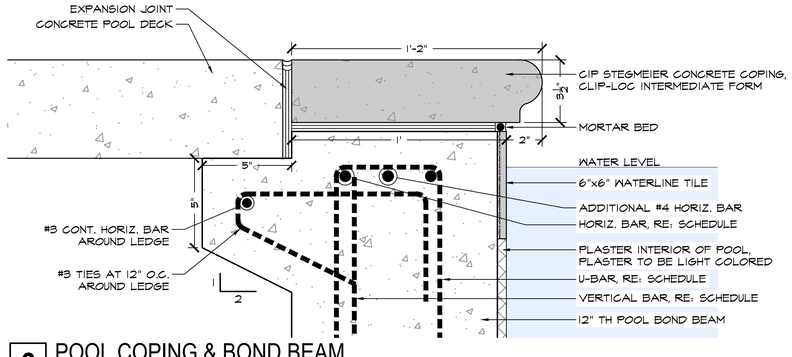
3 POOL CROSS SECTION
SCALE: 3/8" = 1"-0" SECTION



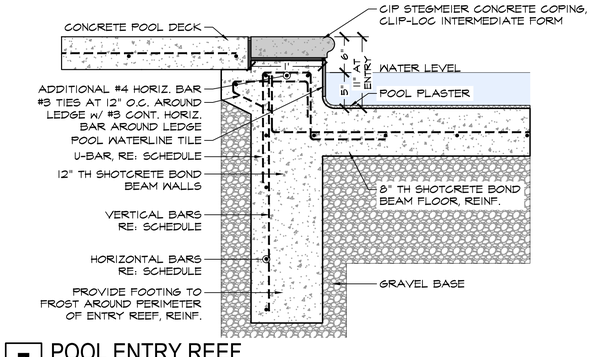
4 POOL STAIRS
SCALE: 3/4" = 1"-0" SECTION



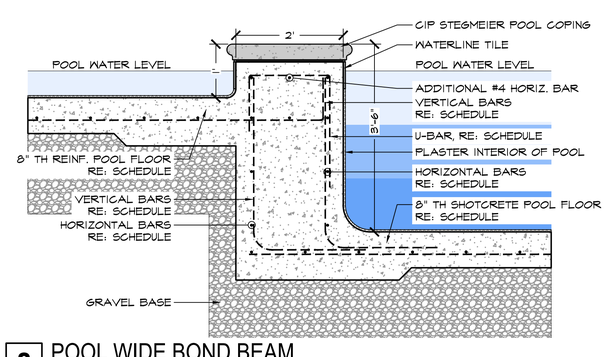
5 POOL REEF AND STAIRS
SCALE: 3/4" = 1"-0" SECTION



6 POOL COPING & BOND BEAM
SCALE: 3" = 1"-0" SECTION



7 POOL ENTRY REEF
SCALE: 1" = 1"-0" SECTION



8 POOL WIDE BOND BEAM
SCALE: 3/4" = 1"-0" SECTION

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STATE OF MISSOURI
JAMES M. GRANICH
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PROFESSIONAL ENGINEER

1/10/2022

Missouri COA #001268

SUMMIT VIEW FARMS

POOL CONSTRUCTION DOCUMENTS

LEE'S SUMMIT, MISSOURI

REVISION:

DECEMBER 2, 2021

POOL DETAILS

W103

1 SWIMMING POOL VIGNETTE
SCALE: NTS ILLUSTRATIVE VIEWS

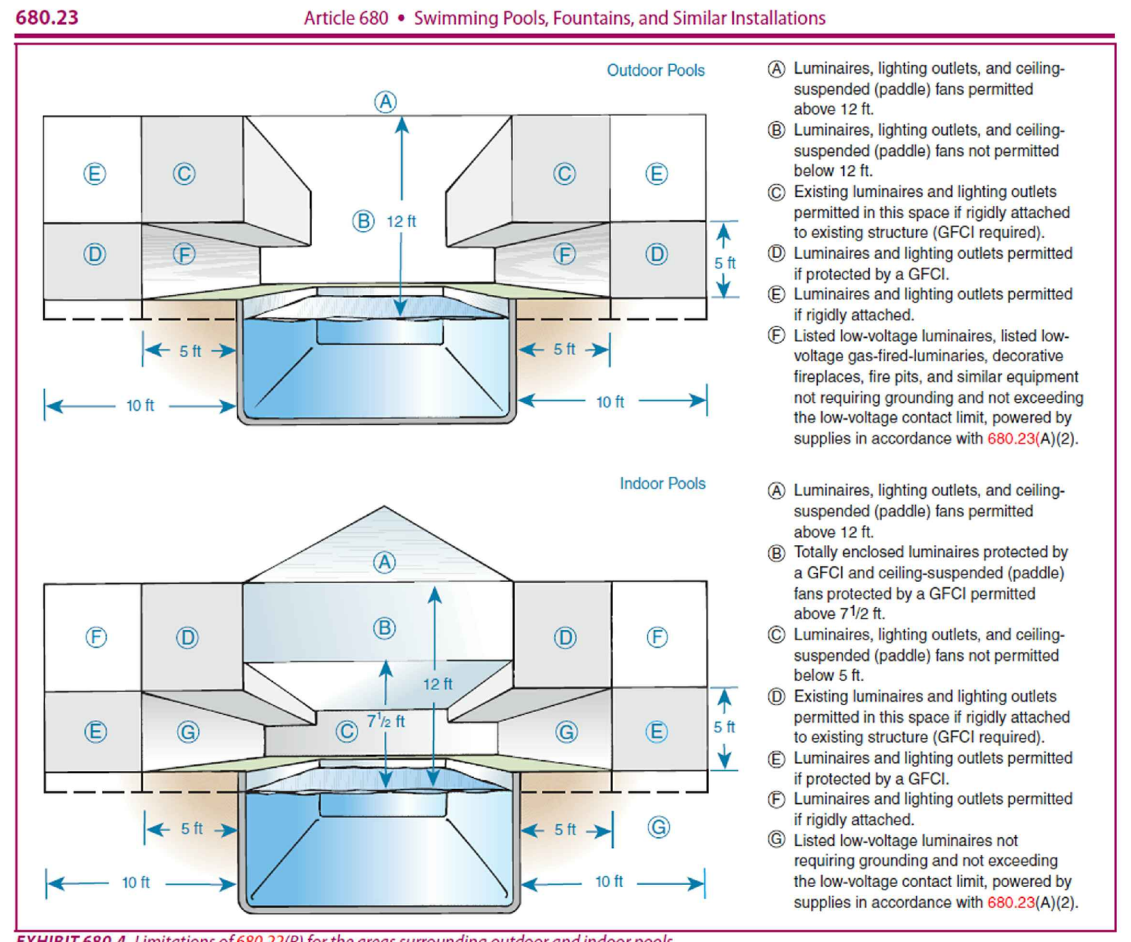
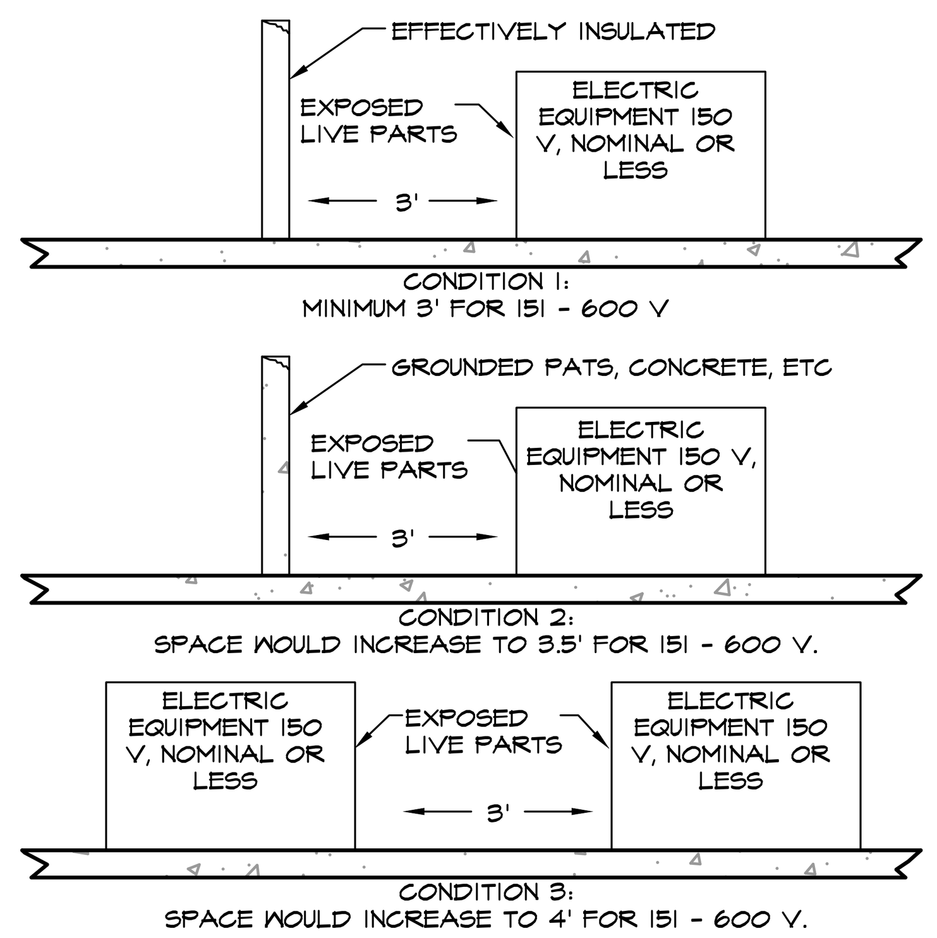


EXHIBIT 680.4 Limitations of 680.22(B) for the areas surrounding outdoor and indoor pools.

2 REQUIRED POOL CLEARANCES
SCALE: NTS SECTION



3 PLACEMENT OF PANEL BOARD
SCALE: NTS SECTION

BASECRETE + POOL SHELL AND POOL TILE WATERPROOFING SYSTEM GUIDE

GLASS POOL TILE - P602 TCNA STANDARD

1. PRESSURE WASH AND CLEAN TO BE TILED WITH BASECRETE POOL SHELL CLEANER
   - BTH-37-1015 - BASECRETE POOL SHELL CLEANER
2. STABILIZE WITH pH - APPLY BASECRETE POOL SHELL pH-STABILIZER. CURE 24 HOURS
   - BTH-37-1014 - BASECRETE POOL SHELL STABILIZER
3. PRIMARY WATERPROOFING - APPLY BASECRETE + POOL SHEEL PRIMARY WATERPROOFING (PENETRATING COLLOIDAL SILICATE). CURE 24 HOURS
4. PRESSURE WASH AND CLEAN POOL SHELL SURFACE
5. APPLY APPROVED MORTAR BED BOND COAT - BASECRETE BOND COAT
6. INSTALL APPROVED MORTAR BED
7. SECONDARY WATERPROOFING / BOND COAT - APPLY BASECRETE SECONDARY WATERPROOFING / BOND COAT TO A LIGHTLY DAMPENED SURFACE. CURE 48 HOURS.
   - BTH-37-1001 PART 1 OF 2 - (1) 5 GAL. OF LIQUID AND
   - BTH-37-1002 PART 2 OF 2 - (3) 50 LBS OF GREY COMPOUND OR/
   - BTH-37-1003 PART 2 OF 2 - (3) 50 LBS OF WHITE COMPOUND OR/
   - BTH-37-1004 PART 2 OF 2 - (3) 50 LBS OF BLACK COMPOUND
8. APPLY APPROVED TILE BOND COAT ADHESIVE
9. INSTALL TILE
10. INSTALL GROUT

BASECRETE RECOMMENDED CURE TIMES

- BASECRETE POOL SHELL pH- STABILIZER - 24 HOURS
- BASECRETE + POOL SHELL PRIMARY WATERPROOFING - 24 HOURS
- BASECRETE + SECONDARY WATERPROOFING / BOND COAT - 48 HOURS

PRODUCTS MAY BE PURCHASED AT YOUR LOCAL POOLCORP, NPT, SCP, OR SUPERIOR POOL PRODUCT DISTRIBUTOR

BASECRETE PRODUCTS ARE APPROVIDE AND RECOMMENDED FOR PRIMARY AND SECONDARY WATERPROOFING FOR POOL SHELLS BY NPT, SCP, SSP, OCEANSIDE GLASS AND TILE AND GENESIS

BASECRETE PROUDLY SPONSORS GENESIS AND TRIBUTARY

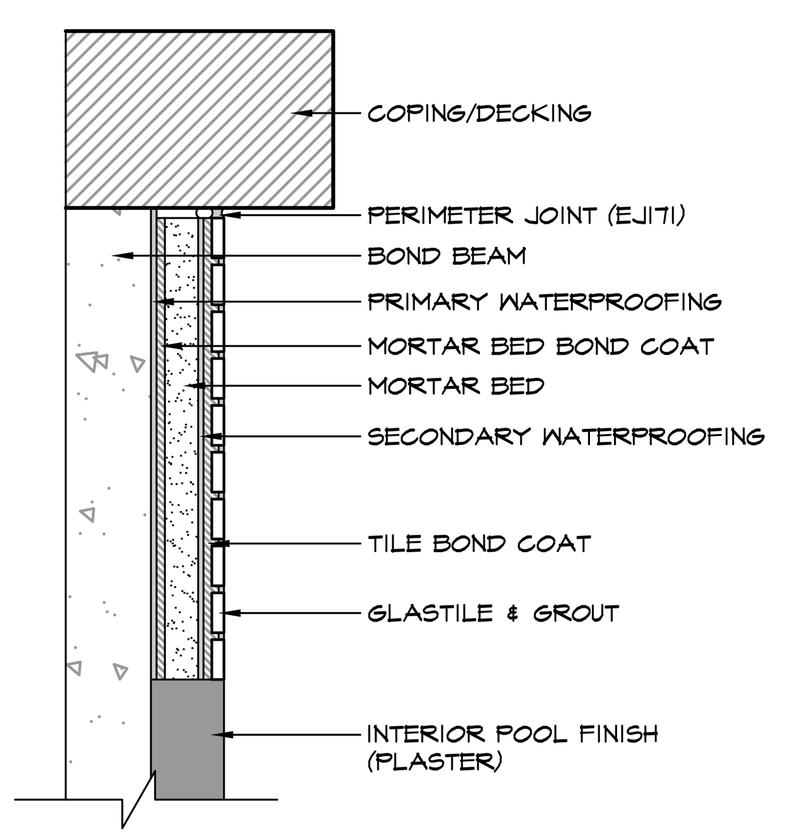
FOR TECHNICAL QUESTIONS PLEAS CONTACT: VITO MARIANO - 941-879-4600

FOR SALES, SUPPORT AND TRAINING ASSISTANCE PEASE CONTACT: BEAU LAMB - 561-389-8806

FOR GENERAL QUESTIONS EMAIL: info@basecreateusa.com

NOTE: INSTALL PER MANUFACTURERS RECOMMENDATIONS

BASECRETE + POOL SHELL REMODEL AND NEW POOL SHELL CONSTRUCTION GUIDE



1. PRESSURE WASH AND CLEAN POOL SHELL SURFACE WITH BASECRETE POOL SHELL CLEANER
   - BTH-37-1015 - BASECRETE POOL SHELL CLEANER
2. STABILIZE THE pH - APPLY BASECRETE POOL SHELL pH- STABILIZER. CURE 24 HOURS
   - BTH-37-1014 - BASECRETE POOL SHELL pH- STABILIZER
3. PRIMARY WATERPROOFING - APPLY BASECRETE + POOL SHEEL PRIMARY WATERPROOFING (PENETRATING COLLOIDAL SILICATE). CURE 24 HOURS
   - BTH-37-1013 - BASECRETE + POOL SHELL PRIMARY WATERPROOFING
4. PRESSURE WASH AND CLEAN POOL SHELL SURFACE
5. INSTALL HIGH STRENGTH BASECRETE REINFORCING MESH OVER TRANSITION AREAS, JOINTS, CHANGE OF PLANES, CRACKS AND FRACTURES IN POOL SHELL USING BASECRETE SECONDARY WATERPROOFING
   - BTH-37-1008 - BASECRETE 4"x150' REINFORCING MESH
   - BTH-37-1009 - BASECRETE 9.5"x105' REINFORCING MESH
   - BTH-37-1010 - BASECRETE 12"x150' REINFORCING MESH
   - BTH-37-1011 - BASECRETE 38"x150' REINFORCING MESH
6. SECONDARY WATERPROOFING / BOND COAT - APPLY BASECRETE SECONDARY WATERPROOFING / BOND COAT TO A LIGHTLY DAMPENED SURFACE . CURE 48 HOURS
   - BTH-37-1001 - PART 1 OF 2 - (1) 5 GAL OF LIQUID AND
   - BTH-37-1002 - PART 2 OF 2 - (3) 50 LBS OF GREY COMPOUND OR/
   - BTH-37-1003 - PART 2 OF 2 - (3) 50 LBS OF WHITE COMPOUND OR/
   - BTH-37-1004 - PART 2 OF 2 - (3) 50 LBS OF BLACK COMPOUND
7. INSTALL PLASTER

4 TYPICAL POOL SHELL WATERPROOFING GUIDE
SCALE: NTS ILLUSTRATIVE VIEW

1. CALL 811 FROM ANYWHERE IN THE USA AND YOUR CALL WILL BE ROUTED TO YOUR LOCAL ONE-CALL CENTER WHERE OPERATORS WILL ASK YOU FOR THE LOCATION OF YOUR DIGGING/DRILLING JOB AND ROUTE YOUR CALL TO THE AFFECTED UTILITY COMPANIES. YOUR LOCAL UTILITY COMPANIES WILL THEN SEND A PROFESSIONAL LOCATOR TO YOUR JOB TO MARK CONFLICTS WITHIN A FEW DAYS.

2. CALL AT LEAST 3 DAYS BEFORE EXCAVATING TO AVOID SERIOUS FINES AND REPAIR EXPENSES. MARK THE PLANNED EXCAVATION AREAS WITH WHITE PAINT. PAINT SHALL BE WATER-BASED QUIK-MARK BY KRYLON OR EQUAL.

3. PROVIDE: ADDRESS, CITY, COUNTY, FOREMAN'S NUMBER, COMPANY, NATURE OF WORK, DATE WORK WILL BEGIN, PERMIT NUMBER, THOMAS GUIDE PAGE AND GRIDS.

4. UTILITY MARKERS GENERALLY EXPIRE AFTER 14 DAYS AFTER WHICH THE PROCESS MUST BE REPEATED. NO EXCAVATION PERMIT IS VALID WITHOUT FIRST CALLING 811. HAND-DIG TO 24" ON EITHER SIDE OF ALL UTILITIES. IT IS THE CONTRACTOR'S AND SUBCONTRACTOR'S RESPONSIBILITY TO EACH CALL 811.

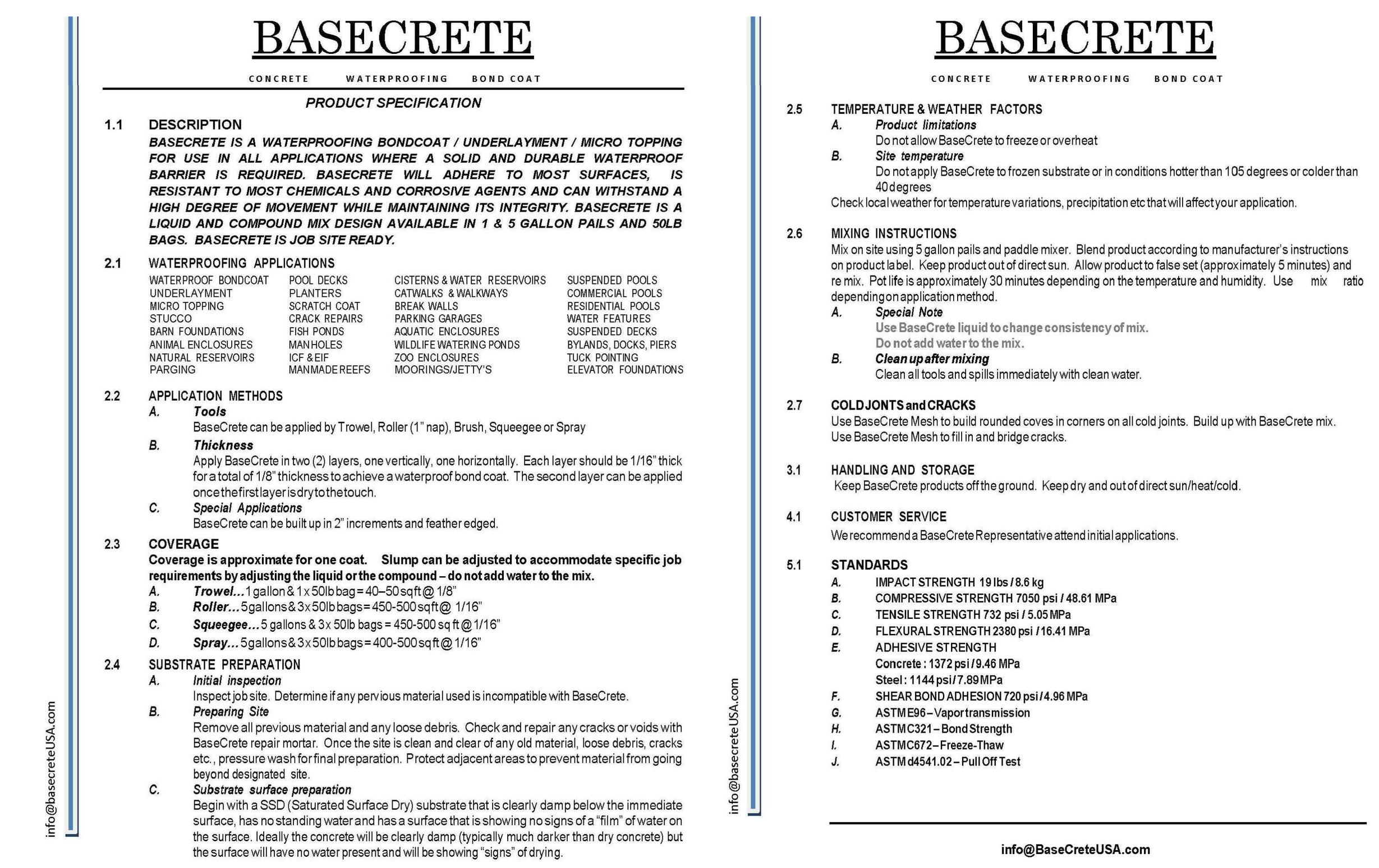
5. EXCAVATION REQUIREMENTS VARY DEPENDING ON LOCAL LAWS. COLOR CODES MAY VARY AND LOCAL REQUIREMENTS SHALL SUPERSEDE THIS GENERAL WARNING. FOR MORE INFORMATION, CHECK OUT THE COMMON GROUND ALLIANCE AT WWW.CALL811.COM.

6. COLOR KEY:
   WHITE - PROPOSED EXCAVATION
   PINK - TEMP. SURVEY MARKINGS
   RED - ELECTRIC
   YELLOW - GAS/OIL/STEAM
   ORANGE - COMMUNICATIONS/CATV
   BLUE - WATER
   PURPLE - RECLAIMED WATER
   GREEN - SEWER

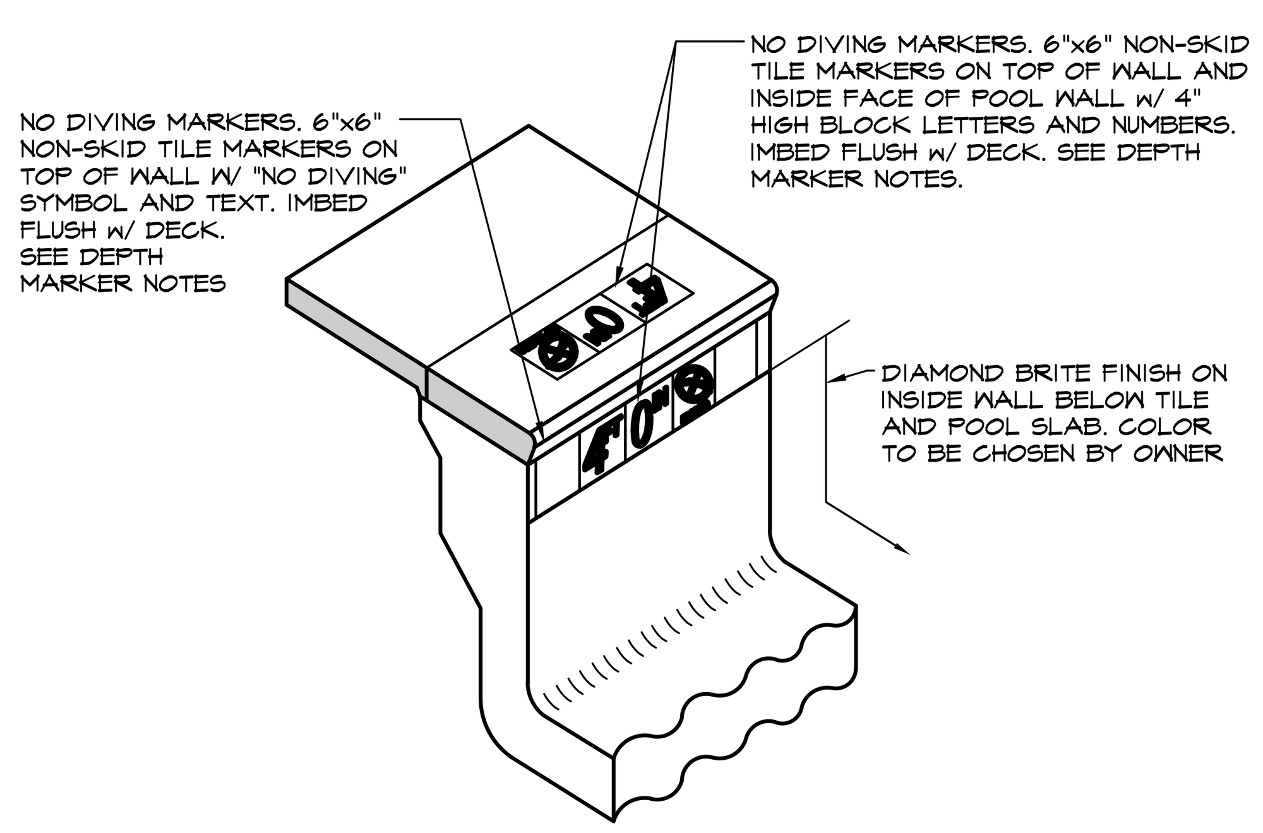
811 Know what's below. Call before you dig.

5 DIGGING / DRILLING ALERT
SCALE: N.T.S.

6 BASECRETE PLUS (COLLOIDAL CONCETE DENSIFIER)
SCALE: NTS MANUF. SPECS.



7 BASECRETE SPECIFICATION GUIDE
SCALE: NTS MANUF. SPECS.



DEPTH / WARNING MARKER NOTES:

1. DEPTH MARKERS SHALL BE LOCATED A MAXIMUM OF 25'-0" OR LESS CENER TO CENTER AROUND THE FULL PERIMETER OF THE SWIMMING POOL.

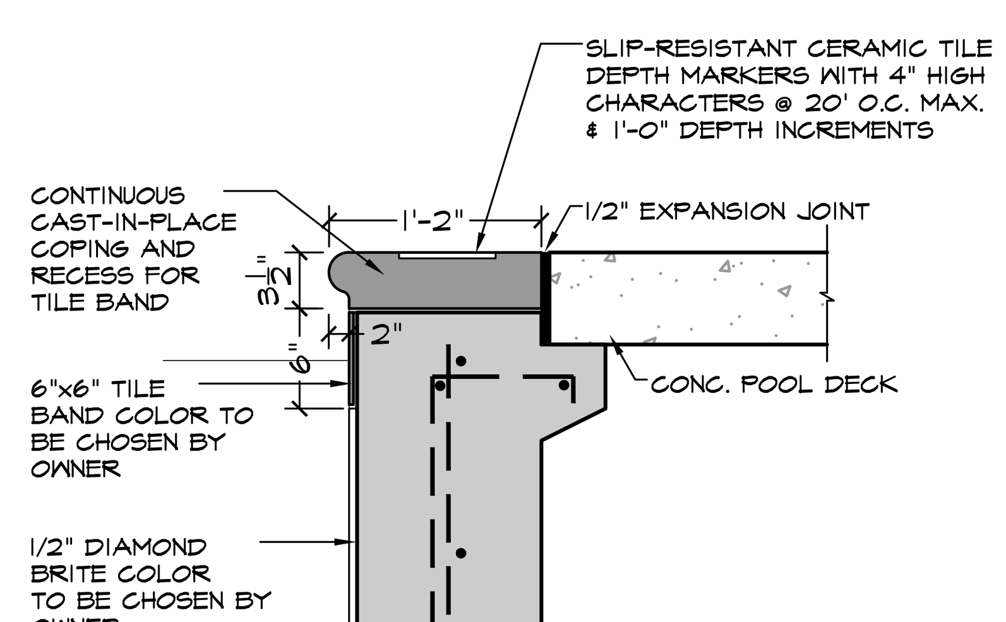
2. THE MAXIMUM DEPTH OF THE SWIMMING POOL SHALL BE MARKED ON BOTH SIDES OF THE SWIMMING POOL AT THE MAIN DRAIN.

3. THE DEPTH SHALL BE MA4RKED AT 6" DEPTH INTERVALS. SEE DEPTH MARKERS SCHEDULE ON POOL PLAN DRAWING FOR MORE INFORMAITON.

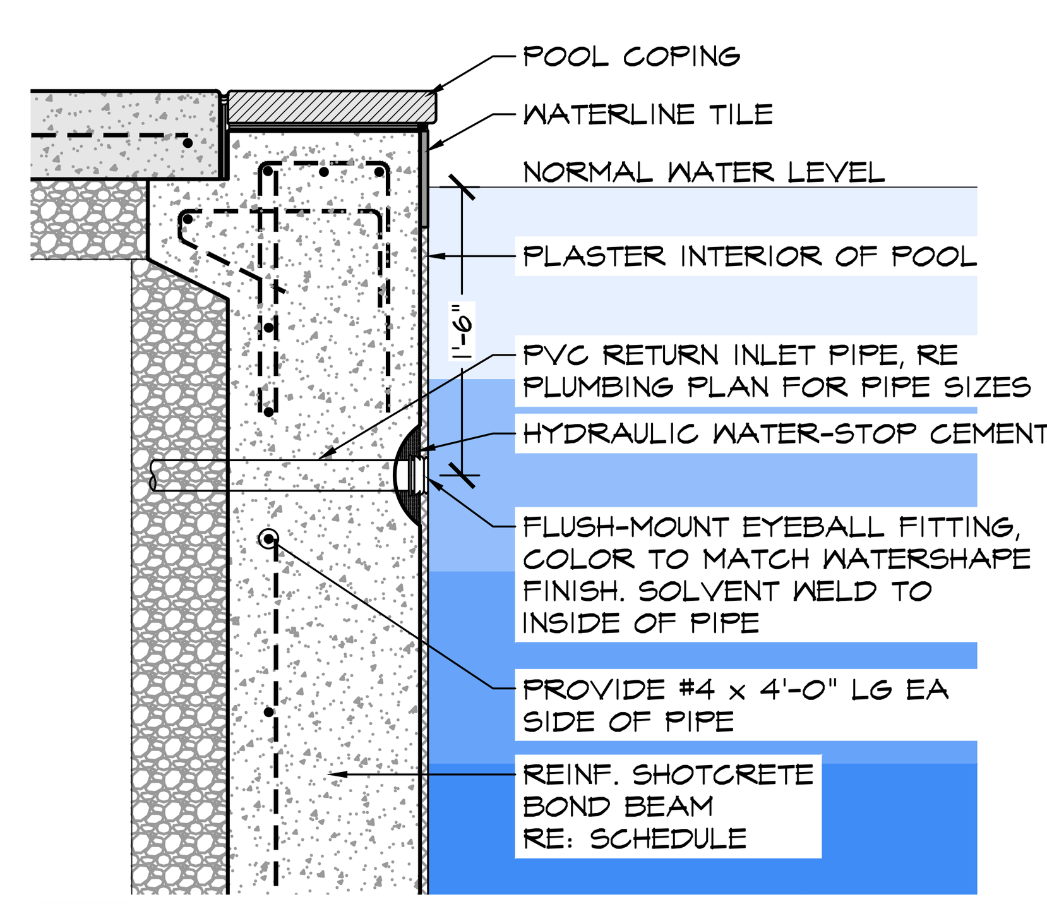
4. "NO DIVING" SYMBOL TILES SHALL BE LOCATED ON THE DECK WITH EACH SET OF DEPTH MARKERS IN 0" TO 5'-0" OF WATER.

5. LETTER, NUMBER AND GRAPHIC MARKERS SHALL BE SLIP RESISTANT, OF A CONTRASTING COLOR FROM THE DECK AND AT LEAST 4" IN HEIGHT

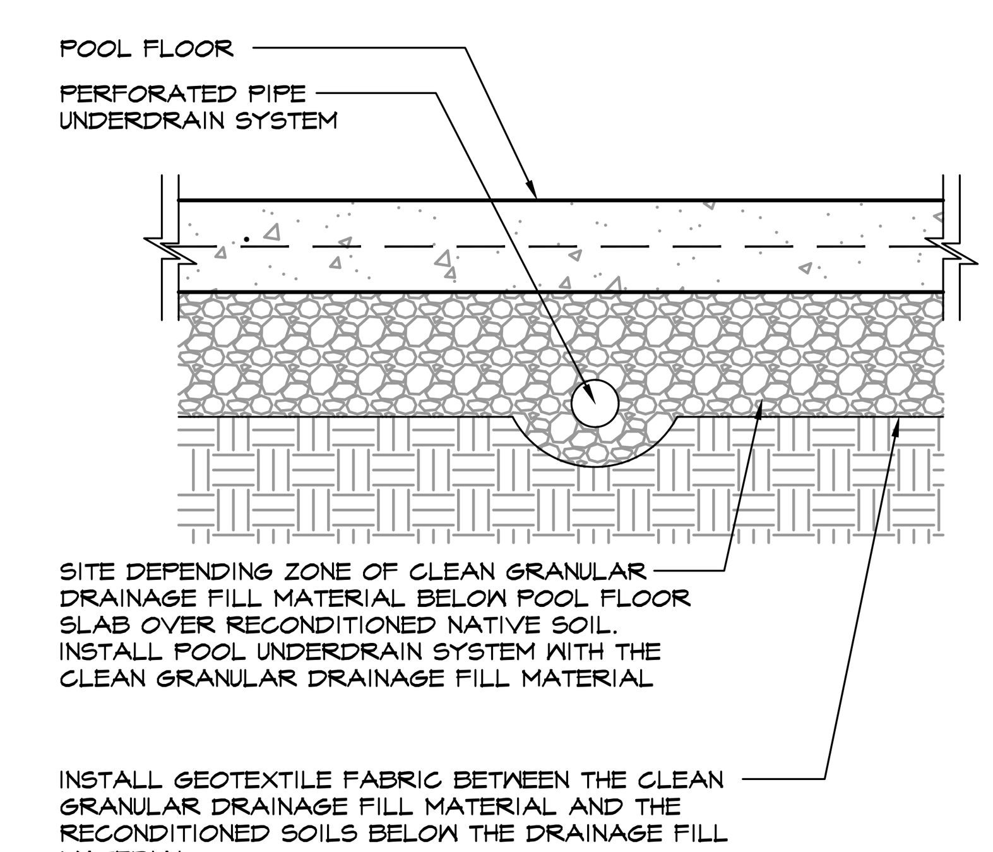
8 POOL PLASTEER/MARKER DETAIL
SCALE: NTS ILLUSTRATIVE VIEW



9 POOL PLASTEER/MARKER DETAIL
SCALE: 1" = 1'–0" SECTION



10 STANDARD RETURN FITTING
SCALE: 1" = 1'–0" SECTION



8 TYPICAL UNDERDRAIN DETAIL
SCALE: 1" = 1'–0" SECTION

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WWW.LORAXDESIGNGROUP.COM

STATE OF MISSOURI KURT L. KRASINGER NUMBER LA-2003016227 LANDSCAPE ARCHITECT
2·23·2021

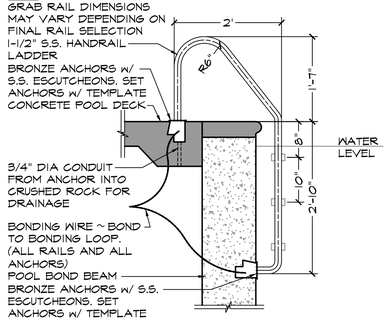
SUMMIT VIEW FARMS
POOL CONSTRUCTION DOCUMENTS
LEE'S SUMMIT, MISSOURI

REVISION:

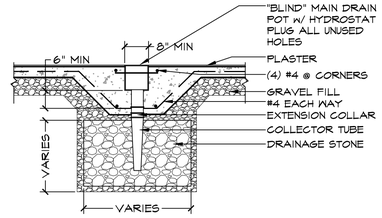
DECEMBER 2, 2021
POOL DETAILS

W104

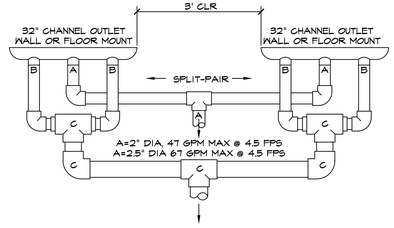
NOTE:
GRAB RAIL DIMENSIONS MAY VARY DEPENDING ON FINAL RAIL SELECTION
1-1/2" S.S. HANDRAIL
LADDER
BRONZE ANCHORS w/ S.S. ESCUTCHEONS. SET ANCHORS w/ TEMPLATE
CONCRETE POOL DECK
3/4" DIA CONDUIT FROM ANCHOR INTO CRUSHED ROCK FOR DRAINAGE
BONDING WIRE ~ BOND TO BONDING LOOP. (ALL RAILS AND ALL ANCHORS)
POOL BOND BEAM
BRONZE ANCHORS w/ S.S. ESCUTCHEONS. SET ANCHORS w/ TEMPLATE



1 POOL HANDRAIL DETAIL
SCALE: 3/4" = 1'-0" SECTION

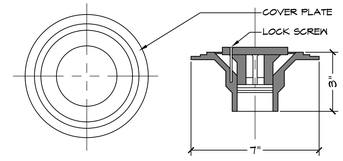


2 MAIN DRAIN w/ HYDROSTAT
SCALE: 1/2" = 1'-0" SECTION



C=2" DIA, 47 GPM MAX @ 4.5 FPS, B=2" DIA
C=2.5" DIA, 67 GPM MAX @ 4.5 FPS, B=2" DIA OR 2.5" DIA
C=3" DIA, 104 GPM MAX @ 4.5 FPS, B=2.5" DIA
C=4" DIA, 184 GPM MAX @ 3.4 FPS, B=2.5" DIA

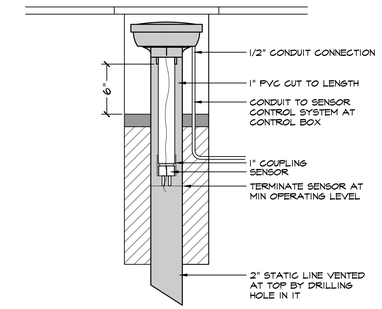
3 CHANNEL OUTLET CONFIGURATION
SCALE: NTS SECTION



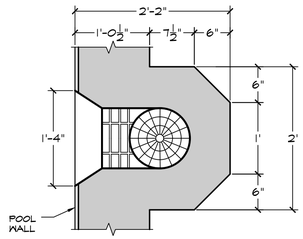
WARNING:
USE OF THIS FITTING AS A SUCTION OUTLET IS HAZARDOUS. RISK OF HAIR OR BODY ENTRAPMENT, DROWNING OR DISEMBOWELMENT.

DO NOT USE COVER ON ANY SUCTION OR OUTLET FITTING. USE ONLY AS AN EXACT REPLACEMENT COVER ON A FLOOR INLET FITTING.

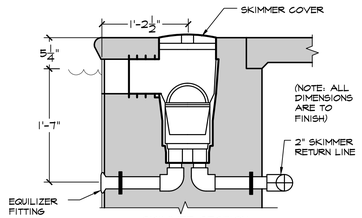
4 SECTION OUTLET FITTING
SCALE: NTS SECTION



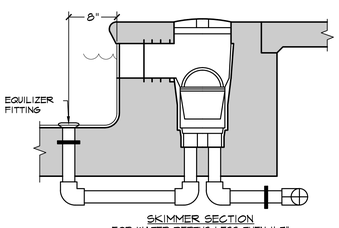
5 DECK LID LEVELOR INSTALLATION
SCALE: NTS SECTION



SKIMMER PLAN

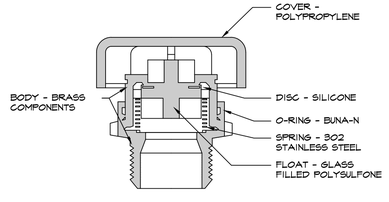


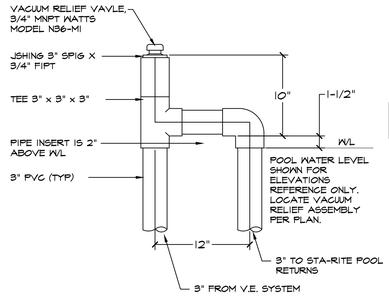
SKIMMER SECTION
FOR WATER DEPTHS GREATER THEN 1'-7"



SKIMMER SECTION
FOR WATER DEPTHS LESS THEN 1'-7"

8 POOL SKIMMER DETAIL
SCALE: 1" = 1'-0" SECTION



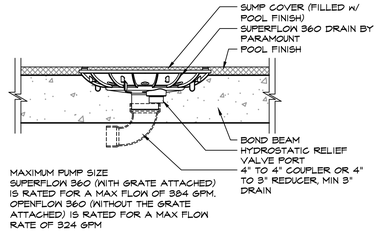


NOTE:
1. LOCATE VACUUM RELIEF ASSEMBLTY PER PLAN. IF FIELD CONDITIONS PREVENT CRITICAL ELEVATIONS TO BE ACHIEVED AT THE DESIRED LOCATION, NOTIFY THE DESIGNER IMMEDIATELY. DO NOT INSTALL VALVE HORIZONTALLY.

2. THE TYPE SS SPRING MAY PREMATURELY FAIL IN SALTWATER APPLICATIONS, IT IS ADVISABLE TO KEEP A SPARE VACUUM RELIEF VALVE ON HAND.

3. VACUM RELIEF VALVE BY MATTS INDUSTRIES, INC. (WWW.MATTS.COM) OR APPROVED EQUAL.

9 VACUUM BREAKER
SCALE: NTS SECTION



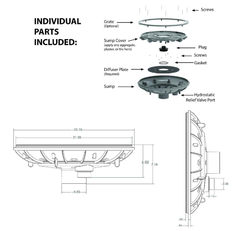
MAXIMUM PUMP SIZE
SUPERFLOW 360 (WITH GRATE ATTACHED) IS RATED FOR A MAX FLOW OF 384 GPM.
OPENFLOW 360 (WITHOUT THE GRATE ATTACHED) IS RATED FOR A MAX FLOW RATE OF 324 GPM

NOTE:
- FOR SINGLE OR MULTIPLE DRAIN USE. WHEN TWO OR MORE SUCTION FITTING ARE USED ON A COMMON SUCTION LINE, THEY MUST BE SEPARATED BY A MIN OF 3 FEET
- POOL FINISH SHOULD NEVER EXCEED TOP OF SUMP
- WHEN FILLING SUMP COVER, MAKE SURE IT IS COMPLETELY LEVEL AND DOES NOT BOW OR SINK
- DRAIN COVERS ARE NOT TO BE PLACED ON SEATING AREAS OR BACKRESTS. THIS PRODUCT CAN BE USED ON FLOOR ONLY

6 PARAMOUNT SUPERFLOW 360 DRAIN
SCALE: NTS SECTION

SUPERFLOW/OPENFLOW 360 PEBBLE TOP DRAIN DESIGN

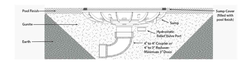
INDIVIDUAL PARTS INCLUDED:



NOTICE
Maximum Pump Size
SuperFlow 360 (WITH grate attached) is rated for a maximum flow of 384 GPM.
OpenFlow 360 (WITHOUT the grate attached) is rated for a maximum flow rate of 324 GPM.

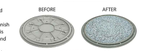
While system flow rates will vary with pump size and the Total Head Loss for a given system, virtually any modern pump is capable of exceeding this limit, therefore it is the responsibility of the system designer to make sure it is not possible to exceed the maximum flow rates listed above.

INSTALLATION INSTRUCTIONS



1. Install sump in pool/spa floor. See detailed instruction on pages 6 & 7.
2. Fill Sump Cover with the same pool/spa finish so that it's completely level with cover. It is important that finish is completely level and does NOT bow up or sink in.
3. Remove vinyl construction cover label in the center of sump and the eight vinyl dots covering the eight screw holes.
4. For SuperFlow 360 WITH GRATE: attach Grate & Sump Cover to Sump with the (8) 2-inch screws supplied.
   For OpenFlow 360 WITHOUT GRATE: attach Sump Cover to Sump with the (8) 1.5-inch screws supplied.

SIMPLY APPLY THE SAME PLASTER, AGGREGATE OR TILE BEING APPLIED TO THE POOL TO THE TOP OF THE DRAIN COVER



NOTICE

- For Single or Multiple drain use. When two-or more suction fittings are used on a common suction line, they must be separated by a minimum of three feet.
- Pool finish should never exceed top of sump.
- When filling sump cover, make sure it is completely level and does not bow or sink.
- Drain covers are not to be placed on seating areas or backrests. This product can be used on floor only.
- Replace covers and screws within five installed years.
- Please use appropriate tools for installation (Phillips screwdriver).
- Please consult your standard head-loss curve to assist with installation. The head loss is dependent upon pipe length, pipe size, pump, distance from equipment, etc. that we cannot determine.

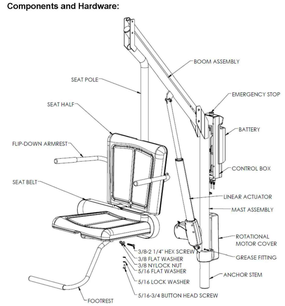
Motion Trek 350

153121

SPECTRUM Aquatics
a PLAYCORE Company

7100 Spectrum Lane ~ Missoula MT 59808
800.751.5056 ~ www.spectrumproducts.com

Components and Hardware:



SOME HARDWARE OMITTED FOR CLARITY
HANDSET, ANCHOR, AND CHARGING ACCESSORIES NOT SHOW

Installation Overview
Read all instructions before attempting to assemble or install the lift.

Clear Deck Space:
To be compliant with ADA guidelines, the lift must be installed in a location that is clear from obstacles and other hazards. Clear deck space is defined by the figure to the right. This rectangle is 48" long (along the pool wall) and 36" wide.

Pool/Spa Depth:
To comply with ADA guidelines the lift must be installed where the water depth does not exceed 48". If the entre pool is deeper than 48" this requirement does not apply.

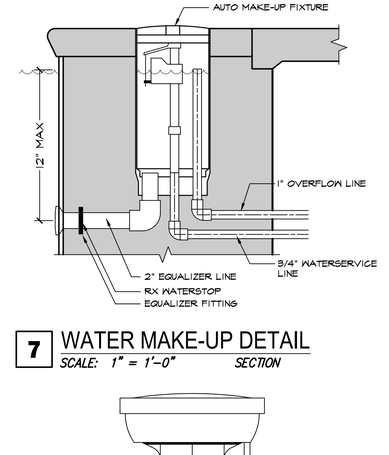
Anchor Location/Installation:
The lift anchor centerline must be no less than 6", but no greater than 22" from the pool/spa wall (or any feature that sticks out past the pool/spa wall, such as a coping). The lift is installed in a single 2.375" I.D. anchor.

New Construction Anchor Installation

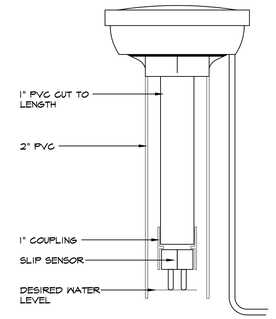
a. Place the anchor in the desired location following above guidelines.
b. Locate a bonding source to bond (ground) the anchor. The steel rebar-bonding grid of the pool deck is the best choice for bonding the anchor. Attach a No. 8 solid copper wire (NEC Section 680-22) from the bonding bolt on the base of the anchor to the bonding grid.
c. Secure anchor in place at the proper height – anchor may be cemented in place. Set the anchor so that the finished top is 1/8" to 1/4" below finished deck level – allowing for anchor cap to be put in place when the lift is not in use.
d. Use the carpenter's level to level the anchor making sure the lift mast will be vertically straight up and down (perpendicular to the deck) in all directions. It is important that the mast be vertically straight to ensure ease of rotation when the lift is fully loaded.
e. Place tape over the anchor hole before pouring concrete deck – not allowing concrete to enter anchor opening.
f. Pour concrete deck and finish.

Allow the concrete to cure for at least 7-days before installing and using the lift.

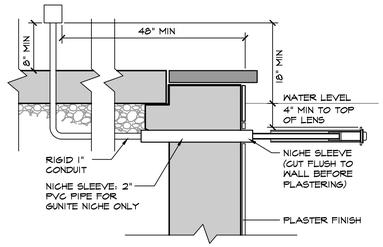
10 ADA CHAIR LIFT BY SPECTRUM AQUATICS
SCALE: N.T.S. SECTION



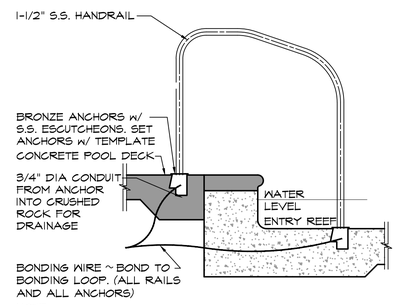
7 WATER MAKE-UP DETAIL
SCALE: 1" = 1'-0" SECTION



11 SLIP SENSOR DETAIL
SCALE: NTS SECTION

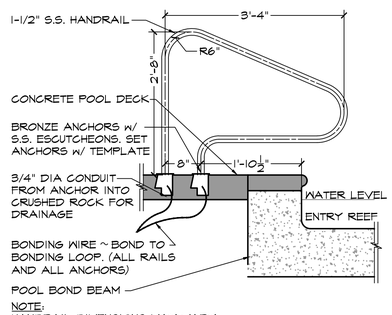


12 LIGHT PLACEMENT DETAIL
SCALE: NTS SECTION



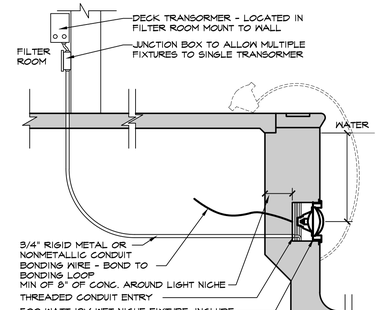
NOTE:
HANDRAIL DIMENSIONS MAY VARY DEPENDING ON FINAL RAIL SELECTION

13 ENTRY REEF HANDRAIL OPTION #1
SCALE: 3/4" = 1'-0" SECTION

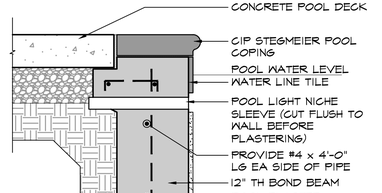


NOTE:
HANDRAIL DIMENSIONS MAY VARY DEPENDING ON FINAL RAIL SELECTION

14 ENTRY REEF HANDRAIL OPTION #2
SCALE: 3/4" = 1'-0" SECTION



15 UNDERWATER POOL LIGHT
SCALE: 3/4" = 1'-0" SECTION



16 TYPICAL POOL LIGHTS
SCALE: 1" = 1'-0" SECTION

LORAX DESIGN GROUP
8021 SANTA FE DRIVE
OVERLAND PARK, KS 66204
WWW.LORAXDESIGNGROUP.COM

STATE OF MISSOURI
KURT A. KOSTINGER
NUMBER LA-2003016227
LANDSCAPE ARCHITECT
2-23-2021

SUMMIT VIEW FARMS

POOL CONSTRUCTION DOCUMENTS
LEE'S SUMMIT, MISSOURI

REVISION:

DECEMBER 2, 2021

POOL DETAILS

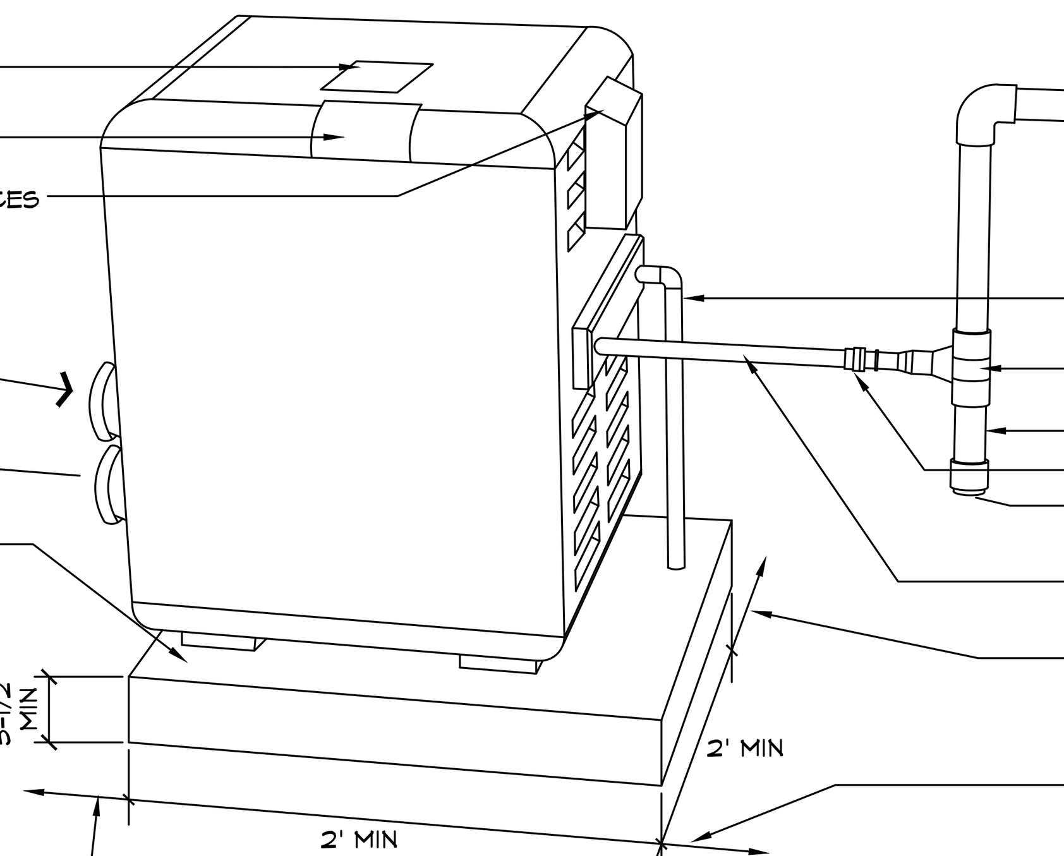
W105

DETAIL NOTES:

1. INSTALL ALL EQUIPMENT PER MANUFACTURER'S INSTRUCTIONS.
2. INSTALL BONDING PER NEC 680.26
3. INSTALL PER LOCAL CODES. THIS MAY REQUIRE THE ADDITION OF A PRESSURE RELIEF VALVE NOT TO EXCEED 50 PSI

VENT TERMINATION CLEARANCES	
DESCRIPTION	MIN CLEARANCE DIM
VERTICAL THROUGH ROOF	2' (600MM) ABOVE ALL STRUCTURES WITHIN 10' (3,000MM)
VERTICAL TO UNDERSIDE OF ROOF OR DECK OVERHANG	3' (900MM)
CLEARANCE FROM WALLS	6" (150MM)
CLEARANCE FROM ANY OPENING INTO A BUILDING	4' (1,200MM)
CLEARANCE FROM ELECTRIC METERS, PANELS, GAS METERS, REGULATORS, AND RELIEF EQUIPMENT	4' (1200MM)
CLEARANCE FROM PROPERTY LINE	1'-6" (450MM)
CLEARANCE FROM A/C OR HEAT PUMP	3' (900MM)
CLEARANCE ABOVE FINISHED GRADE AND NORMAL SNOW LEVEL	1' (300MM)

TYPE "B" DOUBLE-WALL VENT w/ TYPE "B" DOUBLE-WALL CONNECTOR IN FEET					
VENT SIZE	MODEL 175 HEIGHT MIN/MAX	MODEL 200 HEIGHT MIN/MAX	MODEL 250 HEIGHT MIN/MAX	MODEL 300 HEIGHT MIN/MAX	MODEL 350 HEIGHT MIN/MAX
6"	6' / 100'	6' / 100'	18' / 100'	30' / 100'	NOT REC.
7"	6' / 100'	6' / 100'	8' / 100'	10' / 100'	15' / 100'
8"	6' / 100'	6' / 100'	6' / 100'	6' / 100'	8' / 100'
9" & 10"	6' / 50'	6' / 50'	6' / 50'	6' / 100'	8' / 100'
TYPE "B" DOUBLE-WALL VENT w/ SINGLE WALL CONNECTOR IN FEET					
VENT SIZE	MODEL 175 HEIGHT MIN/MAX	MODEL 200 HEIGHT MIN/MAX	MODEL 250 HEIGHT MIN/MAX	MODEL 300 HEIGHT MIN/MAX	MODEL 350 HEIGHT MIN/MAX
6"	6' / 15'	6' / 15'	6' / 15'	NOT REC.	NOT REC.
7"	6' / 8'	6' / 8'	6' / 8'	10' / 20'	15' / 50'
8"	NOT REC.	NOT REC.	NOT REC.	6' / 20'	8' / 20'
9"	NOT REC.	NOT REC.	NOT REC.	NOT REC.	6' / 6'
10"	NOT REC.	NOT REC.	NOT REC.	NOT REC.	NOT REC.

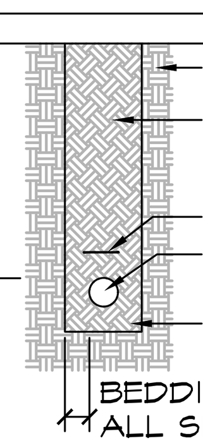


3 POOL HEATER INSTALLATION
SCALE: NTS ILLUSTRATIVE VIEW

POLYETHYLENE (PE) GAS LINE BURIAL DEPTHS		
LOCATION	NORMAL SOIL	CONSOLIDATED ROCK
SERVICE LINES: PRIVATE PROPERTY	18"	18"
SERVICE LINES: UNDER STREETS, ROADS, AND DRIVEWAYS	24"	18"
TRANSMISSION LINES AND MAINS CLASS 1 LOCATION	30"	18"
TRANSMISSION LINES AND MAINS: CLASS 2, 3, AND 4 LOCATION	36"	24"
TRANSMISSION LINES AND MAINS: DRAINAGE DITCHES OF PUBLIC ROADS AND RAILROAD CROSSINGS	36"	24"
TRANSMISSION LINES AND MAINS: NAVIGABLE RIVERS, STREAMS OR HARBORS (MEASURED TOP OF PIPE TO NATURAL BOTTOM)	48"	24"

DETAIL NOTES:

7. A HYDROSTATIC PRESSURE TEST SHALL HOLD MIN 20 PSI WITH ZERO DROP IN 72 HOURS.
8. PE 2406/2708 MOPE YELLOW PIPE BY CHARTER PLASTICS.
9. PROPANE MAX OPERATING PRESSURE IS 30 PSI @ 73.4⅛F



DETAIL NOTES:

1. POLYETHYLENE PIPE SHALL CONFORM TO ASTM D2513-OSD STANDARD SPECIFICATION FOR THERMOPLASTIC GAS PRESSURE PIPE, TUBING, AND FITTINGS.
2. POLYETHLENE PIPE DIMENSIONS SHALL BE BASED ON IRON PIPE SIZE STANDARDS INSTEAD OF COPPER TUBE SIZE PER TABLE BELOW
3. POLYETHYLENE COLOR SHALL BE YELLOW.
4. GAS PLUMBING SHALL BE INSTALLED WITH AN ELECTRICALLY CONTINUOUS INSULATED NUMBER 18 AWG COPPER TRACER WIRE TERMINATING ABOVE GRADE AT ALL ENDS OF THE GAS LINES.
5. PVC AND COPPER SHALL NOT BE USED FOR GAS PLUMBING.
6. APPROVED PLASTIC-TO-METAL TRANSITION GITTINGS SHALL BE USED TO RISE ABOVE GRADE.

POLYETHYLENE (PE) PIPE SPECIFICATIONS						
NOMINAL SIZE	OUTSIDE DIA (IPS STD)	MIN WALL THICHNESS	DIA RATIO (DR)	MIN BEND RADIUS	NET GAS MAX PRESS	MIN BEDDING DIMENSIONS
1/2"	0.830"	0.091"	9.3	18"	81 PSI	2"
3/4"	1.060"	0.096"	11	21"	68 PSI	2"
1"	1.315"	0.120"	11	27"	68 PSI	2"
1-1/4"	1.360"	0.151"	11	34"	68 PSI	2"
1-1/2"	1.900"	0.173"	11	38"	68 PSI	2"
2"	2.375"	0.216"	11	48"	68 PSI	2"
3"	3.500"	0.304"	11.5	84"	64 PSI	3"
4"	4.500"	0.333"	13.5	108"	54 PSI	4"
5"	6.625"	0.491"	13.5	160"	54 PSI	6"

6 POLYETHELINE GAS PIPING
SCALE: NTS ILLUSTRATIVE VIEW

METAL FLUE COLALR	PART NO.
4 x 6"	77707-0076
4 x 8"	77707-0077

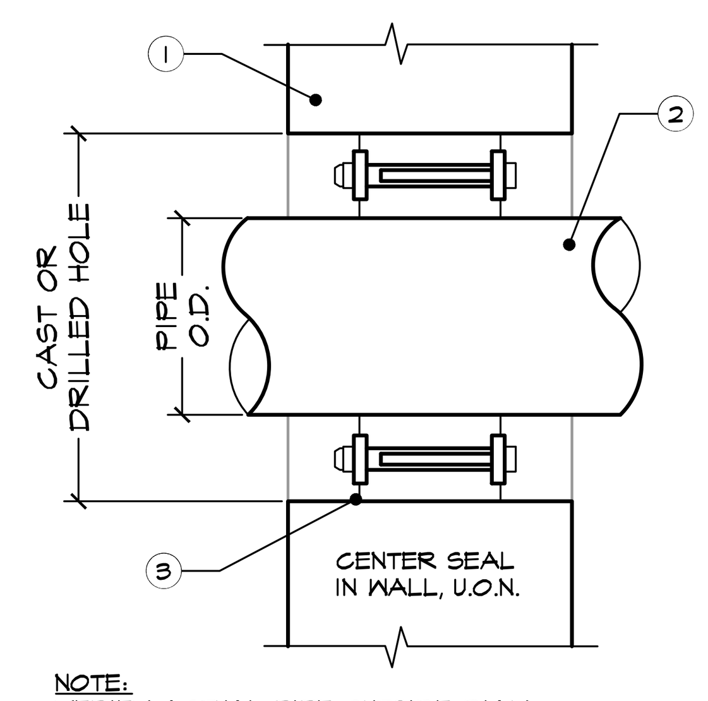
1. SEE TABLE 10, TO DETERMINE ALLOWABLE VENT SIZES FOR YOUR HEATER.
NOTICE: TABLE 10 IS FOR INSTALLATIONS IN WHICH THE TOTAL LATERAL VENT LENGTH (THAT IS HORIZONTAL DISTANCE FROM THE FLUE COLLAR TO THE COLLAR TO THE MAIN VERTICAL PORTION OF THE VENT) IS LESS THAN 1/2 THE TOTAL VENT HEIGHT (THE VERTICAL DISTNACE FROM THE FLUE COLLAR TO THE VENT TERMINATION) AND WHICH HAVE THREE OR LESS ELBOWS IN THE SYSTEM. FOR VENTING SYSTEMS WHICH DO NOT MEET THESE CONDITIONS, CONSULT THE NATIONAL FUEL GAS CODE, ANSI Z223.1 (U.S.).

READ "VERTICAL VENTING - NEGATIVE PRESSURE" BEFORE USING THIS TABLE.

TABLE 10 - PERMITTED MINIMUM AND MAXIMUM VENT HEIGHTS BY SIZE AND HEATER MODEL

TYPE "B" DOUBLE-WALL VENT WITH TYPE"B" DOUBLE-WALL CONNECTOR IN FEET (METERS)					
VENT SIZE	MODEL 175 HEIGHT MIN./MAX.	MODEL 200 HEIGHT MIN./MAX.	MODEL 250 HEIGHT MIN./MAX.	MODEL 300 HEIGHT MIN./MAX.	MODEL 400 HEIGHT MIN./MAX.
6"	6' (1.8)/100' (30.5)	6' (1.8)/100' (30.5)	18' (5.5)/100' (30.5)	30' (9)/100' (30.5)	NOT REC
7"	6' (1.8)/100' (30.5)	6' (1.8)/100' (30.5)	8' (2.4)/100' (30.5)	10' (3)/100' (30.5)	15' (4.6)/100' (30.5)
8"	6' (1.8)/100' (30.5)	6' (1.8)/100' (30.5)	6' (1.8)/100' (30.5)	6' (1.8)/100' (30.5)	8' (2.4)/100' (30.5)
9" AND 10"	6' (1.8)/50' (15.3)	6' (1.8)/50' (15.3)	6' (1.8)/50' (15.3)	6' (1.8)/100' (30.5)	6' (1.8)/100' (30.5)
TYPE "B" DOUBLE-WALL VENT WITH SINGLE-WALL CONNECTOR IN FEET (METERS)					
VENT SIZE	MODEL 175 HEIGHT MIN./MAX.	MODEL 200 HEIGHT MIN./MAX.	MODEL 250 HEIGHT MIN./MAX.	MODEL 300 HEIGHT MIN./MAX.	MODEL 400 HEIGHT MIN./MAX.
6"	6' (1.8)/15' (4.6)	6' (1.8)/15' (4.6)	6' (1.5)/15' (4.6)	NOT REC	NOT REC
7"	6' (1.8)/8' (2.4)	6' (1.8)/8' (2.4)	6' (2.4)/8' (2.4)	10' (3)/20' (6)	15' (4.6)/50' (15.3)
8"	NOT REC	NOT REC	NOT REC	6' (1.8)/20' (6)	8' (2.4)/20' (6)
9"	NOT REC	NOT REC	NOT REC	NOT REC	6' (1.8)/6' (1.8)
10"	NOT REC	NOT REC	NOT REC	NOT REC	NOT REC

1 PIPE/WALL SEAL (LINK SEAL)
SCALE: NTS ILLUSTRATIVE VIEW



NOTE:
VERIFY ACTUAL PIPE OUTSIDE DIAM. DIM. PRIOR TO ORDERING SEAL

PIPE AND EQUIPMENT SUPPORT:
- FLOOR PENETRATIONS
- WALL PENETRATIONS
- PIPE SUPPORTS
- NOISE AND VIBRATION SUPPRESSION

DETAIL KEYNOTES
1. CAST-IN-PLACE CONCRETE OR MASONRY WALL AS DETAILED ELSEWHERE
2. PIPE AS SHOWN ON PLAN AND AS DETAILED ELSEWHERE
3. PIPE SEAL PER "LINK-SEAL" TO SIZE SHOWN ON TABLE - INSTALL PER MFR. REQUIREMENTS

PIPE SIZE (NORMAL)	OUTSIDE DIA (IPS O.D.)	CAST OR DRILLED CONC. HOLE INSIDE DIAM. (I.D.)	LINK SEAL PRODUCT #	NO. OF LINKS PER SEAL
1/2"	0.810	2.0	LS-200	4
3/4"	1.050	2.5	LS-275	5
1"	1.315	3.0	LS-300	4
1-1/4"	1.660	3.0	LS-275	7
1-1/2"	1.900"	3.5	LS-300	5
2"	2.375	4.0	LS-300	6
2-1/2"	2.875	4.0	LS-200	9
3"	3.500	5.0	LS-300	8
3-1/2"	4.000	6.0	LS-325	5
4"	4.500	6.0	LS-300	10
5"	5.563	8.0	LS-425	6
6"	6.625	10.0	LS-475	10
8"	8.625	12.0	LS-475	12
10"	10.75	14.0	LS-400	10
12"	12.75	16.0	LS-400	12
14"	14.00	16.0	LS-325	15
16"	16.00	18.0	LS-325	17
18"	18.00	23.0	LS-500	16
20"	20.00	25.0	LS-500	18
22"	22.00	27.0	LS-500	19
24"	24.00	29.0	LS-500	21
26"	26.00	31.0	LS-500	23
28"	28.00	33.0	LS-500	24
30"	30.00	35.0	LS-500	26
32"	32.00	37.0	LS-500	28
34"	34.00	39.0	LS-500	29
36"	36.00	41.0	LS-500	30

4 PIPE/WALL SEAL (LINK SEAL)
SCALE: NTS ILLUSTRATIVE VIEW

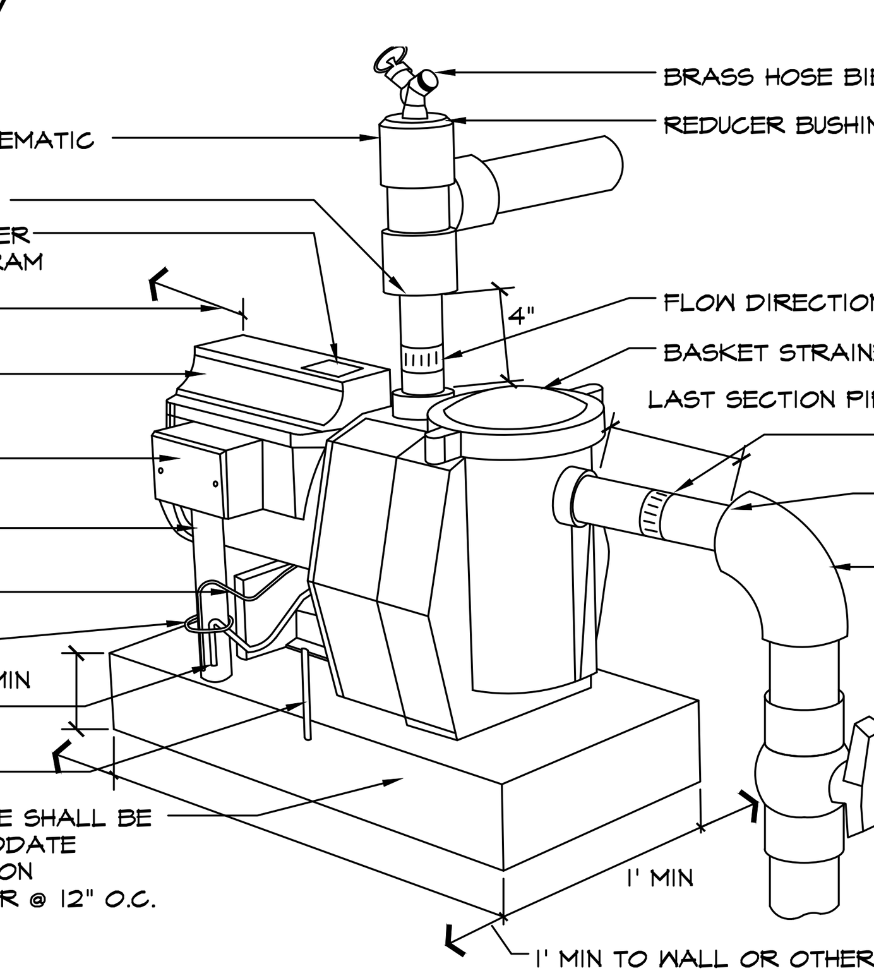
MAX FLOW RATES (PER OUTLET) MOUNTING POSITIONS (xxx=COLOR SUFFIX)					
MODEL	32CDLTxxx (AND 32CDLTFRxxx, 32CDLTVxxx)	32CDAVxxx (AND 32CDAVFRxxx, 32CDAVVxxx, 32CDAVACxxx)	32PDxxx (MIN. 2" PIPE)	32CDBTxxx, 32CDBTFRxxx	32CDPHxxx (AND 32CDPHFRxxx, 32CDPHVxxx, 32CDPHTSxxx) (MIN 2" PIPE)
FLOOR	316 GPM @ 3.9 FPS	196 GPM @ 1.3 FPS	236 GPM @ 3.4 FPS	120 GPM @ 1.2 FPS	120 GPM @ 1.2 FPS
WALL	208 GPM @ 2.6 FPS	192 GPM @ 1.2 FPS	136 GPM @ 1.9 FPS	N.A.	N.A.

ACCEPTABLE PIPE SIZE FOR MAXIMUM RECOMMENDED SYSTEM FLOW RATE PER APSP-7 (6FEET/SECOND IN THE BRANCH LINE)				
PIPE SIZE	1½"	2"	2½"	3"
FLOW RATE IN GPM	45	80	110	160

WATER VELOCITY AND FLOW RATES
THE MAX WATER VELOCITY THROUGH DRAIN COVERS IS LIMITED BY LOCAL REGULATIONS, FOR EXAMPLE SOME STATE HEALTH DEPARTMENTS LIMIT THE VELOCITY THROUGH PUBLIC DRAIN COVERS TO 1.5" PER SECOND. THIS VELOCITY IS LOWER THATN THE FLOW RATING PROVIDED BY THE ANSI/APSP-16 2011 CERTIFICATION, THEREFORE THE LOCAL LIMIT APPLIES NAD MUST BE FOLLOWED. NEVER EXCEED THE FLOW RATING LISTED ON THE COVER EVEN IF THE LOCAL CODE DOES NOT PROVIDE A VELOCITY LIMIT.

PIPING-GENERAL
FOR NEW INSTALLATIONS, THE PIPING BETWEEN DRAINS MUST BE SIZED TO LIMIT THE VELOCITY TO 6 FEET PER SECOND. THIS LIMIT APPLIES TO THE BRANCH PIPING AND ALL FITTINGS BETWEEN MULTIPLE OUTLETS AND THE TREE LEADING BACK TO THE PUMP. IF CODE REQUIRES A LOWER WATER VELOCITY, COMPLY WITH THE CODE. SEE THE CHART ABOVE FOR INFORMATION ON PIPE SIZE FLOW RATINGS AT 6 FEET PER SECOND.

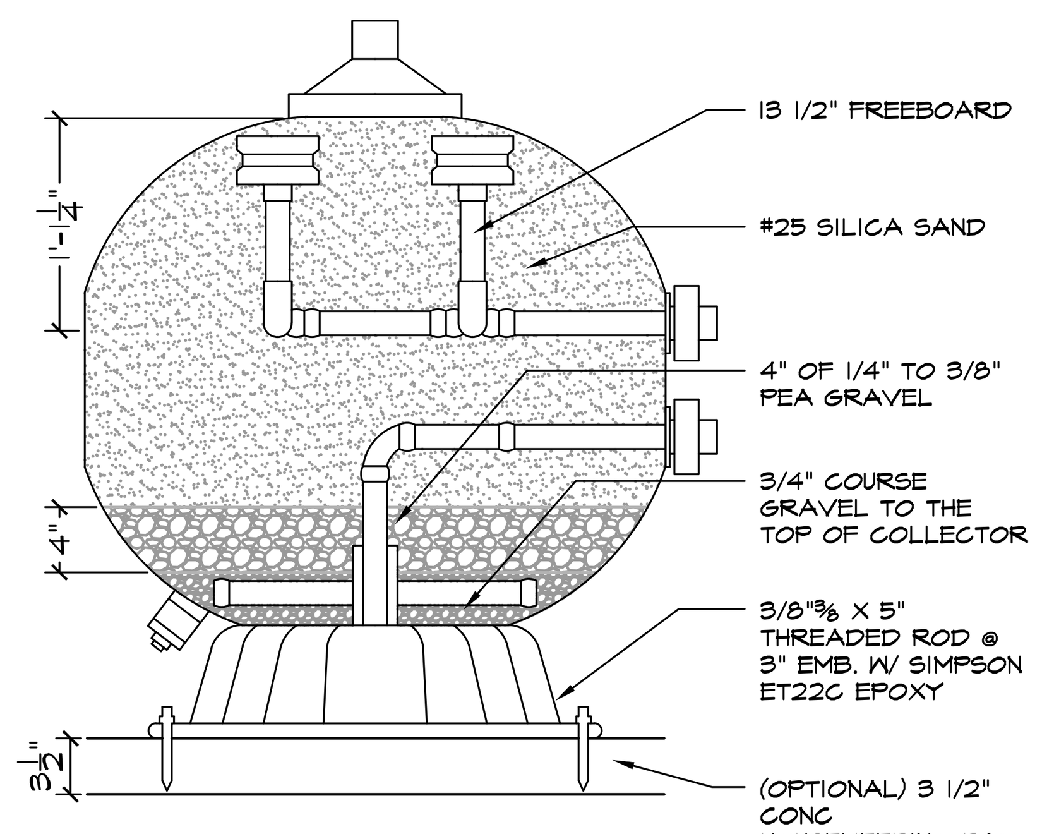
5 GENERAL PIPING NOTES
SCALE: NTS ILLUSTRATIVE VIEW



DETAIL NOTES:

1. INSTALL ALL EQUIPMENT PER MANUFACTURERS INSTRUCTIONS.
2. INSTALL BONDING PER NEC 680.26

7 POOL PUMP INSTALLATION
SCALE: NTS ILLUSTRATIVE VIEW



2 POOL FILTER INSTALLATION
SCALE: NTS SECTION

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KURT L. KRASINGER
NUMBER LA-2003016227
LANDSCAPE ARCHITECT
2·23·2021

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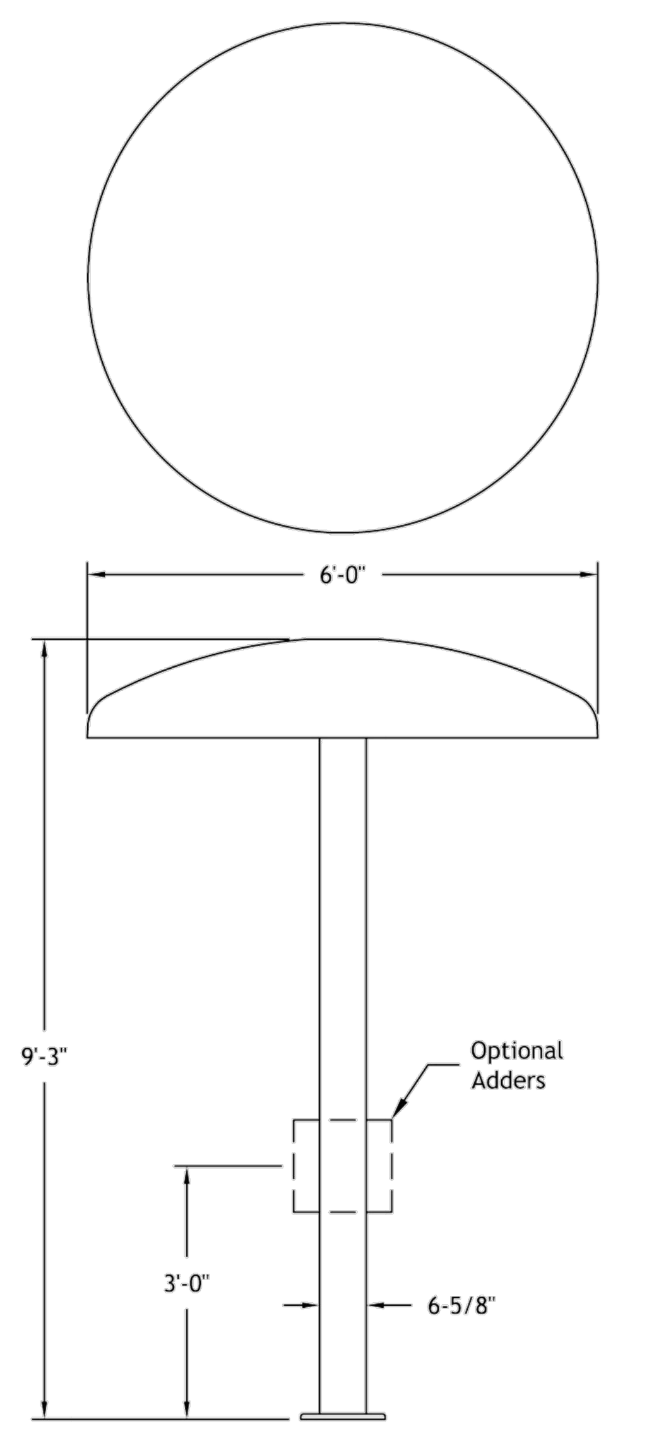
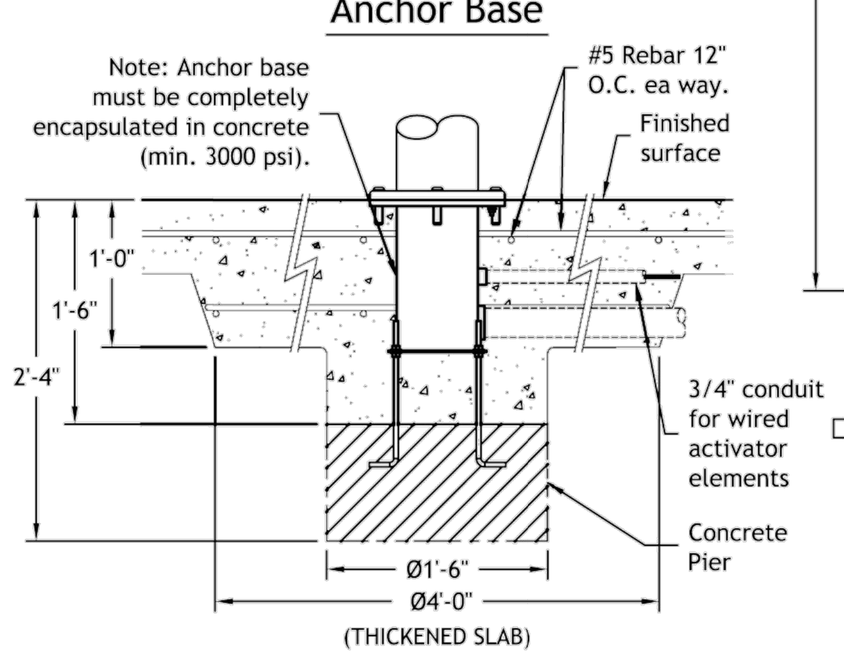
Specifications

Model Number: W007-F
Shaft: Straight 6" diameter type 304 stainless steel with machined type 304 base plate.
Dome: Heavy-duty FRP (fiber reinforced polyester).
Anchor Base: Type 304 stainless steel machined to mate with shaft base plate with grounding connection and 2" FPT inlet. Supplied with 4, ¾" x 12" x 3" anchor bolts with two leveling nuts and washers per bolt and wood pour template.
Gasket: 70 durometer EPDM o-ring.
Fasteners: Tamper-resistant 18/8 stainless steel.
Finish: Textured elastomeric urethane with a UV and chlorine resistant sealer coat.
Color: (Specify red, dark blue, light blue, yellow, green, orange, or purple.)

Optional Adders:
- ☐ **Wireless Activator Button (-SW)**
  Transmitter: Solid state with encoded signal and integral omni-directional antenna.
  Activator Power: 3 VDC lithium battery (CR2477).
- ☐ **Wired Activator Button (-ST)**
  Activator Switch: 12 VDC.
  Activator Cord: 150' of #18/2 type STOW, minimum 3/4" conduit recommended.
- ☐ **Hand Wheel (-HW):** Stainless steel coated with a heavy-duty aliphatic urethane.



Anchor Base



Hydraulic Requirements

☐ W007-F

GPM	psi
50-250	4

Under-Brella™ F

W007-F

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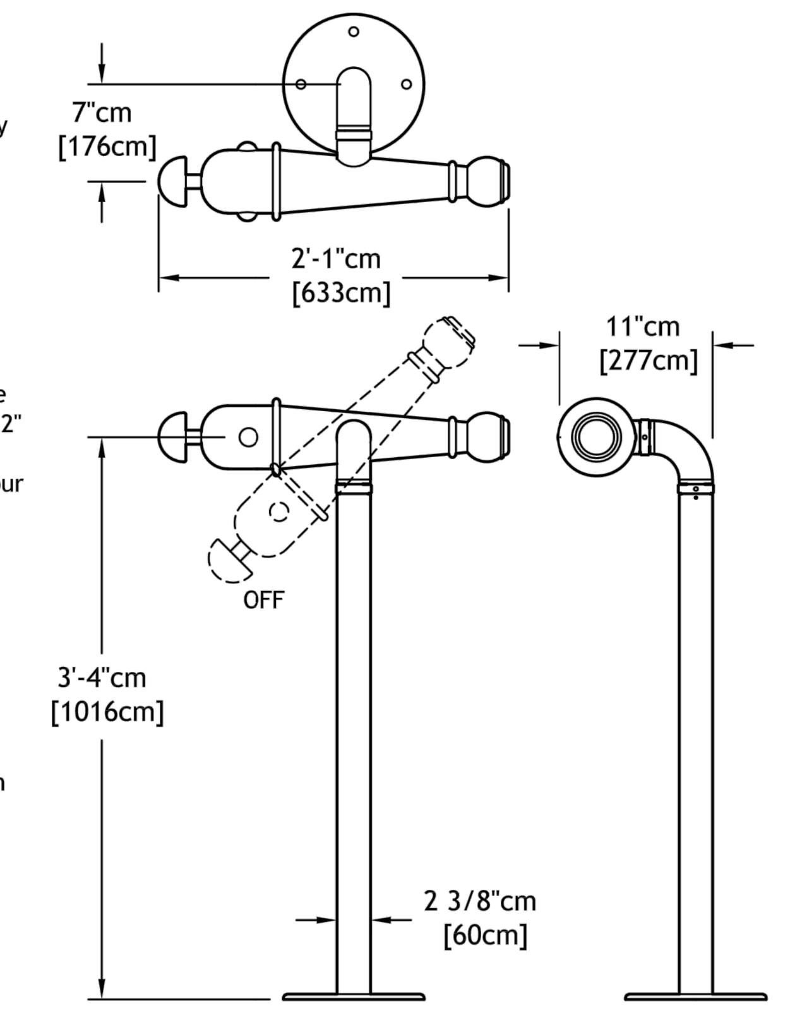
03-15-11

1 UNDER-BRELLA F BY WATER ODYSEEY
SCALE: NTS *CUT SHEET*

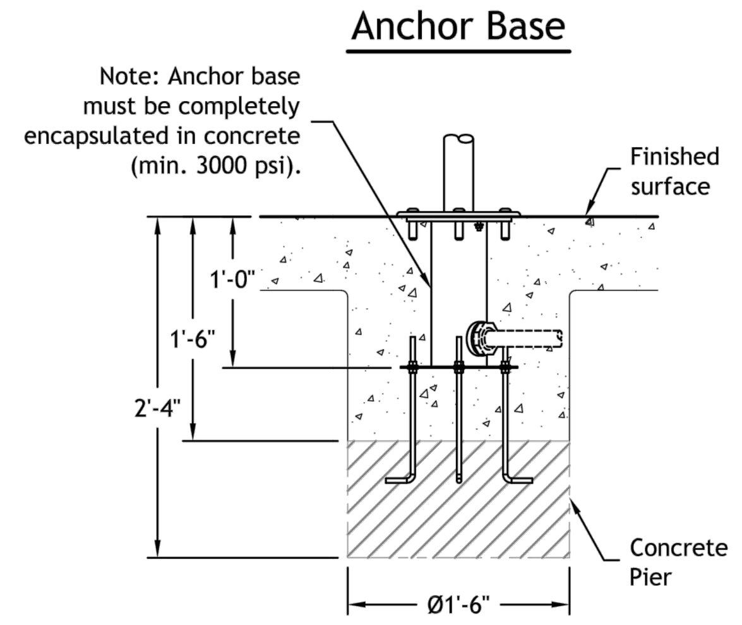
Specifications

Model Number: W088
Interactive Water Effect: Shall be twin directable highly aerated sprays of water. Shooter shall turn off automatically when not in use.
Shaft: Straight 2" type 304 stainless steel pipe with machined type 304 base plate.
Elbow: 2" type 304 stainless steel.
Housing: Fabricated type 304 stainless steel.
Joints: Precision machined Delrin® flow control joints adjustable for 45°-360° directional flow.
Anchor Base: Type 304 stainless steel machined to mate with shaft base plate includes grounding connection and 2" FPT inlet. Supplied with (4) 3/8" x 12" x 2" anchor bolts with two leveling nuts and washers per bolt and wood pour template.
Gasket: 70 durometer EPDM o-ring.
Fasteners: Tamper-resistant 18/8 stainless steel.
Finish: Textured elastomeric urethane with a UV and chlorine resistant sealer coat.
Nozzles: Machined brass foam nozzles.

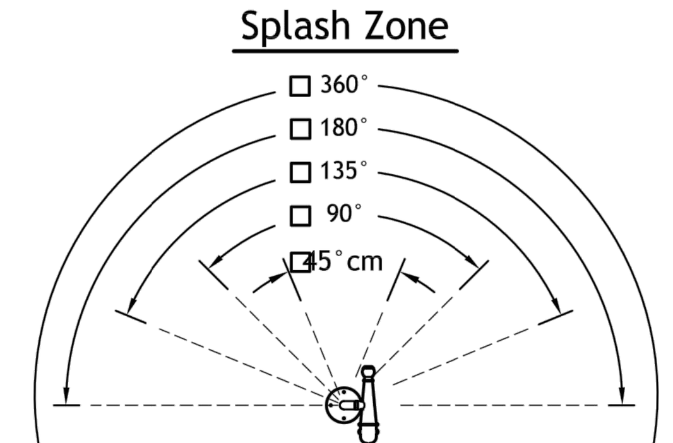
Water Conserving Version
Model Number: W088C
Water Conserving Nozzle : Machined brass multi stream nozzle.



Anchor Base



Splash Zone



Hydraulic Requirements

☐ W088 Throw @ 45°	GPM	psi	☐ *W088C - Water Conserving Throw @ 45°	*CGPM	*Cpsi
10'	15	20	10'	9	12
15'	20	23	15'	12	14
20'	27	27	20'	16	16

WATER ODYSSEY BY FOUNTAIN PEOPLE
A PLAYCORE Company

Gravity Cannon™

W088

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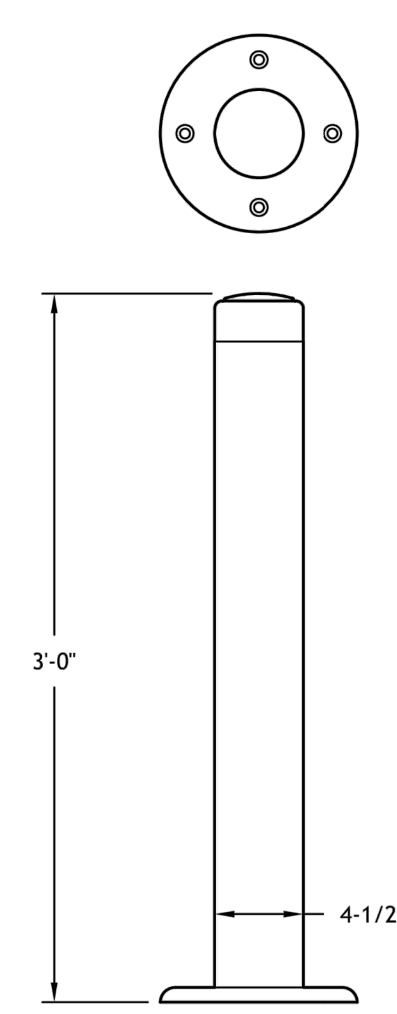
09-24-18

2 GRAVITY CANNON BY WATER ODYSEEY
SCALE: NTS *CUT SHEET*

Specifications

Model Number: W009
Shaft: 4" type 304 stainless steel pipe.
Base Plate: Type 304 stainless steel.
Anchors: (4) stainless steel concrete anchors, supplied.
Finish: Textured elastomeric urethane with a UV and chlorine resistant sealer coat.
Color: Select from Red, Light Blue, Yellow, Green, Dark Blue, Orange, or Purple.
Fasteners: Tamper-resistant type 18/8 stainless steel.
Activator Housing: Machined from solid PVC stock.
Activator Housing Color: Select from Red, Light Blue, Yellow, Green, Dark Blue, Orange, or Purple.
Activator Cord: 150' of 18/3 type SJTOW submersible cable pre-wired to activator button, supplied.



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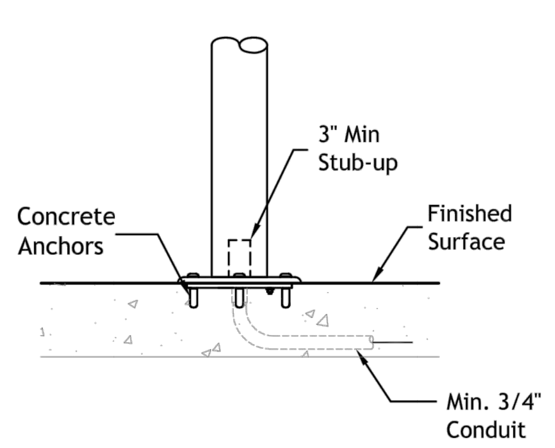

Touch & Go™

W009

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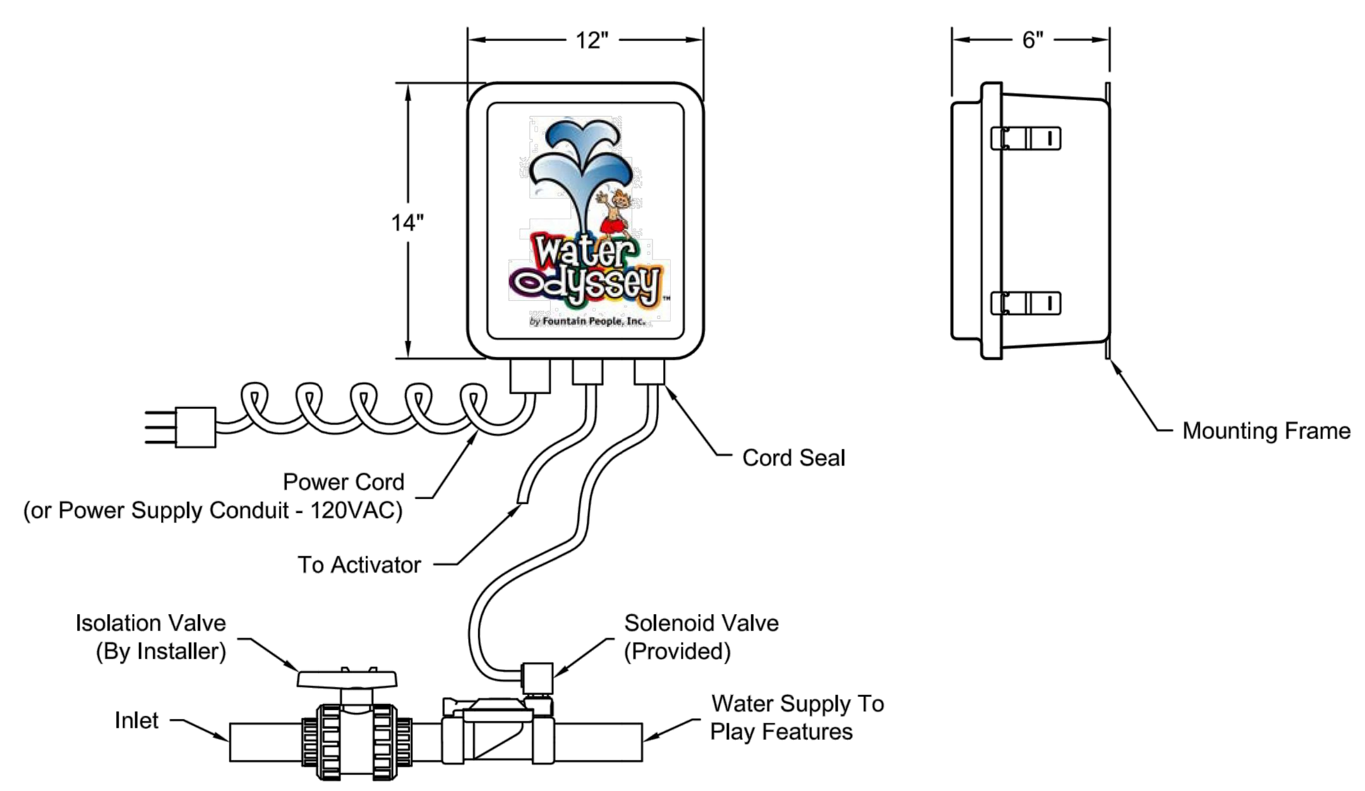
08-13-09

3 TOUCH & GO SWITCH BY WATER ODYSEEY
SCALE: NTS *CUT SHEET*



Note: Conduit and Wire By Installer

Specifications

Model No: CTP-100-XX (See Chart).
Housing: NEMA 4X with lockable hasp.
Input Voltage: 120VAC/60 Hertz, 20 Amps.
Wired Activator Input: 12VDC. Maximum qty 2.
Output Voltage: 12VDC/60 Hertz, 5 Amps continuous. (To Solenoid Valve)
Power Cord: 6 foot, 16-3 type SJT with grounded plug.
Cord Seal: PVC compression seal fittings with neoprene gland for 16-2 solenoid valve cables.
Time Clock: Integral, electronic, 7 day, 24 hour.
Time Delay Relay: Electronic, 24 hour adjustment.
TDR Adjustment: 1 second up to 24 hour with fine adjustment.
Safety: ETL and Underwriters' Laboratories Listed.
Solenoid Valves: Die cast bronze with stainless steel hardware, DIN connector with 15' cord, and 12VDC UL Recognized solenoid.

Model Number	Valve Size	Max Flow
CTP-100-10	1"	25
CTP-100-15	1-1/2"	50
CTP-100-20	2"	100

Notes:
1. Conduit and wire by installer.
2. All field wiring to be compliant with NEC and local codes. Field output wire to be stranded copper, minimum rated 60°C.

Single Timer Controller
For wired activators

CTP-100-SERIES

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12/10/15

4 TIMED CONTROLLER BY WATER ODYSEEY
SCALE: NTS *CUT SHEET*

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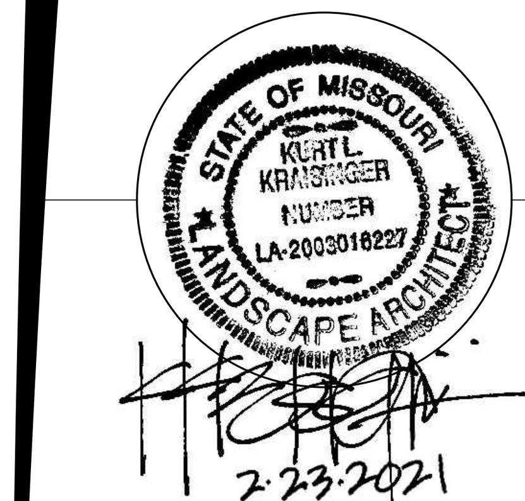

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