

**CONSTRUCTION CODE REQUIREMENTS:**

THESE PLANS WERE PREPARED AND SHALL COMPLY WITH THE FOLLOWING CODES WHEN APPLICABLE

- 2018 NORTH CAROLINA BUILDING CODE
- 2018 INTERNATIONAL SWIMMING POOL & SPA CODE (ISpsc)
- 15A NCAC 18A .2500 RILES GOVERNING PUBLIC SWIMMING POOLS - NORTH CAROLINA DPH
- 2018 NORTH CAROLINA PLUMBING CODE
- 2018 NORTH CAROLINA FIRE PREVENTION CODE
- 2018 NORTH CAROLINA MECHANICAL CODE
- 2018 NORTH CAROLINA FUEL GAS CODE
- 2018 NORTH CAROLINA ENERGY CONSERVATION CODE
- 2018 NORTH CAROLINA EXISTING BUILDING CODE
- 2020 NORTH CAROLINA ELECTRICAL CODE
- 2009 NORTH CAROLINA ACCESSIBILITY CODE
- 2010 ADA STANDARDS
- ANS/APSP/ICC-7 2013 AMERICAN NATIONAL STANDARD FOR SUCTION ENTRAPMENT AVOIDANCE IN SWIMMING POOLS, WADING POOLS, SPAS, HOT TUBS AND CATCH BASINS
- ANS/APSP/ICC-16 2017 AMERICAN NATIONAL STANDARD FOR SUCTION OUTLET FITTING ASSEMBLIES (SOFA) FOR USE IN POOLS, SPAS AND HOT TUBS.

**IMPORTANT NOTE:**

POOL CONTRACTOR IS RESPONSIBLE FOR CONFORMING TO ALL ABOVE LISTED CODE REQUIREMENT AS WELL AS ANY ADDITIONAL REQUIREMENTS PER LOCAL MUNICIPALITY THAT MAY BE MORE STRINGENT THAN THE ABOVE LISTED CODES REQUIREMENTS.

**GENERAL STRUCTURAL NOTES:**

1. TILE MINIMUM CONCRETE COVER FOR #3 REBAR IS TO BE 2".
2. CONTINUOUS #3 REBAR SPLICES SHALL BE 18" (40 BAR DIAMETERS) MINIMUM LAP, STEEL TO BE BENT, LAPPED, AND PLACED IN CONFORMANCE WITH A.C.J. STANDARDS AND SPECS.
3. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF NOT LESS THAN 3000 PSI AT 28 DAYS.

**GENERAL POOL / SPA REQUIREMENTS (ISpsc):**

**GENERAL CONSTRUCTION NOTE**

- POOLS AND SPAS AND APPURTENANCES THERETO SHALL BE CONSTRUCTED OF MATERIALS THAT ARE NONTOXIC TO HUMANS AND THE ENVIRONMENT; THAT ARE GENERALLY OR COMMONLY REGARDED TO BE IMPERVIOUS AND ENDURING; THAT WILL WITHSTAND THE DESIGN STRESSES; AND THAT WILL PROVIDE A WATERTIGHT STRUCTURE WITH A SMOOTH AND EASILY CLEANABLE SURFACE WITHOUT CRACKS OR JOINTS, EXCLUDING STRUCTURAL JOINTS, OR THAT WILL PROVIDE A WATERTIGHT STRUCTURE TO WHICH A SMOOTH, EASILY CLEANED SURFACE/FINISH IS APPLIED OR ATTACHED. MATERIAL SURFACES THAT COME IN CONTACT WITH THE USER SHALL BE FINISHED, SO THAT THEY DO NOT CONSTITUTE A CUTTING, PINCHING, PUNCTURING OR ABRASION HAZARD UNDER CASUAL CONTACT AND INTENDED USE.

- HAZARDOUS LOCATIONS FOR GLAZING SHALL BE AS DEFINED IN THE INTERNATIONAL BUILDING CODE OR THE INTERNATIONAL RESIDENTIAL CODE, AS APPLICABLE IN ACCORDANCE WITH SECTION 102.7.1 OF THIS CODE. WHERE GLAZING IS DETERMINED TO BE IN A HAZARDOUS LOCATION, THE REQUIREMENTS FOR THE GLAZING SHALL BE IN ACCORDANCE WITH THOSE CODES, AS APPLICABLE.

- FOR OTHER THAN RESIDENTIAL POOLS AND RESIDENTIAL SPAS, THE COLORS, PATTERNS, OR FINISHES OF THE POOL AND SPA INTERIORS SHALL NOT OBSCURE OBJECTS OR SURFACES WITHIN THE POOL OR SPA.

- AN ACCESSIBLE ROUTE TO PUBLIC POOLS AND SPAS SHALL BE PROVIDED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE. ACCESSIBILITY WITHIN PUBLIC POOLS AND SPAS SHALL BE PROVIDED AS REQUIRED BY THE ACCESSIBLE RECREATIONAL FACILITIES PROVISIONS OF THE INTERNATIONAL BUILDING CODE.

**LIGHTING**

- WHEN A POOL IS OPEN DURING PERIODS OF LOW NATURAL ILLUMINATION, ARTIFICIAL LIGHTING SHALL BE PROVIDED SO THAT ALL AREAS OF THE POOL, INCLUDING ALL SUCTION OUTLETS ON THE BOTTOM OF THE POOL, WILL BE VISIBLE. ILLUMINATION SHALL BE SUFFICIENT TO ENABLE A LIFE GUARD OR OTHER PERSONS STANDING ON THE DECK OR SITTING ON A LIFE GUARD STAND ADJACENT TO THE POOL EDGE TO DETERMINE IF A POOL USER IS LYING ON THE BOTTOM OF THE POOL AND THAT THE POOL WATER IS TRANSPARENT AND FREE FROM CLOUDINESS.

- WHERE LIGHTING IS INSTALLED FOR, AND IN, RESIDENTIAL POOLS AND PERMANENT RESIDENTIAL SPAS, SUCH LIGHTING SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 70 OR THE INTERNATIONAL RESIDENTIAL CODE, AS APPLICABLE IN ACCORDANCE WITH SECTION 102.7.1.

- FOR OUTDOOR POOLS, ANY COMBINATION OF OVERHEAD AND UNDERWATER LIGHTING SHALL PROVIDE MAINTAINED ILLUMINATION NOT LESS THAN 10 HORIZONTAL FOOT-CANDLES (10 LUMENS PER SQUARE FOOT) [108 LUX] AT THE POOL WATER SURFACE. DECK AREA LIGHTING FOR BOTH INDOOR AND OUTDOOR POOLS SHALL PROVIDE MAINTAINED ILLUMINATION OF NOT LESS THAN 10 HORIZONTAL FOOT-CANDLES (10 LUMENS PER SQUARE FOOT) [108 LUX] AT THE WALKING SURFACE OF THE DECK.

- UNDERWATER LIGHTING SHALL PROVIDE NOT LESS THAN 8 HORIZONTAL FOOT-CANDLES (8 LUMENS PER SQUARE FOOT) [86 LUX] AT THE POOL WATER SURFACE AREA, OR NOT LESS THAN A TOTAL WATTAGE OF 1/2 WATT/FT2 (5.4 WATTS/M2) OF POOL WATER SURFACE FOR INCANDESCENT UNDERWATER LIGHTING WHERE THE FIXTURES AND LAMPS ARE RATED IN WATTS.

**ELECTRICAL, PLUMBING, MECHANICAL AND FUEL GAS**

-ELECTRICAL REQUIREMENTS FOR AQUATIC FACILITIES SHALL BE IN ACCORDANCE WITH NFPA 70 OR THE INTERNATIONAL RESIDENTIAL CODE, AS APPLICABLE IN ACCORDANCE WITH SECTION 102.7.1. EXCEPTION: INTERNAL WIRING FOR PORTABLE RESIDENTIAL SPAS AND PORTABLE RESIDENTIAL EXERCISE SPAS.

- PIPING AND FITTINGS USED FOR WATER SERVICE, MAKEUP AND DRAINAGE PIPING FOR POOLS AND SPAS SHALL COMPLY WITH THE INTERNATIONAL PLUMBING CODE. FITTINGS SHALL BE APPROVED FOR INSTALLATION WITH THE PIPING INSTALLED.

- PIPE, FITTINGS, AND COMPONENTS SHALL BE LISTED AND LABELED IN ACCORDANCE WITH NSF 50 OR NSF 14. PLASTIC JETS, FITTINGS, AND OUTLETS USED IN PUBLIC SPAS SHALL BE LISTED AND LABELED IN ACCORDANCE WITH NSF 50. EXCEPTIONS: 1) PORTABLE RESIDENTIAL SPAS AND PORTABLE RESIDENTIAL EXERCISE SPAS LISTED AND LABELED IN ACCORDANCE WITH UL 1563 OR CSA C22.2 NO. 218.1. 2) ON GROUND STORABLE POOLS SUPPLIED BY THE POOL MANUFACTURER AS A KIT THAT INCLUDES ALL PIPE, FITTINGS, AND COMPONENTS.

- PIPING, INCLUDING PROCESS PIPING, THAT IS INSTALLED IN TRENCHES, SHALL BE INSPECTED PRIOR TO BACKFILLING.

- WATER SUPPLIES FOR POOLS AND SPAS SHALL BE PROTECTED AGAINST BACKFLOW IN ACCORDANCE WITH THE INTERNATIONAL PLUMBING CODE OR THE INTERNATIONAL RESIDENTIAL CODE, AS APPLICABLE IN ACCORDANCE WITH SECTION 102.7.1.

- WHERE WASTEWATER FROM POOLS OR SPAS, SUCH AS BACKWASH WATER FROM FILTERS AND WATER FROM DECK DRAINS DISCHARGE TO A BUILDING DRAINAGE SYSTEM, THE CONNECTION SHALL BE THROUGH AN AIR GAP IN ACCORDANCE WITH THE INTERNATIONAL PLUMBING CODE OR THE INTERNATIONAL RESIDENTIAL CODE AS APPLICABLE IN ACCORDANCE WITH SECTION 102.7.1.

- TESTS ON WATER PIPING SYSTEMS CONSTRUCTED OF PLASTIC PIPING SHALL NOT USE COMPRESSED AIR FOR THE TEST.

- POOLS AND SPAS SHALL BE MAINTAINED IN A CLEAN AND SANITARY CONDITION, AND IN GOOD REPAIR.

- AN OPERATING AND MAINTENANCE MANUAL IN ACCORDANCE WITH INDUSTRY-ACCEPTED STANDARDS SHALL BE PROVIDED FOR EACH PIECE OF EQUIPMENT REQUIRING MAINTENANCE.

**USER LOADING**

IN DETERMINING THE MAXIMUM NUMBER OF PERSONS ALLOWED IN THE POOL AT ANY ONE TIME, THE FOLLOWING CRITERIA SHALL GOVERN:

(1) FIFTEEN SQUARE FEET (1.39 SQ M) OF WATER SURFACE AREA PER PERSON SHALL BE PROVIDED IN AREAS OF THE POOL FIVE FEET (1.52 M) DEEP OR LESS.

(2) TWENTY-FOUR SQUARE FEET (2.23 SQ M) OF WATER SURFACE AREA PER PERSON SHALL BE PROVIDED IN AREAS OF THE POOL GREATER THAN FIVE FEET (1.52 M) DEEP. THREE HUNDRED SQUARE FEET (27.87 SQ M) OF POOL AREA AROUND EACH DIVING BOARD OR PLATFORM, WHERE PROVIDED, SHALL NOT BE INCLUDED IN COMPUTING THIS AREA FOR THE PURPOSE OF DETERMINING MAXIMUM BATHER LOAD.

(3) TEN SQUARE FEET (0.9 SQ M) OF WATER SURFACE AREA PER PERSON SHALL BE PROVIDED IN SPAS.

(4) TWENTY-FIVE SQUARE FEET OF SPLASH ZONE AREA PER PERSON SHALL BE PROVIDED AT INTERACTIVE PLAY ATTRACTIONS.

**CIRCULATION SYSTEMS**

- CIRCULATION EQUIPMENT SHALL BE SIZED TO TURNOVER THE ENTIRE WATER CAPACITY OF THE POOL AS SPECIFIED IN ISpsc TABLE 407.2. THE SYSTEM SHALL BE DESIGNED TO PROVIDE THE REQUIRED TURNOVER RATE BASED ON THE MAXIMUM PRESSURE AND FLOW RATE RECOMMENDED BY THE MANUFACTURER OF THE FILTER WITH CLEAN FILTER MEDIA.

- FOR PUBLIC POOLS. GAUGES SHALL BE PROVIDED WITH READY ACCESS.

1. A PRESSURE GAUGE SHALL BE LOCATED DOWNSTREAM OF THE PUMP AND BETWEEN THE PUMP AND FILTER.

2. A VACUUM GAUGE SHALL BE LOCATED BETWEEN THE PUMP AND FILTER AND UPSTREAM.

- PUBLIC SWIMMING POOLS AND WADING POOLS SHALL BE EQUIPPED WITH A FLOW-MEASURING DEVICE THAT INDICATES THE RATE OF FLOW THROUGH THE FILTER SYSTEM. THE FLOW RATE MEASURING DEVICE SHALL INDICATE GALLONS PER MINUTE (LPM) AND SHALL BE SELECTED AND INSTALLED TO BE ACCURATE WITHIN PLUS OR MINUS 10 PERCENT OF ACTUAL FLOW OF THE PUMP.

**SAFETY**

- WHERE THE DEPTH BELOW THE DESIGN WATERLINE OF A POOL OR SPA EXCEEDS 42 INCHES (1067 MM), HANDHOLDS ALONG THE PERIMETER SHALL BE PROVIDED. HANDHOLDS SHALL BE LOCATED AT THE TOP OF DECK OR COPING. EXCEPTIONS: 1. HANDHOLDS SHALL NOT BE REQUIRED WHERE AN UNDERWATER BENCH, SEAT OR SWIMOUT IS INSTALLED. 2. HANDHOLDS SHALL NOT BE REQUIRED FOR WAVE ACTION POOLS AND ACTION RIVERS.

- HANDHOLDS SHALL BE LOCATED NOT MORE THAN 12 INCHES (305 MM) ABOVE THE DESIGN WATERLINE.

- HANDHOLDS SHALL BE HORIZONTALLY SPACED NOT GREATER THAN 4 FEET (1219 MM) APART.

- THE TOP OF THE GRIPPING SURFACE OF HANDRAILS FOR PUBLIC POOLS AND PUBLIC SPAS SHALL BE 34 INCHES (864 MM) TO 38 INCHES (965 MM) ABOVE THE RAMP OR STEP SURFACE AS MEASURED AT THE NOSING OF THE STEP OR FINISHED SURFACE OF THE SLOPE. THE TOP OF THE GRIPPING SURFACE OF HANDRAILS FOR RESIDENTIAL POOLS AND RESIDENTIAL SPAS SHALL BE 30 INCHES (762 MM) TO 38 INCHES (965 MM) ABOVE THE RAMP OR STEP SURFACE AS MEASURED AT THE NOSING OF THE STEP OR FINISHED SURFACE OF THE SLOPE. HANDRAILS SHALL BE MADE OF CORROSION RESISTANT MATERIALS. HANDRAILS SHALL BE INSTALLED SO THAT THEY CANNOT BE REMOVED WITHOUT THE USE OF TOOLS. THE LEADING EDGE OF HANDRAILS FOR STAIRS, POOL ENTRIES AND EXITS SHALL BE LOCATED NOT GREATER THAN 18 INCHES (457 MM) FROM THE VERTICAL FACE OF THE BOTTOM RISER. THE OUTSIDE DIAMETER OR WIDTH OF HANDRAILS SHALL BE NOT LESS THAN 1 1/4 INCHES (32 MM) AND NOT GREATER THAN 2 INCHES (51 MM).

- THERE SHALL NOT BE OBSTRUCTIONS THAT CAN CAUSE THE USER TO BE ENTRAPPED OR INJURED. TYPES OF ENTRAPMENT INCLUDE, BUT ARE NOT LIMITED TO, WEDGE OR PINCH-TYPE OPENINGS AND RIGID, NONGIVING CANTILEVERED PROTRUSIONS.

**SANITIZING EQUIPMENT**

- SANITIZING EQUIPMENT INSTALLED IN PUBLIC POOLS AND SPAS SHALL BE CAPABLE OF INTRODUCING THE QUANTITY OF SANITIZER NECESSARY TO MAINTAIN THE APPROPRIATE LEVELS UNDER ALL CONDITIONS OF INTENDED USE.

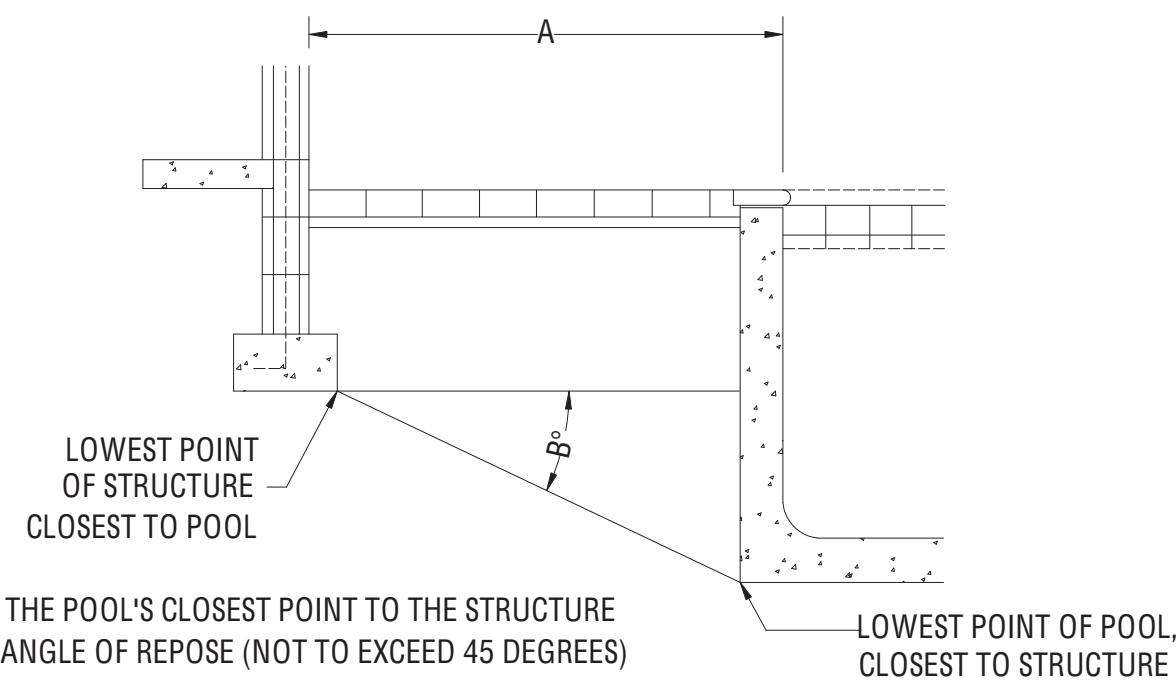
- WHERE INSTALLED, CHEMICAL FEED SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS. CHEMICAL FEED PUMPS SHALL BE WIRED SO THAT THEY CANNOT OPERATE UNLESS THERE IS ADEQUATE RETURN FLOW TO DISBURSE THE CHEMICAL THROUGHOUT THE POOL OR SPA AS DESIGNED.

- BACKWASH WATER AND DRAINING WATER SHALL BE DISCHARGED TO THE SANITARY OR STORM SEWER, OR INTO AN APPROVED DISPOSAL SYSTEM ON THE PREMISE, OR SHALL BE DISPOSED OF BY OTHER MEANS APPROVED BY THE STATE OR LOCAL AUTHORITY. DIRECT CONNECTIONS SHALL NOT BE MADE BETWEEN THE END OF THE BACKWASH LINE AND THE DISPOSAL SYSTEM. DRAINS SHALL DISCHARGE THROUGH AN AIR GAP.

**OTHER ADDITIONAL NOTES**

- PUBLIC POOL CIRCULATION SYSTEMS SHALL BE DESIGNED TO PROCESS NOT LESS THAN 100 PERCENT OF THE TURNOVER RATE THROUGH SKIMMERS.

- PUBLIC POOLS AND PUBLIC POOL AREAS THAT OPERATE DURING PERIODS OF LOW ILLUMINATION SHALL BE PROVIDED WITH EMERGENCY LIGHTING THAT WILL AUTOMATICALLY TURN ON TO PERMIT EVACUATION OF THE POOL AND SECURING OF THE AREA IN THE EVENT OF POWER FAILURE.



IBC 1804.1 EXCAVATION NEAR FOUNDATIONS: EXCAVATION FOR ANY PURPOSE SHALL NOT REDUCE VERTICAL OR LATERAL SUPPORT FOR ANY FOUNDATION OR ADJACENT FOUNDATION WITHOUT FIRST UNDERPINNING OR PROTECTING THE FOUNDATION AGAINST DETERMENTAL LATERAL OR VERTICAL MOVEMENT, OR BOTH.

**ANGLE OF REPOSE (N.T.S)**

**SCOPE OF WORK:**  
**COMMERCIAL SWIMMING POOL ENGINEERING**  
**(POOL NOT DESIGNED FOR DIVING)**

**PROJECT INFORMATION:**

**PROJECT NAME:- AGAPE-KURE BEACH MINISTRIES**

**PROJECT ADDRESS:- 1369 TYLER DEWAR LN, FUQUAY-VARINA NC 27526**

SHEET NO.	DRAWING INDEX
1	GENERAL NOTES
2	POOL LOCATION PLAN
3	POOL DATA AND PLAN
4	POOL SECTION
5	POOL PLUMBING
6	POOL DETAILS

**NOTE:**  
**SCALE ON THIS PLAN WHEN SHOWN IS SET TO PRINT FULL SIZE ON 36" X 24" PAPER SIZE.**

 <p><b>GUNDERSON ENGINEERING LLC</b>          4161 TAMAMI TRAIL, UNIT 101          PORT CHARLOTTE, FLORIDA 33952          (941) 391-5980          www.gundersonengineering.com</p>		LICENSE # P-2016 PROJECT NO. 2406706-2
CONTRACTOR: MASTIN AQUATIC GROUP LLC 1215 SOUTHER RD NORTH WILKSBORO, NC 28659	PROJECT ADDRESS: AGAPE-KURE BEACH MINISTRIES 1369 TYLER DEWAR LN, FUQUAY-VARINA NC 27526	
DESIGN DATE: 08/05/2024 REVISION 1: 1/30/2026 REVISION 2: 1/30/2026 DRAWN BY: PD SCALE: NTS		SHEET: <b>01</b>

**DRESSING AND SANITARY FACILITIES**

- (A) DRESSING AND SANITARY FACILITIES SHALL BE PROVIDED AT ALL POOLS, EXCEPT FOR POOLS AT HOTELS, MOTELS, CONDOMINIUMS, AND APARTMENTS WHERE POOL USE IS RESTRICTED TO RESIDENTS OR GUESTS. AT HOTELS, MOTELS, CONDOMINIUMS AND APARTMENTS WHERE THE FARTHEST UNIT IS MORE THAN 300 FEET FROM THE POOL, AS MEASURED ALONG WALKWAYS PROVIDED FOR ACCESS BY RESIDENTS OR GUESTS TO THE POOL AREA, A TOILET AND LAVATORY SHALL BE PROVIDED. ALL PUBLIC SWIMMING POOLS SHALL POST A SIGN VISIBLE UPON ENTERING THE POOL ENCLOSURE DIRECTING POOL USERS TO SHOWER BEFORE ENTERING THE POOL.
- (B) PARTITIONS SHALL BE OF MATERIAL, NOT SUBJECT TO DAMAGE BY WATER AND SHALL BE DESIGNED SO THAT A WATERWAY IS PROVIDED BETWEEN PARTITIONS AND FLOOR TO PERMIT THOROUGH CLEANING OF THE WALLS AND FLOOR AREAS WITH HOSES AND BROOMS.
- (C) DRESSING FACILITY FLOORS SHALL BE CONTINUOUS THROUGHOUT THE AREAS. FLOORS SHALL HAVE A SLIP-RESISTANT SURFACE THAT SHALL BE SMOOTH, TO INSURE COMPLETE CLEANING. FLOOR DRAINS SHALL BE PROVIDED, AND FLOORS SHALL BE SLOPED NOT LESS THAN ¼ INCH PER FOOT TOWARD THE DRAINS TO INSURE POSITIVE DRAINAGE.
- (D) HOSE BIBS SHALL BE PROVIDED SUCH THAT ALL PARTS OF THE DRESSING FACILITY INTERIOR CAN BE REACHED WITH A 50 FOOT HOSE.
- (E) THE MINIMUM NUMBER OF FIXTURES REQUIRED IN DRESSING AND SANITARY FACILITIES SHALL BE BASED UPON THE MAXIMUM BATHER LOAD.
- (F) ONE WATER CLOSET, ONE LAVATORY, AND ONE URINAL SHALL BE PROVIDED FOR THE FIRST 100 MALE USERS. ONE ADDITIONAL WATER CLOSET, LAVATORY, AND URINAL SHALL BE PROVIDED FOR EACH ADDITIONAL 200 MALE USERS UP TO A TOTAL OF 500 USERS, WHERE USER LOAD EXCEEDS 500 MALE USERS, TWO ADDITIONAL WATER CLOSETS OR URINALS AND ONE LAVATORY SHALL BE PROVIDED FOR EACH ADDITIONAL 250 MALE USERS, WHERE THE MAXIMUM BATHER LOAD INCLUDES LESS THAN 50 MALE USERS, ONE WATER CLOSET AND ONE LAVATORY WILL BE SUFFICIENT.
- (G) TWO WATER CLOSETS AND TWO LAVATORIES SHALL BE PROVIDED FOR THE FIRST 100 FEMALE USERS. ONE ADDITIONAL WATER CLOSET AND LAVATORY SHALL BE PROVIDED FOR EACH ADDITIONAL 100 FEMALE USERS UP TO A TOTAL OF 500 USERS, WHERE USER LOAD EXCEEDS 500 FEMALE USERS, TWO ADDITIONAL WATER CLOSETS AND ONE LAVATORY SHALL BE PROVIDED FOR EACH ADDITIONAL 250 FEMALE USERS.
- (H) WHERE THE MAXIMUM BATHER LOAD INCLUDES LESS THAN 50 FEMALE USERS, ONE WATER CLOSET AND ONE LAVATORY WILL BE SUFFICIENT.
- (I) SHOWERS SHALL BE PROVIDED IN THE PROPORTION OF ONE FOR EACH 200 PERSONS AT THE TIME OF MAXIMUM BATHER LOAD.
- (J) THE WATER HEATER SHALL BE INACCESSIBLE TO USERS. THE SYSTEM SHALL BE DESIGNED SUCH THAT WATER TEMPERATURE AT THE SHOWER HEADS AND LAVATORIES CANNOT EXCEED 110° FAHRENHEIT.
- (K) SOAP DISPENSERS WITH EITHER LIQUID OR POWDERED SOAP SHALL BE PROVIDED AT EACH LAVATORY OR REQUIRED SHOWER. THE DISPENSER SHALL BE OF ALL METAL OR PLASTIC TYPE, WITH NO GLASS PERMITTED IN THESE UNITS.
- (L) IF MIRRORS ARE PROVIDED, THEY SHALL BE OF SHATTERPROOF MATERIALS.
- (M) TOILET PAPER HOLDERS WITH TOILET PAPER SHALL BE PROVIDED AT EACH WATER CLOSET.
- (N) DRESSING AND SANITARY FACILITIES SHALL BE KEPT CLEAN AND IN GOOD REPAIR.

**FENCE/ BARRIER NOTE:**

- A) PUBLIC SWIMMING POOLS SHALL BE COMPLETELY ENCLOSED BY A FENCE, WALL, BUILDING, OR OTHER ENCLOSURE, OR ANY COMBINATION THEREOF, WHICH ENCLOSES THE SWIMMING POOL AREA SUCH THAT ALL OF THE FOLLOWING CONDITIONS ARE MET:
  - (1) THE TOP OF THE BARRIER SHALL BE AT LEAST 48 INCHES ABOVE GRADE MEASURED ON THE SIDE OF THE BARRIER THAT FACES AWAY FROM THE SWIMMING POOL. THE MAXIMUM VERTICAL CLEARANCE BETWEEN GRADE AND THE BOTTOM OF THE BARRIER SHALL BE TWO INCHES MEASURED ON THE SIDE OF THE BARRIER THAT FACES AWAY FROM THE SWIMMING POOL.
  - (2) OPENINGS IN THE BARRIER SHALL NOT ALLOW PASSAGE OF A FOUR-INCH-DIAMETER SPHERE AND SHALL PROVIDE NO EXTERNAL HANDHOLDS OR FOOTHOLDS. SOLID BARRIERS THAT DO NOT HAVE OPENINGS SHALL NOT CONTAIN INDENTATIONS OR PROTRUSIONS EXCEPT FOR NORMAL CONSTRUCTION TOLERANCES AND TOOLED MASONRY JOINTS.
  - (3) WHERE THE BARRIER IS COMPOSED OF HORIZONTAL AND VERTICAL MEMBERS AND THE DISTANCE BETWEEN THE TOPS OF THE HORIZONTAL MEMBERS IS 45 INCHES OR MORE, SPACING BETWEEN THE VERTICAL MEMBERS SHALL NOT EXCEED FOUR INCHES, WHERE THERE ARE DECORATIVE CUTOUTS WITHIN THE VERTICAL MEMBERS, SPACING WITHIN THE CUTOUTS SHALL NOT EXCEED 1.75 INCHES IN WIDTH.
  - (4) WHERE THE BARRIER IS COMPOSED OF HORIZONTAL AND VERTICAL MEMBERS AND THE DISTANCE BETWEEN THE TOPS OF THE HORIZONTAL MEMBERS IS LESS THAN 45 INCHES, THE HORIZONTAL MEMBERS SHALL BE LOCATED ON THE SWIMMING POOL SIDE OF THE FENCE. SPACING BETWEEN THE VERTICAL MEMBERS SHALL NOT EXCEED 1.75 INCHES IN WIDTH, WHERE THERE ARE DECORATIVE CUTOUTS WITHIN THE VERTICAL MEMBERS, SPACING WITHIN THE CUTOUTS SHALL NOT EXCEED 1.75 INCHES IN WIDTH.
  - (5) MAXIMUM MESH SIZE FOR CHAIN LINK FENCES SHALL BE A 2.25 INCH SQUARE UNLESS THE FENCE IS PROVIDED WITH SLATS FASTENED AT THE TOP OR THE BOTTOM THAT REDUCE THE OPENINGS TO NO MORE THAN 1.75 INCHES.
  - (6) WHERE THE BARRIER IS COMPOSED OF DIAGONAL MEMBERS, THE MAXIMUM OPENING FORMED BY THE DIAGONAL MEMBERS SHALL BE NO MORE THAN 1.75 INCHES.
  - (7) ACCESS GATES SHALL COMPLY WITH THE DIMENSIONAL REQUIREMENTS FOR FENCES AND SHALL BE EQUIPPED TO ACCOMMODATE A LOCKING DEVICE, EFFECTIVE APRIL 1, 2011, PEDESTRIAN ACCESS GATES SHALL OPEN OUTWARD AWAY FROM THE POOL AND SHALL BE SELF-CLOSING AND HAVE A SELF-LATCHING DEVICE EXCEPT WHERE A GATE ATTENDANT AND LIFEGUARD ARE ON DUTY. GATES OTHER THAN PEDESTRIAN ACCESS GATES SHALL HAVE A SELF-LATCHING DEVICE, WHERE THE RELEASE MECHANISM OF THE SELF-LATCHING DEVICE IS LOCATED LESS THAN 54 INCHES FROM THE BOTTOM OF THE GATE, THE RELEASE MECHANISM SHALL REQUIRE THE USE OF A KEY, COMBINATION OR CARD READER TO OPEN OR SHALL BE LOCATED ON THE POOL SIDE OF THE GATE AT LEAST THREE INCHES BELOW THE TOP OF THE GATE, AND THE GATE AND BARRIER SHALL HAVE NO OPENINGS GREATER THAN 0.5 INCH WITHIN 18 INCHES OF THE RELEASE MECHANISM; AND
  - (8) GROUND LEVEL DOORS AND WINDOWS OPENING FROM OCCUPIED BUILDINGS TO INSIDE THE POOL ENCLOSURE SHALL BE SELF-CLOSING OR CHILD PROTECTED BY MEANS OF A BARRIER OR AUDIBLE ALARM.

**DECK**

- SLIP RESISTANT. DECKS, RAMPS, COPING, AND SIMILAR STEP SURFACES SHALL BE SLIP RESISTANT AND CLEANABLE. SPECIAL FEATURES IN OR ON DECKS SUCH AS MARKERS, BRAND INSIGNIAS, AND SIMILAR MATERIALS SHALL BE SLIP RESISTANT.
- PUBLIC POOL AND SPA DECK STEPS HAVING THREE OR MORE RISERS SHALL BE PROVIDED WITH A HANDRAIL.
- STEP RISERS FOR DECKS OF PUBLIC POOLS AND SPAS SHALL BE UNIFORM AND HAVE A HEIGHT NOT LESS THAN 3/4 INCHES (95 MM) AND NOT GREATER THAN 7/12 INCHES (191 MM). THE TREAD DISTANCE FROM FRONT TO BACK SHALL BE NOT LESS THAN 11 INCHES (279 MM). STEP RISERS FOR DECKS OF RESIDENTIAL POOLS AND SPAS SHALL BE UNIFORM AND SHALL HAVE A HEIGHT NOT EXCEEDING 7/12 INCHES (191 MM). THE TREAD DISTANCE FROM FRONT TO BACK SHALL BE NOT LESS THAN 10 INCHES (254 MM).

**DECKS AND DECK EQUIPMENT**

- A DECK OR UNOBSTRUCTED ACCESS SHALL BE PROVIDED FOR NOT LESS THAN 90 PERCENT OF THE POOL PERIMETER.
- DECKING NOT LESS THAN 4 FEET (1219 MM) IN WIDTH SHALL BE PROVIDED ON THE SIDES AND REAR OF ANY DIVING EQUIPMENT. A DECK CLEARANCE OF 4 FEET (1219 MM) SHALL BE PROVIDED AROUND ALL OTHER DECK EQUIPMENT.
- DECKS BETWEEN POOLS, SPAS OR ANY COMBINATION OF POOLS AND SPAS, SHALL HAVE A WIDTH OF NOT LESS THAN 6 FEET (1829 MM).
- WALKING SURFACES OF DECKS WITHIN 4 FEET (1219 MM) OF A POOL OR SPA SHALL BE SLIP RESISTANT.
- SWIMMING POOL SLIDES SHALL COMPLY WITH THE REQUIREMENTS OF 16 CFR PART 1207. THE MANUFACTURER OF THE SLIDE SHALL PROVIDE INSTALLATION AND USE INSTRUCTIONS FOR THE SLIDE. SLIDES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

**LIFESAVING EQUIPMENT & SAFETY PROVISIONS**

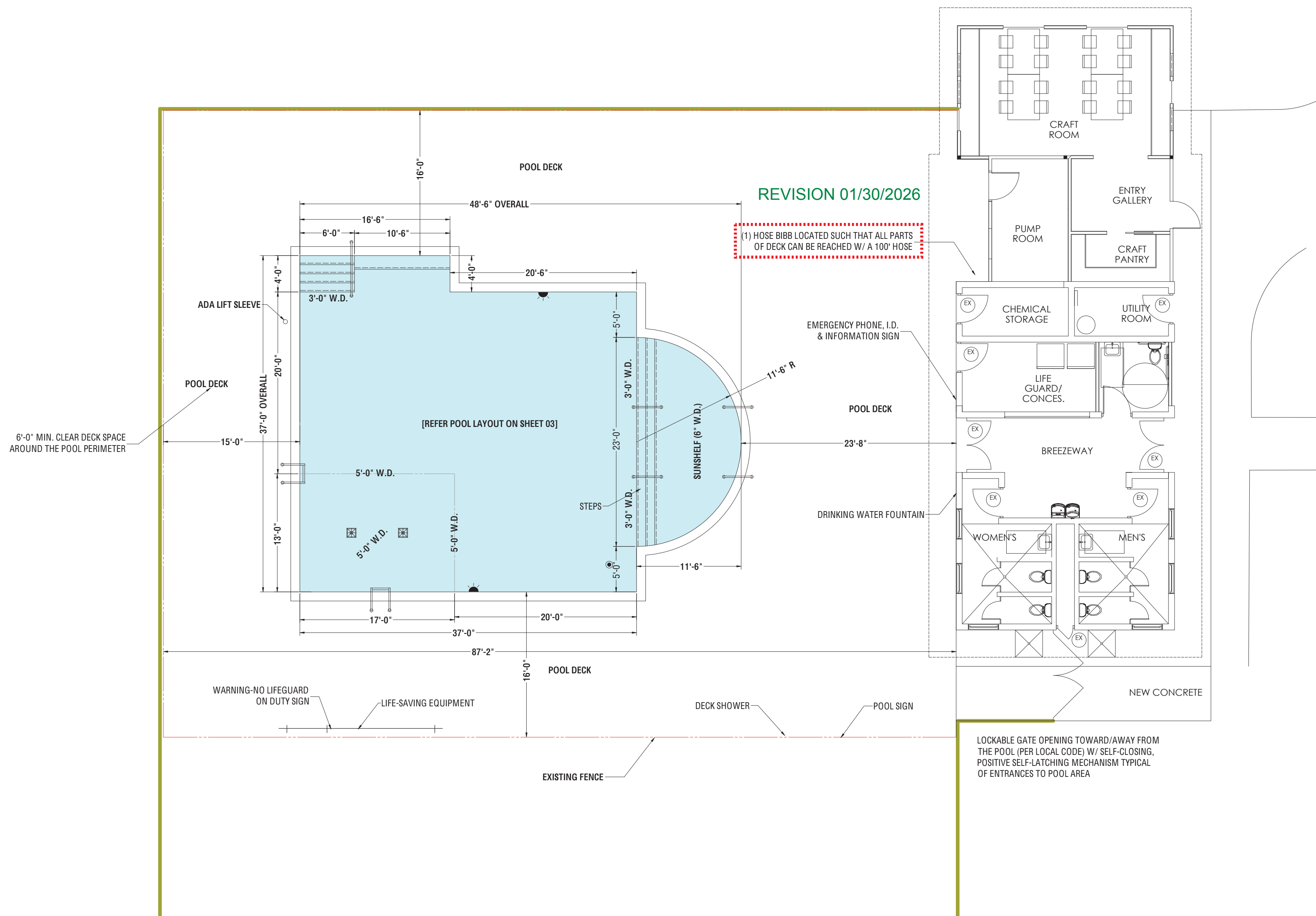
- (A) SWIMMING POOLS SHALL HAVE LIFESAVING EQUIPMENT CONSPICUOUSLY AND CONVENIENTLY ON HAND AT ALL TIMES. A UNIT OF LIFESAVING EQUIPMENT SHALL INCLUDE THE FOLLOWING:
  - (1) A POLE NOT LESS THAN 12 FEET LONG, WITH A BODY HOOK SECURELY ATTACHED. THE POLE ATTACHED TO THE BODY HOOK SHALL BE NON-TELESCOPING, NON-ADJUSTABLE AND NON-COLLAPSIBLE.
  - (2) A MINIMUM ¼ INCH DIAMETER THROWING ROPE AS LONG AS ONE AND ONE-HALF TIMES THE MAXIMUM WIDTH OF THE POOL OR 50 FEET, WHICHEVER IS LESS, ATTACHED TO A U.S. COAST GUARD APPROVED RING BUOY. A RESCUE TUBE OR RESCUE CAN SHALL BE ACCEPTED AS A SUBSTITUTE FOR THE RING BUOY WHERE IT IS ACCOMPANIED BY A LIFEGUARD WHO HAS BEEN TRAINED TO USE IT PROPERLY.
  - (B) TWO UNITS OF LIFESAVING EQUIPMENT MUST BE PROVIDED FOR ANY POOL THAT EXCEEDS 3,000 SQUARE FEET (186 SQ M) OF TOTAL SURFACE AREA.
  - (C) WHEN A SWIMMING POOL DOES NOT HAVE AT LEAST ONE LIFEGUARD ON DUTY, A SIGN SHALL BE POSTED WITH LEGIBLE LETTERS OF AT LEAST FOUR INCHES (10 CM) IN HEIGHT STATING: "WARNING-NO LIFEGUARD ON DUTY." IN ADDITION THERE SHALL BE SIGNS LEGIBLE FROM ALL BATHER ENTRANCES WITH A MINIMUM LETTER SIZE OF ONE INCH STATING: "CHILDREN SHOULD NOT USE THE SWIMMING POOL WITHOUT ADULT SUPERVISION", AND: "ADULTS SHOULD NOT SWIM ALONE". WADING POOLS THAT DO NOT HAVE A LIFEGUARD INSIDE THE WADING POOL ENCLOSURE SHALL HAVE A SIGN POSTED STATING "WARNING NO LIFEGUARD ON DUTY". SUCH SIGNS SHALL BE MOUNTED PERMANENTLY.
  - (D) A SIGN PROHIBITING PETS AND GLASS CONTAINERS IN THE POOL AREA SHALL BE PROVIDED.
  - (E) POOL CLOSED SIGNS SHALL BE PROVIDED AND SHALL BE POSTED AT BATHER ENTRANCES WHENEVER AN OPERATION PERMIT IS SUSPENDED FOR WATER QUALITY OR SAFETY VIOLATIONS.
  - (F) A TELEPHONE CAPABLE OF DIRECTLY DIALING 911 OR OTHER EMERGENCY NOTIFICATION SYSTEM SHALL BE PROVIDED AND ACCESSIBLE TO ALL POOL USERS, EFFECTIVE APRIL 1, 2005 THE TELEPHONE SHALL BE PERMANENTLY AFFIXED TO A LOCATION INSIDE THE POOL ENCLOSURE OR OUTSIDE THE ENCLOSURE WITHIN 75 FEET OF A BATHER ENTRANCE. THE TELEPHONE SHALL BE VISIBLE FROM WITHIN THE POOL ENCLOSURE OR A SIGN SHALL BE POSTED INDICATING THE LOCATION OF THE EMERGENCY TELEPHONE. A SIGN WITH LEGIBLE LETTERS SHALL BE POSTED AT THE TELEPHONE PROVIDING DIALING INSTRUCTIONS, ADDRESS OF THE POOL LOCATION AND THE TELEPHONE NUMBER, WHERE THE TELEPHONE DOES NOT DIRECTLY ACCESS 911, THE EMERGENCY NOTIFICATION SYSTEM SHALL:
    - (1) PROVIDE 24 HOUR MONITORING OF ALL INCOMING CALLS BY A TELECOMMUNICATOR WHO ANSWERS ONLY EMERGENCY CALLS;
    - (2) BE CAPABLE OF ROUTING CALLS TO THE LOCAL 911 TELECOMMUNICATOR VIA THE 911 DEDICATED EMERGENCY TRUNK LINE; AND
    - (3) ELECTRONICALLY TRANSFER AUTOMATIC NUMBER IDENTIFICATION AND AUTOMATIC LOCATION IDENTIFICATION FOR THE EMERGENCY TELEPHONE AT THE POOL TO THE ENHANCED 911 SYSTEM FOR ALL CALLS ROUTED TO 911.

**POOL RULES SIGN:**

- THE OWNER SHALL PROVIDE POOL RULES SIGNS WHICH SHALL BE POSTED IN A CONSPICUOUS PLACES IN THE POOL AREA.
- LETTERING SHALL BE BOLD AND LEGIBLE.
- THE SIGNS SHALL CONTAIN, AS A MINIMUM, THE FOLLOWING ITEMS:
  - THERE SHOULD BE NO SOLO SWIMMING.
  - THERE SHOULD BE NO RUNNING BOISTEROUS OR ROUGH PLAY.
  - PERSONS UNDER THE INFLUENCE OF ALCOHOL OR DRUGS SHOULD NOT USE THE POOL.
  - THERE SHOULD BE NO SPITTING OR NOSE BLOWING IN THE POOL.
  - PERSONS WITH DIARRHEAL ILLNESS OR NAUSEA SHOULD NOT USE THE POOL.
  - PERSONS WITH SKIN, EYE, EAR OR RESPIRATORY INFECTIONS SHOULD NOT USE THE POOL.
  - PERSONS WITH OPEN LESSONS OR WOUNDS SHOULD NOT ENTER THE POOL.
  - PETS OR ANIMALS NOT ALLOWED IN THE POOL.
  - NO GLASS ALLOWED IN THE POOL OR ON THE POOL DECK.
  - CHILDREN SHOULD NOT BE ALLOWED IN THE POOL WITHOUT SUPERVISION.
  - YOU SHOULD TAKE A SHOWER BEFORE ENTERING THE POOL.
  - THE POOL IS OPEN FROM ..... TO .....
  - THE MAXIMUM NUMBER OF PERSONS ALLOWED IN THE POOL IS .....
  - A FIRST AID KIT IS LOCATED AT .....
  - AN EMERGENCY TELEPHONE IS LOCATED .....

**ADDITIONAL SIGNS:**

- THE SIGN SHALL CONTAIN, AS A MINIMUM, THE FOLLOWING ITEMS:
  - THE OWNER SHALL PROVIDE (2) OR MORE "NO DIVING" SIGNS FOR POOLS NOT APPROVED FOR DIVING.
  - THE LETTERING SHALL BE IN BOLD PRINT WITH CAPITAL LETTERS AND BE AS FOLLOWS: "SHALLOW WATER" (IN MINIMUM 4" HIGH LETTERING) "NO DIVING ALLOWED" (IN MINIMUM 6" HIGH LETTERING).
  - THERE ARE TO BE (1) OR MORE "WARNING-NO LIFEGUARD ON DUTY" SIGNS PLACED AS PLACED ON THE PLANS.
  - THERE SHALL BE A SIGN WITH A MINIMUM LETTER SIZE OF 1" STATING "CHILDREN SHOULD NOT USE THE SWIMMING POOL WITHOUT ADULT SUPERVISION", AND "ADULTS SHOULD NOT SWIM ALONE".
  - THERE SHALL BE A SIGN CONSPICUOUSLY POSTED STATING "THE CERTIFIED POOL OPERATOR AT THIS FACILITY IS ....., STATE CERTIFICATION NUMBER ....." (BLANKS MUST BE FILLED IN).



**POOL LOCATION PLAN**

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

**SITE NOTE:**  
 CONTRACTOR SHALL VERIFY AND CONSULT WITH ENGINEERS FOR POOL TO BE INSTALLED IN FLOOD HAZARD AREAS.

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CONTRACTOR:  
 MASTIN AQUATIC GROUP LLC  
 1215 SOUTHER RD  
 NORTH WILKSBORO, NC 28659

PROJECT ADDRESS:  
 AGAPE-KURE BEACH MINISTRIES  
 1369 TYLER DEWAR LN,  
 FUQUAY-VARINA NC 27526

DESIGN DATE: 08/05/2024  
 REVISION 1: 1/30/2026  
 REVISION 2: 1/30/2026  
 DRAWN BY: PD  
 SCALE: NTS

SHEET: 02

PROJECT NO. 2406706-2  
 LICENSE # P-2016



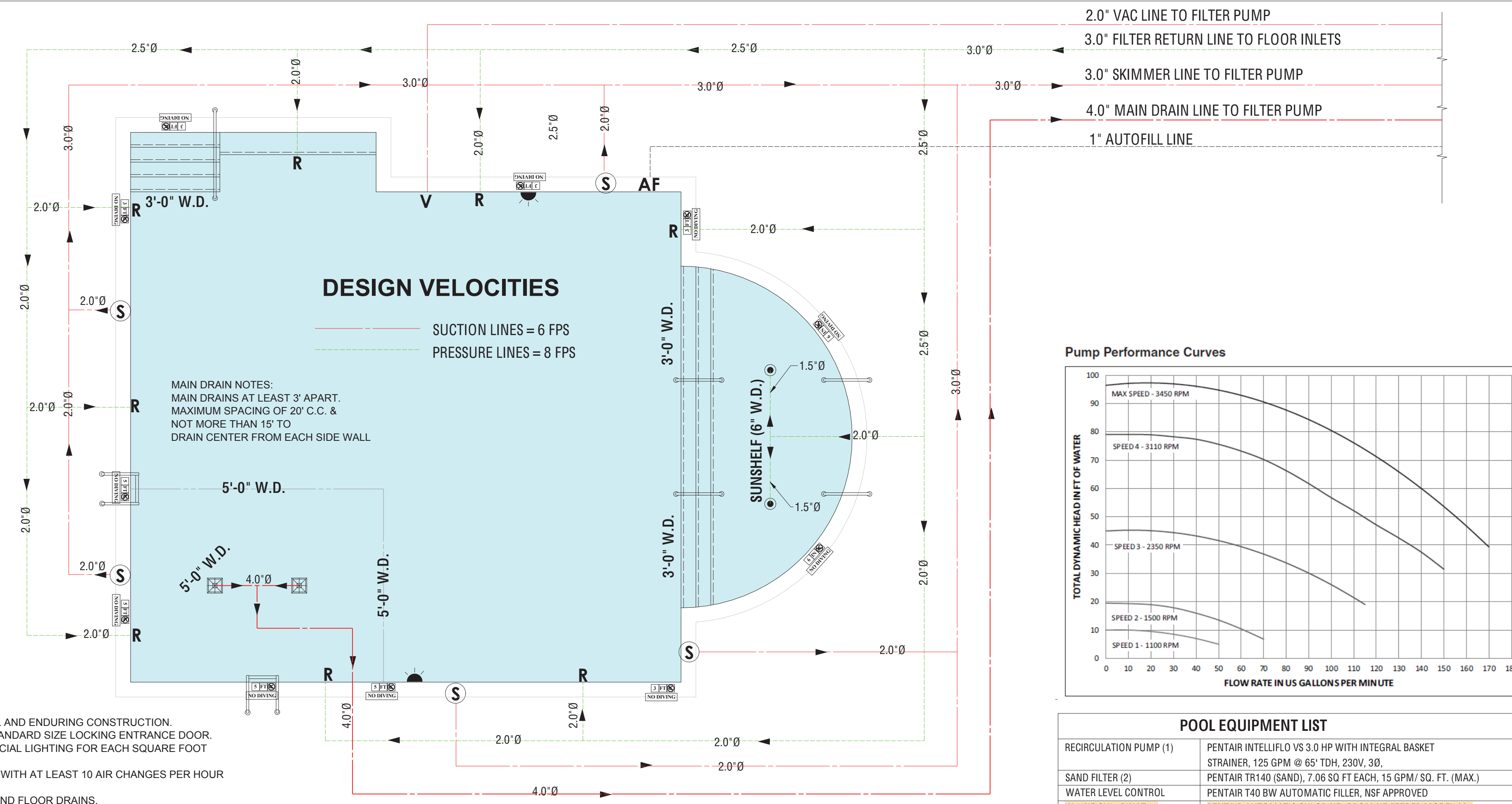


NOTE:  
THE PIPING SHOWN IS A GRAPHIC REPRESENTATION  
OF PIPE ROUTE. ACTUAL ROUTING OF PIPING  
AROUND POOL MAY DIFFER FROM THIS PLAN.

NOTE:  
A SUCTION OUTLET SYSTEM THAT IS COMPLETELY SUBMERGED  
SHALL PROTECT AGAINST USER ENTRAPMENT ACCORDING TO  
REQUIREMENTS OF VERGINIA GRAEME BAKER POOL AND SPA  
SAFETY ACT AND SHALL INCLUDE A SAFETY VACUUM RELEASE SYSTEM  
& APPROVED SAFETY DRAIN COVERS.

# POOL PIPING PLAN

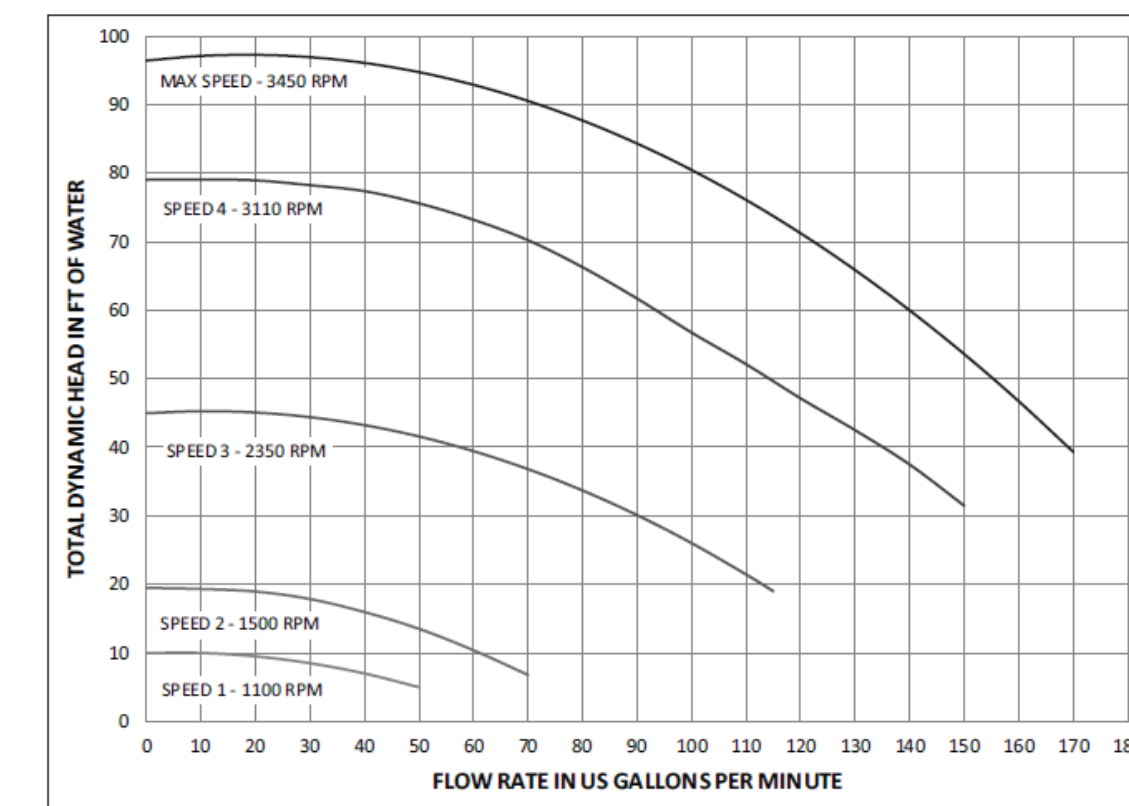
(SCALE: 3/16" = 1'-0")



## EQUIPMENT ROOM

- THE OWNER SHALL PROVIDE AN EQUIPMENT ROOM OF SUBSTANTIAL AND ENDURING CONSTRUCTION.
- THE ROOM SHALL HAVE A MINIMUM CEILING HEIGHT OF 7'-0" AND A STANDARD SIZE LOCKING ENTRANCE DOOR.
- ILLUMINATION SHALL BE PROVIDED BY AT LEAST OF 1 WATT OF ARTIFICIAL LIGHTING FOR EACH SQUARE FOOT OF FLOOR AREA WITH A MINIMUM OF 150 WATTS INCANDESCENT.
- VENTILATION SHALL BE PROVIDED SO THAT THE ROOM IS FURNISHED WITH AT LEAST 10 AIR CHANGES PER HOUR WHICH IS VENTED TO THE OUTSIDE AND AWAY FROM THE POOL.
- THE FLOOR SHALL BE CONCRETE AND INCLUDE NECESSARY SUMPS AND FLOOR DRAINS.
- THE ROOM SHALL HOUSE NECESSARY POOL MECHANICAL EQUIPMNT. STORAGE OF ANY OTHER MATERIALS OR EQUIPMENT SHALL NOT BE PERMITTED.
- ELECTRICAL PANELS, SWITCHES, CONTROLS NOT PERTINENT TO THE OPERATION OF THE POOL SHALL NOT BE LOCATED IN THE EQUIPMENT ROOM.

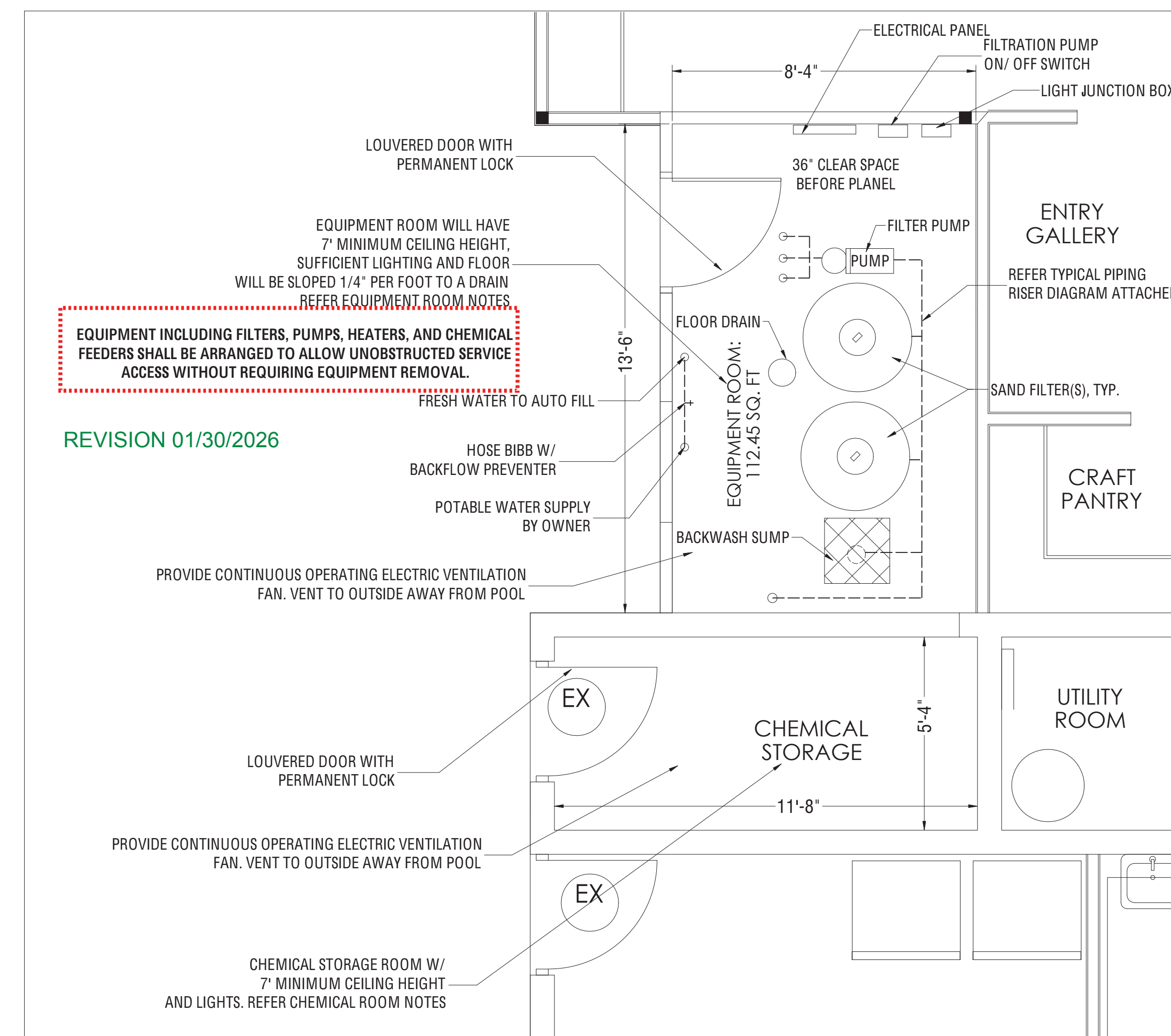
## Pump Performance Curves



## POOL EQUIPMENT LIST

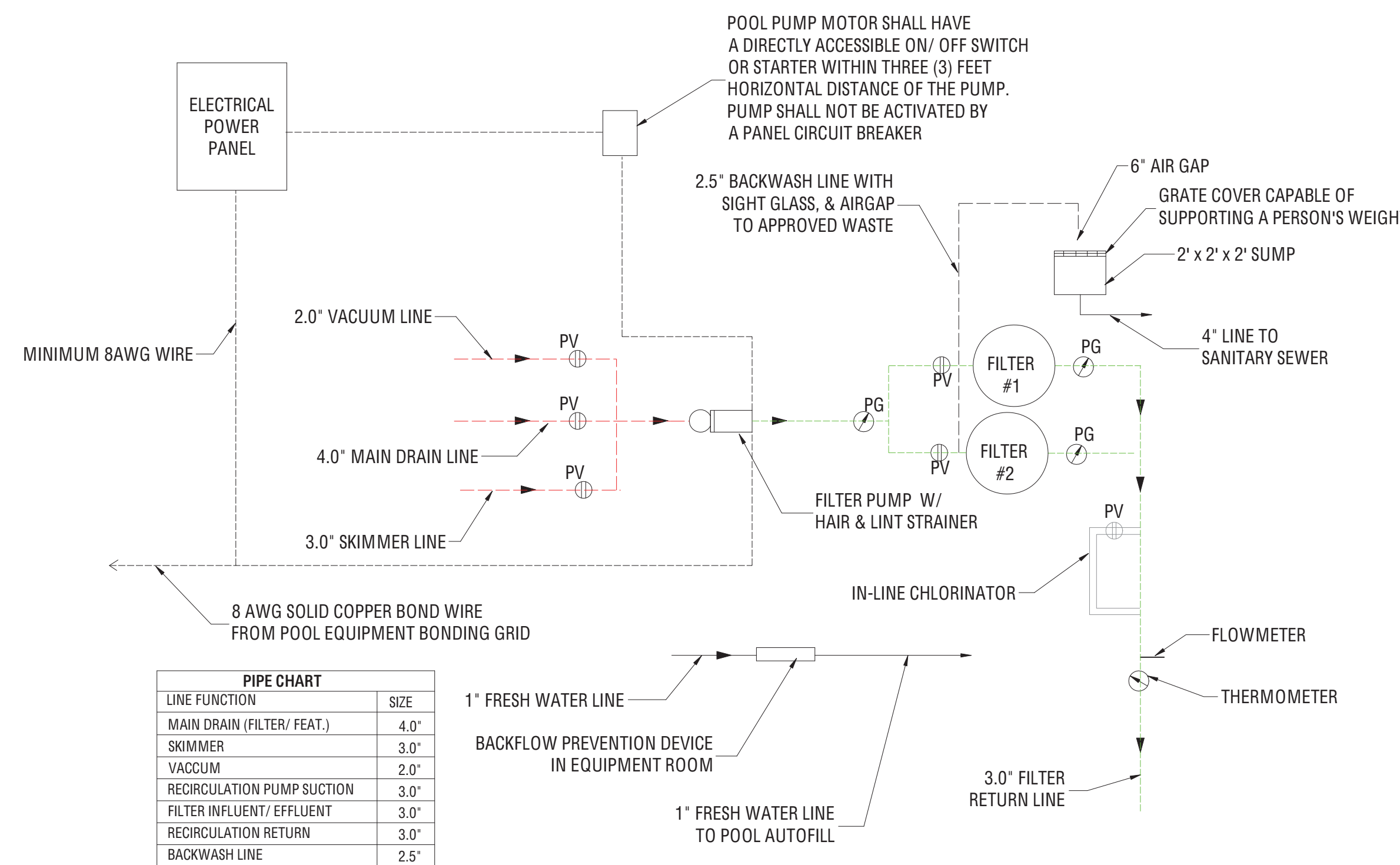
RECIRCULATION PUMP (1)	PENTAIR INTELLIFLO VS 3.0 HP WITH INTEGRAL BASKET STRAINER, 125 GPM @ 65' TDH, 230V, 3Ø.
SAND FILTER (2)	PENTAIR TR140 (SAND), 7.06 SQ FT EACH, 15 GPM/SQ. FT. (MAX.)
WATER LEVEL CONTROL	PENTAIR T40 BW AUTOMATIC FILLER, NSF APPROVED
IN-LINE CHLORINATOR	PENTAIR AUTOMATIC CHLORINE/BROMINE FEEDER MODEL 320
FLOWMETER	3.0" BLUE/WHITE F-30300P, 45 TO 240 GPM RANGE
THERMOMETER	PRECISION INSTRUMENT CO B281-K WITH 1/2" NPT THERMOWELL 30" TO 240" F RANGE
PRESSURE GAUGE	WIKA, 0-60 PSI, LIQUID FILLED, 1/4" NPT, 2" FACE DIAMETER
SKIMMER (5)	STAR-RITE U-3
MAIN DRAIN GRATE - (2) TOTAL	12" x 12" MAIN DRAIN WITH SIDE PORT WITH WATERWAY GRATE 640-472/V (ANSI/ APSP-16 2017, VGBA 2017 COMPLIANT) 62.4 SQ. IN. OPEN AREA; 356 GPM RATED FLOW RATE

REVISION 01/30/2026



## POOL EQUIPMENT ROOM LAYOUT PLAN

(SCALE: 3/8" = 1')



## TYPICAL PIPING RISER DIAGRAM

## CHEMICAL ROOM

- A SEPARATE CHEMICAL STORAGE ROOM THAT MEETS THE FOLLOWING CRITERIA SHALL BE PROVIDED:
- THE OWNER SHALL PROVIDE A POOL CHEMICAL STORAGE ROOM SEPARATE FROM THE EQUIPMENT ROOM.
  - ILLUMINATION SHALL BE PROVIDED BY AT LEAST 1 WATT OF ARTIFICIAL LIGHT FOR EACH SQUARE FOOT OF FLOOR AREA WITH A MINIMUM OF 100 WATTS INCANDESCENT.
  - VENTILATION SHALL BE PROVIDED SO THAT THE ROOM IS FURNISHED WITH AT LEAST 10 AIR CHANGES PER HOUR WHICH IS VENTED TO THE OUTSIDE AND AWAY FROM THE POOL.
  - THE ROOM SHALL BE KEPT DRY AND LOCKED AT ALL TIMES.
  - NO ELECTRICAL PANELS, SWITCHES, CONTROLS OR MECHANICAL EQUIPMENT SHALL BE PLACED IN THE ROOM.
  - CHEMICAL SHALL BE LOCATED A MINIMUM OF 6" ABOVE THE FLOOR.
  - CHEMICAL ROOMS SHALL BE A MINIMUM OF 5 SQUARE FEET FOR THE FIRST 10,000 GALLONS AND 1 ADDITIONAL SQUARE FOOT FOR EACH ADDITIONAL 3000 GALLONS.

## SKIMMERS

- A SURFACE SKIMMING SYSTEM SHALL BE PROVIDED FOR PUBLIC POOLS AND SPAS. SURFACE SKIMMING SYSTEMS SHALL BE LISTED AND LABELED IN ACCORDANCE WITH NSF 50. EITHER A SURFACE SKIMMING SYSTEM OR PERIMETER OVERFLOW SYSTEM SHALL BE PROVIDED FOR PERMANENT INGROUND RESIDENTIAL POOLS AND PERMANENT RESIDENTIAL SPAS. WHERE INSTALLED, SURFACE SKIMMING SYSTEMS SHALL BE DESIGNED AND CONSTRUCTED TO CREATE A SKIMMING ACTION ON THE POOL WATER SURFACE WHEN THE WATER LEVEL IN THE POOL IS WITHIN OPERATIONAL PARAMETERS.
- WHERE AUTOMATIC SURFACE SKIMMERS ARE USED AS THE SOLE OVERFLOW SYSTEM, NOT LESS THAN ONE SURFACE SKIMMER SHALL BE PROVIDED FOR THE SQUARE FOOT (SQUARE METER) AREAS, OR FRACTIONS THEREOF, INDICATED IN TABLE IS/SPC 315.3. SKIMMERS SHALL BE LOCATED TO MAINTAIN EFFECTIVE SKIMMING ACTION.
- WHERE A PERIMETER-TYPE SURFACE SKIMMING SYSTEM IS USED AS THE SOLE SURFACE SKIMMING SYSTEM, THE SYSTEM SHALL EXTEND AROUND NOT LESS THAN 50 PERCENT OF THE POOL OR SPA PERIMETER.
- WHERE PERIMETER SURFACE SKIMMING SYSTEMS ARE USED, THEY SHALL BE CONNECTED TO A CIRCULATION SYSTEM WITH A SYSTEM SURGE CAPACITY OF NOT LESS THAN 1 GALLON FOR EACH SQUARE FOOT (40.7 LITERS PER SQUARE METER) OF WATER SURFACE. THE CAPACITY OF THE PERIMETER OVERFLOW SYSTEM AND RELATED PIPING IS PERMITTED TO BE CONSIDERED AS A PORTION OF THE SURGE CAPACITY.

## RETURN AND SUCTION FITTINGS

- ONE RETURN INLET SHALL BE PROVIDED FOR EVERY 300 SQUARE FEET (27.9 M2) OF POOL SURFACE AREA, OR FRACTION THEREOF.
- WHERE INSTALLED, SUBMERGED VACUUM FITTINGS SHALL BE ACCESSIBLE AND SHALL BE LOCATED NOT GREATER THAN 12 INCHES (305 MM) BELOW THE WATER LEVEL.

## SUCTION ENTRAPMENT AVOIDANCE

- SUCTION ENTRAPMENT AVOIDANCE FOR POOLS AND SPAS SHALL BE PROVIDED IN ACCORDANCE WITH APSP 7. EQUIPMENT

- POOL AND SPA EQUIPMENT AND RELATED PIPING SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
- ELECTRICALLY OPERATED EQUIPMENT SHALL BE LISTED AND LABELED IN ACCORDANCE WITH APPLICABLE PRODUCT STANDARDS.
- TREATMENT AND CIRCULATION SYSTEM EQUIPMENT FOR PUBLIC POOLS AND SPAS SHALL BE LISTED AND LABELED IN ACCORDANCE WITH NSF 50 AND OTHER APPLICABLE STANDARDS.
- FILTERS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
- THE DESIGN, CONSTRUCTION, AND INSTALLATION OF PUMPS AND COMPONENT PARTS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
- SHUTOFF VALVES SHALL BE INSTALLED ON THE SUCTION AND DISCHARGE SIDES OF PUMPS THAT ARE LOCATED BELOW THE WATERLINE. SUCH VALVES SHALL BE PROVIDED WITH ACCESS.
- AN EMERGENCY SHUTOFF SWITCH SHALL BE PROVIDED TO DISCONNECT POWER TO RECIRCULATION AND JET SYSTEM PUMPS AND AIR BLOWERS. EMERGENCY SHUTOFF SWITCHES SHALL BE PROVIDED WITH ACCESS, LOCATED WITHIN SIGHT OF THE POOL OR SPA; AND LOCATED NOT LESS THAN 5 FEET (1524 MM) HORIZONTALLY FROM THE INSIDE WALLS OF THE POOL OR SPA.
- MOTORS SHALL COMPLY WITH UL1004-1, UL 1081, CSA C22.2 NO. 108 OR THE RELEVANT MOTOR REQUIREMENTS OF UL 1563 OR CSA C22.2 NO. 218.1, AS APPLICABLE.
- HEATERS AND HOT WATER STORAGE TANKS SHALL BE LISTED AND LABELED IN ACCORDANCE WITH THE APPLICABLE STANDARD LISTED IN TABLE 316.2.
- HEATERS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND THE INTERNATIONAL FUEL GAS CODE, INTERNATIONAL MECHANICAL CODE, INTERNATIONAL ENERGY CONSERVATION CODE, NFPA 70 OR INTERNATIONAL RESIDENTIAL CODE, AS APPLICABLE IN ACCORDANCE WITH SECTION 316.6.
- SOLAR THERMAL WATER HEATERS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 316.6.
- A MEANS SHALL BE PROVIDED TO MONITOR WATER TEMPERATURE.
- AIR BLOWER SYSTEMS SHALL BE EQUIPPED WITH BACKFLOW PROTECTION AS SPECIFIED IN UL 1563 OR CSA C22.2 NO. 218.1.

## FILTERS

- THE FOLLOWING STATEMENT SHALL BE POSTED IN A CONSPICUOUS LOCATION WITHIN THE AREAS OF THE AIR RELEASE:  
"DO NOT START THE SYSTEM AFTER MAINTENANCE WITHOUT FIRST PROPERLY REASSEMBLING THE FILTER AND SEPARATION TANK AND OPENING ALL AIR RELEASE VALVES."

## WATER QUALITY AND STANDARDS

- WHENEVER A PUBLIC SWIMMING POOL IS OPEN FOR USE, WATER QUALITY SHALL BE MAINTAINED IN ACCORDANCE WITH THE FOLLOWING:
- (1) THE CHEMICAL QUALITY OF THE WATER SHALL BE MAINTAINED IN AN ALKALINE CONDITION AT ALL TIMES WITH THE PH BETWEEN 7.2 AND 7.8.
  - (2) THE CLARITY OF THE WATER SHALL BE MAINTAINED SUCH THAT THE MAIN DRAIN GRATE IS VISIBLE FROM THE POOL DECK AT ALL TIMES.
  - (3) DISINFECTION SHALL BE PROVIDED IN ACCORDANCE WITH MANUFACTURERS' INSTRUCTIONS FOR ALL POOLS BY A CHEMICAL OR OTHER PROCESS THAT MEETS THE CRITERIA LISTED AS FOLLOWS:  
(A) REGISTERED WITH THE U.S. ENVIRONMENTAL PROTECTION AGENCY FOR POOL WATER OR POTABLE WATER;  
(B) PROVIDES A RESIDUAL EFFECT IN THE POOL WATER THAT CAN BE MEASURED BY PORTABLE FIELD TEST EQUIPMENT;  
(C) WILL NOT IMPART ANY IMMEDIATE OR CUMULATIVE ADVERSE PHYSIOLOGICAL EFFECTS TO POOL BATHERS WHEN USED AS DIRECTED;  
(D) WILL NOT PRODUCE ANY SAFETY HAZARD WHEN STORED OR USED AS DIRECTED;  
(E) WILL NOT DAMAGE POOL COMPONENTS OR EQUIPMENT; AND  
(F) WILL DEMONSTRATE REDUCTION OF TOTAL COLIFORM AND FECAL COLIFORM TO A LEVEL AT LEAST EQUIVALENT TO FREE CHLORINE AT A LEVEL OF ONE PART PER MILLION IN THE SAME BODY OF WATER.
  - (4) WHEN CHLORINE IS USED AS THE DISINFECTANT, A FREE CHLORINE RESIDUAL OF AT LEAST ONE PART PER MILLION (PPM) SHALL BE MAINTAINED THROUGHOUT THE POOL WHENEVER IT IS OPEN OR IN USE. POOLS THAT USE CHLORINE AS THE DISINFECTANT MUST BE STABILIZED WITH CYANURIC ACID EXCEPT AT INDOOR POOLS OR WHERE IT CAN BE SHOWN THAT CYANURIC ACID IS NOT NECESSARY TO MAINTAIN A STABLE FREE CHLORINE RESIDUAL. THE CYANURIC ACID LEVEL SHALL NOT EXCEED 100 PARTS PER MILLION.
  - (5) WHEN BROMINE OR COMPOUNDS OF BROMINE ARE USED AS THE DISINFECTANT, A FREE BROMINE RESIDUAL OF AT LEAST TWO PARTS PER MILLION, SHALL BE MAINTAINED THROUGHOUT THE POOL WHENEVER IT IS OPEN OR IN USE.
  - (6) WHEN CHLORINE OR BROMINE ARE USED AS THE DISINFECTANT, AUTOMATIC CHEMICAL FEEDERS SHALL BE USED. AUTOMATIC CHLORINE OR BROMINE FEEDERS SHALL BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH NSF/ANSI STANDARD NUMBER 50. AUTOMATIC CHLORINE AND BROMINE FEEDER PUMPS SHALL BE AUTOMATICALLY PREVENTED FROM OPERATING WHEN THE CIRCULATION PUMP IS NOT IN OPERATION.
  - (7) WHEN BIGUANIDE IS USED AS THE DISINFECTANT, A RESIDUAL OF 30 TO 50 PARTS PER MILLION SHALL BE MAINTAINED THROUGHOUT THE POOL WHENEVER IT IS OPEN OR IN USE.
  - (8) WHEN SILVER/COPPER ION SYSTEMS ARE USED, THE COPPER CONCENTRATION IN THE POOL WATER SHALL NOT EXCEED ONE PART PER MILLION AND A CHLORINE RESIDUAL MUST BE MAINTAINED IN ACCORDANCE WITH ITEM (4) OF THIS RULE.
  - (9) THE USE OF CHLORINE IN ITS ELEMENTAL (GASEOUS) FORM FOR DISINFECTION OF PUBLIC SWIMMING POOLS IS PROHIBITED.
  - (10) TEST KITS OR EQUIPMENT CAPABLE OF MEASURING DISINFECTANT LEVEL, PH, AND TOTAL ALKALINITY MUST BE MAINTAINED AT ALL PUBLIC SWIMMING POOLS. POOLS USING CYANURIC ACID OR CHLORINATED ISOCYANURATES MUST HAVE A TEST KIT CAPABLE OF MEASURING CYANURIC ACID LEVELS.
  - (11) THE POOL OPERATOR SHALL INSPECT THE POOL AT LEAST DAILY AND MAINTAIN WRITTEN RECORDS OF THE OPERATING CONDITIONS OF EACH POOL. RECORDS SHALL BE MAINTAINED AT THE POOL SITE FOR A PERIOD OF NOT LESS THAN SIX MONTHS. RECORDS SHALL INCLUDE THE FOLLOWING:  
(A) DAILY RECORDING OF THE DISINFECTANT RESIDUAL IN THE POOL;  
(B) DAILY RECORDING OF POOL WATER PH;  
(C) DAILY RECORDING OF WATER TEMPERATURE IN HEATED POOLS; RECORDING OF ACTIVITIES PERTAINING TO POOL WATER MAINTENANCE INCLUDING CHEMICAL ADDITIONS AND FILTER BACKWASH CYCLES;  
(D) WEEKLY RECORDING OF TOTAL ALKALINITY AND CYANURIC ACID LEVELS; AND  
(E) DAILY RECORDING OF POOL DRAIN COVER/GRATE INSPECTION.
  - (12) WATER TEMPERATURE IN HEATED SWIMMING POOLS SHALL NOT EXCEED 90 DEGREES FAHRENHEIT (32 DEGREES CELSIUS) AND IN HEATED SPAS SHALL NOT EXCEED 104 DEGREES FAHRENHEIT (40 DEGREES CELSIUS).
  - (13) THE POOL OPERATOR SHALL TAKE THE FOLLOWING STEPS TO MANAGE FECAL AND VOMITUS ACCIDENTS:  
(A) DIRECT EVERYONE TO LEAVE ALL POOLS INTO WHICH WATER CONTAINING THE FECES OR VOMIT IS CIRCULATED AND DO NOT ALLOW ANYONE TO ENTER THE POOL(S) UNTIL DECONTAMINATION IS COMPLETED.  
(B) REMOVE AS MUCH OF THE FECES OR VOMIT AS POSSIBLE USING A NET OR SCOOP AND DISPOSE OF IT IN A SEWAGE TREATMENT AND DISPOSAL SYSTEM.  
(C) RAISE THE FREE AVAILABLE CHLORINE CONCENTRATION TO TWO PPM AT A PH OF 7.2 TO 7.5 AND TEST TO ASSURE THE CHLORINE CONCENTRATION IS MIXED THROUGHOUT THE POOL; AND  
(D) FOR ACCIDENTS INVOLVING FORMED STOOLS OR VOMIT, MAINTAIN THE FREE AVAILABLE CHLORINE CONCENTRATION AT TWO PPM FOR AT LEAST 25 MINUTES OR AT THREE PPM FOR AT LEAST 19 MINUTES BEFORE REOPENING THE POOL. FOR ACCIDENTS INVOLVING LIQUID STOOLS INCREASE THE FREE CHLORINE RESIDUAL AND CLOSURE TIME TO REACH A CT INACTIVATION VALUE OF 15,300 THEN BACKWASH THE POOL FILTER BEFORE REOPENING THE POOL. CT REFERS TO CONCENTRATION (C) OF FREE AVAILABLE CHLORINE IN PARTS PER MILLION MULTIPLIED BY TIME (T) IN MINUTES.

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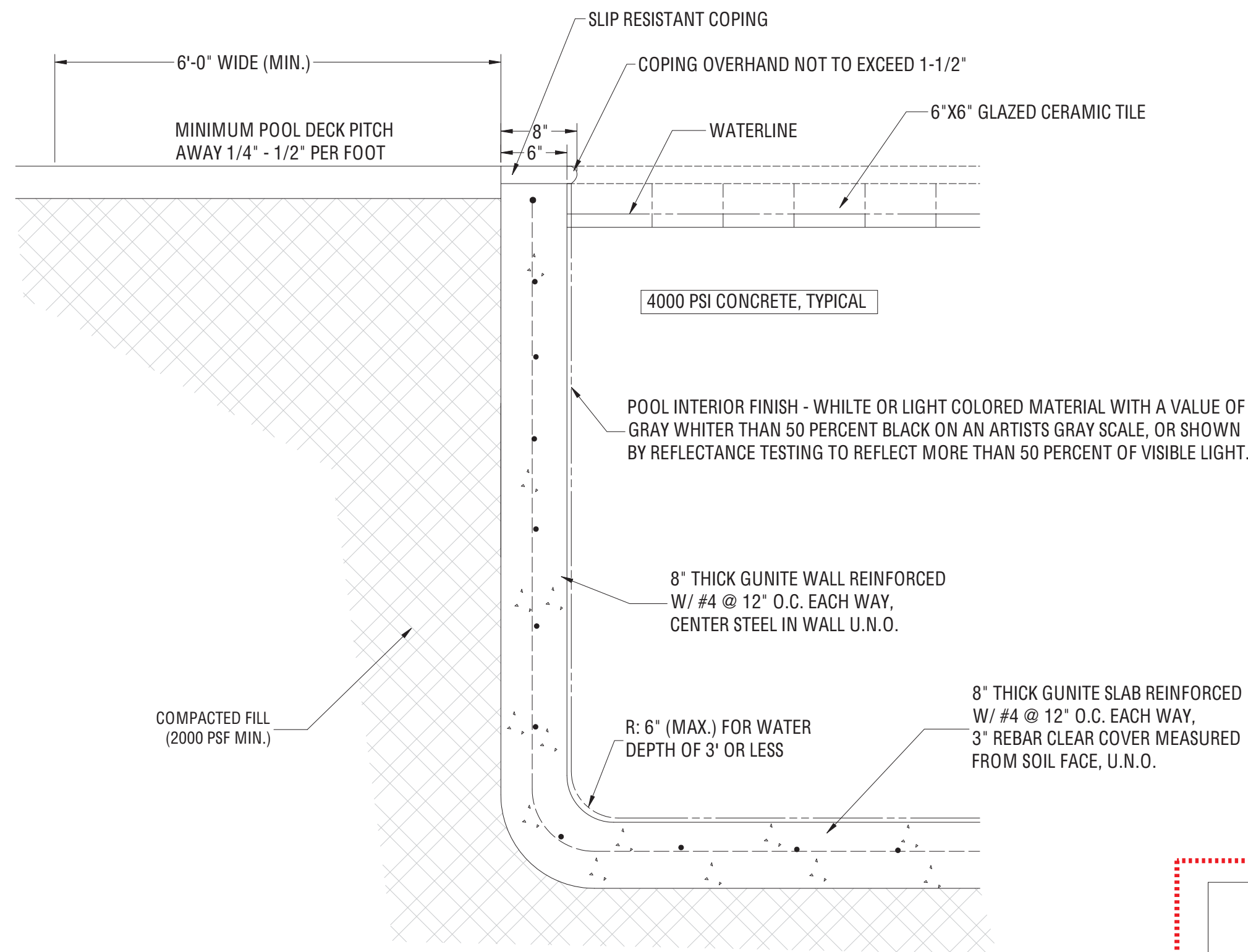
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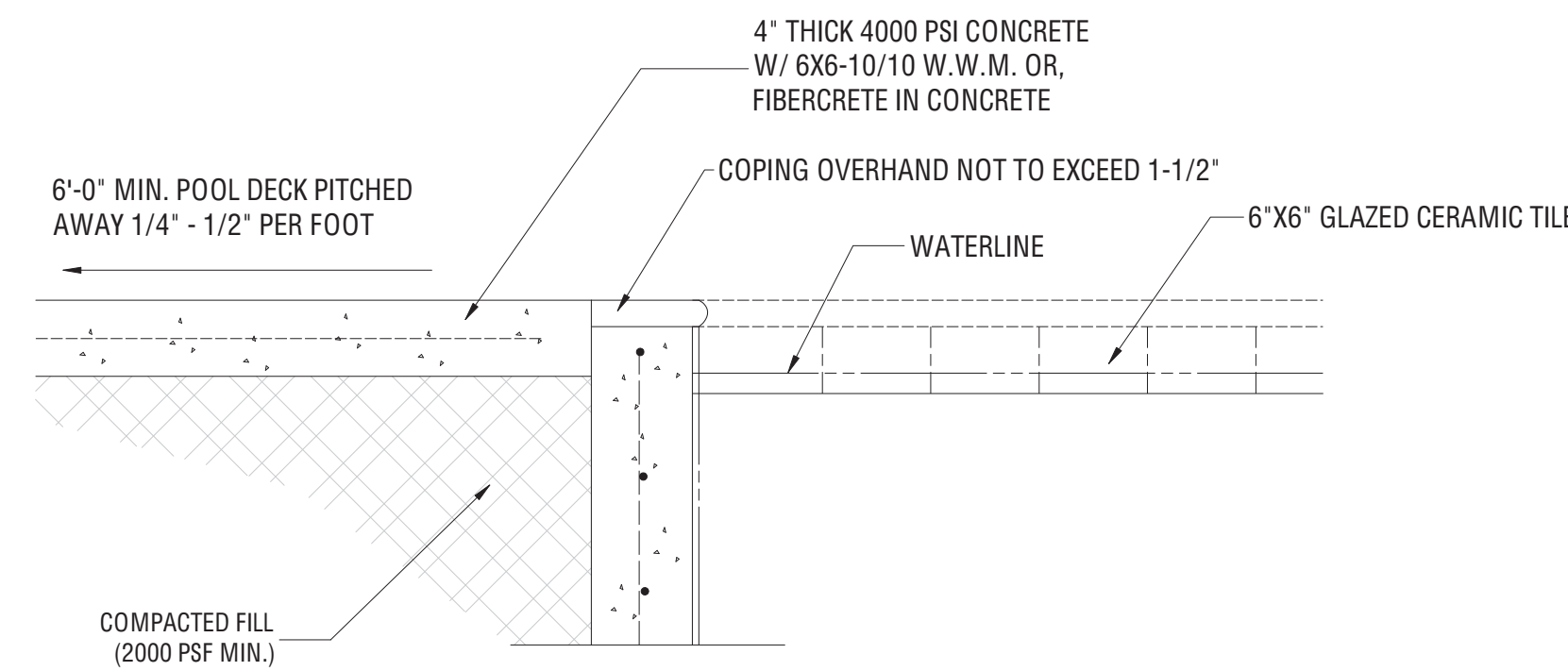
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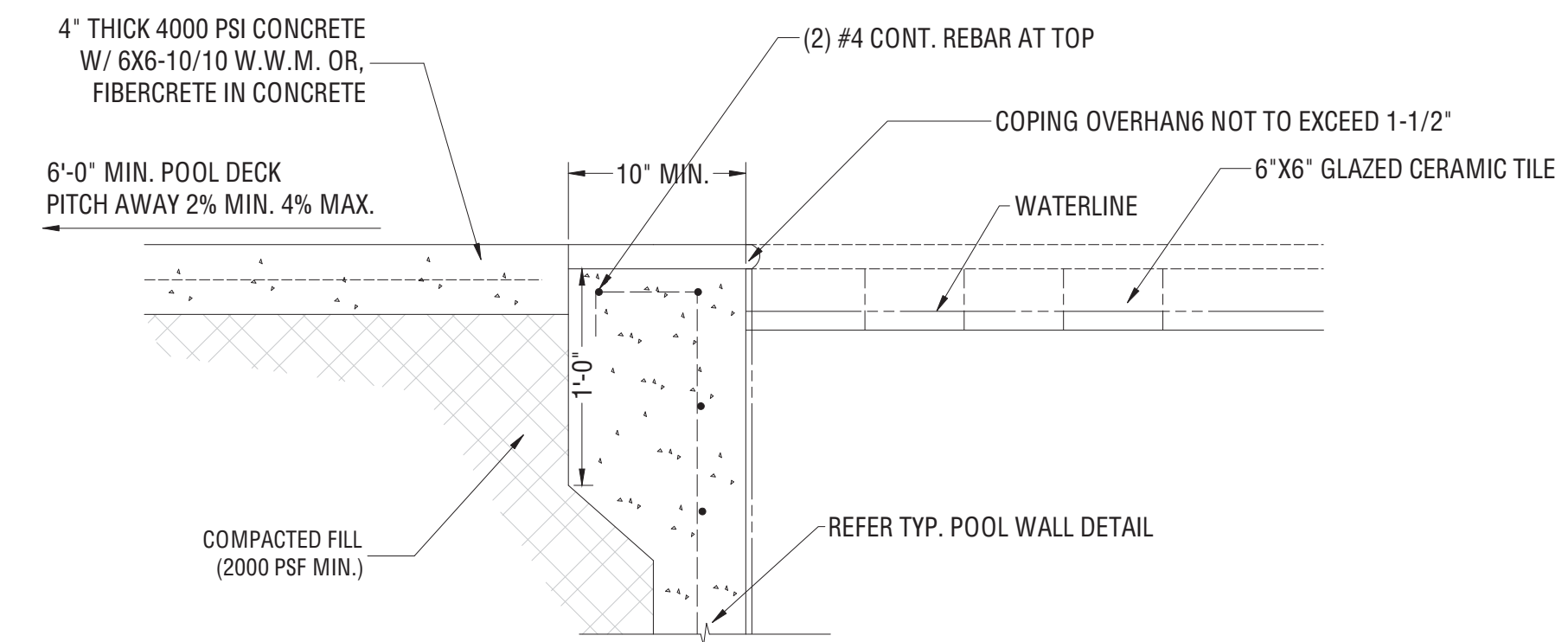


TYPICAL WALL/ FLOOR SECTION DETAIL (N.T.S)

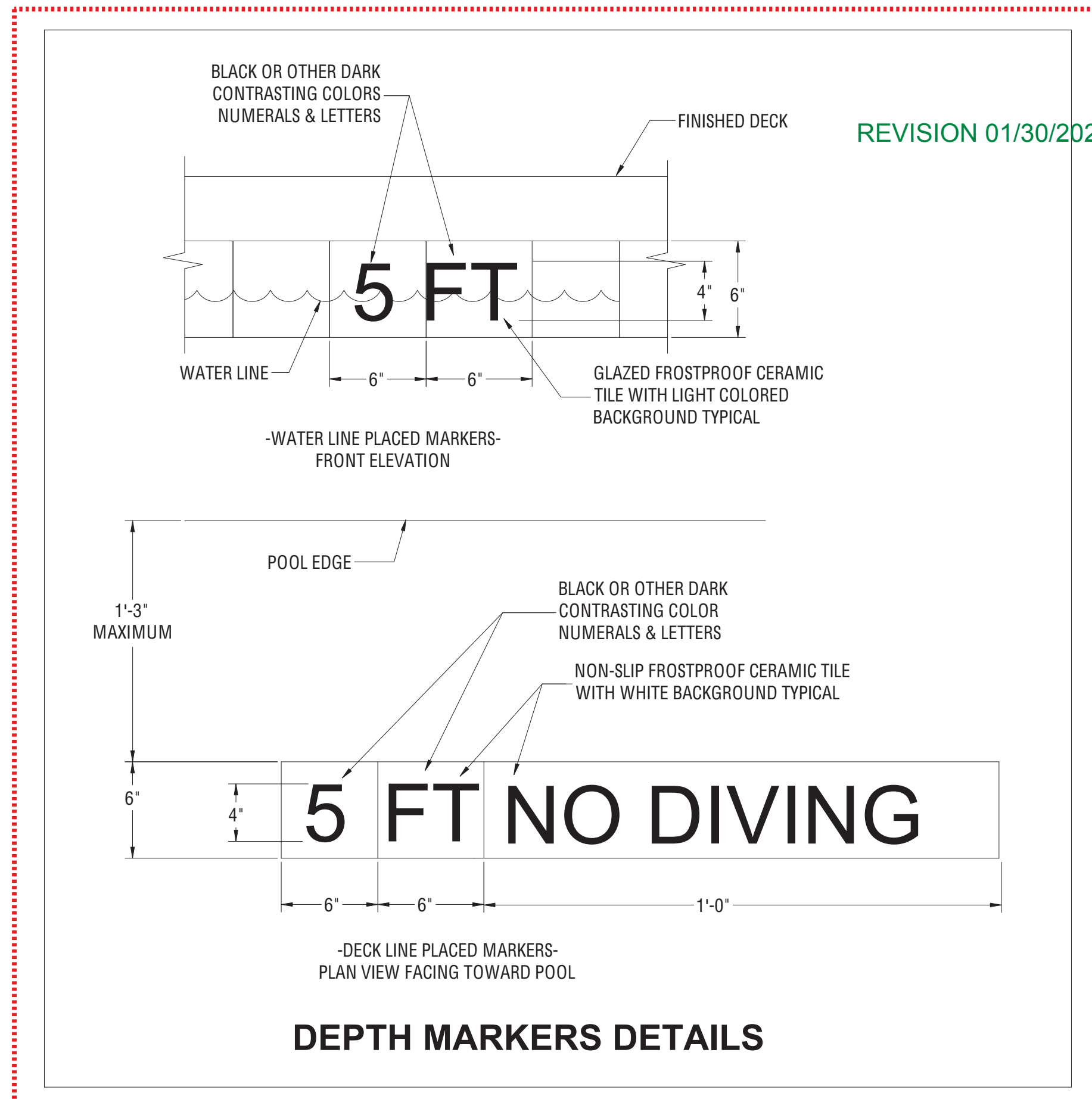
**DECK NOTES:**  
 1) DECKS, RAMPS, AND COPING AND SIMILAR STEP SURFACES SHALL BE SLIP-RESISTANT, EASILY CLEANABLE, AND NONABSORBENT.  
 2) THE POOL DECK AREA MUST BE SLOPED AWAY FROM THE POOLS TODRAINS. DECKS MUST NOT DRAIN INTO LANDSCAPED AREAS.  
 3) ALL JOINTS SHALL BE CONSTRUCTED LESS THAN 3/16" WIDE.



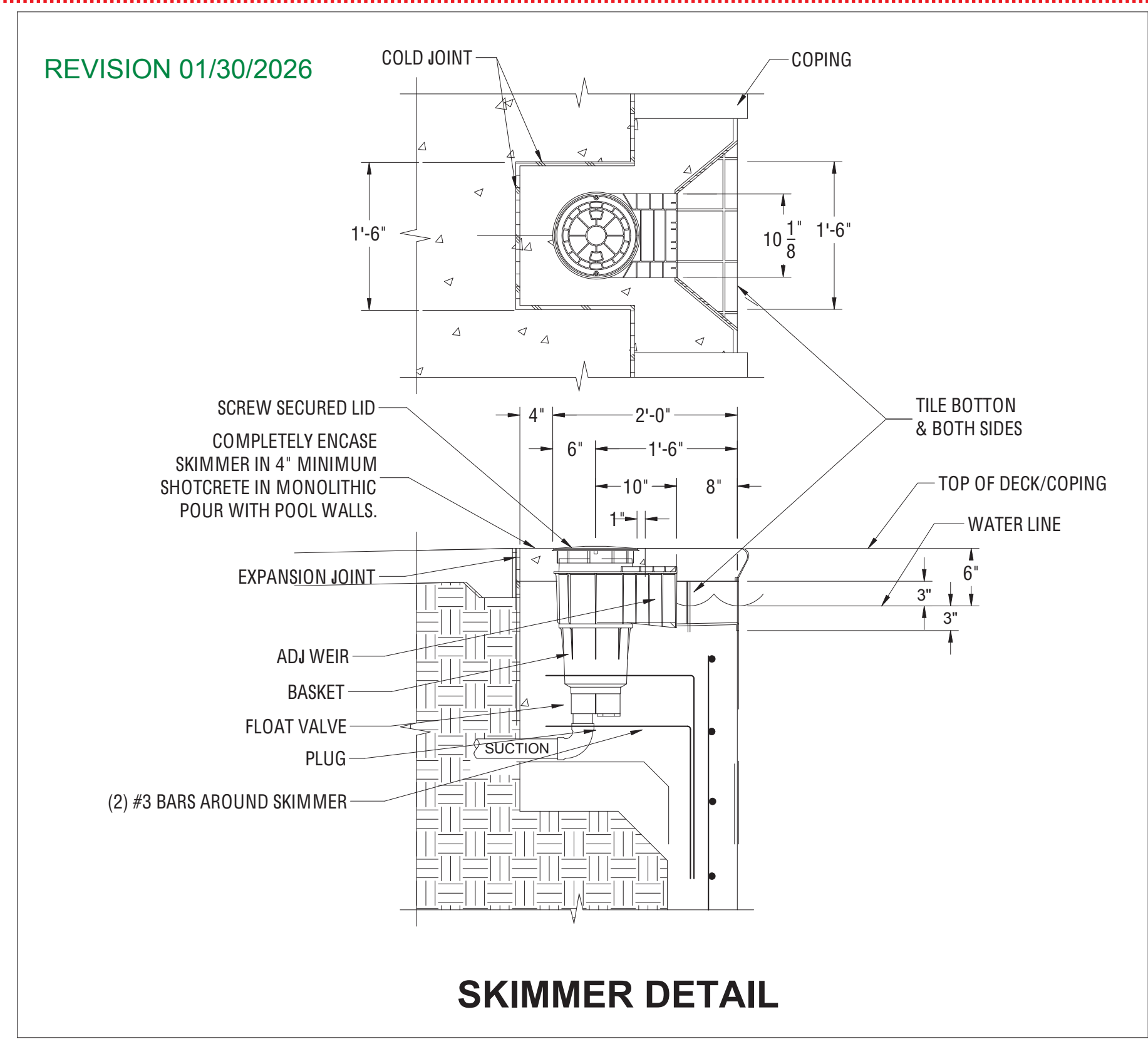
TYPICAL POOL DECK DETAIL (N.T.S)



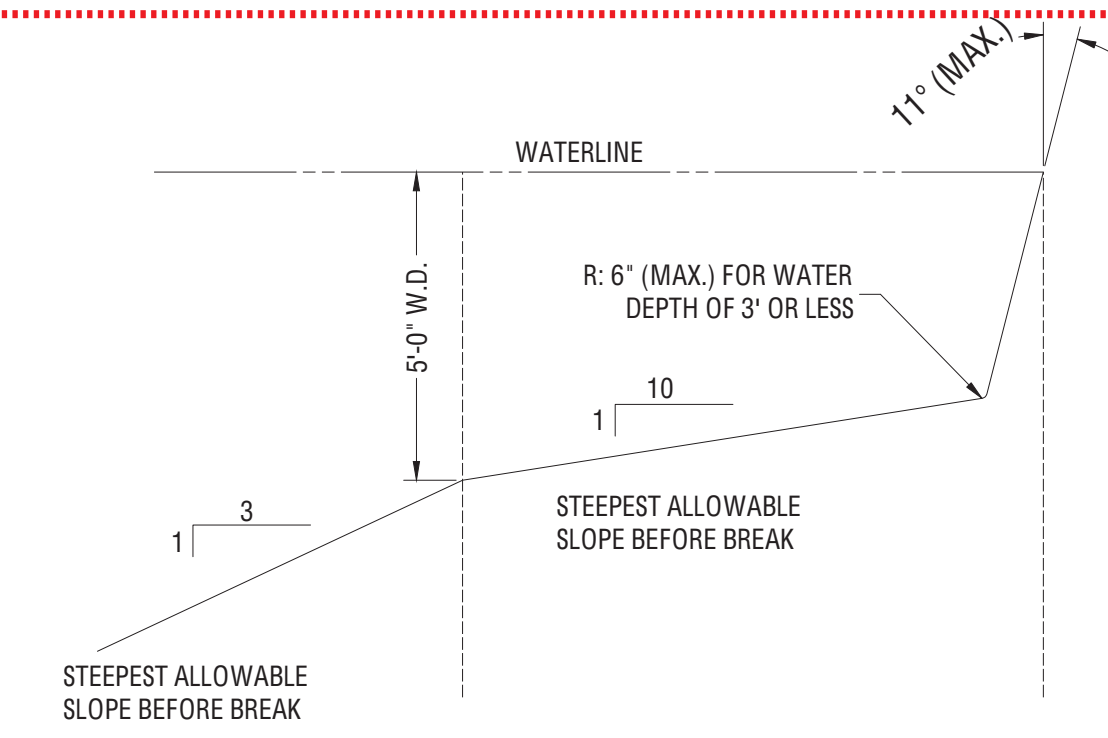
TYPICAL POOL BEAM DETAIL (N.T.S)



DEPTH MARKERS DETAILS



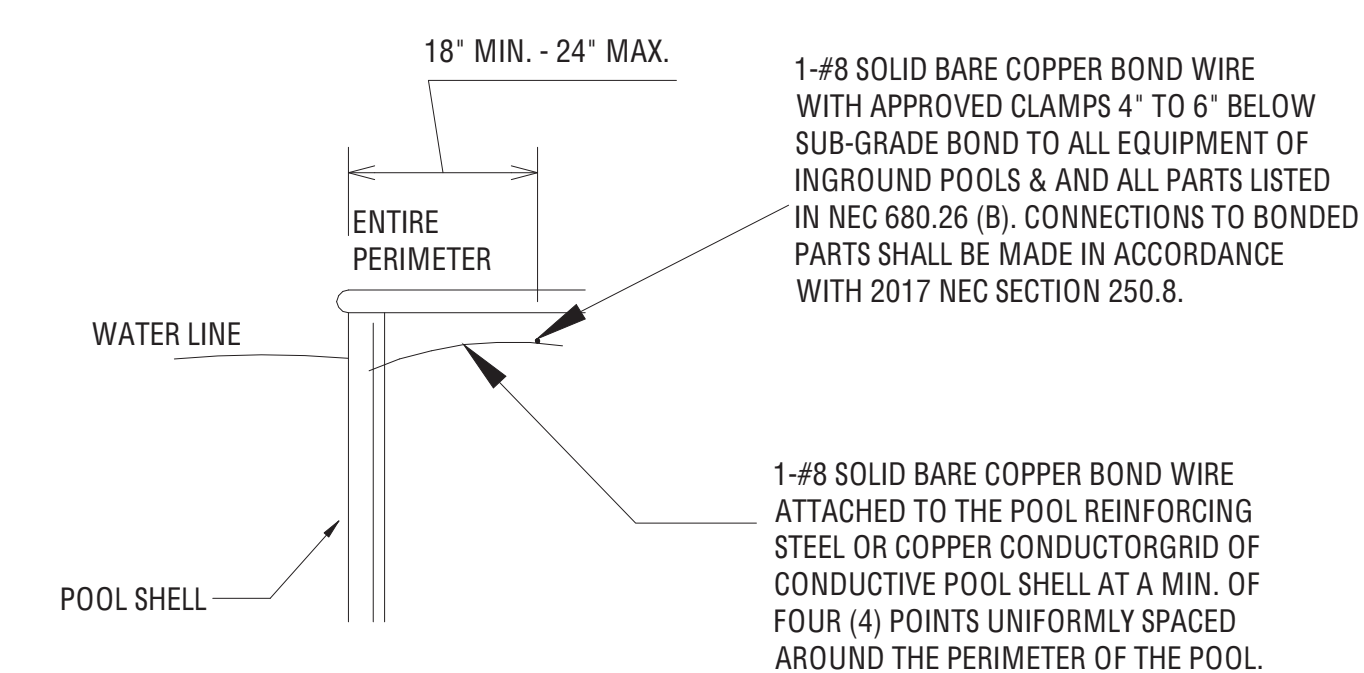
SKIMMER DETAIL



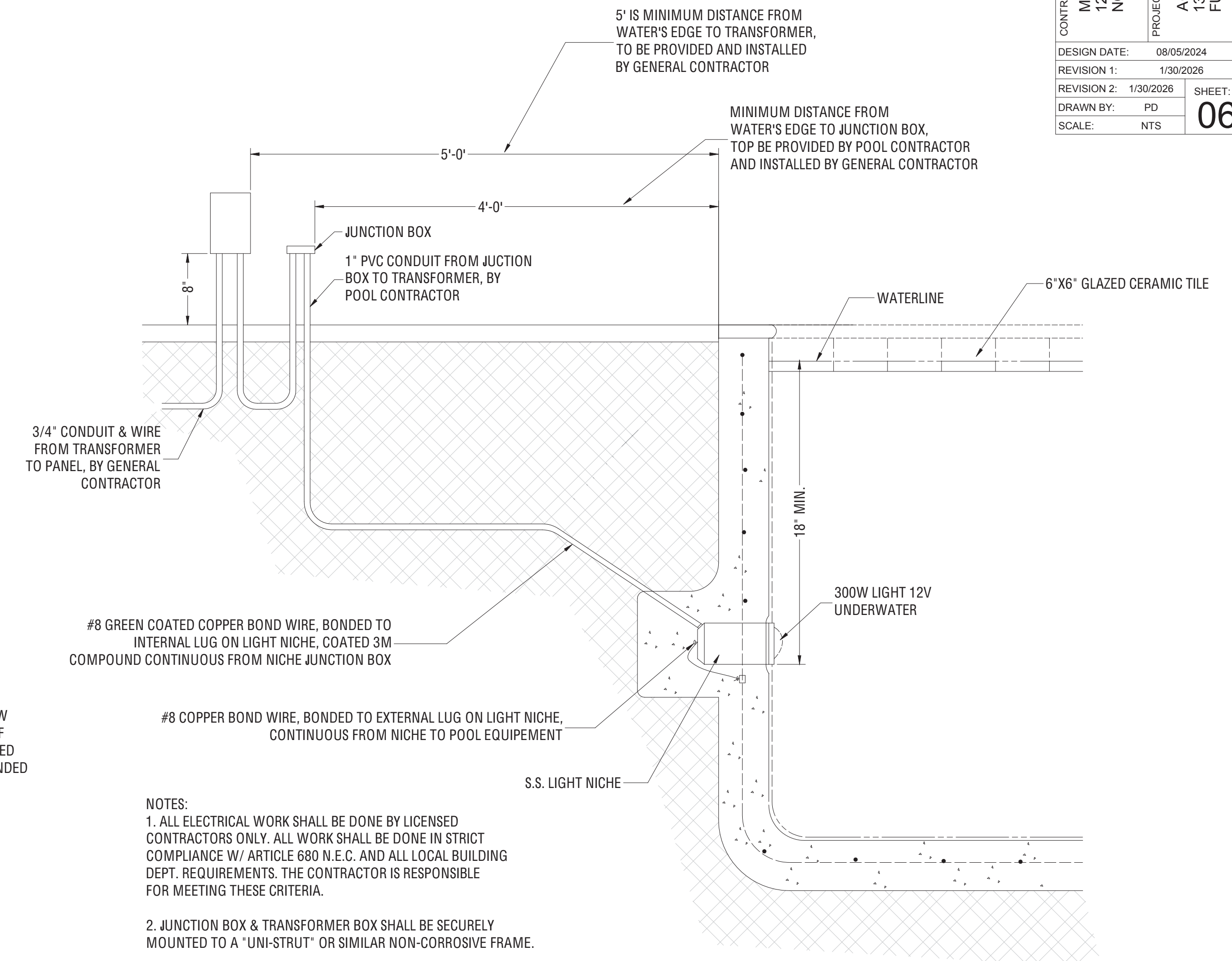
ALLOWABLE POOL PROFILE & FLOOR SLOPES (N.T.S)

**POOL PROFILE NOTES:**

- (A) THE VERTICAL WALLS OF A PUBLIC SWIMMING POOL SHALL NOT EXCEED 11 DEGREES FROM PLUMB. CORNERS FORMED BY INTERSECTION OF WALLS AND FLOORS SHALL BE COVERED OR RADIUSED. HOPPER BOTTOMED POOLS ARE PROHIBITED.
- (B) UNDERWATER LEDGES OR PROTRUSIONS ARE PROHIBITED, EXCEPT THAT UNDERWATER STAIRS, SUN SHELVES, SEATS AND BENCHES MAY BE INSTALLED IN AREAS OF THE POOL NO MORE THAN FOUR FEET DEEP. UNDERWATER BENCHES SHALL HAVE A MAXIMUM SEAT DEPTH OF TWO FEET FROM THE WATER SURFACE, PROTRUDE NO MORE THAN 18 INCHES FROM THE WALL AND BE MARKED BY A TWO INCH CONTRASTING COLOR BAND ON THE LEADING EDGE. UNDERWATER PROTRUSIONS MAY PROVIDE SEATING AT SWIM-UP BARS LOCATED IN OFFSET AREAS AWAY FROM SWIM LANES. UNDERWATER STAIRS MAY ADJOIN A SUN SHELF TO DEEPER WATER PROVIDED THE DEPTH AT THE BOTTOM OF THE STAIRS IS NO MORE THAN FOUR FEET AND THE STAIRS MEET ALL PROVISIONS OF RULE .2521 OF 15A NCAC 18A .2500 SECTION.
- (C) THE SLOPE OF THE BOTTOM OF ANY PORTION OF ANY PUBLIC SWIMMING POOL HAVING A WATER DEPTH OF LESS THAN FIVE FEET (1.52 M) SHALL NOT BE MORE THAN ONE FOOT VERTICAL CHANGE IN 10 FEET (10 CM IN ONE METER) OF HORIZONTAL DISTANCE AND THE SLOPE SHALL BE UNIFORM.
- (D) IN PORTIONS OF POOLS WITH WATER DEPTHS GREATER THAN FIVE FEET (1.52 M), THE SLOPE OF THE BOTTOM SHALL NOT BE MORE THAN ONE FOOT VERTICAL IN THREE FEET (33.3 CM IN ONE METER) OF HORIZONTAL DISTANCE.



EQUIPOTENTIAL BONDING DETAIL (2020 NCEC)



TYPICAL POOL LIGHT, JUNCTION BOX & TRANSFORMER DETAIL (N.T.S)

- NOTES:
1. ALL ELECTRICAL WORK SHALL BE DONE BY LICENSED CONTRACTORS ONLY. ALL WORK SHALL BE DONE IN STRICT COMPLIANCE W/ ARTICLE 680 N.E.C. AND ALL LOCAL BUILDING DEPT. REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE FOR MEETING THESE CRITERIA.
  2. JUNCTION BOX & TRANSFORMER BOX SHALL BE SECURELY MOUNTED TO A "UNI-STRUT" OR SIMILAR NON-CORROSIVE FRAME.

- ADDITIONAL ELECTRICAL NOTES:
1. NO OVERHEAD WIRING SHALL PASS WITHIN TWENTY FOOT (HORIZONTAL DISTANCE OF THE POOL ENCLOSURE).
  2. NO ELECTRICAL OUTLETS SHALL BE LOCATED WITHIN TEN FEET OF THE POOL EDGE.