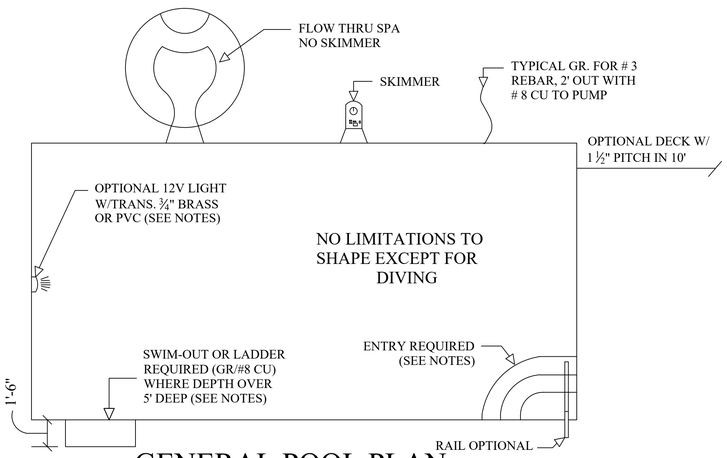
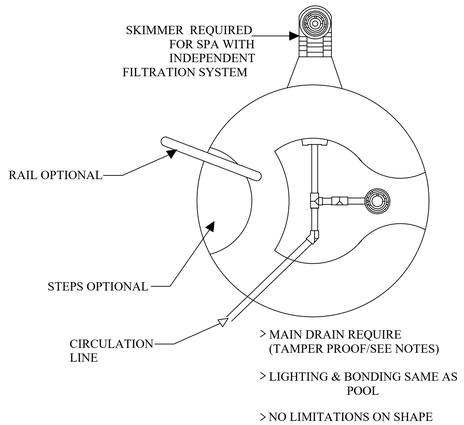


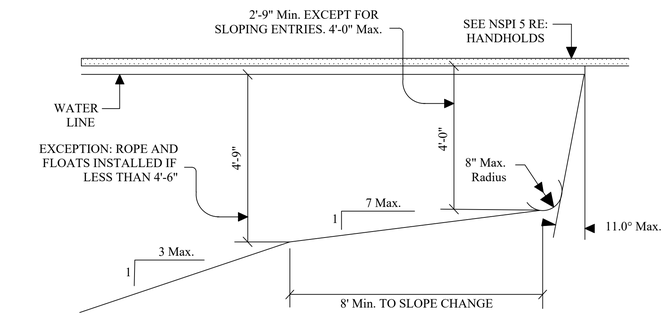
GENERAL POOL PLAN

N.T.S.



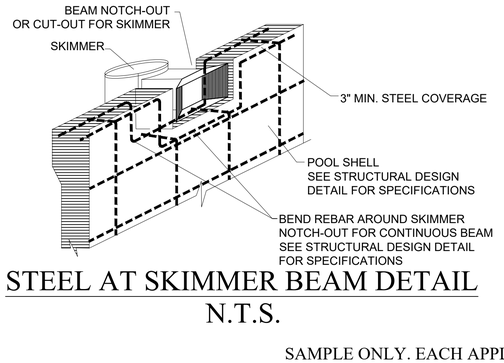
GENERAL SPA PLAN

N.T.S.



POOL SECTION DETAIL

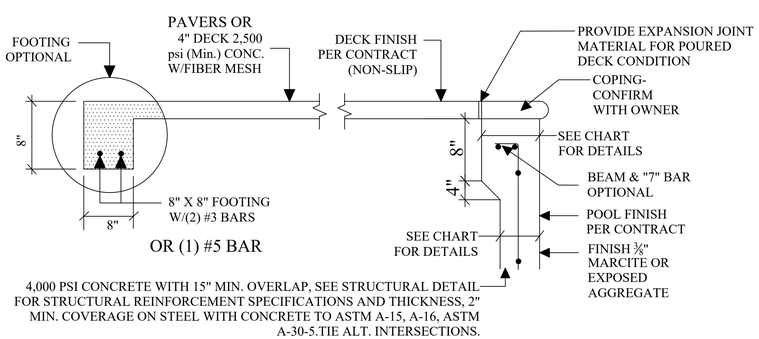
N.T.S.



STEEL AT SKIMMER BEAM DETAIL

N.T.S.

SB836, 6-20-07
FOR BONDING AND GROUNDING SYSTEMS FOR SWIMMING POOLS, THE USE OF AN UNDERGROUND BONDING CONDUCTOR MADE OF #8 AWG. BARE SOLID COPPER WIRE BURIED TO A MINIMUM DEPTH OF 4 INCHES TO 6 INCHES BELOW SUBGRADE, AND 18 TO 24 INCHES FROM INSIDE WALL OF A SWIMMING POOL OR SPA, IS DEEMED A PERMISSIBLE ALTERNATIVE OR EQUIVALENT TO COMPLIANCE WITH s. 680.26(c) OF THE NATIONAL ELECTRICAL CODE.



STRUCTURAL SUBJECT TO SUITABLE SOIL CONDITIONS

POOL/SPA, DECK, BEAM, WALL, FLOOR

N.T.S.

COMPLIES WITH 2023 FLORIDA BUILDING CODE, 8TH EDITION

SAMPLE ONLY. EACH APPLICATION FOR PERMIT SHALL BE BASED ON A TOTAL DYNAMIC HEAD OF 60 ft.

Determine System Flow Rate:
Minimum Flow Rate Required: 35gpm per skimmer (Required: 1 Skimmer per 800 sf)

NOTE:
FOR SINGLE SKIMMER POOLS ONLY.

Pool Volume: 500 sq. ft x 4 ave depth x 7.481 gal/cf = 15,000 gallons
Turnover Time in Hours: 6 hours x 60 min/hr = 360 minutes
Flow Rate: 15,000 gallons / 360 minutes = 42 gpm

PIPE SIZING CHART (MAXIMUN)

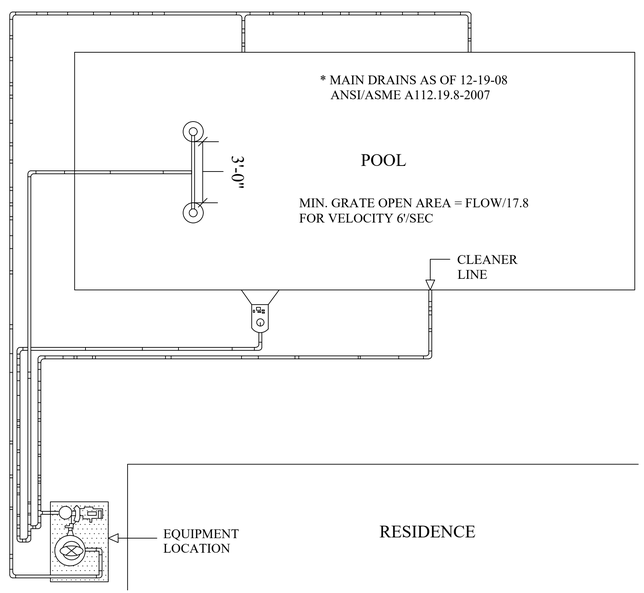
PIPE	SUCTION	PRESSURE
1 ½"	35 GPM	65 GPM
2"	60	105
2 ½	90	147
3"	135	230
4"	235	396

FOR POOLS WITH VOLUME =15,000 GALS.
PUMP: STARITE P6E6DL OR HAYWARD SUPERII ¾ HP 42 GPM 60' TURN

TURNOVER RATE = 6 HOURS = 360 MINS.

FILTER: STARITE PTM 50, 50 GPM OR HAYWARD C751, 75 GPM CAPACITY
MAIN DRAIN: HAYWARD W61048E
CLEANER: HAYWARD VAC LOC

MAIN SUCTION PIPE SIZE 2"
SKIMMER SUCTION PIPE SIZE 2"
CLEANER/VAC PIPE SIZE 1½"
RETURN SUCTION PIPE SIZE 1½"



FLORIDA BUILDING CODE R4501

THE POOL CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL DETAIL DESIGN REQUIREMENTS FOR EACH INDIVIDUAL POOL IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, AND ALL CONSTRUCTION SHALL MEET ALL APPLICABLE CODES INCLUDING PLUMBING, ELECTRICAL AND GAS. PIPING SHALL BE SCH. 40 PVC, NSFpw, MAX. PRESSURE VELOCITY 10 FPS, SUCTION 6 FPS. THE POOL PLAN SHALL SHOW THE DESIGN PLUMBING AS PER THE SAMPLE WITH THE INFORMATION REQUIRED SHOWN. MAIN DRAIN PLUMBING SHALL BE TWO DRAINS SEPARATED BY 3' WITH APPROVED ANSI/ASME A112.19.8.2009 COVERS. AS AN ALTERNATE THE APPROVED DRAINS MAY BE PLACED ON DIFFERENT PLANES. THE TWO DRAINS SHALL HAVE A COMMON SUCTION LINE. SUCTION GRATES MAY BE USED IF APPROVED AT A MAXIMUM OF 1 ½ FPS AND THE SUCTION PIPING IS RECESSED FROM THE GRATE THE DISTANCE EQUAL TO THE SUCTION PIPE SIZE. SKIMMERS DO NOT REQUIRE PROTECTION AND
MUST BE DESIGNED FOR A MINIMUM 25 gpm.
THE FOLLOWING SHALL BE LABELED WITH LABEL MARKER TAPE AT THE FILTER LOCATION: PIPES, VALVES, PUMP(S) OFF SWITCH.

ELECTRICAL REQUIREMENTS:

-WIRING AND BONDING AND ALL ELECTRICAL TO COMPLY WITH CHAPTER 27, 2023 FLORIDA BUILDING CODE 8TH EDITION-RESIDENTIAL AND NEC 2020.
-NO OUTLET OR OVERHEAD POWER WITHIN 10' IF WITHIN 15' PROTECT BY GFI, TRANSFORMER MIN. 10' FROM POOL, 8" ABOVE WATER, J BOX 4' FROM POOL, BRASS TO J BOX OR TRANSFORMER WHICH EVER IS FIRST EXCEPT WHERE PVC IS APPROVED.

SPECIAL SPA REQUIREMENTS:

-MAXIMUM WATER DEPTH 4', MAXIMUM SEAT DEPTH 28", MAX.
-FLOOR SLOPE 1:12
-STEPS: MIN. TREAD 10" X 12", 7" MIN. RISER, 12" MAX. RISER EXCEPT THE BOTTOM STEP MAY BE 14" IF IT IS THE SEAT. INTERMEDIATE TREADS AND RISERS TO BE UNIFORM. IF THE SPA IS OPERATED INTERMITTENTLY IT SHALL HAVE A ONE HOUR TURNOVER, IF CONTINUOUS A SIX HOUR TURNOVER.
-MAXIMUM TEMPERATURE 104 DEGREES.
-MEET ANSI/NSPI ARTICLE XVII, SAFETY INSTRUCTION/SAFETY SIGNS.
-PRESSURE TEST PIPING AT 35 PSI FOR 15 MINUTES OR MEET LOCAL CODE IF GREATER.

GENERAL DESIGN REQUIREMENTS

-DESIGN, CONSTRUCTION AND WORKMANSHIP SHALL BE IN CONFORMITY WITH THE REQUIREMENTS OF APSP/ICC 3, APSP/ICC 4, APSP/ICC 5, AND APSP/ICC 6 AND APSP/ICC 7 BASED ON THE POOL TYPE.
-SEE NSPI FOR DIVING WATER ENVELOPES.
-SLIDES SHALL MEET THE MANUFACTURE'S INSTALLATION REQUIREMENTS.
-ALL POOLS WHETHER PUBLIC OR PRIVATE SHALL BE PROVIDED WITH A LADDER OR STEPS IN THE SHALLOW END WHERE THE WATER DEPTH EXCEEDS 24 INCHES (610 MM). IN PRIVATE POOLS WHERE WATER DEPTH EXCEEDS 5 FEET (1524 MM) THERE SHALL BE LADDERS, STAIRS OR UNDERWATER BENCHES/ SWIM-OUTS IN THE DEEP END. WHERE MANUFACTURED DIVING EQUIPMENT IS TO BE USED, BENCHES OR SWIM-OUTS SHALL BE RECESSED OR LOCATED IN A CORNER.
-CIRCULATION SYSTEMS, COMPONENTS AND EQUIPMENT SHALL COMPLY WITH NSF 50.
-THE MAXIMUM TURNOVER RATE IS 12 HOURS.
-FILTERS SHALL HAVE AN AIR RELEASE AND PRESSURE GAGE.
-PUMPS 3 HP AND LESS SHALL MEET ANSI/UL1081 CORROSION RESISTANT WITH STRAINER AND MEET THE REQUIRED FLOW.
-SURFACE SKIMMERS SHALL MEET NSF 50 AND THERE SHALL BE ONE FOR EVERY 800 SQUARE FEET OF SURFACE AREA.
-APPROVED MANUFACUTRED INLET FITTNGS FOR THE RETURN OF RECIRCULATED POOL WATER SHALL BE PROVIDED ON THE BASIS OF AT LEAST ONE PER 300 SQUARE FEET (28 m2) OF SURFACE AREA. SUCH INLET FITTINGS SHALL BE DESIGNED AND CONSTRUCTED TO INSURE AN ADEQUATE SEAL TO THE POOL STRUCTURE AND SHALL INCORPORATE A CONVENIENT MEANS OF SEALING FOR PRESSURE TESTING OF THE POOL CIRCULATION PIPING. WHEN MORE THAN ONE INLET IS REQUIRED, THE SHORTEST DISTANCE BETWEEN ANY TWO REQUIRED INLETS SHALL BE AT LEAST 10 FEET (3048 MM).
-HEATER SHALL MEET ANSI-Z21.56 OR UL 1261 OR UL 559.
-DISINFECTANT EQUIPMENT SHALL COMPLY WITH NSF 50.
-PRESSURE TEST PIPING AT 35 PSI FOR 15 MINUTES OR MEET LOCAL CODE IF GREATER.
-RESIDENTIAL SWIMMING BARRIER REQUIREMENTS TO MEET SECTONS 4501.17
-WASTE DISPOSAL TO COMPLY WITH SECTION 454.2.10 R403.10 (MANDATORY)
POOLS & PERMANENT SPA ENERGY CONSUMPTION
- THE ENERGY CONSUMPTION OF POOLS AND PERMANENT SPAS SHALL BE IN ACCORDANCE WITH SECTIONS R403.10.1 THROUGH R403.10.5.

IT HAS BEEN CERTIFIED THAT THESE DESIGN REQUIREMENTS ARE IN COMPLIANCE WITH THE 2023 FLORIDA BUILDING CODE 8TH EDITION, R4501, ANSI/APSP/ICC 3, ANSI/APSP/ICC 4, ANSI/APSP/ICC 5, AND ANSI/APSP/ICC 6 AND ANSI/APSP/ICC 7, ANSI/APSP/ICC 14, ANSI/APSP/ICC 15.

STRUCTURAL SPECIFICATIONS					
POOL DEPTH	MINIMUM STRENGTH	WALLS	WALL THICKNESS	FLOORS	FLOOR THICKNESS
3' - 5'	4,000 PSI	#3 REBAR 10" O.C.E.W.	6" MIN.	#3 REBAR 10" O.C.E.W.	6" MIN.
5'-6'	4,000 PSI	#4 REBAR 6" O.C.E.W.	8" MIN.	#4 REBAR 6" O.C.E.W.	8" MIN.
6'-7'	4,000 PSI	#5 REBAR 6" O.C.E.W.	10" MIN.	#5 REBAR 6" O.C.E.W.	8" MIN.

NOTES:
THE STRUCTURAL SPECIFICATIONS PROVIDED ARE FOR POOLS 500 SQ. FT. OR LESS. STRUCTURAL DATA PROVIDED ON THIS SHEET SHALL BE CONSIDERED VOID FOR POOLS EXCEEDING 500 SQ. FT.
THE STRUCTURAL SPECIFICATIONS PROVIDED SHALL NOT BE SUBSTITUTED DURING BIDDING OR CONSTRUCTION
DESIGN FOR BASIC POOL CONSTRUCTION ONLY - ALL STRUCTURAL, ARCHITECTURAL AND GEOTECHNICAL SPECIFICATIONS SHALL BE SUBMITTED FOR REVIEW TO A LICENSED ENGINEER PRIOR TO CONSTRUCTION

Columbia County Building Department
Plans Reviewed for Code Compliance
State of Florida

G.B. COLLINS ENGINEERING P.A.
CERTIFICATE OF AUTHORIZATION 2795
AQUATIC ENGINEERING CONSULTANTS
32707 US HIGHWAY 19 NORTH
PALM HARBOR, FLORIDA 34684
GB_COLLINS@VERIZON.NET
(727)442-8478

WENTWORTH RESIDENCE
190 SW THISTLEWOOD LN
FORT WHITE, FL 32038

STANDARD RESIDENTIAL POOL AND/OR SPA DESIGN

SAMUEL A. LIBERATORE LICENSE No. 55740 STATE OF FLORIDA PROFESSIONAL ENGINEER

This item has been electronically signed and sealed by Sam Liberatore PE using a Digital Signature and date. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Samuel A Liberatore
2024.06.18 14:18:55 -04'00'

SAMUEL A. LIBERATORE, P.E.
#55740

DATE	SCALE
6-17-2024	As Shown