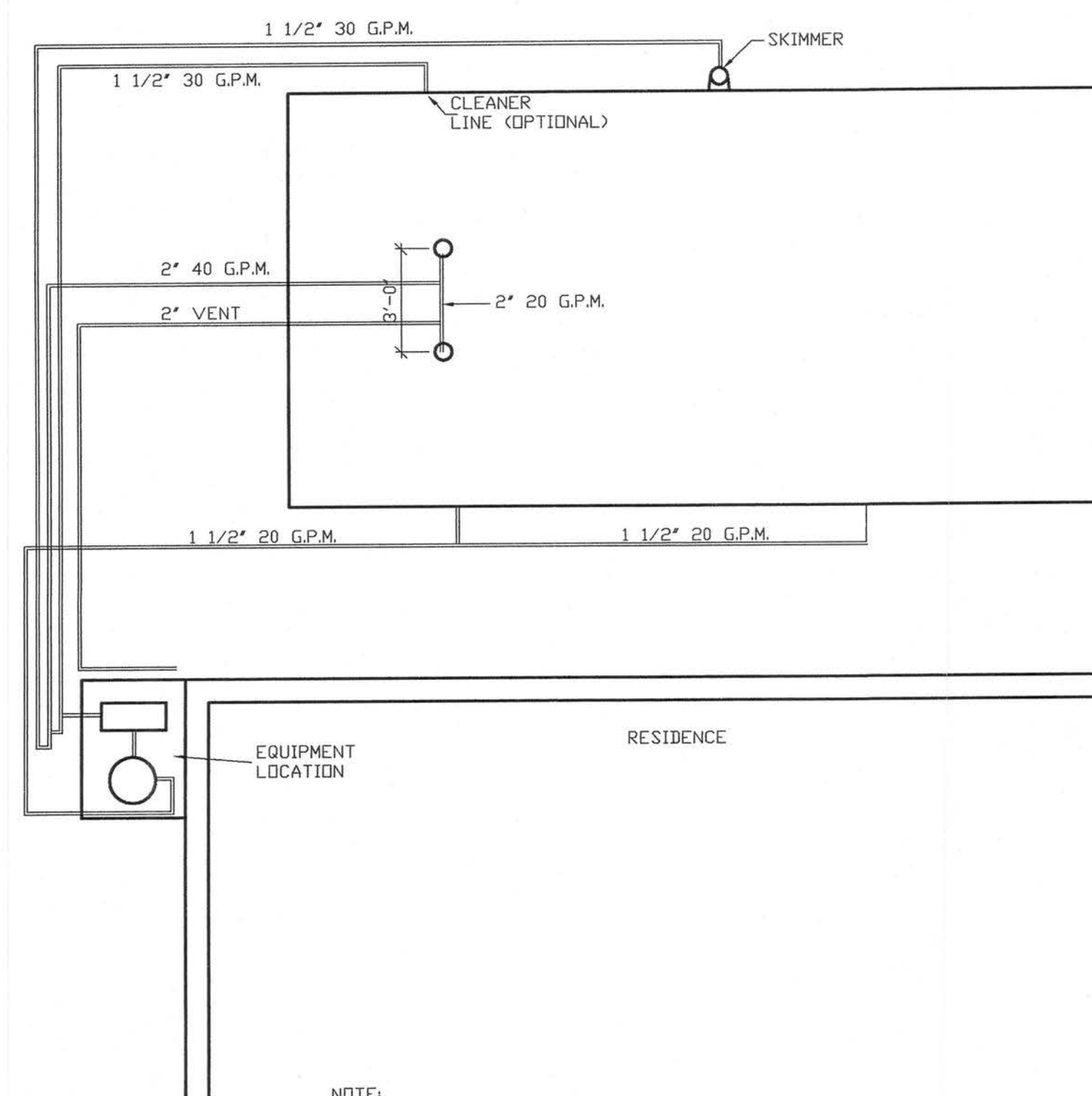
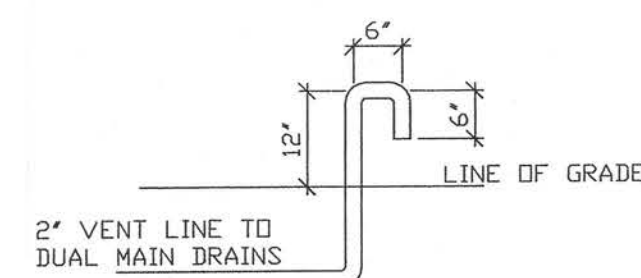


GENERAL POOL PLAN  
SCALE: 1/4" = 1'-0"

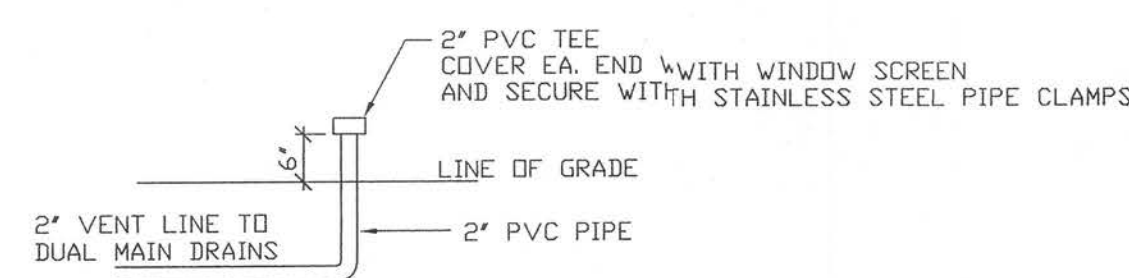
PIPE	SUCTION	PRESSURE
1 1/2"	35 GPM	60 GPM
2"	60	100
2 1/2"	85	145
3"	135	225
4"	235	375



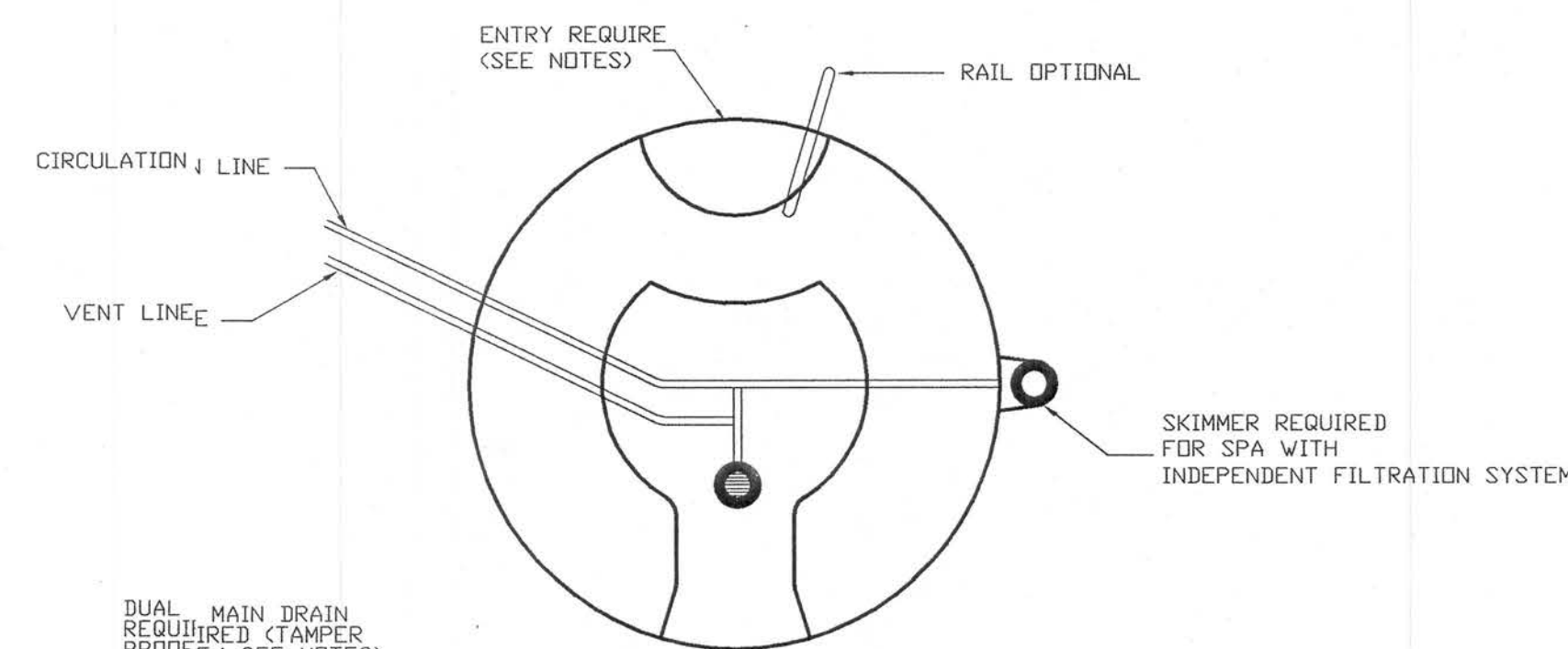
NOTE:  
THE VENT LINE SHALL BE TIED TO THE 2" LINE THAT  
TIES THE DRAINS TOGETHER, THE SUCTION LINE SHALL  
BE TIED THE SAME WAY AS SHOWN IN THE DIAGRAM.  
THE VENT SHALL BE AT LEAST 18' LONG AND NO MORE  
THAN 30' LONG. THIS SYSTEM WILL REACT WITHIN THE  
'3" SECOND TIME FRAME



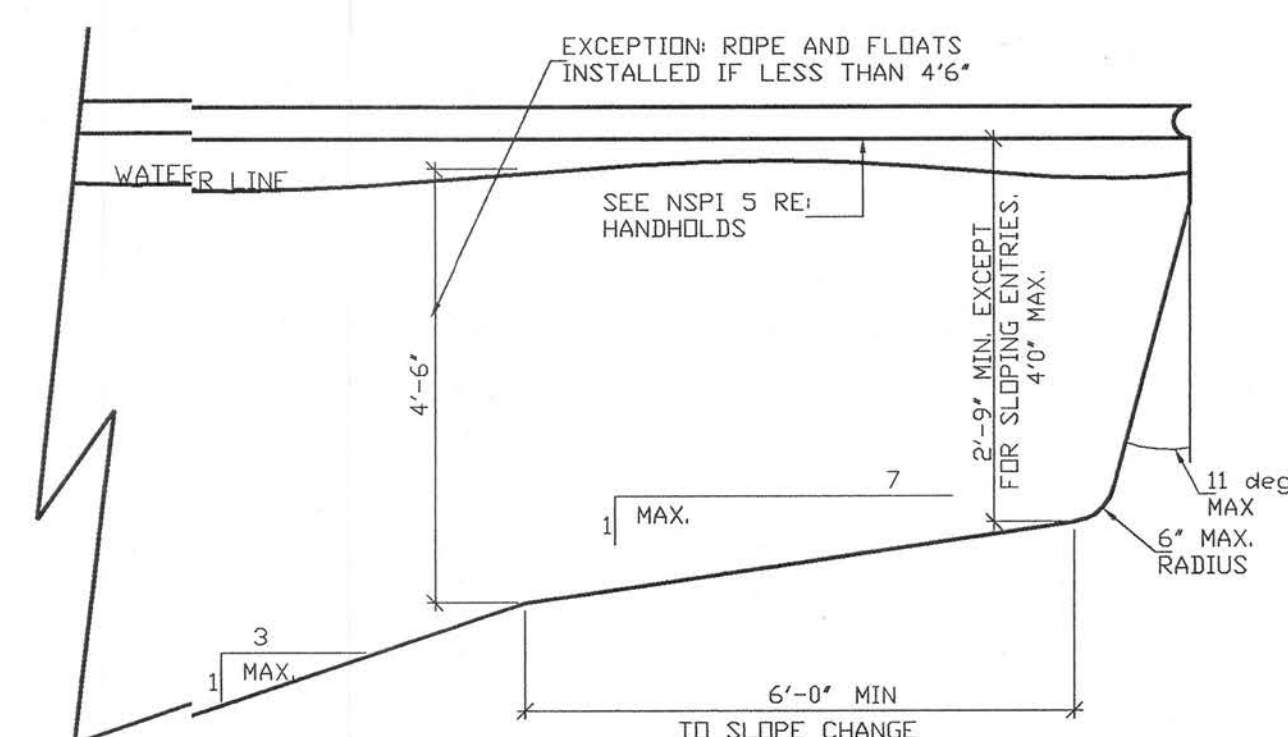
VENT DETAIL  
SCALE: 1/2" = 1'-0"



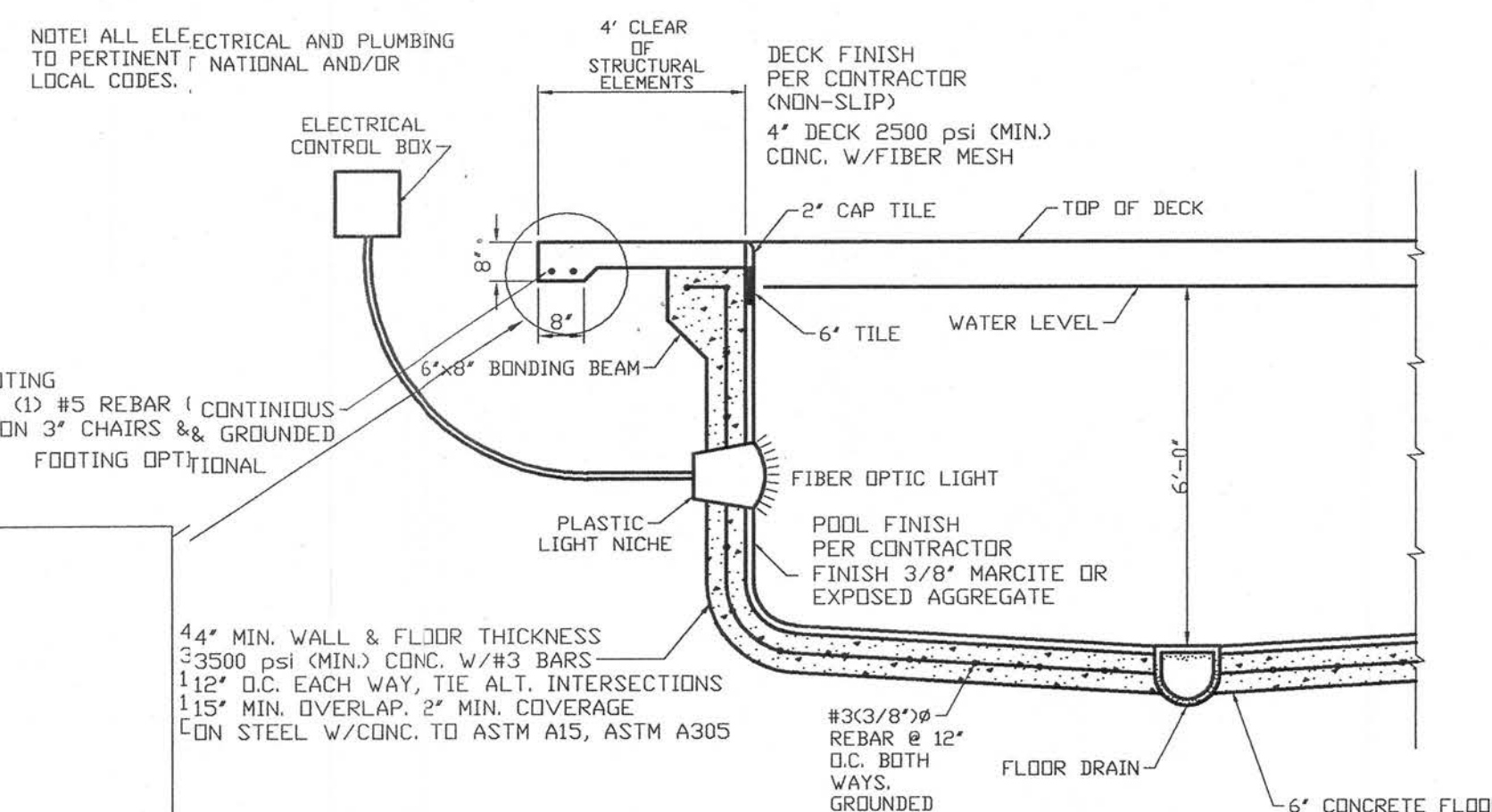
OPT. VENT DETAIL  
SCALE: 1/2" = 1'-0"



GENERAL SPA PLAN  
SCALE: 1/2" = 1' - 0"



POOL SECTION DETAIL  
SCALE: 1/2" = 1' - 0"



TYPICAL FLOOR AND WALL SECTION  
SCALE: N.T.S.

DESIGN DIMENSIONS SHALL COMPLY WITH SPECIFICATIONS IN NSPI 5 AND NSPI 3 BASED ON THE POOL TYPE.

- SECTIONS FOR DIVING WATER ENVELOPES,
- SLIDES SHALL MEET THE MANUFACTURER'S INSTALLATION REQUIREMENTS.
- ENTRY/EXIT: REQUIRED AT THE SHALLOW END AND KEYS TO BE OPENED FROM BEING ACCEPTABLE AND STAIRS 60" MIN TREAD WITH 240 SQUARE INCH MIN. AREA, 12" MAX RISER WITH INTERMEDIATE TREADS AND RIGIDLY FASTENED TO LANDING UNDER WATER.
- SEATS, AND SWIM OTS (MAX. 20" BELOW WATER).
- CIRCULATION SYSTEMS, COMPONENTS AND EQUIPMENT SHALL COMPLY WITH NSF 50.
- THE MAXIMUM TURNING SPEED SHALL BE 1000S.
- FILTERS SHALL HAVE AN AIR RELEASE AND PRESSURE GAGE.
- PUMPS, AND LESS SHALL MEET ANSI/UL1081 CORROSION RESISTANT WITH STRAINER AND MEET THE REQUIRED FLOW.
- SURFACE SKIMMERS SHALL MEET NSF 50 AND HEATER SHALL BE ONE FOR EVERY 800 SQUARE FEET OF SURFACE AREA.
- RETURN INLETS SHALL BE A MINIMUM OF ONE FOR EVERY 400 SQUARE FEET.
- HEATER SHALL MEET ANSI-Z21.56 OR UL 1261 OR UL559.
- DISINFECTANT EQUIPMENT SHALL COMPLY WITH NSF 50.
- TEMPERATURE TEST PIPING AT 15 PSI FOR 30 MINUTES OR MEET LOCAL CODE IF GREATER.

28" MAXIMUM WATER DEPTH 4", MAXIMUM SEAT DEPTH  
20", 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, AND THE STEPS IS OPERATED  
INTERMITTENTLY IT SHALL HAVE A ONE HOUR  
TURNOVER, IF CONTINUOUS A SIX HOUR TURN OVER.  
-MAXIMUM TEMPERATURE 104 DEGREES.  
-MEET ANSI/NSFP ARTICLE XVII, SAFETY  
INSTRUCTIONS/SAFETY SIGNS  
-PRESSURE TEST PIPING AT 25 PSI FOR 30 MINUTES OR  
MEET LOCAL CODE IF GREATER.

-WIRING AND BONDING AND ALL ELECTRICAL TO  
NEC ART. 680 OR LOCAL CODE.  
-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 WITH EVER IS  
FIRST EXCEPT WHERE PVC IS APPROVED.

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 BE IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, AND ALL APPLICABLE CODES INCLUDING PLUMBING, ELECTRICAL AND GAS. PIPING SHALL BE SCH. 40 PBC, NSFPM, MAX. PRESSURE VELOCITY 10 FPS, SUCTION & 6 FPS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR 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 MAIN DRAIN ALTERNATE. THE APPROVED DRAINS MAY BE PLACED ON DIFFERENT PLANES. THE TWO DRAINS SHALL HAVE COMMON SUCTION PIPING TO THE MAIN DRAIN. BE USED IF APPROVED AT A MAXIMUM DCP 1/2 FPS AND THE SUCTION PIPING IS RECESSED FROM THE GRATE. THE DISTANCE EQUAL TO THE SUCTION PIPE SIZE. ADDITION A 1/2" AIR RELEASE VALVE TO THE SYSTEM MUST BE INSTALLED. THIS MAY CONSIST OF AN AIR RELEASE SYSTEM. THE VENT PIPE SHALL BE TIED TO THE MAIN DRAIN LINES, SIZED THE SAME AS THE MAIN DRAIN. THE MAIN DRAIN SHALL BE TIED TO THE FILTER LOCATION, ELBOWED UP AND OVER WITH A GRATE FOR PROTECTION AND LABELED "SAFETY VENT".

SUCKING MAINS DO NOT REQUIRE PROTECTION AND MAY BE DESIGNED FOR 30 GPM SUCTION.

THE FOLLOWING SHALL BE LABELED WITH RED PLATE MARKER TAPE AT THE FILTER LOCATION: PUMP LINES, SAID MAIN OR "SAFETY DEVICE", PUMPS) OFF SWITCH.

IT HAS BEEN CERTIFIED THAT THESE DESIGN REQUIREMENTS ARE IN COMPLIANCE WITH THE 2004 FLORIDA BUILDING CODE, ANSI/NSP-3 1992, STANDARD FOR PERMANENTLY INSTALLED SPAS AND HOT TUBS-1992, AND THE FLORIDA BUILDING CODE FOR RESIDENTIAL IN-GROUND SWIMMING POOLS.

1. ALL WORK TO BE DONE ACCORDING TO THE 2004 FLORIDA BUILDING CODES.
2. MINIMUM DESIGN SOIL BEARING CAPACITY TO BE 2000 PSF, SOIL CAPACITY TO BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION.
3. NOTHING TO BE EXCAVATED OR DISTURBED. VEGETATION AND DELETERIOUS MATERIAL SHALL BE PLACED ON AN UNDISTURBED BASE.
4. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO INSURE THE SAFETY OF THE BUILDING AND ITS COMPONENT PARTS DURING ERECTION. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF WHATEVER TEMPORARY BRACING, GUYS, OR TIE WINDS THAT MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER COMPLETION OF THE PROJECT.
5. ALL DIMENSIONS AND ELEVATIONS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE VERIFIED AND SHALL CONFORM TO THE ARCHITECTURAL DRAWINGS.
6. CONCRETE:
  - MINIMUM COMPRESSIVE CONCRETE STRENGTH TO BE 3000 PSI IN 28 DAYS. ALL CONCRETE SHALL BE "READY MIXED" AND IN ACCORDANCE WITH A.S.T.M. SPECIFICATION C-94. ALL CONCRETE MODULAR UNITS SHALL HAVE A COMPRESSIVE STRENGTH OF 1500 PSI WITH TYPE M OR S MORTAR, 2000 PSI.
7. SLAB ON FILL:
  - INTERIOR CONCRETE SLABS POURED ON FILL TO BE POURED OVER WATERPROOF MEMBRANES. ALL SLABS TO BE REINFORCED WITH #6x 10/10 WELDED WIRE MESH.
8. ALL STEEL SHALL BE 40 KSI WITH A MINIMUM CORAL COVER OF 3" AGAINST SOIL, AND SHALL HAVE A MINIMUM LAP OF 40 TIMES THE DIAMETER OF THE REBAR.
9. BASIC LOADING FOR FACTORED LOADING:


**RICHARD J. MATASSA, P.E.**  
**PE #51431**  
**12 SOUTH MAIN ST**  
**BROOKSVILLE, FL 34601**  
**(352) 796-6319**

[illegible]

**STANDARD RESIDENTIAL  
POOL AND/ OR SPA DESIGN**

**Pool For:  
Lee Residence  
2019 Southeast C.R. 18  
Lake City, FL**

**To Be Constructed By:  
Lessman Pools**



**CIVIL-TECH  
CONSULTING  
ENGINEERS, INC.**  
CIVIL ENGINEERS & PLANNERS

12 South Main Street  
Burlington, MA 01803  
Tel. - (508) 796-6310  
Fax - (508) 799-9203  
E9#-0007748

**DRAWN**  
**P.A.R.**  
**CHECKED**

**DATE**  
**05-21-05**

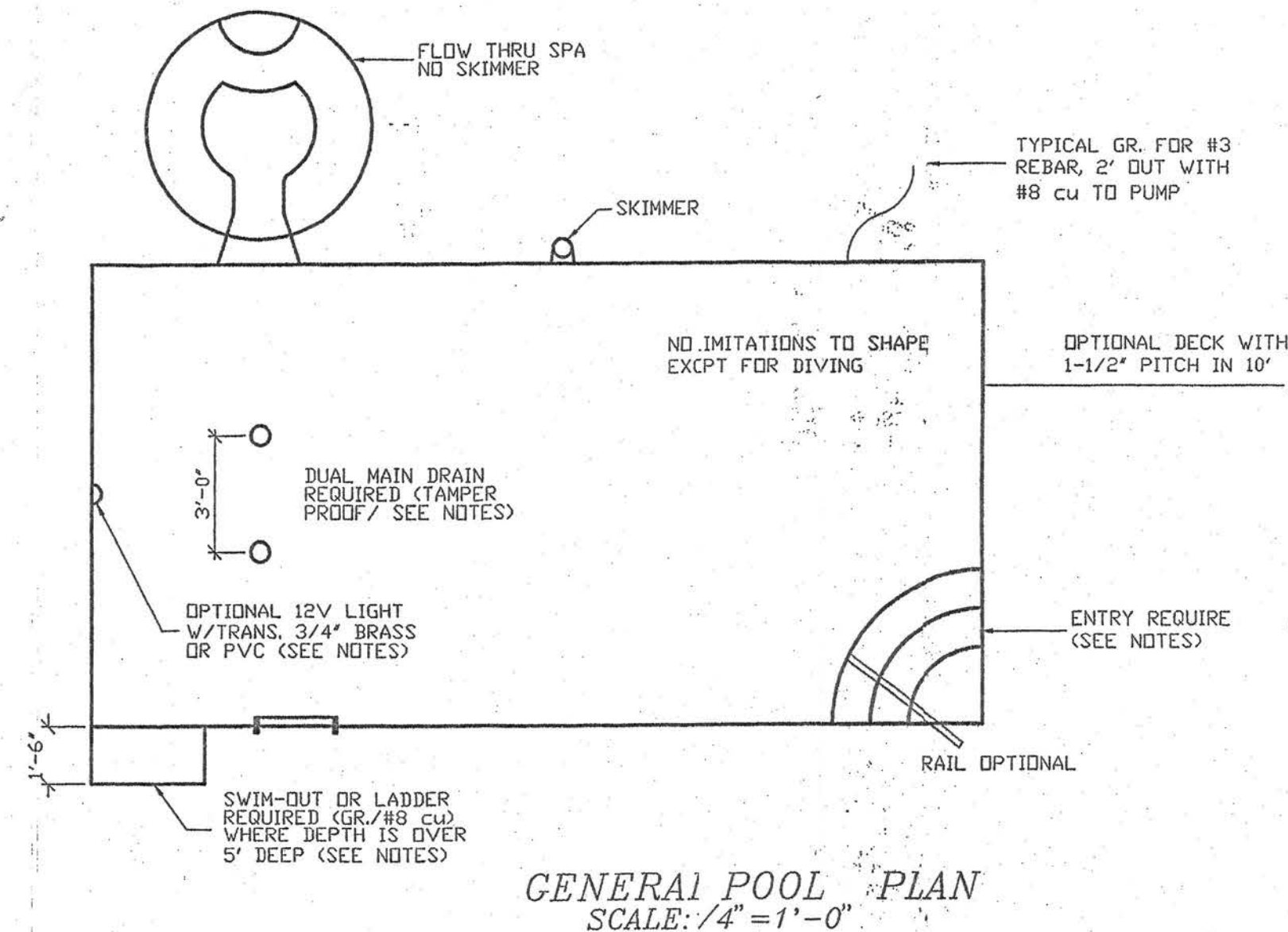
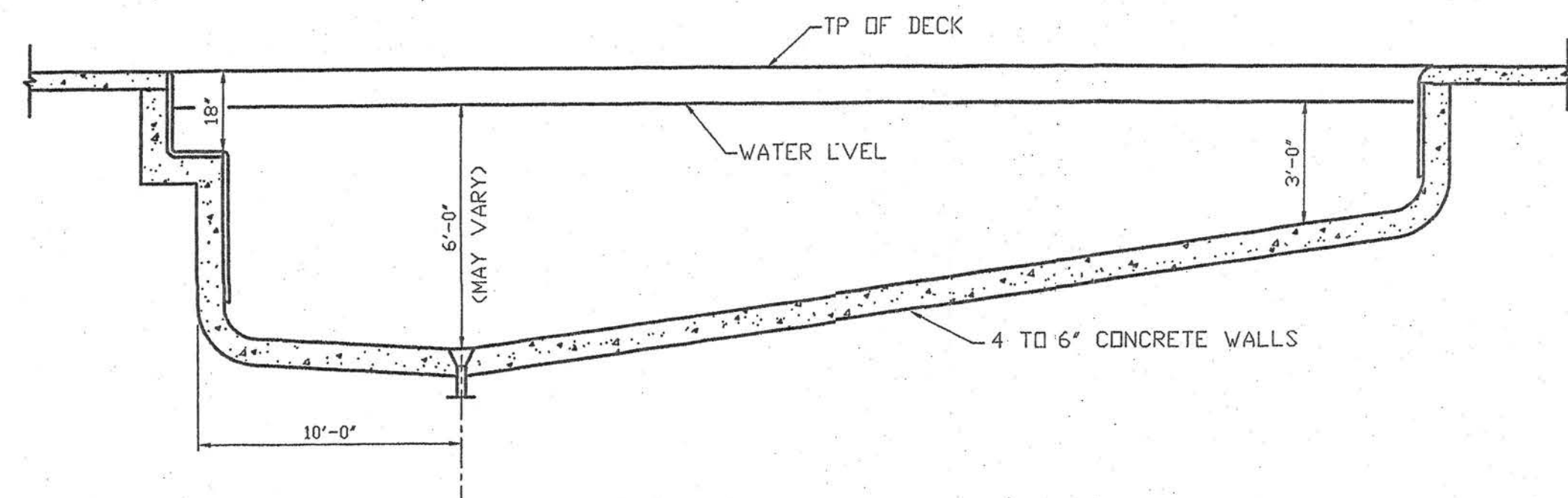
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**SHEET**

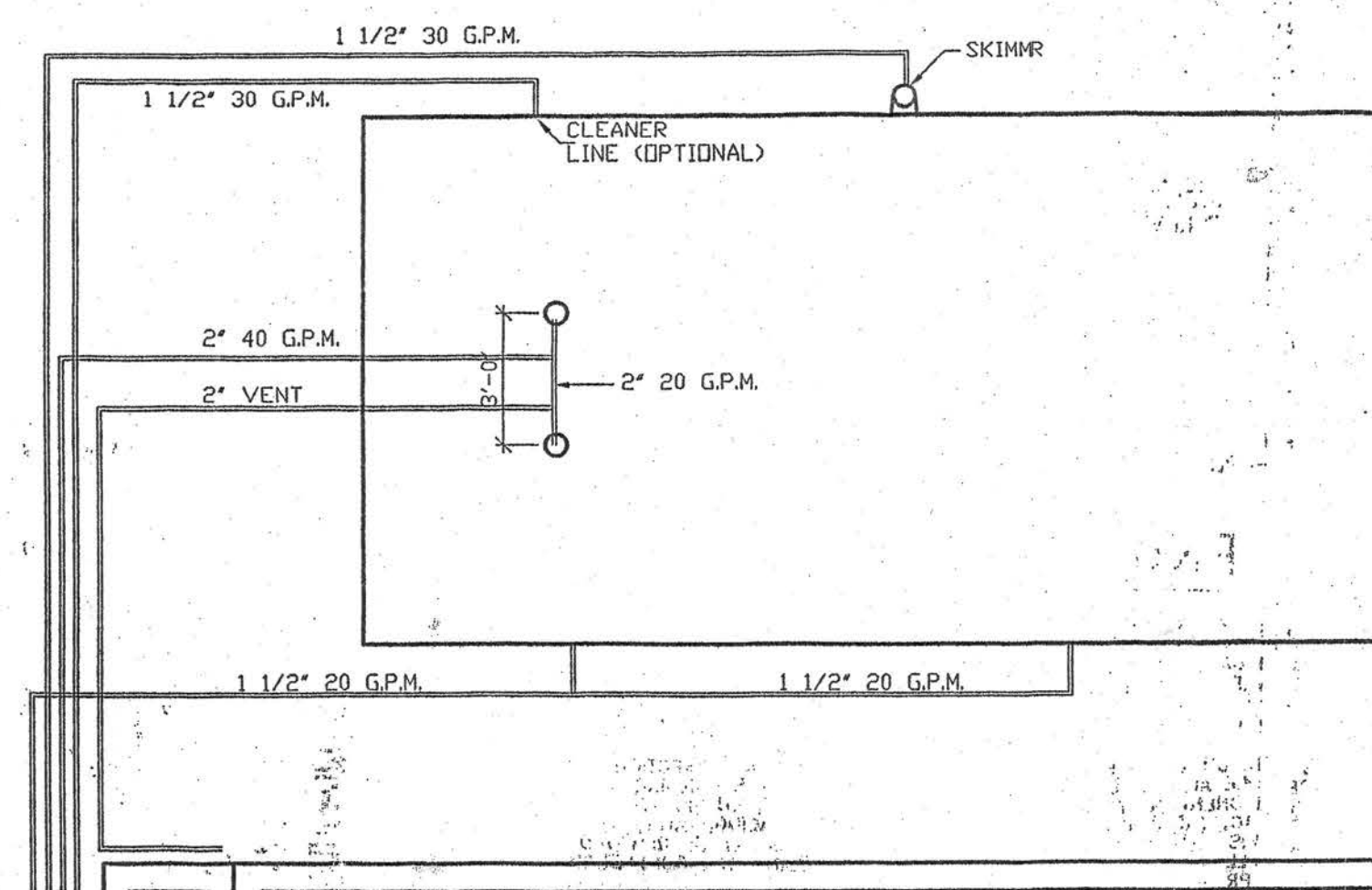
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**OF 1 SHEETS**





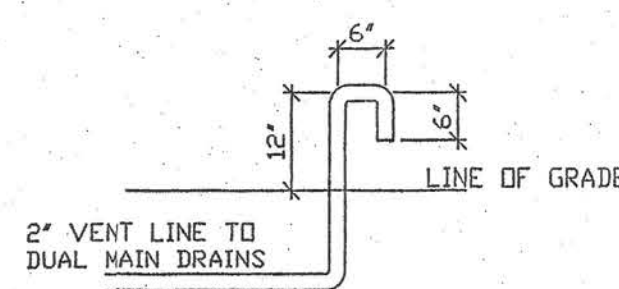
PIPE	SUCTION	PRESSURE
1 1/2"	35 GPM	60 GPM
2"	60	100
2 1/2"	85	145
3"	135	225
4"	235	375



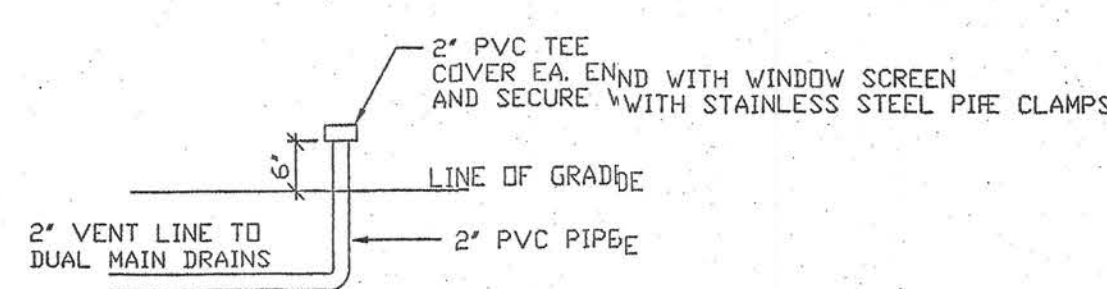
REVIEWED FOR CODE COMPLIANCE  
DATE: 9-8-03 REVIEWER: RB  
OCCUPANCY: R3 TYPE CONST: 17  
CODE: FBC-01 ZONING

APPROVED FOR MASTER  
LESSMAN POOLS MASTER #15

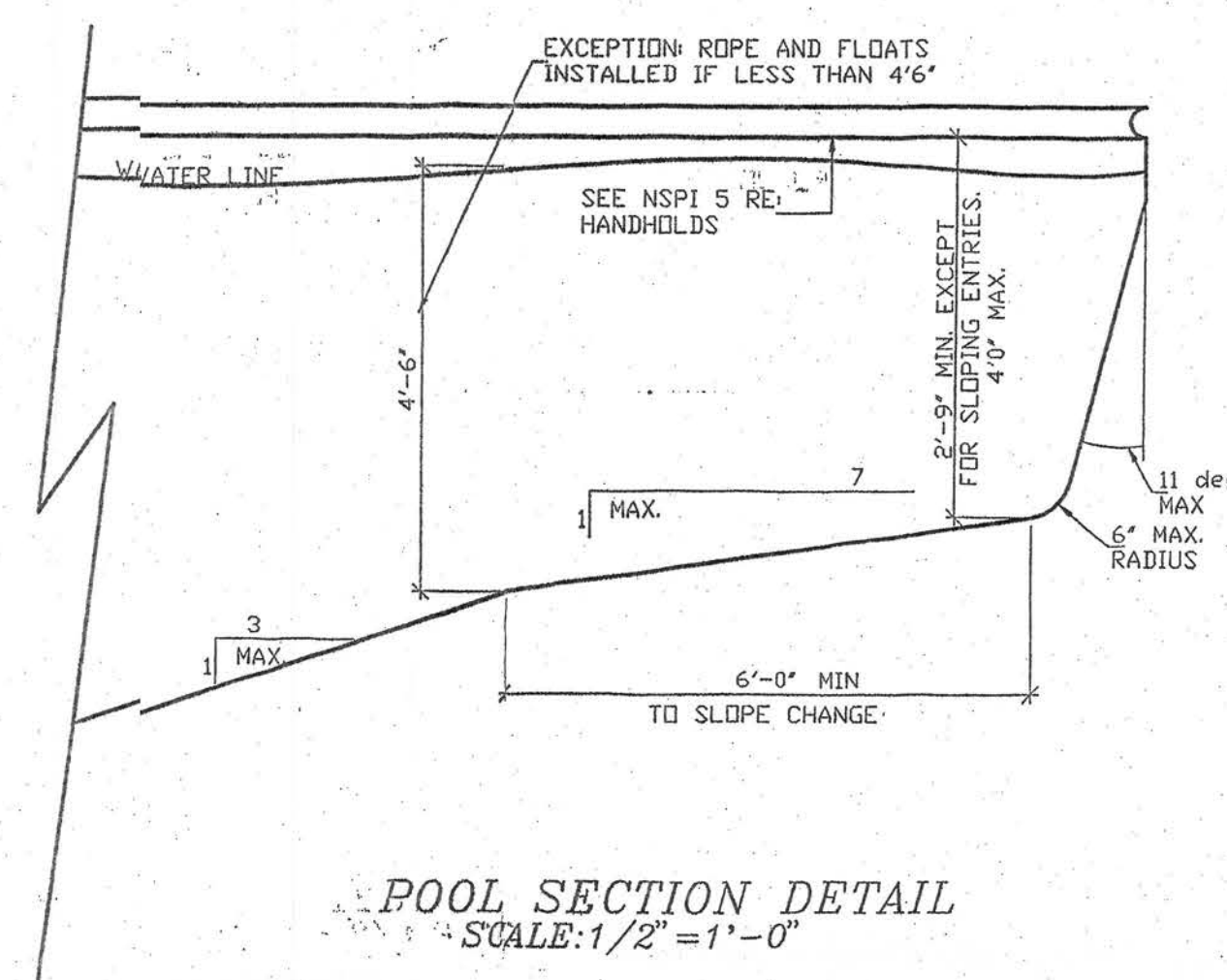
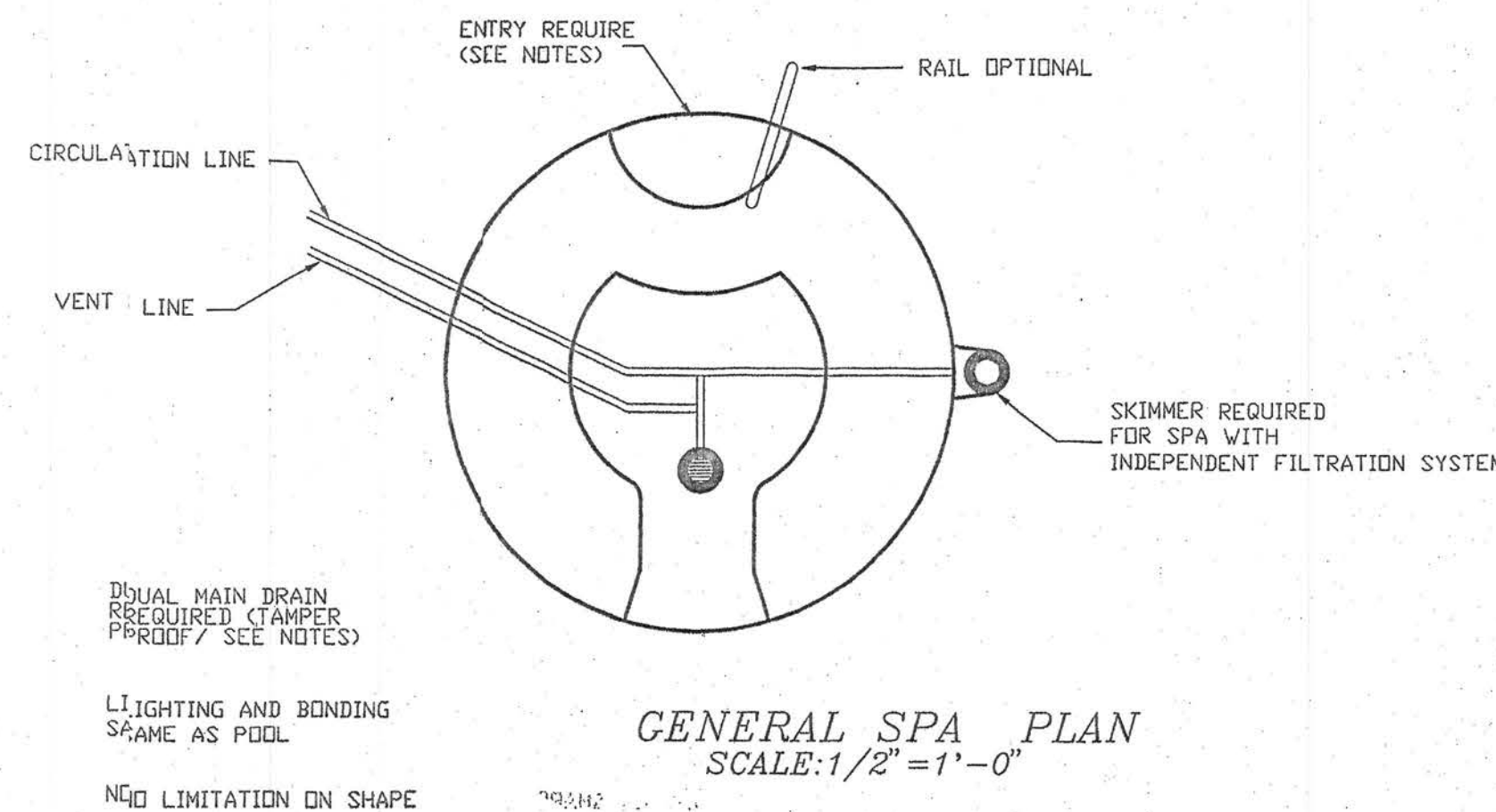
NOTE: THE VENT LINE SHALL BE TIED TO THE 2" LINE THAT TIES THE DRAINS TOGETHER. THE SUCTION LINE SHALL BE TIED THE SAME WAY AS SHOWN IN THE DIAGRAM. THE VENT SHALL BE AT LEAST 18" LONG AND NO MORE THAN 30' LONG. THIS SYSTEM WILL REACT WITHIN THE 3" SECOND TIME FRAME.



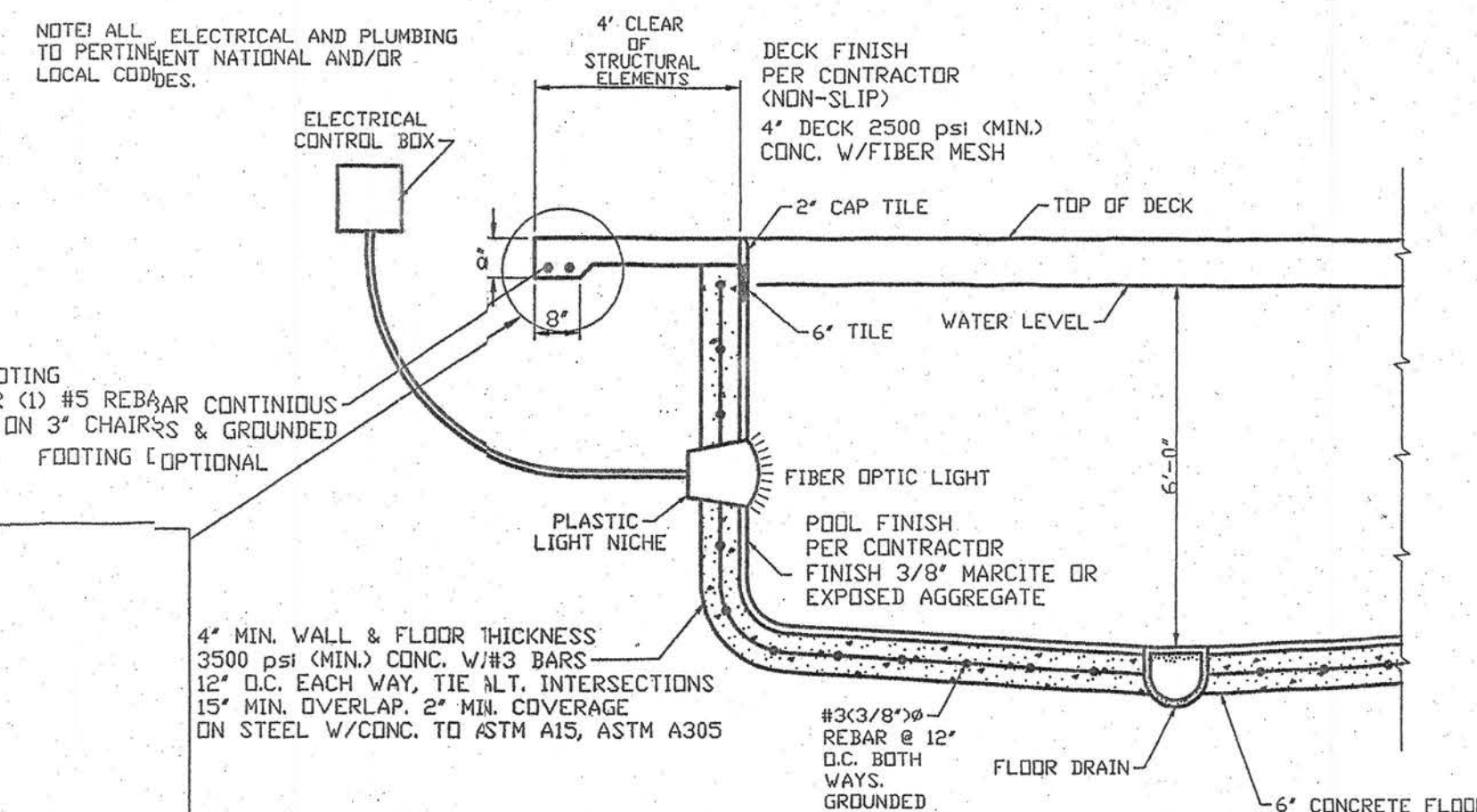
VENT DETAIL  
SCALE: 1/2" = 1'-0"



OPT. VENT DETAIL  
SCALE: 1/2" = 1'-0"



POOL SECTION DETAIL  
SCALE: 1/2" = 1'-0"



TYPICAL FLOOR AND WALL SECTION  
SCALE: N.T.S.

## GENERAL DESIGN REQUIREMENTS

DESIGN DIMENSIONS SHALL COMPLY WITH SPECIFICATIONS IN NSPI 3 AND NSPI 3 BASED ON THE BDL TYPE.  
SEE NSPI FOR DIVING WATER ENVELOPES.  
SLIDES SHALL MEET THE MANUFACTURER'S INSTALLATION REQUIREMENTS.  
ENTRY/EXIT: REQUIRED AT THE SHALLOW END AND DEEP END IF OVER 5 FEET DEEP. ACCEPTABLE ARE FAIRS 10" MIN TREAD WITH 240 SQUARE INCH MIN. AREA, 12" MAX. RISER WITH INTERMEDIATE TREADS AND RISERS UNIFORM. LADDERS, UNDERWATER SEATS, AND SWIM DUTS (MAX. 20" BELOW WATER).  
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.  
RETURN INLETS SHALL BE A MINIMUM OF ONE FOR EVERY 600 SQUARE FEET.  
HEATER SHALL MEET ANSI-Z21.56 OR UL 1261 OR UL559.  
DISINFECTANT EQUIPMENT SHALL COMPLY WITH NSF 50.  
PRESSURE TEST PIPING AT 15 PSI FOR 30 MINUTES OR MEET LOCAL CODE IF GREATER.

## SPECIAL SPA REQUIREMENTS

MAXIMUM WATER DEPTH 4', MAXIMUM SEAT DEPTH 3', 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 INSTRUCTIONS/SAFETY SIGNS.  
PRESSURE TEST PIPING AT 25 PSI FOR 30 MINUTES OR MEET LOCAL CODE IF GREATER.

## ELECTRICAL REQUIREMENTS

WIRING AND BONDING AND ALL ELECTRICAL TO NEC ART. 680 OR LOCAL CODE.  
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, BIASS TO J BOX OR TRANSFORMER WITH EVER IS FIRST EXCEPT WHERE PVC IS APPROVED.

## FLORIDA BUILDING CODE 424-2

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 PBC, NSFPM, MAX. PRESSURE VELOCITY 10 FPS, SUCTON 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 ANTI-SQUEALING 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 1/2 FPS AND THE SUCTION PIPING IS RECESSED FROM THE GATE. THE DISTANCE EQUAL TO THE SUCTION PIPE SIZE. IN ADDITION A SAFETY VACUUM RELEASE SYSTEM MUST BE INSTALLED. THIS MAY CONSIST OF AN AIR RELEASE SYSTEM. THE VENT PIPE SHALL BE TIED TO THE MAIN DRAIN LINES, SIZED THE SAME AS THE MAIN DRAIN SUCTION LINE AND BROUGHT BACK TO THE FILTER LOCATION, ELBOWED UP AND OVER WITH A GRATE FOR PROTECTION AND LABELED 'SAFETY VENT'. SKIMMERS DO NOT REQUIRE PROTECTION AND MAY BE DESIGNED FOR 30 GPM SUCTION. THE FOLLOWING SHALL BE LABELED WITH RED LABEL MARKER TAPE AT THE FILTER LOCATION: PIPES, VALVES, 'SAFETY VENT' OR 'SAFETY DEVICE', PUMPS, OFF SWITCH.

IT HAS BEEN CERTIFIED THAT THESE DESIGN REQUIREMENTS ARE IN COMPLIANCE WITH THE FLORIDA BUILDING CODE 424-2, ANSI/NSPI-3 1992, STANDARD FOR PERMANENTLY INSTALLED SPAS AND ANSI/NSPI-5 1995 STANDARD FOR RESIDENTIAL IN-GROUND SWIMMING POOLS.

## ENGINEER'S NOTES

- ALL WORK TO BE DONE ACCORDING TO FLORIDA BUILDING CODES.
- MINIMUM DESIGN SOIL BEARING CAPACITY TO BE 2000 PSF. SOIL CAPACITY TO BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. FOOTINGS TO BE EXCAVATED TO CLEAN SOIL FREE OF VEGETATION AND DELETERIOUS MATTER. CONCRETE SHALL BE PLACED ON AN UNDISTURBED BASE.
- IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO INSURE THE SAFETY OF THE BUILDING AND ITS COMPONENT PARTS DURING ERECTION. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF WHATEVER TEMPORARY BRACING, GUYS, OR TIE DOWNS THAT MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER COMPLETION OF THE PROJECT.
- ALL DIMENSIONS AND ELEVATIONS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE VERIFIED AND SHALL CONFORM TO THE ARCHITECTURAL DRAWINGS.
- CONCRETE  
MINIMUM COMPRESSIVE CONCRETE STRENGTH TO BE 3000 PSI IN 28 DAYS. ALL CONCRETE SHALL BE 'READY MIXED' AND IN ACCORDANCE WITH A.S.T.M. SPECIFICATION C-243. ALL CONCRETE MODULAR UNITS SHALL HAVE A COMPRESSIVE STRENGTH OF 1000 PSI WITH TYPE M OR S MORTAR, 2000 PSI.
- SLAB ON FILL:  
INTERIOR CONCRETE SLABS POURED ON FILL TO BE POURED OVER WATERPROOF MEMBRANES. ALL SLABS TO BE REINFORCED WITH #6 10/10 WELDED WIRE MESH.
- ALL STEEL SHALL BE 40 KSI WITH A MINIMUM CLEAR COVER OF 3" AGAINST SOIL. ALL SHALL HAVE A MINIMUM LAP OF 40 TIMES THE DIAMETER OF THE REBAR.
- BASIC LOADING FOR FACTORED LOADING:  
1. 1.4D  
2. 1.2D+1.6L+0.5Lr  
3. 1.2D+1.6L+0.5L  
4. 1.2D+1.6W+0.5L+0.5Lr  
5. 1.2D+0.5L  
6. 0.9D+1.6W  
7. 1.2D+1.6W+2.0Fa+0.5L+0.5Lr  
8. 0.9D+1.6W+2.0Fa

RICHARD J. MATASSA, P.E.  
PE #51431  
12 SOUTH MAIN ST  
BROOKSVILLE, FL 34601  
(352) 796-6319

REVISIONS	BY

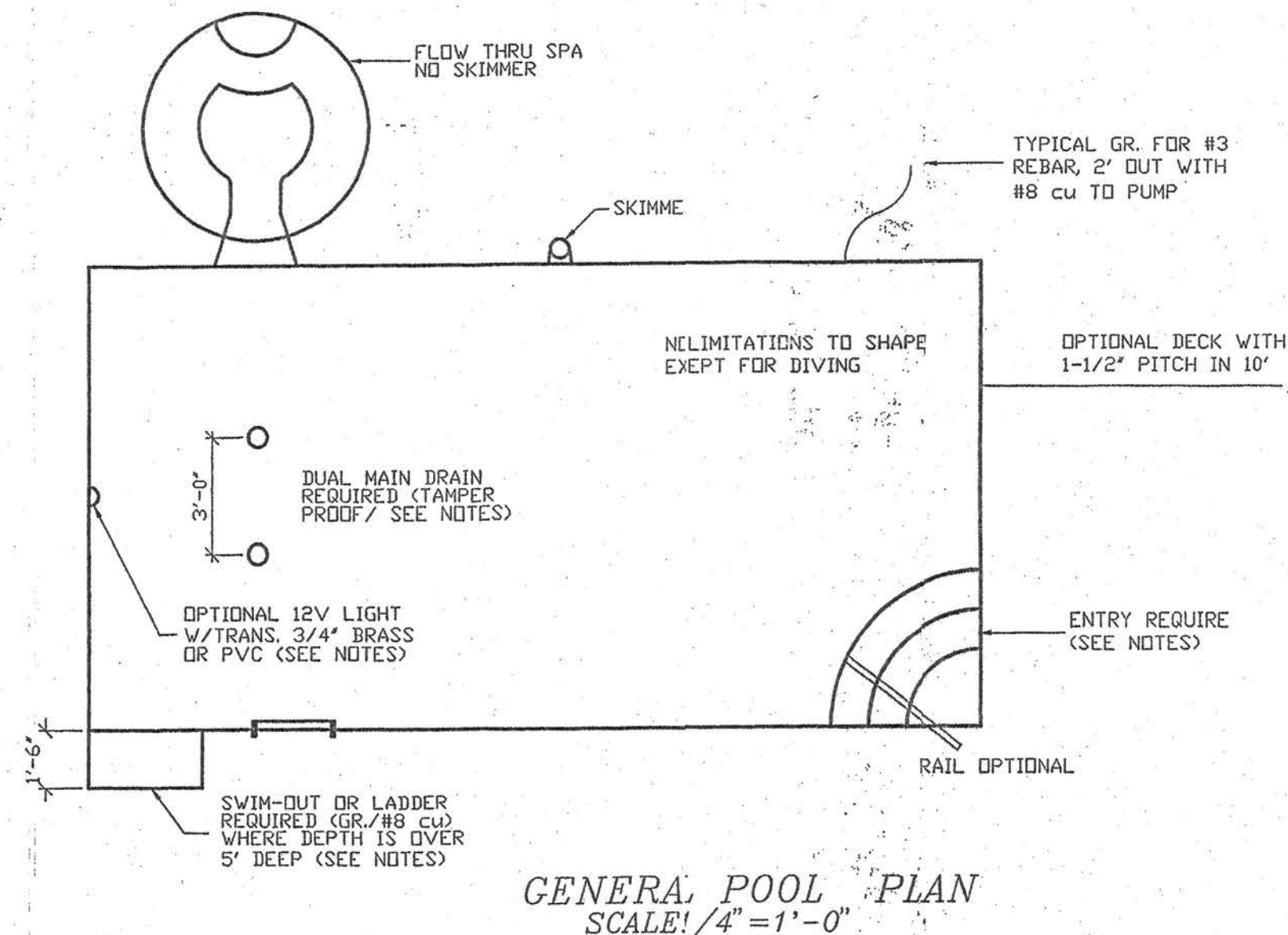
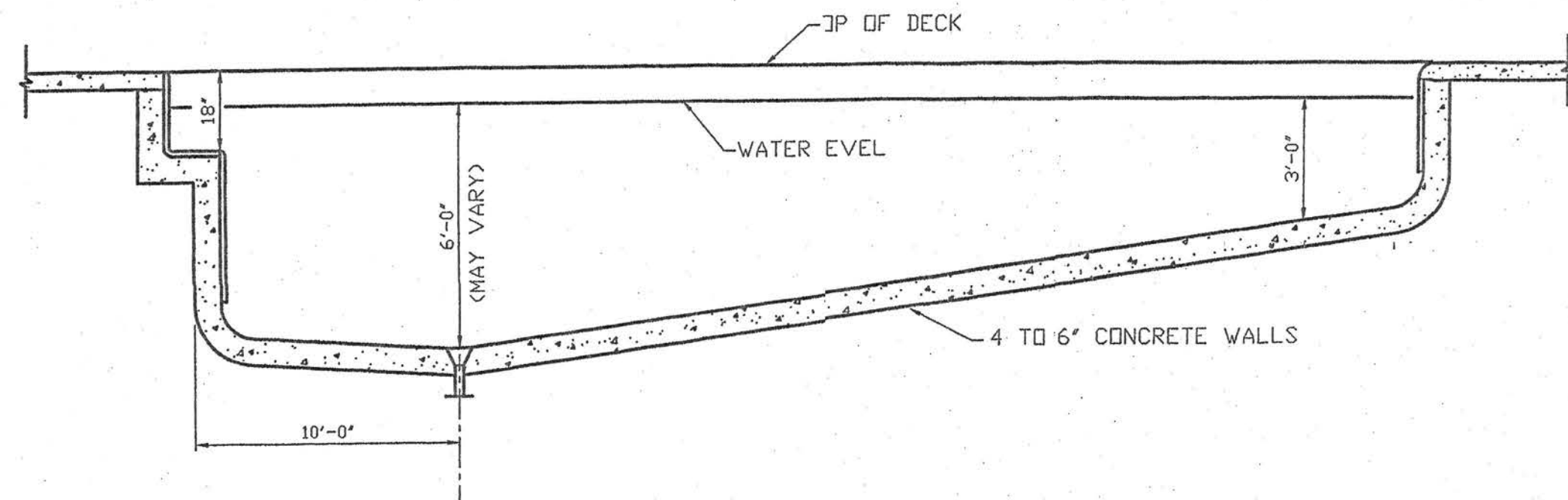
STANDARD RESIDENTIAL  
POOL AND/ OR SPA DESIGN  
THIS MASTER IS GOOD FOR ANY SHAPE POOL  
INCLUDING LINES WITH CONCAVE AND CONVEX  
FROM 3' TO 10' IN DEPTH

Pool For:  
LESSMAN POOLS & SPAS  
8258 225TH ROAD  
LIVE OAK, FL 32060  
To Be Constructed By:  
Homeowner

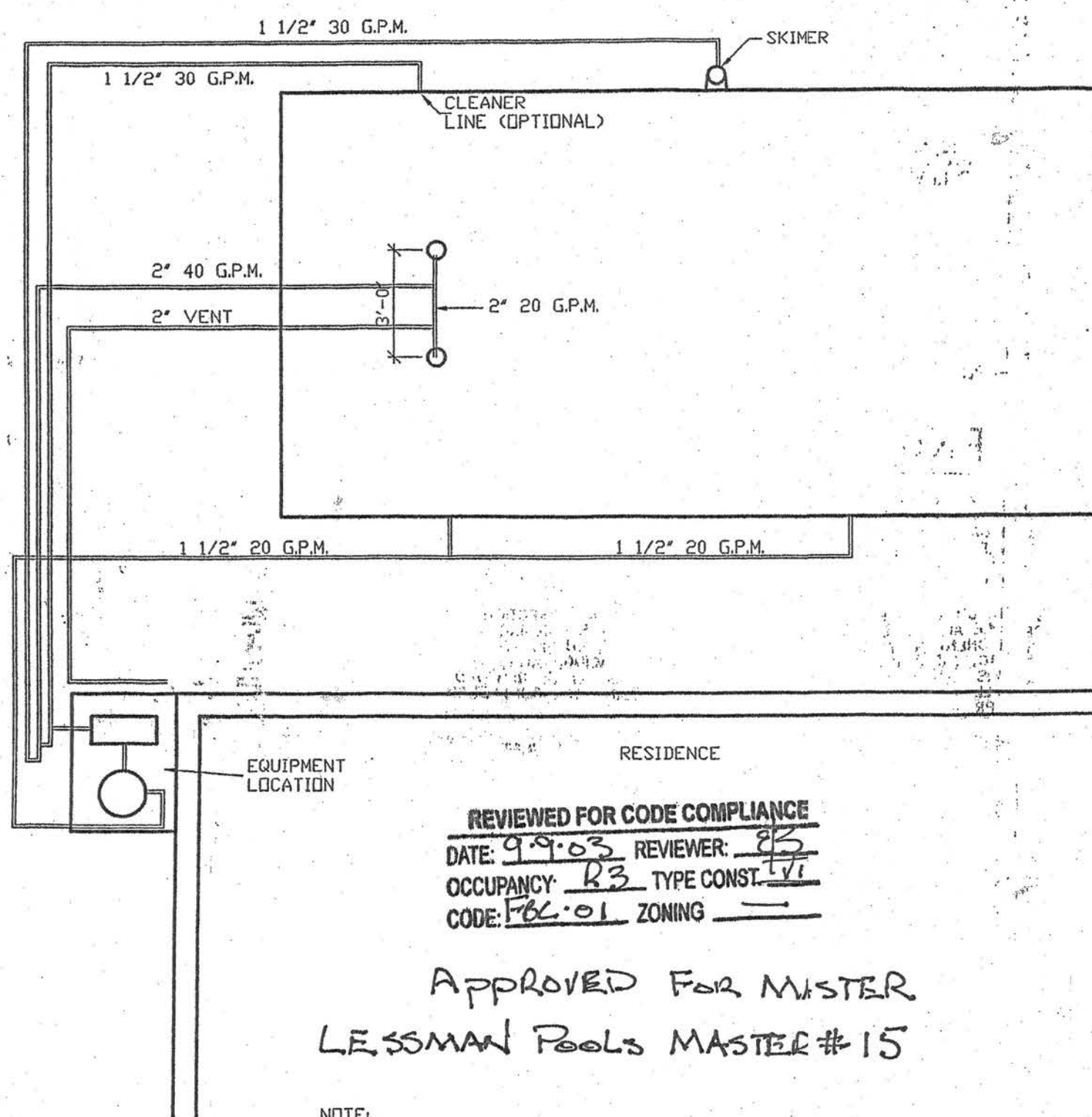
CIVIL-TECH  
CONSULTING  
ENGINEERS, INC.  
12 South Main Street  
Brooksville, FL 34605  
(352) 796-6319  
Fax: (352) 796-6319

DATE  
DTP  
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DATE  
08/28/03  
SCALE  
AS SHOWN  
JOB NO.  
SHEET  
1  
SHEETS





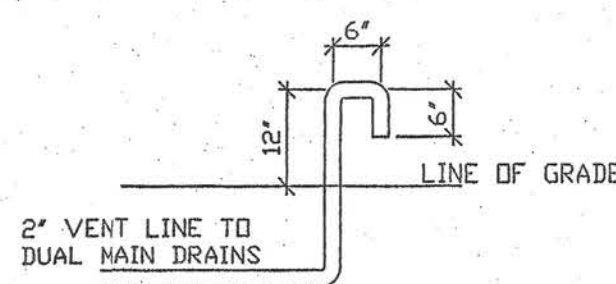
PIPE	SUCTION	PRESSURE
1 1/2"	35 GPM	60 PSI
2"	60	100
2 1/2"	85	145
3"	135	225
4"	235	375



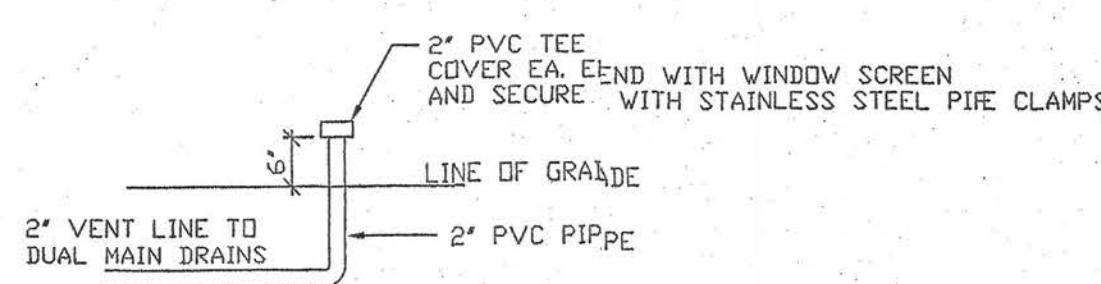
REVIEWED FOR CODE COMPLIANCE  
DATE: 9/2/03 REVIEWER: [Signature]  
OCCUPANCY: R3 TYPE CONST. 17  
CODE: FC-01 ZONING

APPROVED FOR MASTER  
LESSMAN POOLS MASTER #15

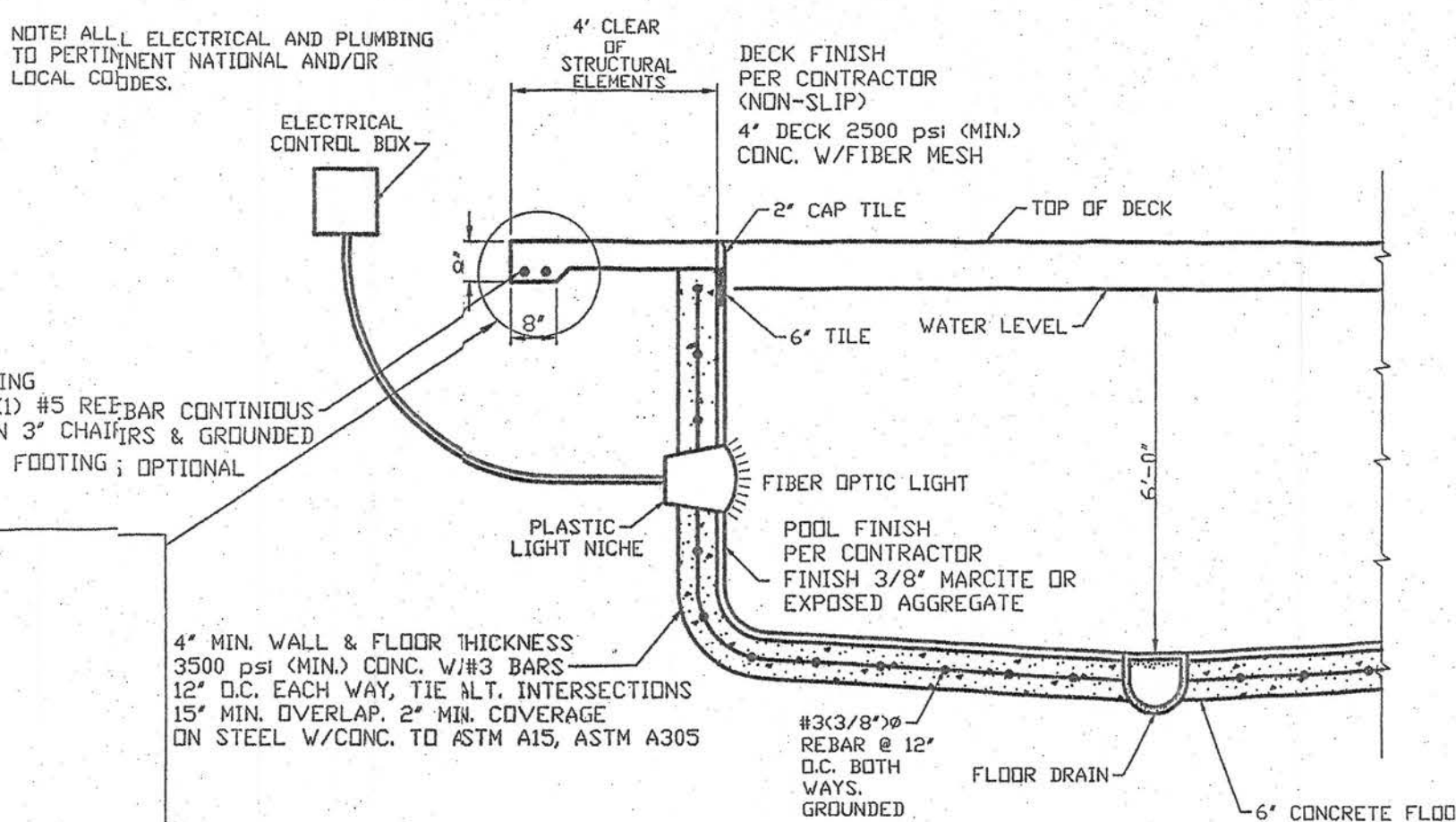
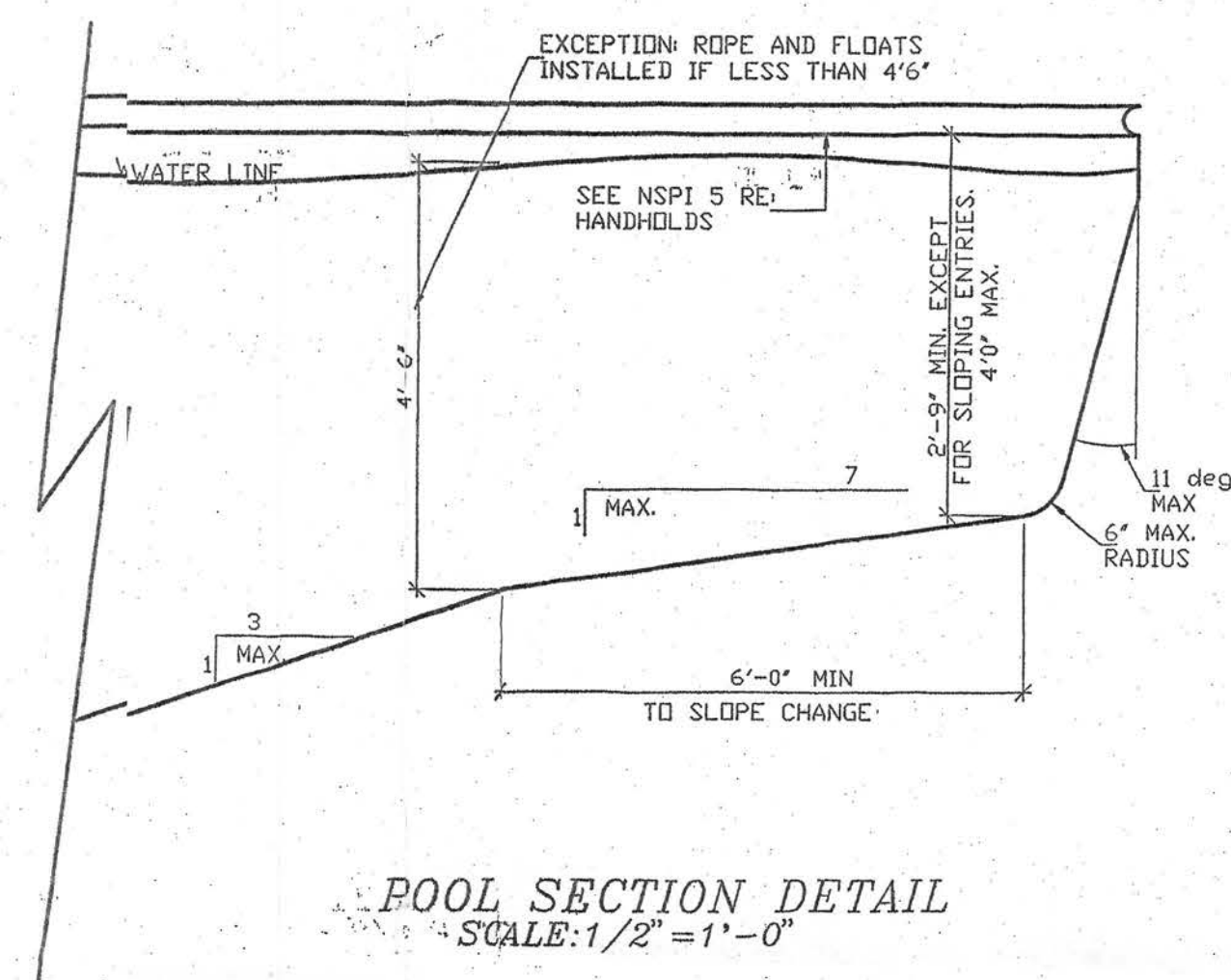
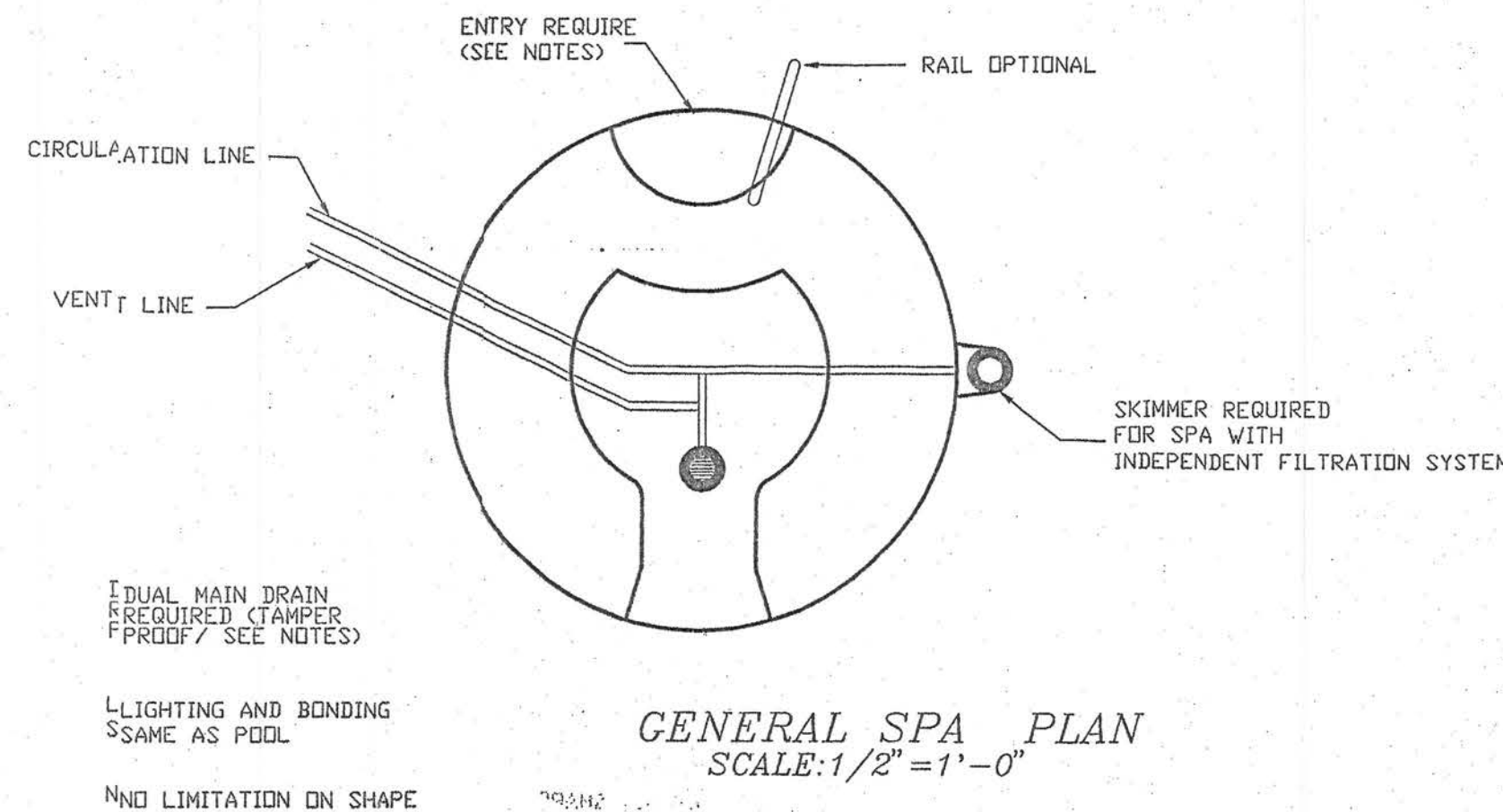
NOTE: THE VENT LINE SHALL BE TIED TO THE 2" LINE THAT TIES THE DRAINS TOGETHER. THE SUCTION LINE SHALL BE TIED THE SAME WAY AS SHOWN IN THE DIAGRA. THE VENT SHALL BE AT LEAST 18" LONG AND NO MORE THAN 30" LONG. THIS SYSTEM WILL REACT WITHIN THE "3" SECOND TIME FRAME.



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



OPT. VENT DETAIL  
SCALE: 1/2" = 1'-0"



TYPICAL FLOOR AND WALL SECTION  
SCALE: N.T.S.

## GENERAL DESIGN REQUIREMENTS

DESIGN DIMENSIONS SHALL COMPLY WITH SPECIFICATIONS IN NSPI 5 AND NSPI 3 BASED ON THE BDL TYPE.  
SEE NSPI FOR DIVING WATER ENVELOPES.  
SLIDES SHALL MEET THE MANUFACTURE'S INSTALLATION REQUIREMENTS.  
ENTRY/EXIT: REQUIRED AT THE SHALLOW END AND DEEP END IF OVER 5 FEET DEEP. ACCEPTABLE ARE FAIRS 10" MIN TREAD WITH 240 SQUARE INCH MIN. AREA, 12" MAX RISER WITH INTERMEDIATE TREADS AND RISERS UNIFORM. LADDERS, UNDERWATER SEATS, AND SWIM OUTFITS (MAX. 20" BELOW WATER).  
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.  
RETURN INLETS SHALL BE A MINIMUM OF ONE FOR EVERY 600 SQUARE FEET.  
HEATER SHALL MEET ANSI-Z21.56 OR UL 1261 OR UL559.  
DISINFECTANT EQUIPMENT SHALL COMPLY WITH NSF 50.  
PRESSURE TEST PIPING AT 15 PSI FOR 30 MINUTES OR MEET LOCAL CODE IF GREATER.

## SPECIAL SPA REQUIREMENTS:

MAXIMUM WATER DEPTH 4', MAXIMUM SEAT DEPTH 24" 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 TURN OVER.  
MAXIMUM TEMPERATURE 104 DEGREES.  
MEET ANSI/NSPI ARTICLE XVII, SAFETY INSTRUCTIONS/SAFETY SIGNS.  
PRESSURE TEST PIPING AT 25 PSI FOR 30 MINUTES OR MEET LOCAL CODE IF GREATER.

## ELECTRICAL REQUIREMENTS:

WIRING AND BONDING AND ALL ELECTRICAL TO MEET ART. 680 OR LOCAL CODE.  
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. BIAS TO J BOX OR TRANSFORMER WITH EVER IS FIRST EXCEPT WHERE PVC IS APPROVED.

## FLORIDA BUILDING CODE 424-2

THE POOL CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL DETAIL DESIGN REQUIREMENTS FOR EACH INDIVIDUAL POOL IN ACCORDANCE WITH THE FLORIDA BUILDING CODE AND ALL APPLICABLE CODES INCLUDING PLUMBING, ELECTRICAL AND GAS. PIPING SHALL BE SCH. 40 PBC, NSF 50, 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 ANS/ASME A112.19.8M 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 1/2 FPS AND THE SUCTION PIPING IS RECESSED FROM THE GATE THE DISTANCE EQUAL TO THE SUCTION PIPE SIZE. IN ADDITION A SAFETY VACUUM RELEASE SYSTEM MUST BE INSTALLED. THIS MAY CONSIST OF AN AIR RELEASE SYSTEM. THE VENT PIPE SHALL BE TIED TO THE MAIN DRAIN LINES, SIZED THE SAME AS THE MAIN DRAIN SUCTION LINE AND BROUGHT BACK TO THE FILTER LOCATION, ELBOWED UP AND OVER WITH A GATE FOR PROTECTION AND LABELED "SAFETY VENT".  
SKIMMERS DO NOT REQUIRE PROTECTION AND MAY BE DESIGNED FOR 30 GPM SUCTION. THE FOLLOWING SHALL BE LABELED WITH RED LABEL MARKER TAPE AT THE FILTER LOCATION: PIPES, VALVES, "SAFETY VENT" OR "SAFETY DEVICE", PUMPS, OFF SWITCH.

IT HAS BEEN CERTIFIED THAT THESE DESIGN REQUIREMENTS ARE IN COMPLIANCE WITH THE FLORIDA BUILDING CODE 424-2, ANSI/NSPI-3 1992, STANDARD FOR PERMANENTLY INSTALLED SPAS AND ANSI/NSPI-5 1995 STANDARD FOR RESIDENTIAL IN-GROUND SWIMMING POOLS.

## ENGINEER'S NOTES

- ALL WORK TO BE DONE ACCORDING TO FLORIDA BUILDING CODES.
- MINIMUM DESIGN SOIL BEARING CAPACITY TO BE 2000 PSF. SOIL CAPACITY TO BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION.
- IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO INSURE THE SAFETY OF THE BUILDING AND ITS COMPONENT PARTS DURING ERECTION. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF WHATEVER TEMPORARY BRACING, GUYS, OR TIE DOWNS THAT MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER COMPLETION OF THE PROJECT.
- ALL DIMENSIONS AND ELEVATIONS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE VERIFIED AND SHALL CONFORM TO THE ARCHITECTURAL DRAWINGS.
- CONCRETE: MINIMUM COMPRESSIVE CONCRETE STRENGTH TO BE 3000 PSI IN 28 DAYS. ALL CONCRETE SHALL BE "READY MIXED" AND IN ACCORDANCE WITH A.S.T.M. SPECIFICATION C-84. ALL CONCRETE MODULAR UNITS SHALL HAVE A COMPRESSIVE STRENGTH OF 1800 PSI WITH TYPE M OR S MORTAR, 2000 PSI.
- SLAB OF FILL: INTERIOR CONCRETE SLABS POURED ON FILL TO BE POURED OVER WATERPROOF MEMBRANES. ALL SLABS TO BE REINFORCED WITH 6X6 10/10 WELDED WIRE MESH.
- ALL STEEL SHALL BE 40 KSI WITH A MINIMUM CLEAR COVER OF 3" AGAINST SOIL, AND SHALL HAVE A MINIMUM LAP OF 40 TIMES THE DIAMETER OF THE REBAR.
- BASIC LOADING FOR FACTORED LOADING:
  - 1.40
  - 1.2D+1.6L+0.5Lr
  - 1.2D+1.6Lr+0.5L
  - 1.2D+1.6W+0.5L+0.5Lr
  - 1.2D+0.5L
  - 0.9D+1.6W
  - 1.2D+1.6W+2.0Fa+0.5L+0.5Lr
  - 0.9D+1.6W+2.0Fa

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REVISIONS	BY

STANDARD RESIDENTIAL  
POOL AND/ OR SPA DESIGN  
THIS MASTER IS GOOD FOR ANY SHAPE POOL INCLUDING LINES WITH CONCAVE AND CONVEX WALLS FROM 3' TO 10' IN DEPTH

Pool For:  
LESSMAN POOLS & SPAS  
8258 225TH ROAD  
LIVE OAK, FL 32060  
To Be Constructed By:  
Homeowner

CIVIL-TECH  
CONSULTING, INC.  
CIVIL ENGINEERS & PLANNERS  
12 South Main Street  
Brooksville, FL 34601  
(352) 796-6319  
Fax: (352) 796-0074

DATE: 08/28/03  
AS SHOWN  
JOB NO.  
SHEET  
1  
OF  
SHEETS