This project shall comply with the:

A. 2019 California Residential Code (CRC)

B. 2019 California Building Code (CBC)

C. 2019 California Plumbing Code (CPC)

D. 2019 California Mechanical Code (CMC)

E. 2019 California Electrical Code (CEC)

F. 2019 California Fire Code (CFC)

G. 2019 California Green Building Standards Code (CGBS)

H. 2019 California Energy Efficiency Standards (CEES)

I. City of San Juan Capistrano Local Ordinances

OCCUPANCY R3/U TYPE OF CONSTRUCTION VB

NOTES:

TWO SAFETY FEATURES BESIDES BARRIERS TO BE DOOR ALARMS BY TECHKO AND SONAR ALARMS BY POOL GUARD MODEL PGRM-2

EQUIPOTENTIAL BONDING GRID REQUIRED PEER CEC 680.26

The discharge of pollutants to and storm drainage and sewer system is prohibited. No solid waste, petroleum byproducts, soil particulate, construction waste materials, or waste water generated on construction sites or by construction activities shall be placed, conveyed or discharged into the street, gutter, storm drain and sewer system

SOLAR BLANKET REQUIRED TO FINAL

POOL EQUIPMENT TO BE BOLTED DOWN

EXPOSED PVC PIPE SHALL BE PAINTED FOR UV PROTECTION

GLASS WITHIN 5' OF THE POOL EDGE SHALL BE TEMPERED OR LAMINATED SAFETY GLASS

ALL POOL BARRIERS SHALL BE MAINTAINED DURING CONSTRUCTION

RENOVATIONS OF AN EXISTING POOL REQUIRE THE SUCTION OUTLET OF THE EXISTING POOL SPA
OR TODDLER POOL TO BE UPGRADED SO AS TO BE EQUIPPED WITH AN APPROVED ANTI-ENTRAPMENT COVER MEETING THE CURRENT STANDARDS OF THE ASTM OR ASME PER SECTION 115920HSC

EQUIPMENT SCHEDULE:

PENTAIR VS 2 HP PUMP MODEL 011055

PENTAIR DE FILTER MODEL 180009 PENTAIR

HEATER MODEL 460736

(N) POOL/SPA EQUIPMENT NOTES 5' MIN TO PL AND 20' MIN TO ADJACENT DWELLINGS

-ORACOUSTICAL

ANALYSIS REQUIRED TO DEMONSTRATE CITY MIN DBA (45) IS ACHIEVED

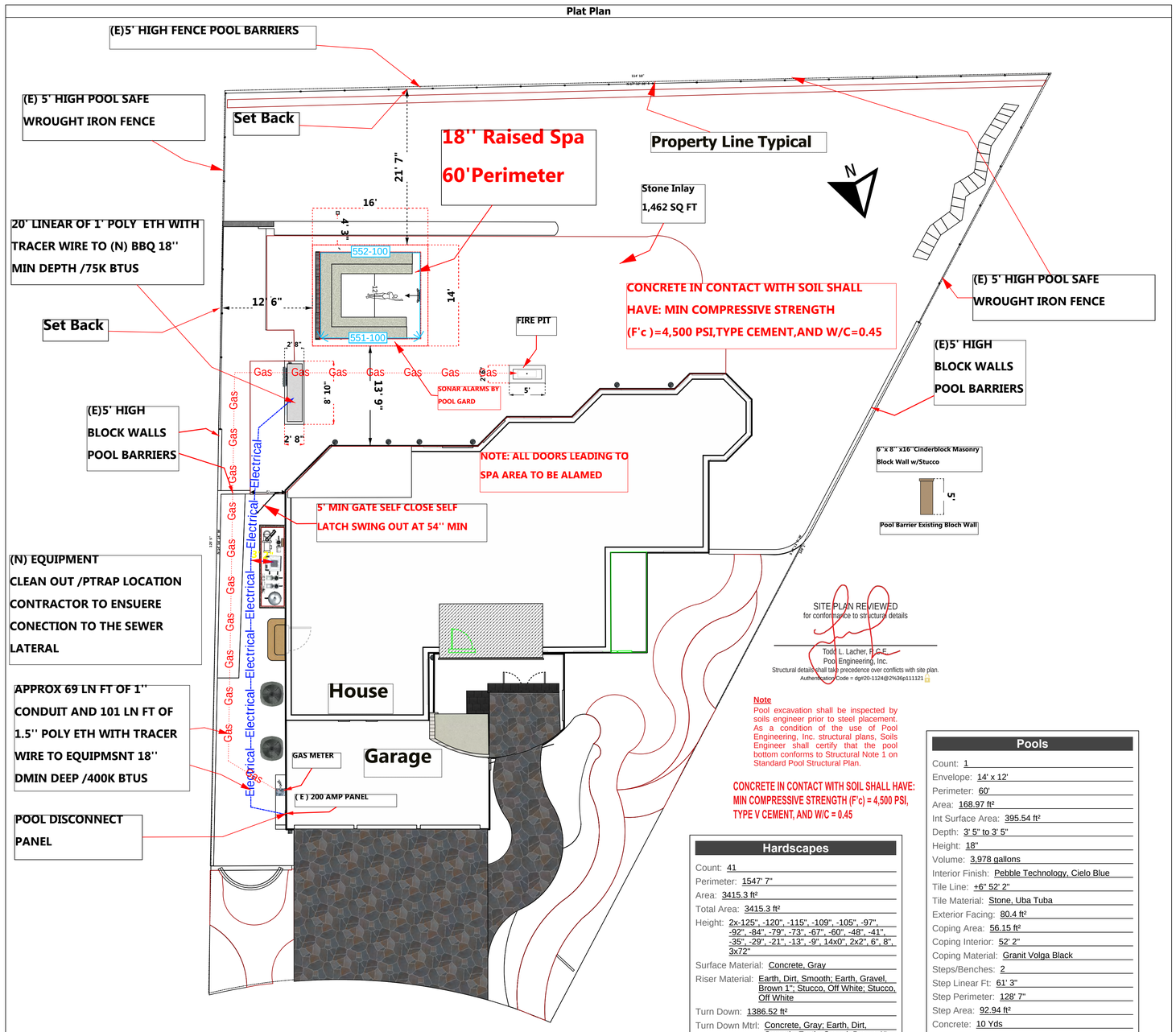
CONTRACTOR TO ENSURE PRESSURE VACUUM BREAKER IS INSTALLED SUCH AS ZURN

SCOPE OF WORK

1.169 SF Spa with related equipment

2.Gas to BBQ and Fire pit

Plat Plan



Hardscapes	
Count:	41
Perimeter:	1547' 7"
Area:	3415.3 ft²
Total Area:	3415.3 ft²
Height:	2x-125", -120", -115", -109", -105", -97", -92", -84", -79", -73", -67", -60", -48", -41", -35", -29", -21", -13", -9", 14x0", 2x2", 6", 8", 3x72"
Surface Material:	Concrete, Gray
Riser Material:	Earth, Dirt, Smooth; Earth, Gravel, Brown 1"; Stucco, Off White; Stucco, Off White
Turn Down:	1386.52 ft²
Turn Down Mtrl:	Concrete, Gray; Earth, Dirt, Smooth; Earth, Gravel, Brown 1"; Stone, Blue, Linear; Stone, Slate; Stucco, Off White; Stucco, Off White
Displacement:	514 ft³
Concrete:	42.2 yards³

Pools	
Count:	1
Envelope:	14' x 12'
Perimeter:	60'
Area:	168.97 ft²
Int Surface Area:	395.54 ft²
Depth:	3' 5" to 3' 5"
Height:	18"
Volume:	3,978 gallons
Interior Finish:	Pebble Technology, Cielo Blue
Tile Line:	+6" 52' 2"
Tile Material:	Stone, Uba Tuba
Exterior Facing:	80.4 ft²
Coping Area:	56.15 ft²
Coping Interior:	52' 2"
Coping Material:	Granit Volga Black
Steps/Benches:	2
Step Linear Ft:	61' 3"
Step Perimeter:	128' 7"
Step Area:	92.94 ft²
Concrete:	10 Yds
Rebar:	1609' 10"

Scale: 1/8" = 1 ft

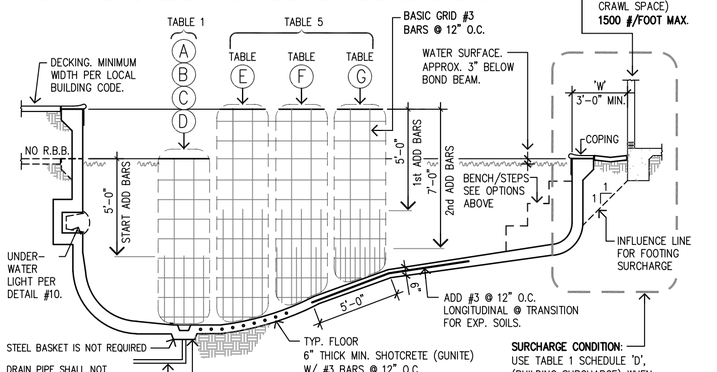
0 3 6 9 12 15

Designer: SEAN PONCE
Address: 22 BELL VISTA
City: FOOTHILL RANCH
State/Zip: CA, 92610
Phone: 949 4549575
Cell: 9492832164
Email: SEANDESIGN1@YAHOO.COM
Alternate Contact:
License #: 999642

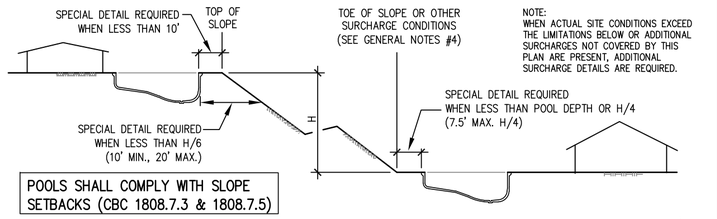
Customer Name: ~~xxxxxxxx~~
Address: 104555 New Port
City: San Pedro Port,
State/Zip: CA,92675
Phone: 949 756-9999
Email: fort.groden@gmail.com
Job #: 2020.04

BENCH AND STEP OPTIONS:

1. UNDISTURBED EARTH MAY BE LEFT IN PLACE TO FORM THE STEPS OR BENCHES. REINFORCING STEEL SHOULD BE PLACED AROUND THE STEP OR BENCH SHAPED EARTH (3" CLEAR FROM EARTH).
2. THE EARTH MAY BE REMOVED AND BENCHES AND STEPS MAY BE FORMED OF SHOTCRETE (GUNITE) WITHIN THE STRUCTURAL POOL SHELL. REINFORCING AT THE SURFACE OF THE BENCHES AND STEPS IS OPTIONAL.

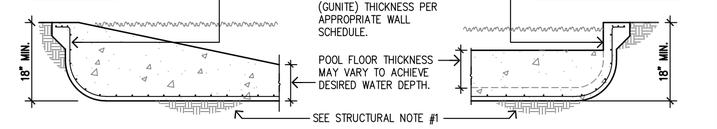


TYPICAL LONGITUDINAL SECTION — N.T.S. — 2

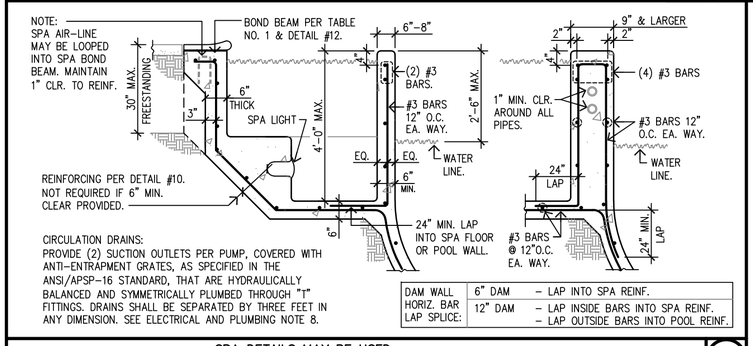


SURCHARGE CONDITIONS — ADDITIONAL SPECIAL DETAILS REQUIRED FOR CONDITIONS ABOVE — N.T.S. — 3

REFER TO AMERICAN NATIONAL STANDARD FOR RESIDENTIAL IN-GROUND SWIMMING POOLS PUBLISHED BY AMERICAN NATIONAL STANDARD INSTITUTE (ANSI) AND THE NATIONAL SPA & POOL INSTITUTE (APSP)

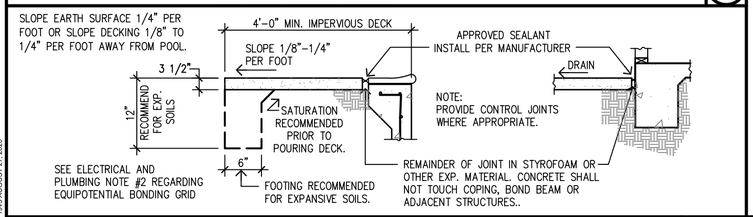


SHALLOW FEATURES — MAINTAIN 18" MIN. EMBEDMENT INTO UNDISTURBED OR 90% COMPACTED SOIL — N.T.S. — 4



DAM WALL	6" DAM	– LAP INTO SPA REINF.
HORIZ. BAR LAP SPLICE:	12" DAM	– LAP INSIDE BARS INTO SPA REINF. – LAP OUTSIDE BARS INTO POOL REINF.

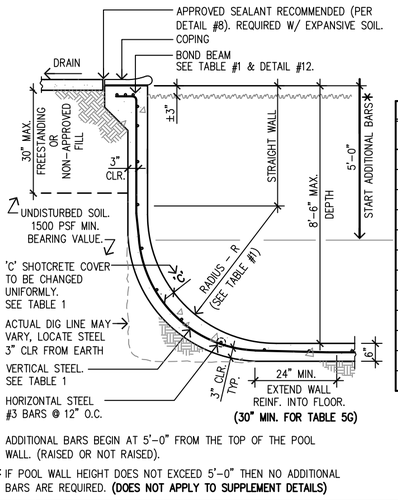
SPA DETAILS — SPA DETAILS MAY BE USED FOR SPAS WITHOUT POOLS. — N.T.S. — 7



EXPANSIVE SOIL DETAILS | IN EXPANSIVE SOILS WHERE MIN DECK REQMTS ARE NOT MET USE TABLE 1, SCHEDULE 'C' — N.T.S. — 8

RADIUS NOTE: FLOOR TO WALL TRANSITION RADIUS MAY VARY DEPENDING ON CONTRACTOR OR OWNER DESIGN INTENT. RADIUS SHALL NOT BE LESS THAN 1-FOOT AND SHALL NOT EXCEED 5-FEET.

NOTE: BOND BEAM HORIZONTAL BARS MAY BE OVER OR UNDER VERTICAL BARS. TYPICAL INCLUDING ALL SPECIAL DETAILS.



* IF POOL WALL HEIGHT DOES NOT EXCEED 5'-0" THEN NO ADDITIONAL BARS ARE REQUIRED. **(DOES NOT APPLY TO SUPPLEMENT DETAILS)**

TABLE NO. 1

NON-EXPANSIVE	EXPANSIVE	NO DECK/HIGH EXP.	BUILD'G SURCHARGE
A	B	C	D
(3) #3 BARS.	(4) #3 BARS.	(4) #3 BARS.	(4) #3 BARS

E.F.P.		30 P.C.F.		45 P.C.F.		62.4 P.C.F.		45 P.C.F.	
D	R	C	VERTICAL STEEL	C	VERTICAL STEEL	C	VERTICAL STEEL	C	VERTICAL STEEL
3'0"	1'-0"	3"	#3 @ 12"	3"	#3 @ 12"	3"	#3 @ 12"	3"	#3 @ 12"
3'6"	1'-0"	3"		3"		3"		3"	
4'0"	1'-0"	3"		3"		4"		4"	
4'6"	1'-0"	3"		3½"		5"		5"	
5'0"	1'-6"	3"		4"		5"		5½"	
5'6"	2'-0"	3"		4"		5"		6"	
6'0"	2'-6"	3"		4"		6"		6½"	
6'6"	3'-0"	3"		4½"		7"		7"	
7'0"	3'-6"	3"		5½"		8½"		7½"	
7'6"	4'-0"	3"		6"		9"		8"	
8'0"	4'-6"	3"		6"		9"		8½"	
8'6"	5'-0"	3"		6"		9"		8½"	

ITEM NOT APPLICABLE — POOL ENGINEERING, INC.

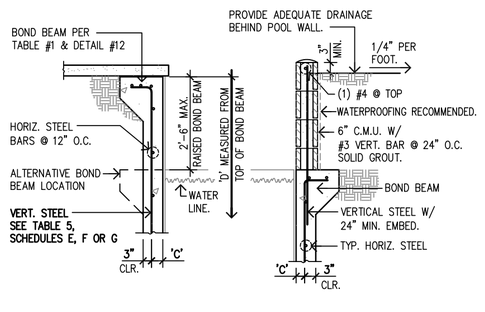
INDICATES TYPICAL RADIUS (ACTUAL RADIUS MAY VARY, SEE RADIUS NOTE AT TOP)

'D' IS DISTANCE DOWN FROM TOP OF POOL WALL.

NO DECK OR HIGH EXPANSIVE SOIL

BUILDING FOOTING SURCHARGE (IN COUNTY OF L.A. USE DETAIL 271-60)

STANDARD WALL SECTION — IN THE COUNTY OF ORANGE REFER TO "UNINCOPORATED COUNTY OF ORANGE SPECIAL NOTES" REGARDING DESIGN E.F.P. FOR POOLS. — N.T.S. — 1



MASONRY NOTES:

1. CONCRETE BLOCK SHALL BE GRADE N (EXPOSED TO WEATHER), TYPE II (NON-MOISTURE CONTROLLED), NORMAL WEIGHT UNITS (135 PCF), CONFORMING TO CBC/IBC SEC. 2103, AND ASTM C 90. ALL CONCRETE BLOCK SHALL HAVE A DESIGN STRENGTH OF f'm = 2000 psi.
2. GROUT SHALL CONFORM TO CBC/IBC SEC. 2103 & ASTM C 476 WITH f'c=2,000 PSI.
3. MORTAR SHALL BE TYPE M WITH f'c = 2500 psi AND SHALL CONFORM TO CBC/IBC SEC. 2103 & ASTM C 270.

TABLE NO. 5 RAISED BOND BEAM

NON-EXPANSIVE	EXPANSIVE	NO DECK/HIGH EXP.
E	F	G

E.F.P.	30 P.C.F.		45 P.C.F.		62.4 P.C.F.	
D	C	VERTICAL STEEL	C	VERTICAL STEEL	C	VERTICAL STEEL
3'6"	3"	#3 @ 6"	3"	#3 @ 6"	3"	#3 @ 6"
4'0"	3"		3"		4"	
4'6"	3"		3½"		5"	
5'0"	3"	#5 @ 6"	3½"	#5 @ 6"	5"	#5 @ 6"
5'6"	3"		4"		6"	
6'0"	3"		5"		7"	
6'6"	4"		6"		8"	
7'0"	5"		6"	#5 @ 4"	8"	#5 @ 3"
7'6"	5½"		6"		8"	
8'0"	6"		7"		8"	
8'6"	6"		8"		9"	
9'0"	7"		10"		11½"	
9'6"	9"		10"		11½"	
10'0"	9"		11"		12"	
11'0"	9"		11"		12½"	

ITEM NOT APPLICABLE — POOL ENGINEERING, INC.

GENERAL NOTES

1. THIS STANDARD POOL STRUCTURAL PLAN MUST BE ACCOMPANIED BY A CLEAR PLOT PLAN SHOWING POOL AND/OR SPA SHAPE, DEPTH, DISTANCE TO PROPERTY LINE, GRADE CHANGES & SLOPES AND ADJACENT STRUCTURES.
2. REPRESENTATIVES OF POOL ENGINEERING INC. HAVE NOT INSPECTED THE SITE & ARE RELYING ON INFORMATION PROVIDED BY THE CONTRACTOR OR OWNER TO DETERMINE THE ADEQUACY OF THIS STANDARD POOL STRUCTURAL PLAN FOR THE ACTUAL SITE CONDITIONS. SHOULD SITE CONDITIONS VARY FROM THAT COVERED BY THIS STANDARD POOL STRUCTURAL PLAN, IT IS THE RESPONSIBILITY OF THE CONTRACTOR OR THE OWNER TO NOTIFY POOL ENGINEERING INC. AND OBTAIN APPLICABLE SPECIAL ENGINEERING DETAILS PRIOR TO CONSTRUCTION. EXPANSIVE SOIL DETAILS ARE VALID ONLY FOR STATED EQUIVALENT FLUID PRESSURES AND POOL ENGINEERING INC. RECOMMENDS THAT THE OWNER OR CONTRACTOR OBTAIN A SOILS REPORT.
3. POOL ENGINEERING INC. (PEI) RECOMMENDS THAT THE PROPERTY OWNER AND/OR POOL CONTRACTOR RETAIN A LICENSED GEOTECHNICAL CONSULTANT TO OBTAIN GEOTECHNICALLY RELATED DESIGN CRITERIA FOR THE PROPOSED POOL SITE. IT IS THE RESPONSIBILITY OF THE PROPERTY OWNER AND/OR POOL CONTRACTOR TO REQUIRE THAT THE LICENSED GEOTECHNICAL CONSULTANT CONFIRM THAT THE POOL STRUCTURAL PLANS PROVIDED MEET THE REQUIREMENTS OF THE PROJECT SITE AND THE GEOTECHNICAL REPORT. WHEN A GEOTECHNICAL REPORT HAS NOT BEEN PROVIDED TO PEI, IT IS THE OWNER AND/OR CONTRACTOR'S RESPONSIBILITY TO VERIFY THAT THE SITE GEOTECHNICAL CONDITIONS ARE SUITABLE FOR CONSTRUCTION OF THE PROPOSED POOL BASED ON THE PEI PLANS BEING USED.
4. THIS PLAN IS NOT VALID WITHOUT ADDITIONAL SURCHARGE DETAILS WHEN THE CONDITIONS AS SHOWN IN DETAIL #3 APPLY (PER CBC SECTION 1808.7.3). ALL POOLS SHALL COMPLY WITH SLOPE SETBACKS PER CBC SECTION 1808.7.3.
5. THE STANDARD POOL STRUCTURAL PLAN IS NOT INTENDED TO BE APPLICABLE TO NON-STRUCTURAL ITEMS INCLUDING BUT NOT LIMITED TO PLUMBING, ELECTRICAL, FENCING, CONCRETE DECKING AND POOL GEOMETRICS.
6. DECKING CONSTRUCTION IS SHOWN AS RECOMMENDED MINIMUM CONSTRUCTION AND DOES NOT DEMONSTRATE A SYSTEM THAT WILL RESIST HEAVING DUE TO SOIL EXPANSION.
7. ALL CONSTRUCTION SHALL COMPLY WITH THE 2019 EDITIONS OF THE CALIFORNIA BUILDING CODE (CBC), CALIFORNIA ELECTRICAL CODE (CEC), CALIFORNIA MECHANICAL CODE (CMC), CALIFORNIA PLUMBING CODE (CPC), CALIFORNIA ENERGY CODE, 2019 BUILDING ENERGY EFFICIENCY STANDARDS, 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE, AND LOCAL ORDINANCES.
8. POOLS WITH DIVING BOARDS SHALL MEET DIVING BOARD MANUFACTURER'S POOL GEOMETRIC STANDARDS AND/OR LOCAL CODES.
9. SIGNS & SAFETY EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH LOCAL CODES.
10. PUBLIC POOLS REQUIRE COUNTY HEALTH DEPARTMENT APPROVAL AND PROVISIONS FOR ASSISTIVE DEVICES FOR THE DISABLED.
11. CONTRACTOR OR OWNER SHALL VERIFY ALL FIELD CONDITIONS & DIMENSIONS AT JOB SITE. POOL LENGTH, GRADE BREAK LOCATIONS & DEPTH DIMENSIONS AS NOTED ON THE PLOT PLAN SHALL COMPLY WITH APSP SUGGESTED MINIMUM STANDARDS FOR RESIDENTIAL POOLS OR APPLICABLE STATE AND LOCAL HEALTH DEPARTMENTS REGULATIONS AND MANUFACTURERS RECOMMENDATIONS.

ELECTRICAL AND PLUMBING

1. ALL ELECTRICAL SHALL BE IN CONFORMANCE WITH THE 2019 CEC.
2. POOL SHELL AND PERIMETER PAVED AND UNPAVED SURFACES SHALL BE BONDED IN ACCORDANCE WITH CEC 680.26(B). BONDING TO PERIMETER SURFACES SHALL BE PROVIDED AS SPECIFIED IN CEC 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.
3. OBTAIN ELECTRICAL AND PLUMBING PERMITS ALONG WITH POOL BUILDING PERMIT.
4. ALL EQUIPMENT SHALL BE LISTED AND INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND IN ACCORDANCE WITH LOCAL REGULATIONS.
5. POOLS SHALL BE EQUIPPED WITH A FILTERING SYSTEM.
6. BACKWASH SHALL BE DISPOSED OF IN AN APPROVED MANNER.
7. POOL/SPA WATER HEATER AND GAS PIPING INSTALLATION TO BE IN CONFORMANCE WITH THE CPC.
8. SUCTION OUTLETS SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH ANSI/APSP-7 AND 2019 CBC SECTION 3109 (HS CODE §§ 115920–115929).
9. POTABLE WATER SUPPLY TO SWIMMING POOLS, SPAS, AND HOT TUBS SHALL BE PROTECTED FROM BACKFLOW IN ACCORDANCE WITH CPC 603.5.20
10. CHEMICAL DISPENSERS SHALL COMPLY WITH 2019 CPC SECTION 603.5.21 REQUIREMENTS FOR PROTECTION AGAINST BACKFLOW AND COMPLY WITH ASSE 1055.

STRUCTURAL NOTES

1. SOIL SHALL HAVE A MINIMUM BEARING VALUE OF 1500 PSF. CONCRETE SHALL BE PLACED AGAINST UNDISTURBED SOIL OR BUILDING DEPARTMENT APPROVED 90% COMPACT FILL. THIS PLAN IS NOT SUITABLE WHERE POTENTIAL EXISTS FOR DIFFERENTIAL MOVEMENT FROM DISSIMILAR SOIL CONDITIONS UNDER POOL, INCLUDING BUT NOT LIMITED TO CUT–FILL TRANSITIONS.
2. ALL REINFORCING STEEL SHALL BE DEFORMED BARS & CONFORM TO ASTM A615 GRADE 40 FOR #3 BARS AND #4 BARS. SPLICES TO BE LAPPED A MINIMUM OF 24". MINIMUM CLEARANCE BETWEEN PARALLEL BARS IS 2 1/2".
3. (1) #4 BAR IS EQUIVALENT TO AND MAY BE USED IN PLACE OF (2) #3 BARS, WITH THE EXCEPTION THAT IF #4 BARS ARE USED FOR THE BASIC GRID, THE MAXIMUM SPACING IS #4 BARS AT 18" O.C..
4. THE PLAN TABLES SPECIFY THE MINIMUM REQUIRED REINFORCEMENT. FOR CONVENIENCE OF THE INSTALLER, THERE MAY BE MORE REINFORCEMENT THAN SPECIFIED AT ANY GIVEN POINT IN THE POOL STRUCTURE.
5. BONDING/GROUNDING (PER THE CEC) OF THE STRUCTURAL REINFORCING MUST BE INSTALLED PRIOR TO PLACEMENT OF CONCRETE.
6. SHOTCRETE (GUNITE) TO BE IN CONFORMANCE WITH CBC SECTION 1908 & SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI AT 28 DAYS. WHERE APPLICABLE, SHOTCRETE (GUNITE) TO BE IN CONFORMANCE WITH CBC SECTION 1904 DURABILITY REQUIREMENTS. AGGREGATE SHALL NOT EXCEED 3/4–INCH.
7. CEMENT SHALL CONFORM TO CBC SECTION 1903.1, ACI 318 CHAP. 19 & ASTM C 150.
8. SHOTCRETE/GUNITE IN CONTACT WITH SOIL SHALL BE IN ACCORDANCE WITH ACI 318 SECTION 19.3 FOR CONCRETE EXPOSURE TO SULFATE AND AS DIRECTED BY LOCAL BUILDING OFFICIAL.
9. KEEP CONCRETE DAMP CONTINUOUSLY FOR 14 DAYS.
10. ALL INTERIOR SURFACES OF POOL/SPA SHALL BE COATED WITH A WATERPROOF SURFACE.

GLAZING IN HAZARDOUS LOCATIONS

WHEN REQUIRED BY THE BUILDING OFFICIAL, GLAZING SHALL COMPLY WITH THE CBC SECTION 2406.4, INCLUDING LOCALLY ADOPTED AMENDMENTS.

1. GLAZING IN WALLS AND FENCES USED AS A BARRIER SHALL BE SAFETY GLAZING WHEN ALL OF THE FOLLOWING CONDITIONS ARE PRESENT:
   A. THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 60" ABOVE ANY STANDING OR WALKING SURFACE.
   B. THE GLAZING IS WITHIN 5 FEET OF A SWIMMING POOL OR SPA DECK AREA.

CONTINUOUS SHOTCRETE INSPECTION

WHERE REQUIRED BY THE PERMITTING AGENCY, PNEUMATIC CONCRETE PLACEMENT SHALL BE INSPECTED BY A SPECIAL INSPECTOR IN CONFORMANCE WITH CBC SECTION 1704, WHO SHALL SUBMIT A STATEMENT INDICATING COMPLIANCE WITH THE PLANS AND SPECIFICATIONS.

TITLE 24

1. PUMPS SHALL BE SIZED PER SECTION 150(p) OF THE LATEST ADOPTED EDITION OF THE BUILDING ENERGY EFFICIENCY STANDARDS.
2. A LENGTH OF STRAIGHT PIPE GREATER THAN OR EQUAL TO 4 PIPE DIAMETERS SHALL BE INSTALLED BEFORE THE PUMP.
3. ALL ELBOWS SHALL BE SWEEP ELBOWS.
4. MANDATORY REQUIREMENTS FOR POOL & SPA HEATING SYSTEMS & EQUIPMENT:
   4.1. SYSTEM IS CERTIFIED WITH: THERMAL EFFICIENCY THAT COMPLIES WITH THE APPLIANCE EFFICIENCY REGULATIONS, READILY ACCESSIBLE ON–OFF SWITCH, WEATHERPROOF OPERATING INSTRUCTIONS ON ENERGY EFFICIENT OPERATIONS, NO ELECTRIC RESISTANCE HEATING AND NO PILOT LIGHT.
   4.2. SYSTEM IS INSTALLED WITH:
   A) AT LEAST 36" PIPE BETWEEN FILTER & HEATER FOR FUTURE SOLAR HEATING.
   B) COVER FOR OUTDOOR POOLS OR OUTDOOR SPA.
   4.3. POOL SYSTEM HAS DIRECTIONAL INLETS & A CIRCULATION PUMP TIME SWITCH TO PERMIT OFF PEAK OPERATION.

FENCING AND BARRIERS

1. PRIOR TO FILLING, THE POOL AND OR SPA SHALL BE COMPLETELY ENCLOSED BY 5' MIN. HIGH FENCING & GATES WITH NO OPENINGS 4" OR GREATER. GATES TO BE SELF–CLOSING & SELF–LATCHING WITH LATCH A MIN. OF 5' HIGH. ACCESS GATES THROUGH FENCING SHALL OPEN AWAY FROM THE POOL. MAXIMUM VERTICAL CLEARANCE FROM GROUND TO POOL FENCING SHALL NOT EXCEED 2 INCHES. WHERE THIS VARIES FROM LOCAL CODES, THE LOCAL CODES SHALL PREVAIL.
2. BARRIERS SHALL COMPLY WITH CBC SECTION 3109 (HS CODE §§ 115920–115929), INCLUDING LOCALLY ADOPTED AMENDMENTS:
   A. IN THE COUNTY OF LOS ANGELES, BARRIERS REQUIRED BY CHAPTER 11.50 OF THE LOS ANGELES COUNTY HEALTH AND SAFETY CODE AND ORDINANCE 95–0039 SHALL BE REQUIRED. THESE BARRIER REQUIREMENTS SHALL BE ATTACHED TO THE SWIMMING POOL SITE PLAN.

COUNTY OF LOS ANGELES SPECIAL NOTES

1. IN THE COUNTY OF LOS ANGELES, THE DEPARTMENT OF PUBLIC WORKS, BUILDING & SAFETY/LAND DEVELOPMENT DIVISION NOTES TITLED BARRIERS FOR SWIMMING POOL, SPAS, AND HOT TUBS FOR R–3 OCCUPANCIES SHALL BE ATTACHED TO AND MADE A PART OF THE SITE PLAN.
2. CONSTRUCTION TO BE PER THE LATEST ADOPTED EDITION OF THE LOS ANGELES COUNTY BUILDING CODE (LACBC).
3. IN LOS ANGELES COUNTIES SETBACK TO TOE OF ASCENDING SLOPE SHALL NOT BE LESS THAN 1 1/2 FEET & SETBACK TO TOP OF DESCENDING SLOPE SHALL NOT BE LESS THAN 2 1/2 FEET.
4. ALL POOL CONSTRUCTION SHALL BE BASED ON AN EQUIVALENT FLUID PRESSURE EQUAL TO OR GREATER THAN 60 P.C.F., UNLESS A SOILS REPORT IS SUBMITTED FOR REVIEW.

CITY OF SIMI VALLEY SPECIAL NOTES

1. SEE THE ATTACHED "CITY OF SIMI VALLEY RESIDENTIAL SWIMMING POOL NOTES" FOR BUILDING CODE REQUIREMENTS AND DISPOSAL OF POOL WASTEWATER.
2. THE MINIMUM DESIGN EQUIVALENT FLUID PRESSURE (EFP) IS 60 PSF/FT (PCF) FOR POOLS SET IN LEVEL GRADE/LEVEL BACKFILL THAT MEET THE CITY OF SIMI VALLEY SLOPE SETBACK REQUIREMENTS FOR POOL PROJECTS THAT DO NOT SUBMIT OR REQUIRE A SOILS REPORT (CBC TABLE 1610.1).

UNINCORPORATED COUNTY OF ORANGE SPECIAL NOTES

1. WHERE SITE SPECIFIC SOIL TESTING HAS NOT BEEN PERFORMED:
   1.1. POOLS SHALL BE DESIGNED FOR A MINIMUM DESIGN EQUIVLENT FLUID PRESSURE (E.F.P.) OF 100 P.S.F.
   1.2. ALL CONCRETE IN CONTACT WITH SOIL SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH (F'c) EQUAL TO 4,500 P.S.I., TYPE V CEMENT, AND W/C RATIO EQUAL TO 0.45. (THIS SHALL SUPERSEDE ALL OTHER LOWER F'c SPECIFICATIONS SET FORTH).
   1.3. DROWNING PREVENTION SAFETY FEATURES SHALL BE PROVIDED PER COUNTY ORDINANCE NO. 19–006 SECTION 7–1–56 SECTION AV100.

CITY OF SANTA CLARITA SPECIAL NOTES

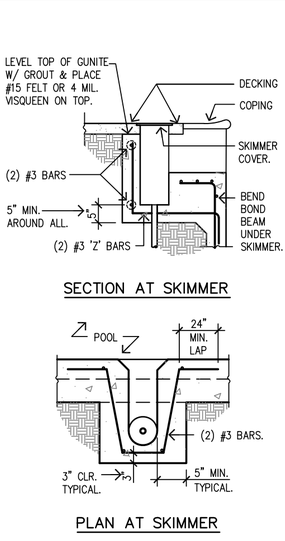
CONSTRUCTION MATERIALS, CONCRETE, PLASTER, DIRT, GRAVEL, SAND, AND ACIDS AS WELL AS ANY WASH WATERS ARE PROHIBITED FROM ENTERING THE STREET, GUTTER, AND STORM DRAIN SYSTEM PER THE SANTA CLARITA MUNICIPAL CODE.
USE PROPER BEST MANAGEMENT PRACTICES TO PREVENT OR CAPTURE ANY CONSTRUCTION ACTIVITY RUNOFF INTO THE STORM DRAIN SYSTEM.

COUNTY OF SAN BERNARDINO SPECIAL NOTES

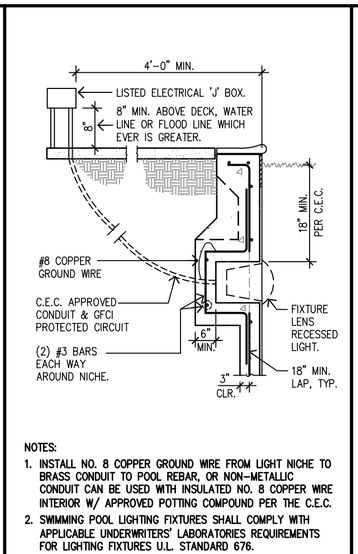
1. THESE PLANS ARE FOR PRIVATE RESIDENTIAL USE ONLY.
2. ALL POOL CONSTRUCTION SHALL COMPLY WITH THE 2018 INTERNATIONAL SWIMMING POOL AND SPA CODE (ISPSC) AND COUNTY OF SAN BERNARDINO INFORMATION BULLETIN IB–0007. PERMIT APPLICANT SHALL PROVIDE PLANS SHOWING POOL ARCHITECTUAL DESIGN AND GEOMETRY.
3. IN THE ABSENCE OF SITE SPECIFIC SOIL TESTING: POOL CONSTRUCITON SHALL BE BASED ON AN E.F.P. OF 60 P.C.F. OR GREATER AND ALL CONCRETE IN CONTACT WITH SOIL SHALL HAVE AT MIN: F'c = 4,500 PSI, TYPE V CEMENT AND W/C RATIO = 0.45
4. ENGINEER OF RECORD SHALL PROVIDE SITE PLAN REVIEW STAMP AND SIGNATURE ON SITE PLAN VERIFYING APPROPRIATE PROPOSED POOL LOCATION.

NOTES — BY THE USE OF THIS PLAN, THE USER ACKNOWLEDGES THAT HE HAS READ & UNDERSTANDS ALL OF THE NOTES INCLUDED HEREIN. — 6

RAISED BOND BEAM — N.T.S. — 5



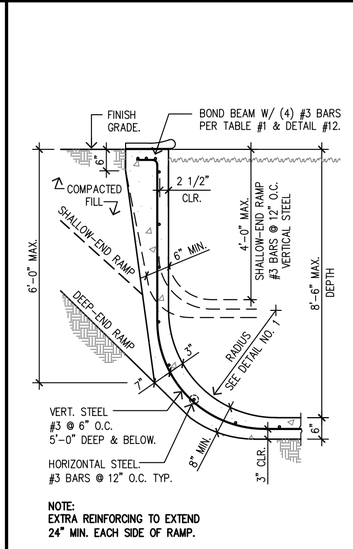
SKIMMER DETAIL — N.T.S. — 9



NOTES:

1. **INSTALL NO. 8 COPPER GROUND WIRE FROM LIGHT NICHE TO BRASS CONDUIT TO POOL REBAR, OR NON–METALLIC CONDUIT CAN BE USED WITH INSULATED NO. 8 COPPER WIRE INTERIOR W/ APPROVED POTTING COMPOUND PER THE C.E.C.**
2. **SWIMMING POOL LIGHTING FIXTURES SHALL COMPLY WITH APPLICABLE UNDERWRITERS' LABORATORIES REQUIREMENTS FOR LIGHTING FIXTURES U.L. STANDARD 676.**

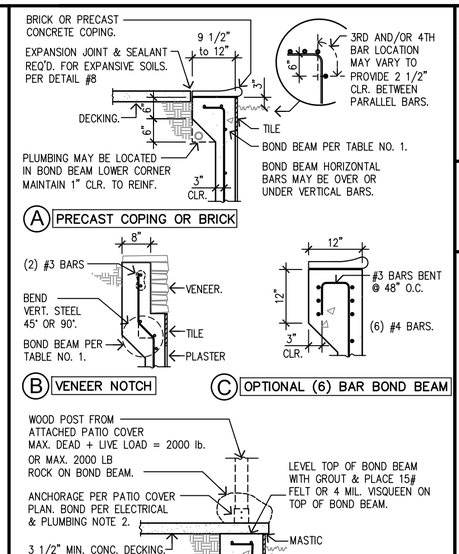
SECTION AT LIGHT — N.T.S. — 10



NOTE:
EXTRA REINFORCING TO EXTEND 24" MIN. EACH SIDE OF RAMP.

SHALLOW/DEEP END RAMP — 11

BOND BEAM DETAILS — N.T.S. — 12


BRICK OR PRECAST CONCRETE COPING.
9 1/2" to 12"
EXPANSION JOINT & SEALANT REQ'D. FOR EXPANSIVE SOILS. PER DETAIL #8
3RD AND/OR 4TH BAR LOCATION MAY VARY TO PROVIDE 2 1/2" CLR. BETWEEN PARALLEL BARS.
DECKING.
TILE
PLUMBING MAY BE LOCATED IN BOND BEAM LOWER CORNER MAINTAIN 1" CLR. TO REINF.
BOND BEAM PER TABLE NO. 1.
BOND BEAM HORIZONTAL BARS MAY BE OVER OR UNDER VERTICAL BARS.
A PRECAST COPING OR BRICK
(2) #3 BARS
BEND VERT. STEEL 45° OR 90°.
VENEER.
TILE
PLASTER
BOND BEAM PER TAB

CALCULATIONS

METHODOLOGY:

γ = EQUIVALENT FLUID PRESSURE

CASE I

OTM = 1/6 γ H^3 WHERE γ = 100 pcf

NET MOM = OTM − RESISTING MOMENT

CASE II

OTM = 1/6 γ H^3 WHERE γ = 62.4 pcf

NET MOM = OTM + RESISTING MOMENT

$$fs = \frac{M(12\ in/ft)}{As\ j\ d} = \frac{Mt\ (12)}{As\ (0.887)\ d}$$

$$fc = \frac{M(2)\ 12\ in/ft}{j\ k\ b\ d^2}$$

$$= \frac{Mt\ (2)(12)}{(0.887)(0.339)(12)\ d^2} < 1125\ psi$$

$$vc = \frac{(1/2)\ \gamma\ H^2}{(12\ in/ft)\ j\ d}$$

$$= \frac{\gamma\ H^2}{(2)(12)(0.887)\ d} < 55\ psi$$

f'c = 2,500 psi

Fs = 20,000 psi

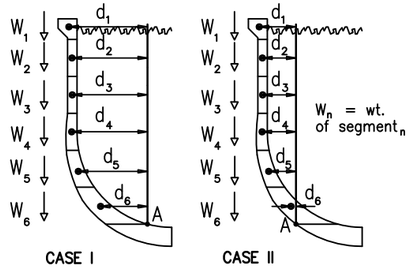
fc = 0.45 f'c = 1125 psi

Vc = 1.1 $\sqrt{f'c}$ = 55 psi

RESISTING MOMENT:

RESISTING MOMENT ABOUT POINT A

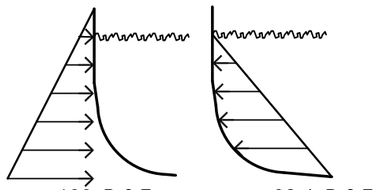
$RM = W_1 d_1 + W_2 d_2 + \ldots W_n d_n$



CASE I CASE II

LOADING DIAGRAM:

THIS DETAIL IS DESIGNED FOR EACH OF THE LOAD CASES DEFINED BELOW.



γ = 100 P.C.F. CASE I

γ = 62.4 P.C.F. CASE II

CALCULATION RESULTS:

FREESTANDING WALL
EQUIVALENT FLUID PRESSURE = 100 P.C.F.
RESULTS FOR NO RAISED BOND BEAM

DEPTH 'D'	SOIL OTM ft−#	WATER OTM ft−#	SOIL RM ft−#	WATER RM ft−#	NET Mom	CASE I d1 SOIL	CASE II d2 WATER	VERTICAL STEEL	fs p.s.i.	fc p.s.i.	vc p.s.i.
3'−0"	450	281	97	−44	353	3"	3"	#3 @ 12"	13804	384	12.5
4'−0"	1067	666	129	−85	937	4"	3"	#3 @ 4"	9467	420	16.7
5'−0"	2083	1300	241	−36	1842	4"	3"	"	18611	911	26.0
6'−0"	3600	2246	506	28	3094	5"	4"	add 3 #4	12169	793	30.0
7'−0"	5717	3567	1047	380	4670	5"	5"	"	18364	1119	40.8
8'−0"	8533	5325	2265	810	6135	6½"	6"	"	19908	1085	41.0
8'−6"	10235	6387	5031	389	6775	6½"	7"	"	18696	928	46.3

RESULTS FOR 2'−6" MAX. RAISED BOND BEAM

HEIGHT 'H'	SOIL OTM ft−#	WATER OTM ft−#	SOIL RM ft−#	WATER RM ft−#	NET Mom	CASE I d1 SOIL	CASE II d2 WATER	VERTICAL STEEL	fs p.s.i.	fc p.s.i.	vc p.s.i.
3'−0"	450	1	97	−44	353	3"	3"	#3 @ 12"	13804	384	12.5
4'−0"	1067	35	121	−93	946	4"	3"	#3 @ 4"	9556	424	16.7
5'−0"	2083	163	147	−137	1936	4½"	3"	"	17291	716	23.1
6'−0"	3600	446	183	−213	3417	5½"	3"	add 3 #4	12154	698	27.3
7'−0"	5717	948	221	−278	5495	6"	3"	"	17832	972	34.0
8'−0"	8533	1730	274	−451	8260	7½"	3½"	add 3 #5	14680	885	35.6
9'−0"	12150	2856	349	−670	11801	9½"	3½"	"	16351	857	35.5
10'−0"	16667	4388	453	−990	16214	11½"	4"	"	18381	1057	36.6
11'−0"	22183	6387	2214	−1471	19969	13"	5"	"	19909	1044	38.8

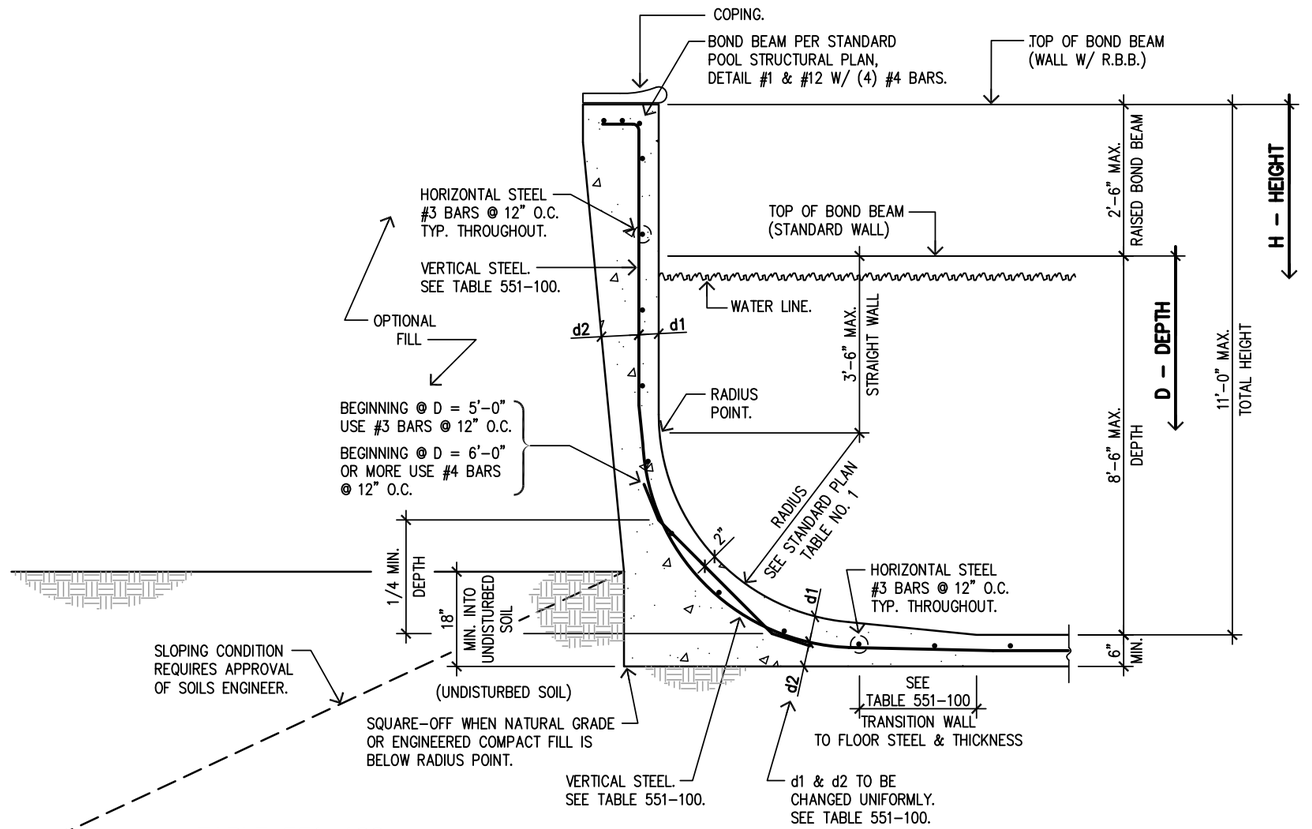


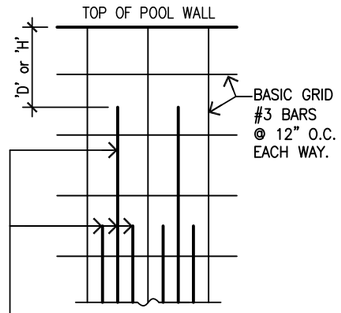
TABLE 551−100

'D' OR 'H' IS DISTANCE FROM TOP OF POOL WALL DOWNWARD.
BEGIN SPECIFIED STEEL & GUNITE THICKNESS AT INDICATED 'D' OR 'H' DEPTH.
(SEE STANDARD STRUCTURAL PLAN, DETAIL #2)

POOL DEPTH	NO RAISED BOND BEAM			REQ'D TRANS.
D	d1	d2	VERTICAL STEEL	
0 to 3'0"	3"	3"	#3 @ 12"	2'−0"
3'−6"	4"	3"	"	2'−0"
4'−0"	4"	3"	#3 @ 4"	2'−0"
4'−6"	4"	3"	"	2'−0"
5'−0"	4"	3"	"	2'−0"
5'−6"	5"	4"	"	2'−0"
6'−0"	5"	4"	add 3 #4	2'−0"
6'−6"	4½"	4"	"	2'−2"
7'−0"	5"	5"	"	2'−5"
7'−6"	6"	5½"	"	2'−8"
8'−0"	6½"	6"	"	2'−10"
8'−6"	6½"	7"	"	3'−0"

TOTAL HEIGHT	2'−6" MAX. RAISED BOND BEAM			REQ'D TRANS.
H	d1	d2	VERTICAL STEEL	
0 to 3'0"	3"	3"	#3 @ 12"	2'−0"
3'−6"	4"	3"	"	2'−0"
4'−0"	4"	3"	#3 @ 4"	2'−0"
4'−6"	4"	3"	"	2'−0"
5'−0"	4½"	3"	"	2'−0"
5'−6"	5½"	3"	"	2'−4"
6'−0"	5½"	3"	add 3 #4	2'−11"
6'−6"	5½"	3"	"	3'−8"
7'−0"	6"	3"	"	4'−4"
7'−6"	7"	3"	"	4'−8"
8'−0"	7½"	3½"	add 3 #5	4'−10"
8'−6"	8½"	3½"	"	5'−0"
9'−0"	9½"	3½"	"	5'−2"
9'−6"	10½"	3½"	"	5'−4"
10'−0"	11½"	4"	"	5'−5"
10'−6"	12½"	4½"	"	5'−6"
11'−0"	13"	5"	"	8'−3"

TYPICAL ADD BAR REINFORCING DIAGRAM



VERTICAL REINFORCEMENT AS SPECIFIED IN TABLE STARTS A DISTANCE 'D' OR 'H' DOWN FROM TOP OF POOL WALL. REINFORCEMENT OTHER THAN BASIC GRID NEED NOT EXTEND TO TOP OF POOL WALL. ADD BARS TO BE EQUALLY SPACED BETWEEN BASIC GRID.

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Phone: (714) 630-6100

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21-1124

11-11-21

PLAN VALID ONLY WITH ENGINEER'S SIGNATURE IN RED INK ON PLAN.

THIS DETAIL TO BE USED IN CONJUNCTION WITH STANDARD POOL STRUCTURAL PLAN

FREESTANDING WALL
EQUIVALENT FLUID PRESSURE = 100 P.C.F.

DETAIL #551-100

19-2 JULY 29, 2020

CALCULATIONS

METHODOLOGY:

γ = EQUIVALENT FLUID PRESSURE

CASE I

OTM = 1/6 γ H^3 WHERE γ = 100 pcf

NET MOM = OTM − RESISTING MOMENT

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NET MOM = OTM + RESISTING MOMENT

$$fs = \frac{M(12\ in/ft)}{As\ j\ d} = \frac{Mt\ (12)}{As\ (0.887)\ d}$$

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f'c = 2,500 psi

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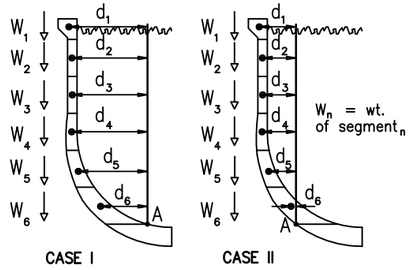
RESISTING MOMENT ABOUT POINT A

RM = $W_1 d_1 + W_2 d_2 + \ldots W_n d_n$



CASE I CASE II

LOADING DIAGRAM:

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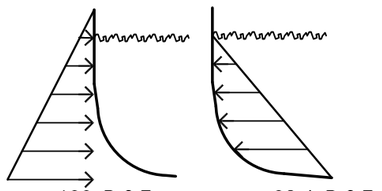

γ = 100 P.C.F. CASE I

γ = 62.4 P.C.F. CASE II

CALCULATION RESULTS:

FREESTANDING WALL
EQUIVALENT FLUID PRESSURE = 100 P.C.F.
RESULTS FOR NO RAISED BOND BEAM

DEPTH 'D'	SOIL OTM ft−#	WATER OTM ft−#	SOIL RM ft−#	WATER RM ft−#	NET Mom	CASE I d1 SOIL	CASE II d2 WATER	VERTICAL STEEL	fs p.s.i.	fc p.s.i.	vc p.s.i.
3'−0"	450	281	97	−44	353	3"	3"	#3 @ 12"	13804	384	12.5
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5'−0"	2083	1300	241	−36	1842	4"	3"	"	18611	911	26.0
6'−0"	3600	2246	506	28	3094	5"	4"	add 3 #4	12169	793	30.0
7'−0"	5717	3567	1047	380	4670	5"	5"	"	18364	1119	40.8
8'−0"	8533	5325	2265	810	6135	6½"	6"	"	19908	1085	41.0
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RESULTS FOR 2'−6" MAX. RAISED BOND BEAM

HEIGHT 'H'	SOIL OTM ft−#	WATER OTM ft−#	SOIL RM ft−#	WATER RM ft−#	NET Mom	CASE I d1 SOIL	CASE II d2 WATER	VERTICAL STEEL	fs p.s.i.	fc p.s.i.	vc p.s.i.
3'−0"	450	1	97	−44	353	3"	3"	#3 @ 12"	13804	384	12.5
4'−0"	1067	35	121	−93	946	4"	3"	#3 @ 4"	9556	424	16.7
5'−0"	2083	163	147	−137	1936	4½"	3"	"	17291	716	23.1
6'−0"	3600	446	183	−213	3417	5½"	3"	add 3 #4	12154	698	27.3
7'−0"	5717	948	221	−278	5495	6"	3"	"	17832	972	34.0
8'−0"	8533	1730	274	−451	8260	7½"	3½"	add 3 #5	14680	885	35.6
9'−0"	12150	2856	349	−670	11801	9½"	3½"	"	16351	857	35.5
10'−0"	16667	4388	453	−990	16214	11½"	4"	"	18381	1057	36.6
11'−0"	22183	6387	2214	−1471	19969	13"	5"	"	19909	1044	38.8

19v2, JULY 29, 2020

TYPICAL ADD BAR REINFORCING DIAGRAM

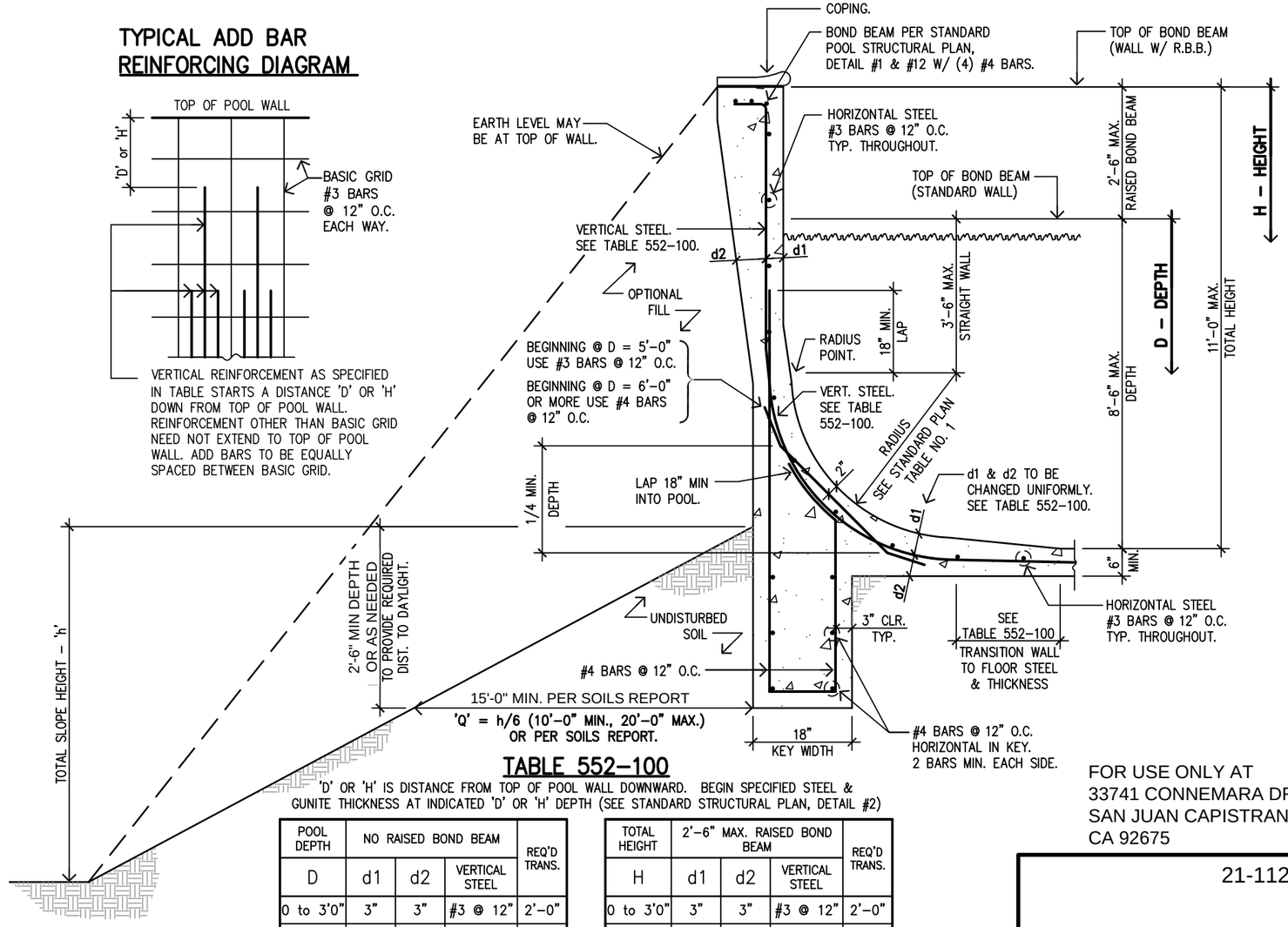

TABLE 552−100

'D' OR 'H' IS DISTANCE FROM TOP OF POOL WALL DOWNWARD. BEGIN SPECIFIED STEEL & GUNITE THICKNESS AT INDICATED 'D' OR 'H' DEPTH (SEE STANDARD STRUCTURAL PLAN, DETAIL #2)

POOL DEPTH	NO RAISED BOND BEAM			REQ'D TRANS.
D	d1	d2	VERTICAL STEEL	
0 to 3'0"	3"	3"	#3 @ 12"	2'−0"
3'−6"	4"	3"	"	2'−0"
4'−0"	4"	3"	#3 @ 4"	2'−0"
4'−6"	4"	3"	"	2'−0"
5'−0"	4"	3"	"	2'−0"
5'−6"	5"	4"	"	2'−0"
6'−0"	5"	4"	add 3 #4	2'−0"
6'−6"	4½"	4"	"	2'−2"
7'−0"	5"	5"	"	2'−5"
7'−6"	6"	5½"	"	2'−8"
8'−0"	6½"	6"	"	2'−10"
8'−6"	6½"	7"	"	3'−0"

TOTAL HEIGHT	2'−6" MAX. RAISED BOND BEAM			REQ'D TRANS.
H	d1	d2	VERTICAL STEEL	
0 to 3'0"	3"	3"	#3 @ 12"	2'−0"
3'−6"	4"	3"	"	2'−0"
4'−0"	4"	3"	#3 @ 4"	2'−0"
4'−6"	4"	3"	"	2'−0"
5'−0"	4½"	3"	"	2'−0"
5'−6"	5½"	3"	"	2'−4"
6'−0"	5½"	3"	add 3 #4	2'−11"
6'−6"	5½"	3"	"	3'−8"
7'−0"	6"	3"	"	4'−4"
7'−6"	7"	3"	"	4'−8"
8'−0"	7½"	3½"	add 3 #5	4'−10"
8'−6"	8½"	3½"	"	5'−0"
9'−0"	9½"	3½"	"	5'−2"
9'−6"	10½"	3½"	"	5'−4"
10'−0"	11½"	4"	"	5'−5"
10'−6"	12½"	4½"	"	5'−6"
11'−0"	13"	5"	"	8'−3"

NOTES

1. KEYWAY MAY BE POURED−IN−PLACE PRIOR TO GUNITE (SHOTCRETE) APPLICATION OF POOL (I.E. COLD JOINT). EXPOSED SURFACE OF KEY SHOULD BE ROUGHENED TO A 1/4" AMPLITUDE FOR BONDING.
2. KEYWAY MAY BE OMMITED IF BOTTOM OF POOL EXCAVATION MEETS OR EXCEEDS THE REQUIRED HORIZONTAL DISTANCE TO DAYLIGHT, AS SPECIFIED ABOVE.

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PLAN VALID ONLY WITH ENGINEER'S SIGNATURE IN RED INK ON PLAN.

THIS DETAIL TO BE USED IN CONJUNCTION WITH STANDARD POOL STRUCTURAL PLAN

FREESTANDING WALL WITH KEY
EQUIVALENT FLUID PRESSURE = 100 P.C.F.

DETAIL #552-100