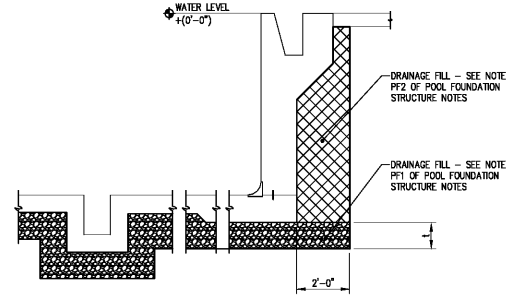
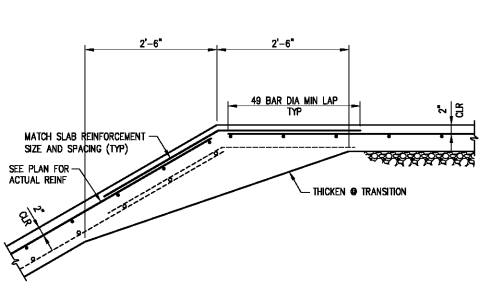


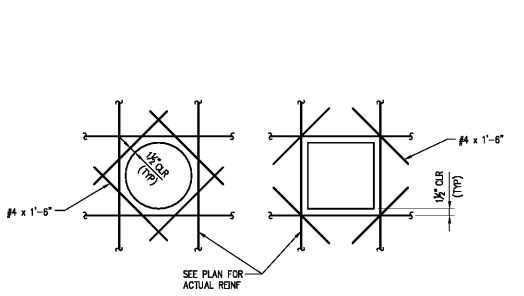
- ABBREVIATIONS LIST**
- ACI AMERICAN CONCRETE INSTITUTE
 - ADD'L ADDITIONAL
 - ADH ADHESIVE
 - ADJ ADJUSTMENT
 - AESS ARCHITECTURALLY EXPOSED STRUCTURAL STEEL
 - AFF ASFALT FINISHED FLOOR
 - AGR AGGREGATE
 - AHU AIR HANDLING UNIT
 - AISC AMERICAN INSTITUTE OF STEEL CONSTRUCTION
 - AISI AMERICAN IRON AND STEEL INSTITUTE
 - ALUM ALUMINUM
 - ALT ALTERNATE
 - APA AMERICAN PLYWOOD ASSOCIATION
 - APX APPROXIMATE
 - ARCH ARCHITECT
 - ASTM AMERICAN SOCIETY OF TESTING MATERIALS
 - AWIS AMERICAN WELDING SOCIETY
 - LG LONG
 - LL LONG LEG HORIZONTAL
 - LLV LONG LEG VERTICAL
 - LVL LAMINATED VENEER LUMBER
 - MAS MASONRY
 - MAT'L MATERIAL
 - MAX MAXIMUM
 - MFR METAL BUILDING MANUFACTURER
 - MCCJ MECHANICAL CONTROL JOINT
 - MEZ MEZZANINE
 - MFR MANUFACTURER
 - MIS/MISCELLANEOUS
 - MO MASONRY OPENING
 - MOM MOMENT
 - MSW MASONRY SHEAR WALL
 - MSL MEAN SEA LEVEL
 - NETL NET
 - MF MASONRY WALL
 - N/C NOT IN CONTRACT
 - NBR NUMBER
 - NS NEAR SIDE
 - NTS NOT TO SCALE
 - OUT OUT TO OUT
 - O/O OVERLAP
 - OC ON CENTER
 - OD OUTSIDE DIAMETER
 - OF OUTSIDE FACE
 - OH OVER HEAD
 - OPG OPENING
 - OPP OPPOSITE
 - ORH ORIENTED STRAND BOARD
 - OSB OUTSTANDING LEG
 - OVS OVERSIZE HOLE
 - PAF POWDER ACTUATED FASTENER
 - PC PRECAST
 - PL PLATE
 - PLF POUNDS PER LINEAR FOOT
 - PLN PLYWOOD
 - PROJ PROJECTION
 - PSF POUNDS PER SQUARE FOOT
 - PSI POUNDS PER SQUARE INCH
 - PSL PARALLEL STRAND LUMBER
 - PT PRESSURE TREATED
 - PTN PARTITION
 - PWT PAVEMENT
 - QTY QUANTITY
 - R RADIUS
 - RD ROOF DRAIN
 - REF REFERENCE
 - REF'D REQUIRED
 - REV REVISION/REVISED
 - ROOF ROOF OPENING
 - RRD ROOF RELIEF DRAIN
 - RTR RETURN
 - RTU ROOF TOP UNIT
 - RTW RETAINING WALL
 - SCHED SCHEDULE
 - SECT SECTION
 - SHT SHEET
 - SIW SIMILAR
 - SJ SANK JOINT
 - SJI STEEL JOIST INSTITUTE
 - SL SLOPED
 - SLRS SEISMIC LOAD RESISTING SYSTEM
 - SPA SPACE(S)
 - SPECS SPECIFICATIONS
 - SS SQUARE
 - SS STAINLESS STEEL
 - SSL SHORT SLOTTED HOLES
 - STD STANDARD
 - STIFF STIFFNESS
 - STL STEEL
 - STRUCT STRUCTURAL
 - EQS EDGE OF SLAB
 - EQ EQUAL
 - EQV EQUIVALENT
 - ES EACH SIDE
 - EW EACH WAY
 - EX EXISTING
 - EXP EXPANSION
 - EXT EXTERIOR
 - F FACE OF
 - FD FLOOR DRAIN FOUNDATION
 - FIN FINISH
 - FLR FLOOR
 - FLG FLANGE
 - FS FAR SIDE
 - FTG FOOTING
 - GAU GAUZE
 - GALV GALVANIZED
 - GB GRADE BEAM
 - GC GENERAL CONTRACTOR
 - GL GLULAM
 - GR GRADE
 - HC HOLLOW CORE
 - HD HOLD DOWN
 - HGT HEIGHT
 - HORIZ HORIZONTAL
 - HP HIGH POINT
 - HS HEADED STUD
 - HSS HOLLOW STRUCTURAL SECTION
 - ID INSIDE DIAMETER
 - ID INSIDE FACE
 - INFO INFORMATION
 - INT INTERIOR
 - INV INVERT
 - JST JOIST
 - JT JOINT
 - K KIP
 - KO KNOCK OUT
 - LB LOAD
 - LDG LEDGE
 - LG LONG
 - LL LIVE LOAD
 - LLH LONG LEG HORIZONTAL
 - LLV LONG LEG VERTICAL
 - LVL LAMINATED VENEER LUMBER
 - LONG LONGITUDINAL
 - LP LOW POINT
 - LVL LAMINATED VENEER LUMBER
 - MAS MASONRY



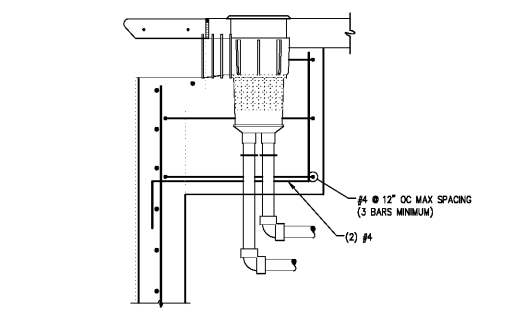
TYPICAL POOL FILL
SCALE: NTS
POOL-025 POOL FILL AQ1.1



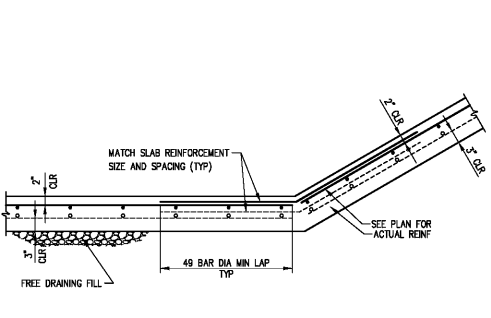
TYPICAL BOTTOM SLAB TRANSITION DETAIL
SCALE: 3/4" = 1'-0"
POOL-008 AQ1.1



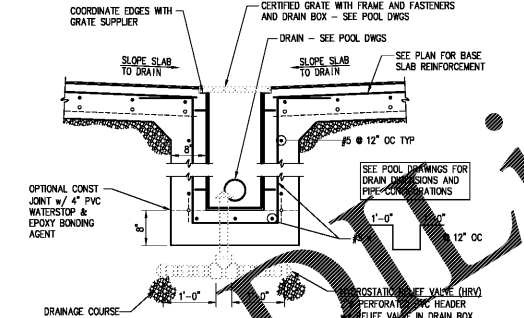
TYP REINFORCING AT EMBEDDED ITEMS
SCALE: NTS
POOL-001 AQ1.1



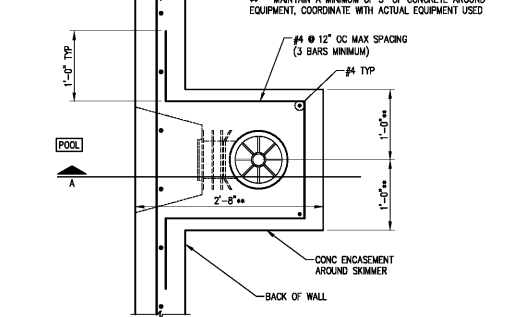
CONC ENCASEMENT AT SKIMMER
SCALE: 1" = 1'-0"
POOL-022 AQ1.1



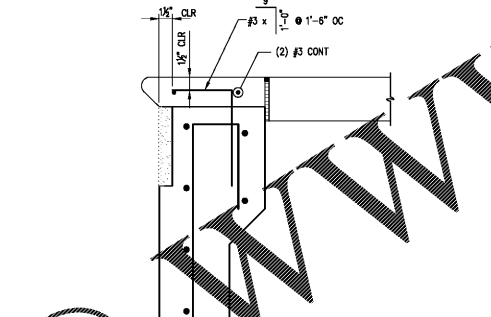
TYP BOTTOM SLAB TRANSITION DETAIL
SCALE: 3/4" = 1'-0"
POOL-009 AQ1.1



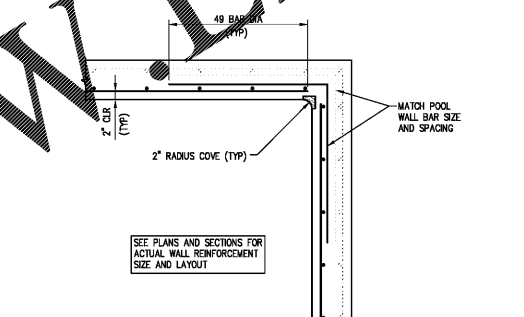
TYPICAL DRAIN BOX DETAIL
SCALE: 3/4" = 1'-0"
POOL-002 AQ1.1



ELEVATION TOP AND BOTTOM OF LIST
SCALE: 1" = 1'-0"
POOL-022 AQ1.1



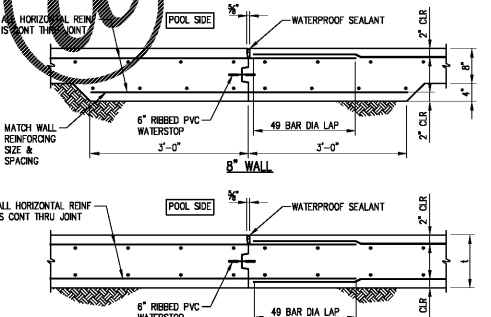
TYPICAL COPING REINFORCEMENT
SCALE: 1 1/2" = 1'-0"
POOL-021 AQ1.1



TYPICAL POOL WALL CORNER DETAIL
SCALE: 3/4" = 1'-0"
POOL-003 AQ1.1



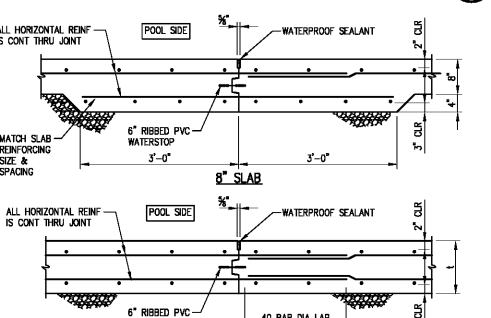
TYP CONCRETE WALL CONSTRUCTION JOINT
SCALE: 3/4" = 1'-0"
POOL-016 AQ1.1



TYP CAST-IN-PLACE WALL BASE
SCALE: 1 1/2" = 1'-0"
POOL-005 AQ1.1



TYP POOL SLAB CONSTRUCTION JOINT
SCALE: NTS
POOL-017 AQ1.1



TYP SHOTCRETE WALL BASE
SCALE: 1 1/2" = 1'-0"
POOL-007 AQ1.1

MCCOMAS/O'DONNELL/NACCARATO
STRUCTURAL ENGINEERS
1171 EAST 110th STREET, SUITE 200, CAROLINA, MINNAPOLIS 55425
(317) 580-0422 | WWW.ODN.com | Project No: 7020.0057.00

- SWIMMING POOL STRUCTURE NOTES**
- PG1 Building Codes: International Building Code 2015
Concrete: American Concrete Institute ACI 318.14
American Concrete Institute ACI 308.06
 - PG2 The construction documents indicate design of a complete reinforced concrete structure. The structural details have been prepared based on cast-in-place concrete methods. If alternate means and methods of concrete placement are employed that may alter the completed project, the contractor must prepare revisions and signed/sealed calculations to the Architect/Engineer for approval prior to fabrication or construction.
 - PG3 The pool structure has been designed to withstand all anticipated loadings under both full and empty conditions in accordance with the criteria of ACI 308 for a non-jointed structure.
 - PG4 During construction the pool structure should not be completely filled with water until the pool is ready for use. If the pool is to be filled with water with no backfill, all walls greater than 6'-0" high must be braced at maximum intervals of 2'-0" on center. Lateral bracing must be braced at 2'-0" on center of the wall.
 - PG5 The pool shell has not been designed to withstand any surge loading from adjacent structures. Inform engineer immediately if adjacent structures are to be added to the pool structure.

- HYDROSTATIC RELIEF VALVES**
- HV1 HRV = Hydrostatic Relief Valve.
 - HV2 The hydrostatic relief valves are part of the pool shell design, and are intended to balance buoyant forces caused by groundwater that is higher than the pool deck when the pool is empty. The hydrostatic relief valves must remain in operation when the pool is empty. If the hydrostatic relief valves are not operational, significant reduction of and damage to the pool shell structure is possible. Contractor is responsible for proper groundwater relief during construction. Refer to the project geotechnical report for additional information.
- POOL SHELL AND RELATED ELEMENTS REINFORCED CONCRETE AND SHOTCRETE NOTES**
- PC1 Pool base shall be cast in-place concrete. Pool walls shall be either cast-in-place concrete or shotcrete (dry mix).
 - PC2 Shotcrete shall be 4500 psi minimum 28 day compressive strength with 6% air entrainment. Limit water to cementitious material ratio (w/c) to 0.42.
 - PC3 All reinforcing steel shall be detailed, supplied and placed in accordance with these construction documents and with ACI 318, ACI 308, and ACI 309 Manual of Standard Practice.
 - PC4 All reinforcing steel shall be shop fabricated to conform to ASTM A615, Grade 60.
 - PC5 All pool concrete shall be wet cured using hoses and polyethylene covering.
 - PC6 Reinforcing clearance: 2" Pool walls, surge tank walls
2" Pool bottom slabs, surge tank slabs
3" All surfaces cast out against earth.
- CONSTRUCTION LOAD NOTES**
- CL1 All pool structural elements have not been designed for any construction loading, including, but not limited to scaffolding, shoring, lifts, etc. It is the responsibility of the contractor to verify the pool structural elements are capable of withstanding construction loads without damage to the pool structural elements, or performance of the in-service pool.

- WATER-TIGHTNESS TESTING**
- WT1 Water tightness testing per American Concrete Institute is required. See specifications.
- POOL FOUNDATION STRUCTURE**
- PF1 All Slabs shall be placed on compacted, free-draining, frost free drainage course.
Drainage Course: Narrowly graded mixture of washed crushed stone, or crushed or uncrushed gravel, ASTM D 448, coarse aggregate grading Size 57, with 100 percent passing a 1.1/2 inch sieve and 0 to 5 percent passing a No. 8 sieve. All fill shall be compacted to a minimum dry density of 95% of the Modified Proctor maximum dry density (ASTM D1557), placed in 6" to 8" lifts. Place Miral 140N or equivalent between drainage fill and subgrade. See project geotechnical report for further recommendations.
Drainage Course Thickness (1): 12" For water depths of 0'-0" to 3'-0"
12" For water depths greater than 3'-0"
12" For Surge Tank
 - PF2 All pool walls shall be backfilled with compacted, free-draining, frost free drainage fill.
Drainage Fill: Narrowly graded mixture of washed crushed stone, or crushed or uncrushed gravel, ASTM D 448, coarse aggregate grading Size 57, with 100 percent passing a 1.1/2 inch sieve and 0 to 5 percent passing a No. 8 sieve. All fill shall be compacted to a minimum dry density of 95% of the Modified Proctor maximum dry density (ASTM D1557), placed in 6" to 8" lifts. Place Miral 140N or equivalent between drainage fill and subgrade. See project geotechnical report for further recommendations.

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Geotechnical Report by: Mactec Engineering and Consulting Inc., dated 09/21/2009

Support Type: Soil supported

Density: 125 pcf

Equivalent Fluid Pressure: 50 psf/ft depth (active)

Passive Pressure: 300 psf/ft depth

Groundwater: None

Front Depth: 2'-0" below finished grade

Differential Settlement: 1/2"

Total Settlement: 1/2"

Allowable Bearing Pressure: 1000 psf

BAR DEVELOPMENT & SPLICE LENGTHS

BAR	TENSION DEVELOPMENT		SPLICES	
	TOP BAR	OTHER	TOP BAR	OTHER
#3	19"	15"	25"	19"
#4	25"	19"	33"	25"
#5	31"	24"	41"	31"
#6	37"	29"	49"	37"
#7	54"	42"	71"	54"
#8	62"	48"	81"	62"
#9	70"	54"	91"	70"
#10	78"	61"	102"	78"
#11	87"	67"	114"	87"

* USE TOP BAR LENGTHS WHEN BARS ARE PLACED SUCH THAT THERE IS MORE THAN 1'-0" OF CONCRETE BELOW BAR

City of Asheville/ Parks & Recreation
DR. WESLEY GRANT SR.
CENTER EXPANSION

285 LIVINGSTON STREET
ASHEVILLE, NC 28801

DESIGNER
CLARK NEXSEN

301 COLLEGE STREET, SUITE 300
ASHEVILLE, NORTH CAROLINA 28801
828.232.9608
CLARK NEXSEN LICENSE NUMBER: C-1028

PROFESSIONAL SEAL
NORTH CAROLINA
SEAL
02/29/06

SUBMITTAL
03.12.2021
CONSTRUCTION DOCUMENTS

REVISIONS

KEY PLAN

DESIGN: TWM
DRAWN: KLT
REVIEW: GJM

CN 7904-A

Order Plans