

**CONCRETE NOTES:**

- ALL WORK SHALL CONFORM TO IBC 2009 REFERENCED EDITIONS OF "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318) AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 301).
- REQUIRED CONCRETE PARAMETERS ARE AS FOLLOWS:

| LOCATION                                  | MAX W/C RATIO | f'c       | AIR-ENTRAINMENT |
|---|---------------|-----------|-----------------|
| INT. WALLS/ELEV. SLABS                    | .52           | 3,000 PSI | 2% ± 1½%        |
| FOUNDATIONS, FOOTINGS, & FOUNDATION WALLS | .45           | 4,500 PSI | 6% ± 1½%        |
| INT. SLAB-ON-GRADE                        | .45           | 4,500 PSI | 2% ± 1½%        |
| EXT. SLAB-ON-GRADE                        | .45           | 4,500 PSI | 6% ± 1½%        |

WHERE: W/C = WATER TO CEMENT RATIO AND  
f'c = COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS

USE PORTLAND CEMENT TYPE II, IN CONFORMANCE WITH ASTM 150  
AIR ENTRAINING ADMIXTURES SHALL CONFORM TO ASTM C 260  
ADMIXTURES SHALL CONFORM TO ASTM C 494  
FLY ASH USED AS ADMIXTURES SHALL CONFORM TO ASTM C 618

- MAXIMUM AGGREGATE SIZE SHALL BE ¾", IN CONFORMANCE WITH ASTM C33.
- CALCIUM CHLORIDE OR ADMIXTURES CONTAINING CALCIUM CHLORIDE IS NOT PERMITTED.
- MAXIMUM SLUMP AFTER THE ADDITION OF A WATER-REDUCING ADMIXTURE IS 6 INCHES.
- CONTRACTOR SHALL NOT PLACE CONCRETE ON FROZEN GROUND OR IN WATER. ADEQUATE EQUIPMENT SHALL BE PROVIDED FOR HEATING CONCRETE MATERIALS AND PROTECTING CONCRETE DURING NEAR-FREEZING OR FREEZING WEATHER. REFERENCE ACI 306, AS NOTED ABOVE, FOR RECOMMENDATIONS FOR COLD WEATHER CONCRETING.
- VERTICAL CONSTRUCTION JOINTS IN WALLS SHALL NOT EXCEED A SPACING OF 40 FEET, U.N.O.
- ANCHOR BOLTS SHALL BE HEADED RODS AND CONFORM TO ASTM F1554, GRADE 36 KSI WELDABLE STEEL, U.N.O. ON DRAWINGS. PROVIDE GALVANIZED ANCHOR BOLTS WHERE IN CONTACT WITH PRESSURE TREATED LUMBER.
- REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60, DEFORMED BARS.
- WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A185 AND BE PROVIDED IN FLAT SHEETS. PROVIDE ADEQUATE SUPPORT FOR WWF TO ENSURE PROPER LOCATION WITHIN SLAB DURING CONCRETE PLACEMENT.
- MINIMUM CONCRETE COVER FOR REINFORCEMENT SHALL BE AS FOLLOWS:
 

|  |           |
|--|-----------|
| A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH      | 3 INCHES  |
| B. FORMED CONCRETE IN CONTACT WITH EARTH OR EXPOSED TO WEATHER | 2 INCHES  |
| C. CONCRETE NOT EXPOSED TO EARTH OR WEATHER IN SLABS & WALLS   | 1½ INCHES |
- WELDING OF REINFORCEMENT IS NOT PERMITTED.
- PROVIDE NON-SHRINK GROUT BENEATH LEVELING PLATES & BEARING PLATES w/ MINIMUM COMPRESSIVE STRENGTH OF 7,000 PSI AT 28 DAYS.

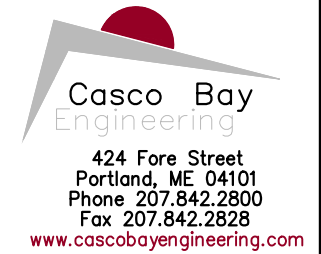
**CONCRETE NOTES CONT.:**

- PROVIDE CONTINUOUS REINFORCEMENT AT ALL CORNERS AND INTERSECTIONS, SEE TYPICAL FOUNDATION WALL DETAILS ON FOUNDATION DETAILS SHEET.
- REINFORCING BARS AND ALL EMBEDDED ITEMS, INCLUDING ANCHOR BOLTS, MUST BE ACCURATELY PLACED AND ADEQUATELY SECURED BEFORE CONCRETE IS PLACED. "WET SETTING" OF EMBEDDED ITEMS INTO CONCRETE IS STRICTLY PROHIBITED.
- UNLESS NOTED ON DRAWINGS, FOLLOW ACI STANDARDS FOR LAP SPLICE LENGTHS OF REINFORCING BARS.

| REBAR LAP SPLICE TABLE |     |     |     |     |     |     |     |
|------------------------|-----|-----|-----|-----|-----|-----|-----|
| BAR SIZE               | #3  | #4  | #5  | #6  | #7  | #8  | #9  |
| 3000 PSI CONCRETE      | 18" | 24" | 30" | 36" | 48" | 56" | 64" |
| 4500 PSI CONCRETE      | 16" | 20" | 24" | 30" | 40" | 48" | 54" |

**FOUNDATION NOTES:**

- FOUNDATIONS HAVE BEEN DESIGNED USING A PRESUMED ALLOWABLE BEARING PRESSURE PER TABLE 1806.2 OF THE INTERNATIONAL BUILDING CODE BASED ON TYPICAL SOILS FOUND IN THIS AREA. IF CLAY, MUD, ORGANIC SILT, PEAT OR UNPREPARED FILL IS FOUND DURING CONSTRUCTION, NOTIFY ENGINEER IMMEDIATELY, AS THE ALLOWABLE LOADS USED IN DESIGN WILL NEED TO BE VERIFIED BY A GEOTECHNICAL ENGINEER. CASCO BAY ENGINEERING RECOMMENDS PROCURING A GEOTECHNICAL ENGINEER TO VERIFY EXISTING SOIL CONDITIONS.
- ALLOWABLE SOIL BEARING CAPACITY USED IN DESIGN = 2,000 PSF
- MINIMUM FROST DEPTH COVER = 4'-6" FOR EXTERIOR FOOTINGS BELOW FINAL EXTERIOR GRADE.
- EXCAVATION, BACKFILL, COMPACTION, GRADATION REQUIREMENTS, FOUNDATION DRAINAGE AND PERMANENT DEWATERING REQUIREMENTS SHALL BE PROVIDED BY A GEOTECHNICAL ENGINEER.
- CONCRETE SLABS ON GRADE SHALL BE CONSTRUCTED ON A MINIMUM 12" THICK LAYER OF PROPERLY COMPACTED STRUCTURAL FILL, UNLESS OTHERWISE DIRECTED BY A GEOTECHNICAL ENGINEER.
- FOUNDATIONS SHALL BEAR ON UNDISTURBED NATIVE SOIL, UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL AND STRUCTURAL ENGINEER IF ANY UNSUITABLE SOILS ARE ENCOUNTERED PRIOR TO PLACING FOUNDATIONS.
- FOUNDATION WALLS AND SLAB-ON-GRADES SHALL REACH THEIR FULL 28 DAY COMPRESSIVE STRENGTH PRIOR TO BACKFILLING. THE CONTRACTOR SHALL PROVIDE TEMPORARY SHORING/BRACING FOR WALLS WHEN BACKFILL IS PLACED PRIOR TO CONCRETE ACHIEVING ITS FULL 28 DAY STRENGTH. CONTRACTOR SHALL PROVIDE TEMPORARY SHORING/BRACING FOR WALLS AND OTHER STRUCTURAL ELEMENTS PRIOR TO INSTALLATION OF PERMANENT BRACING/FLOOR/STRUCTURE.
- PROTECT FOUNDATIONS FROM FROST AND KEEP BOTTOM OF TRENCH DRY DURING CONSTRUCTION. IF GROUNDWATER IS ENCOUNTERED NEAR OR ABOVE THE BASE OF THE FOOTINGS, EXCAVATIONS SHALL BE DEWATERED DURING CONSTRUCTION. SURFACE WATER SHALL BE DIVERTED AWAY FROM EXCAVATIONS.
- DO NOT UNDERMINE EXISTING FOUNDATIONS OF ADJACENT STRUCTURES. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SHORING, BRACING AND UNDERPINNING OF EXISTING STRUCTURES DURING EXCAVATION, BACKFILLING, AND CONSTRUCTION. CONTRACTOR SHALL SLOPE EXCAVATIONS TO ACHIEVE SOIL STABILITY.



CLIENT:  
**SCATTERGOOD DESIGN**  
80 MIDDLE ST.  
PORTLAND, ME 04101

104 WEST ST. PORTLAND MAINE

| No. | DATE | DESCRIPTION |
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|     |      |             |

SHEET TITLE:

**NOTES**

DESIGNED: ED  
DRAWN: AR  
DATE: 7-14-16  
PROJECT No: 16-095

**S0.1**