

THE FOLLOWING BUILDING CODES AND STANDARDS SHALL BE REFERENCED DURING CONSTRUCTION:

- IBC 2003 EDITION OF THE IBC INTERNATIONAL BUILDING CODE
- ASCE 7 AMERICAN SOCIETY OF CIVIL ENGINEERS, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
- ACI 301 AMERICAN CONCRETE INSTITUTE SPECIFICATION FOR STRUCTURAL CONCRETE
- ASCI AMERICAN CONCRETE INSTITUTE SPECIFICATION FOR STRUCTURAL CONCRETE
- ACI 318 AMERICAN CONCRETE INSTITUTE REQUIREMENTS FOR REINFORCED CONCRETE
- ASTM AMERICAN SOCIETY OF TESTING AND MATERIALS
- NDS NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION BY NATIONAL FOREST PRODUCTS ASSOCIATION, 2001.

REFERENCE ARCHITECTURAL PLANS FOR DIMENSIONS NOT SHOWN, REFERENCE MECHANICAL, ELECTRICAL, AND ARCHITECTURAL PLANS FOR SIZES AND LOCATIONS OF WALL AND SLAB OPENINGS, DUCTS, PIPING, CURBS, AND EQUIPMENT PADS. IN THE EVENT OF A CONFLICT BETWEEN THE DRAWINGS, SPECIFICATIONS, OR NOTES ON THE DRAWINGS, THE ENGINEER SHALL BE NOTIFIED PRIOR TO CONSTRUCTION.

EXISTING DIMENSIONS AND CONDITIONS ARE FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY, ALL EXISTING CONSTRUCTION AND DIMENSIONS IN THE FIELD PRIOR TO CONSTRUCTION OR FABRICATION. ALL DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER PRIOR TO COMMENCING WORK.

THE CONTRACTOR SHALL NOTIFY THE ENGINEER IF DIMENSIONS OR CHANGES ARE REQUIRED TO THE CONTRACT DOCUMENTS OR APPROVED SHOP DRAWINGS DUE TO INTERFERENCES, FABRICATION ERRORS, OR OTHER CAUSES. THE STRUCTURE IS SELF-SUPPORTING AND STABLE AFTER THE ENTIRE BUILDING IS COMPLETELY CONSTRUCTED. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ERECTION PROCEDURES AND SEQUENCING DURING CONSTRUCTION AND ERECTION TO PROVIDE LOCAL AND OVERALL STABILITY OF THE BUILDING AND ITS COMPONENTS DURING CONSTRUCTION AND ERECTION. THE CONTRACTOR SHALL RETAIN A LICENSED STRUCTURAL ENGINEER TO DESIGN TEMPORARY BRACING/SHORING AND DETERMINE WHERE THE TEMPORARY BRACING/SHORING IS NEEDED.

GENERAL NOTES

USE DEFORMED BILLET-STEEL REINFORCING BARS, GRADE 60, IN CONFORMANCE WITH ASTM A615. REINFORCEMENT SHALL BE ACCURATELY PLACED AND SUPPORTED PRIOR TO CONCRETE PLACEMENT, AND SHALL BE SECURED AGAINST DISPLACEMENT.

THE CONTRACTOR SHALL SUBMIT REINFORCING SHOP DRAWINGS TO THE ENGINEER FOR REVIEW AND ACCEPTANCE PRIOR TO COMMENCING FABRICATION. REINFORCEMENT SHALL BE DETAILED IN ACCORDANCE WITH ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING OF REINFORCED CONCRETE STRUCTURES". SHOP DRAWINGS SHALL SHOW REINFORCING STEEL PLACEMENT DETAILS AND SECTIONS.

MINIMUM CONCRETE COVER FOR REINFORCEMENT	
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3 INCHES
CONCRETE EXPOSED TO EARTH OR WEATHER	2 INCHES
CONCRETE NOT EXPOSED TO EARTH OR WEATHER IN SLABS AND WALLS (FOR PRIMARY REINFORCEMENT, TIES, AND STIRRUPS)	1½ INCHES
CONCRETE NOT EXPOSED TO EARTH OR WEATHER IN COLUMNS AND BEAMS	1½ INCHES

CONTINUOUS REINFORCEMENT SHALL BE TENSION LAP SPUN PER LAP SPUNCE LENGTH TABLE, U.N.O.

LAP SPUNCE LENGTH TABLE	
BAR SIZE	#3 #4 #5 #6 #7 #8 #9
MIN LAP SPUNCE (INCHES)	18 24 30 36 48 64 81

REINFORCEMENT HOOKS SHALL CONFORM TO STANDARD HOOKS ACCORDING TO ACI 318, UNLESS OTHERWISE NOTED. REINFORCEMENT NOTED WELDING OF REINFORCEMENT IS NOT PERMITTED, UNLESS OTHERWISE NOTED.

CONCRETE REINFORCING NOTES

CONCRETE NOTES

MAXIMUM AGGREGATE SIZE SHALL BE ¾", IN CONFORMANCE WITH ASTM C33 USE PORTLAND CEMENT TYPE II, IN CONFORMANCE WITH ASTM 150. AIR ENTRAINING ADMIXTURES SHALL CONFORM TO ASTM C 280. ADMIXTURES SHALL CONFORM TO "SPECIFICATION FOR CHEMICAL ADMIXTURES FOR CONCRETE" ASTM C 494. FLY ASH USED AS ADMIXTURES SHALL CONFORM TO ASTM C 618. CALCIUM CHLORIDE OR ADMIXTURES CONTAINING CALCIUM CHLORIDE IS NOT PERMITTED.

MAXIMUM SLUMP AFTER THE ADDITION OF A WATER-REDUCING ADMIXTURE IS 8 INCHES.

CONCRETE EXPOSED TO FREEZING AND THAWING, INCLUDING FOUNDATIONS, FOOTINGS, FOUNDATION WALLS, AND EXTERIOR WALKWAYS SHALL BE AIR ENTRAINED WITH AIR CONTENT BETWEEN 5% AND 6%. 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.

CONTRACTOR SHALL SUBMIT PROPOSED CONCRETE MIX DESIGN AND LABORATORY TESTS OF FABRICATED CYLINDERS VERIFYING CONCRETE STRENGTH OR PERFORMANCE HISTORY OF MIX TO ENGINEER FOR ACCEPTANCE PRIOR TO PLACEMENT OF CONCRETE. CONCRETE USED ON SITE SHALL BE FIELD TESTED IN ACCORDANCE WITH AND IN THE PRESENCE OF AN APPROVED TESTING AGENCY. FIELD TESTING INFORMATION SHALL INDICATE SLUMP, AIR CONTENT, AND TEMPERATURE. COMPRESSION TEST 1 CYLINDER AT 7 DAYS AND 2 AT 28 DAYS. HOLD AN ADDITIONAL CYLINDER FOR A 56 DAY BREAK, IF NECESSARY. PROVIDE A SET OF 4 CYLINDERS FOR EACH PLACEMENT AND PER 50 CUBIC YARDS OF CONCRETE PLACED. THE OWNER SHALL PAY FOR ALL CONCRETE TESTING.

CONSTRUCTION JOINTS IN WALLS SHALL BE PERMITTED AS DETAILED ON THE STRUCTURAL DRAWINGS. SURFACES OF CONCRETE CONSTRUCTION JOINTS SHALL BE CLEANED AND LAITANCE REMOVED. IMMEDIATELY BEFORE NEW CONCRETE IS PLACED, CONSTRUCTION JOINTS SHALL BE WETTED AND STANDING WATER REMOVED. VERTICAL CONSTRUCTION JOINTS IN WALLS SHALL NOT EXCEED A SPAACING OF 40 FEET.

WHERE ELECTRICAL CONDUIT/RADIANT HEATING TUBES RUN IN THE SLAB, THEY SHALL BE LOCATED AT MID-DEPTH OF THE SLAB. ALUMINIUM ANCHOR BOLTS SHALL CONFORM TO ASTM A307. ANCHOR BOLTS SHALL HAVE HEAVY HEX NUTS AND LOCK WASHERS.

LOCATION	MAX W/C RATIO	f _c	AIR-ENTRAINMENT
INT. SLAB-ON-GRADE	.47	4,000 PSI	NONE

REQUIRED CONCRETE PARAMETERS ARE AS FOLLOWS:

- ACI 318 AMERICAN CONCRETE INSTITUTE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE
- ACI 301 AMERICAN CONCRETE INSTITUTE SPECIFICATIONS FOR STRUCTURAL CONCRETE
- ACI 305 STANDARD SPECIFICATIONS FOR HOT WEATHER CONCRETING
- ACI 306 STANDARD SPECIFICATION FOR COLD WEATHER CONCRETING
- ACI 308 STANDARD PRACTICE FOR CURING CONCRETE

ALL CONCRETE WORK, INCLUDING MATERIAL SELECTION, ADMIXTURES, MIXING, AND PLACEMENT OF CONCRETE SHALL BE IN CONFORMANCE WITH APPLICABLE BUILDING CODES. IN ADDITION, REFERENCE THE FOLLOWING CONCRETE STANDARDS AND SPECIFICATIONS:

DESIGN CRITERIA

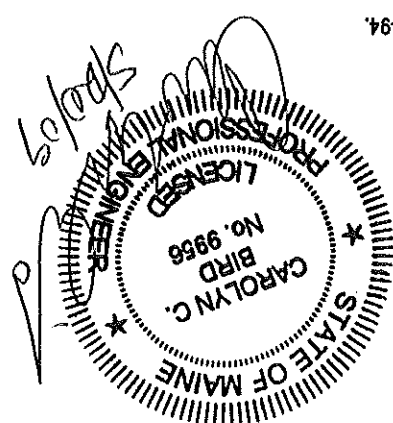
- LIVE LOAD: MECHANICAL ROOM = 125 PSF WALK-IN FREEZER AREA = 150 PSF
- GROUND SNOW LOAD, P_g = 50 PSF
- SNOW EXPOSURE FACTOR, C_e = 1.0
- SNOW LOAD IMPORTANCE FACTOR, I = 1.0
- FLAT ROOF SNOW LOAD, P_f = 35 PSF + DRIFT

ANCHOR BOLTS SHALL CONFORM TO ASTM A307. ANCHOR BOLTS SHALL HAVE HEAVY HEX NUTS AND LOCK WASHERS.

WHERE ELECTRICAL CONDUIT/RADIANT HEATING TUBES RUN IN THE SLAB, THEY SHALL BE LOCATED AT MID-DEPTH OF THE SLAB. ALUMINIUM ANCHOR BOLTS SHALL CONFORM TO ASTM A307. ANCHOR BOLTS SHALL HAVE HEAVY HEX NUTS AND LOCK WASHERS.

REVISIONS

No.	DATE	ISSUE
0	11-25-08	FOR CONSTRUCTION



NOTES

DESIGNED: TD
DRAWN: TD
DATE: 10-31-08
CADD FILE: 8097-S1.DWG
PROJECT No: 8097

50

CASCO BAY ENGINEERING
424 Fore Street
Portland, ME 04101
Phone 207.842.2800
Fax 207.842.2828
www.cascobayengineering.com

CLIENT: R. DEAN BINGHAM
55 ROBERTS STREET
PORTLAND, ME 04102

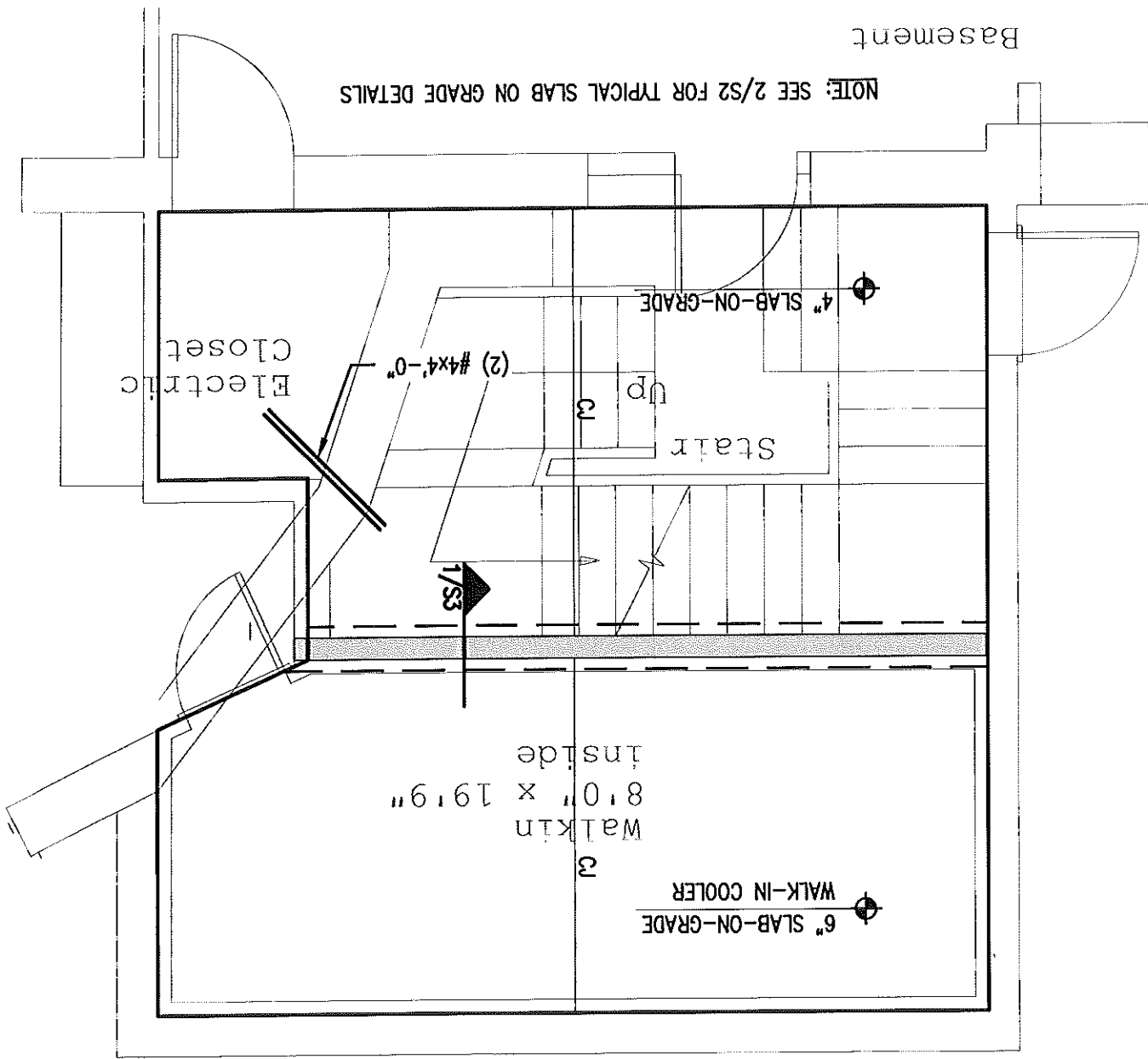
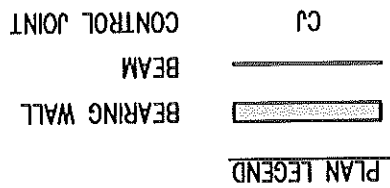
GRACE
CHESTNUT STREET CHURCH
PORTLAND MAINE

FIRST FLOOR PLAN

SCALE: 1/4"=1'-0"

WOOD NOTES

ALL LUMBER SHALL BE VISUALLY GRADED AND STAMPED WITH GRADE DESIGNATION, SPECIES, AND ADDITIONAL INSPECTION INFORMATION, U.N.O.
 CARE SHALL BE TAKEN TO PROTECT TIMBER FROM WEATHER AND DAMPNESS. DO NOT STACK IN SUCH A WAY AS TO CAUSE WARPING OR PREVENT ADEQUATE AIR CIRCULATION.
 WOOD GRADES AND SPECIES:
 1. SPRUCE-PINE-FIR, No.1/No.2 OR BETTER FOR TYPICAL LUMBER (JOISTS, WALLS, ETC) U.N.O.
 2. USE SOUTHERN YELLOW PINE FOR EXTERIOR EXPOSURE APPLICATIONS AND WHERE SHOWN ON DRAWINGS AS PRESERVATIVE PRESURE TREATED LUMBER (PT OR PPT).
 3. WHERE NOTED LVL OR PSL ON DRAWINGS, PROVIDE VERSALAM MEMBERS BY BOISE CASCADE OR EQUIVALENT, WHICH HAVE THE FOLLOWING MINIMUM ALLOWABLE STRESSES:
 A. LVL PROPERTIES:
 Fb = 2600 PSI Fc = 2510 PSI (PARALLEL TO GRAIN)
 Ft = 285 PSI Fe = 750 PSI (PERPENDICULAR TO GRAIN)
 B. PSL PROPERTIES:
 Ft = 1555 PSI E = 1,900,000 PSI
 Fv = 2800 PSI Fc = 2900 PSI (PARALLEL TO GRAIN)
 Ft = 290 PSI Fe = 750 PSI (PERPENDICULAR TO GRAIN)
 Fv = 2025 PSI E = 2,000,000 PSI
 STRUCTURAL LUMBER SHALL HAVE A MAXIMUM MOISTURE CONTENT OF 19%.
 PROVIDE PRESURE TREATED LUMBER FOR ALL LUMBER IN CONTACT WITH MASONRY OR CONCRETE.
 NOMINAL SIZES ARE TYPICALLY REFERENCED ON THE DRAWINGS. PROVIDE ACTUAL SIZES AS SET FORTH IN U.S. DEPARTMENT OF COMMERCE VOLUNTARY PRODUCT STANDARD PS20-99.
 ALL PLYWOOD SHALL BE APA RATED CDX SHEATHING.
 1. USE 1/2" PLYWOOD WALL SHEATHING. ATTACH PLYWOOD WITH LONG SIDE PERPENDICULAR TO WALL STUDS. STAGGER PANEL ENDS AND BLOCK ALL PANEL EDGES.
 2. USE 5/8" PLYWOOD ROOF SHEATHING. ATTACH PLYWOOD WITH LONG SIDE PERPENDICULAR TO FRAMING. STAGGER PANEL ENDS. USE SHEATHING CLIPS BETWEEN SHEETS WHERE BLOCKING IS NOT REQUIRED.
 3. USE 3/4" PLYWOOD FLOOR SHEATHING. ATTACH PLYWOOD WITH LONG SIDE PERPENDICULAR TO FRAMING. STAGGER PANEL ENDS.
 PROVIDE FULL DEPTH BLOCKING AT ENDS AND INTERIOR SUPPORTS OF ALL JOISTS AND RAFTERS WHERE JOISTS AND RAFTERS FRAME OVER SUPPORTS. PROVIDE 1x3 DIAGONAL BRIDGING OR FULL DEPTH SOLID BLOCKING FOR EACH 8'-0" OF SPAN FOR ALL JOISTS AND RAFTERS.
 FASTENERS SHALL COMPLY WITH RECOMMENDED FASTENING SCHEDULE OF REFERENCED BUILDING CODE, U.N.O. ON DRAWINGS. SPIKE TOGETHER ALL FRAMING MEMBERS WHICH ARE BUILT-UP USING A MINIMUM OF 2-ROWS OF 16d NAILS AT 12" O.C. STAGGERED, UNLESS OTHERWISE NOTED IN BOCA OR ON THE DRAWINGS. NAIL MULTIPLE LVL'S TOGETHER AS RECOMMENDED BY THE MANUFACTURER USING A MINIMUM OF 2-ROWS OF 16d NAILS AT 12" O.C. STAGGERED. ALL FASTENERS, NUTS, AND WASHERS SHALL BE HOT-DIPPED GALVANIZED.
 ALIGN COLUMNS SUCH THAT COLUMNS BEAR CONTINUOUSLY TO FOUNDATION SUPPORT.
 PROVIDE HORIZONTAL BLOCKING FOR ALL LOAD BEARING WALLS AT 4'-0" O.C. VERTICAL, MAXIMUM.
 SUBMIT SHOP DRAWINGS FOR ALL PREFABRICATED WOOD JOISTS AND WALL PANELS TO ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.



S1

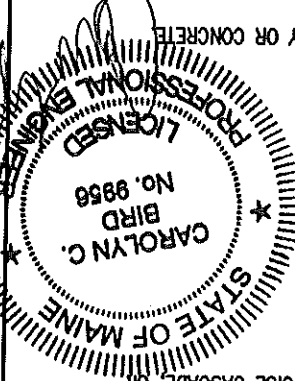
DESIGNED: TD
 DRAWN: TD
 DATE: 10-31-08
 CADD FILE: 8097-S1.DWG
 PROJECT No: 8097

1ST FLOOR FRAMING PLAN

SHEET TITLE:

No.	DATE	ISSUE
0	11-25-08	FOR CONSTRUCTION

REVISIONS

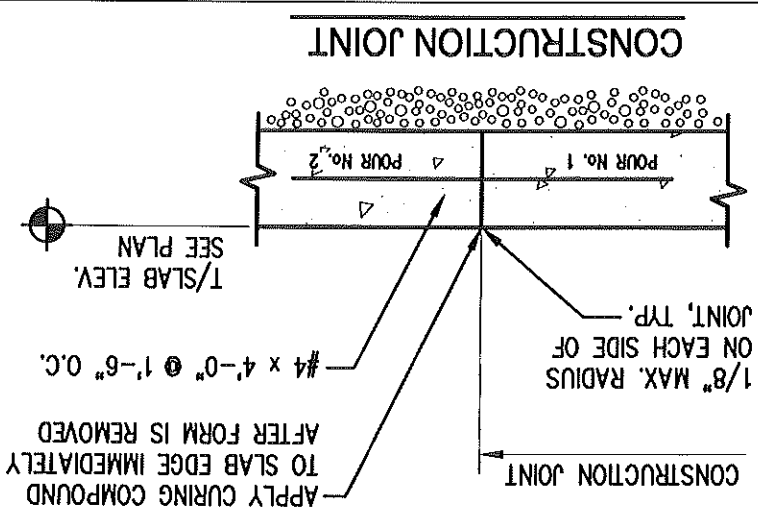
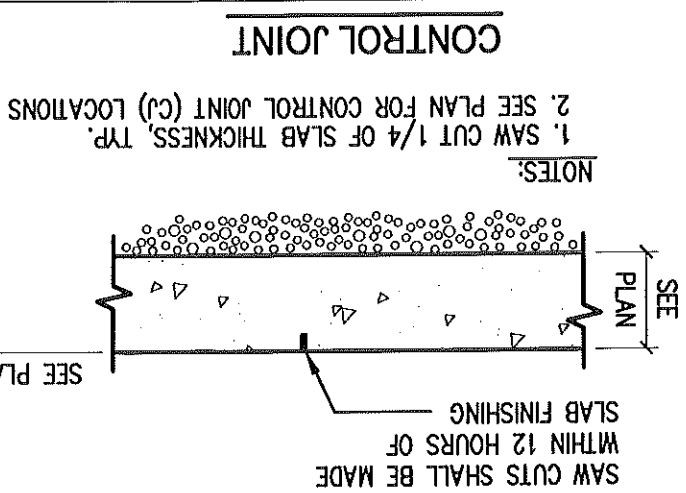
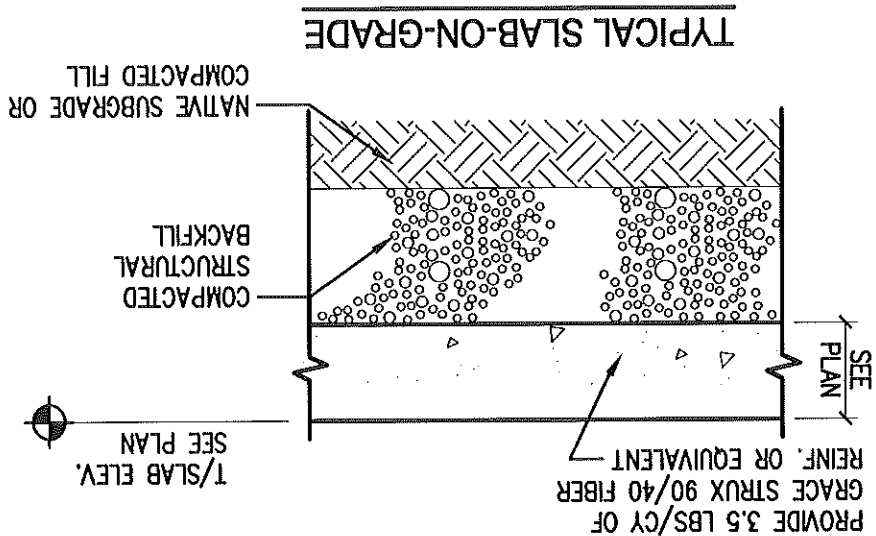


GRACE
 CHESTNUT STREET CHURCH
 PORTLAND MAINE

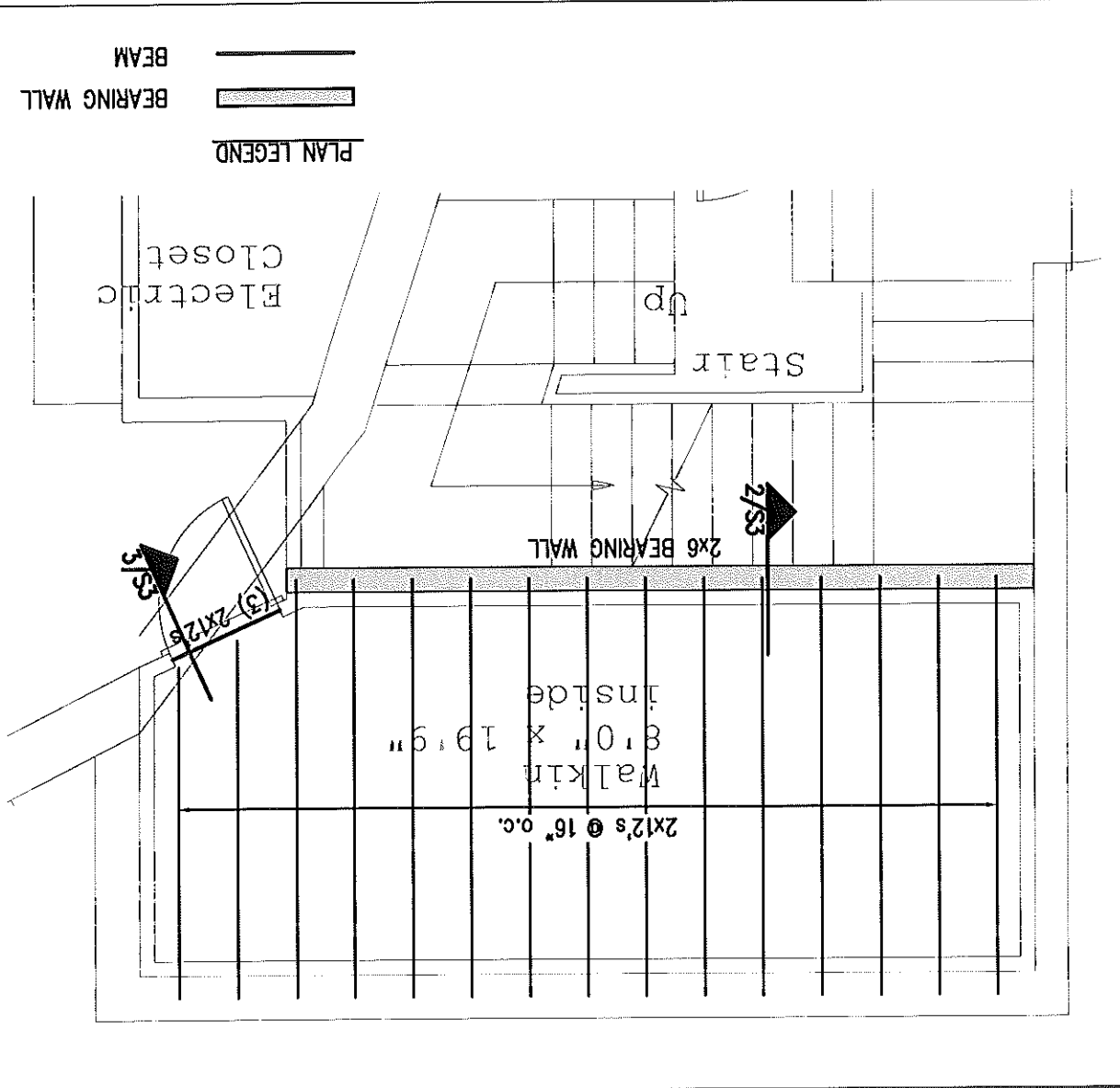
CLIENT: R. DEAN BINGHAM
 55 ROBERTS STREET
 PORTLAND, ME 04102
 424 Fore Street
 Portland, Me 04101
 Phone 207.842.2800
 Fax 207.842.2828
 www.cascobayengineering.com



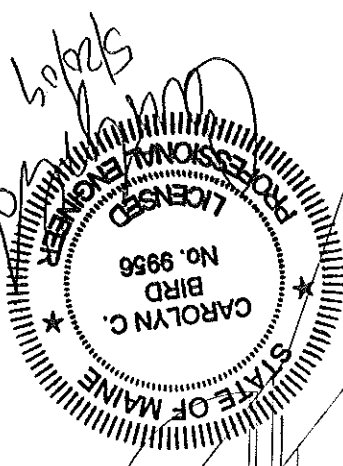
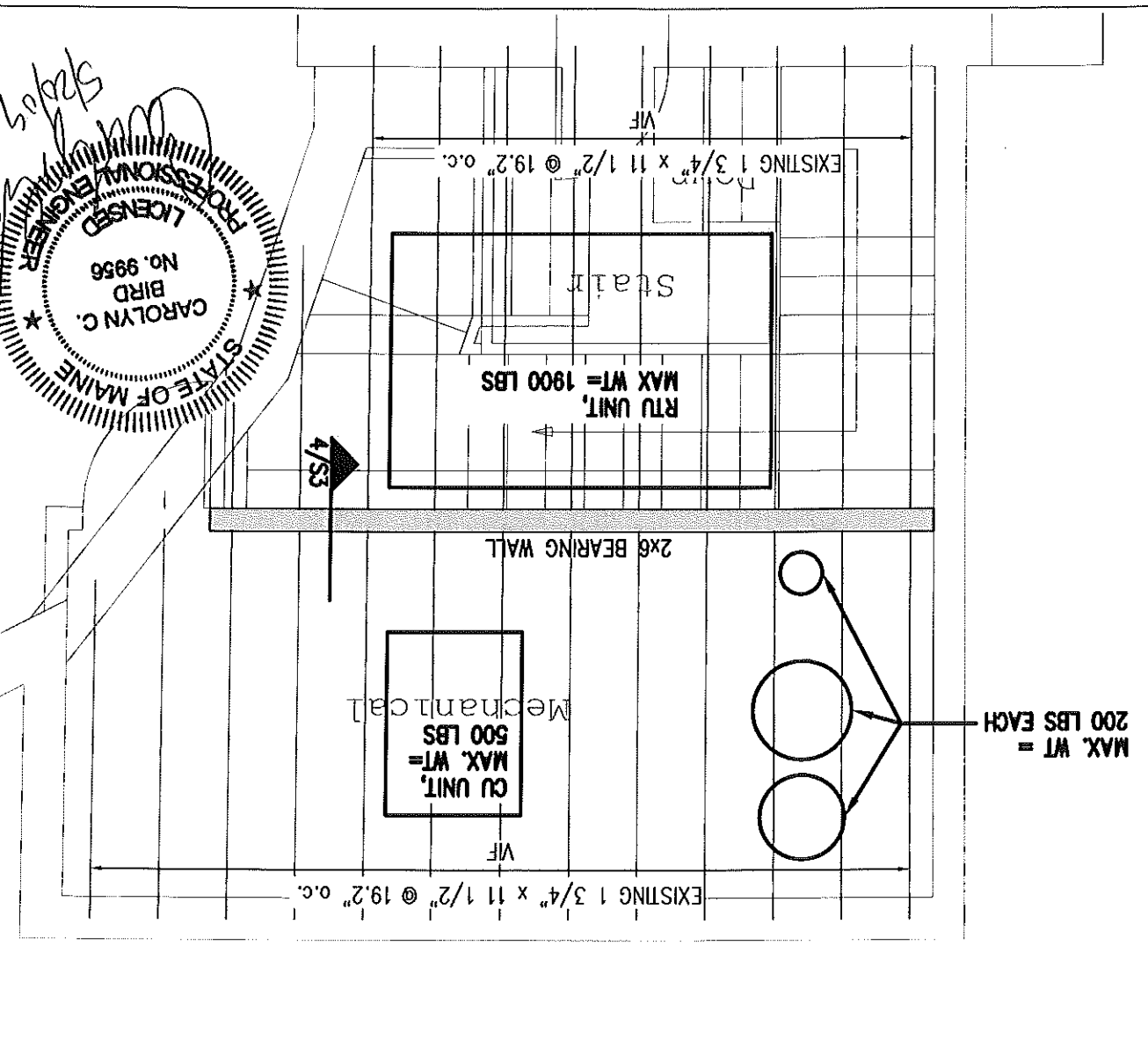
SLAB-ON-GRADE DETAILS



2ND FLOOR PLAN



ROOF PLAN



REVISIONS

No.	DATE	ISSUE
0	11-25-08	FOR CONSTRUCTION

SHEET TITLE: 2ND FLR AND ROOF FRAMING PLANS

DESIGNED: TD

DRAWN: TD

DATE: 10-31-08

CADD FILE: 8097-S1.DWG

PROJECT No: 8097

CHESTNUT STREET CHURCH
 PORTLAND MAINE

R. DEAN BINGHAM
 56 ROBERTS STREET
 PORTLAND, ME 04102

CASCO BAY ENGINEERING
 424 Fore Street
 Portland, Me 04101
 Phone 207.842.2800
 Fax 207.842.2828
 www.cascobayengineering.com

S2

S3

DESIGNED: TD
 DRAWN: TD
 DATE: 10-31-08
 CADD FILE: 8097-S1.DWG
 PROJECT No: 8097

DETAILS

SHEET TITLE:

REVISIONS		
No.	DATE	ISSUE
0	11-25-08	FOR CONSTRUCTION



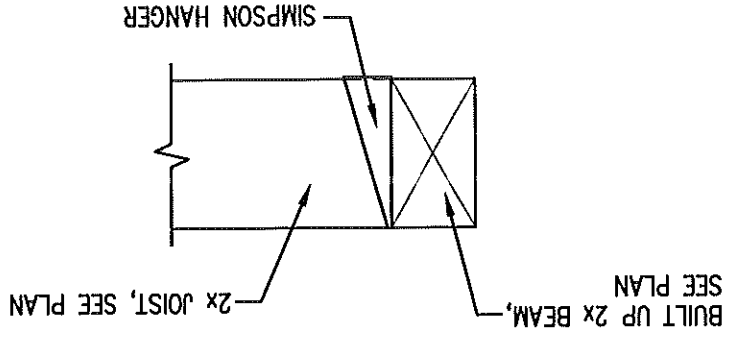
GRACE
 CHESTNUT STREET CHURCH
 PORTLAND MAINE

CASCO BAY ENGINEERING
 424 Fore Street
 Portland, ME 04101
 Phone 207.842.2800
 Fax 207.842.2828
 www.cascobayengineering.com
 CLIENT: R. DEAN BINGHAM
 55 ROBERTS STREET
 PORTLAND, ME 04102

SECTION

SCALE: 1"=1'-0"

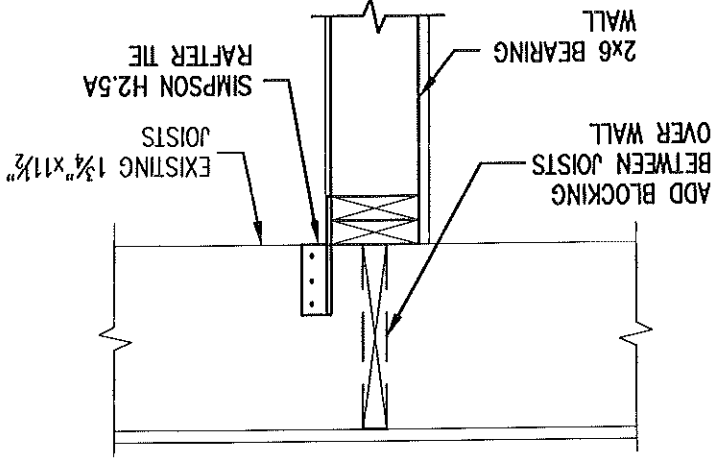
3



SECTION

SCALE: 1"=1'-0"

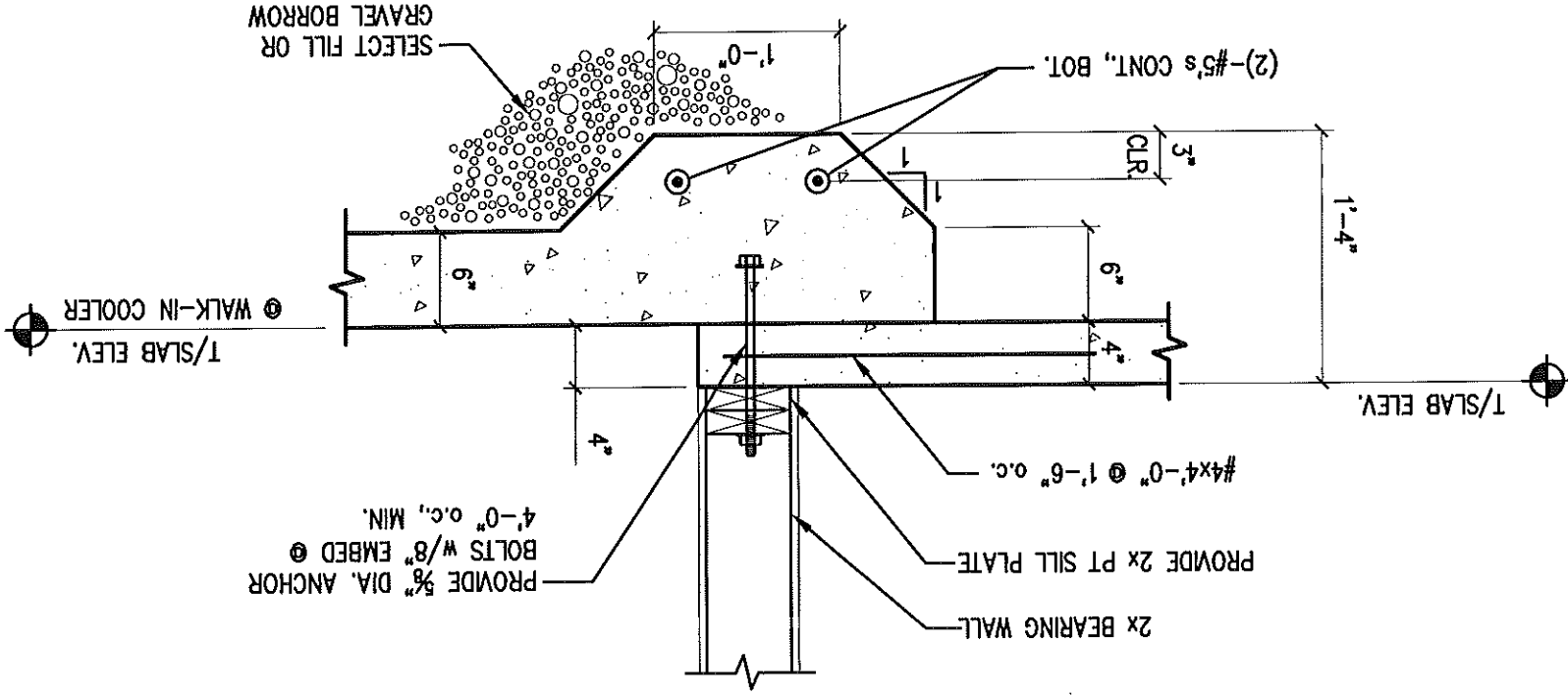
4



SECTION

SCALE: 1"=1'-0"

1



SECTION

SCALE: 1"=1'-0"

2

