

BUILDING CODE INFORMATION:
 THE 2009 EDITION OF THE INTERNATIONAL BUILDING CODE (IBC 2009).
 AMERICAN SOCIETY OF CIVIL ENGINEERS: MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, ANSI/ASCE 7-05, 2005.
 AMERICAN WELDING SOCIETY: STRUCTURAL WELDING CODE – SHEET STEEL, 2nd ED., ANSI/AWS D1.3, 2008.

1.0 DESIGN ASSUMPTIONS
 THE ARCHITECT AND/OR ENGINEER OF RECORD MUST REVIEW AND APPROVE THE FOLLOWING DESIGN ASSUMPTIONS BEFORE THE SHOP DRAWINGS MAY BE USED.
 ALL CONNECTIONS SHALL BE COMPLETE AS PER THE PLANS AND SPECIFICATIONS AT THE TIME OF INSTALLATION.

STRUCTURAL DESIGN CRITERIA:

1. DESIGN LOADS:

i. DESIGN WIND: LOCATION: PORTLAND, MAINE
 WIND LOAD (PER ASCE 2005 SECTION 6.0 COMPONENTS AND CLADDING):
 OCCUPANCY CATEGORY II
 BASIC WIND SPEED V = 100 MPH
 WIND EXPOSURE FACTOR = B
 IMPORTANCE FACTOR I = 1.0
 DEFLECTION CRITERIA: L/360 OF THE WALL FRAMING LENGTH.

ii. ROOF LIVE LOAD:
 SNOW LOAD: 50 PSF (GROUND SNOW LOAD 20 PSF) PLUS SNOW DRIFT LOADING
 WHERE APPLICABLE (PER ASCE 2005 SECTION 7.0)
 SNOW EXPOSURE FACTOR (Ce) = 1.0
 THERMAL FACTOR (Ct) = 1.2
 IMPORTANCE FACTOR (I) = 1.0

WIND LOADS – COMPONENTS & CLADDING

WALLS (- ZONE 4)	WALLS (- ZONE 5)
P = +18.3 PSF / -20.0 PSF	P = +18.3 PSF / -24.5 PSF

WIND LOADS – MWFRS

ROOF (WIND NORMAL TO RIDGE)	ROOF (WIND PARALLEL TO RIDGE)
P = +5.1 PSF / -10.7 PSF	P = -14.7 PSF

WALL (WIND NORMAL TO RIDGE)	WALL (WIND PARALLEL TO RIDGE)
P = +10.6 PSF / -12.0 PSF	P = + 10.6 PSF / -12.0 PSF

iii. ROOF LOADS: GRAVITY LOADING
 ROOF GRAVITY LOADING:
 SHINGLED ROOF DEAD LOAD = 3.0 PSF ASPHALT SHINGLES
 1.5 PSF 3/4" CDX PLYWOOD SHEATHING
 3.0 PSF WOOD 2x RAFTERS AT 16" OC
 1.5 PSF 3/4" CDX PLYWOOD SHEATHING CEILING
 1.0 PSF MISCELLANEOUS
 W_r = 10.0 PSF

FLOOR GRAVITY LOADING:
 FLOOR DEAD LOAD = 1.5 PSF 2x WOOD FLOOR DECKING
 2.0 PSF WOOD JOIST AT 16" OC
 1.5 PSF MISCELLANEOUS
 W_r = 5.0 PSF

DEFLECTION CRITERIA:
 EXTERIOR WALLS = L/360
 ROOF RAFTERS = L/240 LIVE LOAD
 FLOOR JOISTS = L/360 LIVE LOAD

STRUCTURAL DESIGN CRITERIA:

1. ALL DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.

2. THE STRUCTURE IS DESIGNED TO BE SELF SUPPORTING AND STABLE AFTER THE BUILDING IS COMPLETE. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE TO ENSURE SAFETY OF THE STRUCTURE AND PERSONNEL DURING ERECTION. THIS INCLUDES THE ADDITION OF THE NECESSARY SHORING, SHEETING, TEMPORARY BRACING, GUY'S OR TIEDOWNS. SUCH MATERIAL SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER COMPLETION OF THE PROJECT.

3. ALL APPLICABLE FEDERAL, STATE, AND MUNICIPAL REGULATIONS SHALL BE FOLLOWED, INCLUDING THE FEDERAL DEPARTMENT OF LABOR OCCUPATIONAL SAFETY AND HEALTH ACT.

WOOD FRAMING NOTES:

1. STRUCTURAL LUMBER: ACO, CA AND MCQ PRESSURE TREATED SOUTHERN PINE NO. 2 OR BETTER LUMBER
 F_b = 1000 PSI F_v = 565 PSI
 F_c = 1400 PSI E = 1600000 PSI

NELMA Grading Rules Agency / No. 2 EASTERN HEMLOCK NO. 2 OR BETTER.
 F_b = 575 PSI F_v = 140 PSI
 F_c = 825 PSI E = 1100000 PSI

STRUCTURAL COMPOSITE LUMBER: LVL F_b = 3100 PSI

2. DESIGN CODE: THIS BUILDING IS DESIGNED TO COMPLY WITH THE 2009 EDITION OF THE INTERNATIONAL BUILDING CODE, IBC 2009.

3. FASTENERS: COMPLY WITH RECOMMENDED FASTENING SCHEDULE OF THE INTERNATIONAL BUILDING CODE IBC 2009 UNLESS SHOWN OTHERWISE ON THE DRAWINGS.

4. SHEATHING: APA RATED 'EXPOSURE 1' PLYWOOD OR COMPOSITE PANEL:

LOCATION	THICKNESS	SPAN RATING	EDGE NAILING	FIELD NAILING
ROOF SHEATHING:	5/8-INCH	40/20	8d AT 6" OC	8d AT 12" OC
WALL SHEATHING:	1/2-INCH	16/0	8d AT 6" OC	8d AT 12" OC
FLOOR SHEATHING:	3/4-INCH	48/24	8d AT 6" OC	8d AT 12" OC

5. SPIKE TOGETHER ALL FRAMING MEMBERS WHICH ARE BUILT-UP USING MULTIPLE 2x LUMBER.

6. PROVIDE PRESSURE TREATED LUMBER FOR ALL LUMBER IN CONTACT WITH MASONRY OR CONCRETE OR EXPOSED TO WEATHER.

7. ROOF SHEATHING: 5/8" APA RATED SHEATHING, EXTERIOR OR STRUCTURAL I OR II RATED SHEATHING, SPAN RATING 40/20, INSTALL SHEETS WITH FACE GRAIN DIRECTION PERPENDICULAR TO SUPPORTING MEMBERS.

8. WALL SHEATHING: 1/2" APA RATED SHEATHING, EXTERIOR OR STRUCTURAL I OR II RATED SHEATHING, SPAN RATING 32/16, INSTALL SHEETS WITH FACE GRAIN DIRECTION PERPENDICULAR TO SUPPORTING MEMBERS.

NOTES
 TYPICAL NOTES

GENERAL NOTES:

1. **COPYRIGHT:**
 THE CONTRACTOR SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS INCLUDING VERIFYING EXISTING FINISH GRADE CONDITIONS. DO NOT SCALE THE DRAWING—ANY ERROR OR OMISSIONS SHALL BE REPORTED TO DOWNEAST STRUCTURAL CONSULTANTS WITHOUT DELAY. THE COPYRIGHTS TO ALL DESIGNS AND DRAWINGS ARE THE PROPERTY OF DOWNEAST STRUCTURAL CONSULTANTS, PLLC. REPRODUCTION OR USE FOR ANY PURPOSE OTHER THAN THAT AUTHORIZED BY DOWNEAST STRUCTURAL CONSULTANTS, PLLC IS PROHIBITED.

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 A. VERIFY ALL DIMENSIONS
 B. REVIEW DEMOLITION PROCEDURES (WHERE REQUIRED) WITH A DESIGN PROFESSIONAL TO DETERMINE POSSIBLE STRUCTURAL INSTABILITIES AND DEVELOP A DEMOLITION PLAN.
 C. VERIFY ACTUAL SITE CONDITIONS. ANY DISCREPANCIES ON THE PLANS MUST BE RESOLVED BY THE BUILDER PRIOR TO CONSTRUCTION. CONSTRUCTION OF ANY HOME SHOULD NOT BE UNDERTAKEN WITHOUT THE ASSISTANCE OF A QUALIFIED BUILDING PROFESSIONAL.

CONCRETE NOTES:

1. ALL CONCRETE WORK SHALL CONFORM TO ACI-318.
 2. CONCRETE COMPRESSIVE STRENGTH AT 28 DAYS SHALL BE 3500 PSI AT FOUNDATION WALLS AND FOOTINGS, 4000 PSI AT SLABS, MAXIMUM SIZE AGGREGATE SHALL BE 3/4".
 3. ALL CONCRETE WITH THE EXCEPTION OF INTERIOR FLOOR SLABS SHALL BE AIR ENTRAINED.
 4. CONCRETE SHALL NOT BE PLACED IN WATER OR ON FROZEN GROUND.
 5. REINFORCING BARS SHALL CONFORM TO ASTM A615 GRADE 60. DEFORMED BARS SHALL BE DETAILED AND FABRICATED IN ACCORDANCE TO ACI-315 LATEST EDITION, AND PLACED IN ACCORDANCE WITH ACI-318.
 6. SPLICES OF REINFORCING BARS SHALL BE IN ACCORDANCE WITH ACI-318. SPLICES OF WWF SHALL BE 6" MINIMUM.
 7. ANCHOR BOLTS SHALL CONFORM TO ASTM F1554 UNLESS OTHERWISE NOTED.
 8. CONCRETE COVER OVER REINFORCEMENT SHALL BE AS FOLLOWS:
 CONCRETE CAST AGAINST EARTH = 3"
 CONCRETE EXPOSED TO EARTH OR WEATHER = 2" FOR #6 AND LARGER
 = 1-3/4" FOR #5 AND SMALLER
 CONCRETE NOT EXPOSED TO EARTH OR WEATHER = 3/4"

NOTES
 TYPICAL NOTES—CONT



DECK RENOVATION
 226 WOODFORD STREET
 PORTLAND, MAINE

FASTENERS & CONNECTORS

FASTENER TYPE	SUBSTRATE	DESCRIPTION	PRODUCT
SCREWS	METAL TRACK	#10-16 x 3/8" PAN HEAD	BUILDEX 'TEKS' COMPASS 'DARTS' GRABBER SELF DRILLING SCREWS
	COLD FORMED STEEL STUD TO STUD	#10-16 x 3/8" HEX HEAD	HILTI KWIK PRO OR BUILDEX 'TEKS' COMPASS GRABBER SELF TAPPING FASTENERS
	COLD FORMED STEEL TO STRUCTURAL STEEL	#12-14 x 1 1/2" HEX HEAD, #5 TIP	HILTI KWIK PRO OR BUILDEX 'TEKS' SELF TAPPING FASTENERS
	WOOD FRAMING OR PLYWOOD TO WOOD STRUCTURAL FRAMING	#14-20 x 2 1/2" FLAT HEAD WINGED, #3 TIP	HILTI KWIK PRO OR SIMPSON STRONG-TIE SDWS TIMBER SCREW
POWDER ACTUATED FASTENERS	CONCRETE OR GROUTED CONCRETE MASONRY	1/2"Ø x 1 1/2" TAPERED HEX HEAD W/ T-27 TORX RECESS	HILTI KWIK CON II CONCRETE AND MASONRY SCREW ANCHOR
	STRUCTURAL STEEL	0.157"Ø x 1 1/4"	HILTI X-U HILTI X-DNI
		0.157"Ø x 3/8"	HILTI X-U HILTI X-DNI

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 GORHAM, ME

Project:
 226 WOODFORD STREET
 PORTLAND, MAINE

DECK RENOVATION

REVISIONS:

No.	Description	Date

Seal:

 CHRISTOPHER F. RAY
 No. 10547
 LICENSED PROFESSIONAL ENGINEER
 State of Maine

CURRENT ISSUE STATUS:
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