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**273 Congress Street
Portland, ME
SI Job#: 15-0164**

DESIGN LOADS: International Building Code, IBC 2009 Edition, except as noted

Occupancy Category, Table 1604.5 II Standard

Roofs:

Ground Snow, Pg	60 psf (used for drifting calculations)
Flat Roof Snow, Pf	42 psf
Snow Exposure Factor, Ce	Table 1608.3.1 0.9
Snow importance factor, Is	Table 1604.5 1.0
Snow Thermal Factor, Ct	Table 1608.3.2 1.1

Floors:

Residential	40 psf
Public First Floor	100 psf

Lateral:

Wind	IBC 1603.1.4, ASCE 7-05	Analytic Method
3 Second Gust Velocity	100 mph	Importance Factor
Importance Factor	1.0	Building Category and Internal Pressure Coefficient
IBC 1609.2, ASCE Figure 6-5	Partially Enclosed	GCpi=0.18
Exposure	B	Components and Cladding Pressures
DP 30 uno.	Also see specs	Seismic Use Group
1	Importance Factor	1.0
Spectral Response	Acceleration	Coefficient
Short Period	S _s 0.314 g	S _{0.5} 0.324 g
One Second	S ₁ 0.077 g	S _{1.0} 0.123 g
Soils Site Class	Table 1615.1.1 D	Design Category
Table 1616.3 B	Basic Force Resisting System, Table 1617.6.2	Design Base Shear
75 kips	Seismic Response Coefficient	Cs 0.162
Response Modification Coefficient	R 2	Analysis Procedure
Equivalent Lateral Force		

STRUCTURAL STEEL:

* Angles, misc.	ASTM	A36
* W shapes	ASTM	A992
* IHS	ASTM	A500 GRADE B
* Anchor Bolts:	ASTM	A36
* Expansion Anchors shall be ICC-ES approved, installed in accordance with manufacturers specifications.		
In concrete:	Wedge Type	

WOOD FRAMING:

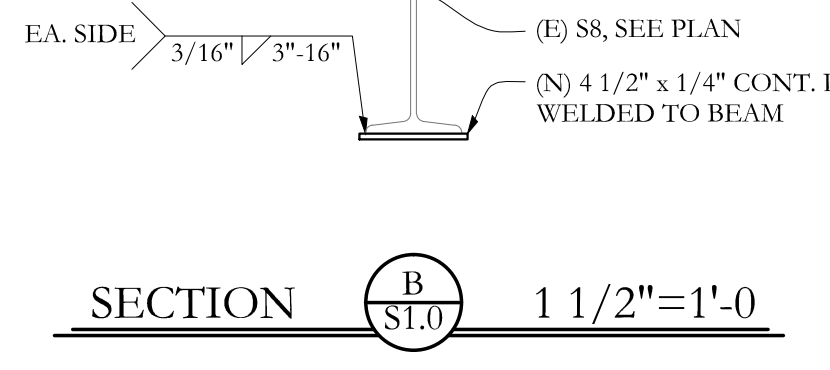
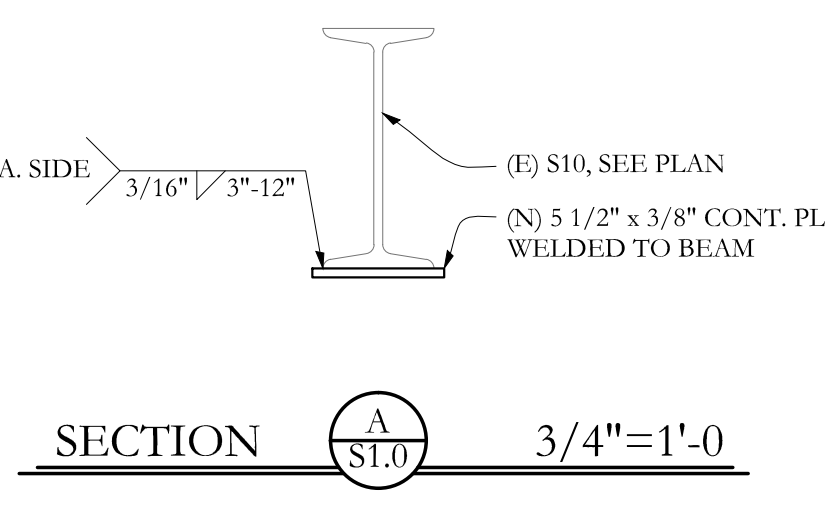
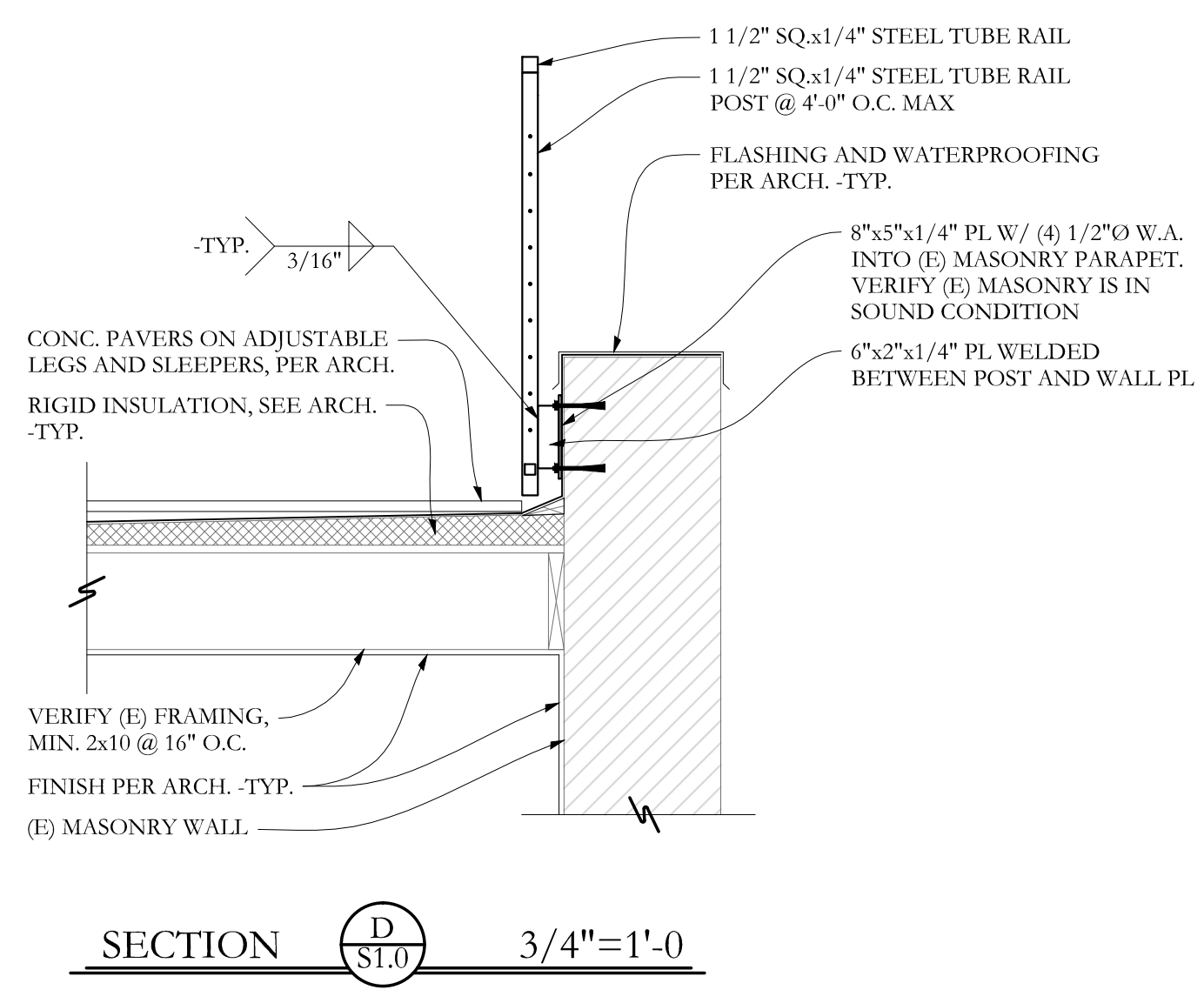
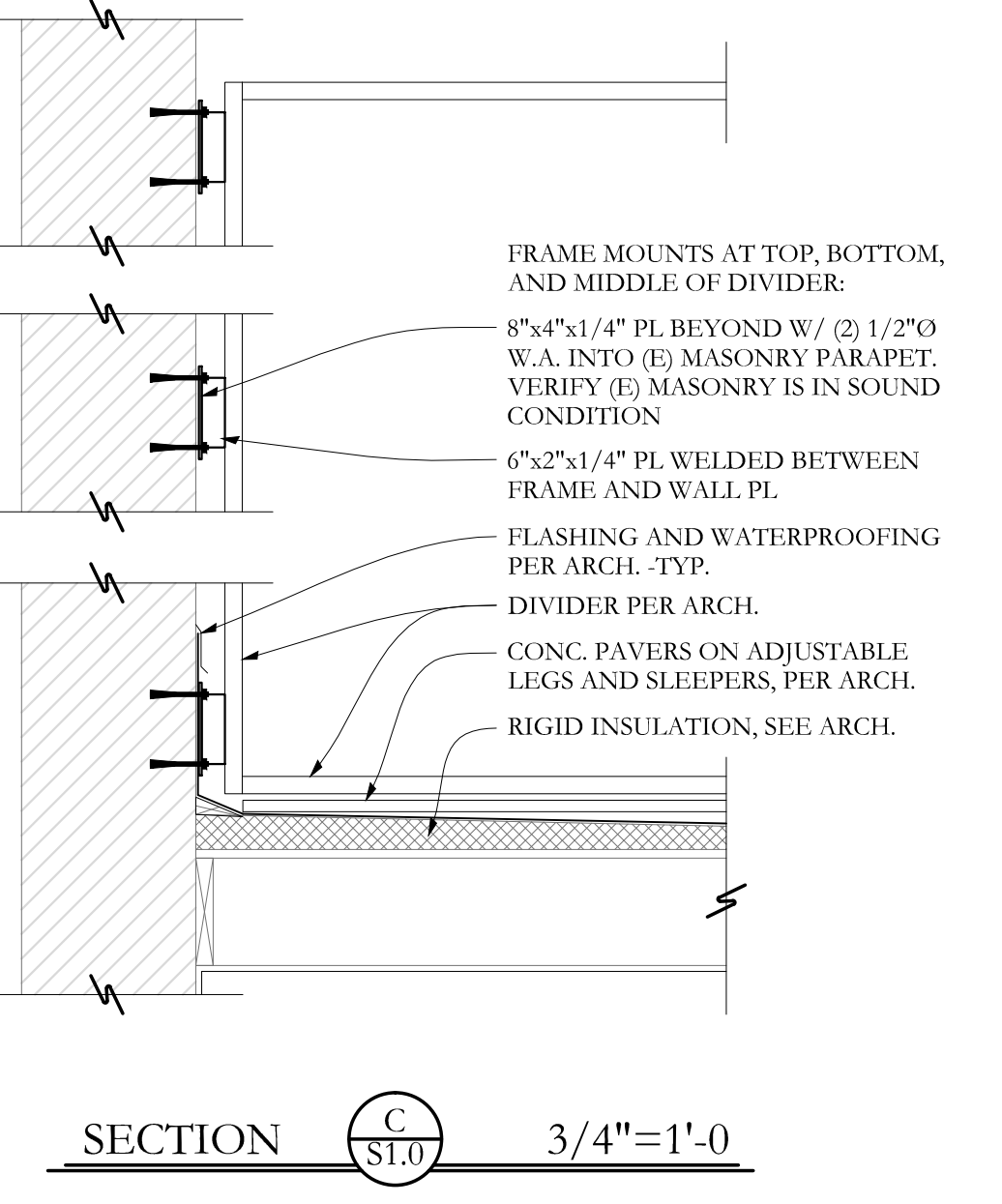
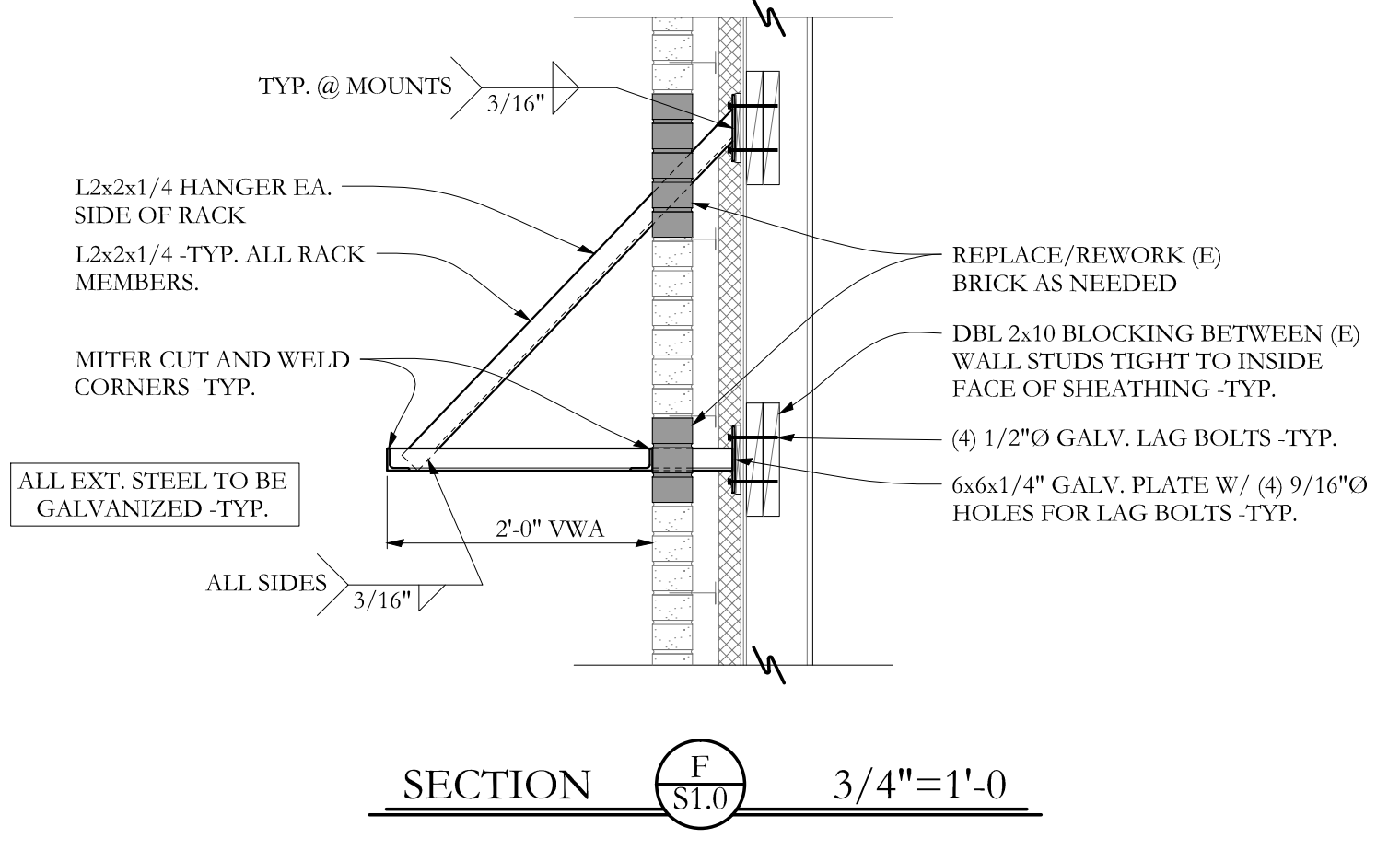
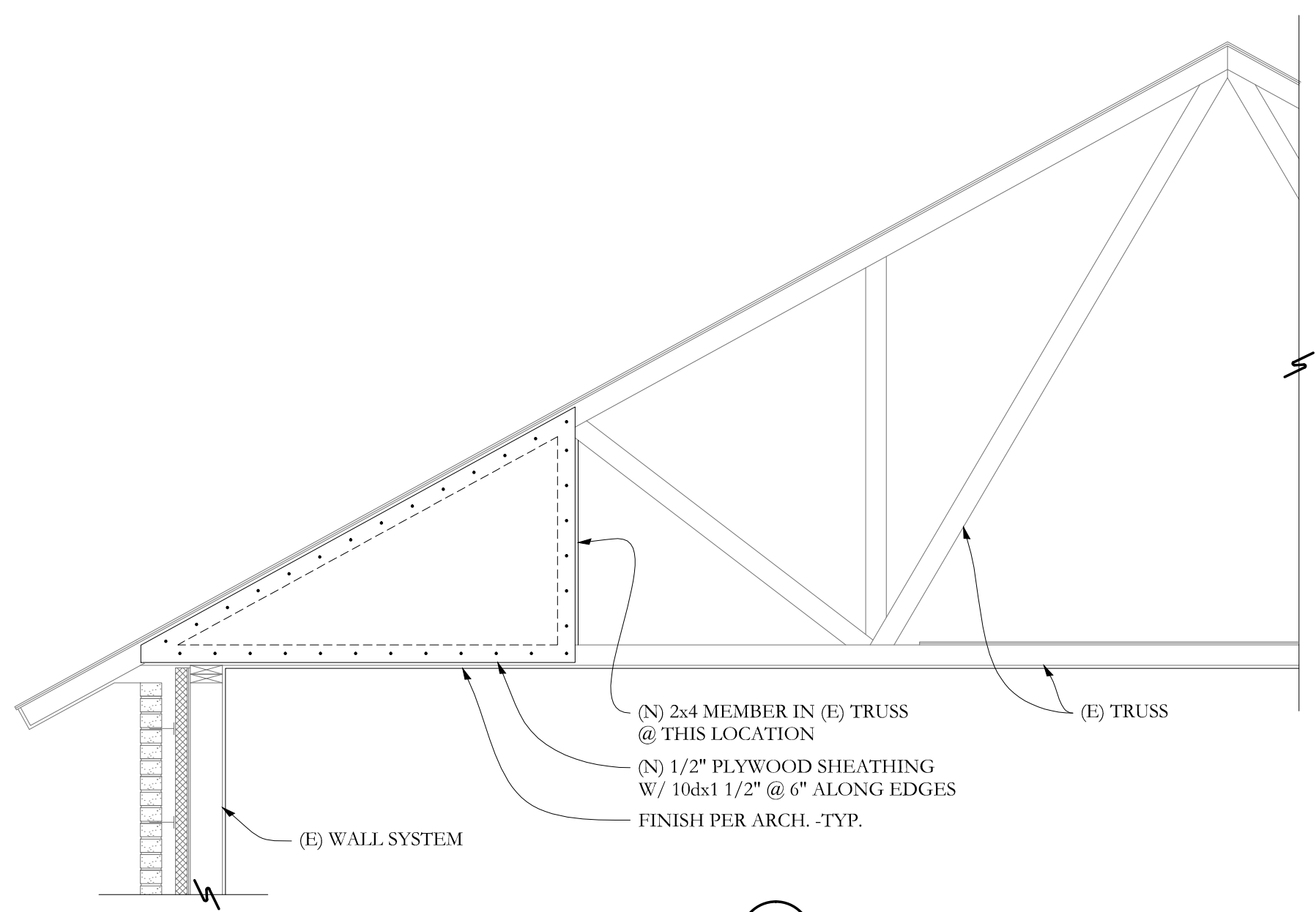
- * Dimension Lumber is designed and shall be supplied using BASE VALUES Design Criteria.
- * SPF #2 and better (Maximum Moisture Content 19%) U.O.N.
- * Plates: Sill plates: Pressure Treated SPF or Southern Pine.
- * "Pressure treated lumber" shall be framing material of the specified species which has been pressure treated with a decay and insect resistant solution, meeting all current standards for wood in contact with concrete or earth.
- * Sill plates in contact with masonry or concrete foundations, footings or slabs may be treated Timber Strand LSL (zinc borate treatment). Sodium borate treatment may also be acceptable for sill plate applications when protected from weather.
- * Acceptable treatment mediums for wood in contact with earth or in exterior applications include ACQ-C and ACQ-D (Alkaline Copper Quaternary) and copper azole (CBA-A and CBA-B).
- * DO NOT USE WOODS WHICH HAVE BEEN TREATED WITH AMMONIA BASED CARRIERS. All connectors shall meet the recommendations of the pressure treated wood manufacturer, but shall be not less than Hot Dipped Galvanized meeting requirements of ASTM A653, such as Simpson ZMAX (G185). All screws, nails and bolts shall match hangers and other connectors, and shall meet ASTM A123 for individual connectors, and ASTM A153 for fasteners.
- * For durability, it is our recommendation that connectors used in exposed conditions with treated lumber be stainless steel.
- * Do not mix galvanized and stainless products.
- * Do not allow aluminum to contact treated wood.
- * Top and Bottom Plates: SPF No 2 and better
- * Hem Fir Studs U.O.N: 2 x 4 and 2 x 6 to 8'-0": stud grade
- * 2 x 4 over 8'-0": standard and better
- * 2x 6 over 8'-0": No. 2 and better
- * Laminated Veneer Lumber (LVL): Manufactured 1 3/4" wide Microlams (ML) by Ilevel/Trus Joist or equivalent.
- * Fb=2,600 psi, E=1,900,000 psi, Fv=285 psi, depth noted on plans.
- * All plywood and oriented strand board (OSB) sheathing shall be engineered grades with APA grade stamp indicating appropriate maximum spacing of supports.
- * Floor sheathing: nominal 3/4", APA Stud-1-Floor "24" tongue & groove glued and nailed.
- * Wall sheathing: 7/16" OSB nail base insulated panel (Zip "R" or equal) (exterior walls)
- * Roof sheathing: 19/32" OSB base insulated panel, fastened w/ #10hc" wood screw @ 12" OR 16ds at 4" max
- * Nail wall sheathing with 10d commons at 6" o.c. at panel edges, and 12" o.c. intermediate framing U.O.N.
- * BLOCK AND NAIL ALL EDGES BETWEEN STUDS. Sheathing shall be continuous from bottom plate to top plate. Cut in "L" and "I" shapes around openings. Lap sheathing over rim joists min. 4" at all floors to tie upper and lower stud walls together. Minimum height of sheathing panels shall be 16" to assure that plates are tied to studs. Use minimum 3-8d per stud and nail plates with edge nail spacing.
- * Sole plate at all perimeter walls and at designated shear walls shall be nailed as for braced panels with 3-16d x 3 1/2" long box nails (coated or deformed shank) per 16". 12d nails are not acceptable.
- * SHEATH ALL EXTERIOR WALLS.
- * All wall studs shall be continuous from floor to floor or from floor to roof.
- * Cross bridge all dimension lumber roof and floor joists at midspan and provide solid blocking or rim joists at all joint supports and joist ends.
- * Metal connectors: Simpson Strong Tie unless otherwise noted, installed with number and type of nails to achieve maximum rated capacity. Note that heavy duty and skewed hangers may require special order.
- * All beams shall be braced against rotation at points of bearing.
- * Drypack grout all beam pockets full after beams are set.
- * Unless otherwise indicated, install two lengths of solid blocking x joist depth x 12 inches long in floor framing under column loads. Columns must have a continuous load path to foundation.
- * Lead holes for lag bolts shall be 60% to 70% of lag shank diameter in compliance with AITC criteria.

STRUCTURAL ERECTION AND BRACING REQUIREMENTS

- * The structural drawings illustrate the completed structure with all elements in their final positions, properly supported and braced. The contractor, in the proper sequence, shall provide proper shoring and bracing as may be required to achieve the final completed structure.
- * These plans have been engineered for construction at one specific building site. Builder assumes ALL responsibility for use of these plans at Any Other building site. Plans shall not be used for construction at any other building site without specific review by the engineer.
- * Observations of foundation reinforcing or framing required by the owner, lender, insurer, building department or any other party will be accomplished by the engineer at the owner's expense. At least 24 hours advance notice is requested.
- * All slabs on grade shall be separated from adjacent structural and finish elements to allow free movement of the slab, unless specifically shown and noted otherwise.

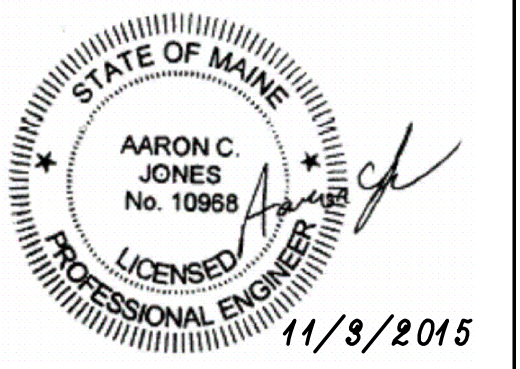
ABBREVIATIONS KEY

AB	Anchor Rod (Bolt)	EF	Each Face	MACH	Machine	SC	Slip Critical
ADDD	Additional	EJ	Expansion Joint	MASY	Masonry	SCH	Schedule
ADJ	Adjustable	ELEV	Elevation	MATL	Material	SDST	Self Drilling Self Tapping
AF	Above Finished Floor	ELEC	Electric (Electrical)	MAX	Maximum	SECT	Section
ALT	Alternate	ENGR	Engineer	MB	Machine Bolt	SF	Square Feet
AMT	Amount	EQ	Equal	MECH	Mechanical	SHT	Sheet
ANCH	Anchor, Anchorage	EQUIP	Equipment	MEZZ	Mezzanine	SHTG	Sheathing
APPROX	Approximate	EQUIV	Equivalent	MFR	Manufacturer, -cr, -ed	SIM	Similar
ARCH	Architect, -ural	ES	Each Side	MIN	Minimum	SLH	Short Leg Horizontal
ATR	All Thread Rod	EST	Estimate	ML	Microlam (Trus-Joist brand LVL)	SLV	Short Leg Vertical
AVG	Average	E-W	East to West	MO	Masonry Opening	SOG	Slab on Grade
BC	Bottom of Concrete	EXC	Excavate	MTL	Metal	SP	Spaces
BL	Brick Ledge	EXP	Expansion	NF	Near Face	SPEC	Specifications
BLK	Block	EXT	Exterior	NIC	Not In Contract	SQ	Square
BLKG	Blocking	FND	Foundation	NS	Near Side	ST	Snug, Tight
BM	Beam	FF	Far Face, Finished Floor	N-S	North to South	STD	Standard
BOT	Bottom	F-F	Face to Face	NTS	Not to Scale	STIFF	Stiffener
BRG	Bearing	FIG	Figure	OCJ	OSHA Column Joist	STL	Steel
BW	Bottom of Wall	FL	Flush	OD	Outside Diameter	STRUCT	Structure, -al
CB	Counterbore	FLG	Flange	OF	Outside Face	SUPT	Support
CF	Cubic Foot	FLR	Floor	OH	Opposite Hand	SY	Square Yard
CG	Center of Gravity	FO	Face of	OPNG	Opening	SYM	Symmetrical
CIP	Cast in Place	FP	Full Penetration	OPP	Opposite	T&G	Tongue and Groove
CJ	Construction Joint (Control Joint)	FS	Far Side	OSB	Oriented Strand Board	TB	Top of Beam
CLG	Ceiling	GA	Gage (Gauge)	PAF	Powder Actuated Fast'nt	TC	Top of Concrete
CLR	Clear	GALV	Galvanized	PC	Precast	TD	Top of Deck
CM	Construction Manager (Management)	GC	General Contractor	PCF	Pounds Per Cubic Foot	THD	Thread
CMU	Concrete Masonry Unit	GND	Ground	GEN	General	THK	Thick, -ness
COL	Column	GL	Glue laminated (Glulam)	PERP	Perpendicular	TJ	Top of Joist
COM	Common	GR	Grade	PL	Property Line	TL	Total Load
COMB	Combination	GT	Girder Truss	PLF	Pounds per Linear Foot	TPG	Topping
CONC	Concrete	GYP BD	Gypsum Board	PNL	Panel	TRANS	Transverse
CONN	Connection	HAS	Headed Anchor Stud	PP	Panel Point	TW	Top of Wall
CONT	Continue (Continuous)	HORIZ	Horizontal	PS	Prestressed	TYP	Typical
COORD	Coordinate, -tion	HT	Height	PSF	Pounds per Square Foot	ULT	Ultimate
CS	Countersink	ID	Inside Diameter	PSI	Pounds per Square Inch	UNO	Unless Noted Otherwise
CTR	Center	IF	Inside Face	PSL	Parallel Strand Lumber (generic term)	VERT	Vertical
CY	Cubic Yard	INT	Interior (Intermediate)	PT (1)	Post Tensioned	WA	Wedge Anchor
DAB	Deformed Anchor Bar	JB	Joist Bearing	PT (2)	Pressure Treated	WP	Work Point
DET	Detail	JST	Joist	PTN	Partition	WT	Weight
DEV	Develop	JT	Joint	PWD	Plywood	WWF	Welded Wire Fabric
DIAG	Diagonal	K	Kip (1,000 lbs.)	QTY	Quantity	XS	Extra Strong
DIM	Dimension	LD	Load	R	Radius	XSECT	Cross-section
DL	Dead Load	LL	Live Load	RE	Reference (refer to)	XXS	Double Extra Strong
DN	Down	LLH	Long Leg Horizontal	RECT	Rectangle	(E)	Existing
DP	Drilled Pier	LLV	Long Leg Vertical	REINF	Reinforce, -ed, -ing	(N)	New
DT	Double Tee	LOC	Location	REQ	Required	(R)	Remove
DWG	Drawing	LSL	Laminated Strand Lumber (generic term)	REQMT	Requirement		
DWL	Dowel	LT	Light	RET	Retaining		
EA	Each	LVL	Laminated Veneer Lumber (generic term)	RM	Room		
ECC	Eccentric			RMO	Rough Masonry Opening		
E-E	End to End			RO	Rough Opening		



Structural Drawing Index

S1-0	General Notes and Details
S1-1	Framing Plans



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PROJECT NO. 15019
PROJECT NAME 273 CONGRESS STREET
PORTLAND, ME

REVISIONS

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5	-

PERMIT SET

DRAWN BY BDH
SHEET TITLE GENERAL NOTES AND DETAILS
ISSUE DATE 11/03/15
SHEET SCALE AS NOTED

STATE OF MAINE
AARON C. JONES
No. 10968
PROFESSIONAL ENGINEER
11/8/2015

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S1.0

SI # 15-0164