



Reviewed for Code Compliance
Inspection Division
Approved with Conditions

Date: 12/16/14

2696 Lake Shore Road
Unit 130
Gilford, NH 03249-6219
Phone: (603) 293-8038

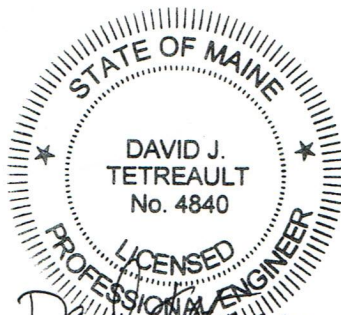
MEMORANDUM

Date: Dec 10, 2014
Project: 97 State Street, Portland, ME
From: David Tetreault
Subject: Response to Building Dept. Review Comments

Attached are calculations that I prepared for support of the exterior porch floor beam as shown on Structural Section 7/A2.01. Following are the design criteria used:

Floor Dead Load	12 PSF
Floor Live Load	100 PSF
Fastener Allowable Shear	940 Pounds

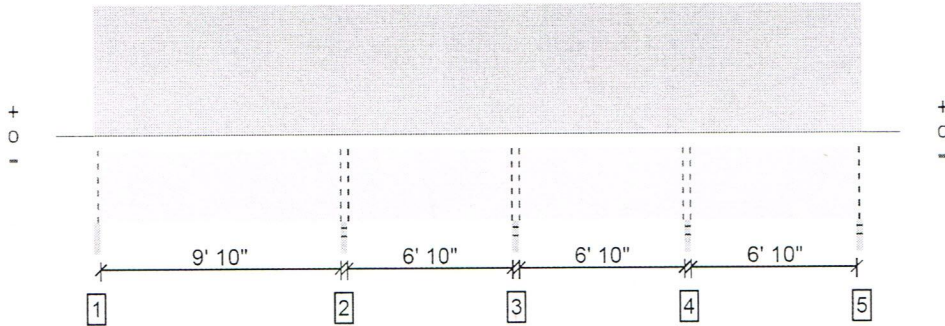
Please call me if there is any question or if I can be of further assistance.



SIGNATURE: _____

David J. Tetreault

Overall Length: 31' 3/4"



All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)
Member Reaction (lbs)	2660 @ 10' 5/8"	2966 (1.75")	Passed (90%)	--	1.0 D + 1.0 L (Adj Spans)
Shear (lbs)	1219 @ 9' 1/2"	3938	Passed (31%)	1.00	1.0 D + 1.0 L (Adj Spans)
Moment (Ft-lbs)	-2416 @ 10' 5/8"	5273	Passed (46%)	1.00	1.0 D + 1.0 L (Adj Spans)
Live Load Defl. (in)	0.055 @ 4' 8 3/8"	0.251	Passed (L/999+)	--	1.0 D + 1.0 L (Alt Spans)
Total Load Defl. (in)	0.063 @ 4' 8 3/16"	0.502	Passed (L/999+)	--	1.0 D + 1.0 L (Alt Spans)

System : Floor
 Member Type : Flush Beam
 Building Use : Residential
 Building Code : IBC
 Design Methodology : ASD

- Deflection criteria: LL (L/480) and TL (L/240).
- Bracing (Lu): All compression edges (top and bottom) must be braced at 20' 11 9/16" o/c unless detailed otherwise. Proper attachment and positioning of lateral bracing is required to achieve member stability.
- Applicable calculations are based on NDS 2005 methodology.

Supports	Bearing Length			Loads to Supports (lbs)			Accessories
	Total	Available	Required	Dead	Floor Live	Total	
1 - Beam - SYP	1.75"	1.75"	1.50"	138	906/-44	1044/-44	Blocking
2 - Stud wall - SYP	1.75"	1.75"	1.57"	354	2306	2660	Blocking
3 - Stud wall - SYP	1.75"	1.75"	1.50"	186	1695	1881	Blocking
4 - Stud wall - SYP	1.75"	1.75"	1.50"	279	1860	2139	Blocking
5 - Stud wall - SYP	1.75"	1.75"	1.50"	93	665/-87	758/-87	Blocking

- Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.

Loads	Location	Tributary Width	Dead (0.90)	Floor Live (1.00)	Comments
1 - Uniform (PSF)	0 to 31' 3/4"	2' 1 1/4"	12.0	100.0	Residential - Living Areas

Weyerhaeuser Notes

Weyerhaeuser warrants that the sizing of its products will be in accordance with Weyerhaeuser product design criteria and published design values. Weyerhaeuser expressly disclaims any other warranties related to the software. Refer to current Weyerhaeuser literature for installation details. (www.woodbywy.com) Accessories (Rim Board, Blocking Panels and Squash Blocks) are not designed by this software. Use of this software is not intended to circumvent the need for a design professional as determined by the authority having jurisdiction. The designer of record, builder or framer is responsible to assure that this calculation is compatible with the overall project. Products manufactured at Weyerhaeuser facilities are third-party certified to sustainable forestry standards.

The product application, input design loads, dimensions and support information have been provided by Forte Software Operator



Forte Software Operator	Job Notes
David Tetreault Structural Design Consulting, Inc. (207) 934-8038 djt@sdconc.biz	



TABLE 1A—FASTENER SPECIFICATIONS: OLYLOG AND TIMBERLOK FASTENERS

OLYLOG®/ TIMBERLOK® FASTENER DESIGNATION	HEAD MARKING	OVERALL LENGTH ¹ (inches)	LENGTH OF THREAD ^{2,4} (inches)	UNTHREADED SHANK DIAMETER (inch)	MINOR THREAD (ROOT) DIAMETER (inch)	BENDING YIELD ^{3,5} (F _{yb} , psi)	ALLOW FASTENER STRENGTH	
							Tensile (lbf)	Shear ⁶ (lbf)
TLOK212 or LOG212	F2.5	2 1/2	1 1/4	0.189	0.172	167,300	1,300	940
TLOK04 or LOG004	F4.0	4	2					
TLOK06 or LOG006	F6.0	6	2					
TLOK08 or LOG008	F8.0	8	2			190,600	1,145	800
LOG009	F9.0	9	2					
TLOK10 or LOG010	F10.0	10	2					
LOG012	F12.0	12	2					
LOG014	F14.0	14	2					
LOG016	F16.0	16	2					

For SI: 1 inch = 25.4 mm, 1 lbf = 4.4 N, 1 psi = 6.895 kPa.

¹For purposes of measuring overall fastener length, fasteners must be measured from the underside of head to bottom of tip.

²Length of thread includes tip. See detailed illustration.

³Bending yield strength determined per methods specified in ASTM F1575 and based on the minor thread diameter.

⁴Fastener installation and design values require complete threaded portion to be embedded in the main member.

⁵Fastener bending yield strength is determined by the 5 percent diameter (0.05D) offset method of analyzing load-displacement curves developed from bending tests.

⁶Allowable shear strength values apply only to shearing in the unthreaded shank portion of the fastener.

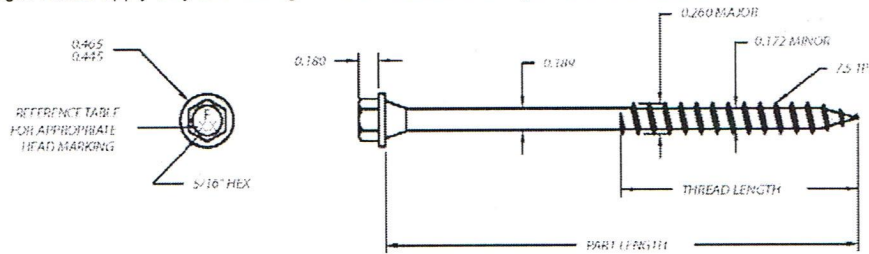


TABLE 1B—FASTENER SPECIFICATIONS: HEADLOK FASTENERS

HEADLOK® FASTENER DESIGNATION	HEAD MARKING	OVERALL LENGTH ¹ (inches)	LENGTH OF THREAD ^{2,4} (inches)	UNTHREADED SHANK DIAMETER (inch)	MINOR THREAD (ROOT) DIAMETER (inch)	BENDING YIELD ^{3,5} (F _{yb} , psi)	ALLOWABLE FASTENER STRENGTH	
							Tensile (lbf)	Shear ⁶ (lbf)
HLM278	F2.8HL	2 7/8	2	0.191	0.172	187,300	1,215	965
HLM412	F4.5HL	4 1/2	2					
HLM6	F6.0HL	6	2					
HLM8	F8.0HL	8	2					
HLM10	F10HL	10	2					

For SI: 1 inch = 25.4 mm, 1 lbf = 4.4 N, 1 psi = 6.895 kPa.

¹For purposes of measuring overall fastener length, fasteners must be measured from the underside of head to bottom of tip.

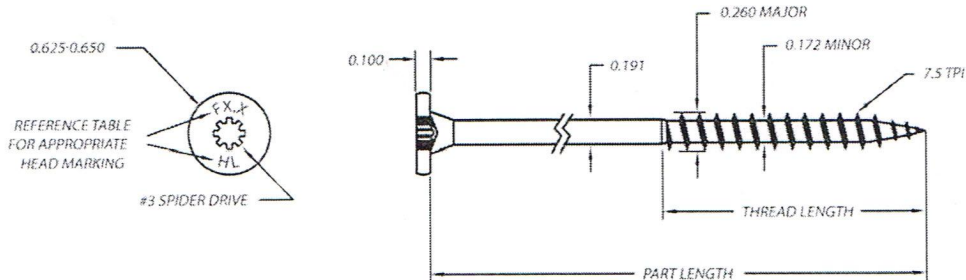
²Length of thread includes tip. See detailed illustration.

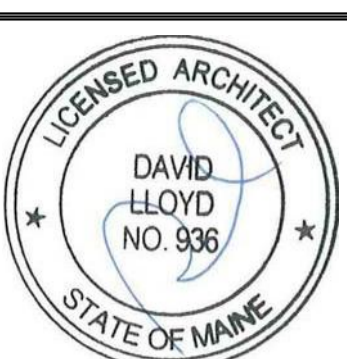
³Bending yield strength determined per methods specified in ASTM F1575 and based on the minor thread diameter.

⁴Fastener installation and design values require complete threaded portion to be embedded in the main member.

⁵Fastener bending yield strength is determined by the 5 percent diameter (0.05D) offset method of analyzing load-displacement curves developed from bending tests.

⁶Allowable shear strength values apply only to shearing in the unthreaded shank portion of the fastener.





Prepared For:
Mercy Hospital

Consultant:

Architect:
ARCHETYPE architects
48 Union Wharf Portland, Maine 04101
(207) 772-6002 ARCHETYPE@ARCHETYPEPA.COM

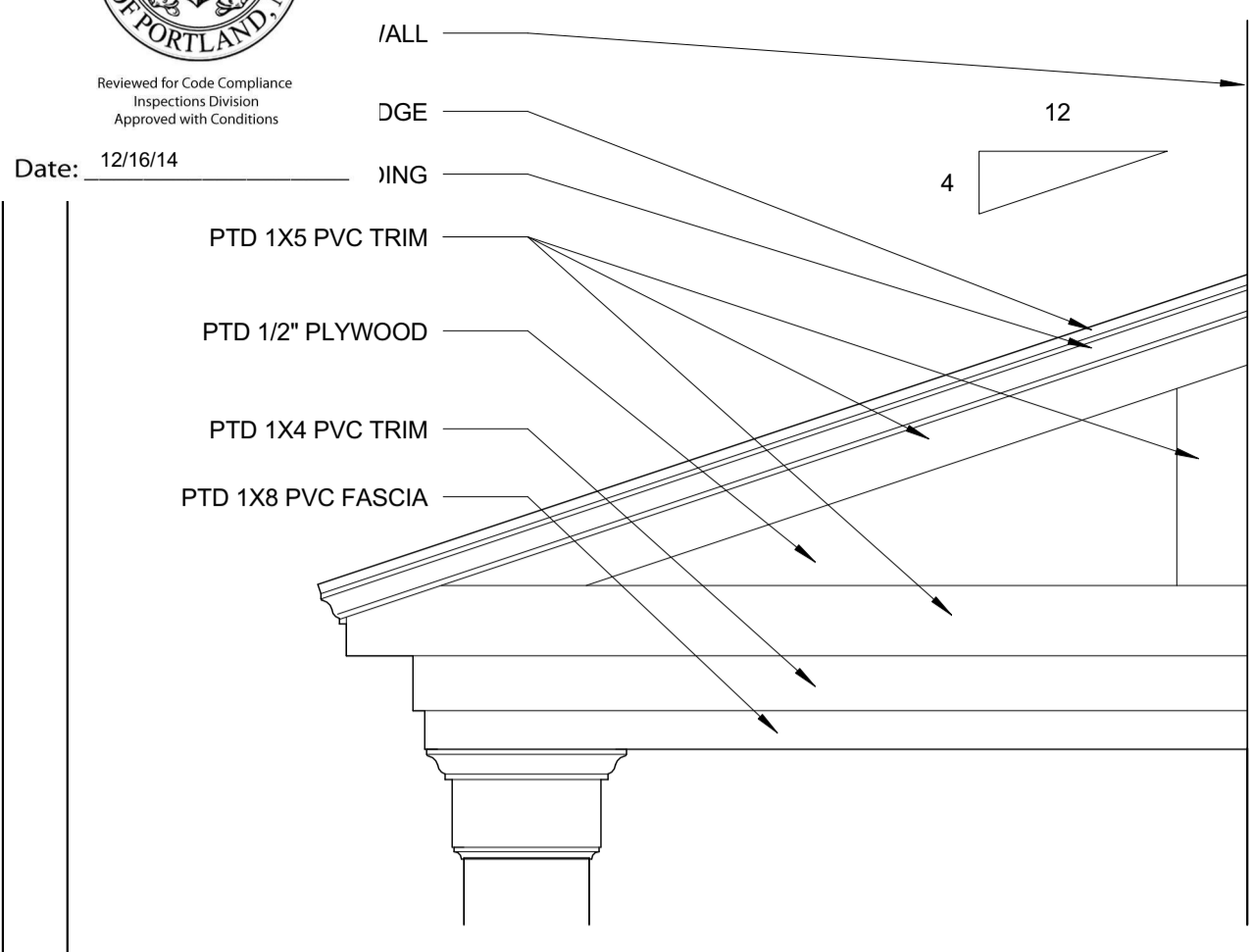
Project:
97 State Street Porch

97 State Street Portland, ME

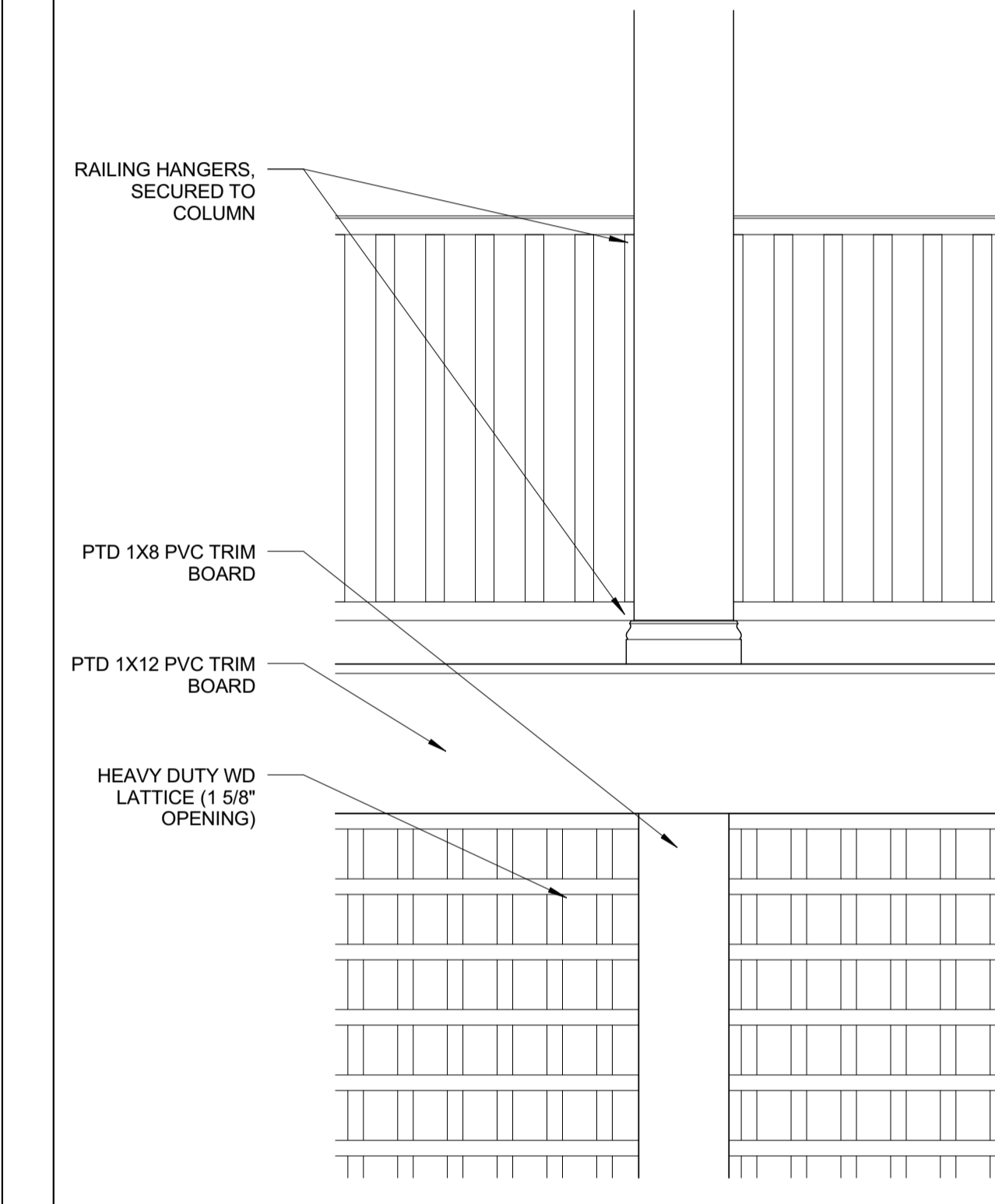
Revisions:

Date: 10/29/2014
Scale: As indicated
Porch Framing Plans, Elevations, and Details

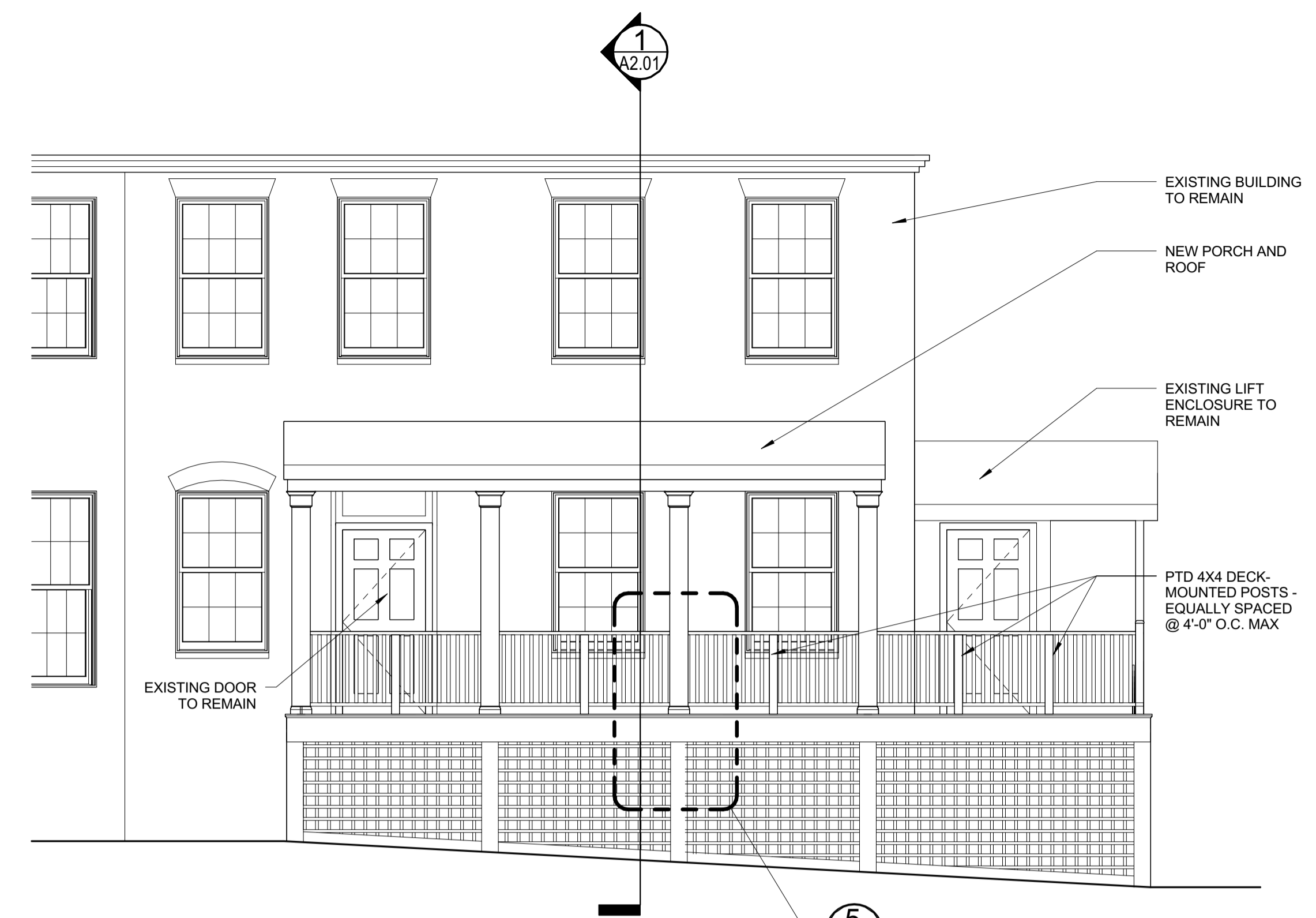
A1.01



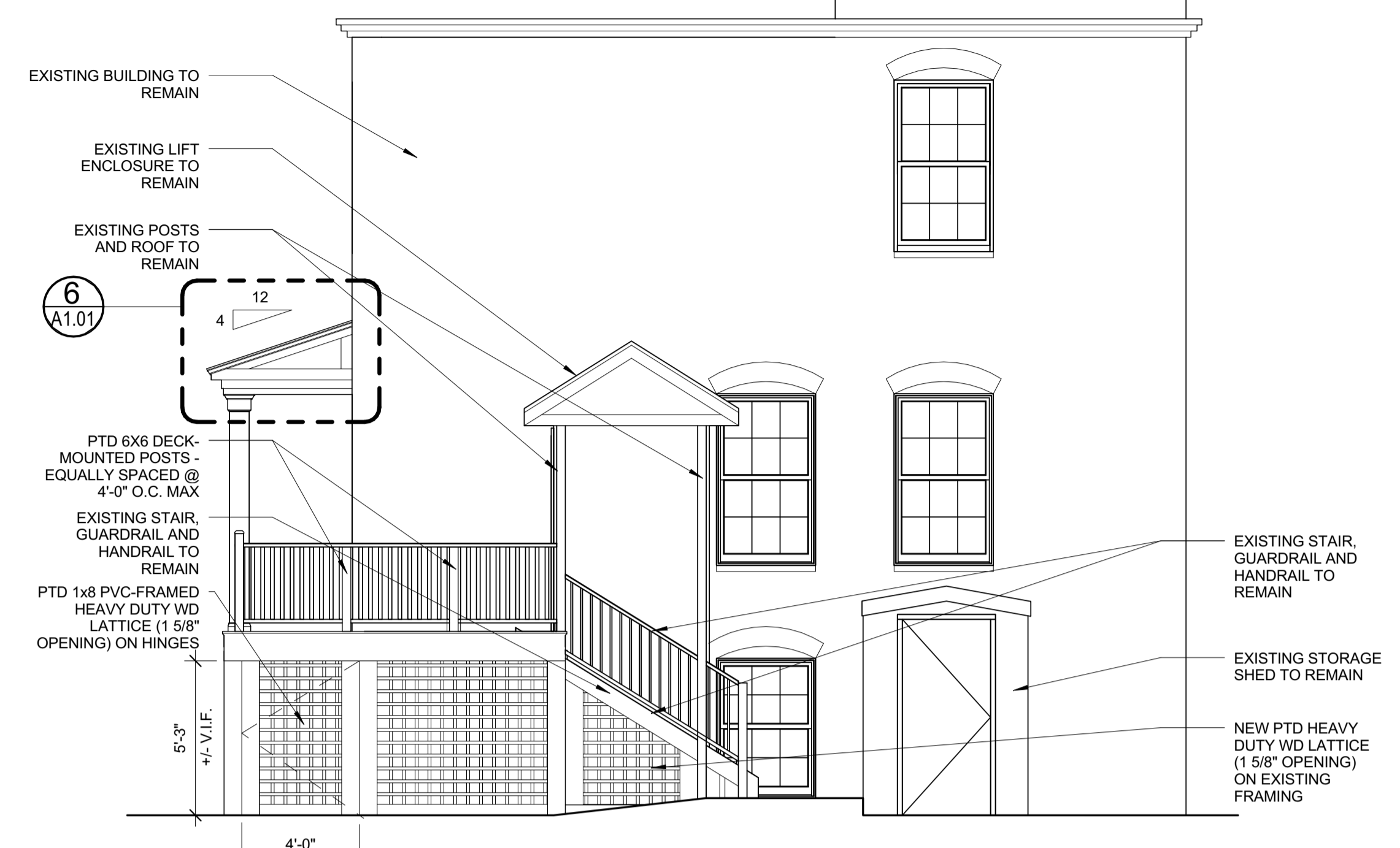
6 | PORCH ROOF ELEVATION DETAIL
1" = 1'-0"



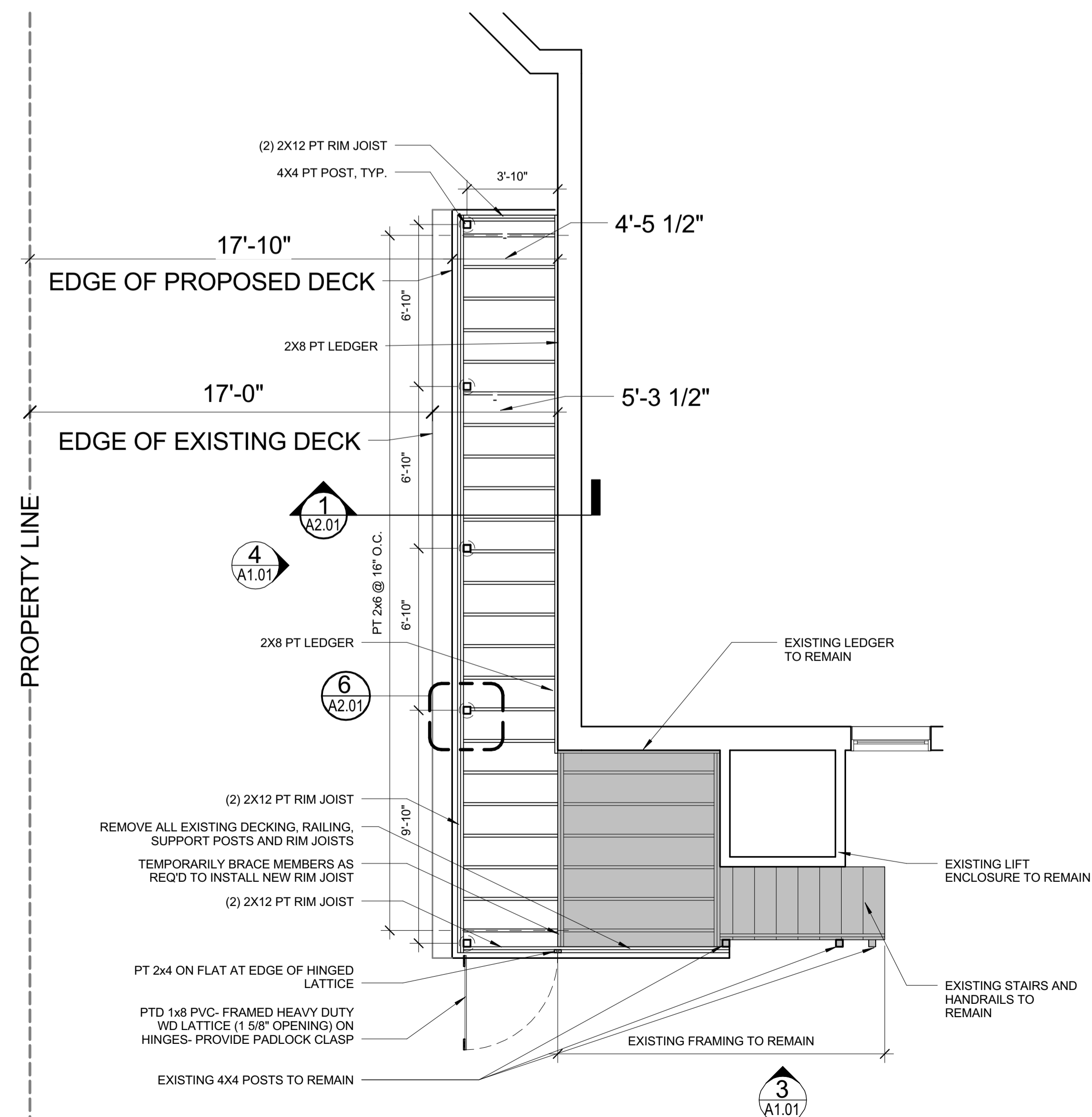
5 | RAILING ELEVATION DETAIL
1" = 1'-0"



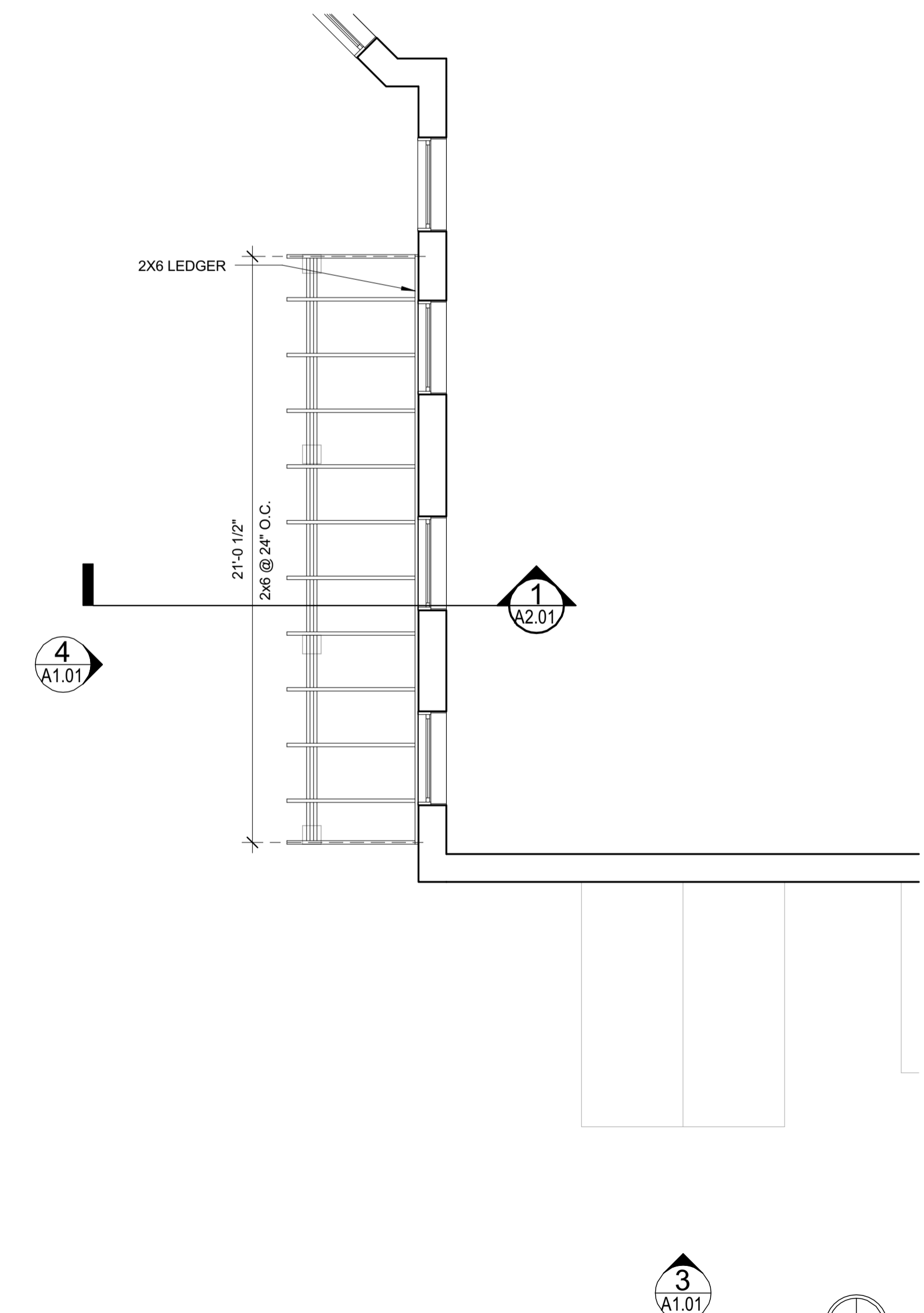
4 | EAST ELEVATION
1/4" = 1'-0"



3 | NORTH ELEVATION
1/4" = 1'-0"



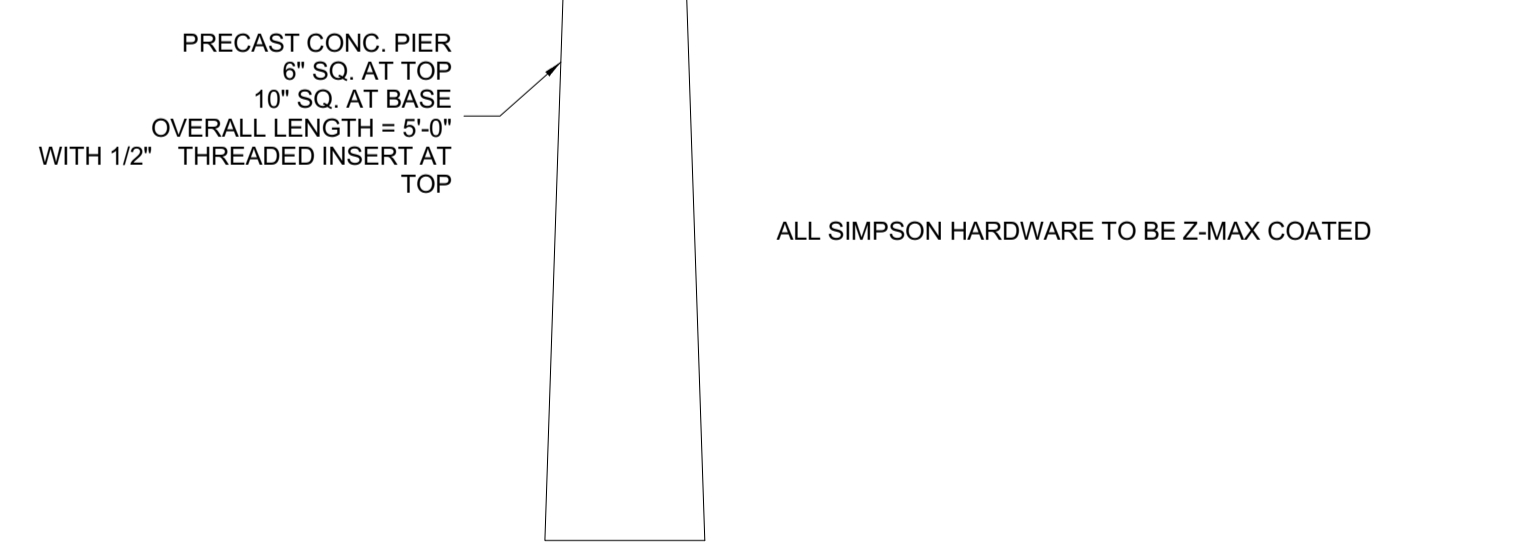
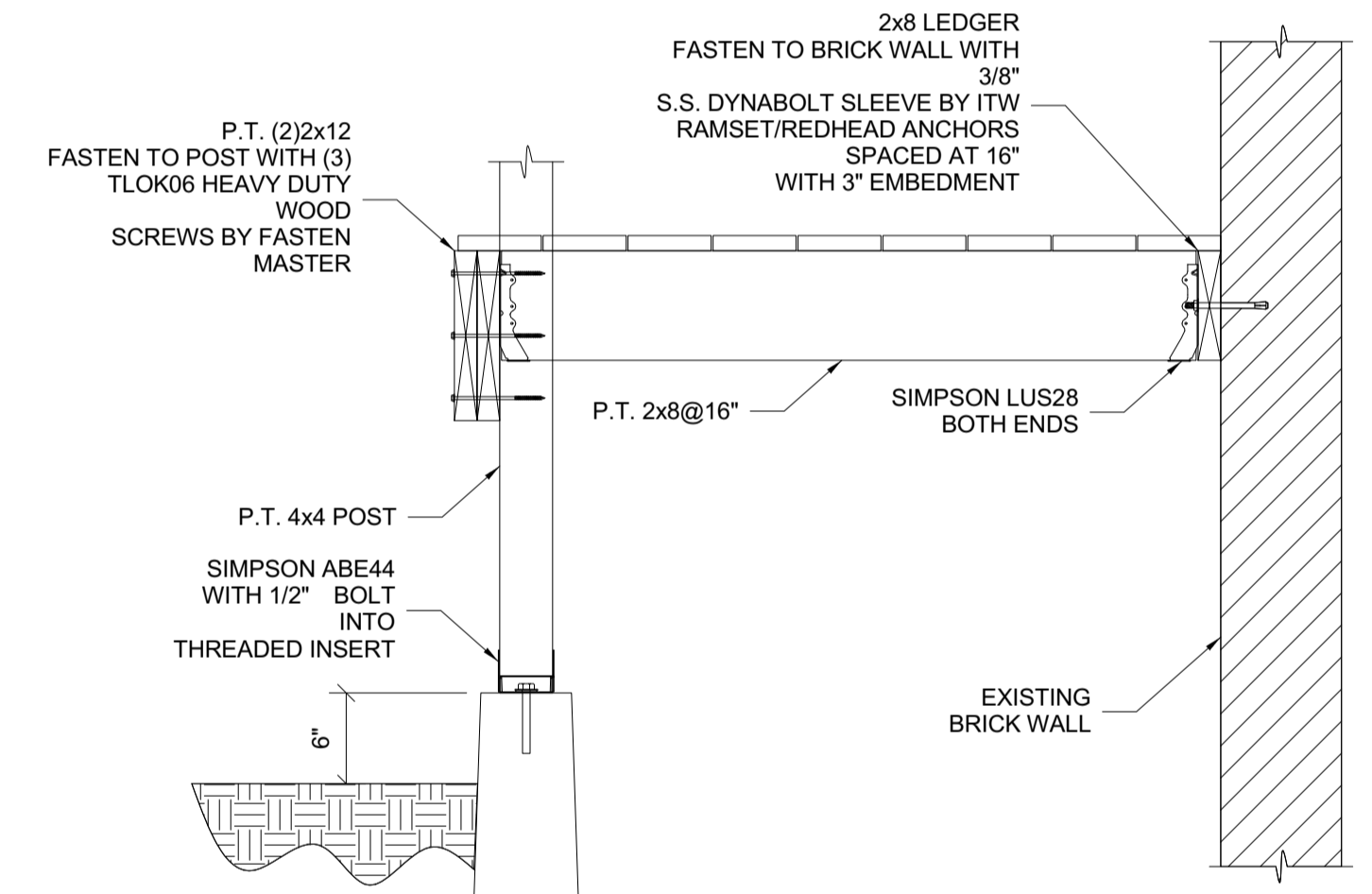
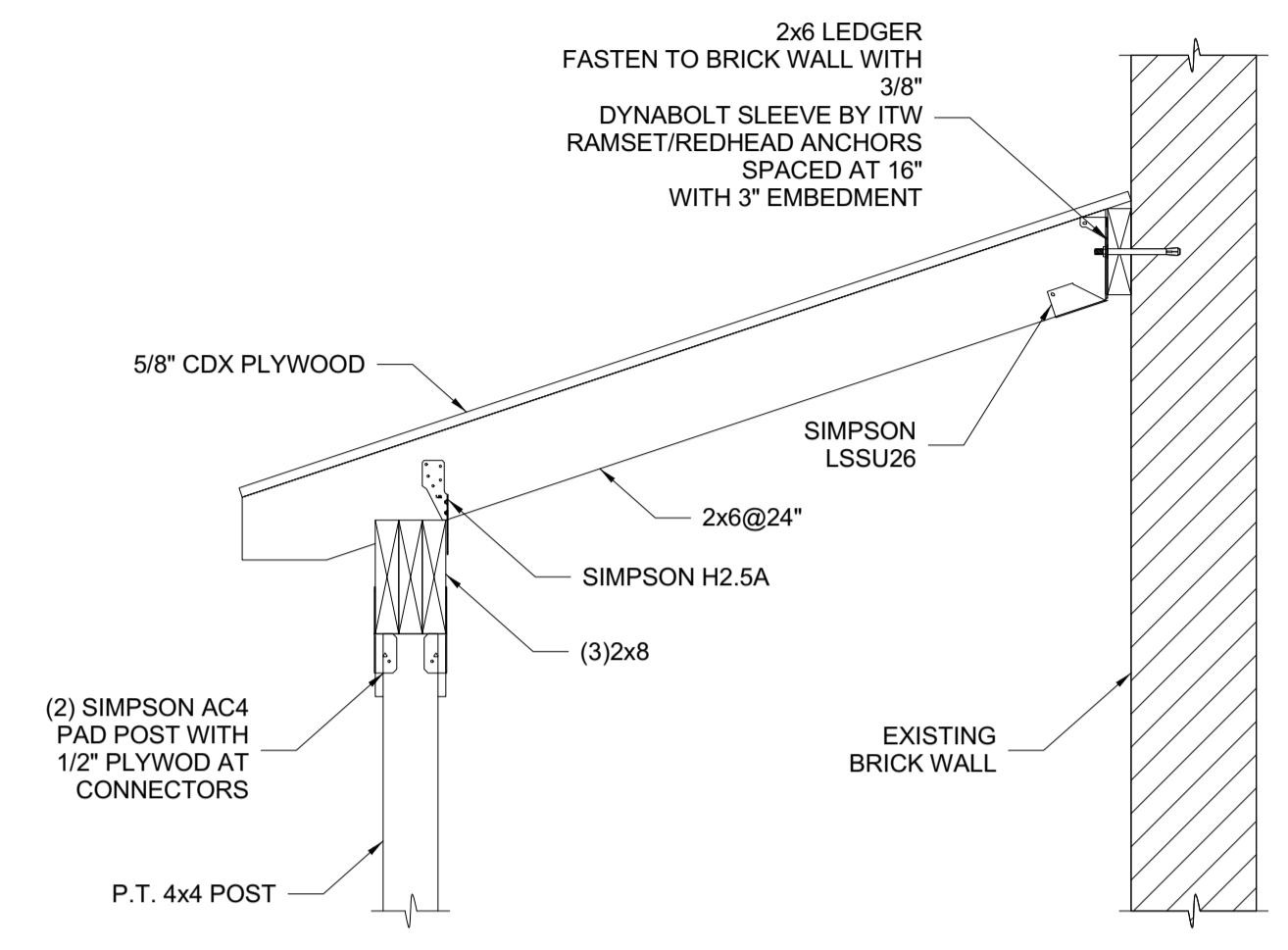
2 | PORCH FRAMING PLAN
1/4" = 1'-0"



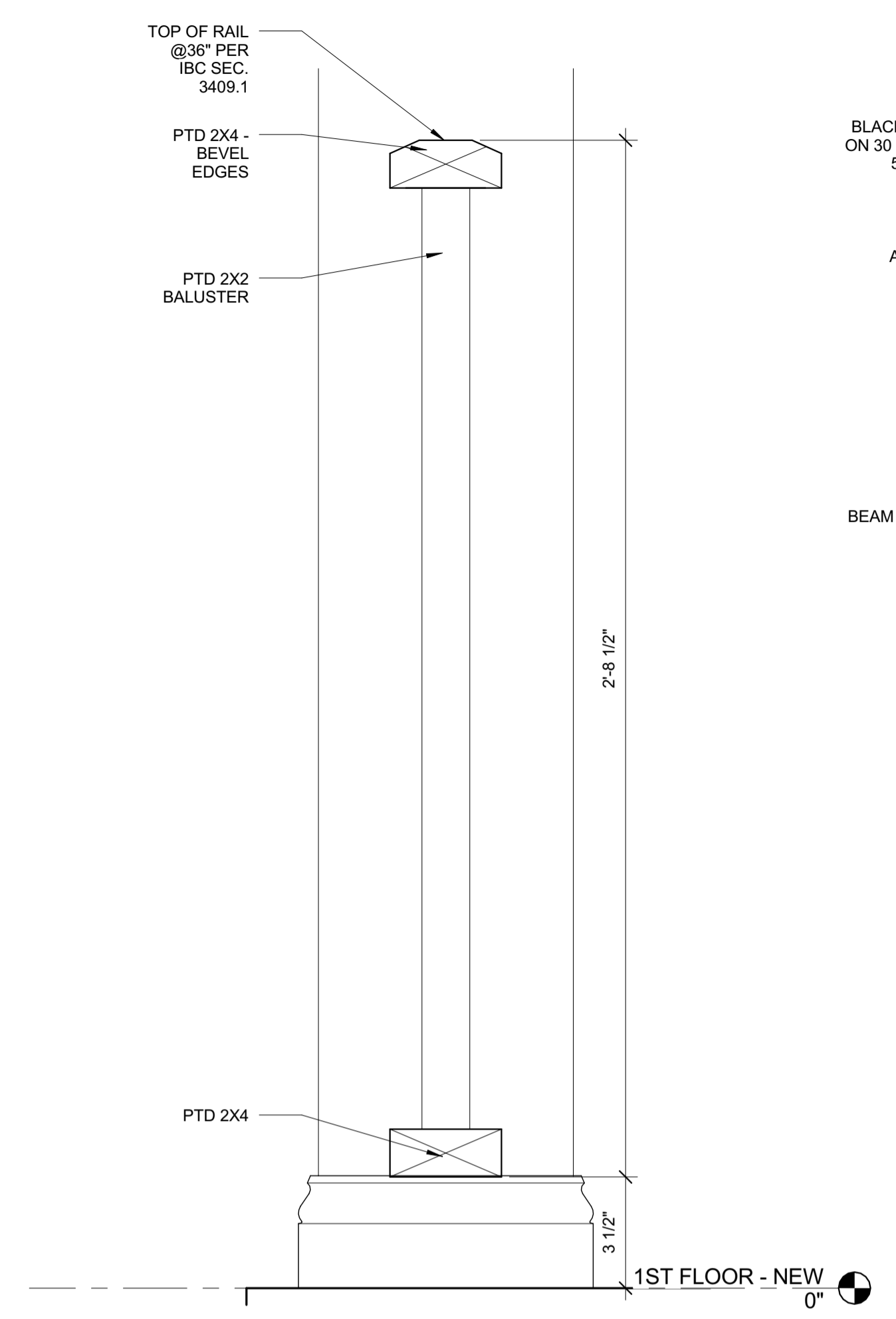
1 | PORCH ROOF FRAMING PLAN
1/4" = 1'-0"



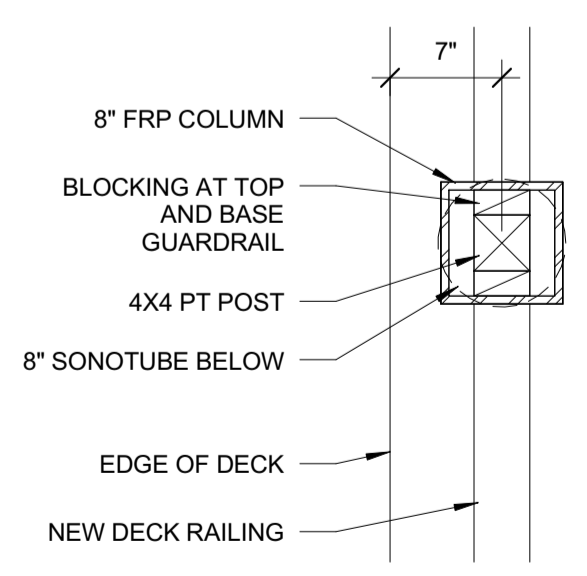
Date: 12/16/14



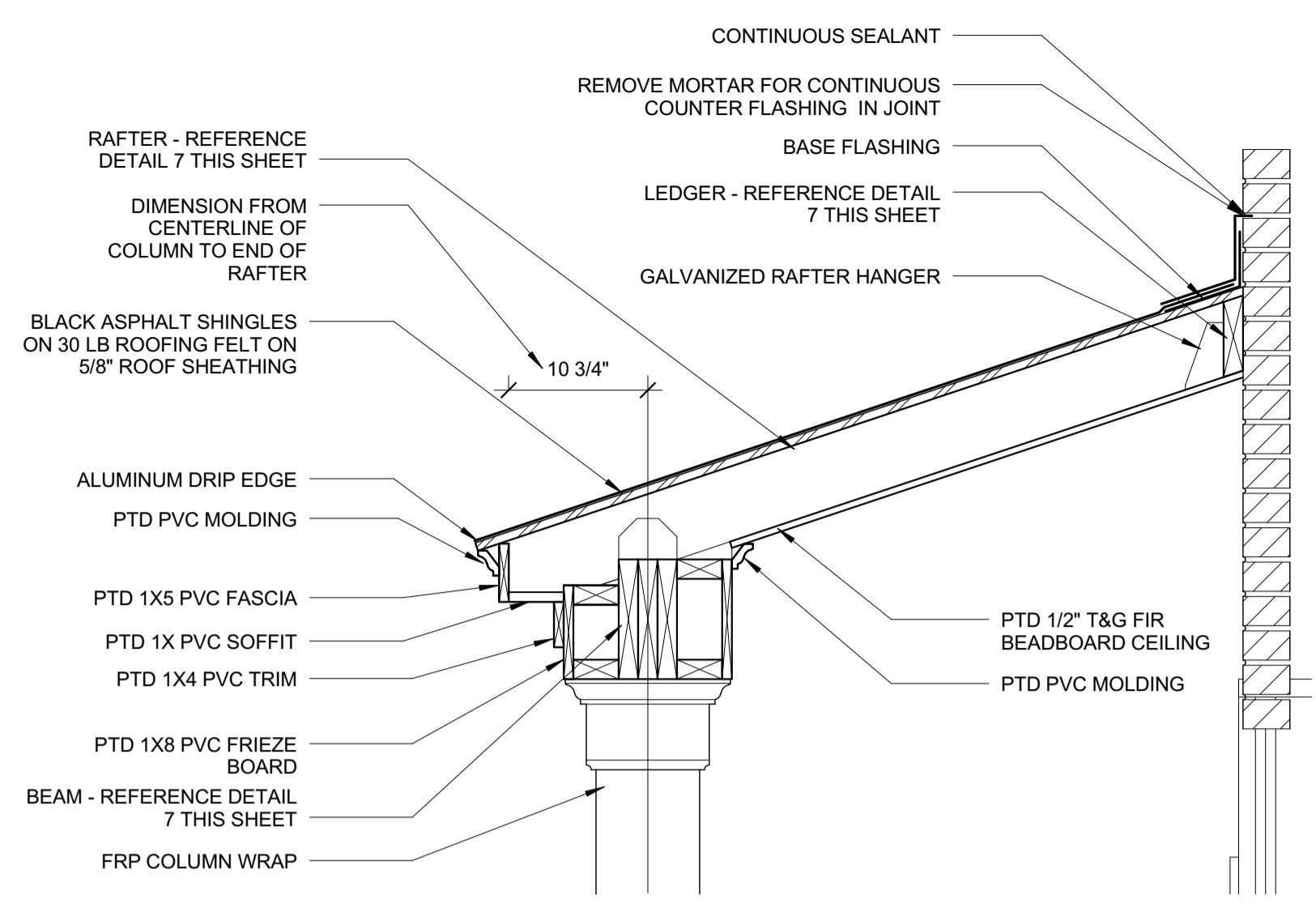
7 | STRUCTURAL SECTION
1" = 1'-0"



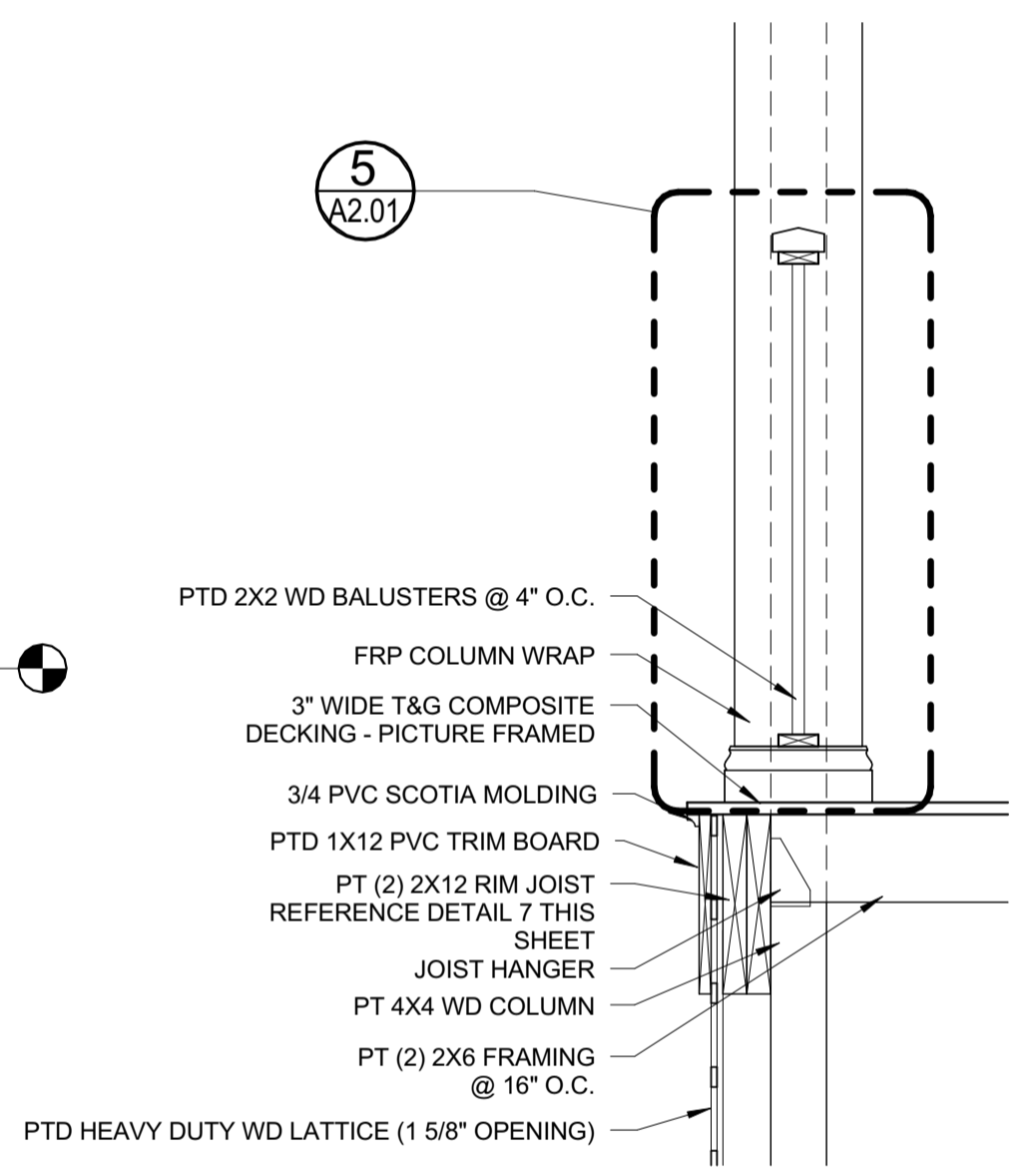
5 | RAILING PROFILES
3" = 1'-0"



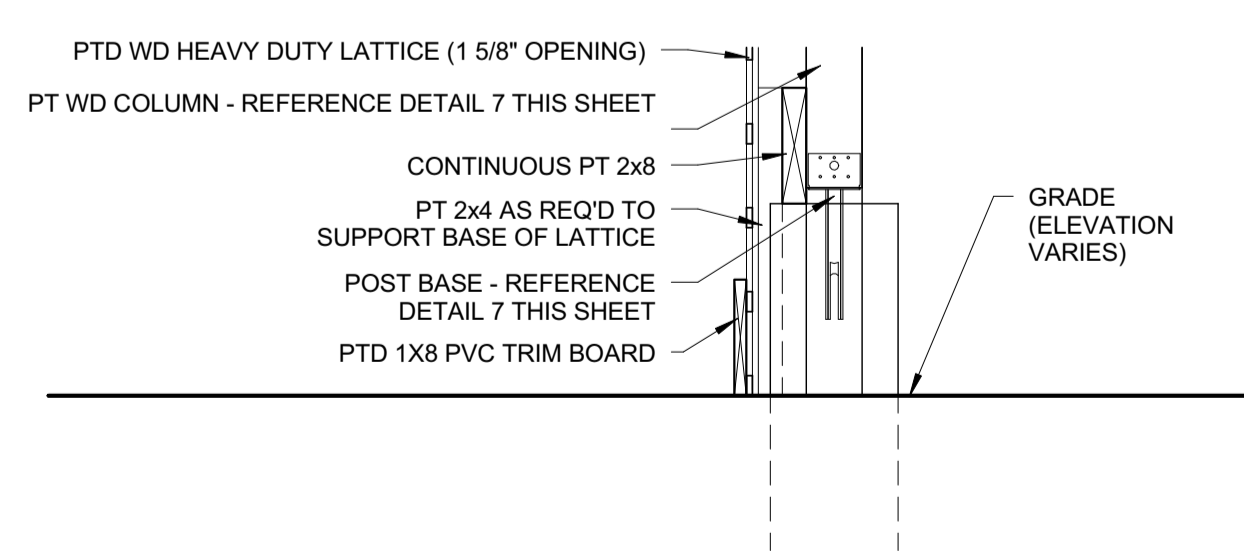
6 | COLUMN PLAN DETAIL
1" = 1'-0"



4 | EVE DETAIL AT PORCH
1" = 1'-0"

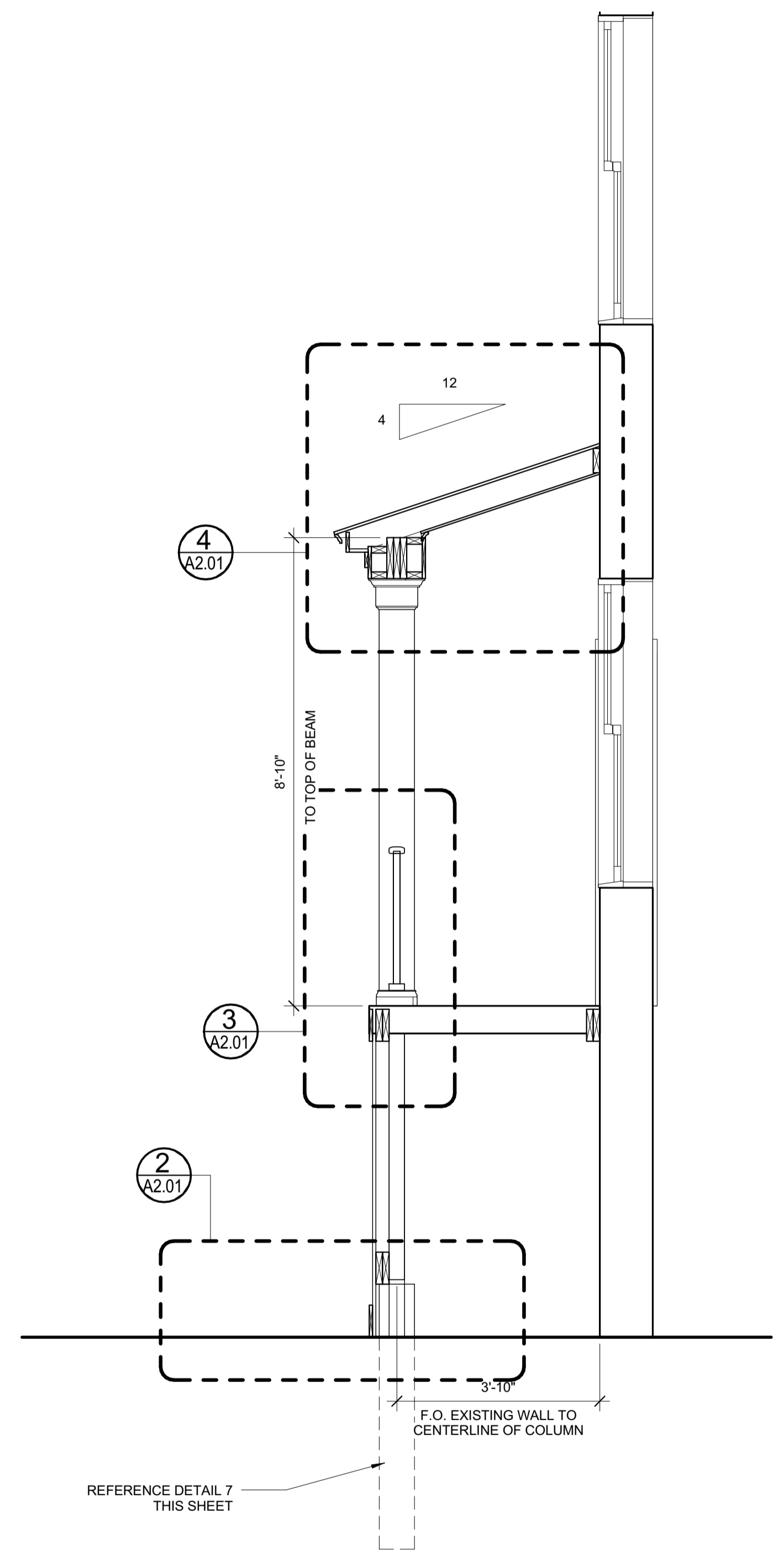


3 | BASE DETAIL AT PORCH
1" = 1'-0"

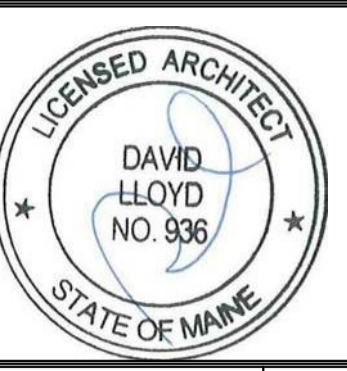


2 | COLUMN BASE DETAIL
1" = 1'-0"

NOTE:
ALL PAINTED ELEMENTS TO BE MONOLITHIC CREAM COLOR
COMPOSITE DECKING TO BE GRAY



1 | PORCH SECTION
1/2" = 1'-0"



Prepared For:
Mercy Hospital

Consultant:
ARCHETYPE architects
48 Union Wharf Portland, Maine 04101
ARCHETYPE@ARCHETYPEPA.COM
(207) 772-6002

Project:
97 State Street Porch
97 State Street Portland, ME

Revisions:
Date: 10/29/2014
Scale: As indicated
Porch Section and Details

A2.01



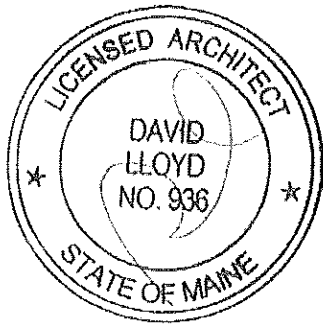
Accessibility Building Code Certificate

Designer: Archetype Architects

Address of Project: 97 State Street

Nature of Project: New Porch

The technical submissions covering the proposed construction work as described above have been designed in compliance with applicable referenced standards found in the Maine Human Rights Law and Federal Americans with Disability Act. Residential Buildings with 4 units or more must conform to the Federal Fair Housing Accessibility Standards. Please provide proof of compliance if applicable.



Signature: David Lloyd Digitally signed by David Lloyd
DN: cn=David Lloyd, o=Archetype Architects,
ou, email=lloyd@archetypepa.com, c=US
Date: 2014.09.29 14:44:23 -0400

Title: Architect

Firm: Archetype

Address: 48 Union Wharf
Portland, ME 04101

Phone: (207) 772-6022

E-mail: lloyd@archetypepa.com

For more information or to download this form and other permit applications visit the Inspections Division on our website at www.portlandmaine.gov



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Certificate of Design Application

From Designer: Archetype Architects
 Date: 9/30/14
 Job Name: 97 State Street Porch
 Address of Construction: 97 State Street

2009 International Building Code
 Construction project was designed to the building code criteria listed below:

Building Code & Year _____ Use Group Classification (s) 8,000.00

Type of Construction _____

Will the Structure have a Fire suppression system in Accordance with Section 903.3.1 of the 2009 IRC _____

Is the Structure mixed use? _____ If yes, separated or non separated or non separated (section 302.3) _____

Supervisory alarm System? _____ Geotechnical/Soils report required? (See Section 1802.2) _____

Structural Design Calculations

_____ Submitted for all structural members (106.1 – 106.11)

Design Loads on Construction Documents (1603)

Floor Area Use	Loads Shown
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Wind loads (1603.1.4, 1609)

_____ Design option utilized (1609.1.1, 1609.6)
 _____ Basic wind speed (1809.3)
 _____ Building category and wind importance Factor, w_b (table 1604.5, 1609.5)
 _____ Wind exposure category (1609.4)
 _____ Internal pressure coefficient (ASCE 7)
 _____ Component and cladding pressures (1609.1.1, 1609.6.2.2)
 _____ Main force wind pressures (7603.1.1, 1609.6.2.1)

Earth design data (1603.1.5, 1614-1623)

_____ Design option utilized (1614.1)
 _____ Seismic use group ("Category")
 _____ Spectral response coefficients, S_D & S_I (1615.1)
 _____ Site class (1615.1.5)

_____ Live load reduction
 _____ Roof *live* loads (1603.1.2, 1607.11)
 _____ Roof snow loads (1603.7.3, 1608)
 _____ Ground snow load, P_g (1608.2)
 _____ If $P_g > 10$ psf, flat-roof snow load P_f
 _____ If $P_g > 10$ psf, snow exposure factor, C_e
 _____ If $P_g > 10$ psf, snow load importance factor, I_s
 _____ Roof thermal factor, C_t (1608.4)
 _____ Sloped roof snowload, P_s (1608.4)
 _____ Seismic design category (1616.3)
 _____ Basic seismic force resisting system (1617.6.2)
 _____ Response modification coefficient, R_d and deflection amplification factor, C_d (1617.6.2)
 _____ Analysis procedure (1616.6, 1617.5)
 _____ Design base shear (1617.4, 16175.5.1)

Flood loads (1803.1.6, 1612)

_____ Flood Hazard area (1612.3)
 _____ Elevation of structure

Other loads

_____ Concentrated loads (1607.4)
 _____ Partition loads (1607.5)
 _____ Misc. loads (Table 1607.8, 1607.6.1, 1607.7, 1607.12, 1607.13, 1610, 1611, 2404)



Certificate of Design

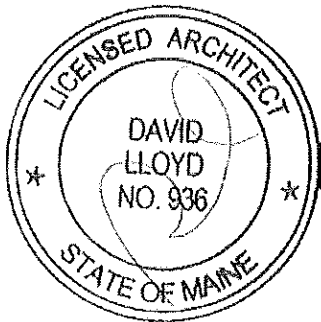
Date: 9/30/14

From: Archetype Architects

These plans and / or specifications covering construction work on:

97 State Street

Have been designed and drawn up by the undersigned, a Maine registered Architect / Engineer according to the **2009 International Building Code** and local amendments.



Signature: David Lloyd Digitally signed by David Lloyd
DN: cn=David Lloyd, o=Archetype Architects,
ou, email=lloyd@archetypepa.com, c=US
Date: 2014.09.29 14:45:37 -0400

Title: Architect

Firm: Archetype Architects

Address: 48 Union Wharf
Portland, ME 04101

Phone: (207) 772-6022

E-mail: lloyd @archetypepa.com

For more information or to download this form and other permit applications visit the Inspections Division on our website at www.portlandmaine.gov



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PORTLAND MAINE

Strengthening a Remarkable City, Building a Community for Life • www.portlandmaine.gov

Jeff Levine, AICP, Director
Director of Planning and Urban Development

Tammy Munson
Director, Inspections Division

Electronic Signature and Fee Payment Confirmation

Notice: Your electronic signature is considered a legal signature per state law.

By digitally signing the attached document(s), you are signifying your understanding this is a legal document and your electronic signature is considered a **legal signature** per Maine state law. You are also signifying your intent on paying your fees by the opportunities below.

I, the undersigned, intend and acknowledge that no permit application can be reviewed until payment of appropriate permit fees are **paid in full** to the Inspections Office, City of Portland Maine by method noted below:

Within 24-48 hours, upon receipt of an e-mailed invoice from Building Inspections, which signifies that my electronic permit application and corresponding paperwork have been received, determined complete, entered by an administrative representative, and assigned a permit number, I then have the following four (4) payment options:

- to provide an on-line electronic check or credit/debit card (we now accept American Express, Discover, VISA, and MasterCard) payment (along with applicable fees beginning July 1, 2014),
- call the Inspections Office at (207) 874-8703 and speak to an administrative representative to provide a credit/debit card payment over the phone,
- hand-deliver a payment method to the Inspections Office, Room 315, Portland City Hall,
- or deliver a payment method through the U.S. Postal Service, at the following address:

City of Portland
Inspections Division
389 Congress Street, Room 315
Portland, Maine 04101

Once my payment has been received, this then starts the review process of my permit. *After all approvals have been met and completed, I will then be issued my permit via e-mail.* No work shall be started until I have received my permit.

Applicant Signature: David Lloyd Digitally signed by David Lloyd
DN: cn=David Lloyd, o=Archetype Architects, ou,
email=lloyd@archetypepa.com, c=US
Date: 2014.09.29 14:40:38 -0400 Date: 9/30/14

I have provided digital copies and sent them on: David Lloyd Digitally signed by David Lloyd
DN: cn=David Lloyd, o=Archetype Architects, ou,
email=lloyd@archetypepa.com, c=US
Date: 2014.09.29 14:41:02 -0400 Date: 9/30/14

NOTE: All electronic paperwork must be delivered to buildinginspections@portlandmaine.gov or by physical means ie; a thumb drive or CD to the office.

Room 315 - 389 Congress Street- Portland, Maine 04101 (207) 874-8703 - Fax: 874-8716 - TTY: 874-8936



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General Building Permit Application

If you or the property owner owes real estate or personal property taxes or user charges on any property within the City, payment arrangements must be made before permits of any kind are accepted.

Address/Location of Construction: 97 State Street		
Total Square Footage of Proposed Structure: 190 sq. ft.		
Tax Assessor's Chart, Block & Lot Chart# Block# Lot# 45 B 25	Applicant Name: Roger Beesley Address One City Center City, State & Zip Portland, ME 04101	Telephone: (207) 871-1080 Email: roger@dirigomgmt.com
Lessee/Owner Name : (if different than applicant) Dirigo Management Company Address: One City Center City, State & Zip: Portland, ME 04101 Telephone E-mail: roger@dirigomgmt.com	Contractor Name: Not chosen at this time (if different from Applicant) Address: City, State & Zip: Telephone E-mail:	Cost Of Work: \$ 8,000.00 C of O Fee: \$ 100.00 ??? Historic Rev \$ paid Total Fees : \$ 202.00
Current use (i.e. single family) Residential		
If vacant, what was the previous use? _____		
Proposed Specific use: porch		
Is property part of a subdivision? <u>no</u> If yes, please name _____		
Project description: New Porch		
Who should we contact when the permit is ready: David Lloyd		
Address: 48 Union Wharf		
City, State & Zip: Portland, ME 04101		
E-mail Address: sue@archetypepa.com		
Telephone: (207) 772-6022		

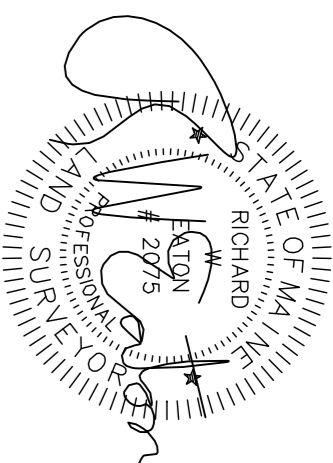
Please submit all of the information outlined on the applicable checklist. Failure to do so causes an automatic permit denial.

In order to be sure the City fully understands the full scope of the project, the Planning and Development Department may request additional information prior to the issuance of a permit. For further information or to download copies of this form and other applications visit the Inspections Division on-line at www.portlandmaine.gov, or stop by the Inspections Division office, room 315 City Hall or call 874-8703.

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Code Official's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

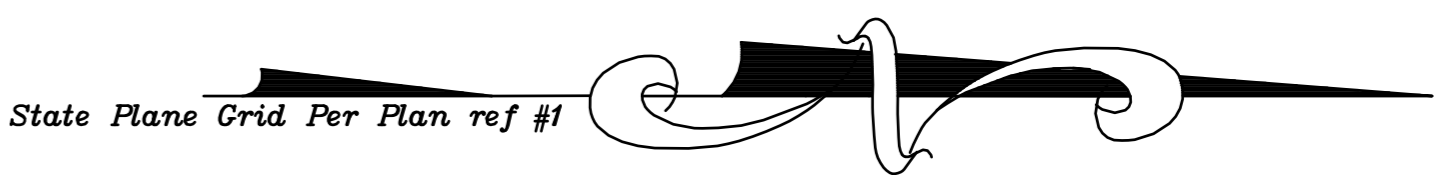
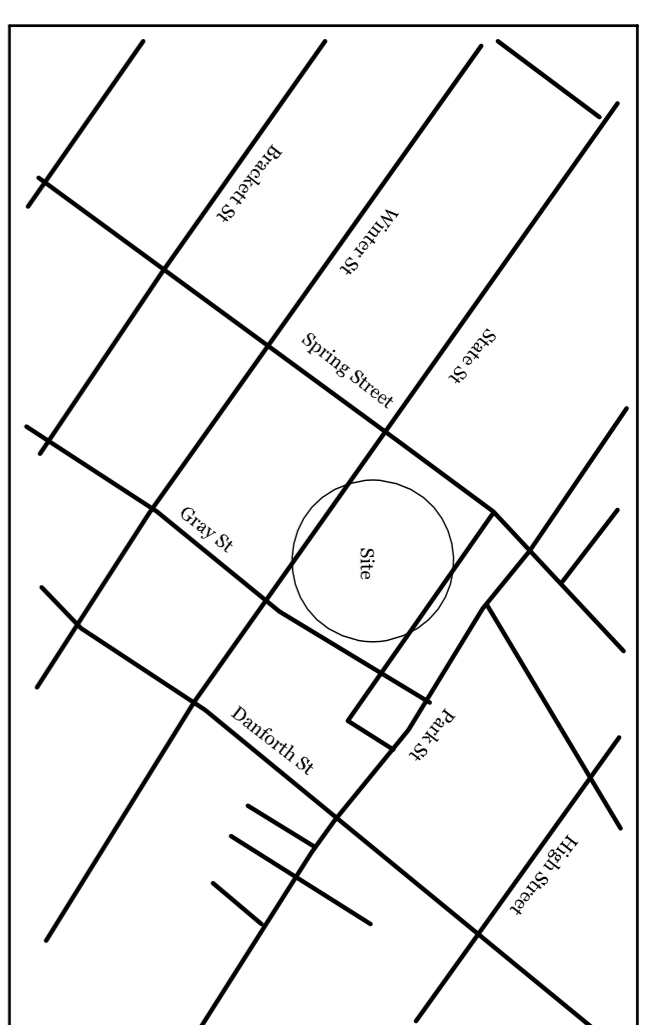
Signature: **David Lloyd** Digitally signed by David Lloyd
DN: cn=David Lloyd, o=Archetype Architects, ou,
email=dlloyd@archetypepa.com, c=US
Date: 2014.09.29 14:47:46 -0400 Date: 9/30/14

This is not a permit; you may not commence ANY work until the permit is issued.



RICHARD W. EATON P.L.S. # 2075

Location



STATE OF MAINE
SS REGISTRY OF DEEDS
RECEIVED _____ AT _____ H _____ M _____ M _____ AND
RECORDED IN PLAN BOOK _____ PAGE _____
ATTEST: _____ REGISTER

PLAN REFERENCE

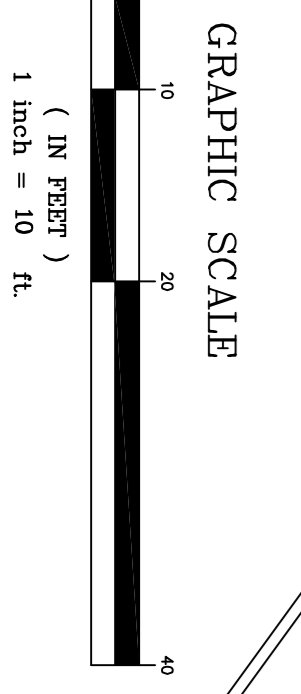
- 1) Recording plat, 91 State Street LLC, By Owen Haskell Inc, Dated April 19, 2013 Recorded in Plan Book 213 Page 209
- 2) Boundary Survey and Site Plan at 99 State Street For Crandall Toothaker By Back Bay Boundary Inc, Dated 03-03-2002 Recorded in Plan Book 202 Page 144
- 3) Plan of Park Row Associates in Portland, Maine By HII EC Jordan Dated 8-10-1972 and Reopened in Plan Book 95 Page 29
- 4) Portland Maine Right of Way Sheets on File at Portland Engineering Vault

Total Area 7,259 Square Feet or 0.17 Acres

- LEGEND**
- 5/8" Rebar Set With Cap
 - Rebar/Iron Pipe Found
 - ⊕ Utility Pole
 - N.F. Now or Formerly
 - 1324/98 Book & Page
 - Chain Link Fence

To Congress Street
99' Feet Wide
Per Plan Ref. #4
State Street

State Street



R. W. EATON ASSOCIATES
LAND SURVEYING & REAL ESTATE
PLEASANT STREET, WESTBROOK, MAINE 04092
54-2402 FAX: 856-7167 E-MAIL: RWEATON@MAINE.RR.COM
November 26, 2014



Reviewed for Code Compliance
Inspection Division
Approved with Conditions

Date: 12/16/14

SCALE: 1"=10'
DRAWN BY: R.M.E.
CHECKED BY: R.M.E.
CAD FILE: 516.DWG
PROJ #: 516
ORIG DATE: 11-26-14
0 REV DATE: 00-00-00
1 REV DATE: 00-00-00
2 REV DATE: 00-00-00
3 REV DATE: 00-00-00

Boundary Survey
"Gray's House"

Land Located at: 97 State Street
Portland, Maine 04102

Land Owned By: Mercy Hospital
144 State Street
Portland, Maine 04102

Deed Reference: Book 15218 Page 252

12/16/14