TREADWELL MINE OFFICE
BUILDING REHABILITATION – PH I

The drawings are labeled Juneau, Alaska Treadwell Historic Preservation and Restoration Society Treadwell Office Improvements 2015

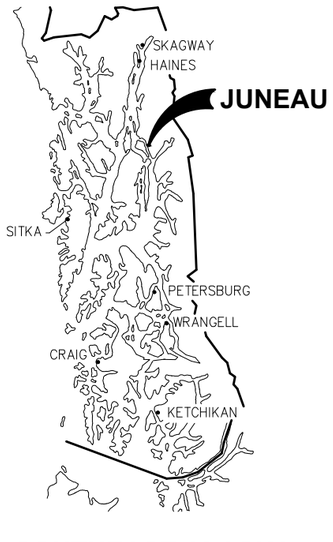
VOLUME II of II

Contract No. BE17-072

File No. 1929

ENGINEERING DEPARTMENT

JUNEAU, ALASKA
TREADWELL HISTORIC PRESERVATION AND RESTORATION SOCIETY
TREADWELL OFFICE IMPROVEMENTS
2015



SOUTHEAST ALASKA

VICINITY MAP- DOUGLAS

SCALE IN FEET
0 75 150 FT.

REVISIONS

REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P N D ENGINEERS, INC.
9360 Glacier Highway Ste 100
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DESIGN: CMG CHECKED: CMG
DRAWN: DRD APPROVED: ---
SCALE: AS SHOWN
DATE: 6/30/15

STATE OF ALASKA 49TH
Christopher Gianotti
SE-14256
REGISTERED PROFESSIONAL ENGINEER

JUNEAU, ALASKA
TREADWELL HISTORIC PRESERVATION AND RESTORATION SOCIETY

SHEET TITLE:
COVER SHEET AND VICINITY MAP

PND PROJECT NO.: 102055.02 DWG. FILE: -----.DWG

S001
SHEET 1 OF --

STRUCTURAL GENERAL NOTES

CRITERIA

CODE

2009 EDITION OF INTERNATIONAL BUILDING CODE (IBC) AS AMENDED BY THE CITY AND BOROUGH OF JUNEAU AND THE STATE OF ALASKA

LOADS

SNOW:

GROUND SNOW LOAD: pg =	70 PSF
EXPOSURE COEFFICIENT,	Ce = 1.0
THERMAL COEFFICIENT,	Ct = 1.2 (UNHEATED ROOFS)
IMPORTANCE FACTOR,	I = 1.0
FLAT ROOF SNOW LOAD,	Pf = 59 psf
SLOPED ROOF COEFFICIENT:	Cs = 0.60 PSF
SLOPED ROOF SNOW LOAD:	40 PSF MINIMUM

WIND:

116 MILES PER HOUR (3-SECOND GUST)
EXPOSURE D
IMPORTANCE, I = 1.0

SEISMIC LOADS

SITE CLASS: E
Ss = 0.616 g, Fa = 1.31, Sds = 0.53g
S1 = 0.42 g, Fv = 1.58, Sd1 = 0.45g
DESIGN CATEGORY D
R = 4.0 CONCRETE SHEAR WALL STRUCTURE
IMPORTANCE, Ie = 1.0
Cs = 0.13 g

MATERIALS AND CONCTRUCTION

EARTHWORK

CONTRACTOR SHALL EXCAVATE TO THE LIMITS SHOWN ON THE PLANS IN ACCORDANCE WITH ALL OSHA AND STATE OF ALASKA LABOR REGULATIONS. AT THE LIMITS OF EXCAVATION PROOF COMPACT NATIVE SOILS WITH A MINIMAL LEVEL OF EFFORT OF 6 PASSES WITH A WALK-BEHIND, VIBRATORY PLATE OR DOUBLE DRUM ROLLER COMPACTOR WITH A MINIMUM RATING OF 10,000 POUNDS.

TYPE A SELECT MATERIAL SHALL BE IN CONFORMANCE WITH SECTION 703-2.07 1 OF THE ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2004 EDITION. PLACE IN LIFTS NOT TO EXCEED 8 INCHES IN LOOSE THICKNESS. COMPACT EACH LIFT PRIOR TO PLACING SUBSEQUENT MATERIAL WITH A MINIMUM LEVEL OF EFFORT OF 6 PASSES WITH A WALK-BEHIND VIBRATORY PLATE OR DOUBLE DRUM ROLLER COMPACTOR WITH A MINIMUM RATING OF 10,000 POUNDS.

BASE COURSE SHALL BE EITHER NATIVE MATERIAL OR IMPORTED MATERIAL MEETING THE REQUIREMENTS FOR AGGREGATE FOR BASE COURSE, D-1 GRADATION, AS SPECIFIED IN SECTION 703 OF THE ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2004 EDITION. PLACE BASE COURSE IN SINGLE LIFT AND COMPACT WITH A MINIMUM LEVEL OF EFFORT OF 6 PASSES WITH A WALK-BEHIND VIBRATORY PLATE OR DOUBLE DRUM ROLLER COMPACTOR WITH A MINIMUM RATING OF 10,000 POUNDS.

CONCRETE

CONCRETE SHALL BE A DENSE WORKABLE MIX THAT WHEN PLACED IS FREE OF EXCESS SURFACE WATER. CONCRETE SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH OF 4,000 PSI, HAVE A MAXIMUM AGGREGATE SIZE OF 3/8 INCHES AND BE ENTRAINED WITH AIR. FOR A MAXIMUM AGGREGATE SIZE OF 3/8 INCHES AIR CONTENT SHALL BE BETWEEN 6.5 AND 9.5 PERCENT.

CONCRETE REINFORCEMENT SHALL CONFORM TO ASTM A615 GRADE 60. ALL BARS SHALL BE IN PLACE AND SECURED PRIOR TO PLACING CONCRETE. MINIMUM COVER SHALL BE AS NOTED. SUBMIT CONCRETE REINFORCING FABRICATION DRAWINGS FOR REVIEW AND APPROVAL.

CONCRETE SHALL BE MIXED, PLACED, CONSOLIDATED AND CURED IN ACCORDANCE WITH THE BUILDING CODE. CONCRETE SHALL BE PROTECTED FROM FREEZING BY COVERING AND HEATING AS REQUIRED TO ENSURE CONCRETE TEMPERATURE IS NOT BELOW 40 DEGREES F UNTIL CURED.

CONCRETE REPAIRS

REPAIR GROUT. REMOVE UNSOUND CONCRETE USING CHIPPING HAMMERS, BUSHING TOOLS OR OTHER EFFECTIVE METHODS. RINSE CONCRETE TO REMAIN OF DUST WITH WATER. REPAIR SPALLS, LARGE CRACKS AND VOIDS LESS THAN 4 INCHES DEEP WITH RAPID SET CEMENT ALL. PERFORM SURFACE PREPARATION, MIXING, PLACEMENT AND CURING IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

CORROSION INHIBITOR: SIMPSON FX406. PREPARE REBAR FOR APPLICATION BY VIGOROUS WIRE BRUSHING.

BONDING AGENT: SIMPSON FX752 BONDING AGENT OR APPROVED EQUAL.

PENETRATING SEALER: ASHFORD FORMULA OR APPROVED EQUAL SILANE OR SILOXANE PENETRATING SEALER.

STRUCTURAL STEEL

STEEL SHALL CONFORM TO THE FOLLOWING STANDARDS:

C AND L SECTIONS:	ASTM A36 (YIELD STRENGTH = 36,000 PSI)
PLATES	ASTM A 36 (YIELD STRENGTH = 36,000 PSI)
BOLTS: STEEL TO STEEL:	ASTM A325 GALVANIZED
BOLTS: WOOD TO STEEL:	ASTM A 307 GALVANIZED

FABRICATE AND ERECT STEEL IN ACCORDANCE WITH THE AISC CODE OF STANDARD PRACTICE, LATEST EDITION. ALL WELDING SHALL BE DONE BY QUALIFIED WELDERS PER THE AWS D1.1 STRUCTURAL WELDING CODE. WELDERS SHALL FOLLOW APPROVED PROCEDURES. SUBMIT WELDER QUALIFICATIONS AND WELDING PROCEDURES FOR REVIEW AND APPROVAL PRIOR TO SHOP OF FIELD FABRICATION. SUBMIT SHOP FABRICATION DRAWINGS FOR REVIEW AND APPROVAL.

GALVANIZE ALL STRUCTURAL STEEL AFTER FABRICATION IN ACCORDANCE WITH ASTM A 153 AND A123 AS APPROPRIATE.

REPAIR DAMAGE TO GALVANIZING IN ACCORDANCE WITH ASTM A780, ZINC ALLOY STICK METHOD AND FOLLOWED BY A TOP COAT OF BRUSH APPLIED COLD GALVANIZING PAINT APPLIED WHILE STEEL IS STILL WASM.

TIMBER

TIMBER DECKING SHALL BE NOMINAL 2X TONGUE AND GROOVE DECKING WITH V-JOINT PATTERN CONFORMING TO AITC 112, DOUGLAS FIR-LARCH, COMMERCIAL QUALITY AS GRADED BY THE WCLIB OR WWPA. ALL PLANK JOINTS SHALL BE OVER PURLIN NAILERS. STAGGER PLANK JOINTS WITH JOINTS ON ADJACENT PLANKS BY AT LEAST ONE SPAN. EACH PIECE SHALL BE TOE-NAILED THROUGH THE TONGUE AND FACE NAILED WITH ONE NAIL PER SUPPORT, 16d COMMON NAILS (DIAMETER = 0.162 INCHES X 3.5 INCHES LONG), HOT DIP GALVANIZED.

NAILERS SHALL BE HEM FIR NO 1 GRADE OR OF A SPECIES AND GRADE WITH HIGHER ALLOWABLE STRESSES. CONNECT NAILERS TO PURLINS WITH 5/8 INCH DIAMETER, GALVANIZED A307 BOLTS AT 2'-0"ON CENTER MAX. LUMBER AND TIMBER SHALL BE FABRICATED AND JOINED TO CREATE SNUG TIGHT CONNECTIONS. HOLES FOR BOLTS SHALL BE NO GREATER THAN THE BOLT DIAMETER PLUS 1/8 INCHES. ALL BOLTS SHALL BE INSTALLED WITH STANDARD WASHERS UNDER THE HEAD AND NUT.

ROOFING

ROOFING SHALL BE ASC BUILDING PRODUCTS 2½" CORRUGATED, RUSTIC RED COLOR, 26 GAGE. INSTALL WITH 30 POUND ROOFING FELT, CLOSURES, SEALANTS AND FLASHING PER MANUFACTURER'S INSTRUCTIONS. SHIP, HANDLE AND PROTECT ALL COMPONENTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. SECURE FLASHING USING ROOFING NAILS AS INSTRUCTED BY ROOFING MANUFACTURER. SECURE ROOFING USING SCREWS OF SIZE AND TYPE AND AT THE SPACING AS INSTRUCTED BY THE MANUFACTURER. PANELS SHALL BE IN ONE PIECE FROM RIDGE R HIP TO EAVE WITHOUT ANY FIELD SPLICES. SIDE LAP PANELS AND SECURE PER MANUFACTURER'S INSTRUCTIONS. WHEN COMPLETE AND IN PLACE ROOFING SHALL BE A WEATHER TIGHT SYSTEM WITHOUT LEAKS.

ABBREVIATIONS

AISI	AMERICAN IRON AND STEEL INSTITUTE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
APPROX	APPROXIMATE
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS
AWS	AMERICAN WELDING SOCIETY
CL	CENTERLINE
COL	COLUMN
CONC	CONCRETE
(E)/EXIST	EXISTING
EA	EACH
EW	EACH WAY
EMBED	EMBEDMENT
G	ACCELERATION DUE TO GRAVITY
GA	GAGE
GB	GRADE BREAK
HSS	HOLLOW STRUCTURAL STEEL
ICRI	INTERNATIONAL CONCRETE REPAIR INSTITUTE
KSI	KIPS PER SQUARE INCH (1 KIP = 1000 POUNDS)
PL	PLATE
PLWD	PLYWOOD
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
REINF	REINFORCEMENT
OC	ON CENTER
OPP	OPPOSITE
STD	STANDARD
TYP	TYPICAL
VERT	VERTICAL
W/	WITH
WWPA	WESTERN WOOD PRODUCTS ASSOCIATION
WCLIB	WEST COAST LUMBER INSPECTION BUREAU

DRAWING INDEX

REVISIONS

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SCALE:

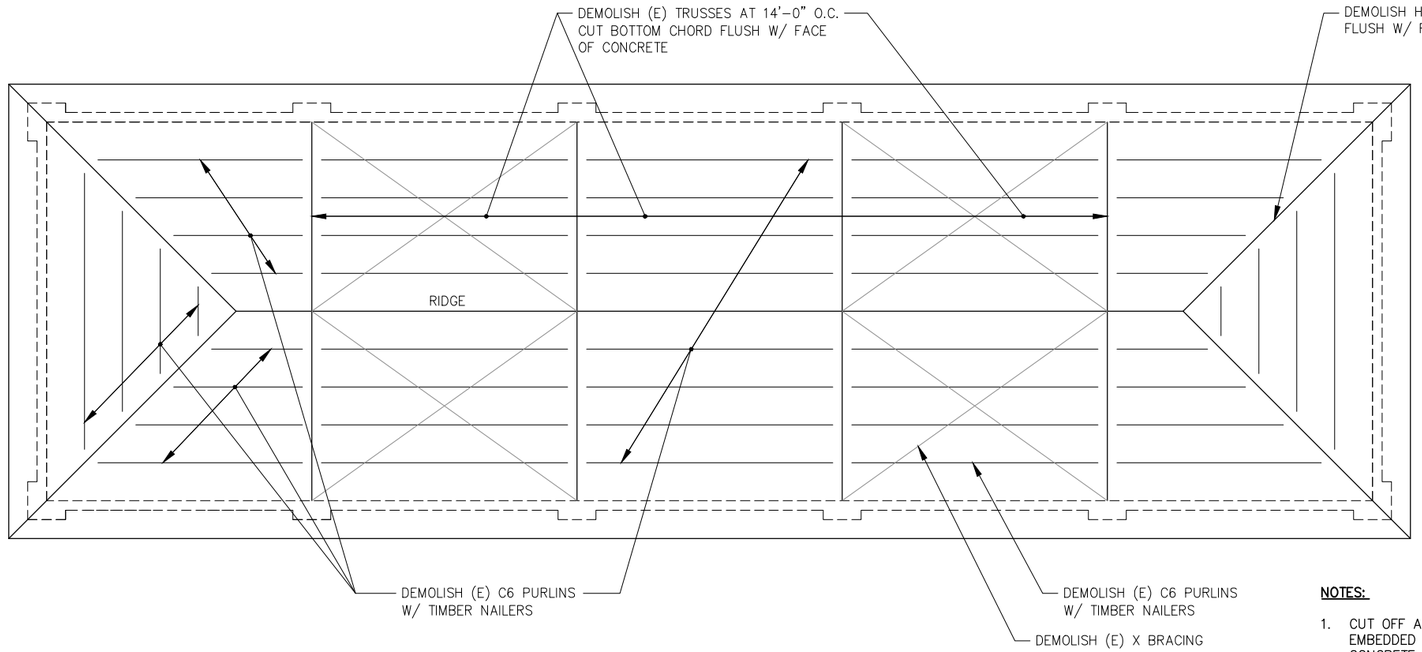
STATE OF ALASKA 49TH Christopher Gianotti SE-14256 REGISTERED PROFESSIONAL ENGINEER
DATE: 6/30/15

JUNEAU, ALASKA
TREADWELL HISTORIC PRESERVATION AND RESTORATION SOCIETY

SHEET TITLE:
STRUCTURAL GENERAL NOTES

PND PROJECT NO.: 102055.02 DWG. FILE: -----.DWG

S002
SHEET -- OF --



1 ROOF DEMOLITION PLAN

NOTES:

1. CUT OFF ALL ANCHOR BOLTS STRUCTURAL STEEL AND EMBEDDED CONDUIT FLUSH WITH FACE OF EXIST CONCRETE TO REMAIN.
2. VERIFY TOP OF CONCRETE CONDITION WITH CHIPPING HAMMER OR BUSHING TOOL REMOVE LOOSE CONCRETE.
3. AT TOP OF CONCRETE, REMOVE LOOSE RUST FROM EXPOSED REBAR. APPLY CORROSION INHIBITOR.
4. REPAIR VOIDS FROM SPALLS LARGER THAN 1½" AND AT EXPOSED REBAR WITH CEMENT ALL.

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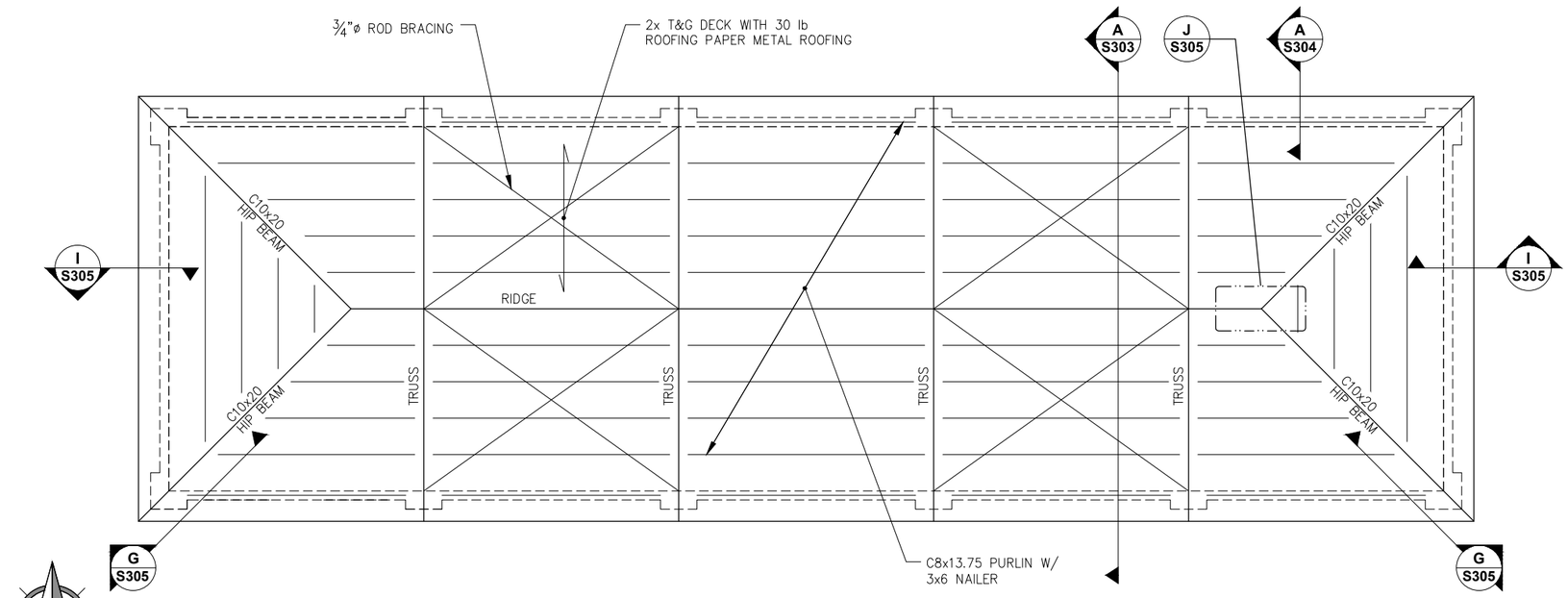
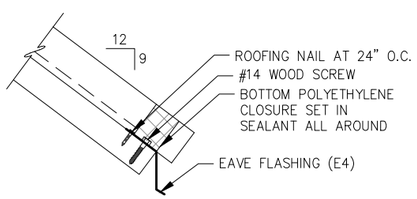
SHEET TITLE: **ROOF DEMOLITION PLAN**

PND PROJECT NO.: 102055.02 DWG. FILE: -----.DWG

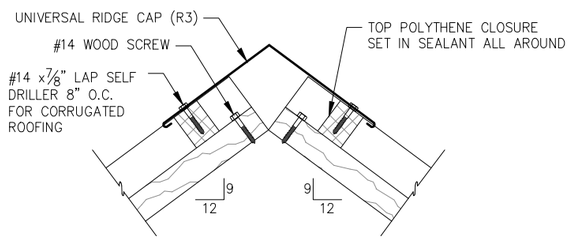
S103 SHEET -- OF --



1 ROOF FRAMING PLAN



A EAVE FLASHING DETAIL



B RIDGE/ HIP FLASHING

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SHEET TITLE:
ROOF FRAMING PLAN

PND PROJECT NO.: 102055.02 DWG. FILE: -----.DWG

S203
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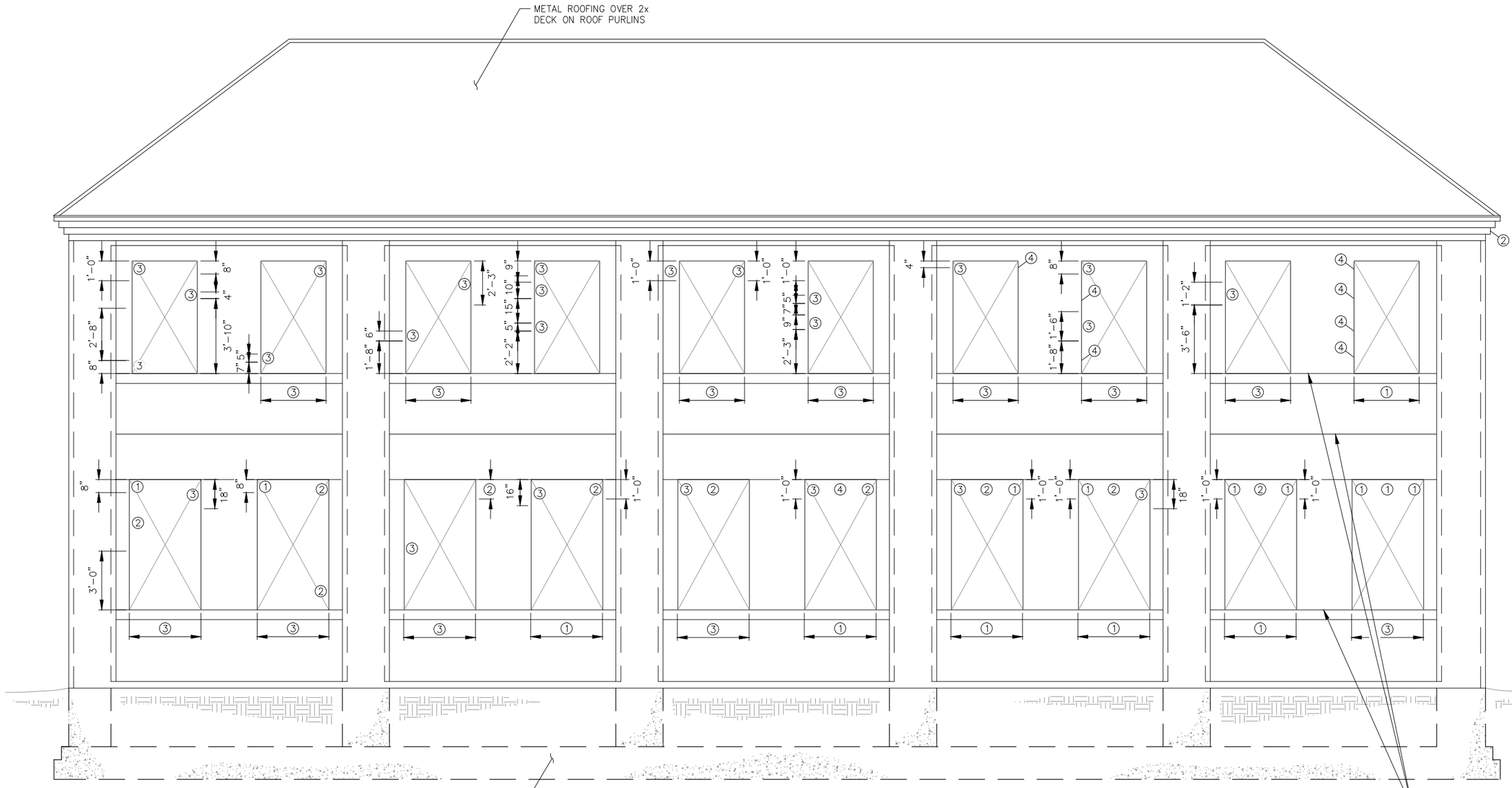

1 **SOUTH ELEVATION**

NOTES:

1. DIMENSIONS ARE APPROXIMATE. FIELD VERIFY.
2. (#) INDICATES WINDOW OPENING REPAIR SEE 1/S003.

NOT IN THIS CONTRACT

NOT IN THIS CONTRACT

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SHEET TITLE:
SOUTH ELEVATION

PND PROJECT NO.: 102055.02 DWG. FILE: -----.DWG

S300
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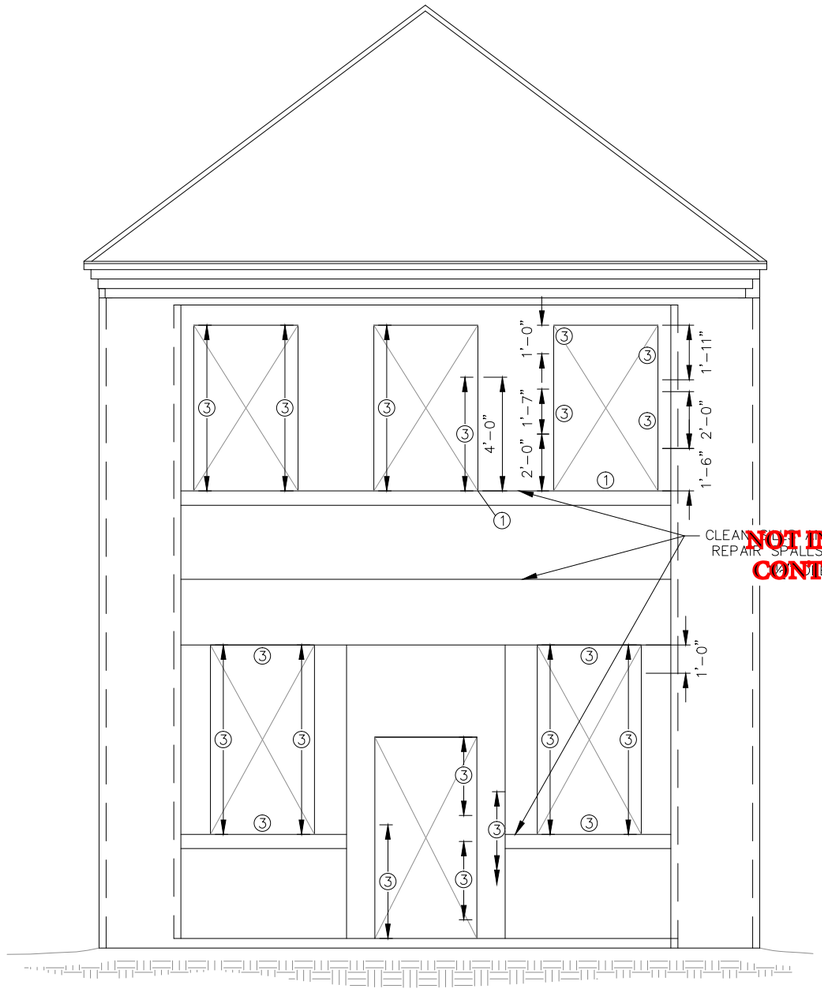
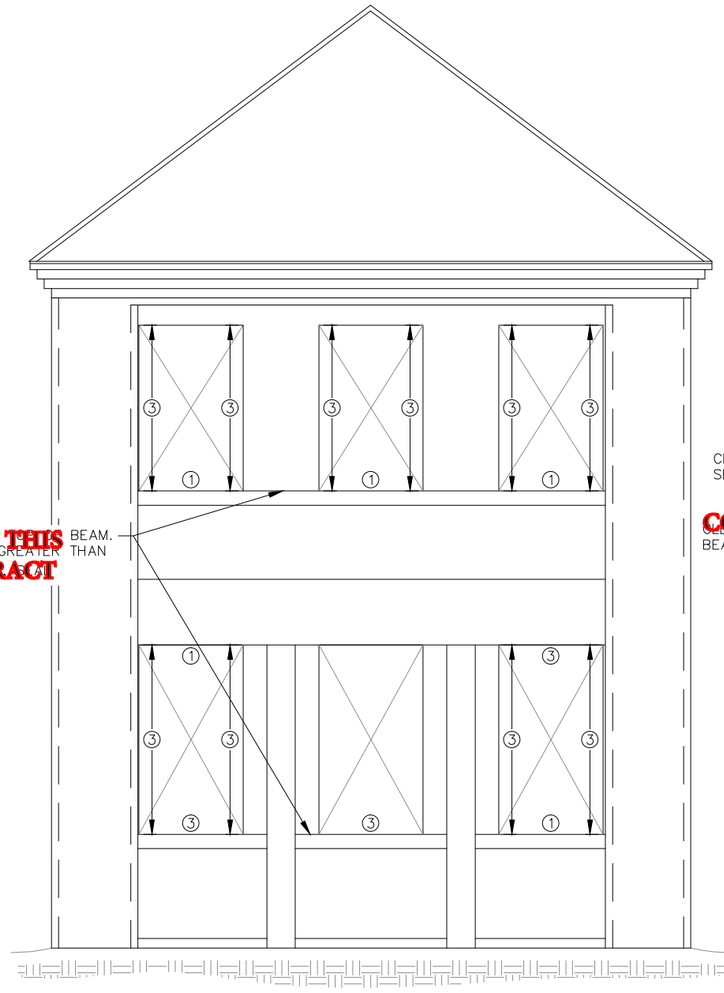


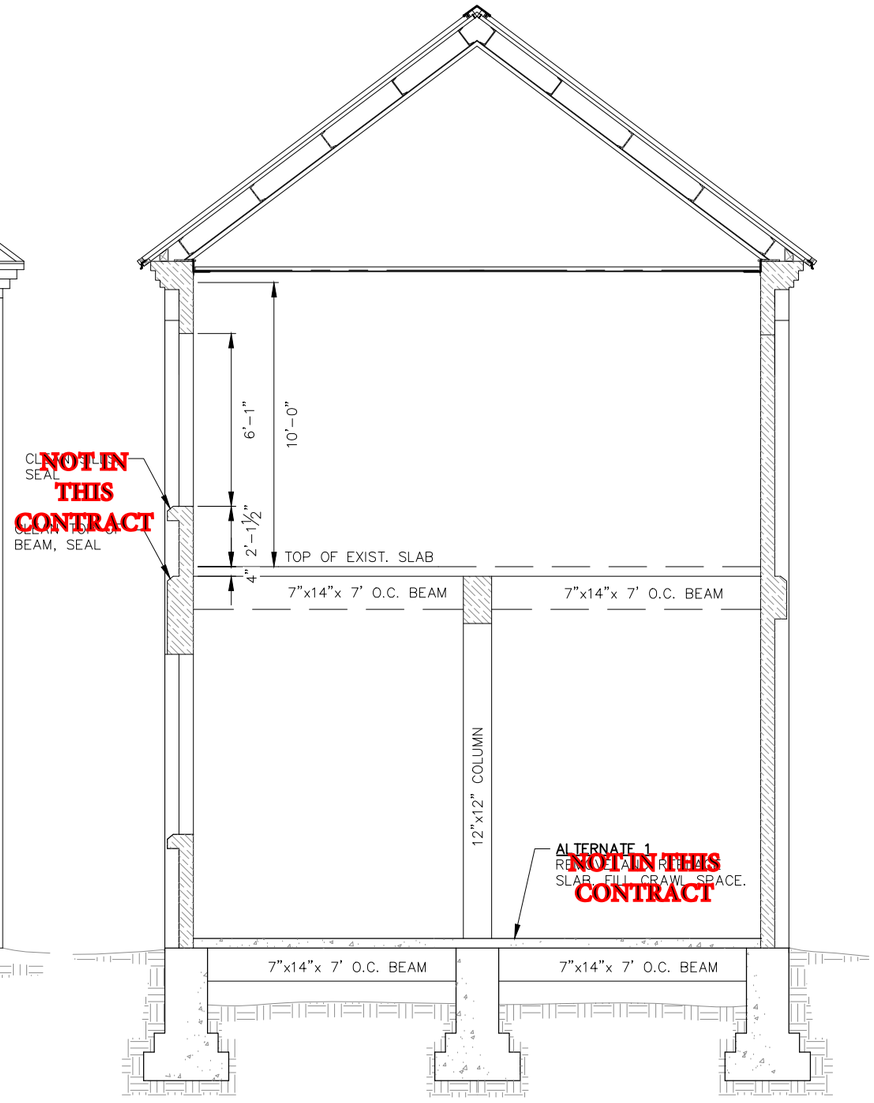
NOTE:

1. (#) INDICATES REPAIR, SEE S002.

1 EAST ELEVATION



2 WEST ELEVATION



NOTE:

1. FIELD VERIFY DIMENSIONS.

A EXISTING BUILDING SECTION

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JUNEAU, ALASKA
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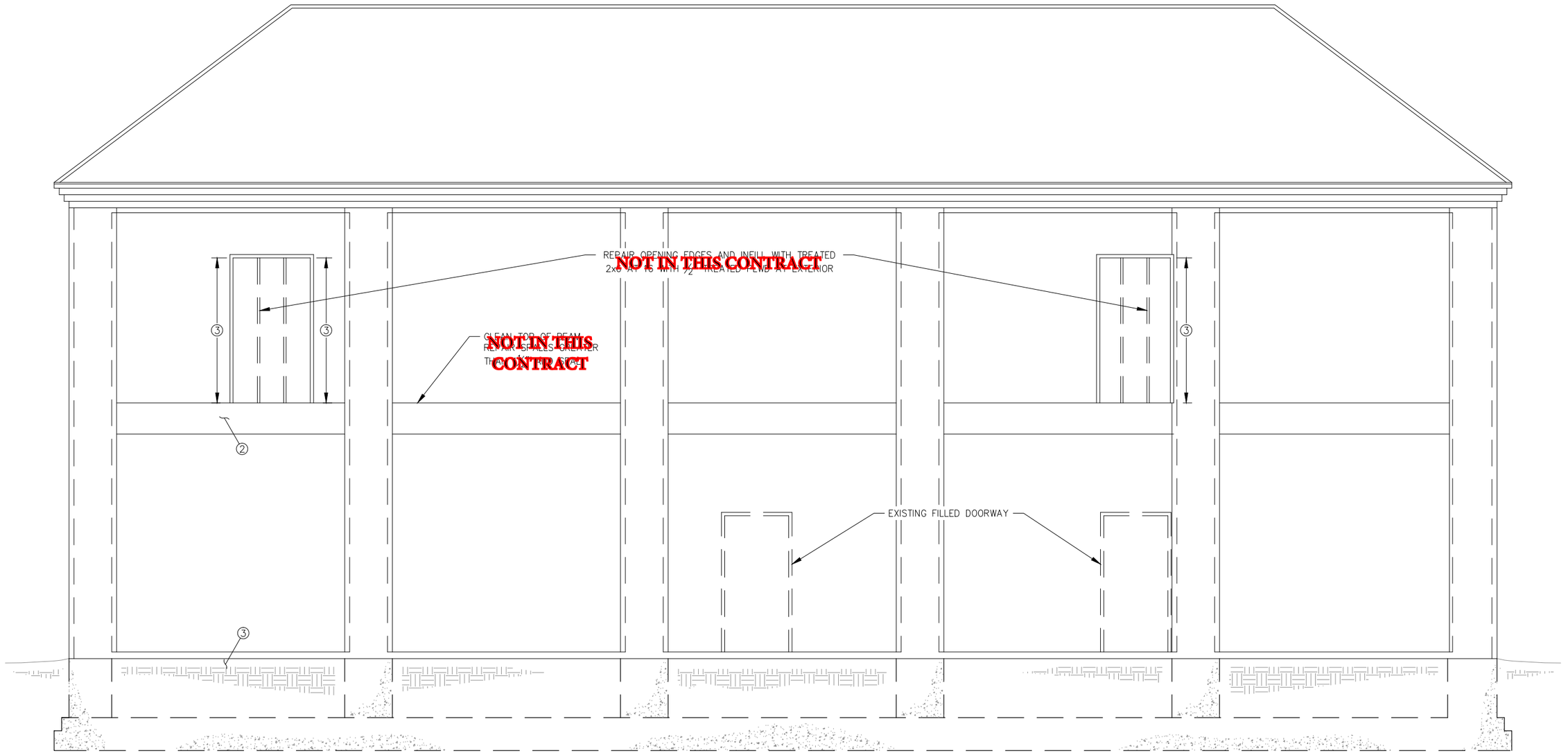
SHEET TITLE:
EAST AND WEST ELEVATION PLAN

PND PROJECT NO.: 102055.02 DWG. FILE: -----.DWG

S301
SHEET -- OF --



1 **NORTH ELEVATION**

NOTES:

1. SEE NOTES ON S301 FOR REQUIRED BEAM REPAIRS
2. (#) INDICATES OPENING REPAIR SEE 1/S302.

NOT IN THIS CONTRACT

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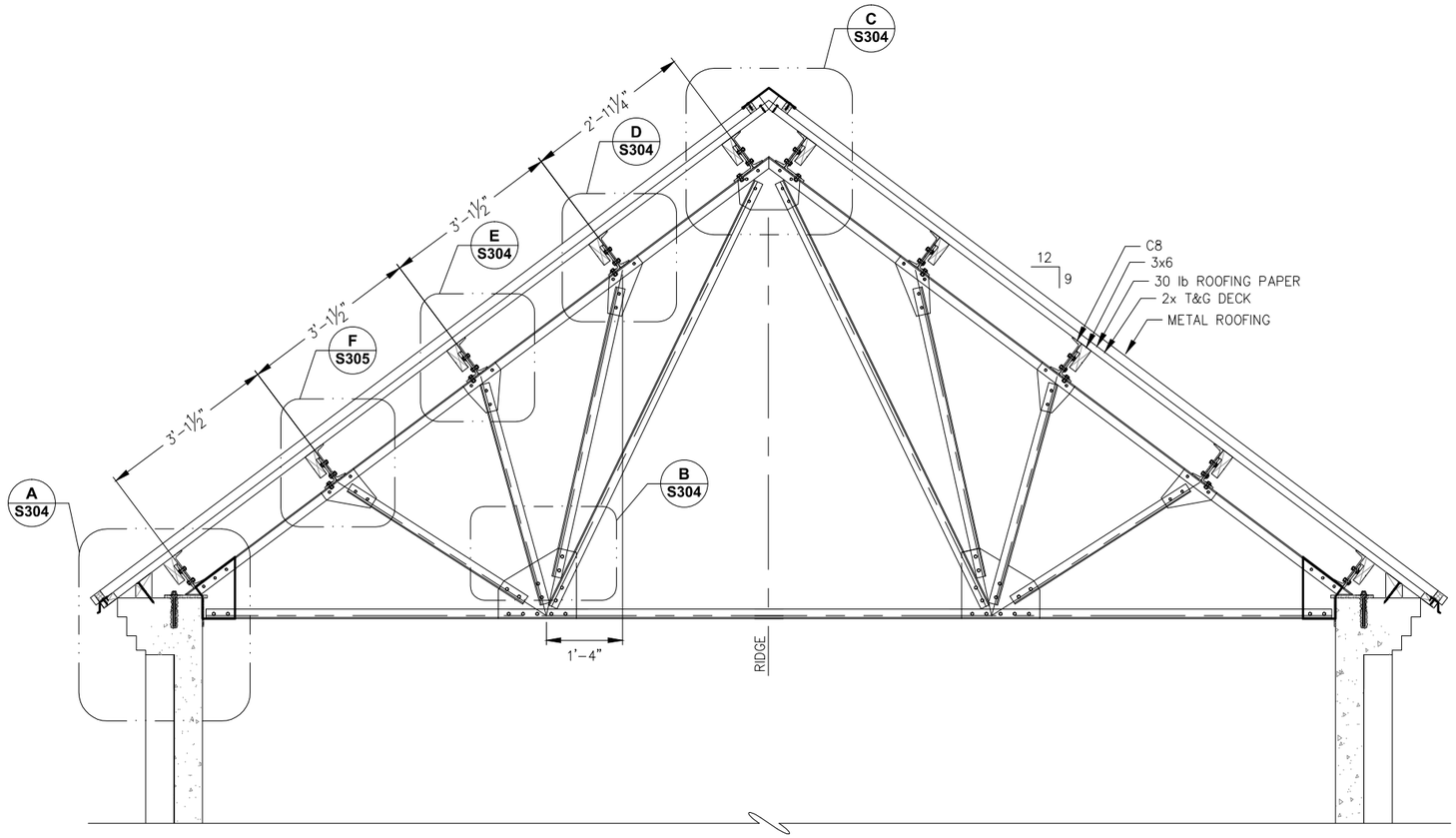
SHEET TITLE: **NORTH ELEVATION**

PND PROJECT NO.: 102055.02 DWG. FILE: -----.DWG

S302
SHEET -- OF --



A **ROOF AND TRUSS SECTION**

NOTES:

1. FIELD VERIFY EXISTING CONDITIONS

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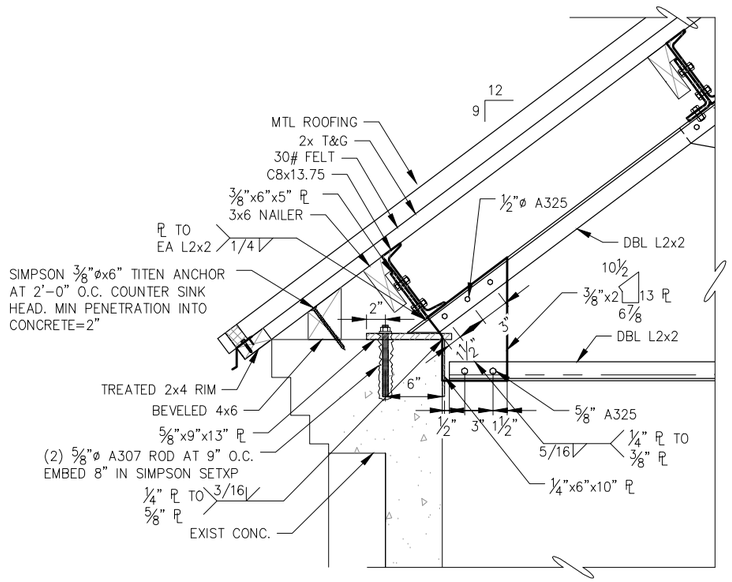
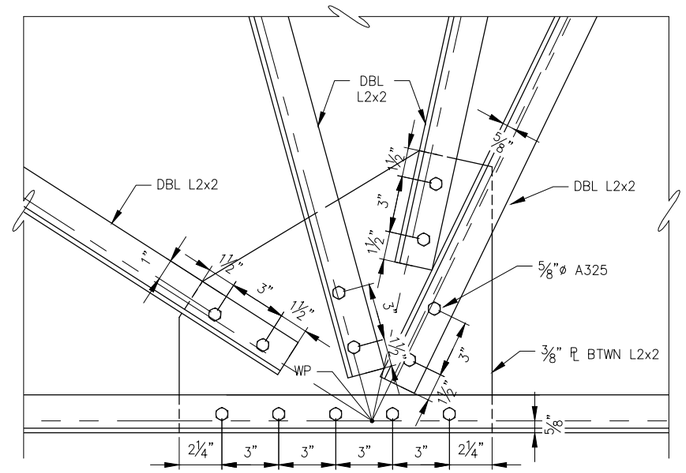
SHEET TITLE:
ROOF FRAMING SECTION

PND PROJECT NO.: 102055.02 DWG. FILE: -----.DWG

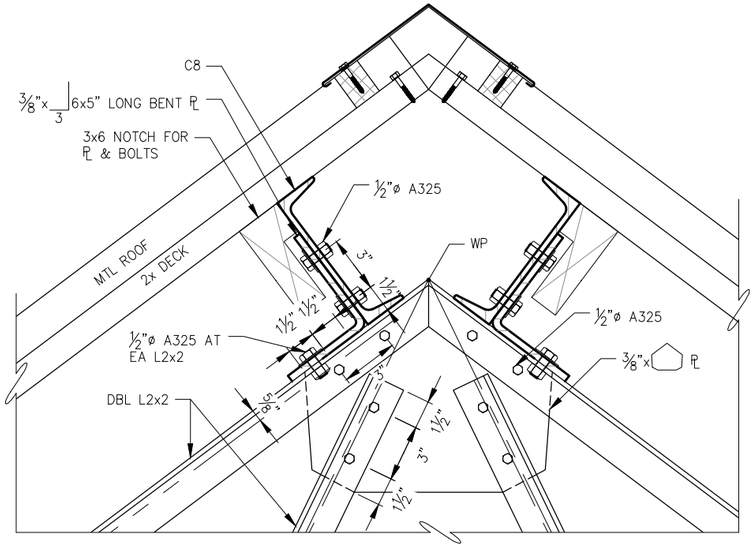
S303
SHEET -- OF --



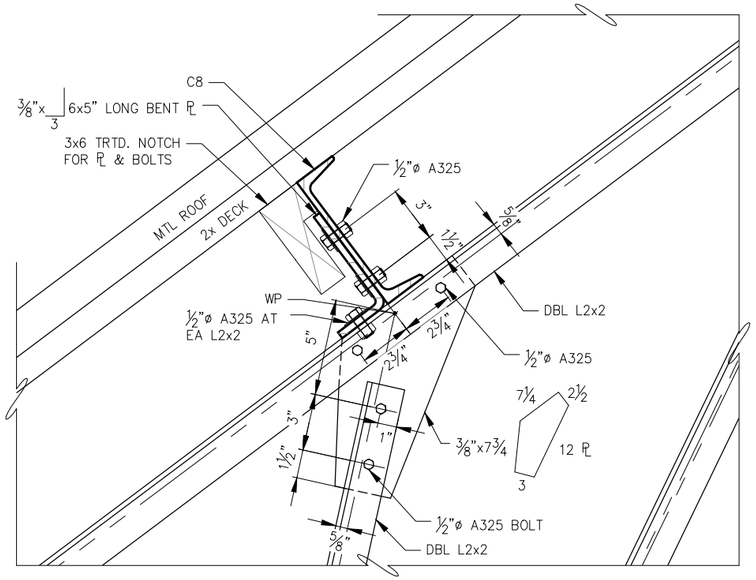
A **DETAIL AT SUPPORT**



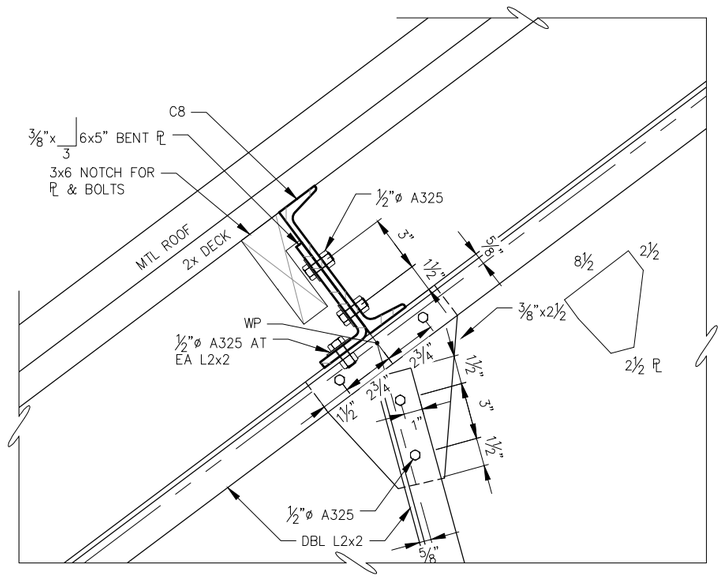
B **BOTTOM CHORD DETAIL**



C **DETAIL AT RIDGE**



D **DETAIL AT TOP CHORD**



E **DETAIL AT TOP CHORD**

NOTE:

1. SEE I/S305 FOR TYPICAL NAILER TO C8 CONNECTION

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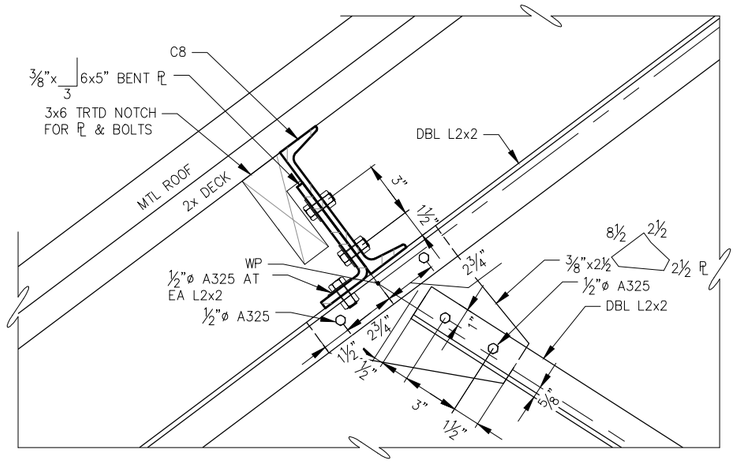
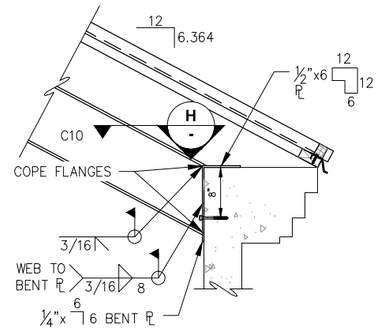
SHEET TITLE:
ROOF FRAMING DETAILS

PND PROJECT NO.: 102055.02 DWG. FILE: -----.DWG

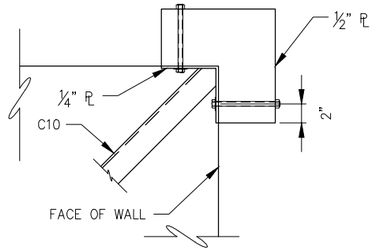
S304
SHEET -- OF --



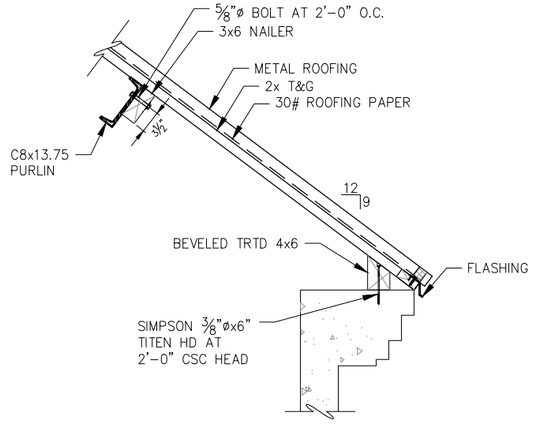
F **DETAIL AT TOP PLATE**



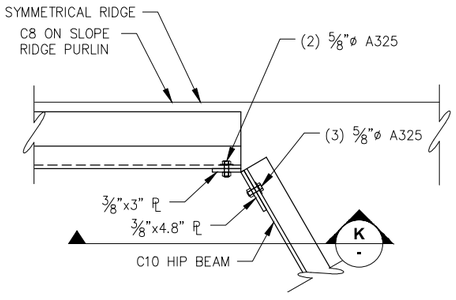
G **HIP BEAM TO WALL DETAIL**



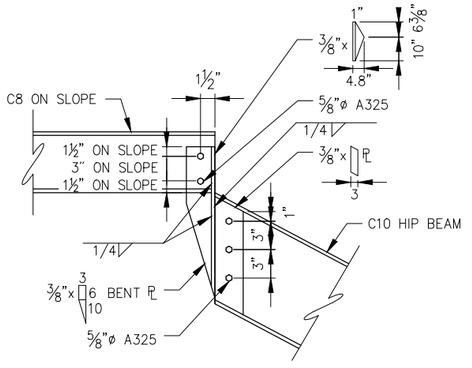
H **HIP BEAM TO WALL**



I **END EAVE SECTION**



J **HIP BEAM TO RIDGE PURLIN**



K **HIP BEAM TO ROOF PURLIN**

REVISIONS

REV.	DATE	DESCRIPTION	DWN.	CKD.	APP.

P N D ENGINEERS, INC.

9360 Glacier Highway Ste 100
Juneau, Alaska 99801

Phone: 907-586-2093
Fax: 907-586-2099
www.pndengineers.com

DESIGN: CMG CHECKED: CMG
DRAWN: DRD APPROVED: ---
SCALE: AS SHOWN
DATE: 6/30/15

STATE OF ALASKA 49TH Christopher Gianotti SE-14256 REGISTERED PROFESSIONAL ENGINEER

JUNEAU, ALASKA
TREADWELL HISTORIC PRESERVATION AND RESTORATION SOCIETY

SHEET TITLE:
ROOF FRAMING DETAILS

PND PROJECT NO.: 102055.02 DWG. FILE: -----.DWG

S305
SHEET -- OF --