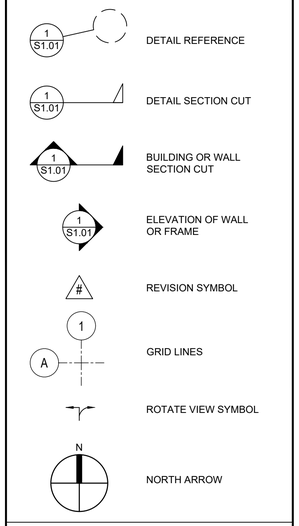
STRUCTURAL ABBREVIATIONS

#	NUMBER OR POUNDS
AB	ANCHOR BOLT
ACI	AMERICAN CONCRETE INSTITUTE
ADDL	ADDITIONAL
ADJ	ADJACENT
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL
AFF	ABOVE FINISH FLOOR
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALT	ALTERNATE
ALUM	ALUMINUM
APA	AMERICAN PLYWOOD ASSOCIATION
ARCH	ARCHITECTURAL
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
ASSY	ASSEMBLY
ATR	ALL THREAD ROD
ATR/A	ALL THREAD ROD WITH ADHESIVE
AWS	AMERICAN WELDING SOCIETY
B/	BOTTOM OF
BF	BRACED FRAME
BLDG	BUILDING
BLKG	BLOCKING
BM	BEAM
BN	BOUNDARY NAIL
BOT	BOTTOM
BRBF	BUCKLING RESTRAINED BRACED FRAME
BRNG	BEARING
BSMT	BASEMENT
BTWN	BETWEEN
BU	BUILT-UP
C	CAMBER OR CHANNEL (AMERICAN STANDARD)
CANT	CANTILEVER
CIP	CAST IN PLACE
CG	CENTER OF GRAVITY
CGS	CENTER OF GRAVITY OF (PRESTRESSING) STEEL
CJ	CONTROL OR CONSTRUCTION JOINT
CJP	COMPLETE JOINT PENETRATION
CL	CENTERLINE
CLG	CEILING
CLR	CLEARANCE; CLEAR
CLSM	CONTROLLED LOW STRENGTH MATERIAL
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS
COORD	COORDINATE
CSA	CONCRETE SCREW ANCHOR
d	PENNY (NAIL)
db	NOMINAL BAR DIAMETER
DBA	DEFORMED BAR ANCHOR
DBL	DOUBLE
DBO	DESIGNED BY OTHERS
DEG	DEGREE
DEMO	DEMOLISH; DEMOLITION
DF/L	DOUGLAS FIR-LARCH
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DIST	DISTANCE
DL	DEAD LOAD
DN	DOWN
DTL	DETAIL
DWG	DRAWING
(E)	EXISTING
EA	EACH
EB	EXPANSION BOLT
EF	EACH FACE
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
EN	EDGE NAIL
EQ	EQUAL; EARTHQUAKE
EW	EACH WAY
EXT	EXTERIOR
EXTD	EXTEND; EXTENDED
f'c	28 DAY CONC COMPRESSIVE STRENGTH
FF	FINISH FLOOR
FN	FIELD NAIL
FLR	FLOOR
FDN	FOUNDATION
FOC	FACE OF CONCRETE
FOM	FACE OF MASONRY
FOS	FACE OF STUD
FT	FEET
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
GLB	GLUE LAMINATED BEAM
GWB	GYPSUM WALL BOARD
HDG	HOT-DIP GALVANIZED
HDR	HEADER
HF	HEM-FIR
HORIZ	HORIZONTAL
HSA	HEADED STUD ANCHOR
HSS	HOLLOW STRUCTURAL SECTION
HT	HEIGHT
ID	INSIDE DIAMETER
IN	INCH
INT	INTERIOR
JST	JOIST
JT	JOINT
K	KIP(S) (1,000 POUNDS)
KSI	KIPS PER SQUARE INCH
L OR 2L	ANGLE OR DOUBLE ANGLE
LF	LINEAR FOOT
LL	LIVE LOAD
LLBB	LONG LEGS BACK TO BACK
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LONG	LONGITUDINAL
LVL	LAMINATED VENEER LUMBER
LWC	LIGHT WEIGHT CONCRETE
MAX	MAXIMUM
MC	MISCELLANEOUS CHANNEL
MECH	MECHANICAL
MF	MOMENT FRAME
MFR	MANUFACTURER
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MSA	MASONRY SCREW ANCHOR
(N)	NEW
NIC	NOT IN CONTRACT
NOM	NOMINAL
NTE	NOT TO EXCEED
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OPP	OPPOSITE
OWJ	OPEN WEB JOIST
PAF	POWER-ACTUATED FASTENER
PC	PRECAST
PCF	POUNDS PER CUBIC FOOT
PERP	PERPENDICULAR
PJP	PARTIAL JOINT PENETRATION
PL	PLATE
PLF	POUNDS PER LINEAL FOOT
PLYWD	PLYWOOD
PSI	POUNDS PER SQUARE INCH
PSF	POUNDS PER SQUARE FOOT
PT	PRESSURE TREATED OR POST TENSIONED
PVC	POLYVINYL CHLORIDE
QTY	QUANTITY
RAD	RADIUS
REF	REFERENCE
RAD	REFERENCE ARCH DOCUMENTS
REINF	REINFORCING
REQD	REQUIRED
REV	REVISED, REVISION
RO	ROUGH OPENING
SC	SLIP CRITICAL
SER	STRUCTURAL ENGINEER OF RECORD
SHT	SHEET
SHTG	SHEATHING
SIM	SIMILAR
SLBB	SHORT LEGS BACK TO BACK
SMS	SHEET METAL SCREW
SOG	SLAB ON GRADE
SQ	SQUARE
SS	STAINLESS STEEL
SSL	SHORT SLOTTED (HOLES)
STD	STANDARD
STL	STEEL
SQ	SQUARE
SYM	SYMMETRICAL
T&B	TOP AND BOTTOM
T&G	TONGUE AND GROOVE
T/	TOP OF
TRANS	TRANSVERSE
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
URM	UNREINFORCED MASONRY
UT	ULTRASONIC TEST
VERT	VERTICAL
VIF	VERIFY IN FIELD
W/	WITH
W/O	WITHOUT
WD	WOOD
WF	WIDE FLANGE
WP	WORK POINT
WTS	WELDED THREADED STUDS
WWR	WELDED WIRE REINFORCING

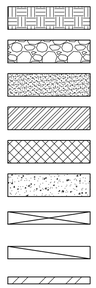
STRUCTURAL DRAWING INDEX

SHEET	DRAWING TITLE	PERMIT SET
S0.01	COVER SHEET	●
S0.02	STRUCTURAL NOTES	●
S1.01	ROOF PLAN	●
S1.02	ENLARGED PLAN AND SECTION	●

STRUCTURAL DRAWING SYMBOLS



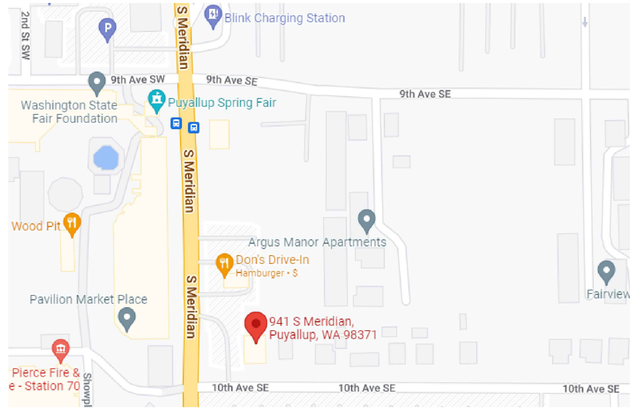
MATERIAL SYMBOLS



SCOPE OF WORK:

THE SCOPE OF THESE DRAWINGS INCLUDE THE SUPPORT AND ANCHORAGE OF (2) NEW MECHANICAL UNITS PLACED ON THE ROOF OF THE (E) STRUCTURE

PRMH20221388



N

2 S0.01 VICINITY MAP

N.T.S.

City of Puyallup
Development & Permitting Services
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

THE APPROVED CONSTRUCTION PLANS, DOCUMENTS AND ALL ENGINEERING MUST BE POSTED ON THE JOB AT ALL INSPECTIONS IN A VISIBLE AND READILY ACCESSIBLE LOCATION.

FULL SIZED LEDGIBLE COLOR PLANS ARE REQUIRED TO BE PROVIDED BY THE PERMITEE ON SITE FOR INSPECTION

City of Puyallup
Building
APPROVED

See permit for additional requirements.

JMontgomery
11/02/2022
1:16:19 PM

CITY OF PUYALLUP STATE OF WASHINGTON

10/26/2022

ANDREW RYAN LEIGHT — STATE OF WASHINGTON — 44007 — STRUCTURAL ENGINEER — PROFESSIONAL ENGINEER

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NEW MECHANICAL UNITS

7 ELEVEN
COOLSYS COMMERCIAL/IND SOLUTIONS
941 S MERIDIAN
PUYALLUP , WA

LINE IS 2 INCHES
AT FULL SCALE
(IF NOT 2" - SCALE ACCORDINGLY)

DRAWN BY:	ADJ
CHECKED BY:	PRA
MCE PROJECT NO:	221449
ISSUE DATE:	10.26.22

REV.	DATE	DESCRIPTION

SHEET CONTENT

COVER SHEET

SHEET

S0.01

PRMH20221388

STRUCTURAL NOTES:

GENERAL NOTES

THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION AND CORRELATION OF ALL ITEMS AND WORK NECESSARY FOR COMPLETION OF THE PROJECT AS INDICATED BY THE CONTRACT DOCUMENTS. SHOULD ANY QUESTION ARISE REGARDING THE CONTRACT DOCUMENTS OR SITE CONDITIONS, THE CONTRACTOR SHALL REQUEST INTERPRETATION AND CLARIFICATION FROM THE ENGINEER BEFORE BEGINNING THE PROJECT. THE ABSENCE OF SUCH REQUEST SHALL SIGNIFY THAT THE CONTRACTOR HAS REVIEWED AND FAMILIARIZED HIMSELF WITH ALL ASPECTS OF THE PROJECT AND HAS COMPLETE COMPREHENSION THEREOF. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONFORMANCE TO ALL SAFETY REGULATIONS DURING CONSTRUCTION.

THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. UNLESS OTHERWISE SPECIFICALLY NOTED, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION OR CONSTRUCTION LOADS. ONLY THE CONTRACTOR SHALL PROVIDE ALL METHODS, DIRECTION AND RELATED EQUIPMENT NECESSARY TO PROTECT THE STRUCTURE, WORKMEN AND OTHER PERSONS AND PROPERTY DURING CONSTRUCTION. THE CONTRACTOR SHALL, AT THEIR OWN EXPENSE, ENGAGE PROPERLY QUALIFIED PERSONS TO DETERMINE WHERE AND HOW TEMPORARY PRECAUTIONARY MEASURES SHALL BE USED AND INSPECT SAME IN THE FIELD. ANY MATERIAL NOT AS SPECIFIED OR IMPROPER MATERIAL INSTALLATION OR WORKMANSHIP SHALL BE REMOVED AND REPLACED WITH SPECIFIED MATERIAL IN A WORKMANLIKE MANNER AT THE CONTRACTOR'S EXPENSE.

THESE PLANS, SPECIFICATIONS, ENGINEERING AND DESIGN WORK ARE INTENDED SOLELY FOR THE PROJECT SPECIFIED HEREIN. MILLER CONSULTING ENGINEERS DISCLAIMS ALL LIABILITY IF THESE PLANS AND SPECIFICATIONS OR THE DESIGN, ADVICE AND INSTRUCTIONS ATTENDANT THERETO ARE USED ON ANY PROJECT OR AT ANY LOCATION OTHER THAN THE PROJECT AND LOCATION SPECIFIED HEREIN. OBSERVATION VISITS TO THE JOB SITE AND SPECIAL INSPECTIONS ARE NOT PART OF THE STRUCTURAL ENGINEER'S RESPONSIBILITY UNLESS THE CONTRACT DOCUMENTS SPECIFY OTHERWISE.

NON-STRUCTURAL PORTIONS OF PROJECT INCLUDING, BUT NOT LIMITED TO, PLUMBING, FIRE SUPPRESSION, ELECTRICAL, MECHANICAL, LAND USE, SITE PLANNING, EROSION CONTROL FLASHING AND WATER-PROOFING ARE BEYOND THE SCOPE OF THESE DRAWINGS AND ARE PROVIDED BY OTHERS.

BUILDING CODE

ALL PHASES OF THE WORK SHALL CONFORM TO THE 2018 INTERNATIONAL BUILDING CODE AS AMENDED BY THE STATE OF WASHINGTON, INCLUDING ALL REFERENCE STANDARDS, UNLESS NOTED OTHERWISE.

STRUCTURAL DESIGN CRITERIA

LIVE LOAD REDUCTION FOR BEAMS AND COLUMNS WAS NOT USED. DESIGN FOR MECHANICAL LOADS INCLUDES ONLY THOSE INDICATED ON STRUCTURAL DRAWINGS. THE FOLLOWING ARE THE DESIGN REQUIREMENTS:

STRUCTURAL DESIGN CRITERIA	
RISK CATEGORY	II
SUPERIMPOSED DEAD LOAD (EXCLUDING STRUCTURAL FRAME SELF WEIGHT)	
ROOF (TOTAL INCLUDING ROOFING/CEILING)	15 PSF
ROOF SNOW LOAD	
DESIGN ROOF SNOW LOAD	25 PSF
SNOW DRIFTING	AS NOTED ON PLANS (IF OCCURS)
IMPORTANCE FACTOR	Is = 1.0
EXPOSURE FACTOR	Ce = 1.0
THERMAL FACTOR	Ct = 1.0
SLOPE FACTOR	Cs = 1.0
WIND DESIGN DATA	
BASIC DESIGN WIND SPEED (3 SEC GUST)	V = 97 MPH
EXPOSURE	C
PRESSURE COEFFICIENT	GCR = +/- 1.5 (HORIZ) +/- 1.9 (VERTICAL)
SEISMIC DESIGN DATA	
IMPORTANCE FACTOR	Ie = 1.0
SPECTRAL RESPONSE ACCELERATIONS	SS = 1.269 S1 = 0.437
SITE CLASS	D
SPECTRAL RESPONSE COEFFICIENTS	SDS = 1.015
SEISMIC DESIGN CATEGORY	D
SEISMIC FORCE RESISTING SYSTEM	MECH COMPONENTS
SEISMIC RESPONSE COEFFICIENT	Fp=0.508Wp
RESPONSE MODIFICATION FACTOR	ap = 2.5 Rp =3
ANALYSIS PROCEDURE USED	ASCE 7-16 CHAPTER 13

WOOD FRAMING

ALL STRUCTURAL GRADES WOOD SHALL BE PER TYPICAL WOOD FRAMING SCHEDULE UNLESS NOTED OTHERWISE. ALL WOOD PLATES IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESSURE TREATED UNLESS NOTED OTHERWISE. ALL COLUMNS SHALL HAVE SOLID BLOCKING FOR THE FULL COLUMN AREA TO SUPPORTING MEMBERS BELOW. COLUMNS SHALL ALIGN THROUGH ALL FLOORS TO THE FOUNDATION. ALL SAWN LUMBER SHALL HAVE A MOISTURE CONTENT LESS THAN 19% (S-DRY) PRIOR TO INSTALLATION OF NON-STRUCTURAL COMPONENTS.

TYPICAL WOOD FRAMING SCHEDULE (UNO)	
MEMBER	MIN GRADE
BEAMS	HEM/FIR NO. 2

ALL BOLT HEADS OR NUTS BEARING ON WOOD TO HAVE STANDARD WASHERS. BOLT HOLES IN WOOD SHALL BE A MINIMUM OF 1/32" TO A MAXIMUM OF 1/16" LARGER THAN THE BOLT. ALL LAG SCREWS SHALL HAVE PILOT HOLES AS PER LAG SCREW LEAD HOLE SCHEDULE. REFER TO SECTION 12.1 OF THE NDS FOR ADDITIONAL INSTALLATION INSTRUCTIONS OF DOWEL-TYPE FASTENERS.

LAG SCREW PILOT HOLE SCHEDULE (PER SECT. 11.1.4 OF NDS)		
APPLICABLE FOR: DOUGLAS FIR LARCH, HEM-FIR, ENGINEERED LUMBER, AND 24F GLB		
LAG DIAMETER	CLEARANCE HOLE FOR SHANK (FULL BODY DIA)	LEAD HOLE FOR LENGTH OF THREADED PORTION ONLY
3/8" AND SMALLER	NOT REQUIRED	NOT REQUIRED
7/16"	7/16"	3/16"
1/2"	1/2"	1/4"

PRESSURE TREATED LUMBER

ALL STRUCTURAL WOOD MEMBERS EXPOSED TO WEATHER OR AS NOTED ON DRAWINGS OR AS REQUIRED BY IBC SECTION 2303.1.9, SHALL BE PRESERVATIVE TREATED IN ACCORDANCE WITH AMERICAN WOOD-PRESERVERS ASSOCIATION USING (ACQ, CA-B, DOT) STANDARD U1 AND M4 FOR SPECIES, PRODUCT, PRESERVATIVE AND END USE. RETENTION AMOUNTS SHALL BE AS REQUIRED FOR AWPA USE CATEGORY STANDARDS FOR STRUCTURAL APPLICATIONS. FOR ABOVE GROUND APPLICATIONS RETENTION OF 0.25 LBS PER CUBIC FOOT OF ACQ OR 0.10 LBS PER CUBIC FOOT OF CA-B BASED ON AWPA USE CATEGORY STANDARDS UC1, UC2, UC3A, UC3B. FOR GROUND CONTACT, FRESH WATER IMMERSION APPLICATIONS RETENTION OF 0.40 LBS PER CUBIC FOOT OF ACQ OR 0.25 LBS PER CUBIC FOOT OF CA-B BASED ON AWPA USE CATEGORY STANDARDS UC4A, UC4B. FOR IN GROUND STRUCTURAL APPLICATIONS RETENTION OF 0.60 LBS PER CUBIC FOOT OF ACQ OR 0.31 LBS PER CUBIC FOOT OF CA-B BASED ON AWPA USE CATEGORY STANDARD UC4B. FOR ABOVE GROUND, CONTINUOUSLY PROTECTED FROM LIQUID WATER APPLICATIONS (SILL PLATE) RETENTION OF 0.25 LBS PER CUBIC FOOT OF ACQ OR 0.10 LBS PER CUBIC FOOT OF CA-B OR 0.25 LBS PER CUBIC FOOT BASED ON AWPA USE CATEGORY STANDARDS UC1, UC2.

FASTENERS IN CONTACT WITH PRESERVATIVE-TREATED MATERIAL SHALL BE IN ACCORDANCE WITH IBC SECTION 2304.10.5. TIMBER CONNECTORS/FASTENERS INCLUDING NUTS AND WASHERS IN CONTACT WITH PRESERVATIVE-TREATED MATERIAL SHALL HAVE PROTECTIVE COATINGS AS RECOMMENDED BY CONNECTOR/FASTENER MANUFACTURER.

ALL LAMINATED VENEER LUMBER, ORIENTED STRAND LUMBER, GLUE LAMINATED LUMBER EXPOSED TO WEATHER AND SUBJECT TO DECAY, SHALL BE PRESERVATIVE TREATED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR PRESERVATIVE MATERIALS, RETENTION RATES AND END USE. LAMINATED TIMBERS SHALL BE PRESERVATIVE TREATED IN ACCORDANCE WITH IBC SECTION 2304.12.2.4.

ALL TRIMMED SECTIONS, CUTS, DAPS OR HOLES IN PRESSURE TREATED MATERIALS SHALL BE TREATED WITH COPPER NAPTHENATE, IN ACCORDANCE WITH AWPA STANDARD M4. FOR ADDITIONAL REQUIREMENTS, SEE IBC SECTION 2304.11 FOR PROTECTION AGAINST DECAY AND TERMITES.

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10/26/2022

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NEW MECHANICAL UNITS

7 ELEVEN
COOLSYS COMMERCIAL/IND SOLUTIONS
941 S MERIDIAN
PUYALLUP , WA

LINE IS 2 INCHES
AT FULL SCALE
(IF NOT 2" - SCALE ACCORDINGLY)

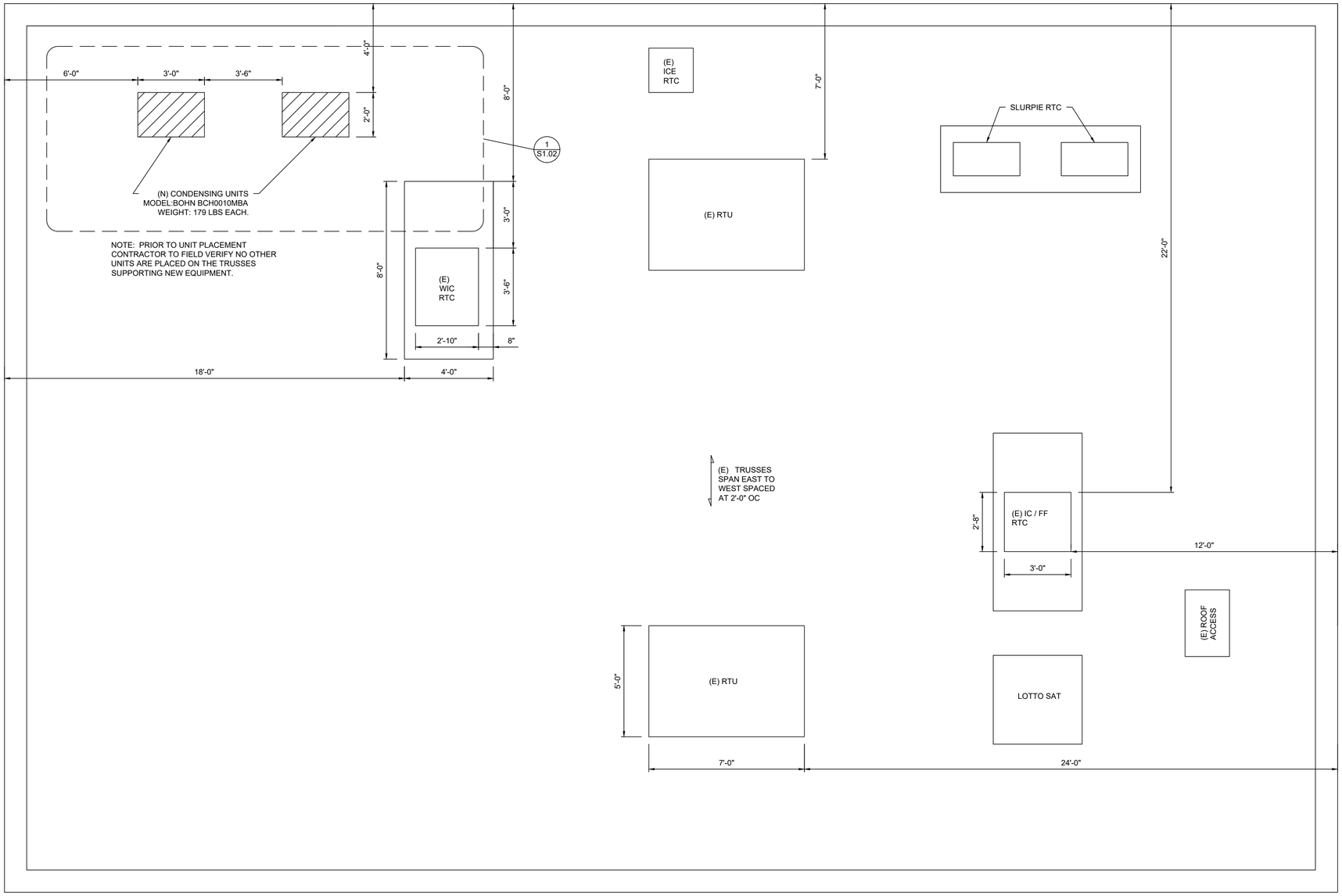
DRAWN BY: ADJ
CHECKED BY: PRA
MCE PROJECT NO: 221449
ISSUE DATE: 10.26.22

REV.	DATE	DESCRIPTION

SHEET CONTENT
STRUCTURAL NOTES

SHEET
S0.02

PRMH20221388



City of Puyallup
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Building	Planning
Engineering	Public Works
Fire	Traffic

N

1
S1.01

ROOF PLAN

3/8" = 1'-0"

10/26/2022

ANDREW RYAN LEICHT
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44007
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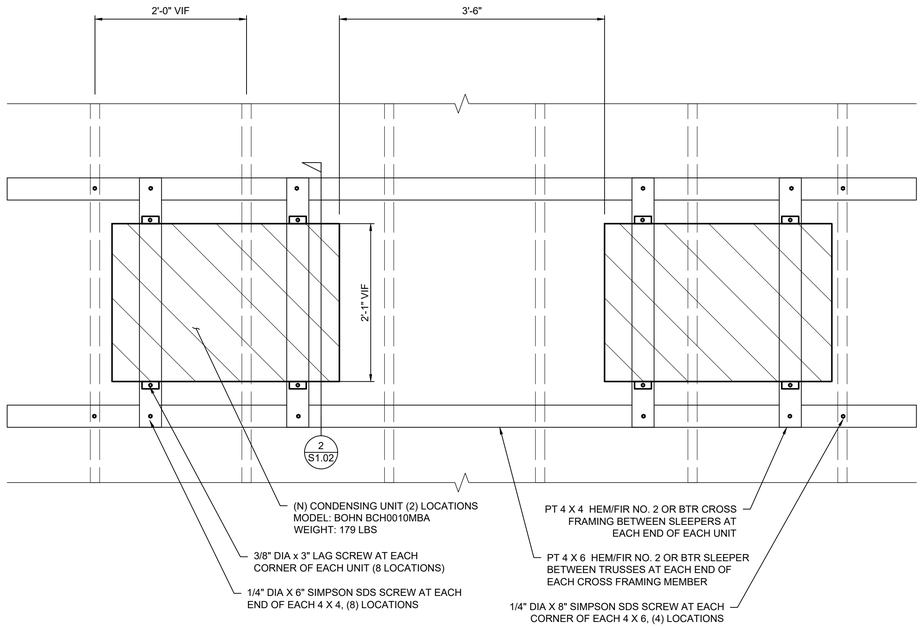
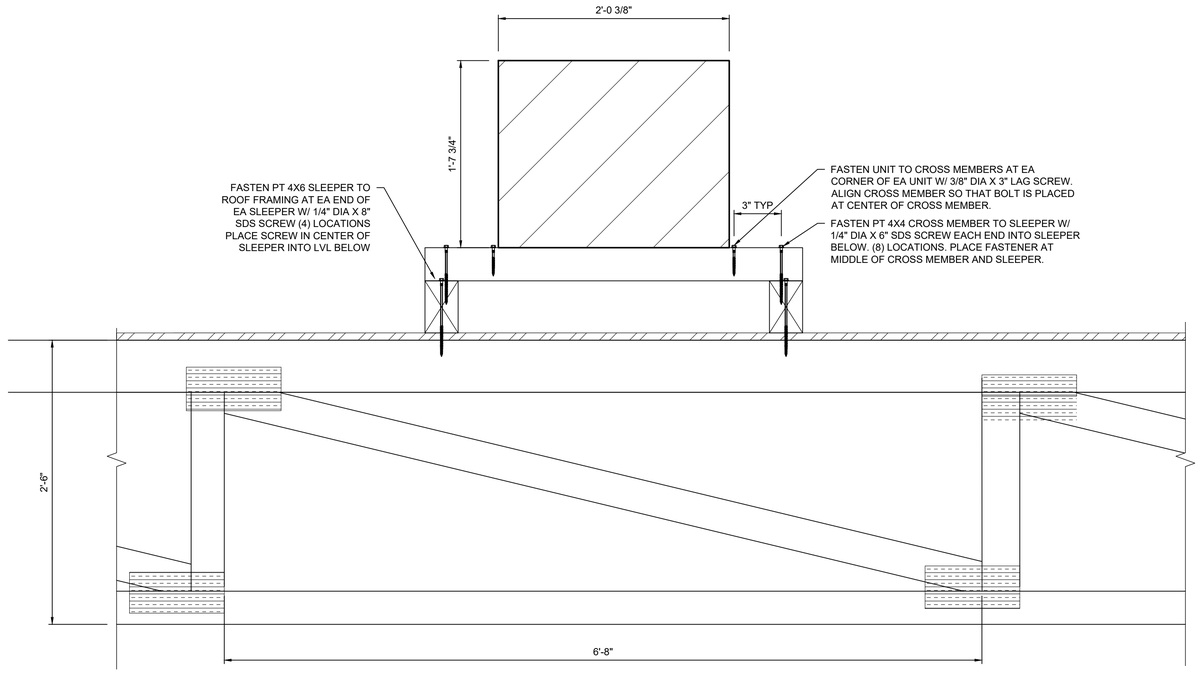


NOTE:
CONTRACTOR TO SEAL ALL ROOF PENETRATIONS AS REQUIRED
TO PERMANENTLY STOP ALL MOISTURE PENETRATION

1 S1.02 ENLARGED PLAN

1" = 1'-0"



NOTE:
CONTRACTOR TO SEAL ALL ROOF PENETRATIONS AS REQUIRED
TO PERMANENTLY STOP ALL MOISTURE PENETRATION

2 S1.02 SECTION

1 1/2" = 1'-0"

City of Puyallup
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ENLARDED PLAN
SECTION

SHEET
S1.02