

UPPER LEVEL PANEL LAYOUT

Scale: 1/4"=1'-0"

MANDATORY STRUCTURAL NOTES

- 1. TO ENSURE OPTIMAL PANEL INSTALLATION, FOLLOW PANEL LAYOUT PLANS, ALL WARMBOARD INSTALLATION INSTRUCTIONS, AND APA GUIDELINES. FAILURE TO DO SO COULD CAUSE PANEL WASTE.
- 2. WARMBOARD PLANS ARE CONCEPTUAL AND DO NOT SUPERSEDE STRUCTURAL PLANS WHICH MAY BE PART OF THE ARCHITECTURAL PLAN SET. SHOULD THERE BE A CONFLICT BETWEEN WARMBOARD PLANS AND THE STRUCTURAL PLANS, CONSULT IMMEDIATELY WITH WARMBOARD CUSTOMER SERVICE BEFORE PROCEEDING.
- 3. INSTALLING CONTRACTOR IS RESPONSIBLE TO VERIFYING ALL MEASUREMENTS PRIOR TO THE INSTALLATION OF WARMBOARD PANELS.

QUESTIONS? FOR IMMEDIATE ASSISTANCE
CALL: 877-338-5493 (8AM - 5PM PT)

PANEL SCHEDULE

TYPE	QUANTITY	COMMENTS
RS	92	(1)
RT	149	(1)
RF	28	(2)

- (1) ANY PANELS IN THE DRAWING THAT ARE MARKED WITH AN ASTERISK (*) INDICATE A PANEL THAT IS TO BE TRIMMED. A CAREFUL MEASUREMENT SHOULD BE MADE TO GUARANTEE A CORRECT INSTALLATION.
- (2) OSB PLYWOOD PANELS USED TO FILL IN EMPTY SPACES WHERE WB-REMODEL PANEL MAY NOT BE APPROPRIATE.

IMPORTANT:

RETAIN ALL OFF CUTS
TO FILL IN SECTIONS
AS NEEDED.

WARMBOARD PANEL LEGEND

- RS REMODEL STRAIGHT PANEL
- RT REMODEL TURN PANEL
- RF REMODEL FILLER PANEL
- * DENOTES TRIMMED PANEL.

IMPORTANT NOTE:

INSULATING JOIST CAVITIES BELOW EXISTING
SUBFLOOR IS REQUIRED.

REVISIONS: BY:

- 1 02/07/2023 DKE
- 2 02/14/2023 BB

Reviewed for
Code Compliance

03/01/2023

WARMBOARD, INC.
100 ENTERPRISE WAY, SUITE G300
SCOTTS VALLEY, CALIFORNIA 95066
1.800.556.0595
WARMBOARD.COM



WEYAND RESIDENCE
JOB# 62708
STEAMBOAT SPRINGS, CO. 80477

PANEL
LAYOUT

DATE: 01/26/2023

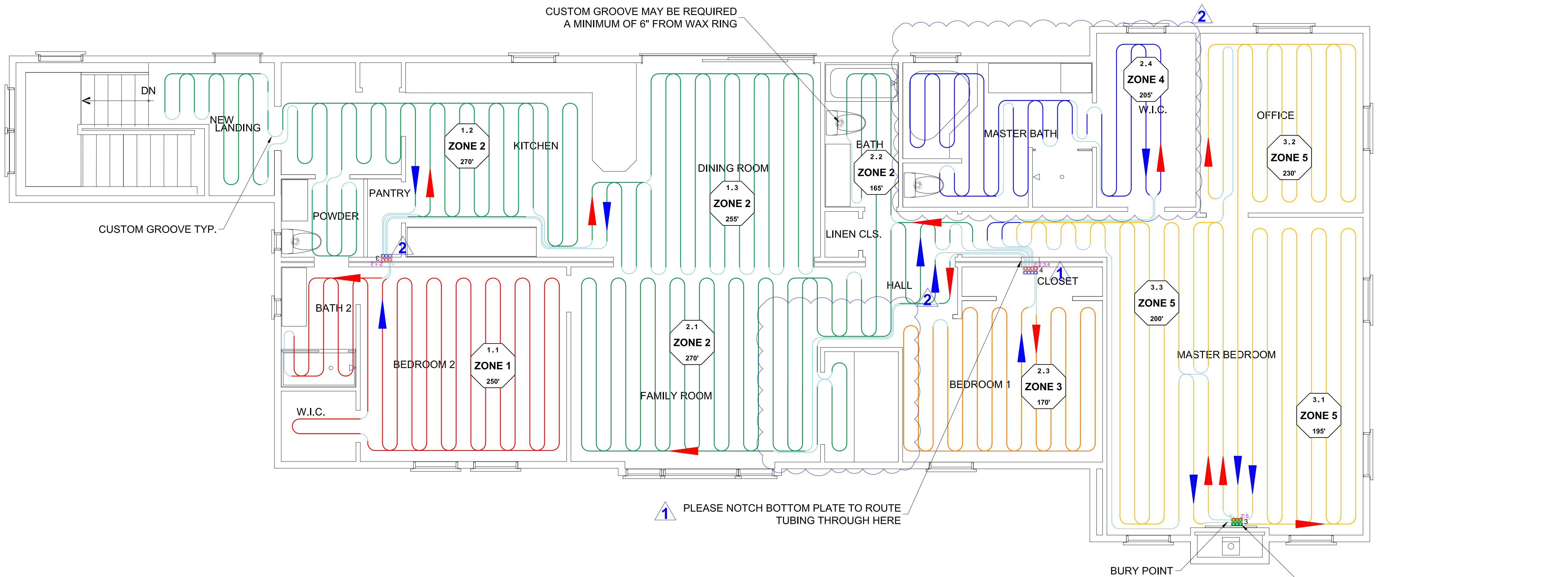
SCALE: 1/4" = 1'

DRAWN: DKE

REVIEWED: TW

SHEET:

1 OF 3



UPPER LEVEL TUBING LAYOUT

Scale: 1/4"=1'-0"

MANDATORY TUBING NOTES

- 1. USE ONLY WARMBOARD APPROVED TUBING. SEE INSTALLATION MANUAL
- 2. USE AN APPROPRIATELY WEIGHTED ROLLER TO PRESS TUBING INTO CHANNELS.
- 3. MINOR FIELD MODIFICATION OF TUBING PLAN IS WELCOME AND TYPICAL. WHEN IN DOUBT CALL WARMBOARD CUSTOMER SERVICE.

QUESTIONS? FOR IMMEDIATE ASSISTANCE
CALL: 877-338-5493 (8AM - 5PM PT)

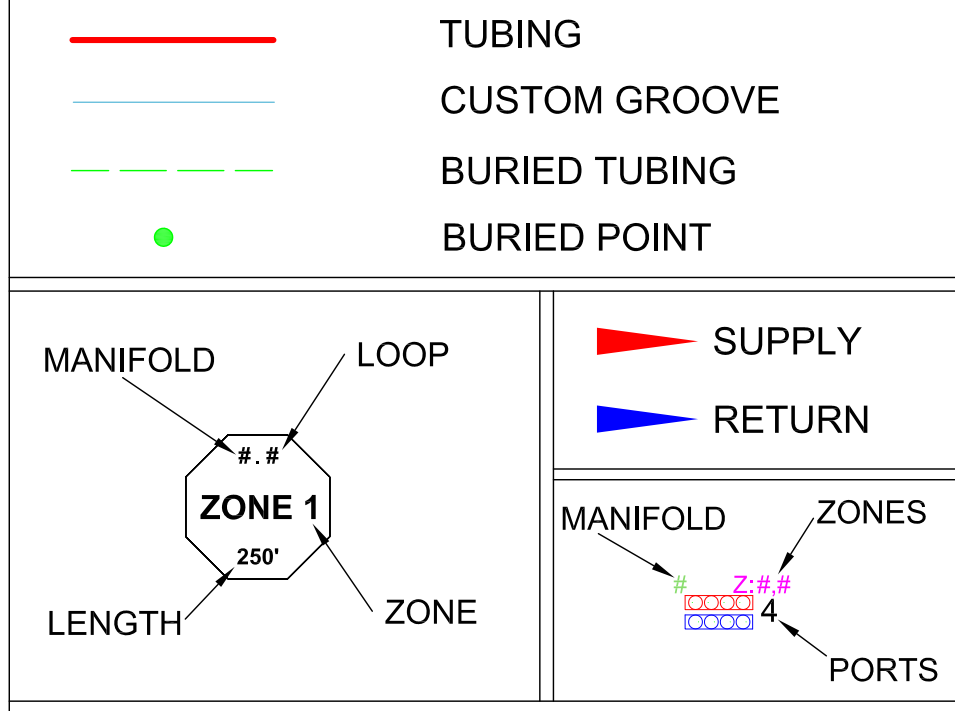
ESTIMATED CUSTOM ROUTES

Turns	118
Total Linear Length of Straight Routes	160'

LOOP SCHEDULE

Zone	Manifold	Loop	Length
1	1	1	250'
2	1	2	270'
2	1	3	255'
2	2	1	270'
2	2	2	165'
3	2	3	170'
4	2	4	205'
5	3	1	195'
5	3	2	230'
5	3	3	200'
Total			2210'-0"

WARMBOARD TUBING LEGEND



REVISIONS: BY:

- 1 02/07/2023 DKE
- 2 02/14/2023 BB

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STEAMBOAT SPRINGS, CO. 80477

TUBING
LAYOUT

DATE: 01/26/2023

SCALE: 1/4" = 1'

DRAWN: DKE

REVIEWED: TW

SHEET:

2 OF 3

THIS WARMBOARD DESIGN CONSISTS OF: SPECIFYING PANELS, TUBING, AND MANIFOLDS ONLY.

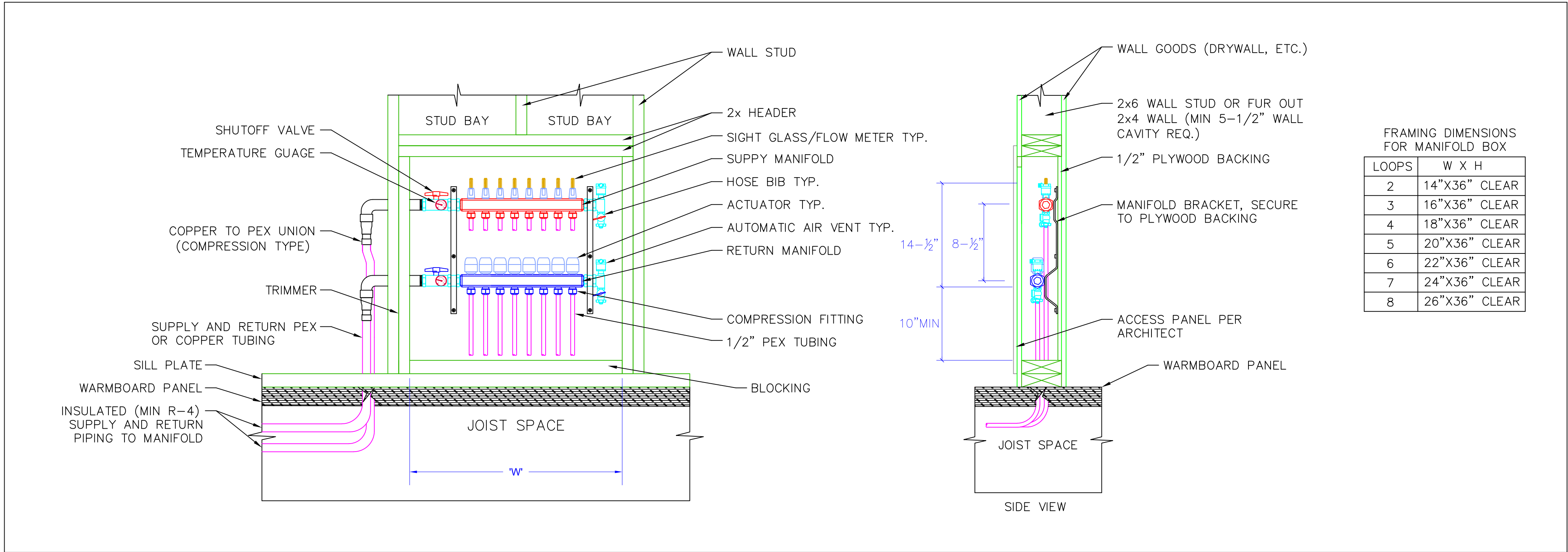
WARMBOARD SHOP DRAWINGS DO NOT INCLUDE THE FOLLOWING:

ROOM BY ROOM HEAT LOSS CALCULATIONS, PROPER DESIGN OF FLOW RATES, REQUIRED WATER TEMPERATURES, SIZING OF CIRCULATION PUMPS, SIZING OF DISTRIBUTION LINES, SIZING OF OTHER COMPONENTS NECESSARY FOR PROPER HYDRONIC SYSTEM OPERATION, SPECIFICATION OF HEAT SOURCE, OR COMPLETE ELECTRONIC CONTROL STRATEGY. SUCH DESIGN SERVICES RELATED TO THESE COMPONENTS OF A HYDRONIC SYSTEM ARE TYPICALLY PERFORMED BY THOSE RESPONSIBLE FOR SUPPLYING AND/OR INSTALLING THESE COMPONENTS.

WARMBOARD INC. HIGHLY RECOMMENDS CONSULTING WITH A QUALIFIED RADIANT DESIGNER, MECHANICAL ENGINEER OR MECHANICAL CONTRACTOR FOR COMPLETE INTEGRATED SYSTEM DESIGN THAT MEETS OR EXCEEDS RPA GUIDELINES. DESIGN PROFESSIONALS SHALL RELY ON WARMBOARD TUBING LAYOUTS AND OUTPUT TABLES FOR THEIR DESIGN CALCULATIONS.

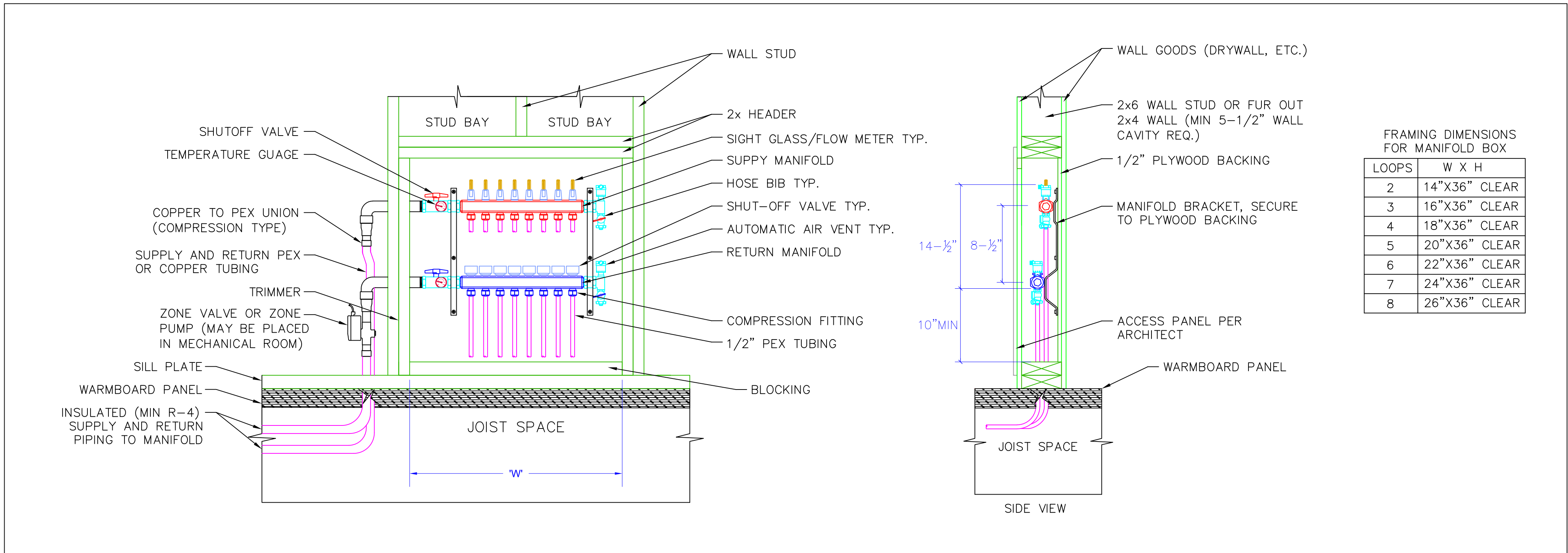
MANIFOLD INSTALLATION (WARMBOARD PANELS) - WITH ACTUATORS

SCALE: NONE



MANIFOLD INSTALLATION (WARMBOARD PANELS) - NO ACTUATORS

SCALE: NONE



WHEN IN DOUBT, ASK!

Please review all installation instructions. If there are any questions or need for technical assistance call: 1 877 338-5493

MANIFOLD & TUBING MATERIALS LIST

QTY	DESCRIPTION	NOTES
2	1000' X 1/2" AL PEX ROLL	(1.1,1.2,1.3,2.2) 940' (2.1,2.3,2.4,3.1) 840'
1	500' X 1/2" AL PEX ROLL	(3.2,3.3) 430'
	300' X 1/2" AL PEX ROLL	
	SINGLE SUPPLY & RETURN	
	2 PORT SUPPLY & RETURN MANIFOLD KIT	
2	3 PORT SUPPLY & RETURN MANIFOLD KIT	1 - MULTI ZONE 1 - SINGLE ZONE
1	4 PORT SUPPLY & RETURN MANIFOLD KIT	MULTI ZONE
	5 PORT SUPPLY & RETURN MANIFOLD KIT	
	6 PORT SUPPLY & RETURN MANIFOLD KIT	
	7 PORT SUPPLY & RETURN MANIFOLD KIT	
	8 PORT SUPPLY & RETURN MANIFOLD KIT	
20	1/2" COMPRESSION FITTINGS	
7	24 VOLT ACTUATORS	

WARMBOARD MANIFOLD LAYOUT

REVISIONS:BY:

102/07/2023DKE

202/14/2023BB

Reviewed for Code Compliance

03/01/2023

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100 ENTERPRISE WAY, SUITE G300
SCOTTS VALLEY, CALIFORNIA 95066
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WARMBOARD.COM

WEYAND RESIDENCE

JOB# 62708

STEAMBOAT SPRINGS, CO. 80477

TUBING & MANIFOLD LAYOUT

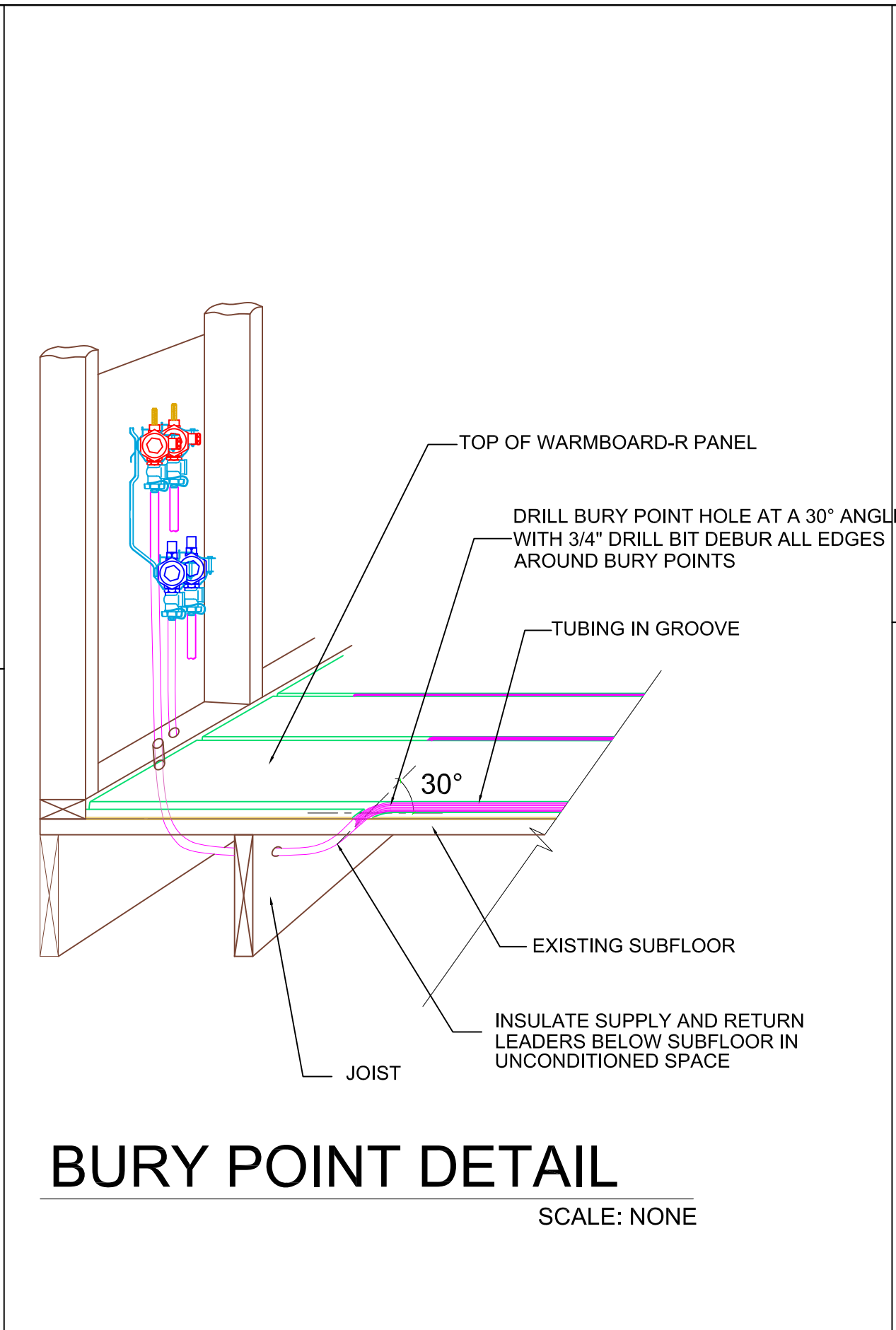
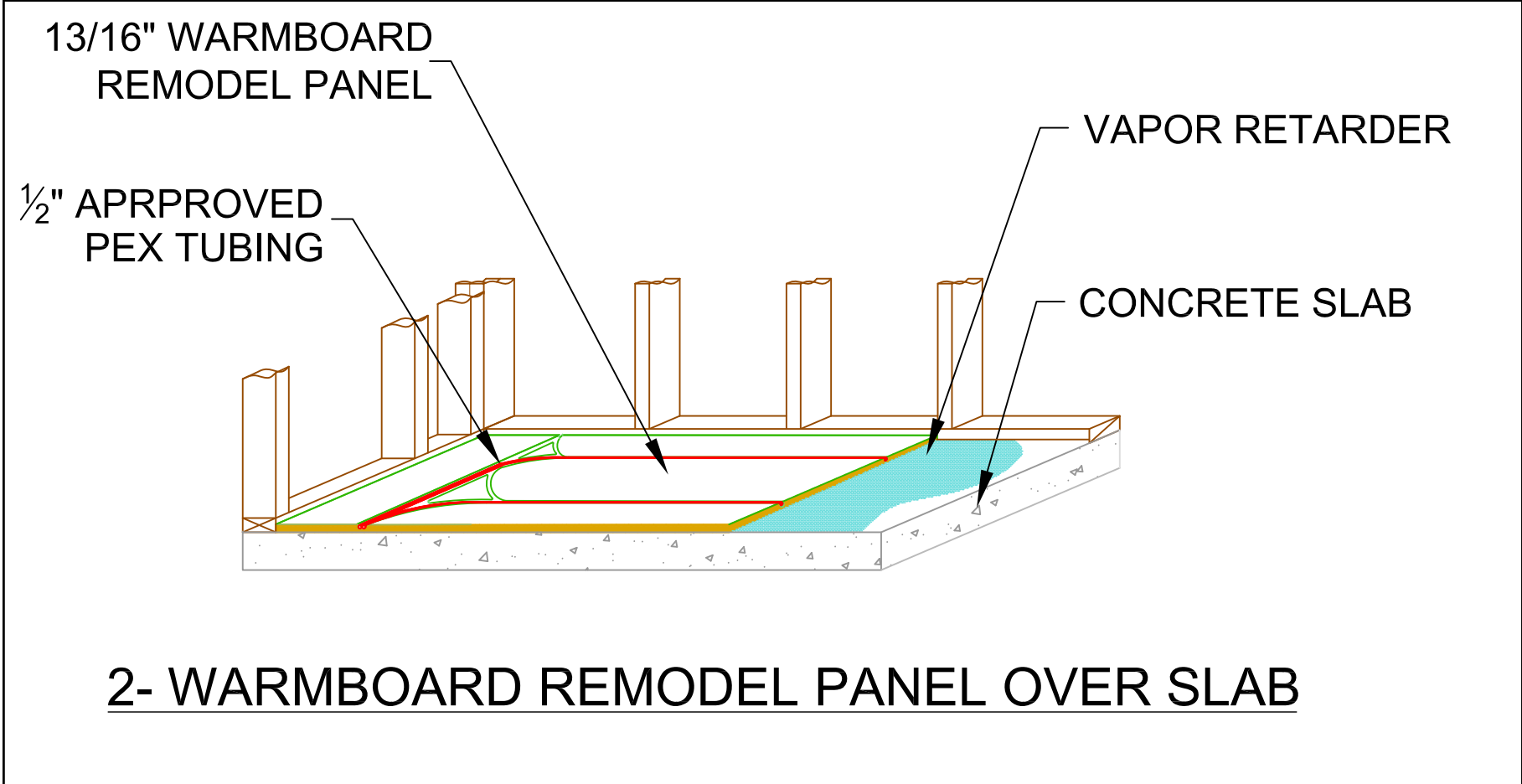
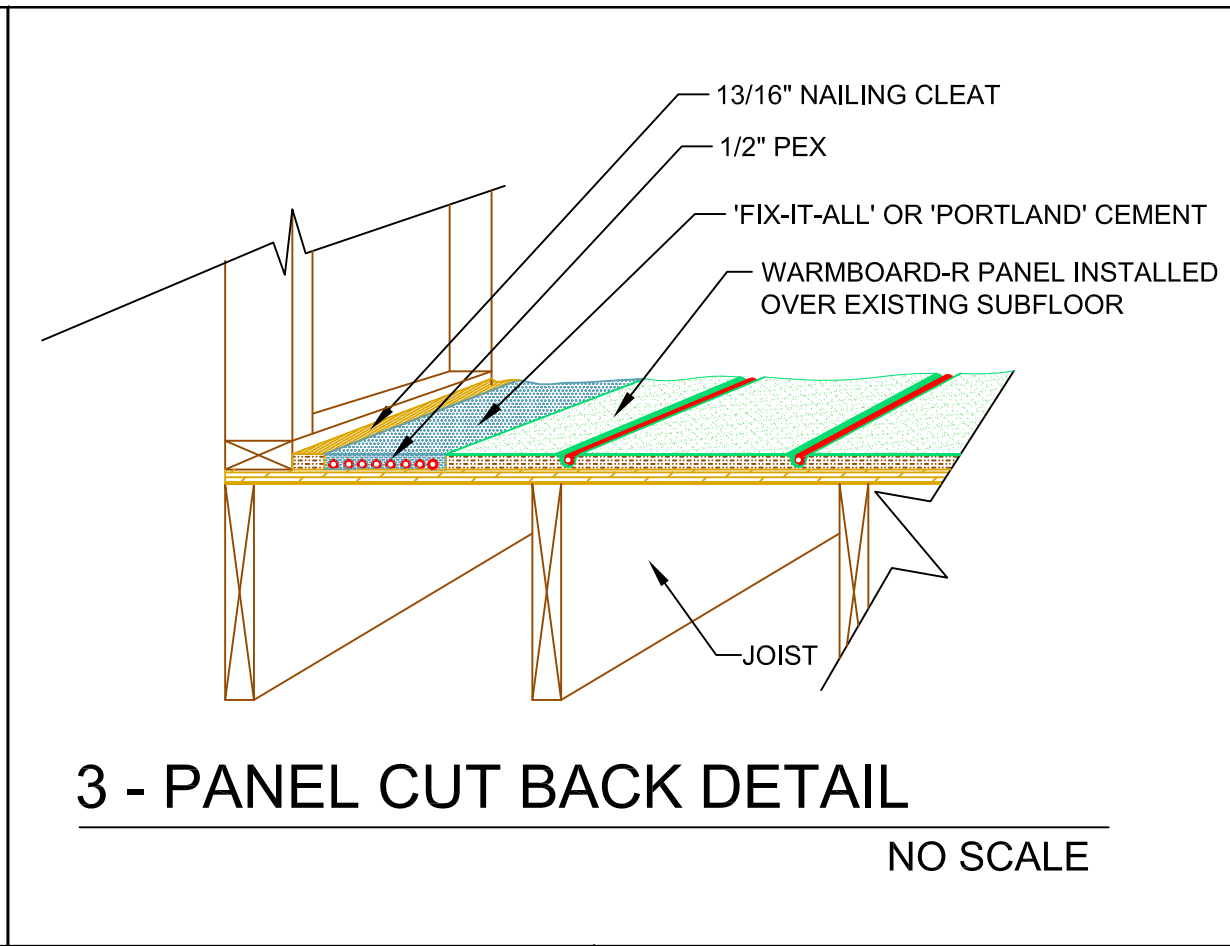
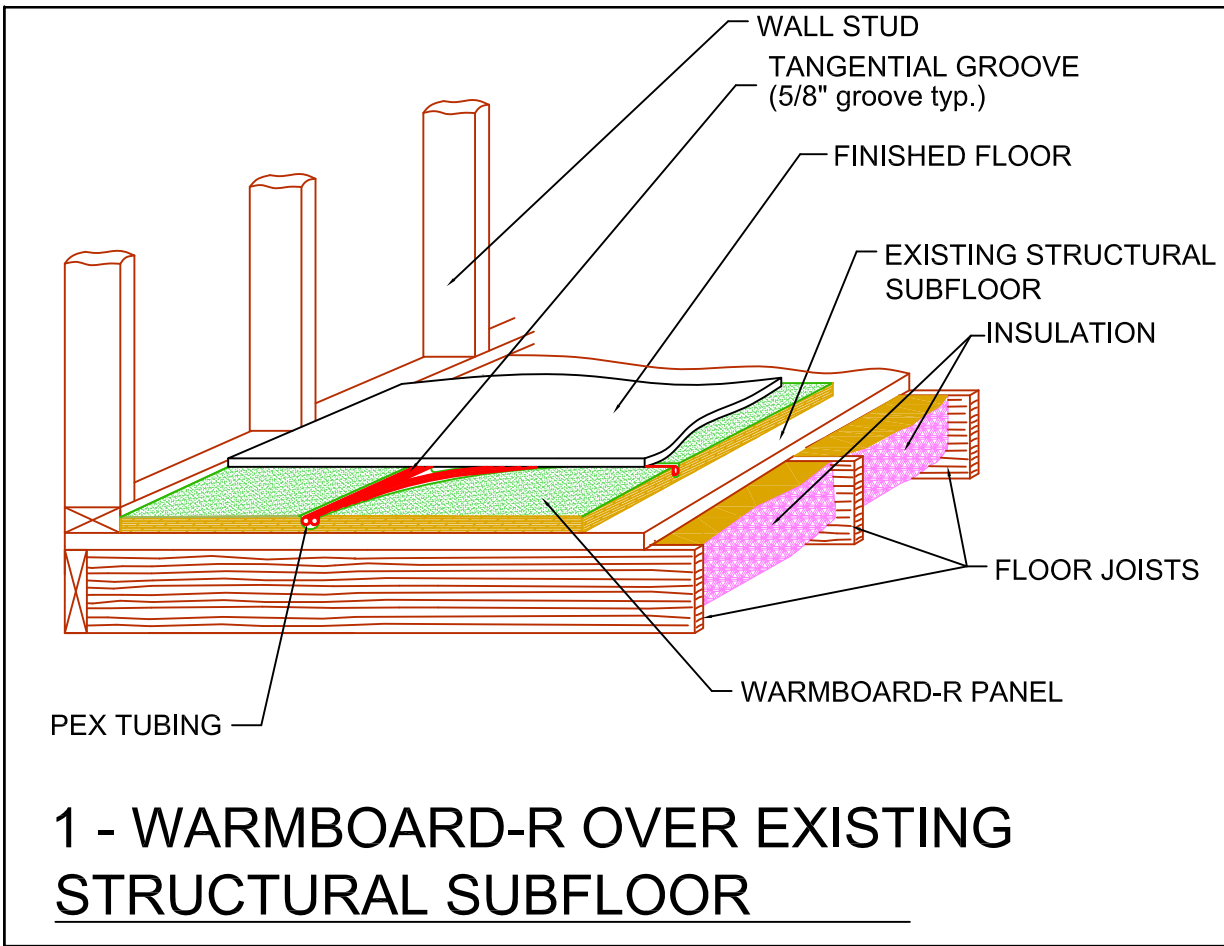
DATE: 01/26/2023

SCALE: NTS = 1'

DRAWN: DKE

REVIEWED: TW

SHEET: 3 OF 3



RS

STRAIGHT PANEL

RT

TURN PANEL

RF

FILLER PANEL

B.1-WARMBOARD-REMODEL PANEL

WARMBOARD REMODEL PANEL SPECIFICATIONS

A. GENERAL INFORMATION

1. Warmboard Radiant Remodel panel is manufactured in the USA, and supplied by:
Warmboard Inc.
100 ENTERPRISE WAY, SUITE G300
SCOTT'S VALLEY, CA 95066
1.800.556.0595

2. Warmboard Remodel panels shall be 2'x4' OSB with a thickness of 13/16".

WB-R Panels shall be consisting of straights and turns patterns, such channels on 12" centers to interface with 1/2" PEX tubing.

The entire top skin (2'x4') of OSB panel shall have a highly conductive continuous sheet of 1060 series aluminum alloy, bonded to the entire surface.

The continuous sheet of aluminum shall completely contour in all channels depths: both turns and straight runs.

Warmboard-Remodel Panels shall be (2'x4') in one of the two tubing channel pattern options. - Straight and Turns - (See Detail BB).

3.All panels installed will meet or exceed all specifications documented on Warmboard engineered AutoCAD drawings and Warmboard Remodel Installation manual.

4. Panel assembly shall be one of the following:

Warmboard Remodel panel installed over existing structural plywood, decking or OSB.subfloor. (See Detail 1)

Warmboard Remodel panel installed over concrete slab (See Detail 2)

B - WARMBOARD REMODEL PANEL DETAIL

SCALE: NONE

WARMBOARD-R INSTALLATION NOTES - MANDATORY:

The contractor(s) responsible for the installation of the Warmboard-R panels, as well as any hydronic tubing supplied by other, shall review these plans for accuracy and completeness. These contractors will also be responsible to verify all measurements prior to any Warmboard-R installations. Any discrepancy between these plans an the existing framing of the project for which they apply shall be brought to the immediate attention of Warmboard, Inc.

WHEN IN DOUBT, ASK!

Please review all installation instructions. If there are any questions or need for technical assistance call: 1 877-338-5493

TO ORDER PRODUCT PLEASE CALL: 1-877-338-5493

A. GENERAL INFORMATION

1. WARMBOARD-R IS ONE COMPONENT OF A HYDRONIC SYSTEM. THIS CONCEPTUAL PLAN COVERS ONLY PANEL AND TUBING LAYOUTS AND DOES NOT CONSTITUTE A COMPLETE INSTALLATION GUIDE FOR A HYDRONIC SYSTEM. Installation of a hydronic system employing Warmboard-R panels requires a combination of carpentry and plumbing skills. The general contractor shall be responsible for the skills, training, and experience of the installers. Warmboard, Inc. refers to Architectural Floor Plan information supplied by the customer. Deviations should be brought to the immediate attention of Warmboard, Inc. The hydronic contractor shall follow the tubing layout plan and tubing installation instructions supplied. They shall also be responsible for providing an accurate heat loss analysis and the installation of the hydronic system as a whole in accordance with Radiant Panel Association (RPA) guidelines. Design floor and supply water temperatures for a given floor covering will follow RPA guidelines and the Warmboard, Inc. recommended water temperatures chart.

2. It is the installer's responsibility to assure the system functions properly, safely, and meets all local, state, and regional codes.

3.The installer is to supply and install all materials shown on this plan; as well as all other materials needed to complete this hydronic system and any incidental work not shown or specified, which can be reasonably inferred as belonging to the work necessary to provide the complete system.

4. Warmboard, Inc. makes no guarantee for any material to be installed in this hydronic system other than the Warmboard-R panels.

B. WARMBOARD-R INSTALLATION

1. WARMBOARD-R shall verify the compatibility of their layout with the attached floor plan.

2. All supply and return tubing below subfloor in unconditioned space shall be insulated with pipe insulation.

3.Custom grooves shall be routed as indicated on the plans using supplied router templates, a properly sized router equipped with a template guide, and the supplied 5/8" core box router bit. All router use shall conform to supplied instructions, and all safety instructions provided by manufacturer of the router you plan to use.

4. When applicable, installation contractor shall coordinate with the plumbing contractor so as to have all plumbing stubbed out 12" above sub-floor prior to installation.

5. Alignment pins shall be used for proper alignment of panels.

6. Any excess adhesive that may interfere with tubing installation shall be removed.

7. All burrs left by custom routing and on angle holes shall be removed.

8. Refer to manufacturer's installation manual for additional guidelines for this product.

C. TUBING INSTALLATION

1. Holes for routing below sub-floor shall be drilled using an 3/4" bit at the correct location and in the appropriate direction, so that the end of the tube can be passed from the groove to under the floor area in the right direction, leading to the appropriate manifold location or the boiler panel.

2. All grooves shall be inspected and cleaned of any debris prior to tubing installation.

3. Tubing for radiant floor heating shall be 1/2" PEX approved by Warmboard, In. (See approved tubing list).

The installation of nails plates are required to hold down tubing in channels, remove plates before finish floors are installed. Caution, do not install silicone or other types of adhesives in tubing channel

4. Tubing shall be and remain pressurized immediately following installation into the panel diaphragm for the duration of all construction.

5. Installer is responsible for protecting tubing from freezing during construction. Should climatic conditions occur, this would require adding antifreeze and corrosion inhibiting fluids upon completion of work.

6. Installer to record length of every pipe and photograph completed installation.

7. Special note for carpeted areas: 'Fix-It-All' or 'Portland Cement' shall shall fill any unused groove areas. This provides support for the pad & carpet.

REVISIONS: BY:

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03/01/2023

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WARMBOARD

"SIMPLY SMARTER"
RADIANT HEAT

SPECIFICATION & INSTALLATION INSTRUCTIONS

DATE: 01/26/2023
SCALE: NTS
DRAWN: DKE
REVIEWED: JMB
SHEET: WB-R SPEC