

	COLUMN LINE LETTERS IN ONE DIRECTION NUMBERS IN THE OTHER DIRECTION
	DOOR SYMBOL
	DOOR NUMBER
	WINDOW TYPE
	SKIP LETTERS "I" AND "O"
	LOUVER TYPE
	EQUIPMENT TYPE
	TYPE OF EQUIPMENT, X=X-RAY; F=FOOD SERVICE EQUIPMENT GROUP
	REVISION
	CLOUD AROUND REVISION
	MATCH LINE
	SHADDED PORTION IS THE SIDE CONSIDERED
	WORK POINT, CONTROL POINT OR DATUM POINT
	SECTION
	SECTION IDENTIFICATION SHEET WHERE SECTION IS DRAWN
	DETAIL
	DETAIL IDENTIFICATION SHEET WHERE DETAIL IS DRAWN
	INTERIOR ELEVATION(S)
	ELEVATION NO.
	ELEVATION IDENTIFICATION (NO ARROWS MEANS ELEVATION NOT SHOWN)
	SHEET WHERE ELEVATION IS DRAWN
	OFFICE
	ROOM IDENTIFICATION ROOM NAME
	ROOM NO.
	NEW FINISH GRADE DRAWN @ 45°
	EXISTING GRADE SHOWN HORIZONTALLY
	PROPERTY LINE
	NEW OR FINISHED CONTOURS
	EXISTING CONTOURS
	TOP OF WALL
	TOP OF CURB
	TOP OF PAVEMENT
	ACOUSTIC TILE OR BOARD
	BITUMINOUS CONCRETE SHOW PROFILE ONLY
	BRICK
	CERAMIC TILE SHOW PROFILE ONLY
	CONCRETE
	CAST IN PLACE OR PRECAST
	CONCRETE BLOCK
	EARTH
	GLASS
	OMIT INDICATION IN THIN MATERIAL
	GYPSUM BOARD OMIT DOUBLE LINES AT SMALL SCALE
	INSULATION, BATT
	INSULATION, RIGID
	METAL
	OMIT INDICATION IN THIN MATERIAL
	METAL LATH
	MORTAR
	PLASTER
	PLYWOOD
	ROCK FILL
	SAND
	STONE
	INCLUDES MARBLE
	TERRAZZO SHOW PROFILE ONLY
	WOOD, FINISH
	WOOD, FRAMING THROUGH MEMBER
	WOOD, FRAMING INTERRUPTED MEMBER
	REMOVE OR DEMOLISH

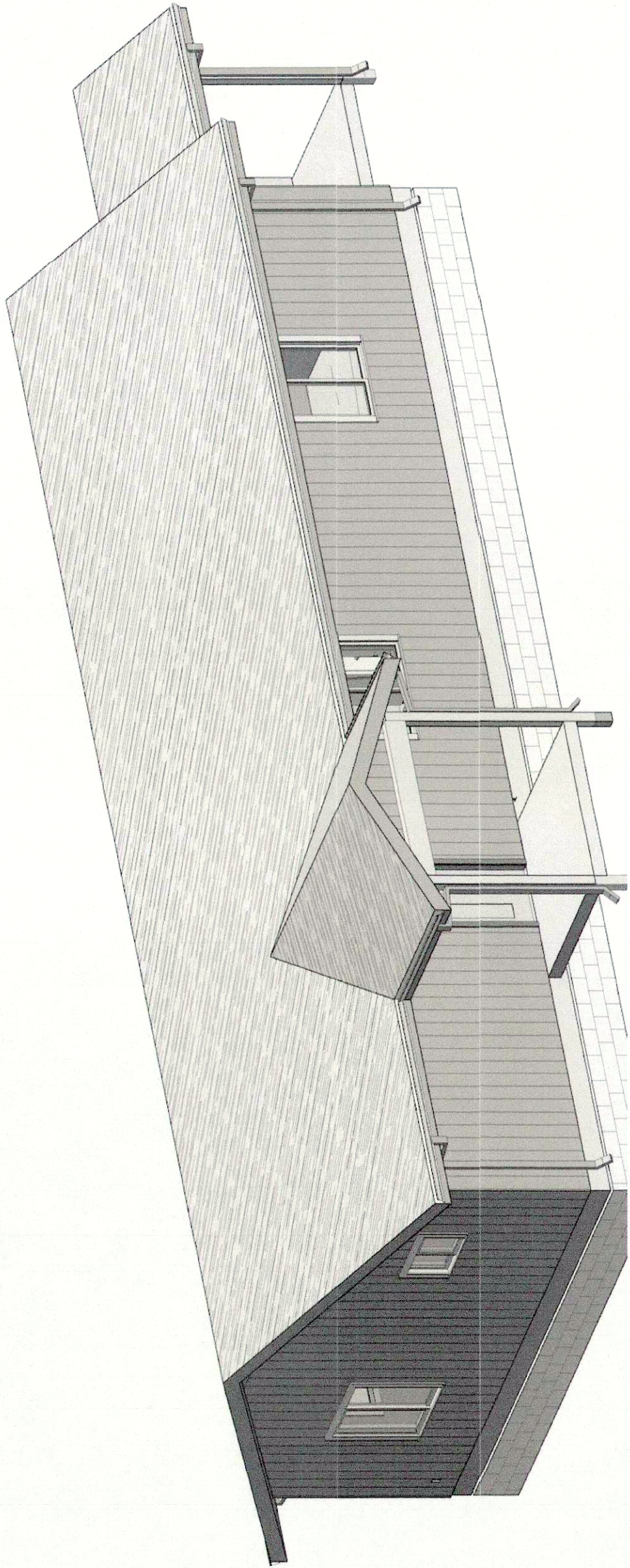
A 3D architectural rendering of a modern, single-story house. The house features dark wood siding and a light gray stone foundation. It has a large covered porch area on the left side, supported by dark wooden posts. The roof is dark gray and appears to be made of shingles. There are several windows, including a large one on the porch and a smaller one on the main level. The house is shown from a perspective view, highlighting its design and materials.

1 Front of One Bedroom House

A circular professional engineer seal for Joshua T. McKnight. The outer ring contains the text "REGISTERED PROFESSIONAL ENGINEER" at the top and "STATE OF CALIFORNIA" at the bottom, separated by two stars. Inside the ring, the name "JOSHUA T. MCKNIGHT" is written in a curve. Below the name is a blue handwritten signature. Under the signature, the text "RCE 60687" is printed. Below that, "EXP. 12/31/16" is printed with the date in blue. At the bottom of the inner circle, the word "CIVIL" is printed.

<h1 style="text-align: center;">KARUK TRIBE HOUSING AUTHORITY</h1> <h2 style="text-align: right;">One Bedroom House</h2>		
No.	Description	Date
<h3>Title Sheet</h3>		
Project number	ktha 2015	
Date	07/13/2016	
Drawn by	RKH	
Checked by	JMB	
G1		
Scale		

KARUK TRIBE HOUSING AUTHORITY TWO BEDROOM HOUSE



1 Front of Model

ZONING	NA
SITE AREA	NA
TYPE OF CONSTRUCTION	V NOT RATED
OCCUPANCY	R-1
DESCRIPTION OF USE	RESIDENCE
SPRINKLERS	YES
NO. OF STORIES	1
BLDG. HEIGHT	15'±
FLOOR AREA	1248 SQ.FT.
APPLICABLE CODE	CBC 2013(TITLE 24)
2010 UFG	2010 UFG, 2010 UMC, 2010 UPC AND
2010 IRC	2010 IRC

SPECIAL INSPECTIONS:

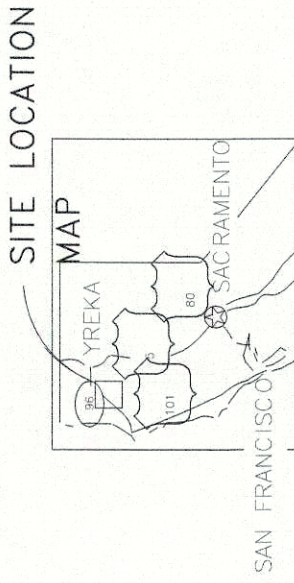
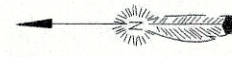
DEFERRED SUBMITTAL: TRUSS DESIGN
SPRINKLER DESIGN

Architect:
J M B Architecture
P O Box 1170
WILLOW CREEK, CA. 95573

Joan Briggs
530.629.0010

Owner: KARIUK TRIBE HOUSING AUTHORITY
PO BOX 1159
HAPPY CAMP, CA 96039

PROJECT SUMMARY



TYPICAL ABBREVIATIONS

TYPICAL SYMBOLS

Abbreviation	Description	Symbol/Note
I.D.	Inside Diameter (Dim.)	
INSUL.	Insulation	
INT.	Interior	
KIT.	Kitchen	
LAB.	Laboratory	
LAM.	Laminate	
LAV.	Lavatory	
LT.	Light	
MAX.	Maximum	
M.C.	Medicine Cabinet	
MECH.	Mechanical	
MEMB.	Membrane	
MET.	Metal	
MFR.	Manufacturer	
MH.	Mortise	
MIN.	Minimum	
MIR.	Mirror	
MISC.	Miscellaneous	
M.O.	Masonry Opening	
MTD.	Mounted	
MUL.	Mullion	
N.	North	
N.I.C.	Not in Contract	
NO. or #	Number	
NOM.	Nominal	
N.T.S.	Not To Scale	
O.A.	Overall	
OBS.	Obscure	
O.C.	On Center	
Outside Diameter (Dim.)		
OFF.	Office	
OPN.	Opening	
OPNG.	Opposite	
OPP.		
PRC ST.	Pre-cast	
PL.	Plate	
PLAM.	Plastic Laminate	
PLAS.	Plaster	
PLYWD.	Plywood	
PR	Pair	
PT.	Point	
PTN.	Partition	
Q.T.	Quarry Tile	
R	Riser	
RAD.	Radius	
R.D.	Roof Drain	
REF.	Reference	
REFR.	Refrigerator	
REINF.	Reinforced	
REQ.	Required	
R.M.	Room	
R.O.	Rough Opening	
RWD.	Redwood	
S.	South	
S.C.	Solid Core	
SCHED.	Schedule	
SECT.	Section	
SH	Shelf	
SHR.	Shower	
SHI.	Sheet	
SIM.	Similar	
SPEC.	Specification	
SQ.	Square	
S.ST.	Stainless Steel	
STD.	Standard	
STL.	Steel	
STOR.	Storage	
STOR. STRUCT.	Structural	
SYM.	Symmetrical	
TRD.	Tread	
T.C.	Top of Curb	
TEL.	Telephone	
TER.	Terrazzo	
T&G.	Tongue and Groove	
THK.	Thick	
THK.	Thick	
T.V.	Television	
T.W.	Top of Wall	
TYP.	Typical	
UNF.	Unfinished	
U.O.N.	Unless Otherwise Noted	
VERT.	Vertical	
W.	West	
W/	With	
W.C.	Water Closet	
WD.	Wood	
W/O	Without	
W/P.	Waterproof	

TYPICAL ABBREVIATIONS

VICINITY MAP

APPROVALS

KTHA: ----- Erin Hillman

JMB Architecture: _____
Joan Briggs

TVCE: _____ Josh McKnight



STRUCTURAL CRITERIA

BASIC WIND SPEED: 110 MPH

GROUND SNOW LOAD: 60 PSF

SEISMIC:

SITE CLASS: D

 $\gamma = 1.155$ $s_1: 0.520$

SEISMIC CATEGORY: D

KARUK TRIBE
HOUSING AUTHORITY
Two Bedroom House

Two Bedroom House

[illegible]

GENERAL

1. DO NOT SCALE DRAWINGS
2. The drawings and specifications, and copies thereof, are legal instruments of services for use by the owner and authorized representatives on the designated property only.
3. All work shall be executed in accordance with the 2010 edition of the California Building Code and/or all other governing agencies requirements.
4. Contractor shall comply with the regulations of "Occupational Safety and Health Act."
5. All dimensions and conditions shall be checked and verified on the job site by the contractor before work begins. Any errors, omissions, or discrepancies shall be brought to the attention of the architect and owner before construction begins.
6. In the event there are found discrepancies or ambiguities in or omissions from the specifications or the drawings, or should there be doubt as to their meaning or intent, the Architect shall be notified, and shall provide a written clarification prior to the commencement of construction or the purchasing of the materials. Failure on the part of the Contractor to follow this procedure shall relieve both the Architect and the owner of damages, costs, and time delays caused by these conditions.
7. Contractor shall examine the condition of the project area and verify the sizes and locations of existing facilities at the site, report any discrepancies between the drawings and existing conditions to the owner and the architect, and shall not commence until the conditions are further clarified or authorization to proceed is given.
8. Dimensions shown on the drawings are to centerline of column or face of stud, unless otherwise noted.
9. Work shall conform to all local, state, and federal codes and ordinances in effect and all safety provisions shall be strictly adhered to.
10. There will be no substitutions without the Owner's written prior approval.
11. The Architect makes no guarantee for products identified by trade name or manufacturer, nor their availability; however, the Contractor shall be responsible for meeting the performance requirement of the specification.
12. Contractor shall be responsible for and obtain all permits and licenses and pay required fees. Certificates of insurance for Workers Compensation shall be filed prior to issuing of permit.
13. Each Contractor shall guarantee, be responsible for and make good any and all defects due to faults of his/her trade for labor, leaks or materials, for a period of one year minimum following the acceptance of the work by the Owner.
14. All damages to, both on and off property (alleys, sidewalks, curbs, streets, etc.) occurring as a result of construction shall be replaced or repaired by the Contractor at no cost to the Owner.
15. No materials or refuse shall be kept outside work area. Provide area for combustible rubbish storage.
16. Typical details shall apply where no specific details or sections are given.
17. The Contractor shall be responsible for continuous clean-up of the site and of all debris.
18. Abbreviations throughout the plans are those in common usage.
19. Architect will define intent of any in question.
20. Provide and maintain fire extinguishers as required by the local fire department field inspector during construction.
20. This project shall comply with title 24 and 2010 UBC, UMC and UPC and 2010 HEC.

- SITE WORK
1. All site work shall comply with any applicable approved drawings or local codes as required.
2. Soils Report not required.
3. All excess materials shall be disposed of at the Contractor's expense.
4. All concrete cuts and sidewalks shall be installed per the California Department of Transportation Standard Specifications-July 1999, Section 7.3

EARTHWORK

1. All grading and earthwork shall be executed in accordance with those ordinances of the governing agencies
2. Carry all footings into solid natural or compacted soil a minimum of 18"
3. All fill material shall be compacted to a minimum 95% relative compaction per Cal 216.

A C PAVING

CONCRETE

1. The labor, materials and execution required for all concrete work as indicated on the drawings shall be in accordance with those applicable sections of chapter 19 of the latest adopted editions of the uniform building code.
2. All concrete shall be a 5 sack mix and have a minimum compressive strength of 2500 psi at 28 days.
3. Reinforcing steel as required shall be properly anchored and tied in place before pouring concrete. Lap all splices a minimum of 32 bar diameters. Reinforcing steel shall be deformed bars conforming to ASTM designation A-615, Grade 40.

MASONRY

1. The labor, materials and execution required for all masonry work as indicated on the drawings shall be in accordance with those applicable sections of chapter 21 of the latest adopted editions of the uniform building code.

METALS

1. Use approved metal connectors, joist and rafter hangers, post base and cap connectors as required on plans, by code and Building Inspector.

STEEL

1. The labor, materials and execution required for all structural steel work as indicated on the drawings shall be in accordance with those applicable sections of Chapter 22 of the latest adopted edition of the Uniform Building Code.
2. Structural steel shall conform to the latest specifications of the A.S.T.M. and have a min. yield of 36,000 PSI
3. Bolted or welded connections shall conform to AISC specifications
4. Structural steel not encased in concrete shall be shop painted with one coat of zinc chromate

WOOD

1. All lumber shall be grade marked #2 DF minimum except as noted on plans.
2. All posts to be #1 DF.
3. All horizontal lumber shall be #1 DF or better.
4. All studs shall be DF conforming.
5. Plywood shall be DF standard, to PS9-74 U. S. Dept. of Commerce, and shall be grade stamped "D.F.P.A."
6. Wood bearing directly on concrete shall be pressure treated Doug. Fir or Redwood

CARPENTRY

1. All framing and carpentry shall be done in accordance with those applicable sections of Chapter 23 of the latest adopted edition of the Uniform Building Code and details indicated on the drawings.
2. Nailing as per C.B.C. table 75-Q
3. Structural Members shall not be cut for pipe, conduit or etc.
4. 2 inch solid blocking shall be placed between joists or rafters at all supports
5. Use approved metal connectors, joist and rafter hangers, post base and cap connectors as required on plans, by code and Building Inspector.

MILKWORK

1. All Milkwork shall be manufactured in accordance with the standards in the latest edition of Chapter 23 of the Manual of Milkwork of the Wood Working Institute in the Custom Grade hereinafter specified or as shown on the drawings
2. Submit Shop Drawings in conformance to Section 1 "Guidelines for Architectural Milkwork Shop Drawings"
3. Milkwork and installation shall be in accordance with Custom Grade of the Manual of Milkwork latest edition
4. Deliver all materials only when project is ready for installation and the General Contractor has provided a clean storage area as defined in the Manual of Milkwork

SHEET METAL

1. All sheet metal work shall be in accordance with the latest addition of the Architectural Sheet Metal Manual of the Sheet Metal and Air Conditioning Contractors National Association, Inc. 2000
2. Flashings, gutters and other galvanized iron (G.I.) shall be 26 gage minimum unless noted otherwise, galvanized hot dip process.

THERMAL & MOISTURE PROTECTION

1. Where penetrations are made through the roof, provide watertight assembly

ROOFING

1. Asphalt composition shingles to be installed per mfr. recommendations. Manufactured by GAF, Lifetime Warranty Comp. Arch. Single, or equal. Color selected by Owner
2. All Metal Roof Flashings, SFR, 1/2" or equal, Color selected by Owner
4. All roofing and flashing materials to be installed in strict accordance with the latest adopted edition of the Uniform Building Code
3. All roof and flashing materials shall be installed to form a waterproof system and the roofing contractor shall issue a written guarantee to the Owner to maintain the roofing and all flashings in a watertight condition for a period of two (2) years after acceptance of the project.

INSULATION

1. Wall insulation R-13 and R-19
2. Ceiling insulation R-30
3. All insulation shall comply with standards established by the State of California "Energy Design Manual" and Energy Regulations of California Administrative Code, title 25

WEATHER STRIPPING

1. Comply with title 24 requirements for weather stripping at all openings
- DOORS & WINDOWS
1. See Sheet A-7
2. Vinyl Low E Double paneled Windows and Sliding Glass Doors manufacturer selected by KTHA
3. Exterior Doors 6 Panel Metal Doors with standard Kwikset locks and deadbolts
4. Interior Doors 6 Panel HC with Kwikset hardware

GLAZING

1. All labor, materials and execution required for the glass and glazing work as indicated on the drawings shall be in accordance with those applicable sections of Chapter 24 of the latest adopted edition of the Uniform Building Code
2. Glass doors, adjacent to decks, glazing within 24" of a door, and all glazed openings within 6'-6" of the adjacent floor shall be of tempered glass as approved for impact hazard.
3. All windows shall be certified and labled to meet A.N.S.I. infiltration standards

FINISHES

1. Contractor shall supervise all finish work.
2. Contractor shall provide galvanic insulation between dissimilar metals.
3. All materials and finishes indicated on drawings shall be new, unused, and of serviceable condition except as specifically noted.
4. Wall and Ceiling materials shall not exceed the flame spread classifications in UBC table 8-B

EXTERIOR SIDING

1. Siding, LP Siding with 8" grooves
2. Trim: primed spruce 3/4"x4" around windows and doors
3. Soffit: NA

GYPSUM WALLBOARD

1. The Gypsum Wallboard work shall be done in accordance with the recommendations of ASTM C754/CA 151, CA 201, CA 216 and shall conform with Chapter 25 of the latest adopted edition of the California Building Code
2. Interior walls to be finished with orange peel texture through out

CERAMIC TILE

1. Ceramic tile work shall be in accordance with the best recommended standards of the The Council of America

PAINTING

1. Painting work, which includes back priming, sealing, etching, lacquering or other work, shall be essential to the appearance of all exterior work, including wood, masonry, metal, ironwork, etc., shall be in accordance with the recommended standards as set forth in the "Painting Specifications" of the Painting and Decorating Contractors Association of America.
2. Colors of all areas being patched and repaired shall match existing and all new work shall be as directed and per schedule provided by Contractor
3. Paint, manufactured by Sherwin Williams and Benjamin Moore, applied per manufacturers recommendations and per schedule provided by Contractor and Owner
4. Interior Walls - prime and paint with two coats semi-gloss latex enamel
- Exterior Walls - one coat primer and two coats eggshell finish
- Exterior trim - one coat primer and two coats semi-gloss finish
- Exterior Doors - one coat primer, two coats eggshell finish and two coats of trim paint w/ semi-gloss finish

CARPET

1. Manufactured by NA
2. Color as selected by Owner from manufacturers standards.
3. Install in accordance with manufacturers recommendations.

VINYL

1. Manufactured by Armstrong, Product: NA
2. Color as selected by Owner from manufacturers standards.
3. Install in accordance with manufacturers recommendations.

MECHANICAL

1. See Mechanical Notes sheet M-1

PLUMBING

1. See Mechanical Drawings Sheet P-1

ELECTRICAL

1. See Electrol Drawing Sheet E-1

ENERGY CONSERVATION

1. All work shall conform to the energy conservation requirements set forth in the California Administrative Code, Title 24.
2. See attached Energy Calculations

3. All appliances shall be energy star rated

SECURITY PROVISIONS

1. All Pin-Type hinges which are accessible from outside a secured area when the door is closed shall have non-removable hinge pins. In addition, they shall have minimum 1/4" diameter steel jamb stud with 1/4" minimum protection unless the hinges are shaped to prevent removal of the door if the hinge pins are removed.

FIRE PROTECTION

- All smoke detectors to be hard wired with battery backup.
2. Penetrations of fire resistive walls, floor - ceiling and roof shall be protected as required in UBC Sections 709 and 710.
3. Provide noncombustible blocking behind all fixtures, handles, grab bars, etc., where indicated or required.

EXITS

1. All exits are to be operable from the inside without the use of a key or special knowledge

KARUK TRIBE
HOUSING AUTHORITY
Two Bedroom House

No.	Description	Date

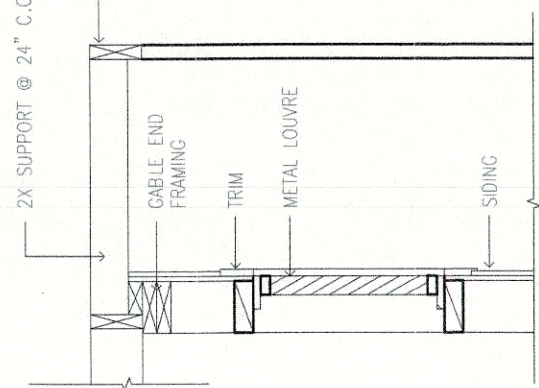
GENERAL NOTES

Project number	ktha 2015
Date	07/05/2015
Drawn by	RKH
Checked by	JMB

G2

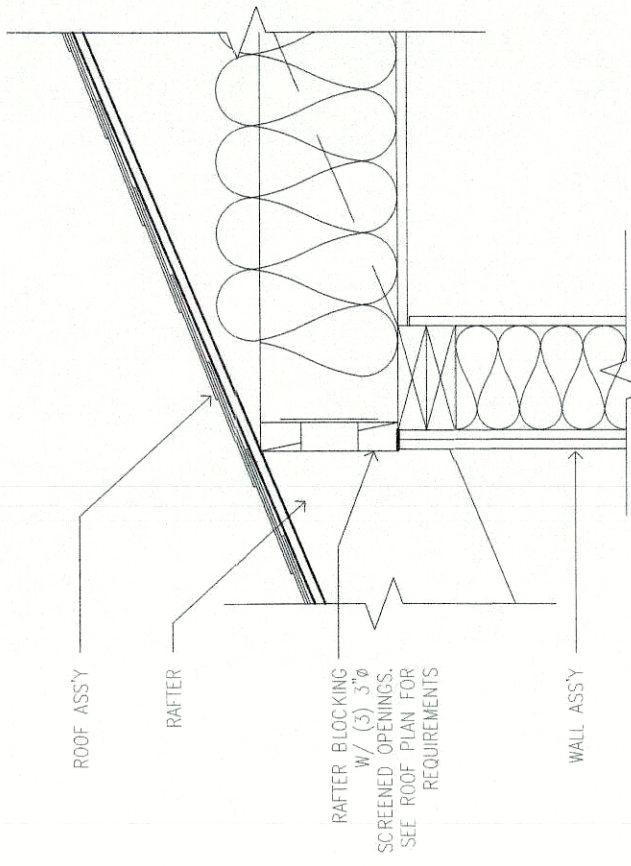
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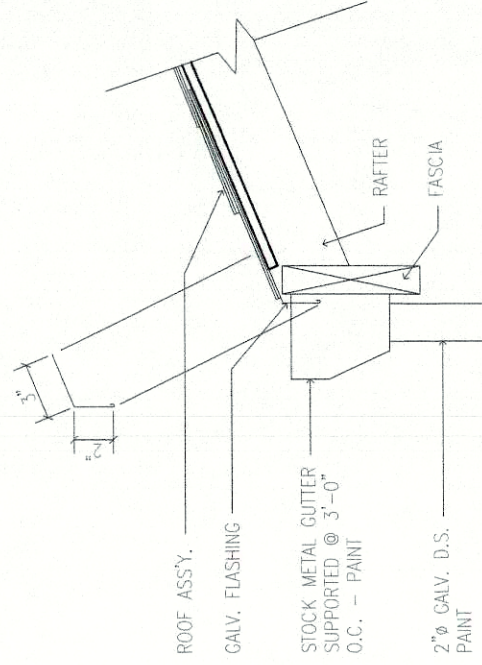
GABLE VENT

SCALE: 3/4"=1'-0"



SOFFIT VENT

SCALE: 1-1/2"=1'-0"



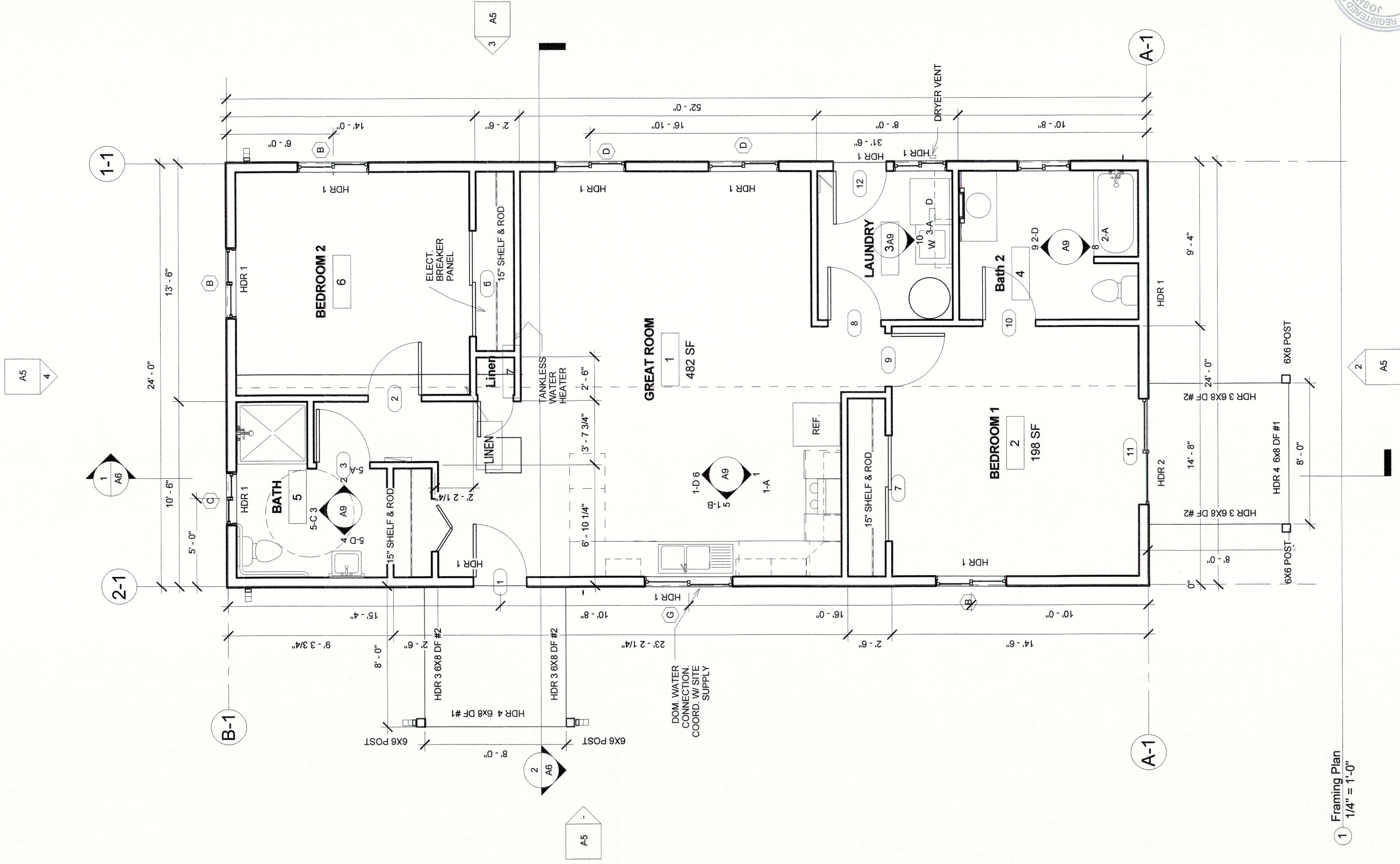
GUTTER DETAIL

SCALE: 1-1/2"=1'-0"

Note:
All Headers 6X12 DF #2 U.N.O.

Shearwall Schedule

Wall Line	Story	Sheathing	Framing	Nailing	Anchor Bolts	Connections	Other
1-1	1	T-111 Siding	2X6 @ 16" o.c.	8d @ 6" edges, 12" field	5/8" X 10" @ 48" o.c.	H2.5 @ EA Truss	
2-1	1	T-111 Siding	2X6 @ 16" o.c.	8d @ 6" edges, 12" field	5/8" X 10" @ 48" o.c.	H2.5 @ EA Truss	
A-1	1	T-111 Siding	2X6 @ 16" o.c.	8d @ 6" edges, 12" field	5/8" X 10" @ 48" o.c.		
B-1	1	T-111 Siding	2X6 @ 16" o.c.	8d @ 6" edges, 12" field	5/8" X 10" @ 48" o.c.		



1 Framing Plan

1/4" = 1'-0"



KARUK TRIBE
HOUSING AUTHORITY
Two Bedroom House

No.	Description	Date

Framing Plan

Project number	ktha 2015
Date	07/05/2015
Drawn by	RKH
Checked by	JMB
Scale	1/4" = 1'-0"

S2

JMB
ARCHITECTURE
ARCHITECTURE
PLANNING

4767 HIGHWAY 96, PO BOX 1170
WILLOW CREEK, CA 95573
707.629.0010 fax 707.629.2348
email: jmbarchitect@snowcrest.net



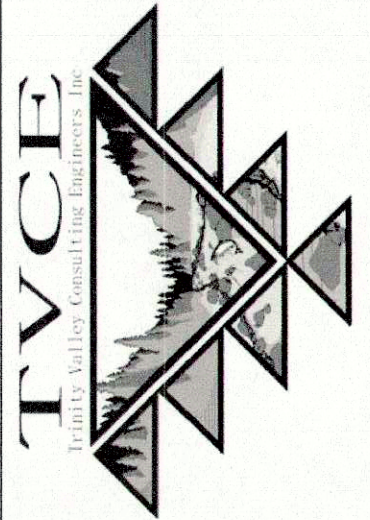
67 Walnut Way, PO BOX 1567
WILLOW CREEK, CA 95573
707.629.3000 fax 707.629.3011
email: tvce@tvce.biz

Peace Engineering
Electrical Consultant
Address: 1750 South Street, Redding, CA 96001
Phone: 530.244.0202
Fax: 530.244
e-mail: amy@pe

Abbey Technical Services
Amy McQuerry
Consultant
Address: 1125 16th Street, Ste. 216, Arcata, CA 95521
Phone: 707.826-1430
Fax: 707.826-1430
e-mail: amy@at

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Address
1730 South Street
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Abbey Technical Services
Address
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707.826.1433
Fax
707.826.1430
e-mail
abbeytechnicalservices.com

KARUK TRIBE
HOUSING AUTHORITY
Two Bedroom House

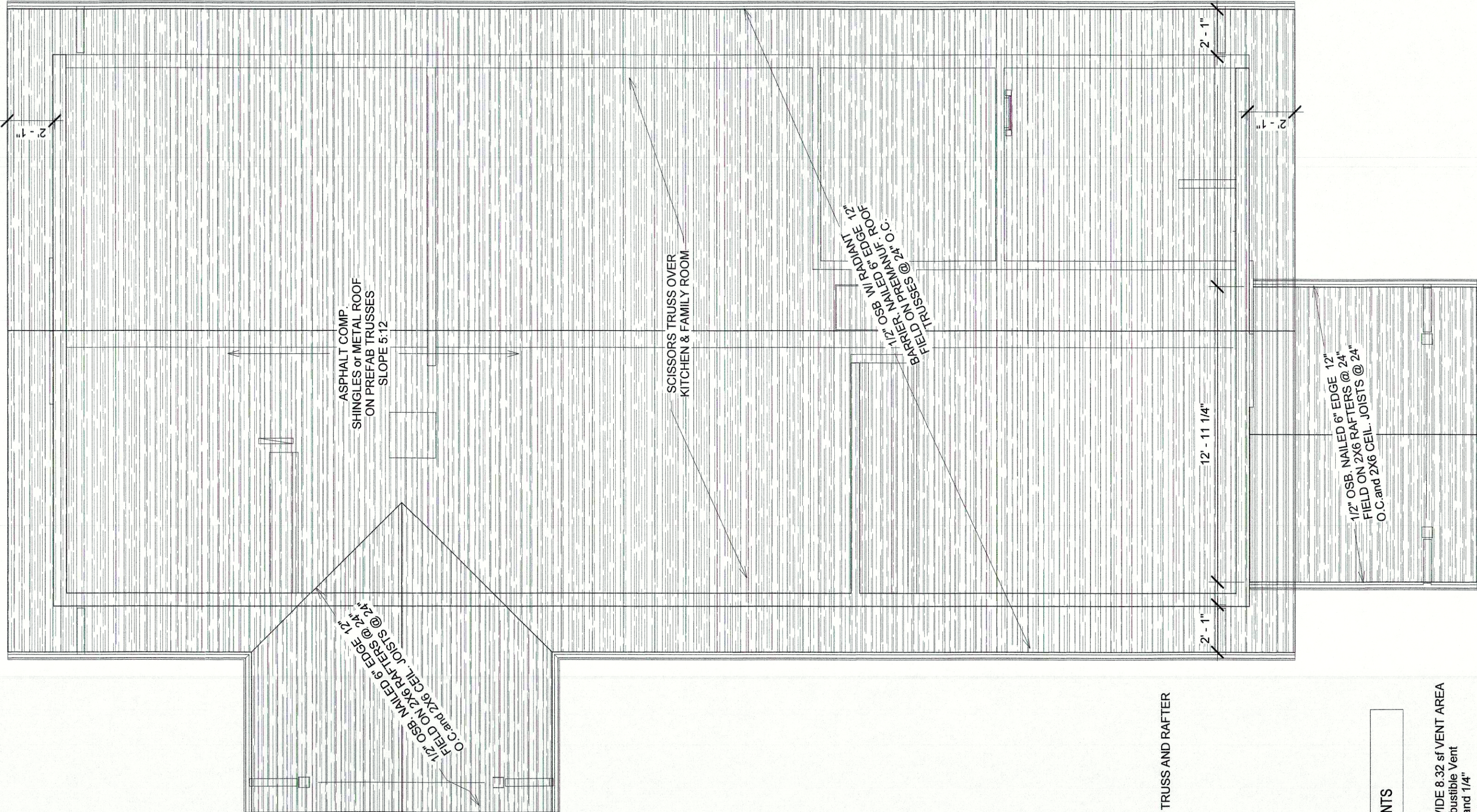
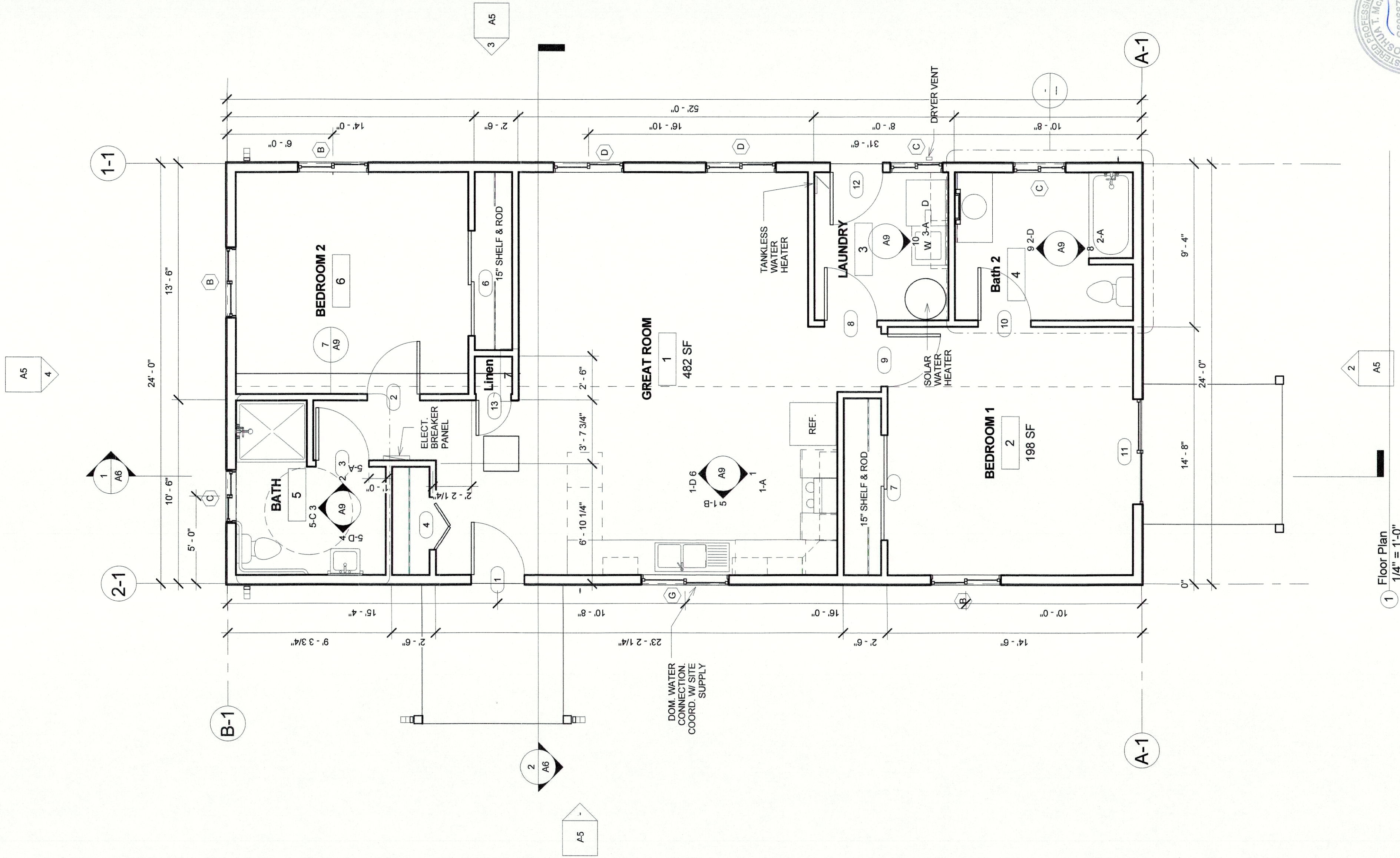
No.	Description	Date

FLOOR PLAN &
ROOF PLAN

Project number ktha 2015
Date 07/05/2015
Drawn by RKH
Checked by JMB

A1

Scale 1/4" = 1'-0"



ATTIC VENT REQUIREMENTS
ATTIC AREA - 1248 sf
1248/150 = 8.32 sf
GABLE VENTS MUST PROVIDE 8.32 sf VENT AREA
Corrosion resistant, non-combustible Vent
with openings between 1/8" and 1/4"

3 Roof Plan
1/4" = 1'-0"

JMB
ARCHITECTURE
◇
ARCHITECTURE
PLANNING

4767 HIGHWAY 96 PO BOX 1170
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KARUK TRIBE
HOUSING AUTHORITY
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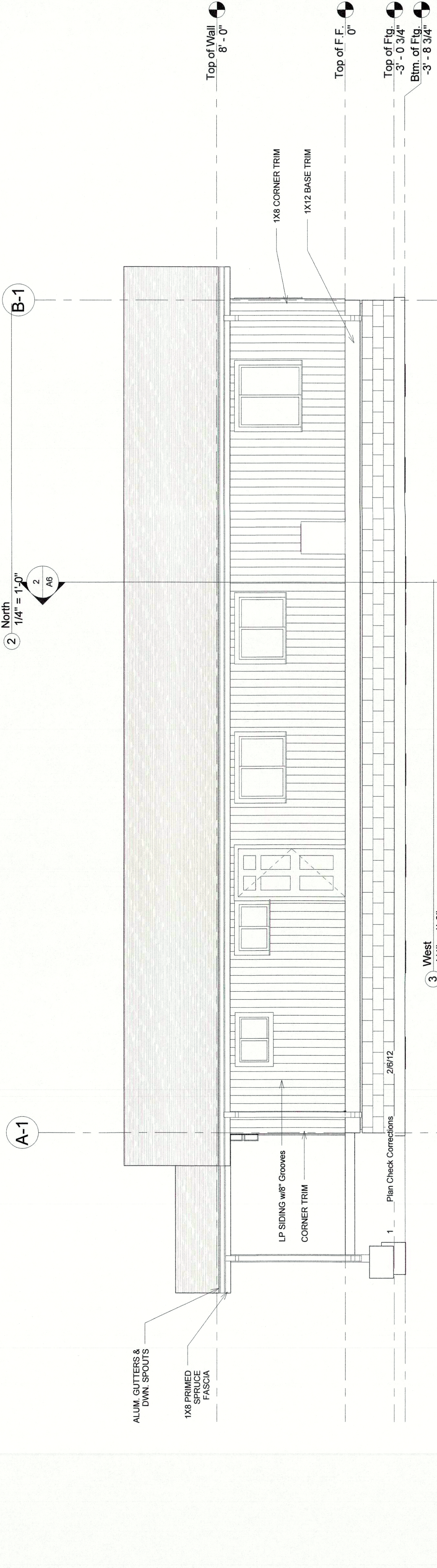
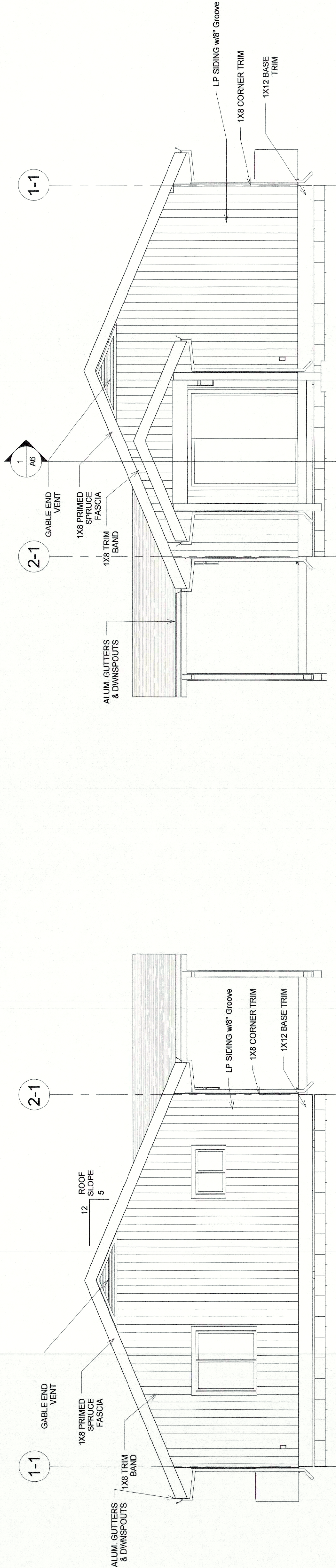
No.	Description	Date

Elevations

Project number ktha 2015
Date 07/05/2015
Drawn by RKH
Checked by JMB

A5

Scale 1/4" = 1'-0"



JMB
ARCHITECTURE
ARCHITECTURE
PLANNING

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KARUK TRIBE
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Two Bedroom House

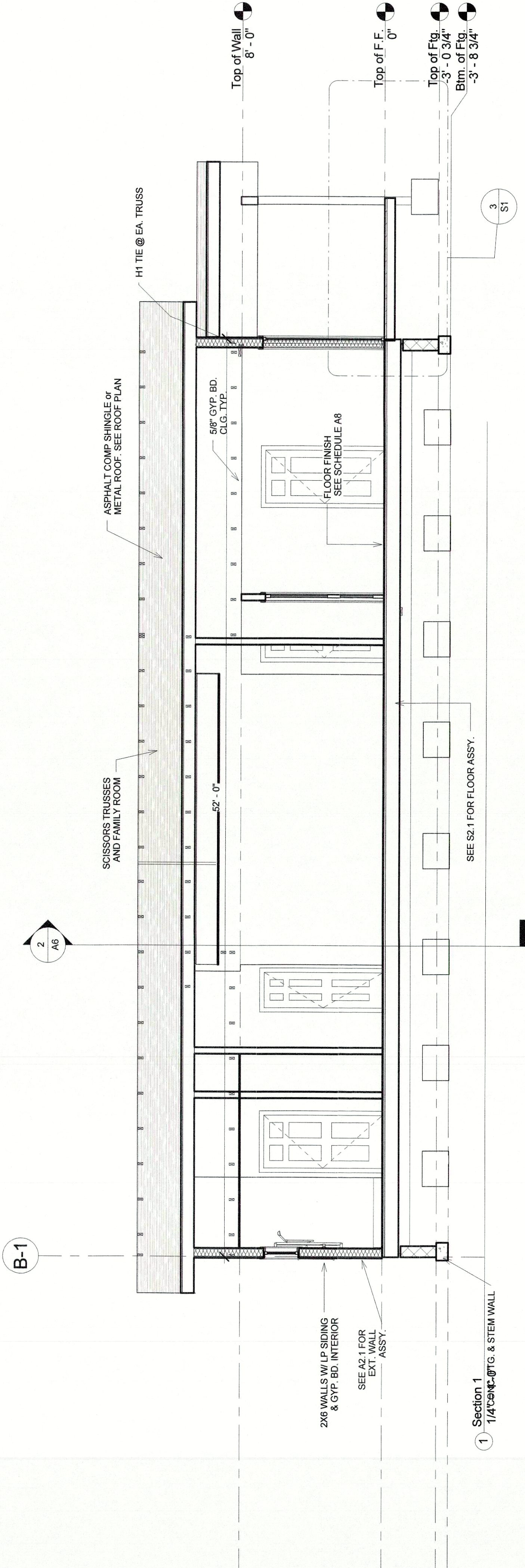
No.	Description	Date

Building Sections

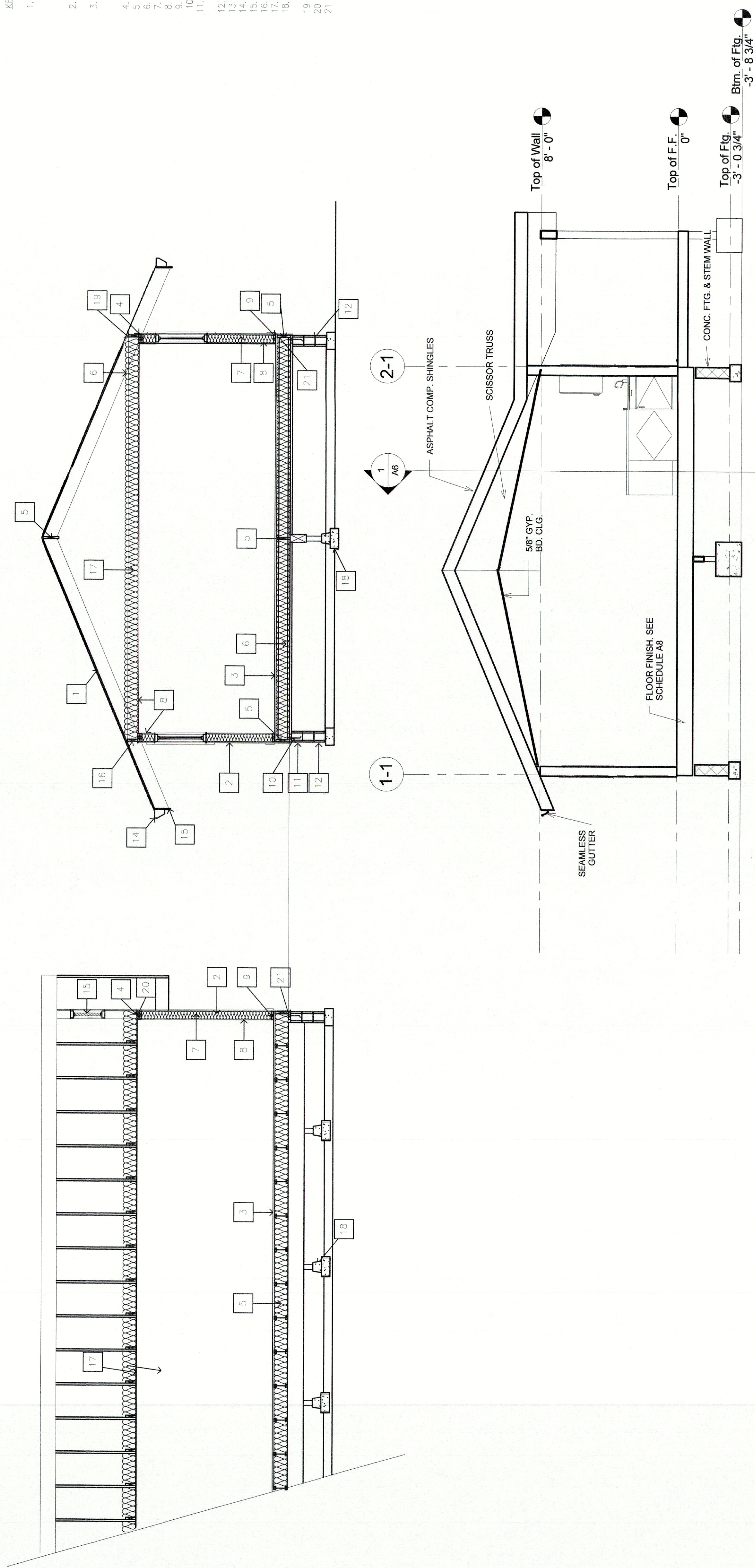
Project number	ktha 2015
Date	07/05/2015
Drawn by	RKH
Checked by	JMB

A6

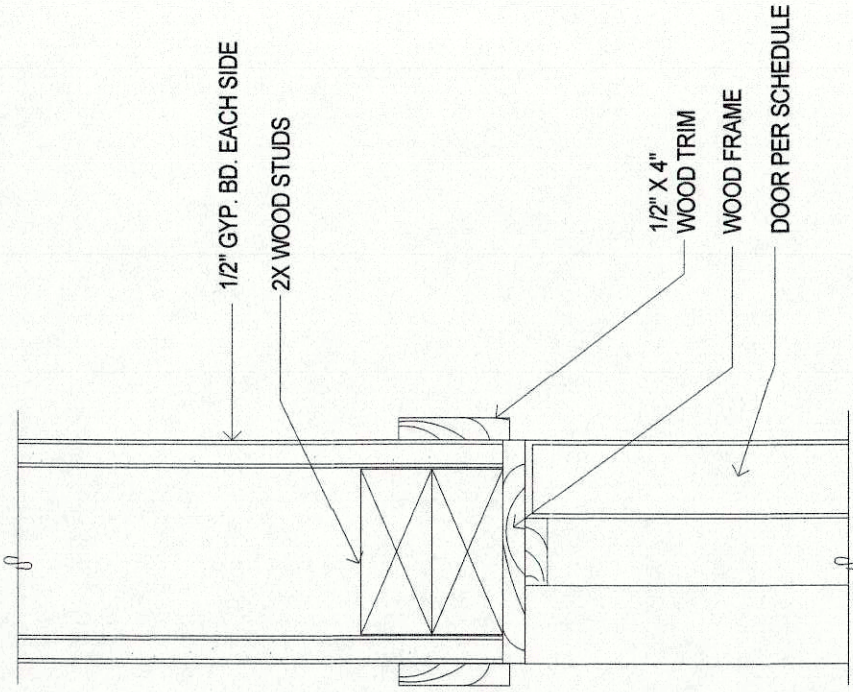
Scale	1/4" = 1'-0"
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- KEYNOTE LEGEND
1. ROOFING - ASPHALT COMP. SHINGLES OR METAL ROOF OVER 5/8" PLYWOOD OVER 2 LAYERS #15 FELT OVER TRUSSES @ 24"
 2. WALLS - 2X6 STUDS @ 16" OC OVER 1/2" DRYWALL
 3. FLOORING - 1 1/8" PLYWOOD OVER 2X6 STUDS @ 16" OC
 4. SEE SCHEDULE FOR FLOOR FINISH
 5. BLOCKING
 6. R30 INSULATION
 7. R19 INSULATION
 8. 1/2" DRYWALL
 9. 5/8" GYP. BD. @ 4'-0" OC
 10. CMU STEM WALL W/ VERTS @ 24" C.C. & (1) #4 HORIZ. CONT.
 11. 8"x12" FOOTING W/ (2) #4 1&B
 12. 8"x12" FOOTING W/ (2) #4 1&B
 13. 8"x12" FOOTING W/ (2) #4 1&B
 14. 8"x12" FOOTING W/ (2) #4 1&B
 15. 2X10 FASCIA
 16. SOFFIT VENT
 17. 5/8" GYP. BD. CEILING
 18. CONC. PER BLOCK & 24"x24"x12"D
 19. H1 TIE @ EA TRUSS
 20. A-35 @ 32" O.C. TRUSS TO TOP PLATE
 21. A-35 @ 32" O.C. RM JOIST TO SILL

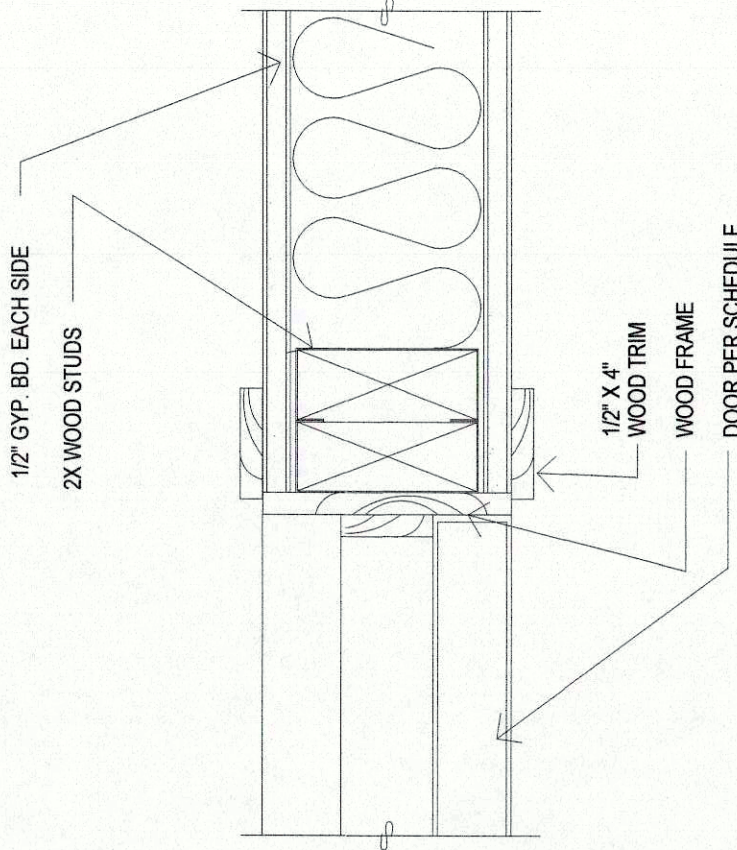


Section 2
1/4" = 1'-0"



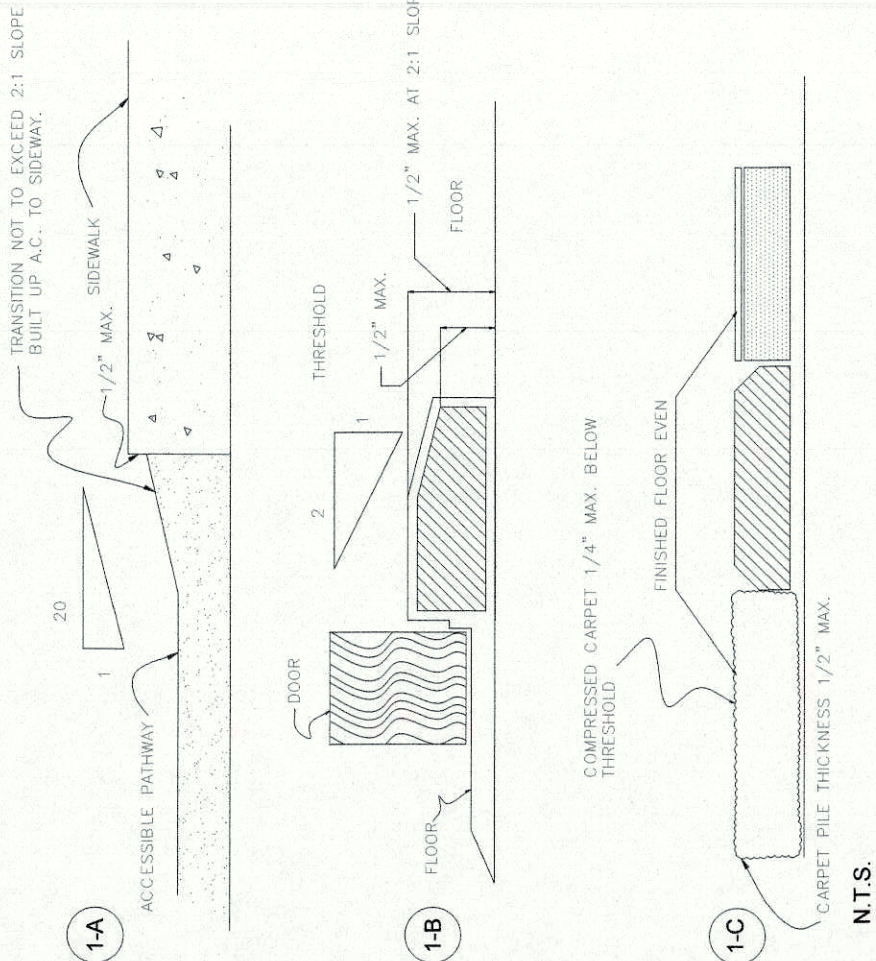
HEAD@INTERIOR DOOR

SCALE: 3/8"=1'-0"



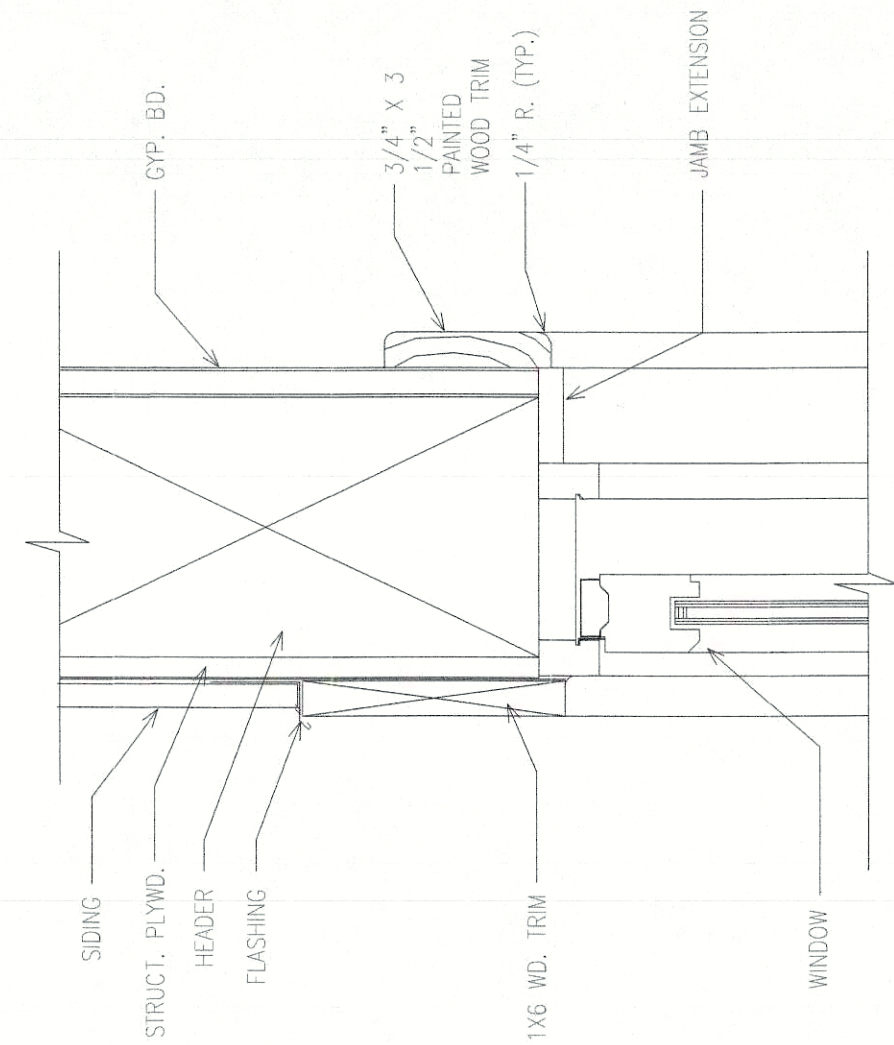
JAMB@INTERIOR DOOR

SCALE: 3/8"=1'-0"



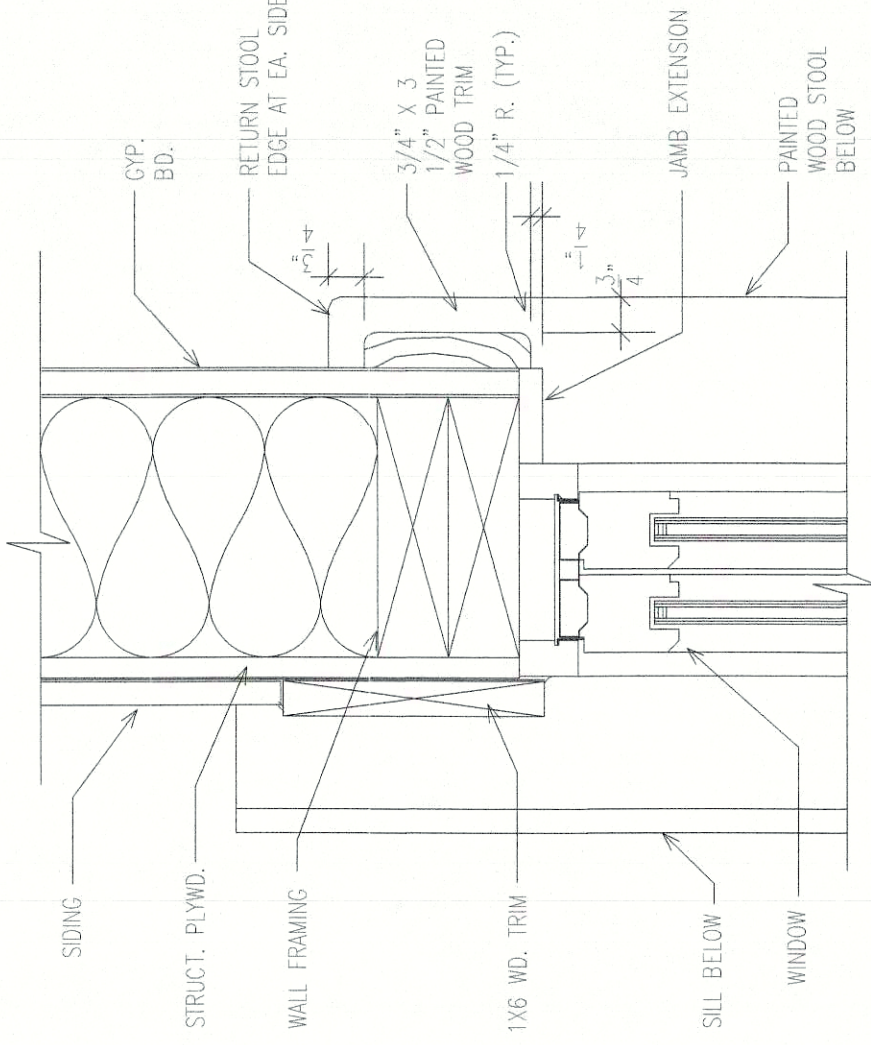
THRESHOLD DETAIL

N.T.S.



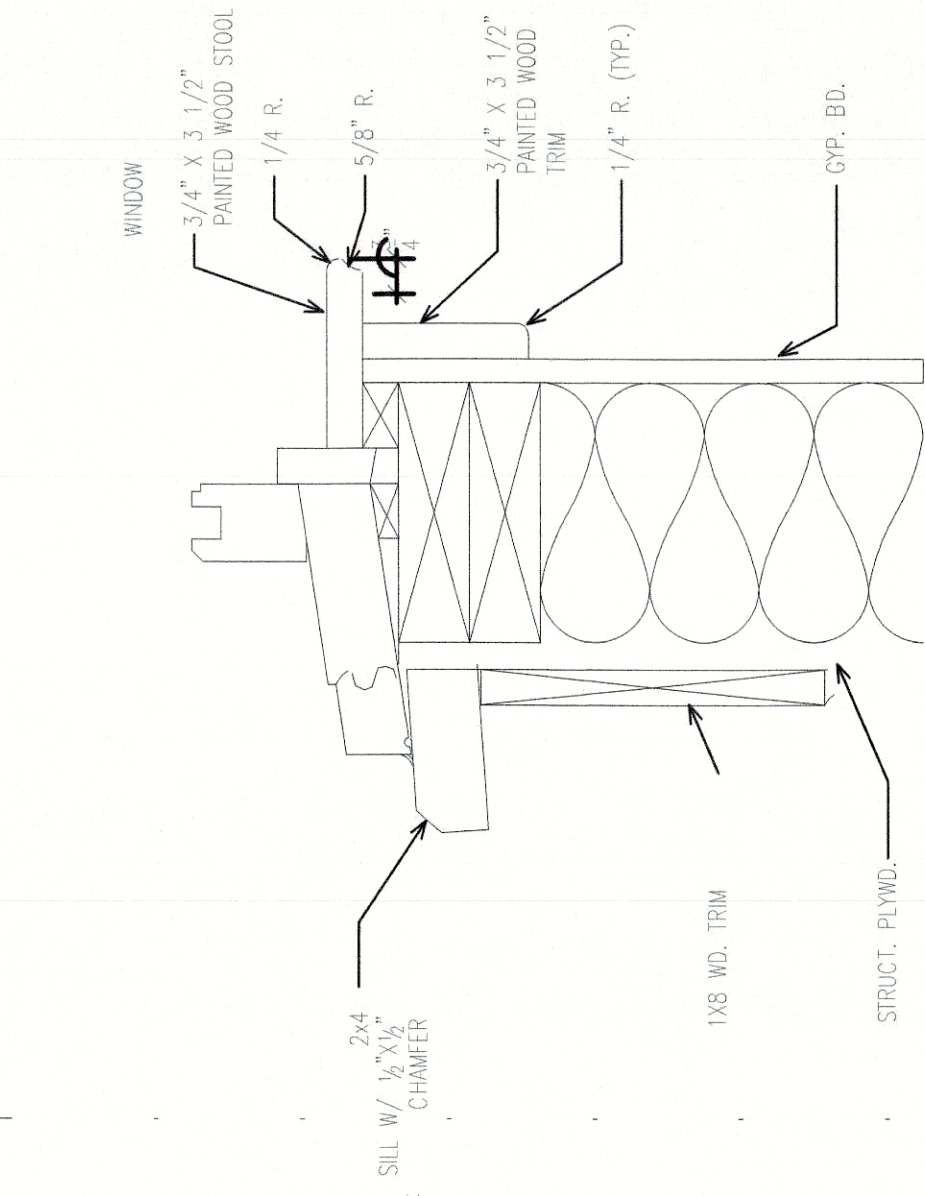
WINDOW HEAD DETAIL

SCALE: 3/8"=1'-0"



WINDOW JAMB DETAIL

SCALE: 3/8"=1'-0"



WINDOW SILL

SCALE: 3/8"=1'-0"

Door Number	Door Type	Door Size	Door Schedule	
			Description	Finish
1	34	36" x 80"	EXTERIOR	1 3/4"
2	23	36" x 80"	INTERIOR	1 3/8"
3	23	36" x 80"	INTERIOR	1 3/8"
4	16	36" x 80"	BIFOLD	1 3/8"
6	3	72" x 80"	SLIDING CLOSET	1 3/8"
7	3	72" x 80"	SLIDING CLOSET	1 3/8"
8	23	36" x 80"	INTERIOR	1 3/8"
9	23	36" x 80"	INTERIOR	1 3/8"
10	23	36" x 80"	INTERIOR	1 3/8"
11	62	72" x 82"	SLIDING GLASS	1 3/4"
12	23	36" x 80"	INTERIOR	1 3/8"
13	39	24" x 80"	INTERIOR	1 3/8"

Type Mark	Rough Opening		Window Schedule		
	Width	Height	Type	Material	Head Height
B	4' - 0"	4' - 0"	Slider with Trim	VINYL	6' - 8"
C	3' - 0"	2' - 0"	Slider with Trim	VINYL	6' - 8"
D	4' - 0"	3' - 0"	Slider with Trim	VINYL	6' - 8"
G	5' - 0"	3' - 0"	Slider with Trim	VINYL	6' - 8"

Room Number	Room Name	Floor	Room Finish Schedule		
			Base	Wall	Ceiling
3	LAUNDRY	Vinyl/Laminate	4" MDF Painted	GYP BD	GYP BD orange peel finish all walls and ceiling
5	BATH	Vinyl/Laminate	4" MDF Painted	GYP BD	GYP BD orange peel finish all walls and ceiling
6	BEDROOM 2	Carpet	4" MDF Painted	GYP BD	GYP BD orange peel finish all walls and ceiling
4	Bath 2	Vinyl/Laminate	4" MDF Painted	GYP BD	GYP BD orange peel finish all walls and ceiling
7	Linen	Vinyl/Laminate	4" MDF Painted	GYP BD	GYP BD orange peel finish all walls and ceiling
2	BEDROOM 1	Carpet	4" MDF Painted	GYP BD	GYP BD orange peel finish all walls and ceiling
1	GREAT ROOM	Vinyl/Laminate	4" MDF Painted	GYP BD	GYP BD orange peel finish all walls and ceiling

JMB
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email: tvceb@tvceb.biz

KARUK TRIBE
HOUSING AUTHORITY

Two Bedroom House

No.	Description	Date

Schedules

Project number	ktha 2015
Date	07/05/2015
Drawn by	RKH
Checked by	JMB

A8

Scale



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KARUK TRIBE
HOUSING AUTHORITY
Two Bedroom House

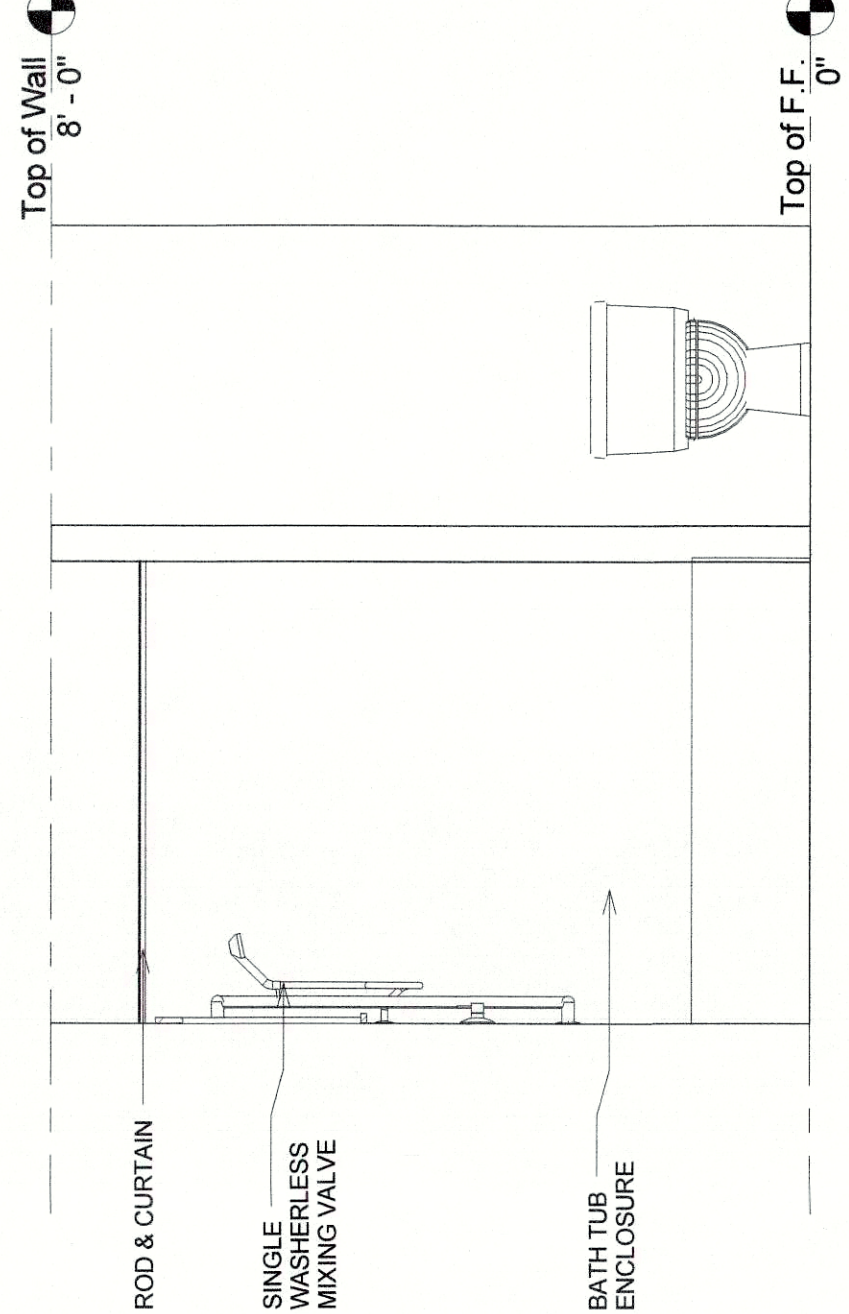
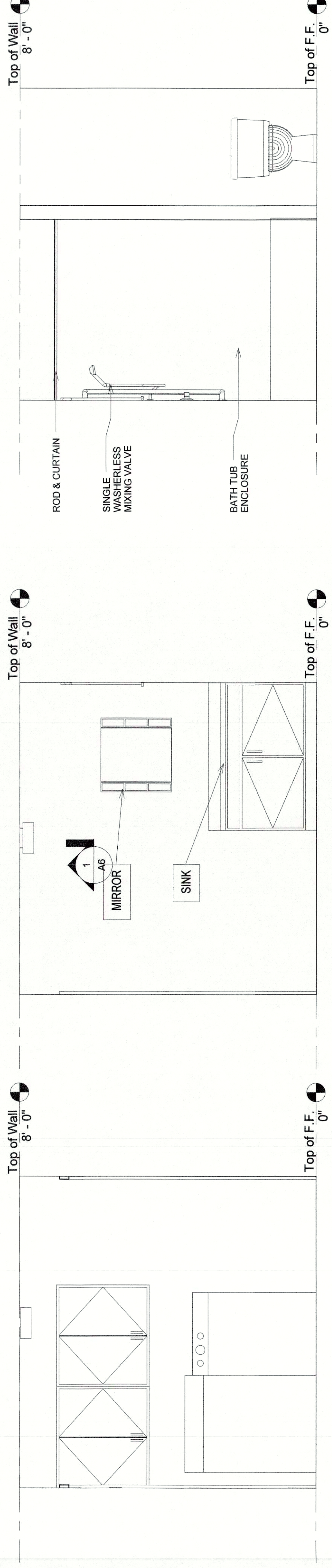
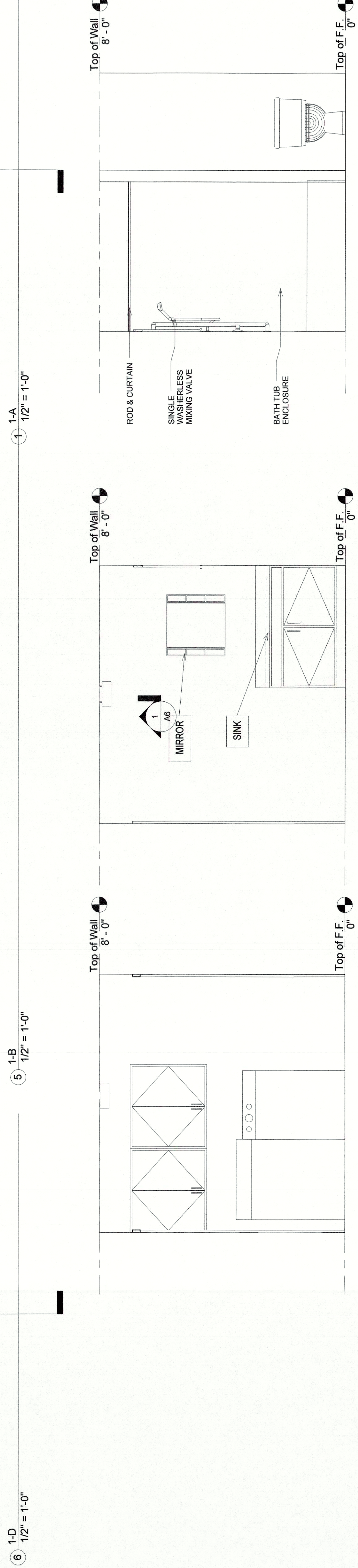
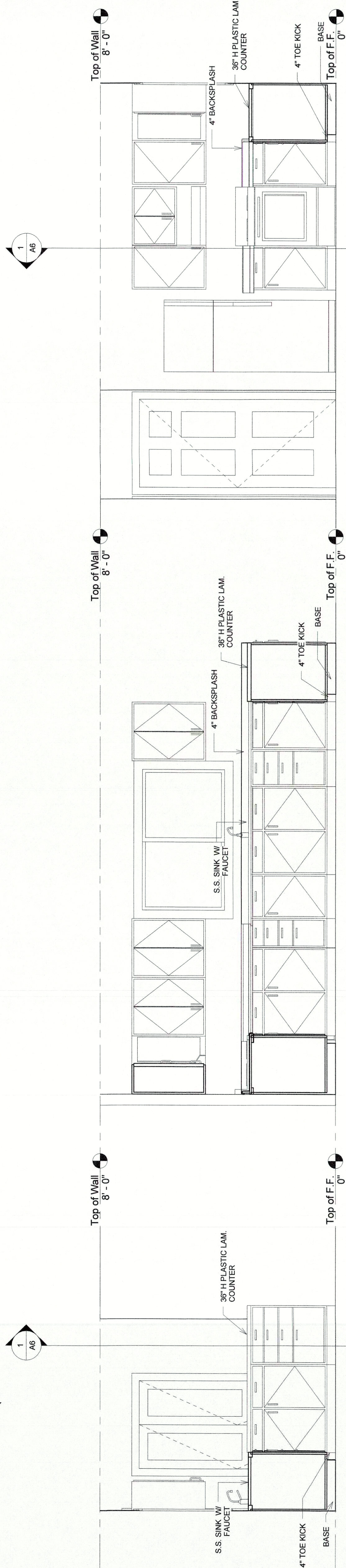
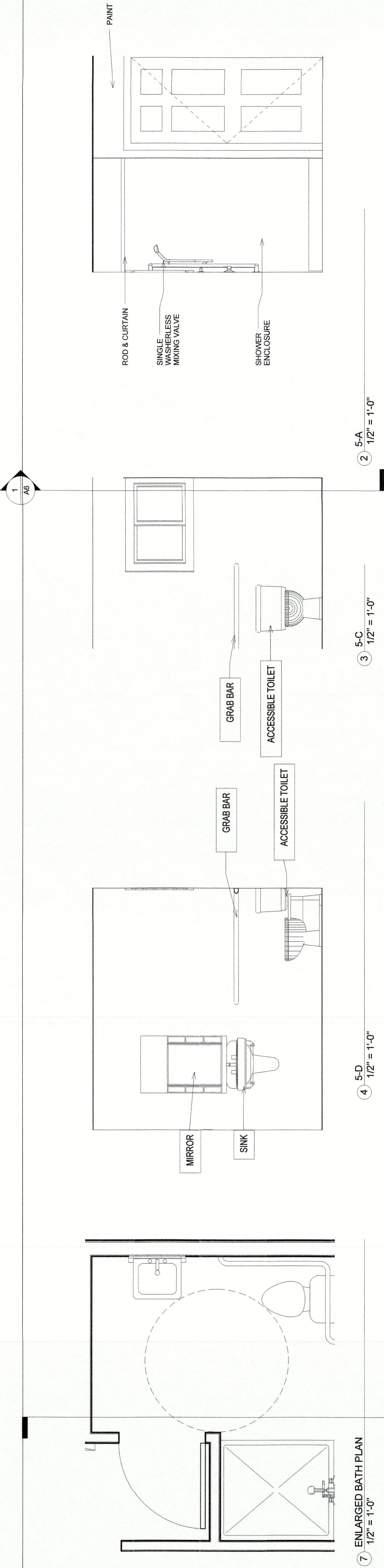
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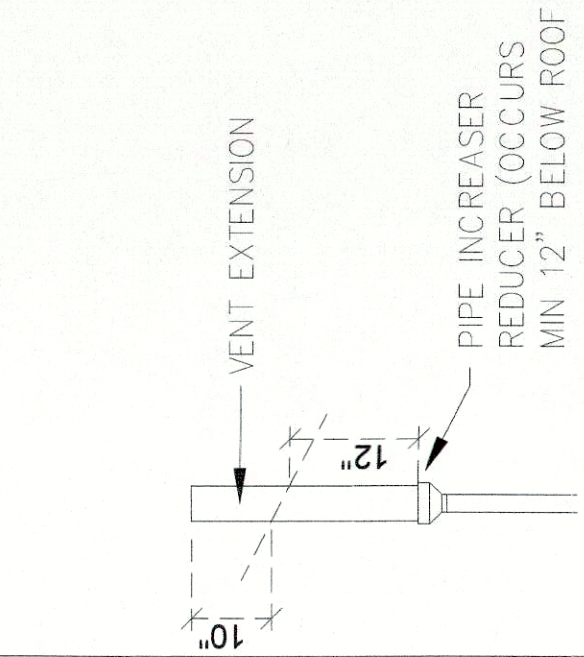
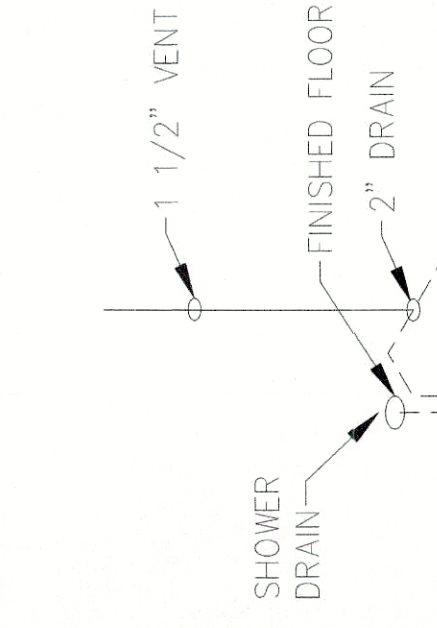
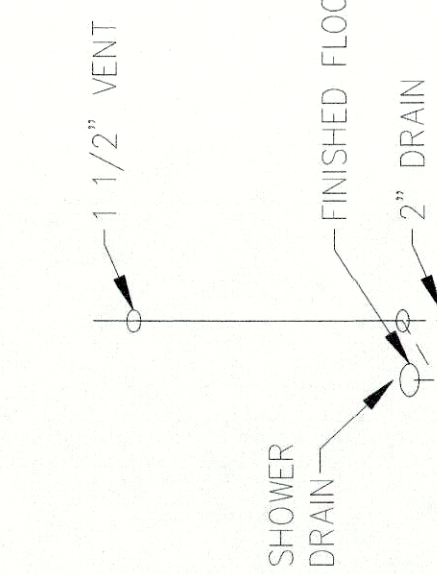
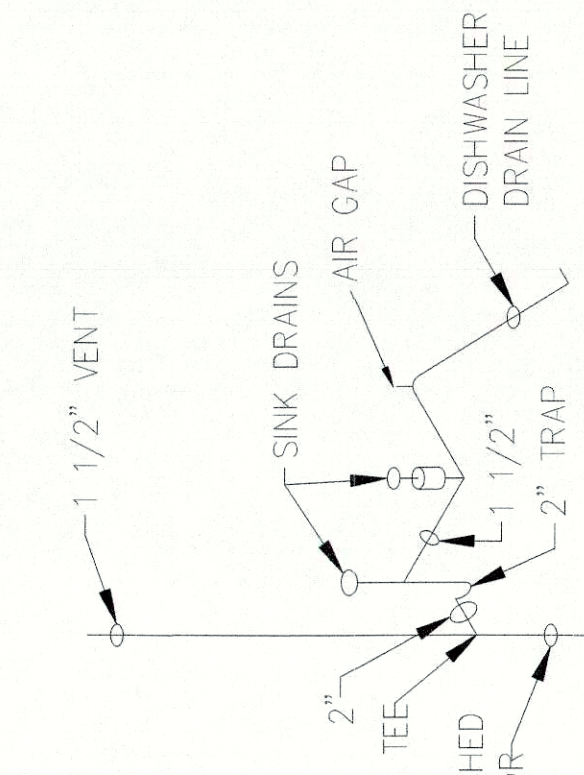
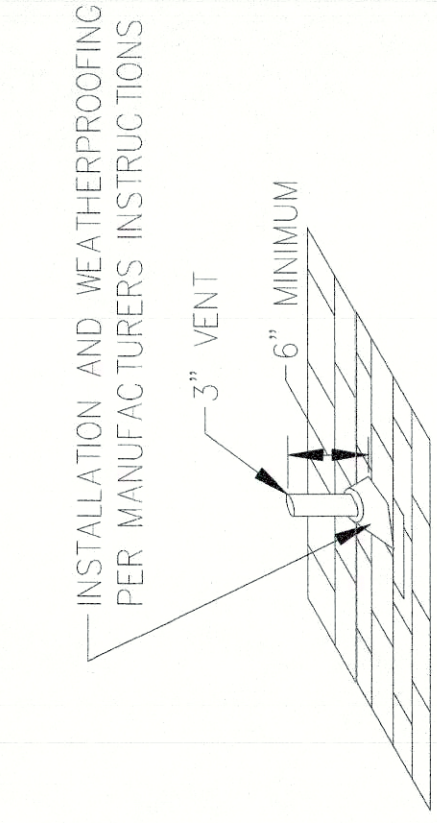
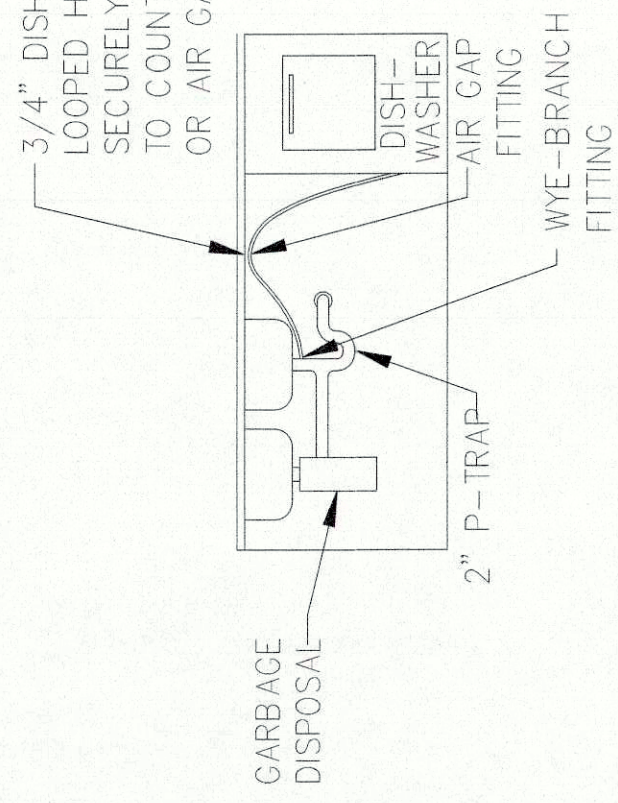
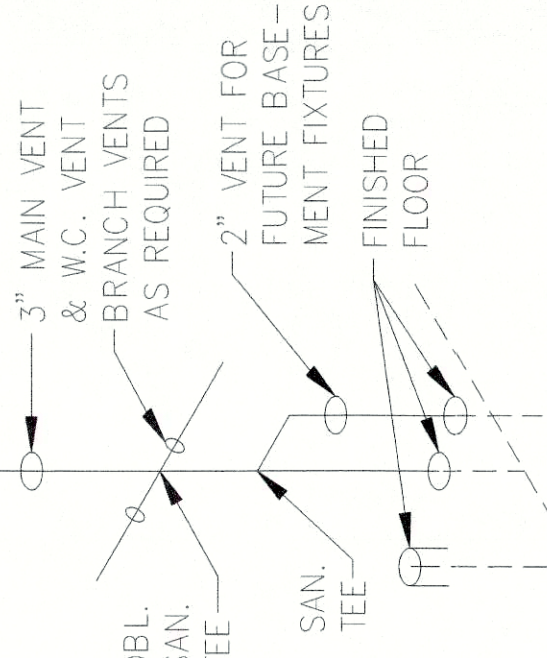
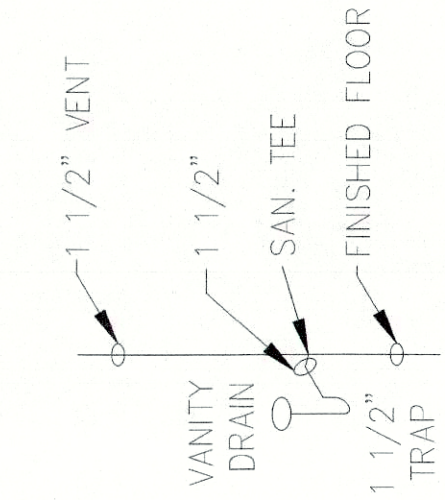
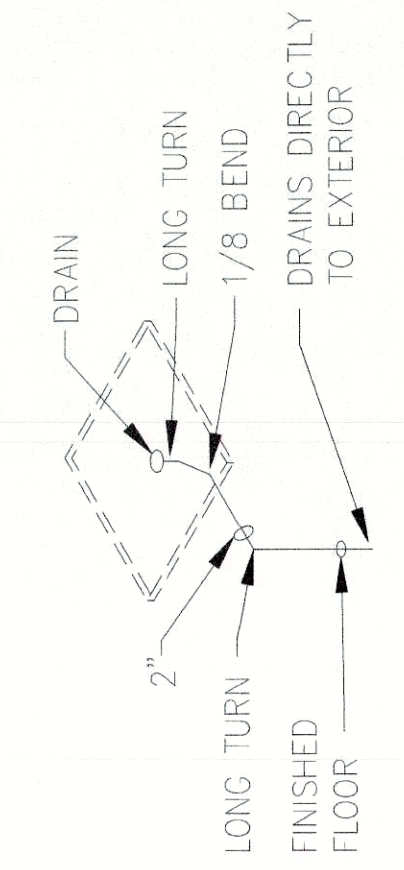
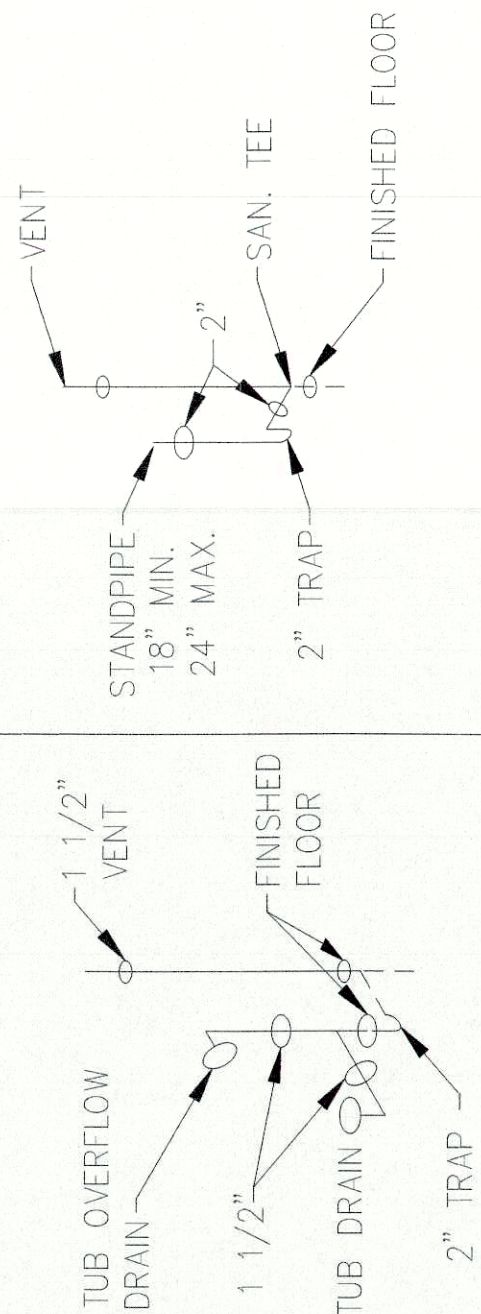
Interior Elevations

Project number kha 2015
Date 07/05/2015
Drawn by RKH
Checked by JMB

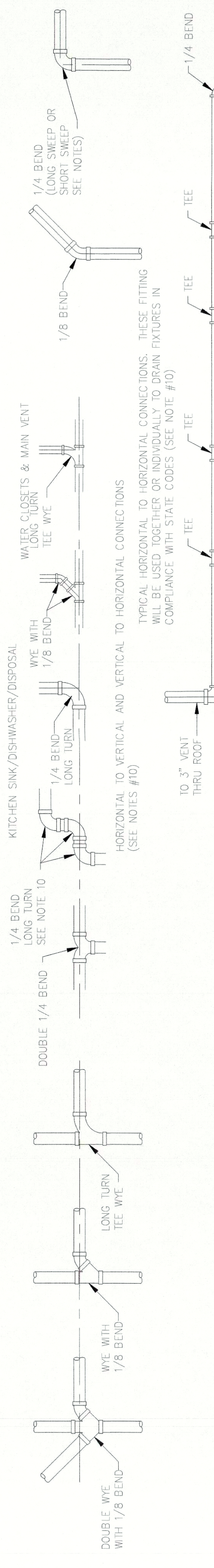
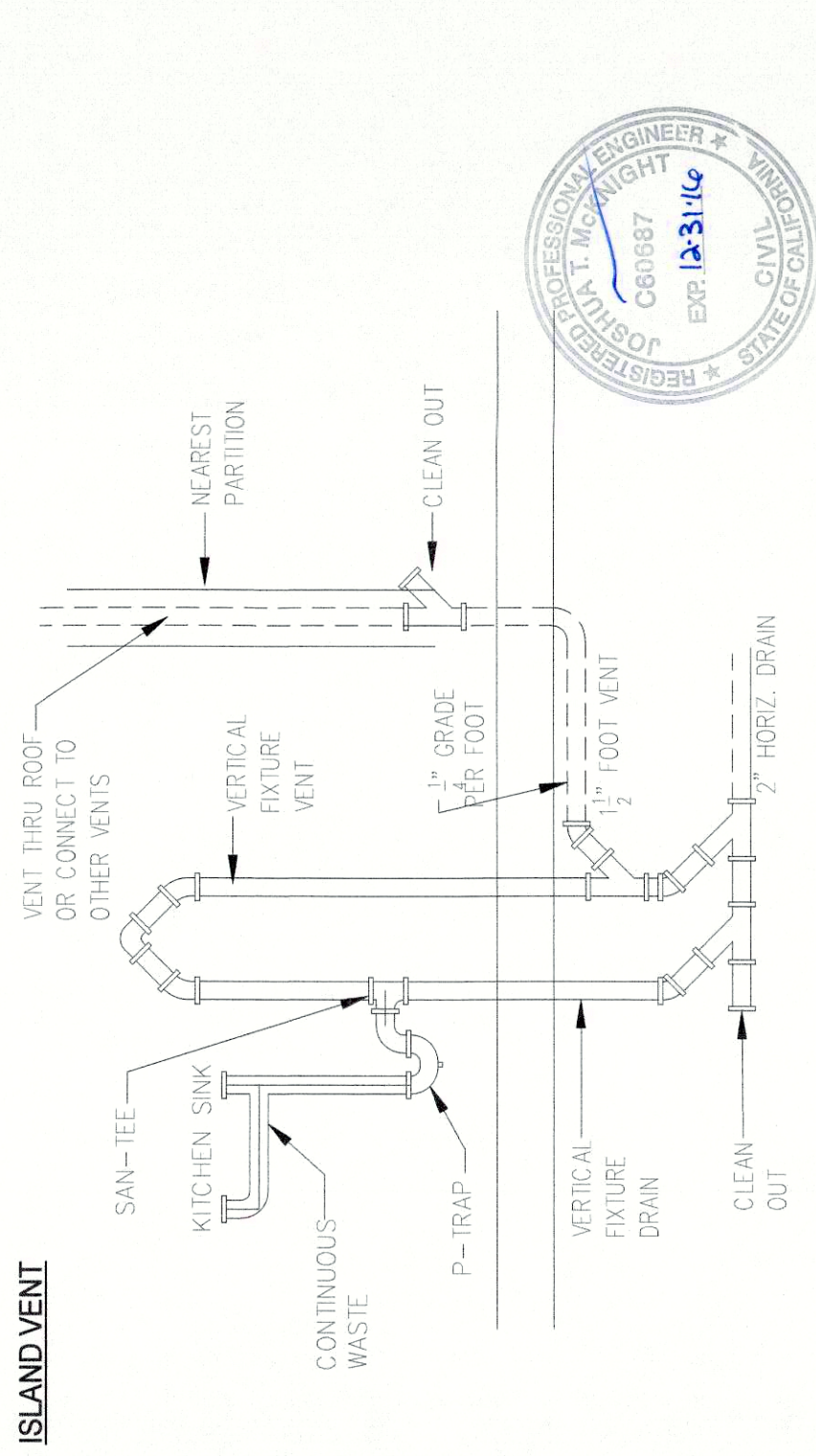
A9

Scale 1/2" = 1'-0"



DWV NOTES:

- | | |
|-----|--|
| 1. | ALL WASTE AND VENT LINES ARE TO BE ABS OR PVC PIPE PROVIDED DWELLING DOES NOT EXCEED TWO STORIES IN HEIGHT. SUPPLY LINES ARE TO BE COPPER. |
| 2. | PITCH ON HORIZONTAL WASTE LINES SHALL BE 1/4" IF A SPECIAL CONSTRUCTION CONDITION EXISTS, LOCAL AUTHORITIES MAY GIVE APPROVAL FOR 1/8" SLOPE ON PIPE DIAMETERS OF 4" OR GREATER. |
| 3. | WASTE LINES: INSTALL WYE W/ CLEANOUT PRIOR TO EXITING WALL FOR CONNECTION TO DISPOSAL SYSTEM. |
| 4. | PVC-DWV PIPE SUPPORTS: AT BRANCHES, CHANGES IN DIRECTION AND AT THE BASE. EACH FLOOR AND MID STORY (VERTICAL) MAXIMUM EVERY 3'-0" AT THE END OF BRANCHES, AND CHANGE OF DIRECTION OR ELEVATION. 4" MINIMUM MAIN WASTE TO SEPTIC (B+1 BUIDLER). |
| 5. | PLASTIC PIPE SHALL NOT PENETRATE FIRE RATED ASSEMBLIES INCLUDING FLOOR/CEILING. PIPING SHALL BE FIRESTOPPED WHERE REQUIRED WITH MATERIAL EQUIVALENT TO CONSTRUCTION ABOVE IT PENETRATES & BE SUITABLE TO PIPE MATERIAL OR USE METAL PIPE FROM A MIN. OF ABOVE ASSEMBLY & DOWN. |
| 6. | EACH DWELLING SHALL HAVE ONE MAIN 3 INCH MIN. STACK FROM BUILDING DRAIN AND AT A MIN. OF 6" ABOVE THE ROOF LINE |
| 7. | ALL TRAP ARMS MUST BE SUPPORTED WITH 3/4" MINIMUM BEARING. |
| 8. | ALL PLASTIC PIPE MUST BE SUPPORTED AT INTERVALS IN ACCORDANCE WITH APPLICABLE PLUMBING CODES |
| 9. | HORIZONTAL TO HORIZONTAL & VERTICAL TO HORIZONTAL DRAIN CHANGES IN DIRECTION SHALL BE 45 DEGREE WYES. LONG SWEEP 90 DEGREE ELBOWS, LONG SWEEP TYS, 6TH, 8TH, OR 16TH BENDS, APPROVED COMBINATIONS OF THESE OR EQUIVALENT LONG SWEEP FITTINGS. SHORT SKEEPS PERMITTED IN SINGLE BRANCH HORIZONTAL TO VERTICAL CHANGES IN DIRECTION ON 3 INCH OR LARGER. |
| 10. | TRAPS SHALL BE PLACED AS CLOSE AS POSSIBLE TO FIXTURE OUTLET. MAXIMUM VERTICAL DROP FROM FIXTURE OUTLET TO TRAP WEIR IS 24" |
| 11. | INACCESSIBLE TRAPS SHALL NOT HAVE UNIONS, CLEANOUTS OR SUBPOINTS. ACCESSIBLE TRAPS SHALL BE REMOVABLE WITH UNION IN TRAP SEAL OR HAVE CLEANOUT OFFERING SAME SIZE AS TRAP. |
| 12. | ALL HORIZONTAL VENT BRANCH PIPING SHALL BE LOCATED A MINIMUM OF 6" ABOVE THE FLOOR LEVEL OF THE HIGHEST FIXTURE IN THAT BRANCH. |
| 13. | MAXIMUM DISTANCE OF FIXTURE TRAP WEIR TO VENT SHALL BE IN ACCORDANCE WITH ALL APPLICABLE PLUMBING CODES. |
| 14. | PLASTIC PIPING SHALL BE PROTECTED WITH 1/16" (15 GAUGE) STEEL PLATE WHEN PIPE PASSES THRU WOOD MEMBERS LESS THAN 1 1/4 INCHES FROM EDGE OF MEMBER.
CPC2001 313.9 |
| 15. | FALL IN TRAP NOT ACCEPTABLE IN CPC |
| 16. | THE VENT PIPE OPENING FROM A SOIL OR WASTE PIPE, EXCEPT FOR WATER CLOSET AND SIMILAR FIXTURES, SHALL NOT BE BELOW THE WEIR OF THE TRAP. CPC2001.002.4 |



17. FIRST FLOOR FIXTURES SHALL CONNECT INTO HORIZONTAL BUILDING DRAIN MORE THAN 10 PIPE DIAMETERS DOWNSTREAM (TAKE THE DIAMETER OF THE CONNECTION TIMES 10 AND THAT IS THE MIN. DISTANCE YOU MUST BE TO THE STACK BASE) OF STACK BASE & NOT CONNECT INTO SECOND FLOOR DRAIN STACK.
18. POTABLE WATER SYSTEM SHALL BE DISCONNECTED ON SITE BY SITE BUILDER IN ACCORDANCE WITH APPLICABLE STATE PLUMBING CODES
19. BACKFLOW DEVICES, VACUUM BREAKERS & AIR GAPS: FOR WATER DISTRIBUTION SYSTEMS
"PROTECTION OF POTABLE WATER SUPPLY."
 - A. WATER HEATER LOCATED @ OR ON LIVING SPACE LEVEL MUST HAVE A BACKFLOW DEVICE INSTALLED AND MUST HAVE A WATERTIGHT PAN OF CORROSION RESISTANT MATERIALS INSTALLED.
 - B. CLOTHES WASHER (IF NOT BUILT IN TO THE APPLIANCE) MUST HAVE AN BACKFLOW
20. WATER HEATER AND FURNACE SHALL BE BRACED TO SECURE AGAINST SEISMIC MOVEMENTS. USE PLUMBER TAPE BRACING OR OTHER APPROVED FASTENERS.

[illegible]

Plumbing Notes and Details

Project number	ktha 2015
Date	07/05/2015
Drawn by	RKH
Checked by	JMB

P2

 $3/8" = 1'-0"$

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KARUK TRIBE
HOUSING AUTHORITY

Two Bedroom House

No.	Description	Date

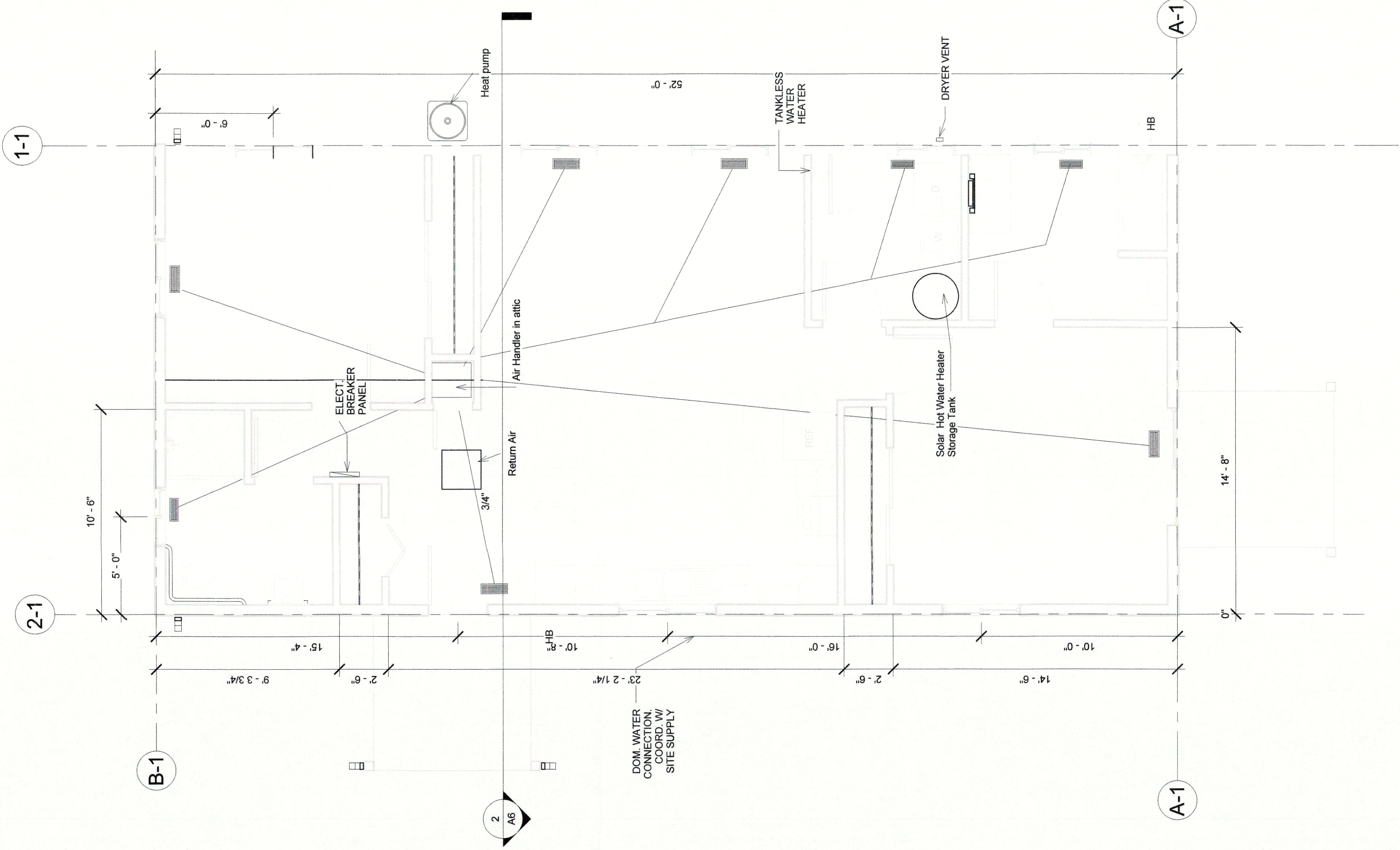
Mechanical Plan

Project number	ktha 2015
Date	07/05/2015
Drawn by	RKH
Checked by	JMB

M1	
Scale	1/4" = 1'-0"



1 Mechanical Plan
1/4" = 1'-0"



DISCLAIMER:
HEATING PLANS ARE SHOWN FOR REPRESENTATION ONLY.
HEATING AND COOLING SYSTEMS WILL BE DESIGNED AND INSTALLED BY THE HEATING SYSTEM SUPPLIER
AND WILL BE REVIEWED AND APPROVED BY LOCAL JURISDICTIONS TANKING AUTHORITY

NOTES:
1. TO BE BRYANT OR EQUAL WITH THE AIR HANDLER IN THE ATTIC AND HEAT PUMP OUTSIDE ON GROUND.
2. FLEX DUCTING
3. ALL AIR DISTRIBUTION SYSTEMS, DUCTS, PLENUMS AND OTHER EQUIPMENT SHALL BE
DESIGNED AND INSTALLED IN ACCORDANCE WITH CMC AND UL 181 STANDARDS
4. ALL DUCTS SHALL BE INSULATED TO MEET THE ASHRAE OR SMACNA STANDARDS.
5. ALL DUCT SEAL AND INSULATION SHALL MEET THE CMC REQUIREMENTS.
6. ALL METAL DUCTS FOR STATIC AIR PRESSURE SHALL COMPLY WITH TABLE 6-1 2001 CMC

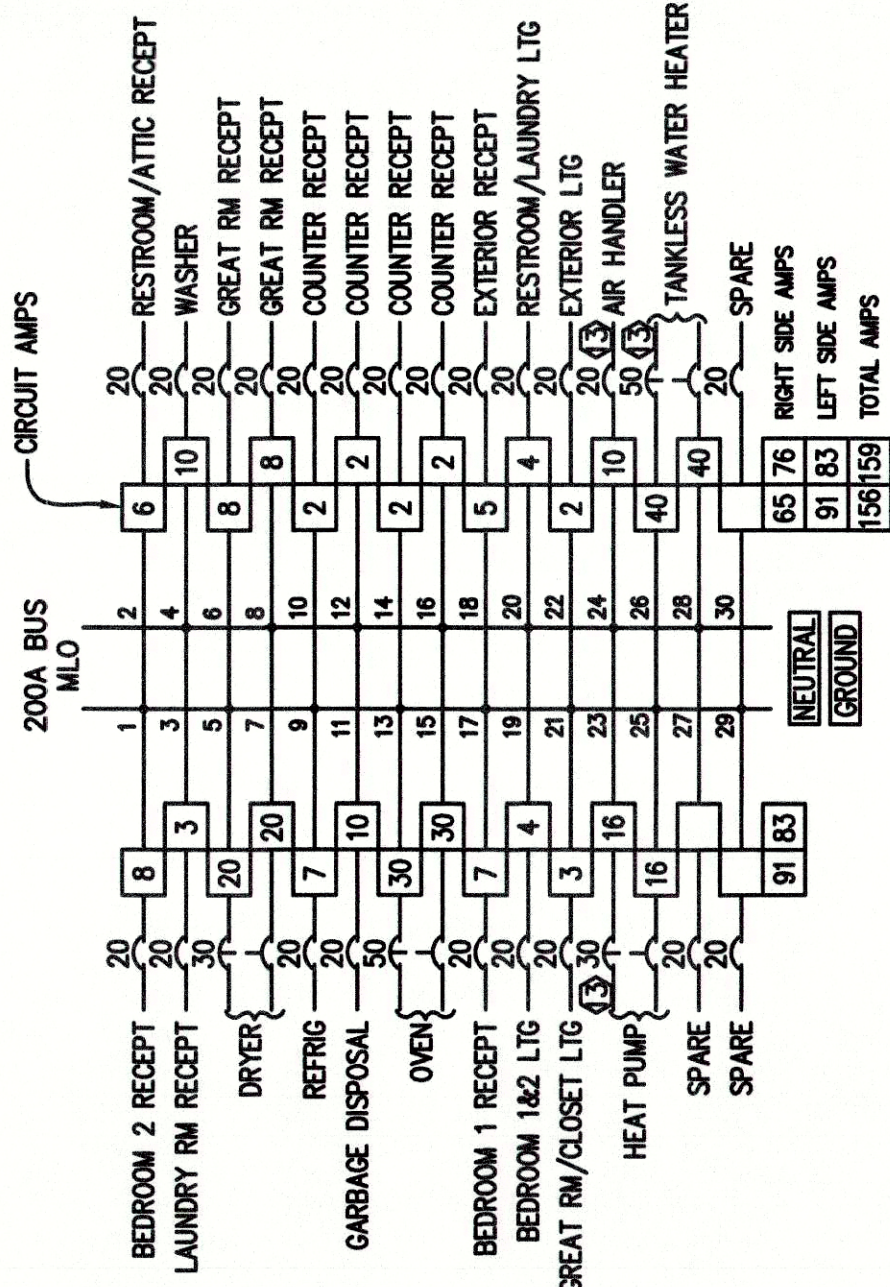
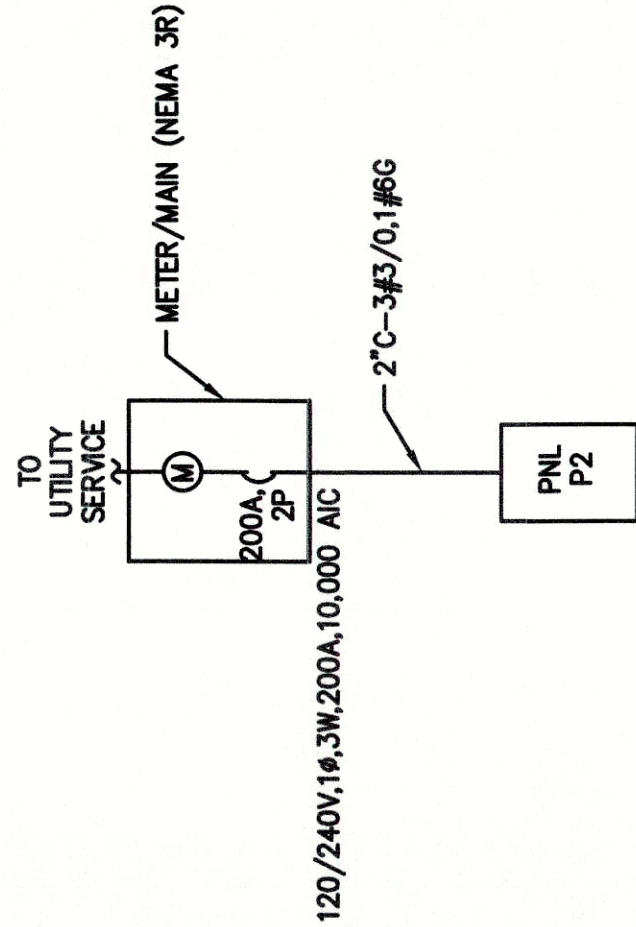
GENERAL NOTES

- 1. UNLESS OTHERWISE INDICATED, RECEPTACLES SHALL BE CONNECTED TO THE CIRCUIT INDICATED USING #12ALF NON-METALIC SHEATHED CABLES. RECEPTACLE CIRCUITS SHALL BE CONCEALED IN WALLS OR ABOVE CEILINGS.
- 2. MAINTAIN A MINIMUM 30"W x 36"D CLEAR SPACE IN FRONT OF ALL ELECTRICAL DISCONNECTS AND PANELS PER THE NEC.
- 3. MAINTAIN WORKING SPACE AND 6'-6" HEAD ROOM IN FRONT OF ALL ELECTRICAL EQUIPMENT IN ACCORDANCE WITH NEC.
- 4. CONDUCTORS SHALL BE NON-METAL SHEATHED CABLE (ROMEX) UNLESS OTHERWISE SHOWN.
- 5. RECEPTACLES SHALL BE SPECIFICATED GRADE WITH NUMBER OF POLES AS REQUIRED. RECEPTACLES SHALL BE PROVIDED WITH GROUND TERMINALS AND SCREW TERMINALS. SUITABLE FOR NO. 10 CONDUCTORS. RECEPTACLES SHALL BE WHITE AND RATED FOR 15A, 120V WITH A NEMA 5-15R CONFIGURATION. DEVICE PLATE SHALL BE PLASTIC WITH COLOR TO MATCH RECEPTACLES.
- 6. LOAD CENTERS SHALL BE RATED AS SHOWN AND PROVIDED WITH TIN-PLATED ALUMINUM BUSBARS. THERMAL MAGNETIC CIRCUIT BREAKERS AS SHOWN, AND NEMA 1 ENCLOSURE UNLESS OTHERWISE INDICATED.

KEY NOTES

- ① PROVIDE AND INSTALL RECEPTACLE 6" ABOVE COUNTER HEIGHT.
- ② SWITCHED GARBAGE DISPOSAL RECEPT. MOUNT 6" ABOVE COUNTER.
- ③ A-19 INCANDESCENT LIGHT FIXTURE TO BE DETERMINED.
- ④ 2 TUBE, F22W T8 SURFACE MOUNT FLUORESCENT FIXTURE.
- ⑤ WALL SCONCE LIGHT FIXTURE TO BE DETERMINED.
- ⑥ ARC FAULT RECEPT.
- ⑦ PROVIDE AND INSTALL IN ACCORDANCE WITH UTILITY REQUIREMENTS.
- ⑧ PROVIDE RECEPTACLES TO MATCH EQUIPMENT CONFIGURATION.
- ⑨ PROVIDE AND INSTALL SMOKE DETECTOR IN LOCATION SHOWN.
- ⑩ PROVIDE AND INSTALL RECEPTACLE 48" ABOVE FINISHED FLOOR.
- ⑪ MOUNT 6" BELOW COUNTER TOP.
- ⑫ MOUNT UNDER SINK FOR DISPOSER CONNECTION.
- ⑬ FINAL CONFIGURATION AND SIZING OF CIRCUIT BREAKER SHALL BE COORDINATED WITH SUPPLIED EQUIPMENT BEFORE INSTALLATION.

ONE-LINE DIAGRAM



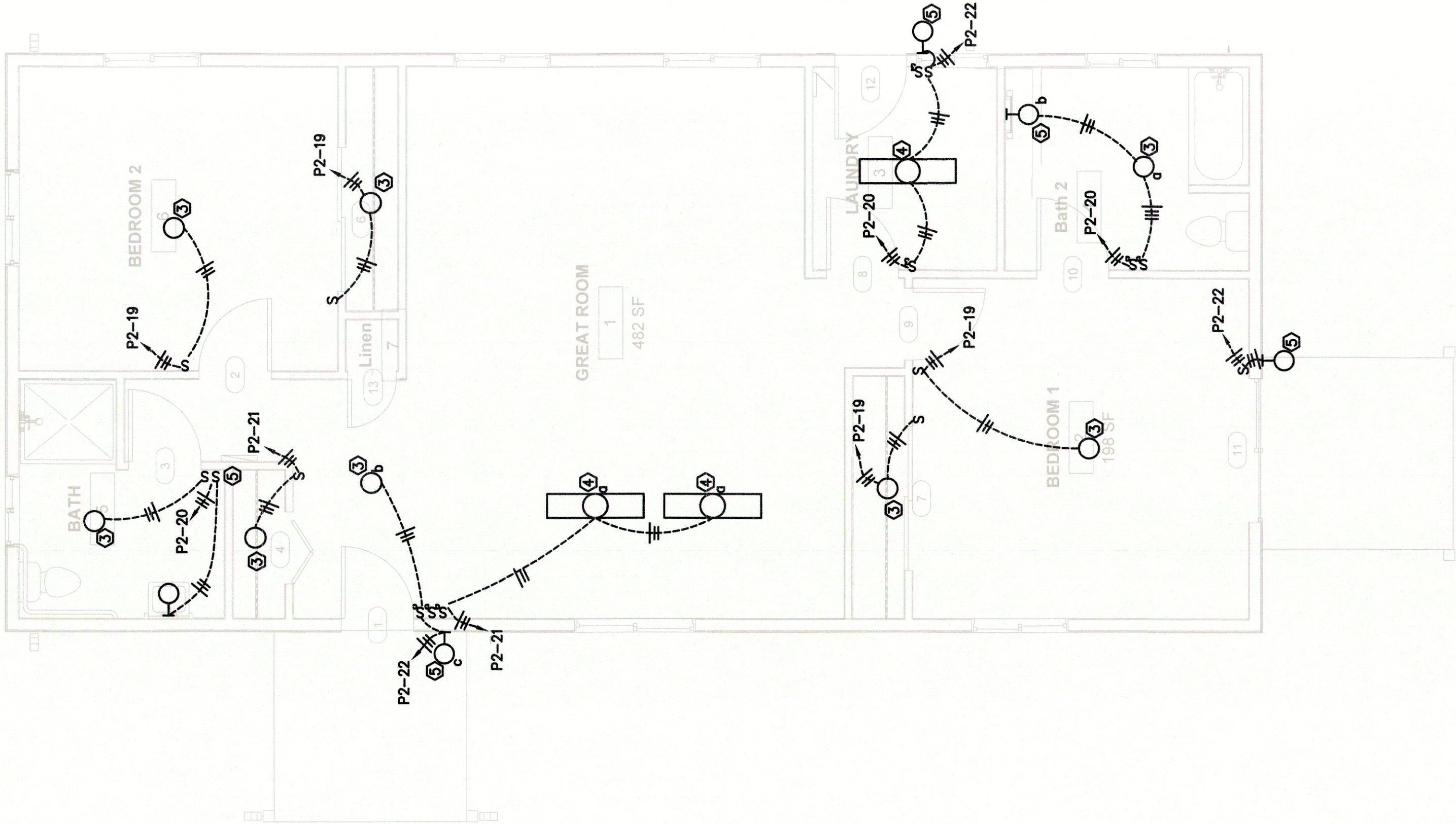
PANEL P2

VOLTAGE: 120/240V
LOCATION: HALLWAY
MOUNTING: RECESS
AMPS IC: 10,000

ELECTRICAL SYMBOLS

- CONDUIT EXPOSED
- CONDUIT CONCEALED or BURIED
- CROSSHATCHES ON CONDUIT RUN INDICATES NUMBER OF #12 CONDUCTORS
- SUBSCRIPT G INDICATES GREEN GROUND CONDUCTOR
- U-> HOME RUN-DESTINATION SHOWN
- SURFACE MOUNT PANELBOARD
- LUMINAIRE
- LUMINAIRE
- WALL MOUNTED LUMINAIRE
- SMALL LETTER SUBSCRIPT AT SWITCH AND LUMINAIRE INDICATES SWITCHING
- TYPE INDICATED SEE LUMINAIRE AND DEVICE SCHEDULE
- CONVENIENCE RECEPTACLE, DUPLEX
- WP-WEATHERPROOF
- AFCI-ARCH FLASH
- CURRENT INTERRUPTER
- 4-PLY CONVENIENCE RECEPTACLE
- GF-GROUND FAULT INTERRUPTER
- TELEPHONE/DATA RECEPTACLE (OUTLET BOX ONLY)
- WALL SWITCH
- MOUNT SWITCHES 48" AFF TO TOP OF DEVICE
- UNLESS OTHERWISE INDICATED, TYPE INDICATED SEE LUMINAIRE AND DEVICE SCHEDULE.
- CIRCUIT-BREAKER, THERMAL MAGNETIC TRIP SHOWN, 3-POLE UNLESS INDICATED OTHERWISE

LIGHTING PLAN
1/4"=1'-0"



POWER PLAN
1/4"=1'-0"



KARUK TRIBE HOUSING AUTHORITY

635 JACOBSON WAY
HAPPY CAMP, CA 96039

TWO BEDROOM FLOOR PLAN

SHEET

E1

PACE ENGINEERING
REGISTERED PROFESSIONAL ENGINEER
ELECTRICAL
No. E 00726
DATE 05/11/15
JOB NO. 2274.17

GENERAL

1. DO NOT SCALE DRAWINGS
2. The drawings and specifications, and copies thereof are legal instruments of services for use by the owner and authorized representatives on the designated property only.
3. All work shall be executed in accordance with the 2013 edition of the California Building Code and/or all other governing agencies requirements.
4. Contractor shall comply with the regulations of "Occupational Safety and Health Act."
5. All dimensions and conditions shall be checked and verified on the job site by the contractor before work begins. Any errors, omissions, or discrepancies shall be brought to the attention of the architect and owner before construction begins.
6. In the event there are found discrepancies or ambiguities in or omissions from the specifications or the drawings, or should there be doubt as to their meaning or intent, the Architect shall be notified, and shall provide a written clarification prior to the commencement of construction or the purchasing of the materials. Failure on the part of the Contractor to follow this procedure shall relieve both the Architect and the owner of damages, costs, and time delays created by these conditions.
7. Contractor shall examine the condition of the project area and verify the sizes and locations of existing facilities at the site, report any discrepancies between the drawings and existing conditions to the owner and the architect, and shall not commence until the conditions are further clarified or authorization to proceed is given.
8. Dimensions shown on the drawings are to centerline of column or face of stud, unless otherwise noted.
9. Work shall conform to all local, state, and federal codes and ordinances in effect and all safety provisions shall be strictly adhered to.
10. There will be no substitutions without the Owner's written prior approval.
11. The Architect makes no guarantee for products identified by trade name or manufacturer, nor their availability; however, the Contractor shall be responsible for meeting the performance requirement of the specification.
12. Contractor shall be responsible for and obtain all permits and licenses and pay required fees. Certificates of insurance for Workers Compensation shall be filed prior to issuing of permit.
13. Each Contractor shall guarantee, be responsible for and make good any and all defects due to faults of his/her trade for labor, leaks or materials, for a period of one year minimum following the acceptance of the work by the Owner
14. All damages to, both on and off property (alleys, sidewalks, curbs, streets, etc.) occurring as a result of construction shall be replaced or repaired by the Contractor at no cost to the Owner.
15. No materials or refuse shall be kept outside work area. Provide area for combustible rubbish storage.
16. Typical details shall apply where no specific details or sections are given.
17. The Contractor shall be responsible for continuous clean-up of the site and of all debris.
18. Abbreviations throughout the plans are those in common usage. Architect will define intent of any in question.
19. Provide and maintain Fire Extinguishers as required by the Local fire department field inspector during construction.
20. This project shall comply with title 24 and 2013 CBC, CRC, CGBSC, UMC, UPC and 2013 HEC.
21. Project to be in conformance with 2013 CBC Chapter 7A Materials and Construction Methods for Exterior Wild Fire Exposure
22. See Wildland Urban Interface (WUI) Products Manual published by the California Dept. of Forestry and Fire Protection, Office of the State Fire Marshall

SITE WORK

1. All site work shall comply with any applicable approved drawings or local codes as required.
2. Soils Report not required.
3. All excess materials shall be disposed of at the Contractor's expense.
4. All concrete curbs and sidewalks shall be installed per the California Department of Transportation Standard Specifications-July 1999, Section 73

EARTHWORK

1. All grading and earthwork shall be executed in accordance with those ordinances of the governing agencies
2. Carry all footings into solid natural or compacted soil a minimum of 18" regardless of elevations shown on the drawings.
3. All fill material shall be compacted to a minimum 95% relative compaction per Cal 216.

A C PAVING

CONCRETE

1. The labor, materials and execution required for all concrete work as indicated on the drawings shall be in accordance with those applicable sections of chapter 19 of the latest adopted editions of the uniform building code.
2. All concrete shall be a 5 sack mix and have a minimum compressive strength of 2500 psi at 28 days.
3. Reinforcing steel as required shall be properly anchored and tied in place before pouring concrete. Lap all splices a minimum of 32 bar diameters. Reinforcing steel shall be deformed bars conforming to ASTM designation A-615, Grade 40.

MASONRY

1. The labor, materials and execution required for all masonry work as indicated on the drawings shall be in accordance with those applicable sections of chapter 21 of the latest adopted editions of the uniform building code.

METALS

1. Use approved metal connectors, joist and rafter hangers, post base and cap connectors as required on plans, by code and Building Inspector.

STEEL

1. The labor, materials and execution required for all structural steel work as indicated on the drawings shall be in accordance with those applicable sections of Chapter 22 of the latest adopted edition of the CBC.
2. Structural steel shall conform to the latest specifications of the A.S.T.M. and have a min. yield of 36,000 PSI
3. Bolted or welded connections shall conform to A.I.S.C. specifications unless noted otherwise on the drawings.
4. Structural steel not encased in concrete shall be shop painted with one coat of zinc chromate

WOOD

1. All lumber shall be grade marked #2 DF minimum except as noted on plans.
2. All posts to be #1 DF.
3. All horizontal lumber shall be #1 DF or better.
4. All studs shall be DF standard.
5. Plywood shall be DF conforming to PSI-74 U. S. Dept of Commerce, and shall be grade stamped "D.F.P.A."
6. Wood bearing directly on concrete shall be pressure treated Doug. Fir or Redwood

CARPENTRY

1. All framing and carpentry shall be done in accordance with those applicable sections of Chapter 23 of the latest adopted edition of the CBC and details indicated on the drawings.
2. Nailing as per C.B.C. Table 25-Q, CRC Table: R 602.3(1) and Table 602.3 (2)
3. Structural Members shall not be cut for pipe, conduit or etc.
4. 2 inch solid blocking shall be placed between joists or rafters at all supports
5. Use approved metal connectors, joist and rafter hangers, post base and cap connectors as required on plans, by code and Building Inspector.

MILLWORK

1. All Millwork shall be manufactured in accordance with the standards in the latest edition of Chapter 23 of the Manual of Millwork of the Wood Working Institute in the Custom Grade hereinafter specified or as shown on the drawings
2. Submit Shop Drawings in conformance to Section 1 "Guidelines for Architectural Millwork Shop Drawings".
3. Millwork and installation shall be in accordance with Custom Grade of the Manual of Millwork latest edition
4. Deliver all materials only when project is ready for installation and the General Contractor has provided a clean storage area as defined in the Manual of Millwork

SHEET METAL

1. All sheet metal work shall be in accordance with the latest addition of the "Architectural Sheet Metal Manual" of the Sheet Metal and Air Conditioning Contractors National Association, Inc. SMACNA
2. Flashings, gutters and other galvanized iron (G.I.) shall be 26 gage minimum unless noted otherwise, galvanized hot dip process.

THERMAL & MOISTURE PROTECTION

1. Where penetrations are made through the roof, provide watertight assembly

ROOFING

1. Asphalt composition shingles to be installed per mfrg. recommendations. Manufactured by Malarkey Lifetime Warranty Comp. Arch. Shingle, or equal, Color selected by Owner Or Metal Roof FABRAL SSR 1-1/2", or equal, Color selected by Owner
2. All roofing and flashing materials shall be installed in strict conformance with the manufacturer's specification and in accordance with Chapter 15 of the latest adopted edition of the Uniform Building Code.
3. All roof and flashing materials shall be installed to form a waterproof system and the roofing contractor shall issue a written guarantee to the Owner to maintain the roofing and all flashings in a watertight condition for a period of two (2) years after acceptance of the project.
4. Roof Gutters Shall be provided with a means to prevent accumulation of leaves
5. Eave and Soffit vents must be fire rated to preclude ember and fire entrance
6. Underside of Eaves shall be ignition resistant or non-combustible
7. Where Roof profile allows exposure of a combustible decking surface, one layer of No.72 ASTM Cap Sheet shall be installed over the combustible decking.
8. Valley Flashing shall be not less than 0.019" (No. 26 Galvanized Sheet Gage) Corrosion -resistant metal installed over a minimum 36" wide underlayment consisting of one layer of No. 72 ASTM cap sheet running full length of valley

INSULATION

1. Wall insulation R-13 and R-19
2. Ceiling insulation R-30
3. All insulation shall comply with standards established by the State of California "Energy Design Manual"

WEATHER STRIPPING

1. Comply with title 24 requirements for weather stripping at all openings

DOORS & WINDOWS

1. See Sheet A-8
2. Vinyl Low E Double paned Windows and Sliding Glass Doors manufacturer selected by KTHA
3. Exterior Doors 6 Panel Metal Doors with standard Kwikset locks and deadbolts
4. Interior Doors 6 Panel HC with Kwikset hardware
5. Exterior windows, window walls, glazed Doors and Glazed openings shall be insulating -glass units with a minimum of one tempered pane, or glass block units, or have a fire resistance rating of not less than 20 -minutes, or conform to the performance requirements of SFM 12-7A-2
6. Exterior Door Assemblies shall conform to the performance requirements of standard SFM 12-7A-1 or shall be in accordance with 2013 CBC 708A

GLAZING

1. All labor, materials and execution required for the glass and glazing work as indicated on the drawings shall be in accordance with those applicable sections of Chapter 24 of the latest adopted edition of the C.B.C.
2. Glass doors, adjacent panels, glazing within 24" of a door, and all glazed openings within 1'-6" of the adjacent floor shall be of tempered glass as approved for impact hazard.
3. All windows shall be certified and labled to meet A.N.S.I. infiltration standards

FINISHES

1. Contractor shall supervise all finish work.

2. Contractor shall provide galvanic insulation between dissimilar metals.

3. All materials and finishes indicated on drawings shall be new, unused, and of serviceable condition except as specifically noted.
4. Wall and Ceiling materials shall not exceed the flame spread classifications in CBC table 6-B

EXTERIOR SIDING

1. Siding: LP Siding with 6" grooves
2. Trim: primed spruce 3/4"x4" around windows and doors
3. Soffit: NA

GYPSUM WALLBOARD

1. The Gypsum Wallboard work shall be done in accordance with the recommendations of ASTM C754,GA 151, GA 201, GA 216 and shall conform with Chapter 25 of the latest adopted edition of the California Building Code
2. Interior walls to be finished with orange peel texture through out

CERAMIC TILE

1. Ceramic tile work shall be in accordance with the best recommended standards of the "Tile Council of America"

PAINTING

1. All painting work, which includes back priming, sealing, staining, lacquering or other work reasonable incidental to the painting of all exterior and interior woodwork, plywood, gyboard, sheet metal, ironwork, etc. shall be in accordance with the recommended standards as set forth in the "Painting Specifications" of the Painting and Decorating Contractors Association of America.
2. Colors of all areas being patched and repaired shall match existing and all new work shall be as directed and per schedule provided by Contractor
3. Paint manufactured by Sherwin Williams and Benjamin Moore, applied per manufacturers recommendations and per schedule provided by Contractor and Owner
4. Interior Walls- prime and paint with two coats semi-gloss latex enamel
Exterior Walls-one coat primer and two coats eggshell finish
Exterior Trim-one coat primer and two coats semi-gloss finish
Exterior Doors - one coat primer, two coats eggshell finish and two coats of trim paint w/ semi-gloss finish

CARPET

1. Manufactured by NA
2. Color as selected by Owner from manufacturers standards.
3. Install in accordance with manufacturers recommendations.

VINYL

1. Manufactured by Armstrong, Product: NA
2. Color as selected by Owner from manufacturers standards.
3. Install in accordance with manufacturers recommendations.

MECHANICAL

1. See Mechanical Notes sheet M-1

PLUMBING

1. See Mechanical Drawings Sheet P-1

ELECTRICAL

1. See Electral Drawing Sheet E-1

ENERGY CONSERVATION

1. All work shall conform to the energy conservation requirements set forth in the California Administrative Code, Title 24.
2. See attached Energy Calculations
3. All appliances shall be energy star rated

SECURITY PROVISIONS

1. All Pin-type hinges which are accessible from outside a secured area when the door is closed shall have non-removable hinge pins. In addition, they shall have minimum 1/4" diameter steel jamb stud with 1/4" minimum protection unless the hinges are shaped to prevent removal of the door if the hinge pins are removed.

FIRE PROTECTION

1. All smoke detectors to be hard wired with battery backup.
2. Penetrations of fire resistive walls, floor - ceiling and roof shall be protected as required in CBC Chapter 7.
3. Provide noncombustible blocking behind all fixtures, handles, grab bars, etc., where indicated or required.

EXITS

1. All exits are to be openable from the inside without the use of a key or special knowledge

JMB
ARCHITECTURE

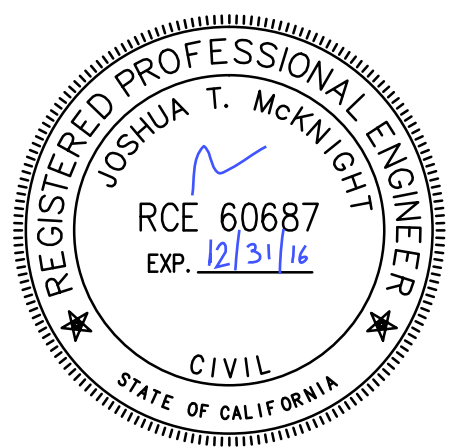


ARCHITECTURE
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KARUK TRIBE
HOUSING AUTHORITY
One Bedroom House

No.	Description	Date

GENERAL NOTES

Project number	ktha 2015
Date	07/13/2016
Drawn by	RKH
Checked by	JMB

G2

Scale

2013 CALIFORNIA GREEN BUILDING STANDARDS CODE

CHAPTER 4 RESIDENTIAL MANDATORY MEASURES

DIVISION 4.1 Planning and Design

4.106 SITE DEVELOPMENT

4.106.3 Storm water drainage and retention during construction

Projects which disturb less than one acre of soil and are not part of a larger common plan of development which in total disturbs one acre or more, shall manage storm water drainage during construction. In order to manage storm water drainage during construction, one or more of the following measures shall be implemented to prevent flooding of adjacent property, prevent erosion and retain soil runoff on the site.

1. Retention basins of sufficient size shall be utilized to retain storm water on the site.
2. Where storm water is conveyed to a public drainage system, collection point, gutter or similar disposal method, water shall be filtered by use of a barrier system, wattle or other method approved by the enforcing agency.
3. Compliance with a lawfully enacted storm water management ordinance.

4.106.3 Surface drainage

The site shall be planned and developed to keep surface water from entering buildings. Construction plans shall indicate how the site grading or drainage system will manage surface water flows. Examples of methods to manage surface water include, but are not limited to, the following:

1. Swales
2. Water collection and disposal systems
3. French drains
4. Water retention gardens
5. Other water measures which keep surface water away from buildings and aid in groundwater recharge

DIVISION 4.2 Energy Efficiency

4.201 GENERAL

4.201.1 Scope (Minimum standards for energy efficiency)

At a minimum, meet the California Energy Code (Title 24, Part 6) as established by the California Energy Commission.

DIVISION 4.3 Water Efficiency and Conservation

4.303 INDOOR WATER USE

4.303.1 Twenty Percent Savings

A schedule of plumbing fixtures and fixture fittings that will reduce the overall use of potable water within the building by at least 20 percent shall be provided. The reduction shall be based on the maximum allowable water use per plumbing fixture and fitting as required by the California Building Standards Code. The 20 percent reduction in potable water use shall be demonstrated by one of the following methods:

1. Each plumbing fixture and fitting shall meet reduced flow rates specified in Table 4.303.2; or
2. A calculation demonstrating a 20 percent reduction in the building "water use" baseline as established in Table 4.303.1 shall be provided, for low-rise residential occupancies, the calculation shall be limited to the following plumbing fixture and fitting types: water closets, urinals, lavatory faucets and showerheads.

Table 4.303.1 - WATER USE BASELINE

FIXTURE TYPE	FLOW RATE	DURATION	DAILY USE	OCCUPANTS
Showerheads, residential	2.5 gpm @ 80 psi	8 min.	1	
Lavatory faucets, residential	2.2 gpm @ 80 psi	30 min.	3	
Kitchen faucets	2.2 gpm @ 80 psi	4 min.	1	
Replacement venturis	2.2 gpm @ 80 psi			
Gravity tank-type water closets	1.6 gpm/flush	1 flush	1 male/3 female	
Flushometer tank water closets	1.6 gpm/flush	1 flush	1 male/3 female	
Flushometer valve water closets	1.6 gpm/flush	1 flush	1 male/3 female	
Electromechanical hydraulic water closets	1.6 gpm/flush	1 flush	1 male/3 female	
Urinals	1.0 gpm/flush	1 flush	2 male	

Fixture "Water Use" = Flow rate X Duration X Occupants X Daily use

4.303.2 Multiple showerheads serving one shower

When single shower fixtures are served by more than one showerhead, the combined flow rate of all the showerheads shall not exceed the maximum flow rates specified in the 20 percent reduction column contained in Table 4.303.2 or the shower shall be designed to only allow one showerhead to be in operation at a time.

Exception: The maximum flow rate for showerheads when using the calculation method specified in Section 4.303.1, Item 2, is 2.5 gpm @ 80 psi.

Table 4.303.2 - FIXTURE FLOW RATE

FIXTURE TYPE	FLOW RATE	MAXIMUM FLOW RATE AT 20 PERCENT REDUCTION
Showerheads	2.5 gpm @ 80 psi	2 gpm @ 80 psi
Lavatory faucets, residential	2.2 gpm @ 80 psi	1.8 gpm @ 80 psi
Kitchen faucets	2.2 gpm @ 80 psi	1.8 gpm @ 80 psi
Gravity tank-type water closets	1.6 gpm/flush	1.3 gpm/flush
Flushometer tank water closets	1.6 gpm/flush	1.3 gpm/flush
Flushometer valve water closets	1.6 gpm/flush	1.3 gpm/flush
Electromechanical hydraulic water closets	1.6 gpm/flush	1.3 gpm/flush
Urinals	1.0 gpm/flush	0.8 gpm/flush

1. Includes single and dual flush water closets with an effective flush of 2.5 gallons or less.
2. Lavatory faucets shall not have a flow rate less than 0.8 gpm @ 20 psi.

4.303.3 Plumbing fixtures and fittings

Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall meet the standards referenced in Table 4.303.3.

Table 4.303.3 - STANDARDS FOR INTEGRAL FIXTURES AND FIXTURE FITTINGS

REQUIRED STANDARDS	
Water closets (toilets) - Flushometer valve-type single flush	ASME A 112.19.2/CSA B45.1 - 1.28 gal (4.8 L)
Water closets (toilets) - Flushometer valve-type dual flush	ASME A 112.19.14 and U.S. EPA WaterSense Tank-Type High-Efficiency Toilet Specification - 1.28 gal (4.8 L)
Water closets (toilets) - Tank type	U.S. EPA WaterSense Tank-Type High-Efficiency Toilet Specification
Urinals, maximum flush volume	ASME A 112.19.3/CSA B45.1 - 0.8 gal (3.0 L)
Urinals, nonwater urinals	ASME A 112.19.15 (without chisel) ANSI Z39.4-2004 or SPMQ Z39.4 (plastic)
Public lavatory faucets	ASME A 112.16.1/CSA B125.1
Public meeting self-closed faucet	ASME A 112.16.1/CSA B125.1
Maximum water use - 0.25 gal (1 L) per metering cycle	ASME A 112.16.1/CSA B125.1
Residential bathroom lavatory sink faucet	ASME A 112.16.1/CSA B125.1
Maximum flow rate - 1.5 gpm (5.7 L/min)	ASME A 112.16.1/CSA B125.1

4.304 OUTDOOR WATER USE

Automatic irrigation system controllers for landscaping provided by the builder and installed at the time of final inspection shall comply with the following:

1. Controllers shall be weather- or soil moisture-based controllers that automatically adjust irrigation in response to changes in plants' needs as weather conditions change.
2. Weather-based controllers without integral rain sensors or communication systems that account for local rainfall shall have a separate wired or wireless rain sensor which connects or communicates with the controller(s). Soil moisture-based controllers are not required to have rain sensor input.

DIVISION 4.4 Material Conservation and Resource Efficiency

4.406 ENHANCED DURABILITY AND REDUCED MAINTENANCE

4.406.1 Joints and Openings

Openings in the building envelope separating conditioned space from unconditioned space needed to accommodate gas, plumbing, electrical lines and other necessary penetrations must be sealed in compliance with the California Energy Code.

Exception: Annular spaces around pipes, electric cables, conduits or other openings in plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or a similar method acceptable to the enforcing agency.

4.408 CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING

4.408.1 Construction waste reduction of at least 50 percent

Recycle and/or salvage for reuse a minimum of 50 percent of the nonhazardous construction and demolition debris, or meet a local construction and demolition waste management ordinance, whichever is more stringent.

Exceptions:

1. Excavated soil and land-clearing debris.
2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the jobsite.

4.408.2 Construction waste management plan

Where a local jurisdiction does not have a construction and demolition waste management ordinance, a construction waste management plan shall be submitted for approval to the enforcing agency that:

1. Identifies the material to be diverted from disposal by recycling, reuse on the project or salvage for future use or sale.
2. Specifies if materials will be sorted on-site or mixed for transportation to a diversion facility.
3. Identifies the diversion facility where the material collected will be taken.
4. Identifies construction methods employed to reduce the amount of waste generated.
5. Specifies that the amount of materials diverted shall be calculated by weight or volume, but not by both.

4.408.2.1 Documentation

Documentation shall be provided to the enforcing agency which demonstrates compliance with Section 4.408.2, Items 1 through 5. The waste management plan shall be updated as necessary and shall be accessible during construction for examination by the enforcing agency.

4.408.2.2 Isolated jobsites

The enforcing agency may make exceptions to the requirements of this section when jobsites are located in areas beyond the haul boundaries of the diversion facility.

4.410 BUILDING MAINTENANCE AND OPERATION

At the time of final inspection, a manual, compact disc, web-based reference or other media acceptable to the enforcing agency which includes all of the following shall be placed in the building:

1. Directions to the owner or occupant that the manual shall remain with the building throughout the life cycle of the structure.
2. Operation and maintenance instructions for the following:
 - a. Equipment and appliances, including water-saving devices and systems, HVAC systems, water-heating systems and other major appliances and equipment.
 - b. Roof and yard drainage, including gutters and downspouts.
 - c. Space conditioning systems, including condensers and air filters.
 - d. Landscape irrigation systems.
 - e. Water reuse systems.
3. Information from local utility, water and waste recovery providers on methods to further reduce resource consumption, including recycle programs and locations.
4. Public transportation and/or carpool options available in the area.
5. Educational material on the positive impacts of an interior relative humidity between 30-60 percent and what methods an occupant may use to maintain the relative humidity level in that range.
6. Information about water-conserving landscape and irrigation design and controllers which conserve water.
7. Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation.
8. Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc.
9. Information about state solar energy and incentive programs available.
10. A copy of all special inspections verifications required by the enforcing agency or this [California Green Building Standards] code.

DIVISION 4.5 Environmental Quality

4.503 FIREPLACES

4.503.1 General

Any installed gas fireplace shall be a direct-vent sealed-combustion type. Any installed woodstove or pellet stove shall comply with U.S. EPA Phase I emission limits where applicable. Woodstoves, pellet stoves and fireplaces shall also comply with applicable local ordinances.

4.504 POLLUTANT CONTROL

4.504.1 Covering of dust openings and protection of mechanical equipment during construction
At the time of rough installation or during storage on the construction site and until final startup of the heating and cooling equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheetmetal or other methods acceptable to the enforcing agency to reduce the amount of dust or debris which may collect in the system.

4.504.2 Finish material pollutant control

Finish materials shall comply with this section.

4.504.2.1 Adhesives, sealants and caulks

Adhesives, sealant and caulks used on the project shall meet the requirements of the following standards unless more stringent local or regional air pollution or air quality management district rules apply:

1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable or SCAQMD Rule 1168 VOC limits, as shown in Table 4.504.1, or 4.504.2, as applicable. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene and trichloroethylene), except for aerosol products, as specified in Subsection 2 below.
2. Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than 1 pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of California Code of Regulations, Title 17, commencing with section 94507.

4.504.2.2 Paints and coatings

Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Suggested Control Measure, as shown in Table 4.504.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 4.504.3 shall be determined by classifying the coating as a flat, Nonflat or Nonflat-High Gloss coating, based on its gloss, as defined in subsections 4.21, 4.36, and 4.37 of the 2007 California Air Resources Board, Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in Table 4.504.3 shall apply.

4.504.2.3 Aerosol paints and coatings

Aerosol paints and coatings shall meet the Product-Weighted MIR Limits for ROC in Section 94522(a)(3) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94522(a)(2) and (d)(2) of California Code of Regulations, Title 17, commencing with Section 94501, and in use under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8, Rule 48.

4.504.2.4 Verification

Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation may include, but is not limited to, the following:

1. Manufacturer's product specification.
2. Field verification of on-site product containers.

Table 4.504.1 - ADHESIVE VOC LIMIT ¹ *

(Less Water and Less EXEMPT Compounds in Grams per Liter)

ARCHITECTURAL APPLICATIONS	CURRENT VOC LIMIT
Interior carpet adhesives	50
Carpet pad adhesives	50
Outdoor carpet adhesives	100
Wood flooring adhesives	100
Rubber floor adhesives	50
Subfloor adhesives	50
Cement tile adhesives	50
VCT and equalize the adhesives	50
Drywall and panel adhesives	50
Cone base adhesives	50
Multipurpose construction adhesives	70
Structural plastic adhesives	100
Shrinky and membrane adhesives not specifically listed	50
SPECIALTY APPLICATIONS	
PVC welding	510
CPVC welding	450
ABS welding	300
Plastic cement welding	250
Adhesive primer for plastic	350
Contact adhesives	50
Special purpose contact adhesives	250
Structural wood member adhesives	140
Top and tie adhesives	50
SUBSTRATE SPECIFIC APPLICATIONS	
Metal to metal	30
Plastic to plastic	30
Porcelain material (except wood)	30
Wood	30
Flameless	50

1. If an adhesive is used to bond dissimilar substrates together, the adhesive with the highest VOC content shall be allowed.
2. For additional information regarding methods to measure the VOC content specified in this table, see South Coast Air Quality Management District Rule 110b.

Table 4.504.2 - SEALANT VOC LIMIT

(Less Water and Less EXEMPT Compounds in Grams per Liter)

SEALANTS	CURRENT VOC LIMIT
Architectural	250
Marine deck	250
Nonmembrane roof	300
Roadway	250
Single-ply roof membrane	450
Other	450
SEALANT PRIMERS	
Architectural	
Nonporous	250
Porous	275
Modified bituminous	500
Marine deck	250
Other	250

Table 4.504.3 - VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS ¹ *

(Grams OF voc per Liter of Coating, Less Water and Less Exempt Compounds)

COATING CATEGORY	EFFECTIVE 1/1/2010	EFFECTIVE 1/1/2012
Flat coatings	50	
Nonflat coatings	100	
Nonflashing gloss coatings	100	
Specialty Coatings	50	
Aluminum roof coatings	400	
Stainless specialty coatings	400	
Bluminox roof coatings	50	
Bluminox roof primers	350	
Bond breakers	350	
Concrete curing compounds	350	
Concrete/masonry sealers	100	
Dilution sealers	50	
Dry fix coatings	100	
Flux finishing coatings	350	
Fire retarding coatings	350	
Floor coatings	100	
Form-release compounds	250	
Graphic arts coatings (sign paints)	500	
High temperature coatings	400	
Industrial maintenance coatings	250	
Low solids coatings ²	120	
Marine hull coatings	450	
Mastic leveling coatings	100	
Metallic pigmented coatings	500	
Multicure coatings	450	
Primer/sealer, sealers, and undercoaters	400	
Primer, sealers, and undercoaters	100	
Reactive penetrating sealers	350	
Repaired coatings	250	
Roof coatings	50	
Roof preservative coatings	400	250
Sealants		
Clear	730	
Opaque	550	
Specialty primers, sealers, and undercoaters	350	100
Stains	250	
Stone consolidants	400	
Thinning pool coatings	350	
Traffic marking coatings	100	
Tub and tile refinishing coatings	400	
Waterproofing membranes	250	
Wood coatings	275	
Wood preservatives	350	
Zinc-rich primers	350	

1. Grams of VOC per liter of coating, including water and including exempt compounds.
2. The specified limits remain in effect unless revised limits are listed in subsequent columns of the table.
3. Values in the table are derived from those specified by the California Air Resources Board, Architectural Coatings Suggested Control Measure, February 1, 2006. More information is available from the Air Resources Board.

4.504.3 Carpet systems

All carpet installed in the building interior shall meet the testing and product requirements of one of the following:

1. Carpet and Rug Institute's Green Label Plus Program.
2. California Department of Public Health Standard Practice for the testing of VOCs (Specification 01350). 3. NSF/ANSI 140 at the Gold level.
4. Scientific Certifications Systems' Indoor Advantage™ Gold.

4.504.3.1 Carpet cushion

All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute Green Label program.

4.504.3.2 Carpet adhesive

All carpet adhesive shall meet the requirements of Table 5.504.1.

4.504.4 Resilient flooring systems:

Where resilient flooring is installed, at least 50 percent of floor area receiving resilient flooring shall comply with VOC emission limits defined in the Collaborative for High Performance Schools (CHPS) Low-emitting Materials List or certified under the Resilient Floor Covering Institute (RFCI) FloorScore program.

4.504.5 Composite wood products:

Hardwood plywood, particleboard and medium density fiberboard composite wood products used on the interior or exterior of the building shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure for Composite Wood (17 CCR 93120 et seq.), by or before the dates specified in those sections, as shown in Table 4.504.5.

4.504.5.1 Documentation:

Verification of compliance with this section shall be provided as requested by the enforcing agency.

Documentation shall include at least one of the following:

1. Product certifications and specifications
2. Chain of custody certifications
3. Other methods acceptable to the enforcing agency

Table 4.504.5 - FORMALDEHYDE LIMITS ¹

(Maximum Formaldehyde Emissions in Parts per Million)

PRODUCT	CURRENT LIMIT	JANUARY 1, 2012	JULY 1, 2012
Hardwood plywood veneer core	0.05		
Hardwood plywood composite core	0.08		0.08
Particleboard	0.09		
Medium density fiberboard	0.11		
Thin medium density fiberboard ²	0.21	0.13	

1. Grams of VOC per liter of coating, including water and including exempt compounds.
2. The specified limits remain in effect unless revised limits are listed in subsequent columns of the table.
3. Values in this table are derived from those specified by the California Air Resources Board, Architectural Coatings Suggested Control Measure, February 1, 2006. More information is available from the Air Resources Board.

4.505 INTERIOR MOISTURE CONTROL

4.505.1 General:

Buildings shall meet or exceed the provisions of the California Building Standards Code.

4.505.2 Concrete slab foundations:

Concrete slab foundations required to have a vapor retarder by California Building Code, CCR, Title 24, Part 2, Chapter 19, shall also comply with this section.

4.505.2.1 Capillary break:

A capillary break shall be installed in compliance with at least one of the following:

1. A 4-inch (101.6 mm) thick base of 1/2 inch (12.7 mm) or larger clean aggregate shall be provided with a vapor barrier in direct contact with concrete and a concrete mix design, which will address bleeding, shrinkage, and curing, shall be used. For additional information, see American Concrete Institute, ACI 302.2R-06.
2. Other equivalent methods approved by the enforcing agency.
3. A slab design specified by a licensed design professional.

4.505.3 Moisture content of building materials:

Building materials with visible signs of water damage shall not be installed. Wall and floor framing shall not be enclosed when the framing members exceed 19 percent moisture content. Moisture content shall be verified in compliance with the following:

1. Moisture content shall be determined with either a probe-type or contact-type moisture meter.
2. Moisture readings shall be taken at a point 2 feet (610 mm) to 4 feet (1219 mm) from the grade stamped end of each piece verified.
3. At least three random moisture readings shall be performed on wall and floor framing with documentation acceptable to the enforcing agency provided at the time of approval to enclose the wall and floor framing.

Insulation products which are visibly wet or have a high moisture content shall be replaced or allowed to dry prior to enclosure in wall or floor cavities. Wet-applied insulation products shall follow the manufacturers' drying recommendations prior to enclosure.

4.506 INDOOR AIR QUALITY AND EXHAUST

4.506.1 Bathroom exhaust fans:

Mechanical exhaust fans which exhaust directly from bathrooms shall comply with the following:

1. Fans shall be ENERGY STAR compliant and be ducted to terminate outside the building.
2. Unless functioning as a component of a whole house ventilation system, fans must be controlled by a humidistat which shall be readily accessible.

Humidistat controls shall be capable of adjustment between a relative humidity range of 50 to 80 percent.

Note: For purposes of this section, a bathroom is a room which contains a bathtub, shower or tub/shower combination.

4.507 ENVIRONMENTAL COMFORT

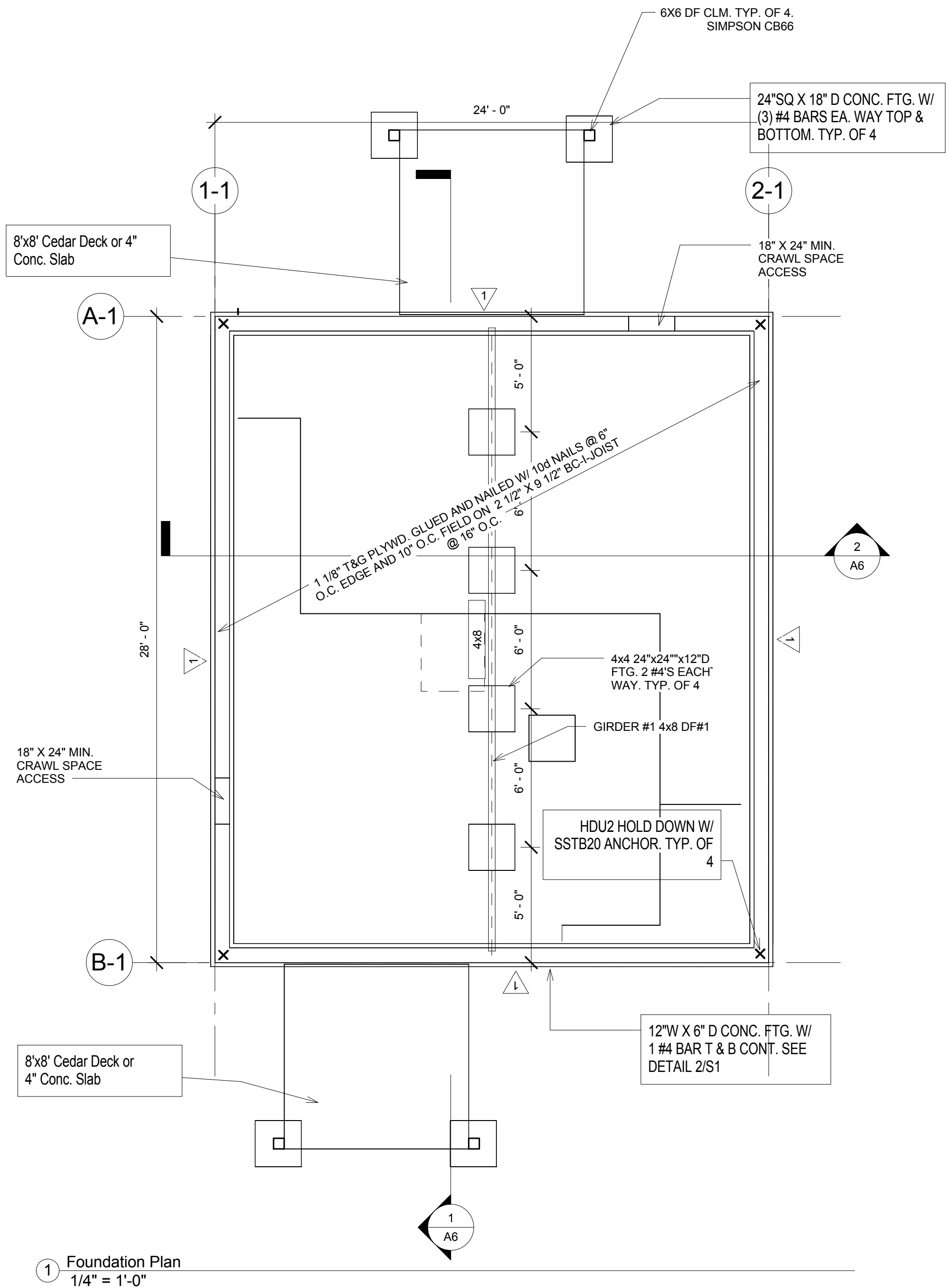
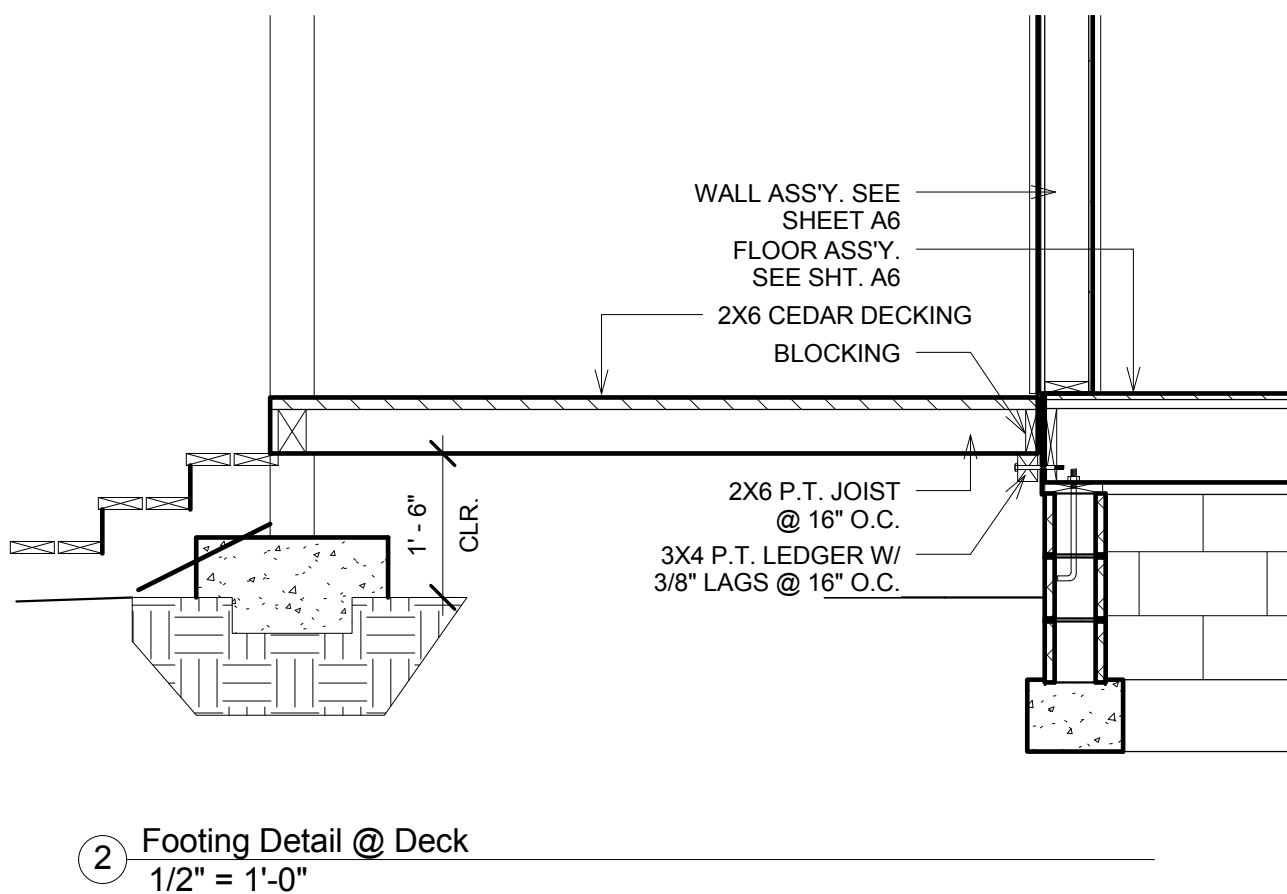
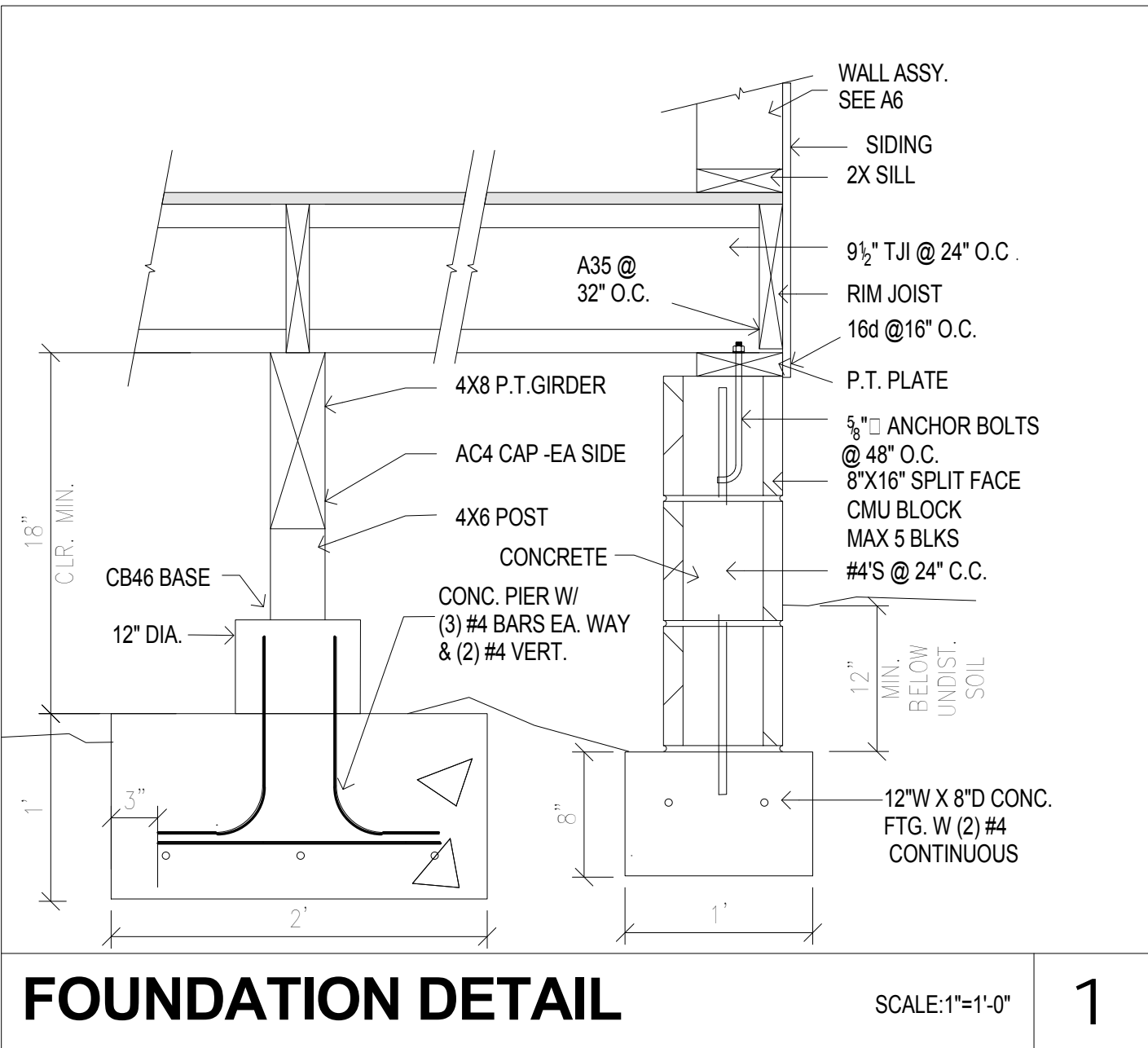
4.507.1 Openings:

Whole house exhaust fans shall have insulated louvers or covers which close when the fan is off. Covers or louvers shall have a minimum insulation value of R-4.2.

4.507.2 Heating and air-conditioning system design:

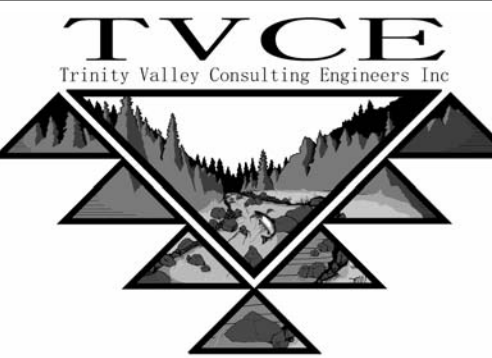
Heating and air conditioning systems shall be sized, designed and have their equipment selected using the following methods:

1. The heat loss and heat gain is established according to ACCA Manual J, ASHRAE handbooks or other equivalent design software or methods.
2. Duct systems are sized according to ACCA 25-D Manual D, ASHRAE handbooks or other equivalent design software

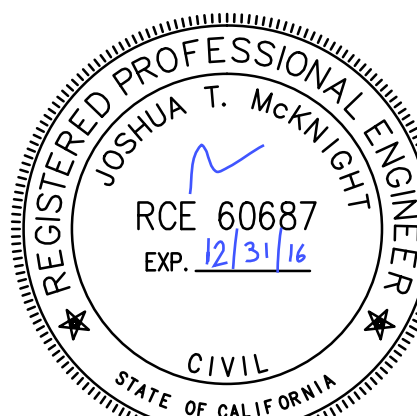


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KARUK TRIBE
HOUSING AUTHORITY
One Bedroom House

No.	Description	Date

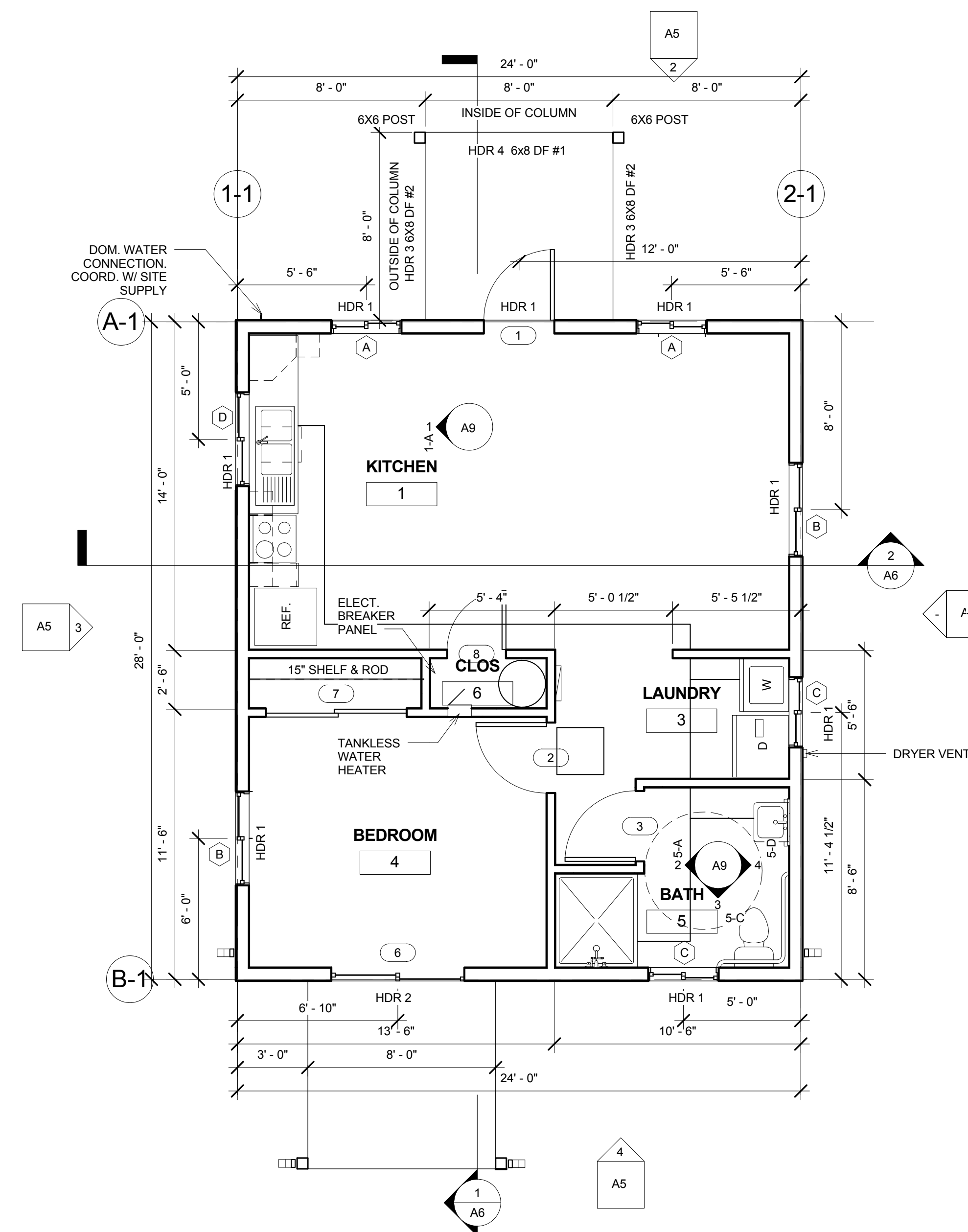
Foundation Plan	
Project number	ktha 2015
Date	07/13/2016
Drawn by	RKH
Checked by	JMB
S1	
Scale	As indicated



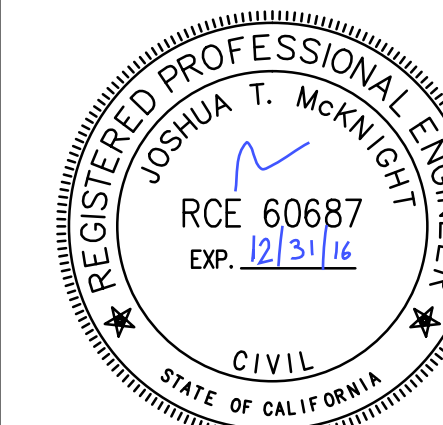
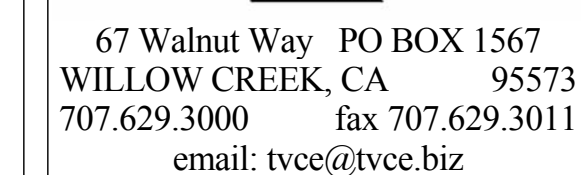
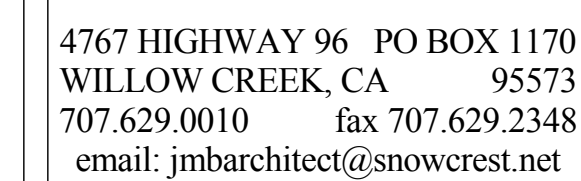
Note:
All Headers 6X12 DF #2 U.N.O.

Shearwall Schedule

Wall Line	Story	Sheathing	Framing	Nailing	Anchor Bolts	Connections	Other
1-1	1	T-111 Siding	2X6 @ 16" o.c.	8d @ 6" edge, 12" field	5/8" X 10" @ 48" o.c.	H2.5 @ EA Truss	
2-1	1	T-111 Siding	2X6 @ 16" o.c.	8d @ 6" edge, 12" field	5/8" X 10" @ 48" o.c.	H2.5 @ EA Truss	
A-1	1	T-111 Siding	2X6 @ 16" o.c.	8d @ 6" edge, 12" field	5/8" X 10" @ 48" o.c.		
B-1	1	T-111 Siding	2X6 @ 16" o.c.	8d @ 6" edge, 12" field	5/8" X 10" @ 48" o.c.		



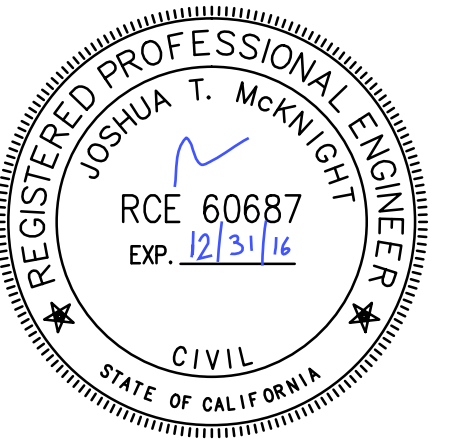
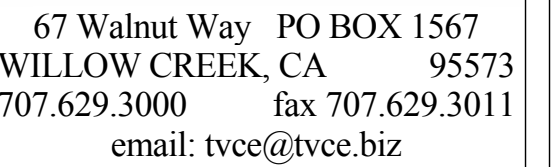
1 Framing Plan
1/4" = 1'-0"



KARUK TRIBE
HOUSING AUTHORITY
One Bedroom House

No.	Description	Date
FRAMING PLAN		
Project number	ktha 201	
Date	07/13/201	
Drawn by	RKH	
Checked by	JMB	
S2		
Scale	1/4" = 1'-0"	

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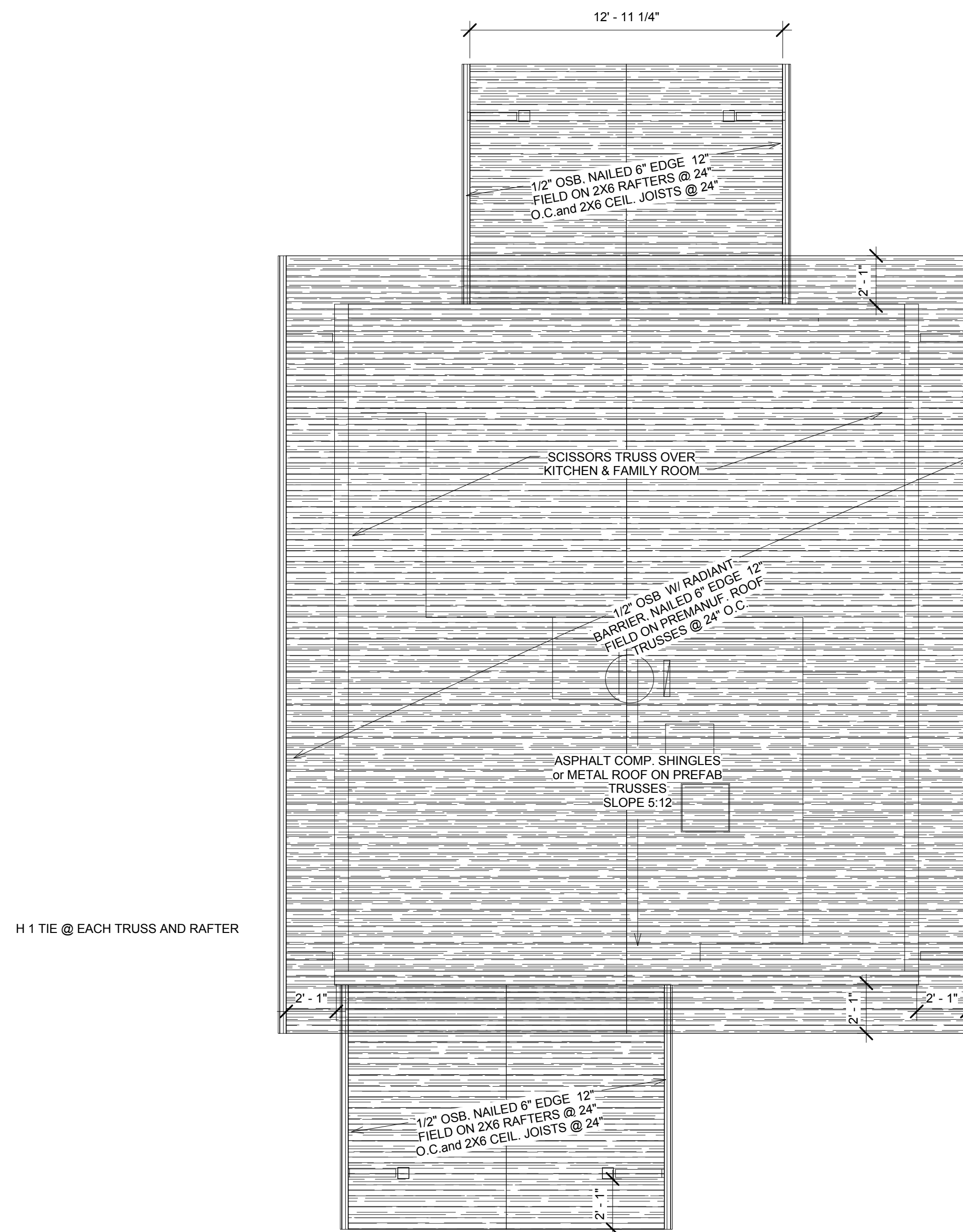
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HOUSING AUTHORITY
ORLEANS, CA 95556
One Bedroom House

[illegible]

FLOOR PLAN & ROOF PLAN

A2

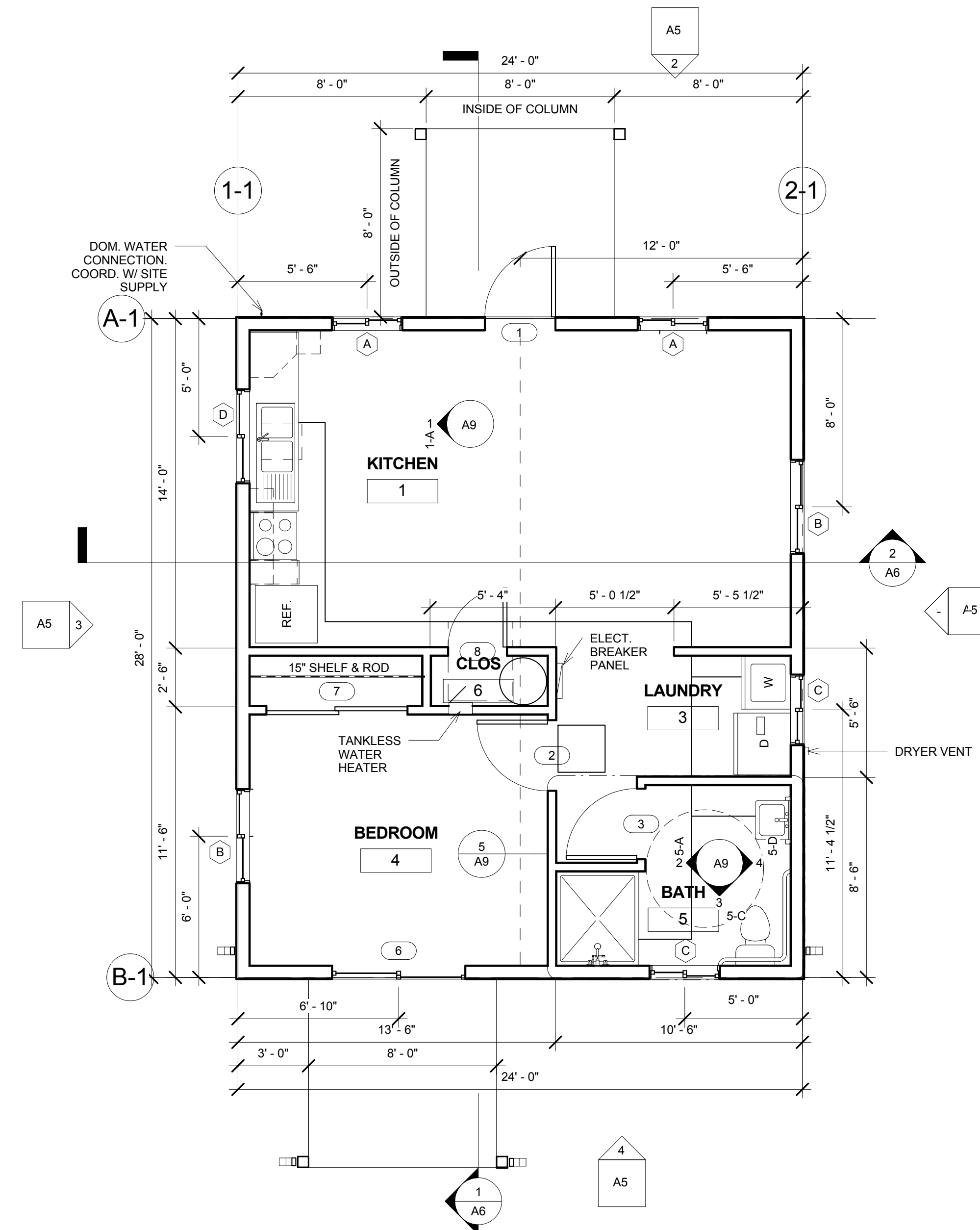
Scale	1/4" = 1'-0"
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3 Roof Plan
1/4" = 1'-0"

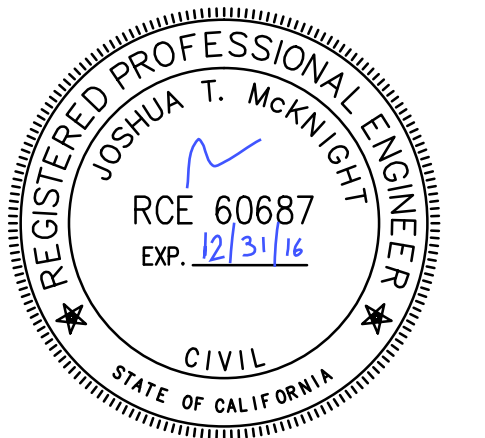
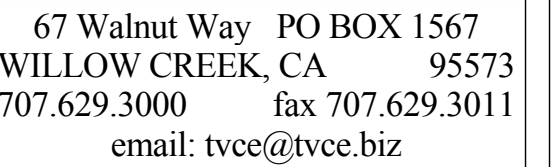
ATTIC VENT REQUIREMENTS

ATTIC AREA: 672 sf
 $672/150 = 4.5$ sf
 GABLE VENTS MUST PROVIDE 4.5 sf VENT AREA
 Corrosion resistant, non-combustible Vent
 with openings between 1/8" and 1/4"



① Floor Plan
1/4" = 1'-0"

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One Bedroom House

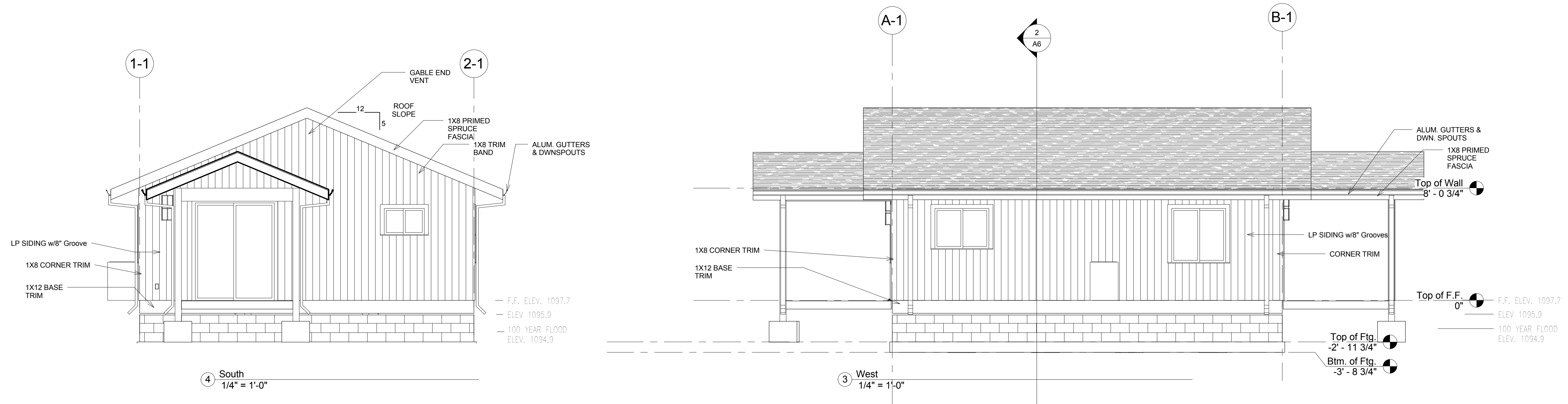
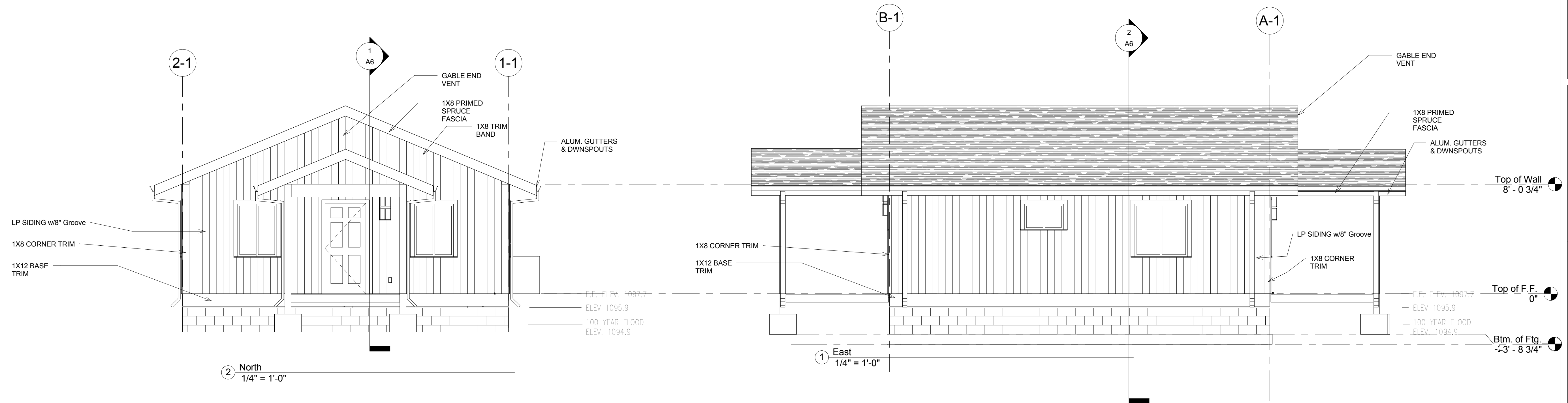
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Elevations

Project number	ktha 2015
Date	07/13/2016
Drawn by	RKH
Checked by	JMB

A5

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



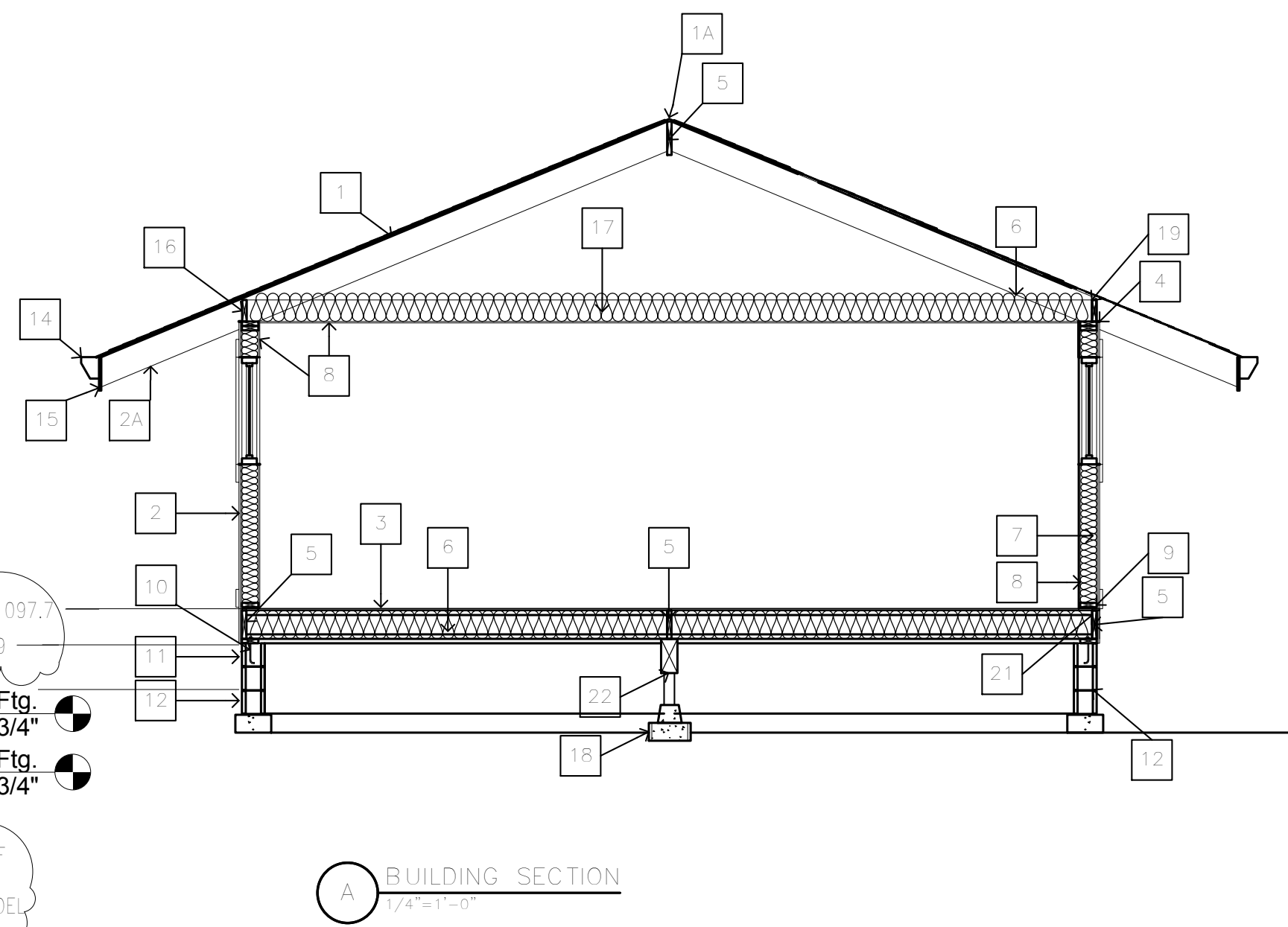
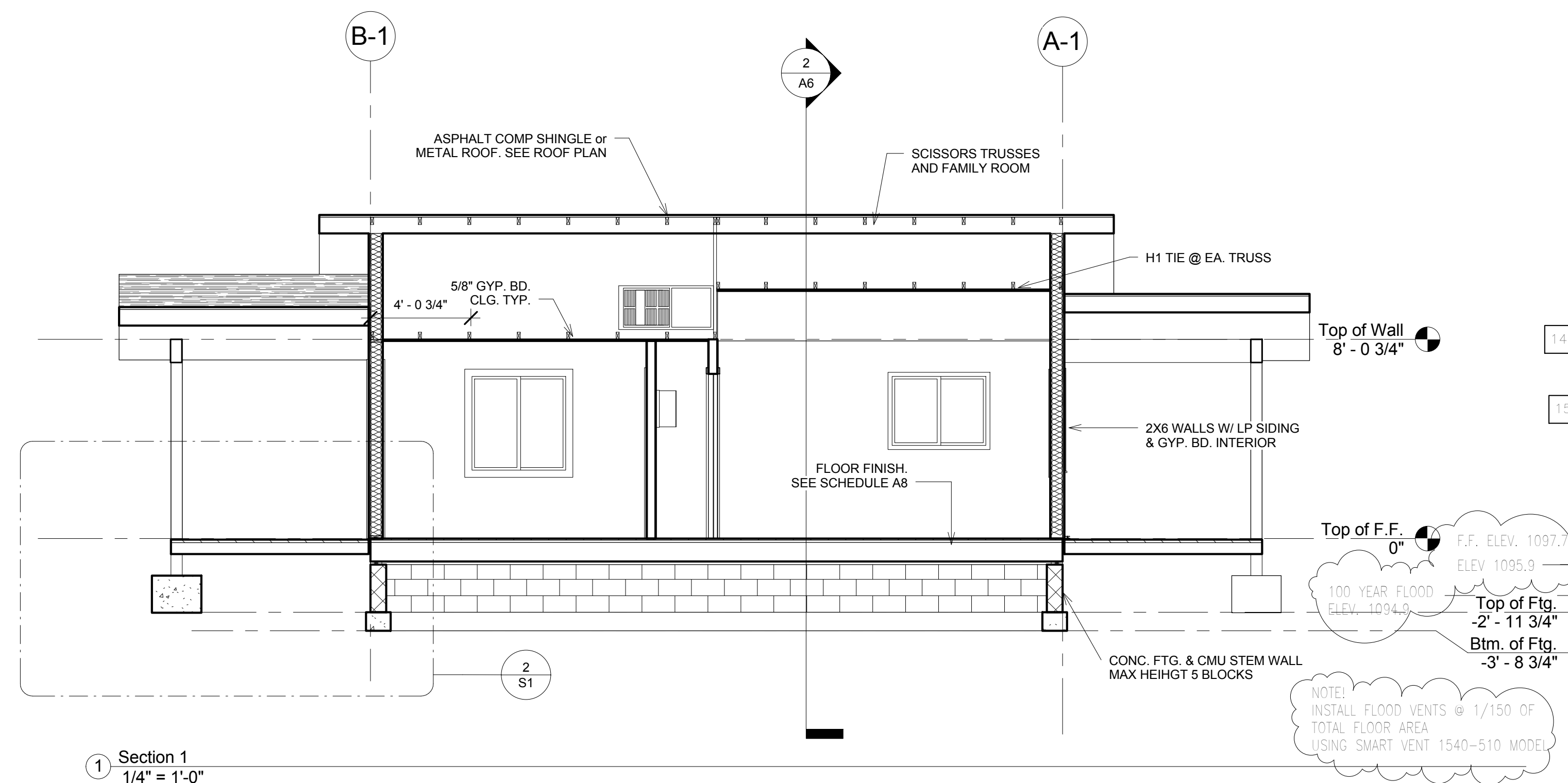
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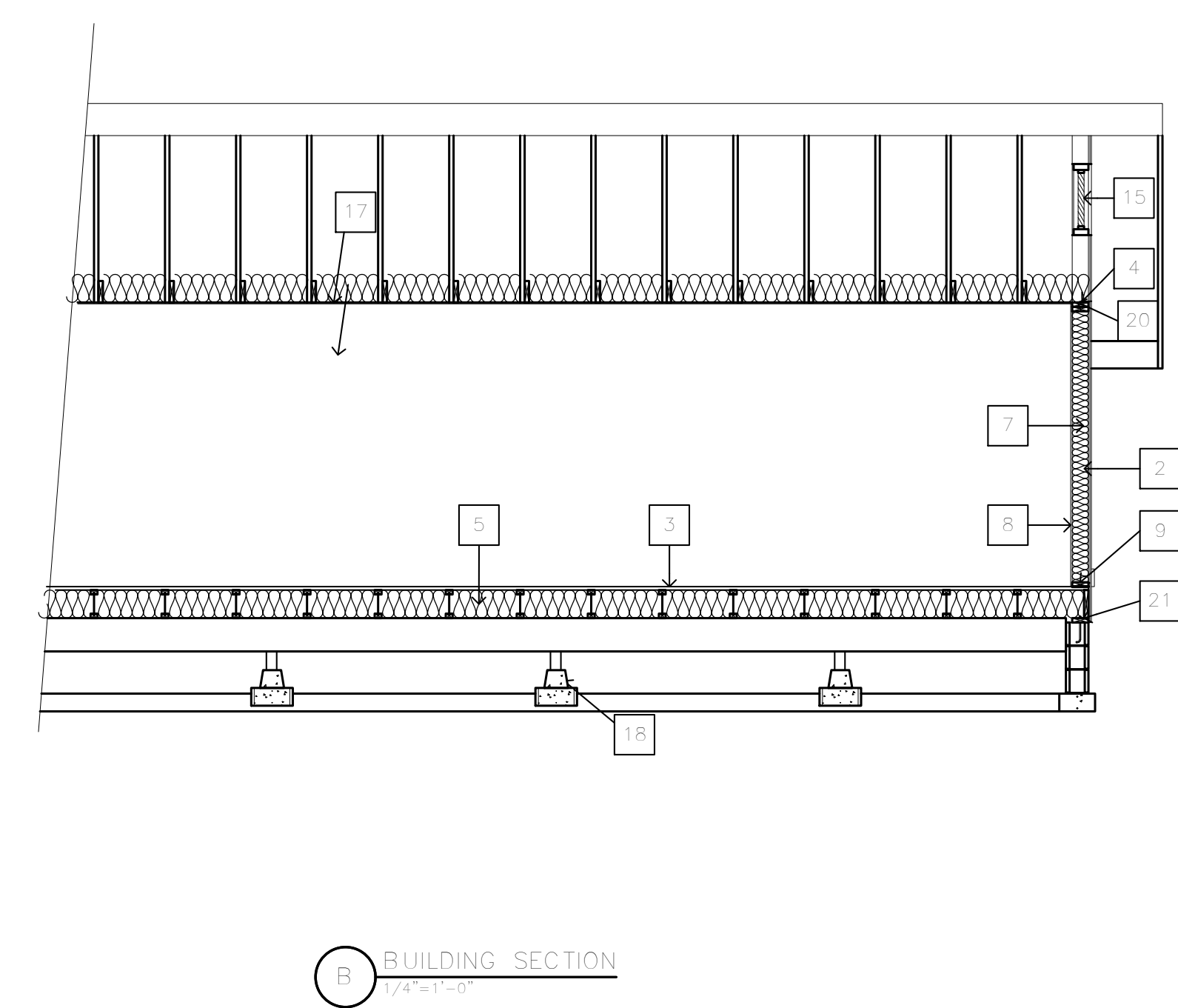
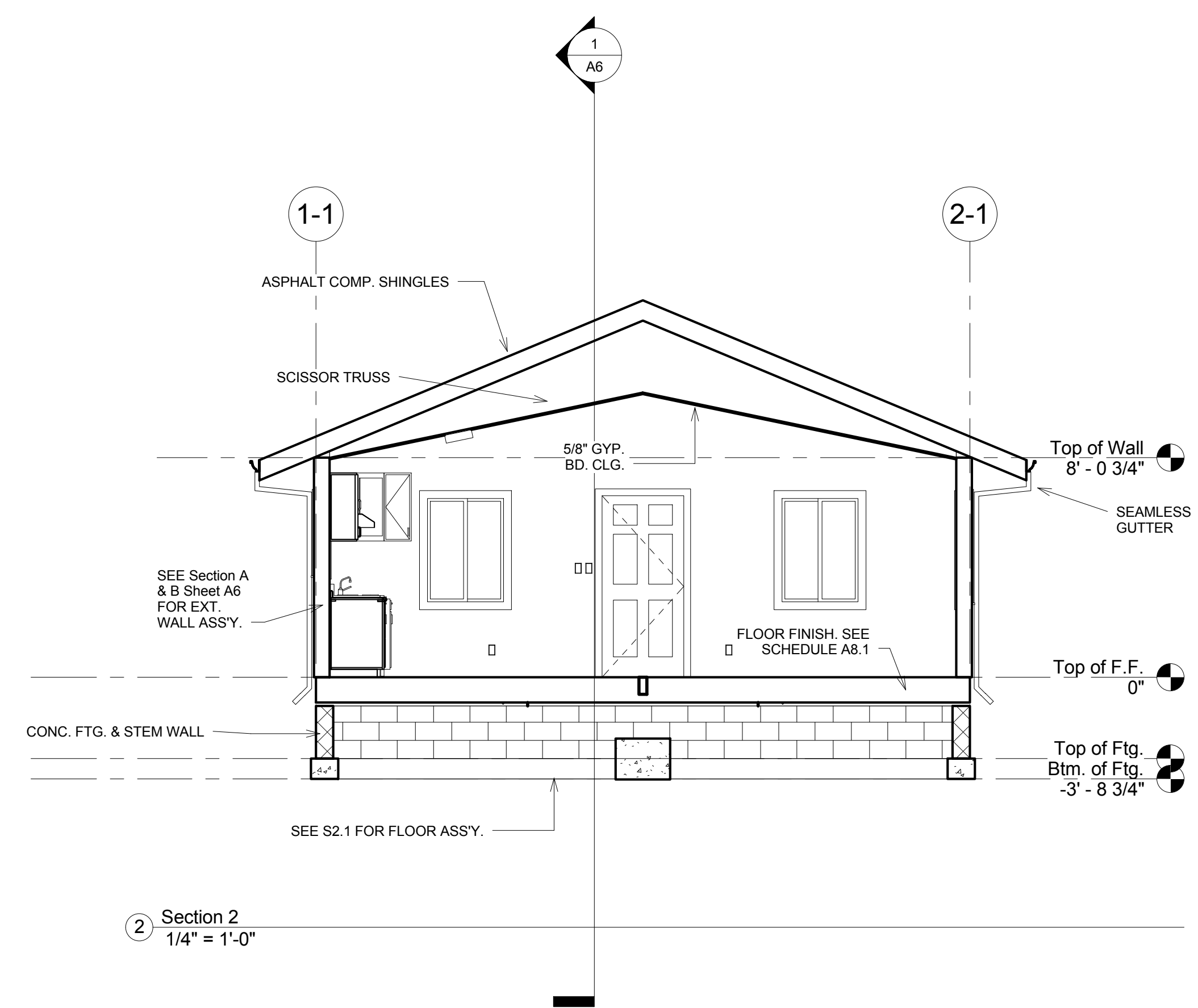
REGISTERED PROFESSIONAL ENGINEER
JOSHUA T. MCKNIGHT
RCE 60687
EXP. 12/31/16
CIVIL
STATE OF CALIFORNIA

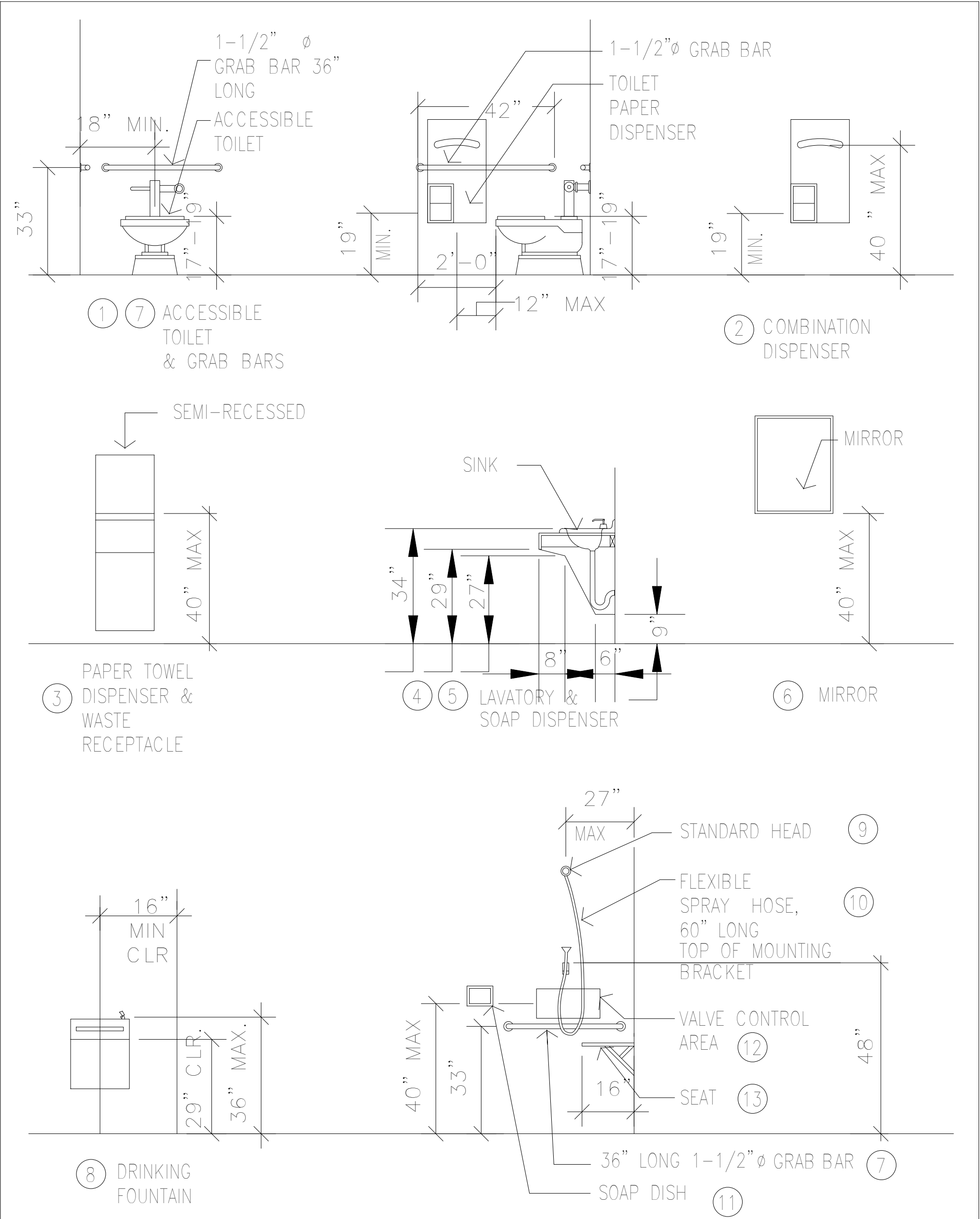
KARUK TRIBE
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One Bedroom House

No.	Description	Date
1	Plan Check Comments	2/6/12
Building Sections		
Project number	ktha 2015	
Date	07/13/2016	
Drawn by	RKH	
Checked by	JMB	
A6		
Scale	1/4" = 1'-0"	



- KEYNOTE LEGEND
- CLASS "A" ROOFING - ASPHALT COMP. SHINGLES OR METAL ROOF OVER 5/8" PLYWOOD, OVER 2 LAYERS #15 FELT OVER TRUSSES @ 24" O.C. NAILING PER TABLE 23-II-B-2.
 - CLASS "A" RIDGE VENT
 - WALLS - LP SIDING OVER 2 LAYERS #15 FELT ON 2X6 STUDS @ 16" OC EXT SIDING MAT'L TO MEET SFM STNDRD 12-7A-1; SEE 2013 CBC 707A
 - 2X6 SOFFIT AND ACCESSORIES SHALL MEET SFM STANDARD 12-7A-3, PER 2013 CBC 707A
 - FLOORING - 1 1/8" PLYWD OVER 9-1/2" X 2-1/2" JOISTS @ 16" O.C. SEE SCHEDULE FOR FLOOR FINISH
 - 2X6 DBL TOP PLATE
 - BLOCKING
 - R38 INSULATION W/ VAPOR BARRIER
 - R21 INSULATION W/ VAPOR BARRIER
 - 1/2" DRYWALL
 - 2X6" P.T. SILL
 - 1/2" DIA. A.B. @ 4'-0" OC
 - CMU STEM WALL W/ VERTS @ 24" C.C. & (1) #4 HORIZ. CONT.
 - 8"x12" FOOTING W/ (2) #4 T&B
 - GABLE VENT
 - GSM GUTTER & DWN SPOUTS
 - 2X10 FASCIA
 - SOFFIT VENT CORROSION RESISTANT, NON-COMBUSTIBLE W/OPENINGS BETWEEN 1/8" AND 1/4"
 - 5/8" GYP.BD. CEILING
 - CONC. PIER BLOCK & 24"x24"x12"D FTG. SEE DETAIL 1 ON SHEET S1.
 - H1 TIE @ EA. TRUSS
 - A-35 @ 32" O.C. TRUSS TO TOP PLATE
 - A35 @ 32" O.C. RIM JOIST TO SILL
 - P.T. POSTS AND GIRDERS





- ① ACCESSIBLE TOILET

② SEMI-RECESSED TOILET PAPER, TOILET SEAT COVER DISPENSER – BOBRICK # B-3471

③ WALL MOUNTED PAPER TOWEL DISPENSER AND WASTE RECEPTACLE

④ LAVATORY WITH ACCESSIBLE LEVERS

⑤ COUNTER TOP MOUNTED SOAP DISPENSER

⑥ FLOAT PLATE GLASS MIRROR

⑦ 1-1/2" Ø GRAB BAR
- ⑧ DRINKING FOUNTAIN

⑨ STANDARD SHOWER HEAD

⑩ FLEXIBLE SPRAY HOSE, 60" LONG

⑪ WALL MOUNTED SOAP DISH

⑫ HANDICAP SHOWER CONTROLS TO BE SINGLE LEVER WITH A MAXIMUM FORCE OF 5 LBS TO OPERATE

⑬ 16" X 36" FOLDING SEAT

MOUNTING HEIGHTS

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◇

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EXP. 12/31/14

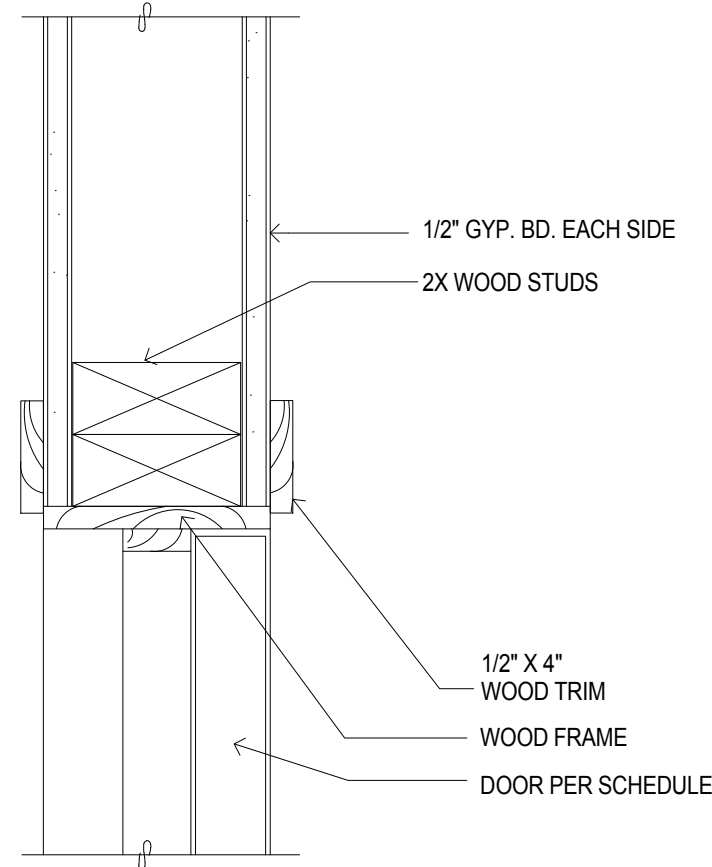
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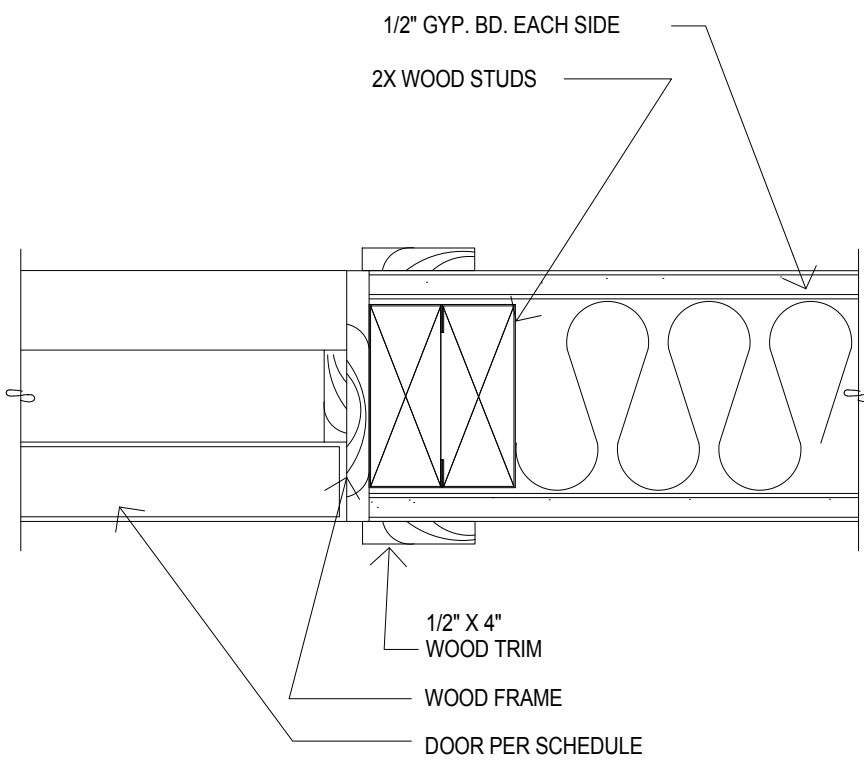
KARIK TRIBE
HOUSING AUTHORITY

One Bedroom House

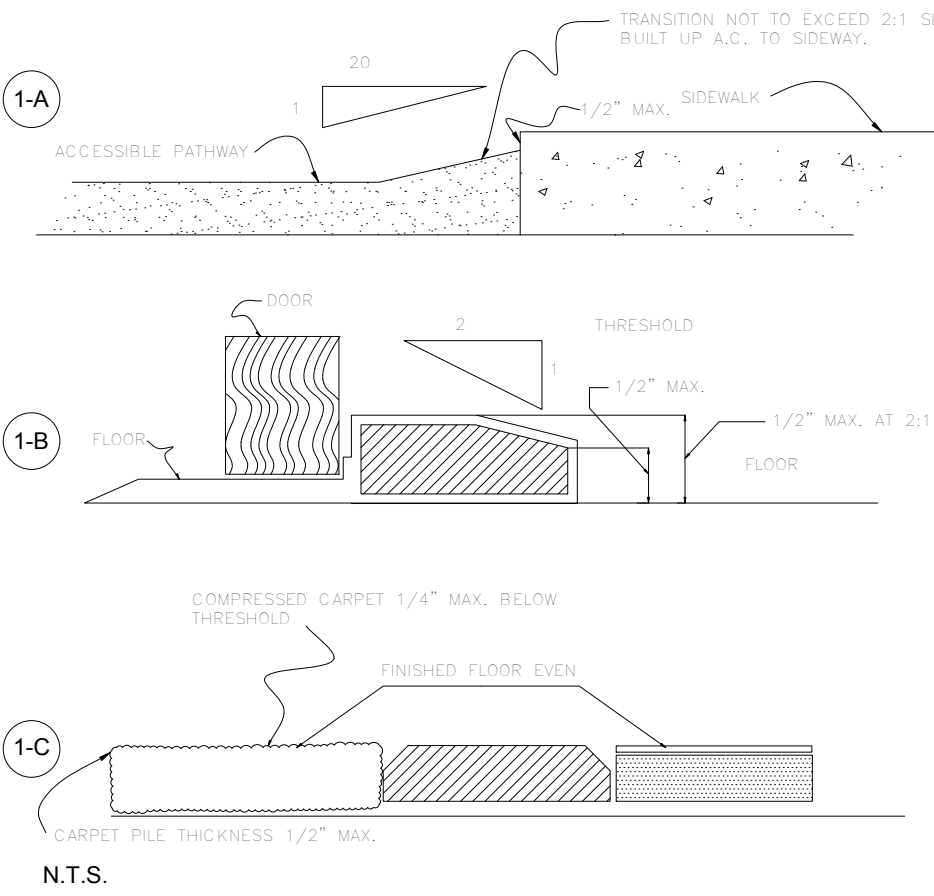
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Date	07/13/2016	
Drawn by	RKH	
Checked by	JMB	
A7		
Scale		



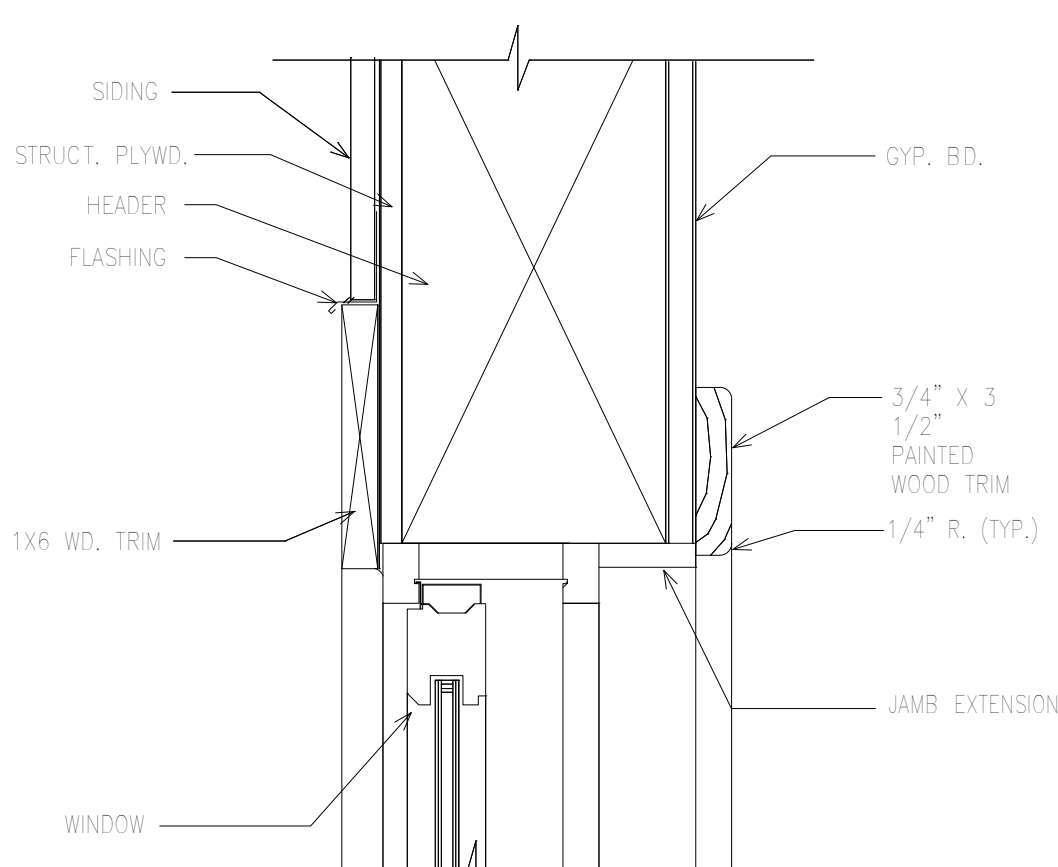
HEAD@INTERIOR DOOR SCALE: 3"=1'-0"



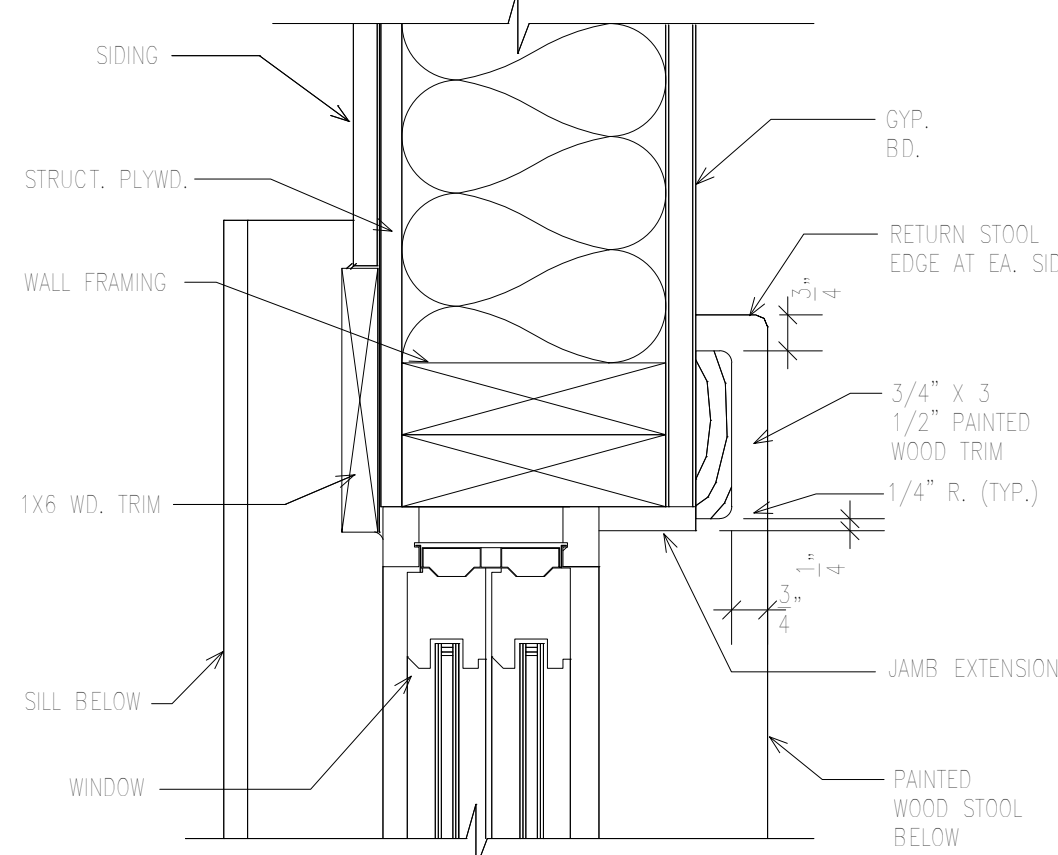
JAMB@INTERIOR DOOR SCALE: 3"=1'-0"



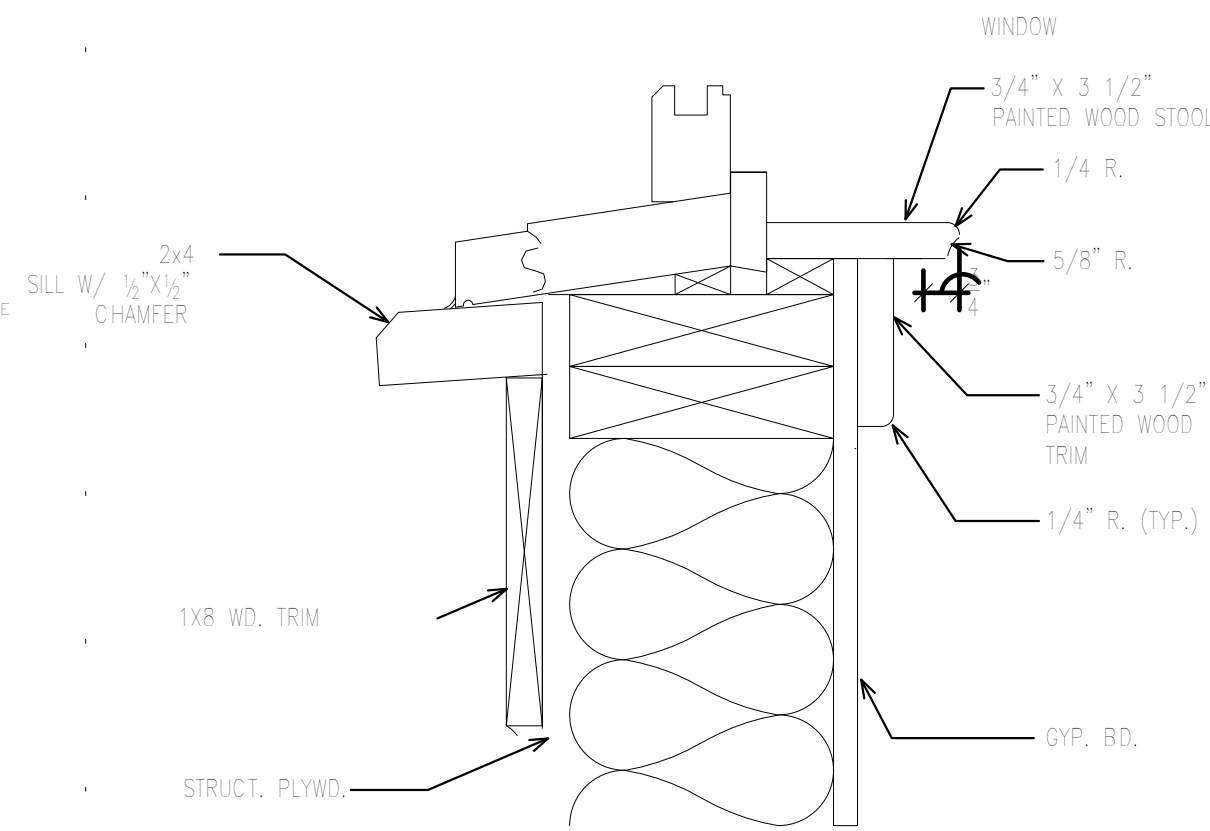
THRESHOLD DETAIL



WINDOW HEAD DETAIL SCALE: 3"=1'-0"



WINDOW JAMB DETAIL SCALE: 3"=1'-0"



WINDOW SILL SCALE: 3"=1'-0"

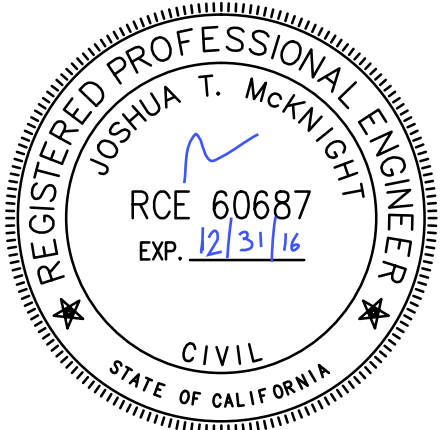
Door Schedule					
Door Number	Door Size	Description	Finish		
			Frame	Comments	
1	36" x 80"	Exterior S.C. 1-3/4" Thk	FiberGlass		
2	36" x 80" Interior	Interior	Masonite		
3	36" x 80" Interior	Interior	Masonite		
6	68" x 84"	Exterior Sliding Glass	FiberGlass	Tempered	
7	72" x 80"	Interior Sliding Closet	Masonite		
8	30" x 80"	Interior	Masonite		

Window Schedule							
Type Mark	Rough Opening		Type	Material	Glazing	Head Height	Comments
	Width	Height			Type		
A	3' - 0"	4' - 0"	Slider with Trim	Vinyl	Low-E Temp	6' - 8"	
B	4' - 0"	4' - 0"	Slider with Trim	Vinyl	Low-E Temp	6' - 8"	
C	3' - 0"	2' - 0"	Slider with Trim	Vinyl	Low-E Temp	6' - 8"	
D	4' - 0"	3' - 0"	Slider with Trim	Vinyl	Low-E Temp	6' - 8"	

Room Finish Schedule						
Room Number	Room Name	Finish				Comments
		Floor	Base	Wall	Ceiling	
2	FAMILY ROOM	Laminate wood	4" MDF Painted	GYP BD	GYP BD ceil. hgt varries	orange peel finish all walls and ceiling
3	LAUNDRY	Vinyl/Laminate	4" MDF Painted	GYP BD	GYP BD ceil hgt 8'	orange peel finish all walls and ceiling
5	BATH	Vinyl/Laminate	4" MDF Painted	GYP BD	GYP BD ceil hgt 8'	orange peel finish all walls and ceiling
4	BEDROOM	Carpet	4" MDF Painted	GYP BD	GYP BD ceil hgt 8'	orange peel finish all walls and ceiling
1	KITCHEN	Vinyl/Laminate	4" MDF Painted	GYP BD	GYP BD ceil. hgt varries	orange peel finish all walls and ceiling
6	CLOS	Vinyl/Laminate	4" MDF Painted	GYP BD	GYP BD ceil hgt 8'	orange peel finish all walls and ceiling

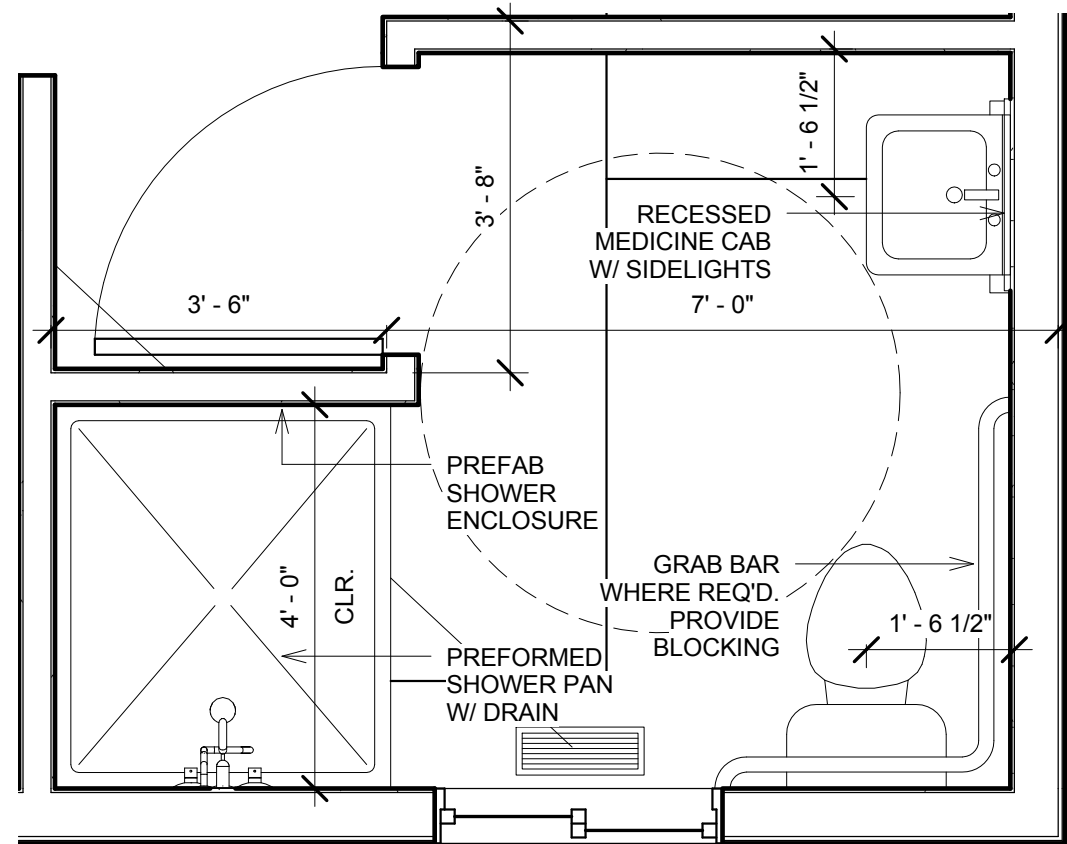
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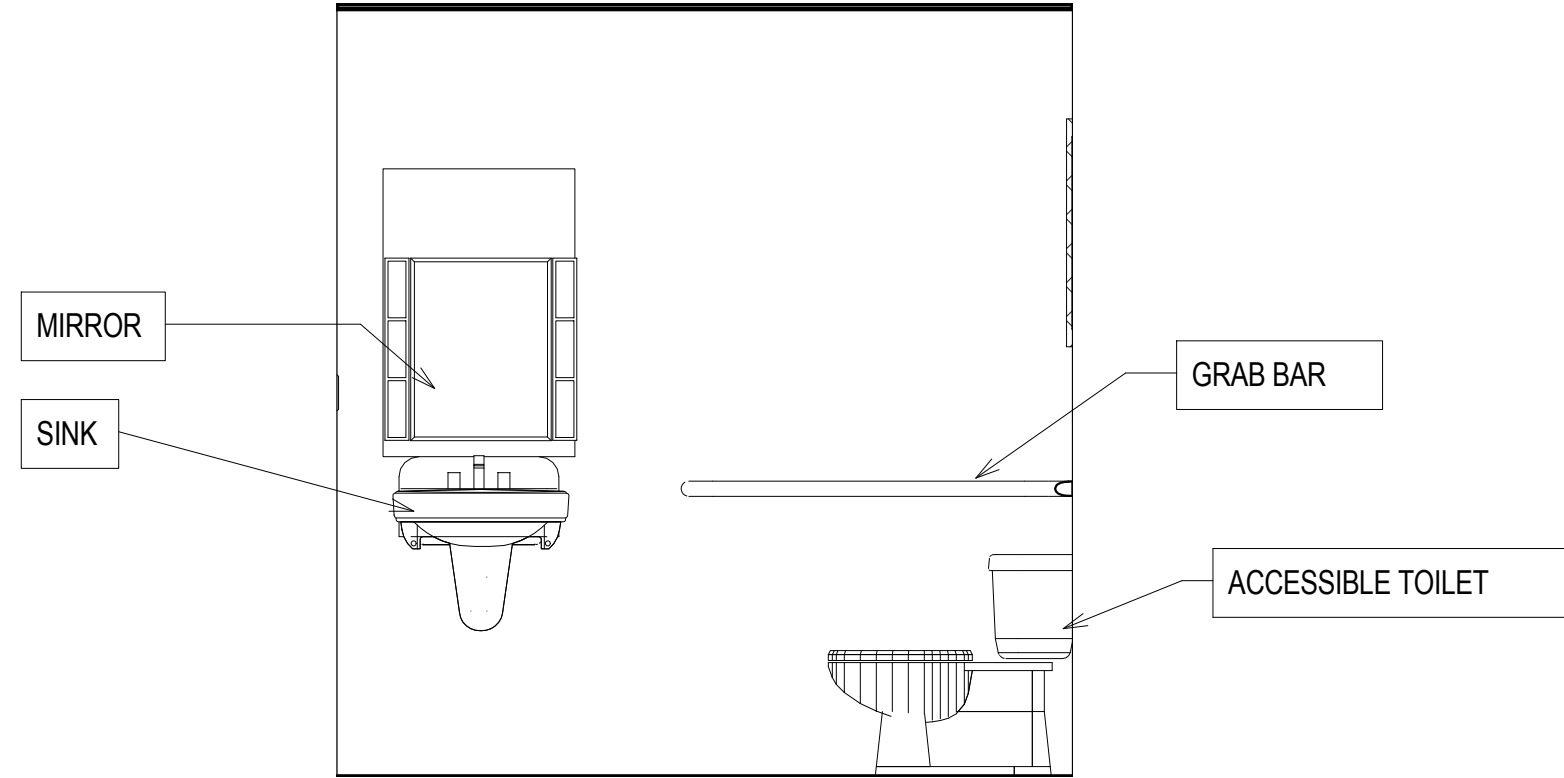


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One Bedroom House

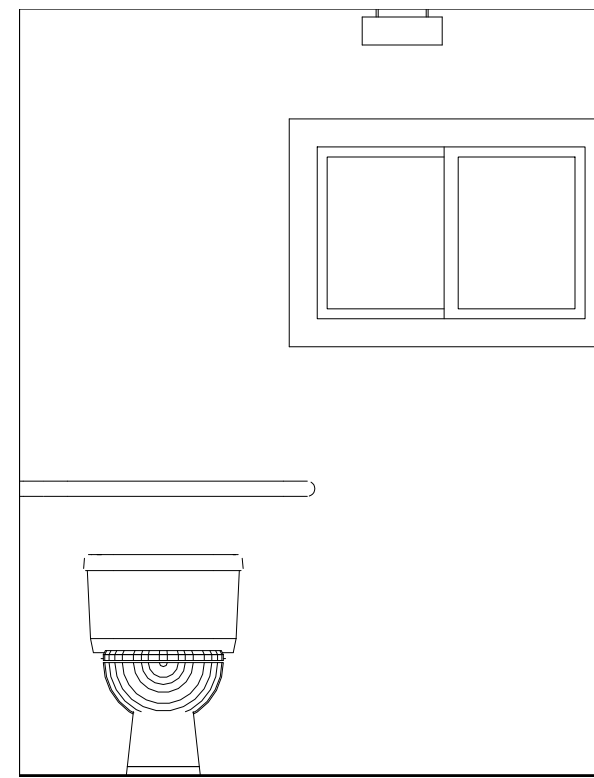
No.	Description	Date
Schedules		
Project number	ktha 2015	
Date	07/13/2016	
Drawn by	RKH	
Checked by	JMB	
A8		
Scale		



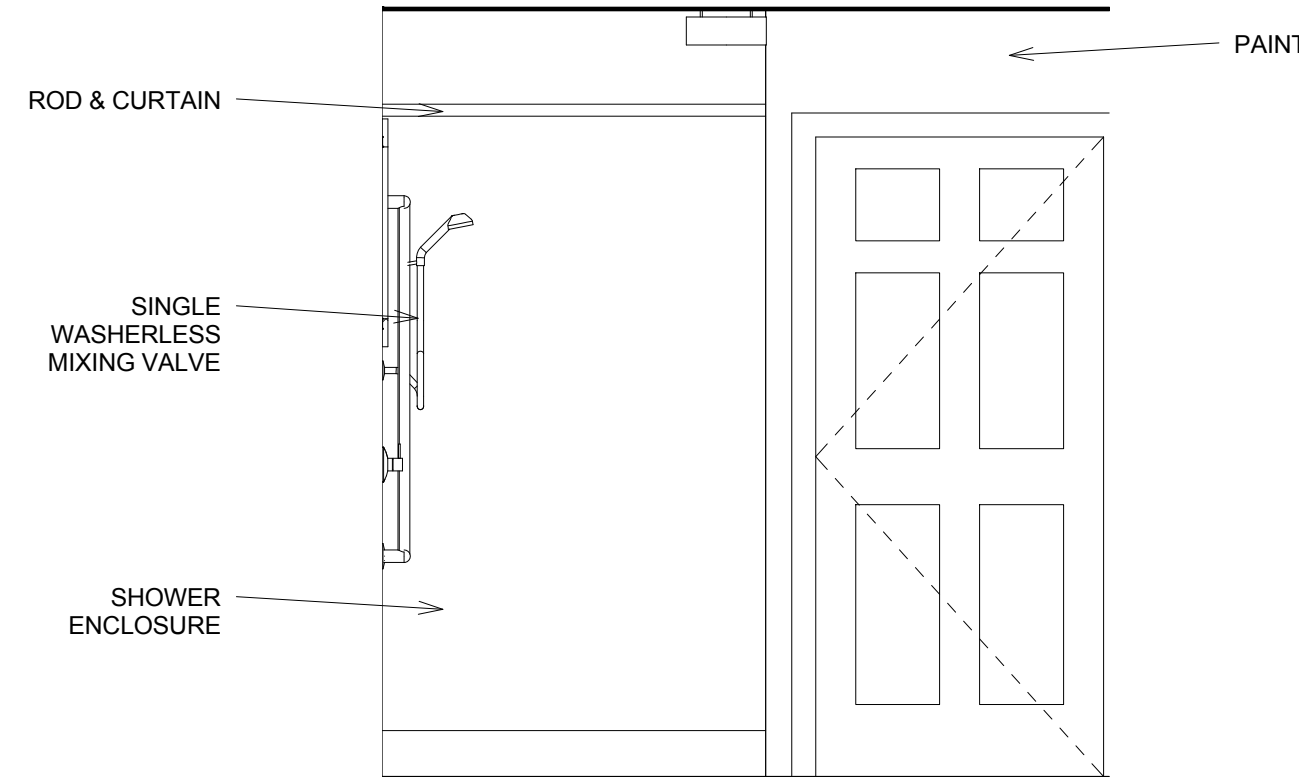
5 ENLARGED BATH PLAN
1/2" = 1'-0"



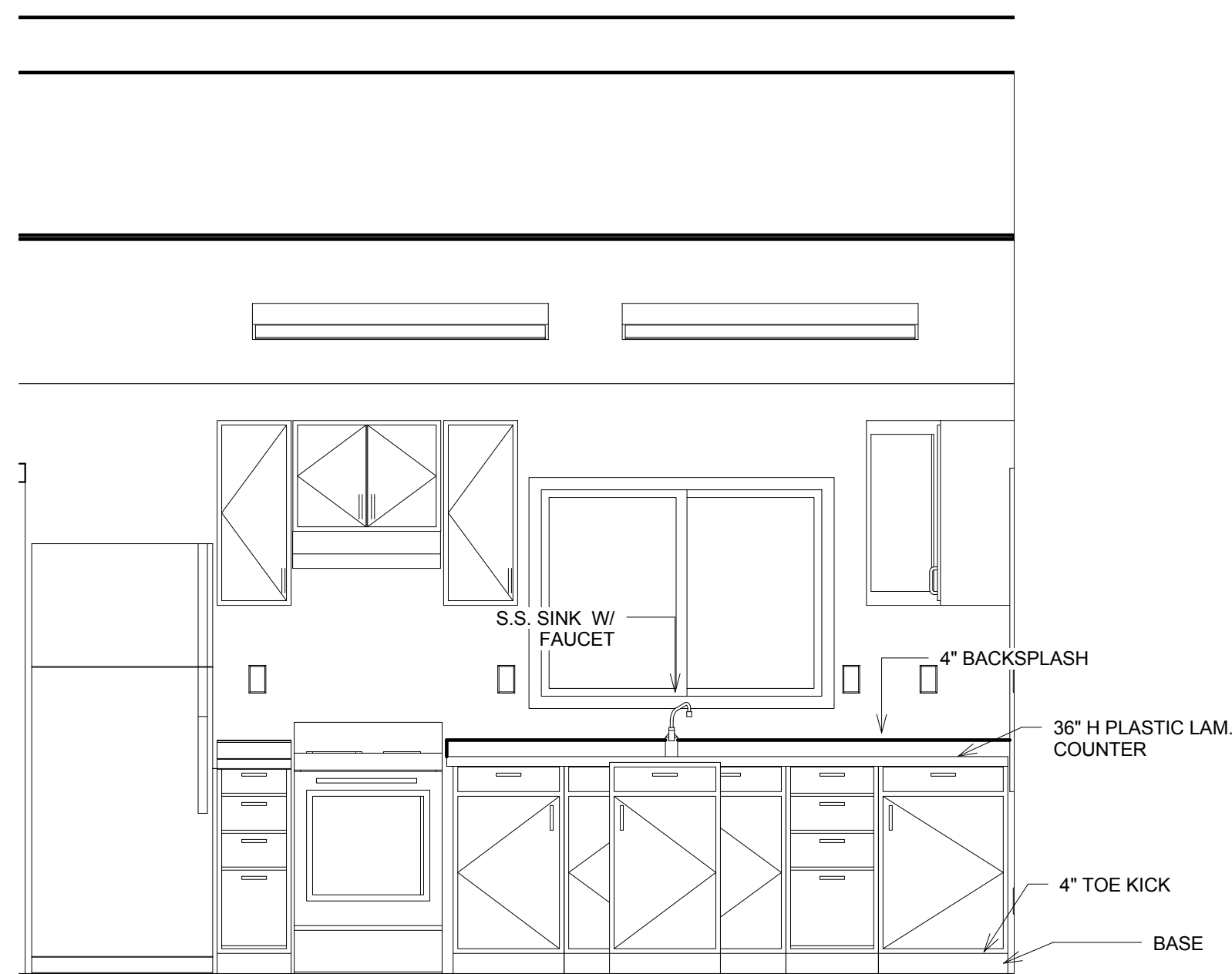
4 5-D
1/2" = 1'-0"



3 5-C
1/2" = 1'-0"



2 5-A
1/2" = 1'-0"



1 1-A
1/2" = 1'-0"

JMB
ARCHITECTURE

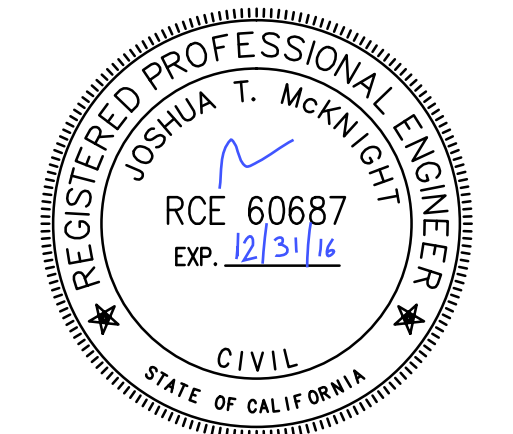


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One Bedroom House

No.	Description	Date

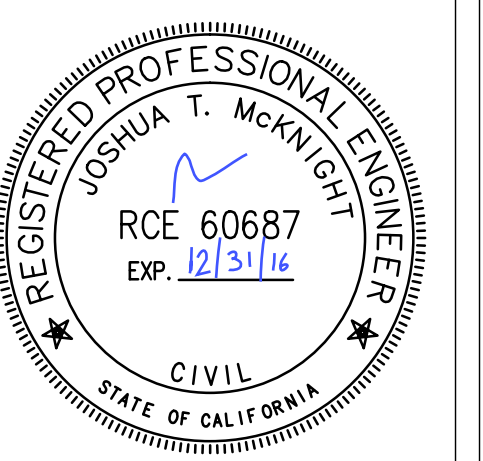
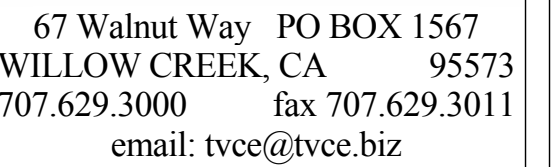
Interior Elevations

Project number	ktha 2015
Date	07/13/2016
Drawn by	RKH
Checked by	JMB

A9

Scale	1/2" = 1'-0"
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One Bedroom House

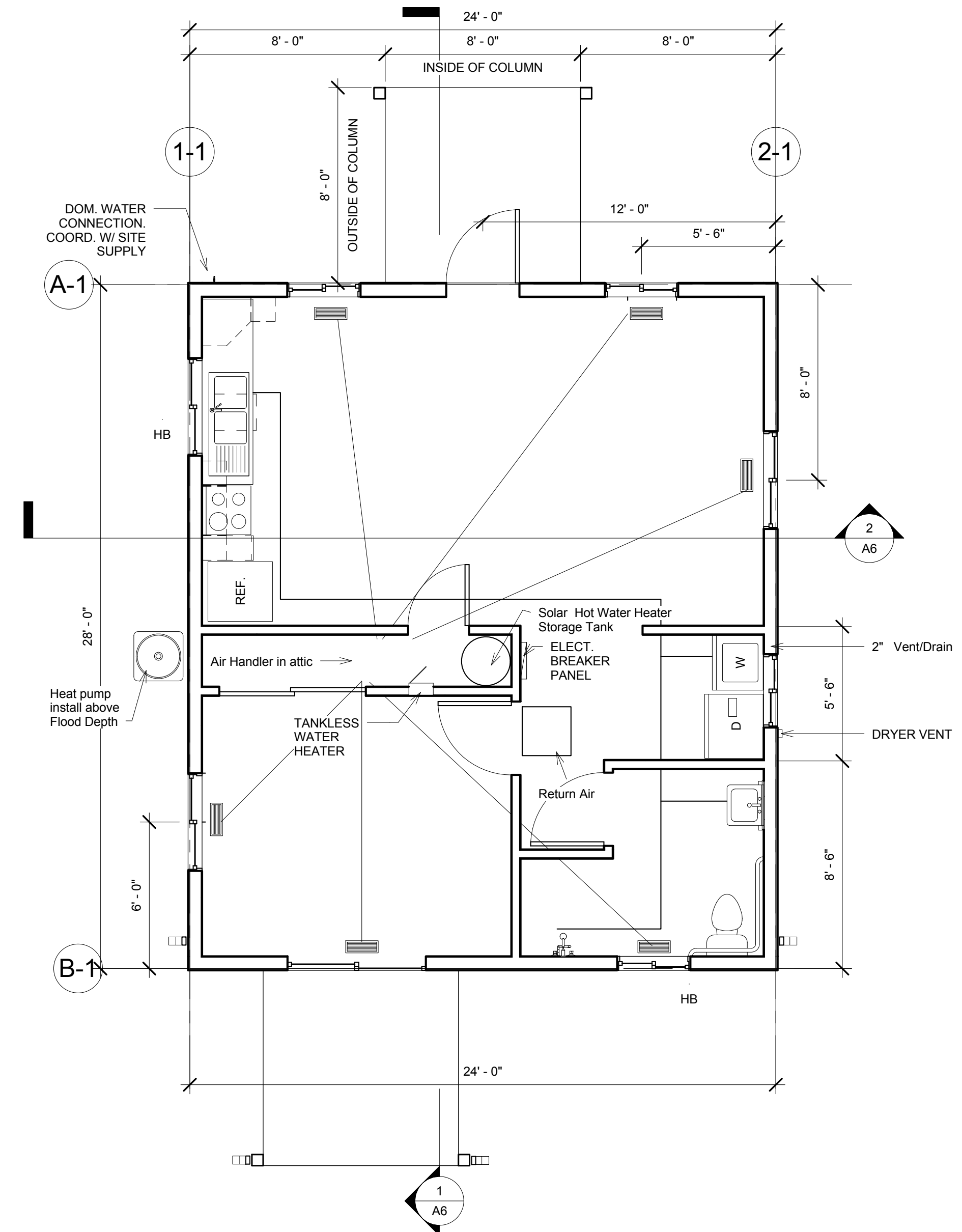
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Mechanical Plan

Project number	ktha 2015
Date	07/13/2016
Drawn by	RKH
Checked by	JMB

M1

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

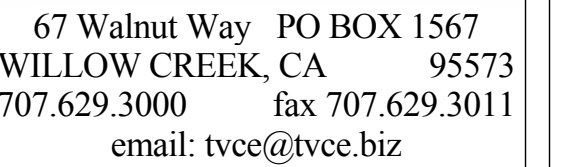
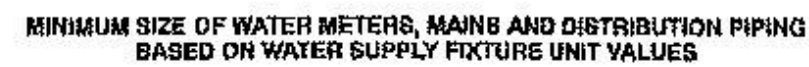


1 Mechanical Plan
1/4" = 1'-0"

DISCLAIMER:
HEATING PLANS ARE SHOWN FOR REPRESENTATION ONLY.
HEATING AND COOLING SYSTEMS WILL BE DESIGNED AND INSTALLED BY THE HEATING SYSTEM SUPPLIER
AND WILL BE REVIEWED AND APPROVED BY LOCAL JURISDICTIONS HAVING AUTHORITY

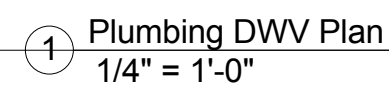
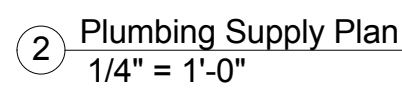
1. NOTES:
2. UNIT TO BE BRYANT OR EQUAL WITH THE AIR HANDLER IN THE ATTIC AND HEAT PUMP OUTSIDE ON GROUND.
3. FLEX DUCTING
4. ALL AIR DISTRIBUTION SYSTEMS, DUCTS, PLENUMS AND OTHER EQUIPMENT SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH CMC AND UL 181 STANDARDS.
5. BUILDING HEATING AND COOLING LOADS SHALL BE DETERMINED USING THE ASHRAE OR SMACNA STANDARDS.
5. ALL DUCT SEAL AND INSULATION SHALL MEET THE CENC REQUIREMENTS.
6. ALL METAL DUCTS FOR STATIC AIR PRESSURE SHALL COMPLY WITH TABLE 6-1 2013 CMC

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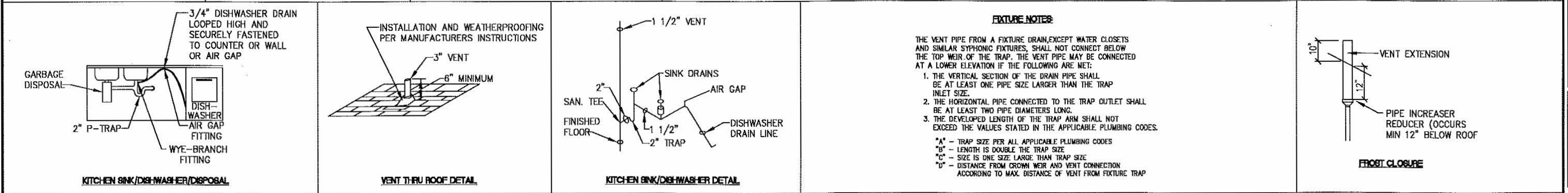
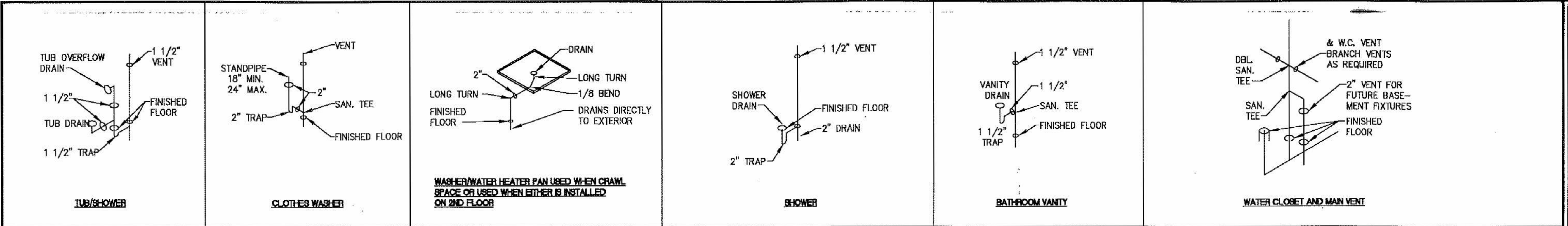
08/07/2016 4:22:40 PM

WATER-SUPPLY FIXTURE-UNIT VALUES FOR VARIOUS PLUMBING FIXTURES AND FIXTURE GROUPS

a. The fixture-unit value 2.5 assumes a flow demand of 2.5 gpm, such as for an individual low-sprinkler device. If a hose bibb(s) or cock will be required to furnish a greater flow rate, the equivalent fixture-unit value may be obtained from Table P2903.6 or Table P2903.7.



SEE ATTACHED SHEET P2 FOR PLUMBING NOTES AND DETAILS
ALL PLUMBING MATERIALS AND INSTALLATIONS TO BE DONE PER NATIONAL, STATE AND LOCAL CODES
USE REMOVABLE TRAPS UNDER ALL SINKS TO PROVIDE CLEANOUT ACCESS
A TEMPERATURE-LIMITING DEVICE CONFORMING TO ASSE 1070 IS REQUIRED AT WHIRLPOOL TUBS AND BATH TUBS TO
LIMIT WATER TEMPERATURE TO 120 DEGREES F

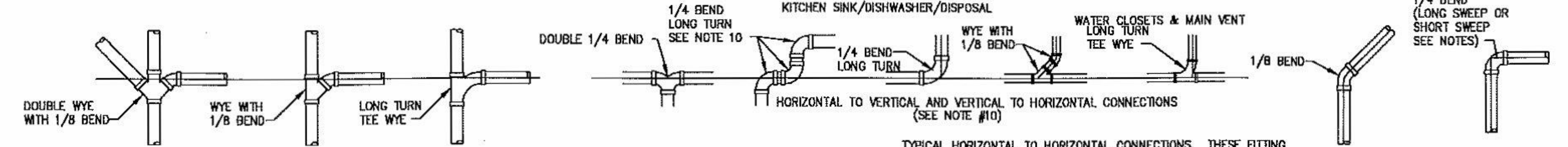
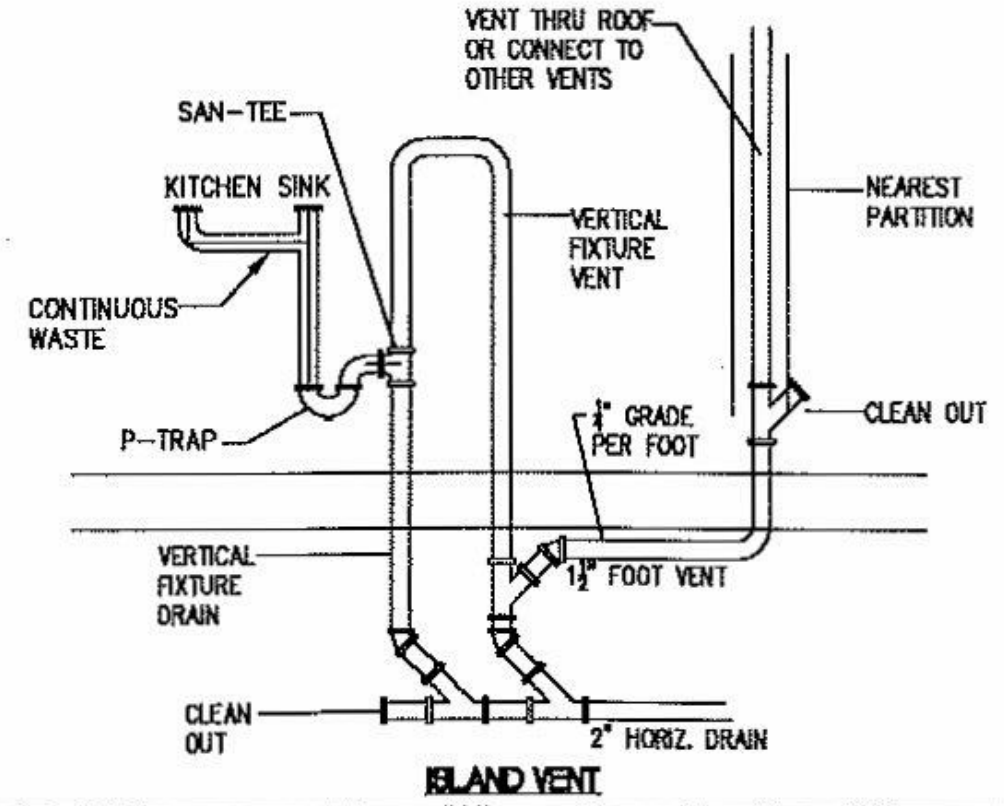


- DWV NOTES:**
- ALL WASTE AND VENT LINES ARE TO BE ABS OR PVC PIPE PROVIDED DWELLING DOES NOT EXCEED TWO STORIES IN HEIGHT. SUPPLY LINES ARE TO BE COPPER.
 - PITCH ON HORIZONTAL WASTE LINES SHALL BE 1/4". IF A SPECIAL CONSTRUCTION CONDITION EXISTS, LOCAL AUTHORITIES MAY GIVE APPROVAL FOR 1/8" SLOPE ON PIPE DIAMETERS OF 4" OR GREATER.
 - WASTE LINES: INSTALL WYE W/ CLEANOUT PRIOR TO EXITING WALL FOR CONNECTION TO DISPOSAL SYSTEM.
 - PVC-DWV PIPE SUPPORTS: AT BRANCHES, CHANGES IN DIRECTION AND AT THE BASE, EACH FLOOR AND MID STORY (VERTICAL) MAXIMUM EVERY 3'-0" AT THE END OF BRANCHES, AND CHANGE OF DIRECTION OR ELEVATION. 4" MINIMUM MAIN WASTE TO SEPTIC (BY BUILDER).
 - PLASTIC PIPE SHALL NOT PENETRATE FIRE RATED ASSEMBLIES INCLUDING FLOOR/CEILING. PIPING SHALL BE FIRESTOPPED WHERE REQUIRED WITH MATERIAL EQUIVALENT TO CONSTRUCTION WHICH IT PENETRATES & BE SUITABLE TO PIPE MATERIAL OR USE METAL PIPE FROM A MIN. OF ABOVE ASSEMBLY & DOWN. FIRE STOPPING SHALL BE PROVIDED AND VERIFIED BEFORE IT IS CONCEALED IN THE CONSTRUCTION PROCESS.
 - EACH DWELLING UNIT SHALL HAVE ONE MAIN 3 INCH MIN. STACK FROM BUILDING DRAIN EXTENDING A MIN. OF 10" ABOVE THE ROOF LINE.
 - ALL TRAP ARMS MUST BE SUPPORTED WITH 3/4" MINIMUM BEARING.
 - ALL PLASTIC PIPE MUST BE SUPPORTED AT INTERVALS IN ACCORDANCE WITH APPLICABLE PLUMBING CODES.
 - BASEMENT MODELS SHALL BE PROVIDED IN FACTORY WITH A 2 INCH VENT TO BASEMENT STUBBED BELOW FIRST FLOOR, THEN CAPPED & LABELED. BASEMENT VENT MAY BE DELETED WHEN CLOTHES WASHER IS ON FIRST OR SECOND FLOOR, OR CRAWL SPACE FOUNDATION IS PROVIDED.
 - HORIZONTAL TO HORIZONTAL & VERTICAL TO HORIZONTAL DRAIN CHANGES IN DIRECTION SHALL BE 45° DEGREE WYES, LONG SWEEP 90° ELBOWS, LONG SWEEP TYS, 6TH., 8TH. OR 16TH BENDS, APPROVED COMBINATIONS OF THESE OR EQUIVALENT LONG SWEEP FITTINGS. SHORT SWEEPS PERMITTED IN SINGLE BRANCH HORIZONTAL TO VERTICAL CHANGES IN DIRECTION ON 3 INCH OR LARGER.
 - TRAPS SHALL BE PLACED AS CLOSE AS POSSIBLE TO FIXTURE OUTLET. MAXIMUM VERTICAL DROP FROM FIXTURE OUTLET TO TRAP WEIR IS 24".
 - INACCESSIBLE TRAPS SHALL NOT HAVE UNIONS, CLEANOUTS OR SLIPJOINTS. ACCESSIBLE TRAPS SHALL BE REMOVABLE WITH UNION IN TRAP SEAL OR HAVE CLEANOUT OPENING SAME SIZE AS TRAP.
 - ALL HORIZONTAL VENT BRANCH PIPING SHALL BE LOCATED A MINIMUM OF 6" ABOVE THE FLOOD LEVEL OF THE HIGHEST FIXTURE IN THAT BRANCH.
 - MAXIMUM DISTANCE OF FIXTURE TRAP WEIR TO VENT SHALL BE IN ACCORDANCE WITH ALL APPLICABLE PLUMBING CODES.
 - PLASTIC PIPING SHALL BE PROTECTED WITH 1/16" (15 GAUGE) STEEL PLATE WHEN PIPE PASSES THROUGH WOOD MEMBERS LESS THAN 1 1/4 INCHES FROM EDGE OF MEMBER.
 - FALL IN TRAP NOT ACCEPTABLE IN CPC
 - FIRST FLOOR FIXTURES SHALL CONNECT INTO HORIZONTAL BUILDING DRAIN MORE THAN 10 PIPE DIAMETERS DOWNSTREAM OF STACK BASE & NOT CONNECT INTO SECOND FLOOR DRAIN STACK.
 - POTABLE WATER SYSTEM SHALL BE DISINFECTED ON SITE BY SITE BUILDER IN ACCORDANCE WITH APPLICABLE STATE PLUMBING CODES
 - ISLAND FIXTURE VENTING SHALL NOT BE PERMITTED FOR FIXTURES OTHER THAN SINKS & LAVATORIES (SEE ISLAND DETAILS).
 - BACKFLOW DEVICES, VACUUM BREAKERS & AIR GAPS: FOR WATER DISTRIBUTION SYSTEMS PROTECTION OF POTABLE WATER SUPPLY.
.....A.- WATER HEATER LOCATED @ OR ON LIVING SPACE LEVEL. MUST HAVE A ANTISIPHONING DEVICE INSTALLED.
.....B.- CLOTHES WASHER (IF NOT BUILT IN TO THE APPLIANCE) MUST HAVE AN ANTISIPHONING DEVICE INSTALLED.
 - WATER HEATER AND FURNACE SHALL BE BRACED TO SECURE AGAINST SEISMIC MOVEMENTS. USE OF METAL STRAPS TO SECURE WATER HEATER IS NOT ACCEPTABLE.

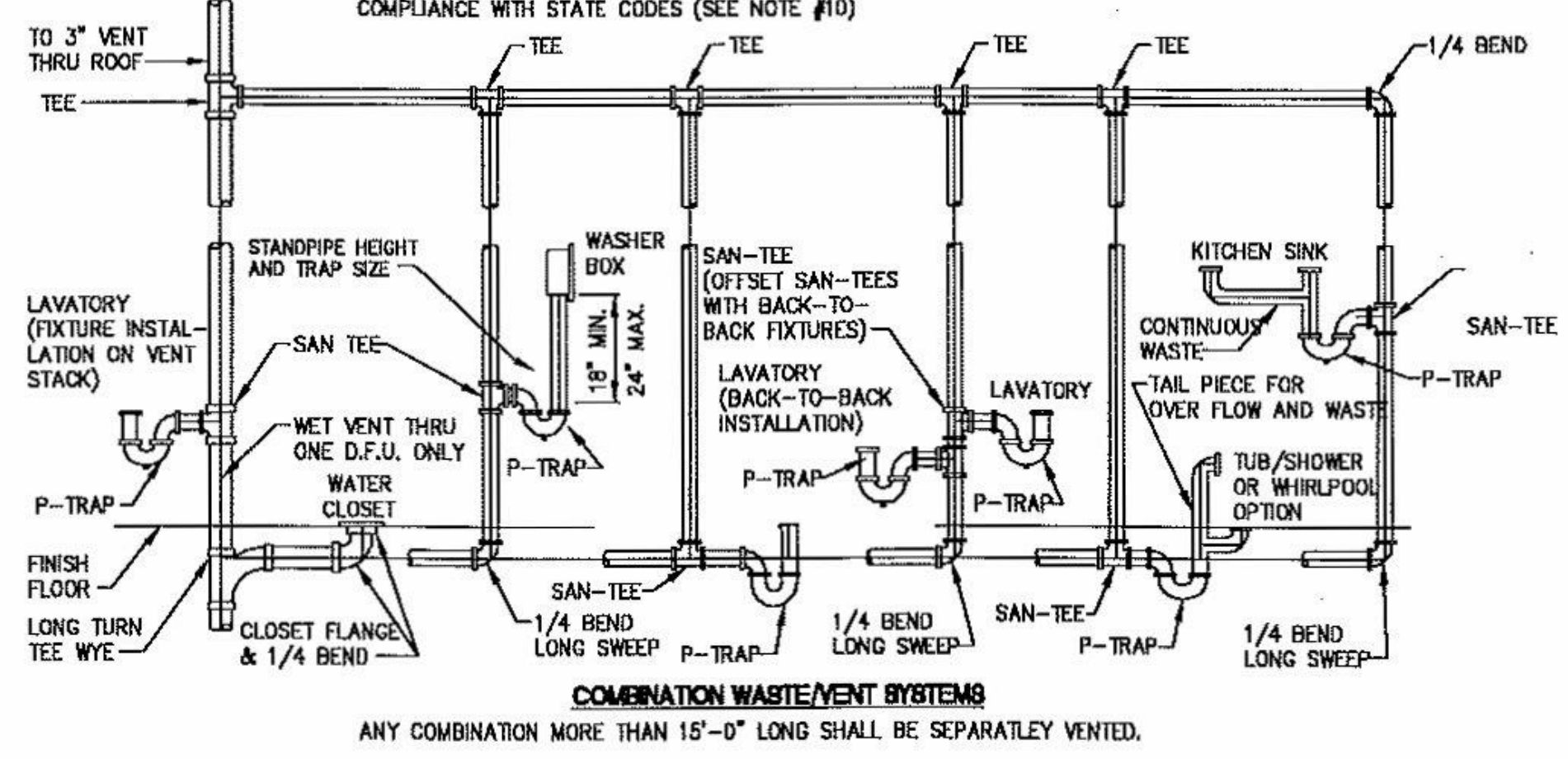
TABLE P-2008.21
MAXIMUM LENGTH OF TRAP ARM "A"

DIA. (inches)	LENGTH (feet)
1-1/4	5
1-1/2	6
2	8
3	12
4	16

- VERTICAL LEG FOR WASTE FIXTURE DRAINS: A VERTICAL LEG ("B" IN DIAGRAM) MAY BE INSTALLED IN THE TRAP ARM OF A WASTE- FIXTURE DRAIN IN LIEU OF THE USUAL TRAP ARM TO VENT CONNECTION. TYPICAL INSTALLATIONS INCLUDE ISLAND SINKS AND FIXTURES NOT ADJACENT TO A WALL. VERTICAL LEG TRAP ARM INSTALLATIONS SHALL MEET THE FOLLOWING CRITERIA:
- MINIMUM TRAP DIAMETER SHALL MEET CODES
 - THE DIAMETER OF SECTION "A" SHALL BE EQUAL TO THE DIAMETER OF THE TRAP.
 - THE LENGTH OF SECTION "A" SHALL BE NOT LESS THAN 6".
 - THE DIAMETER OF SECTION "B" SHALL BE ONE PIPE SIZE LARGER THAN THE DIAMETER OF SECTION "A".
 - THE LENGTH OF SECTION "B" SHALL BE NOT MORE THAN 36 INCHES
 - THE DIAMETER OF SECTION "C" SHALL BE ONE PIPE SIZE LARGER THAN THE DIAMETER OF SECTION "B".
 - THERE IS NO RESTRICTION ON THE LENGTH OF SECTION "C".
 - BENDS SHALL BE THE DIAMETER OF THE LARGEST CONNECTED SECTION.



- GENERAL PLUMBING NOTES:**
- CONCEALED PIPING IN UNHEATED AREAS INCLUDING OUTSIDE WALLS SHALL BE PROTECTED AGAINST FREEZING IN PLANT. PIPING SHALL BE KEPT OUT OF UNHEATED AREAS WHERE POSSIBLE.
 - ANY STRUCTURAL MEMBER SUBJECT TO HOLE DRILLING, CUTTING OR NOTCHING SHALL BE LEFT IN A SAFE STRUCTURAL CONDITION BY BEING REINFORCED, REPAIRED, OR REPLACED IN ACCORDANCE WITH THE STRUCTURAL REQUIREMENTS OF THE CODE.
 - FIELD INSTALLED PIPING SHALL BE APPROVED BY THE LOCAL BUILDING CODE ENFORCEMENT OFFICER. PIPING SHALL BE FIELD TESTED FOR LEAKS.
 - ALL COVERED PLUMBING SHALL BE TESTED IN PLANT. NON PLUMBING SHALL BE COVERED BEFORE TESTING.
 - IN-PLANT FIXTURE DRAINS AND ALL OPEN PIPE SHALL BE LABELED AND CAPPED, PLUGGED OR PROTECTED IN TRANSPORT.
 - BATH TUBS, INCLUDING GARDEN TUBS, HYDRO-MASSAGE, AND HOT TUBS SHALL HAVE AN OVERFLOW OF 1 1/2" MIN.
 - EACH FIXTURE SHALL HAVE A DIRECT INDIVIDUAL VENT OR BE VENTED BY MEANS OF A VERTICAL WET VENT PER CPC.
 - KITCHEN SINK DRAIN SIZE SHALL BE 2"
 - ALL VENTS THROUGH ROOF TO BE 3" DIAMETER AND SHALL TERMINATE ABOVE ROOF REQUIRED DISTANCE.



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KARUK TRIBE
HOUSING AUTHORITY
One Bedroom House

No.	Description	Date

Plumbing Notes and Details

Project number ktha 2015
Date 07/13/2016
Drawn by RKH
Checked by JMB

P2
Scale

Submittal Data Information
Indirect Residential Storage Tanks

Job: _____ Engineer: _____ Contractor: _____ Rep: _____

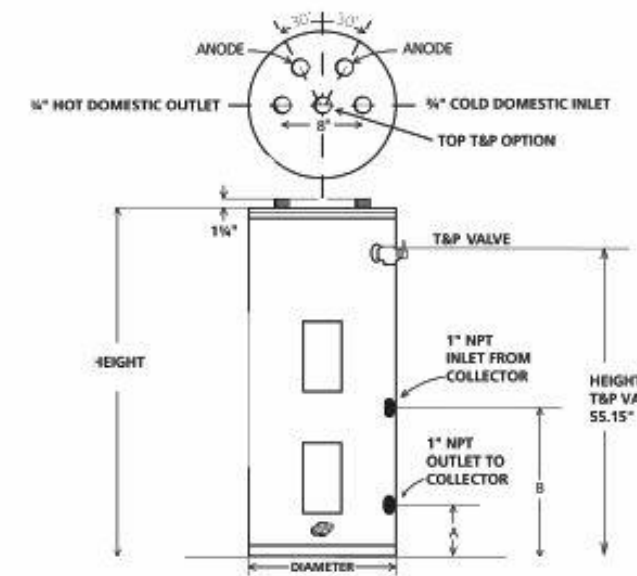
Applications
High quality tanks for use in closed loop or drainback systems where a tank with an integral heat exchanger is required.

- Features**
- Single wall, internal coil heat exchanger
 - Temperature sensor ports
 - Diffuser dip tube
 - 2" non-CFC insulation (R-16)
 - One mid-tank 4500W electric element
 - CSA certified and ASME rated T&P valve
 - Rated for continuous operation up to 160°F



Model	Capacity (gallons)	Element Wattage (240V)	Recovery 90° Rise (gallons per hour)	Dimensions (inches)			Approx. Shipping Weight (lbs)
				Height	A	B	
PTK-SOLX-80	76	4500	21	63-1/4	5-3/8	30-1/8	257
PTK-SOLX-120	108	4500	21	63-1/4	5-3/8	26-1/2	365

All dimensions in inches. Recovery capacity based on element performance. Maximum working pressure = 150 psi.



Heat Exchanger Data				
Model	Tube I.D. (inches)	Surface Area (sq. ft)	Fluid Capacity (gallons)	Tube Length (ft)
PTK-SOLX-80	1.3	16	2.8	40.8
PTK-SOLX-120	1.55	18.8	4	41

Pressure Drop Through Coil (Feet of H ₂ O)		
Flow Rate (GPM)	Head Loss (Feet)	
	PTK-SOLX-80	PTK-SOLX-120
2	0.1	0.05
4	0.3	0.15
6	0.5	0.25

Sustainable HOT WATER Solutions, Delivered by APRICUS
8 Sycamore Way, Branford, Connecticut 06405 USA Ph: 203-488-8215 Fax: 203-488-8572
office-usa@apricus.com www.apricus.com

Submittal Data Information
ETC-30 Solar Collector

Job: _____ Engineer: _____ Contractor: _____ Rep: _____

Part Codes
ETC-30 Solar Collector Complete is comprised of:
1 x ETC-30-KIT (Manifold and standard frame)
3 x BOX-ET/HP-10/10 (Tubes and heat pipes)



Applications
The Apricus ETC-30 collector is designed to be used in a wide variety of solar thermal (heat) applications in almost any climate. The evacuated tube and heat pipe technology provides very efficient and reliable solar thermal production in a simple to install, low maintenance design.

Materials of Construction
Evacuated Tubes: Borosilicate 3.3 Glass
Absorber: Cu-ALN-SS
Heat Pipes: High purity copper
Rubber Components: HTV Silicone Rubber
Mounting Frame: 6005-T5 Anodized Aluminum
316 SS Fasteners
3003 AL, PVDF coating

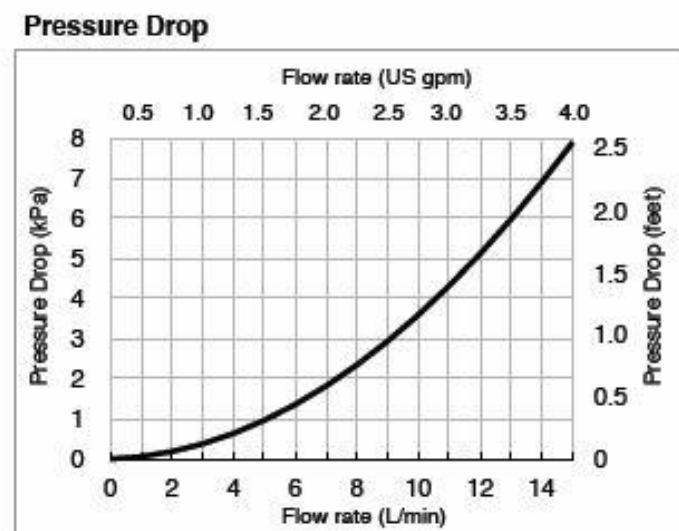
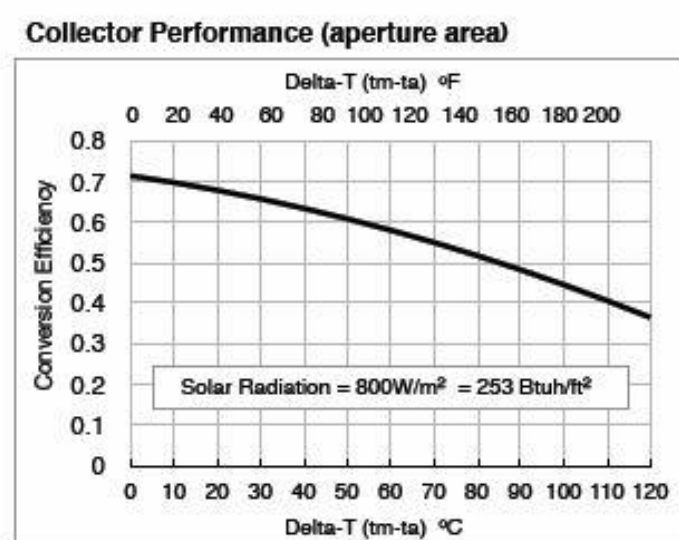
Flow Guidelines
Recommended Flow Rate: 0.5 gpm
Max Flow Rate: 4 gpm
Heat Transfer Liquid: Water or 50% Glycol/water

Physical Specifications
Dimensions (WxHxD): 86.4" x 78" x 5.35"
Aperture Area: 30.77 ft²
Gross Area: 47.33 ft²
Gross Dry Weight: 209 lbs
Fluid Capacity: 0.2 gal
Max Operating Pressure: 116 psi
Stagnation Temperature: 442°F

Warranty
• 10 year limited warranty on tubes and heat pipes
• 15 year limited warranty on copper header and mounting frame

Certifications
SRCC OG-100: 10001909
USEC: S-5995
NSF-61 Tested: 17248

Climate Category (T _{in} -T _a)	High Radiation (2000 Btu/ft ² /day)	Medium Radiation (1500 Btu/ft ² /day)
A (-9°F)	45.3	34.2
B (9°F)	43.7	32.6
C (36°F)	40.9	29.8
D (90°F)	34.4	23.5
E (144°F)	26.7	15.8



Sustainable HOT WATER Solutions, Delivered by APRICUS

Apricus Inc | 1150 S Milliken Ave, Ontario, CA, USA | inquiry-usa@apricus.com | +1 877 458 2634 | www.apricus.com

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Notes

1. Auto Air vent can be removed after initial bleeding.
2. May be required by local regulations. Always required if check valve installed on cold supply line.
3. Depending on tank being used the cold water inlet may be on the top or the bottom of the tank. Always refer to the tank manufactures guidelines before piping.

Suggested Controller Settings
(refer also to controller manual)

Control System Setting: 1

Function Settings
Protection Functions
- Max Temp = no
- Cooling = no
- Overheat protection = no
- Freeze protection = yes (-40°F)
Flow Meter = enter flow rate (gal/min)
Pump P1 = PhAC SC

Setting Menu
Maxtemp tank1 = 176°F
dtMax tank1 = 20°F
dtMin tank1 = 50°F
Min rev pump = 50%
Mintemp Collector = 85°F

Extra Functions
Thermostat Function
- Start = 125°F
- Hysteresis = 30°F

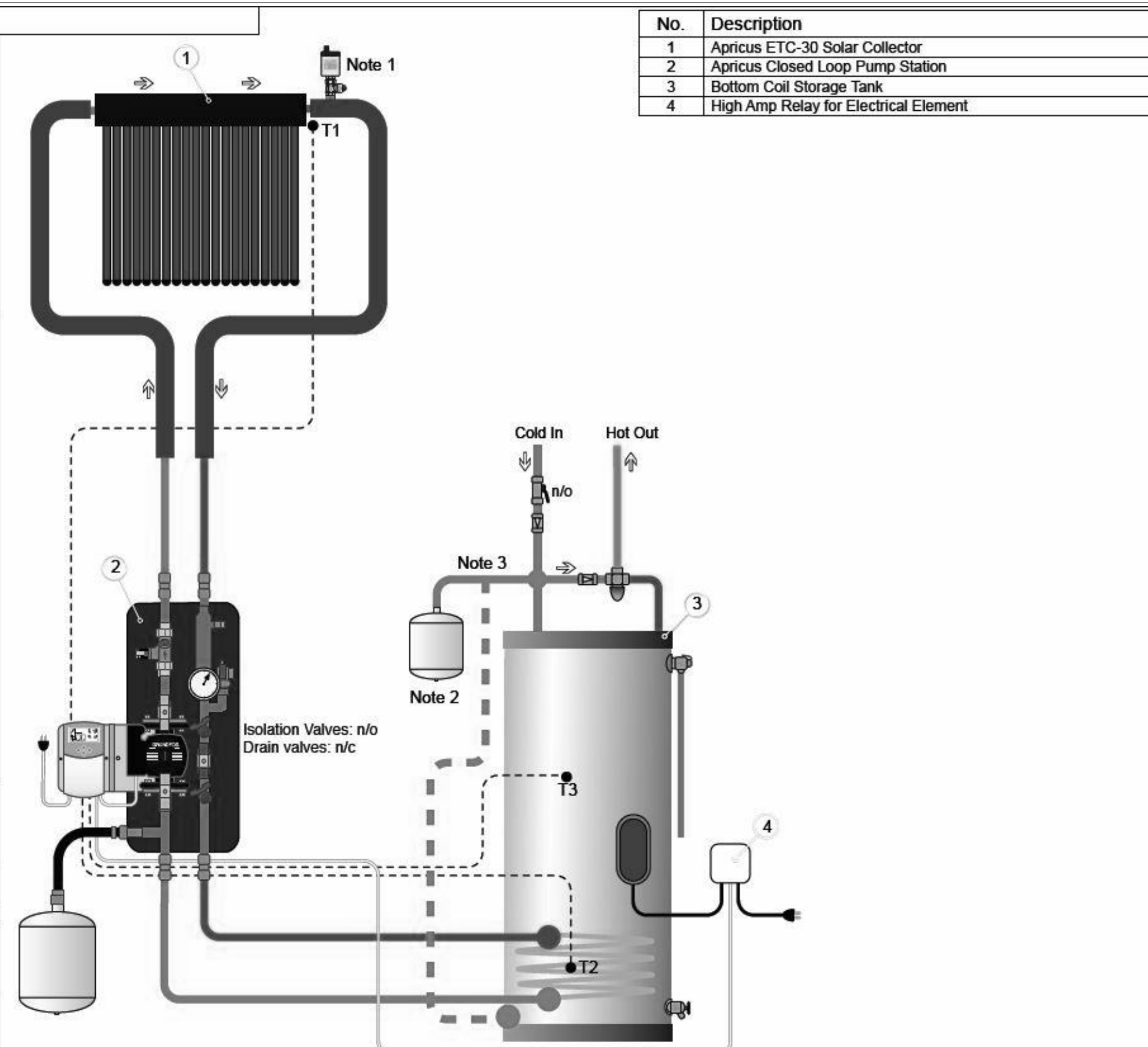
IMPORTANT

System schematics are provided as a guide only. Apricus does not guarantee schematic accuracy, that they meet your customers requirements or adhere to local codes. Any systems designed and installed must adhere to local codes and regulations, and may need to be approved by a licensed engineer, and checked by a plumbing inspector prior to commissioning. Please contact your local authorities for more information.

Revision: 1.5
Creation Date: 29th July 09
Drawing By: MH



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n/c = valve normally closed
n/o = valve normally open

No.	Description
1	Apricus ETC-30 Solar Collector
2	Apricus Closed Loop Pump Station
3	Bottom Coil Storage Tank
4	High Amp Relay for Electrical Element

Solar pump stations

255 & 256 series



Function

Solar pump stations are used on the primary circuit of solar heating systems to control the temperature of the hot water storage. The pump inside the unit is activated by the signal from a differential temperature controller. The unit contains the functional and safety devices for an optimal circuit control, and is available with both flow and return connection or with return connection only.

General

- The solar pump station is a pre-installed and leak-tested unit with fittings for transferring heat from the collector to the storage tank.
- It contains important fittings and safety devices for the operation of the solar thermal system.
- Ball valves in flow and return in combination with check valves to prevent gravity and thermo circulation.
- Ports for flushing, filling and emptying the system.
- Air vent for manual bleeding of the solar thermal system.
- Flow meter for displaying and setting the flow rate.
- Thermometer in flow and return for displaying both temperatures.
- Pressure gauge for displaying the system pressure.
- Safety relief valve to prevent overpressure.

Product range

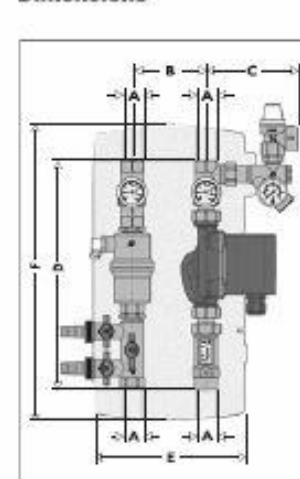
Code 255050A Dual line pump station, 3 speed, supply and return connection, flow meter scale: 1/2 to 5 gpm.....3/4" female
Code 255050A Dual line pump station, without pump, supply and return connection, flow meter scale: 1/2 to 5 gpm.....3/4" female
Code 256050A Single line pump station, 3-speed, return connection, flow meter scale: 1/2 to 5 gpm.....3/4" female
Code 256050A Single line pump station, without pump, return connection, flow meter scale: 1/2 to 5 gpm.....3/4" female
Code 256050A Single line pump station for drainback, 1-speed, return connection, flow meter scale: 1/2 to 5 gpm.....3/4" female

Technical specifications:

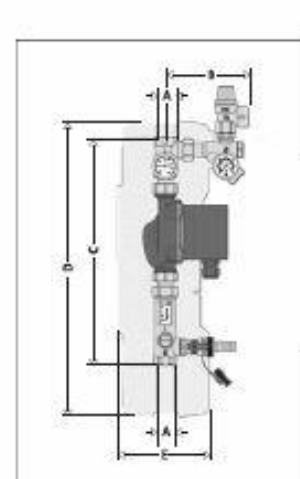
Body: brass
Temperature gauge: steel / aluminium
Seals: PTFE / EPDM
O-Rings: EPDM / Viton
Union gaskets: AFM 34, asbestos free
Insulating shell: EPP, thermal conductivity value = R4

Medium: water, glycol solutions
Max. percentage of glycol: 50%
Safety relief valve temperature range: -20 to 380°F (-30 to 180°C)
Safety relief valve factory setting: 90 psi (6 bar)
Min. opening pressure for check valve: Δp: 1/4 psi (2 kPa)
Adjustment range of flow meter: 1/2 to 5 gpm (1 to 20 l/min)
Max return flow meter temperature: 265°F (130°C)
Pressure gauge scale: 0-90 psi (0-6 bar)
Temperature gauge scale: 32-320°F (0-160°C)
Connections: 3/4" female straight thread
Filling/drain hose connections: 3/4" male hose thread
Expansion tank connection: 1/2" male straight thread

Dimensions



Code	255050A	256050A
A	3 1/4"	3 1/4"
B	4"	4"
C	4 7/8"	4 7/8"
D	15"	15"
E	9"	9"
F	15"	15"
Wt (lb)	15	10

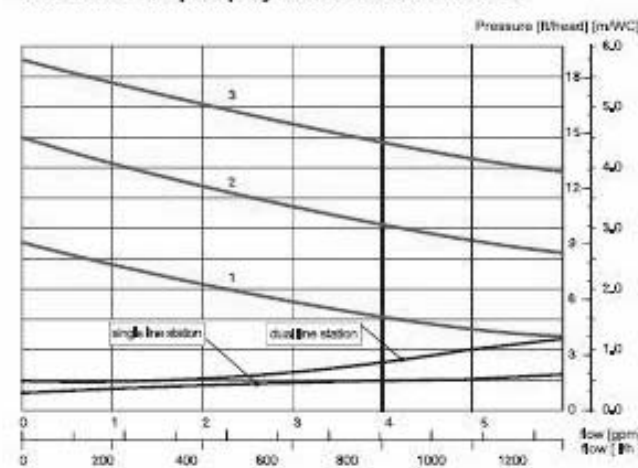


Code	255050A	256050A	256050A
A	3 1/4"	3 1/4"	3 1/4"
B	7"	7"	7"
C	16 1/4"	16 1/4"	16 1/4"
D	17"	17"	17"
E	9"	9"	9"
Wt (lb)	12	8	9

Wilo Star S-16 pump

Performance:
Body: Cast iron
Power supply: 115 V - 60 Hz
Power consumption: 90 W (max) 0.5 A
Max. pressure: 150 psi (10 bar)
Max. temperature: 230°F (110°C)
Agency approval: cULus

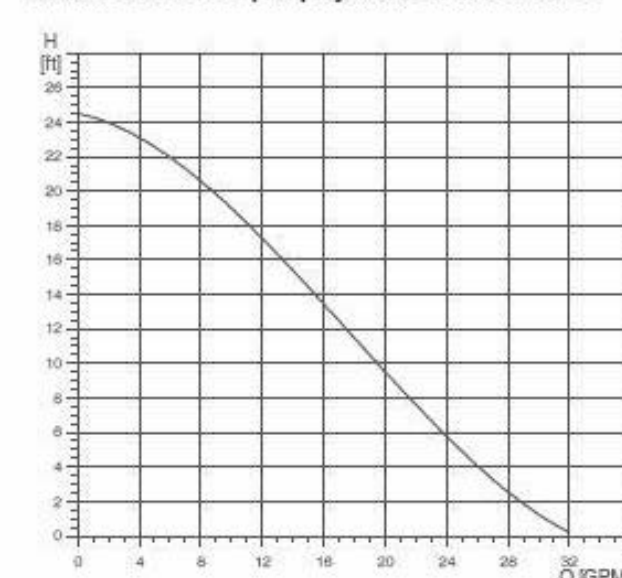
Wilo Star S-16 pump hydraulic characteristics



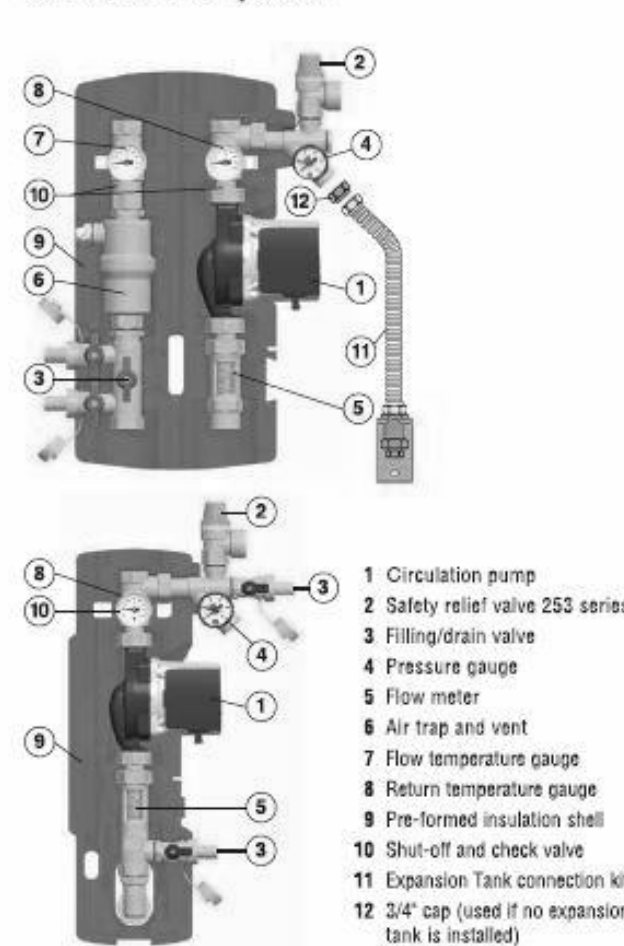
Grundfos UP15-100 pump, Drainback station

Performance:
Body: Cast iron
Power supply: 115 V - 60 Hz
Power consumption: 135 W, 1.1 A
Max. pressure: 145 psi (10 bar)
Max. temperature: 205°F (96°C)
Agency approval: cULus

Grundfos UP15-100 pump hydraulic characteristics



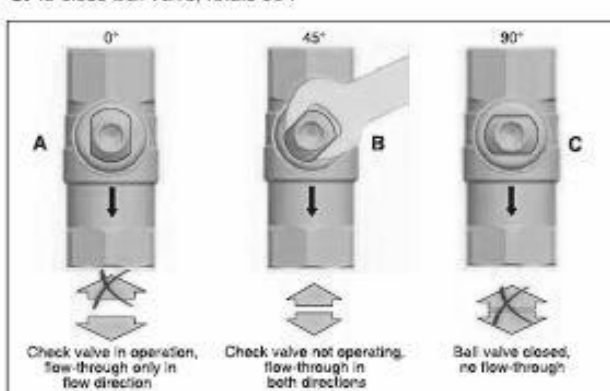
Characteristic components



Construction details

Shut-off and check valve

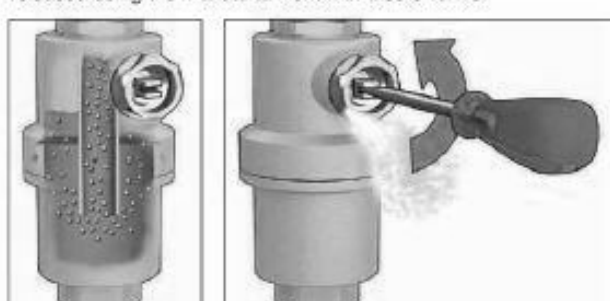
- The shut-off and check valves are built into the ball valves of the temperature gauge connectors.
- A. In normal system operation, the ball valves must be fully open.
- B. To allow the fluid to flow in both directions, it is necessary to rotate the respective ball valve to 45°.
- C. To close ball valve, rotate 90°.



Air vent

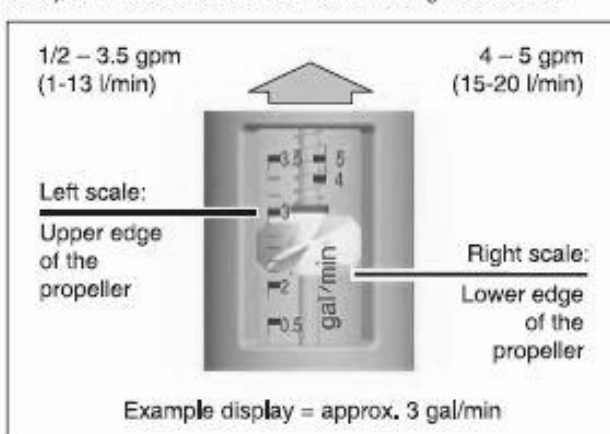
The solar pump unit version with flow and return connection is equipped with an air vent on the flow line. The air, separated from the fluid, is collected at the top of the vent.

The collected air must be released from time to time — every day after the initial installation; however, it can eventually be done weekly or monthly, depending on the quantity of the air. The collected air is released using the manual air vent with a screwdriver.



Flow meter

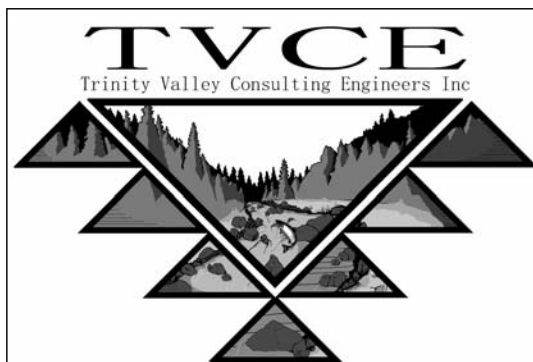
The Flow meter is for measurement and display of the flow rate of 1/2 to 5 gpm (1-20 l/min). For accurate function of the measuring device the system must be flushed and free from foreign substances.



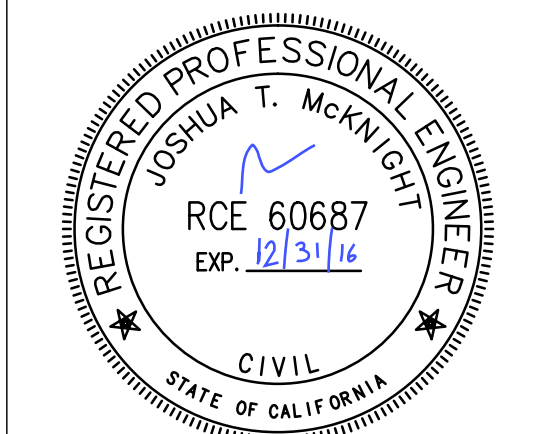
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KARUK TRIBE
HOUSING AUTHORITY
One Bedroom House

No.	Description	Date

Solar Hot Water System

Project number ktha 2015
Date 07/13/2016
Drawn by RKH
Checked by JMB

P3

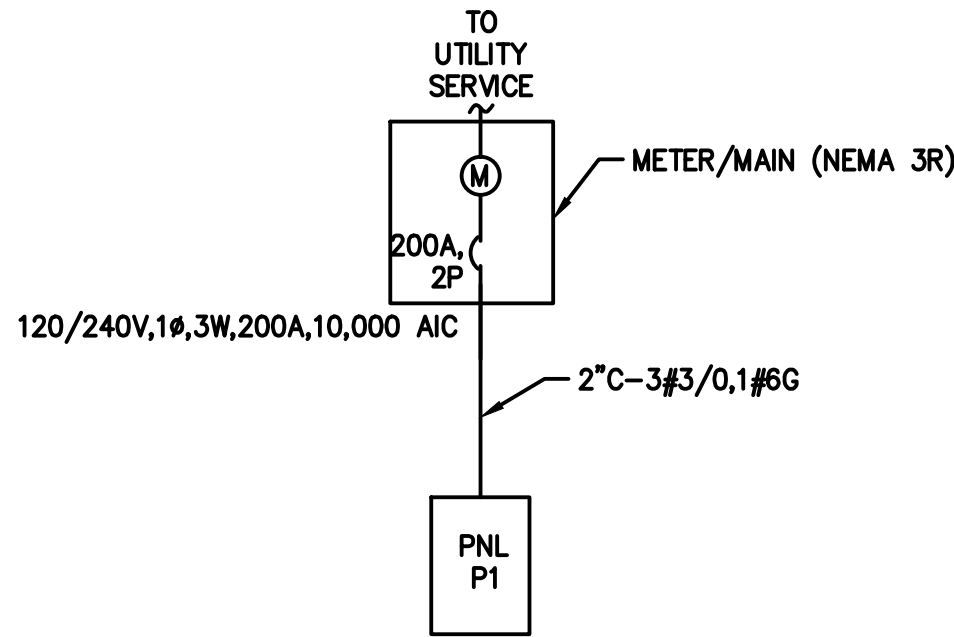
Scale

GENERAL NOTES

1. UNLESS OTHERWISE INDICATED, RECEPTACLES SHALL BE CONNECTED TO THE CIRCUIT INDICATED USING 2#12,1#12G. NON-METALIC SHEATHED CABLES, RECEPTACLE CIRCUITS SHALL BE CONCEALED IN WALLS OR ABOVE CEILINGS.
2. MAINTAIN A MINIMUM 30"W x 36"D CLEAR SPACE IN FRONT OF ALL ELECTRICAL DISCONNECTS AND PANELS PER THE CEC.
3. MAINTAIN WORKING SPACE AND 6'-6" HEAD ROOM IN FRONT OF ALL ELECTRICAL EQUIPMENT IN ACCORDANCE WITH CEC.
4. CONDUCTORS SHALL BE NON-METAL SHEATHED CABLE (ROMEX) UNLESS OTHERWISE SHOWN.
5. RECEPTACLES SHALL BE SPECIFICATION GRADE WITH NUMBER OF POLES AS REQUIRED. RECEPTACLES SHALL BE PROVIDED WITH GROUND TERMINALS AND SCREW TERMINALS. SUITABLE FOR NO. 10 CONDUCTORS. RECEPTACLES SHALL BE WHITE AND RATED FOR 15A, 120V WITH A NEMA 5-15R CONFIGURATION. DEVICE PLATE SHALL BE PLASTIC WITH COLOR TO MATCH RECEPTACLES.
6. LOAD CENTERS SHALL BE RATED AS SHOWN AND PROVIDED WITH TIN-PLATED ALUMINUM BUS, THERMAL MAGNETIC CIRCUIT BREAKERS AS SHOWN, AND NEMA 1 ENCLOSURE UNLESS OTHERWISE INDICATED.

KEY NOTES

- ① PROVIDE AND INSTALL RECEPTACLE 6" ABOVE COUNTER HEIGHT.
- ② SWITCHED GARBAGE DISPOSAL RECEPT. MOUNT 6" ABOVE COUNTER.
- ③ A-19 INCANDESCENT LIGHT FIXTURE TO BE DETERMINED. FIXTURE SHALL MEET MINIMUM EFFICACY REQUIREMENTS PER 2013 TITLE 24 TABLE 150-C.
- ④ 2 TUBE, F32W T8 SURFACE MOUNT FLUORESCENT FIXTURE.
- ⑤ WALL SCONCE LIGHT FIXTURE TO BE DETERMINED. FIXTURE SHALL MEET MINIMUM EFFICACY REQUIREMENTS PER 2013 TITLE 24 TABLE 150-C.
- ⑥ ARC FAULT/TAMPER RESISTANT RECEPT.
- ⑦ PROVIDE AND INSTALL IN ACCORDANCE WITH UTILITY REQUIREMENTS.
- ⑧ PROVIDE RECEPTACLES TO MATCH EQUIPMENT CONFIGURATION.
- ⑨ PROVIDE AND INSTALL SMOKE DETECTOR IN LOCATION SHOWN.
- ⑩ PROVIDE AND INSTALL RECEPTACLE 48" ABOVE FINISHED FLOOR.
- ⑪ MOUNT UNDER SINK FOR DISPOSER CONNECTION.
- ⑫ FINAL CONFIGURATION AND SIZING OF CIRCUIT BREAKER SHALL BE COORDINATED WITH SUPPLIED EQUIPMENT BEFORE INSTALLATION.
- ⑬ PROVIDE AND INSTALL GROUND RODS A MINIMUM OF 6' APART IN ACCORDANCE WITH NEC 250.53(3). SUPPLEMENTAL GROUND ROD IS NOT REQUIRED IF SINGLE GROUND ROD HAS A RESISTANCE TO EARTH OF 25 OHMS OR LESS PER NEC 250.53(2).



ONE-LINE DIAGRAM

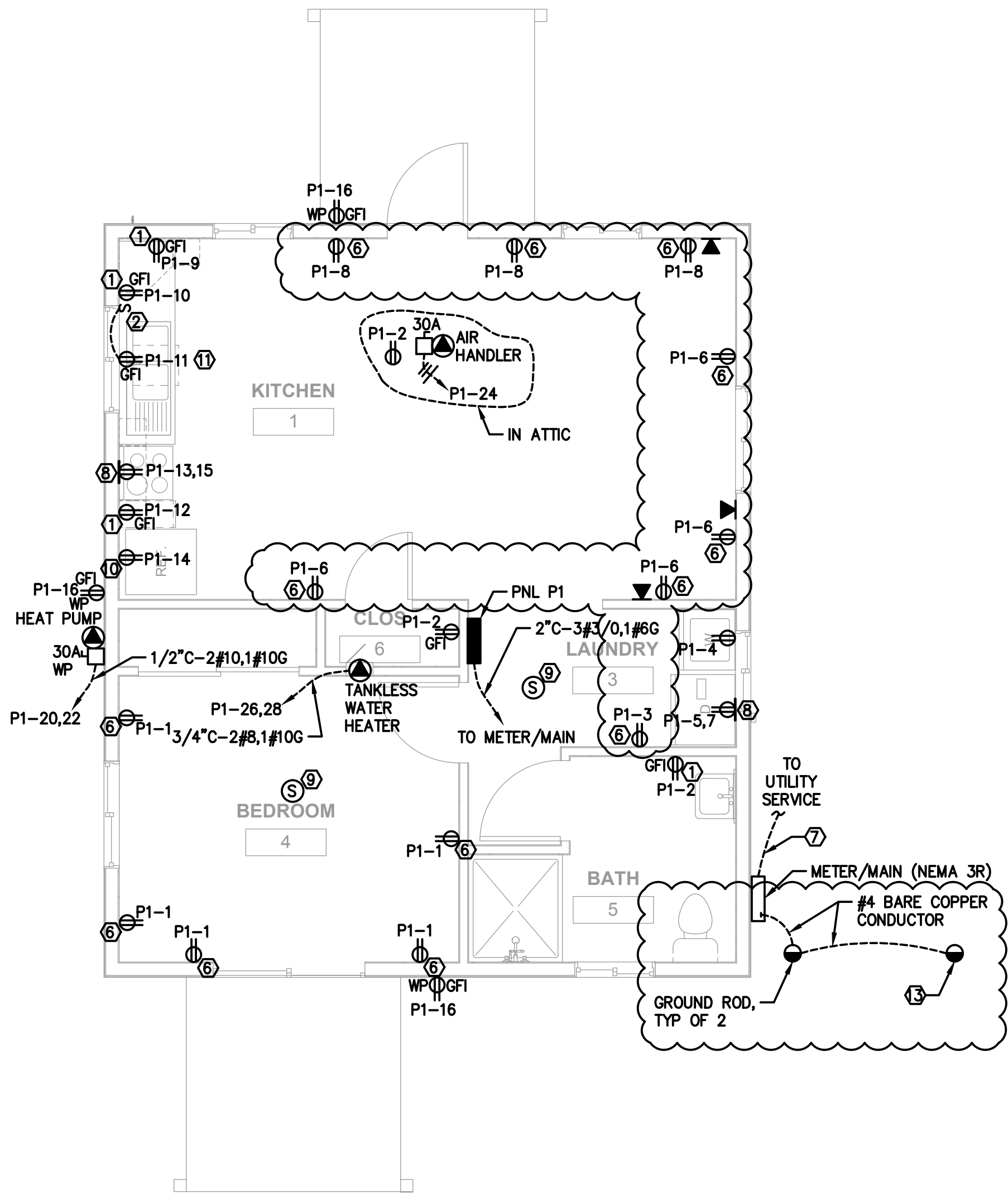
		200A BUS		CIRCUIT AMPS	
		MLO			
BEDROOM RECEPT	20	8	1	2	5
LAUNDRY RM RECEPT	20	3	3	4	10
DRYER	30	20	5	6	20
COUNTER RECEPT	20	2	7	8	5
GARBAGE DISPOSAL	20	10	9	10	20
OVEN	50	30	11	12	20
EXTERIOR RECEPT	20	3	13	14	20
RESTROOM/LAUNDRY LTG	20	3	15	16	3
EXTERIOR LTG	20	2	17	18	2
SPARE	20		19	20	16
SPARE	20		21	22	10
SPARE	20		23	24	20
SPARE	20		25	26	40
SPARE	20		27	28	40
SPARE	20		29	30	20
		65	66	78	86
		NEUTRAL		RIGHT SIDE AMPS	
		GROUND		LEFT SIDE AMPS	
				143	
				152	
				TOTAL AMPS	

PANEL P1

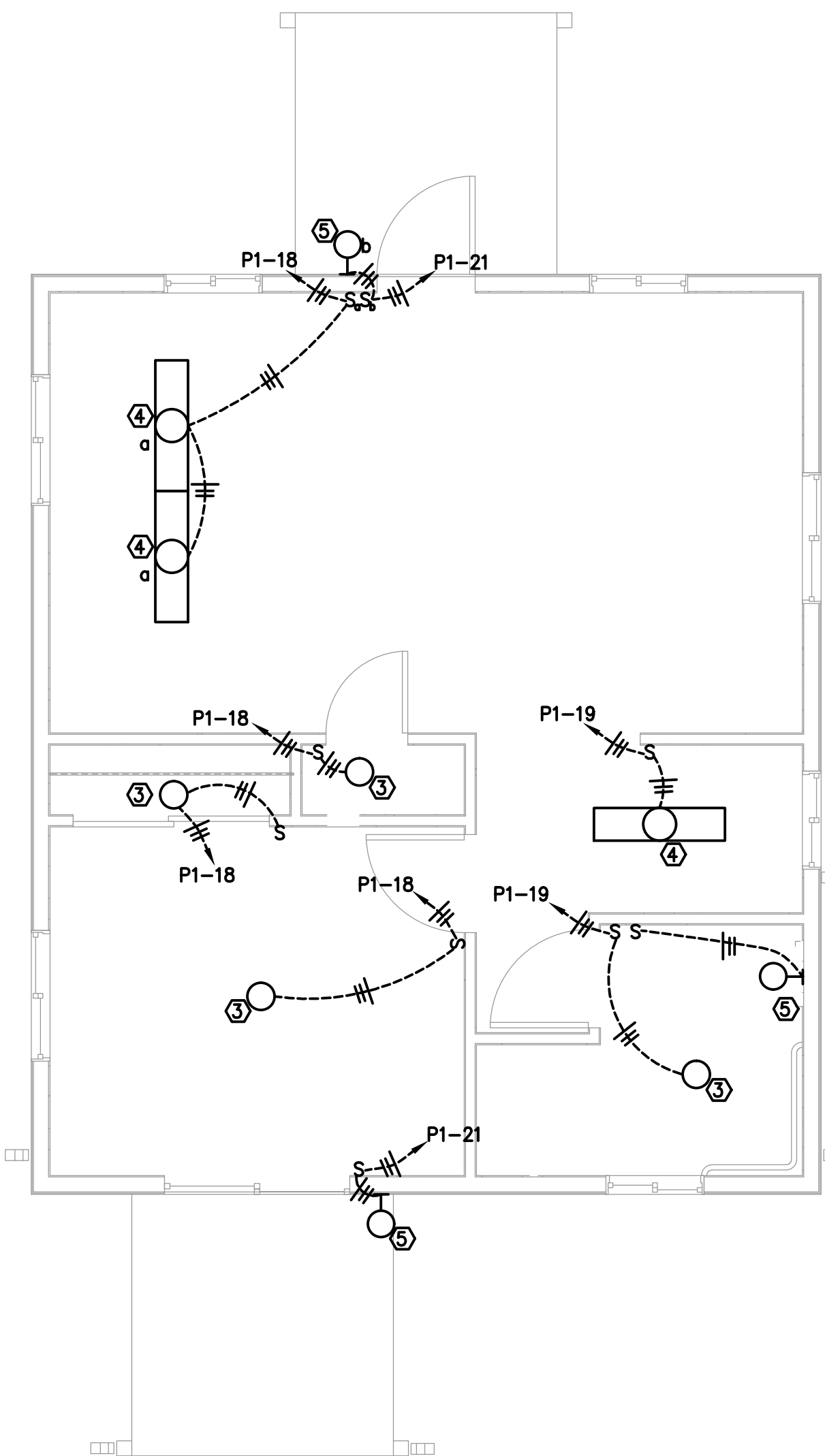
VOLTAGE: 120/240V
LOCATION: LAUNDRY RM
MOUNTING: RECESS
AMPS IC: 10,000

ELECTRICAL SYMBOLS

- CONDUIT EXPOSED
----- CONDUIT CONCEALED or BURIED
— CROSSHATCHES ON CONDUIT RUN INDICATES NUMBER OF #12 CONDUCTORS
— SUBSCRIPT G INDICATES GREEN GROUND CONDUCTOR
— LA-2 HOME RUN-DESTINATION SHOWN
■ SURFACE MOUNT PANELBOARD
○ LUMINAIRE
□ LUMINAIRE
H-○ WALL MOUNTED LUMINAIRE
So or □ SMALL LETTER SUBSCRIPT AT SWITCH AND LUMINAIRE INDICATES SWITCHING
XX-○ CONVENIENCE RECEPTACLE, DUPLEX UNLESS SPECIFIED OTHERWISE
XX-○ 4-PLEX CONVENIENCE RECEPTACLE
◀ TELEPHONE/DATA RECEPTACLE (OUTLET BOX ONLY)
S_{3W} WALL SWITCH:
3-THREE WAY
— CIRCUIT BREAKER, THERMAL MAGNETIC TRIP SHOWN, 3-POLE UNLESS INDICATED OTHERWISE
WP-WEATHERPROOF
AFCI-ARCH FLASH
CURRENT INTERRUPTER
GFI-GROUND FAULT INTERRUPTER
MOUNT 15" AFF FROM THE BOTTOM OF THE RECEPT UNLESS OTHERWISE NOTED.
MOUNT SWITCHES 48" AFF TO TOP OF DEVICE UNLESS OTHERWISE INDICATED. TYPE INDICATED SEE LUMINAIRE AND DEVICE SCHEDULE.



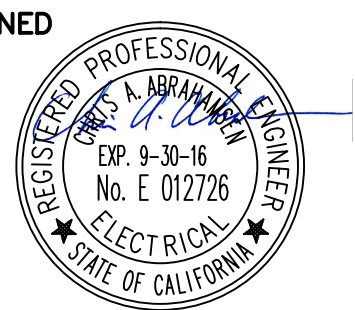
POWER PLAN
1/4"=1'-0"



LIGHTING PLAN
1/4"=1'-0"

PACE ENGINEERING
REDDING, CALIFORNIA

DES. CA	CKD. CA	JOB NO.
DRN. JS	DATE 08/11/15	2274.17



KARUK TRIBE HOUSING AUTHORITY
635 JACOBSON WAY
HAPPY CAMP, CA 96039
ONE BEDROOM FLOOR PLAN

SHEET

E1