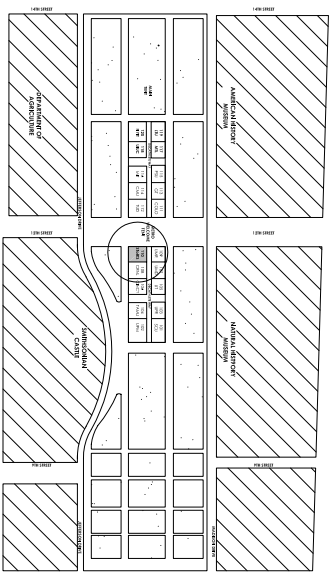


project solarhouse_stateofkansas

Celebrate this place. Redirect expectations. Look ahead. Go mobile. Multiply. We know that the world cannot sustain itself forever simply on fossil fuels and we understand that the time to change that is now. Not "now" as in 50 years, but "now" as in today. Kansas has never been known for its liberal ideas and radical changes, but hopefully we can at least educate not only the citizens of Kansas and the Midwest, but show America how easy and beautiful sustainable design can be.

Our primary design priority is to capture the essence of Kansas by using regional materials inherent to Kansas and optimizing our natural resources: wind and sun. We then looked towards changing the way people think about their homes. We wanted to educate and demonstrate that a comfortable lifestyle doesn't only exist in 4,000 square foot homes. By allowing the living room to open up to the outside and minimizing the interior partitions, we have allowed for space and comfort in a footprint of less than 800sf. By redirecting expectations, we chose to look ahead to the future and design for how life might be rather than continue designing for an over consumptive society. We focused our budget around environmental, energy efficient materials and appliances rather than directing those monies to flashy, non-conductive that didn't achieve anything. We also wanted to change the way people thought of modular homes. This no longer simply means a trailer house, but rather a home that could be mobile and modularized. We foresee that our design could be modified to various needs and climates, but the soul of the object would be the same.

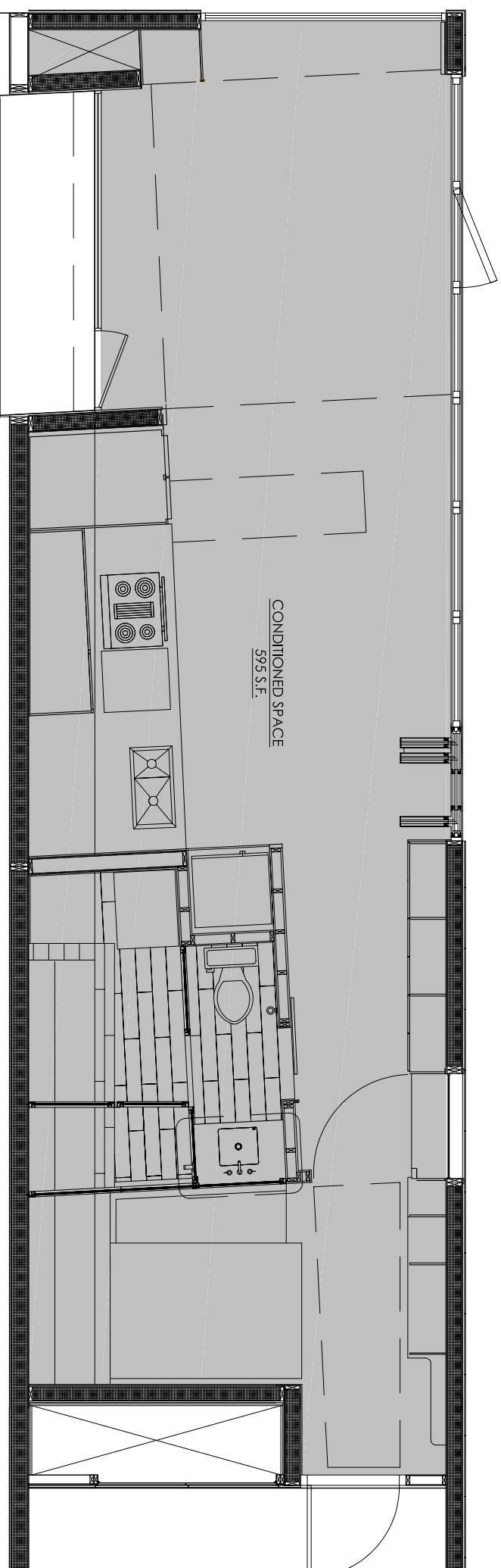
Our house represents a turning point in our history. This project represents so much more than simply a home. It represents new possibilities: for Kansas as well as the rest of the world.



SITE LOCATION PLAN
NO SCALE



EXTERIOR RENDERING
NO SCALE



CONDITIONED SPACE	
NO SCALE	1

GENERAL NOTES

1. ALL NEW CONSTRUCTION SHALL MEET LATEST EDITIONS OF ALL OF ALL APPLICABLE NATIONAL, STATE, AND LOCAL BLDG. CODES.
2. BUILDING PERMIT WILL BE REQUIRED FOR THE PROJECT. ALL CONTRACTORS WILL BE REQUIRED TO OBTAIN AN OCCUPATIONAL LICENSE FROM THE CITY OF KANSAS CITY, MISSOURI.
3. WORKMANSHIP SHALL BE OF THE HIGHEST QUALITY. QUALITY MATERIALS SHALL BE USED THROUGHOUT. ALL WORK SHALL BE DONE IN A MANNER SO AS TO MATCH ADJACENT WORK AND FINISHES AND SHALL BE APPROVED BY OWNER.
4. ALL CUTTING AND PATCHING DONE UNDER THIS CONTRACT SHALL BE ONLY AS NECESSARY FOR THIS WORK.
5. CONTRACTORS SHALL BE RESPONSIBLE FOR CONTAINING THEIR WORK WITHIN THE WORK AREA AND TO PROTECT THE PUBLIC FROM INJURIES AT ALL TIMES. CONTRACTOR SHALL SECURE THE WORK AT THE END OF EACH WORK DAY.
6. KEEP PREMISES BROOMED CLEAN AT ALL TIMES FROM FOREIGN MATERIAL CREATED UNDER THIS CONTRACT. PROVIDE TAPPAULINS TO PROTECT ALL FINISHES, SURFACES, AND EQUIPMENT.
7. AREAS FOR MATERIAL STORAGE, TRASH DISPOSAL, WORKMANS PARKING, ETC. SHALL BE COORDINATED WITH THE OWNER'S REP.
8. CONTRACTOR SHALL REMOVE ALL CONSTRUCTION DEBRIS. ALL CONSTRUCTION DEBRIS SHALL BE CONTAINED WITHIN THE SPACE. BEADS OR CORNER BEADS AS REQUIRED.
9. ALL GYP. BD. SHALL BE 5/8" THICK WITH TAPERED EDGES. OUTSIDE CORNERS AND EDGES SHALL HAVE SCREDS AND CASING BEADS OR CORNER BEADS AS REQUIRED.
11. THE ARCHITECT HAS INFORMED THE OWNER OF ALL REQUIREMENTS AND REGULATIONS REGARDING THE AMERICANS WITH DISABILITIES ACT. THE OWNER IS RESPONSIBLE FOR COMPLIANCE WITH THESE REGULATIONS. THEREFORE THE ARCHITECT ACCEPTS NO RESPONSIBILITY FOR COMPLIANCE.
12. CONTRACTOR SHALL USE ADA COMPLIANT DOORS WITH THE APPROPRIATE HARDWARE.
13. CONTRACTOR SHALL SUBMIT PRODUCT LITERATURE ON ALL FIXTURE TYPES TO ARCHITECT FOR APPROVAL.
14. CONTRACTOR SHALL SUBMIT SAMPLES OF STAINED WOOD TRIM AND PANELS TO ARCHITECT FOR APPROVAL.
15. ALL DIMENSIONS TO BE VERIFIED BY CONTRACTOR.
16. PROVIDE SUBMITTAL OF ALL FINISH MATERIALS FOR APPROVAL PRIOR TO PURCHASE ORDERS.
17. THE CONTRACTOR OR HIS SURETIES SHALL REMEDY ANY DEFECTS IN THE WORK AND PAY FOR ANY DAMAGE OR OTHER WORK RESULTING THERE FROM WHICH SHALL APPEAR WITHIN A PERIOD OF ONE (1) YR. FROM THE DATE OF FINAL ACCEPTANCE UNLESS A LONGER PERIOD IS OTHERWISE SPECIFIED OR A DIFFERENT WARRANTY PERIOD HAS BEEN ESTABLISHED IN THE SUSTANTIAL COMPLETION CERTIFICATION.
18. THE CONTRACTORS SHALL REFER TO ALL ARCHITECTURAL DRAWINGS FOR DETAILS OF BUILDING CONSTRUCTION TO INSURE SPACE AND SATISFACTORY ARRANGEMENT FOR THEIR WORK. THE VARIOUS DRAWINGS COMPRISING THE SET ARE INTERDEPENDENT AND MUST BE USED JOINTLY AT ALL TIMES. EACH CONTRACTOR SHOULD REFER TO THE GENERAL REQUIREMENTS OF THE CONTRACT. THESE NOTES AND SYMBOLS SET DOWN ON THE DRAWINGS ARE FOR THE GUIDANCE OF ALL TRADES INVOLVED IN THE PROJECT AND MUST BE FOLLOWED TO EXECUTE THE WORK AS INTENDED. IF DISCREPANCIES OCCUR, CONTACT THE ARCHITECT FOR CLARIFICATION BEFORE PROCEEDING.
19. DIMENSIONS ARE TYPICALLY INDICATED TO THE FINISHED FACE OF WALLS OR PARTITIONS AND CENTER LINES OF COLUMNS UNLESS NOTED OTHERWISE.
20. ANY STRUCTURAL, MECHANICAL, ELECTRICAL, FIRE PROTECTION, OR PLUMBING INFORMATION INDICATED ON THE ARCHITECTURAL DRAWINGS IS FOR REFERENCE PURPOSES ONLY UNLESS NOTED OTHERWISE.

ABBREVIATIONS

A.F.F.	above finished floor	MIN.	minimum
C.I.	control joint	MICRO.	microvoid
C.L.	center line	M.O.	mosaic opening
CLG.	ceiling	NO.	number
C.O.	coiled opening	N.A.	not applicable
CONT.	continuous	N.T.S.	not to scale
C.O.C.	concrete tile	O.C.	on center
D.	diameter	O.H.	outside diameter
DIA.	diameter	OPP.	opposite
D.N.	down	PP.	post
D.S.	downturn	P.S.F.	pounds square inch
D.W.	dishwasher	P.S.F.	pounds square foot
E.V.	each	R.	riser
E.L.	exposition joint	RE.	refer (to)
ELEV.	elevation	REQD.	required
EQ.	equal	REF.	refrigerator
E.W.	each way	R.M.	room
F.B.O.	furnished by owner	R.O.	rough opening
F.D.	floor drain	S.C.	solid core
F.O.C.	face of concrete	S.D.	smoke detector
F.O.S.	face of stud	S.F.	square feet
F.R.	fire-retardant	SM.	smiler
G.A.	gauge	SIP.	structural insulated por
GYP. BD.	gypsum board	SO.	square
H.B.	hose bibs	SS.	stainless steel
H.C.	hollow core	STD.	standard
H.M.	hollow metal	T.O.B.	top of beam
ID.	inside diameter	T.O.W.	top of wall
JD.	joint	TV.	television
J.V.	joint space	TYP.	typical
K.	knee brace	U.N.O.	unless noted otherwise
L.V.	laminated veneer	W.	washer
LBH	laminated veneer lumber	W.	with
MAX.	maximum	W.H.	water heater
MECH.	mechanical	W.R.	water resistant
MFR.	manufacturer	1ST	first
		2ND	second

DOOR TYPE		DOOR TYPE
	WINDOW TYPE	DOOR TYPE
	SECTION MARKER	DOOR TYPE
	INTERIOR ELEVATION	DOOR TYPE
	WALL TYPE	DOOR TYPE
	DOOR TYPE/NUMBER	DOOR TYPE

GENERAL

G0.1

COVER SHEET

G0.2

GENERAL NOTES + DRAWING INDEX

G0.3

HORIZONTAL PROJECTION

G1.1

TOUR ROUTE

G2.1

FIRE SAFETY

G3.1

CONSTRUCTION ASSEMBLY/DISASSEMBLY

CIVIL

C1.1

SITE PLAN

C2.1

SOLAR ENVELOPE

C3.1

MALL FOOTPRINT

C4.1

MAIN DECK PLAN

C4.2

MAIN DECK FRAMING

C4.3

MAIN DECK FRAMING

C4.4

MAIN DECK SECTION

C5.1

DECK PLAN/FRAMING

C5.2

DECK SECTION/DETAILS

MEP

M0.1

GENERAL NOTES

E1.1

ELECTRICAL PLAN

E1.2

ELECTRICAL PLAN SWITCHES

E1.3

PV WIRING ELEVATION

E1.4

SOLAR ARRAY SCHEMATICS

E1.5

PV ARRAY

E1.6

INVERTERS

E1.7

GROUNDING

E1.8

CONDUIT

M1.1

MECHANICAL PLAN

M1.2

MECHANICAL SCHEDULE

P1.1

SUPPLY WASTE ROUTING PLAN

P1.2

PLUMBING PLAN

P1.4

SCHEMATIC DIAGRAMS

P1.5

TANK DETAILS

P1.6

PLUMBING SCHEDULES

C8.1 PLANTER BOX DETAIL

ARCHITECTURAL

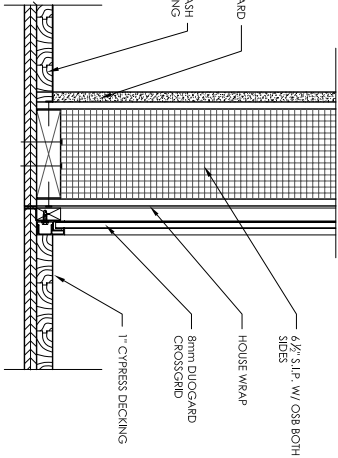
A1.1	FLOOR PLAN
A1.2	REFLECTED CEILING PLAN
A1.3	ROOF PLAN
A2.1	ELEVATIONS
A2.2	ELEVATIONS
A3.1	BUILDING SECTIONS
A3.2	BUILDING SECTIONS
A3.3	BUILDING SECTIONS
A3.4	BUILDING SECTIONS
A3.5	BUILDING SECTIONS
A4.1	ENLARGED FLOOR PLANS
A4.2	ENLARGED FLOOR PLANS
A5.1	WALL SECTIONS
A5.2	WALL SECTIONS
A5.3	WALL SECTIONS
A5.4	WALL SECTIONS
A5.5	WALL SECTIONS
A5.6	WALL SECTIONS
A6.1	DETAILS
A6.2	DETAILS
A6.3	DETAILS
A6.4	DETAILS
A6.5	DETAILS
A6.6	DETAILS
A6.7	DETAILS

A7.1	INTERIOR ELEVATIONS
A7.2	INTERIOR ELEVATIONS
A7.3	INTERIOR ELEVATIONS
A8.1	DOOR SCHEDULE & DETAILS
A8.2	DOOR DETAILS
A8.3	WINDOW SCHEDULE & DETAILS
A8.4	WINDOW DETAILS
A8.5	WINDOW DETAILS
A8.6	FINISH SCHEDULE

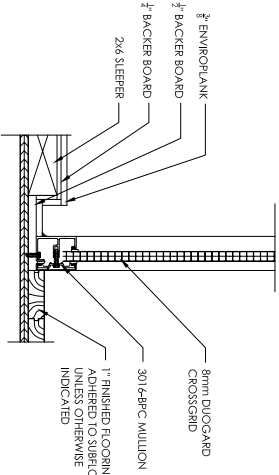
STRUCTURAL

S1.0	LIFTING PLAN
S1.1	FOUNDATION PLAN
S1.2	FLOOR FRAMING PLAN
S1.3	FLOOR PLATE SECTIONS
S1.4	COLUMN DETAILS
S1.5	FLOOR PLATE DETAILS
S1.6	FLOOR PLATE DETAILS
S2.1	STRUCTURAL FLOOR PLAN
S2.2	STRUCTURAL ROOF PLAN
S2.3	STRUCTURAL ELEVATIONS
S2.4	STRUCTURAL ELEVATIONS
S2.5	STRUCTURAL LONGITUDINAL SECTIONS
S2.6	STRUCTURAL CROSS SECTIONS
S2.7	STRUCTURAL CROSS SECTIONS
S3.1	STRUCTURAL DETAILS
S3.2	STRUCTURAL DETAILS
S3.3	STRUCTURAL DETAILS
S3.4	STRUCTURAL DETAILS
S3.5	STRUCTURAL DETAILS
S4.1	ROOF FRAMING
S4.2	S.I.P. SCHEDULE
S4.3	S.I.P. SCHEDULE

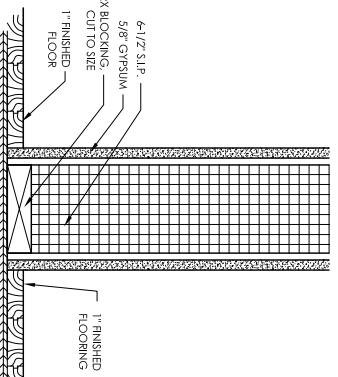
TYPICAL WALL TYPES



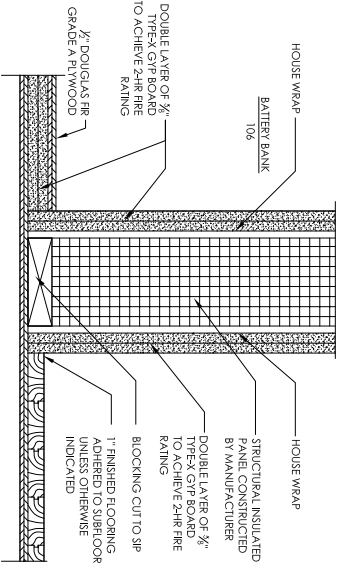
TYPICAL WALL 6
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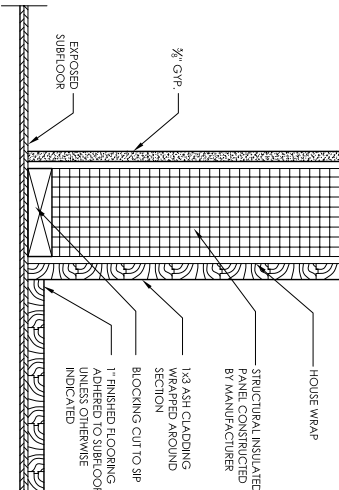
TYPICAL WALL 5
1"=1'-0"



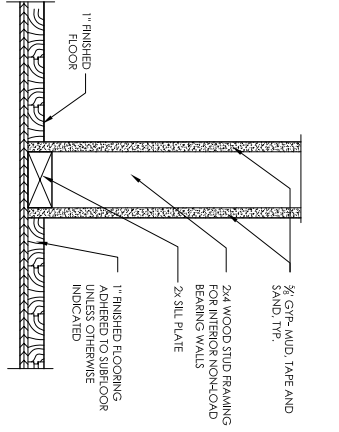
TYPICAL WALL 4
1"=1'-0"



TYPICAL WALL 3
1"=1'-0"



TYPICAL WALL 2
1"=1'-0"



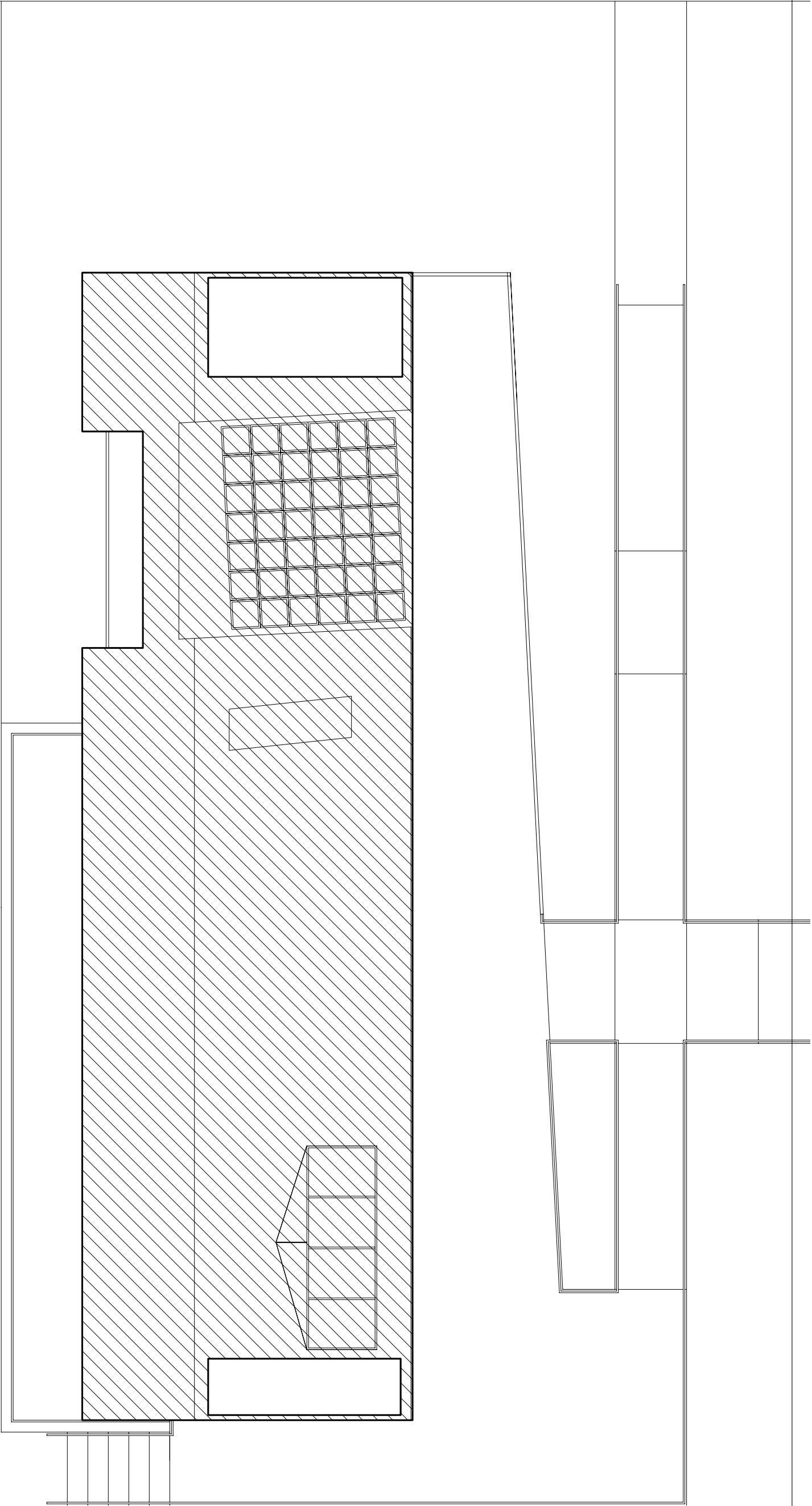
TYPICAL WALL 1
1"=1'-0"

DRAWN BY	PSH
DATE	27 APRIL 2007
CHECKED BY	

GENERAL INFORMATION


GO.2





THREE SIXTEENTH 1" = 3/16" = 1'-0"

0' 1'-0" 3'-0" 5'-0" 7'-0"

 Total Horizontal Projection: 799.8 sqft



Project solarhouse
2007 kansas solar decathlon entry

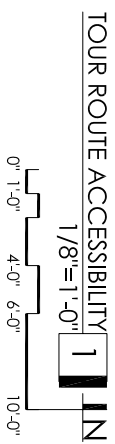
DRAWN BY: PSH
DATE: 3 MAY 2007
CHECKED BY: AEG

HORIZONTAL
PROJECTION

G0.3




ACCESSIBILITY NOTES:

- MAXIMUM EFFORT TO OPERATE DOORS SHALL NOT EXCEED 8.5 POUNDS FOR EXTERIOR DOORS AND 5 POUNDS FOR INTERIOR DOORS.
- REQUIRED EXIT DOORWAYS SHALL HAVE A MINIMUM 32" CLEAR OPENING WITH THE DOOR AT 90 TO THE CLOSED POSITION.
- MAXIMUM HEIGHT OF THRESHOLD TO BE $\frac{1}{2}$ ".
- MAXIMUM VERTICAL CHANGE AT EDGE IS $\frac{1}{4}$ " WITH A MAXIMUM BEVEL OF 45.
- EXTERIOR PATHWAYS TO BE PROVIDED BY NREL



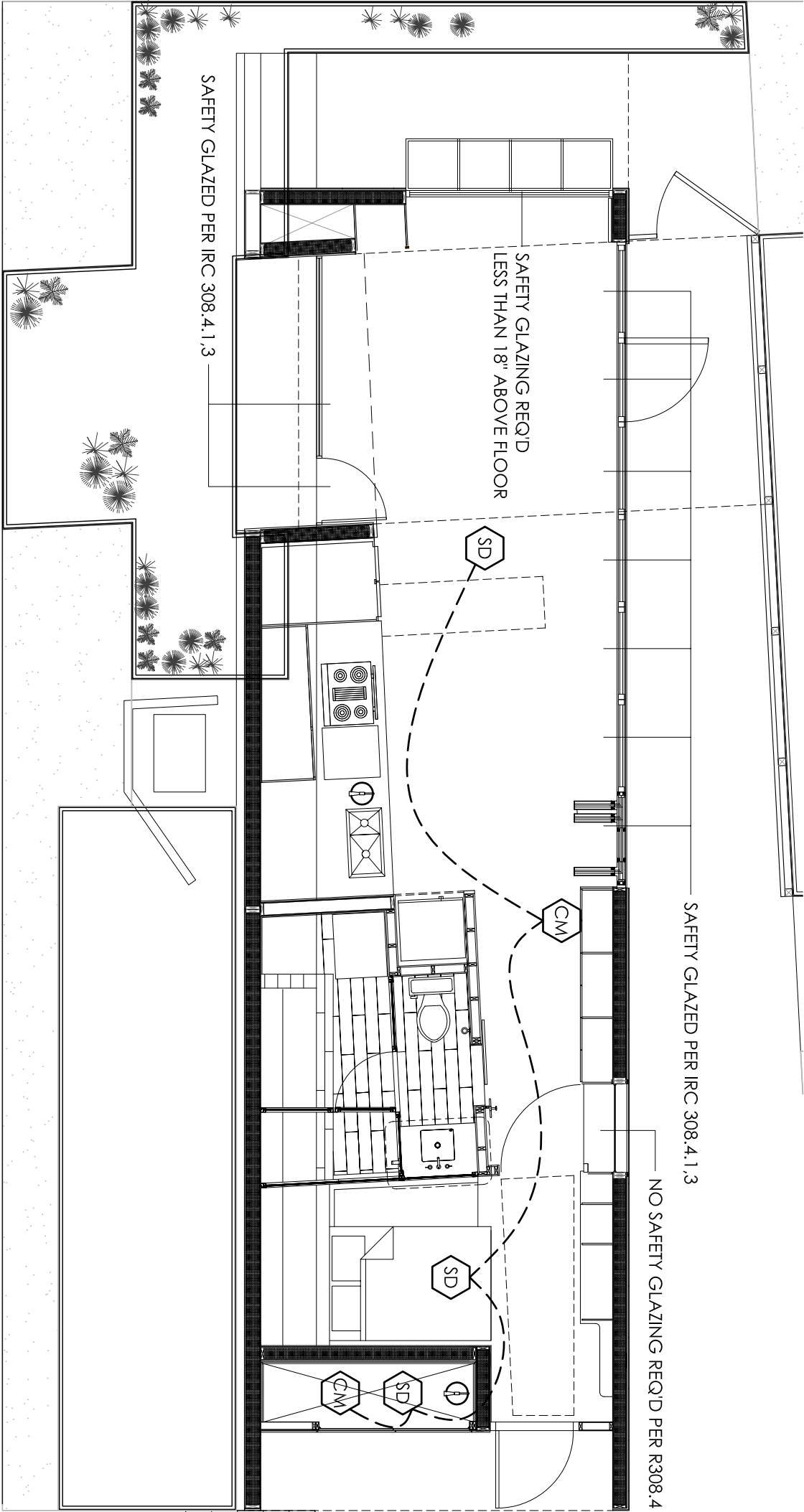
Project **solar**house
2007 kansas solar decathlon entry
NOT FOR CONSTRUCTION

FIRE ALARM SCHEDULE

-  SMOKE DETECTOR
-  CARBON MONOXIDE DETECTOR
-  FIRE EXTINGUISHER

FIRE PROTECTION NOTES:

- UNLESS OTHERWISE NOTED, FIRE EXTINGUISHERS SHALL HAVE A MINIMUM U.L. RATING OF 2A-10BC.



FIRE SAFETY PLAN 1
3/16"=1'-0"
0" 1'-0" 3'-0" 5'-0" 7'-0"

DRAWN BY: PSH
DATE: 03 MARCH 2007
CHECKED BY:

FIRE SAFETY



On the house's arrival to the site, the national mall will be protected by plywood sheeting while the house is being positioning on its site. The house will be raised off of the trailer by a mechanical jacking system. Next the foundation system will be put into place. The truck and trailer will leave the site and the house will be lowered and leveled in place onto its foundation system.



The foundation for the decks is put into place after the house is lifted of the trailer. A secondary vehicle will be driven onto the site to deliver the decks on its foundation. The decks are then bolted to the foundation system and attached the house. An exterior screen on the north side of the house is attached to the deck. The screen is supported by columns which also help support the green roof.



Transported to the site along with the columns and screening system is the green roof. The green roof is a prefabricated structure that is lifted and bolted to the existing roof structure. The structural frame is fastened to the columns creating a canopy of the entrance to the house. Some flashing will be required to seal the envelope. Following, the bio-degradable tray roofing system is laid into place.



The Photovoltaic panels, connectors and the batteries are transported to the site. The solar panels are then attached and connected to the standing seam roof along the southern canted wall. The batteries are then installed and wired into the battery bank located in the east wall. The PV system is then turned on and tested for efficiency.



There are several water systems that are integrated into the site. These systems are transported to the site and set in place. The water storage systems are plumbed and fixtures are connected to the house and checked for leaks. The water storage tanks and grey water systems are then filled to desired amounts. The planter boxes are then arranged on site and braced for structural support.

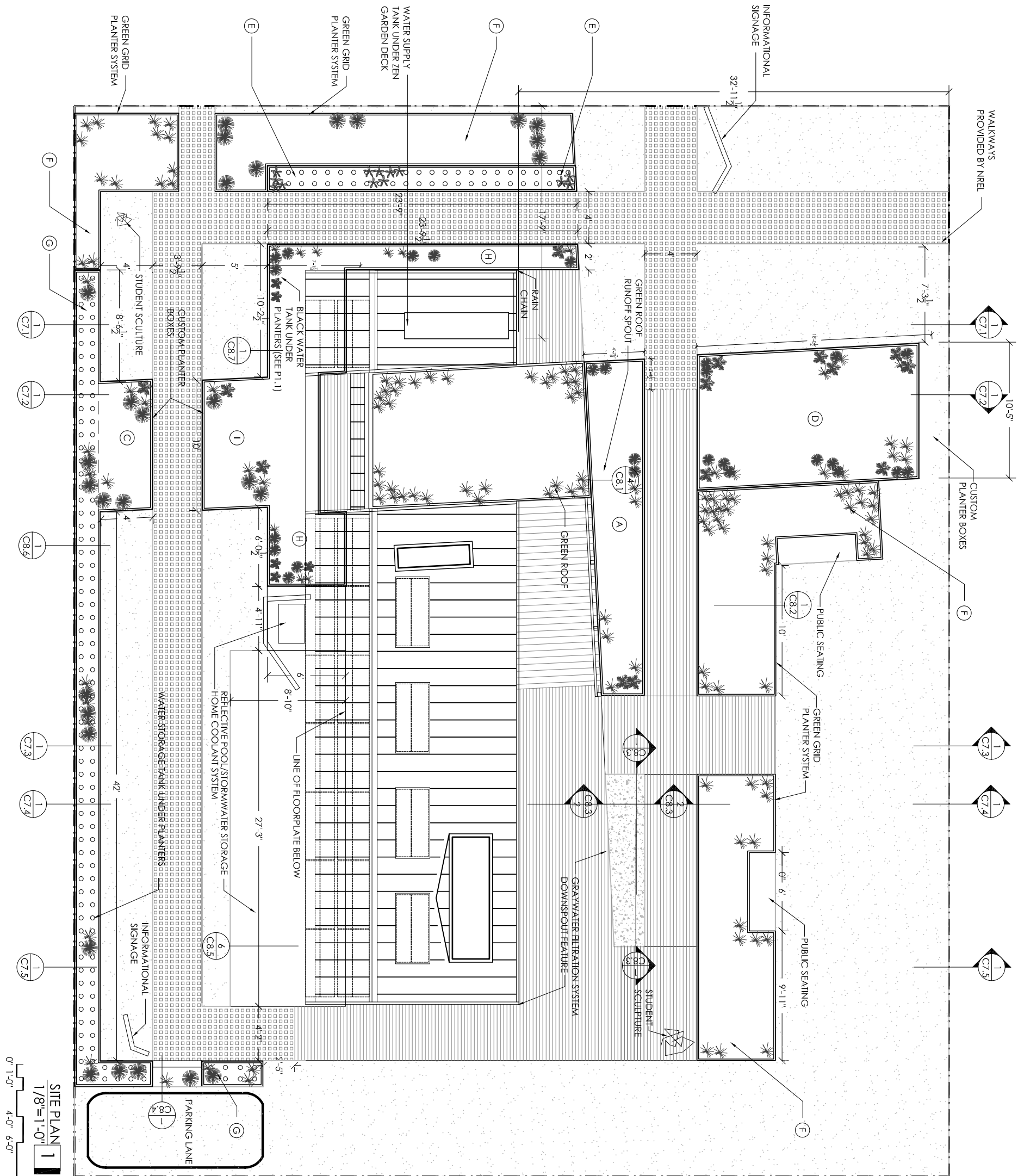


The interior of the house is inspected for damages and for any stresses that were endured during shipping. Any repairs will be made to the house so that it is ready for the tours. All systems and appliances are tested to ensure that the house is in working order. The landscaping is delivered on a truck to the site and the vegetation is then installed and placed with in the planter boxes.

NOTE: For House Disassembly,
Follow Directions in Reverse Order

GROUP	ABBREVIATION	SCIENTIFIC NAME	COMMON NAME
	Dp	<i>Dalea purpurea</i>	Purple Prairie Clover
	Ls	<i>Lobelia siphilitica</i>	Blue Lobelia
A	Pb	<i>Polygatum biflorum</i>	Solomon's Seal
	Ra	<i>Rhus aromatica</i>	Smooth Sumac
	Al	<i>Aster laevis</i>	Smooth Aster
	Ep	<i>Echinacea purpurea</i>	Purple Coneflower
B	Kc	<i>Koeleria cristata</i>	June Grass
	Sh	<i>Sporobolus heterolepis</i>	Prairie Dropseed
	Ss	<i>Solidago rigida</i>	Snowy Goldenrod
	Ssp	<i>Schizachyrium scoparium</i>	Little Bluestem
C	Ag	<i>Andropogon gerardii</i>	Big Bluestem
	Rp	<i>Ratibida pinnata</i>	Yellow Coneflower
	Ssp	<i>Schizachyrium scoparium</i>	Little Bluestem
	Ae	<i>Aster erinoides</i>	Heath Aster
	Cl	<i>Callirhoe involucrata</i>	Purple Poppy Mallow
	Ep	<i>Echinacea purpurea</i>	Purple Coneflower
	Lp	<i>Liatris pycnostachya</i>	Purple Gaitheather
D	Pv	<i>Panicum virgatum</i>	Switchgrass
	Ra	<i>Rhus aromatica</i>	Smooth Sumac
	Rg	<i>Rhus glabra</i>	Prairie Dropseed
	Sh	<i>Sporobolus heterolepis</i>	Stiff Goldenrod
	Sr	<i>Solidago rigida</i>	Snowy Goldenrod
	Ss	<i>Solidago speciosa</i>	Maximilian Sunflower
E	Hm	<i>Helianthus x maximiliani</i>	Maximilian Sunflower
	Bd	<i>Buchloe dactyoides</i>	Buffalograss
F	Hm	<i>Helianthus x maximiliani</i>	Maximilian Sunflower
G	Ms	<i>Medicago sativa</i>	Alfalfa
H	Kg	<i>Kitchen Garden</i>	Vegetables
	Ep	<i>Echinacea purpurea</i>	Purple Coneflower
I	Sh	<i>Sporobolus heterolepis</i>	Prairie Dropseed

PLANTING SCHEDULE 2
NO SCALE



SITE PLAN 1
1/8"=1'-0"
0" 1'-0" 4'-0" 6'-0" 10'-0"

2007 KANSAS SOLAR HOUSE
100 SEASTON HALL, SUITE 100
MANAWATU, KS 66502

NOTES:

1. SITE LOCATED ON LOT #110 OF THE SOLAR DECATHLON.
2. FIELD VERIFY ALL DIMENSION AND LOCATION OF SITE ELEMENTS TO NOT INFRINGE ON THE SOLAR ENVELOPE.
3. ALL WATER TANKS AND SITE OR OTHER SUPPORTS PER SECTION 3.8 OF THE SOLAR

LEGEND

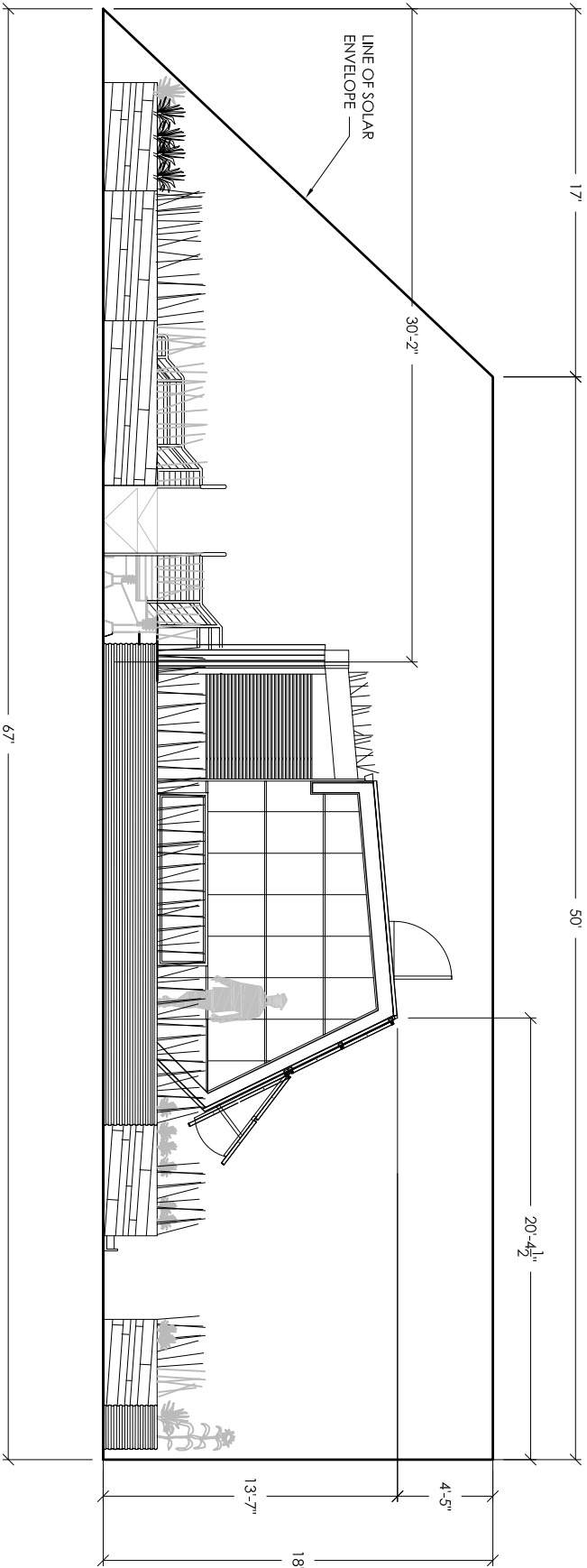
— SITE/SOLAR ENVELOPE
--- BOUNDARY



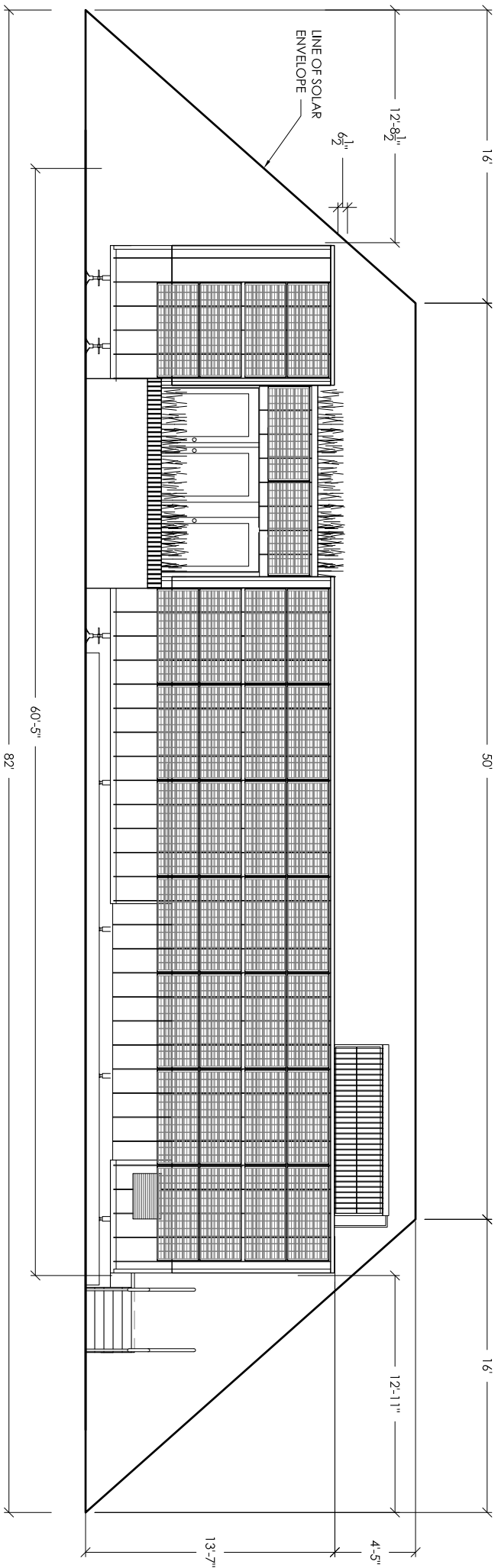
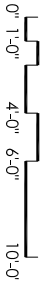
DRAWN BY: PSH
DATE: 3 MAY 2007
CHECKED BY:

SITE PLAN

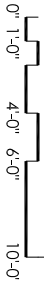
C1.1



WEST ELEVATION WITH SOLAR ENVELOPE 2
1/8"=1'-0"



NORTH ELEVATION WITH SOLAR ENVELOPE 1
1/8"=1'-0"

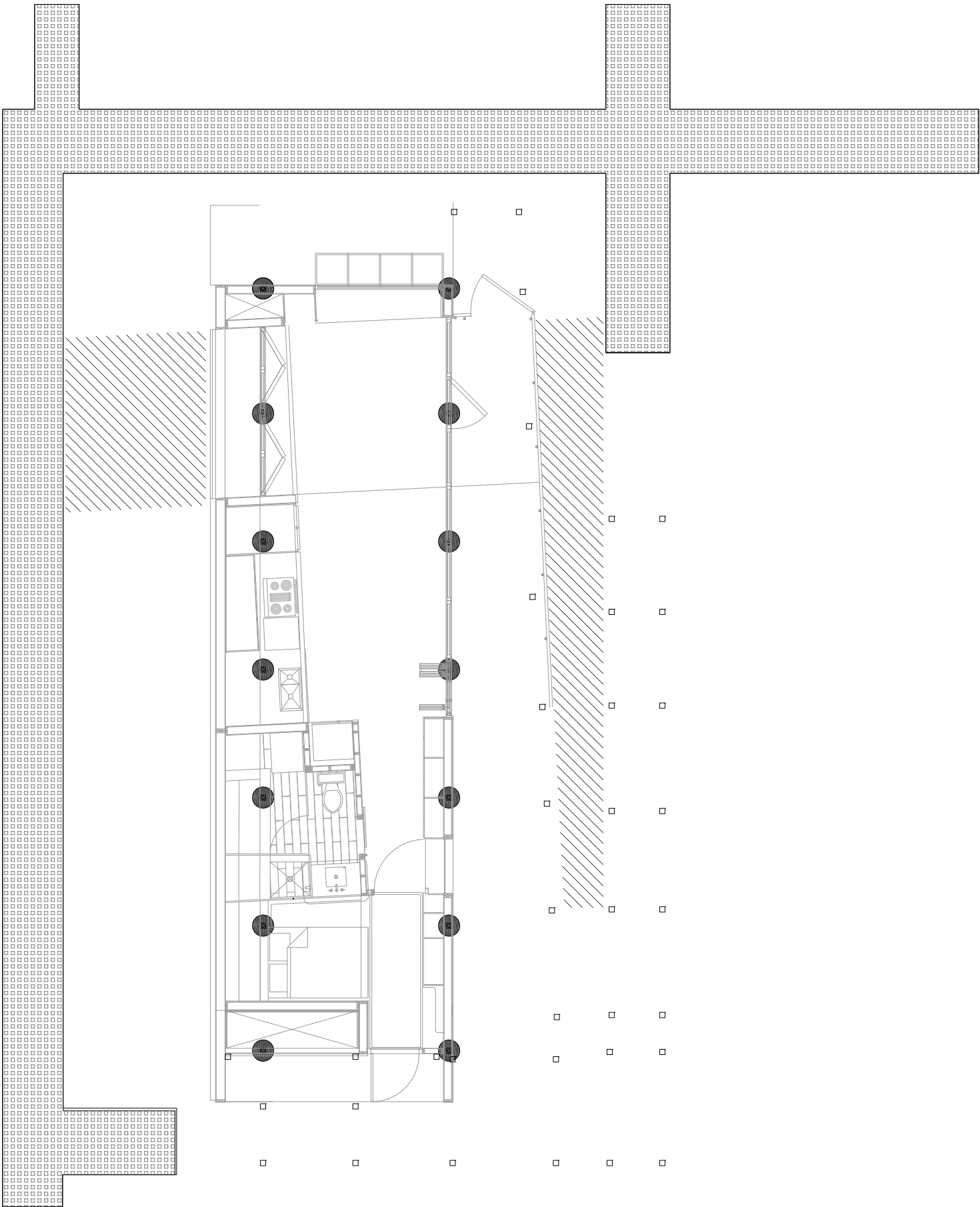


SOLAR
ENVELOPE

C2.1

DRAWN BY: PSJ
DATE: 01 AUG 2008
CHECKED BY:





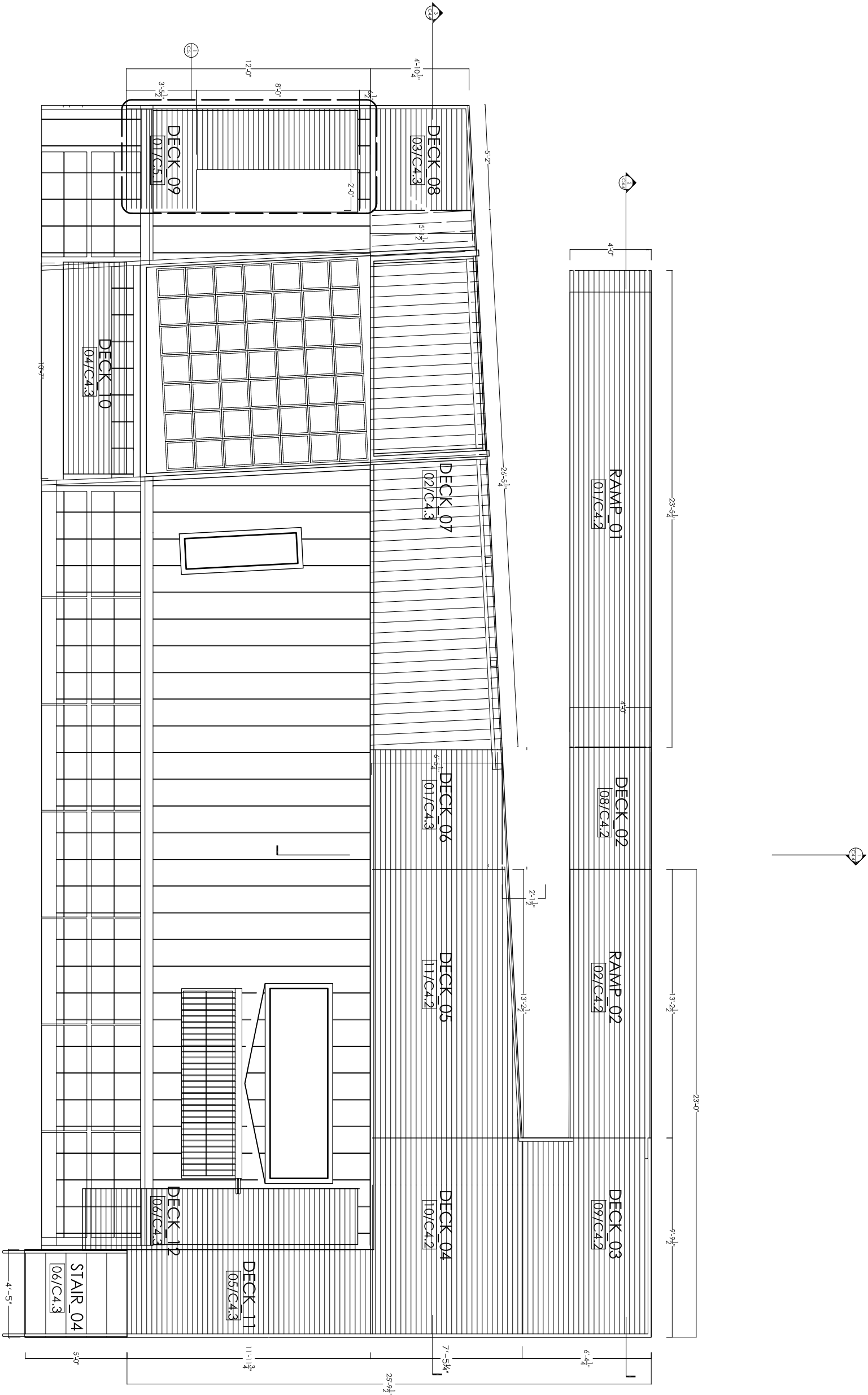
LEGEND 2

NO SCALE

MALL FOOTPRINT 1

1/8"=1'-0"

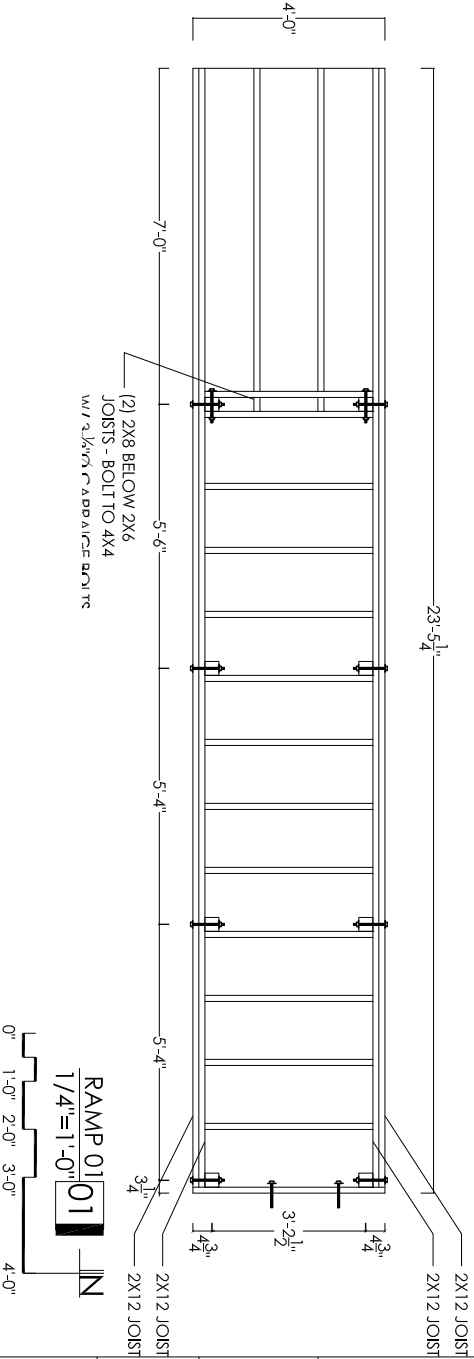
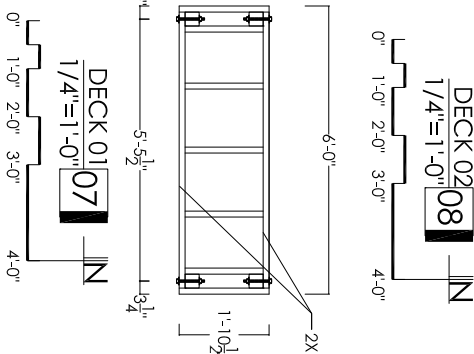
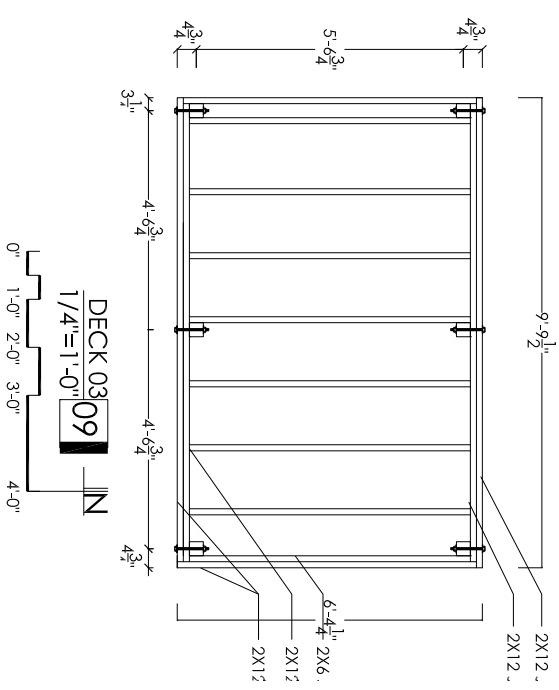
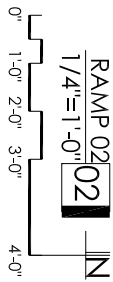
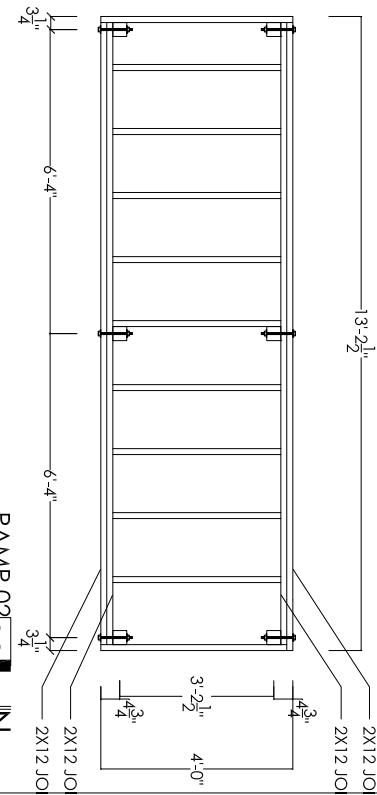
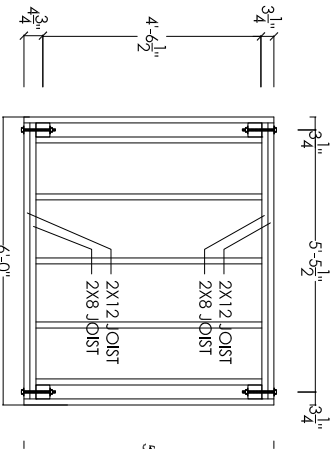
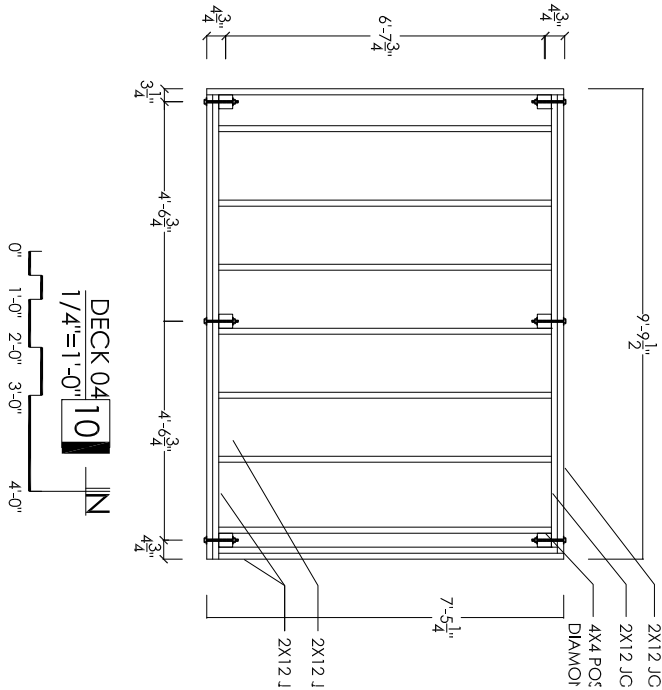
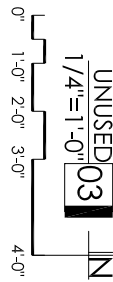
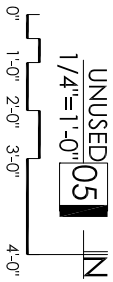
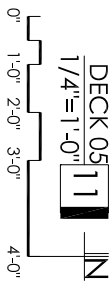
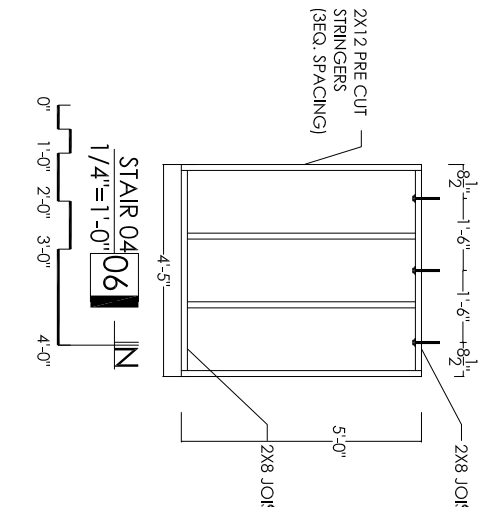
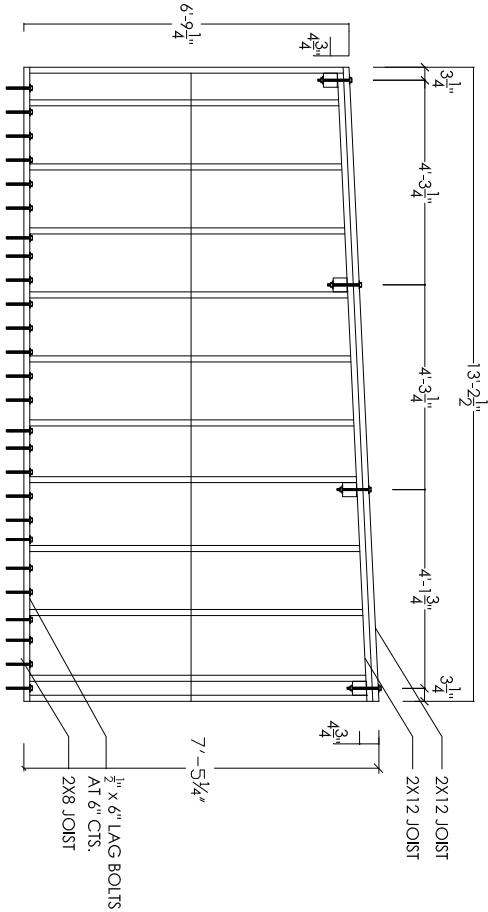
0' 1'-0" 3'-0" 5'-0" 7'-0"



DECK PLAN 1
3/16"=1'-0"
0' 1'-0" 3'-0" 5'-0" 7'-0"

GENERAL NOTES

- *Simpson Strong Tie 2x6 HHB Top Flange Galvanized Joist Hangers to both end of joists TYP.
- *1x8 Pressure Treated Cyprus Decking on top of 2x6 framing
- *All framing to be 2x6 @16"o.c. U.N.O.
- *Field verify all dimensions
- *Framing members are to be #1 grade pressure treated douglas fir or better
- *5/8"Ø Galvanized Carriage Bolts to secure individual deck members
- *5/8"Ø Galvanized Lag Bolts to secure deck to floor plate u.o.n.
- *2x12 Rim Joist to be placed around perimeter of deck
- *for post/beam conns. ref. C4.4



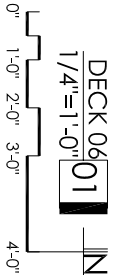
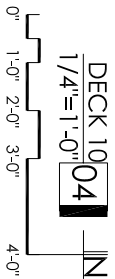
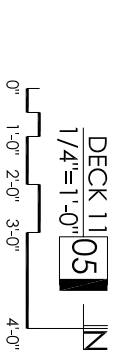
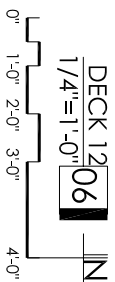
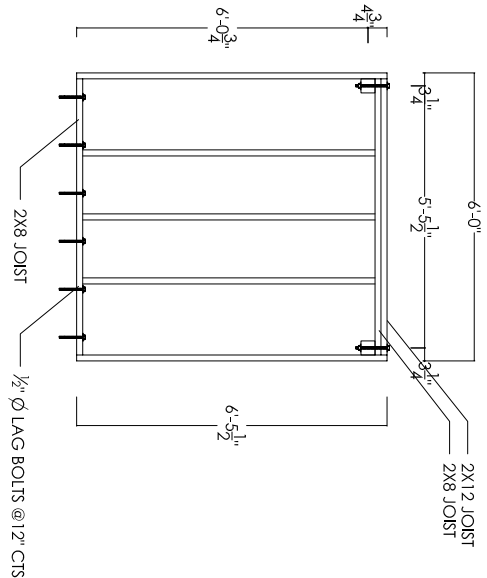
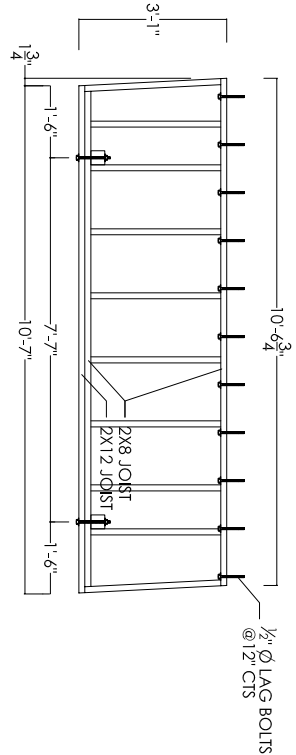
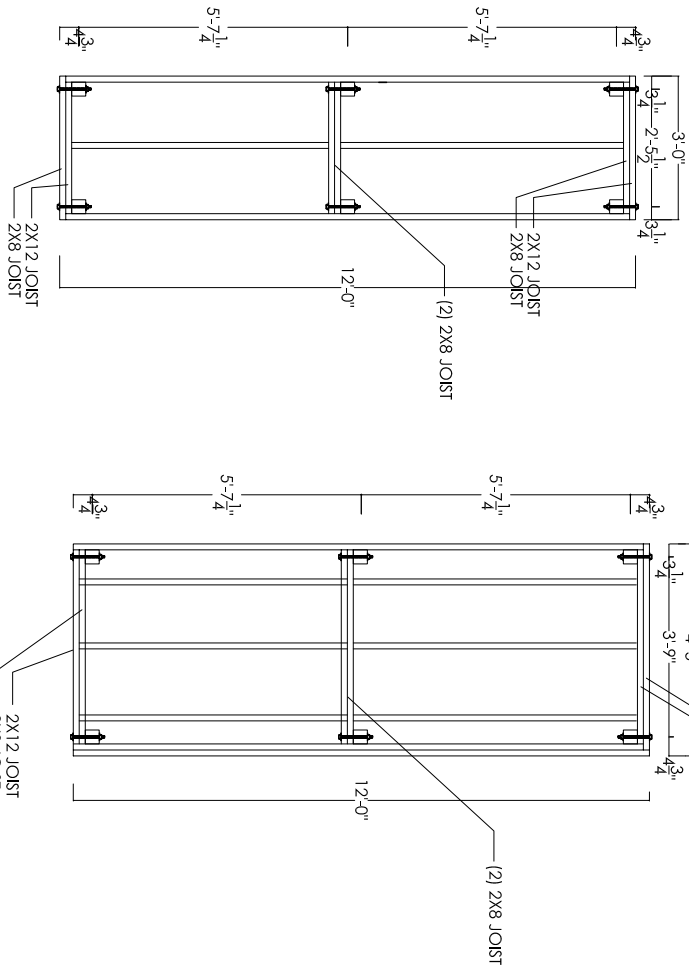
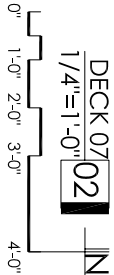
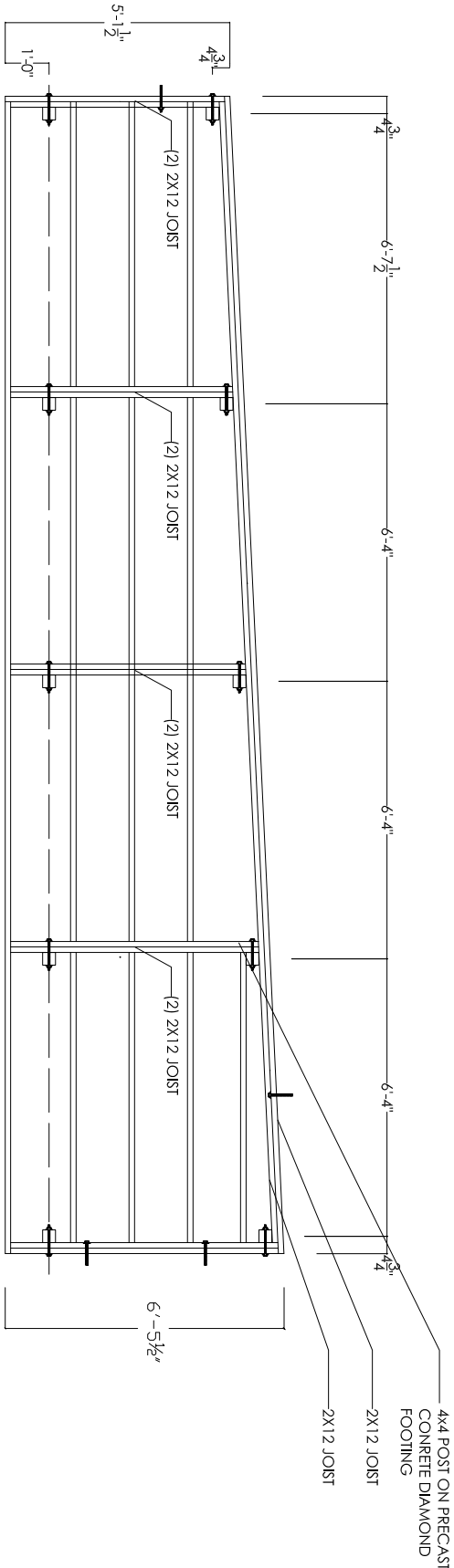
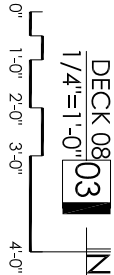
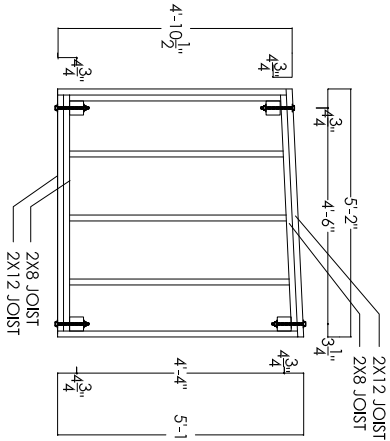
DRAWN BY	PSH
DATE	1 AUG 2008
CHECKED BY	RIG

MAIN DECK
FRAMING
PLAN

C4.2

GENERAL NOTES

- *Simpson Strong Tie 2x6 HHB Top Flange Galvanized Joist Hangers to both end of joist's TYP.
- *1x8 Pressure Treated Cyprus Decking on top of 2x6 framing
- *All framing to be 2x6 @ 16"o.c. U.N.O.
- *Field verify all dimensions
- *Framing members are to be #1 grade pressure treated douglas fir or better
- * $\frac{1}{2}$ " \varnothing Galvanized Carriage Bolts to secure individual deck members
- * $\frac{3}{8}$ " \varnothing Galvanized Lag Bolts to secure deck to floor plate u.o.n.
- *2x12 Rim Joist to be placed around perimeter of deck
- *For post/beam conns. ref. C4.4

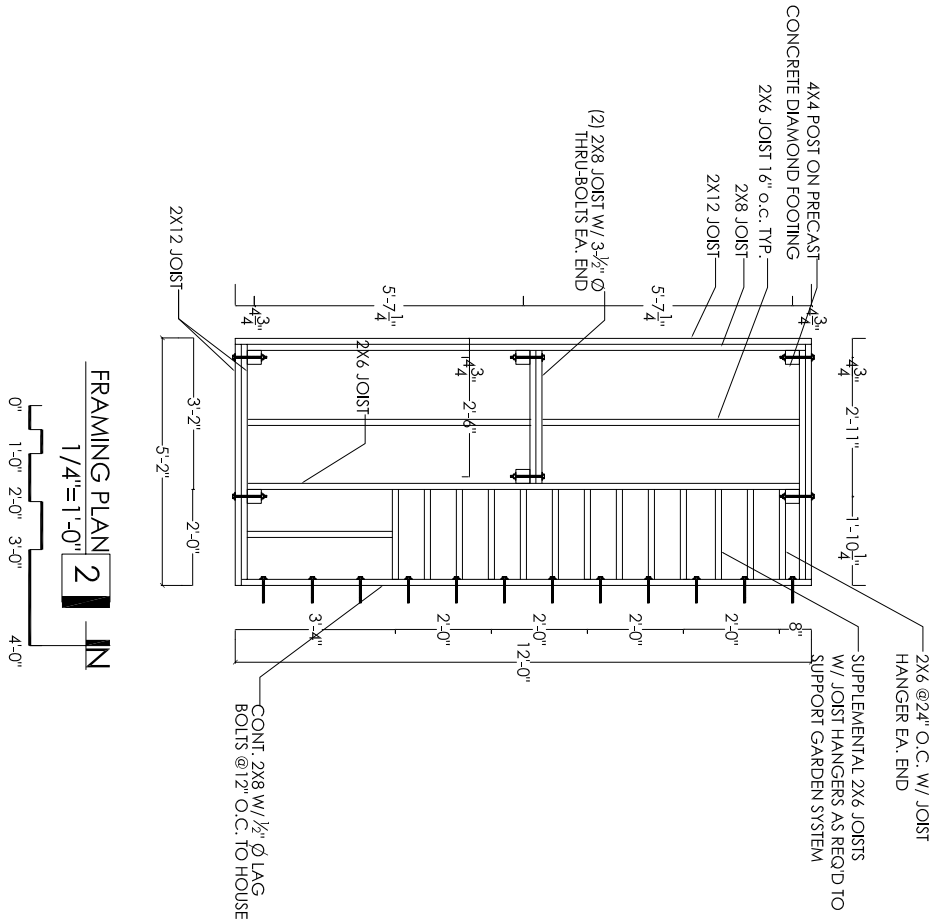
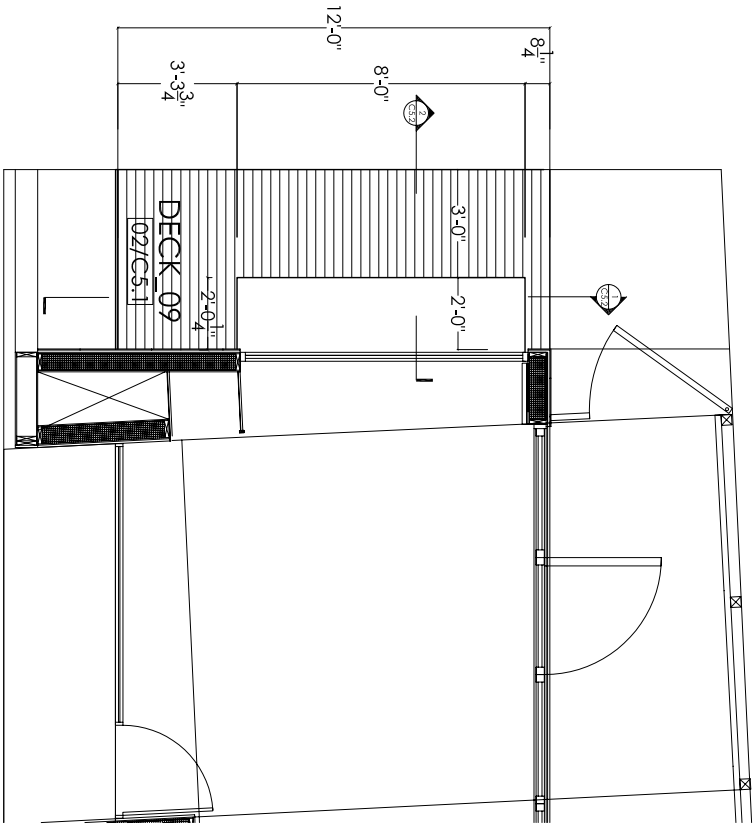




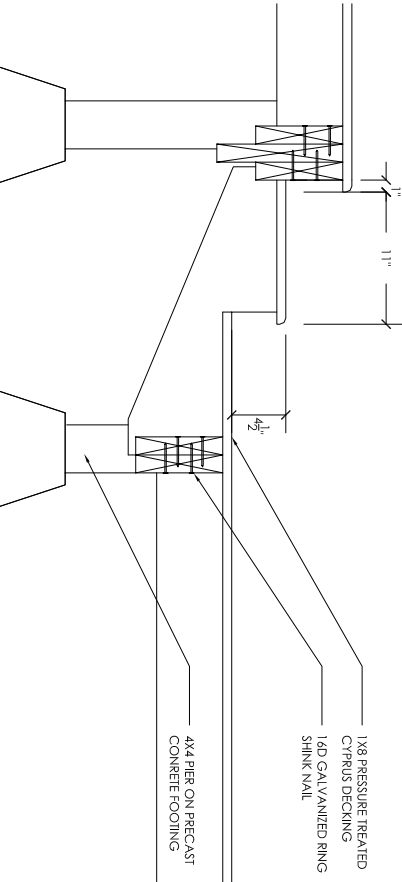
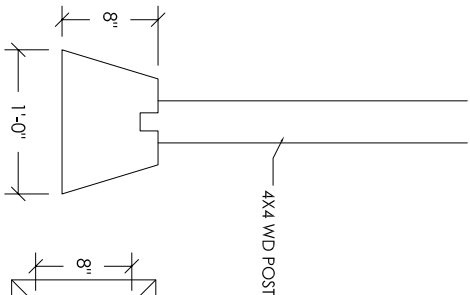
DRAWN BY_	PSH
DATE_	3 MAY 2007
CHECKED BY_	AEG

DECK FRAMING
PLAN

DECK 09 PLAN 1
3/16"=1'-0"
0" 1'-0" 3'-0" 5'-0" 7'-0"

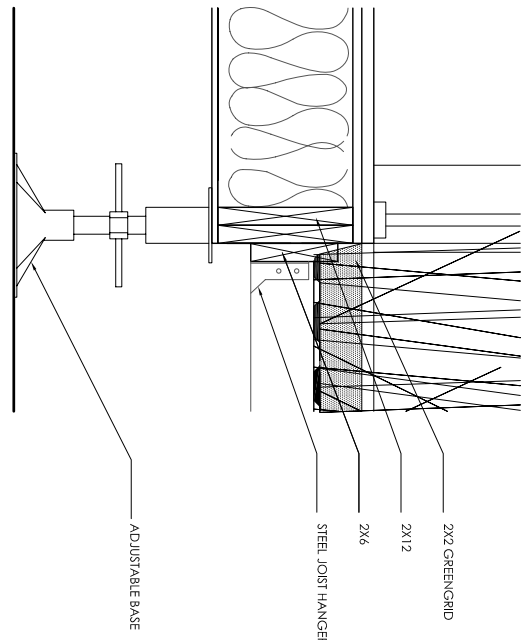


FRAMING PLAN 2
1/4"=1'-0"
0" 1'-0" 2'-0" 3'-0" 4'-0"

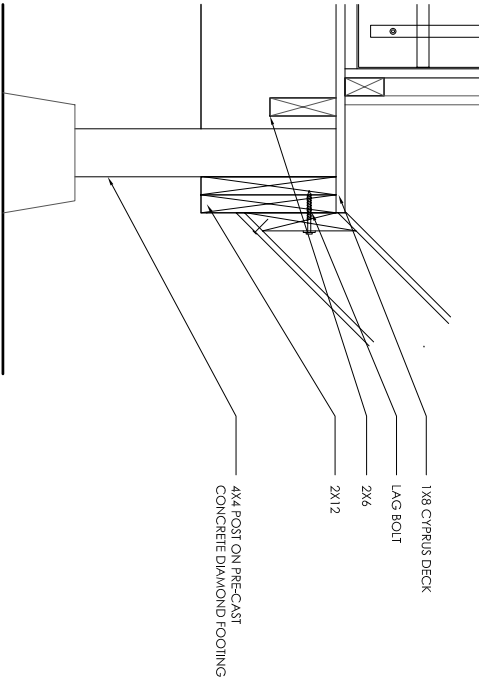


FOOTING DETAIL 6
3/4"=1'-0"

DECK DETAIL 5
3/4"=1'-0"



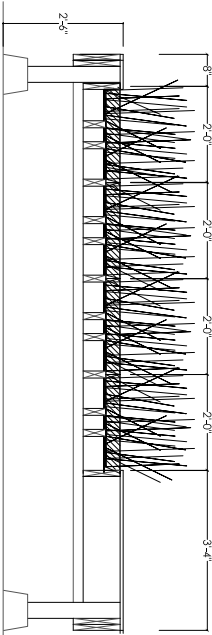
DECK DETAIL 4
3/4"=1'-0"



DECK DETAIL 3
3/4"=1'-0"



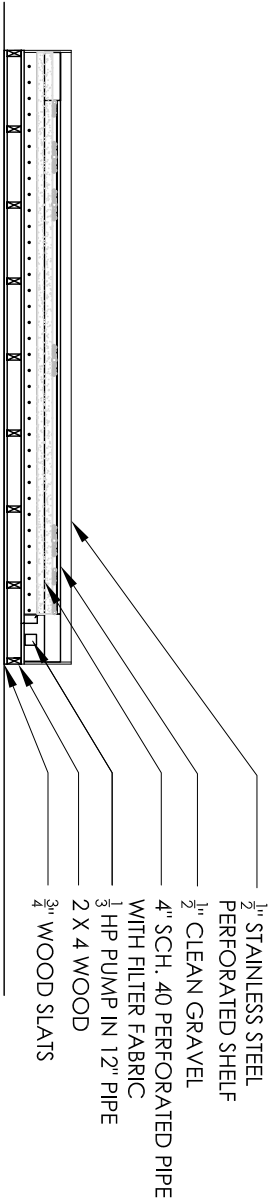
DECK SECTION 2
1/4"=1'-0"



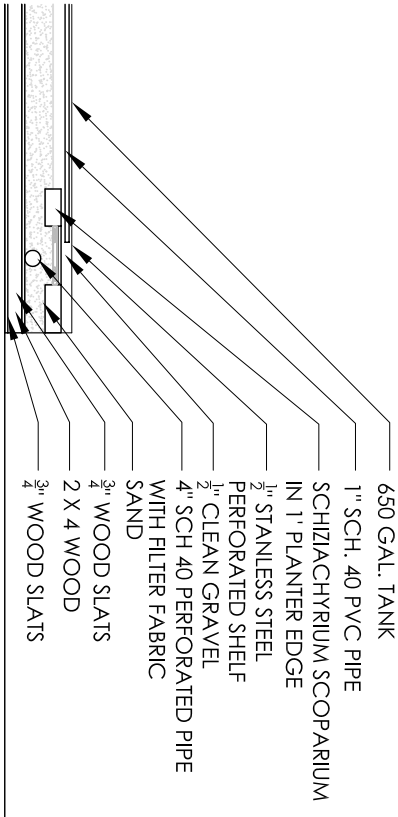
DECK SECTION 1
1/4"=1'-0"

GENERAL NOTES

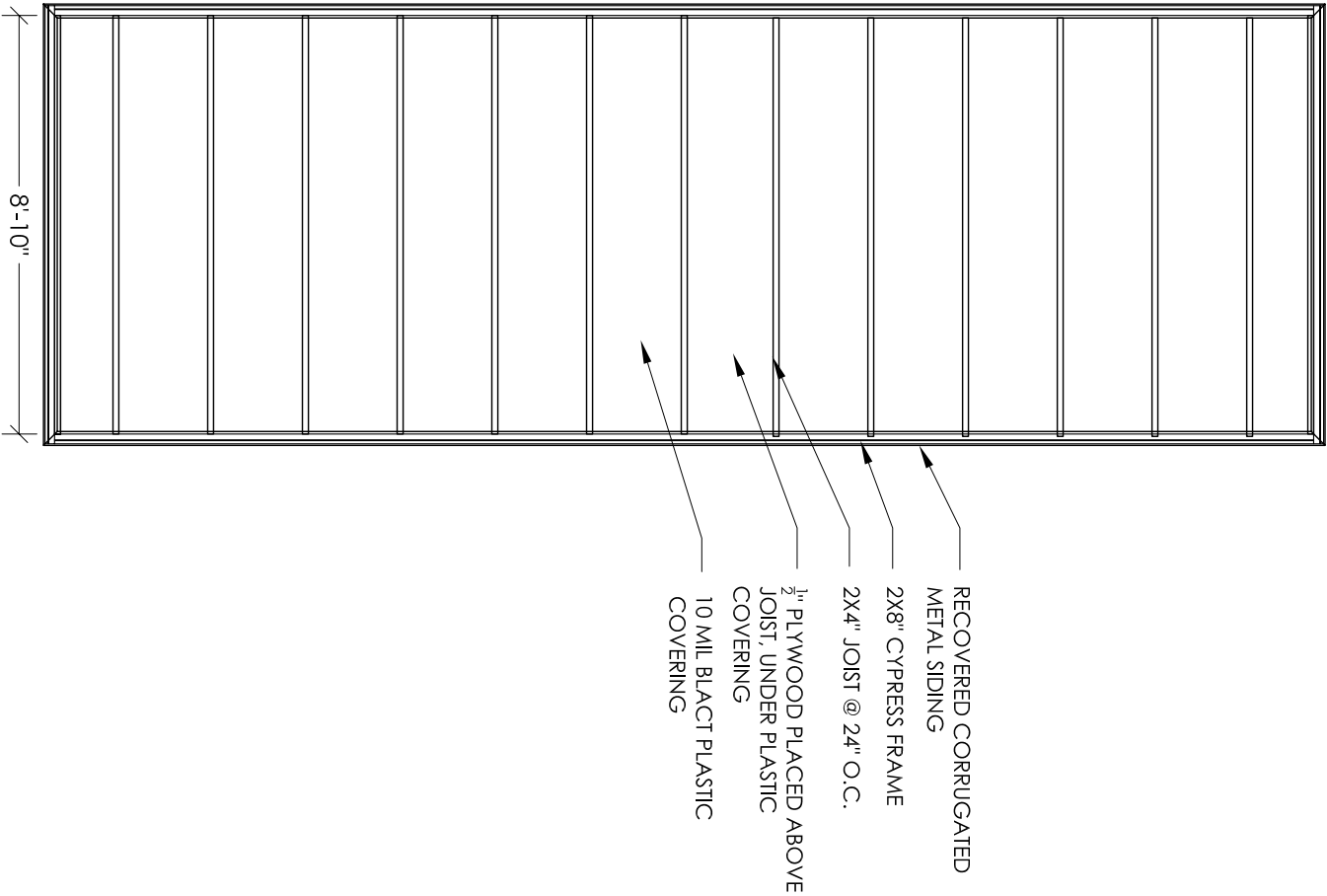
- *2X4" Joists connect to 2x8" cypress perimeter.
- *10 gauge galvanized 3" countersunk screws with square-driven heads.
- *Reclaimed corrugated metal siding to be placed with ribs arranged vertically and attached with $\frac{1}{2}$ " ing shank zinc coated nail.
- * $\frac{1}{2}$ " plywood sheeting placed top of joists.
- *10 mil black plastic to be placed top of plywood and then draped over 2x8 cypress perimeter before filling with water
- *As trough is being filled, the inside corners shall be neatly folded.
- *Once filled with water, the corrugated edging can be secured.
- *Top edging to be $\frac{3}{4}$ " rough-cut cedar wood with $\frac{5}{8}$ " inside overhang.
- *Do not stretch plastic or cause stain due to possible leaking.



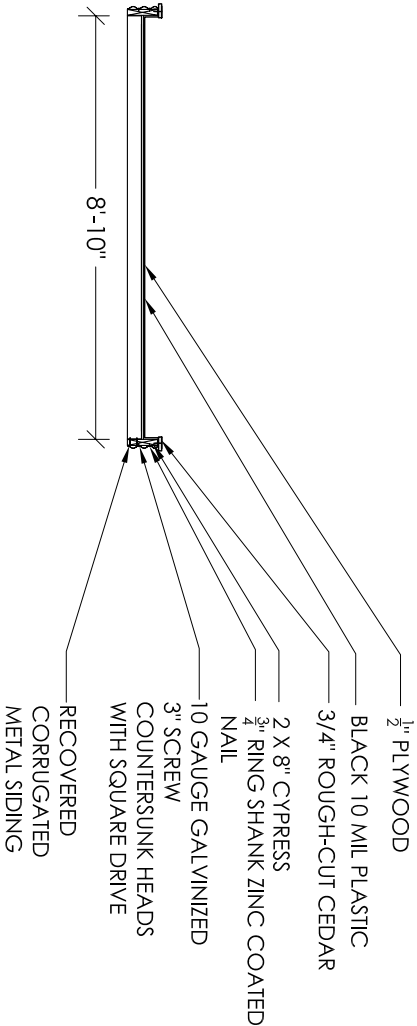
GREYWATER DETAIL 3
1/4"=1.0'



GREYWATER DETAIL 2
1/4"=1.0'



REFLECTION POOL DETAIL 1
1/4"=1.0'



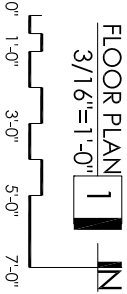
DRAWN BY PS4
DATE 03 MAY 2007
CHECKED BY

REFLECTION
POOL DETAIL

C8.1

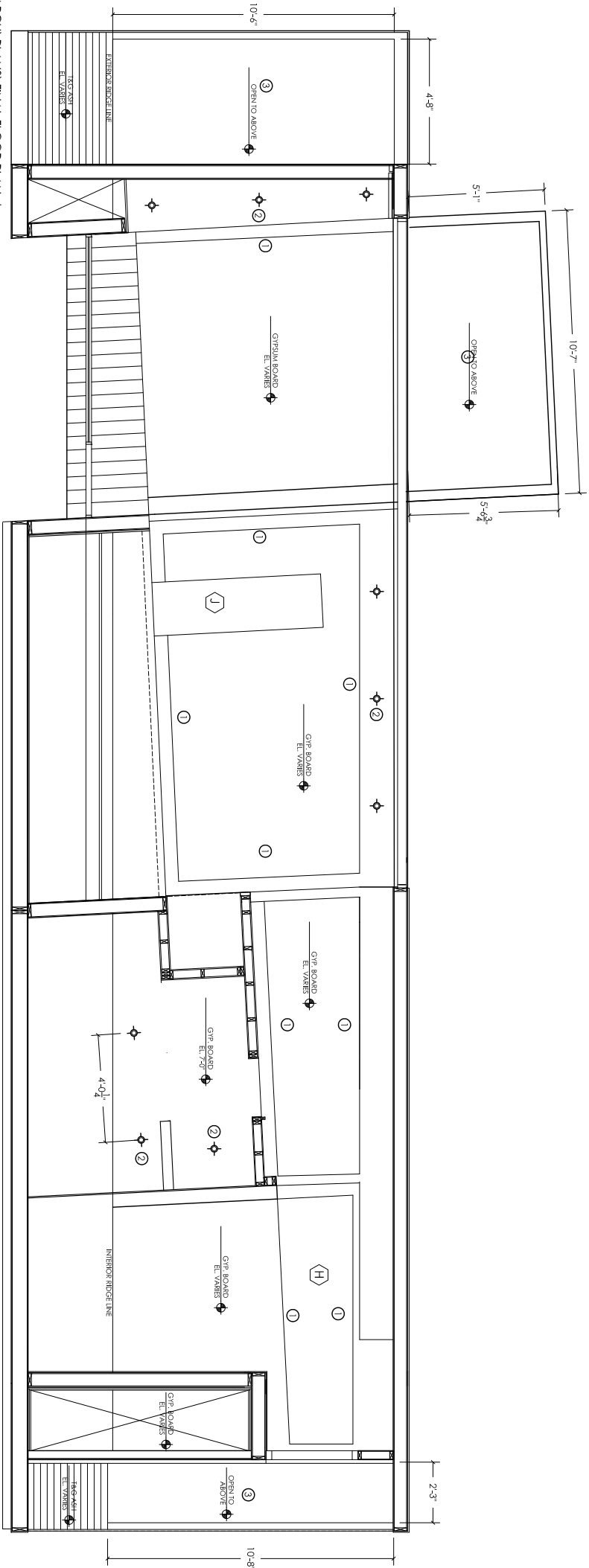


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DATE _____ 1 AUG 2008
CHECKED BY _____



LIGHTING SCHEDULE						
SYSTEM	TYPE	MANUFACTURER	PRODUCT	WATTS	MOUNT	REMARKS
1	FLUORESCENT	PHILIPS	PHILIPS ENERGY ADVANTAGE T8 LAMP	25W	FLUSH	W/ LUTRON 25 W DIMMING BALLAST
2	CFL	PHILIPS	GENERAL PURPOSE	14	RECESSED	NONE

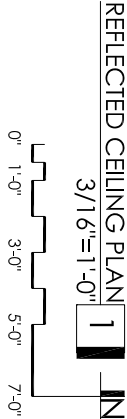
NOTE:
CEILING HEIGHTS FROM F.F.E.



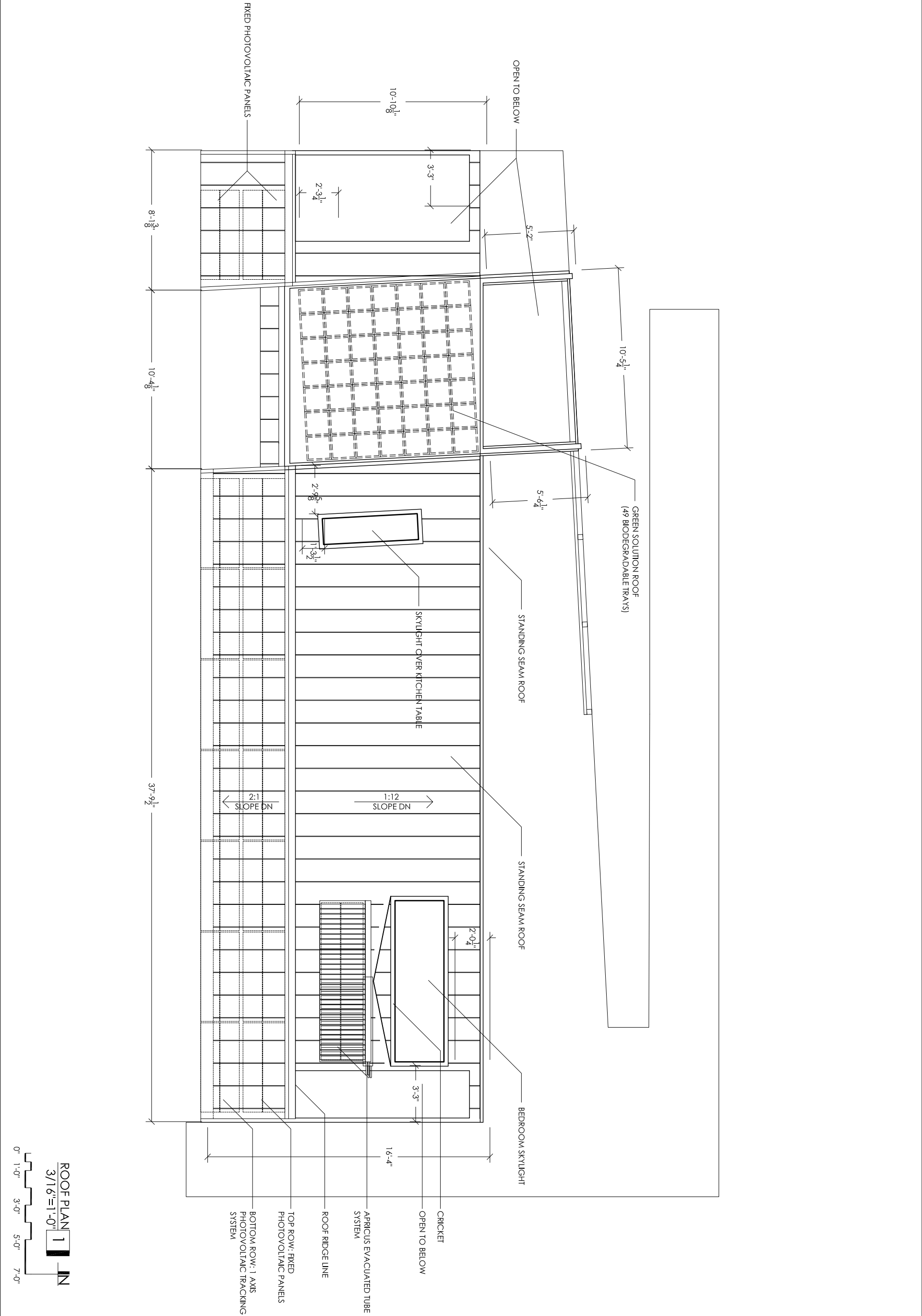
vings\JAN. FINISHED SET\DRAWINGS\ARCH PLANS\FINAL FLOOR PLAN.dwg

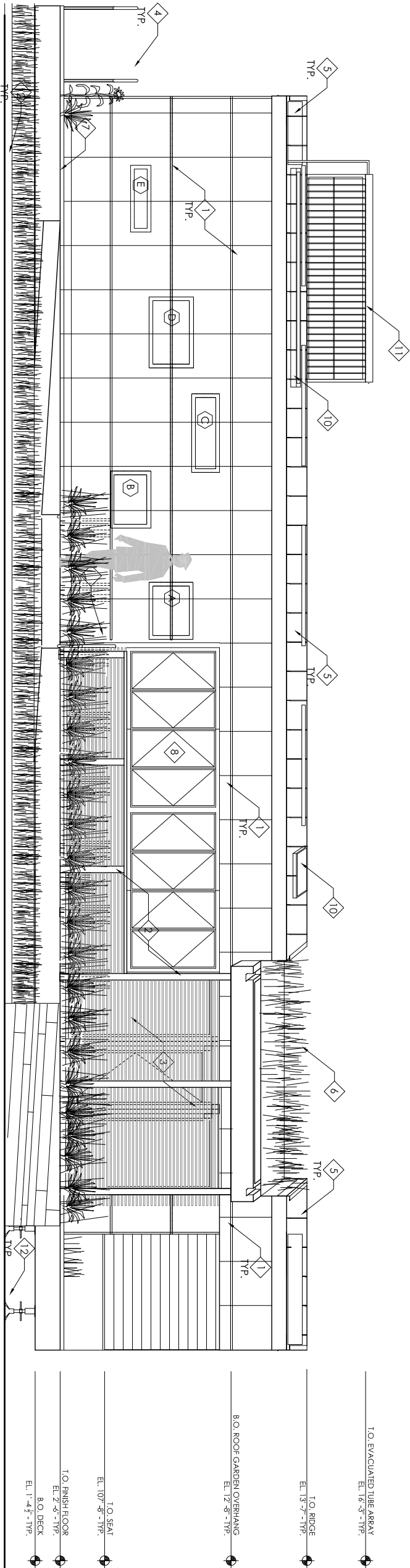
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DATE: 1 AUG 2008
CHECKED BY:

REFLECTED
CEILING PLAN



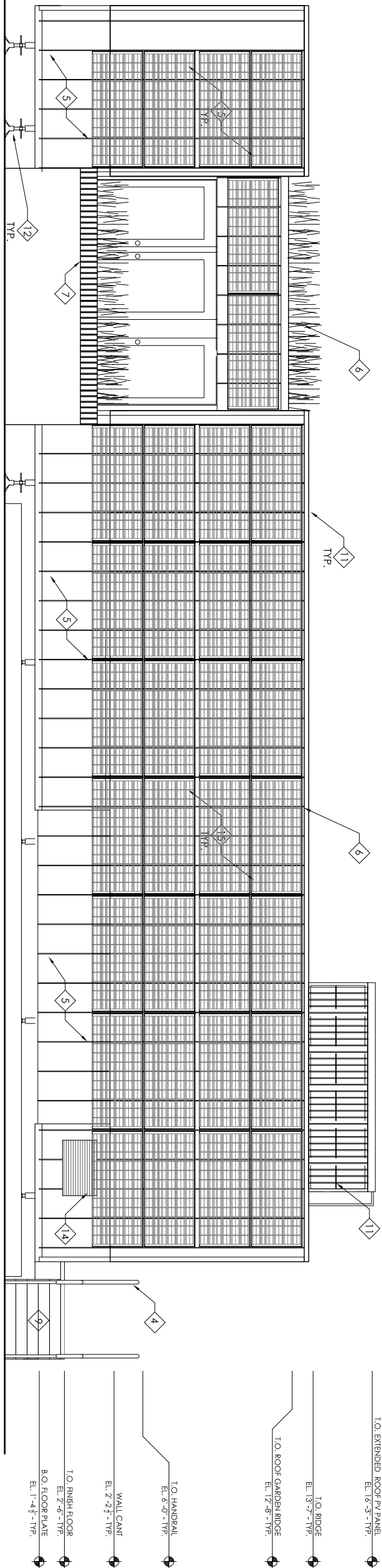
A1.2





NORTH ELEVATION 2
3/16"=1'-0"

0' 1'-0" 3'-0" 5'-0" 7'-0"



SOUTH ELEVATION 1
3/16"=1'-0"

0' 1'-0" 3'-0" 5'-0" 7'-0"

KEYED NOTES

- 1 Poly-carbonate Ext. Cladding
- 2 Low-E Vinyl Casements
- 3 Reclaimed Barn Lumber
- 4 Hand Rail
- 5 Standing Seam
- 6 Green Roof
- 7 Deck/Ramp
- 8 4x4 Wood Column
- 9 Stairs
- 10 skylight
- 11 Evacuated Tube Array
- 12 Adjustable Base
- 13 reflective pool
- 14 grated vent
- 15 solar panel

KEYED NOTES

- 1

Polycarbonate Ext. Cladding
- 2

Nana Wall Behind
- 3

Reclaimed Barn Lumber
- 4

Hand Rails
- 5

Standing Seam
- 6

Green Roof (beyond)
- 7

Deck/Ramp
- 8

4X4 Wood Column
- 9

Stairs
- 10

skylight
- 11

Apertus Evacuated Tube Array
- 12

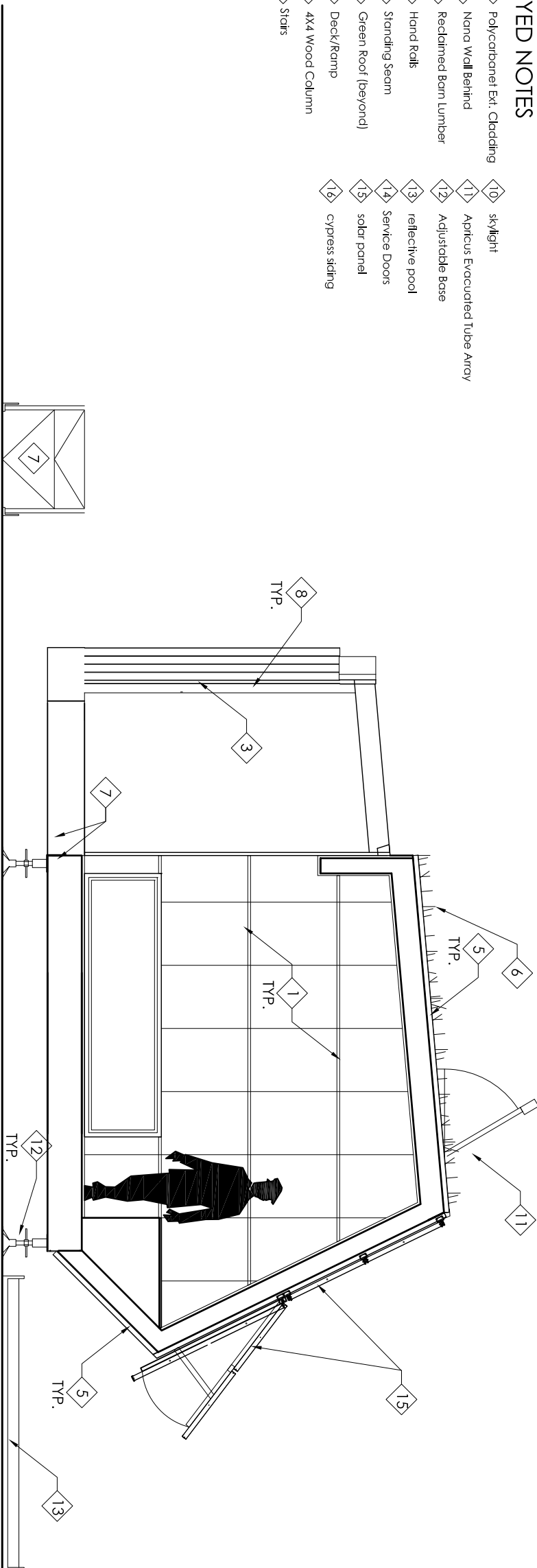
Adjustable Base
- 13

reflective pool
- 14

Service Doors
- 15

solar panel
- 16

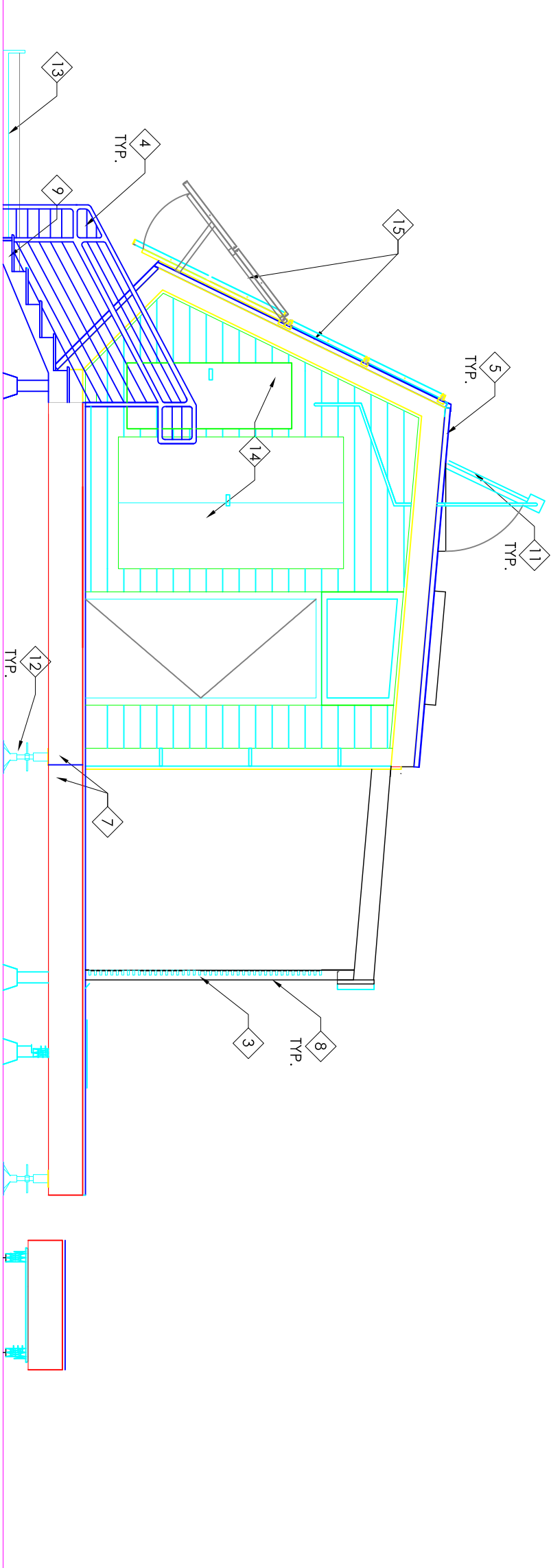
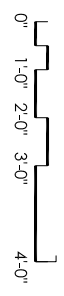
cypress siding



- T.O. EVACUATED TUBE ARRAY
EL. 16'-3" - TYP.
- T.O. RIDGE
EL. 13'-7" - TYP.
- B.O. ROOF GARDEN OVERHANG
EL. 12'-8" - TYP.
- WALL CANT
EL. 2'-2 1/2" - TYP.
- T.O. FINISH FLOOR
EL. 2'-6" - TYP.
- B.O. FLOOR PLATE
EL. 1'-4 1/2" - TYP.

WEST ELEVATION 2

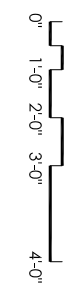
1/4"=1'-0"

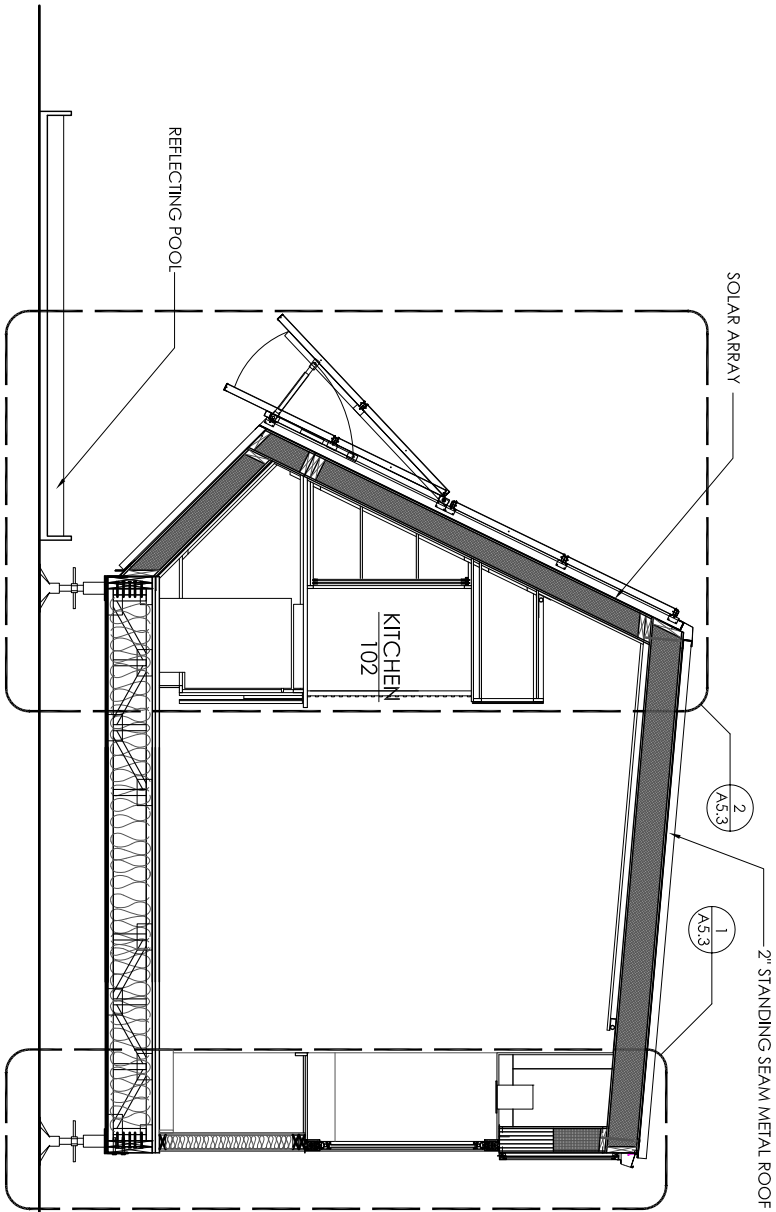


- T.O. EVACUATED TUBE ARRAY
EL. 16'-3" - TYP.
- T.O. RIDGE
EL. 13'-7" - TYP.
- B.O. ROOF GARDEN OVERHANG
EL. 12'-8" - TYP.
- T.O. HANDRAIL
EL. 6'-0" - TYP.
- WALL CANT
EL. 2'-2 1/2" - TYP.
- T.O. FINISH FLOOR
EL. 2'-6" - TYP.
- B.O. FLOOR PLATE
EL. 1'-4 1/2" - TYP.

EAST ELEVATION 1

1/4"=1'-0"

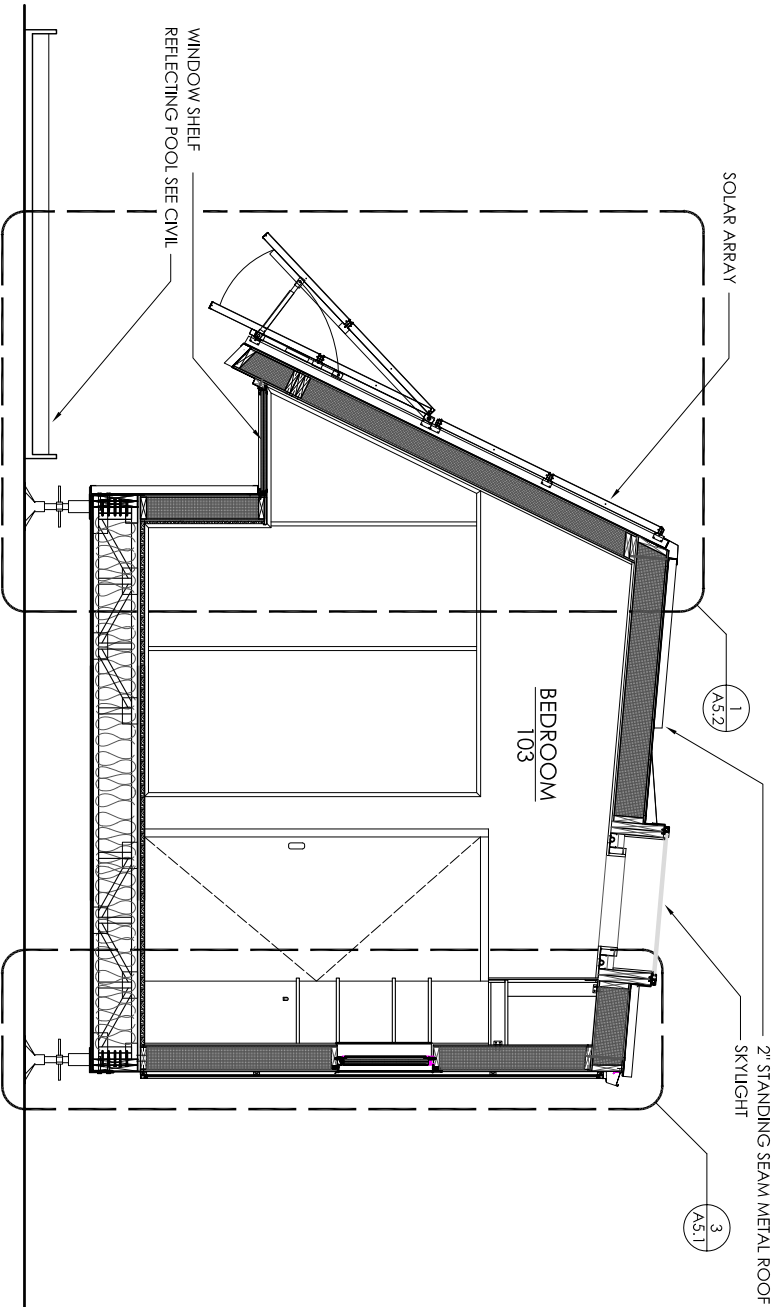




BUILDING SECTION THROUGH KITCHEN SINK 4

1/4"=1'-0"

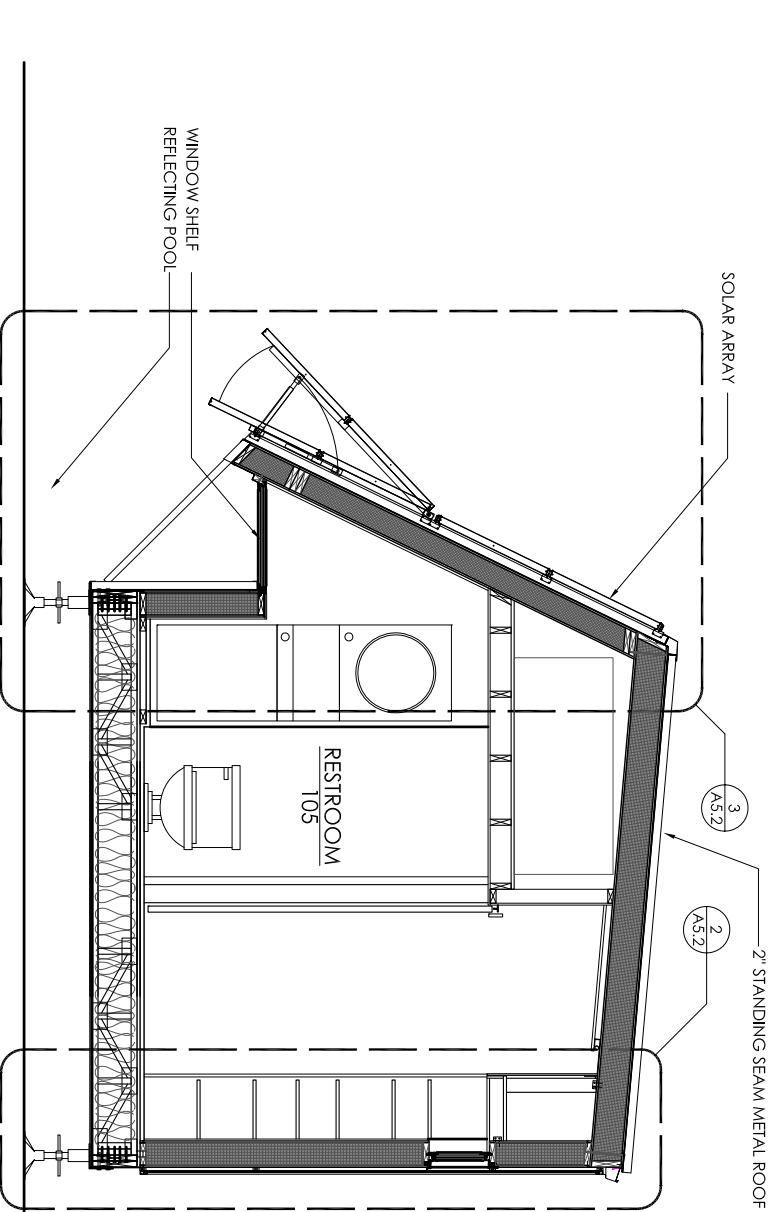
0' 1'-0" 2'-0" 3'-0" 4'-0"



BUILDING SECTION THROUGH BEDROOM 2

1/4"=1'-0"

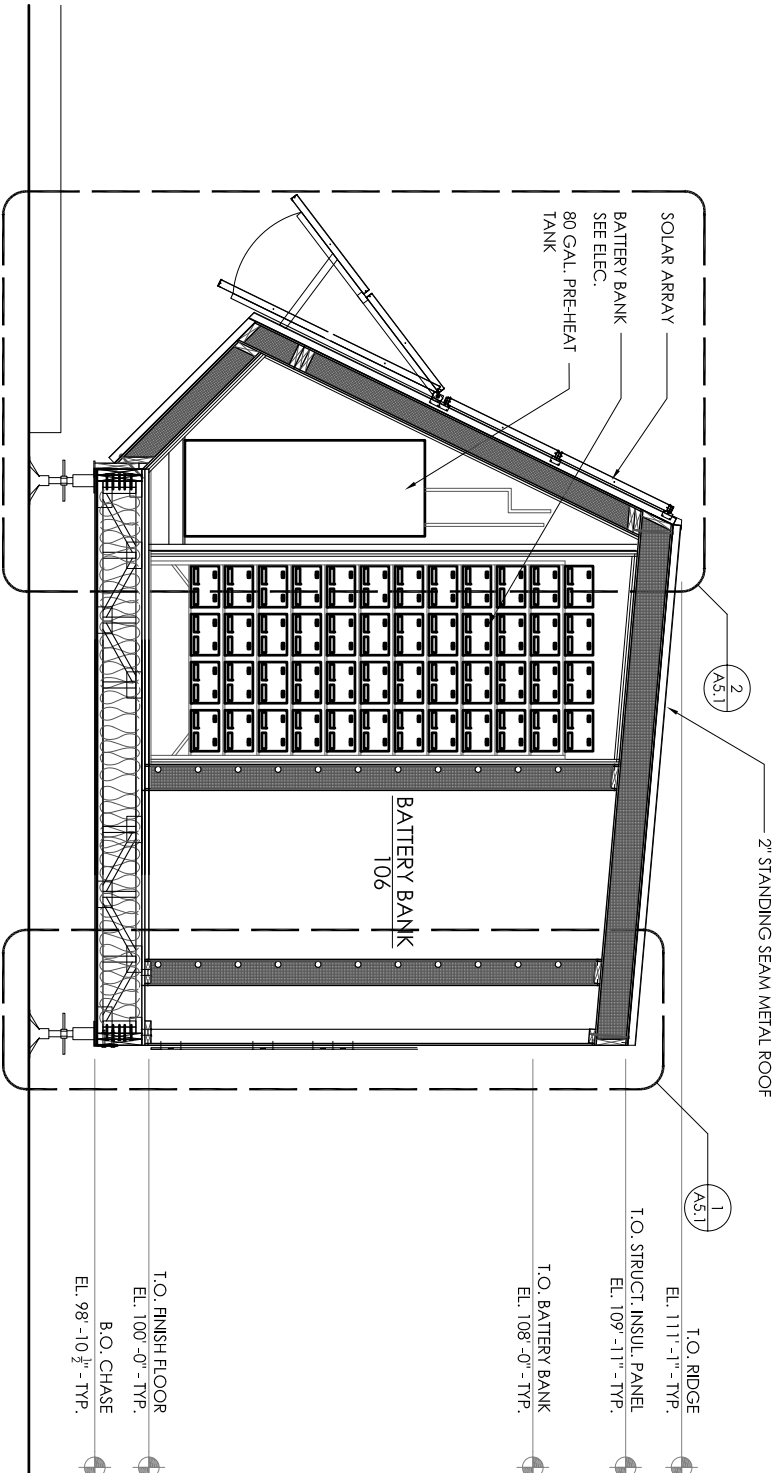
0' 1'-0" 2'-0" 3'-0" 4'-0"



BUILDING SECTION THROUGH BATHROOM 3

1/4"=1'-0"

0' 1'-0" 2'-0" 3'-0" 4'-0"



BUILDING SECTION THROUGH BATTERY BANK 1

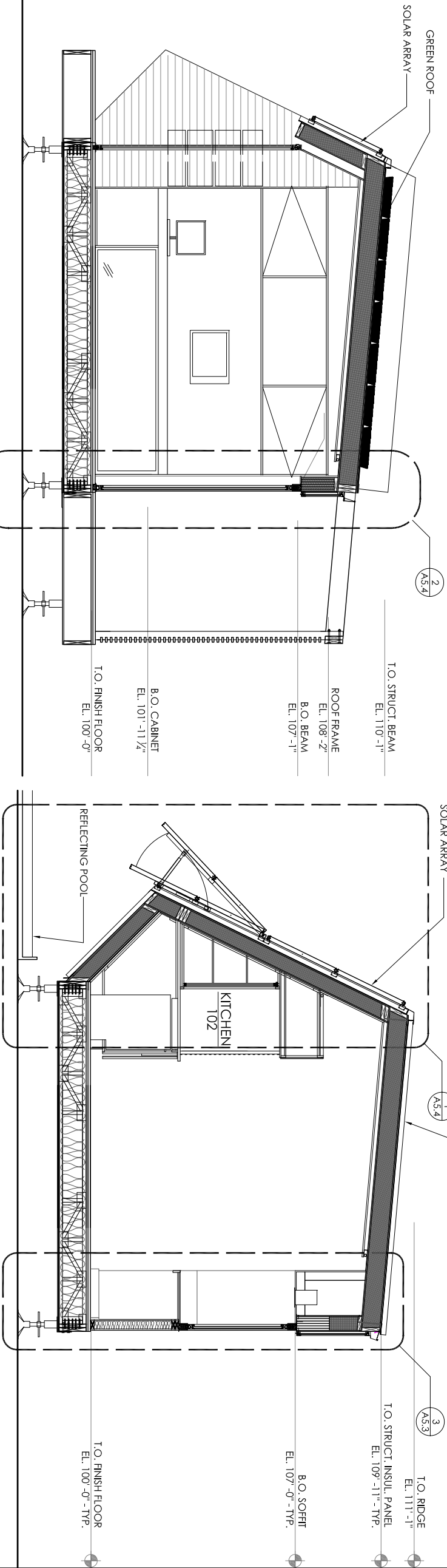
1/4"=1'-0"

0' 1'-0" 2'-0" 3'-0" 4'-0"

DRAWN BY: PSH
DATE: 01 AUG 2008
CHECKED BY:

BUILDING
SECTIONS

A3.1



BUILDING SECTION THROUGH LIVING ROOM 3
1/4"=1'-0"
0' 1'-0" 2'-0" 3'-0" 4'-0"

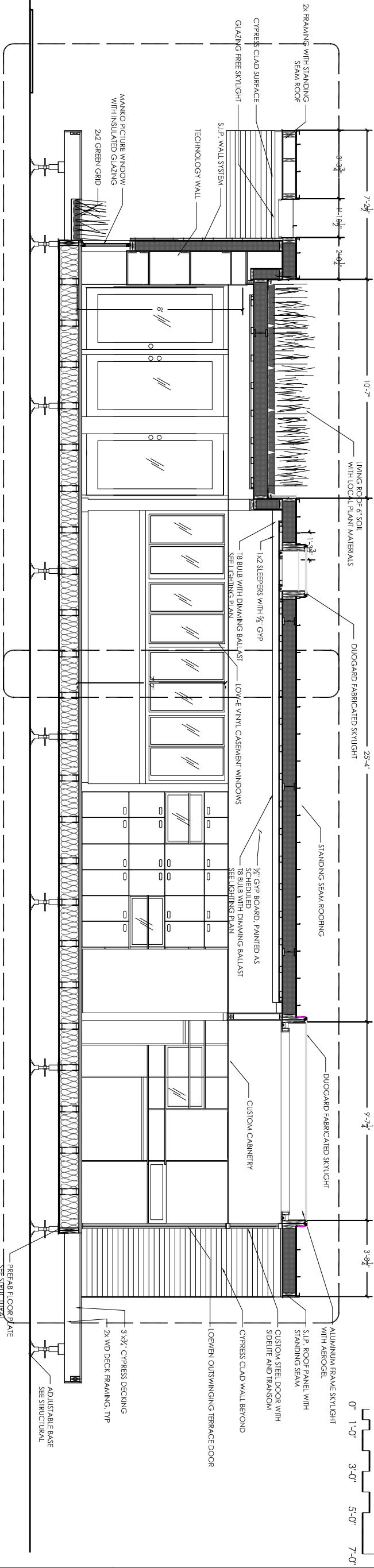
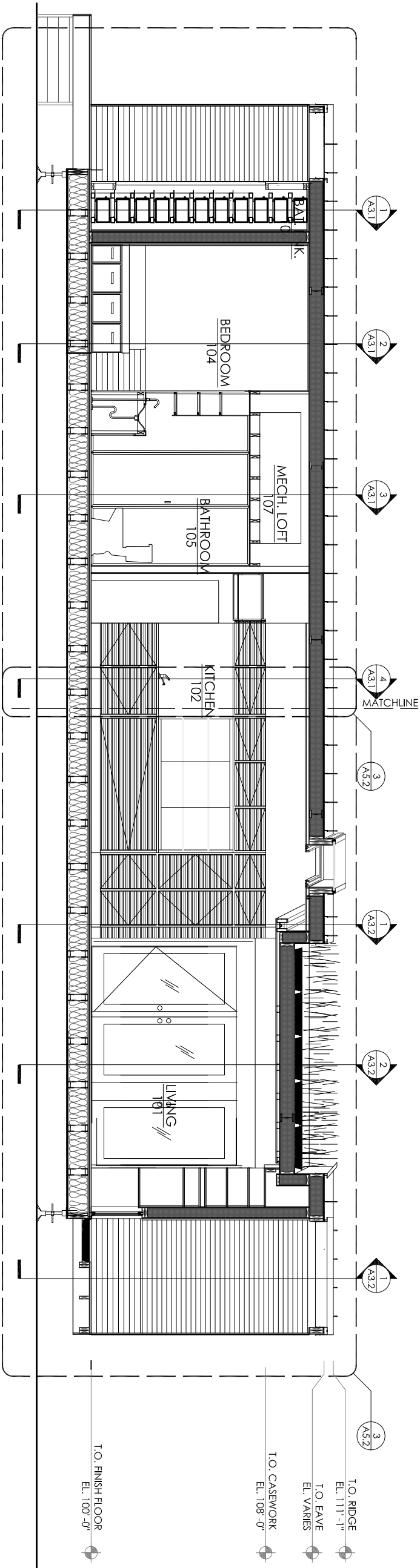
BUILDING SECTION THROUGH KITCHEN 2
1/4"=1'-0"
0' 1'-0" 2'-0" 3'-0" 4'-0"

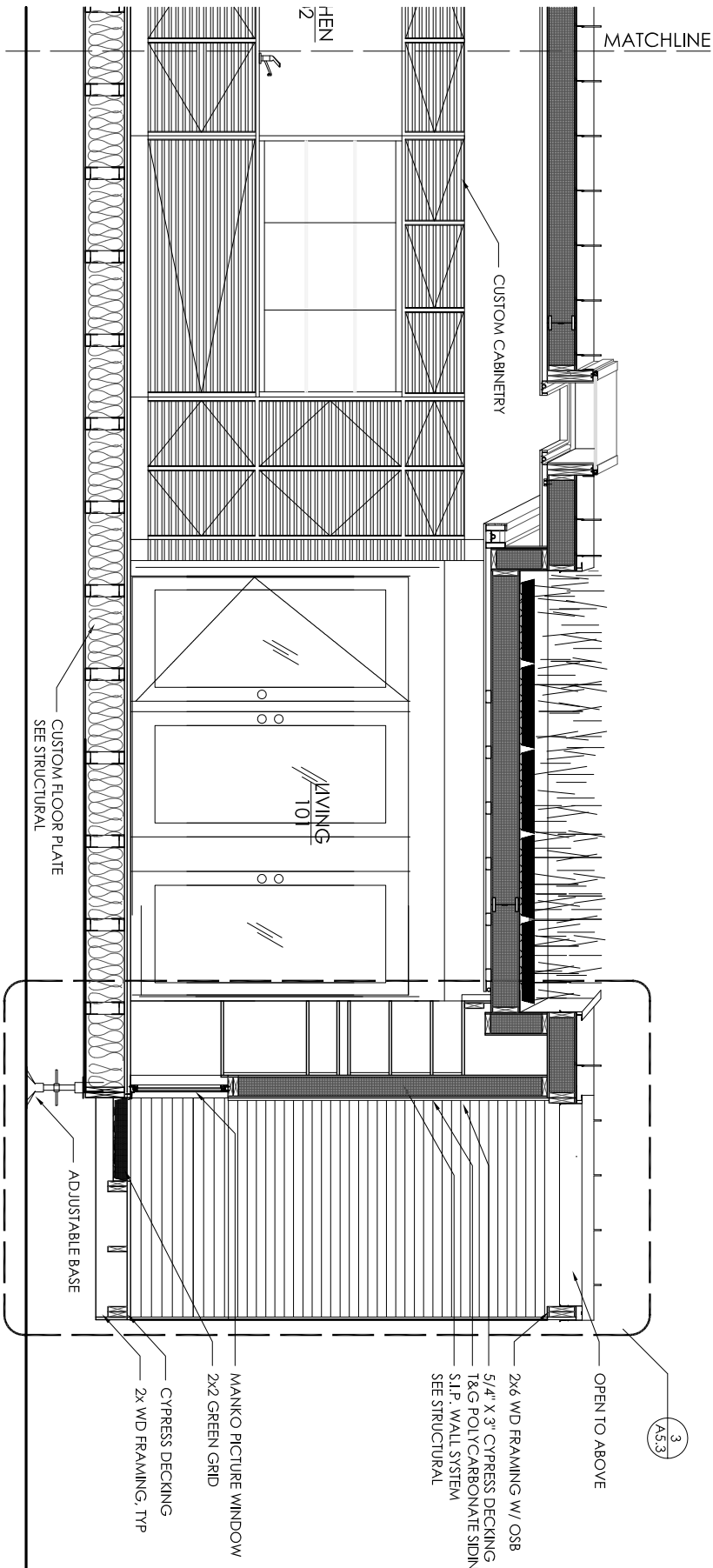
NOT USED 1
1/4"=1'-0"
0' 1'-0" 2'-0" 3'-0" 4'-0"

DRAWN BY _ PSH
DATE _ 01 AUG 2008
CHECKED BY _

BUILDING
SECTIONS

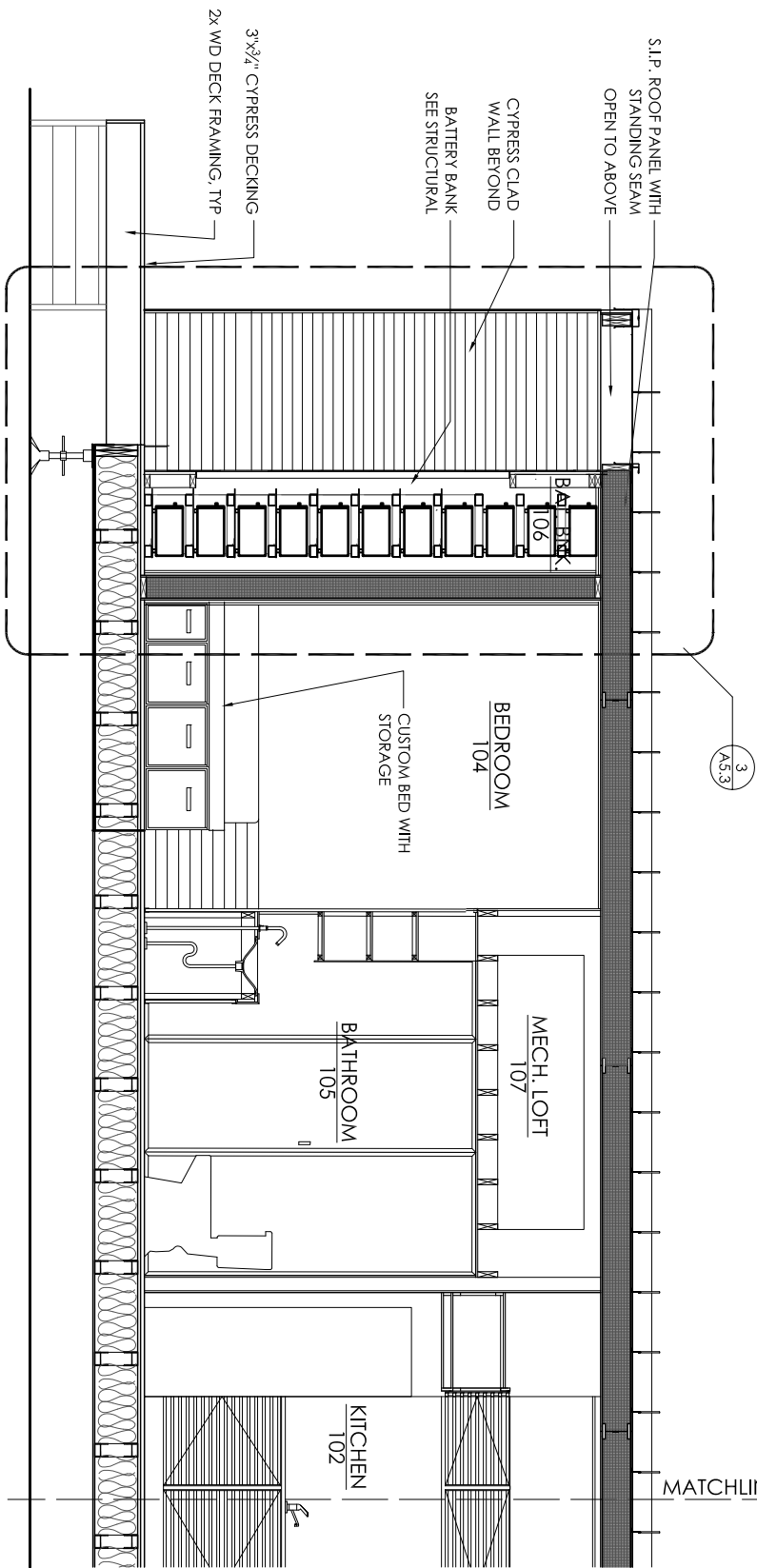
A3.2





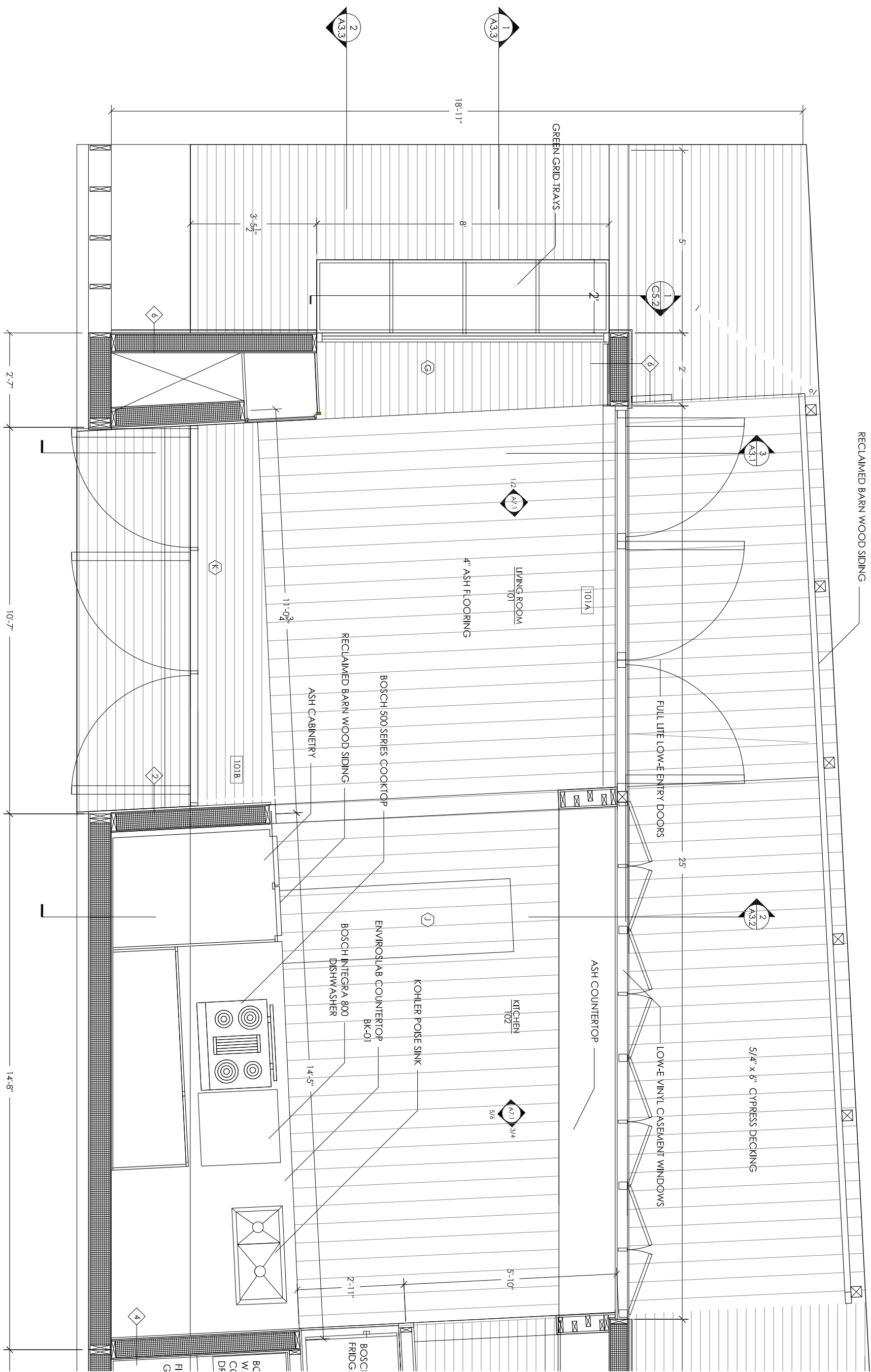
BUILDING SECTION 2
1/4"=1'-0"

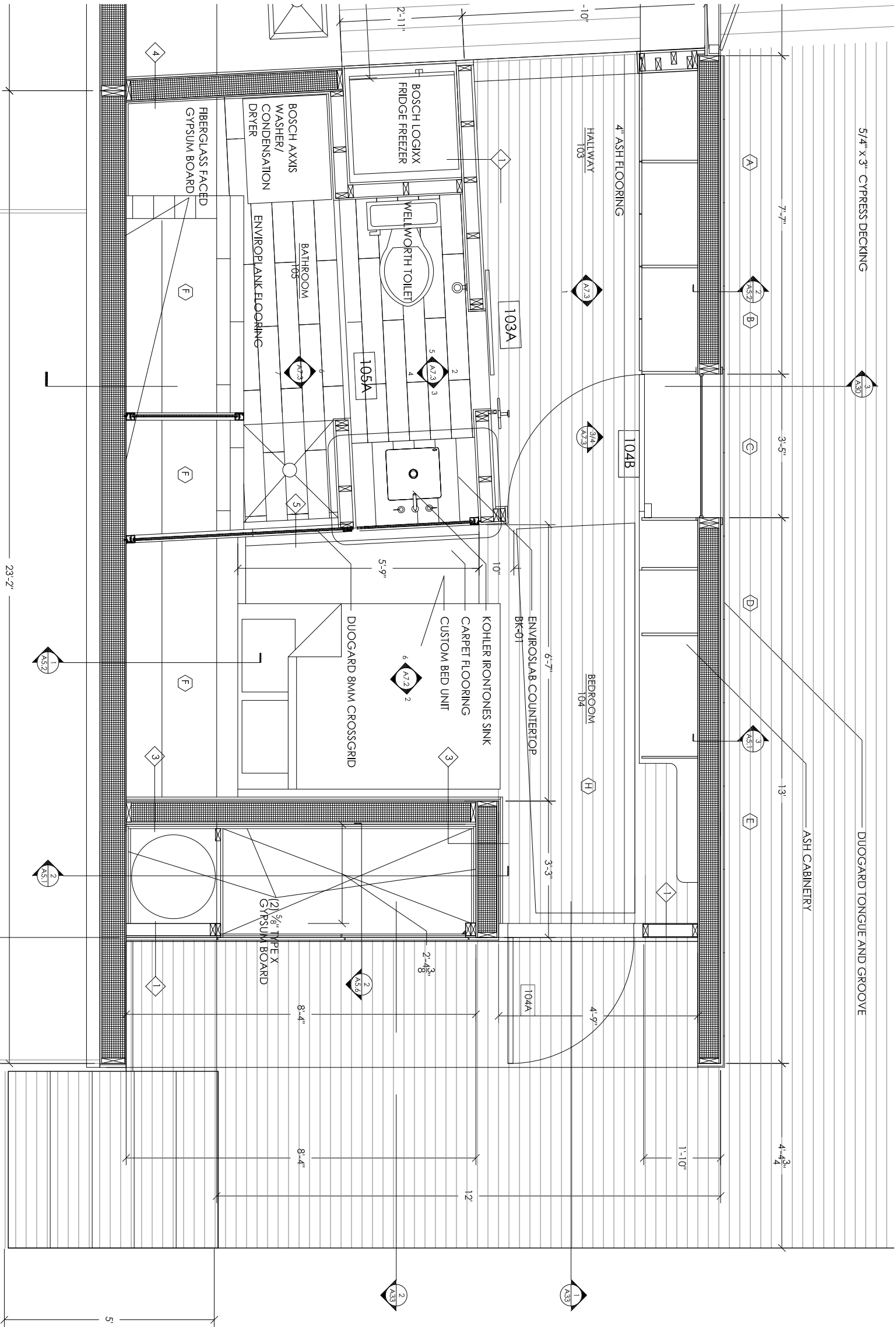
0' 1'-0" 2'-0" 3'-0" 4'-0"

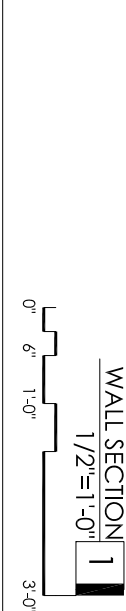


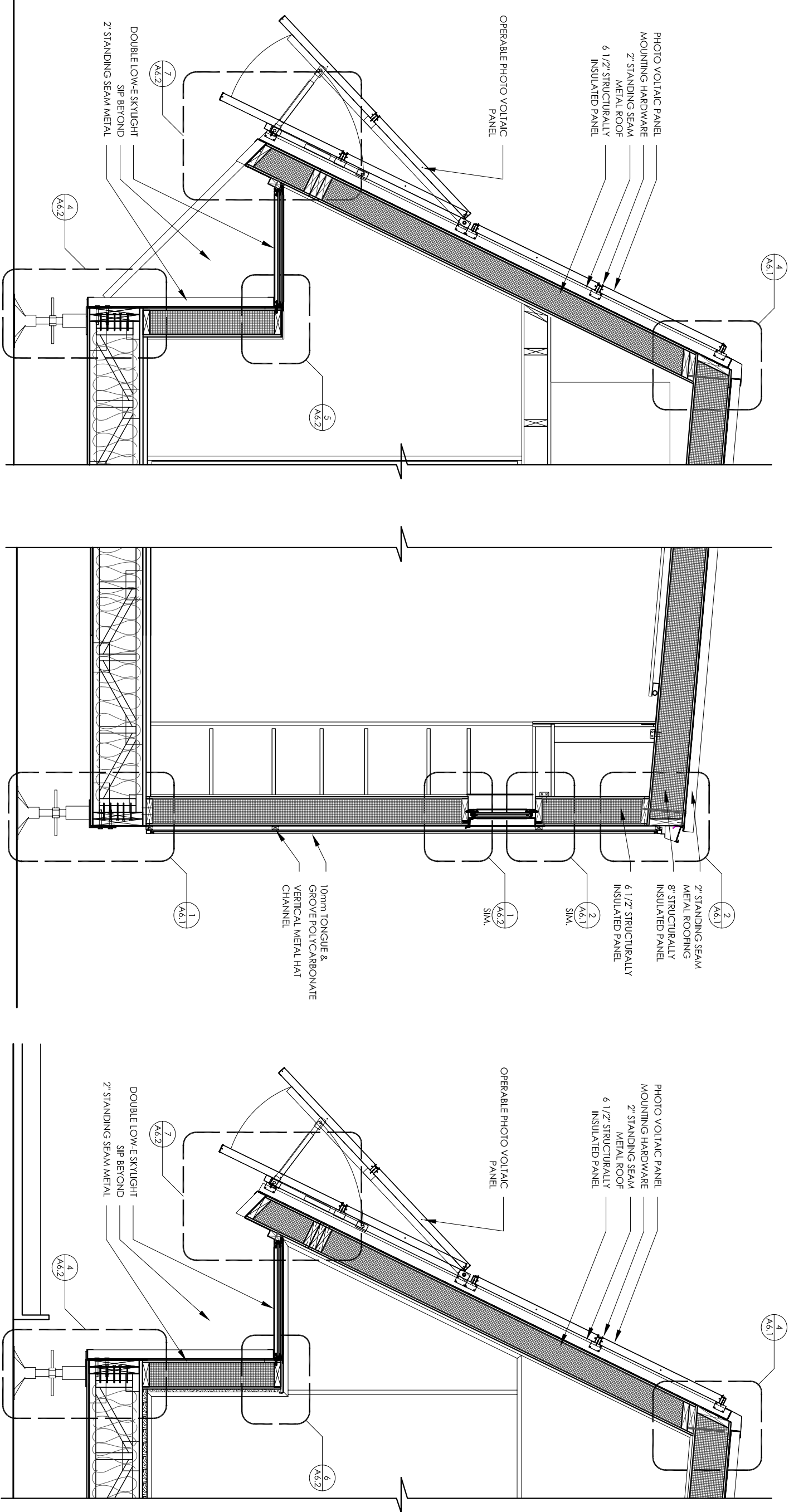
BUILDING SECTION 1
1/4"=1'-0"

0' 1'-0" 2'-0" 3'-0" 4'-0"







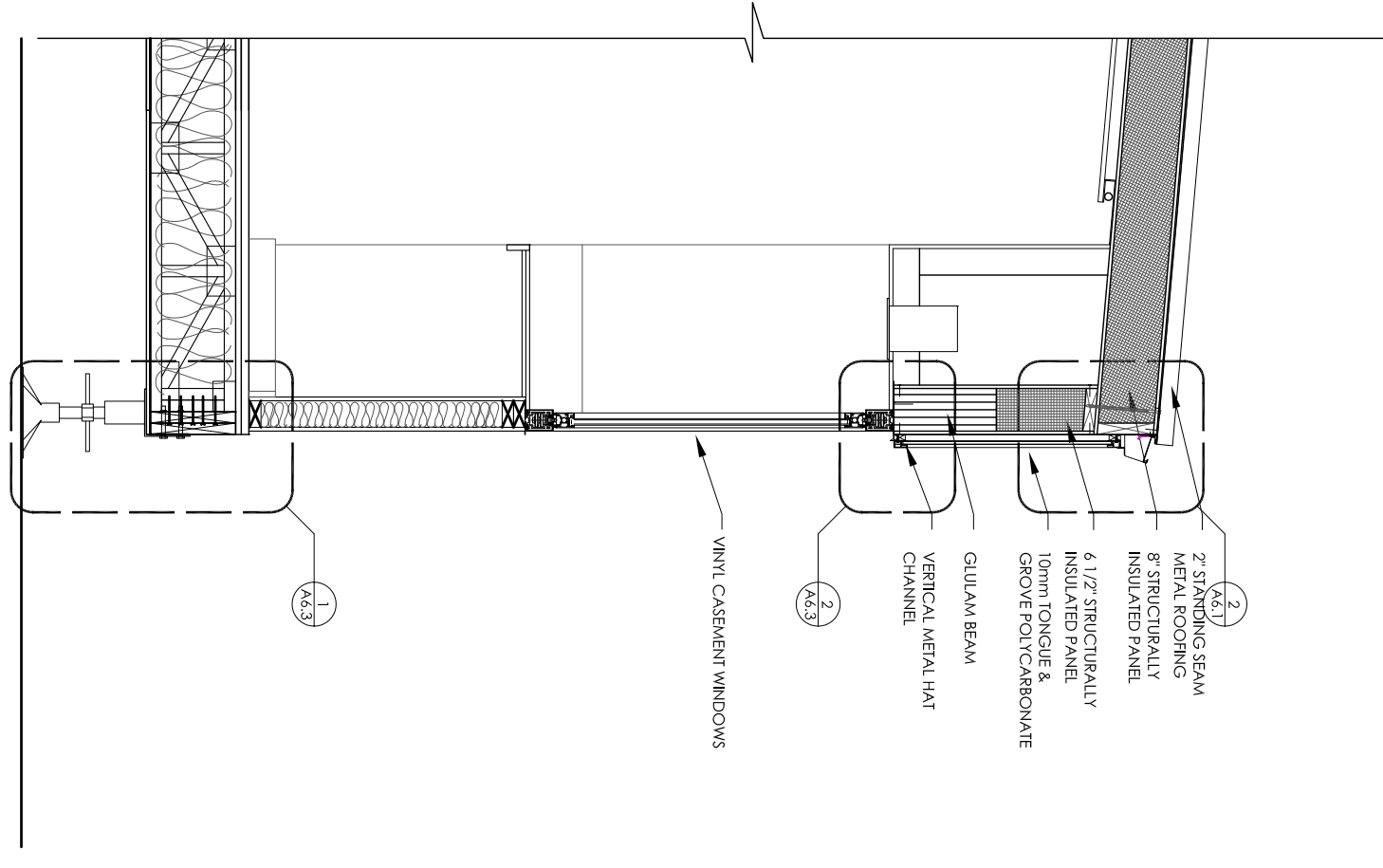
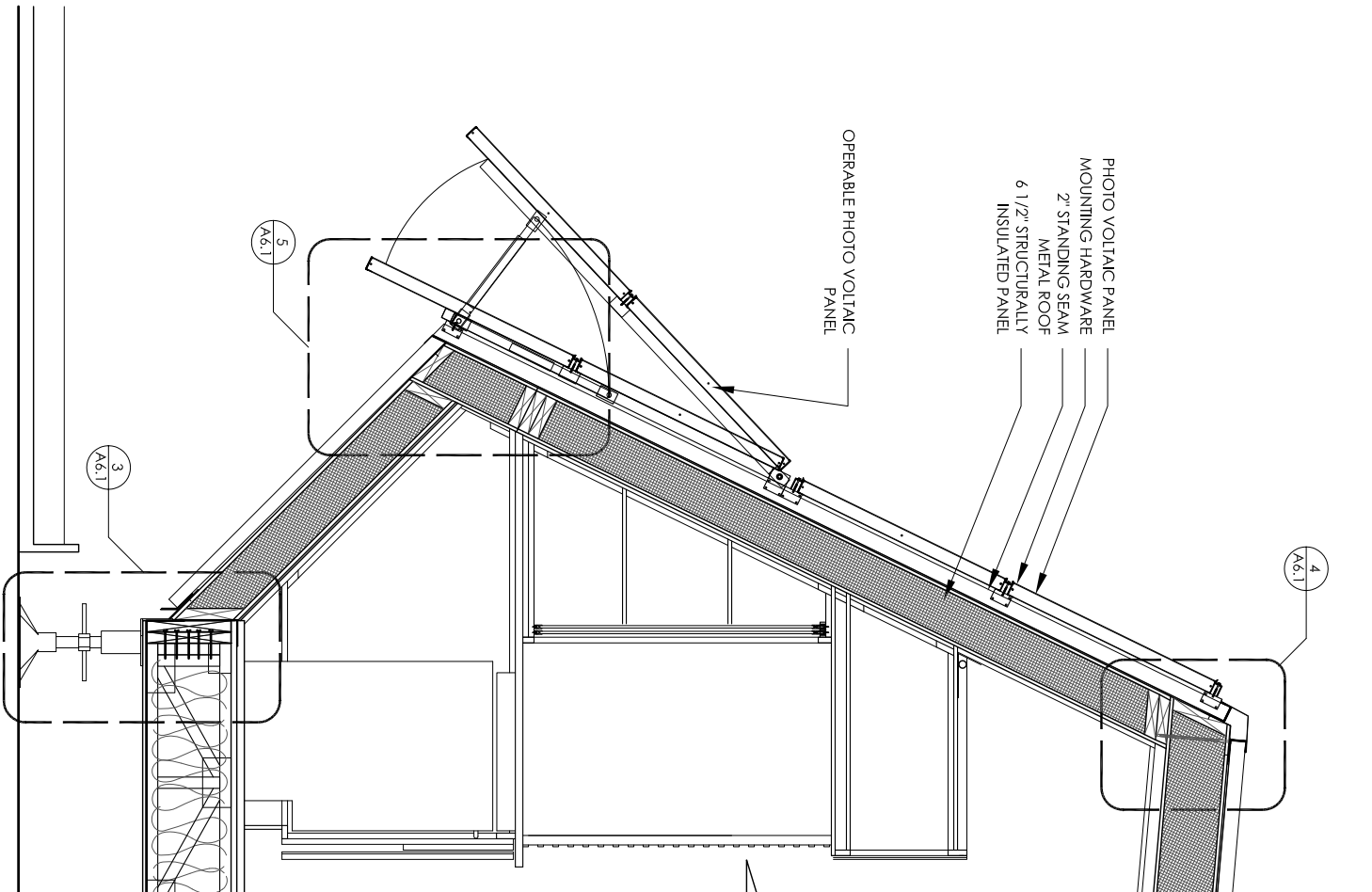
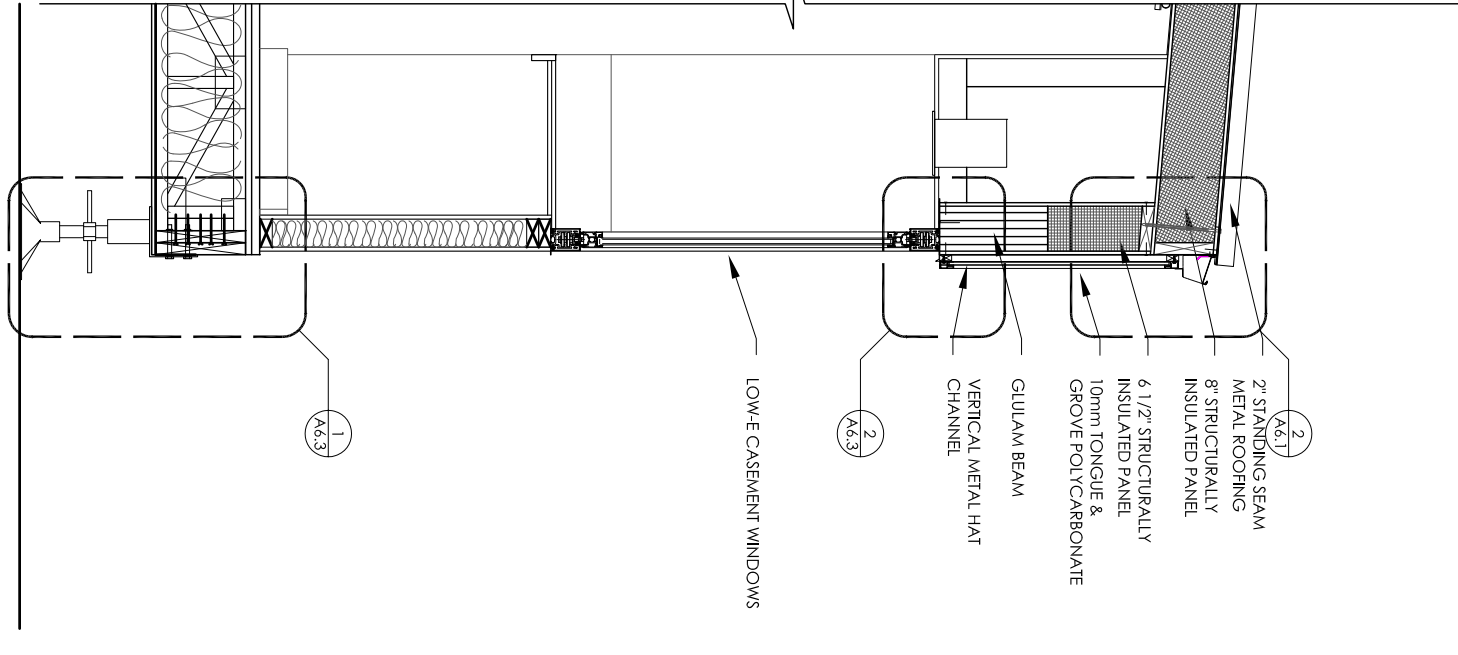


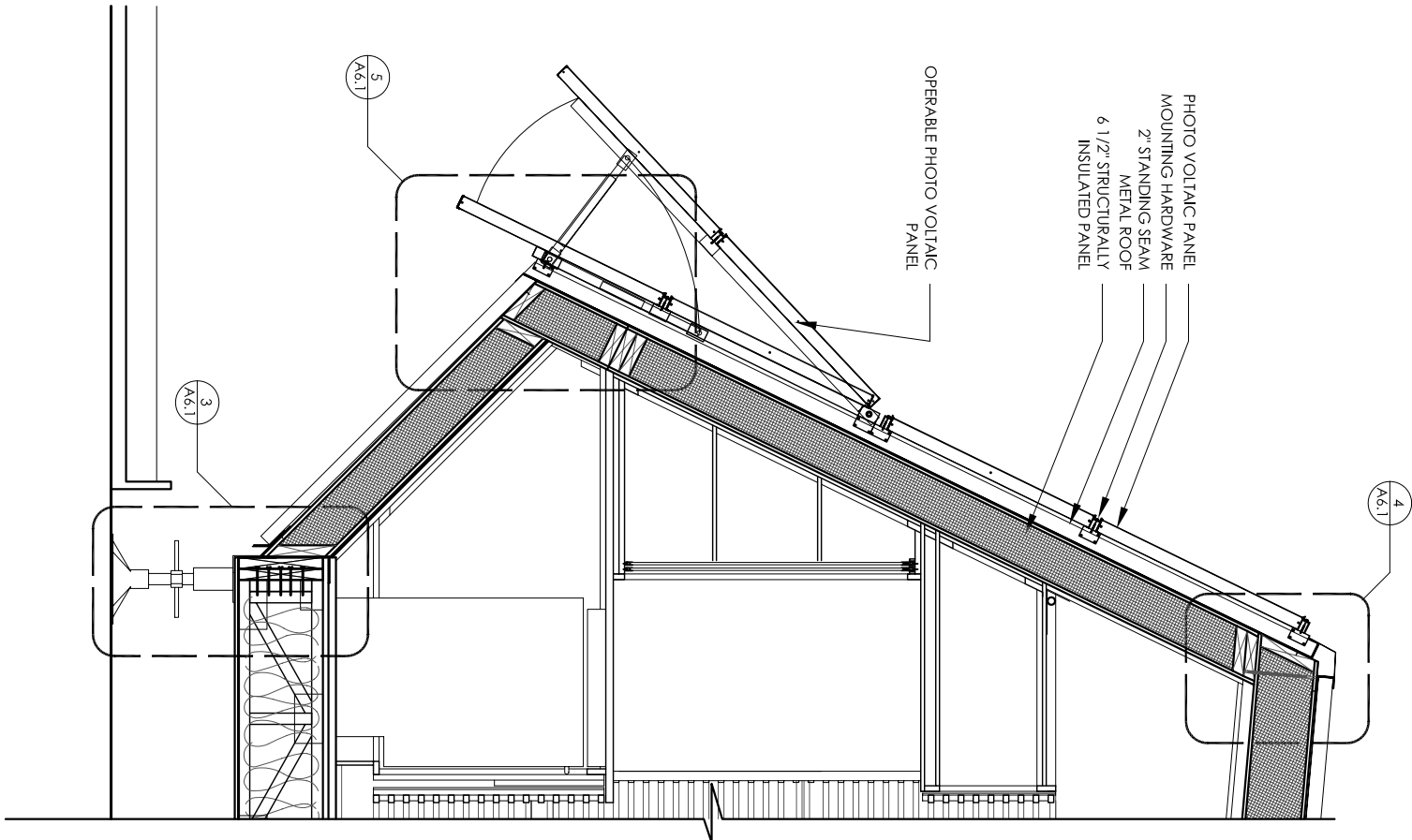
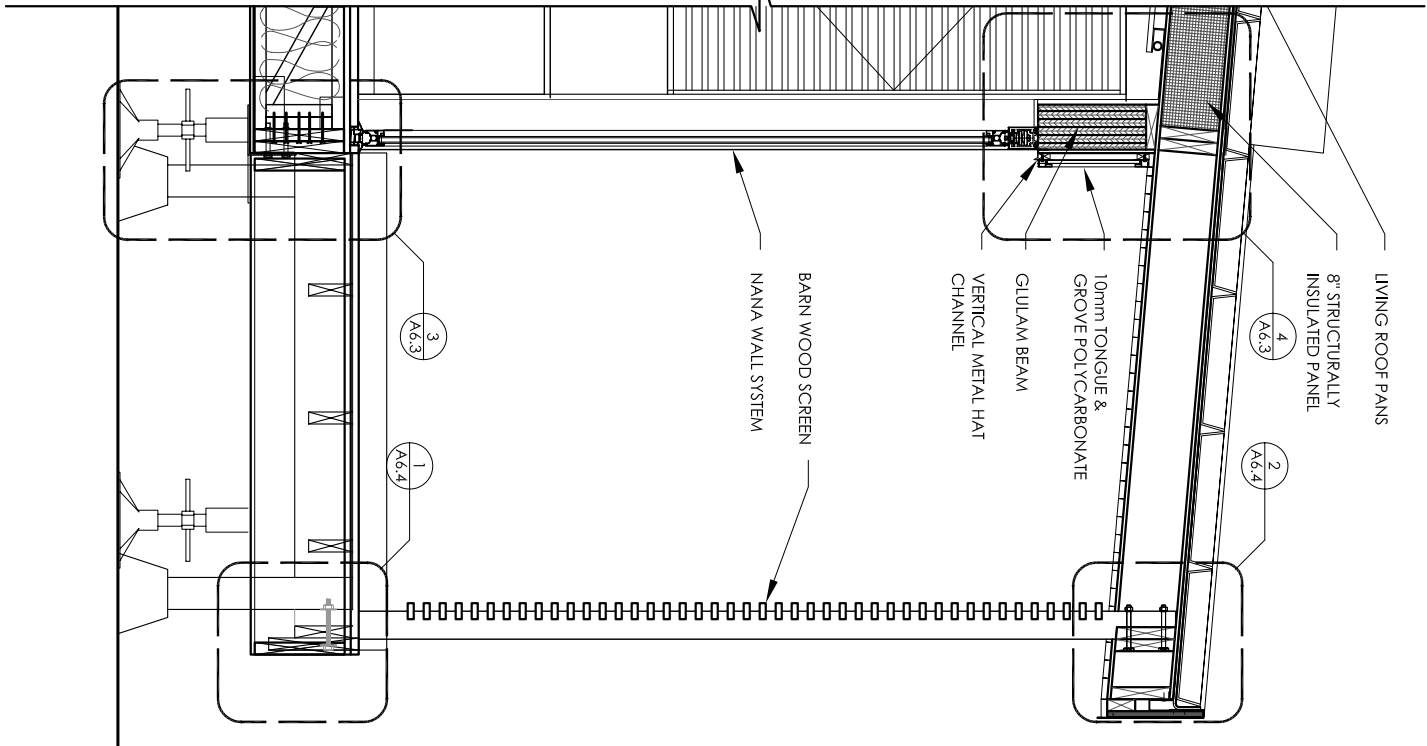
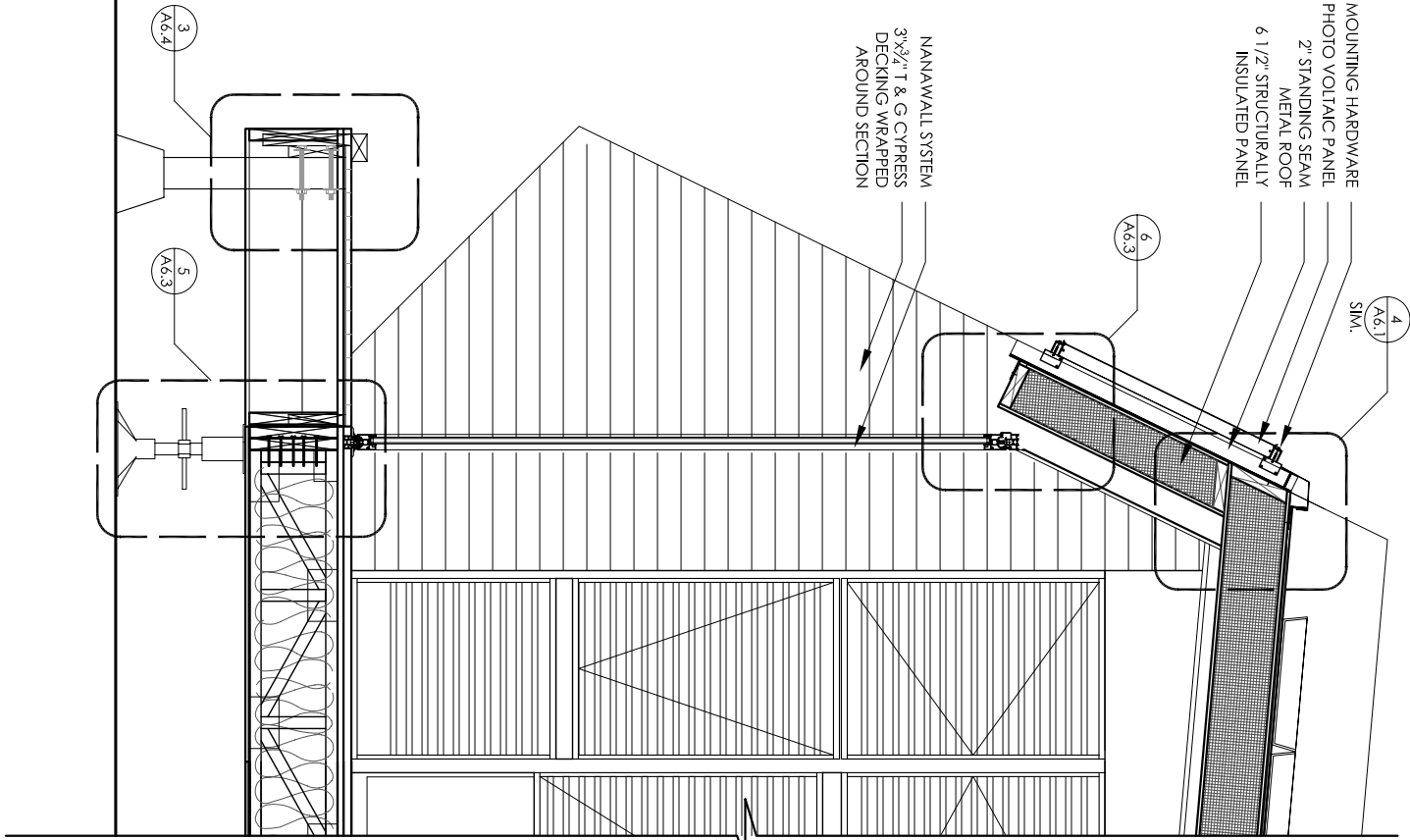


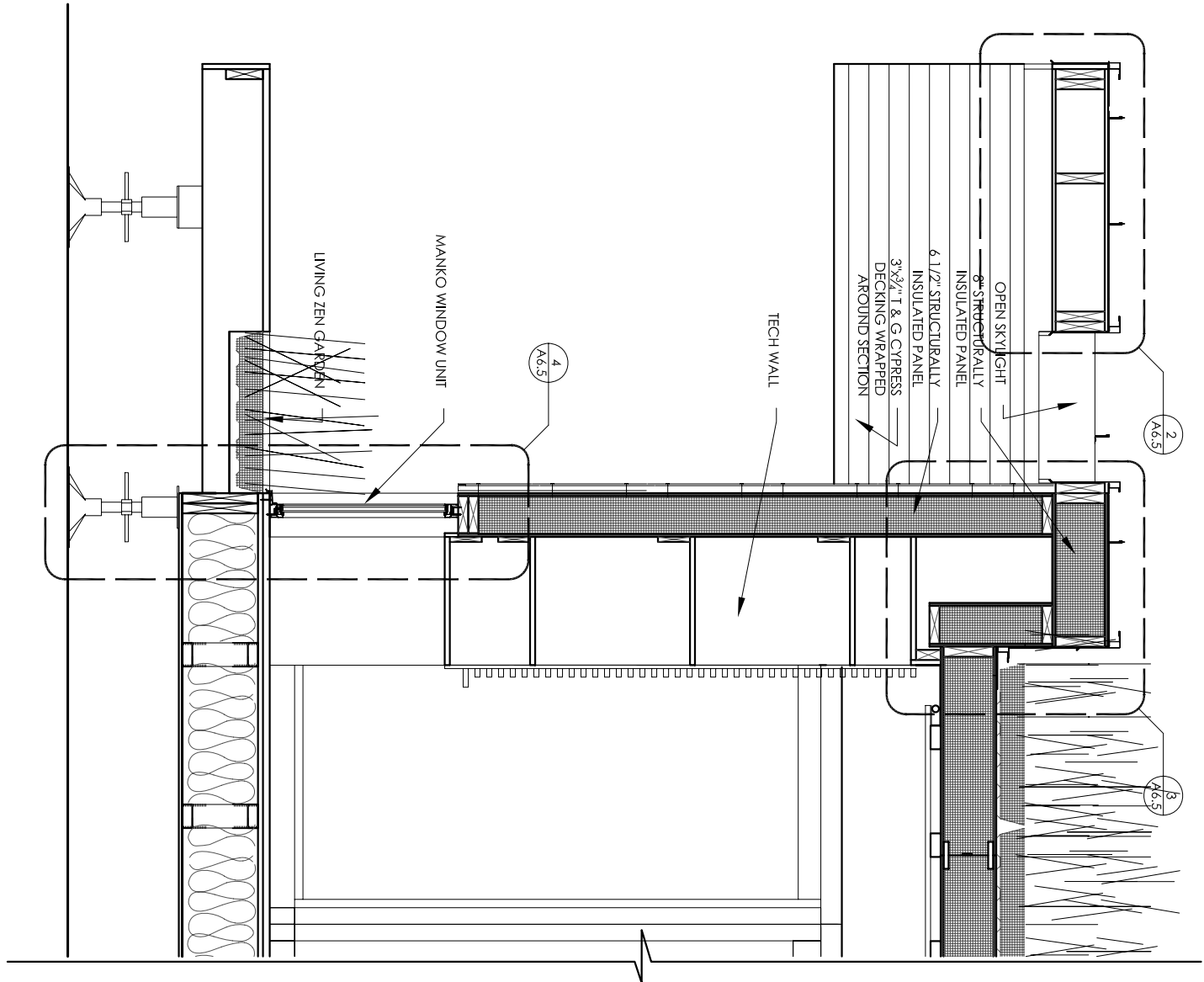
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DATE _____ 03 MAY 2007
CHECKED BY _____

WALL SECTIONS

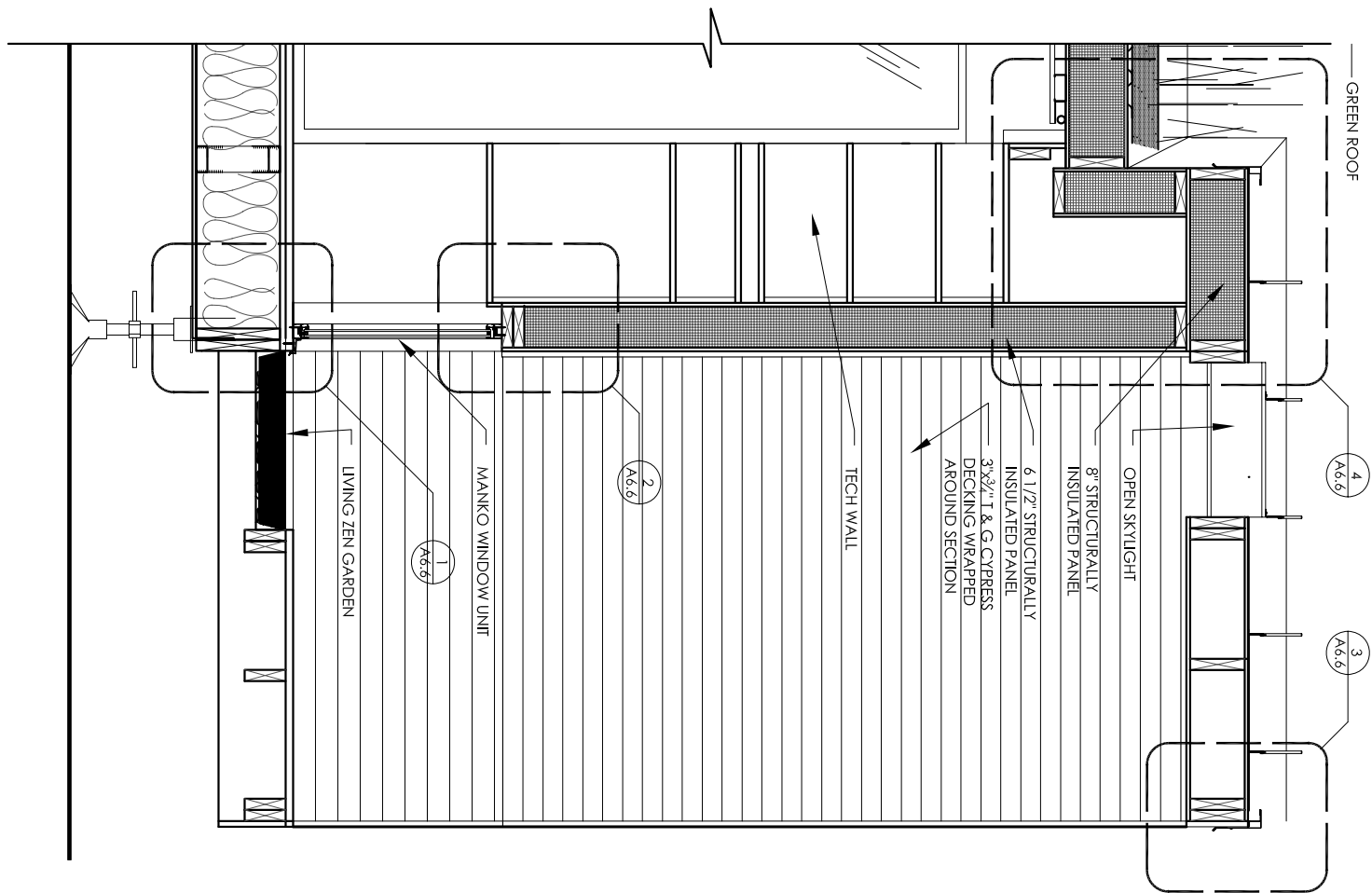
A5.3







WALL SECTION 2
1/2"=1'-0"
0" 6" 1'-0" 3'-0"



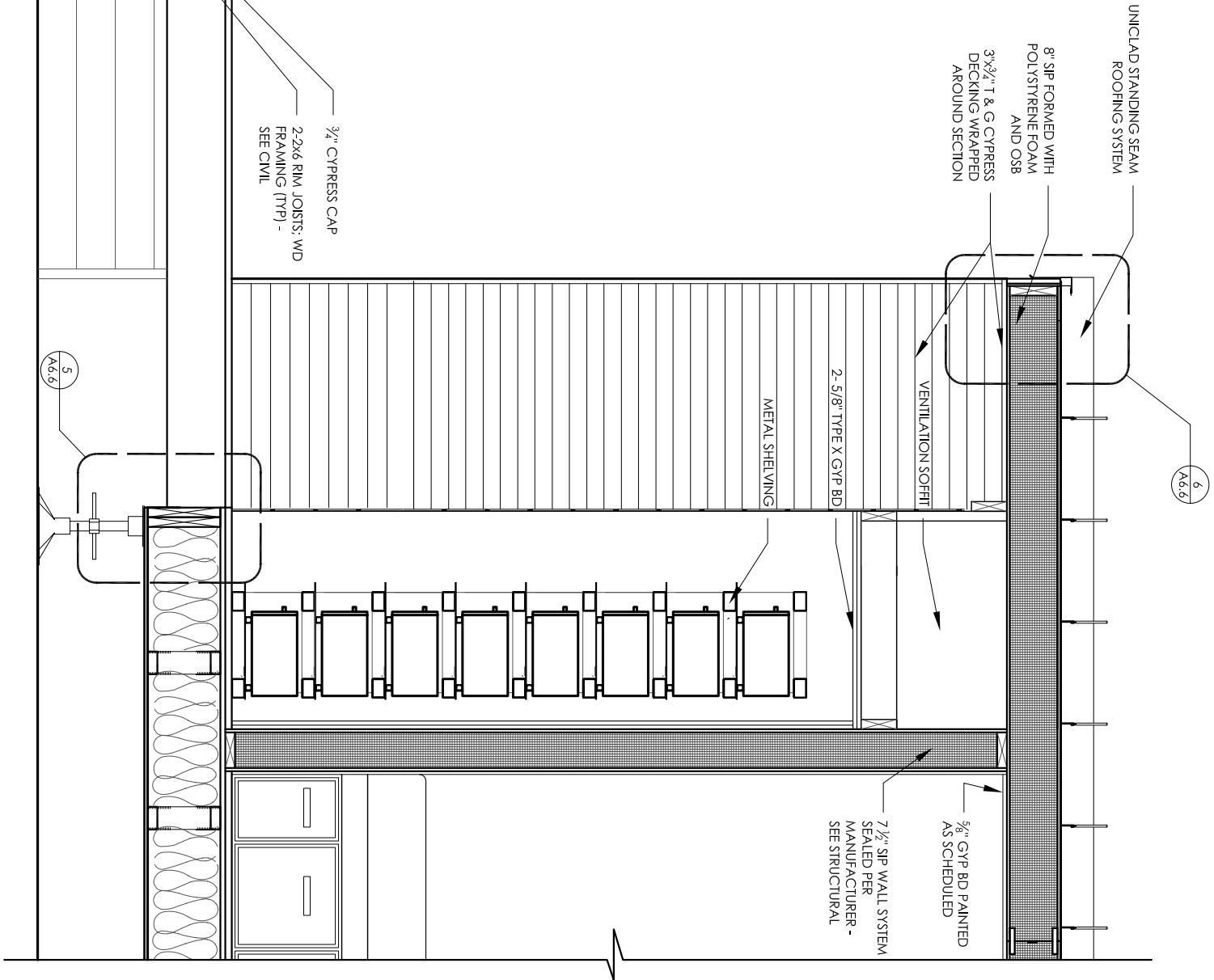
WALL SECTION 1
1/2"=1'-0"
0" 6" 1'-0" 3'-0"

DRAWN BY: PSH
DATE: 6 MAR 2007
CHECKED BY:

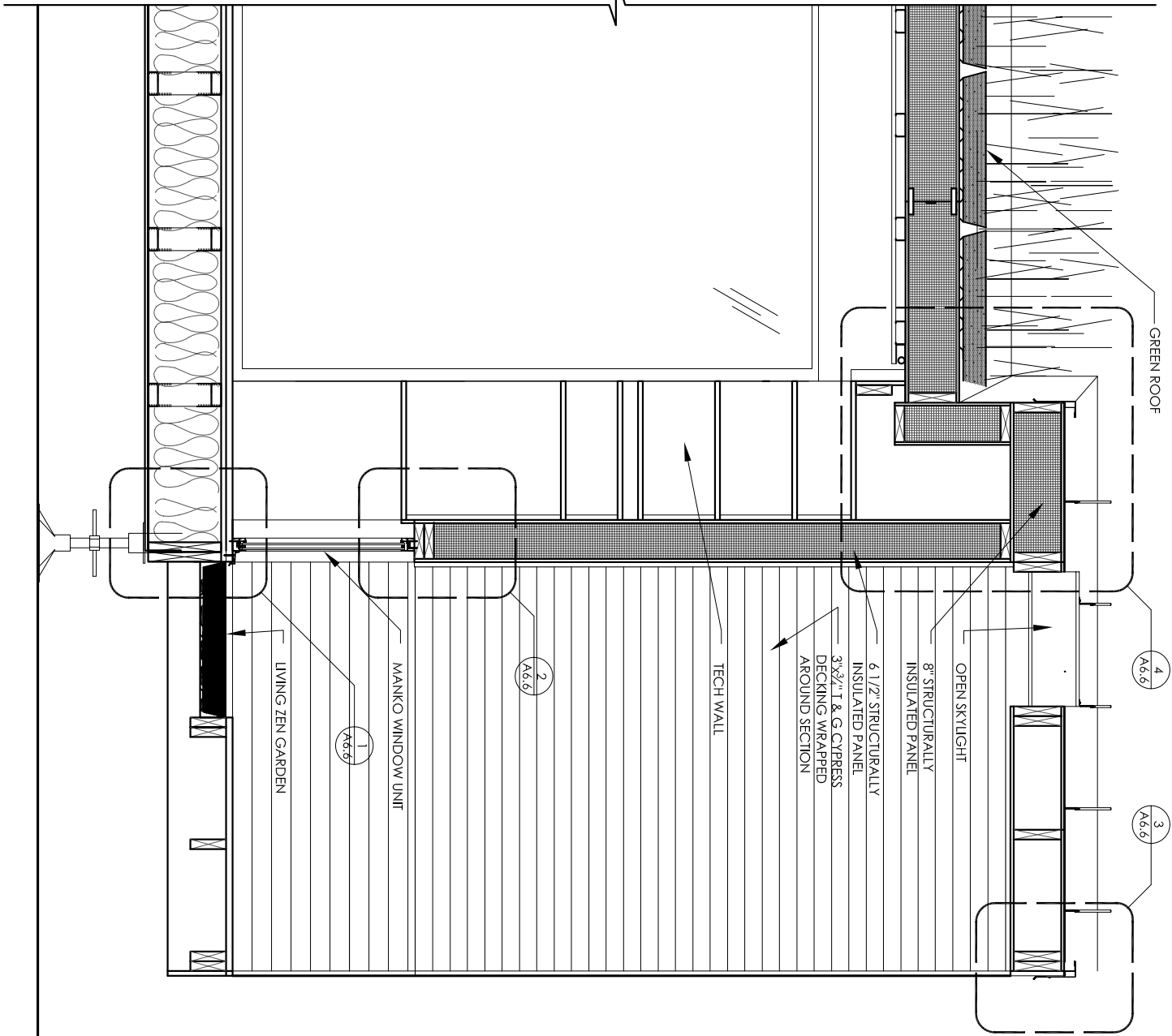
WALL SECTIONS



A5.5



WALL SECTION 2
1/2"=1'-0"
0' 6' 1'-0' 3'-0'

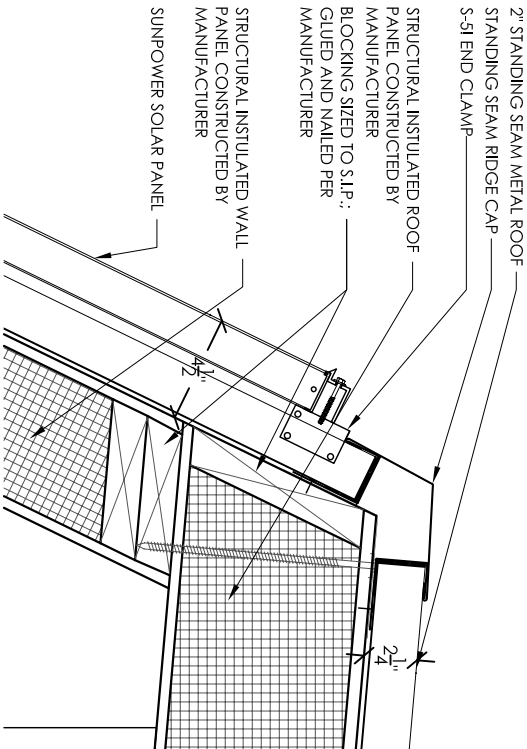


WALL SECTION 1
1/2"=1'-0"
0' 6' 1'-0' 3'-0'

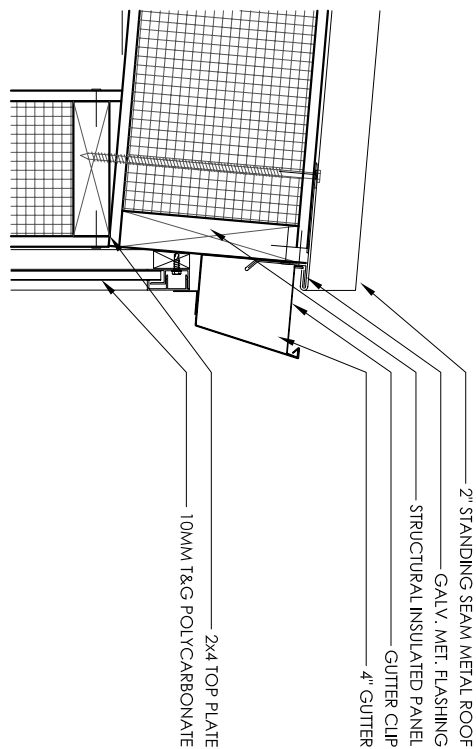
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WALL SECTIONS

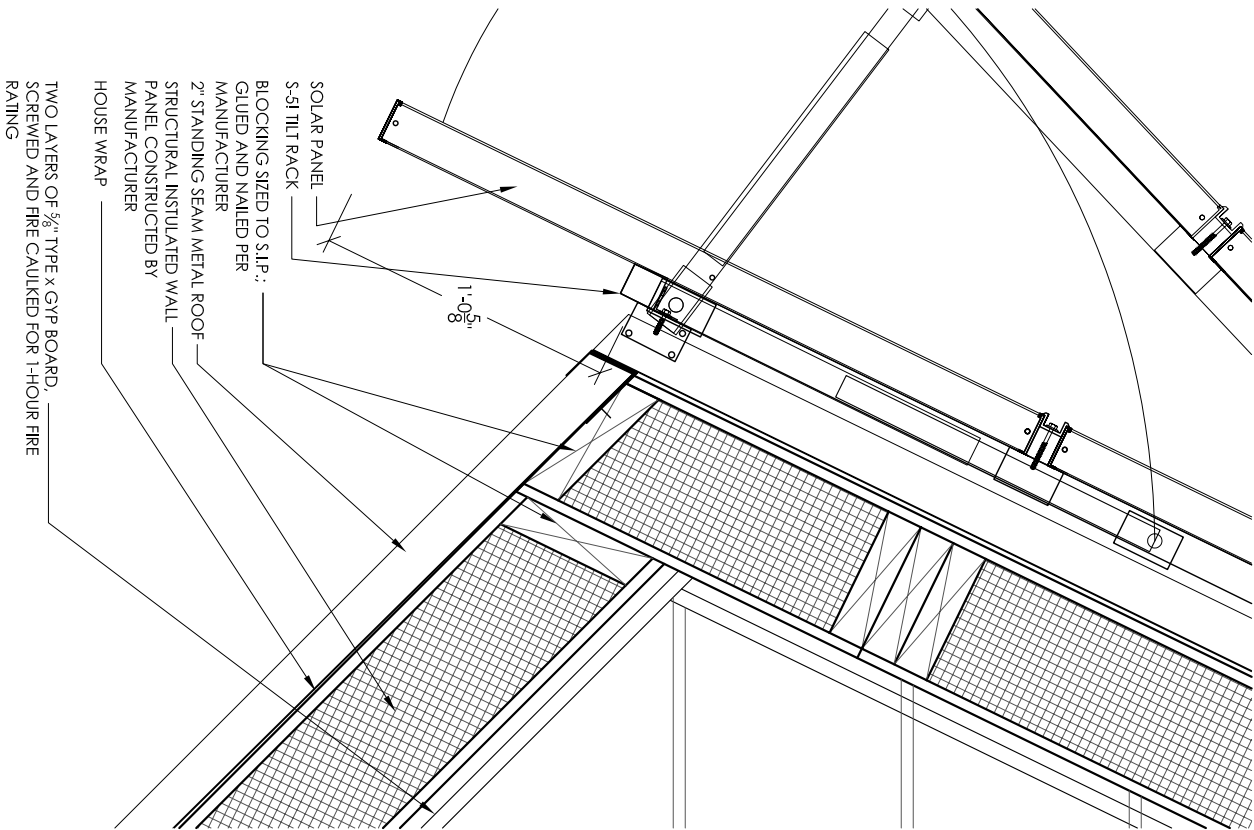
A5.6



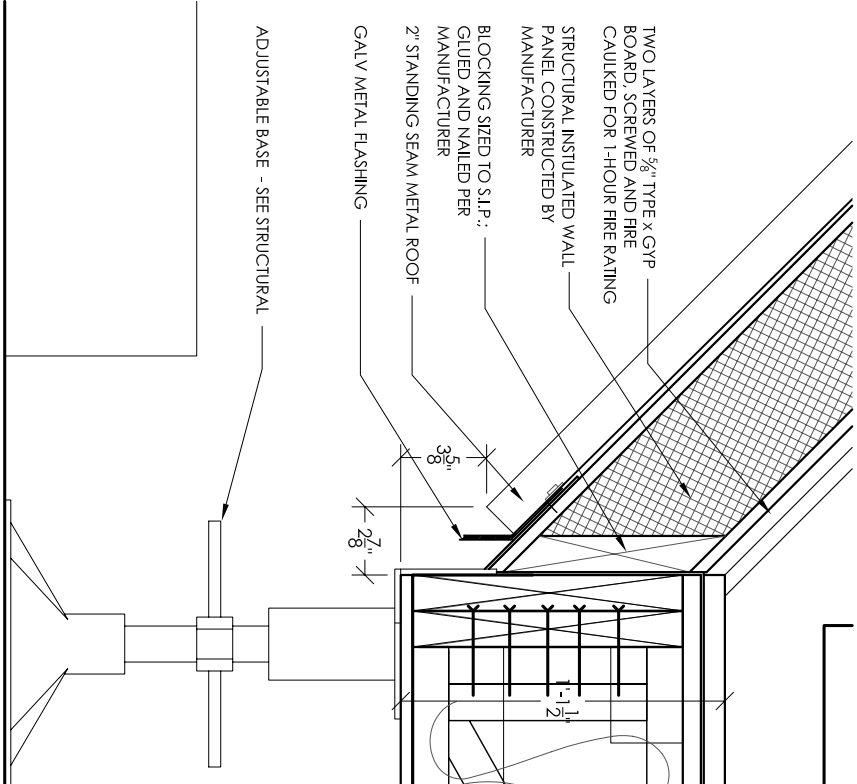
TYPICAL RIDGE DETAIL 4
1'-1/2"=1'-0"



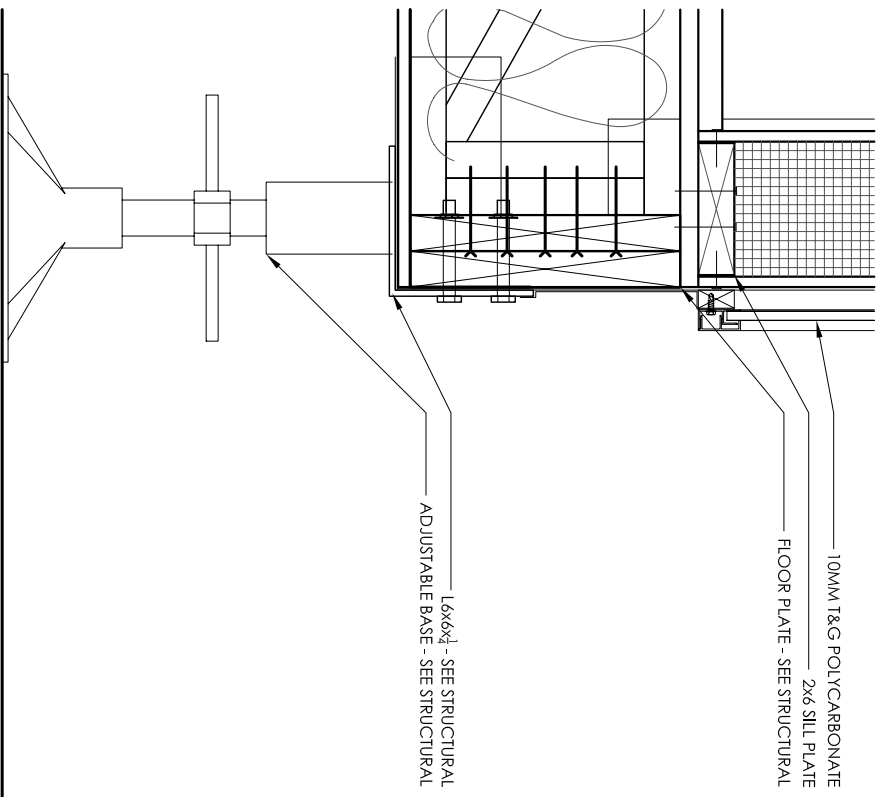
TYPICAL NORTH END ROOF EDGE DETAIL 2
1'-1/2"=1'-0"



TYPICAL SOUTH END S.I.P. CONNECTION DETAIL 3
1'-1/2"=1'-0"



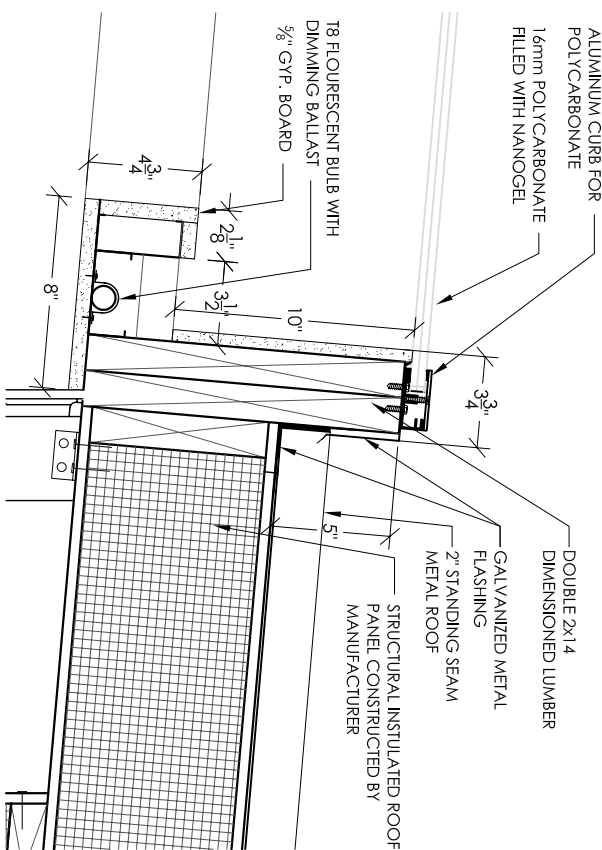
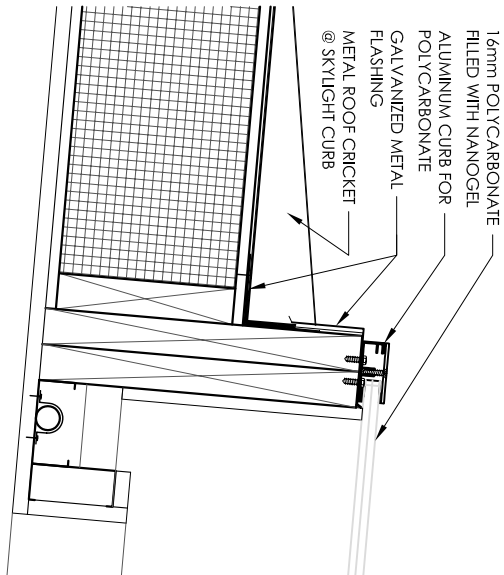
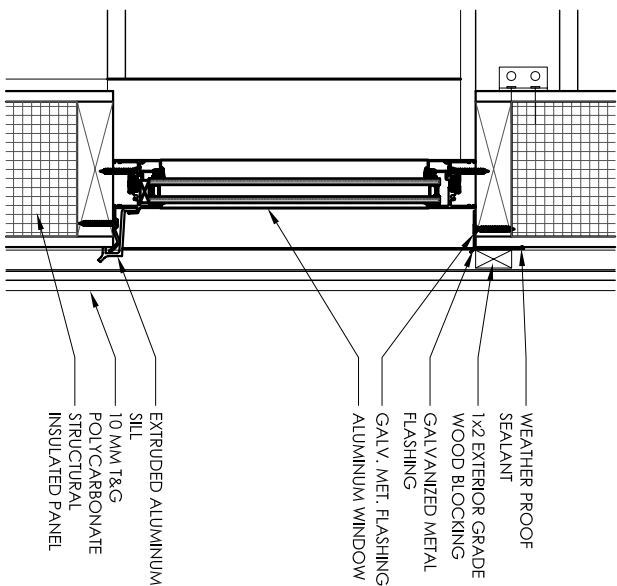
TYPICAL SOUTH EDGE FLOOR PLATE DETAIL 3
1'-1/2"=1'-0"



TYPICAL NORTH EDGE FLOOR PLATE DETAIL 1
1'-1/2"=1'-0"

DRAWN BY PSH
DATE 06 MARCH 2007
CHECKED BY

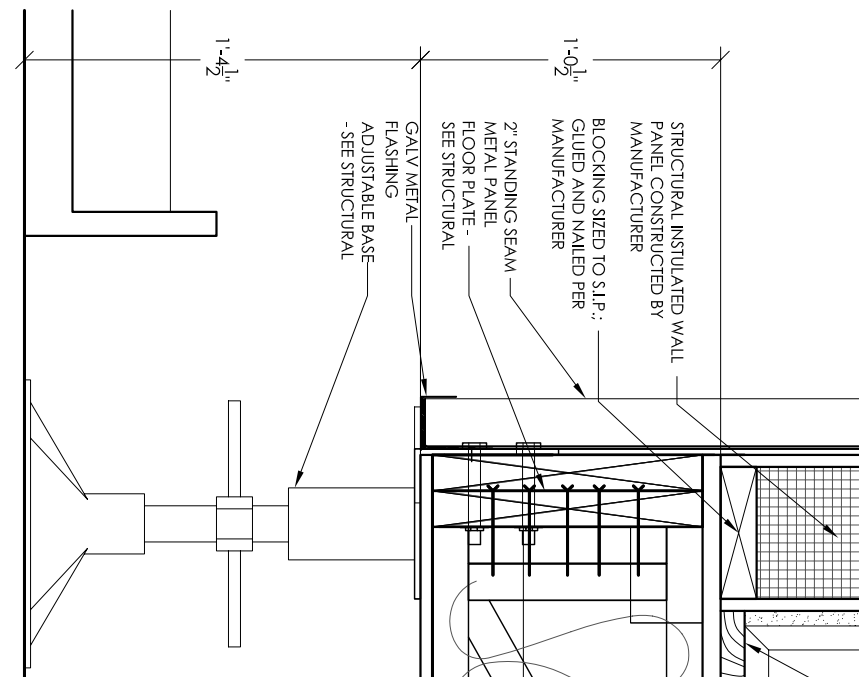
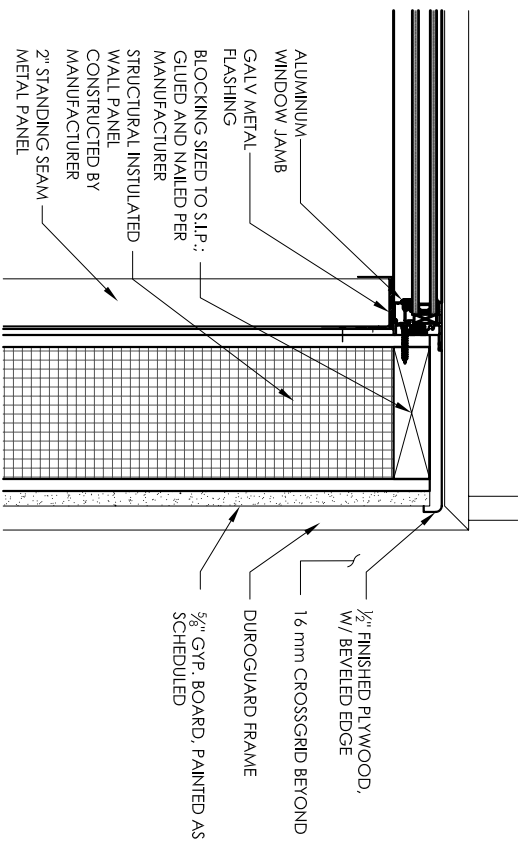
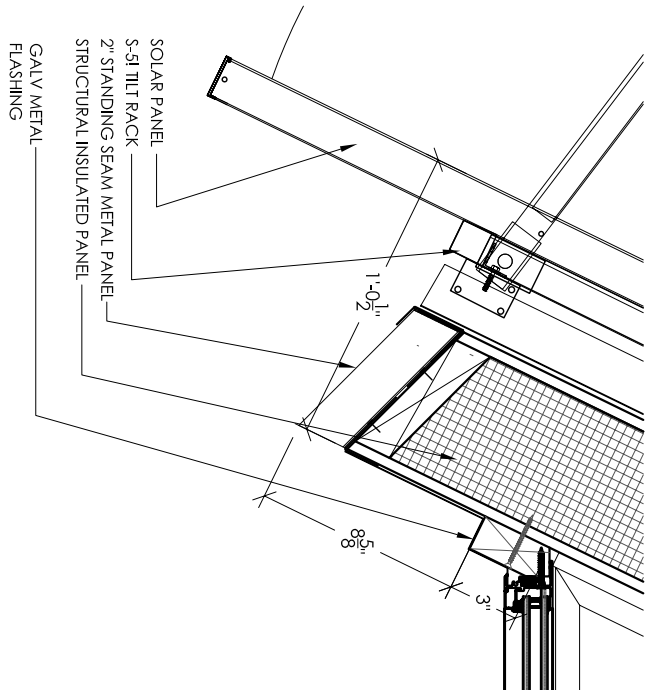
DETAILS



NORTH END WINDOW DETAIL 7
1-1/2"=1'-0"

SKYLIGHT DETAIL 5
1-1/2"=1'-0"

SKYLIGHT DETAIL 3
1-1/2"=1'-0"



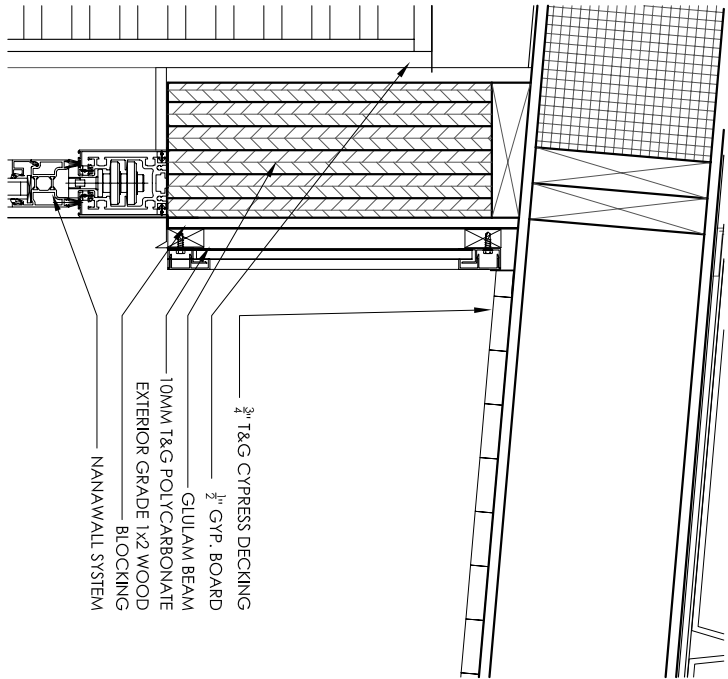
S.I.P. DETAIL @ WINDOW SHELF 8
1-1/2"=1'-0"

JAMB DETAIL @ WINDOW SHELF 6
1-1/2"=1'-0"

FLOOR PLATE DETAIL @ WINDOW SHELF 4
1-1/2"=1'-0"

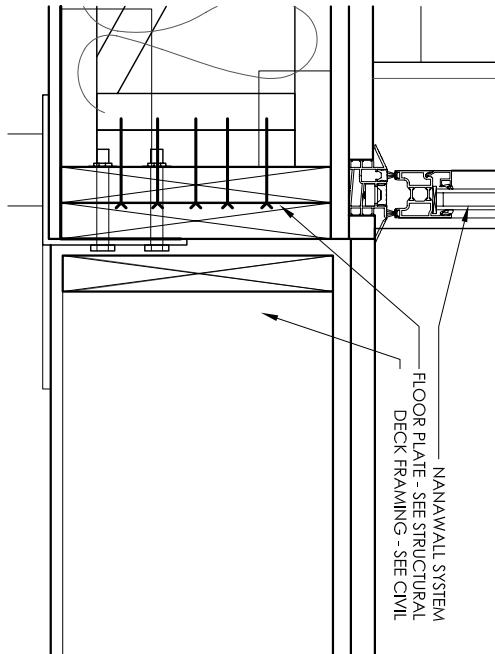
DETAILS

DRAWN BY _____ PSH
DATE_ 06 MARCH 2007
CHECKED BY _____



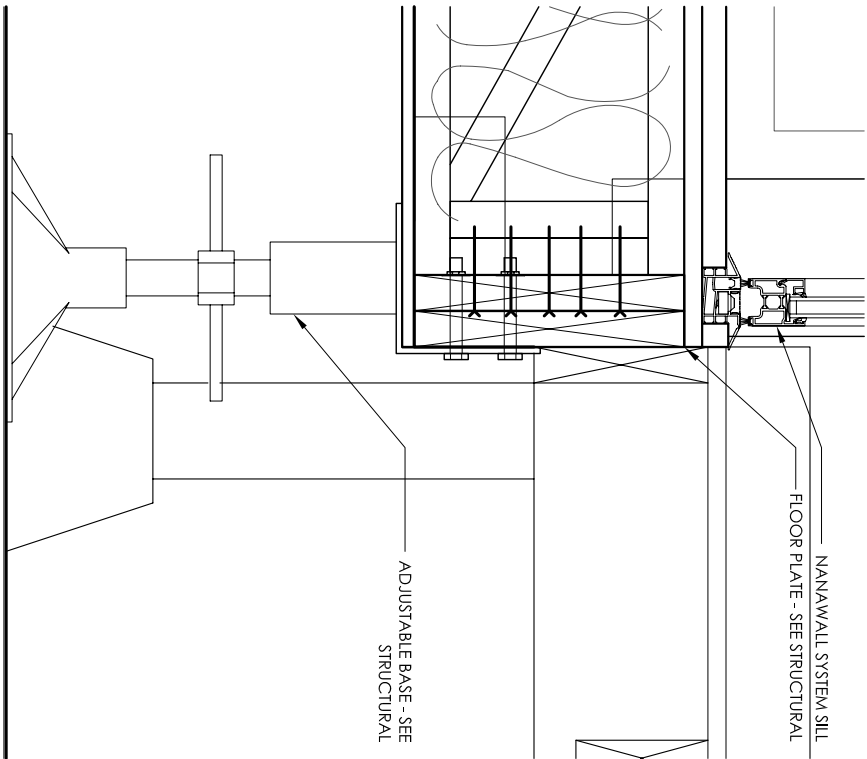
NANAWALL HEAD DETAIL 4
1'-1/2"=1'-0"

0" 3" 6" 9" 1'-0"



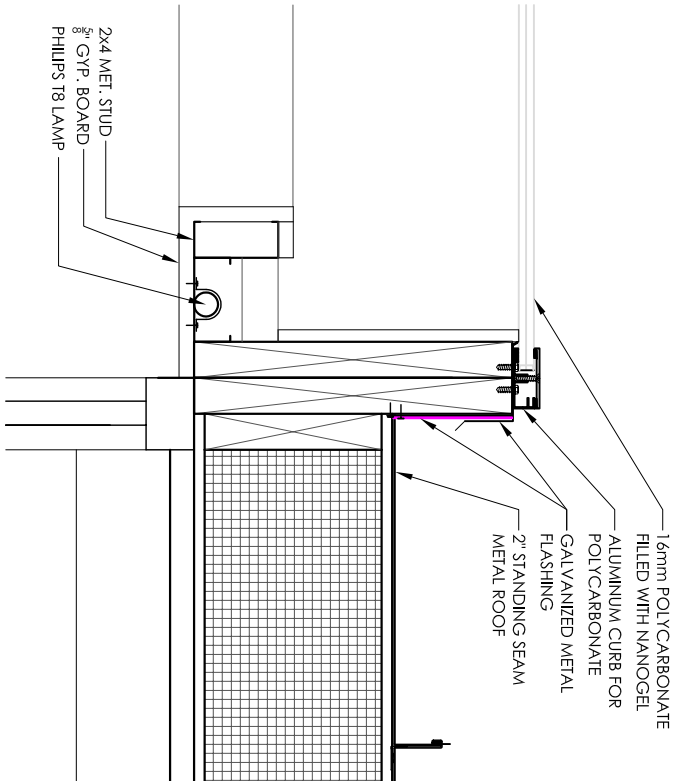
NANAWALL SILL DETAIL @ DECK 3
1'-1/2"=1'-0"

0" 3" 6" 9" 1'-0"



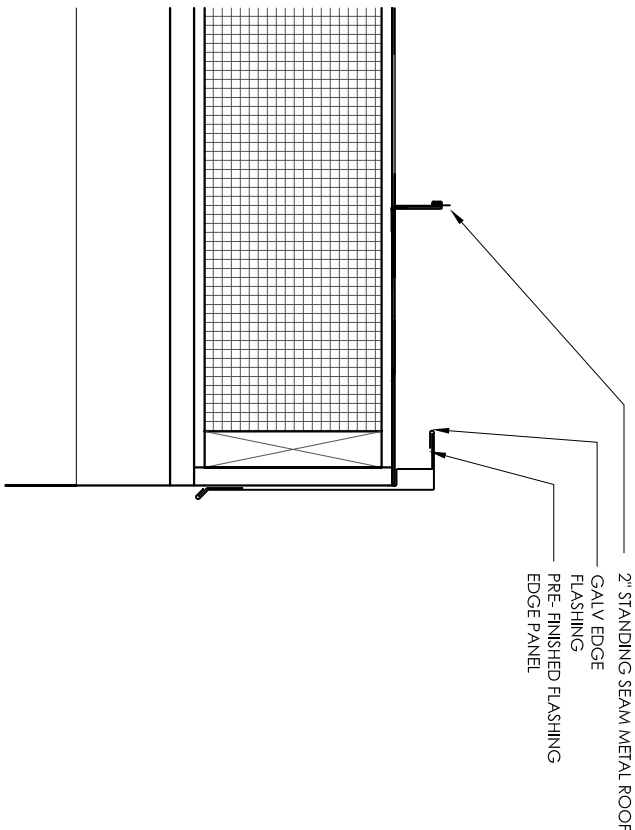
NANAWALL SILL DETAIL 1
1'-1/2"=1'-0"

0" 3" 6" 9" 1'-0"



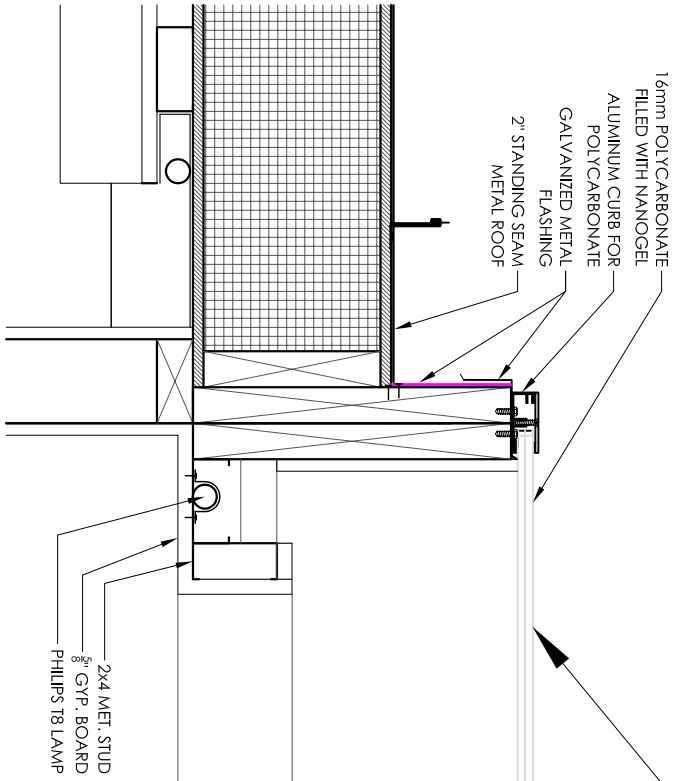
SKYLIGHT DETAIL 6
1-1/2"=1'-0"

0" 3" 6" 9" 1'-0"



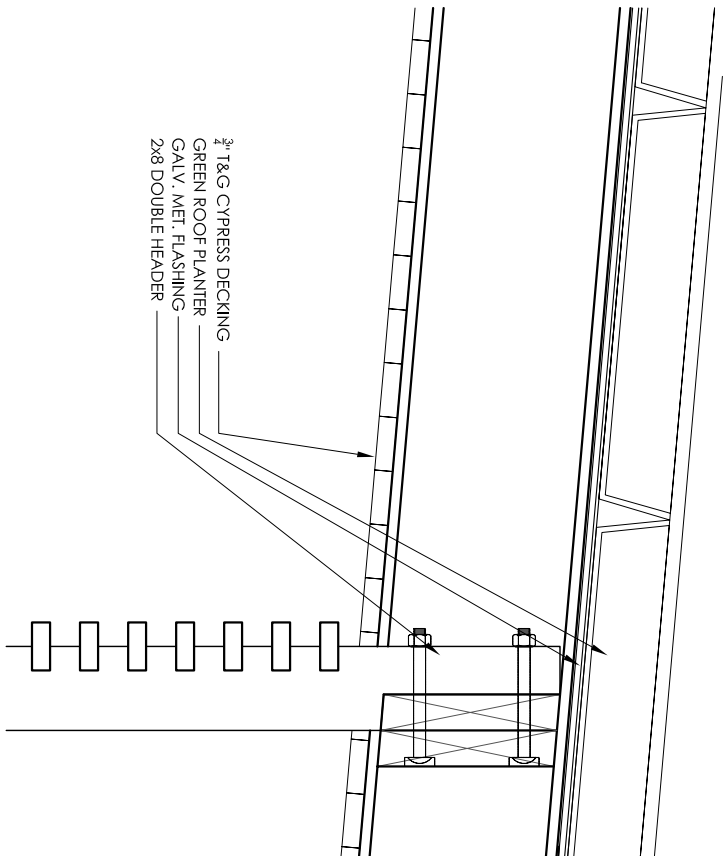
ROOF EDGE DETAIL 4
1-1/2"=1'-0"

0" 3" 6" 9" 1'-0"



SKYLIGHT DETAIL 5
1-1/2"=1'-0"

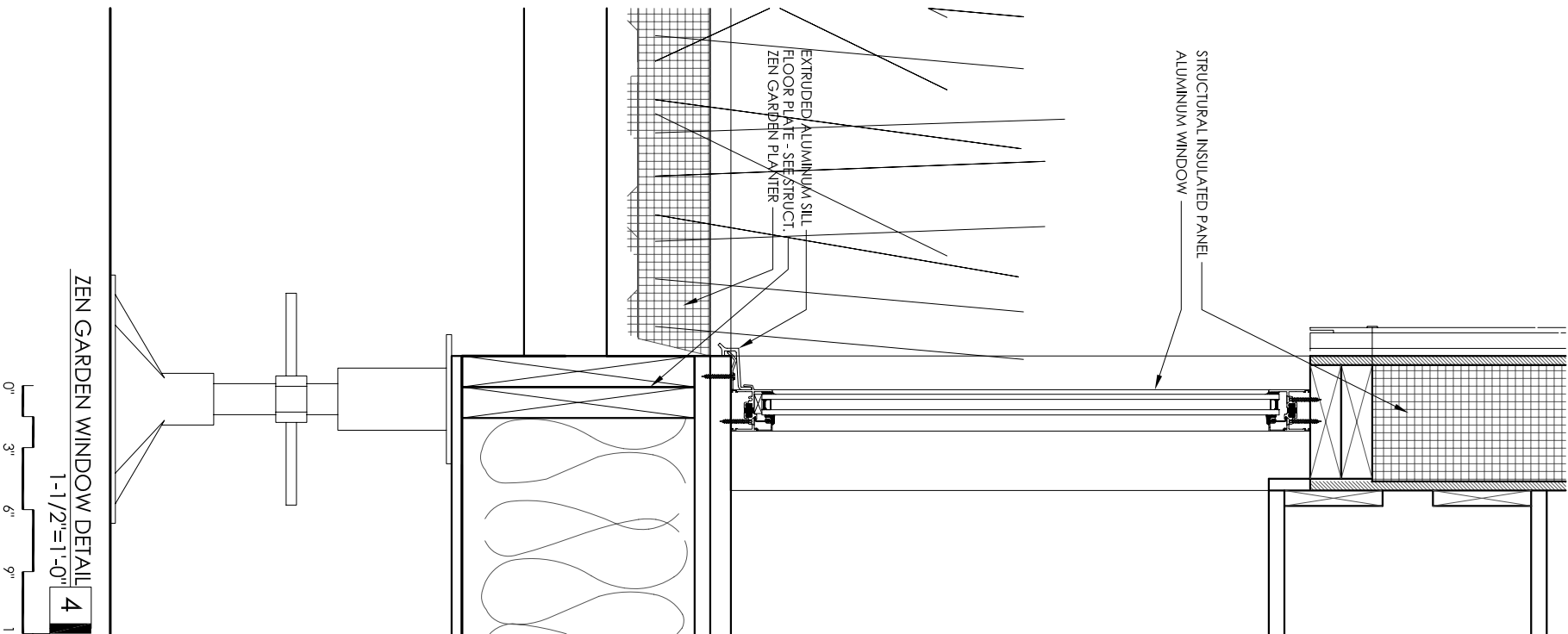
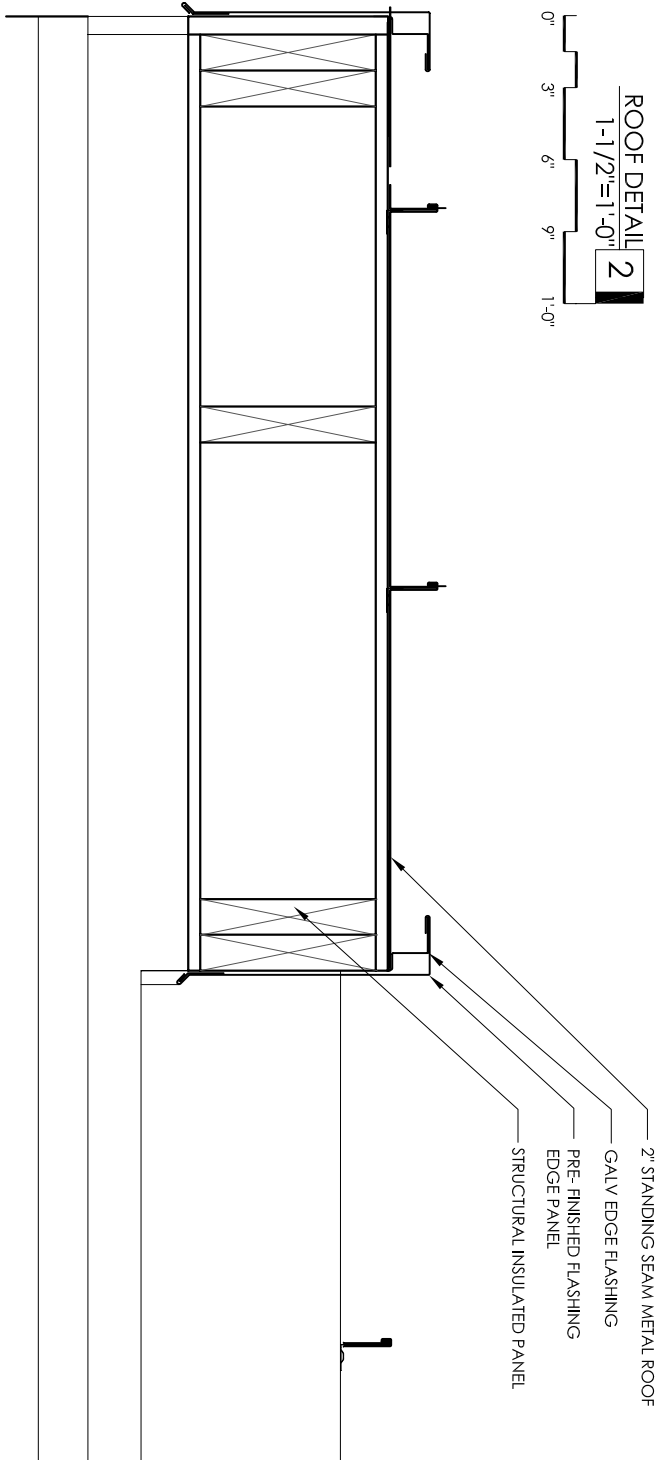
0" 3" 6" 9" 1'-0"



ROOF EDGE DETAIL @ OVERHANG 2
1-1/2"=1'-0"

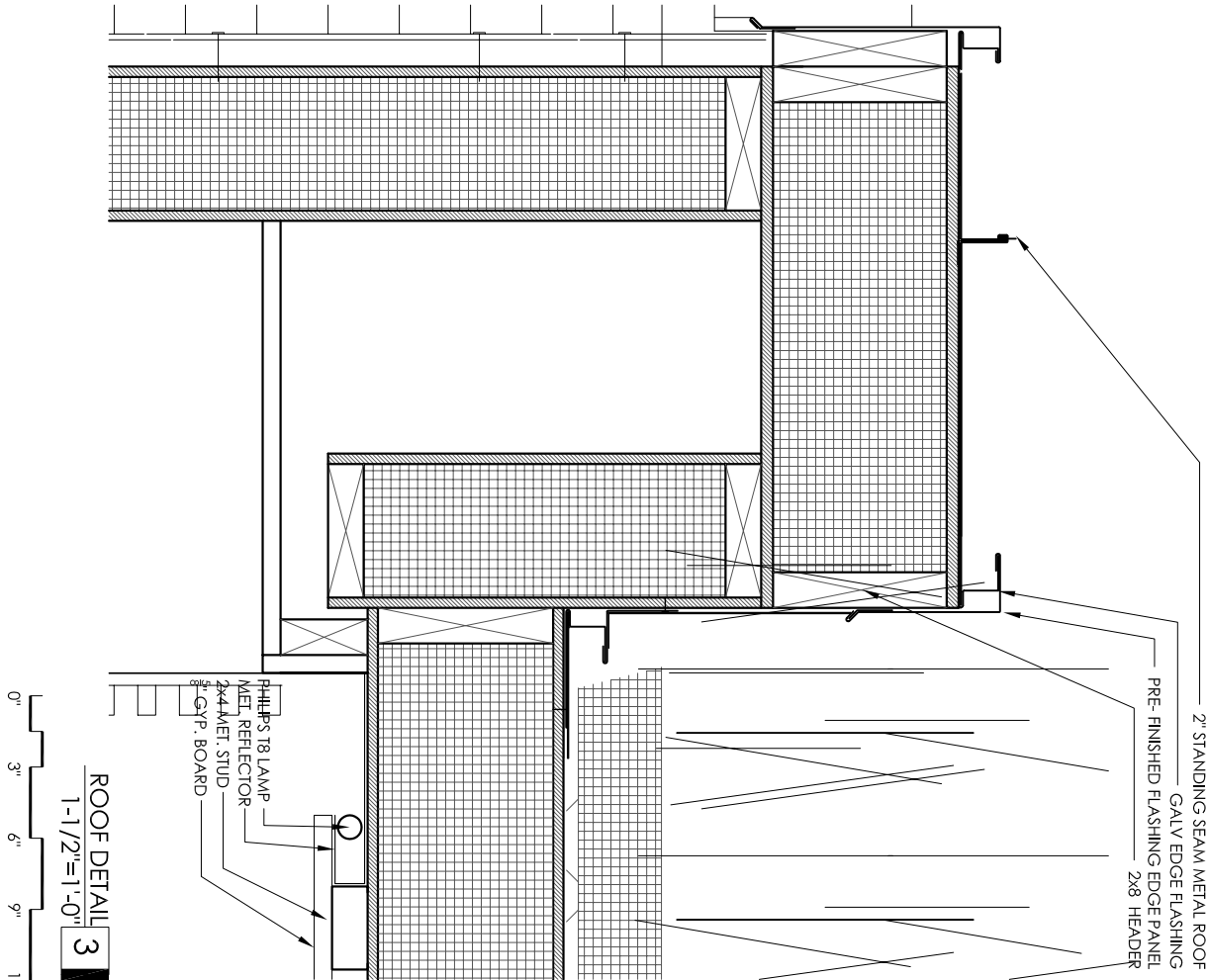
0" 3" 6" 9" 1'-0"

ROOF DETAIL 2
1-1/2"=1'-0"

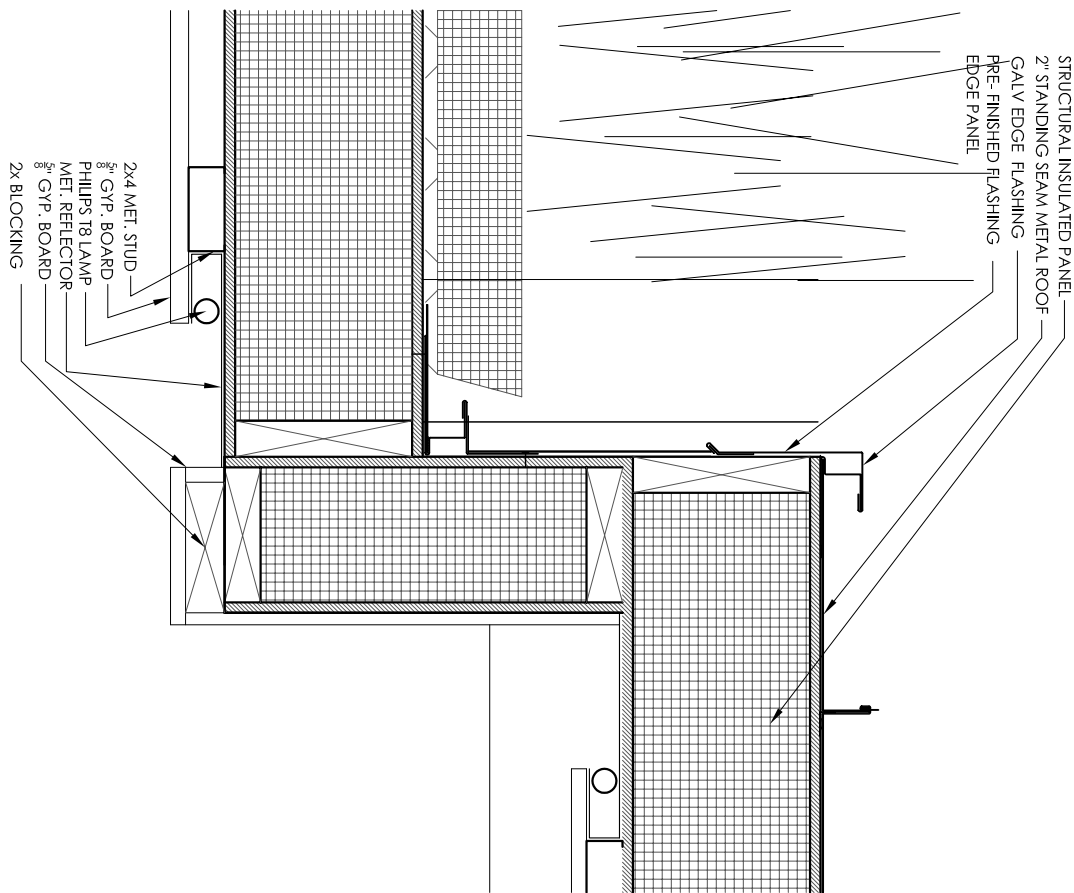


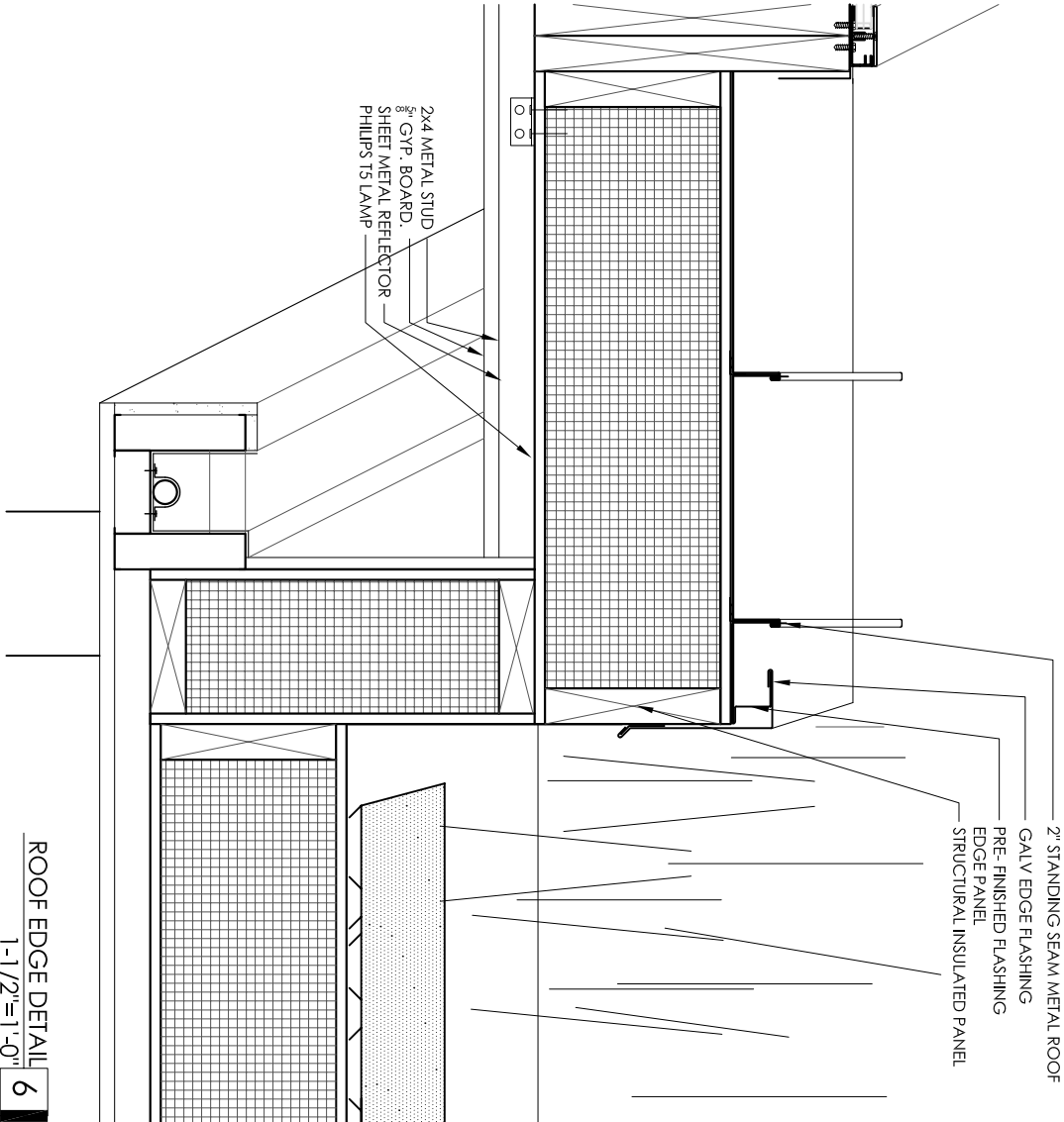
ZEN GARDEN WINDOW DETAIL 4
1-1/2"=1'-0"

ROOF DETAIL 3
1-1/2"=1'-0"

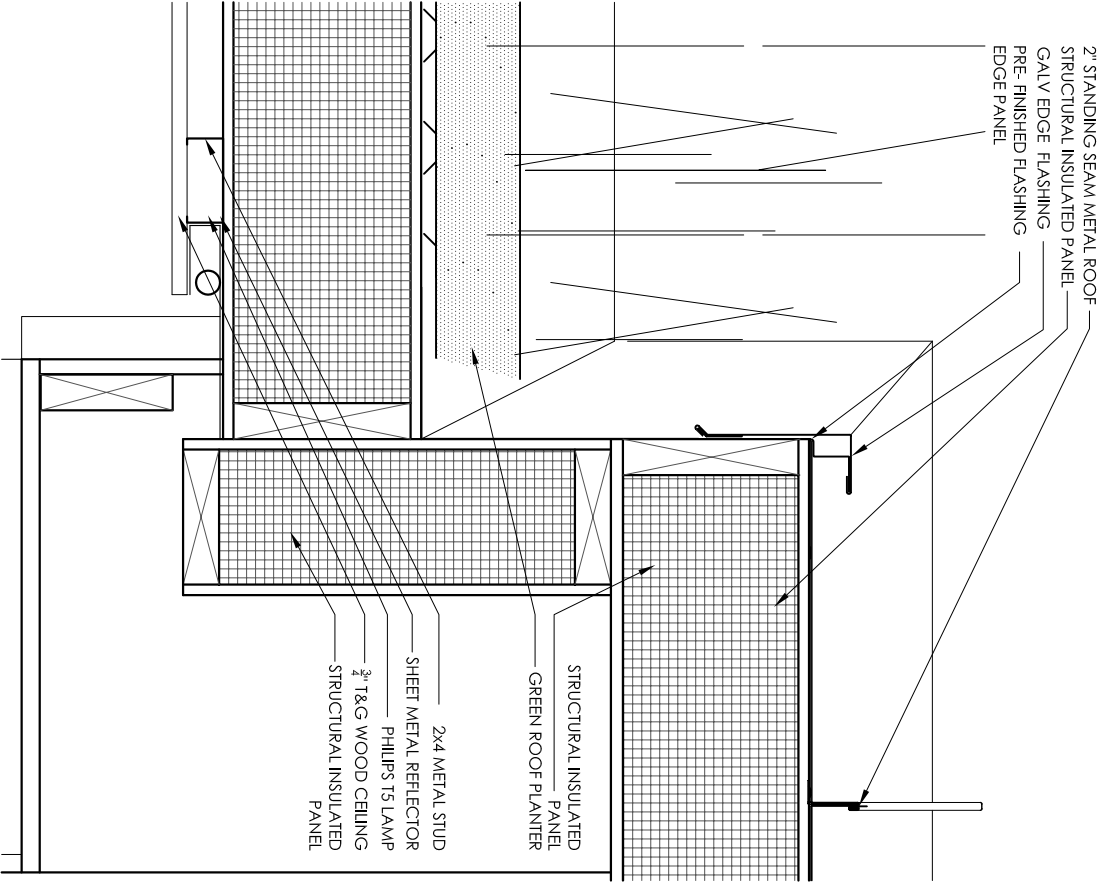


ROOF DETAIL 1
1-1/2"=1'-0"

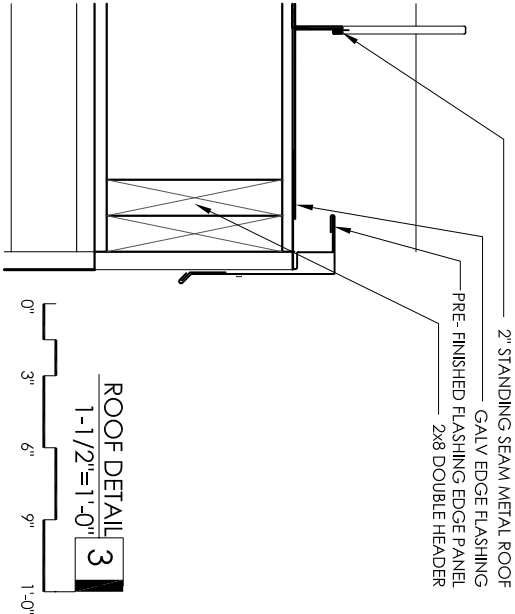




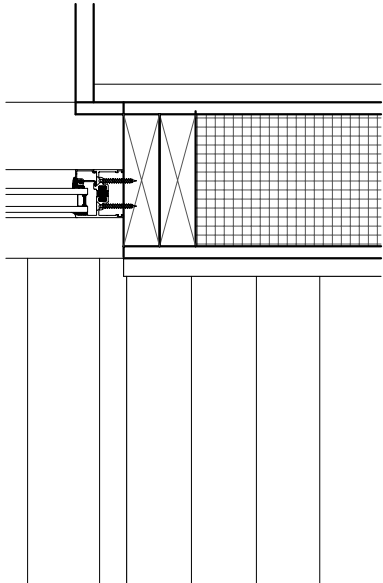
ROOF EDGE DETAIL 6
1'-1/2"=1'-0"



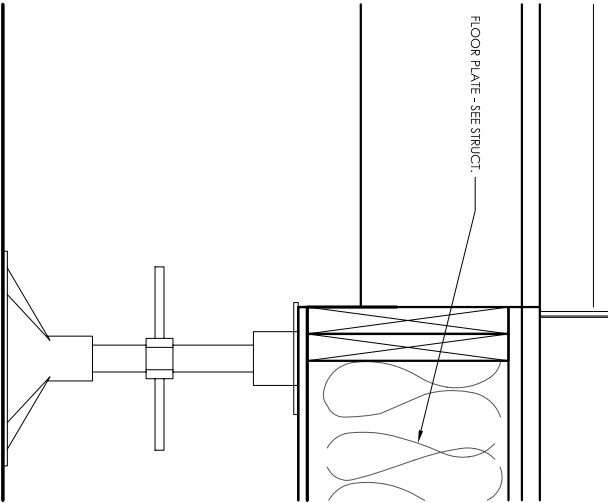
ROOF DETAIL 4
1'-1/2"=1'-0"



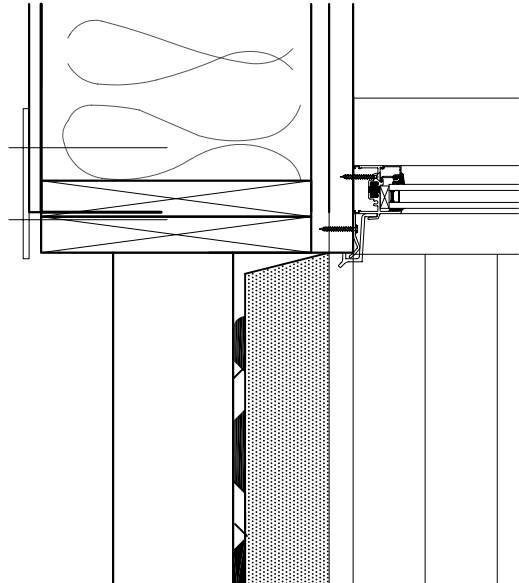
ROOF DETAIL 3
1'-1/2"=1'-0"



WINDOW HEAD DETAIL 2
1'-1/2"=1'-0"



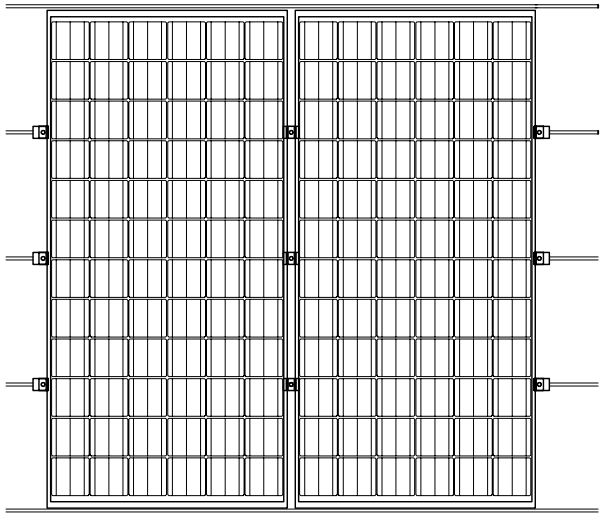
FLOOR PLATE DETAIL 5
1'-1/2"=1'-0"



WINDOW SILL DETAIL 1
1'-1/2"=1'-0"

DETAILS

DRAWN BY: PSH
DATE: 6 MAR 2007
CHECKED BY:



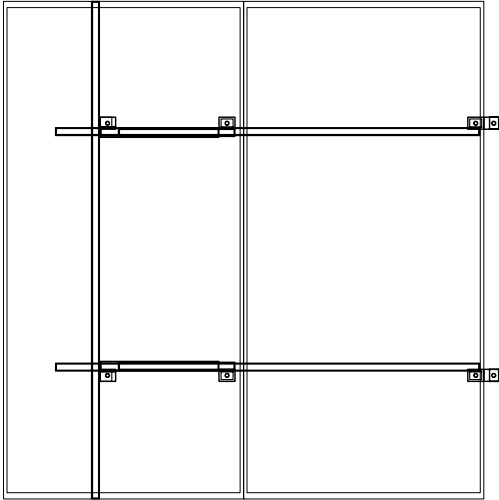
SOLAR PANEL S-Si SYSTEM DETAIL 3
1/2"=1'-0"

0" 6" 1'-0" 3'-0"



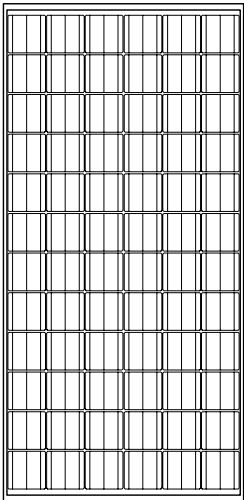
TYP. SOLAR PANEL SECTION 5
1/2"=1'-0"

0" 6" 1'-0" 3'-0"



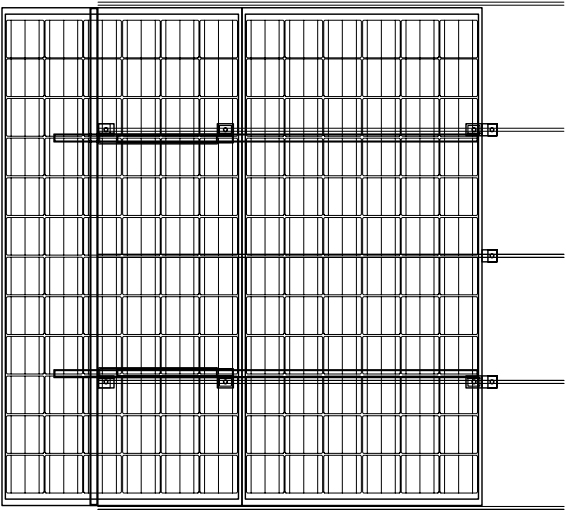
HIGH TILT RACK ELEVATION 2
1/2"=1'-0"

0" 6" 1'-0" 3'-0"



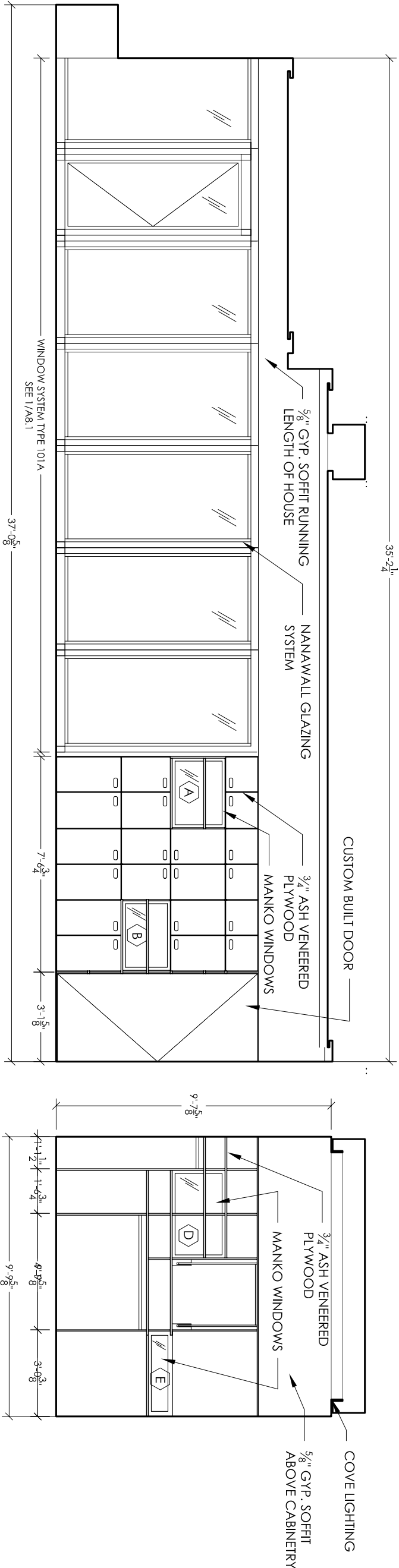
TYPICAL SOLAR PANEL DETAIL 1
1/2"=1'-0"

0" 6" 1'-0" 3'-0"

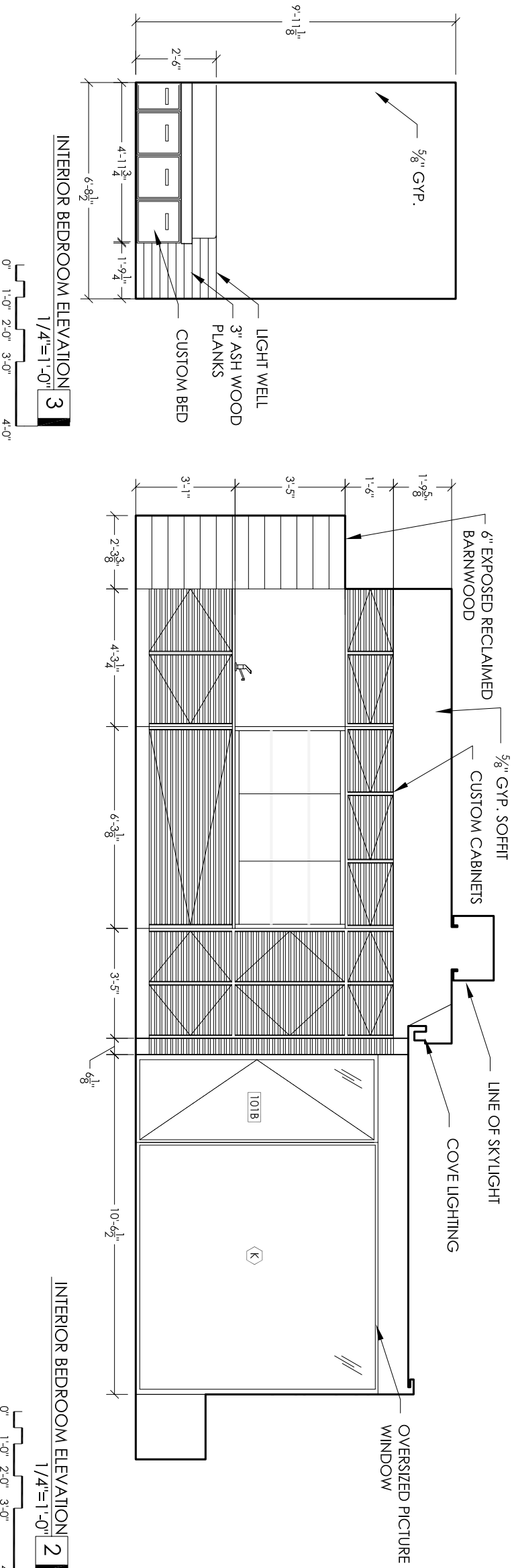
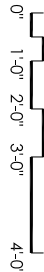


SOLAR PANEL HIGH TILT SYSTEM 4
1/2"=1'-0"

0" 6" 1'-0" 3'-0"



INTERIOR LIVING ROOM ELEVATION 3
1/4"=1'-0"



INTERIOR BEDROOM ELEVATION 2
1/4"=1'-0"



INTERIOR BEDROOM ELEVATION 3
1/4"=1'-0"



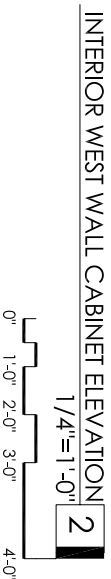
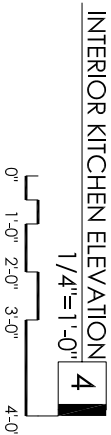
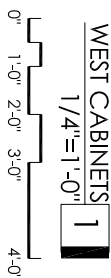
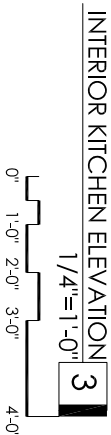
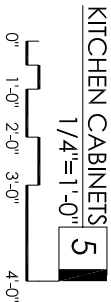



Diagram illustrating the addition of 1/4 inch to 1 foot 0 inches:

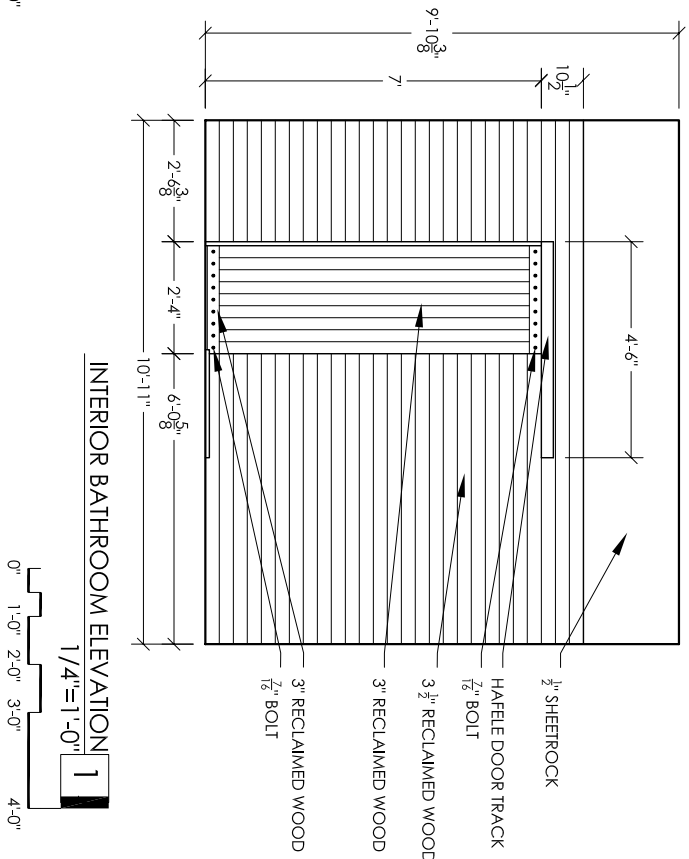
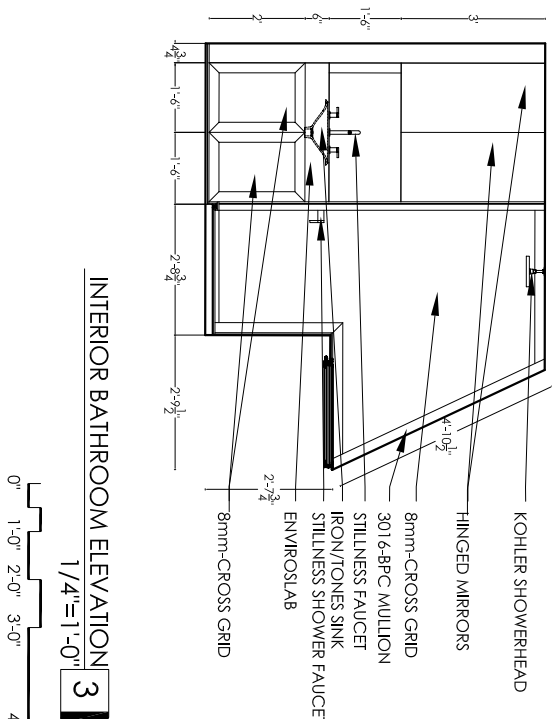
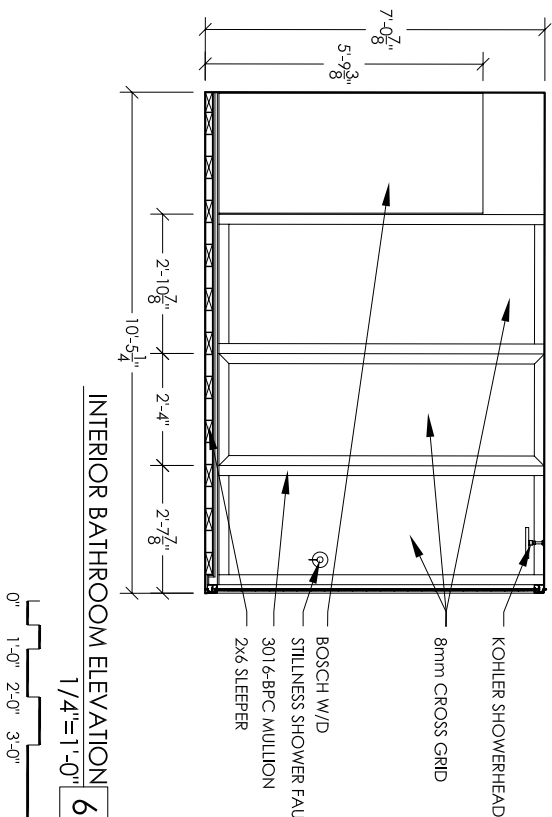
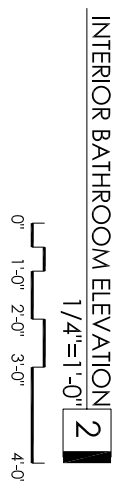
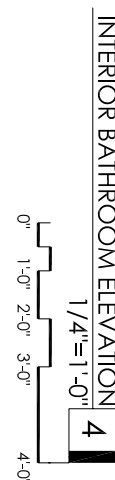
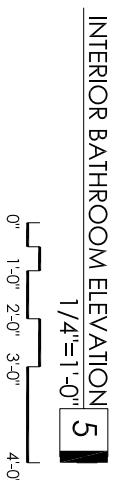
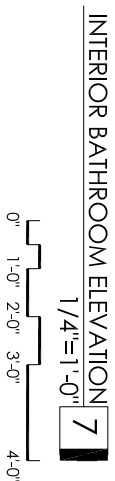
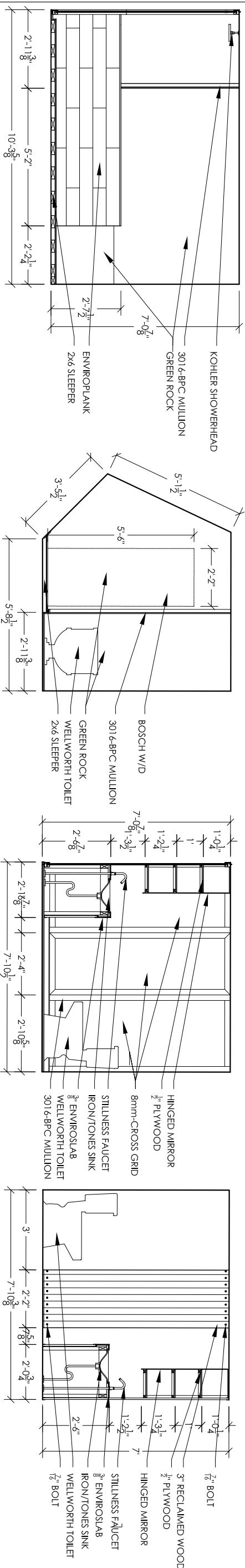
- 1' - 0" (1 foot 0 inches)
- + 1/4" (1/4 inch)
- 1' - 1/4" (1 foot 1/4 inch)



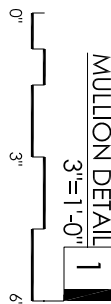
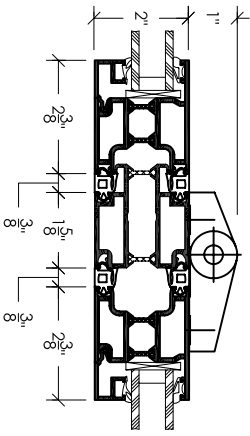
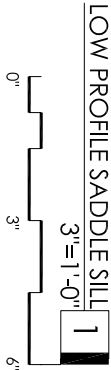
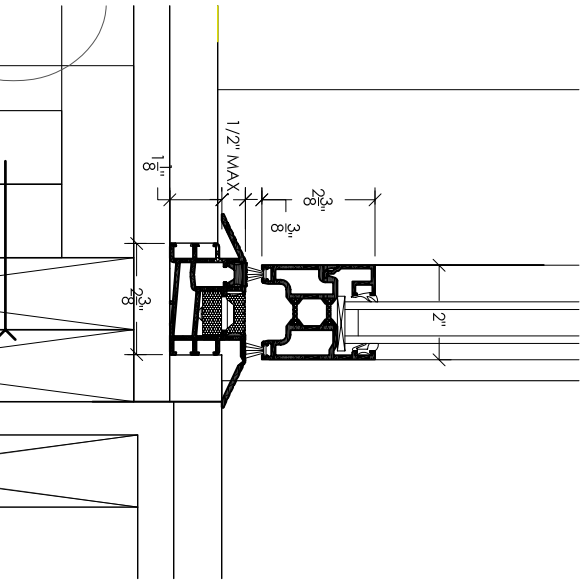
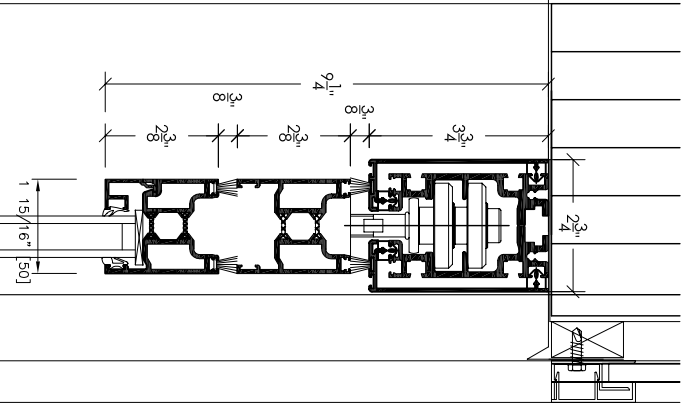
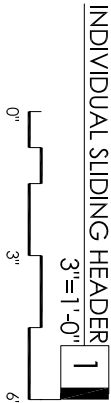
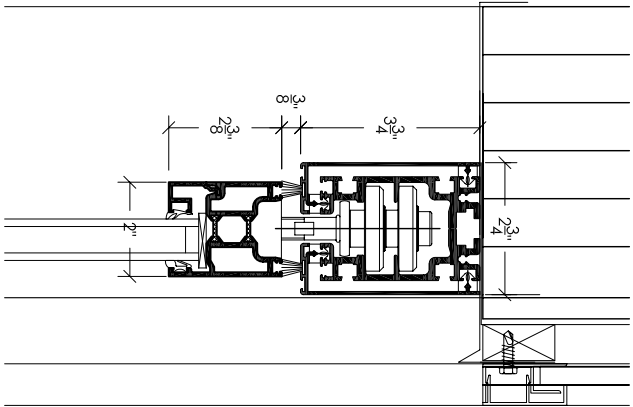
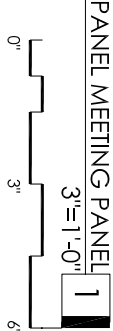
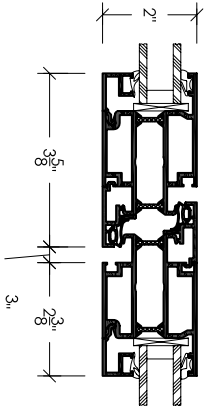
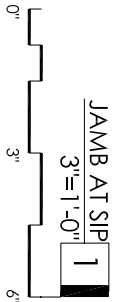
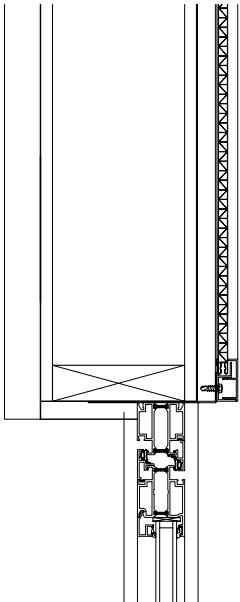
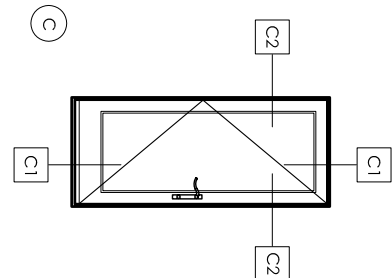
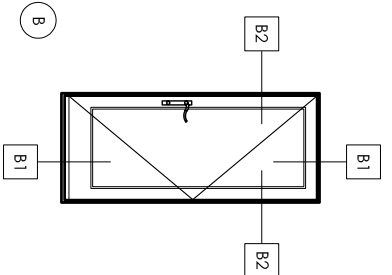
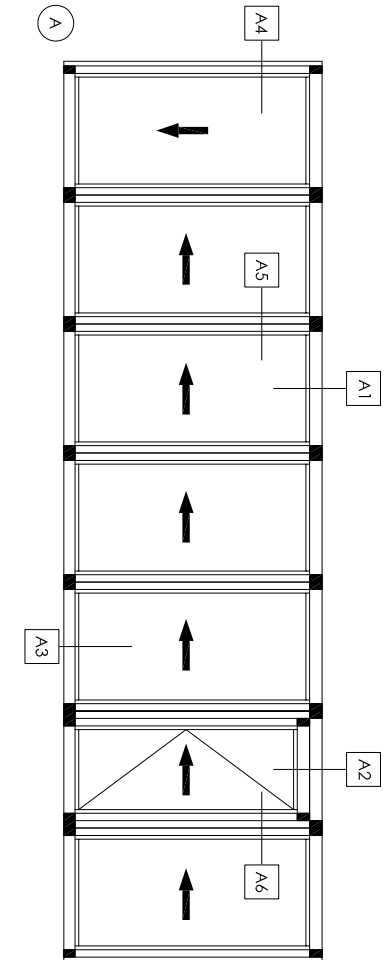
1/4" = 1'-0"



0' 1'-0" 2'-0" 3'-0" 4'-0"



DOOR SCHEDULE							
SYSTEM	WIDTH	HEIGHT	THK.	TYPE	MATERIAL	ELEV.	REMARKS
101A	25'-0"	7'-2"	1 15⁄16"	HSW50 NANAWALL-INDIVIDUAL SLIDING PANELS WITH INCORPORATED SWING PANEL	THERMALLY BROKEN ALUMINUM FRAME	(A)	LOW PROFILE SADDLE SILL, ADA COMPLIANT SWING DOOR
101B	3'-0"	7'-2"	1 3⁄4"	LOEWEN INSWINGING TERRACE DOOR	METAL CLAD WOOD DOOR	(B)	SOUTHERN LIVING ROOM EXTERIOR
103A	3'-0"	7'-2"	1 3⁄4"	LOEWEN OUTSWINGING TERRACE DOOR	METAL CLAD WOOD DOOR	(C)	EXTERIOR BEDROOM
103B	0'-0"	7'-0"	1 1⁄2"	MAGNETIC	WOOD	(D)	INTERIOR BEDROOM
104A	2'-4"	7'-0"	1 1⁄2"	CUSTOM COMPOSITE GLASS	GLASS/ STEEL	(E)	CUSTOM COMPOSITE GLASS
105A	2'-4"	6'-9"	5/8"	DUO-GAURD	POLYCARBONATE	(F)	DUO-GAURD SHOWER



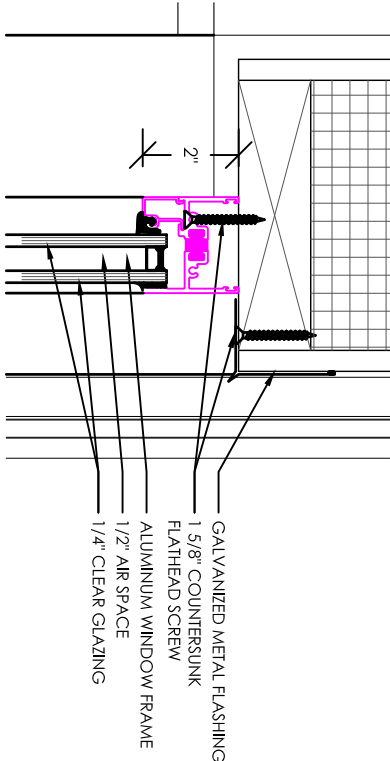
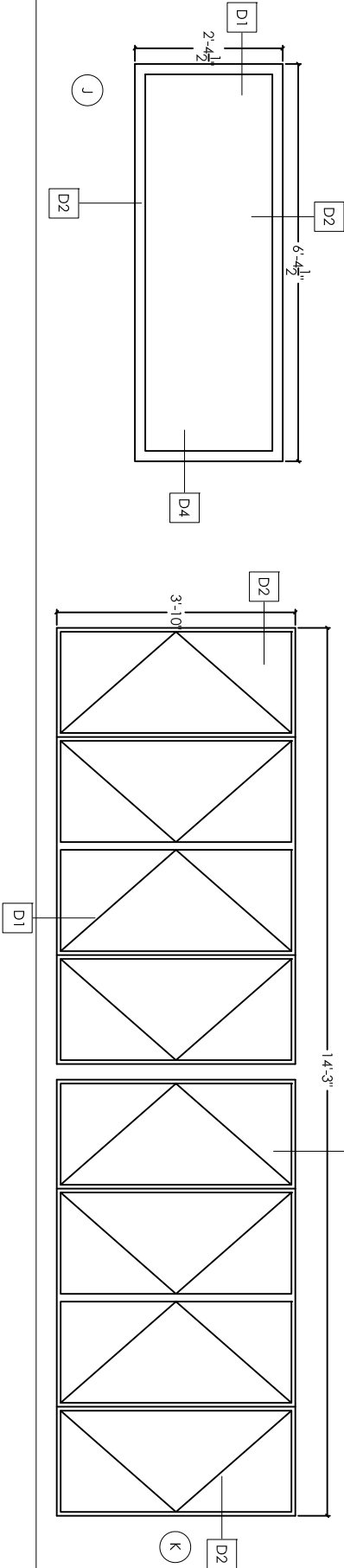
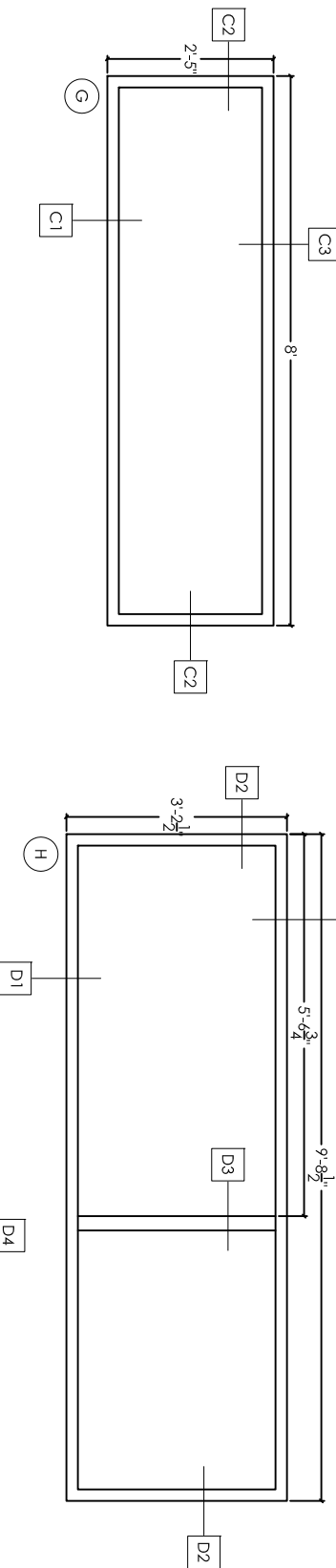
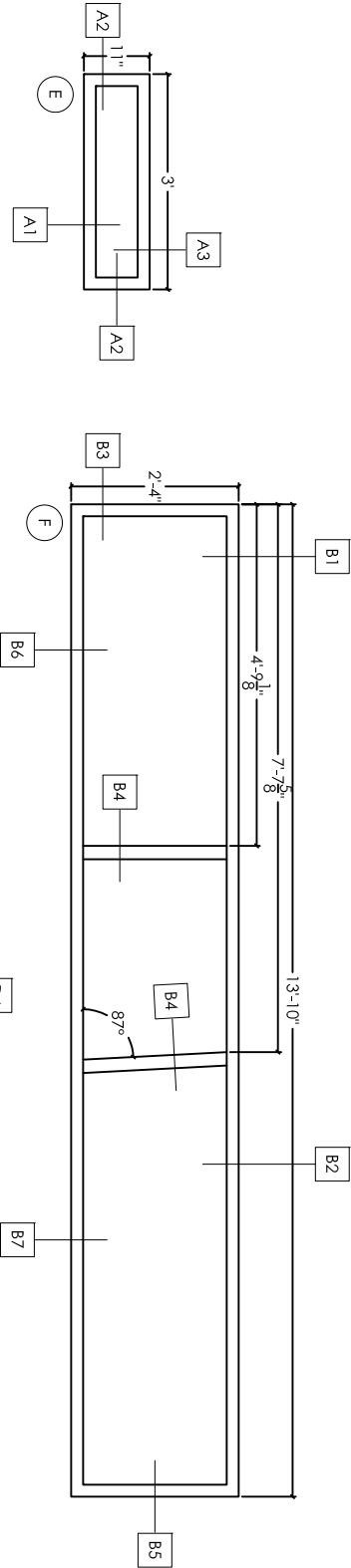
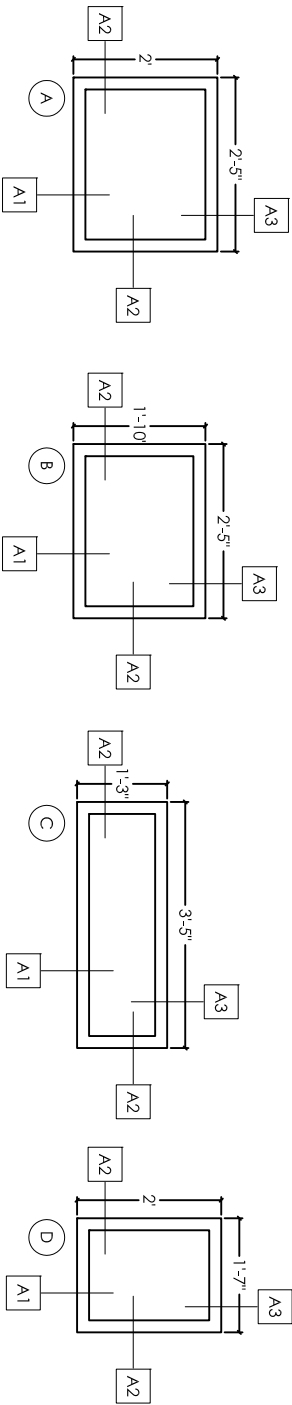
INTERIOR FINISH SCHEDULE

ROOM	ROOM NAME	FLOORING	WALL FINISH				FINISHED CEILING				COMMENTS
			N	E	S	W	LOW ELEV	HIGH ELEV	MATERIAL		
101	LIVING ROOM	6" WIDE ASH PLANK	(1) 5/8" GYP, PAINTED	N/A	(1) 5/8" GYP, PAINTED	(1) 5/8" GYP, PAINTED	8'-2 7/8"	9'-0 3/4"	(1) 5/8" GYP, PAINTED	1. ALL GYPBOARD IS TO BE PRIMED WITH SAFE COAT NEW WALLBOARD PRIME COAT HPV AND THEN COVERED WITH SAFE COAT SEMI GLOSS OF COLOR INDICATED 2. ALL GYPBOARD IS TO BE PAINTED SAFE COAT COLOR OW36-1P, VIOLET WHISPER UNLESS OTHERWISE INDICATED	
102	KITCHEN	6" WIDE ASH PLANK	(1) 5/8" GYP, PAINTED	(1) 5/8" GYP, PAINTED	(1) 5/8" GYP, PAINTED	N/A	9'-2 3/4"	10'-0 3/8"	(1) 5/8" GYP, PAINTED		
103	HALLWAY	3" WIDE ASH PLANK	(1) 5/8" GYP, PAINTED	N/A	3'-1 1/2" BARNWOOD	(1) 5/8" GYP, PAINTED	9'-3 3/4"	9'-6 1/2"	(1) 5/8" GYP, PAINTED		
104	BEDROOM	3" WIDE ASH PLANK	(1) 5/8" GYP, PAINTED	(1) 5/8" GYP, PAINTED	(1) 5/8" GYP, PAINTED	16 mm CROSSGRID	7'-0"	7'-0"	(1) 5/8" GYP, PAINTED		
105	BATHROOM	6" X 3" ENVIROPLANK	(1) 5/8" GREENBOARD	(1) 5/8" GREENBOARD	(1) 5/8" FIBERGLASS FINISH GYP, BD.	16 mm CROSSGRID	9'-4 3/4"	10'-1 13/16"	(1) 5/8" GYP, PAINTED		
106	BATTERY BANK	PLYWOOD SUBFLOOR	(2) 5/8" GYP, PAINTED	1/2" PLYWOOD, UNFINISHED	(2) 5/8" GYP, PAINTED	(2) 5/8" GYP, PAINTED	8'-0"	8'-0"	(1) 5/8" GYP, PAINTED		

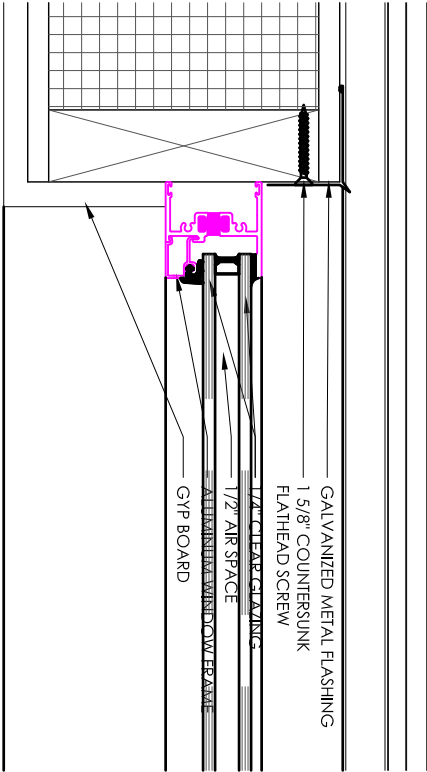
NOTE:
1. ALL S.I.P.'S TO BE SHEATHED IN 5/8" GYP, TAPED, SANDED, PRIMED, AND PAINTED AS SCHEDULED
2. A SMALL AREA RUG EXISTS IN THE BEDROOM, TO BE SPECIFIED AND CHOSEN BY ARCHITECT

WINDOW SCHEDULE

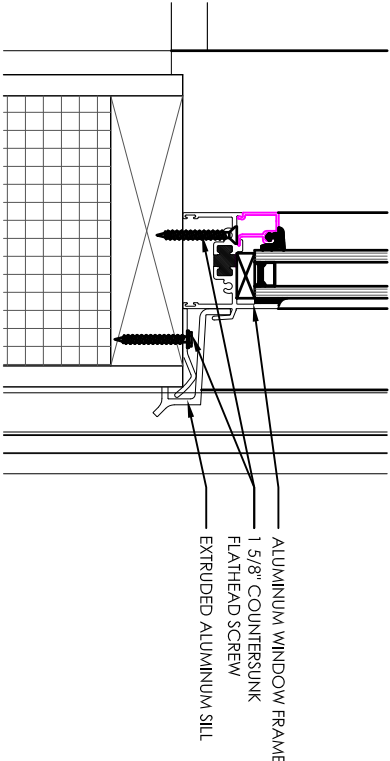
WINDOW	GLAZING TYPE	ROUGH OPENING		FILLING	REMARKS
		HEIGHT	WIDTH		
A	1/4" DOUBLE GLAZING- CLEAR	2' 0"	2' 5"	AIR SPACE	ALUMINUM FRAME FIXED
B	1/4" DOUBLE GLAZING- CLEAR	1' 10"	2' 5"	AIR SPACE	ALUMINUM FRAME FIXED
C	1/4" DOUBLE GLAZING- CLEAR	1' 3"	3' 5"	AIR SPACE	ALUMINUM FRAME FIXED
D	1/4" DOUBLE GLAZING- CLEAR	2' 0"	1' 7"	AIR SPACE	ALUMINUM FRAME FIXED
E	1/4" DOUBLE GLAZING- CLEAR	11"	3' 0"	AIR SPACE	ALUMINUM FRAME FIXED
F	1/4" DOUBLE GLAZING- CLEAR	2' 2 3/4"	13' 7"	AIR SPACE	ALUMINUM FRAME FIXED
G	1/4" DOUBLE GLAZING- CLEAR	2' 5"	8' 0"	AIR SPACE	ALUMINUM FRAME FIXED
H	16mm TRIPLE PRISM POLYCARBONATE - CLEAR	2' 10"	9' 4"		
J	16mm TRIPLE PRISM POLYCARBONATE - CLEAR	6' 0"	2' 0"		
K	1/4" DOUBLE GLAZING- CLEAR	4' 0"	14' 0"	AIR SPACE	VINYL FRAME CASEMENT



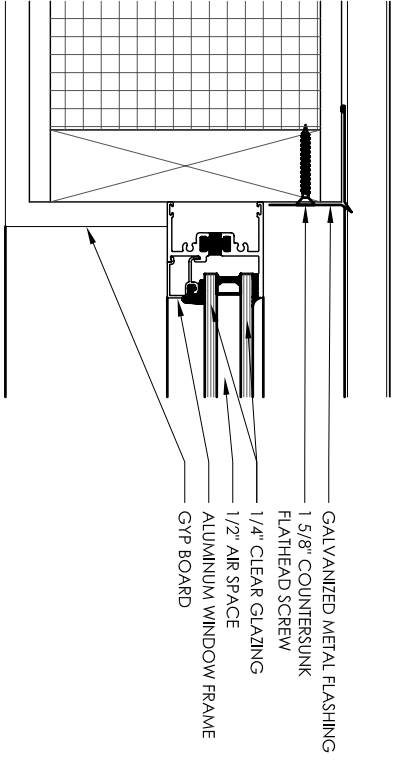
HEAD DETAIL AT S.I.P. WALL TYP. **A3**
3"=1'-0"



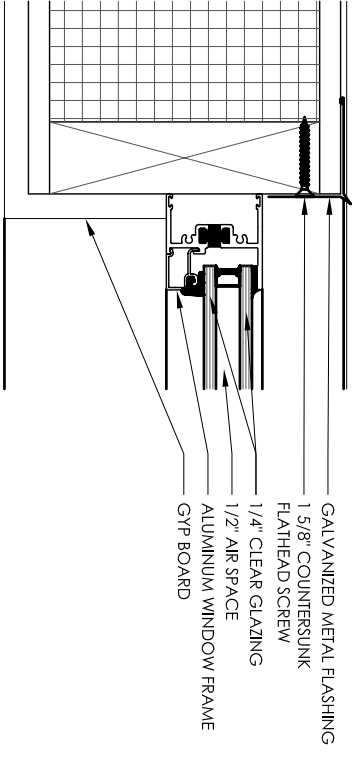
JAMB DETAIL AT S.I.P. WALL TYP. **A2**
3"=1'-0"



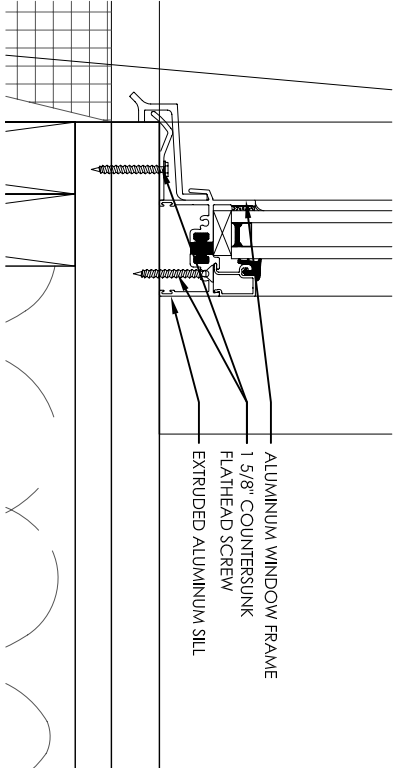
SILL DETAIL AT S.I.P. WALL TYP. **A1**
3"=1'-0"



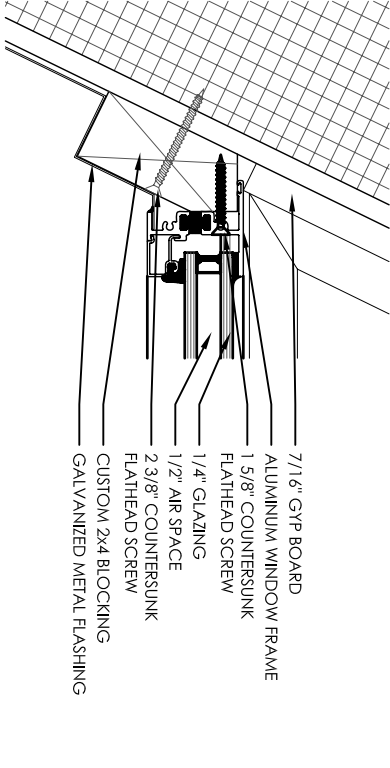
HEAD DETAIL AT WEST WALL **C3**
3"=1'-0"



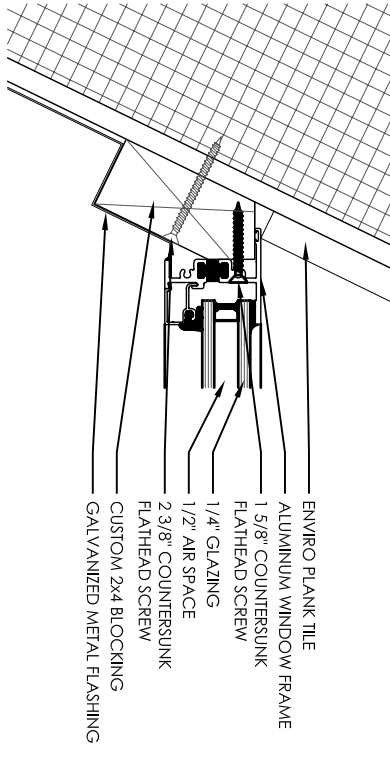
JAMB DETAIL AT WEST WALL **C2**
3"=1'-0"



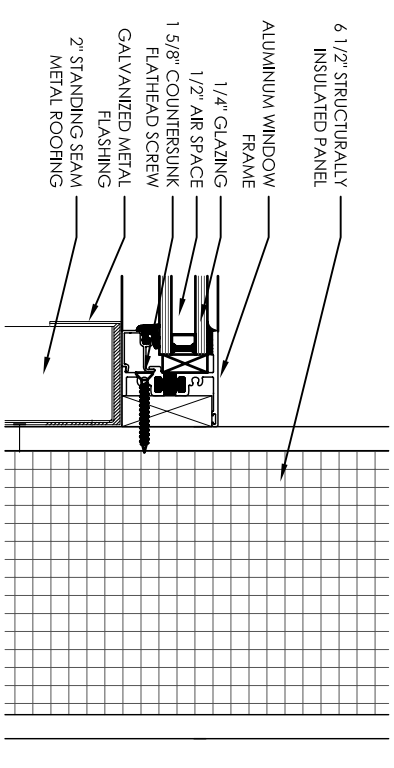
SILL DETAIL AT WEST WALL **C1**
3"=1'-0"



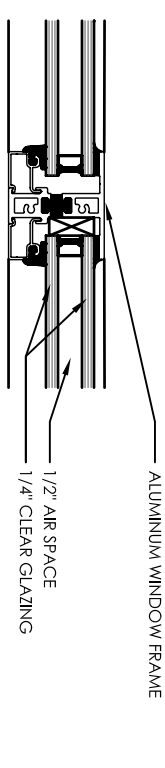
JAMB DETAIL AT BEDROOM **B8**
3"=1'-0"



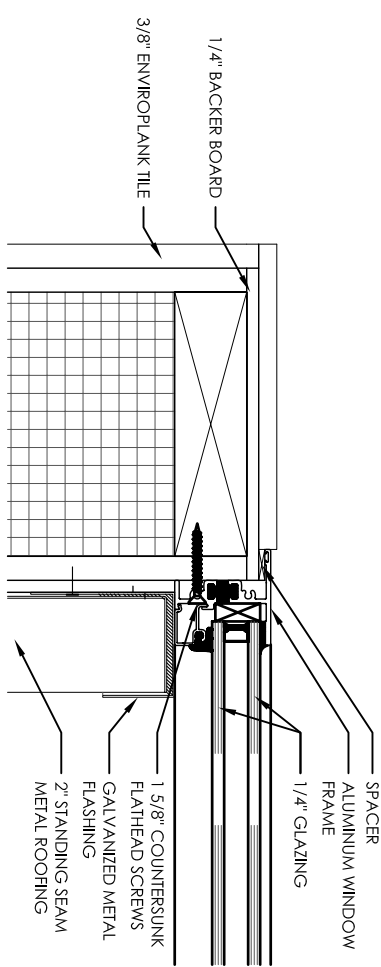
JAMB DETAIL AT BATHROOM **B7**
3"=1'-0"



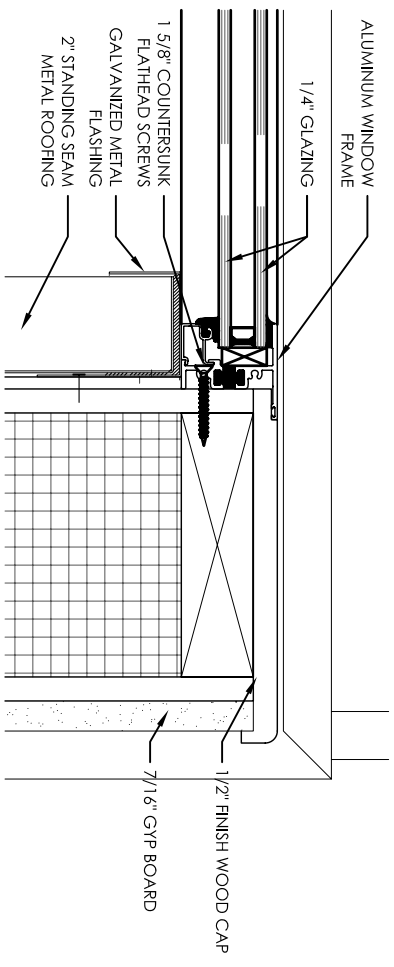
JAMB DETAIL AT BEDROOM **B6**
3"=1'-0"



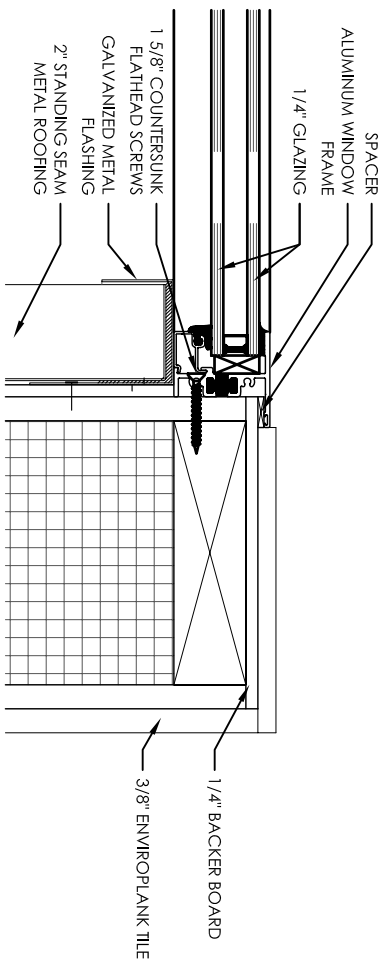
MULLIAN DETAIL AT BATHROOM **B4**
3"=1'-0"



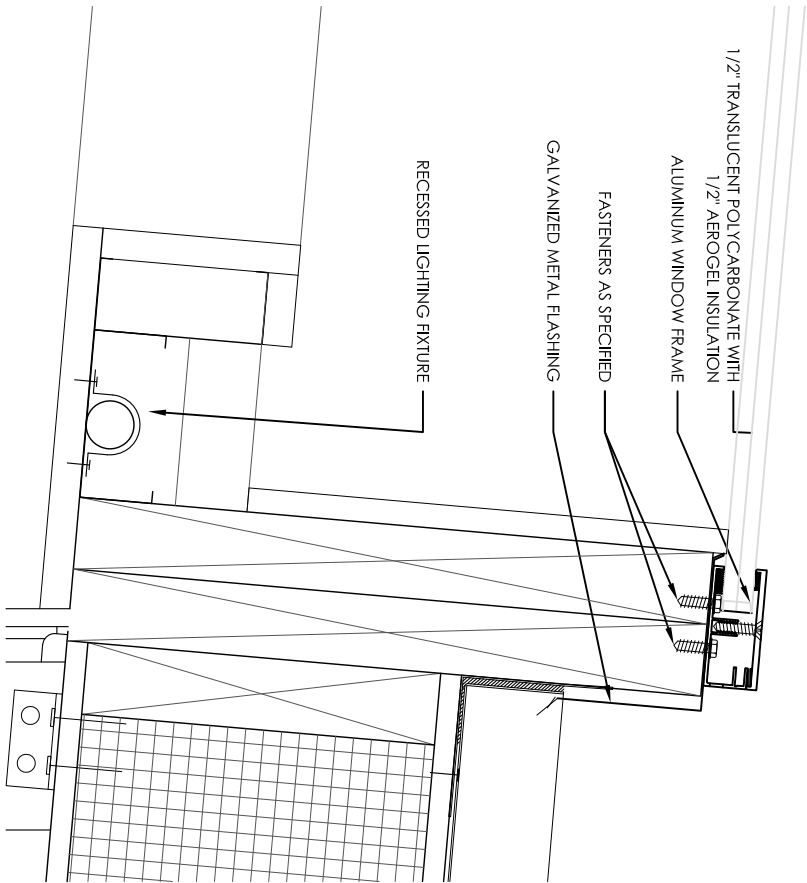
JAMB DETAIL AT BATHROOM **B3**
3"=1'-0"



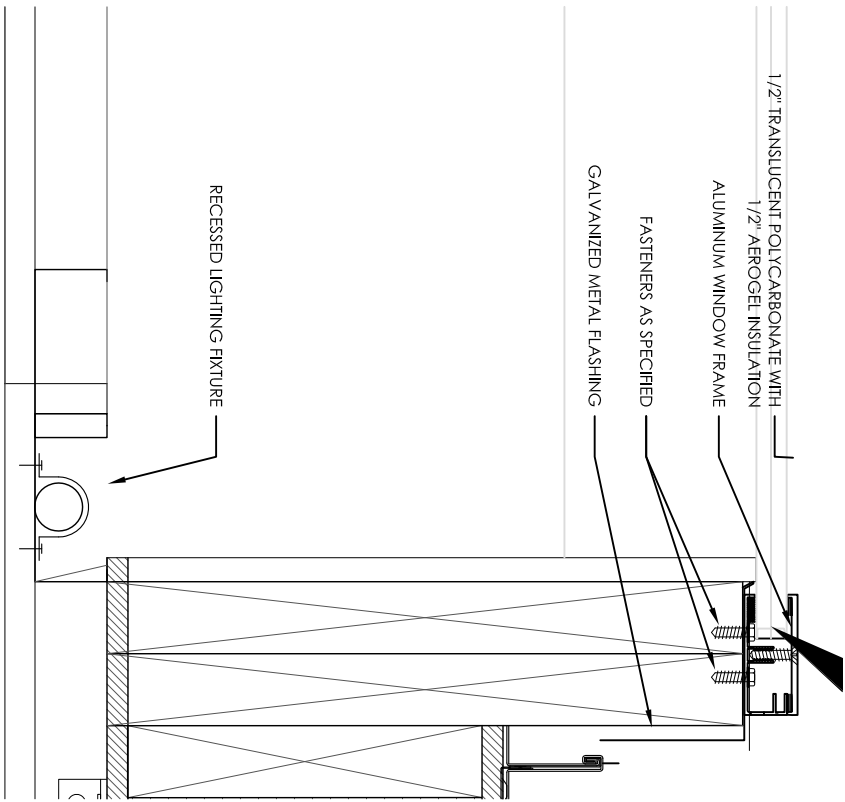
JAMB DETAIL AT BEDROOM **B2**
3"=1'-0"



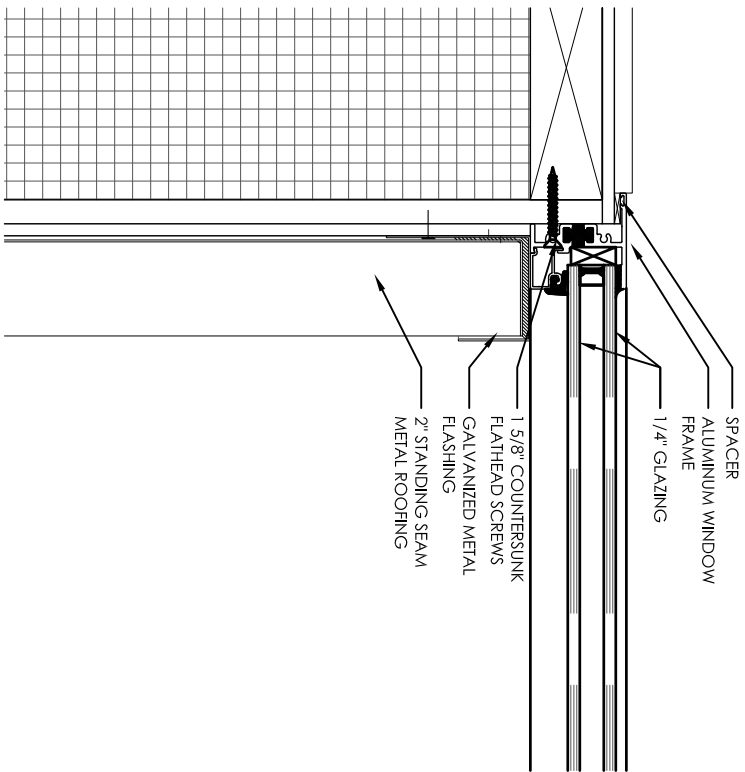
JAMB DETAIL AT BATHROOM **B1**
3"=1'-0"



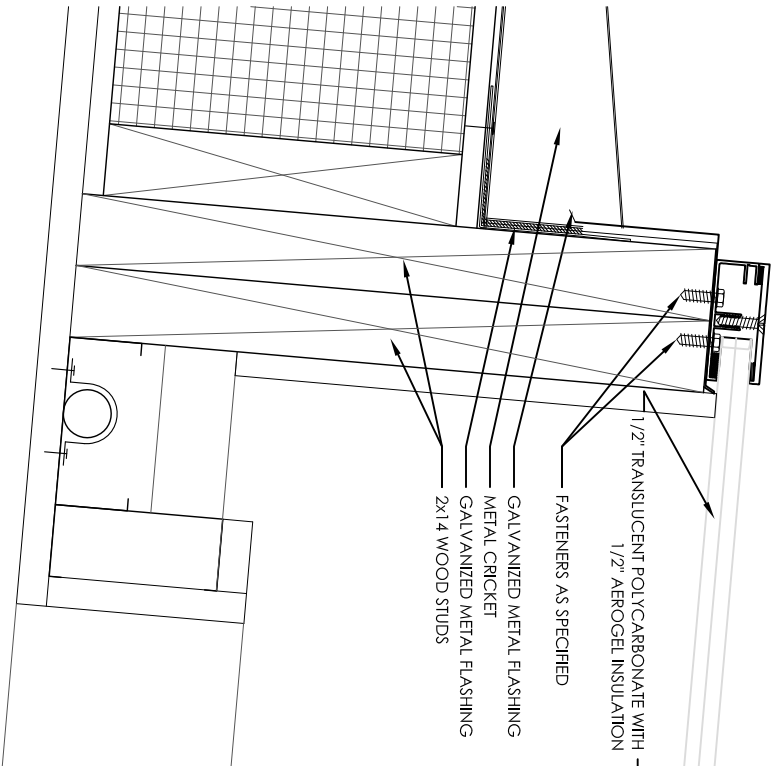
SKYLIGHT CURB DETAIL AT BEDROOM D4
3"=1'-0"



SKYLIGHT CURB DETAIL AT BEDROOM D2
3"=1'-0"

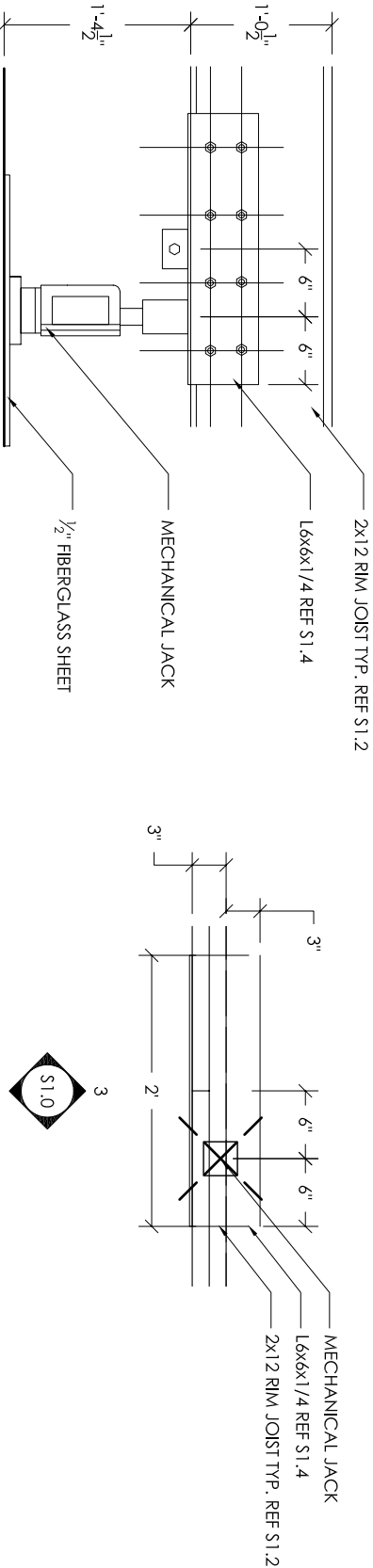


SKYLIGHT MULLION DETAIL AT BEDROOM D3
3"=1'-0"



SKYLIGHT CURB DETAIL AT BEDROOM D1
3"=1'-0"

*structure will be supported temporarily by exterior mounted mechanic
jacks with 2.0" x 2.0" fiberglass sheets
mechanical jacks will be placed at 6" from center of steel angles in the
longitudinal direction, and at the center of steel angles in the transverse
direction for lifting and lowering (ref 1/51.0
*floor plate will be lowered using mechanical jacks until 6" clearance
above adjustable bases
*adjustable bases will be adjusted accordingly to ensure that the house is
level; at which point the house will remain on adjustable bases until
removal from site



AL JACK ELEVATION

3/4"=1'-0"

0" 6" 1'-0" 1'-6" 2'-0"

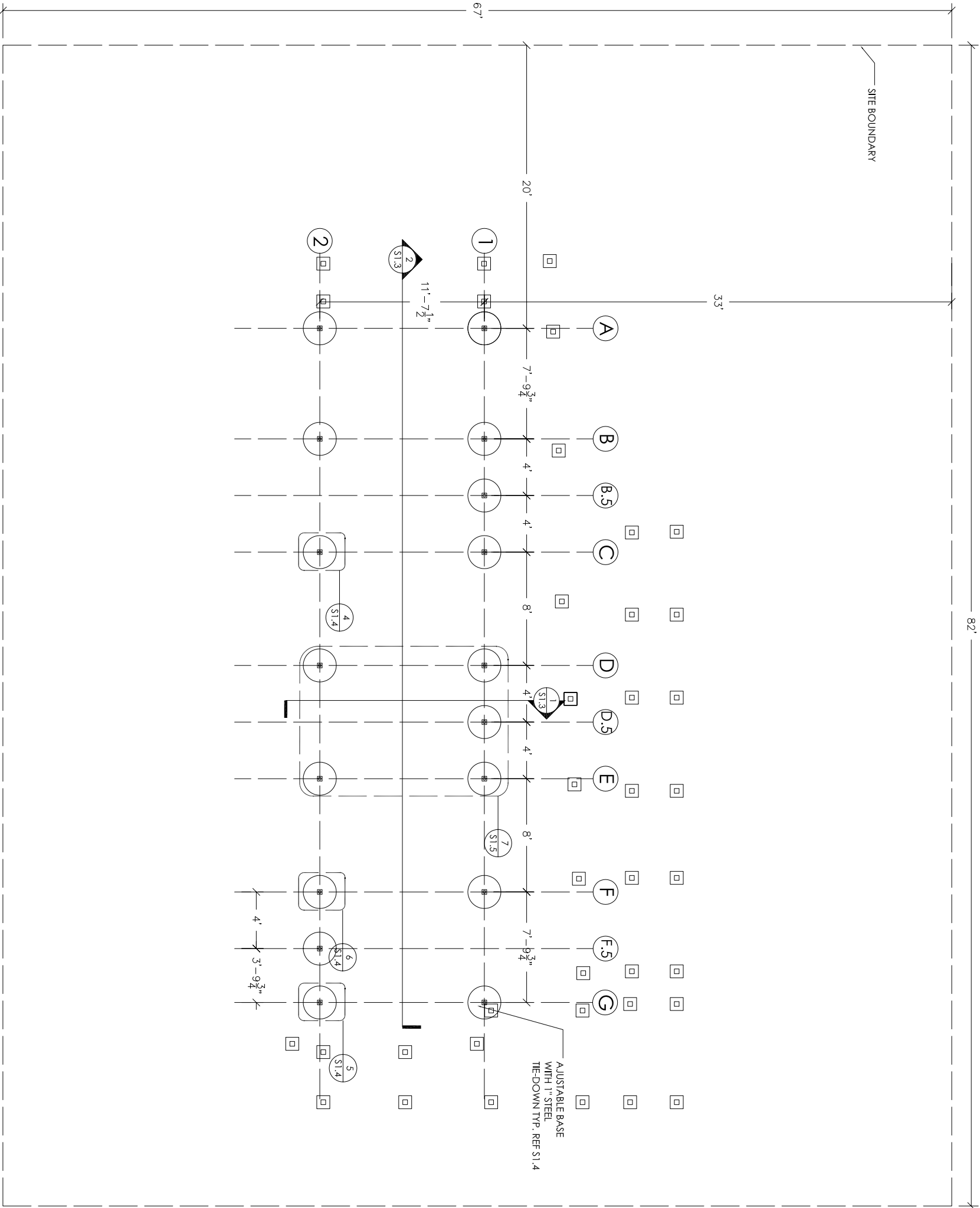
3

MECHANICAL JACK DETAIL

0"
6"
1'-0"
1'-6"
2'-0"

3/4"=1'-0"

1



FOUNDATION PLAN 1
1/8"=1'-0"
0' 1'-0" 4'-0" 6'-0" 10'-0"

LEGEND

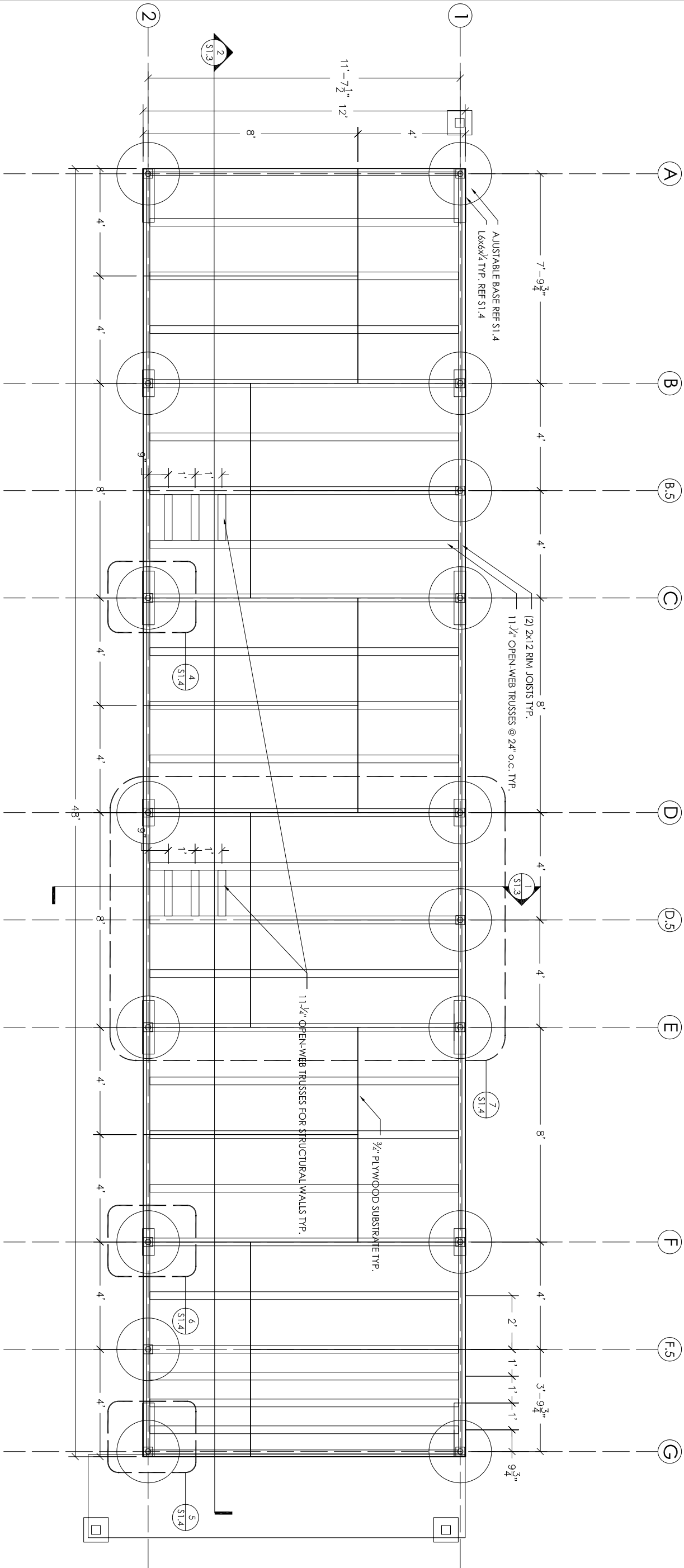
- 11" x 11" concrete footing with 4x4 pressure-treated southern pine grade a for exterior site-built construction (see CS.2 for details)
- 28" diameter adjustable base with 1" tie-down stake (see S1.4 for details)

DESIGN LOADS

Dead Load: 15psf for floor/ 10 psf for roof
Live Load: 50psf for living areas
Roof Live Load: 20psf
Wind Load: Exposure category C, 60mph
Increased Dead Load: 5000lbs concentrated load in battery bank

GENERAL NOTES

*house will be brought to site completed on the bed of a semitruck, and lowered into position with mechanical jacks (see S1.0)
*all building elements will be elevated off the ground 18" with adjustable bases to satisfy low-impact regulations
*take measurements from northwest corner of site



GENERAL NOTES

- *all measurements of will be taken from center line of inner rim joist
- *open-web trusses will be placed at 24" o.c. unless otherwise noted
- *adjustable bases will be placed at 8' o.c. unless otherwise noted
- *rim joists will be 16' long
- *outer rim joist will be placed at center line of entire floor plate
- *inner and outer rim joists will be offset by 8' to create a stronger connection between the two members. attach together w/ 16d nails @8"o.c. staggered top and bottom
- *plywood substrate layout will be mirrored on plywood sheets attached to bottom of floor plate
- *nails will be placed at 12" o.c. to secure the plywood substrate to the open-web trusses
- *see S1.0 for lifting and decendon conditions
- *all plywood is 3/4" douglas fir grade a unless otherwise noted
- *all rim joists are #1 grade, 2x12 douglas fir or better

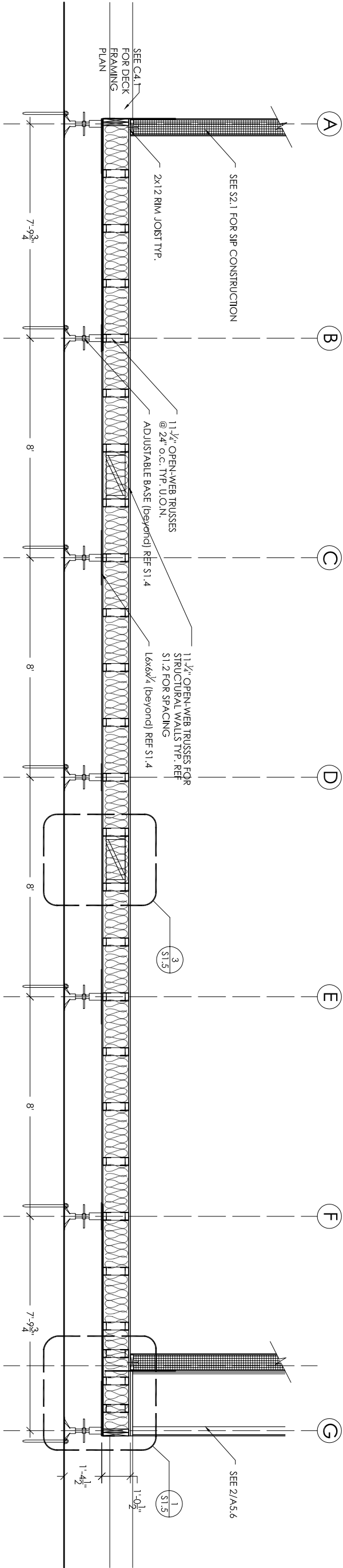
FLOOR FRAMING PLAN 1
1/4"=1'-0"



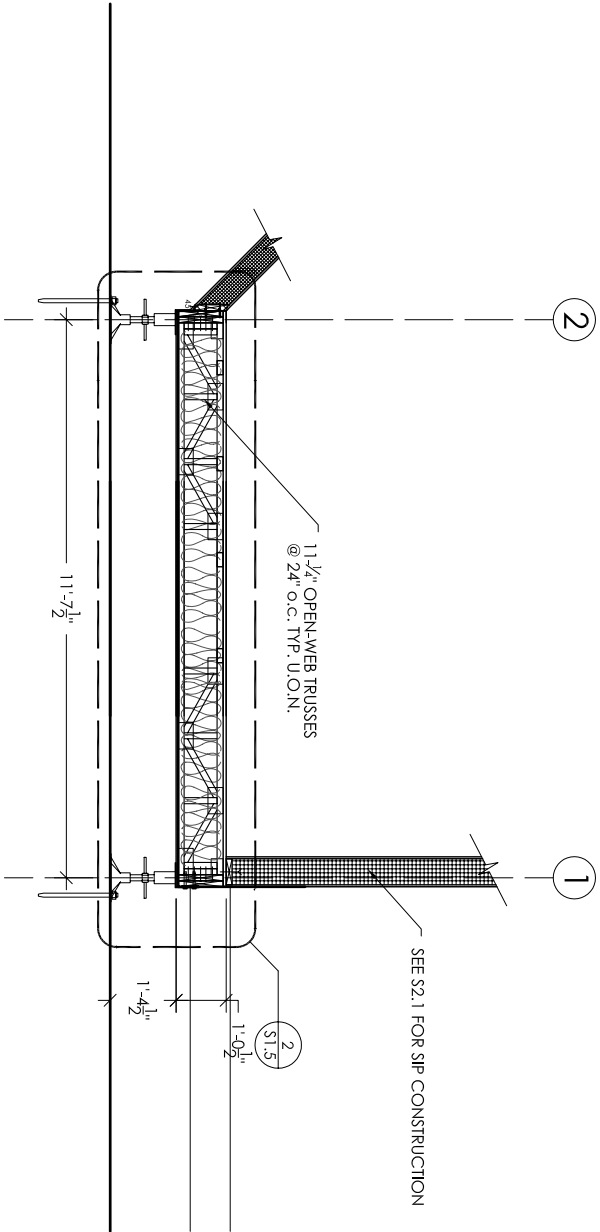
DRAWN BY	PSH
DATE	3 MAY 2007
CHECKED BY	AGG

FLOOR FRAMING PLAN

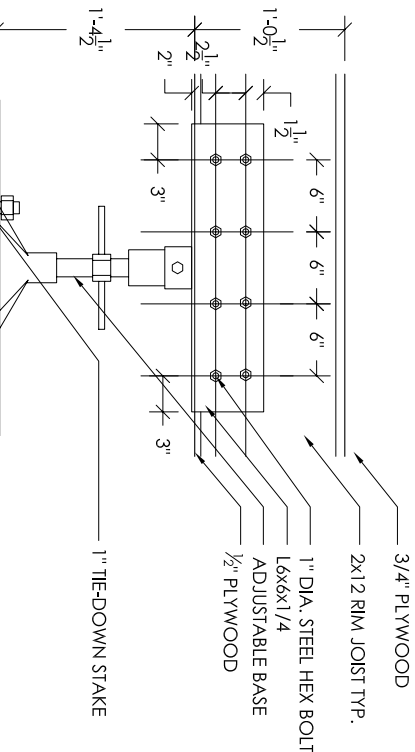
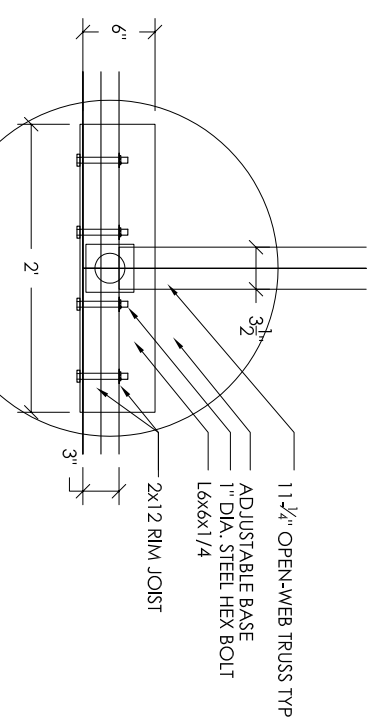
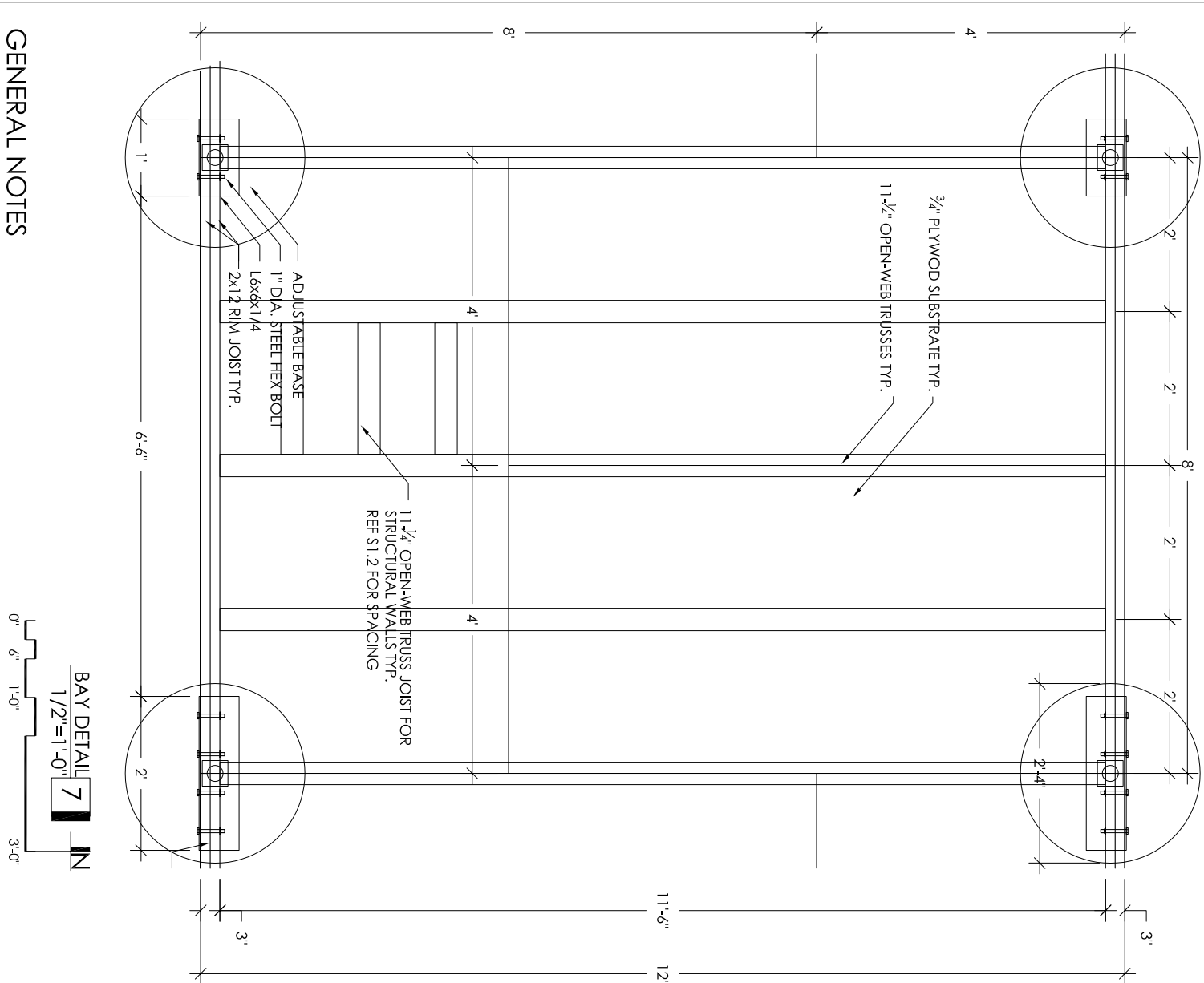
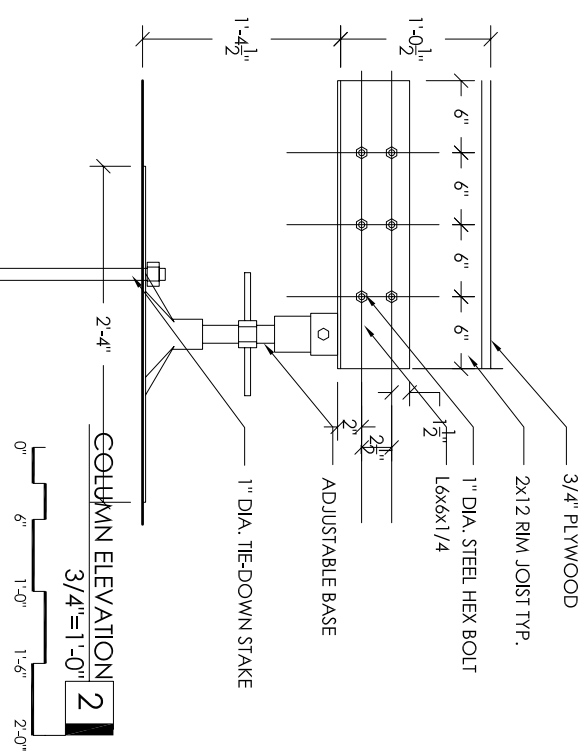
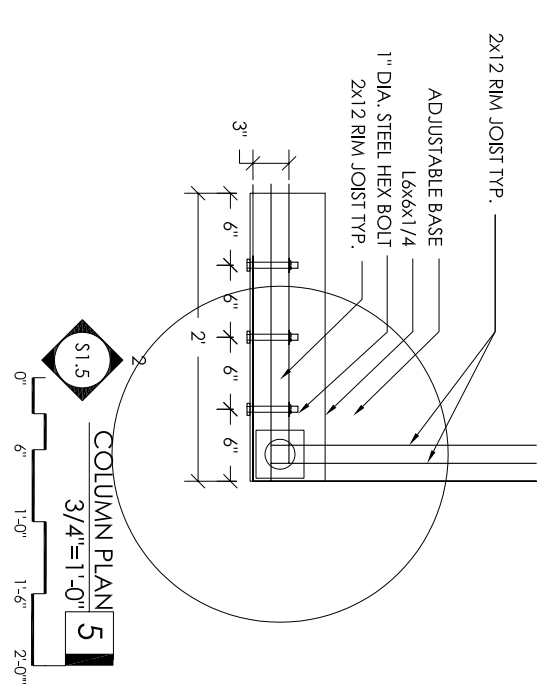
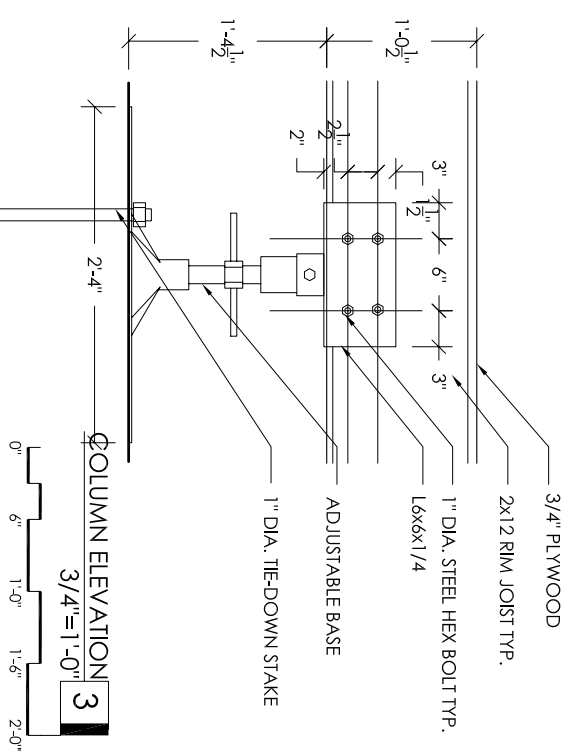
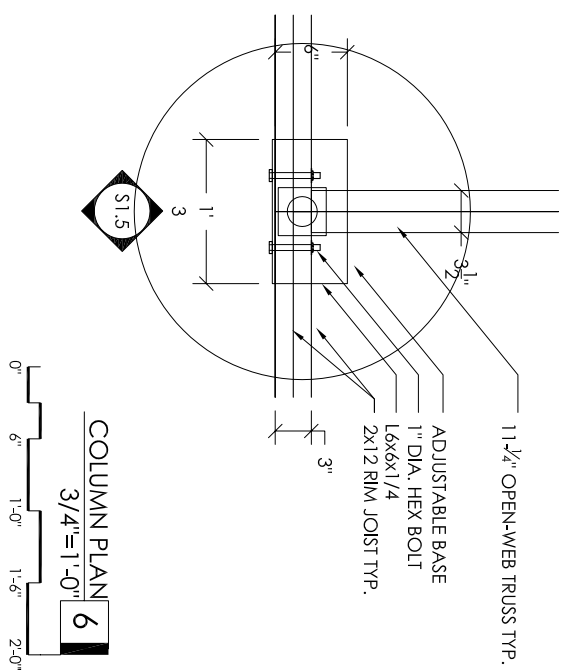
S1.2



LONGITUDINAL SECTION 2
1/4"=1'-0"
0' 1'-0' 2'-0' 3'-0' 4'-0'



TRANSVERSE SECTION 1
1/4"=1'-0"
0' 1'-0' 2'-0' 3'-0' 4'-0'



GENERAL NOTES

*1" diameter tie-down stakes will be driven into the ground the maximum 18" to resist overturning

*adjustable bases will be welded to L6x6x $\frac{1}{4}$ steel angle by approved certified welders using filler metal conforming to E70XX

*welds shall develop the full strength of the materials being welded unless otherwise noted. fillet welds shall be a minimum of 1/4"

1 1/4" OPEN-WEB TRUSS FOR STRUCTURAL WALLS

3/4" PLYWOOD SUBSTRATE

TRUSS TO TRUSS CONN. BY TRUSS SUPPLIER

1 1/4" OPEN WEB TRUSS

1/2" PLYWOOD (see S1.2 for layout)

2

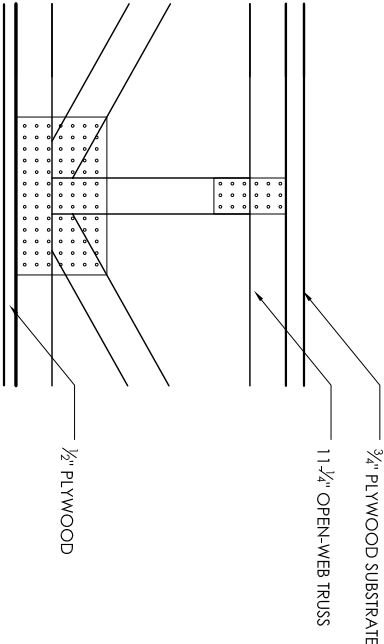
0"	6"	1'-0"	1'-6"	2'-0"
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Technical drawing of a window assembly cross-section. The assembly consists of the following layers from left to right:

- SIP (see S2.1)**: Structural Insulated Panel.
- $\frac{3}{4}$ " PLYWOOD SUBSTRATE**: Plywood substrate layer.
- $1\frac{1}{4}$ " OPEN WEB TRUSS**: Open web truss structure.
- $\frac{1}{2}$ " PLYWOOD (see S1.2 for layout)**: Plywood layer.

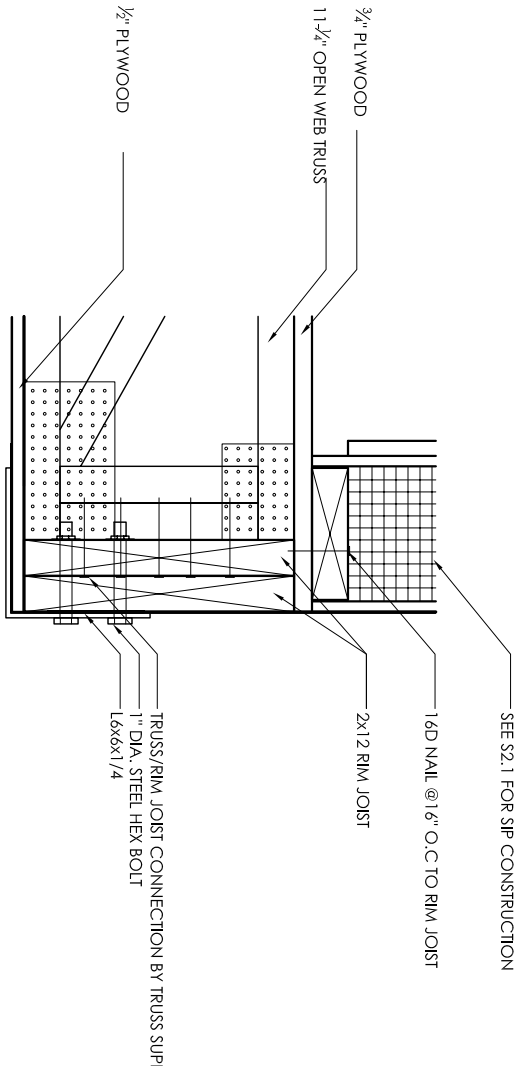
Dimensions and details:

- A vertical dimension of **1'-4"** is indicated on the left side.
- The drawing shows a cross-section of a window frame with a grid pattern on the right side.
- A mechanical component, possibly a handle or latch, is shown at the bottom left.



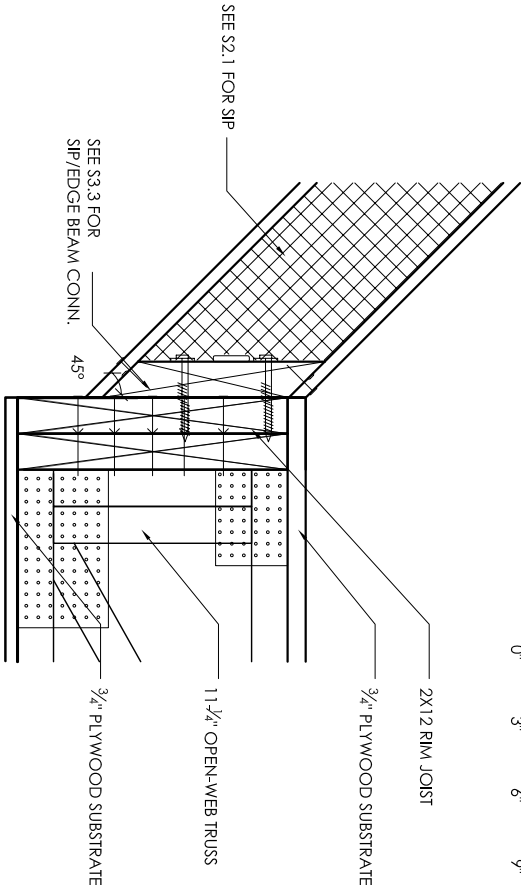
DETAIL 3
1-1/2"=1'-0"

0" 3" 6" 9" 1'-0"



END CONDITION DETAIL 2
1-1/2"=1'-0"

0" 3" 6" 9" 1'-0"



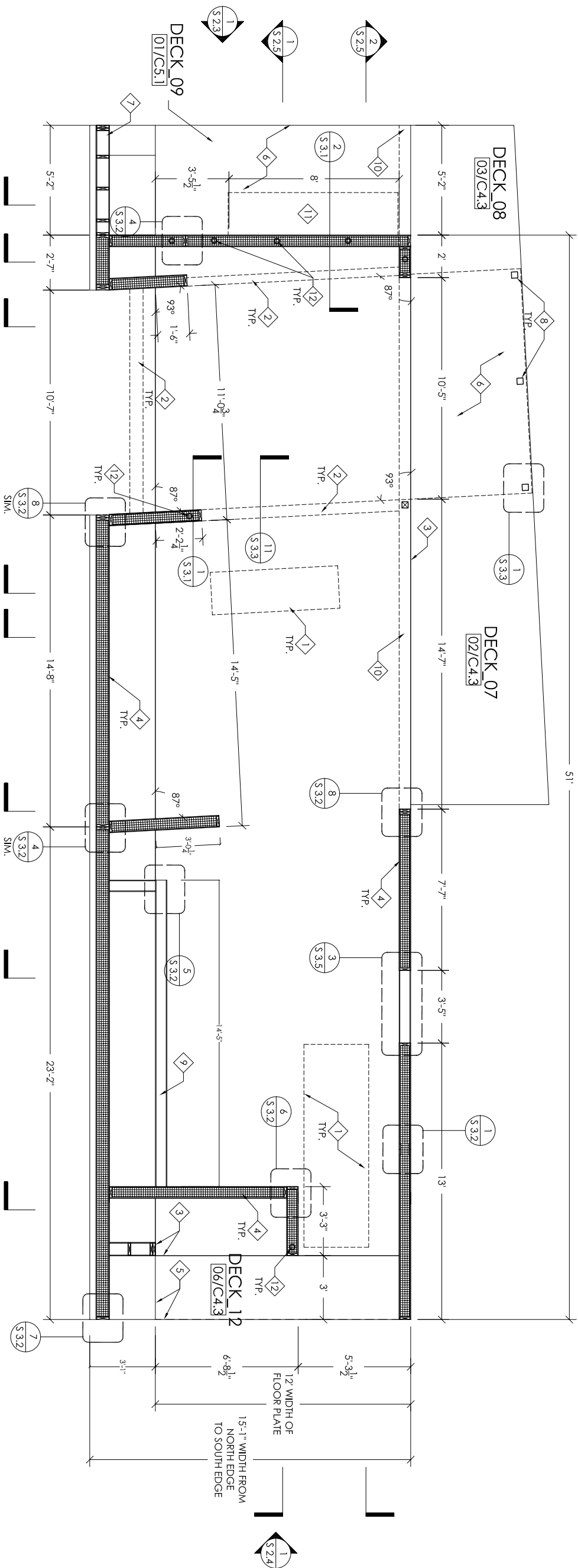
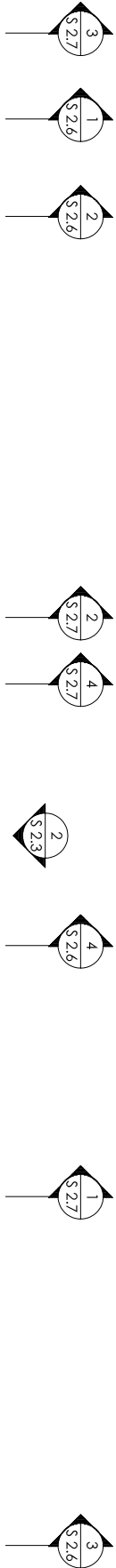
CANTED CORNER DETAIL 1
1-1/2"=1'-0"

0" 3" 6" 9" 1'-0"

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DATE	3 MAY 2007
CHECKED BY	AGG

FLOOR PLATE
DETAILS

S1.6



GENERAL NOTES

- *SIP panels are manufactured by Extreme Panel and individually identified by a letter-number combination
- *all measurements are taken from outside edge of structural elements
- *the deck to the east must be permanently attached prior to attaching wall panels to the floor structure
- *all wall panels are 6 1/2" sps REF 3/S3.2
- *8" panel screws w/ washers shall be used in securing wall panels to adjacent wall panels u.o.n.
- *panel screws shall penetrate top/end plate a minimum of 1" u.o.n.
- *predrill 1 3/4" dia. holes in bottom plates to align w/ electrical chases prior to securing bottom plate to floor plate
- *detailed dimensions and information for individual SIP panels can be found on sheets S 4.2 - S 4.3

KEYED NOTES

- 1 Rough Opening for Skylight Above
- 2 6 1/2" SIP Above REF 3/S3.2
- 3 Edge of Floor Plate
- 4 6 1/2" SIP REF 3/S3.2
- 5 Edge of Permanent Deck
- 6 Framed Roof Structure Above
- 7 Framed Wall Structure
- 8 4 x 4 Wood Column
- 9 6 1/2" SIP Knee-wall REF 3/S3.2
- 10 Girders Beams Above
- 11 Framed Opening Above
- 12 Vert. Elec. Chase



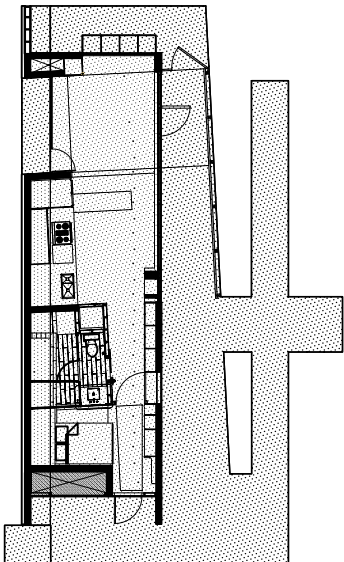
LOADING CONDITIONS

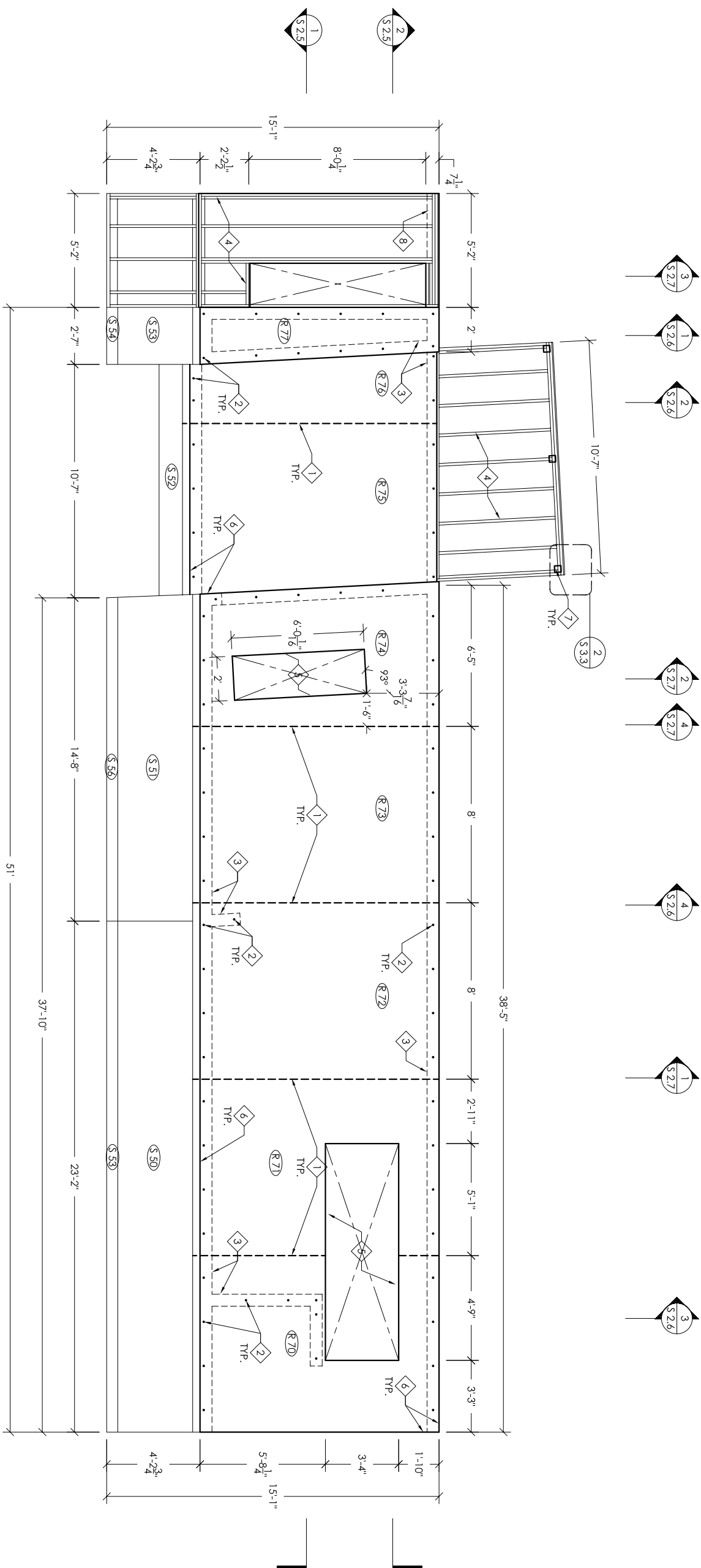
Battery Bank	
DL + LL	
40psf + 5000lb concentrated load	
Exterior Means of Egress	
DL + LL	
10psf + 100psf	
Floor Plate	
DL + LL	
15psf + 50psf	

STRUCTURAL PLAN 1

3/16"=1'-0"

0'-1'-0" 3'-0" 5'-0" 7'-0"






GENERAL NOTES

- *SIP panels are manufactured by Extreme Panel and individually identified by a letter-number combination
- *The roof slopes from the north @ 1:12 pitch
- *All measurements are taken from edge of structural elements
- *All roof panels are 8' x 32' SPS REF 2/S3.2
- *10' panel screws w/ washers shall be used in securing roof panels to structure below
- *Panel screws shall penetrate underlying top plate a minimum of 1"
- *Detailed dimensions and information for individual roof panels can be found on sheet S 4.2
- *Detailed dimensions and information for 2x8 framed roof structures can be found on sheet S 4.1
- *Roof panels shall receive end plates on exposed edges, see sections and details for types and nailing information
- *Roof panels are joined by means of spline connections, see sections and details for nailing information
- *2x2 framed structures are shown w/o OSB sheathing in-order to clarify distinction between SFPs and framing construction
- *While standing SFPs, brace all panels until they are tied together with the top plates.

KEYED NOTES

- 1 Spline Connection
- 2 10" Panel Screw w/ Washer
- 3 Edge of Underlying SIPs
- 4 2 x 8 Framed Roof Structure REF. SA.1
- 5 Rough Opening for Skylight
- 6 SIP End Plate
- 7 4 x 4 Column Below V.I.F.
- 8 Glulam & Structure Below


LEGEND

Spine Connection	-----
Structure Below	-----
Top Edge of Panel	=====
Bottom Edge of Panel	=====
Panel Top	

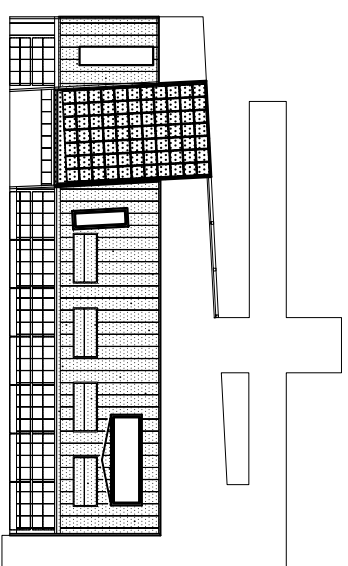
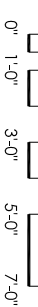
LOADING CONDITIONS

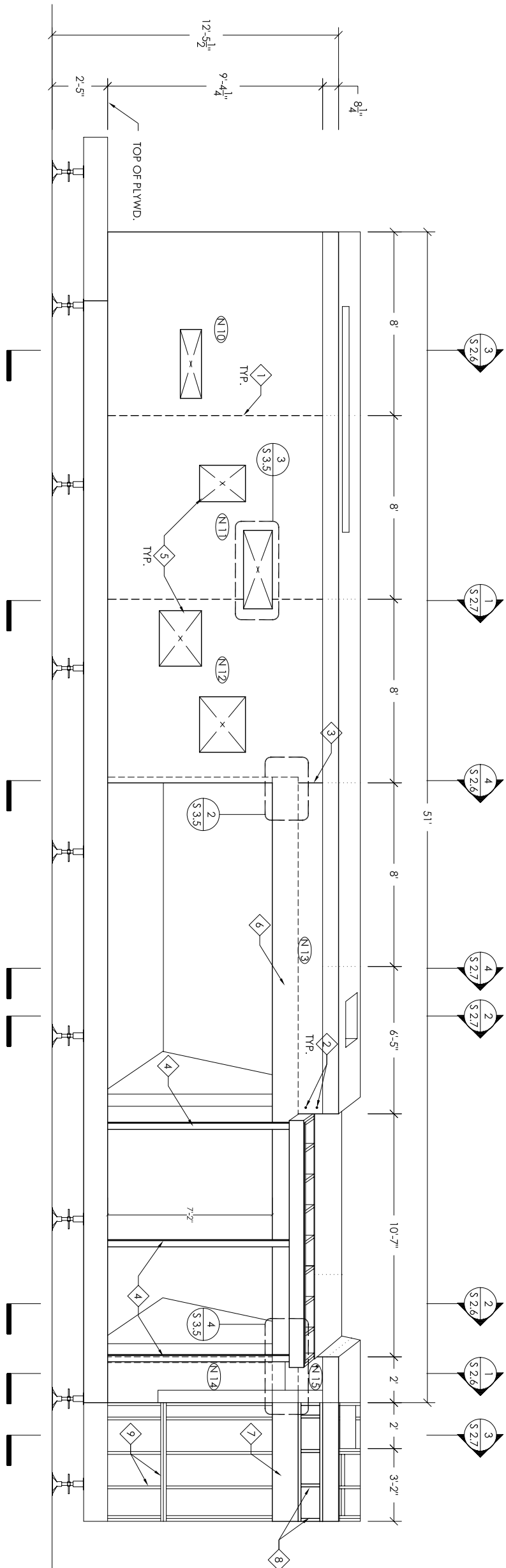
Green Roof
see structural calculations

Roof
DL + LL
10psf + 20psf live load



STRUCTURAL ROOF PLAN



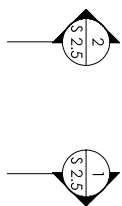


NORTH SIP ELEVATION


2

3/16"=1'-0"

0" 1'-0" 3'-0" 5'-0" 7'-0"



LEGEND

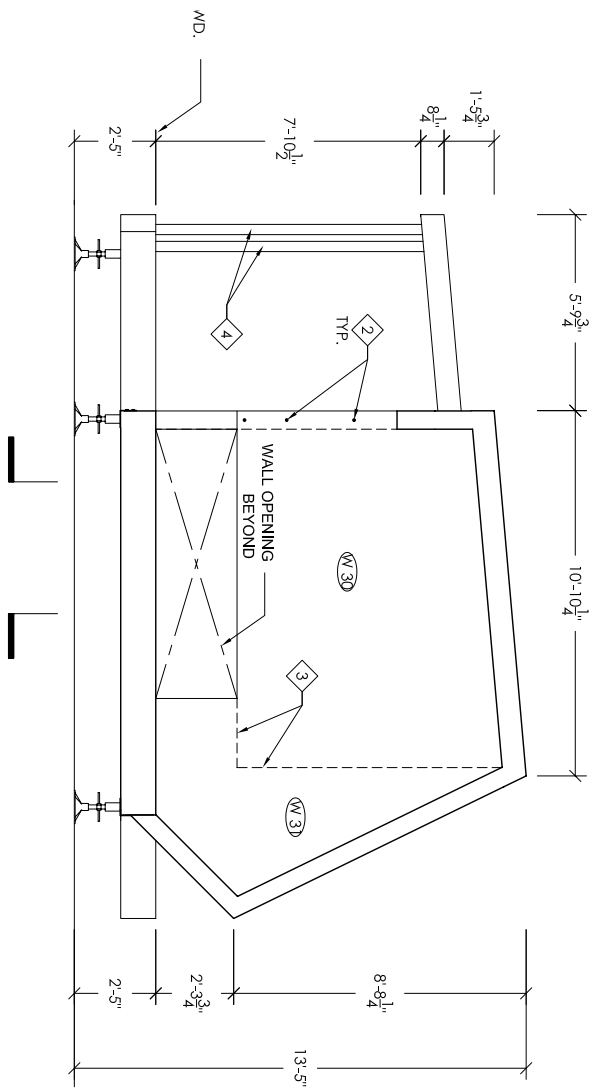
Spline Connection	-----
Structural Elements within SPS	-----
Joint Between Roof & Wall SPS
Edge of Panel	_____
Panel Trog	

GENERAL NOTES

- ***3**ip panels are manufactured by Extremum Panel and individually identified by a letter-number combination
- 4**all measurements are taken from edge of structural elements
- 5**the deck to the east must be permanently attached prior to attaching wall panels to the floor structure
- 6**all wall panels are 6 3/4" sps
- 7**8" panel screws w/ washers shall be used in securing wall panels to adjacent wall panels
- 8**panel screws shall penetrate top/end plate a minimum of 1"
- 9**2X framed structures are shown w/o OSB sheathing in-order to clearly distinction between spfs and framing construction
- 10**detailed dimensions and information for individual panels and 2X framing can be found on sheets 5.4.1 - 5.4.3

KEYED NOTES

- 1 Spline Connection
- 2 8" Panel Screw w/ Washer @ 24" O.C.
- 3 Double 2x Connection
- 4 4x4 Column
- 5 Rough Opening for Window
- 6 Glulam Beam within SIP
- 7 Glulam Beam w/ OSB Facings
- 8 2x6 Framing Above Glulam Beam
- 9 2x6 Framing Beyond

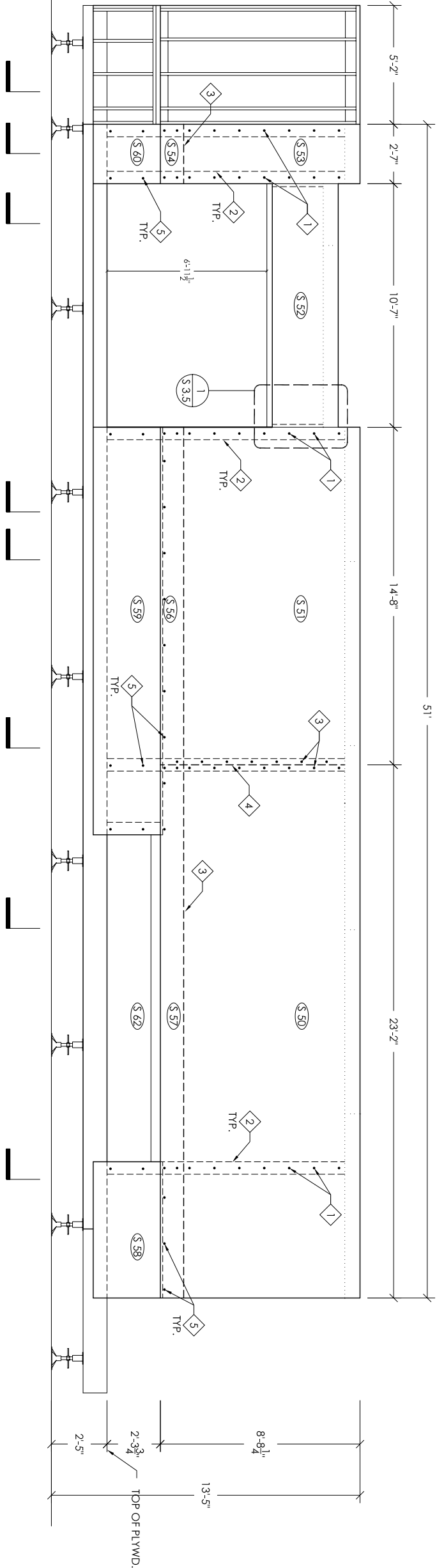


WEST SIP ELEVATION

3/16"=1'-0"

0" 1'-0" 3'-0" 5'-0" 7'-0"

1

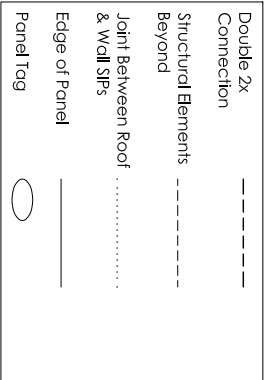


SOUTH SIP ELEVATION 2

3/16"=1'-0"

0" 1'-0" 3'-0" 5'-0" 7'-0"

LEGEND

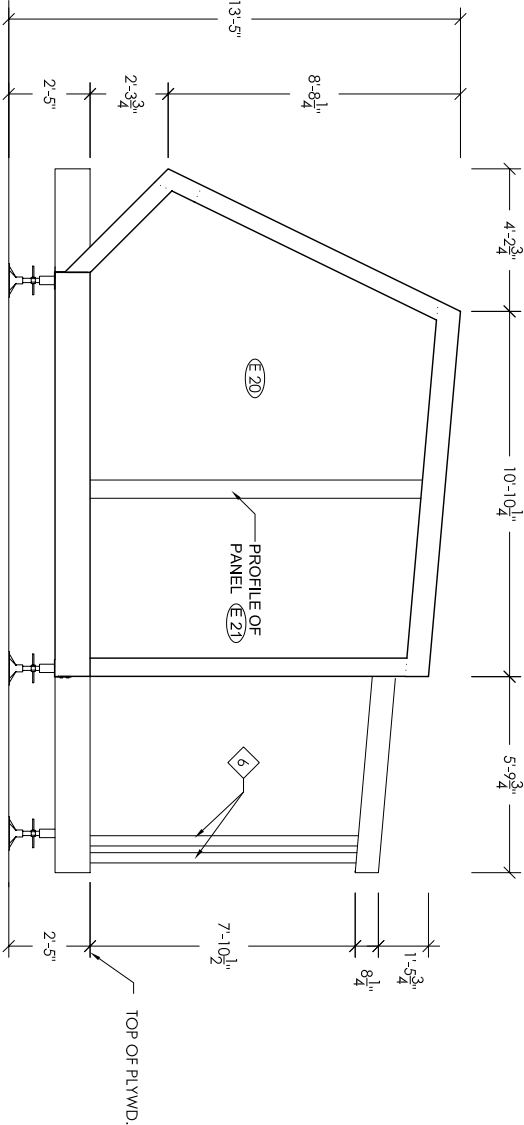
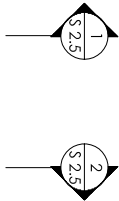


GENERAL NOTES

- *SIP panels are manufactured by Extreme Panel and individually identified by a letter-number combination
- *all measurements are taken from edge of structural elements
- *the deck to the east must be permanently attached prior to attaching wall panels to the floor structure
- *all wall panels are 6 1/2" sps
- *8" panel screws w/ washers shall be used in securing wall panels to adjacent wall panels
- *panel screws shall penetrate top/end plate a minimum of 1"
- *2X framed structures are shown w/o OSB sheathing in-order to clarify distinction between SIPs and framing construction
- *detailed dimensions and information for individual panels and 2X framing can be found on sheets S 4.1 - S 4.3

KEYED NOTES

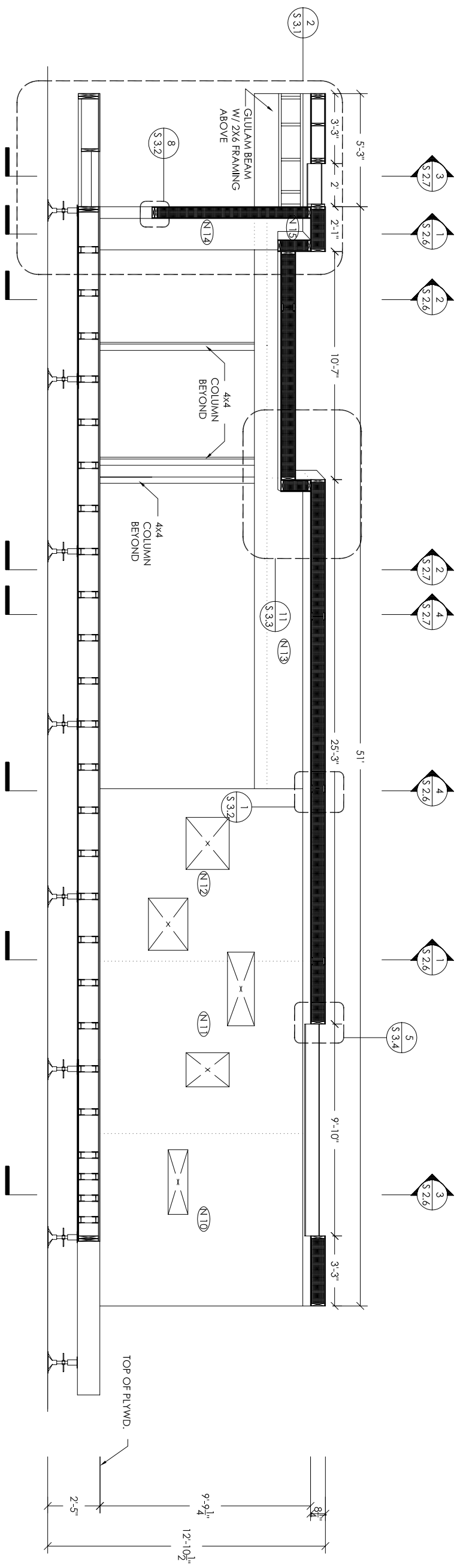
- 1 8" Panel Screw w/ Washer @ 14" O.C.
- 2 Edge of Underlying SIPs
- 3 8" Panel Screw w/ Washer @ 14" O.C. stagger along joint
- 4 Double 2x Connection
- 5 8" Panel Screw w/ Washer @ 24" O.C.
- 6 4x4 Column Beyond



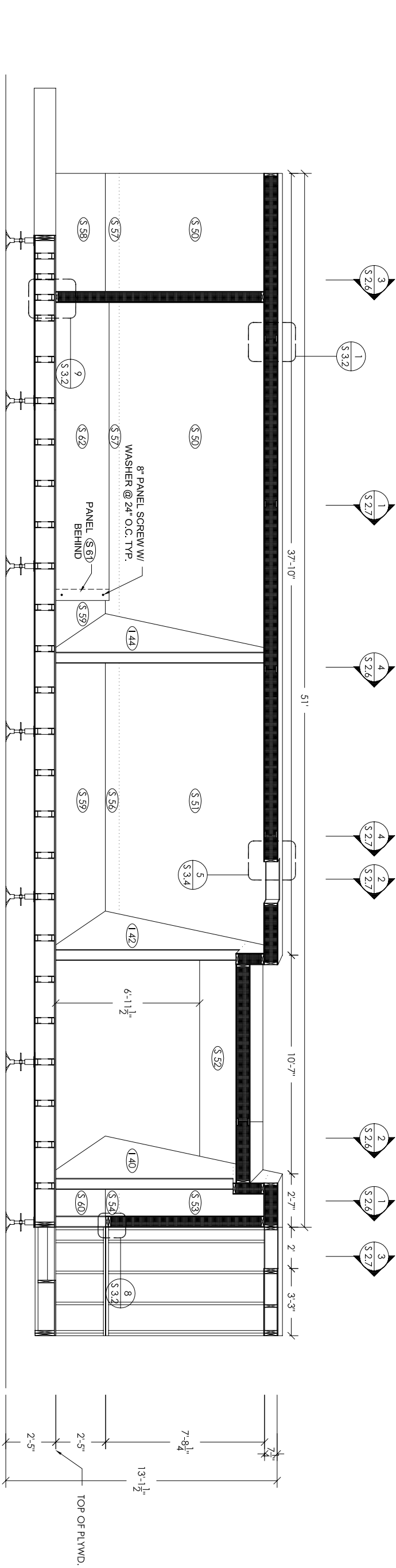
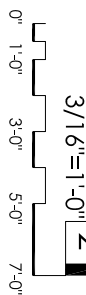
EAST SIP ELEVATION 1

3/16"=1'-0"

0" 1'-0" 3'-0" 5'-0" 7'-0"

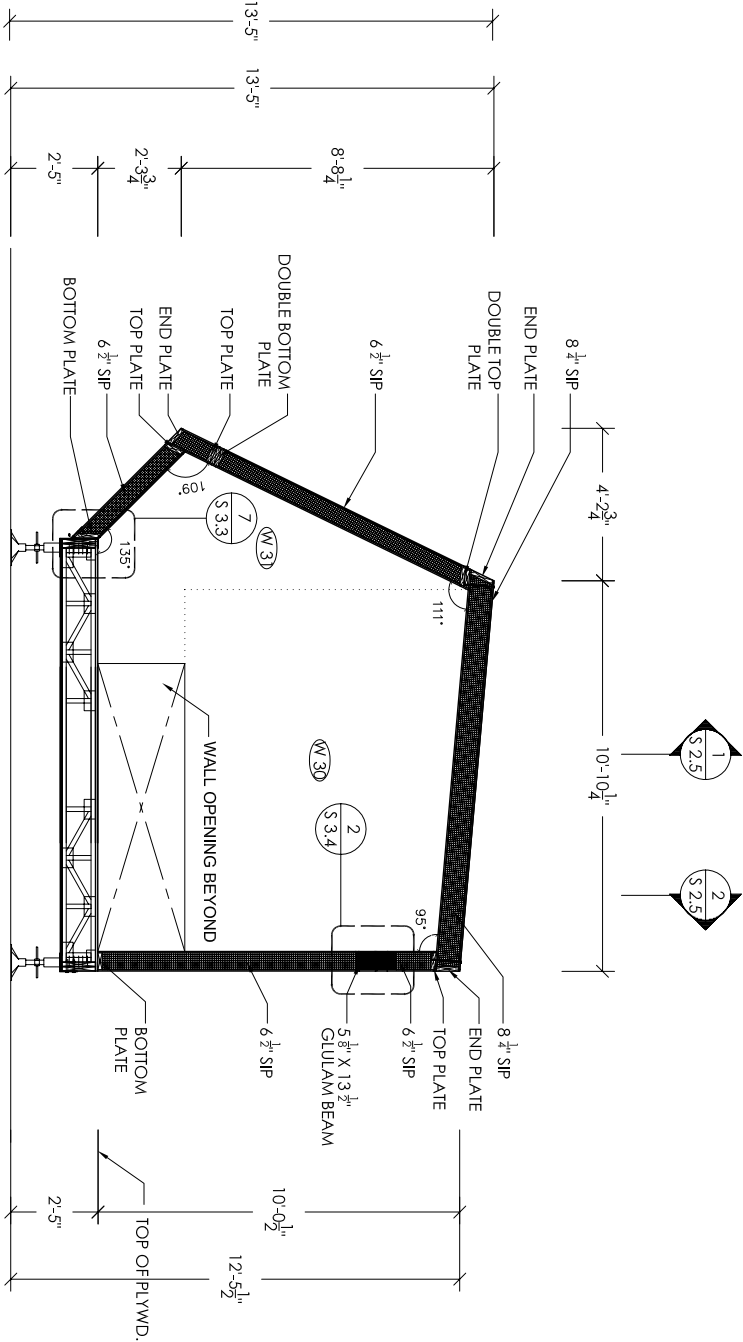
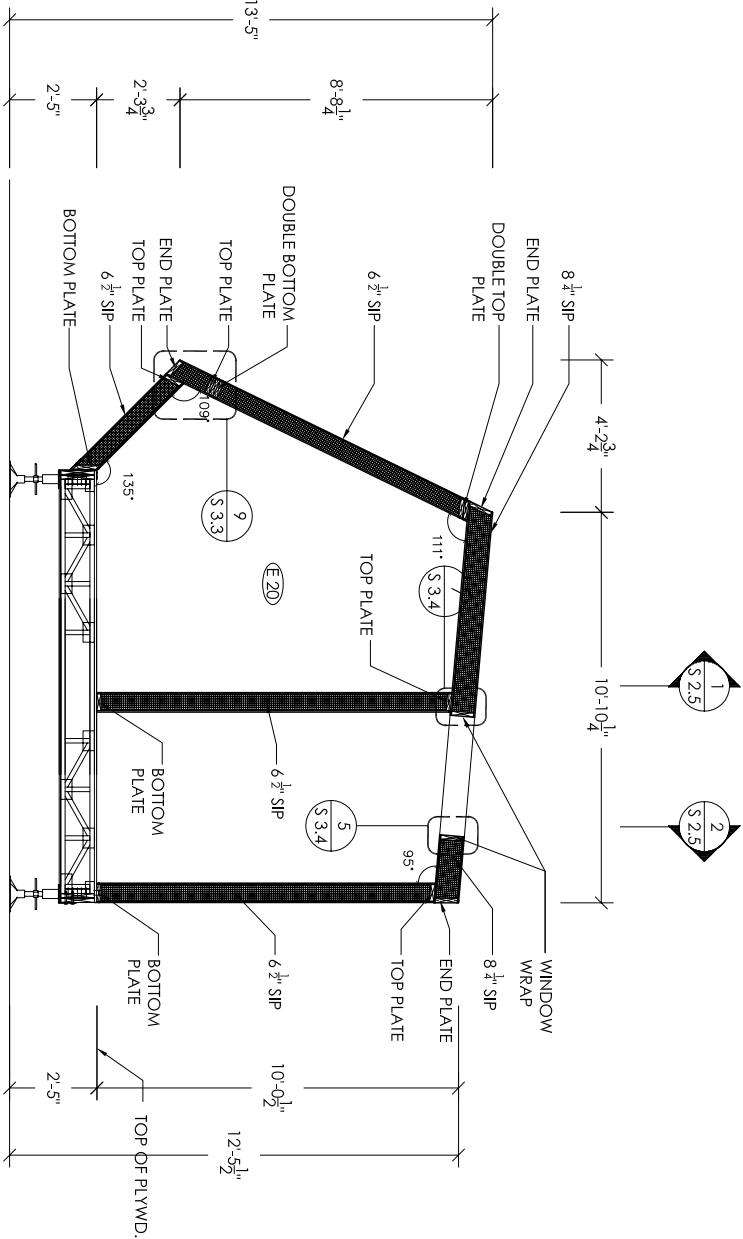
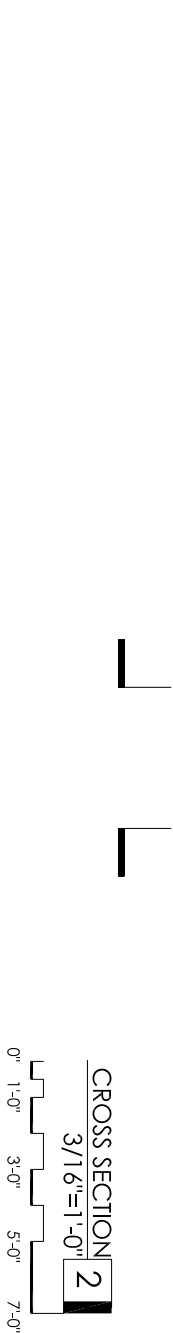
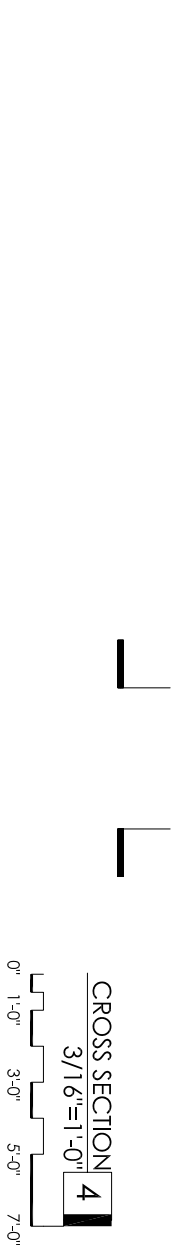
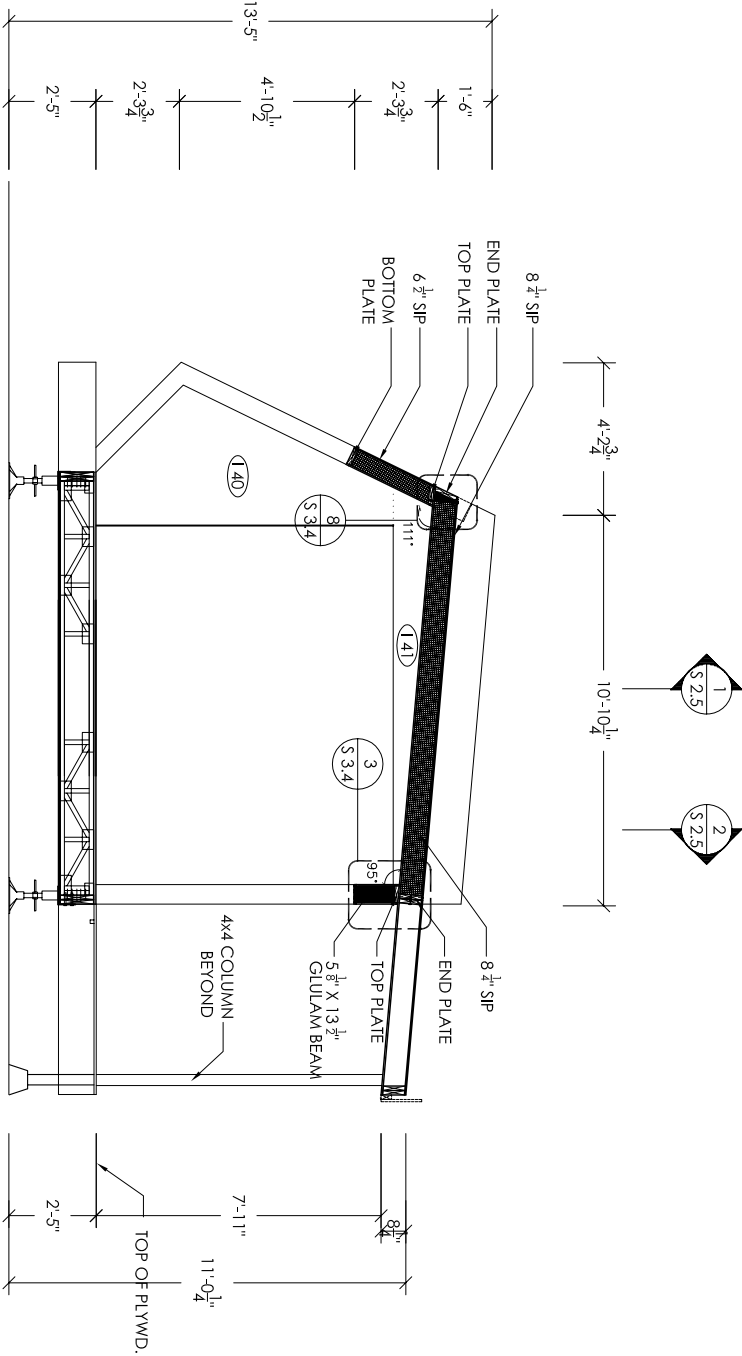
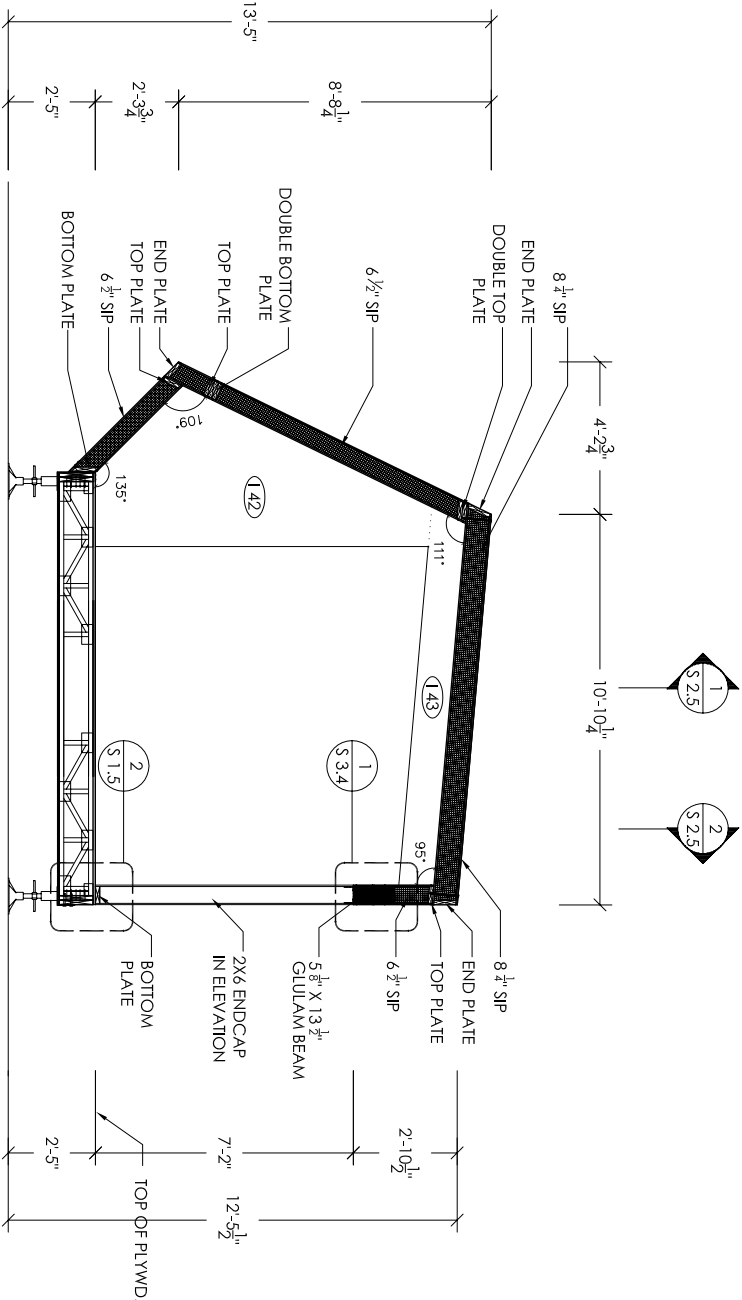


SECTION LOOKING NORTH 2



SECTION LOOKING SOUTH 1

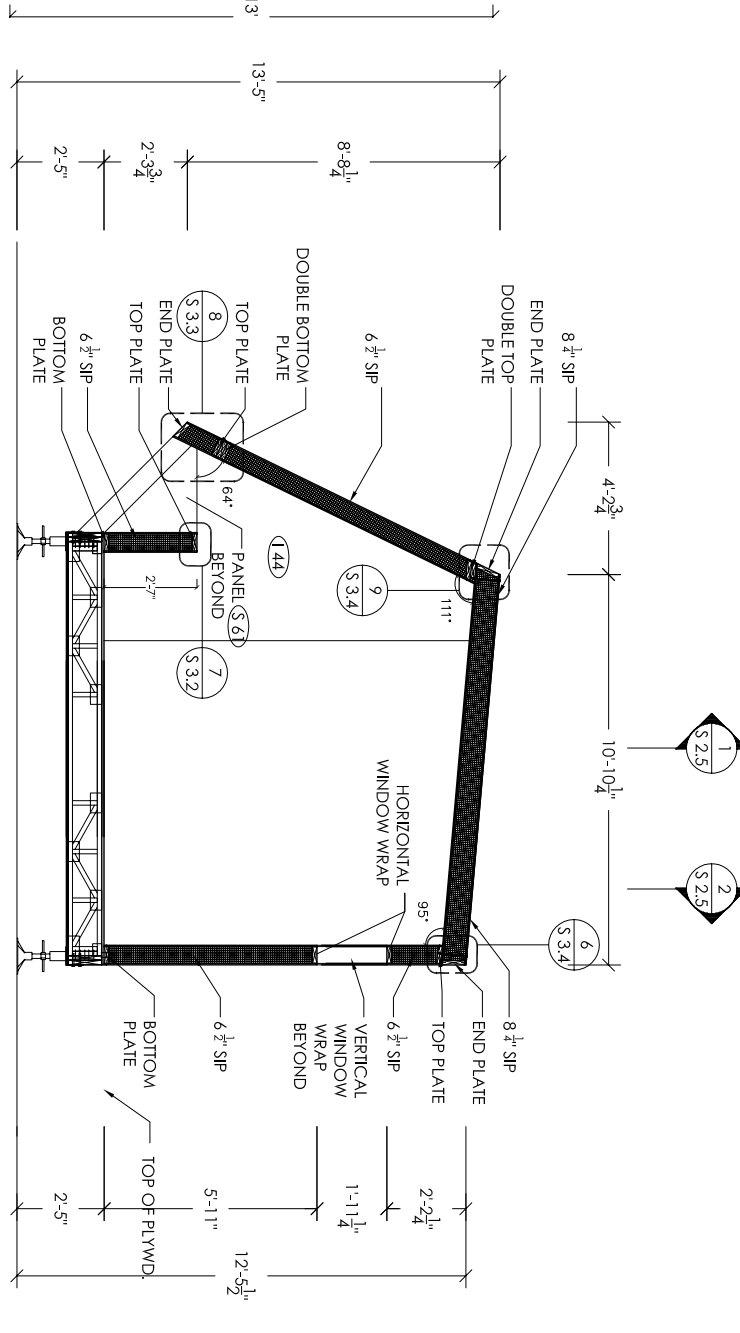
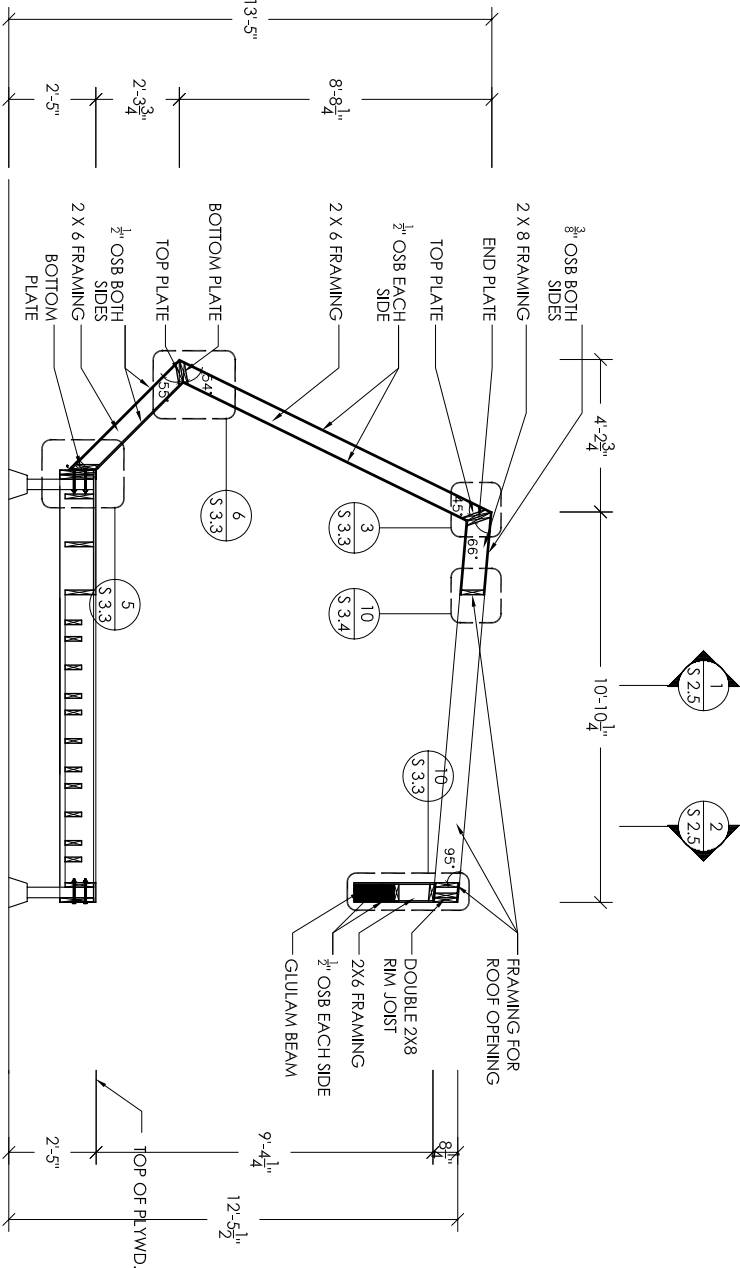
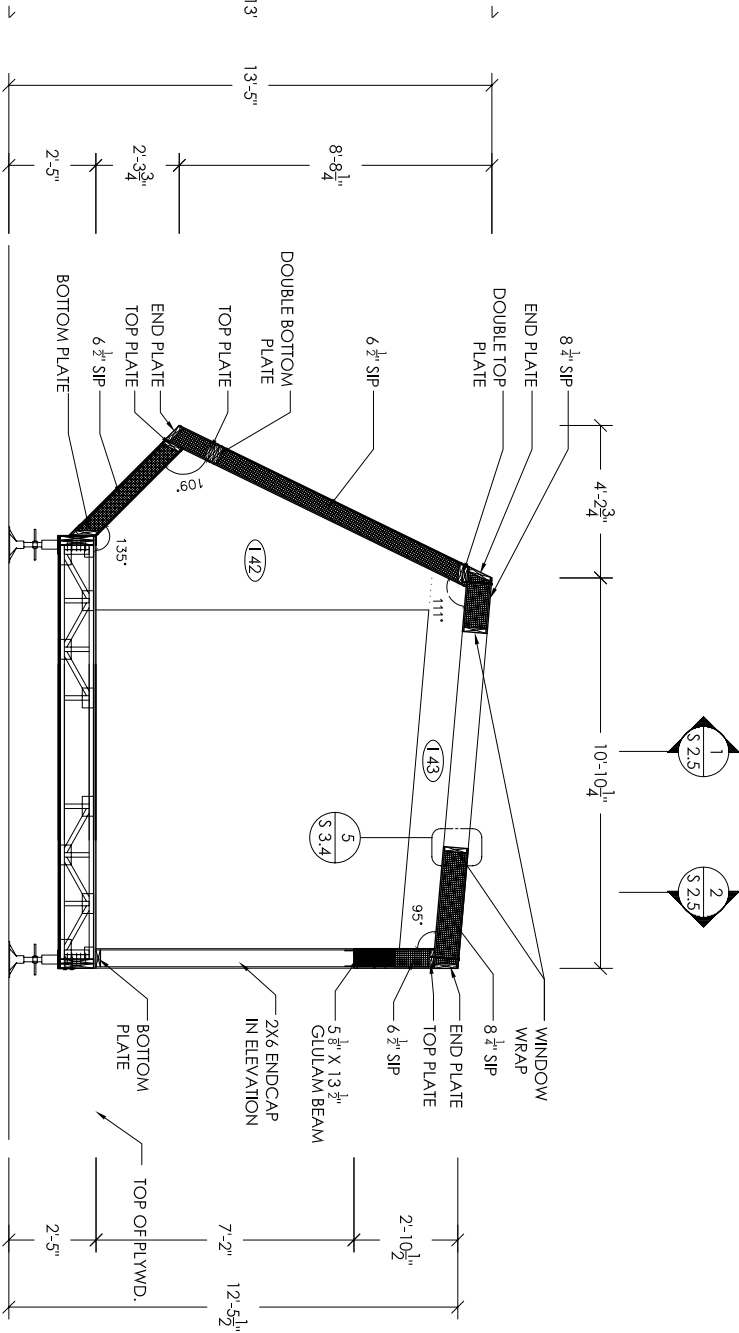
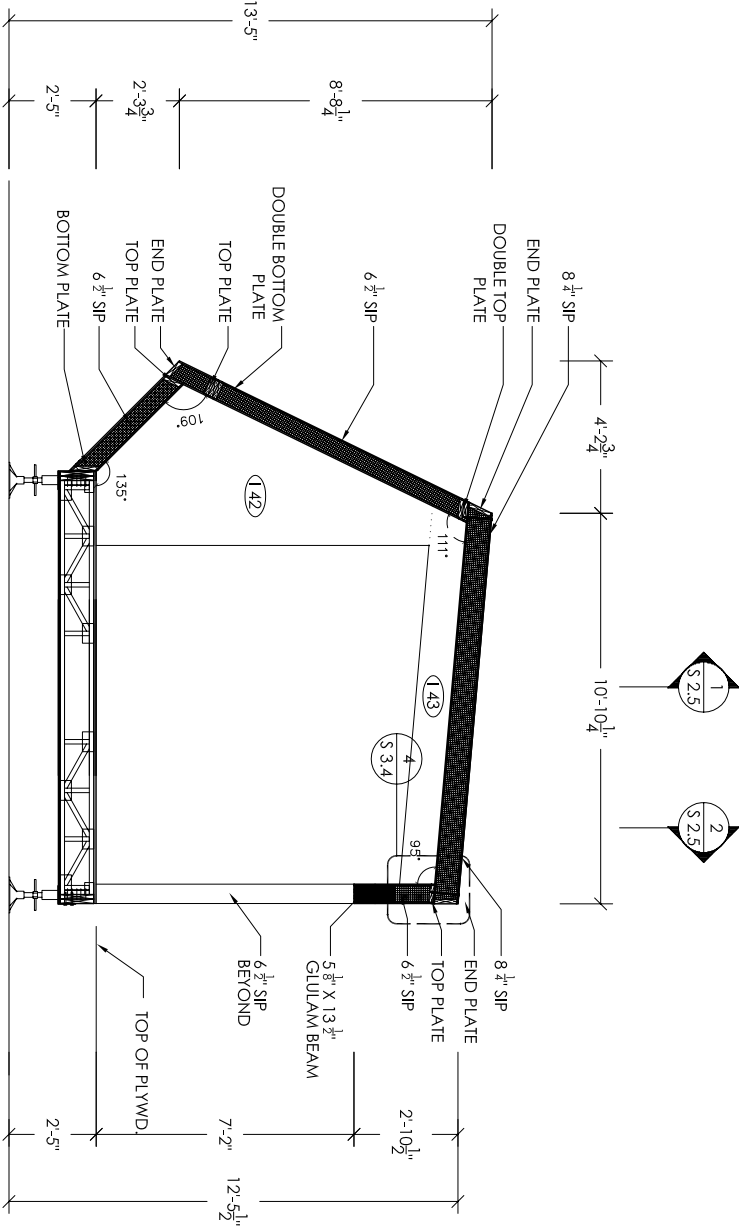


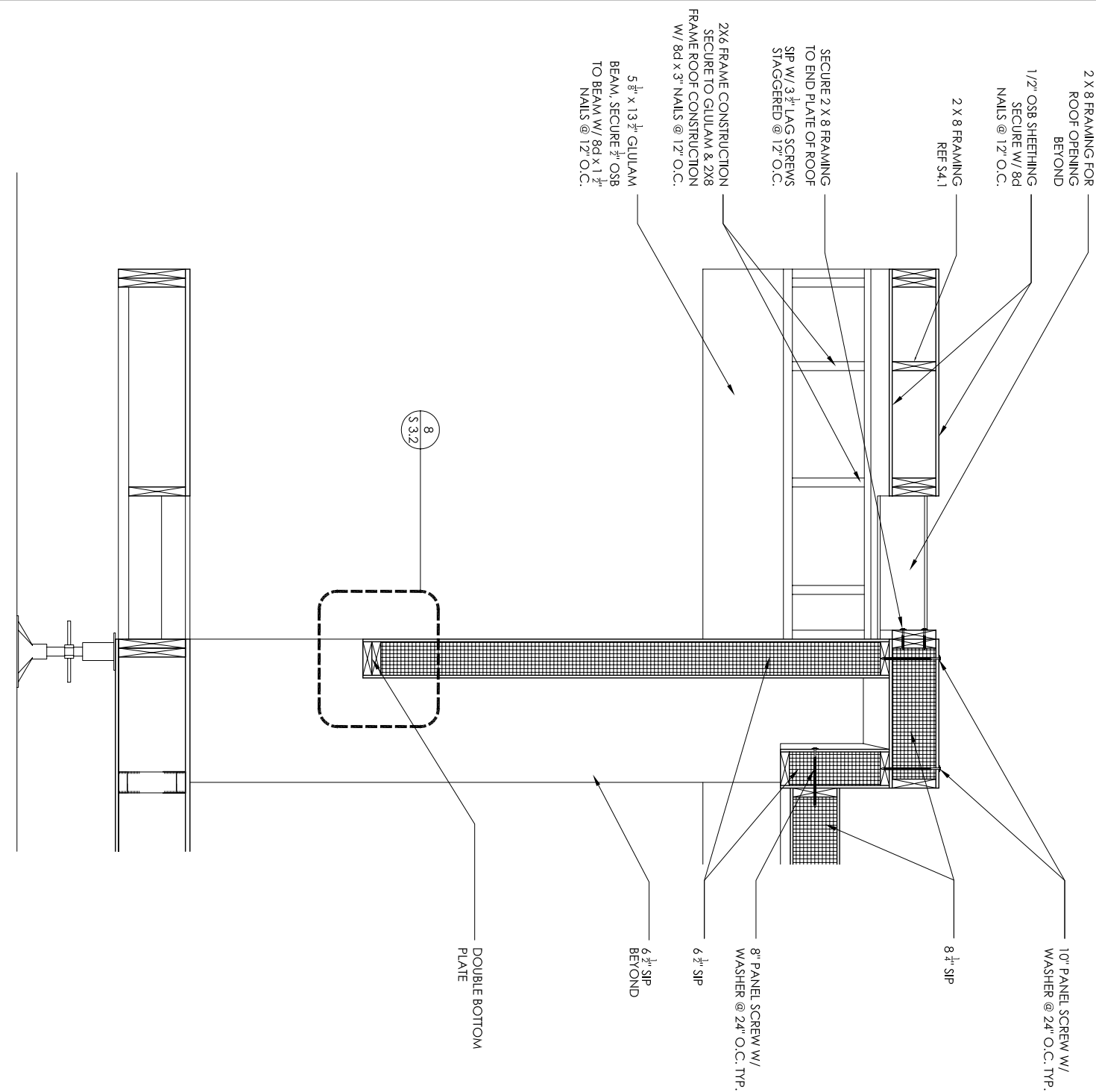


DRAWN BY: PSH
DATE: 3 MAY 2007
CHECKED BY: AGG

STRUCTURAL
CROSS
SECTIONS

S2.6



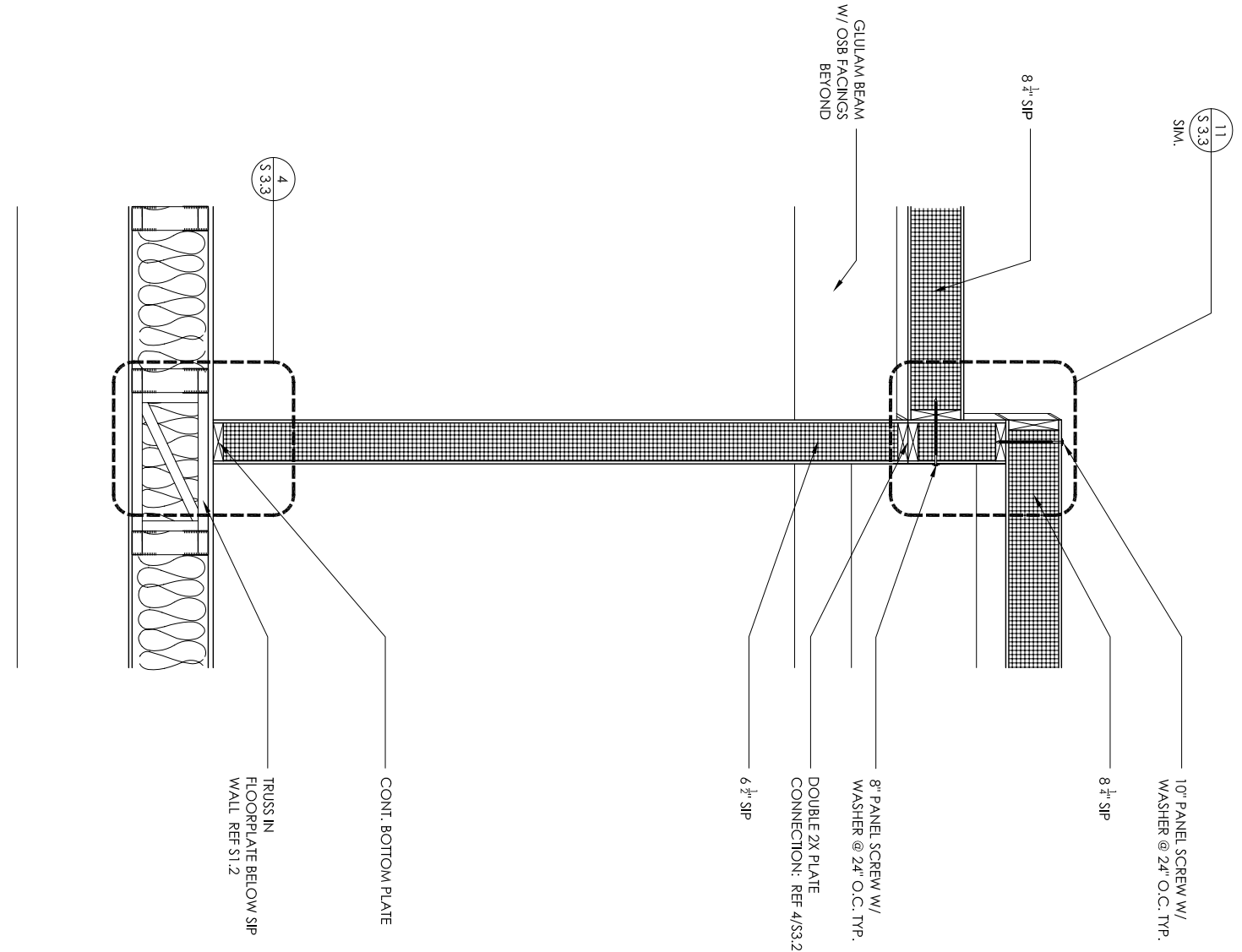


SECTION THROUGH WEST WALL

2

1/2"=1'-0"

0" 6" 1'-0" 3'-0"

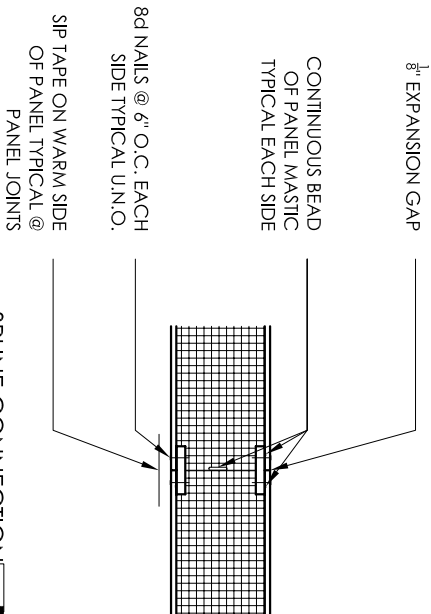
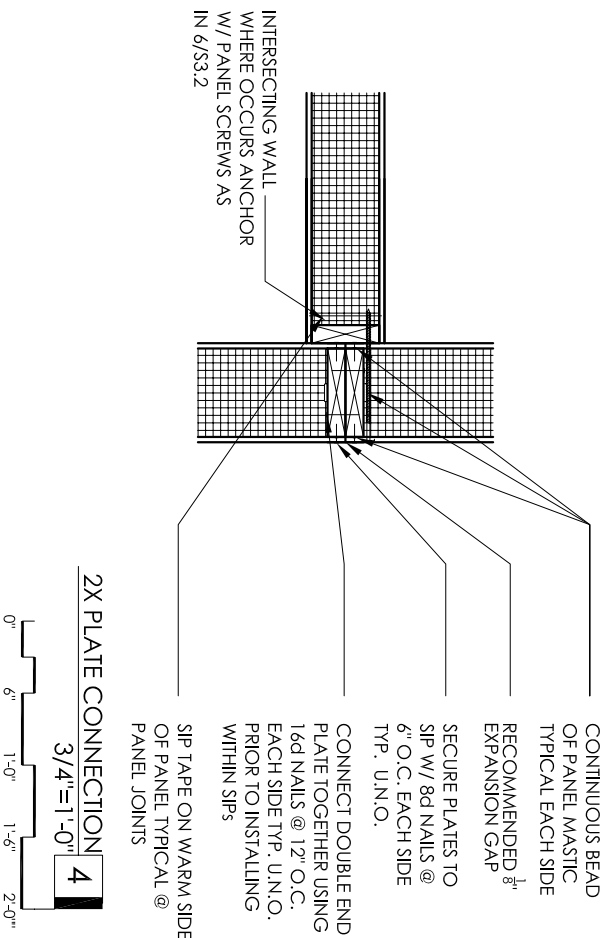
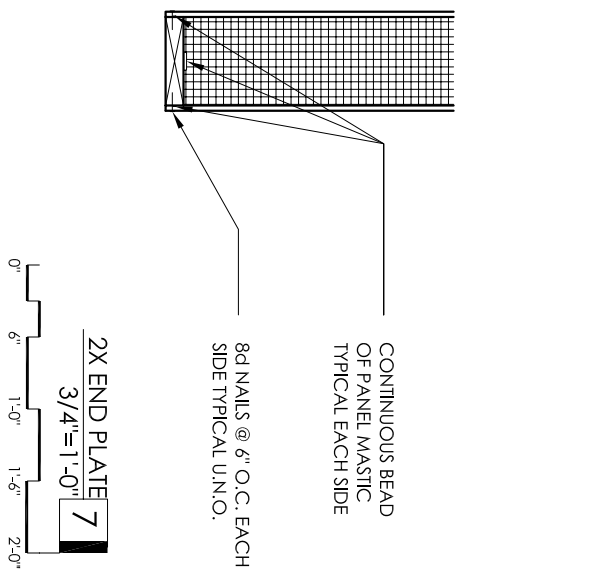
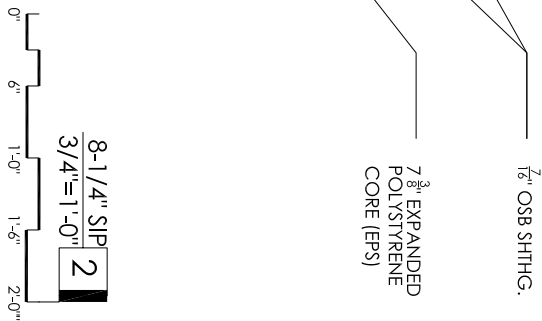
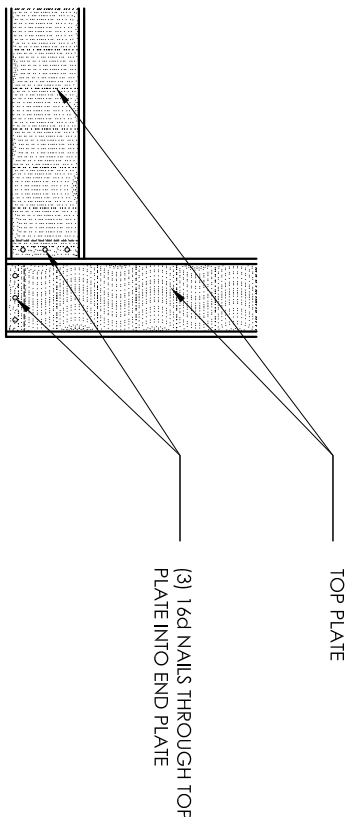
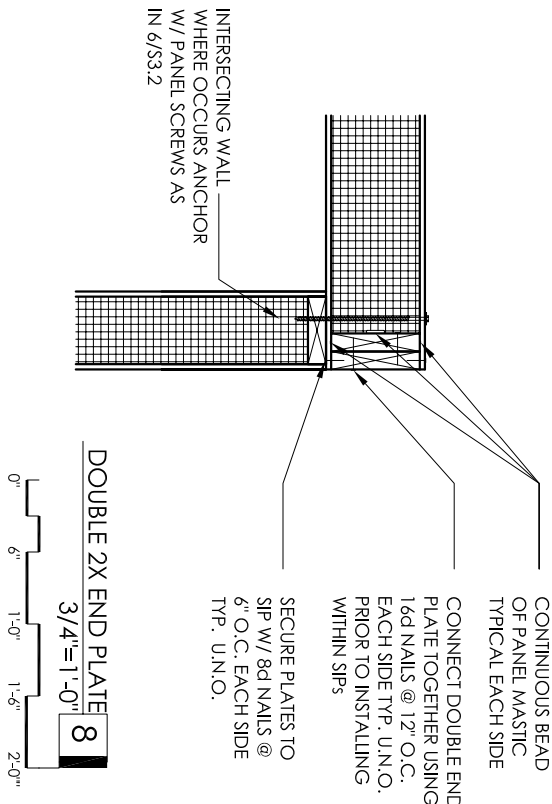
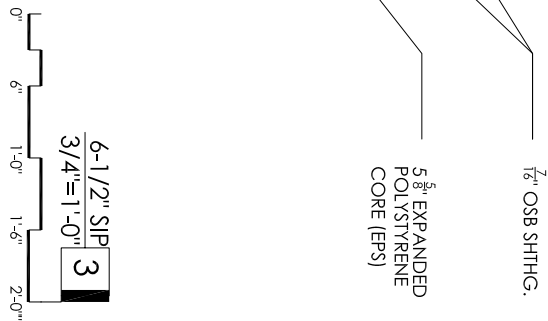
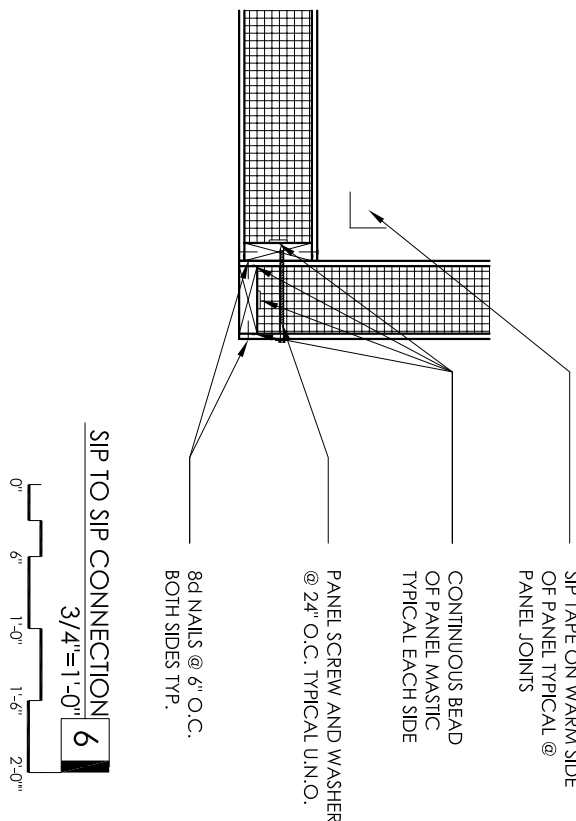
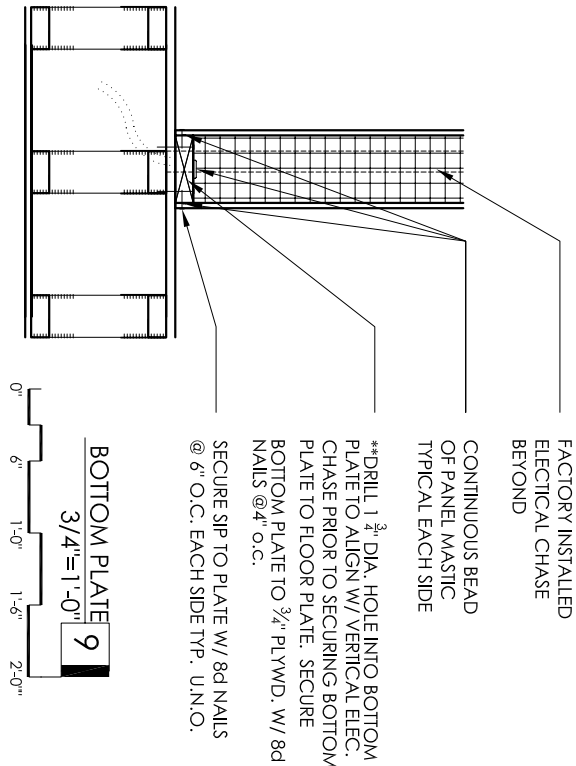


SECTION THROUGH ROOF GARDEN

1

1/2"=1'-0"

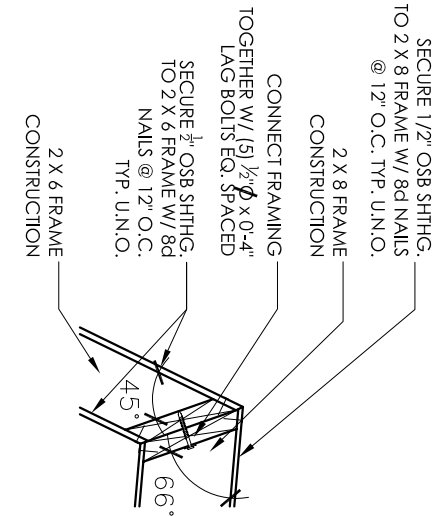
0" 6" 1'-0" 3'-0"



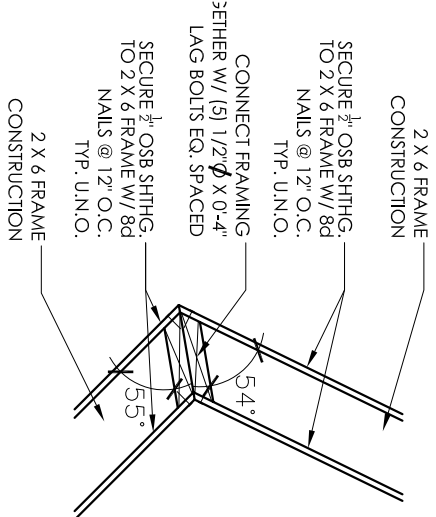
DRAWN BY_ PSH
DATE_ 3 MAY 2007
CHECKED BY_ AGC

STRUCTURAL
DETAILS

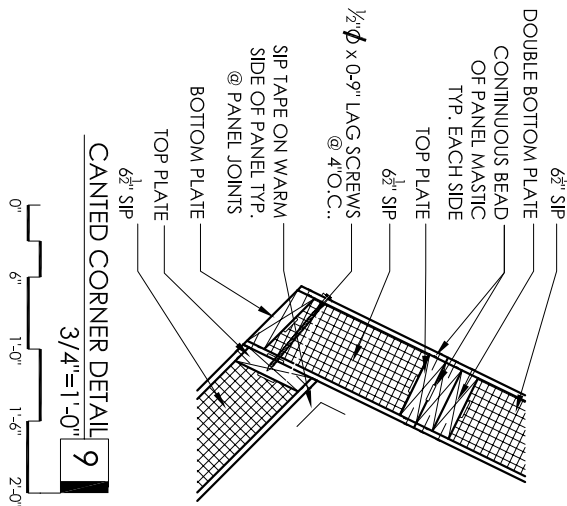
S3.2



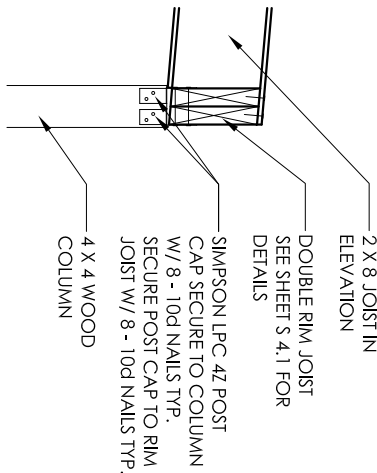
CORNER DETAIL 3
3/4"=1'-0"



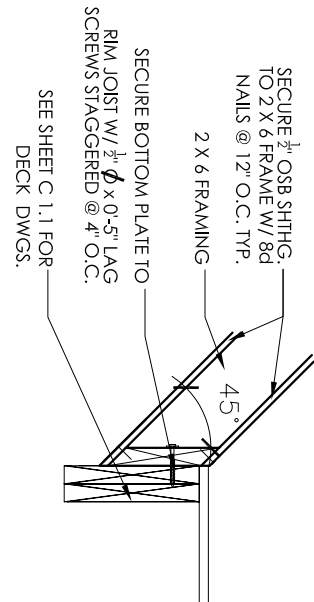
CANTED CORNER DETAIL 6
3/4"=1'-0"



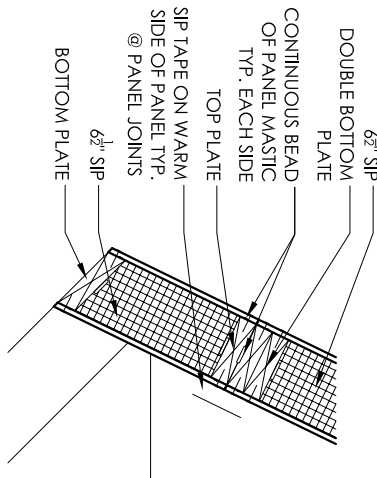
CANTED CORNER DETAIL 9
3/4"=1'-0"



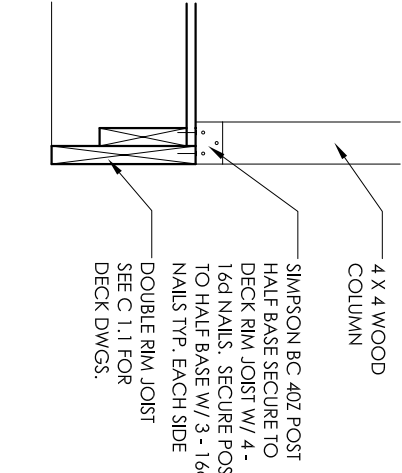
COLUMN CAP DETAIL 2
3/4"=1'-0"



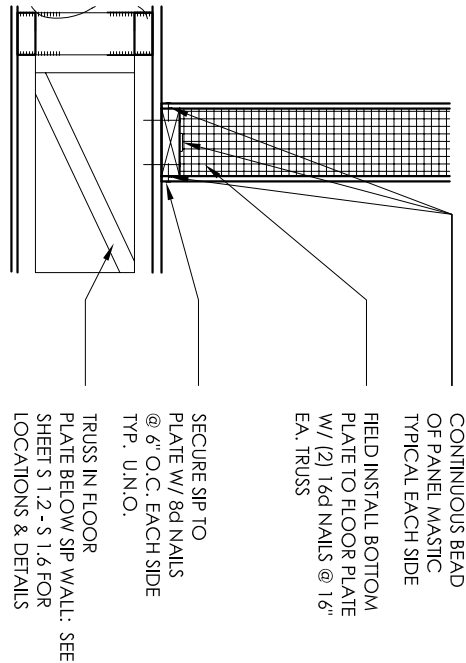
CANTED FLOOR DETAIL 5
3/4"=1'-0"



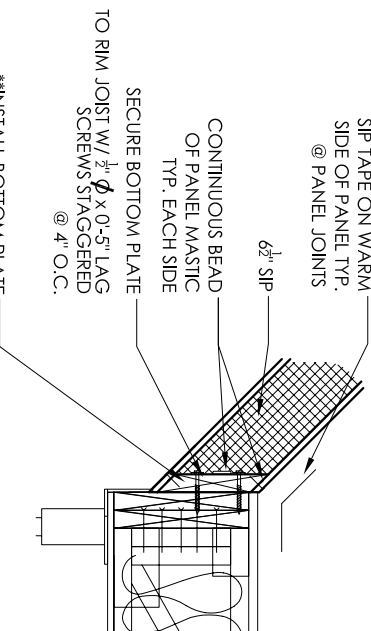
CANTED OVERHANG DETAIL 8
3/4"=1'-0"



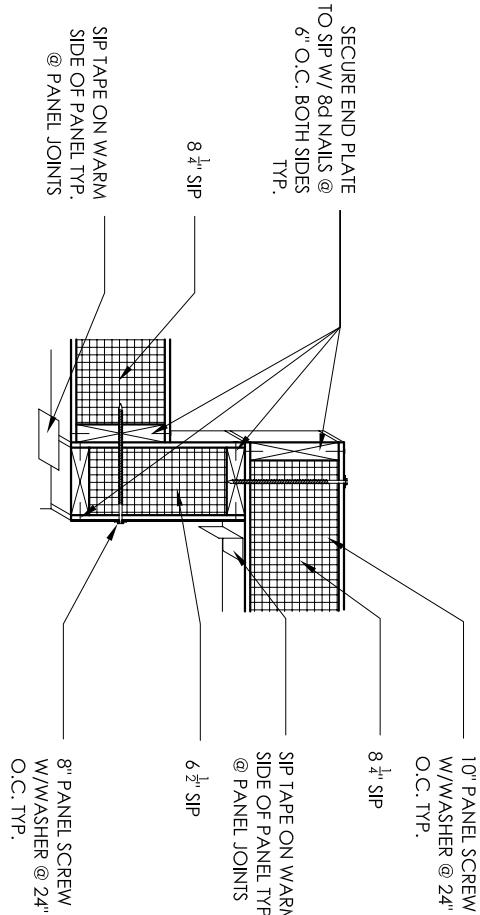
COLUMN BASE DETAIL 1
3/4"=1'-0"



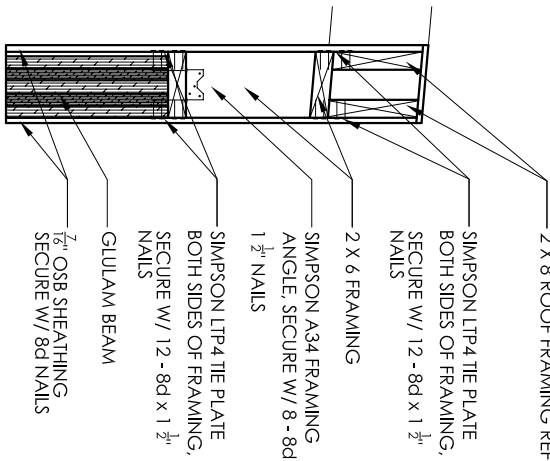
SIP WALL OVER CROSS BRACING 4
3/4"=1'-0"



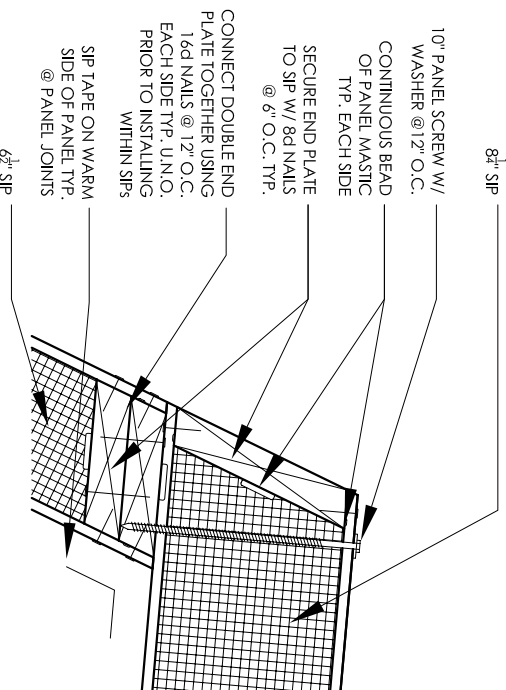
CANTED ANGLE CONNECTION 7
3/4"=1'-0"



ROOF GARDEN EDGE SECTION 11
3/4"=1'-0"



ROOF GARDEN DETAIL 10
3/4"=1'-0"

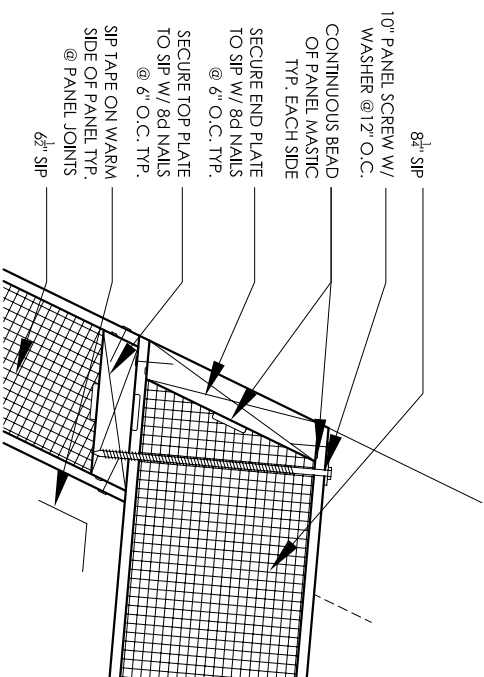


ROOF CORNER DETAIL

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

0" 3" 6" 9" 1'-0"

9

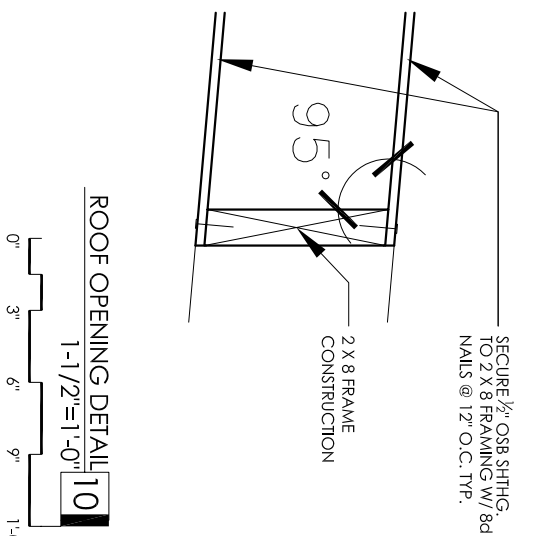


ROOF GARDEN DETAIL

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

0" 3" 6" 9" 1'-0"

8



ROOF OPENING DETAIL

10

1'-0"

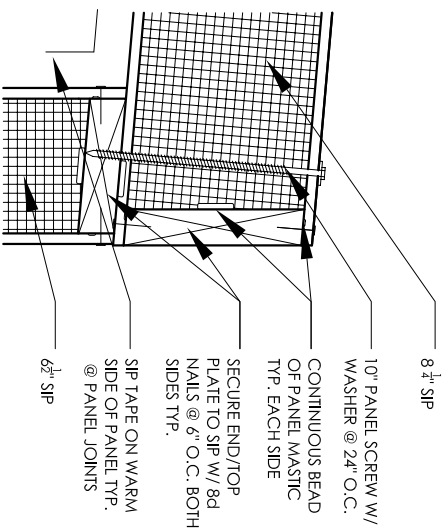
9"

6"

3"

0"

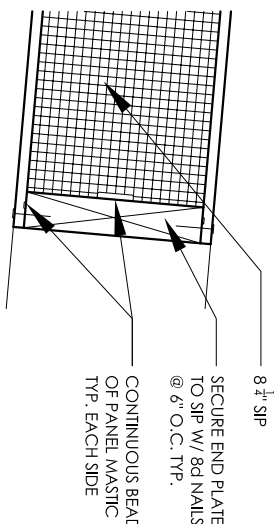
1'-1/2"=1'-0"



ROOF CORNER DETAIL

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

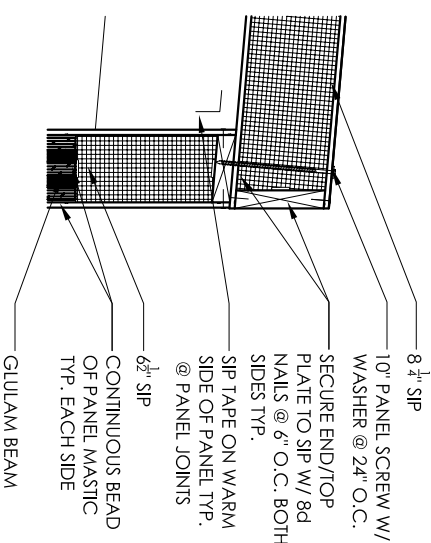
0" 3" 6" 9" 1'-0"



ROOF OPENING DETAIL 5

0" 3" 6" 9" 1'-0"

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

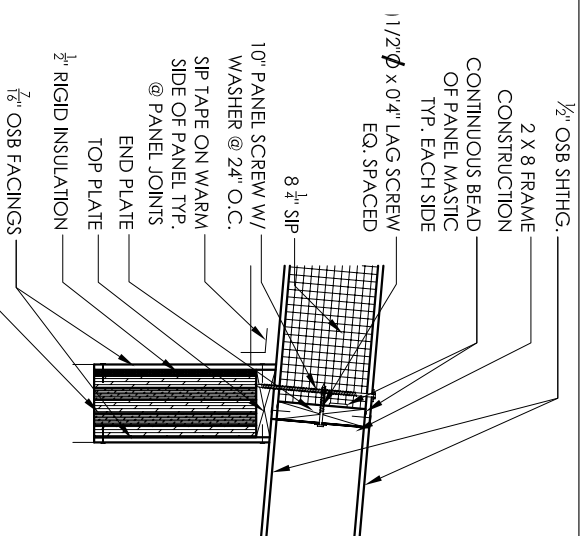


ROOF CORNER DETAIL

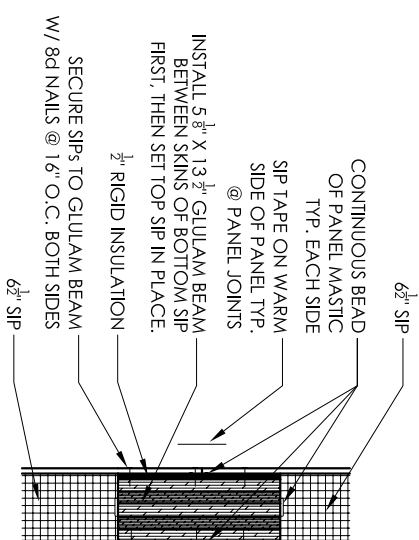
$3/4" = 1'-0"$

4

0" 6" 1'-0" 1'-6" 2'-0"



5' 0" x 13' 2" — GLULAM BEAM
GLULAM ROOF DETAIL 3
3/4" = 1'-0"
0" 6" 1'-0" 1'-6" 2'-0"



GLULAM IN SIP DETAIL 2

3/4"=1'-0"

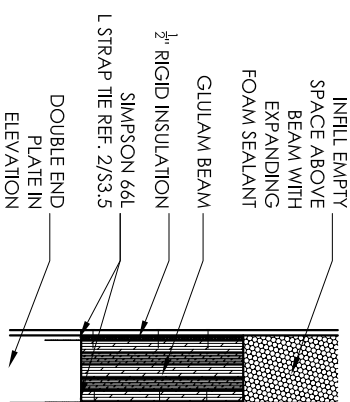
0"

6"

1'-0"

1'-6"

2'-0"



GLULAM BEARING DETAIL

3/4"=1'-0"

0"

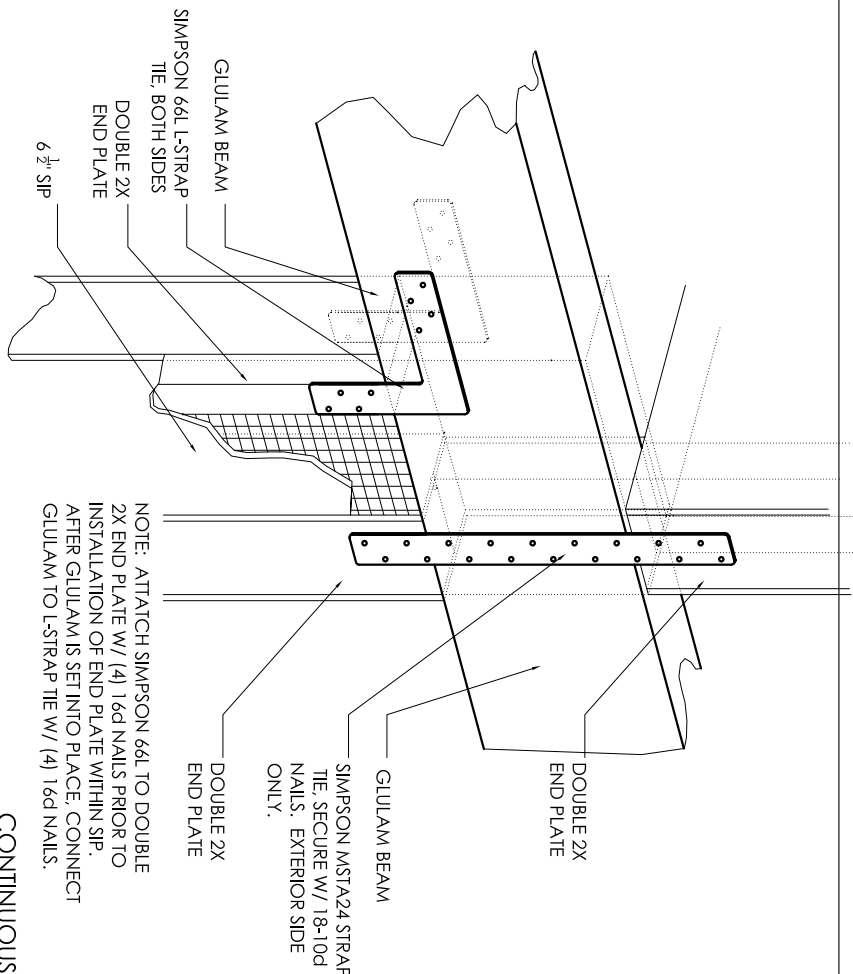
6"

1'-0"

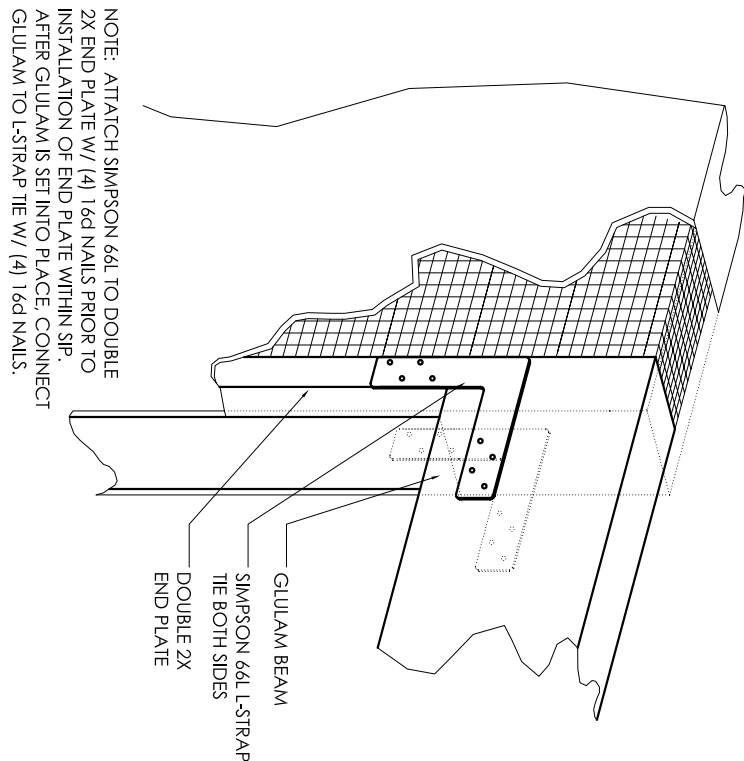
1'-6"

2'-0"

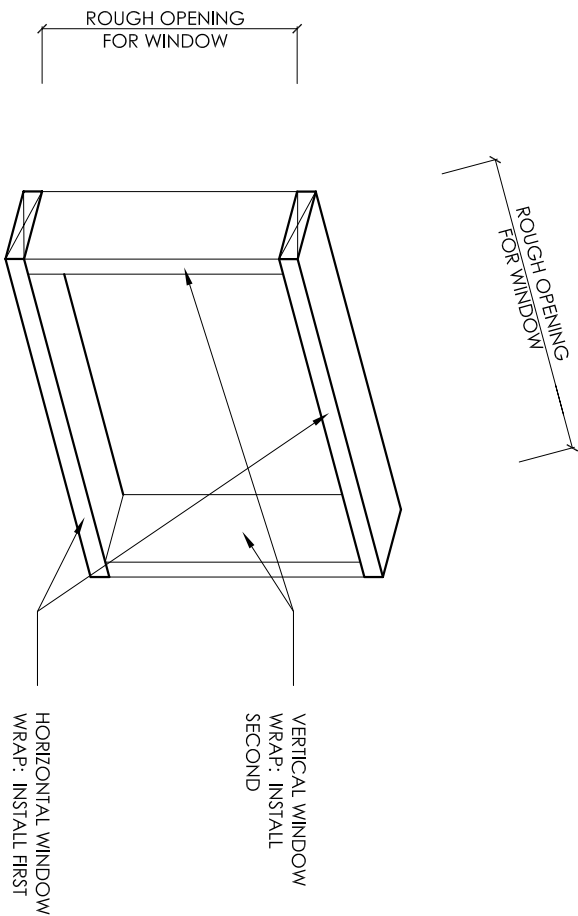
1



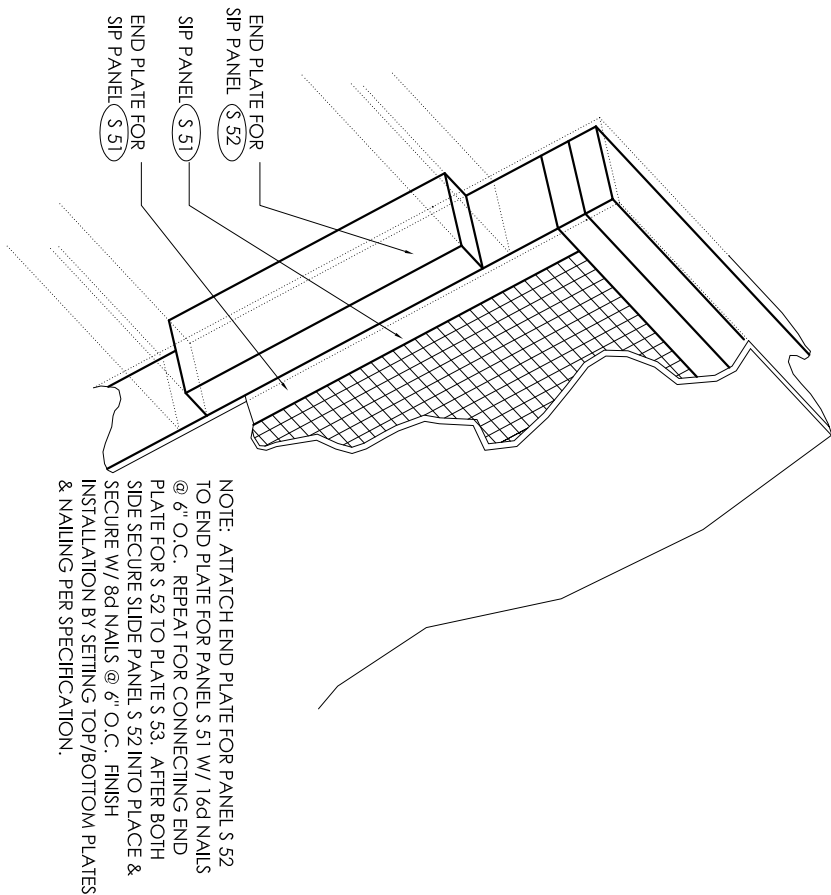
CONTINUOUS GULAM DETAIL 4
NOT TO SCALE



GULAM BEARING DETAIL 2
NOT TO SCALE



PUNCHED OPENING DETAIL 3
NOT TO SCALE

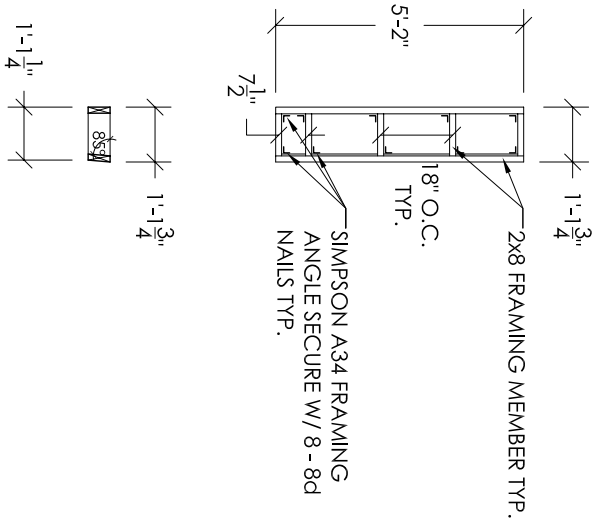


PANEL CONSTRUCTION 1
NOT TO SCALE

STRUCTURAL
DETAILS

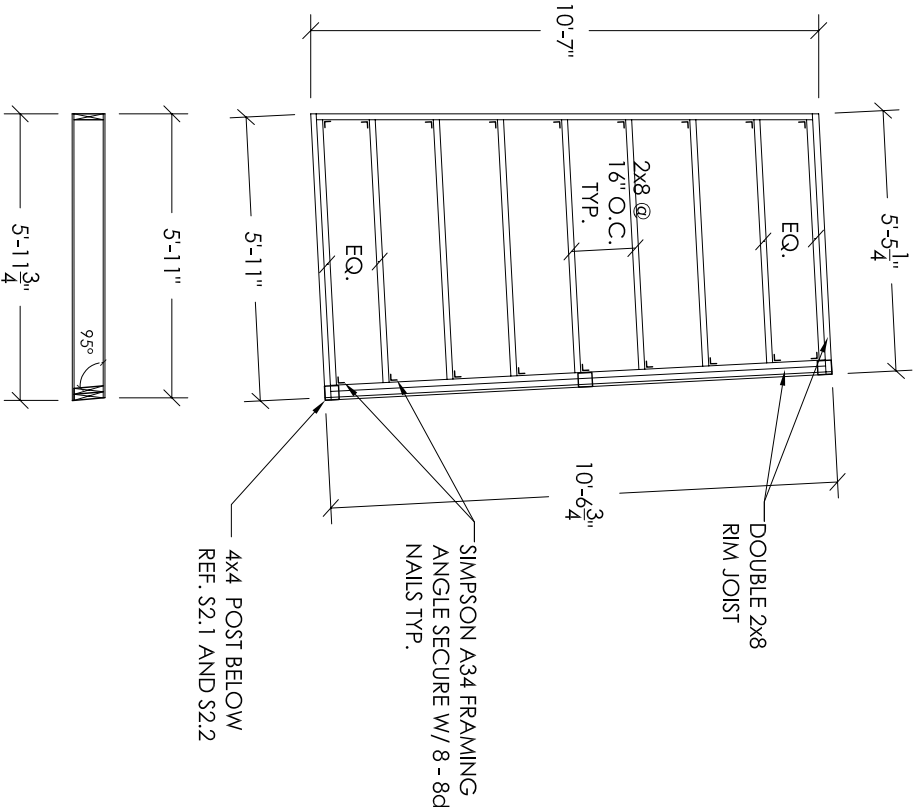
DRAWN BY	PSH
DATE	3 MAY 2007
CHECKED BY	AGG





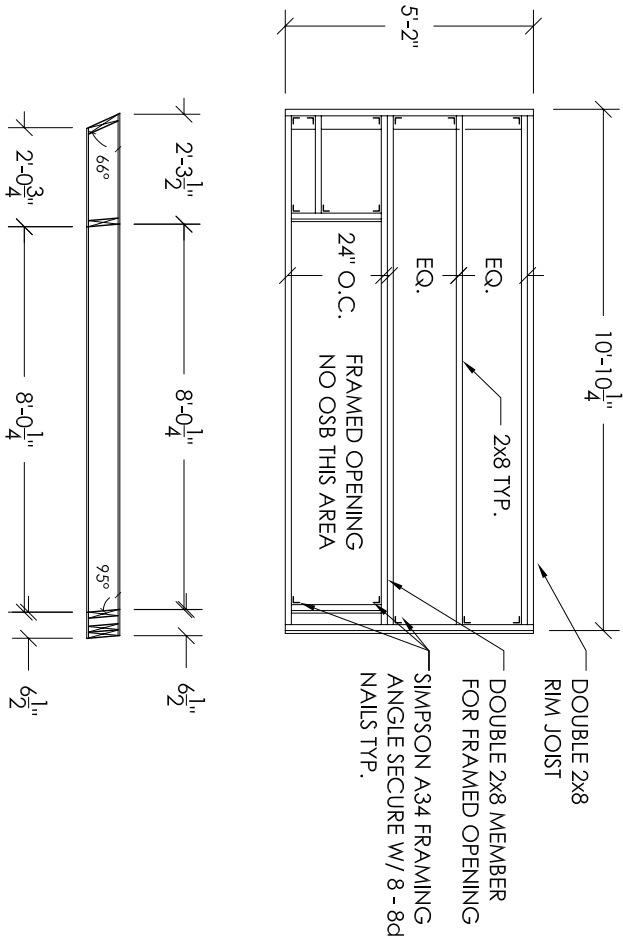
FRAMING ABOVE GLULAM 5
1/8"=1'-0"

0' 1'-0" 4'-0" 6'-0" 10'-0"



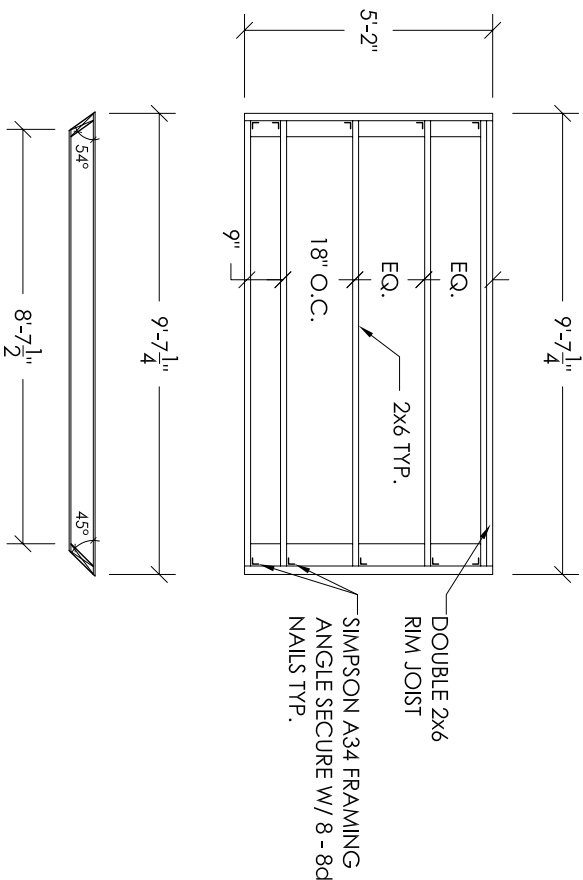
GREEN ROOF FRAMING 4
1/8"=1'-0"

0' 1'-0" 4'-0" 6'-0" 10'-0"



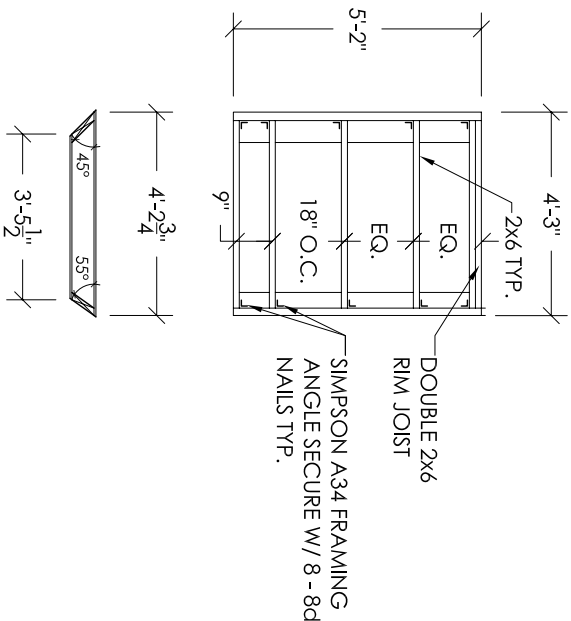
ROOF FRAMING OVER WEST END DECK 3
1/8"=1'-0"

0' 1'-0" 4'-0" 6'-0" 10'-0"



UPPER CANTED WALL FRAMING 2
1/8"=1'-0"

0' 1'-0" 4'-0" 6'-0" 10'-0"

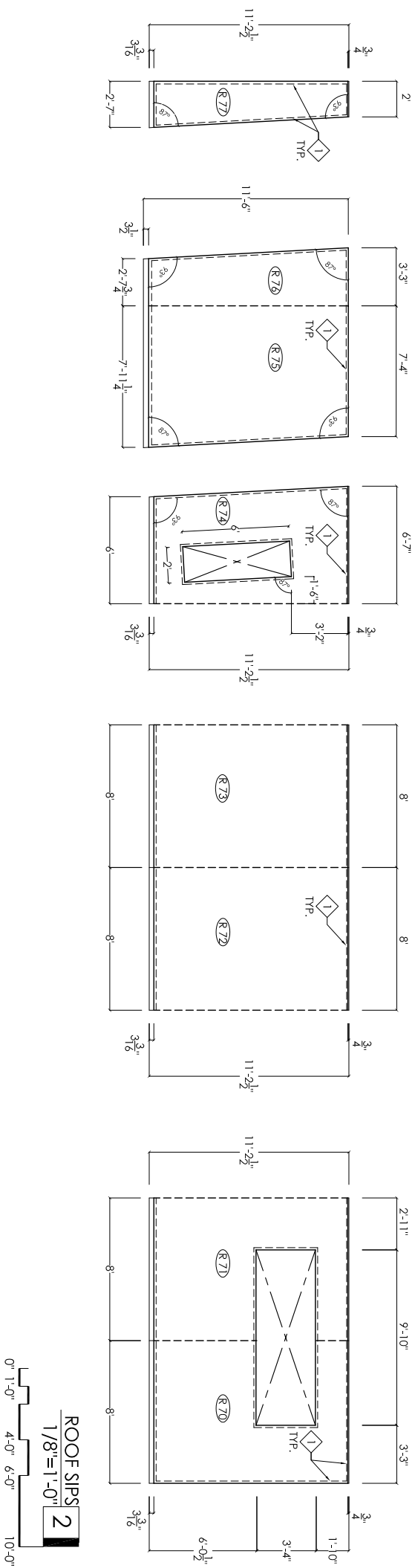


LOWER CANTED WALL FRAMING 1
1/8"=1'-0"


0' 1'-0" 4'-0" 6'-0" 10'-0"

GENERAL NOTES

- *Simpson A34 Framing Angles shall be installed on one side of all structural framing members w/ 8 - 8d x 1 ¹/₂" nails
- *2x8 roof frames shall be sheathed with ³/₈" OSB using 8d x 1 ¹/₂" nails @ 12" O.C.
- *2x6 frames shall be sheathed with ¹/₂" OSB using 8d nails @ 12" O.C.
- *Overall dimensions are taken from the outside edges of the framing members, NOT from the edges of OSB
- *Framing members shall be #1 grade, pressure treated douglas fir or better
- *Fasteners shall be hot-dipped zinc coated



LEGEND

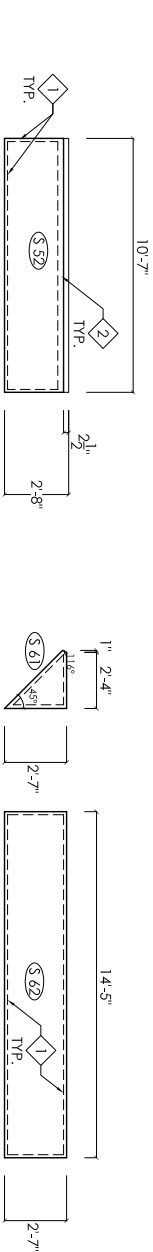
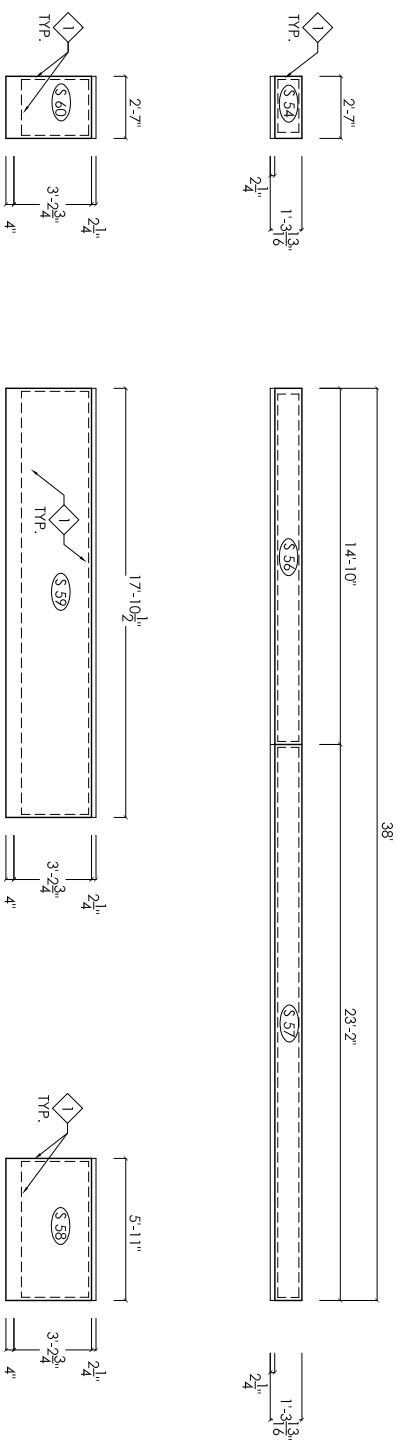
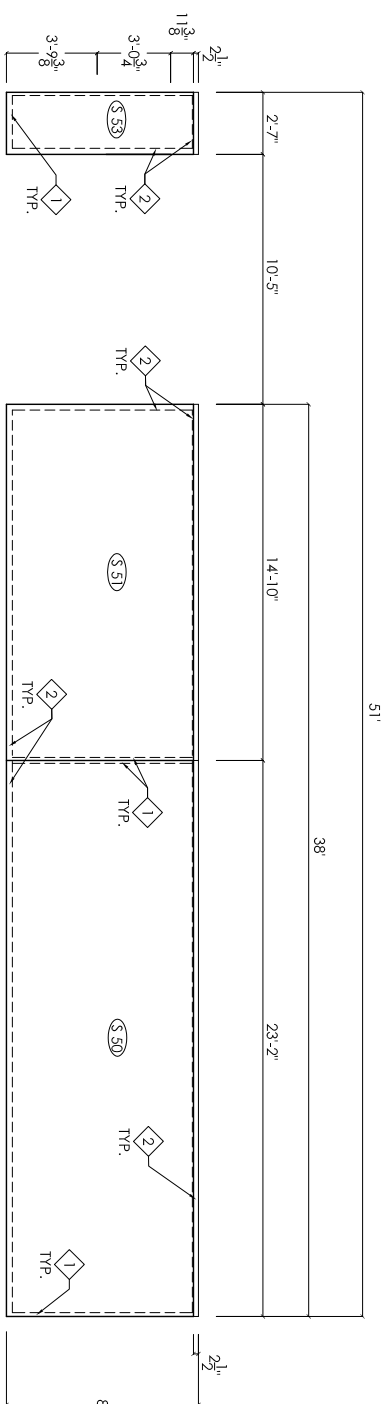
Spline Relief	_____
Foam Relief	-----
Top/Front OSB Skin of Panel	_____
Bottom/Rear OSB Skin of Panel	_____
Elec. Chose	-----
Panel Tog	

GENERAL NOTES

- *SIP panels are manufactured by Extreme Panel and individually identified by a letter-number combination
- *Extreme Panel will also provide specified quantities of
 - 2x4, 2x6 MSR 1650 or better grade lumber
 - 2x8 SPF or better lumber (no wains or knots)
 - $\frac{3}{8}$ " regular grade plywood for spline connections
 - $\frac{1}{2}$ " OSB structural grade facings for SIP panels
 - 8", 10" panel screws w/ washers
- panel mastic
- Sip tape
- foam sealant
- *The 13 ft x 5 ft x 32'-6" k manufactured by Gruen+world Engineered laminates and will ship thru Extreme Panel
- *all wall panels are 6 $\frac{1}{2}$ " SIPs
- *all roof panels are 8 $\frac{1}{4}$ " SIPs
- *all punched opening have a single 2x foam filler
- *fasteners shall be no-dipped zinc coated
- *all measurements are taken from outside edge of structural elements

KEYED NOTES

- 1 Single 2x Foam Relief
 - 2 Double 2x Foam Relief

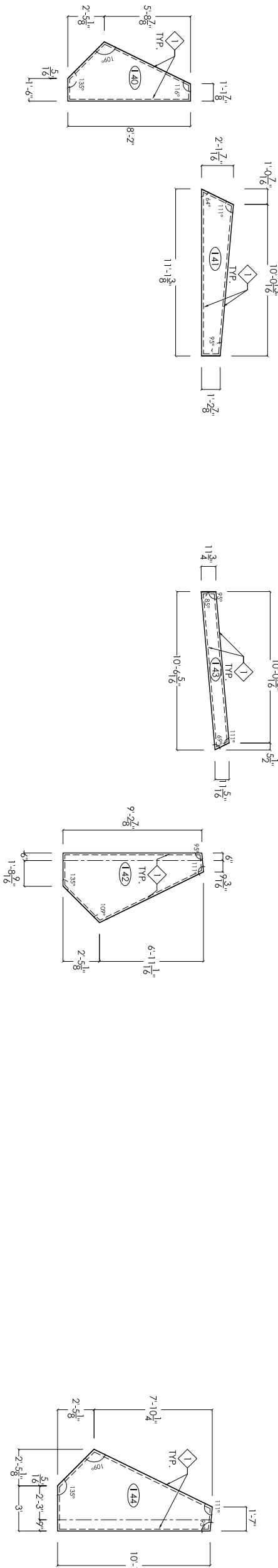


SOUTH WALL SIPS

1/8"=1'-0"

0" 1'-0" 4'-0" 6'-0" 10'-0"

1



INTERIOR WALL SIPs 6
1/8"=1'-0"

INTERIOR WALL SIPs 5
1/8"=1'-0"

INTERIOR WALL SIPs 3
1/8"=1'-0"

Spline Relief	---
Foam Relief	---
Top/Front OSB Skin of Panel	---
Bottom/Rear OSB Skin of Panel	---
Elec. Chase	---
Panel Tag	○

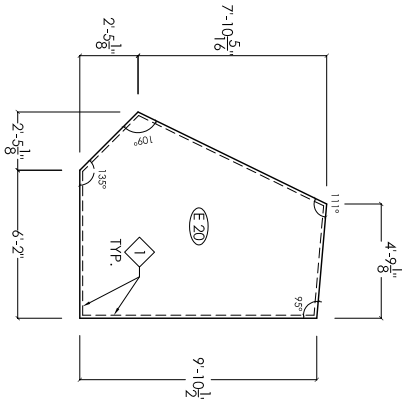
LEGEND

GENERAL NOTES

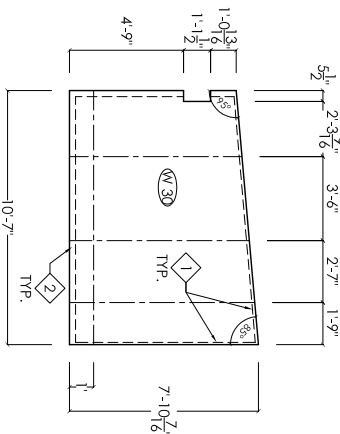
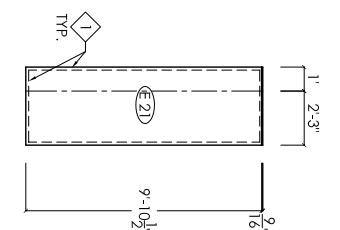
- *SIP panels are manufactured by Extreme Panel and individually identified by a letter-number combination. Extreme Panel will also provide specified quantities of:
 - 2x4, 2x6 MSR 1650 or better grade lumber
 - 2x8 SPF or better lumber (no wains or knots)
 - 5/8" regular grade plywood for spline connections
 - 1 7/8" OSB structural grade facings for SIP panels
 - 8" & 10" panel screws w/ washers
 - panel mastic
 - SIP tape
 - foam sealant
- *the 13 1/2" x 5 3/8" x 32'-6" is manufactured by Guen-wold Engineered Laminates and will ship thru Extreme Panel
- *all wall panels are 6 3/4" SIPs
- *all roof panels are 8 1/4" SIPs
- *all punched opening have a single 2x foam relief
- *fasteners shall be hot-dipped zinc coated
- *all measurements are taken from outside edge of structural elements

KEYED NOTES

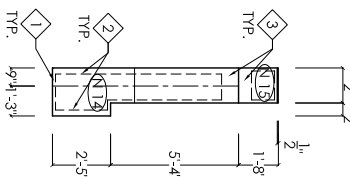
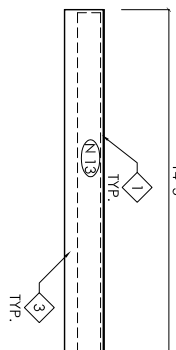
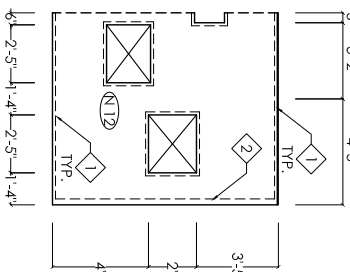
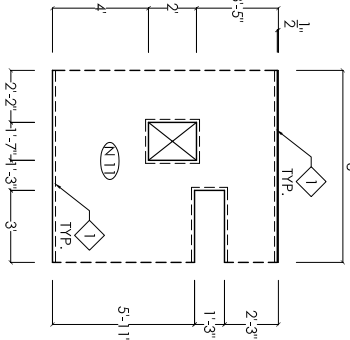
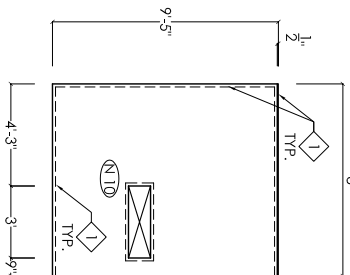
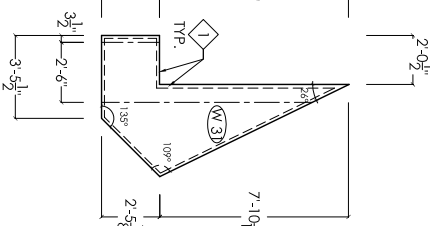
- 1 Single 2x Foam Relief
- 2 Double 2x Foam Relief
- 3 Foam Relief for Glulam Beam



EAST WALL SIPs 4
1/8"=1'-0"



WEST WALL SIPs 2
1/8"=1'-0"



NORTH WALL SIPs 1
1/8"=1'-0"

DRAWN BY	PSH
DATE	3 MAY 2007
CHECKED BY	AGC

SIP SCHEDULE













ELECTRICAL PANEL 240V 1P - 100 AMP MAIN

CKT	SIZE	SERVICE
ER1	1P - 20 AMP	TECH WALL & EXT. WEST WALL
ER2	1P - 20 AMP	LIVING ROOM SERVICES
ER3	2P - 20 AMP	A.H.U.
ER4	2P - 30 AMP	HEAT STRIP
ER5	2P - 20 AMP	OVEN
ER6	2P - 20 AMP	RANGE
ER7	2P - 50 AMP	A.C. CONDENSER
ER8	2P - 20 AMP	DISHWASHER
ER9	1P - 20 AMP	KITCHEN SERVICES
ER10	1P - 15 AMP	REFRIGERATOR
ER11	2P - 30 AMP	WASHER
ER12	2P - 30 AMP	DRYER
ER13	2P - 60 AMP	INSTANT HOT WATER HEATER
ER14	1P - 15 AMP	EXT. PUMP
ER15	1P - 15 AMP	BATHROOM SERVICES
ER16	1P - 20 AMP	BEDROOM SERVICES
ER17	1P - 15 AMP	CAR PLUG
ER18	1P - 15 AMP	GREY WATER PUMP
ER19	1P - 15 AMP	MICROWAVE
ER20	1P - 15 AMP	SMOKE DETECTOR 1
ER21	1P - 15 AMP	CARBON MONOXIDE DETECTOR
ER22	1P - 15 AMP	WEST TECK WALL L.E.D.S
ER23	1P - 15 AMP	ZEN GARDEN L.E.D.S
ER24	1P - 15 AMP	ENTRY L.E.D.S
ER25	1P - 15 AMP	LIVING FLUORESCENT
ER26	1P - 15 AMP	KITCHEN FLUORESCENT
ER27	1P - 15 AMP	BATH L.E.D.S
ER28	1P - 15 AMP	HALLWAY FLUORESCENT
ER29	1P - 15 AMP	BEDROOM FLUORESCENT
ER30	1P - 15 AMP	EAST DECK EXT. L.E.D.S

SYSTEMS COMPONENTS SOLAR ELECTRONICS

- INVERTER: XANTREX XW4548 (REF SPEC)
- CHARGE CONTROLLER: XW SOLAR CHARGE CONTROLLER (REF SPEC)
- DC AND AC BREAKER BOX: XW POWER DISTRIBUTION PANEL (REF SPEC)
- SYSTEM CONTROL PANEL: XW SYSTEM CONTROL PANEL (REF SPEC)

SYMBOLS LIST

-  FLOOR MOUNTED DUPLEX
-  WALL MOUNIED DUPLEX
-  GFCI DUPLEX MOUNTED @ 42" OFF
-  FLOOR MOUNTED 240V
-  WALL MOUNTED LIGHT SWITCH
-  120V STUBBED OUT ELECTRICAL FROM FLOOR PLATE
-  240V STUBBED OUT ELECTRICAL FROM FLOOR PLATE TO MESANE
-  DEDICATED CONDUIT RUN
-  CIRCUIT LINE
-  SMOKE DETECTOR
-  CARBON MONOXIDE DETECTOR
-  ELECTRICAL SERVICE RUN TAG

SYSTEMS COMPONENTS SOLAR ELECTRONICS AND DATA ACQUISITION

- INVERTER: XANTREX XW4548 (REF SPEC)
- CHARGE CONTROLLER: XW SOLAR CHARGE CONTROLLER (REF SPEC)
- DC AND AC BREAKER BOX: XW POWER DISTRIBUTION PANEL (REF SPEC)
- SYSTEM CONTROL PANEL: XW SYSTEM CONTROL PANEL (REF SPEC)
- DATA ACQUISITION: LEVITON 47606-BTP FOR COAX AND PHONE (REF SPEC)
- PANEL TRACKING CONTROL: CONTROL SYSTEM FOR 2-AXIS AND 1-AXIS TRACKING PANELS (IN-HOUSE DESIGN)

SYSTEM INTEGRATION NOTES

1. BATTERY WIRES ARE RUN THROUGH CEILING AND HOUSE WIRES ARE RUN THROUGH FLOORING
2. WIRES FROM COMBINER BOXES WILL BE RUN FROM ROOF
3. WIRES WILL BE SIZED FOR MAXIMUM CURRENT LOADS
4. BREAKER SIZES ARE FOR MAXIMUM CURRENTS THROUGH DEVICES
5. MULTIPLE CHARGE CONTROLLERS AND COMBINERS ARE NEEDED FOR DIFFERENT PANEL TRACKING SYSTEMS

PV PANEL NOTES

1. PV PANELS CONNECTED AS SHOWN ON DRAWING REPRESENT A SERIES CONNECTION
2. LIGHTNING PROTECTION: ALL PANELS GROUNDED

PV PANEL TRACKING TYPES

- F - FIXED
- 1 - 1 AXIS (ALTITUDE)
- 2 - 2 AXIS (ALTITUDE AND AZIMUTH)

SYSTEM COMPONENTS SOLAR ARRAY

- PV PANELS: BP 7190 (REF SPEC)
- COMBINER BOX: OUTBACK PSPV (REF SPEC)

GENERAL NOTES

1. ALL ELECTRICAL WORK SHALL COMPLY THE RULES OF THE NATIONAL ELECTRICAL CODE AND ANY APPLICABLE CODES.
2. THE MINIMUM SIZE WIRE SHALL BE #12 COPPER AND ALL WIRE NOT ROUTED IN WALLS OR FLOORS ALL BE ENCLOSED IN CONDUIT WITH A MINIMUM SIZE OF 3/4".
3. WIRING FOR 48V DC FIXTURES SHALL BE SIZED FOR VOLTAGE DROP, #10 AWG MINIMUM, INSTALLED IN RIGID ALUMINUM CONDUIT.
4. FOR A TWO-WIRE PV SYSTEM OVER 50 VOLTS (125% OF OPEN-CIRCUIT PV-OUTPUT VOLTAGE), ONE DC CURRENT-CARRYING CONDUCTOR SHALL BE GROUNDED.
5. A PERMANENT LABEL SHALL BE APPLIED NEAR THE PV DISCONNECT SWITCH THAT CONTAINS: OPERATING CURRENT, OPERATING VOLTAGE, MAXIMUM SYSTEM VOLTAGE, SHORT-CIRCUIT CURRENT
6. DISCONNECT SWITCH SHALL ADHERE TO MAXIMUM HEIGHT REQUIREMENT FOR OPERATION.
7. ALL FIRE-RATED WALL PENETRATIONS MUST BE FIRE STOPPED, INCLUDING ANY PIPING CONDUIT, CABLE TRAYS, SUPER STRUCTURE, ETC.
8. PROVIDE ALL REQUIRED RULBOXES AND MISCELLANEOUS HARDWARE FOR ALL CONDUIT RUNS. ALL CONDUIT SHALL BE PROPERLY SUPPORTED.
9. UNLESS NOTED OTHERWISE, ALL EQUIPMENT INSTALLED INDOORS SHALL HAVE NEMA 1 ENCLOSURES AND ALL EQUIPMENT INSTALLED OUTDOORS SHALL HAVE NEMA 3R ENCLOSURES.
10. UNLESS NOTED OTHERWISE, ALL CONDUIT RUN WITHIN OR THROUGH DC POWER ROOMS SHALL BE RIGID ALUMINUM.
11. PROVIDE FLEXIBLE CONDUIT CONNECTION AT ALL EQUIPMENT SUBJECT TO VIBRATION.
12. ALL PANELBOARDS AND ELECTRICAL DISTRIBUTION EQUIPMENT FURNISHED OR UTILIZED UNDER THIS PROJECT SHALL BE PROVIDED WITH THE PHENOLIC NAMEPLATES INDICATING THE PANEL NAME AND WHERE IT IS FED FROM.
13. UNLESS NOTED OTHERWISE, ALL PANELBOARDS, CONTROL PANELS, JUNCTION BOXES, DEVICES, CONDUIT, ETC SHALL BE SURFACE MOUNTED.

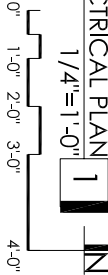
GROUNDING NOTES

- G.1. GROUND ALL ELECTRICAL WORK IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE.
- G.2. ALL GROUND CABLE SHALL BE STRANDED COPPER WITH TYPE RHW INSULATION AND GREEN OR GRAY OUTER TEXTILE OR COTTON BRAID JACKET IN ACCORDANCE WITH VERIZON GROUNDING STANDARDS.
- G.3. GROUND CONDUCTORS LARGER THAN #6 SHALL HAVE A MINIMUM BENDING RADUIS OF 12". GROUNDING CONDUCTORS #6 AND SMALLER SHALL HAVE A MINIMUM BENDING RADIUS OF 8".
- G.4. ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL GROUNDING INSTALLATION AND CONSTRUCTION MAY VARY DUE TO SITE SPECIFIC CONDITIONS.
- G.5. ALL GROUND CONNECTIONS SHALL BE CLEANED & BRIGHTENED METALLIC SURFACE. UTILIZE STAR WASHERS AT GROUND CONNECTIONS.
- G.6. PROVIDE A #1/0 GROUND LOOP AWG GREEN OR GRAY INSULATED COPPER GROUND WIRE, CCGC, FROM THE EXISTING COGB AND DEAD END AS SHOWN. PROVIDE A HEAT SHRINK BOOT AT END.
- G.7. ALL CONDUITS TO BE GROUNDED USING BONDING BUSHINGS AT EACH END.

SYSTEM COMPONENTS

- BATTERY: CONCORDE PVX-9150T, 2V, 915AH @ C/24 (REF SPEC)

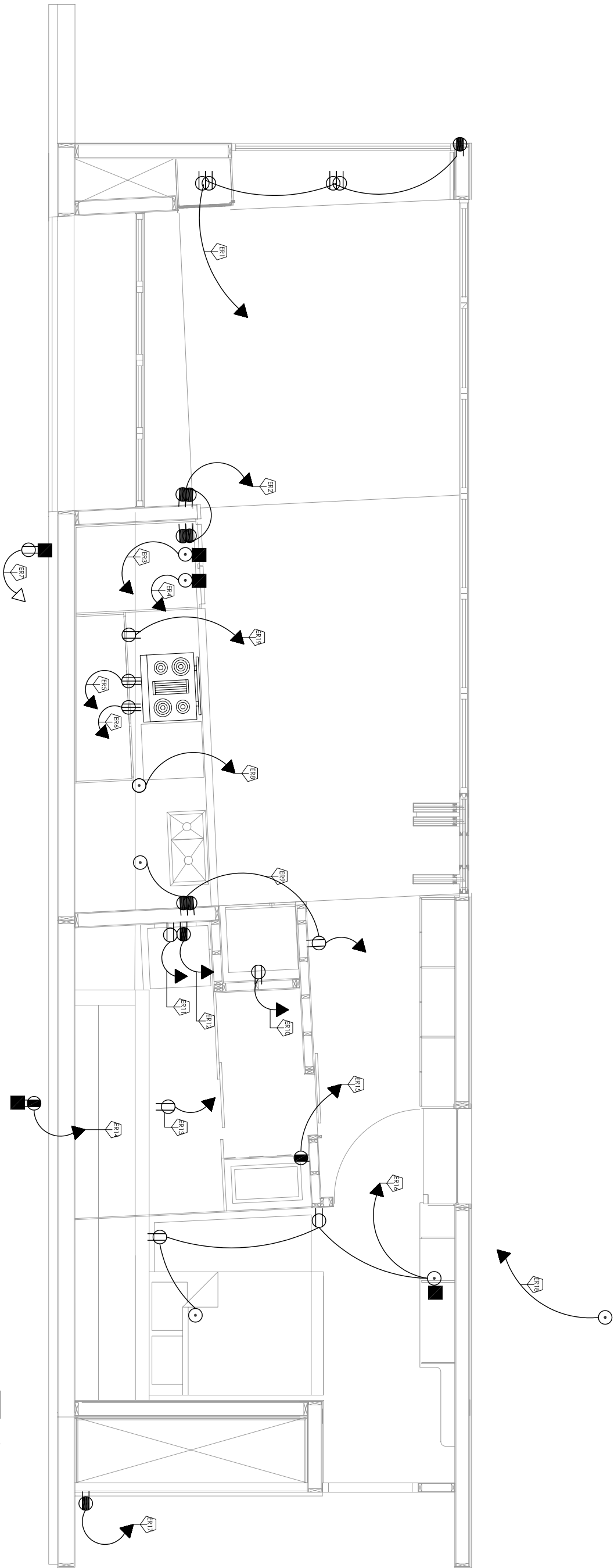
ELECTRICAL PLAN



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DATE _____
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GENERAL NOTES

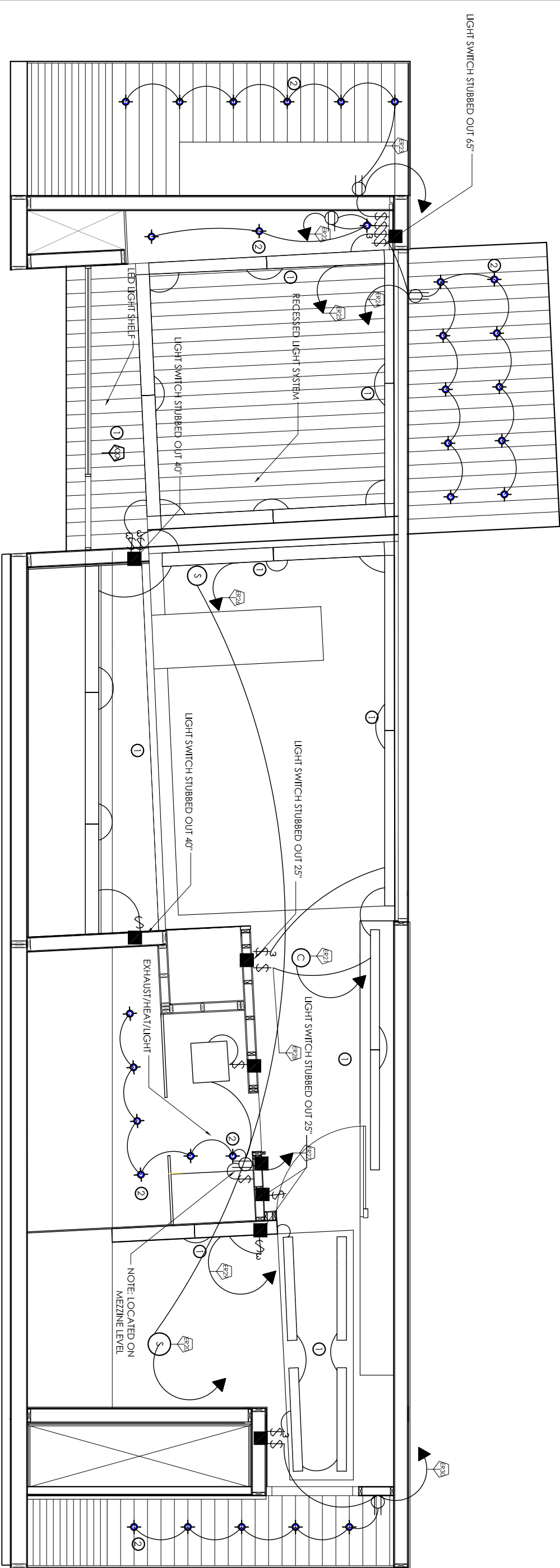
E0.1



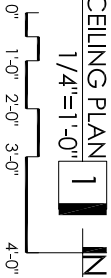
ELECTRICAL PLAN 1
1/4"=1'-0"
0' 1'-0" 2'-0" 3'-0" 4'-0"

SYMBOLS LIST

- FLOOR MOUNTED DUPLEX
- WALL MOUNTED DUPLEX
- GFCI DUPLEX MOUNTED @ 42" OFF
- FLOOR MOUNTED 240V
- WALL MOUNTED LIGHT SWITCH
- 120V STUBBED OUT ELECTRICAL FROM FLOOR PLATE
- 240V STUBBED OUT ELECTRICAL FROM FLOOR PLATE TO MESANINE
- DEDICATED CONDUIT RUN
- CIRCUIT LINE
- SMOKE DETECTOR
- CARBON MONOXIDE DETECTOR
- ELECTRICAL SERVICE RUN TAG



LIGHTING REFLECTED CEILING PLAN 1



SYMBOLS LIST

- FLOOR MOUNTED DUPLEX
- WALL MOUNTED DUPLEX
- GFCI DUPLEX MOUNTED @ 42" OFF
- FLOOR MOUNTED 240V
- WALL MOUNTED LIGHT SWITCH
- 120V STUBBED OUT ELECTRICAL FROM FLOOR PLATE
- 240V STUBBED OUT ELECTRICAL FROM FLOOR PLATE TO MESANINE
- DEDICATED CONDUIT RUN
- CIRCUIT LINE
- SMOKE DETECTOR
- CARBON MONOXIDE DETECTOR
- ELECTRICAL SERVICE RUN TAG

SYSTEMS COMPONENTS SOLAR ELECTRONICS AND DATA ACQUSITION

- INVERTER: XANTREX XW4548 (REF SPEC)
- CHARGE CONTROLLER: XW SOLAR CHARGE CONTROLLER (REF SPEC)
- DC AND AC BREAKER BOX: XW POWER DISTRIBUTION PANEL (REF SPEC)
- SYSTEM CONTROL PANEL: XW SYSTEM CONTROL PANEL (REF SPEC)
- DATA ACQUISITION: LEWITON 47606-BTP FOR COAX AND PHONE (REF SPEC)
- PANEL TRACKING CONTROL: CONTROL SYSTEM FOR 2-AXIS AND 1-AXIS TRACKING PANELS (IN-HOUSE DESIGN)

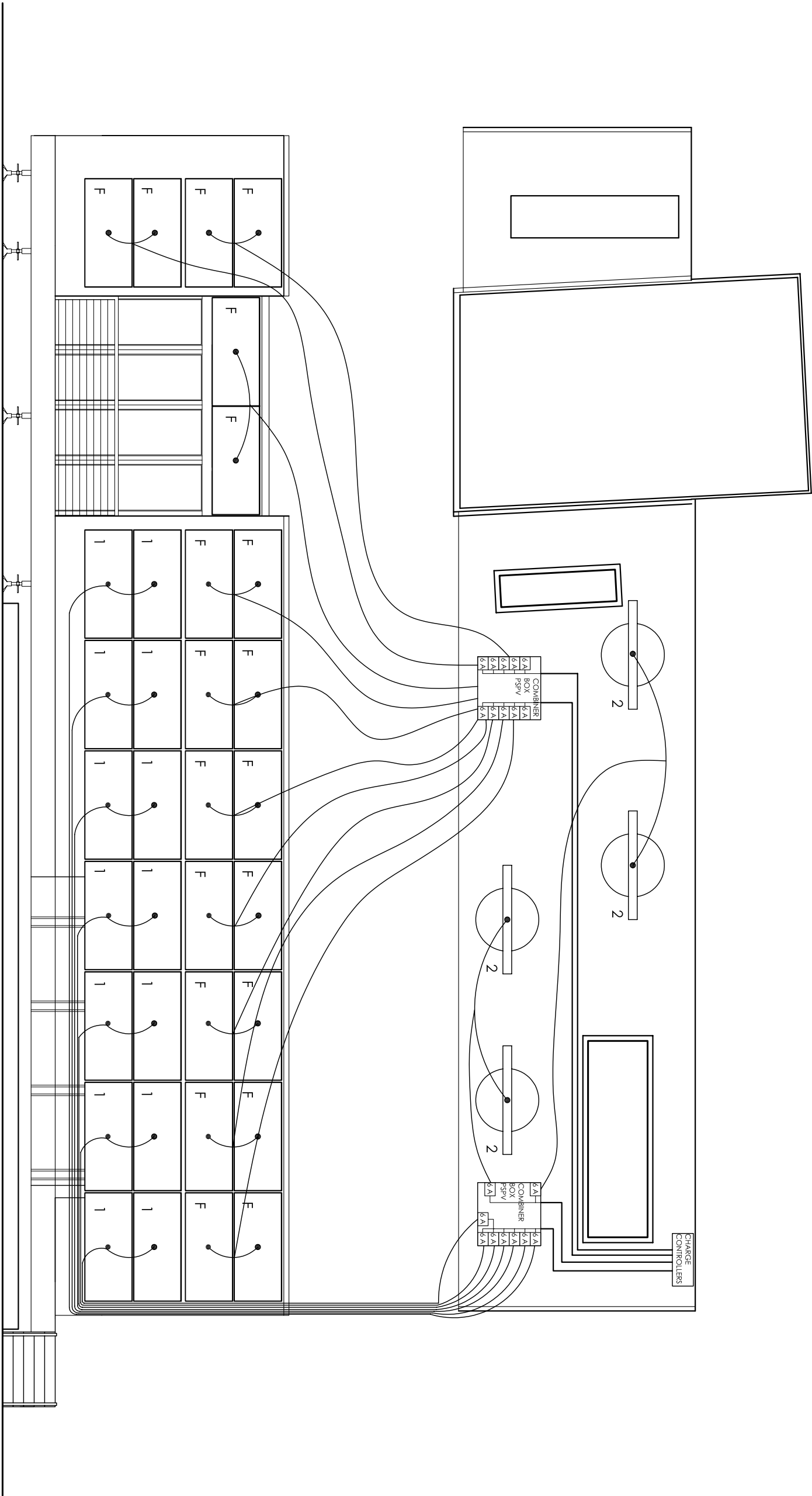


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DATE _____
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P.V. WIRING
SECTION

P.V. WIRING SECTION 1
1/2"=1'-0"
0" 6" 1'-0" 3'-0"

E1.3



SOLAR PANEL



- PV PANELS: BP 7190 (REF SPEC)
- COMBINER BOX: OUTBACK PSPV (REF SPEC)

SYSTEM COMPONENTS SOLAR ARRAY

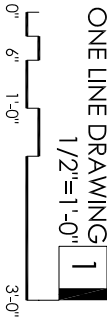
- F - FIXED
- 1 - 1 AXIS (ALTITUDE)
- 2 - 2 AXIS (ALTITUDE AND AZIMUTH)

PV PANEL TRACKING TYPES

PV PANEL NOTES

1. PV PANELS CONNECTED AS SHOWN ON DRAWING REPRESENT A SERIES CONNECTION
2. LIGHTNING PROTECTION: ALL PANELS GROUNDED

SOLAR ARRAY ONE LINE DRAWING



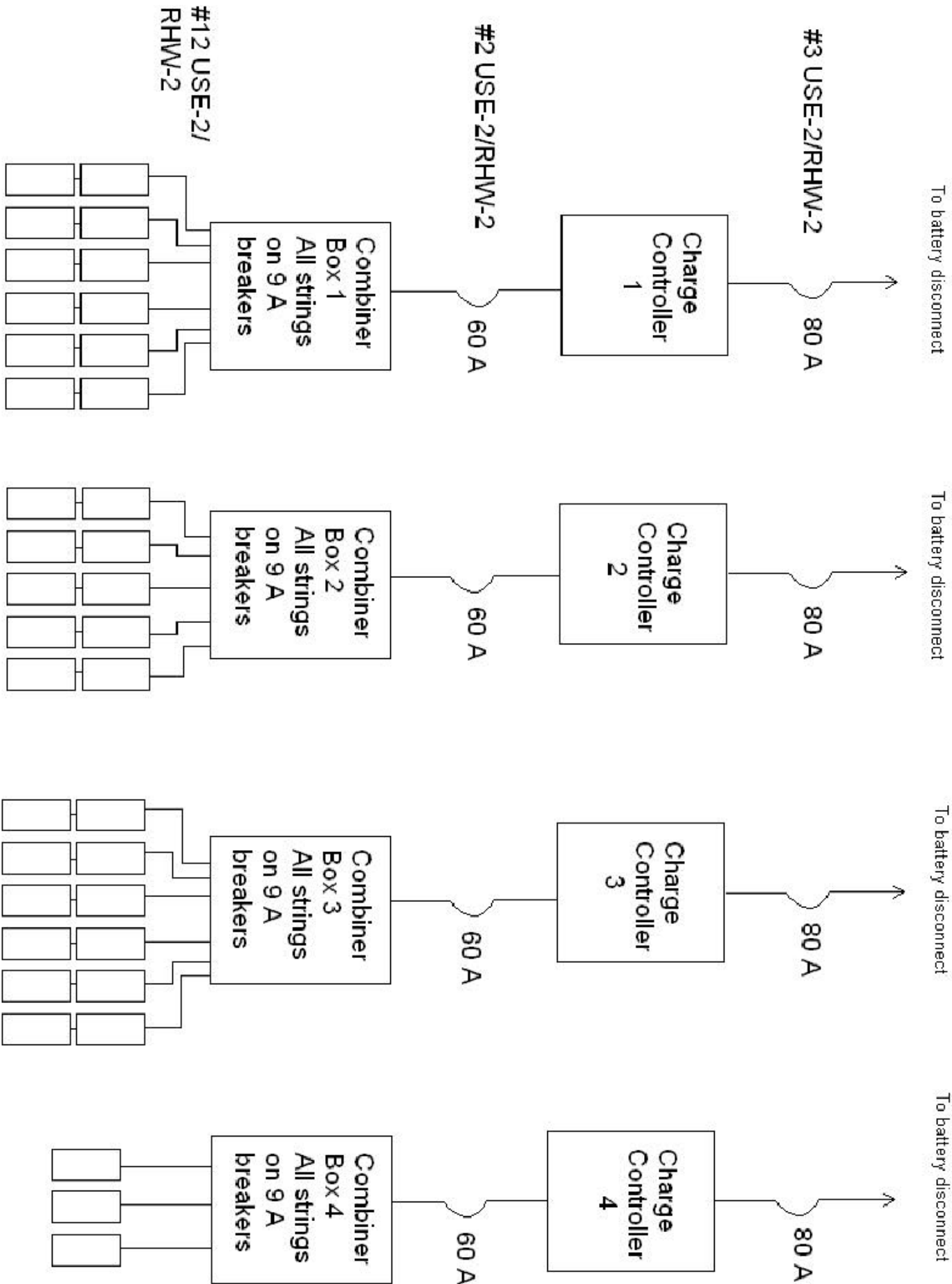
SOLAR
ARRAY

DRAWN BY _____
DATE _____
CHECKED BY _____

PV Array to Battery Disconnect Conductors and Overcurrent Protection

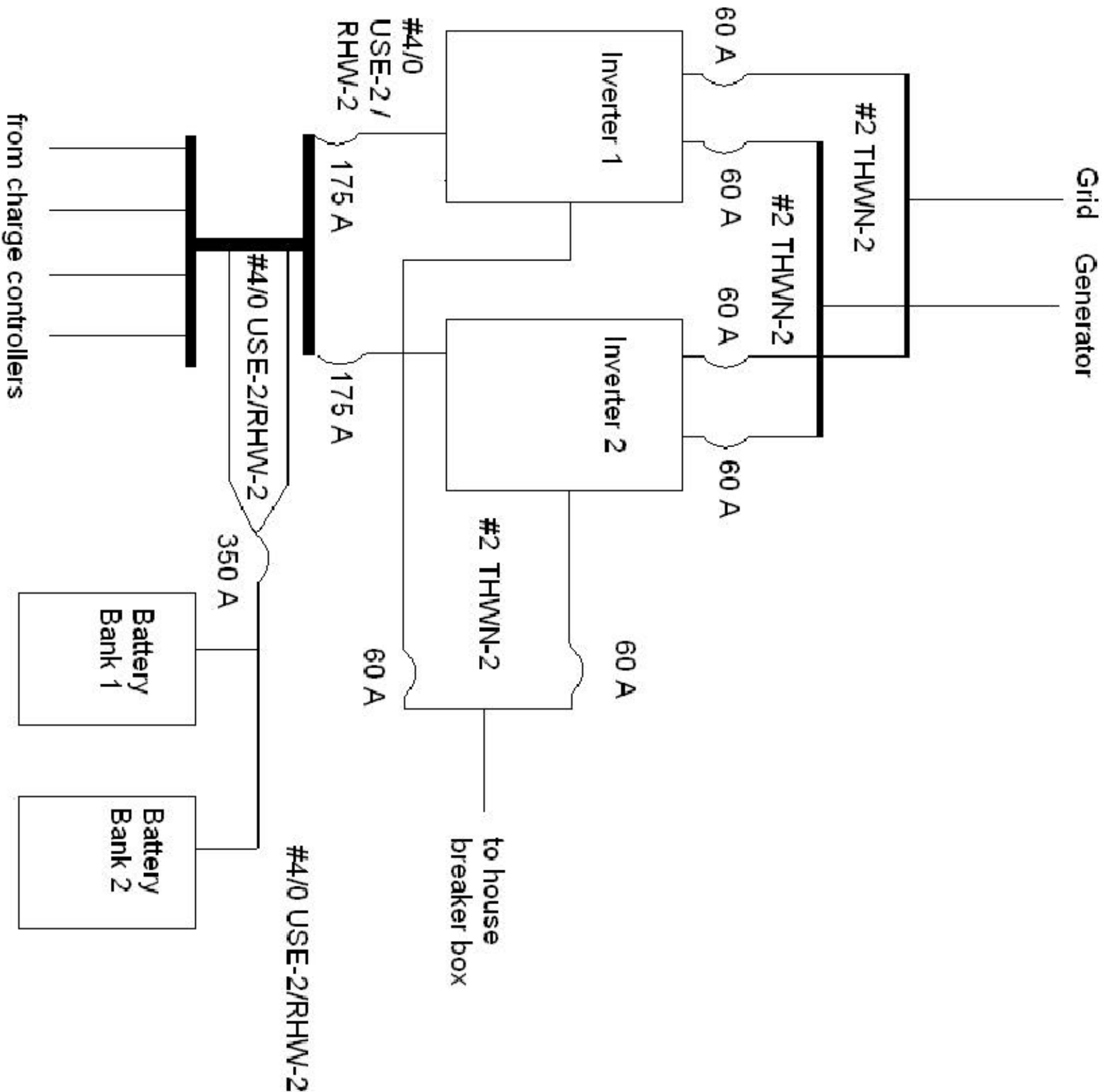
SYSTEMS COMPONENTS SOLAR ELECTRONICS

- INVERTER: XANTREX XW4548 (REF SPEC)
- CHARGE CONTROLLER: XW SOLAR CHARGE CONTROLLER (REF SPEC)
- DC AND AC BREAKER BOX: XW POWER DISTRIBUTION PANEL (REF SPEC)
- SYSTEM CONTROL PANEL: XW SYSTEM CONTROL PANEL (REF SPEC)



PV ARRAY 1
NOT TO SCALE

Inverters and Battery Wiring and Overcurrent Protection

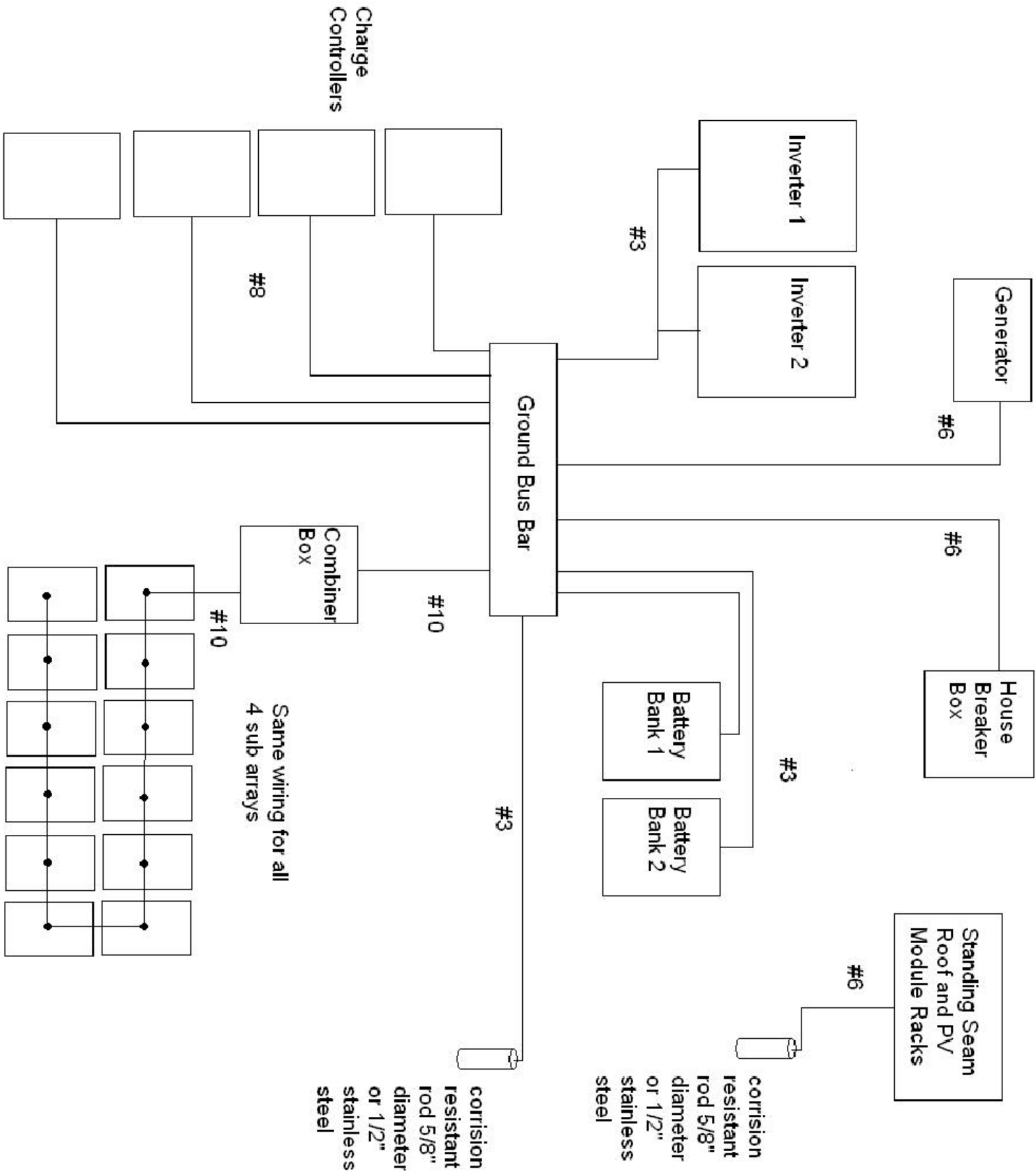


INVERTERS 1
NOT TO SCALE

DRAWN BY: _____
DATE: _____
CHECKED BY: _____

SOLAR
SYSTEM
ELECTRONICS

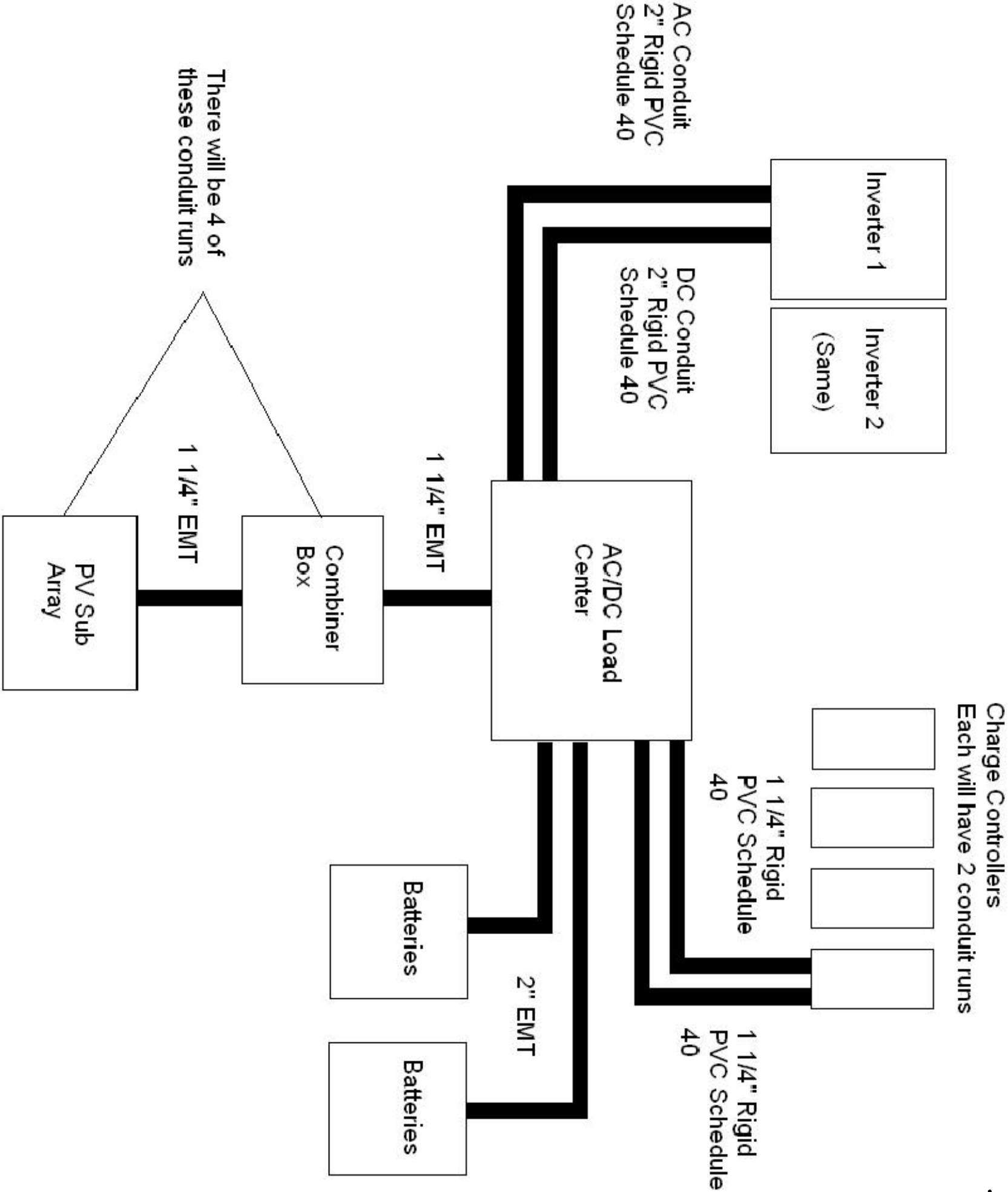
E1.6



GROUNDING
1
NOT TO SCALE

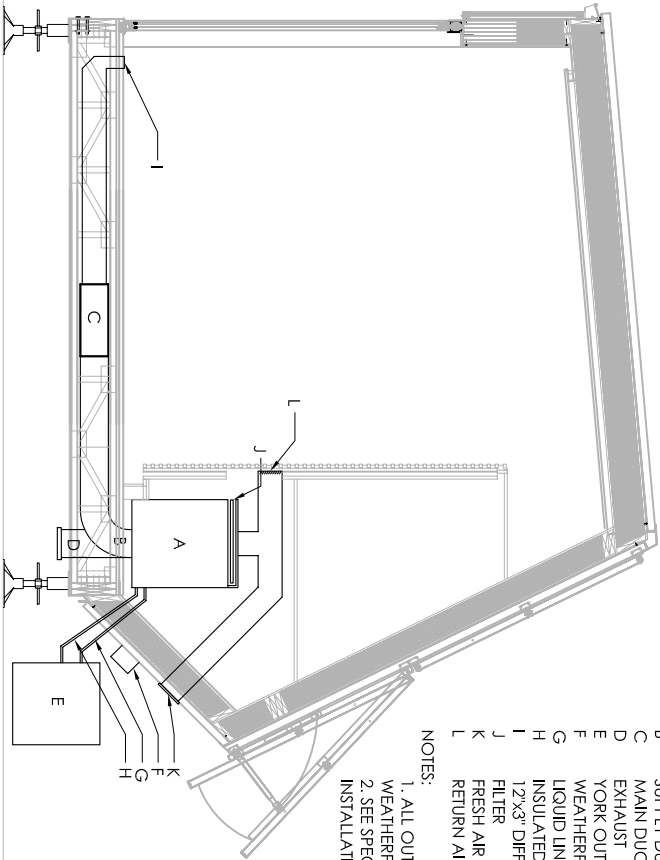
SYSTEM COMPONENTS

- BATTERY: CONCORDE PVX-9150T, 2V, 91.5AH @ C/24 (REF SPEC)

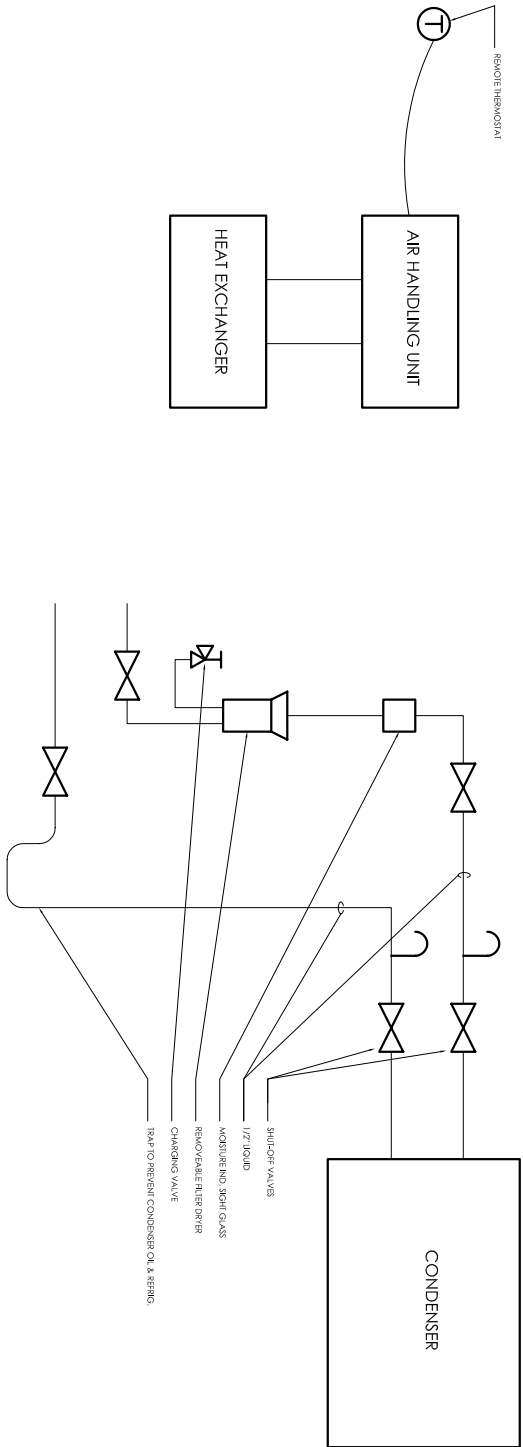


- A MODULAR AIR HANDLER - MODEL N*AH
- B SUPPLY DUCT
- C MAIN DUCT 18"x7"
- D EXHAUST
- E YORK OUTDOOR SPLIT-SYSTEM HEAT PUMP
- F WEATHERPROOF DISCONNECT SWITCH
- G LIQUID LINE
- H INSULATED VAPOR LINE
- I 12"x3" DIFFUSER
- J FILTER
- K FRESH AIR INTAKE
- L RETURN AIR VENT

NOTES:
1. ALL OUTDOOR WIRING MUST BE WEATHERPROOF.
2. SEE SPEC FOR MODEL NUMBERS AND INSTALLATION INSTRUCTIONS.



AC SCHEMATIC DIAGRAM 3
N.T.S. 3

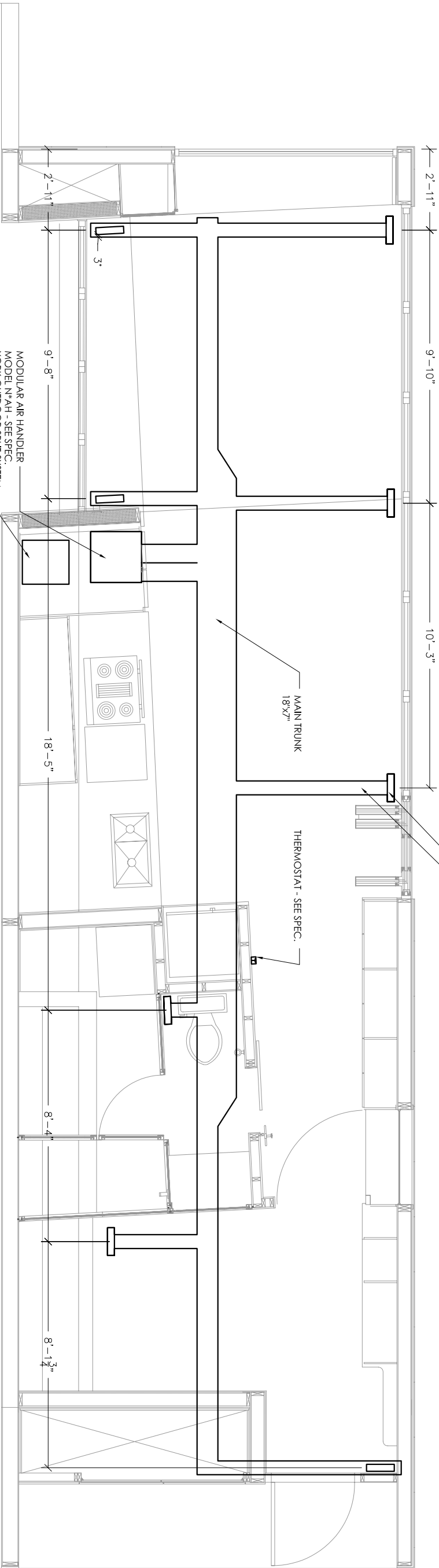


DIAGRAMATIC SECTION THROUGH MECHANICAL CLOSET 2
1/4"=1'-0" 2

12" x 3" DIFFUSER
6" ROUND DUCT

THERMOSTAT - SEE SPEC.

MAIN TRUNK
18"x7"



DUCT/DIFFUSER PLAN 1
1/4"=1'-0" 1

GENERAL NOTES

- * all ductwork to be installed after completion of floor plate
- * fresh air intake occurs atleast a minimum of 12' from and exhaust air
- * all secondary lines will be 6" in diameter

MECHANICAL SCHEDULE

SYMBOL	DESCRIPTION	MANUFACTURER	MODEL #	SUPPLYING	VOLTAGE	CAPACITY	PHASE	REMARKS
M 1	AIR HANDLING UNIT	UNITARY PRODUCTS GROUPS	N*AH	ENTIRE HOUSE	198-264	SEE AIRFLOW TABLE	1	HARDWIRED TO A 220 V LINE
M 2	OUTDOOR SPLIT SYSTEM HEAT PUMP	UNITARY PRODUCTS GROUPS	12	ENTIRE HOUSE	220	SEE AIRFLOW TABLE	1	HARDWIRED TO A 220 V LINE
M 3	PEX TUBING - QPEXBAR	ZURN	QH3P	ENTIRE HOUSE	N/A	.0092 GAL/FT	1	

EXHAUST FAN SCHEDULE

SYMBOL	MANUFACTURER	MODEL #	TYPE	SERVING	CFM	VOLT-PH	MAX SONES
EF 1	TAMARACK TECHNOLOGIES	WASTON	DUCTED	BATHROOM, KITCHEN	115	115-1	53 DB

GRILLE SCHEDULE

SYMBOL	MANUFACTURER	MATERIAL	FINISH	MOUNTING	REMARKS
G 1	CUSTOM BY BUILDER	3/4" ASH PLYWOOD	CLEAR COAT	SURFACE	DETAILS THIS PAGE

TOTAL HOUSING LOADS

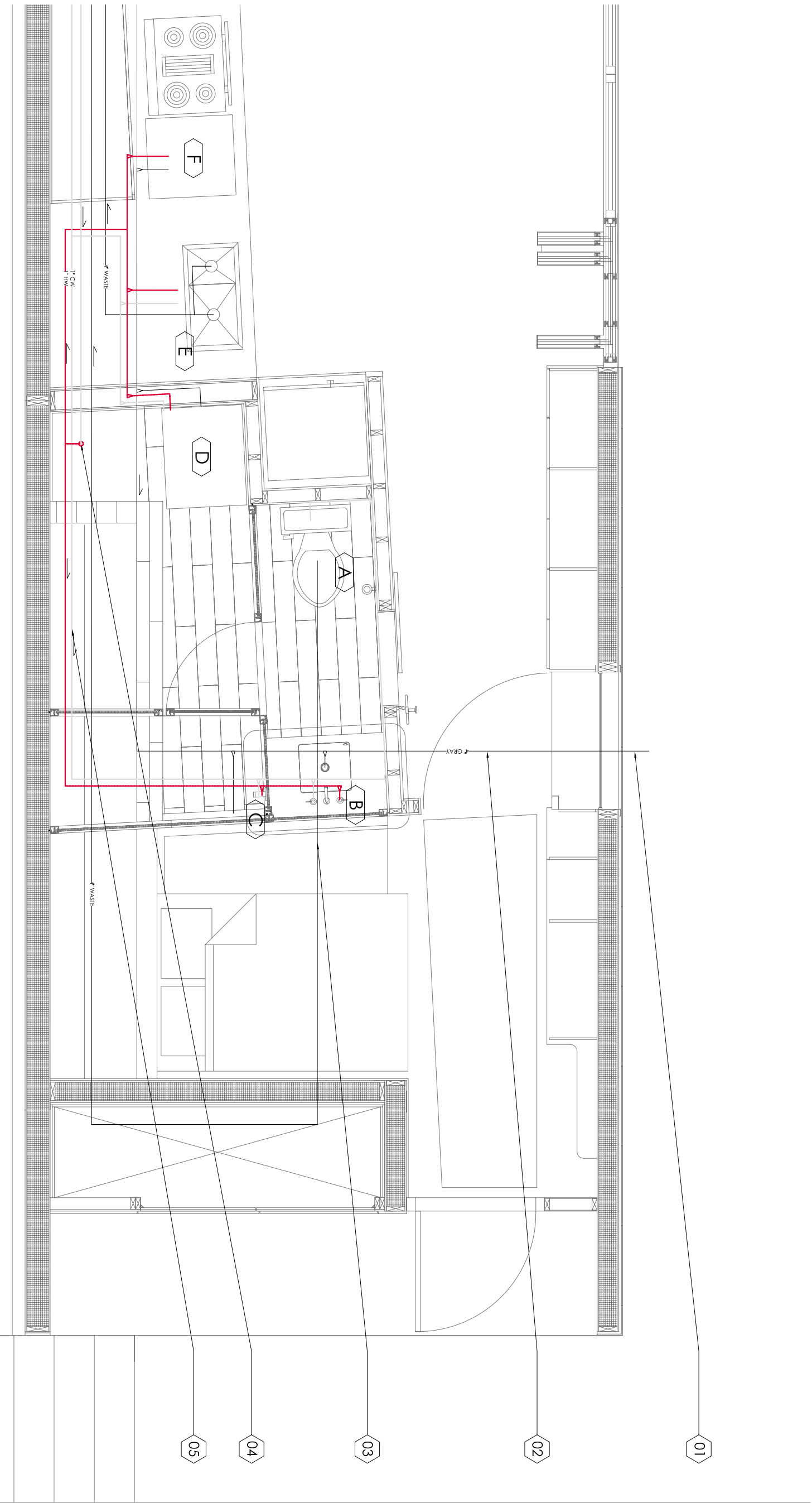
	Btu/H	TONS
BATHROOM	2626	0.2
CORRIDOR	222	0.0
LIVING ROOM	7131	0.6
BEDROOM	5489	0.5
KITCHEN	7386	0.6
HOUSE TOTAL	22850	1.9

AIRFLOW FOR EACH ROOM

	TONS	FRACTION	CFM
BATHROOM	0.2	0.105	84
CORRIDOR	0.0	0.000	0
LIVING ROOM	0.6	0.316	253
BEDROOM	0.5	0.263	211
KITCHEN	0.6	0.316	253

NOTES AND LEGEND

- 01 STUBBED OUT P.V.C. PIPE 6"
- 02 GRAY WATER PIPE TO GRAY WATER COLLECTION SYSTEM (LOCATED TO SOUTH OF HOUSE)
- 03 WATER WATER PIPE TO WASTE SOLIDS OF HOUSE
- 04 HOT WATER FROM DOMESTIC HOT WATER HEATER TO BATHROOM
- 05 COLD WATER FROM SPRAY TANK (LOCATE TO SOUTH OF HOUSE)
- A PLUMBING SCHEDULE REFERENCE SEE P. 1.3



PLUMBING PLAN 1
3/8"=1'-0"
0" 1'-0" 2'-0" 3'-0" 4'-0"

DRAWN BY: PSH
DATE: 3 MAR 2007
CHECKED BY: _

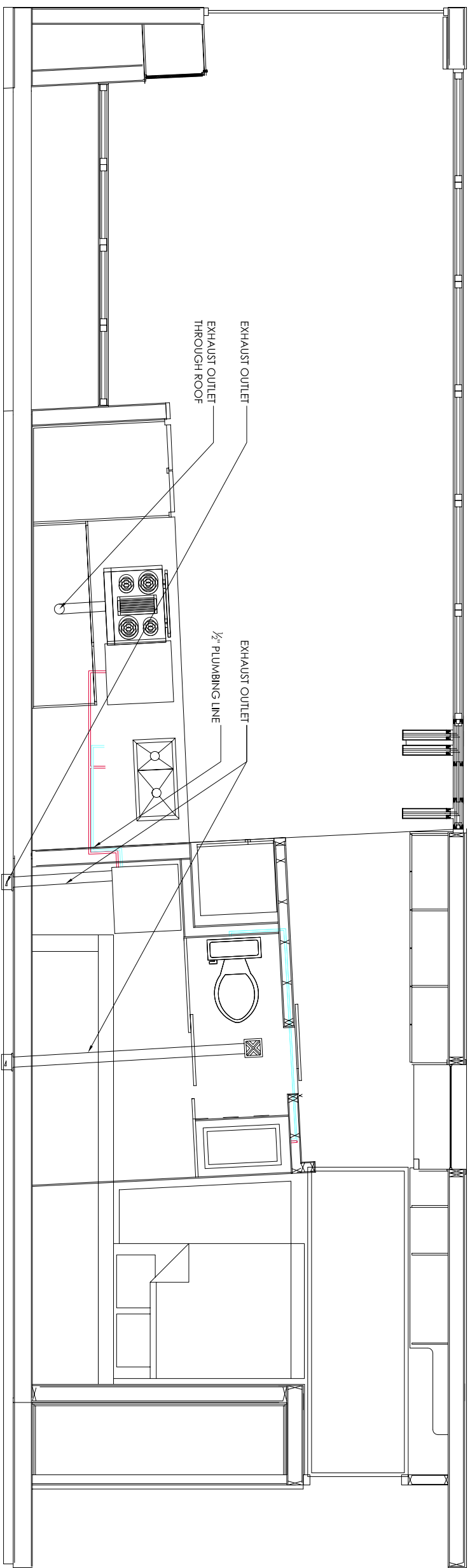
PLUMBING
PLAN

P1.2



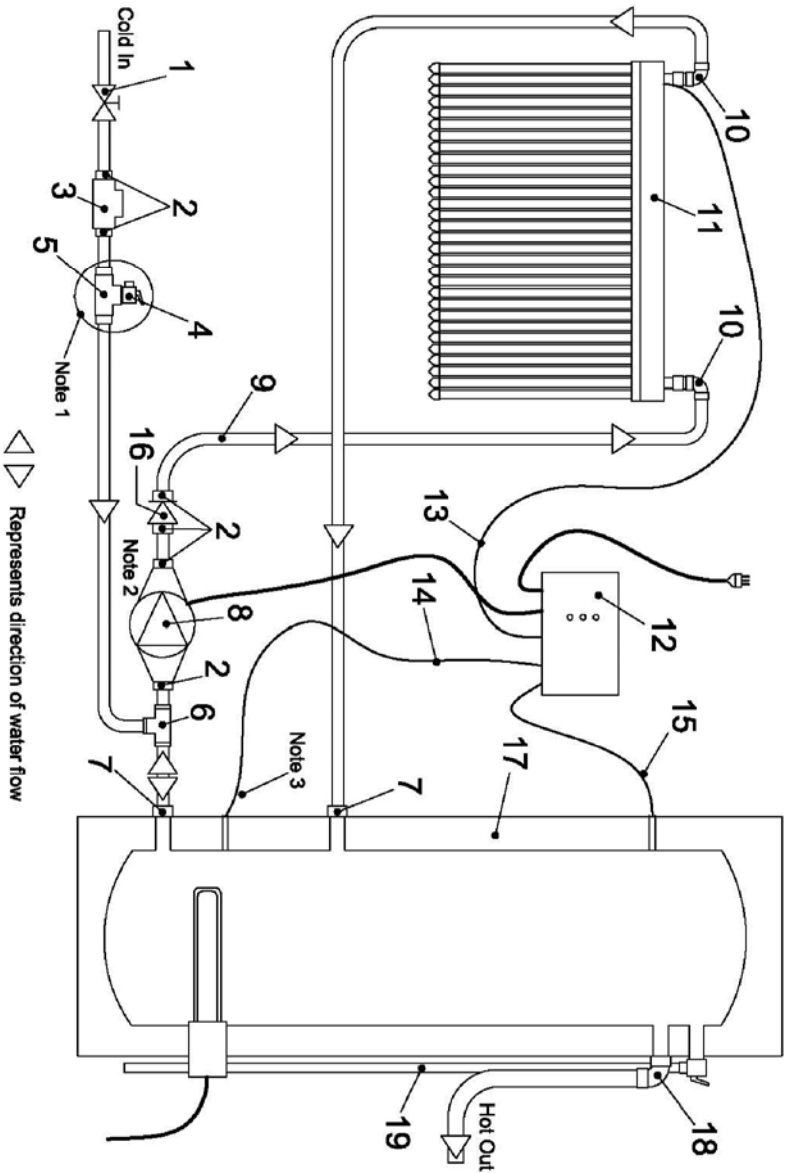
NOTES AND LEGEND

- | | |
|----|---|
| 01 | SHUTTED OUT PVC PIPE & |
| 02 | GRAY WATER PIPE TO GRAY WATER TANK LOCATED TO NORTH OF HOUSE |
| 03 | WASTE WATER PIPE TO WASTE WATER TANK LOCATED TO SOUTH OF HOUSE |
| 04 | HOT WATER FROM DOMESTIC HOT WATER TANK AND RINOSPECIFIC HEATER LOCATED ABOVE BATHROOM |
| 05 | COLD WATER FROM SUPPLY TANK LOCATED TO SOUTH OF HOUSE |
| A | PLUMBING SCHEDULE REFERENCE SEE PT. I, 6 |



Apricus Electric Solar Water Heating System

(using Apricus Solar Tanks)



- Notes:
1. Optional inclusion, compulsory in some states.
 2. For one or two storey building the UP-15-143 may be used. For 3 storey or taller building use Grundfos UPS-20-60B. For all installations, speed setting may need to be adjusted to match the pressure drop of the pipe run.
 3. Place sensor probes into sensor ports on tank. Sensor probes should be coated with thermal paste to ensure optimal heat transfer.

Bill of Materials*

No.	Component Name	Part Number
1	Non-Return Isolating Valve	Duo Valve NR 115FL
2	Union Male 15C x 15M	CO18
3	Pressure Limiting Valve 700kPa 15mm	PLF700P
4	Expansion Control Valve	ECV700
5	Tee F1 centre 15F1 x 15C x 15C	1600
6	Tee 15C all ends	1003
7	Union Male 20M x 15C	CO22
8	Grundfos Circulating Pump	See Note 2
9	Tube Col Lagged 15mm	T47171
10	Elbow Female 15F1 x 15C	OS10
11	Apricus AP Solar Collector	AP-10, 22, 30
12	Reaco Datasol AX Control w/ Apricus Sentinel-B	
13	Collector Sensor Cable	Reaco: 115 211 30
14	Bottom of Tank Sensor Cable	Apricus: Sentinel-B
15	Top of Tank Sensor Cable (Sentinel-B only)	
16	Swing non-return valve 15mm (NIR)	RMC 103340
17	Apricus Solar Tank 250L	250QLES
18	Elbow Male 20M x 20C	CO16
19	20mm Copper PTFE Drain Pipe	T 83356

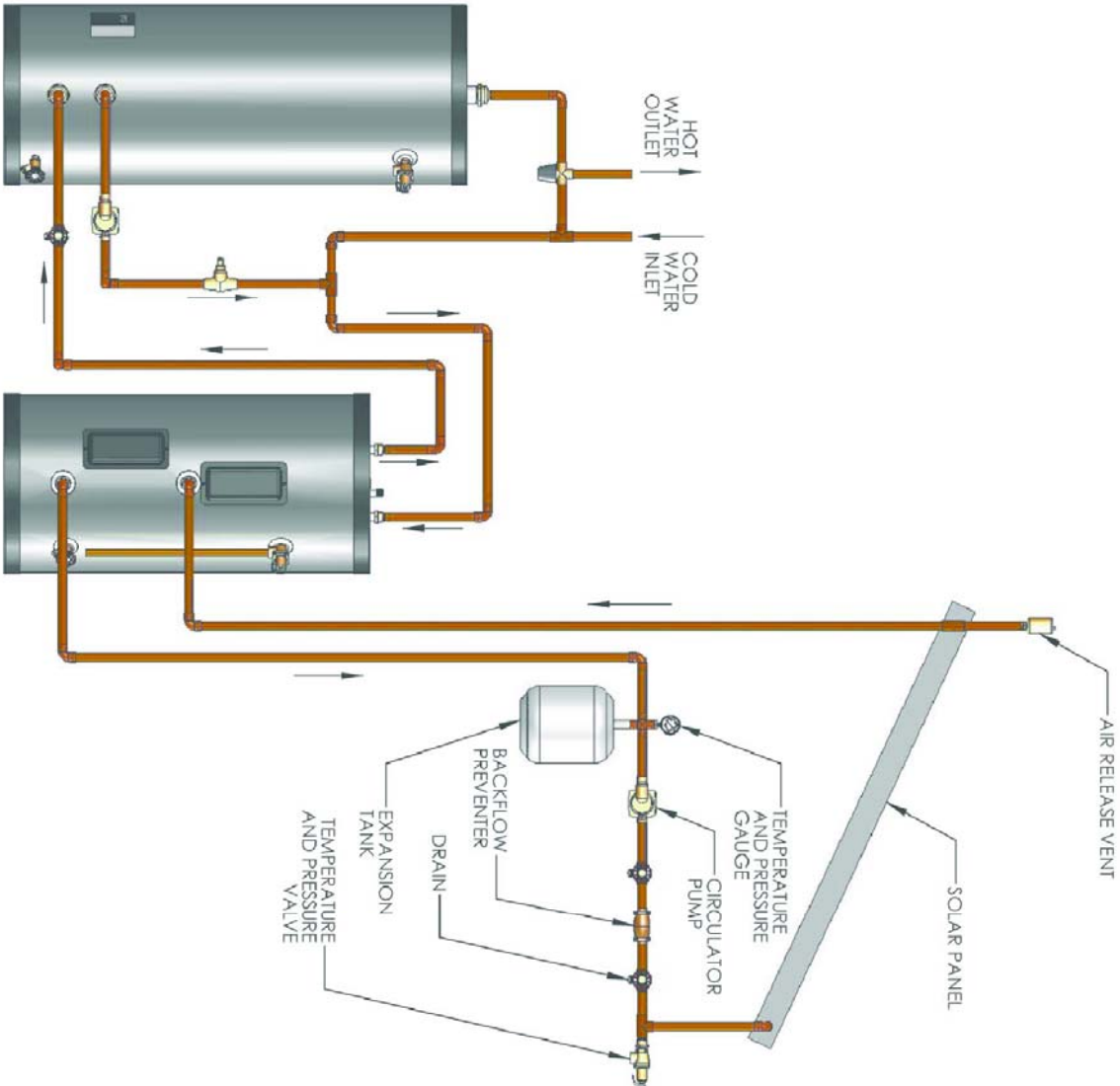
*Refer to AS-1.1 20.1 for full component details and AS-1.1 20.2 for complete list of materials.



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EVACUATIVE TUBE DIAGRAM 2
NO SCALE

CONTENDER SOLAR SE WITH SOLAR PANEL



SOLAR WATER HEATING DIAGRAM 1
NO SCALE