

TEAM TIDEWATER

CANOPY

HOUSE



TEAM NAME: TEAM TIDEWATER VIRGINIA
 ADDRESS: HAMPTON UNIVERSITY DEPARTMENT OF ARCHITECTURE HAMPTON, VIRGINIA
 OLD DOMINION UNIVERSITY SCHOOL OF ENGINEERING NORFOLK, VIRGINIA

CONTACT:

CONSULTANTS

CLARK NEXSEN ARCHITECTURE & ENGINEERING
 NORFOLK, VIRGINIA

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2/14/2013	CONSTRUCTION DOCUMENTS
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LOT NUMBER: 108
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SHEET TITLE

COVER SHEET

G-001



U.S. DEPARTMENT OF ENERGY
SOLAR DECATHLON

U.S. DEPARTMENT OF ENERGY
ENERGY NREL
 NATIONAL RENEWABLE ENERGY LABORATORY



Area Schedule (Rentable)		
Name	Area	Total
LIVING ROOM	211 SF	210 SF
BATHROOM	90 SF	300 SF
BEDROOM	205 SF	505 SF
HALL	45 SF	550 SF
OFFICE	72 SF	621 SF
KITCHEN	223 SF	843 SF

GENERAL SHEET NOTES

- CALCULATIONS COMPLIANT WITH ANSI Z765-2003 STANDARDS
- SQUARE FOOTAGE OF THE MECHANICAL ROOM IS NOT ACCOUNTED FOR IN FINAL SQUARE FOOTAGE OF THE HOUSE
- FINISHED SQUARE FOOTAGE CALCULATIONS FOR THIS HOUSE WERE MADE BASED ON PLAN DIMENSIONS ONLY AND MAY VARY FROM THE FINISHED SQUARE FOOTAGE OF THE HOUSE AS BUILT
- FINISHED AREA: 843 SQUARE FEET



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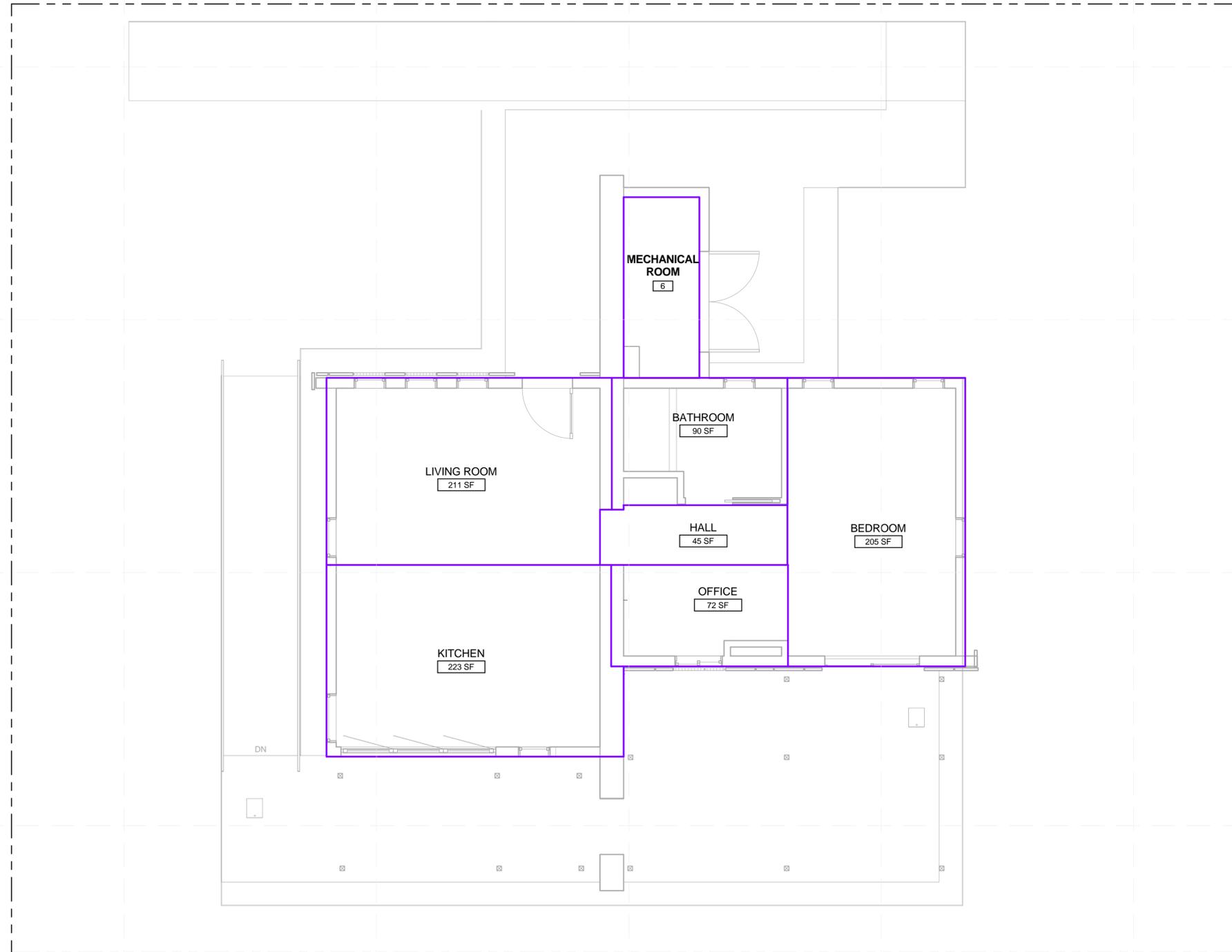
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SQUARE FOOTAGE COMPLIANCE PLAN

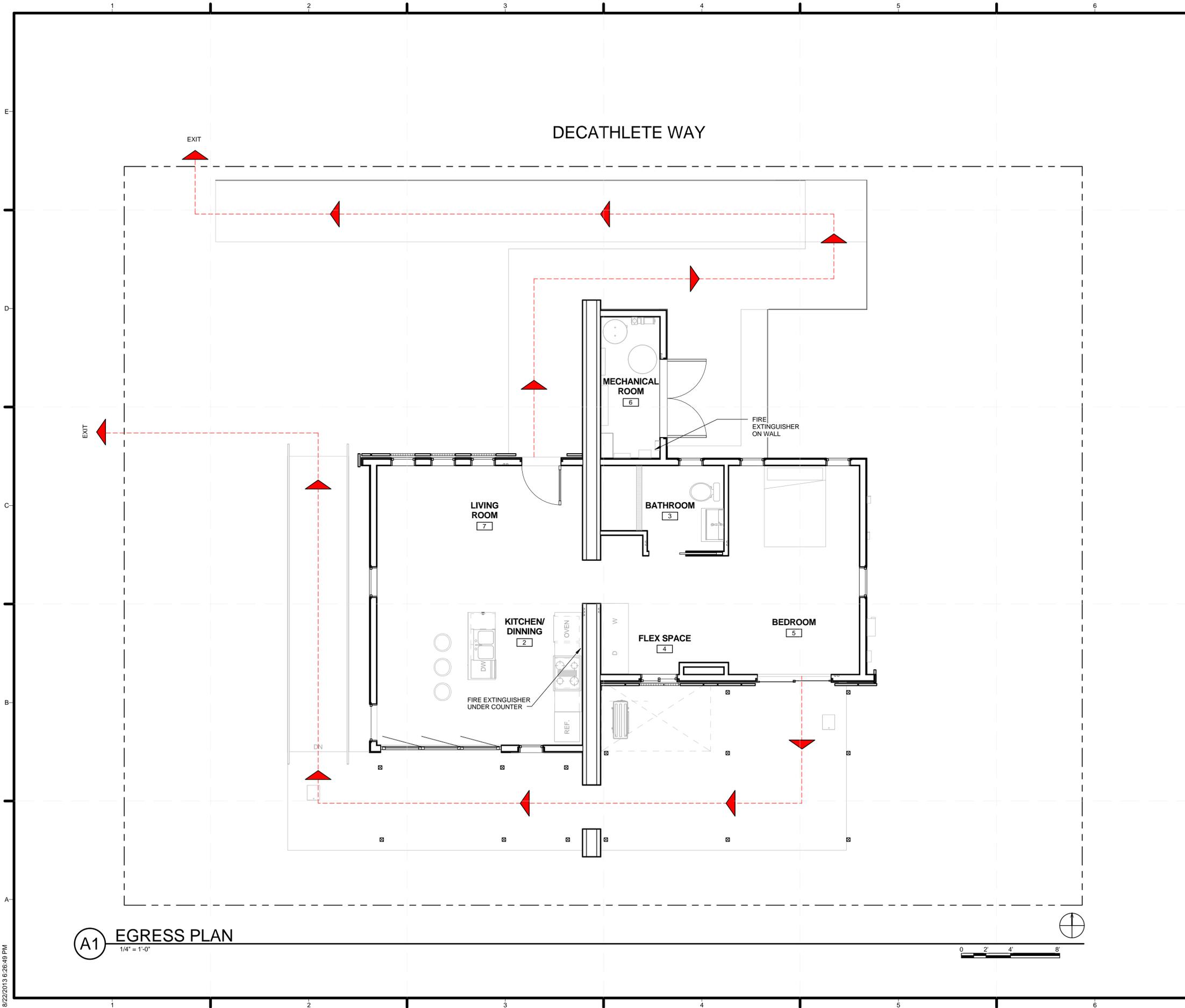
G-101



(A1) FINISHED SQUARE FOOTAGE COMPLIANCE PLAN

1/4" = 1'-0"

0 2' 4' 8'



GENERAL SHEET NOTES

1. FIRE EXTINGUISHERS LOCATED IN KITCHEN CABINET AND MECHANICAL ROOM. EXACT LOCATION TO BE DETERMINED ON SITE.



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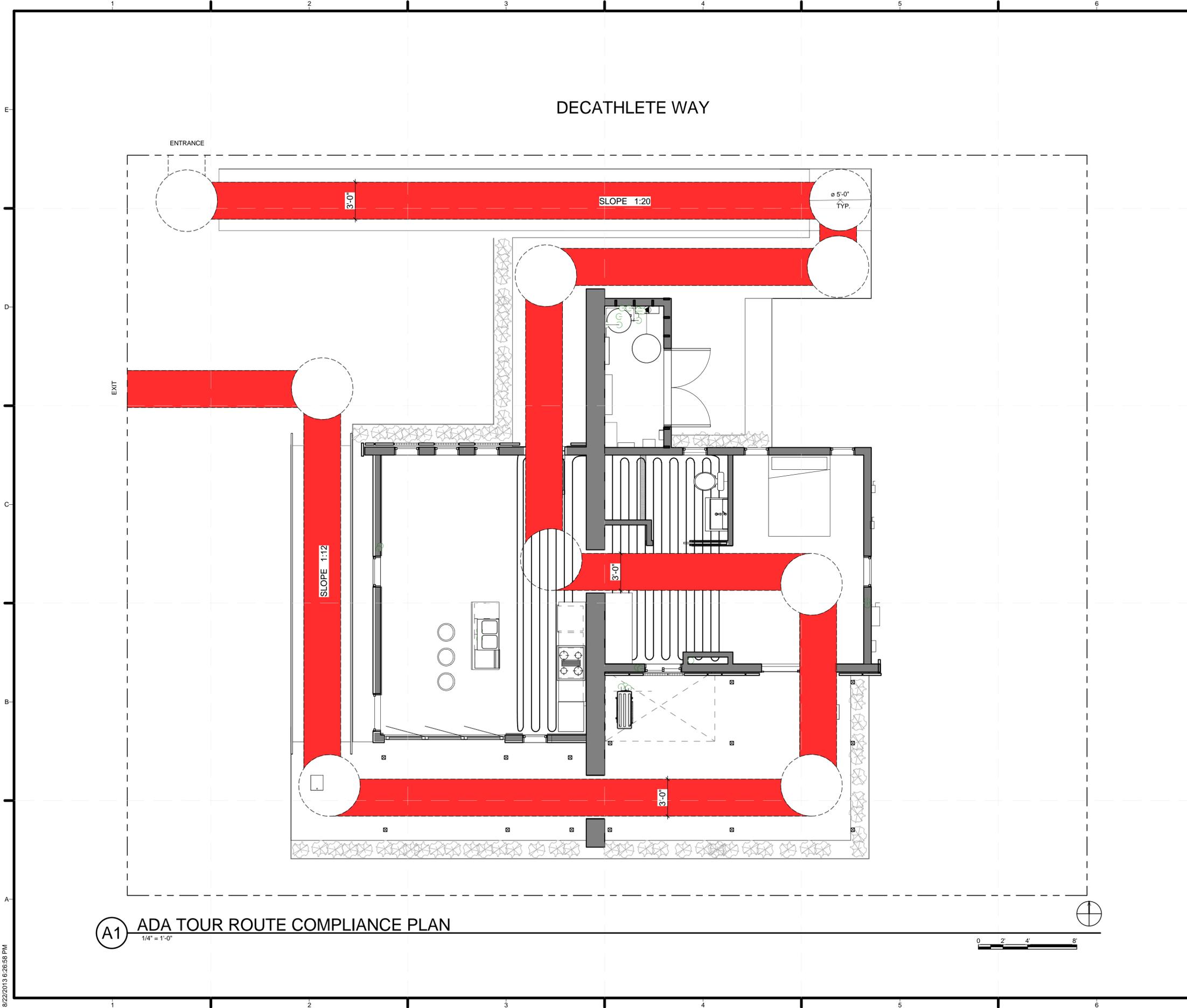
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EGRESS PLAN

G-102

A1 EGRESS PLAN
 1/4" = 1'-0"

8/22/2013 6:26:49 PM



GENERAL SHEET NOTES

- 4. ALL LANDINGS ARE COMPLIANT WITH ICC A117.1-2003 REQUIEMENTS
- 6. ALL EXTERIOR AND INTERIOR DOORS AND THRESHOLDS ARE COMPLIANT WITH ICC A117.1-2003 REQUIEMENTS
- 8. ROUTE DOORS WILL REMAIN LOCKED IN OPEN POSITION DURING PUBLIC EXHIBIT



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SHEET TITLE
ADA TOUR ROUTE COMPLIANCE PLAN

G-103

(A1) ADA TOUR ROUTE COMPLIANCE PLAN
 1/4" = 1'-0"

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GENERAL SHEET NOTES

1. ALL ELEVATIONS INDICATE HEIGHT ABOVE OR BELOW FINISHED FLOOR ELEVATION



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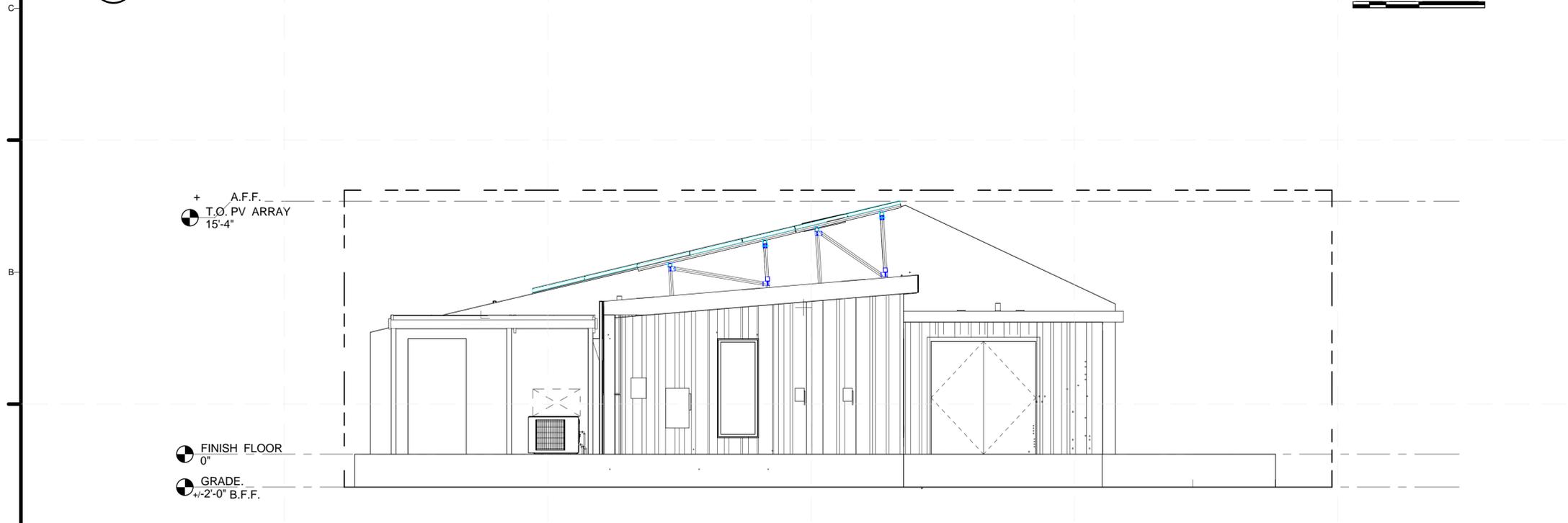
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SOLAR ENVELOPE ELEVATIONS

G-201



C1 NORTH - SOLAR ENVELOPE COMPLIANCE ELEVATION
 1/4" = 1'-0"



A2 EAST - SOLAR ENVELOPE COMPLIANCE ELEVATION
 1/4" = 1'-0"

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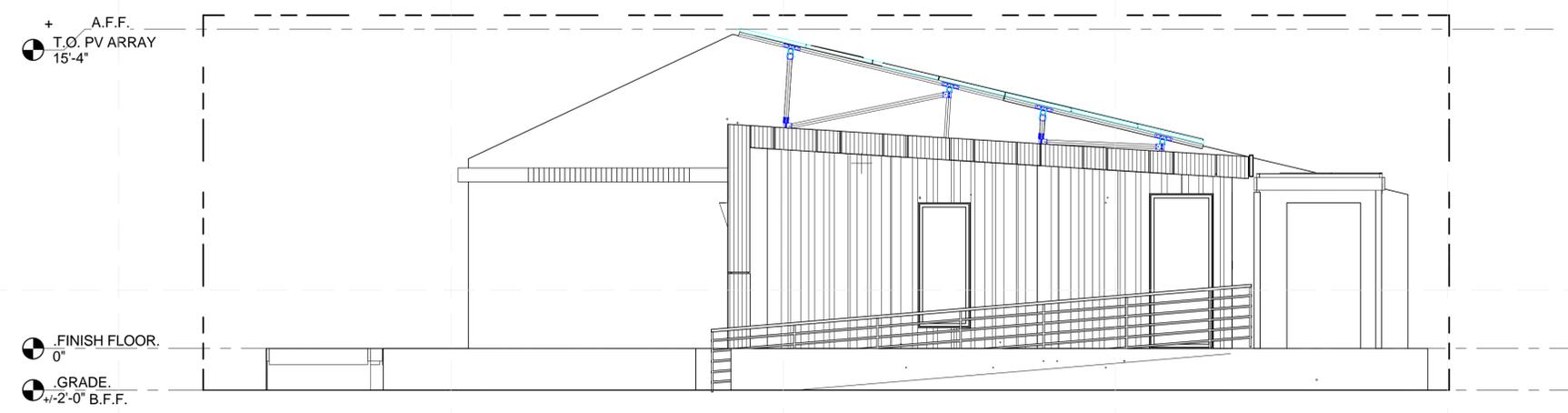
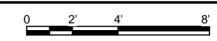
SHEET TITLE

SOLAR ENVELOPE ELEVATIONS

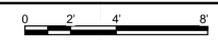
G-202

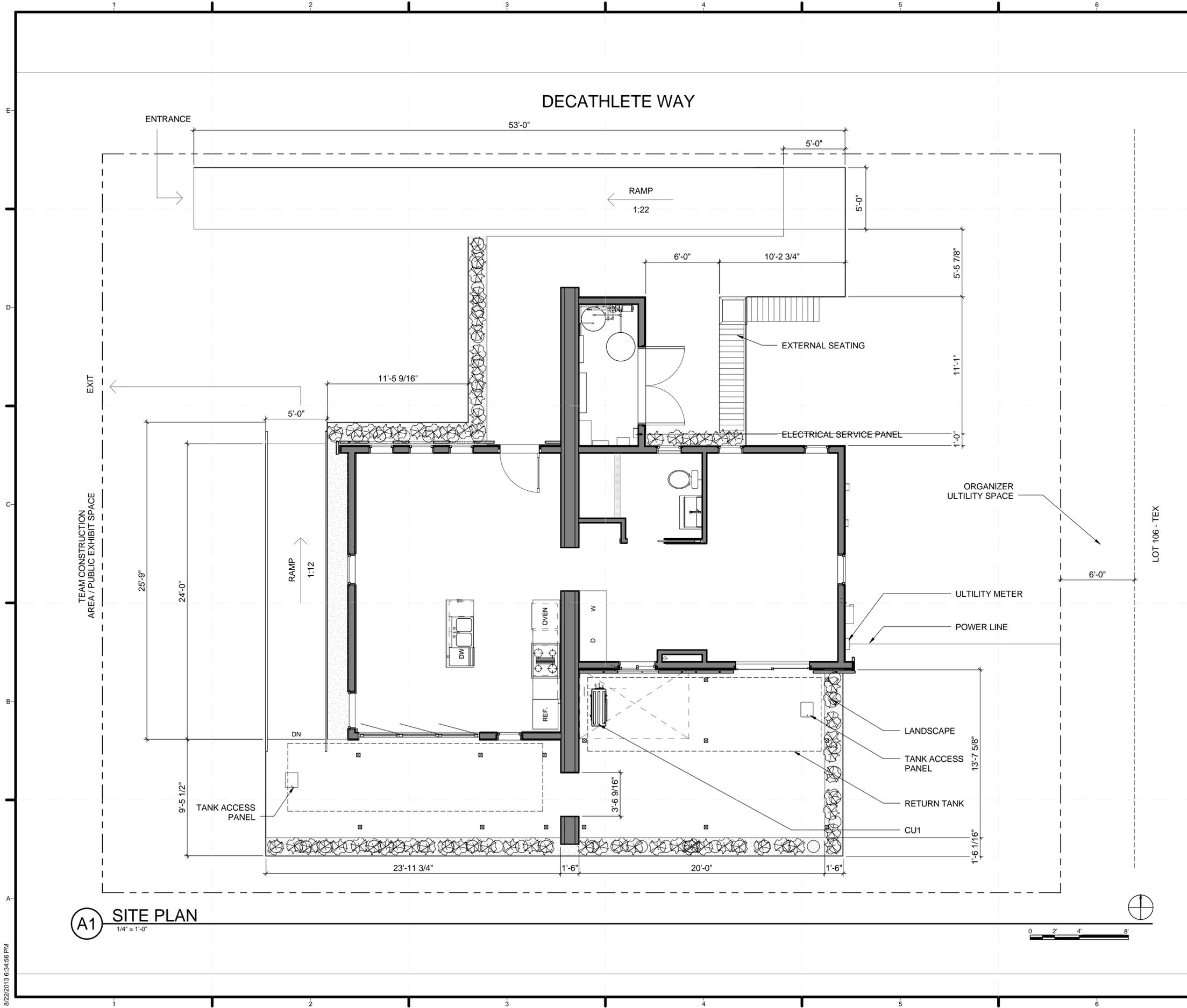


(C1) SOUTH - SOLAR ENVELOPE COMPLIANCE ELEVATION
 1/4" = 1'-0"



(A1) WEST - SOLAR ENVELOPE COMPLIANCE ELEVATION
 1/4" = 1'-0"





GENERAL SHEET NOTES

1. LONG RAMP PLANNING FOR 8" DIFFERENCE IN SITE SLOPE
2. FOR DETAILED WIRING AND LAYOUT OF UTILITY METER, SERVICE PANEL AND POWER LINE SEE ELECTRICAL DISTRIBUTION PLAN



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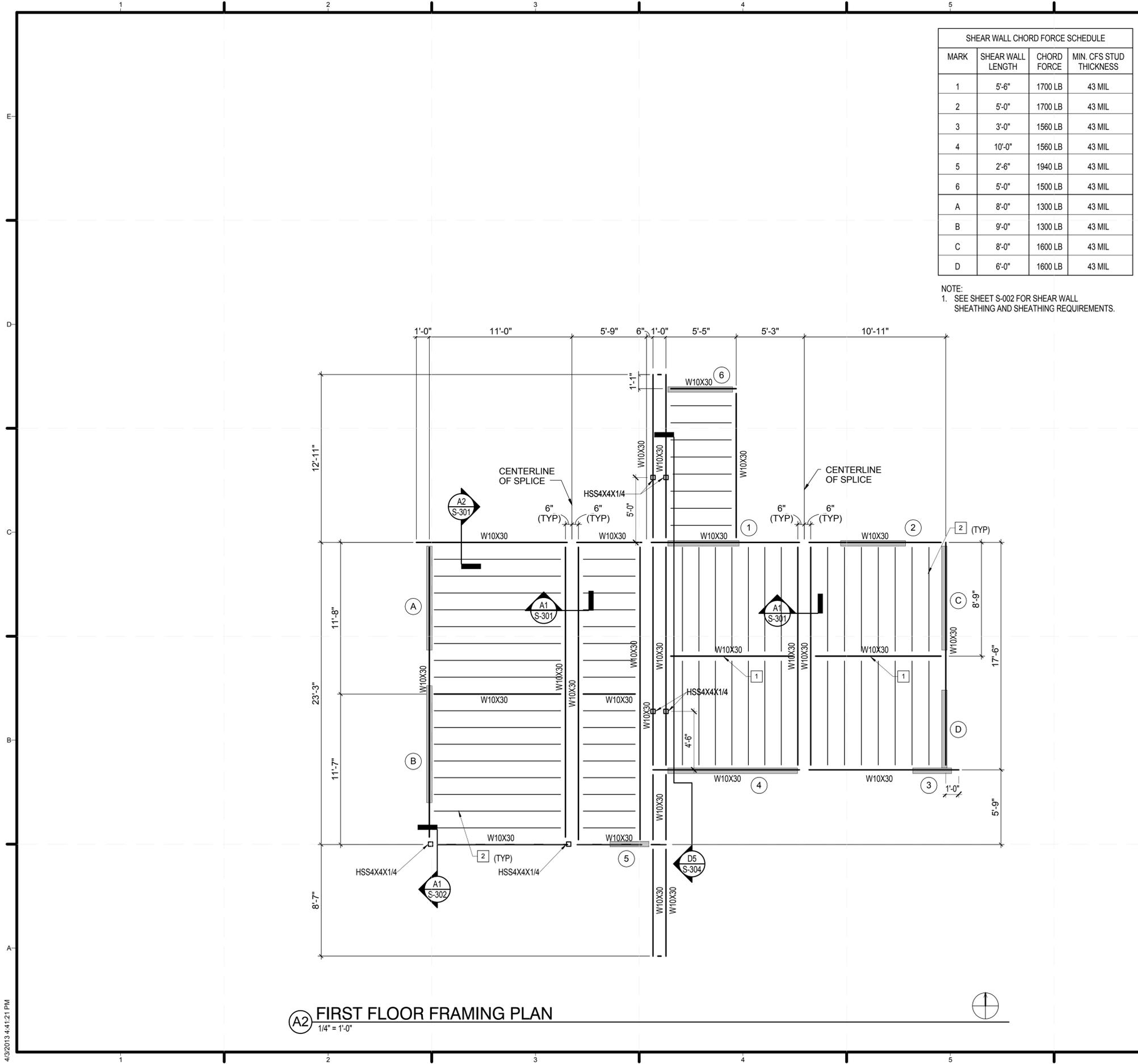
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SHEET TITLE

SITE PLAN

C-102



SHEAR WALL CHORD FORCE SCHEDULE			
MARK	SHEAR WALL LENGTH	CHORD FORCE	MIN. CFS STUD THICKNESS
1	5'-6"	1700 LB	43 MIL
2	5'-0"	1700 LB	43 MIL
3	3'-0"	1560 LB	43 MIL
4	10'-0"	1560 LB	43 MIL
5	2'-6"	1940 LB	43 MIL
6	5'-0"	1500 LB	43 MIL
A	8'-0"	1300 LB	43 MIL
B	9'-0"	1300 LB	43 MIL
C	8'-0"	1600 LB	43 MIL
D	6'-0"	1600 LB	43 MIL

NOTE:
1. SEE SHEET S-002 FOR SHEAR WALL SHEATHING AND SHEATHING REQUIREMENTS.

FLOOR FRAMING KEY NOTES [X]

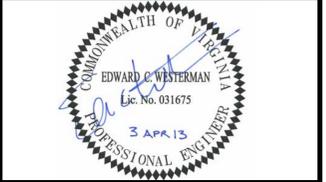
- WOOD NAILER SHALL BE A 2x8 BOARD (SOUTHERN PINE, NO. 2) RIPPED TO THE REQUIRED WIDTH (W10X30 FLANGE WIDTH).
- 2x10 FLOOR JOISTS (SOUTHERN PINE, NO. 2) EQUALLY SPACED BETWEEN W10 BEAMS (16" ON CENTER, MAX).

FLOOR FRAMING PLAN NOTES

- FLOOR SHEATHING SHALL BE 23/32" APA RATED SHEATHING FASTENED AT PANEL EDGES AND TO INTERMEDIATE FRAMING MEMBERS WITH 8d COMMON NAILS AT 6 INCHES ON CENTER. BLOCKING IS NOT REQUIRED AT PLYWOOD SHEET EDGES NOT SUPPORTED BY JOISTS OR NAILERS. MINIMUM NAIL PENETRATION INTO WOOD JOISTS AND NAILERS IS 1-3/8 INCHES.
- SHEAR WALLS ARE IDENTIFIED BY SYMBOL (X) AND INDICATED THUS ON PLAN: [Symbol]
- THERMASTEEL WALL PANEL STUDS SHALL COMPLY WITH THE FOLLOWING: 43 MIL MINIMUM THICKNESS, 1-5/8 INCH MINIMUM FLANGE WIDTH, 3-1/2 INCH MINIMUM WEB DEPTH, AND A 3/8 INCH MINIMUM EDGE STIFFENER ON THE FLANGE.
- FLAT STRAP BLOCKING SHALL BE PROVIDED AT ALL SHEAR WALL PANEL EDGES THAT DO NOT ALIGN WITH A WALL STUD. FLAT STRAP BLOCKING SHALL HAVE A MINIMUM THICKNESS OF 33 MILS AND SHALL HAVE A MINIMUM WIDTH OF 1-1/2 INCHES.
- PROVIDE BOTTOM FLANGE BRACE FOR W10X30 BEAMS/GIRDERS 3'-0" ON EACH SIDE OF AN ADJUSTABLE-HEIGHT STEEL PIER WHERE THE W10 IS CONTINUOUS OVER THE PIER. SEE TYPICAL DETAILS ON SHEET S-303 FOR ADDITIONAL INFORMATION.
- TYPICAL WOOD FLOOR JOIST HANGER SHALL BE SIMPSON STRONG-TIE MODEL NO. LB210 TOP FLANGE JOIST HANGER, UNLESS OTHERWISE NOTED, OR APPROVED EQUAL. MINIMUM HANGER CAPACITY=800lb.



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FIRST FLOOR FRAMING PLAN

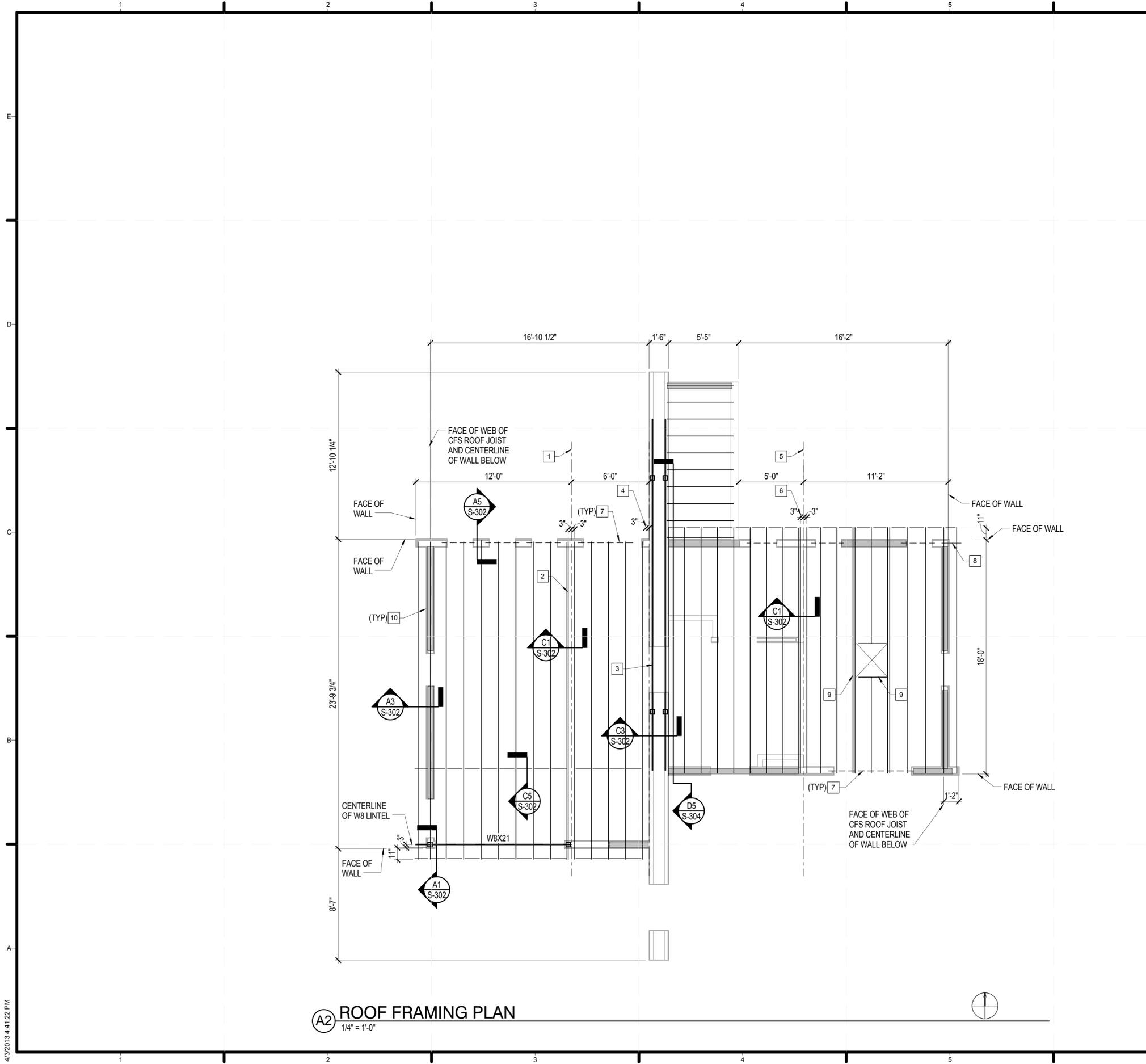
S-102

GRAPHIC SCALE(S)



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

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(A2) ROOF FRAMING PLAN
1/4" = 1'-0"

ROOF FRAMING KEY NOTES

- 1 CENTERLINE WALL JOINT BETWEEN MODULE 1 AND 2.
- 2 CENTERLINE OF DOUBLE COLD-FORMED STEEL (CFS) ROOF JOISTS AND ROOF SHEATHING JOINT BETWEEN MODULE 1 AND 2.
- 3 STEEL TRUSS, SEE SHEET S-304
- 4 CENTERLINE OF ROOF JOINT BETWEEN MODULE 2 AND 3.
- 5 CENTERLINE OF WALL JOINT BETWEEN MODULE 3 AND 4.
- 6 CENTERLINE OF DOUBLE COLD-FORMED STEEL (CFS) ROOF JOISTS AND ROOF SHEATHING JOINT BETWEEN MODULE 3 AND 4.
- 7 HEADER ABOVE WALL OPENING DESIGNED BY WALL MANUFACTURER, TYP
- 8 CANTILEVERED LINTEL BEAM BY WALL MANUFACTURER. SEE PLAN NOTE ON THIS SHEET.
- 9 PROVIDE DOUBLE 1200S200-68 CFS ROOF JOISTS ON EACH SIDE OF SKYLIGHT OPENING
- 10 SHEAR WALL BELOW, TYP

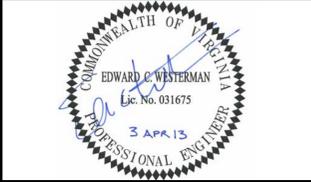
ROOF FRAMING PLAN NOTES

1. ROOF SHEATHING SHALL BE 7/16" STRUCTURAL I SHEATHING FASTENED TO COLD-FORMED STEEL JOISTS WITH #10 SELF-TAPPING SCREWS AT 6 INCHES ON CENTER ON ALL SUPPORTED EDGES. SCREWS (#10) WITHIN THE FIELD OF THE PANEL SHALL BE PROVIDED AT 12 INCHES ON CENTER.
2. FLAT STRAP BRIDGING ON THE TOP FLANGE OF COLD-FORMED STEEL JOISTS SHALL BE CONTINUOUS THROUGH MODULE JOINTS.
3. ALIGN COLD-FORMED ROOF JOISTS WITH WALL STUDS, TYP.
4. COLD-FORMED STEEL ROOF JOISTS ON WEST SIDE OF THE DIEM WALL SHALL BE 1200S200-97 MEMBERS SPACED AT 16" OC MAX.
5. COLD-FORMED STEEL ROOF JOIST ON EAST SIDE OF THE DIEM WALL SHALL BE 1200S200-68 MEMBERS SPACED AT 16" OC MAX.
6. WALL PANEL MANUFACTURER SHALL PROVIDE HEADERS OVER DOOR AND WINDOW OPENINGS DESIGNED FOR THE FOLLOWING SERVICE-LEVEL LOADS: 550 PLF (DEAD + LIVE + WIND LOAD) AND 300 PLF (UPLIFT, WIND LOAD).
7. WALL PANEL MANUFACTURER SHALL PROVIDE A LINTEL BEAM AT THE NORTHEAST CORNER SUPPORTING THE COLD-FORMED STEEL ROOF JOISTS. THE LINTEL SHALL BE DESIGNED FOR THE FOLLOWING SERVICE-LEVEL LOADS LOCATED AT THE END OF THE CANTILEVERED LINTEL: 450 POUNDS (DEAD + LIVE + WIND LOAD) AND 280 POUNDS (UPLIFT, WIND LOAD).
8. PROVIDE DOUBLE CFS ROOF JOISTS CENTERED BENEATH SOLAR PANEL LEG SUPPORTS.
9. WHERE DOUBLE CFS ROOF JOISTS ARE PROVIDED, FASTEN JOISTS TOGETHER WITH (3) ROWS OF #10 SCREWS AT 6" ON CENTER. ROW SPACING = 4". LOCATE FIRST ROW 2" BELOW TOP OF JOIST.
10. PROVIDE SIMPSON STRONG-TIE MODEL NO HRS8 UPLIFT STRAP CONNECTOR AT EACH CFS ROOF JOIST BEARING LOCATION. FASTEN TO JOIST WEB AND WALL STUD PER THE MANUFACTURER'S REQUIREMENTS. MINIMUM UPLIFT CAPACITY=720lb (SERVICE LOAD).
11. PROVIDE 7/8", 54 MIL HAT CHANNELS AT 16" ON CENTER ON BOTH SIDES OF STEEL TRUSS LOCATED WITHIN THE DIEM WALL. FASTEN HAT CHANNELS TO TOP AND BOTTOM CHORD OF TRUSS.
12. WALL FRAMING FOR THE DIEM WALL AND THE WALLS OF THE MECHANICAL ROOM SHALL BE 400S162-54 AT 16" ON CENTER, UNLESS OTHERWISE NOTED.

GRAPHIC SCALE(S)



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ROOF FRAMING PLAN

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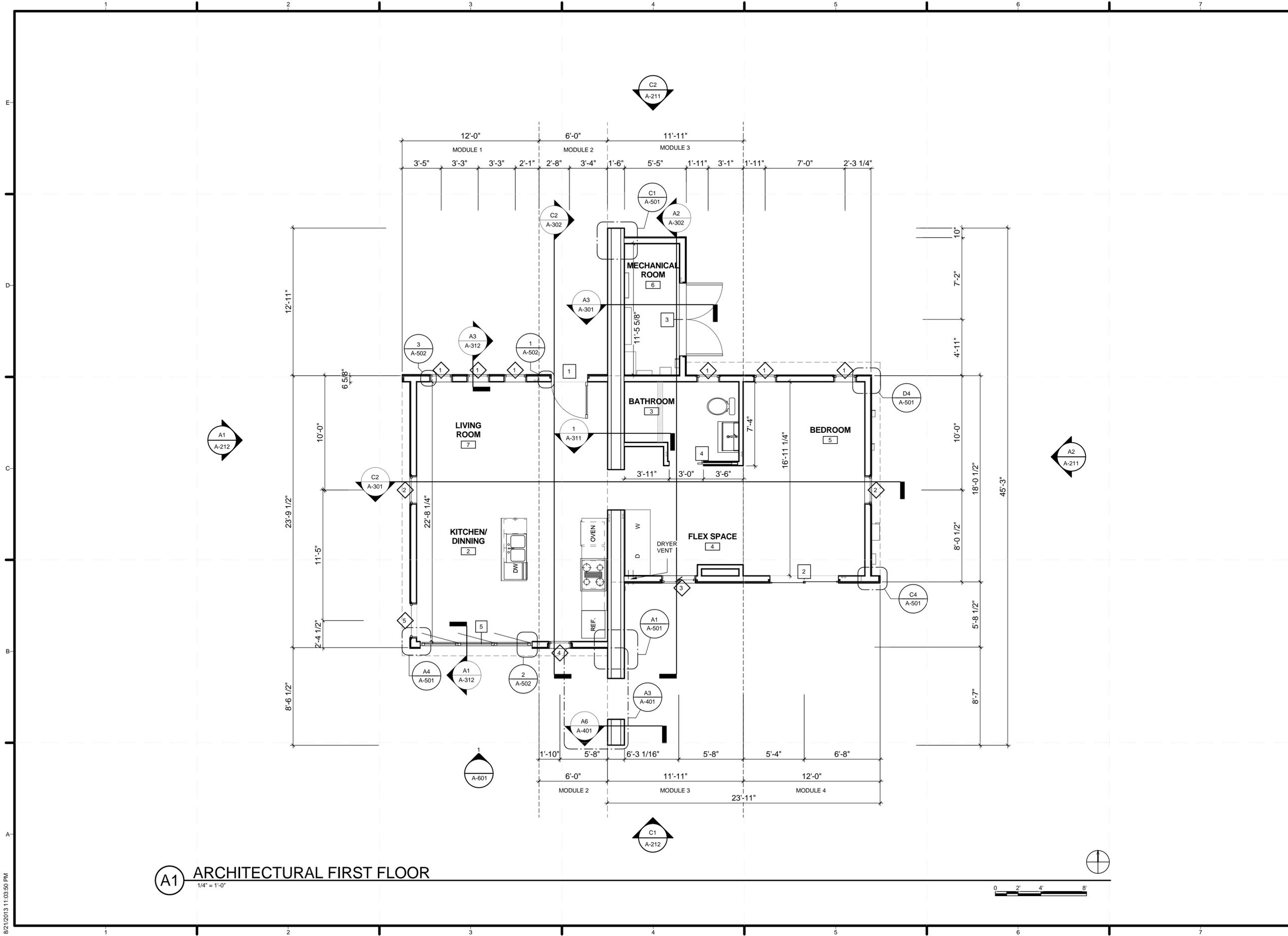
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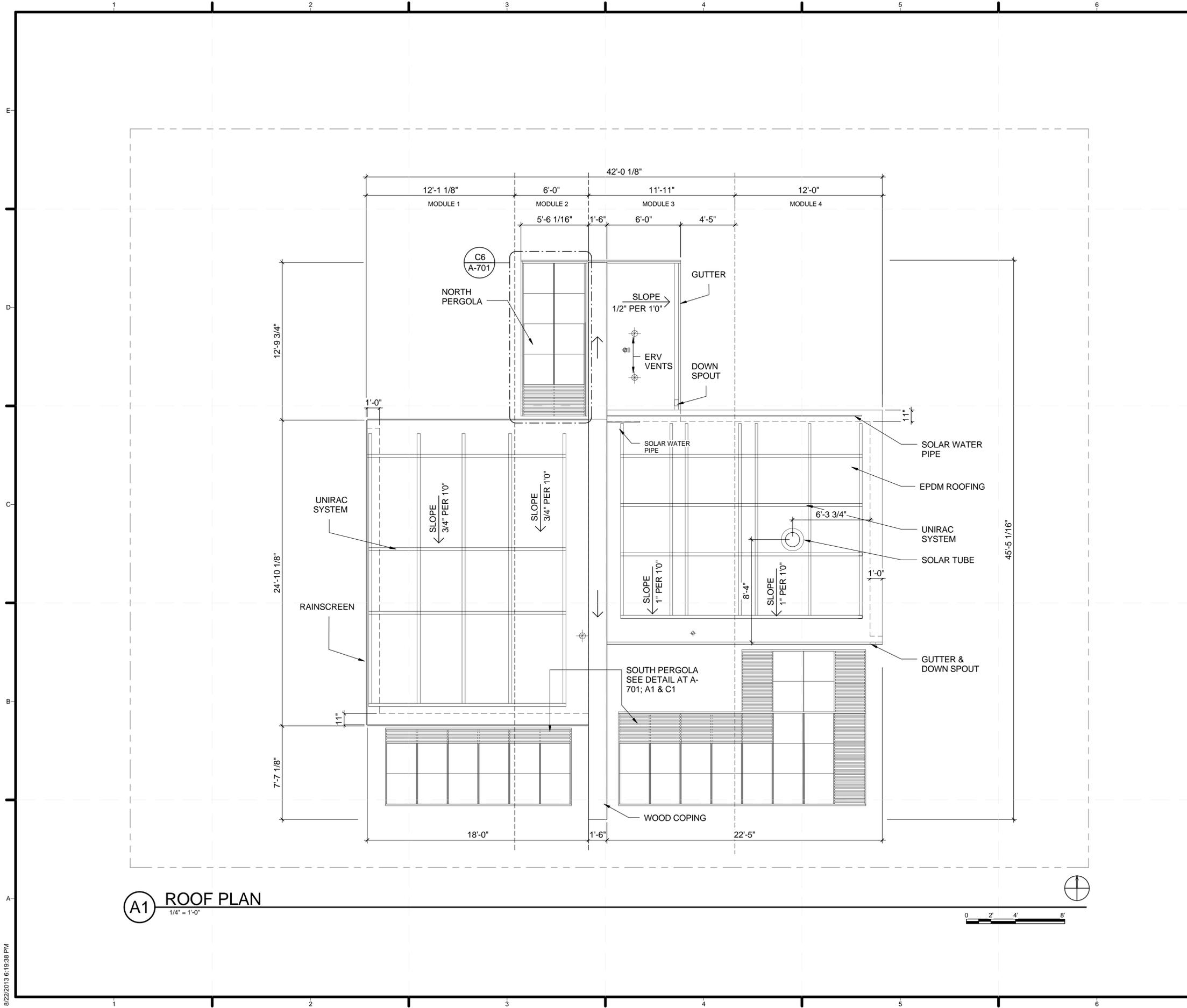
FIRST FLOOR PLAN

A-101



A1 ARCHITECTURAL FIRST FLOOR
 1/4" = 1'-0"

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A1 ROOF PLAN
1/4" = 1'-0"

GENERAL SHEET NOTES

1. CENTER OF SOLAR TUBE DIMENSIONED TO EXTERIOR FACE OF WALLS



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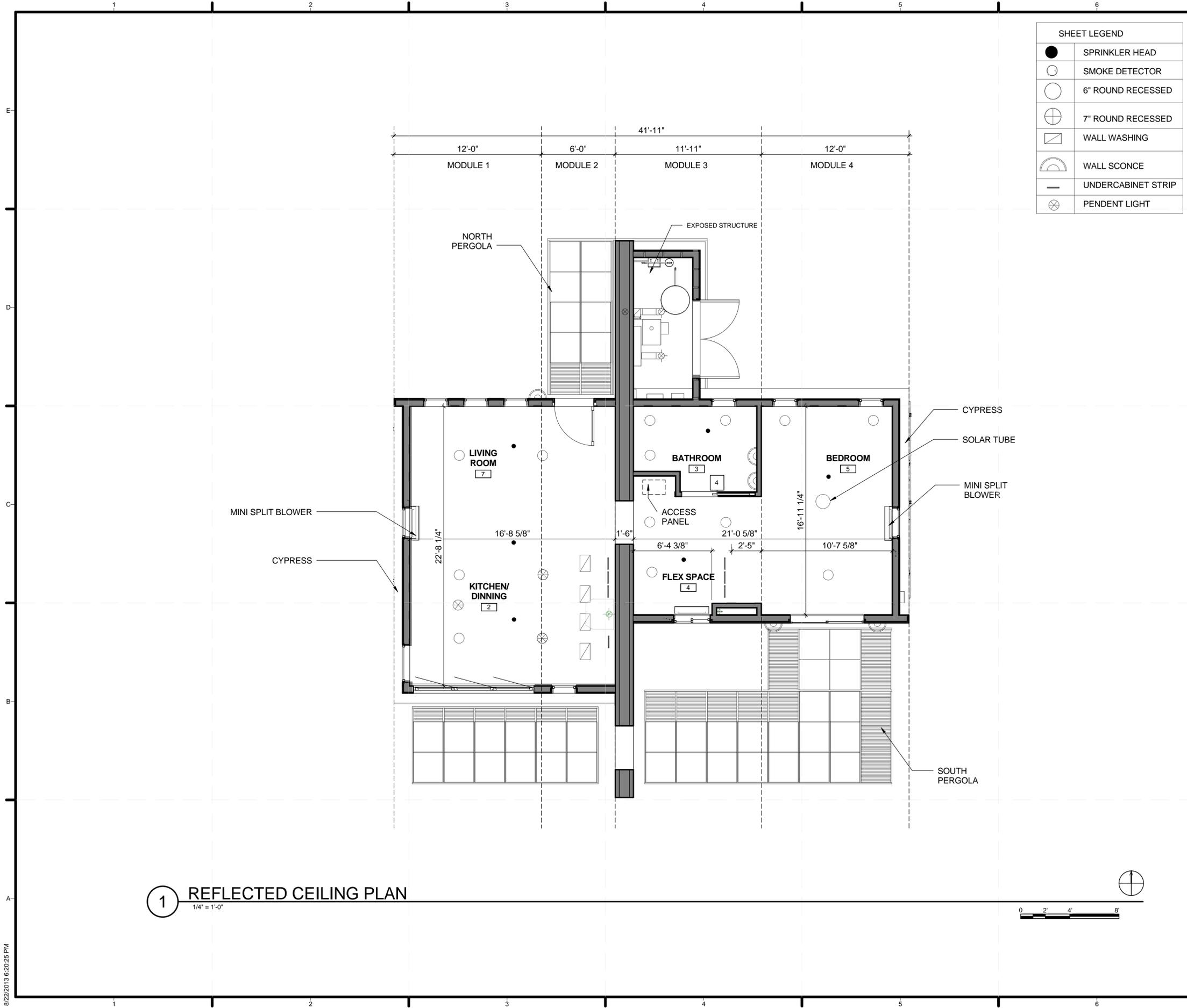
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ROOF PLAN

A-111

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SHEET LEGEND	
●	SPRINKLER HEAD
○	SMOKE DETECTOR
○	6" ROUND RECESSED
⊕	7" ROUND RECESSED
▧	WALL WASHING
⤴	WALL SCONCE
—	UNDERCABINET STRIP
⊗	PENDENT LIGHT

GENERAL SHEET NOTES

1. INSTALL CELING QWB WITH LONG DIMENSION PERPENDICULAR TO METAL HAT CHANNEL



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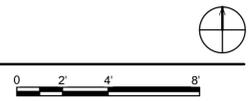
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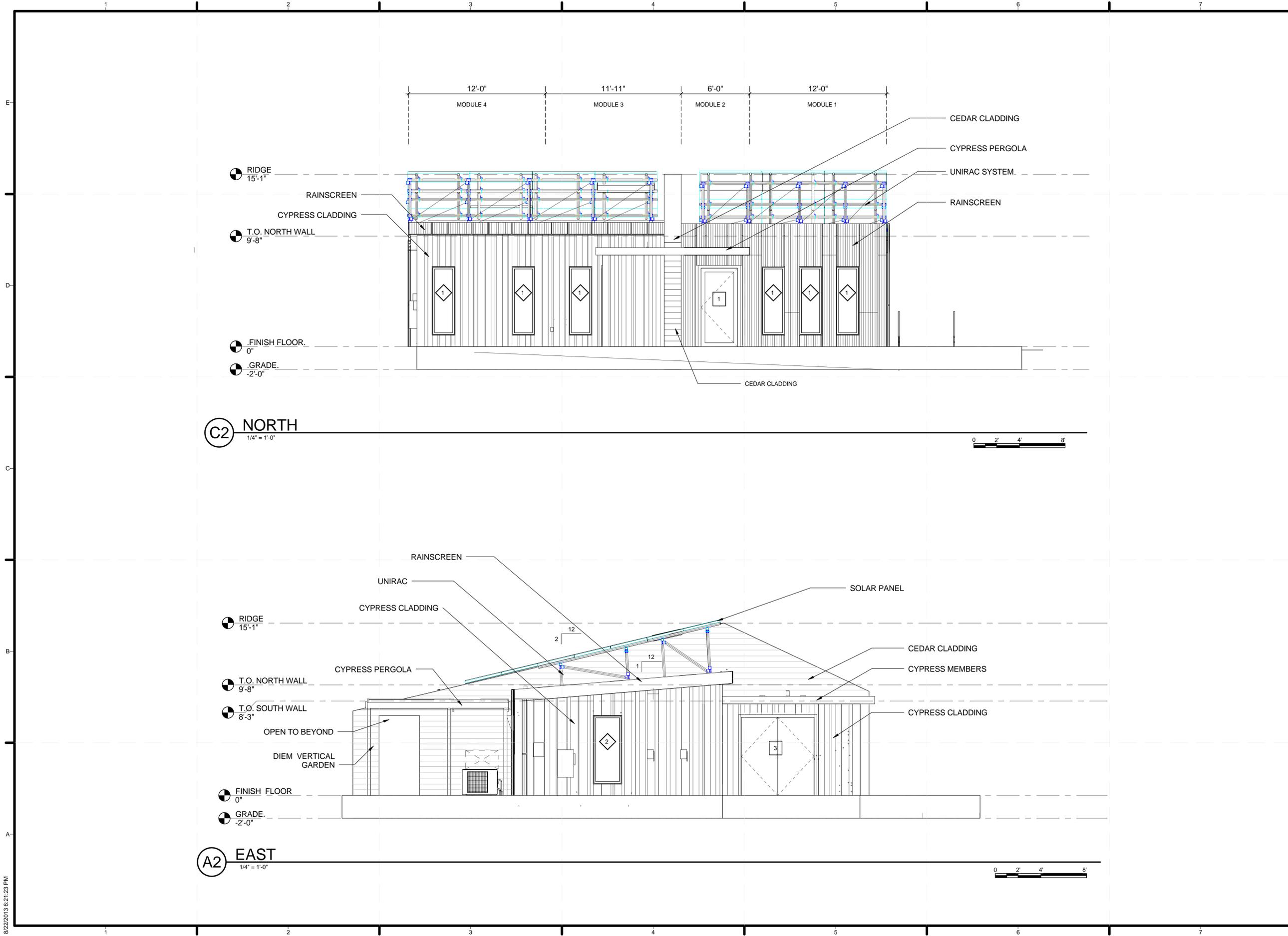
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REFLECTED CEILING PLAN

A-121

1 REFLECTED CEILING PLAN
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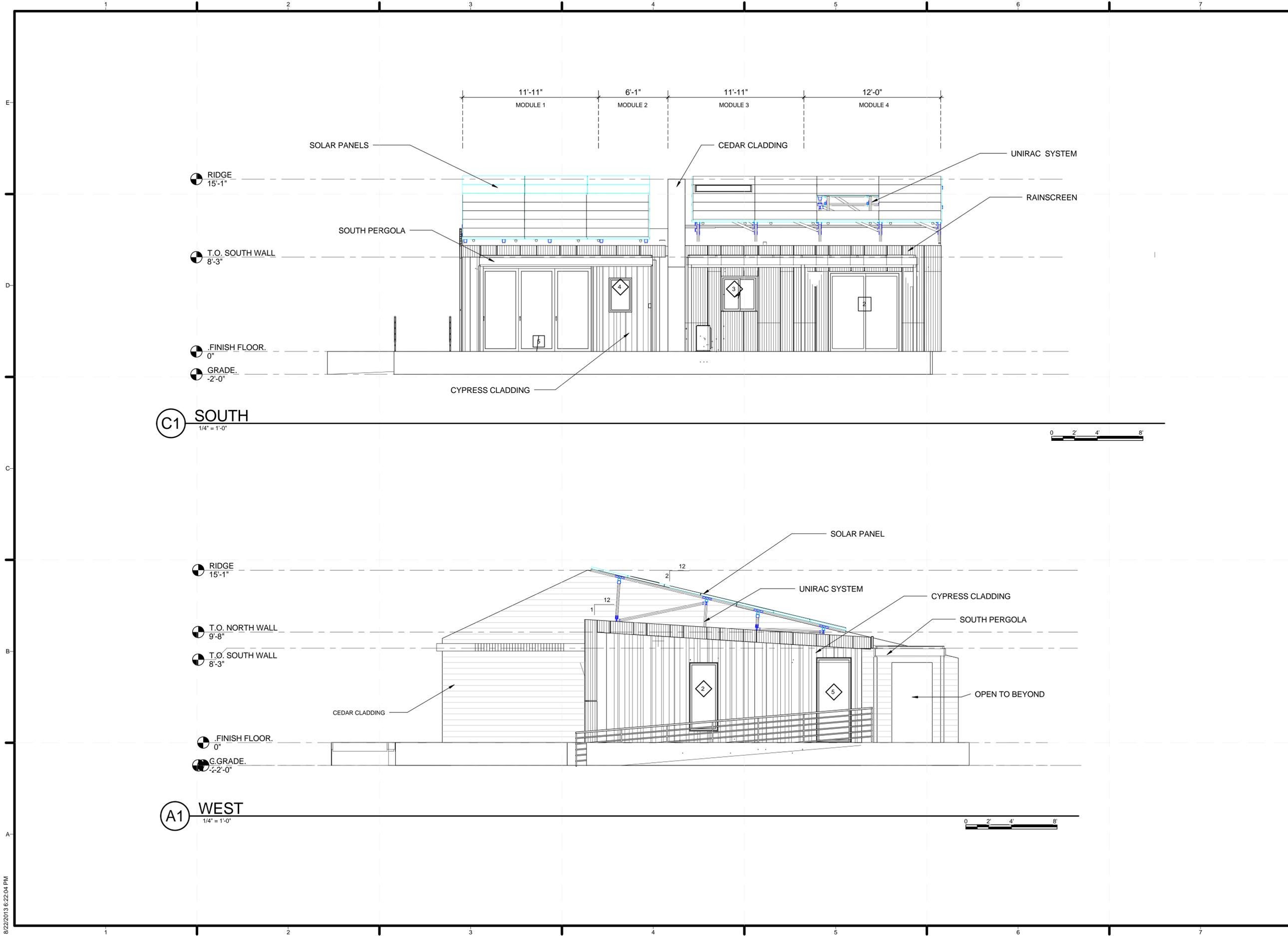
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ELEVATIONS

A-211



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01	2/14/2013	CONSTRUCTION DOCUMENTS
02	8/21/2013	AS-BUILT

MARK	DATE	DESCRIPTION
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SHEET TITLE
 ELEVATIONS

A-212

GENERAL SHEET NOTES

- UNVENTED ATTIC INSULATION ASSEMBLED WITH 3" OF SPRAY FOAM AND 9 1/2" OF BATT INSULATION TO MEET TABLE 1102.2.5 COMMON WEALTH OF VIRGINIA 2009 RESIDENTIAL CODE.



TEAM NAME: TEAM TIDEWATER VIRGINIA
 ADDRESS: HAMPTON UNIVERSITY DEPARTMENT OF ARCHITECTURE HAMPTON, VIRGINIA
 OLD DOMINION UNIVERSITY SCHOOL OF ENGINEERING NORFOLK, VIRGINIA
 CONTACT:
 CONSULTANTS
 CLARK NEXSEN ARCHITECTURE & ENGINEERING
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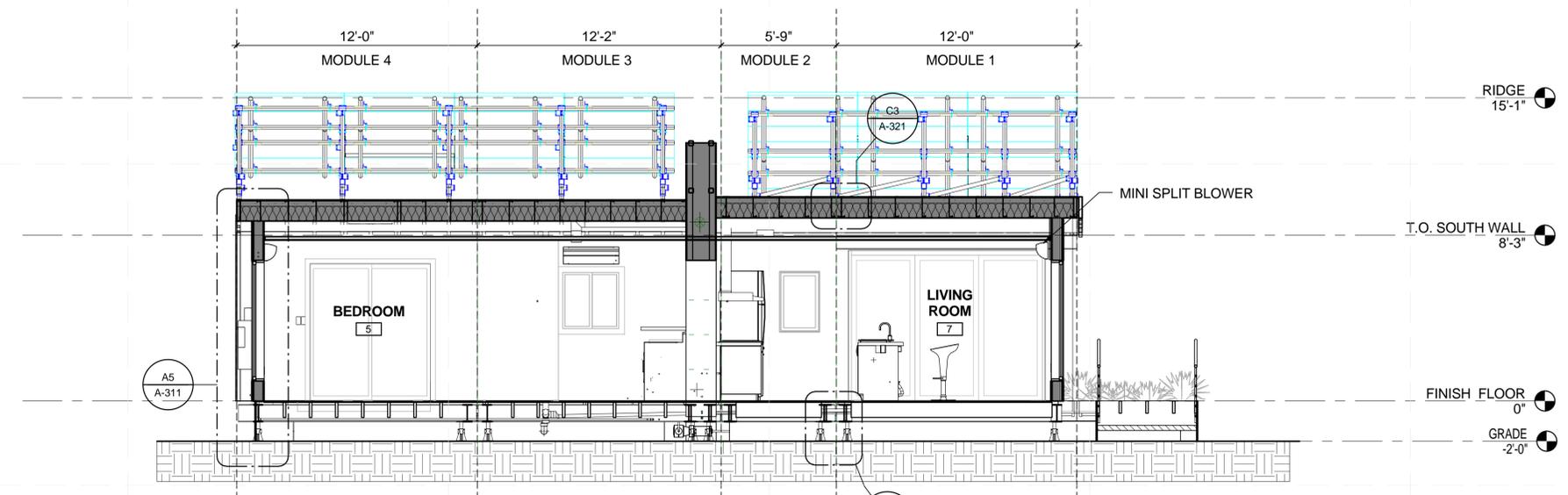


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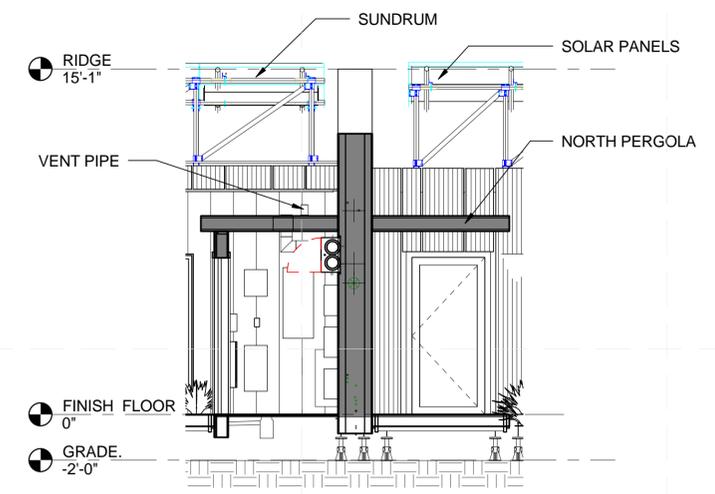
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SHEET TITLE
 BUILDING SECTIONS

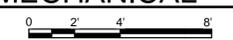
A-301



C2 BUILDING SECTION - LONGITUDINAL
 1/4" = 1'-0"



A3 BUILDING SECTION DIEM/ MECHANICAL
 1/4" = 1'-0"





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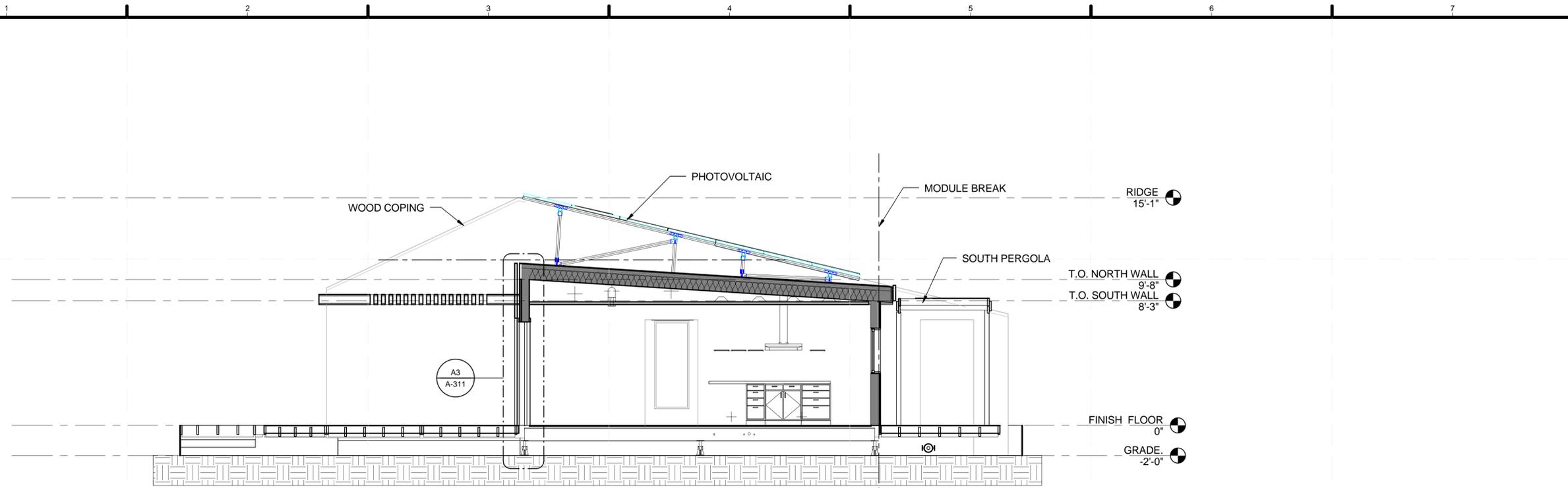
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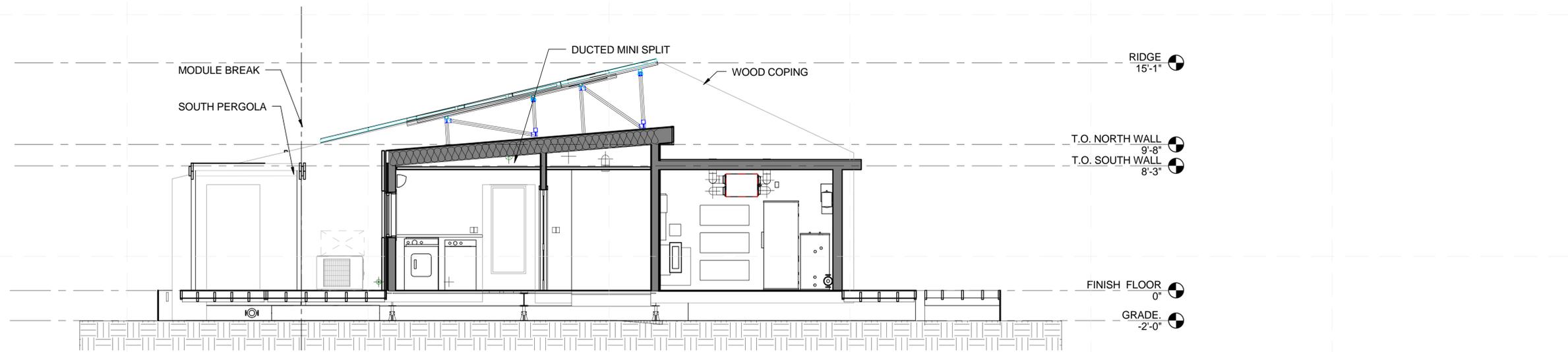
SHEET TITLE

BUILDING SECTIONS

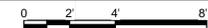
A-302



C2 BUILDING SECTION TRANSVERSE 1
 1/4" = 1'-0"



A2 BUILDING SECTION TRANSVERSE 2
 1/4" = 1'-0"



GENERAL SHEET NOTES

1. ALL OPENING DIMENSIONS ARE TO THE ROUGH OPENING
2. SEE SHEET A-512 FOR HEAD, JAMB & SILL DETAILS AT OPENINGS
3. UNVENTED ATTIC INSULATION ASSEMBLED WITH 3" OF SPRAY FOAM ON TOP OF 9" OF BATT INSULATION, R-49 AND WOOD FLOOR FRAME ASSEMBLED WITH 6 1/2" OF BATT INSULATION, R-19 TO MEET TABLE 1102.2.5, COMMON WEALTH OF VIRGINIA 2009 RESIDENTIAL CODE



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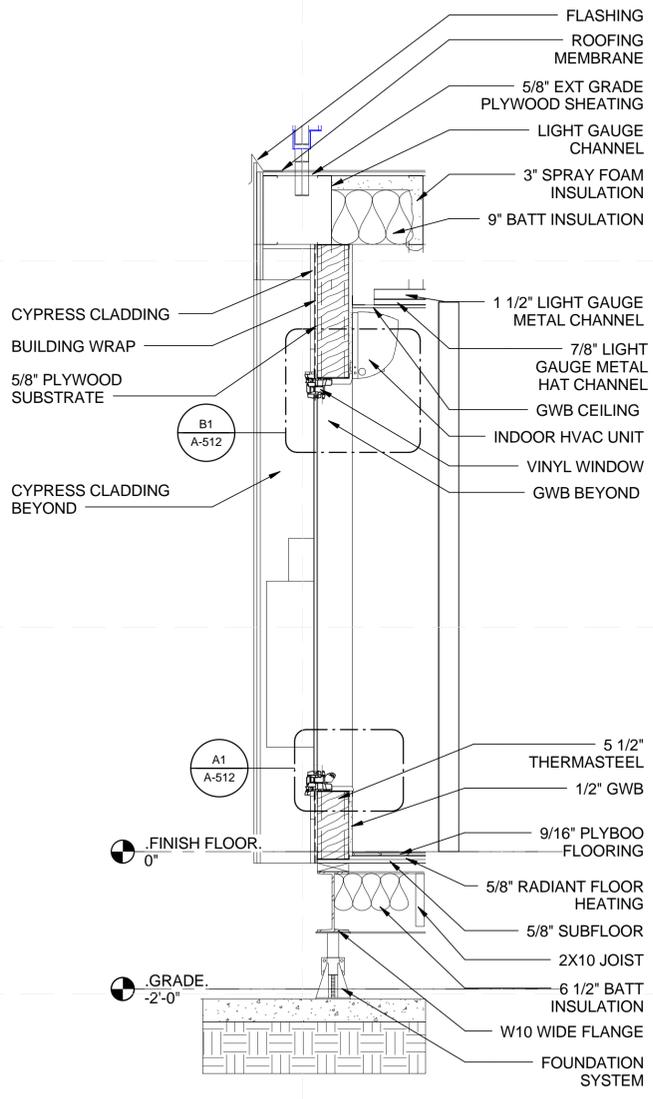
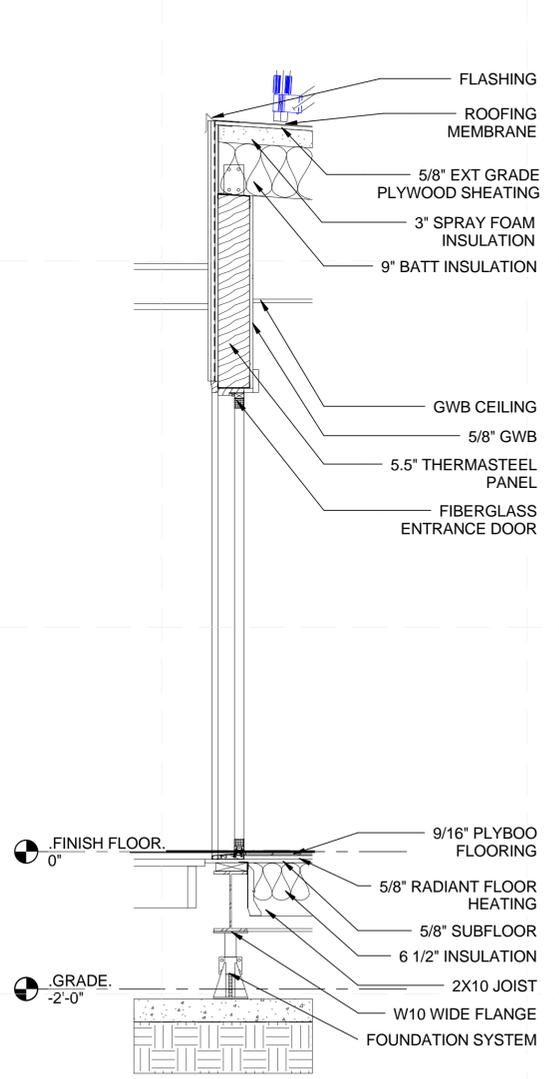
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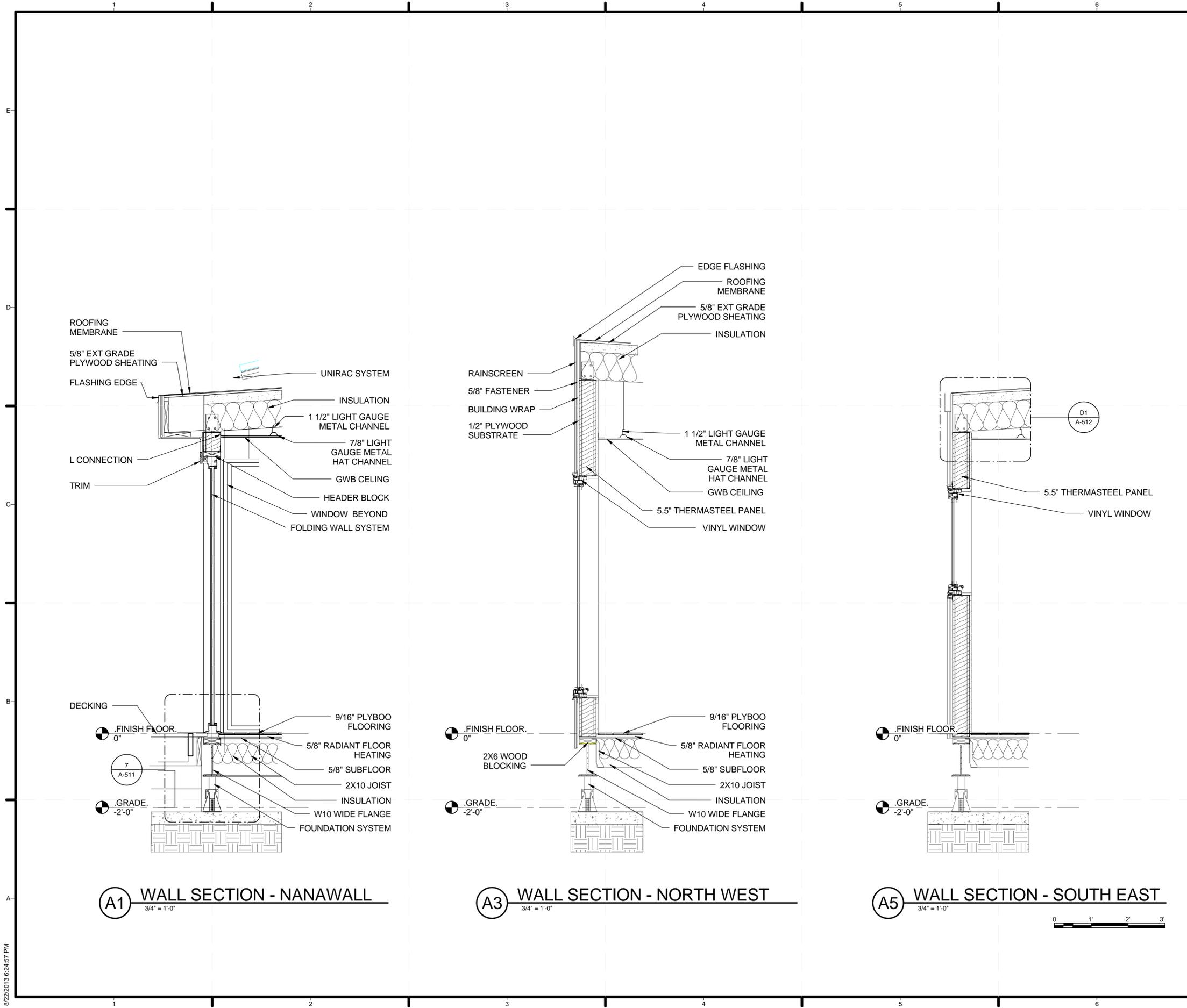
SHEET TITLE

WALL SECTIONS

A-311



8/22/2013 6:24:47 PM



GENERAL SHEET NOTES

1. ALL OPENING DIMENSIONS ARE TO THE ROUGH OPENING
2. SEE SHEET A-512 FOR HEAD, JAMB & SILL DETAILS AT OPENINGS



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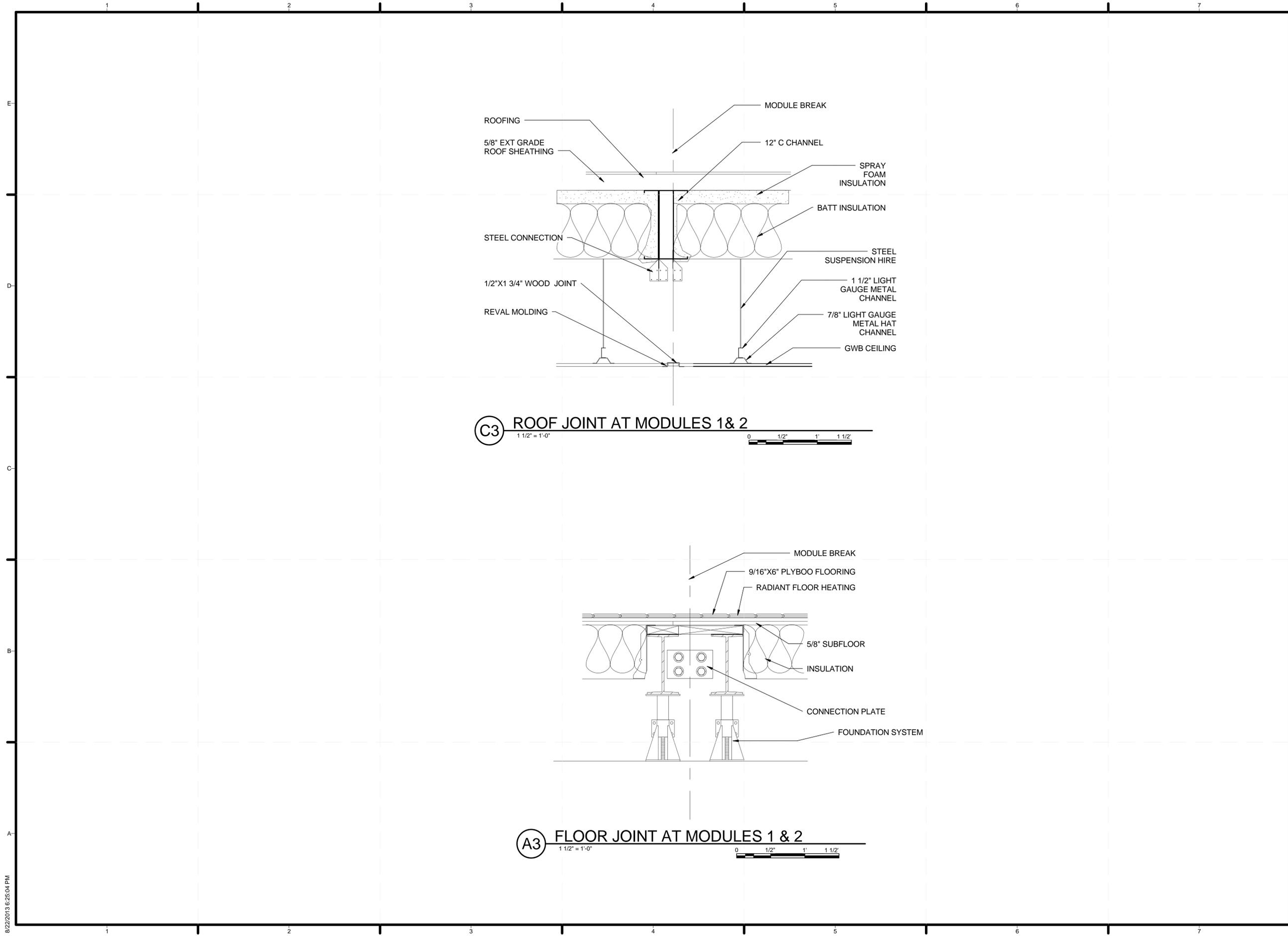
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WALL SECTIONS

A-312

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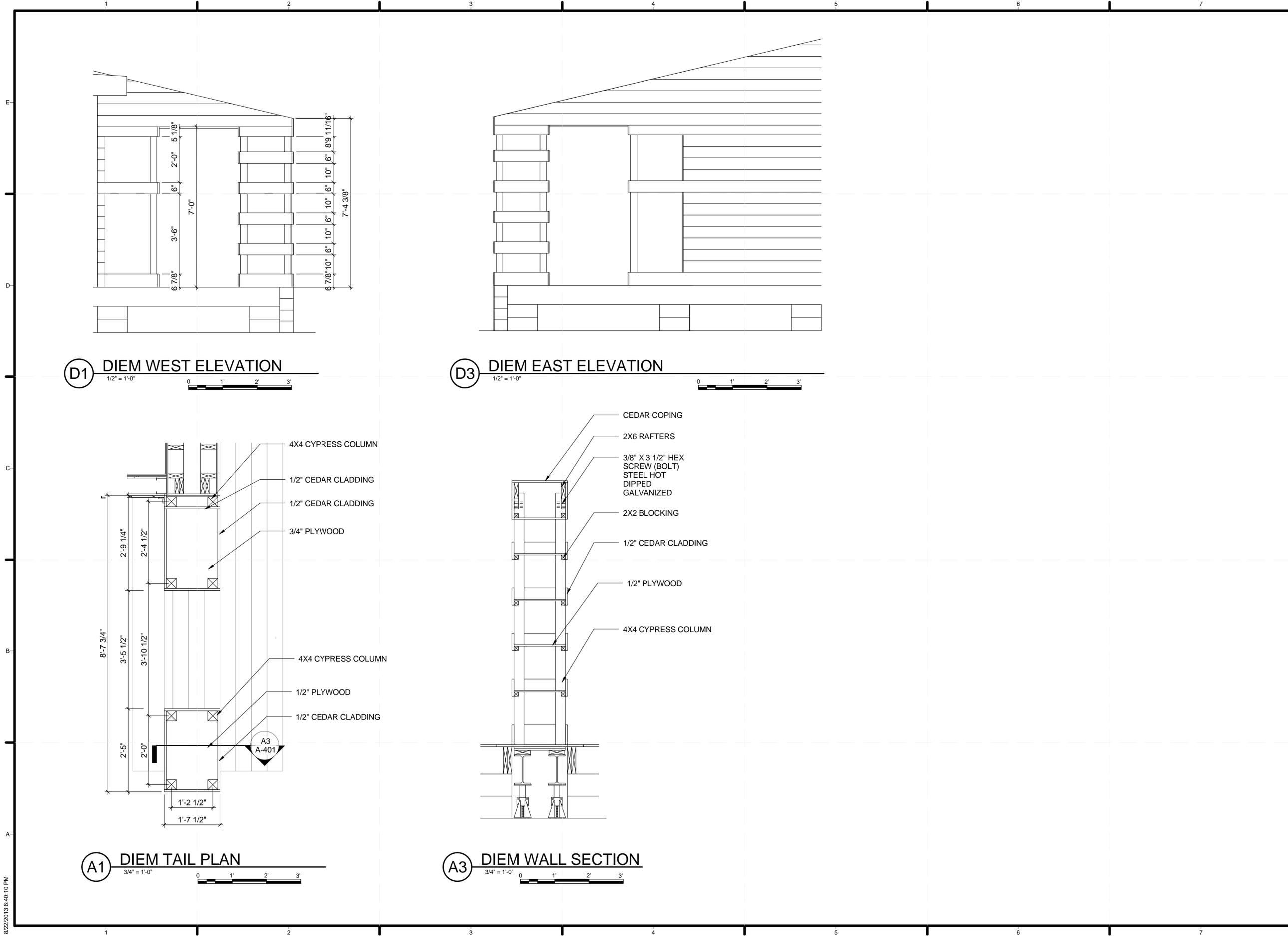
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SHEET TITLE

FLOOR & ROOF SECTIONS

A-321



D1 DIEM WEST ELEVATION
1/2" = 1'-0"

D3 DIEM EAST ELEVATION
1/2" = 1'-0"

A1 DIEM TAIL PLAN
3/4" = 1'-0"

A3 DIEM WALL SECTION
3/4" = 1'-0"



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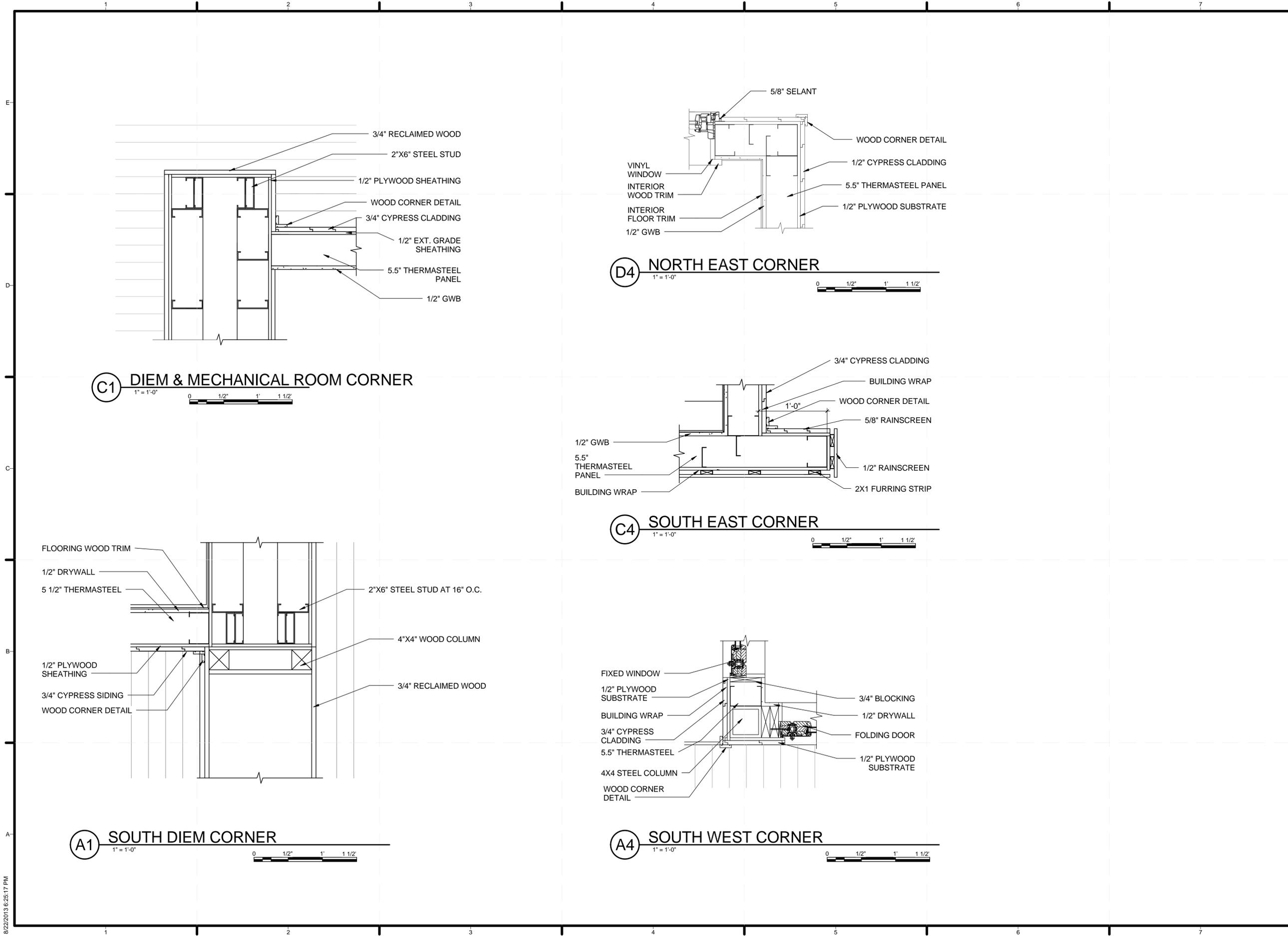
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SHEET TITLE
DIEM TAIL DETAILS

A-401

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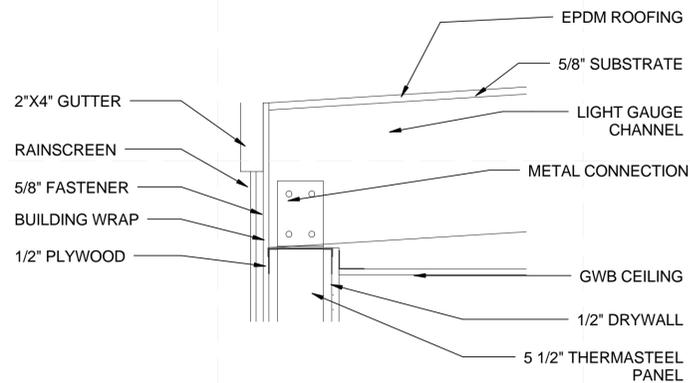
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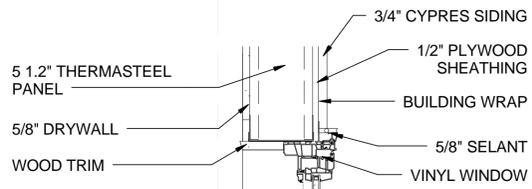
SHEET TITLE

PLAN DETAILS

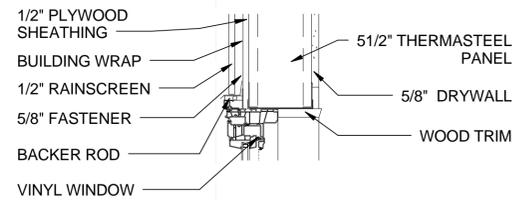
A-501



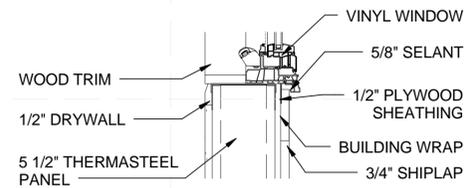
D1 SECTION DETAIL - SOUTH EAST WINDOW
1 1/2" = 1'-0"



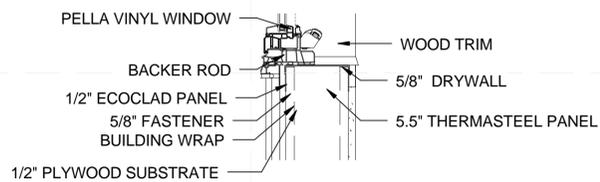
B1 TYPICAL HEAD AT WOOD CLADDING
1 1/2" = 1'-0"



B4 TYPICAL HEAD AT RAINSCREEN
1 1/2" = 1'-0"



A1 TYPICAL SILL AT WOOD CLADDING
1 1/2" = 1'-0"



A4 TYPICAL SILL AT RAINSCREEN
1 1/2" = 1'-0"



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SHEET TITLE
 SECTION DETAILS

A-512



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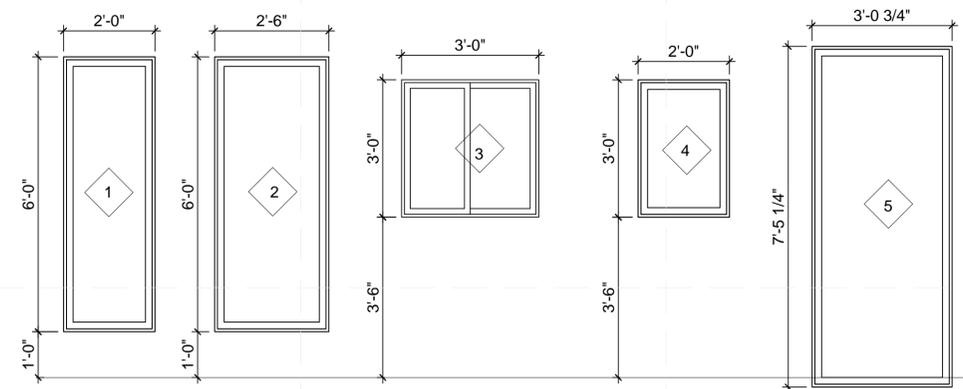
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SHEET TITLE

DOORS & WINDOWS SCHEDULE

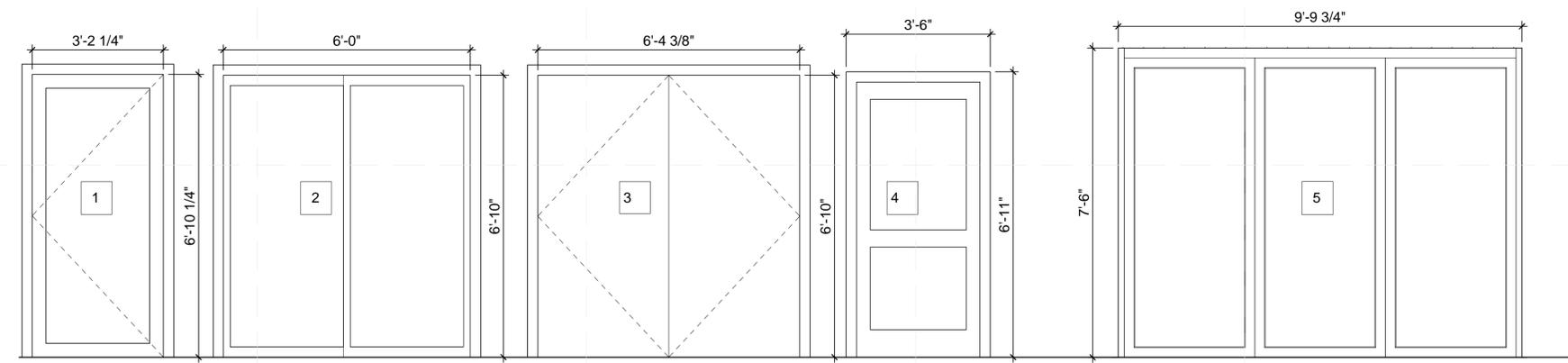
A-601



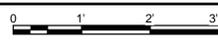
D1 WINDOWS
 1/2" = 1'-0"



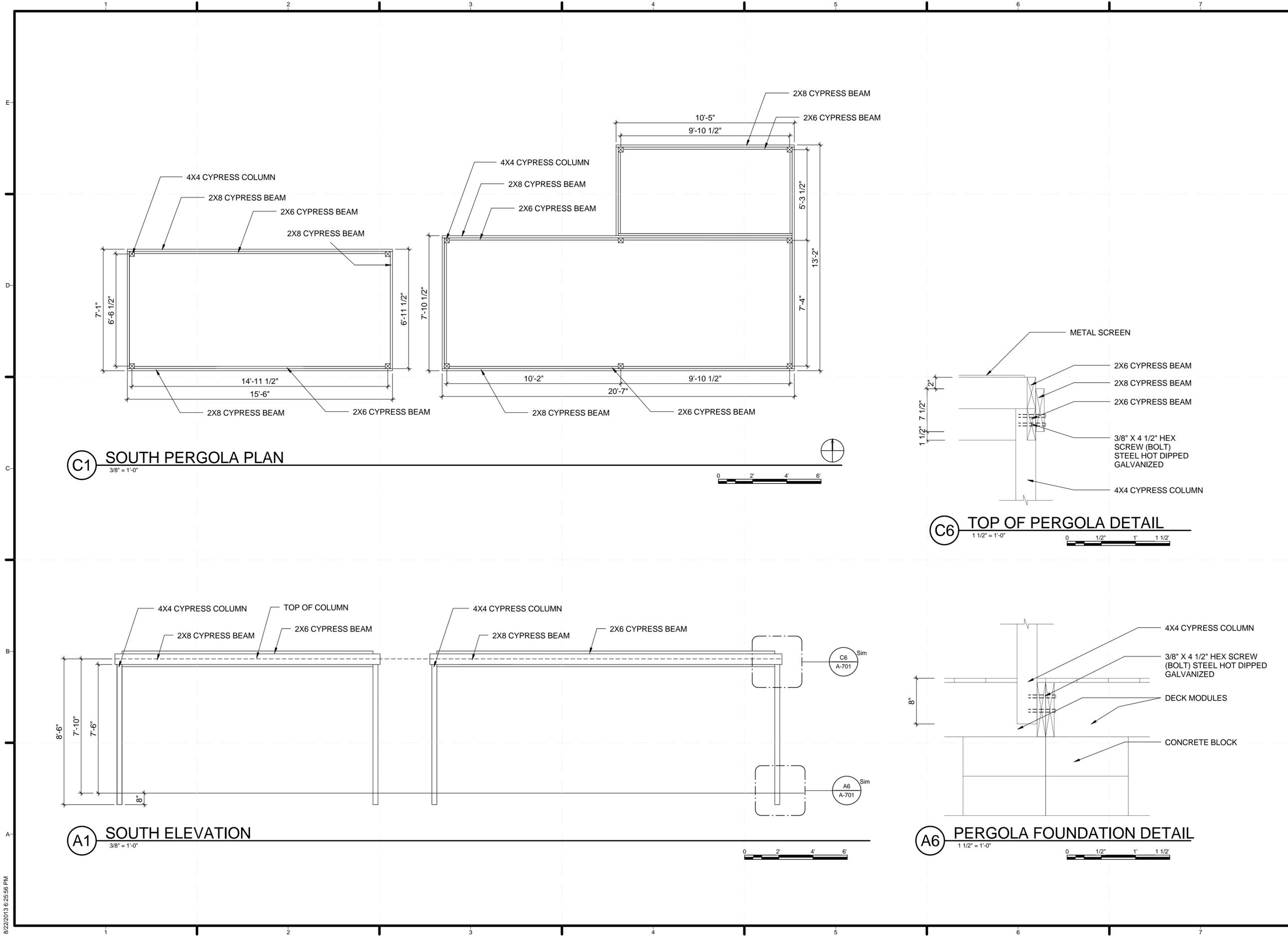
MARK	ROUGH OPENING		TYPE	MATERIAL	DETAIL			GLAZING		HEAD HEIGHT
	WIDTH	HEIGHT			HEAD	JAMB	SILL	THICKNESS	TYPE	
1	2'-0"	6'-0"	CASEMENT	VINYL	A-512	A-501	A-512	TRIPLE GLAZED	TEMPERED GLASS	7'-0"
2	2'-6"	6'-0"	CASEMENT	VINYL	A-512	A-501	A-512	TRIPLE GLAZED	TEMPERED GLASS	7'-0"
3	3'-0"	3'-0"	SLIDING	VINYL				TRIPLE GLAZED	TEMPERED GLASS	6'-6"
4	2'-0"	3'-0"	CASEMENT	VINYL	A-512	A-501	A-512	TRIPLE GLAZED	TEMPERED GLASS	6'-5 1/4"
5	3'-0 3/4"	7'-5 1/4"	CASEMENT	VINYL				TRIPLE GLAZED	TEMPERED GLASS	7'-5 1/4"



B1 DOORS
 1/2" = 1'-0"



MARK	DR TYPE	DR SIZE	DOOR SCHEDULE			DESCRIPTI ON	Rough Height	Rough Width
			HEAD	JAMB	SILL			
1	83	36" x 84" 3				ENTRANCE	6'-10 1/4"	3'-2 1/4"
2	33	72" x 84"				BEDROOM	6'-10"	6'-0"
3	70	72" x 84"				MECH. ROOM	6'-10"	6'-4 3/8"
4	44	36" x 80"				BATHROOM		



C1 SOUTH PERGOLA PLAN
3/8" = 1'-0"

C6 TOP OF PERGOLA DETAIL
1 1/2" = 1'-0"

A1 SOUTH ELEVATION
3/8" = 1'-0"

A6 PERGOLA FOUNDATION DETAIL
1 1/2" = 1'-0"



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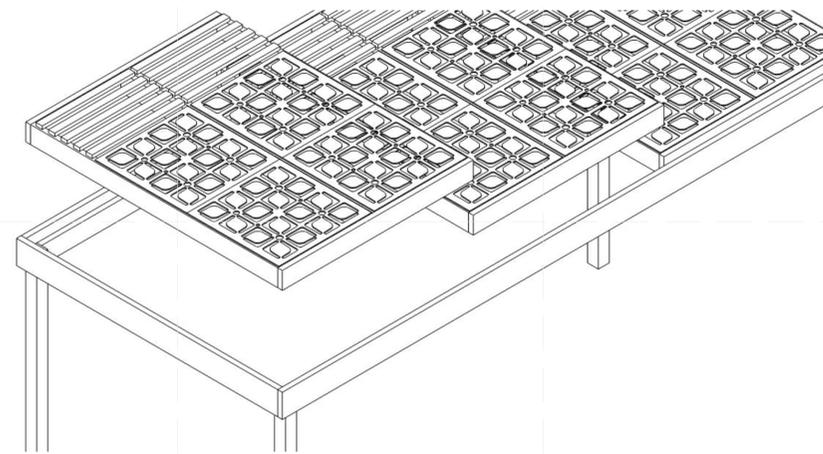
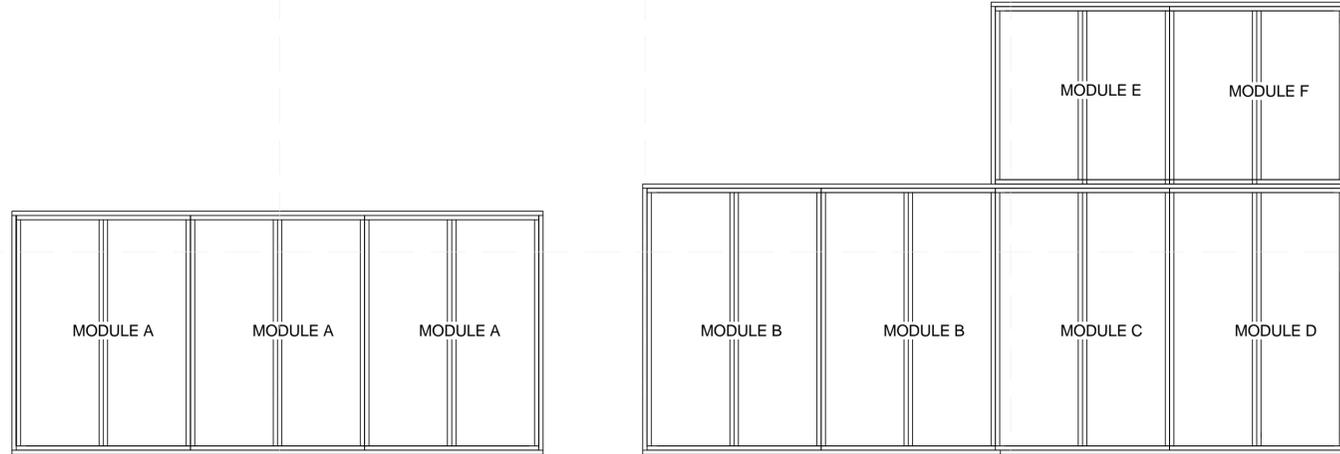
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SHEET TITLE
 SOUTH PERGOLA

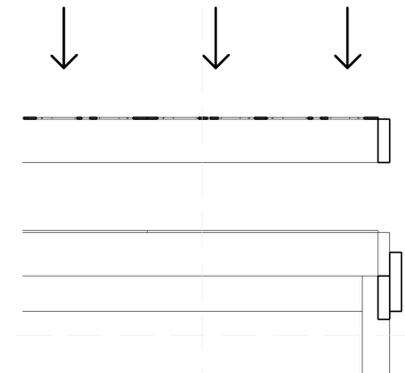
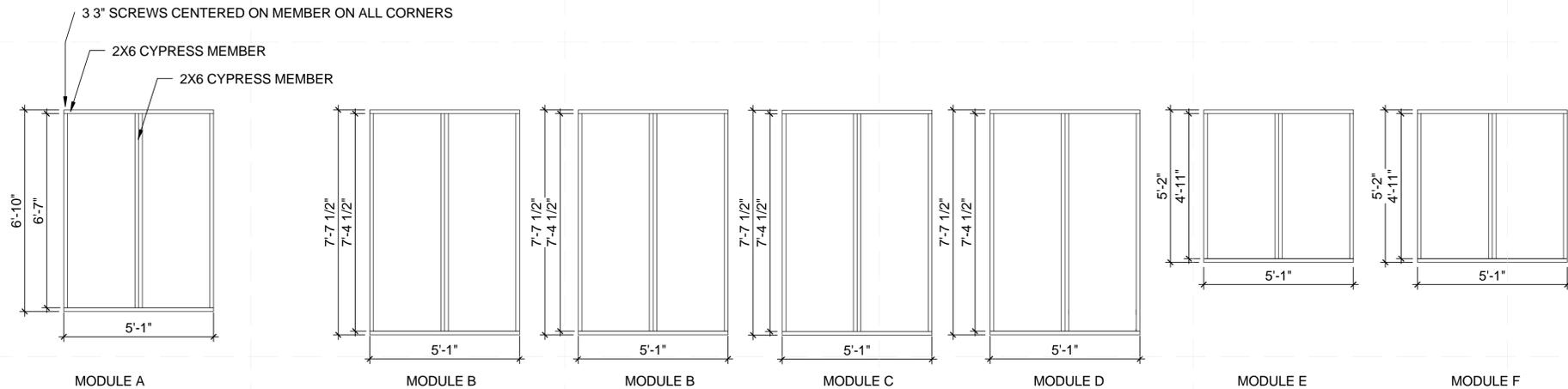
A-701

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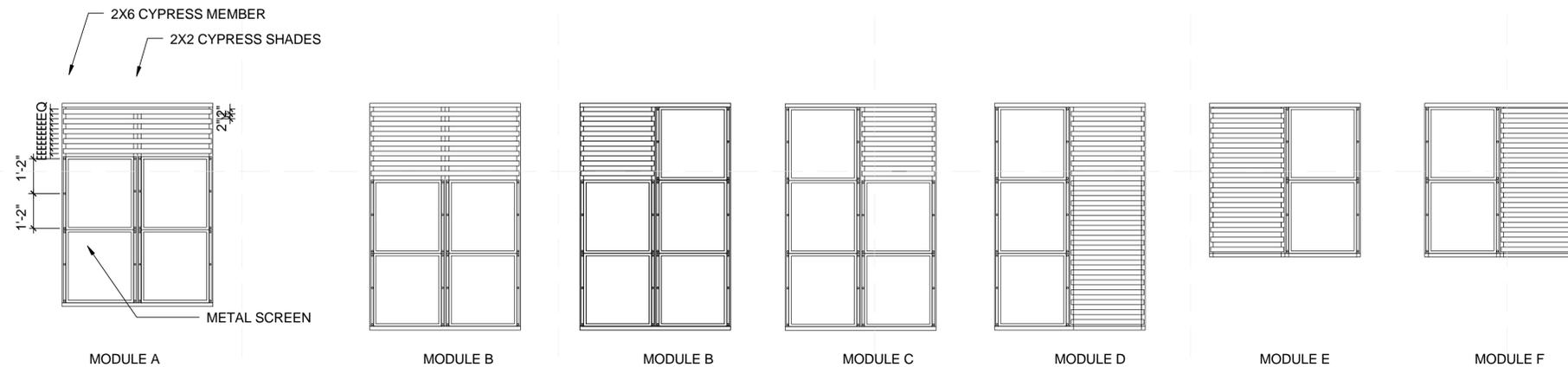
D1 SOUTH PERGOLA MODULE LAYOUT
3/8" = 1'-0"

D5 3D MODULE LAYOUT
1 1/2" = 1'-0"

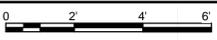


B1 MODULES STRUCTURE
3/8" = 1'-0"

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



A1 MODULES
3/8" = 1'-0"



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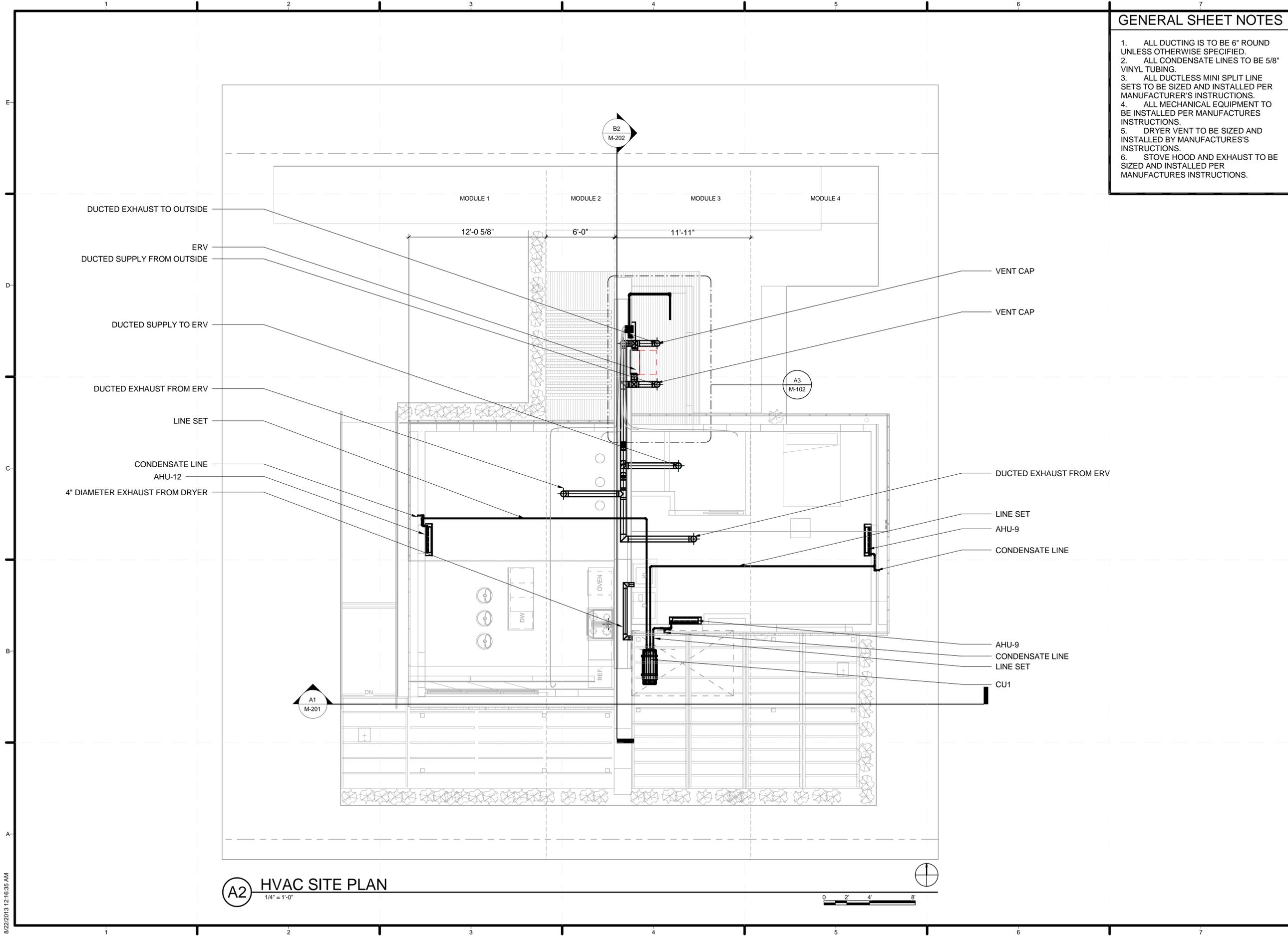
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SHEET TITLE

SOUTH PERGOLA
 MODULE DETAILS

A-702



GENERAL SHEET NOTES

1. ALL DUCTING IS TO BE 6" ROUND UNLESS OTHERWISE SPECIFIED.
2. ALL CONDENSATE LINES TO BE 5/8" VINYL TUBING.
3. ALL DUCTLESS MINI SPLIT LINE SETS TO BE SIZED AND INSTALLED PER MANUFACTURER'S INSTRUCTIONS.
4. ALL MECHANICAL EQUIPMENT TO BE INSTALLED PER MANUFACTURERS INSTRUCTIONS.
5. DRYER VENT TO BE SIZED AND INSTALLED BY MANUFACTURES'S INSTRUCTIONS.
6. STOVE HOOD AND EXHAUST TO BE SIZED AND INSTALLED PER MANUFACTURES INSTRUCTIONS.



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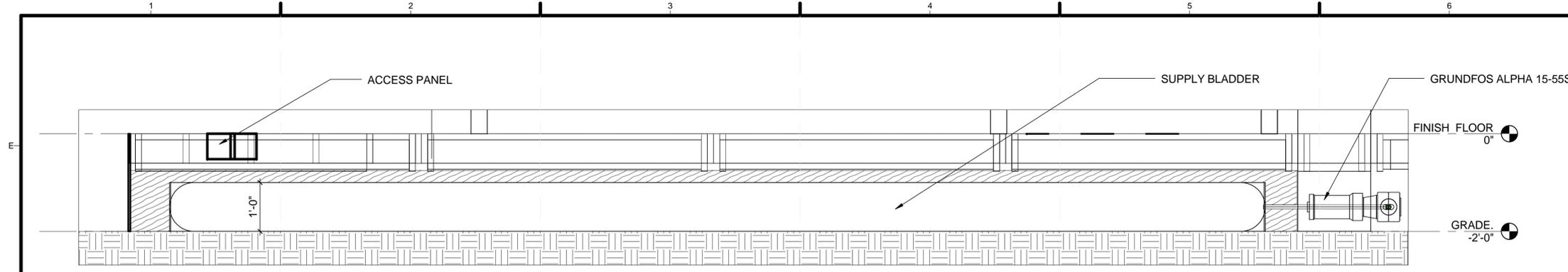
SHEET TITLE

HVAC EQUIPMENT AND DISTRIBUTION PLAN

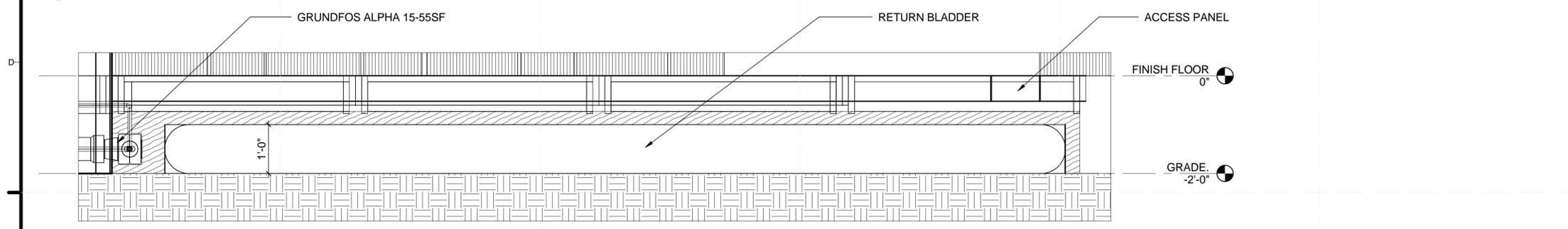
M-101

A2 HVAC SITE PLAN
 1/4" = 1'-0"

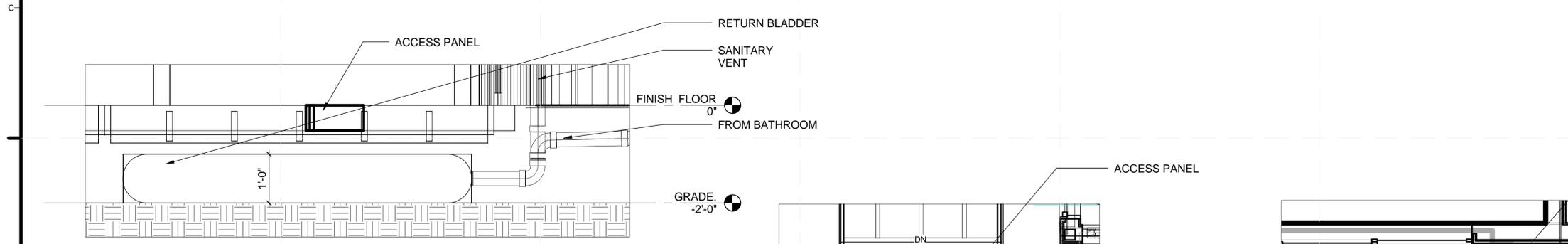
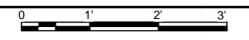
8/22/2013 12:16:35 AM



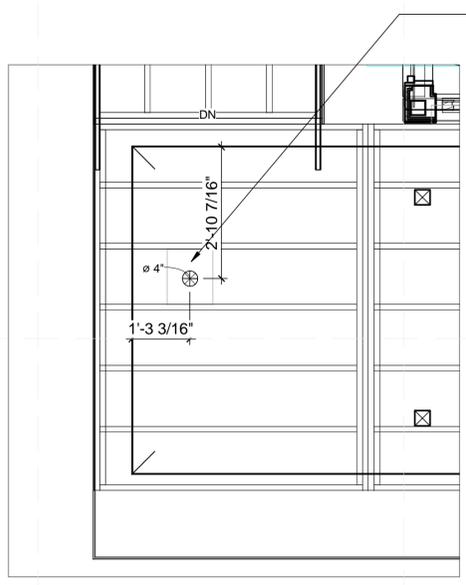
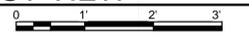
D1 SUPPLY BLADDER SECTION- SOUTH VIEW
3/4" = 1'-0"



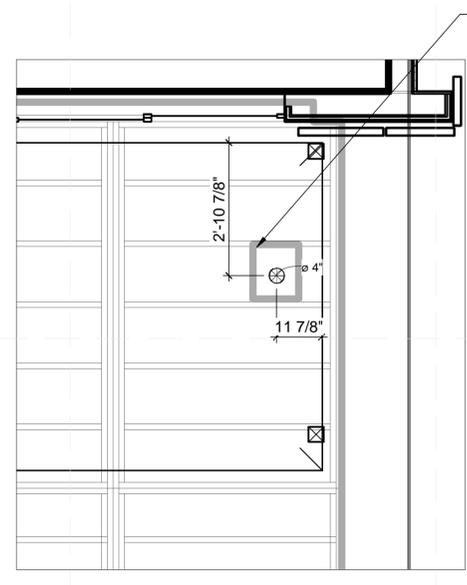
C1 RETURN BLADDER SECTION- SOUTH VIEW
3/4" = 1'-0"



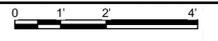
B1 RETURN BLADDER SECTION- EAST VIEW
3/4" = 1'-0"



A3 SUPPLY WATER PLAN ACCESS PANEL
1/2" = 1'-0"



A5 RETURN BLADDER ACCESS PANEL
1/2" = 1'-0"



GENERAL SHEET NOTES

1. THE WATER FOR THE FIRE SUPPRESSION SYSTEM AND DOMESTIC WATER WILL BE CONTAINED IN THE SUPPLY WATER TANK.
2. 950 GALLONS ARE TO BE SUPPLIED TO THE SUPPLY WATER BLADDER.
3. 950 GALLONS ARE TO BE REMOVED FROM THE RETURN WATER BLADDER.
4. THE WATER SUPPLY BLADDER IS TO BE FILLED FROM BEGINNING TO END OF COMPETITION.
5. THE WATER BLADDER FILL CAP WILL BE SUPPORTED BY HUMAN DURING FILL AND REMOVAL.
6. EACH BLADDER WILL HAVE REMOVABLE TOPS WITH A DIAMETER OF AT LEAST 4" AND AT LEAST 12" OF CLEARANCE ABOVE.
7. THE SUPPLY AND RETURN WATER BLADDER ARE TEMPORARY AND FOR COMPETITION PURPOSES ONLY.
8. THE SUPPLY AND RETURN BLADDER WILL HAVE AN HEIGHT OF 12".
9. ACCESS PANELS CONSIST OF REMOVABLE SECTION OF THE DECKING WHICH ARE ACCISSIBLE DURING THE ENTIRE COMPETITION.



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 ADDRESS: HAMPTON UNIVERSITY DEPARTMENT OF ARCHITECTURE HAMPTON, VIRGINIA
 OLD DOMINION UNIVERSITY SCHOOL OF ENGINEERING NORFOLK, VIRGINIA
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WATER BLADDER SECTIONS

P-305

MARK	DESCRIPTION	COUNT	MANUFACTURER	MODEL/STOCK CODE	SUPPLY FITTING	SUPPLY PIPE	DRAIN
HARDWARE							
PU1	CIRCULATOR PUMP	1	GRUNDFOS	ALPHA 15-55SF	3/4" FLANGE	3/4" COPPER	3/4" FLANGE
PM1	5-PORT COPPER MANIFOLD, OPEN ENDS	1	SIoux CHIEF	672XV0599	1/2" NPT MALE	1/2" PEX	1/2" PEX
PM2	5-PORT COPPER MANIFOLD, CLOSED ENDS	1	SIoux CHIEF	672XV0590	1/2" NPT MALE	1/2" PEX	1/2" PEX
AAV	1-1/2" PVC AIR ADMITTANCE VALVE	3	OATELY	39016	1/2" NPT MALE		
WT1	SUPPLY BLADDER (POTABLE)	1	HUSKEY TANKS	CUSTOM	4" PVC	4" PVC	4" PVC
WT2	RETURN BLADDER (NON-POTABLE)	1	HUSKEY TANKS	CUSTOM	4" PVC	4" PVC	4" PVC
B1	SUPPLY BLADDER BERM (POTABLE)	1	HUSKEY TANKS	CUSTOM			
B2	RETURN BLADDER BERM (NON-POTABLE)	1	HUSKEY TANKS	CUSTOM			
WT3	COLD WATER EXPANSION TANK	1	LOGALUX	7747202344	3/4" NPT MALE	3/4" PEX	3/4" PEX
SSC	SUNDRUM SOLAR COLLECTORS (650 W)	8	SUNDRUM	SDM100	3/4" NPT MALE	3/4" PEX	3/4" PEX
SBH	PUMP STATION SBH	1	BOSCH	SBH	1/2" NPT MALE	3/4" PEX	3/4" PEX
SBU	PUMP STATION SBU	1	BOSCH	SBU	1/2" NPT MALE	3/4" PEX	3/4" PEX
PU2	RE-CIRCULATOR PUMP	1	GRUNDFOS	595916	3/4" FLANGE	3/4" PEX	3/4" FLANGE
PCM	PCM SPHERE	30	PURETEMP				
T1	PCM TANK	1	BUDERUS	LOGALUX SM300	3/4" NPT MALE	3/4" COLD & HOT PEX	3/4" NPT MALE
T2	HOT WATER TANK	1	BOSCH	BOSCH WST 50	3/4" NPT MALE	3/4" COLD & HOT PEX	3/4" NPT MALE
OUT1	WASHING MACHINE OUTLET BOX	1	SIoux CHIEF	696-2303XF	1/2" PEX	1/2" PEX	
OUT2	ICE MAKER BOX	1	WATTS	HIB0500	1/2" PEX	1/2" PEX	
OUT3	TOILET/ DISHWASHER OUTLET BOX	1	SIoux CHIEF	696-1001XF	1/2" PEX	1/2" PEX	
PIPES AND FITTINGS							
1/2"	1/2" PEX TUBING HOT (RED)	200 FEET	EVERNOT	NPR-1201			
1/2"	1/2" PEX TUBING COLD (BLUE)	200 FEET	EVERNOT	NPR-1201			
3/4"	3/4" PEX TUBING COLD (BLUE)	100 FEET	EVERNOT	NPR-3401			
7/8"	7/8" PIPE (O.D.) X 3/8" WALL INSUL-LOCK PIPE INSULATION	12 FEET	K-FLEX	6RXL038078			
3"	3" PVC PIPE - SCH 40	30	CHARLOTTE	23834			
1/2"	1-1/2" PVC PIPE - SCH 40	30	EVERNOT	NPR-1201			
1/2"	1/2" PEX COPPER CRIMP RINGS	100	SIoux CHIEF	649X2			
1/2"	3/4" PEX COPPER CRIMP RINGS	100	SIoux CHIEF	649X3			
3/4"	PLASTIC BEND SUPPORT - 3/4" PEX TUBING	100	EVERHOT	PXA4211			
1/2"	PLASTIC BEND SUPPORT - 1/2" PEX TUBING	200	EVERHOT	PXA4111			
3/4"	3/4" PEX x 3/4" PEX Elbow	4	Everhot	BPF6805	3/4" PEX	3/4" PEX	3/4" PEX
1/2"	1/2" x 1/2" x 1/2" Brass PEX Tee	3	Everhot	BPF6901	1/2" PEX	1/2" PEX	1/2" PEX
3/4"	3/4" x 3/4" x 3/4" Brass PEX Tee	5	Everhot	BPF6906	3/4" PEX	3/4" PEX	3/4" PEX
3/4"	3/4" PEX x 3/4" Copper Pipe Adapter	2	Everhot	BPF7304	3/4" NPT MALE	1/2" COPPER	3/4" PEX
3/4"	3/4" PEX x 3/4" Male Threaded Adapter	4	Everhot	BPF7406	3/4" NPT MALE	3/4" PEX	3/4" PEX
3/4"	3/4" Iron Pump Flange (pair)	2	Grundfos	519601	3/4" NPT MALE	3/4" PEX	3/4" PEX
1-1/2"	1-1/2" PVC DWV 90° Elbow	8	Spears	P300-015	1-1/2" PVC	1-1/2" PVC	1-1/2" PVC
3"	3" PVC DWV Street 90° Elbow	3	Spears	P302-030	3" PVC	3" PVC	3" PVC
1-1/2"	1-1/2" PVC DWV Sanitary Tee	4	Spears	P400-015	1-1/2" PVC	1-1/2" PVC	1-1/2" PVC
3"	3" PVC DWV Street 90° Elbow	4	Spears	P302-030	3" PVC	3" PVC	3" PVC
1-1/2"	1-1/2" PVC DWV 45° Elbow	2	Spears	P321-015	1-1/2" PVC	1-1/2" PVC	1-1/2" PVC
1-1/2"	1-1/2" PVC DWV Wye	2	Spears	P600-015	1-1/2" PVC	1-1/2" PVC	1-1/2" PVC
3"	3" x 1-1/2" PVC DWV Reducer Coupling	3	Spears	P102-337	1-1/2" PVC	1-1/2" PVC	3" PVC
1-1/2"	1-1/2" PVC DWV P-Trap	3	Spears	P706x-015	1-1/2" PVC	1-1/2" PVC	1-1/2" PVC
GAUGES							
PG1	SHARKBITE PRESSURE GAUGE WITH 3/4" TEE	4	CASH-ACME	227722	3/4" PEX	3/4" PEX	3/4" PEX



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SCHEDULE

P-601

MAIN SERVICE PANEL - MSP - RATED AT 200A WITH 150A MAIN BREAKER

SLOT #	LOAD	C/B	AWG	SLOT #	C/B	LOAD	AWG
1	LIVING ROOM/HALLWAY	1P/20A*	12	2	1P/20A*	BEDROOM	12
3	REFRIGERATOR**	1P/15A	12	4	1P/15A	VENTILATION HOOD**	12
5	COUNTERTOP LEFT **	1P/20A	12	6	1P/20A	COUNTER TOP RIGHT**	12
7	NORTH MECHANICAL ROOM**	1P/20A	12	8	1P/20A	SOUTH MECHANICAL ROOM**	12
9	ISLAND/DINING ROOM**	1P/15A	12	10	1P/15A	DISHWASHER**	12
11	REAR OUTDOOR RECEPTACLES**	1P/15A	12	12	1P/15A	ERV**	12
13	BATHROOM RECEPTACLE **	1P/20A	12	14	1P/15A	CIRCULATOR PUMP **	12
15	MECHANICAL ROOM FAN	1P/15A	12	16	2P/30A	LAUNDRY **	10
17	LIGHTING 1	1P/15A	12	18			
19	LIGHTING 2	1P/15A	12	20	1P/15A	LIGHTING 3	12
21	WST 50	2P/30A	10	22	1P/15A	LIGHTING 4	12
23				24	1P/15A	LIGHTING 5	12
25	WALL OVEN	2P/30A	10	26	2P/30A	HVAC OUTDOOR UNIT	10
27				28			
29	INVERTER A	2P/20A	12	30	2P/40A	COOKTOP	8
31				32			
33	INVERTER B	2P/20A	12	34	2P/20A	INVERTER C	12
35				36			
37	FIRE ALARM	1P/15A	12	38			
39				40			

* ARC FAULT CIRCUIT INTERRUPTER (AFCI) **GROUND FAULT CIRCUIT INTERRUPTER (GFCI)

SERVICE FEEDER CALCULATIONS

MAIN SERVICE PANEL			
GENERAL LIGHTING AND RECEPTACLES (NEC 210.11(C))			
GENERAL LIGHTING (NEC 220.12, TABLE 220.12)	843 SQFT X 3 VA/SQFT	2529	VA
SMALL APPLIANCE CIRCUITS (NEC220.52(A))	2 X 1500 VA	3000	VA
LAUNDRY (NEC 220.52(B))	1 CIRCUIT X 1500 VA/CIRCUIT	1500	VA
SUBTOTAL (NEC 220.42, TABLE 220.42)	3000 VA AT 100% + 4029 VA AT 35%	4410	VA
COOKING			
COOKTOP	7200 VA AT 100%	7200	VA
WALL OVEN	5800 VA AT 100%	5800	VA
SUBTOTAL (NEC TABLE 220.55 NOTE (3), COLUMN B)	7200 VA + 5800VA = 13000VA AT 65%	8450	VA
FIXED APPLIANCES			
WATER HEATER (NEC 220.53)	4500 VA AT 75%	3375	VA
DISHWASHER (NEC 220.53)	1300 VA AT 75%	975	VA
RANGE HOOD (NEC 220.53)	580 VA AT 75%	435	VA
VENTILATION FAN (NEC 220.53)	120 VA AT 75%	120	VA
RADIANT FLOOR PUMP (NEC 430.24)			VA
CIRCULATOR PUMP (NEC 430.24)	45 VA AT 100%	45	VA
RE-CIRCULATOR PUMP (NEC 430.24)	75 VA AT 100%	75	VA
KS PUMP STATION (NEC 430.24)	215 VA AT 100%	215	VA
PUMP STATION MODULE SBH (NEC 430.24)	3 VA AT 100%	3	VA
PUMP STATION MODULE SBU (NEC 430.24)	3 VA AT 100%	3	VA
SOLAR CONTROLLER (NEC 430.24)	120 VA AT 100%	120	VA
SUBTOTAL		5366	VA
WASHER AND DRYER (NEC 220.54, ANNEX D2 (B))	2300 VA + 2800 VA = 5100 VA AT 100%	5100	VA
HVAC COMPRESSOR (NEC 220.82 (C), 220.60)	2200 VA AT 100%	2200	VA
LARGEST MOTOR (NEC 430.24 (1))	215 VA AT 25%	54	VA
TOTAL (NEC ANNEX D2 (B))		25580	VA
TOTAL CURRENT		107	A
MAIN SERVICE PANEL BREAKER			
		150	A
NEUTRAL CONDUCTOR			
GENERAL LIGHTING AND RECEPTACLES (NEC 220.61)	4410 VA AT 100%	4410	VA
COOKING (NEC 220.61(B))	8450 VA AT 70%	5915	VA
FIXED APPLIANCES (NEC 220.61)	5366 VA AT 100%	5366	VA
WASHER AND DRYER (NEC 220.61(B))	5100 VA AT 70%	3500	VA
TOTAL		19191	VA
TOTAL CURRENT		80	A

MAIN SERVICE PANEL LOAD DETAILS

SLOT #	LOAD DETAIL				
1	(3) STANDARD DUPLEX RECEPTACLES, (1) STANDARD QUADRUPLX RECEPTACLE			120V	3 PRONG
3	REFRIGERATOR	588W		120V	3 PRONG
5	MICROWAVE	1650W	13.8A	120V	3 PRONG
7	COOKTOP	7200W		240V	WIRED IN
9					
11	ISLAND/DINING ROOM			120V	3 PRONG
13	(3) GFCI DUPLEX RECEPTACLES			120V	3 PRONG
15	CIRCULATOR PUMP GRUNDFOS ALPHA 15-55FS	45W	0.65A	120V	3 PRONG
17	(2) GFCI QUADRUPLX RECEPTACLES, PUMPS				3 PRONG
19	BROAN XB110L		0.9A	120V	WIRED IN
21	PORCH SCONCE, 4 6" LIVING ROOM AND KITCHEN				
23	BATHROOM LIGHTS				
25	BEDROOM LIGHTS, BACK PORCH				
27	BOSCH WST 50	4500W		240V	WIRED IN
29					
31					
33					
35	INVERTER A				16A
37					
39	INVERTER B				16A
40					

MAIN SERVIC PANEL LOAD DETAILS

SLOT #	LOAD DETAIL				
2	(6) STANDARD DUPLEX RECEPTACLES			120V	3 PRONG
4	VENTILATION HOOD	580W		120V	3 PRONG
6				120V	3 PRONG
8	WALL OVEN	5800W		240V	WIRED IN
10					
12	DISHWASHER	1300W	12A	120V	3 PRONG
14	DRYER (HAS RECEPTACLE FOR WASHER BUILT IN)	2800W	12A	240V	DRYER
16	WASHER (RECEPTACLE LOCATED ON DRYER)	2300W	12A	240V	WASHER
18	(2) GFCI STANDARD DUPLEX RECEPTACLE, (1) GFCI DUPLEX RECEPTACLE WEATHER RESISTANT, MONITORING EQUIPMENT			120V	3 PRONG
20	RENEWAIR EV70	84W		120V	3 PRONG
22	WALL WASHING, ISLAND				
24	HALLWAY LIGHTS				
26					
28					
30					
32					
34					
36					
38					
40	INVERTER C				16A
41					



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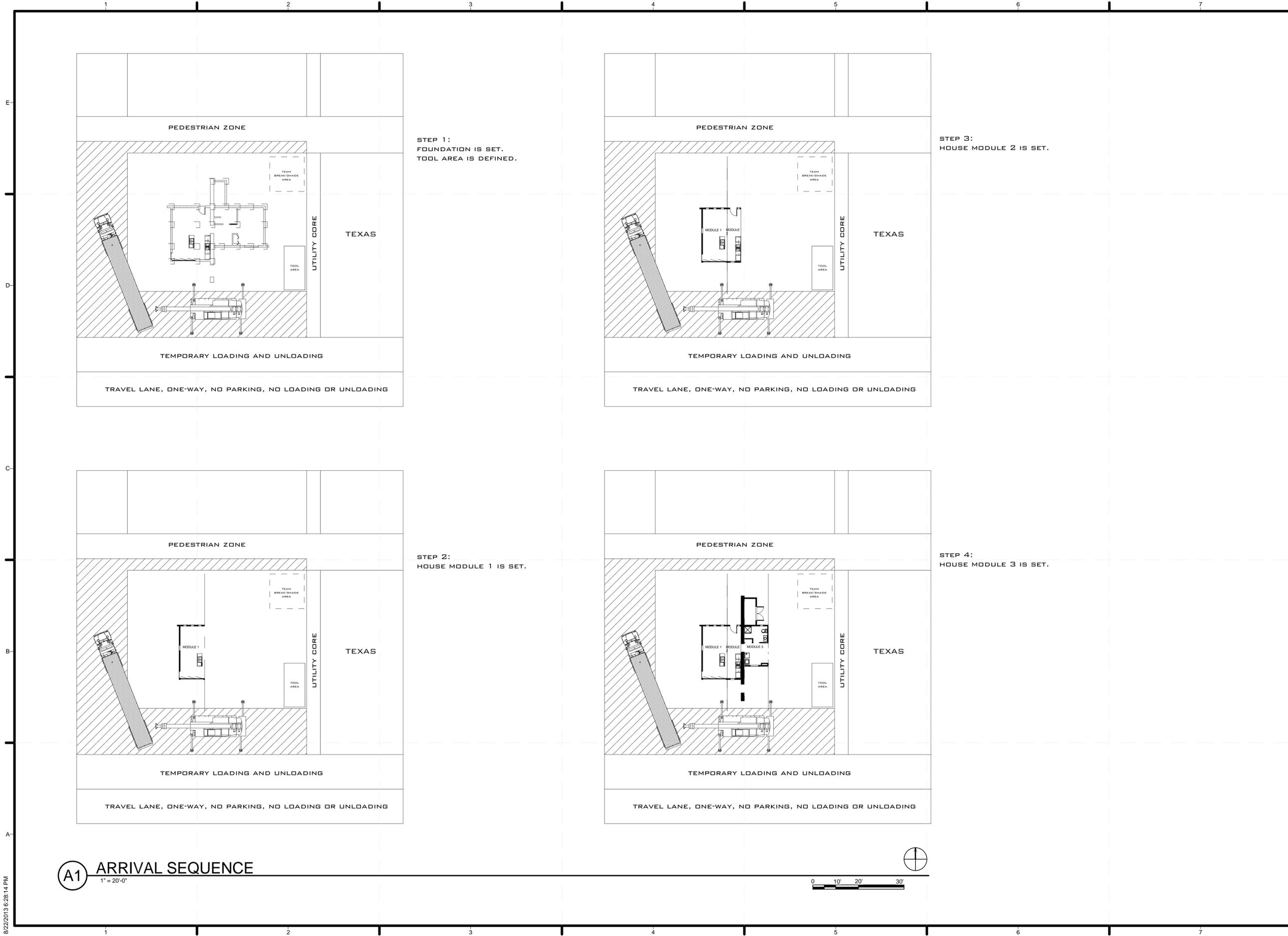
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SCHEDULES

E-603



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 ARRIVAL SEQUENCE PLANS

O-101

(A1) ARRIVAL SEQUENCE

1" = 20'-0"

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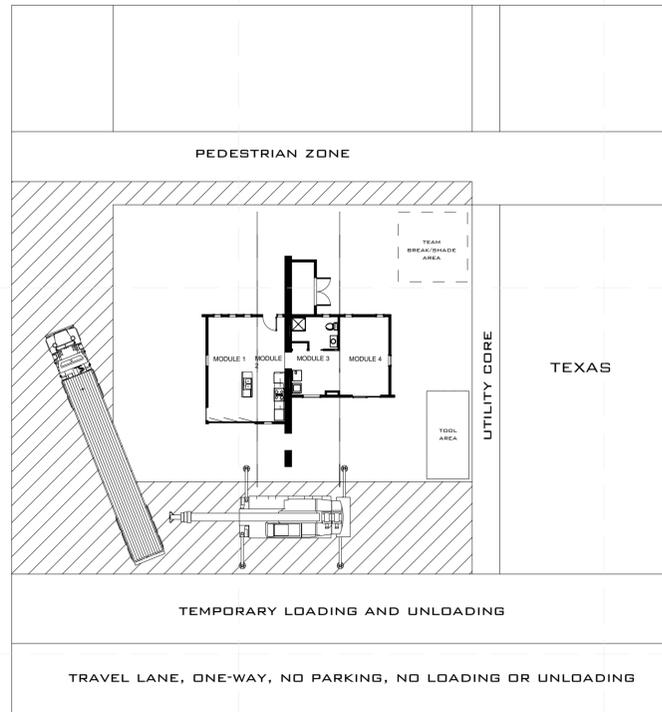
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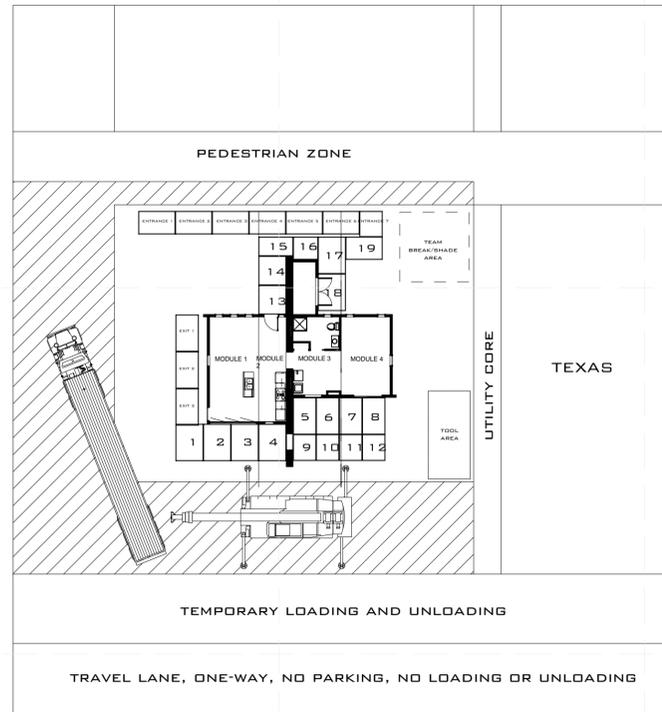
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ARRIVAL SEQUECE
 PLANS 2

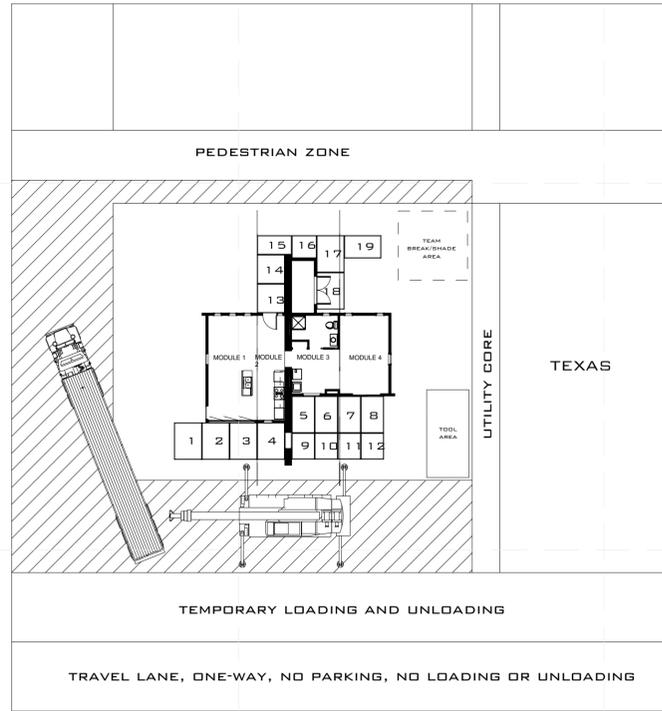
O-102



STEP 4:
 HOUSE MODULE 4 IS SET.



STEP 5:
 RAMP MODULES ARE SET.

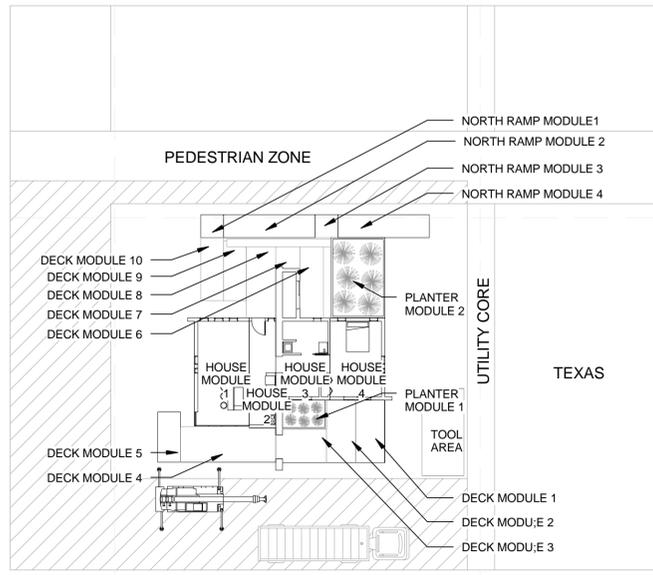


STEP 5:
 DECK MODULES ARE SET.
 DECK MODULES WILL BE PUT INTO PLACE WITH A FORKLIFT.

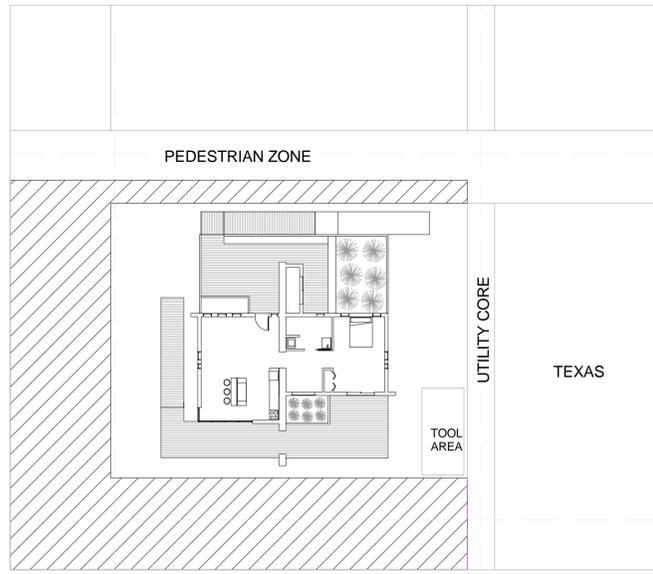
NOTE:
 DEPARTURE SEQUENCE IS THE REVERSE OF THE ARRIVAL SEQUENCE.

A1 ARRIVAL SEQUENCE 2
 1" = 20'-0"





STEP 9: DECK MODULES 1,2,3,4 AND 5 ARE SET



A1 ARRIVAL SEQUENCE 3

1" = 20'-0"



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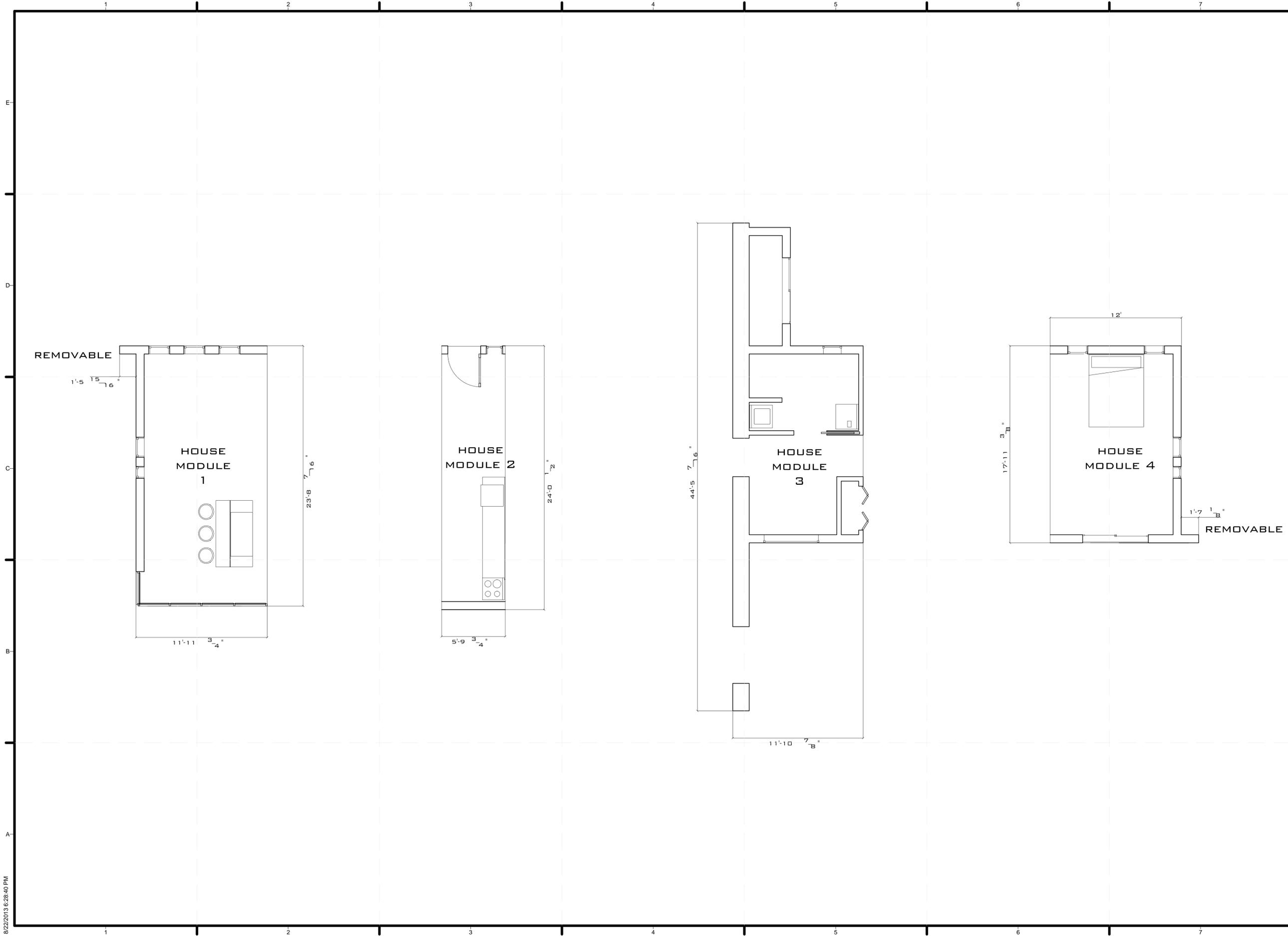
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ARRIVAL SEQUECE
 PLANS 3

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 MODULES DIMENSION

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