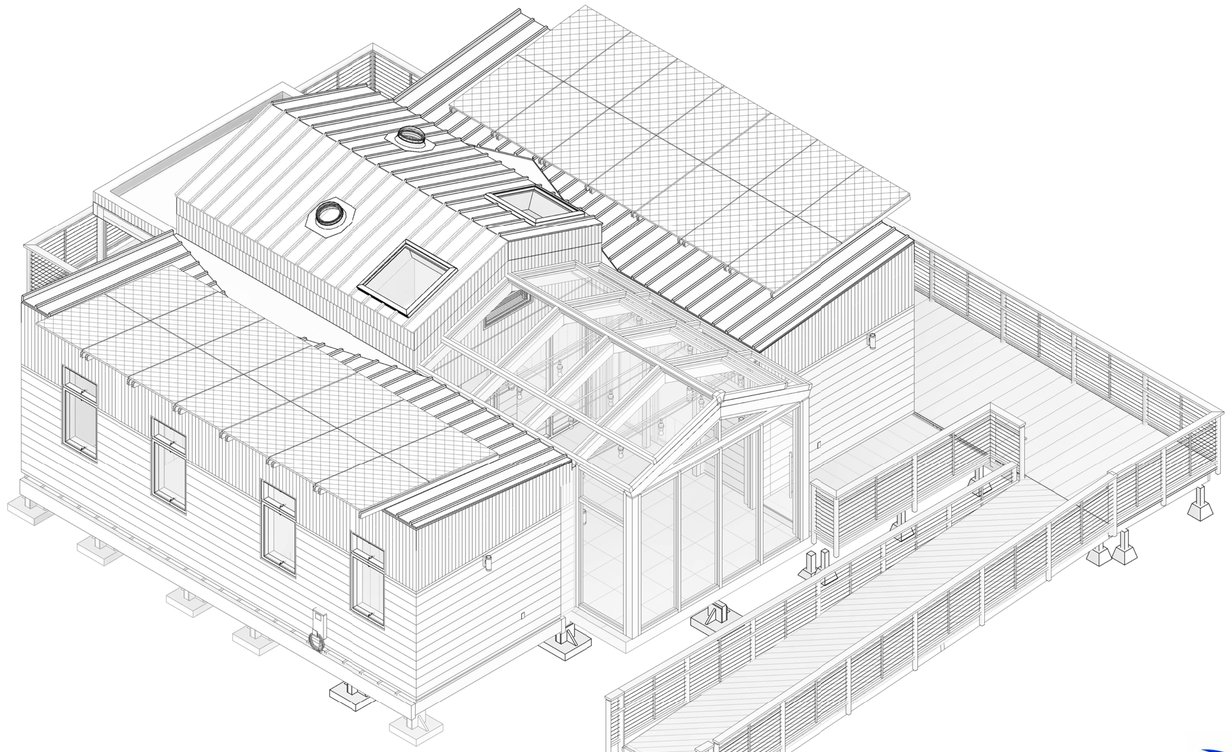
reACT

UNIVERSITY OF MARYLAND

U.S. DEPARTMENT OF ENERGY - SOLAR DECATHLON 2017 SUBMISSION



U.S. DEPARTMENT OF ENERGY

U.S. DEPARTMENT OF ENERGY SOLAR DECATHLON

PROJECT ARCHITECT

Garth Rockcastle, FAIA
School of Architecture, Planning and Preservation
GCR@umd.edu

PROJECT ENGINEER

Raymond Adomaitis
Chemical and Bio Molecular Engineering
Adomaiti@umd.edu

STUDENT PROJECT ARCHITECT

Sandra Oh Boun
sohboun@umd.edu

STUDENT DEPUTY PROJECT ARCHITECT

Malik Johnson-Williams
malikjw3@umd.edu

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description

PROJECT NO.	001
DESIGNED	ETS
CHECKED	GR

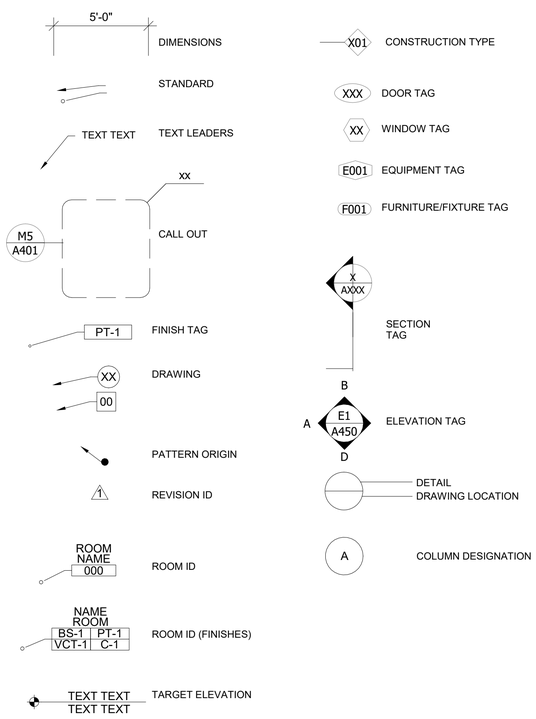
COVER SHEET

G-001

GENERAL NOTES

1. ALL PARTITIONS ARE DIMENSIONED TO FACE OF WALL FINISH, UNLESS NOTED OTHERWISE.
2. ALL FLOORS SHALL BE LEVELED AND FREE FROM IRREGULARITIES TO ASSURE A CONSTANT FLOOR HEIGHT.
3. ALL CONTRACTORS ARE RESPONSIBLE FOR LAYING OUT EQUIPMENT RUNS TO AVOID INTERFERENCE.
4. IF CEILING DIFFUSERS, LIGHT FIXTURES OR OTHER ELEMENTS ON OR ABOVE THE CEILING CANNOT BE LOCATED AS SHOWN ON PLAN DUE TO OBSTRUCTIONS, GENERAL CONTRACTOR SHALL NOTIFY ARCHITECT PRIOR TO COMMENCING WORK.
5. ALL WORK SHALL CONFORM TO TO ALL APPLICABLE CODES: FEDERAL, STATE AND LOCAL BUILDING CODES.
6. AFTER THE JOB IS IN PROGRESS, "CHANGE ORDERS" MUST BE APPROVED BY THE ARCHITECT IN WRITING PRIOR TO COMMENCING WORK.
7. INTERIOR ROOMS SHALL BE MECHANICALLY VENTILATED IN ACCORDANCE WITH STATE AND LOCAL BUILDING CODES.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR BRACING PARTITION WALLS AS REQUIRED AND AT ALL DOOR OPENINGS.
9. ALL MISCELLANEOUS WOOD BLOCKING, SILLS, PLYWOOD, ETC. TO BE FIRE RETARDANT TREATED.
10. ALL MATERIALS ARE TO BE STORED PROPERLY. GENERAL CONTRACTOR IS RESPONSIBLE FOR THE SAFEKEEPING OF MATERIALS.
11. GENERAL CONTRACTOR RESPONSIBLE FOR COORDINATION OF SPECIAL SHIPPING ITEMS. CONTRACTOR SHALL PROVIDE ARCHITECT WITH REASONABLE CONSTRUCTION SCHEDULE TO ARRANGE SHIPPING.
12. THE GENERAL CONTRACTOR SHALL SUBSTITUTE MATERIALS, FINISHES, AND OR EQUIPMENT UPON WRITTEN SUBMITTAL AND APPROVAL TO THE PROJECT MANUAL.
13. NO SUBSTITUTIONS SHALL BE ALLOWED DURING THE CONSTRUCTION PROCESS UNLESS APPROVED BY THE ARCHITECT.
14. DIMENSIONS NOTED 'CLEAR' SHALL NOT BE ADJUSTED WITHOUT PRIOR APPROVAL BY THE ARCHITECT.
15. GENERAL CONTRACTOR SHALL FURNISH AND INSTALL FIRE DAMPERS, SMOKE DETECTORS, AND SPRINKLER HEADS AS REQUIRED BY FIRE MARSHALL AND LOCAL CODES.
16. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL AND DISPOSAL OF ALL CONSTRUCTION DEBRIS AND REFUSE.
17. UPON SUBSTANTIAL COMPLETION OF WORK, CONTRACTOR SHALL PREPARE A PUNCH LIST AND NOTIFY ARCHITECT TO REVIEW AND VERIFY PUNCH-LIST FOR CORRECTIONS.
18. ALL DOOR JAMBS SHALL BE INSTALLED PLUMB AND SQUARE.

SYMBOL LEGEND



Sheet List		
Sheet Type	Sheet Number	Sheet Name
00 - GENERAL	G-001	COVER SHEET
00 - GENERAL	G-002	DRAWING INDEX
00 - GENERAL	G-101	FINISHED SQUARE FOOTAGE COMPLIANCE PLAN
00 - GENERAL	G-102	SITE PLAN & VICINTIY PLAN
00 - GENERAL	G-103	EGRESS & EVACUATION PLAN
00 - GENERAL	G-104	PUBLIC EXHIBIT LAYOUT AND TOUR PATH PLAN
10 - LANDSCAPE	L-101	LANDSCAPE PLAN
10 - LANDSCAPE	L-200	LANDSCAPE ELEVATIONS
10 - LANDSCAPE	L-500	PLANTING DETAIL
10 - LANDSCAPE	L-501	VGP GREEN WALL DETAIL
10 - LANDSCAPE	L-600	PLANT SCHEDULE
20 - STRUCTURAL	S-001	STRUCTURAL NOTES
20 - STRUCTURAL	S-002	SIP PANEL LAYOUT
20 - STRUCTURAL	S-100	FOUNDATION PLAN
20 - STRUCTURAL	S-101	FLOOR FRAMING PLANS
20 - STRUCTURAL	S-102	ROOF FRAMING PLANS
20 - STRUCTURAL	S-200	WING WALL PROFILES
20 - STRUCTURAL	S-201	CORE WALL PROFILES
20 - STRUCTURAL	S-300	EXTERIOR WALL SECTIONS
20 - STRUCTURAL	S-301	MODULE TO MODULE CONNECTIONS
20 - STRUCTURAL	S-305	CORE FRAMING SECTIONS
20 - STRUCTURAL	S-410	GREENHOUSE PLANS & SECTIONS
20 - STRUCTURAL	S-501	WALL CONNECTION DETAILS
20 - STRUCTURAL	S-502	FRAMING DETAILS
20 - STRUCTURAL	S-503	ATTIC DETAILS
20 - STRUCTURAL	S-506	DECK DETAILS
20 - STRUCTURAL	S-510	GREENHOUSE FRAMING DETAILS
20 - STRUCTURAL	S-511	GREENHOUSE SKYLIGHT DETAILS
30 - ARCHITECTURE	A-100	GROUND CONTACT PLAN
30 - ARCHITECTURE	A-101	FLOOR PLAN
30 - ARCHITECTURE	A-102	ROOF PLAN
30 - ARCHITECTURE	A-103	FINISH FLOOR PLAN
30 - ARCHITECTURE	A-104	REFLECTED CEILING PLAN
30 - ARCHITECTURE	A-200	NORTH & SOUTH EXTERIOR ELEVATIONS
30 - ARCHITECTURE	A-201	EAST & WEST EXTERIOR ELEVATIONS
30 - ARCHITECTURE	A-300	BUILDING SECTIONS
30 - ARCHITECTURE	A-301	BUILDING SECTIONS
30 - ARCHITECTURE	A-302	BUILDING SECTIONS
30 - ARCHITECTURE	A-410	ENLARGED BATHROOM PLANS & ELEVATIONS
30 - ARCHITECTURE	A-420	ENLARGED KITCHEN PLANS & ELEVATIONS
30 - ARCHITECTURE	A-430	ENLARGED LIVING ROOM PLAN & ELEVATIONS
30 - ARCHITECTURE	A-440	ENLARGED BEDROOM/STUDY PLAN & ELEVATIONS
30 - ARCHITECTURE	A-450	ENLARGED BEDROOM PLAN & ELEVATIONS
30 - ARCHITECTURE	A-460	ENLARGED CORRIDOR PLAN & ELEVATIONS
30 - ARCHITECTURE	A-470	ENLARGED COURTYARD PLAN & ELEVATIONS
30 - ARCHITECTURE	A-500	PLAN DETAILS
30 - ARCHITECTURE	A-510	ROOF SECTION DETAILS
30 - ARCHITECTURE	A-520	FLOOR SECTION DETAILS
30 - ARCHITECTURE	A-530	WINDOW DETAILS
30 - ARCHITECTURE	A-540	RAINSCREEN SIDING DETAILS
30 - ARCHITECTURE	A-600	WINDOW & DOOR SCHEDULE
30 - ARCHITECTURE	A-601	MATERIAL SCHEDULE
30 - ARCHITECTURE	A-602	INTERIOR WALL PANEL SCHEDULES
40 - FIRE PROTECTION	F-102	FIRE SUPPRESSION COVERAGE
40 - FIRE PROTECTION	F-500	FIRE SUPPRESSION DETAILS
40 - FIRE PROTECTION	F-600	FIRE PROTECTION SCHEDULES
40 - FIRE PROTECTION	F-901	SPRINKLER ISOMETRIC

Sheet List		
Sheet Type	Sheet Number	Sheet Name
50 - PLUMBING	P-001	PLUMBING SYMBOLS AND NOTES
50 - PLUMBING	P-100	DOMESTIC SUPPLY
50 - PLUMBING	P-102	DOMESTIC COLD
50 - PLUMBING	P-103	DOMESTIC HOT
50 - PLUMBING	P-104	DOMESTIC SANITARY
50 - PLUMBING	P-105	DOMESTIC GREY
50 - PLUMBING	P-300	SPINE SECTION EAST
50 - PLUMBING	P-301	SPINE SECTION EAST - HOT, COLD, SANITARY
50 - PLUMBING	P-302	SPINE SECTION WEST
50 - PLUMBING	P-303	SPINE SECTION WEST - HOT,COLD, GREY
50 - PLUMBING	P-901	SUPPLY ISOMETRIC
50 - PLUMBING	P-902	DOMESTIC COLD ISOMETRIC
50 - PLUMBING	P-903	DOMESTIC HOT ISOMETRIC
50 - PLUMBING	P-904	DOMESTIC SANITARY ISOMETRIC
50 - PLUMBING	P-905	DOMESTIC GREY ISOMETRIC
60 - MECHANICAL	M-001	MECHANICAL SYMBOLS AND NOTES
60 - MECHANICAL	M-100	HVAC EQUIPMENT AND DISTRIBUTION PLAN
60 - MECHANICAL	M-200	MECHANICAL ELEVATION
60 - MECHANICAL	M-600	MECHANICAL SCHEDULES
70 - ELECTRICAL	E-001	ELECTRICAL SYMBOLS & NOTES
70 - ELECTRICAL	E-100	LIGHTING PLAN
70 - ELECTRICAL	E-101	ELECTRICAL POWER PLAN
70 - ELECTRICAL	E-102	HARD-WIRED EQUIPMENT PLAN
70 - ELECTRICAL	E-103	PHOTOVOLTAIC SYSTEMS INFORMATION
70 - ELECTRICAL	E-104	PHOTVOLTAIC ARRAY ROOF PLAN
70 - ELECTRICAL	E-105	LIGHTING PLAN
70 - ELECTRICAL	E-500	PHOTOVOLTAIC MOUNTING DETAILS
70 - ELECTRICAL	E-600	LOAD SCHEDULES
70 - ELECTRICAL	E-601	PANEL SCHEDULES
70 - ELECTRICAL	E-602	PV ONE LINE WIRE DIAGRAM
70 - ELECTRICAL	E-603	PV THREE LINE WIRE DIAGRAM

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

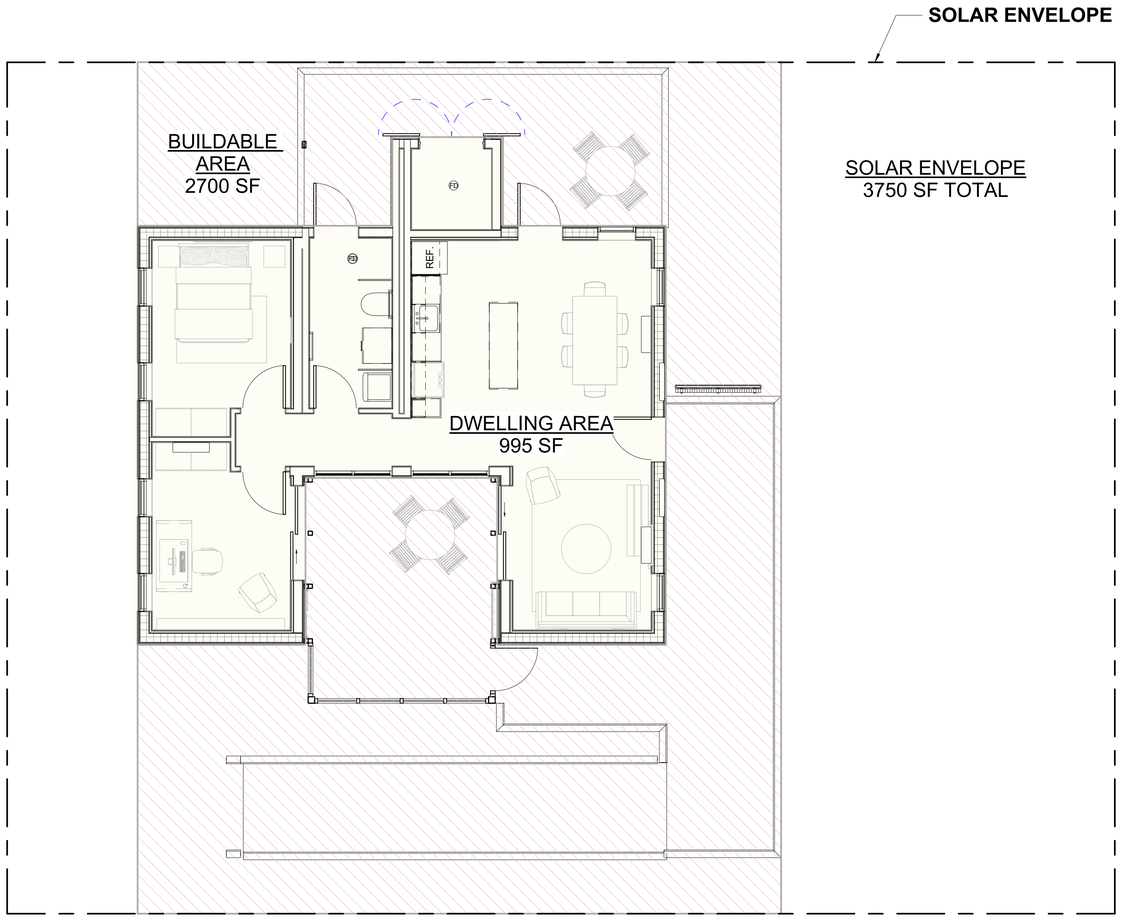
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description

PROJECT NO.	001
DESIGNED	SB
CHECKED	GR

DRAWING INDEX

G-002



1 SQUARE FOOT AGE COMPLIANCE PLAN
3/16" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description

PROJECT NO.	001
DESIGNED	ETS
CHECKED	GR

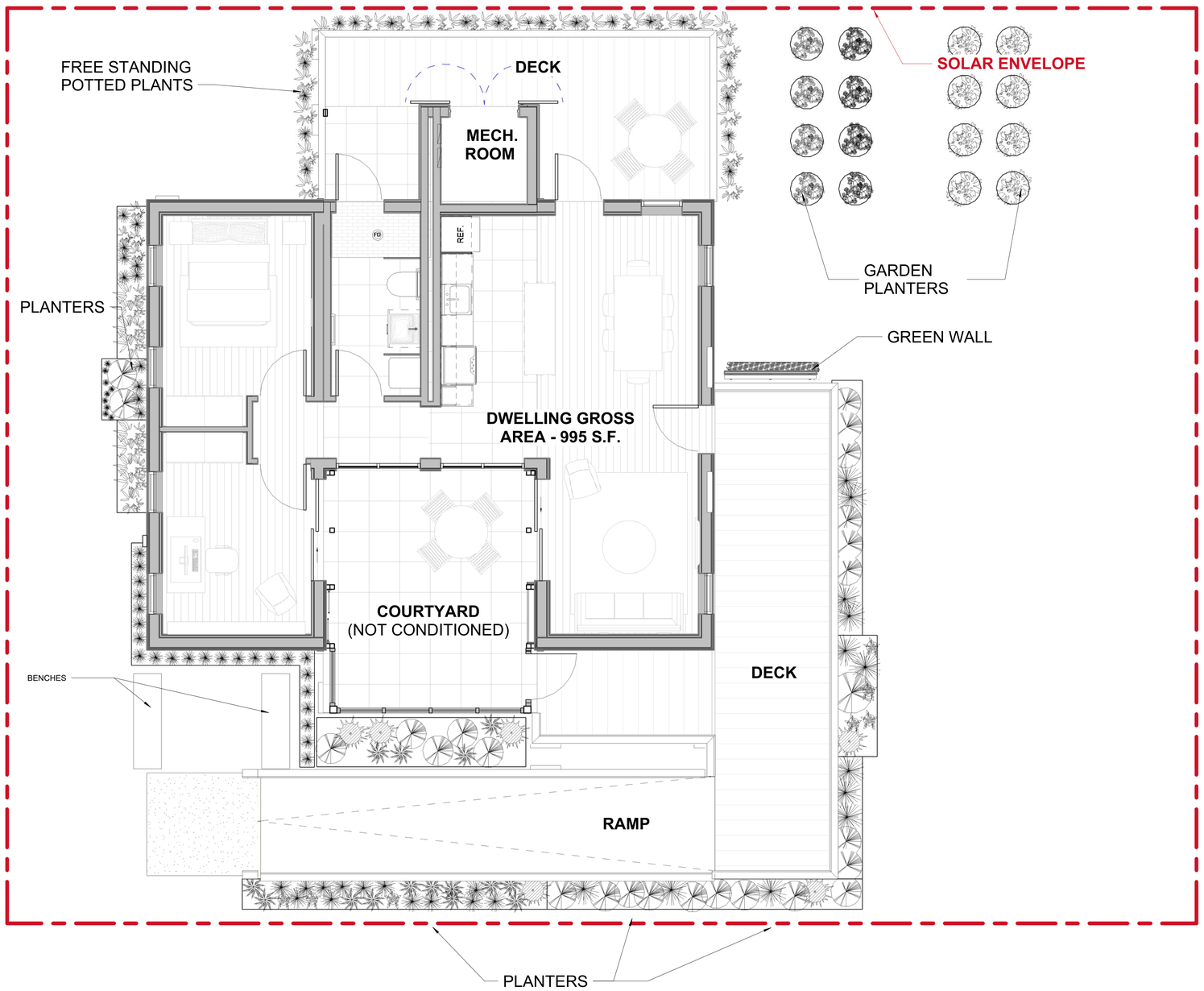
FINISHED SQUARE FOOTAGE COMPLIANCE PLAN

G-101

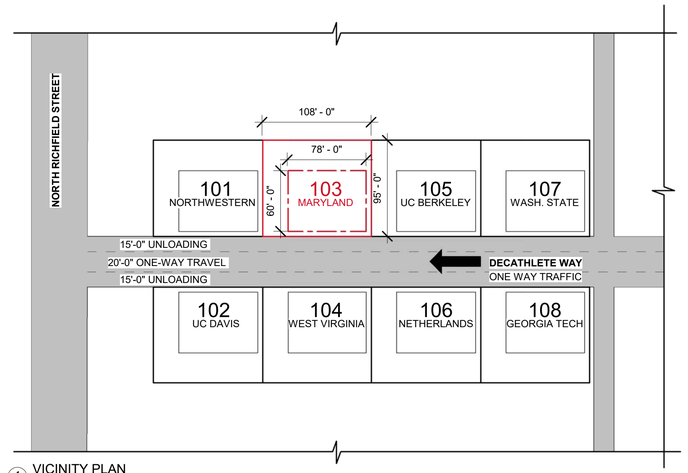
SITE PLAN NOTES

MARYLAND CONTEST SPACE: 108'-0" x 95'-0"

TOTAL DISTANCE: 60'-0" x 78'-0"



2 SITE PLAN
1/4" = 1'-0"



1 VICINITY PLAN
1" = 75'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description

PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

SITE PLAN & VICINTIY PLAN

G-102

LIFE SAFETY NOTES

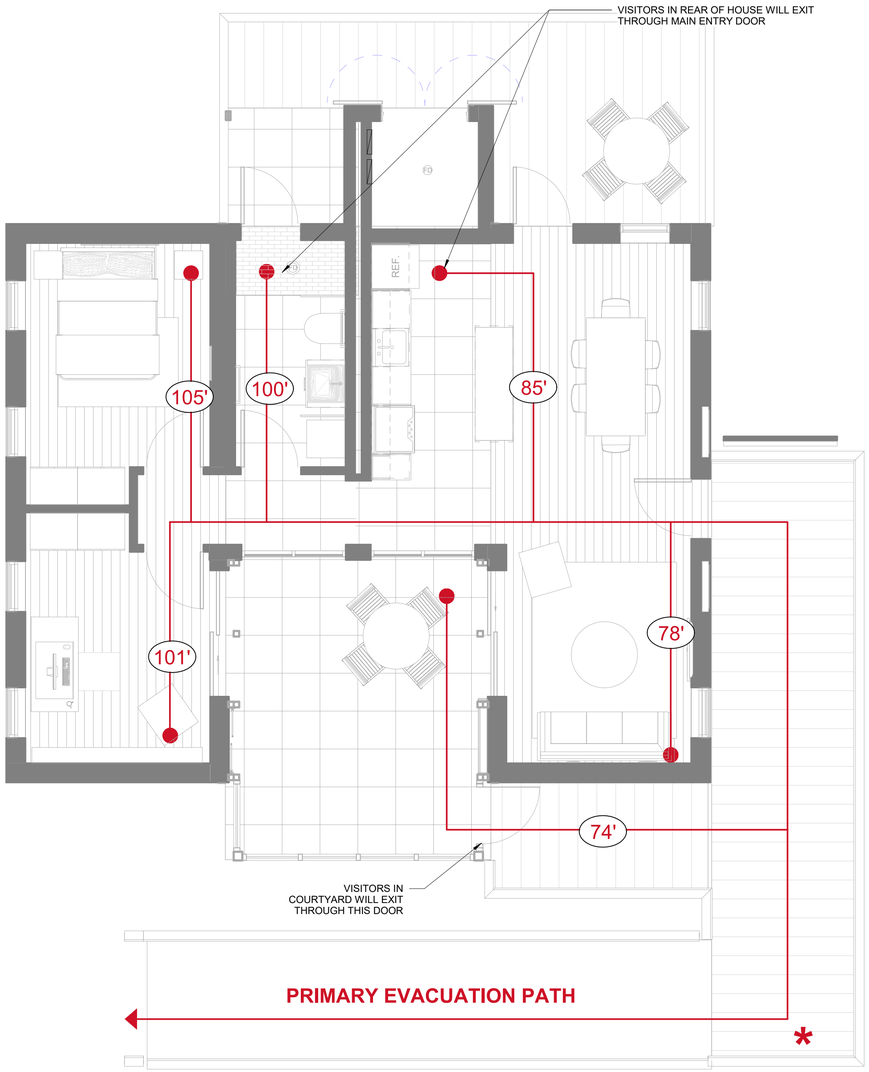
MARYLAND CONTEST SPACE: 108'-0" x 95'-0"

TOTAL DISTANCE: 60'-0" x 78'-0"

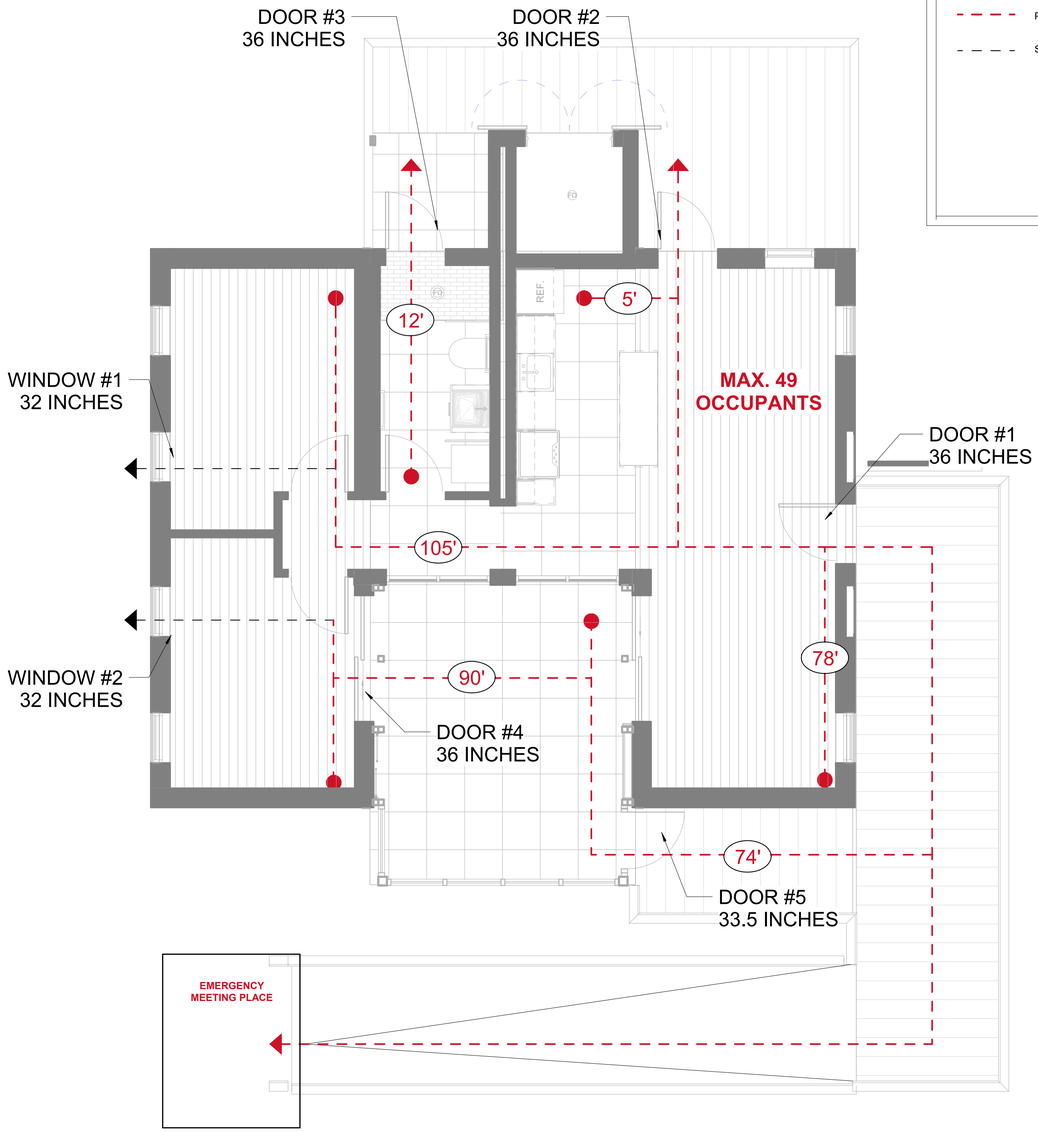
MAXIMUM OCCUPANCY: 49 OCCUPANTS

LIFE SAFETY LEGEND

- COMMON PATH OF TRAVEL
- PRIMARY EGRESS PATH
- SECONDARY EGRESS PATH



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



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

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

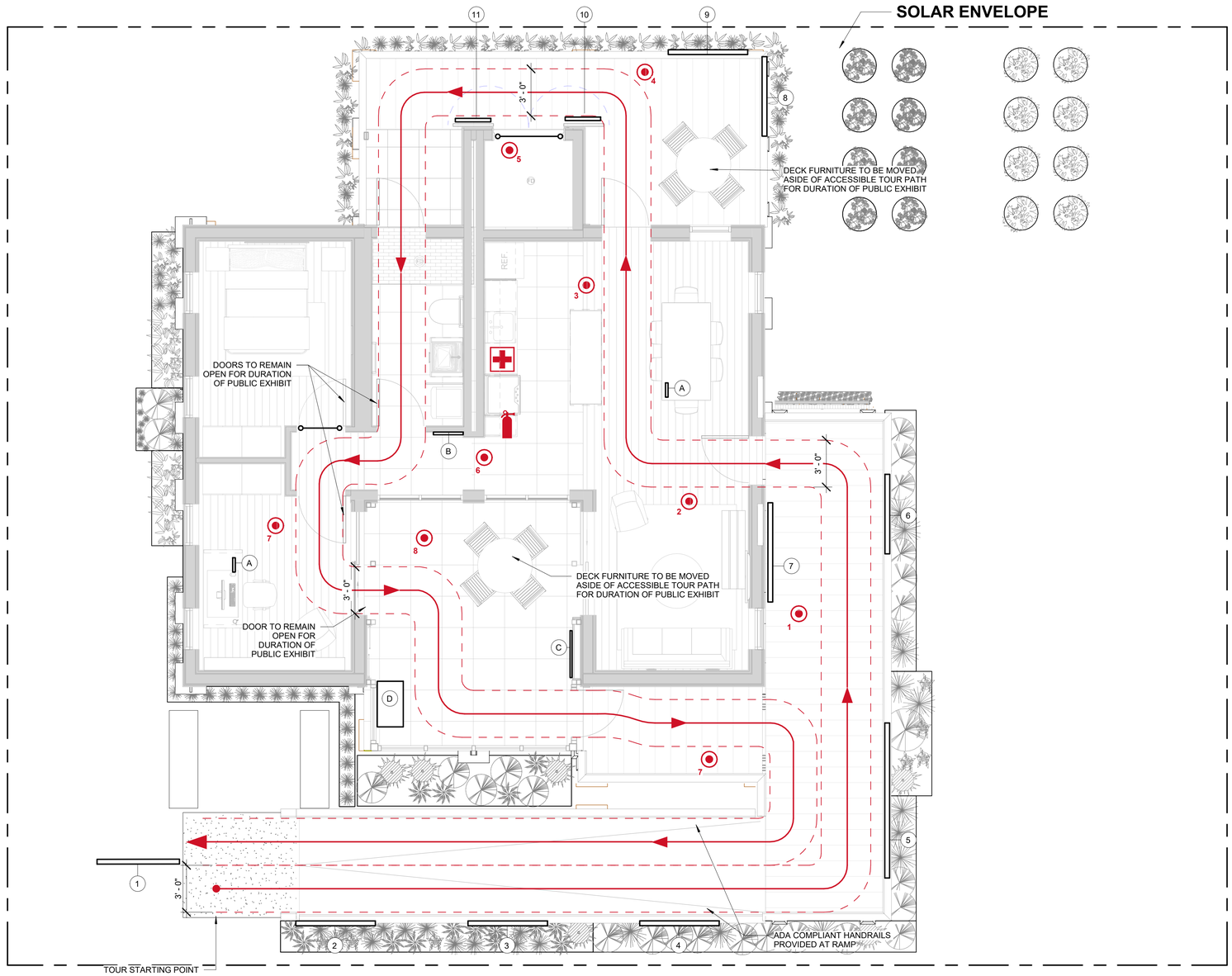
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description

PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

EGRESS & EVACUATION PLAN

G-103



1 TOUR LAYOUT PLAN
1/4" = 1'-0"

ACCESSIBILITY NOTES

1. THE ACCESSIBLE ROUTE INDICATED SHALL COMPLY WITH THE 2010 STANDARD FOR ACESSIBLE DESIGN.
2. THE RUNNING SLOPE OF ALL WALKING SUFACES SHALL NOT BE STEEPER THAN 1:20.
3. HANDRAILS COMPLIANT WITH ALL ADA REQUIREMENTS SHALL BE PROVIDED AT THE ENTRY RAMP.
4. RAILING CABLES SHALL BE INSTALLED SO AS TO PREVENT THE PASSAGE OF A 4 INCH DIAMETER SPHERE WITHIN 4 INCHES OF THE GROUND SURFACE.
5. HANDRAIL HEIGHT IS TO BE WITHIN 34 - 38 INCHES ABOVE WALKING SURFACE. HANDRAIL DIAMETER IS TO BE WITHIN 1-1/2 TO 2 INCHES, AND MOUNTED AT LEAST 1-1/2" INCHES AWAY FROM MAIN RAILING.

EXHIBIT NOTES

1. ALL EXTERIOR SIGNS TO BE WEATHER RESISTANT.
2. EXTERIOR SIGNAGE TO INCLUDE GENERAL FACTS ABOUT WATER AND/OR ENERGY CONSERVATION, USAGE, AND OTHER HOUSEHOLD FACTS.
3. EXTERIOR DOORS TO REMAIN OPEN FOR DURATION OF PUBLIC EXHIBIT, WEATHER PERMISSABLE

TOUR PLAN LEGEND

- TOUR PATH OF TRAVEL
- ACCESSIBLE PATH CLEARANCE
- FIRST AID KIT LOCATION - IN CABINET
- FIRE EXTINGUISHER LOCATION - IN CABINET
- TOUR GUIDE LOCATION
- DOOR BARRIER

EXTERIOR SIGNAGE

1. WELCOME SIGN
2. ARCHITECTURE
3. ENGINEERING
4. AUTOMATION
5. CONSTRUCTION
6. CULTURAL CONNECTIONS
7. REGENERATIVE SYSTEMS
8. URBAN AGRICULTURE
9. WELLNESS
10. WATER SYSTEMS
11. MECHANICAL SYSTEMS

INTERIOR SIGNAGE

- A RECONFIGURABLE FURNITURE
- B SMARTHOME INTERACTIVE PANEL
- C GREENCOURT
- D WALL SYSTEM MOCK-UP

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

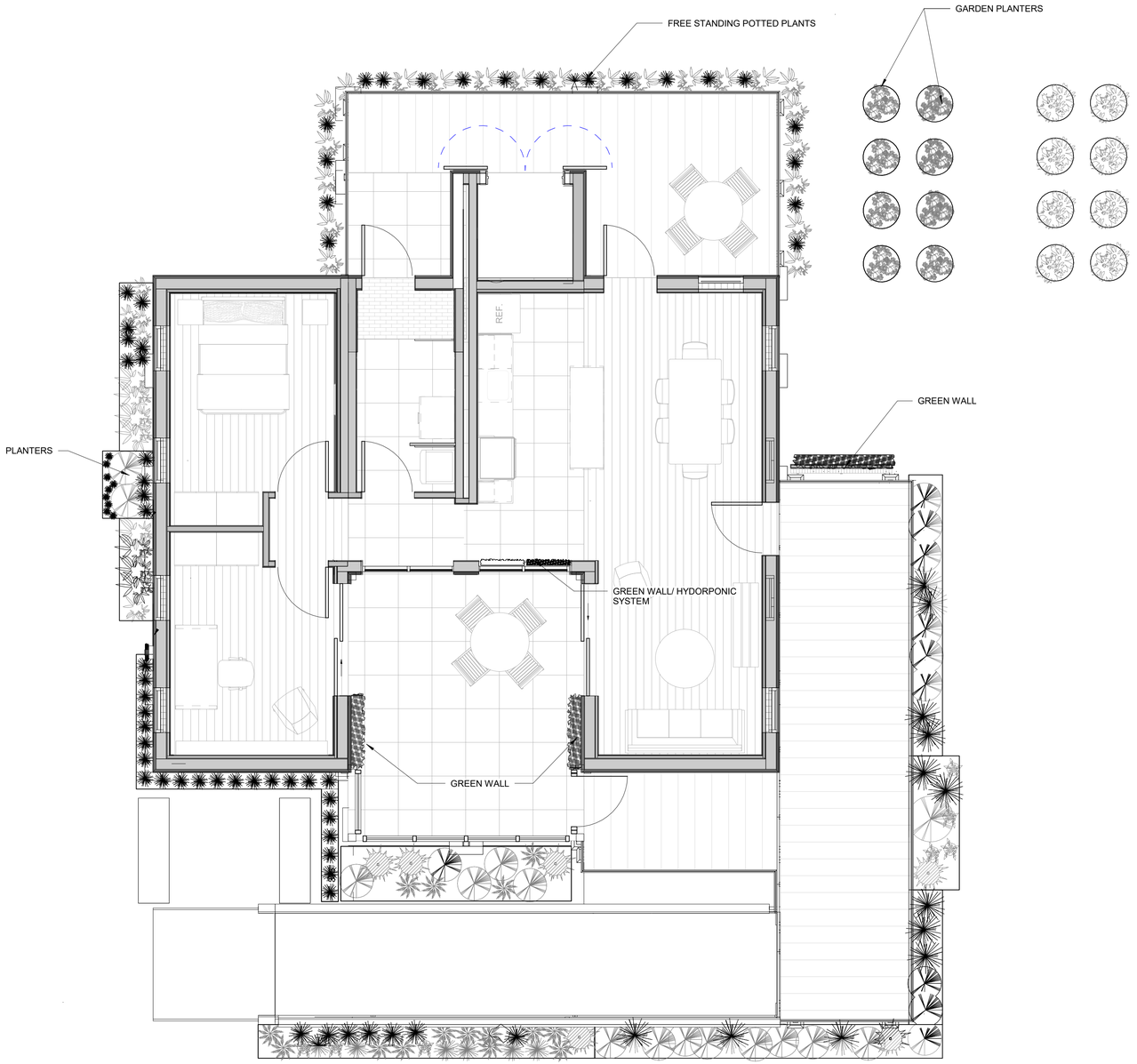
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description

PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

PUBLIC EXHIBIT LAYOUT AND TOUR PATH PLAN

G-104



2 LANDSCAPE PLAN
1/4" = 1'-0"

LANDSCAPE PLAN GENERAL NOTES

LANDSCAPE PLAN SHEET NOTES

A. TOTAL SQUARE FOOTAGE OF PLANTERS: 490SF

LANDSCAPE PLAN LEGEND

- VEGETABLES
- GRASS
- HERBACEOUS
- VEGETABLES
- EVERGREENS
- SHRUBS

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

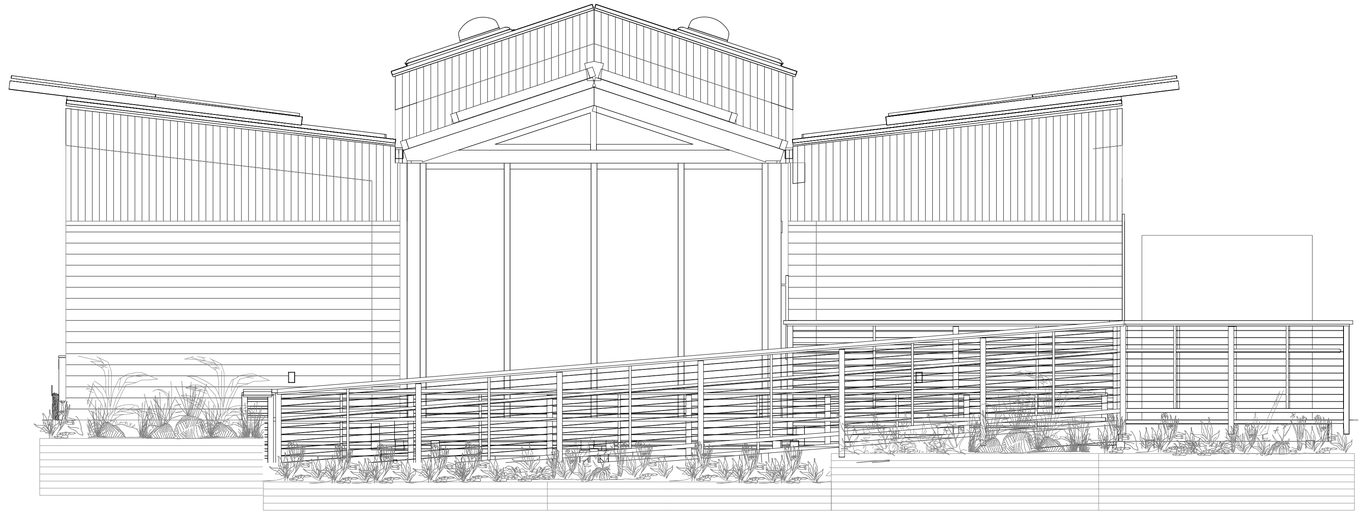
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description

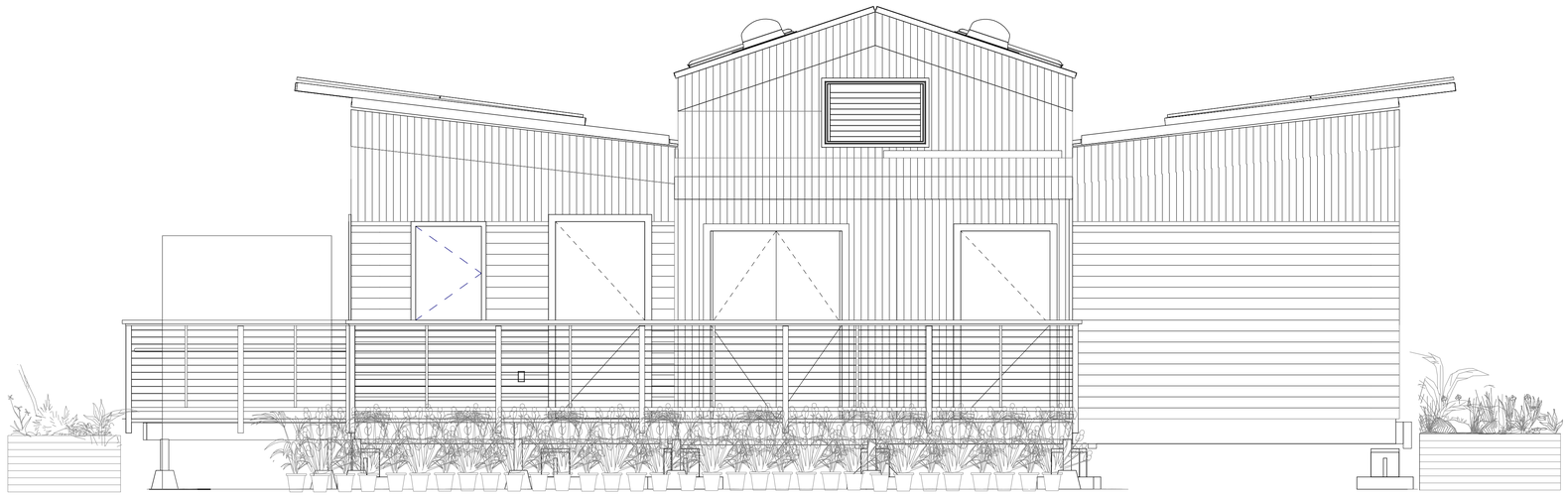
PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

LANDSCAPE PLAN

L-101



2 LANDSCAPE SOUTH ELEVATION
3/8" = 1'-0"



3 Landscape North Elevation
3/8" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

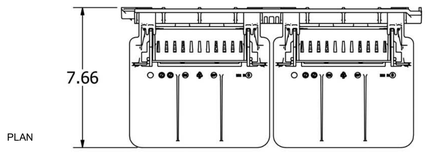
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description

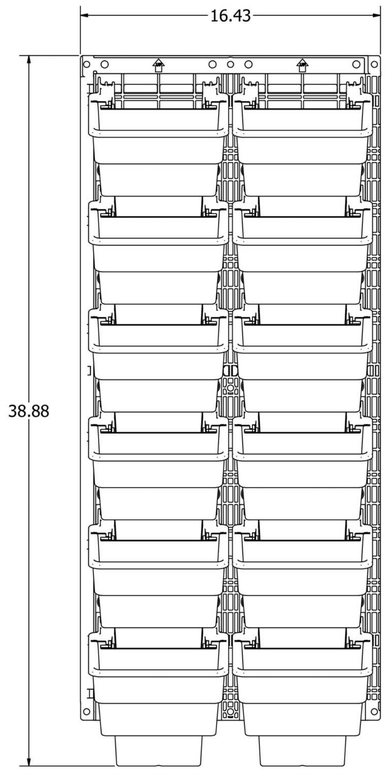
PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

LANDSCAPE ELEVATIONS

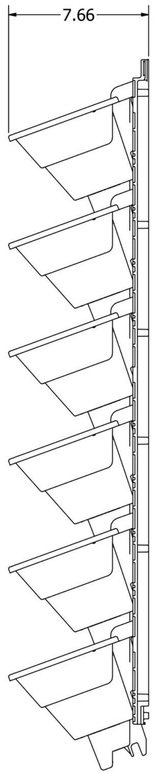
L-200



PLAN

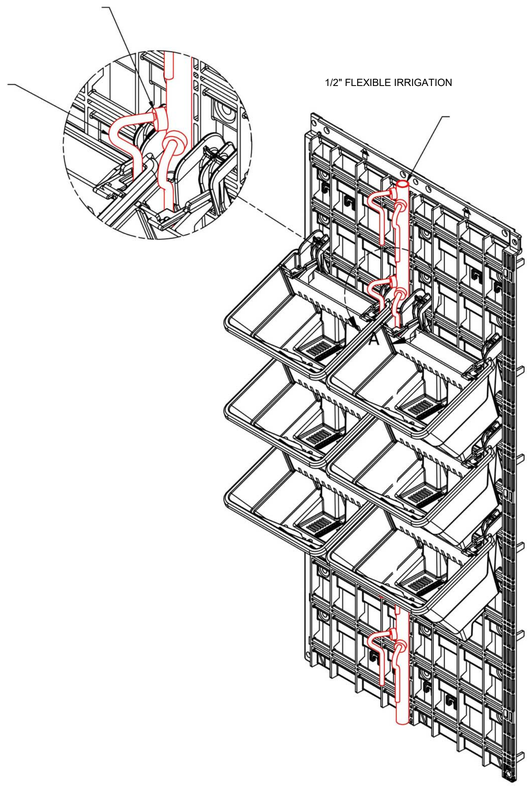


ELEVATION

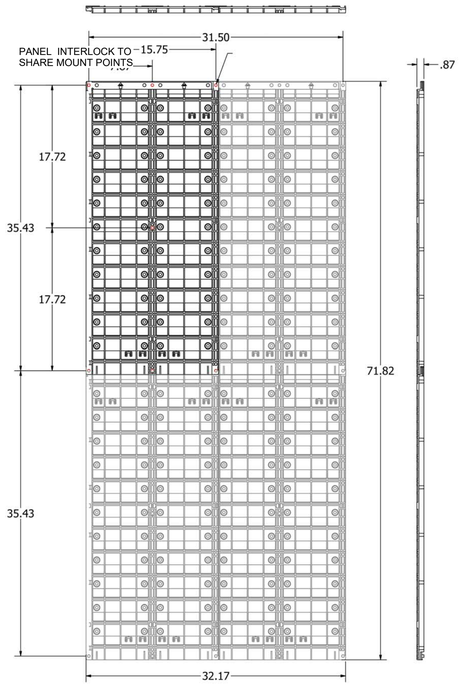


SECTION

EMITTER

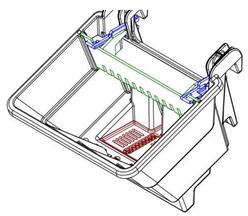


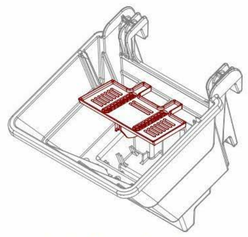
SAMPLE IRRIGATION



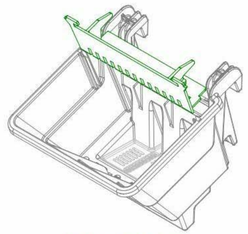
2 X 2 PANEL PATTERN SHOWN

(SECURE WITH 1/4" HARDWARE)
(7 PLACEPER PANEL)

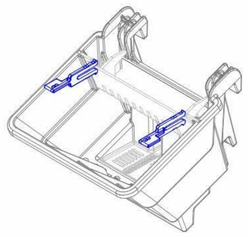




INSERT BOTTOM BAFFLE



INSERT UPPER BAFFLE



INSERT SAFETY CLIPS
(TO LOCK TO WALL PANEL)

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description

PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

VGP GREEN WALL DETAIL

L-501

PLANT SCHEDULE				
PLANT SCHEDULE				
LATIN NAME	COMMON NAME	HEIGHT	SPREAD	TYPE
Asclepias speciosa	Showy Milk Weed	1-3'	1-1.5'	HERBACEOUS
Callicarpa americana	American Beautyberry	3-8'	3-8'	DECIDIOUS SHRUB
Epilobium angustifolium	Fireweed	4-6'	2-3'	HERBACIOUS PERENIAL
Festuca blue fescuef	Elijah Blue	8-12"	8-10"	GRASS
Hakonechloa japanese forest	Japanese Forest Grass	1-1.5'	1-1.5'	GRASS
Ilex decidua	Possumhaw	7-20'	7-20'	DECIDIOUS SHRUB
Monarda fistulosa	Wild Bergamot	2-4'	2-3'	HERBACIOUS PERENIAL
Myrica pensylvanica	Nothern Bayberry	5-12'	5-12'	DECIDIOUS SHRUB
Opuntia compressa	Prickly Pear	.5-1'	1-1.5'	HERBACEOUS
Pennisetum alopecuroides 'Red Head'	Fountain Grass	4-5'	1-3'	GRASS
Ribes uva-crispa	Gooseberry	2-5'	3-6'	FRUIT
Scutellaria incana	Downy Skullcap	2-3'	1.5-2'	FRUIT
Yucca glauca	Soapweed Yucca	4'	3-4'	BROADLEAF EVERGREEN
Solidago rugosa 'Fireworks'	Goldenrod, Fireworks	2.5-3'	2.5-3'	HERBACIOUS PERENIAL
Penstemon strictus	Penstemon, Rocky Mountain	1-2'	6-12"	EVERGREEN PERENIAL
Eriogonum umbellatum	Sulphur Flower	.5-1'	1-3'	HERBACIOUS PERENIAL
Rudbeckia fulgida 'Goldsturm'	Orange Coneflower	2-3'	1-2'	HERBACIOUS PERENIAL
Ratibida columnifera	Coneflower, PrairieYellow	1-3'	1-1.5'	HERBACIOUS PERENIAL
Pennstemon barbatus	Penstemon, Scarlet Bugler	2-3'	1-1.5'	HERBACIOUS PERENIAL
Agastache cana	Double Bubblemint	1-3'	1-2'	HERBACIOUS PERENIAL

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description

PROJECT NO. 001
DESIGNED Author
CHECKED Checker

PLANT SCHEDULE

L-600

STRUCTURAL SPECIFICATIONS AND GENERAL CONDITIONS GENERAL

1. WHERE THESE SPECIFICATIONS CONFLICT WITH OTHER PROJECT SPECIFICATIONS, THESE SPECIFICATIONS SHALL GOVERN.
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LOCAL APPLICABLE CODES AND REGULATIONS. APPROPRIATE SAFETY MEASURES WHICH SATISFY LOCAL AND OSHA REQUIREMENTS SHALL BE PROVIDED.
3. PROPER TEMPORARY BRACING OF ALL CONSTRUCTION WORK IN PROGRESS IS THE CONTRACTOR'S RESPONSIBILITY.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL EXISTING UTILITIES DURING CONSTRUCTION AND THE REPAIR OF ANY DAMAGED FACILITIES.
5. SECTIONS AND DETAILS SHOWN, WHILE DRAWN FOR SPECIFIC LOCATIONS, ARE INTENDED TO ESTABLISH THE GENERAL TYPES OF DETAILS TO BE USED THROUGHOUT.
6. DRAWINGS SHOULD NOT BE SCALED. CONTACT THE ENGINEER FOR CLARIFICATION OF ANY DIMENSION IN QUESTION.
7. ALL DIMENSIONS SHALL BE VERIFIED BY THE CONTRACTOR. LAYOUT SHALL BE CHECKED AND COORDINATED BETWEEN ALL CONSTRUCTION DOCUMENTS AND SPECIFICATIONS PRIOR TO START OF WORK.
8. SHOP DRAWINGS PREPARED BY THE SUBCONTRACTORS, SUPPLIERS, ETC. SHALL BE REVIEWED BY THE ENGINEER FOR CONFORMANCE WITH DESIGN CONCEPT ONLY. EACH SHOP DRAWING SUBMITTED SHALL BE STAMPED, INITIALED AND DATED AS BEING REVIEWED BY THE CONSTRUCTION MANAGER/GENERAL CONTRACTOR. WORK SHALL NOT BEGIN WITHOUT THE REVIEW BY THE ENGINEER.
9. ANY ENGINEERING DESIGN PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW OR RECORD SHALL BEAR THE STAMP AND SIGNATURE OF A PROFESSIONAL STRUCTURAL ENGINEER REGISTERED IN THE STATE OF WEST VIRGINIA.

DESIGN DATA

1. BUILDING CODE = 2015 INTERNATIONAL BUILDING CODE.

2. FLOOR LOAD:
2.1 DEAD LOAD = 15 PSF
2.2 LIVE LOADS = 50 PSF

3. ROOF LOAD:
3.1. DEAD LOAD = 5,625 PSF (ROOF JOIST LOCATIONS); 25 PSF (ROOF TRUSS LOCATIONS)
3.2. LIVE LOAD = 30 PSF

4. SNOW LOAD:
4.1. GROUND SNOW LOAD, PG = 35 PSF

6. WIND LOAD:
6.1. BASIC WIND SPEED (3-SECOND GUST) = 115 MPH
6.2. WIND IMPORTANCE FACTOR, IW = 1.0
6.3. BUILDING CATEGORY = II
6.4. EXPOSURE CATEGORY = C

7. SEISMIC DESIGN:
7.1 SITE CLASS : B
7.2 SOIL CLASS : D

9. WOOD FRAMING DESIGN METHOD:
9.1. DESIGN PER LRFD
9.2. LOADS INDICATED ARE LRFD LOADS

SPECIAL INSPECTION REQUIREMENTS

1. THE FOLLOWING TYPES OF WORK REQUIRE SPECIAL INSPECTION BASED ON SECTION 1704 OF THE 2012 INTERNATIONAL BUILDING CODE. THE OWNER WILL EMPLOY SPECIAL INSPECTORS WHO SHALL PROVIDE SPECIAL INSPECTIONS FOR COMPLIANCE WITH THE CONSTRUCTION DOCUMENTS AND OTHER REFERENCES NOTED. REPORTS SHALL BE SUBMITTED TO THE ENGINEER AND BUILDING OFFICIAL ON A PERIODIC BASIS. A FINAL REPORT SHALL BE SUBMITTED DOCUMENTING REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES PRIOR TO THE END OF CONSTRUCTION.
2. WOOD CONSTRUCTION
2.1. INSPECT WOOD STRUCTURAL PANEL SHEATHING FOR HIGH-LOAD DIAPHRAGMS TO ENSURE CORRECT GRADE AND THICKNESS.
2.2. VERIFY NOMINAL SIZE OF FRAMING MEMBERS AT ADJOINING PANEL EDGES.
2.3. VERIFY FASTENER DIAMETER AND LENGTH, NUMBER OF FASTENER LINES, AND SPACING BETWEEN FASTENERS IN EACH LINE AND AT EDGE MARGINS.

CONSTRUCTION PROCEDURES AND SAFETY REQUIREMENTS

1. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. UNLESS OTHERWISE INDICATED, THEY DO NOT INDICATE THE MEANS OR METHODS OF CONSTRUCTION.
2. PROVIDE ALL MEASURES NECESSARY TO PROTECT THE WORKMEN AND OTHER PERSONS DURING CONSTRUCTION. PROVIDE ALL NECESSARY MEASURES TO AVOID EXCESSIVE STRESSES AND HOLD THE STRUCTURAL ELEMENTS IN PLACE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR CONSTRUCTION EQUIPMENT AND EARTHEN BANKS, FORMS, SCAFFOLDING, PLANKING, SAFETY NETS, SUPPORT/BRACING FOR CRANES AND HOISTS, GUYING, ETC.
3. ENGAGE PROPERLY QUALIFIED PERSONS TO DETERMINE WHERE AND HOW TEMPORARY PRECAUTIONARY MEASURES SHALL BE USED. OBSERVATIONAL VISITS TO THE SITE BY STRUCTURAL ENGINEER'S FIELD REPRESENTATIVE SHALL NOT INCLUDE THE ITEMS NOTED ABOVE.
4. SUPERVISE AND DIRECT THE WORK SO AS TO MAINTAIN SOLE RESPONSIBILITY FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. RETAIN THE SERVICES OF A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF MARYLAND TO DESIGN AND SUPERVISE ANY SCAFFOLDING FOR WORKMEN, AND ALL SHORING OF FORMS AND ELEMENTS OF THE CONSTRUCTION.

FOUNDATION CONSTRUCTION
1. ALLOWABLE SOIL BEARING PRESSURE (NET) ASSUMED IN DESIGN IS 2,500 PSF (POUNDS PER SQUARE FOOT) BASED ON THE SOLAR DECATHLON COMPETITION RULES.

STRUCTURAL STEEL
1. ALL STEEL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, MARCH 9, 2005 (AISC 360), THE SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS, JUNE 30, 2004, THE CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES, MARCH 18, 2008 (AISC 303) AND THE AISC STEEL CONSTRUCTION MANUAL, 13TH EDITION.
2. ALL WELDING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE AWS D1.1 STRUCTURAL WELDING CODE – STEEL, LATEST EDITION, AND AISC SPECIFICATIONS USING THE PROPER ELECTRODE FROM AWS D1.1 TABLE 3.1 AND PERFORMED ONLY BY QUALIFIED WELDERS.
3. STRUCTURAL STEEL PLATES AND ANGLES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36, WITH A MINIMUM YIELD STRESS OF 36 KSI.
4. SQUARE OR RECTANGULAR HOLLOW STRUCTURAL SECTIONS (HSS) SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500, GRADE B, WITH A MINIMUM YIELD STRESS OF 46 KSI.
5. SHOP DRAWINGS FOR THE FABRICATION AND ERECTION OF ALL STRUCTURAL STEEL SHALL BE SUBMITTED TO AND APPROVED BY THE ENGINEER PRIOR TO FABRICATION.
6. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY FABRICATION OR ERECTION ERRORS OR DEVIATIONS AND RECEIVE WRITTEN APPROVAL BEFORE FIELD CORRECTIONS ARE MADE.
7. ANCHOR BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F1554, WITH A MINIMUM YIELD STRENGTH OF 36 KSI, UNLESS NOTED OTHERWISE. BOLTS SHALL BE 5/8" IN DIAMETER UNLESS NOTED OTHERWISE.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE TEMPORARY BRACING OF ALL STEEL DURING ERECTION AND UNTIL CONSTRUCTION IS COMPLETE.
9. THE CONTRACTOR SHALL FURNISH ALL PLATES, CLIP AND SEAT ANGLES, AND CONNECTIONS FOR COMPLETION OF THE STRUCTURE, EVEN IF SUCH ITEMS ARE NOT SPECIFICALLY CALLED FOR ON THE STRUCTURAL DRAWINGS.
10. STEEL FABRICATORS SHALL BE RESPONSIBLE FOR OBTAINING ALL FIELD DIMENSIONS NECESSARY FOR THE COMPLETION OF THEIR WORK.
11. MINIMUM SIZE OF FILLET WELDS, UNLESS OTHERWISE NOTED, IS TO BE 3/16-INCH FILLET. CHIP, WIRE BRUSH CLEAN AND PRIME PAINT ALL FIELD WELDS.
12. ALL STEEL MEMBERS ARE CONCEALED WITHIN WALLS AND THUS ONLY REQUIRE PRIMER COATING:
12.1. REFERENCE STEEL STRUCTURES PAINTING COUNCIL (SSPC) – A GUIDE TO THE SHOP PAINTING OF STRUCTURAL STEEL
12.2. SURFACE PREPARATION = SSPC-SP 2
12.3. PRE-TREAT = NONE REQUIRED
12.4. PRIMER = SSPC-PAINT 15
12.5. TOUCH-UP = AS PER MANUFACTURER SPECIFICATIONS
12.6. SURFACES WITHIN 2 INCHES OF WELDS SHALL BE FREE OF MATERIAL THAT WOULD PREVENT PROPER WELDING OR PRODUCE OBJECTIONABLE FUMES WHILE WELDING IS BEING DONE.

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

Silman

reACT

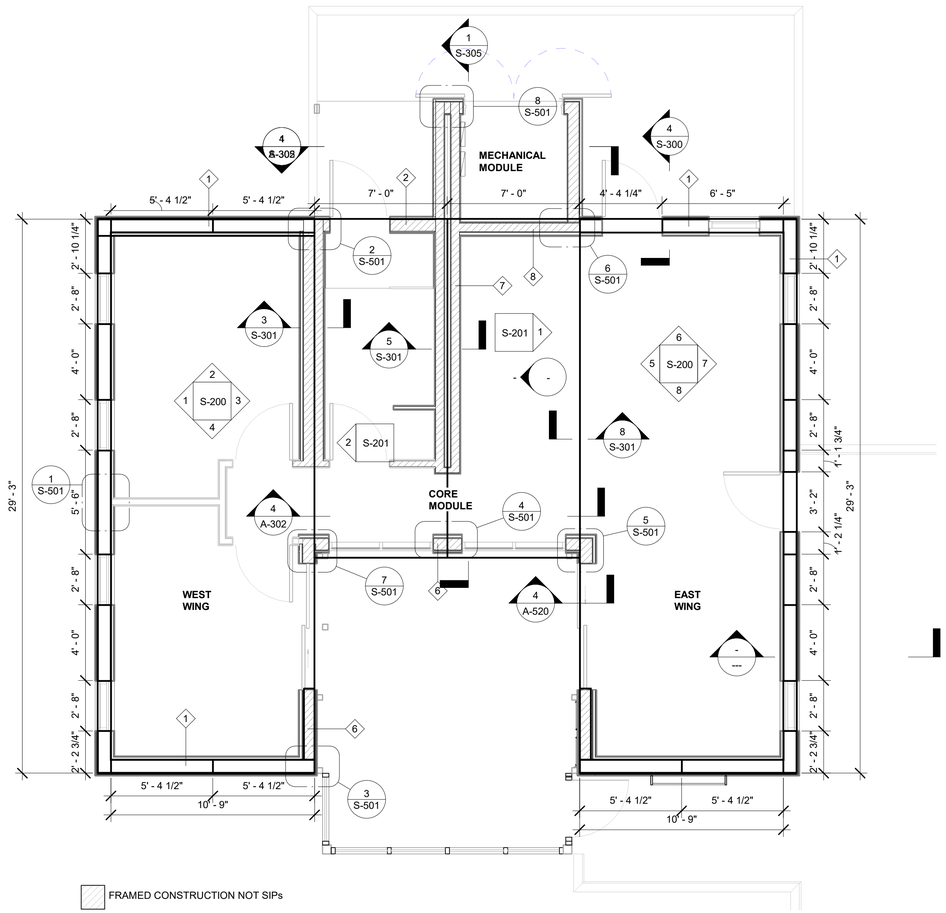
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

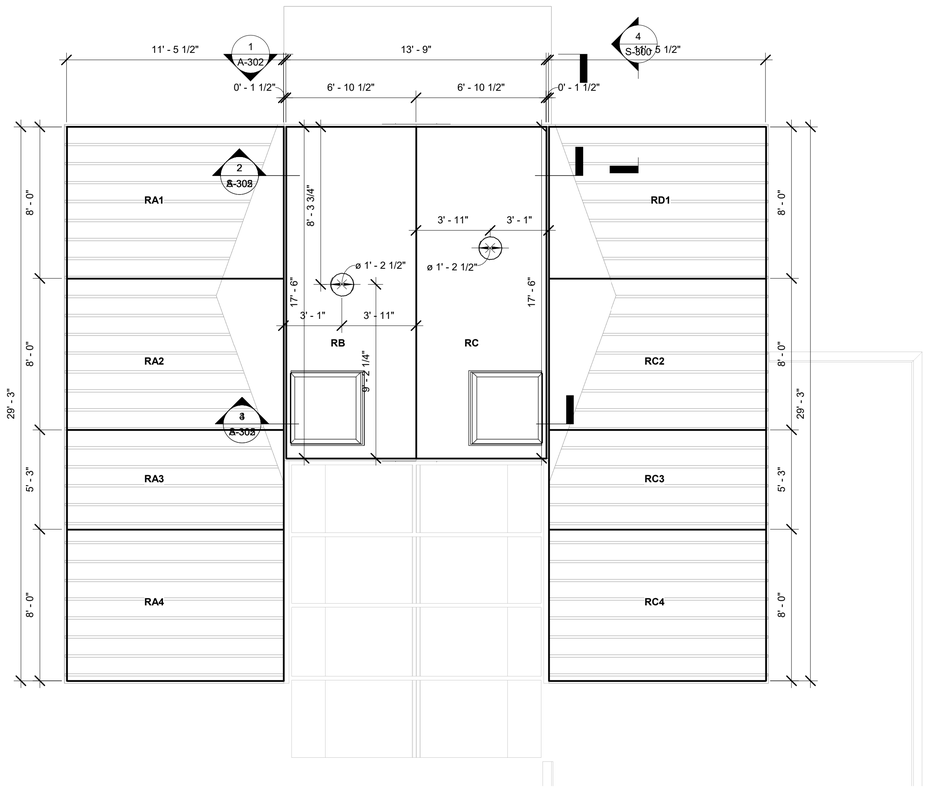
STRUCTURAL NOTES

S-001

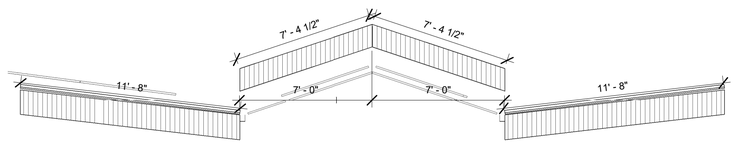


FRAMED CONSTRUCTION NOT SIPs

1 MAIN FLOOR PANEL PLAN
1/4" = 1'-0"



2 ROOF PANEL PLAN
1/4" = 1'-0"



3 ROOF PANEL ELEVATIONS
1/4" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

Silman

reACT

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

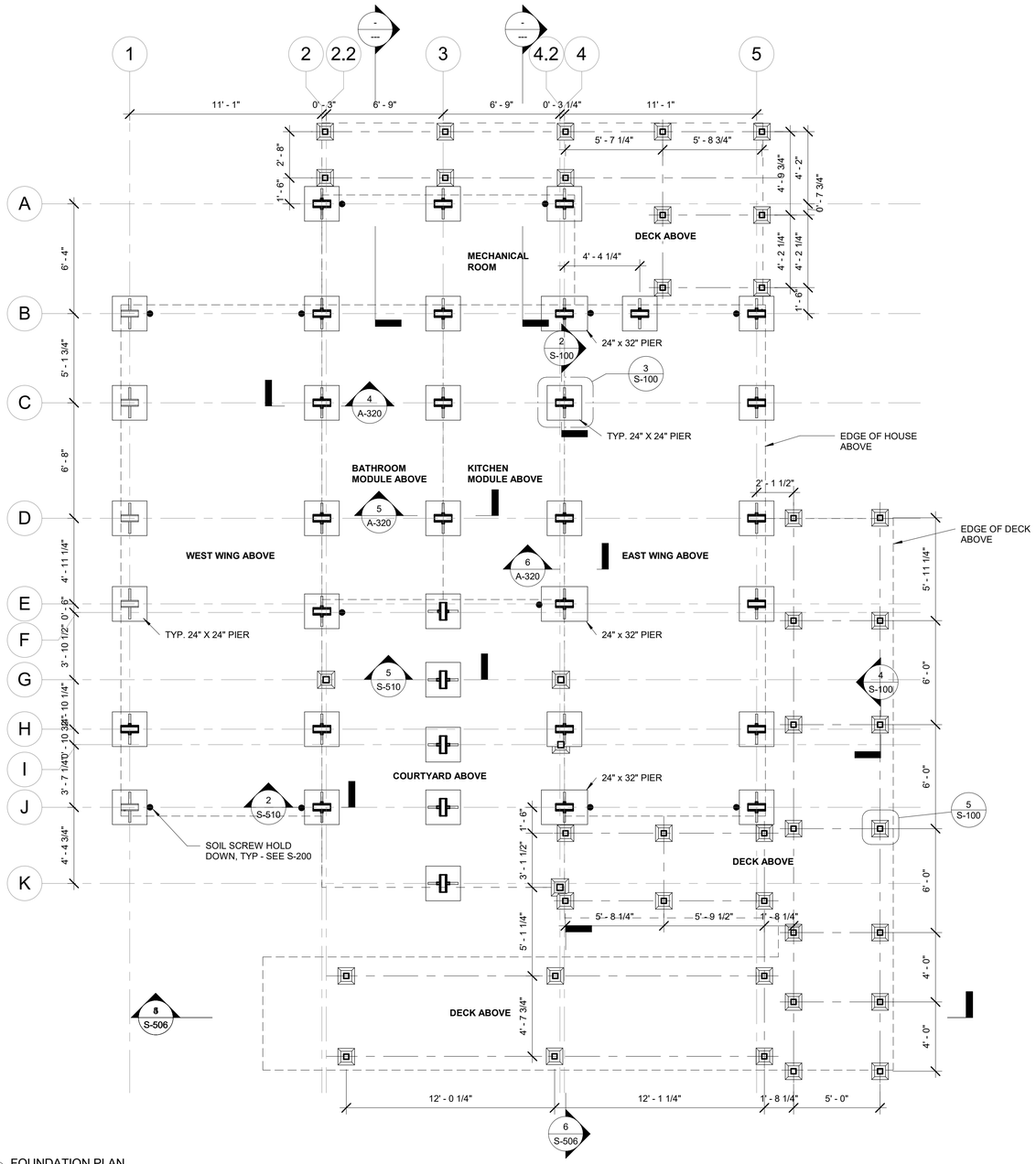
Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

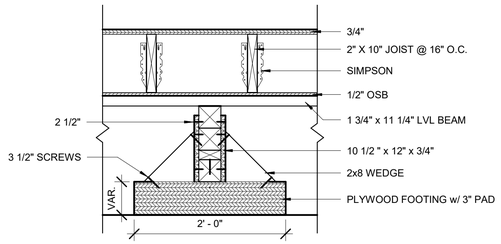
SIP PANEL LAYOUT

S-002

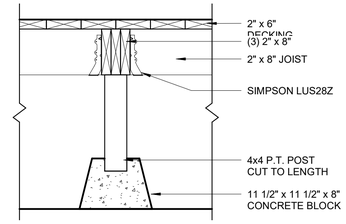
STATE OF MARYLAND
JOHN I. METTAM
NO. 29118
REGISTERED
PROFESSIONAL ENGINEER



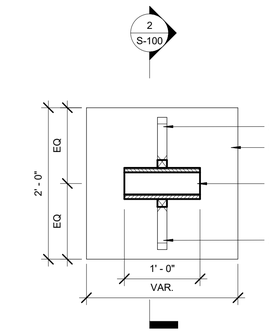
1 FOUNDATION PLAN
1/4" = 1'-0"



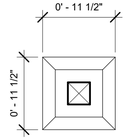
2 TYPICAL PIER SECTION
1" = 1'-0"



4 TYPICAL POST FOOTING
1" = 1'-0"



3 TYPICAL PIER PLAN
1" = 1'-0"



5 TYPICAL DECK POST PLAN
1" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

Silman

reACT

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

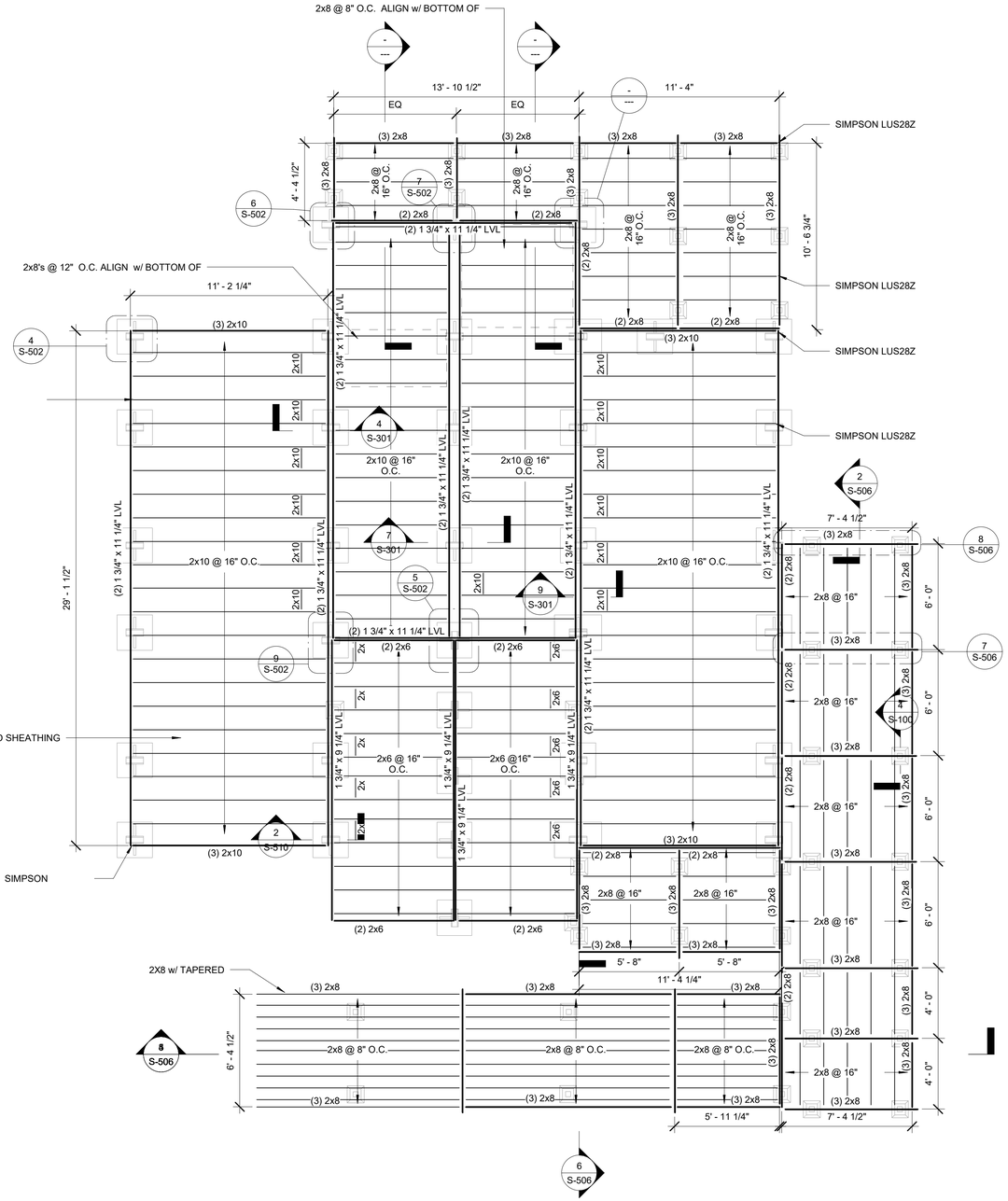
Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

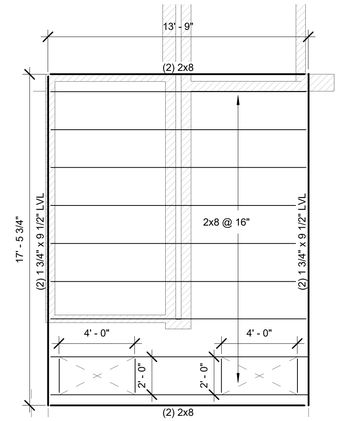
FOUNDATION PLAN

S-100

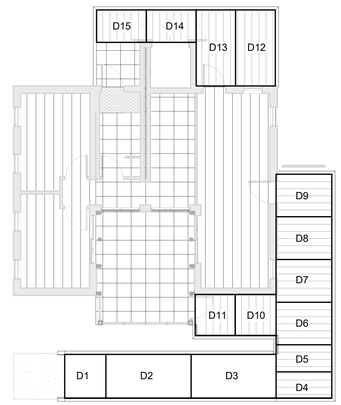
STATE OF MARYLAND
KIRK L. METTAM
No. 29119
REGISTERED
PROFESSIONAL ENGINEER



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



2 ATTIC FLOOR FRAMING
1/4" = 1'-0"



3 DECK MODULE PLAN
3/32" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

Silman

reACT

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

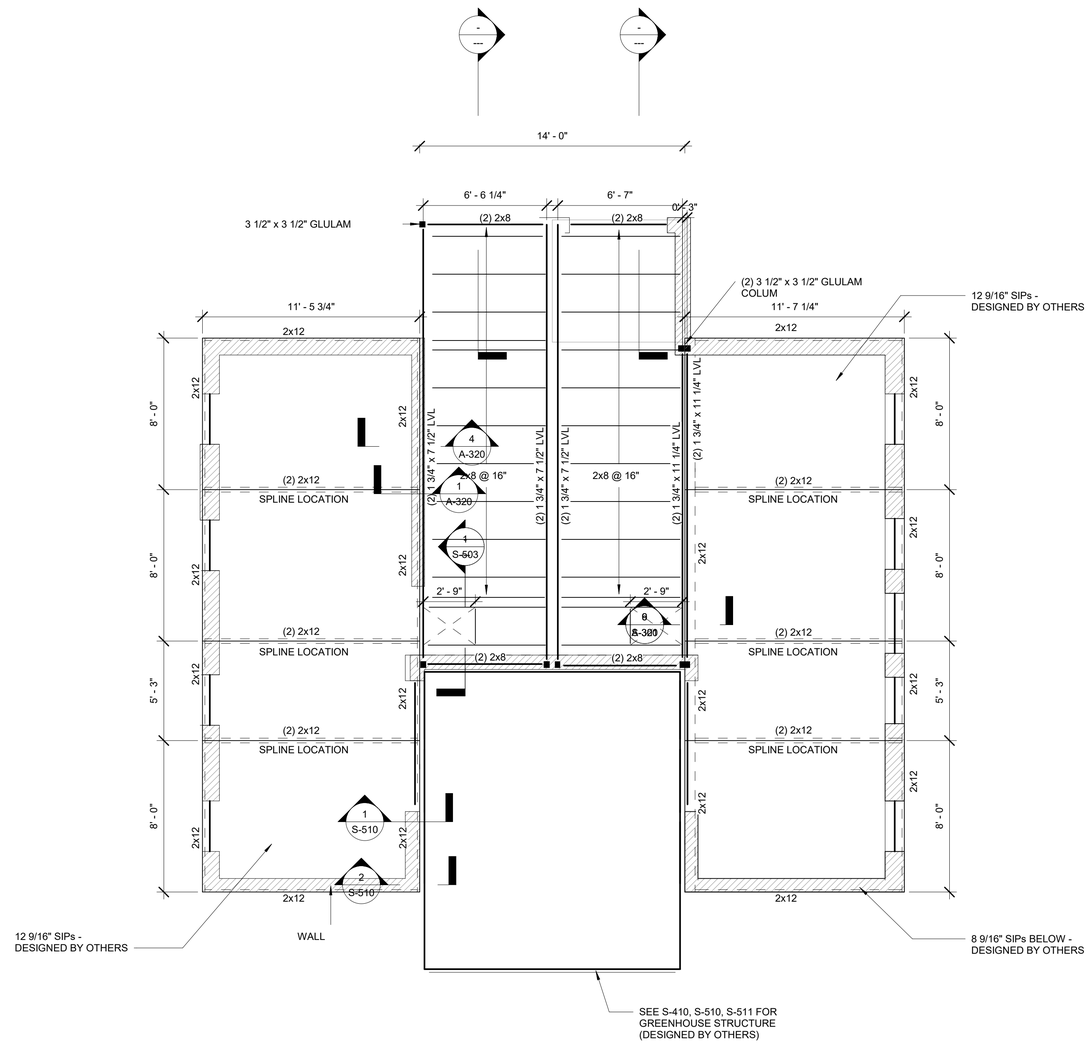
Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

PROJECT NO. 001
DESIGNED Author
CHECKED Checker

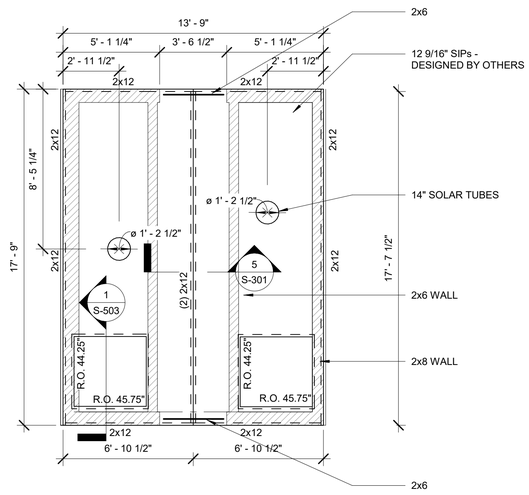
FLOOR FRAMING PLANS

S-101

STATE OF MARYLAND
JUNE I. METTAM
NO. 29118
REGISTERED
PROFESSIONAL ENGINEER



1 MODULE & WINGS ROOF FRAMING PLAN
1/4" = 1'-0"



2 ATTIC ROOF FRAMING
1/4" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

Silman

reACT

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

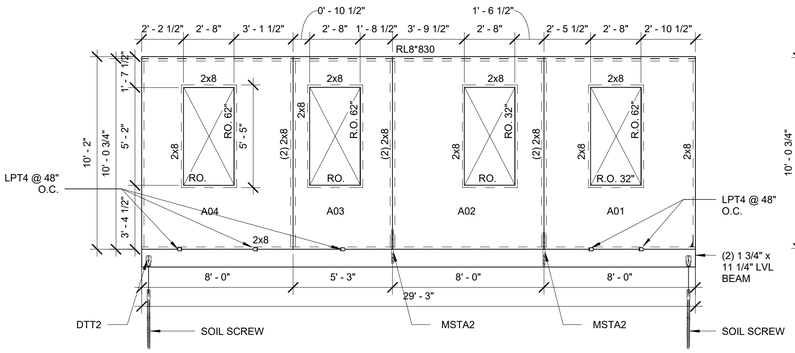
PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

STATE OF MARYLAND
MARK L. METTAM
NO. 29119
REGISTERED
PROFESSIONAL ENGINEER

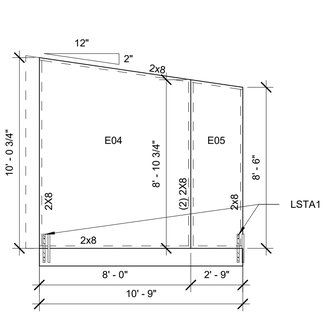
ROOF FRAMING PLANS

S-102

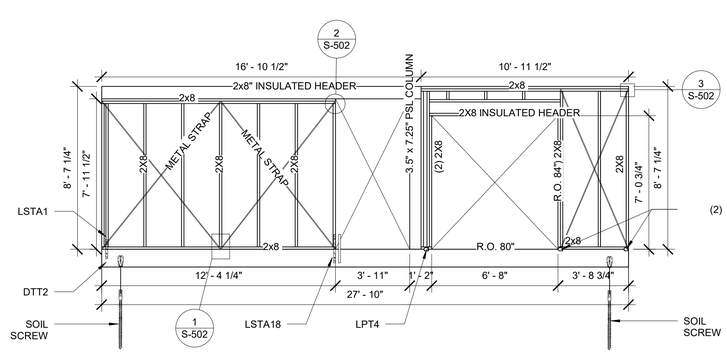
NOTES:
1. ALL SIP PANELS DESIGNED BY OTHERS BASED ON LOADS SPECIFIED BY SILMAN, SEE CALCULATION PACKAGE
2. SOIL SCREWS SHOULD BE INSTALLED WITHIN 12 INCHES OF THE END OF FLOOR BEAM.
3. SOIL SCREWS MAY BE INSTALLED ON THE OUTSIDE OR INSIDE OF FLOOR BEAM.
4. ALL MSTA AND LSTA STRAPS ARE INSTALLED CENTERED ON THE FLOOR PLYWOOD.
5. SIP PANEL STRAPS ATTACH TO SPLINES OR WOOD STUDS AT EDGE OF OPENINGS



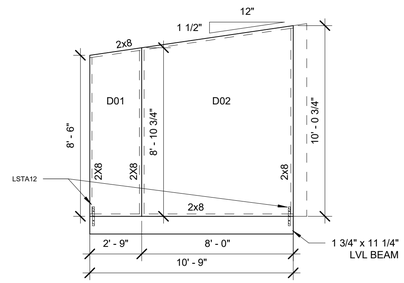
1 WALL PROFILE - A
1/4" = 1'-0"



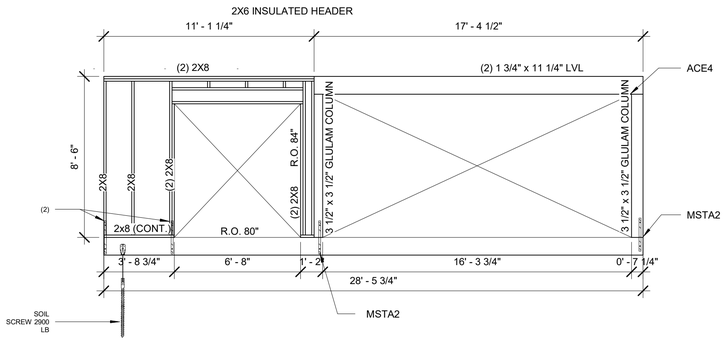
2 WALL PROFILE - B
1/4" = 1'-0"



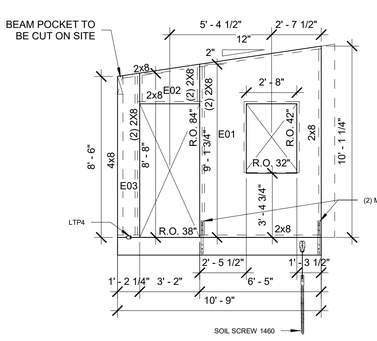
3 WALL PROFILE - C
1/4" = 1'-0"



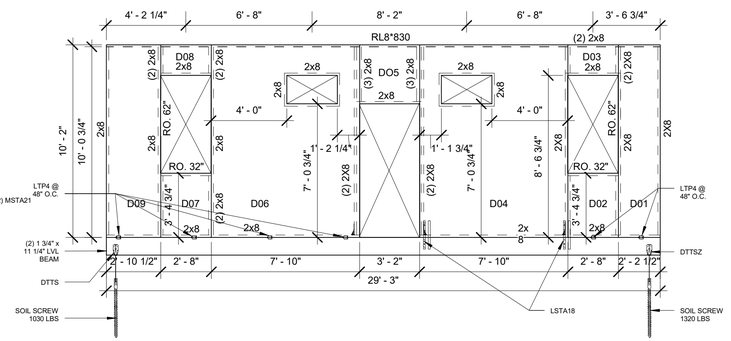
4 WALL PROFILE - D
1/4" = 1'-0"



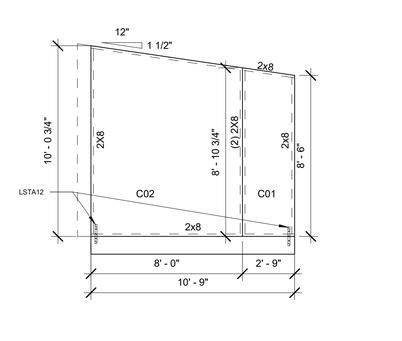
5 WALL PROFILE - E
1/4" = 1'-0"



6 WALL PROFILE - F
1/4" = 1'-0"



7 WALL PROFILE - G
1/4" = 1'-0"



8 WALL PROFILE - H
1/4" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

Silman

reACT

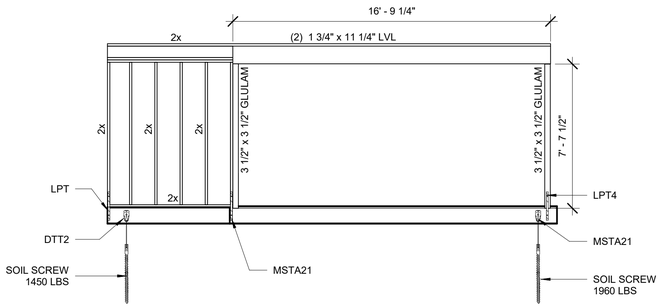
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

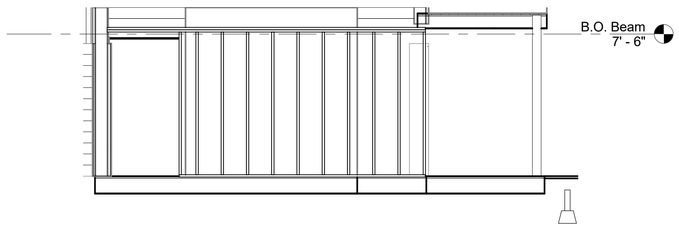
PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

WING WALL PROFILES

S-200



1 CORE EAST WALL PROFILE
1/4" = 1'-0"



2 CORE WEST WALL PROFILE
1/4" = 1'-0"

NOTES:
1. ALL SIP PANELS DESIGNED BY OTHERS
2. SOIL SCREWS SHOULD BE INSTALLED WITHIN 12 INCHES OF THE END OF FLOOR BEAM.
3. SOIL SCREWS MAY BE INSTALLED ON THE OUTSIDE OR INSIDE OF FLOOR BEAM.
4. ALL MSTA AND LSTA STRAPS ARE INSTALLED CENTERED ON THE FLOOR PLYWOOD.
5. SIP PANEL STRAPS ATTACH TO SPLINES OR WOOD STUDS AT EDGE OF OPENINGS

CORE MODULE NORTH AND SOUTH WILL REQUIRE TEMPORARY DIAGNOL BRACING DURING SHIPPING & LIFTING

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

Silman

reACT

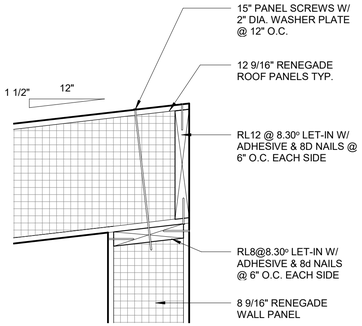
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

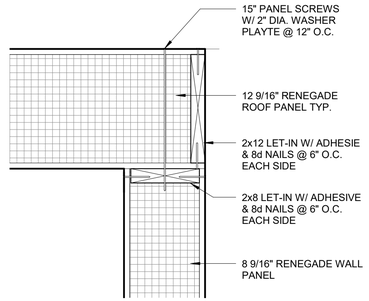
Revision Date	Description

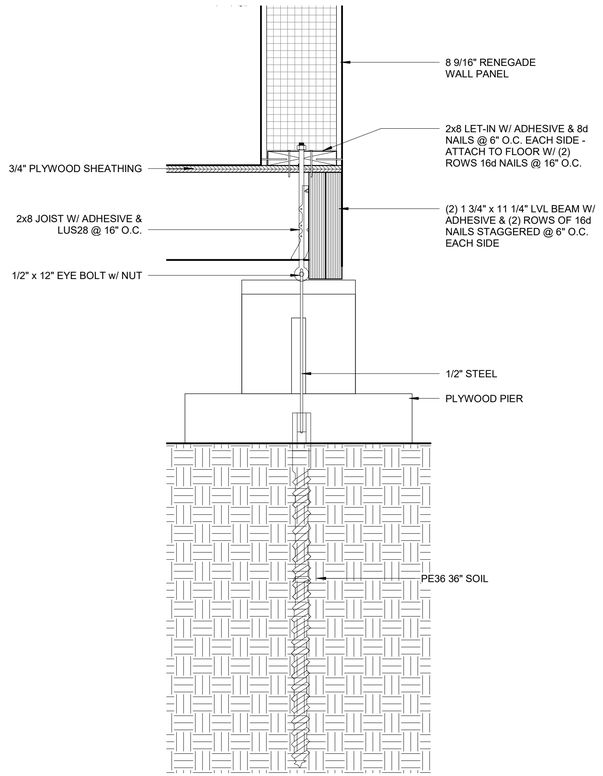
PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

CORE WALL PROFILES

S-201







2 EXTERIOR WALL SECTION AT EAVE
1 1/2" = 1'-0"

4 EXTERIOR WALL SECTION AT RAKE
1 1/2" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

Silman

reACT

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

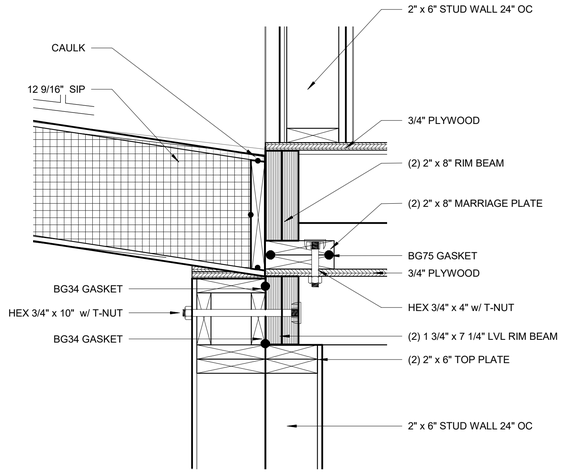
PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

STATE OF MARYLAND
KIRK L. METTAM
NO. 29113
PROFESSIONAL ENGINEER

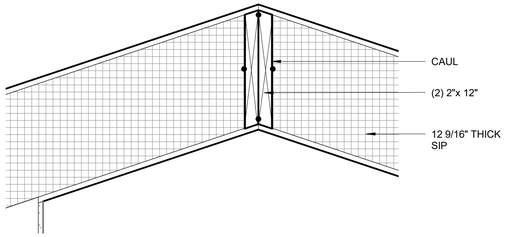
EXTERIOR WALL SECTIONS

S-300

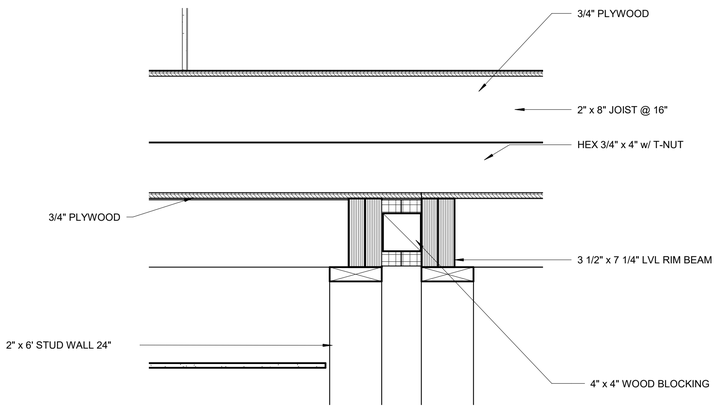
NOTE:
1. IN ALL CASES T-NUTS MAY NOT BE USED TO PULL MODULES TOGETHER



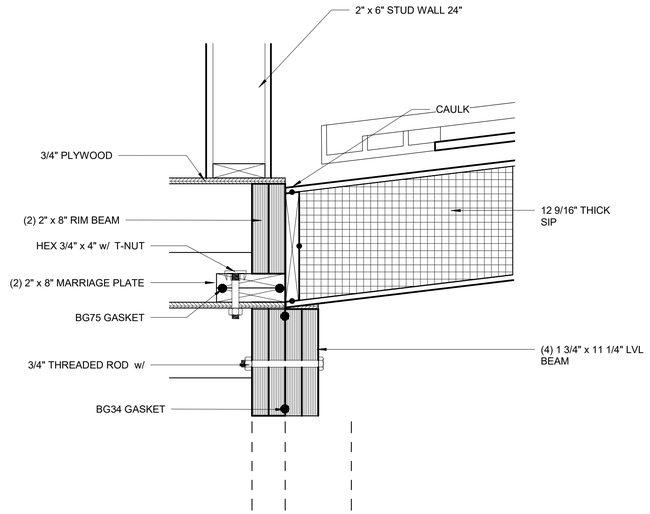
3 WALL FRAMING AT BEDROOM - ROOF
1 1/2" = 1'-0"



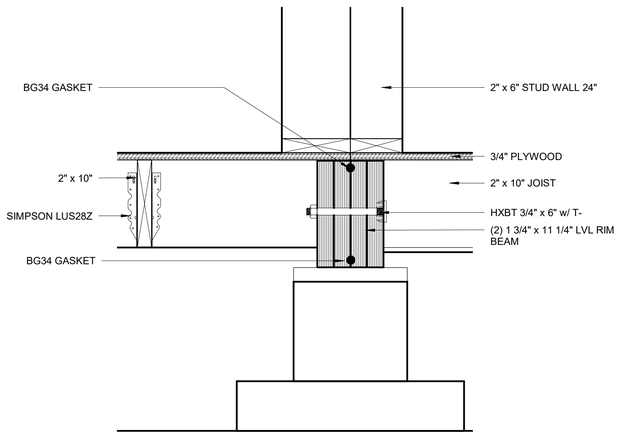
5 WALL FRAMING AT SPINE WALL - ROOF 2
1 1/2" = 1'-0"



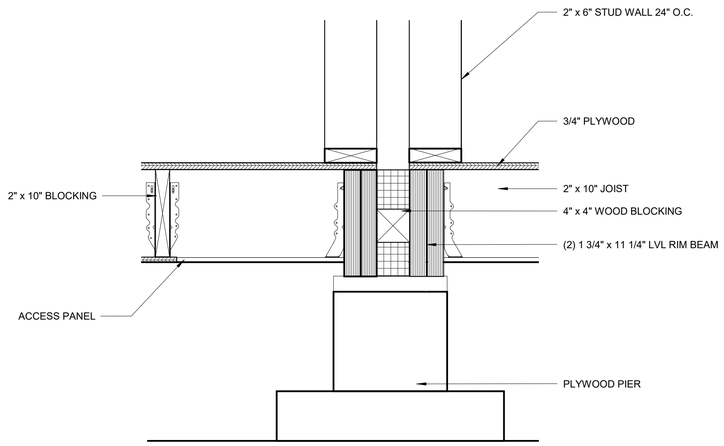
6 WALL FRAMING AT SPINE WALL - ROOF 1
1 1/2" = 1'-0"



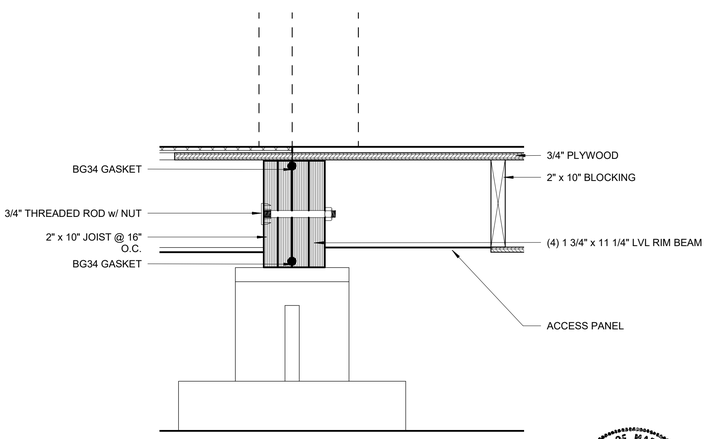
8 FRAMING AT DINING ROOM - ROOF
1 1/2" = 1'-0"



4 WALL FRAMING AT BEDROOM - FLOOR
1 1/2" = 1'-0"



7 WALL FRAMING AT SPINE WALL - FLOOR
1 1/2" = 1'-0"



9 FRAMING AT DINING ROOM - FLOOR
1 1/2" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

Silman

reACT

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

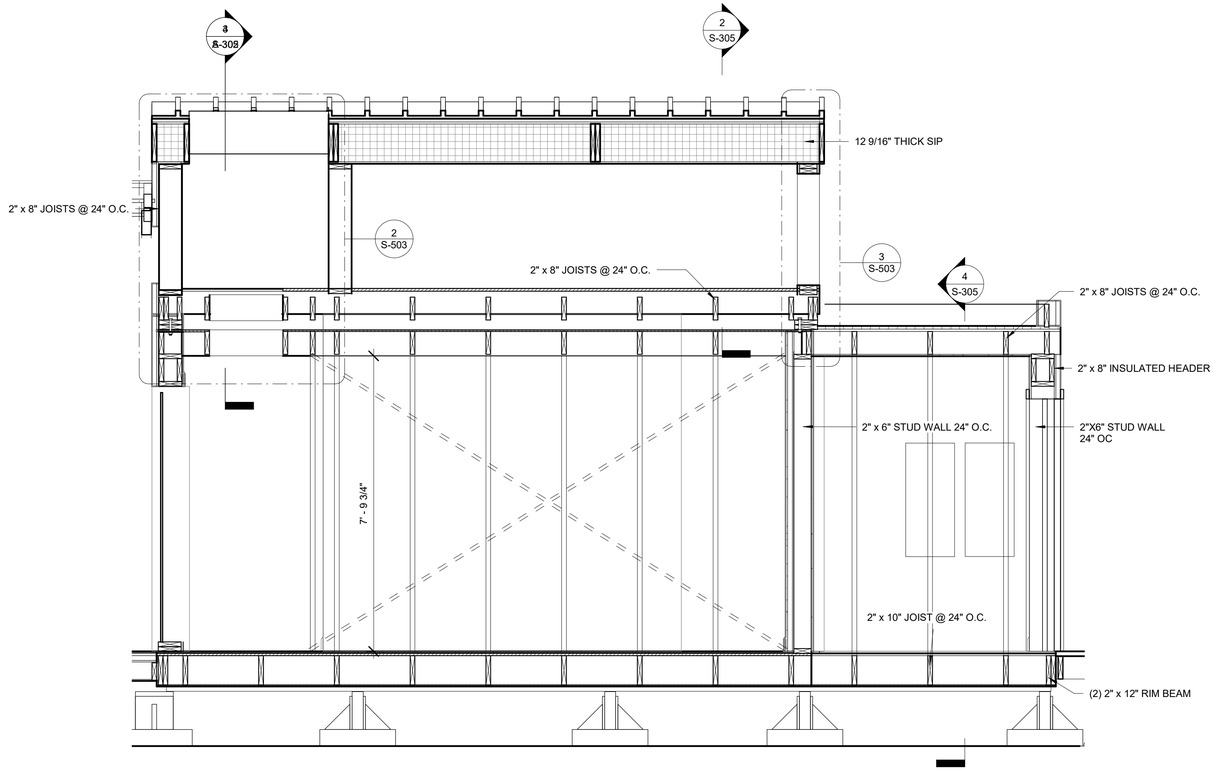
Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

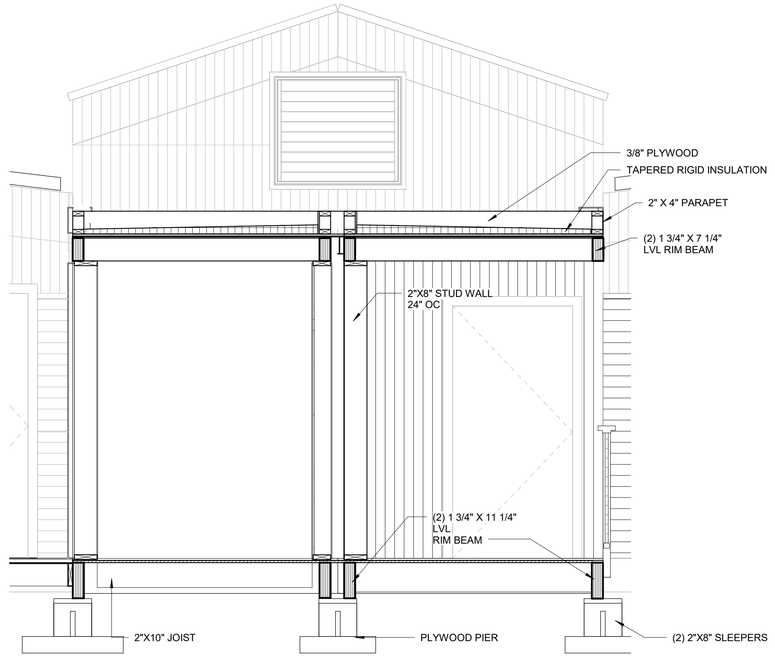
MODULE TO MODULE CONNECTIONS

S-301

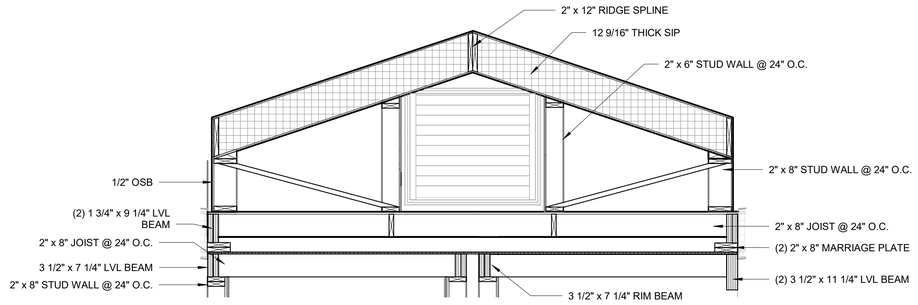
STATE OF MARYLAND
PROFESSIONAL ENGINEER



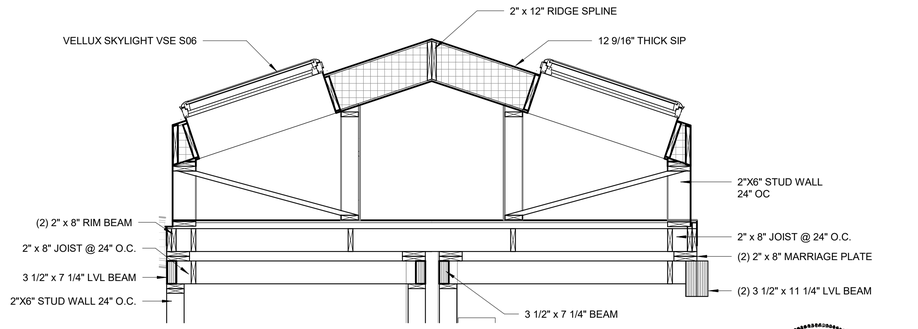
1 SECTION THROUGH CORE
1/2" = 1'-0"



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



2 SECTION THROUGH ATTIC
1/2" = 1'-0"



3 SECTION THROUGH SOLAR DRYERS A
1/2" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

Silman

reACT

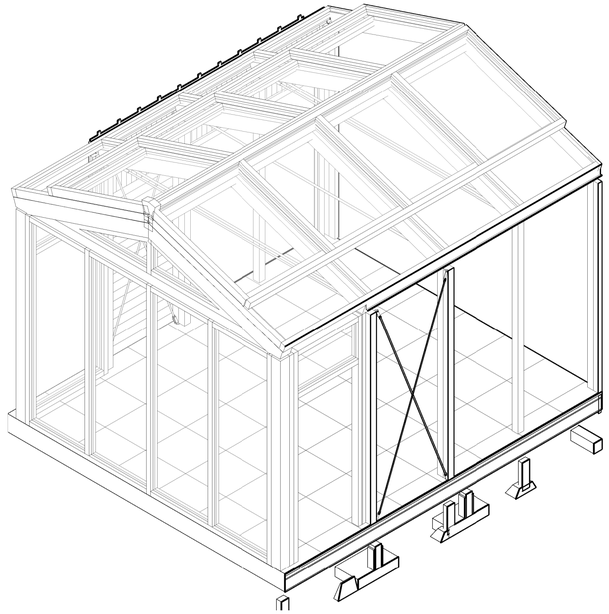
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

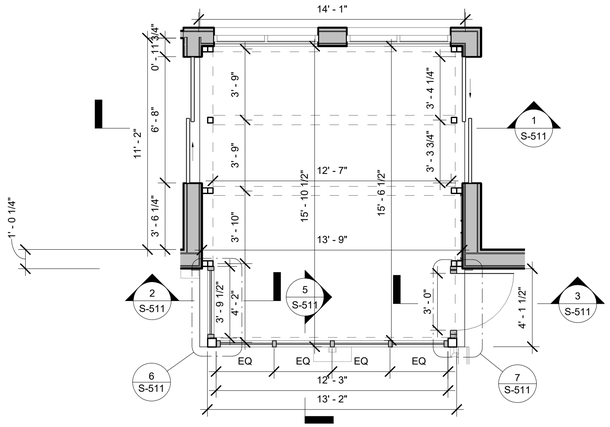
PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

CORE FRAMING SECTIONS

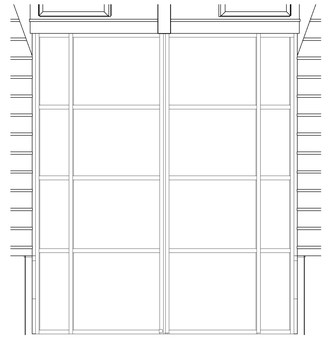
S-305



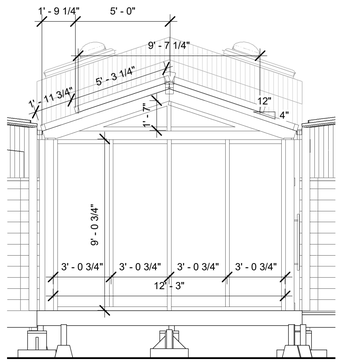
1 GREENHOUSE ISOMETRIC



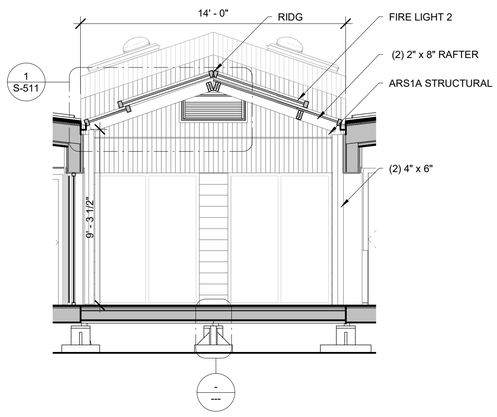
2 GREENHOUSE FLOOR PLAN
1/4" = 1'-0"



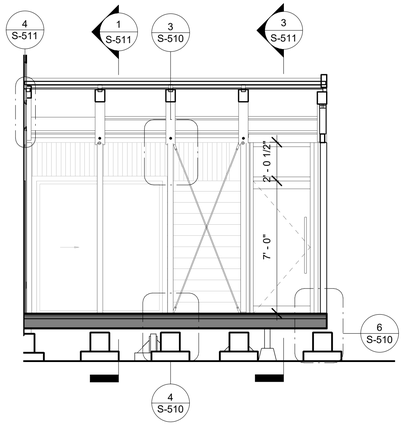
3 GREENHOUSE ROOF PLAN
1/4" = 1'-0"



6 COURTYARD SOUTH ELEVATION
1/4" = 1'-0"



4 TRANSVERSE SECTION THROUGH COURTYARD
1/4" = 1'-0"



5 LONGITUDINAL SECTION THROUGH COURTYARD
1/4" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

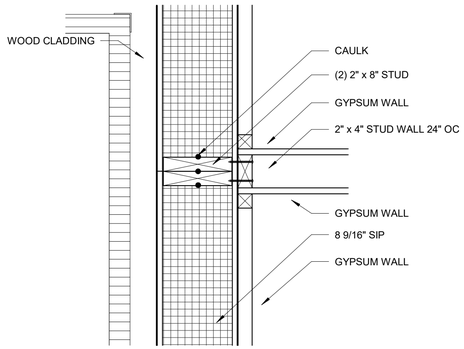
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

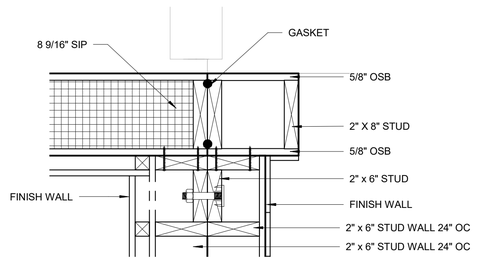
PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

GREENHOUSE PLANS & SECTIONS

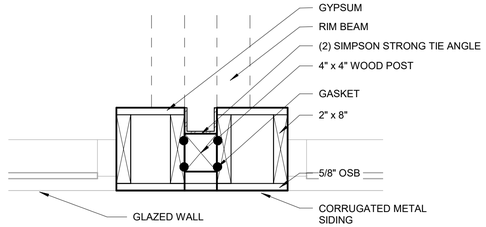
S-410



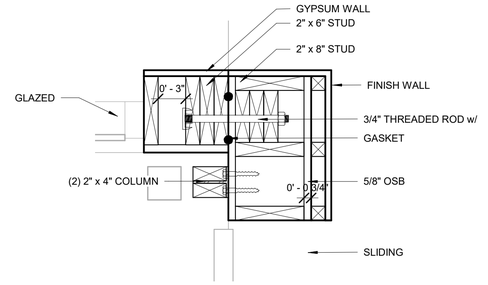
1 INTERIOR WALL TO SIP
1 1/2" = 1'-0"



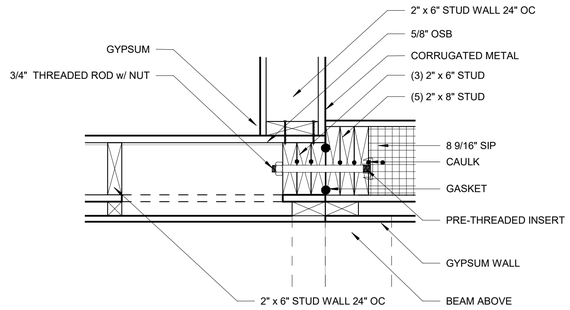
2 MODULE TO WING AT BEDROOM
1 1/2" = 1'-0"



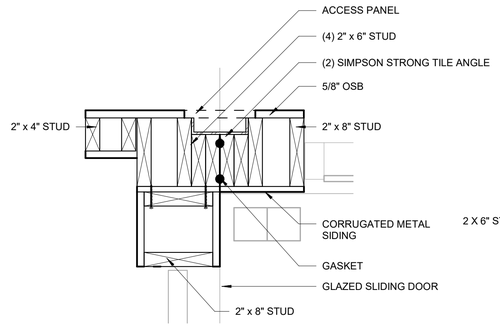
4 MODULE CONNECTION AT CORE
1 1/2" = 1'-0"



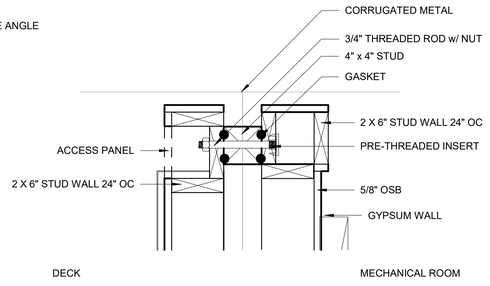
5 MODULE TO WING AT CORNER
1 1/2" = 1'-0"



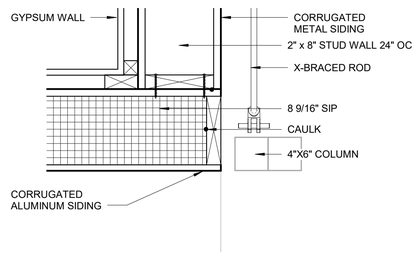
6 MODULE TO WING AT KITCHEN
1 1/2" = 1'-0"



7 MODULE CONNECTION OFFICE TO CORE
1 1/2" = 1'-0"



8 MODULE TO MODULE AT SPINE 2
1 1/2" = 1'-0"



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

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

Silman

reACT

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

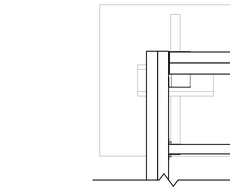
Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

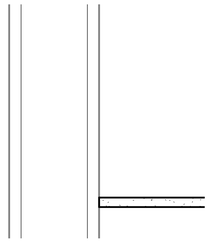
WALL CONNECTION DETAILS

S-501

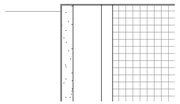
STATE OF MARYLAND
KIRK J. METTAM
NO. 29119
12/21/2016
PROFESSIONAL ENGINEER



1 METAL STRAP AT SILL
3" = 1'-0"

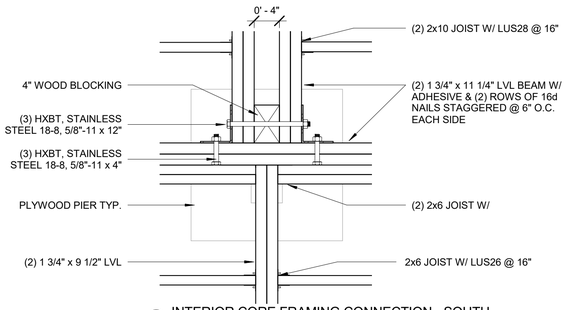


2 METAL STRAP AT HEADER A
3" = 1'-0"

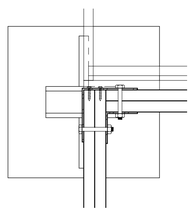


3 METAL STRAP AT HEADER B
3" = 1'-0"

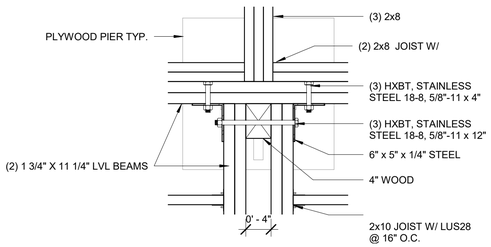
4 FLOOR FRAMING PLAN DETAIL A
1" = 1'-0"



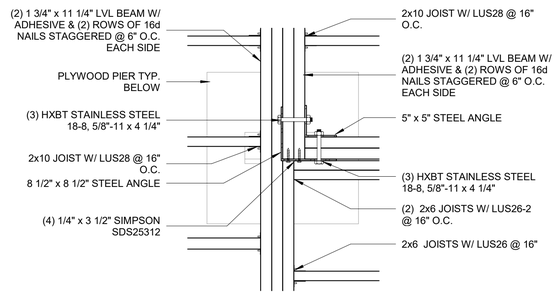
5 INTERIOR CORE FRAMING CONNECTION - SOUTH
1" = 1'-0"



6 FLOOR FRAMING PLAN - Callout 1
1" = 1'-0"



7 INTERIOR CORE FRAMING CONNECTION - NORTH
1" = 1'-0"



9 EXTERIOR CORE FRAMING CONNECTION - SOUTH
1" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

Silman

reACT

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

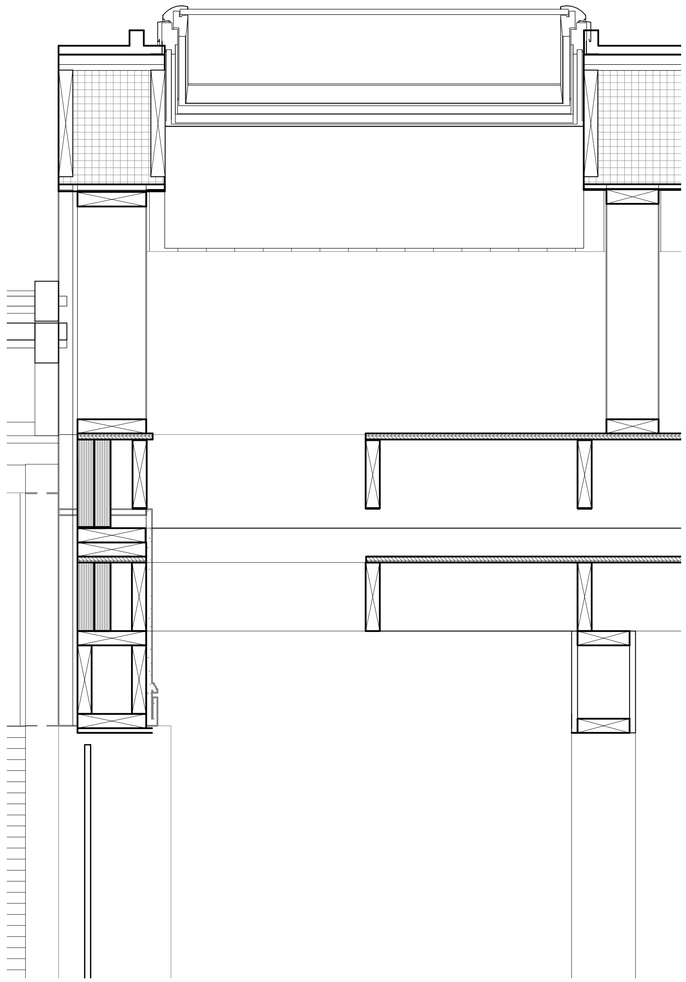
Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

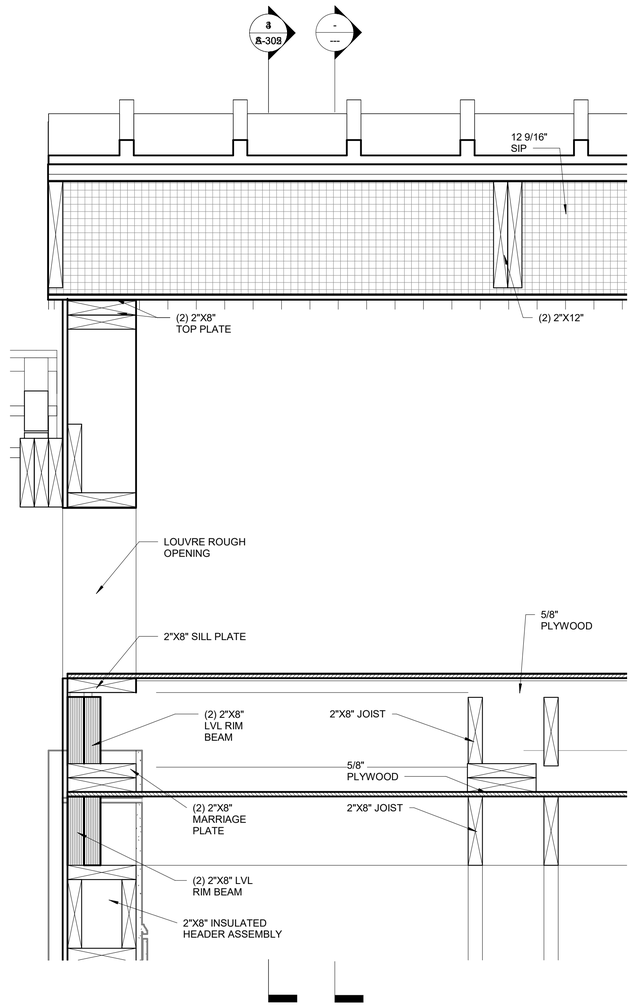
FRAMING DETAILS

S-502

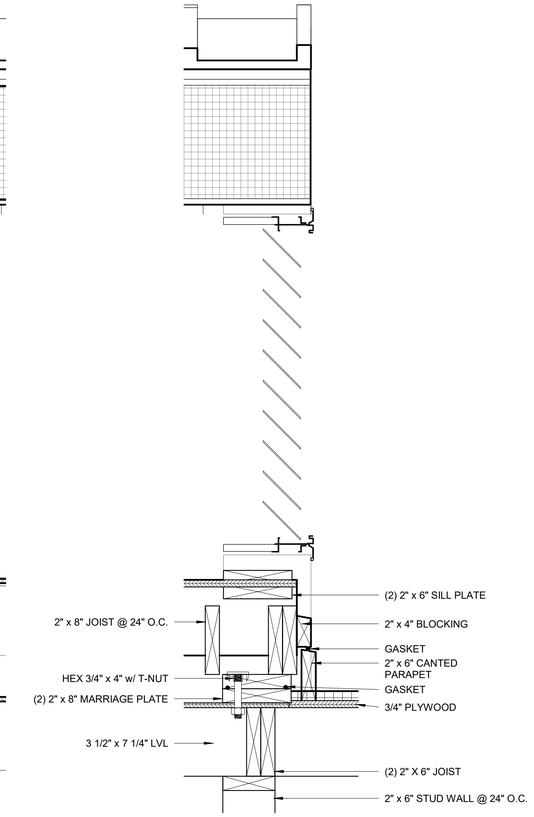
STATE OF MARYLAND
MARK I. METTAM
No. 29118
REGISTERED
PROFESSIONAL ENGINEER



1 SECTION THROUGH SOLAR DRYERS
1 1/2" = 1'-0"



2 SECTION THROUGH ATTIC SOUTH
1 1/2" = 1'-0"



3 ATTIC FLOOR TO NORTH
1 1/2" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

Silman

reACT

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

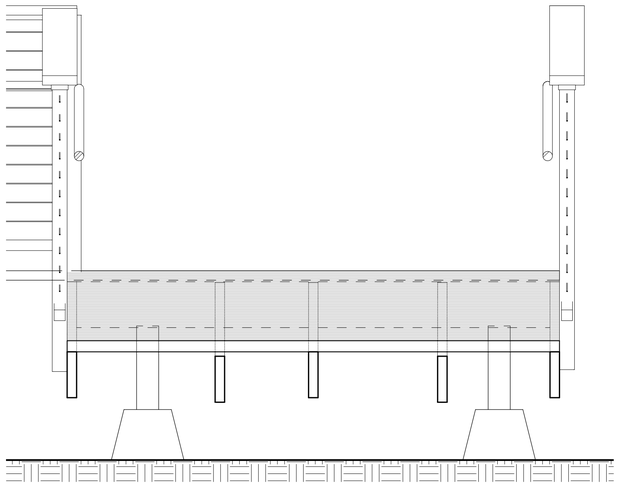
Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

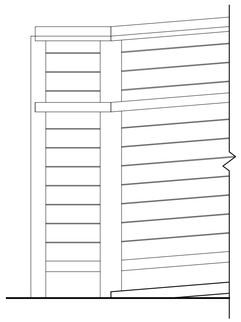
STATE OF MARYLAND
FRANK I METTAM
NO. 29115
REGISTERED
PROFESSIONAL ENGINEER

ATTIC DETAILS

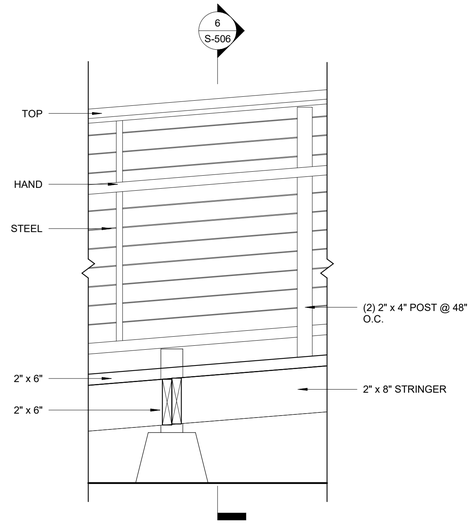
S-503



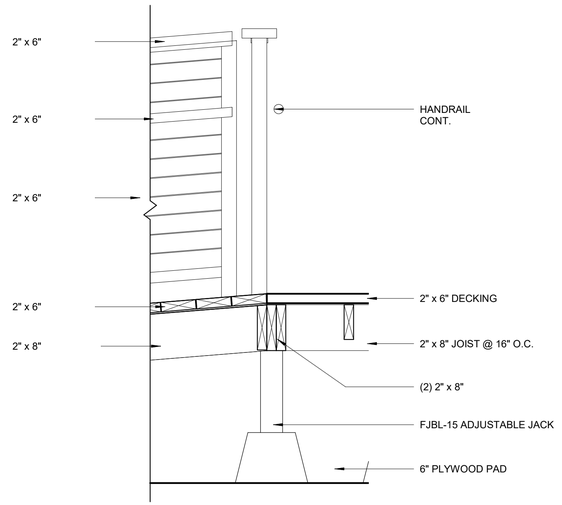
6 TRANSVERSE SECTION THROUGH RAMP
1" = 1'-0"



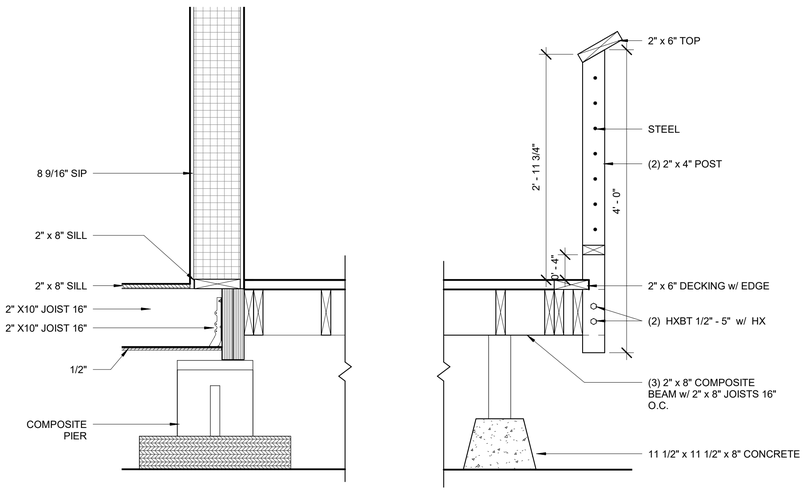
5 SECTION THROUGH RAMP - BOTTOM
1" = 1'-0"



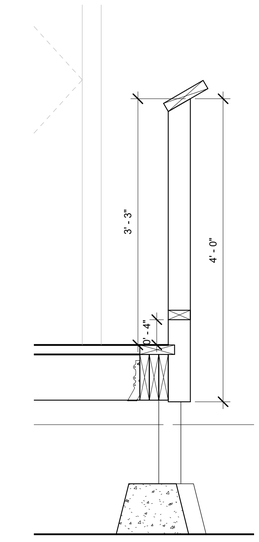
3 SECTION THROUGH RAMP
1" = 1'-0"



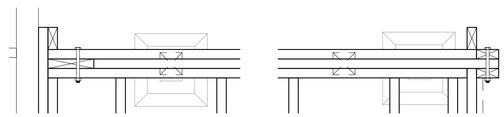
4 SECTION THROUGH RAMP - TOP
1" = 1'-0"



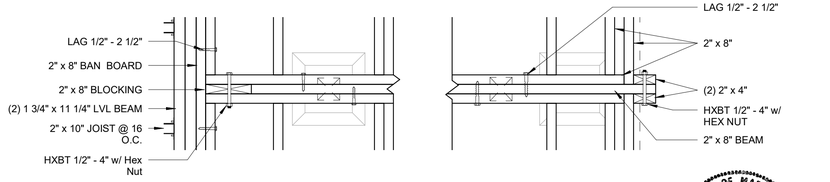
1 SECTION THROUGH RAILING A
1" = 1'-0"



2 SECTION THROUGH RAILING B
1" = 1'-0"



8 FLOOR FRAMING PLAN - Callout 2
1" = 1'-0"



7 DECK FRAMING DETAIL
1" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

Silman

reACT

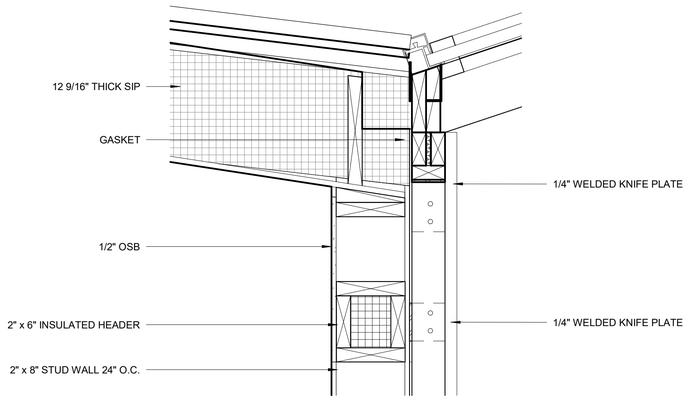
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

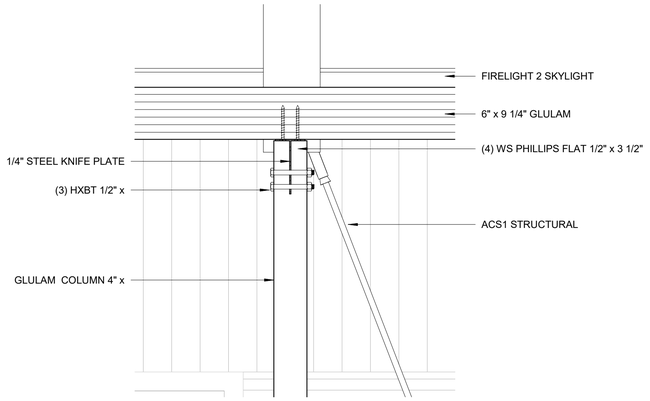
PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

DECK DETAILS

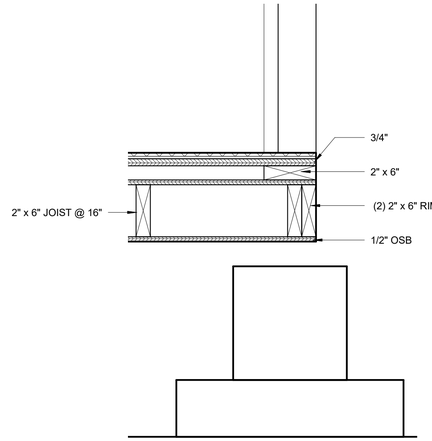
S-506



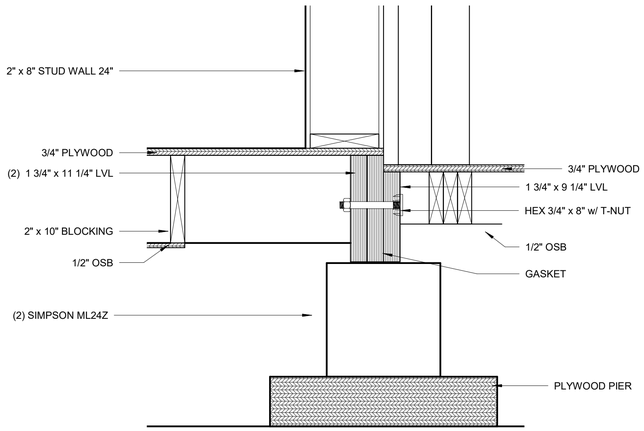
1 FRAMING AT COURTYARD - ROOF A
1 1/2" = 1'-0"



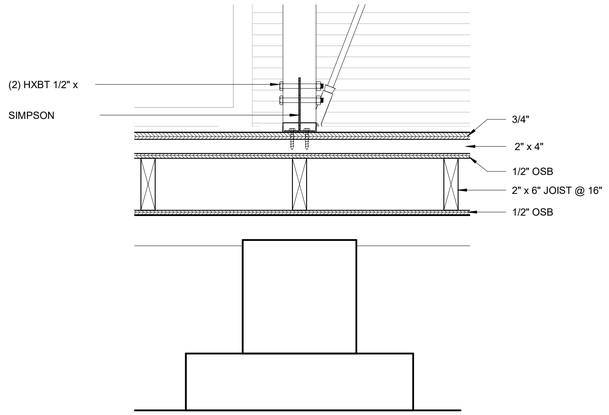
3 FRAMING AT COURTYARD - ROOF B
1 1/2" = 1'-0"



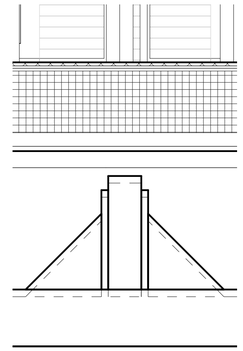
6 COURTYARD AT FACADE
1 1/2" = 1'-0"



2 FRAMING AT COURTYARD - FLOOR A
1 1/2" = 1'-0"



4 FRAMING AT COURTYARD - FLOOR B
1 1/2" = 1'-0"



5 FLOOR SECTION AT CENTER OF COURTYARD
1 1/2" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

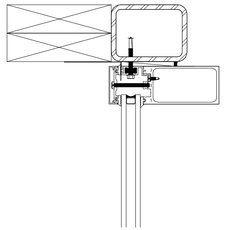
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

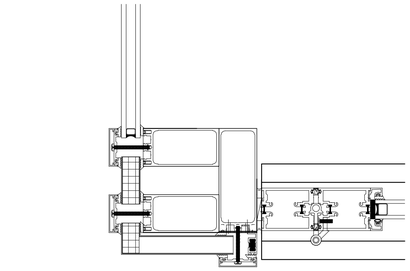
Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

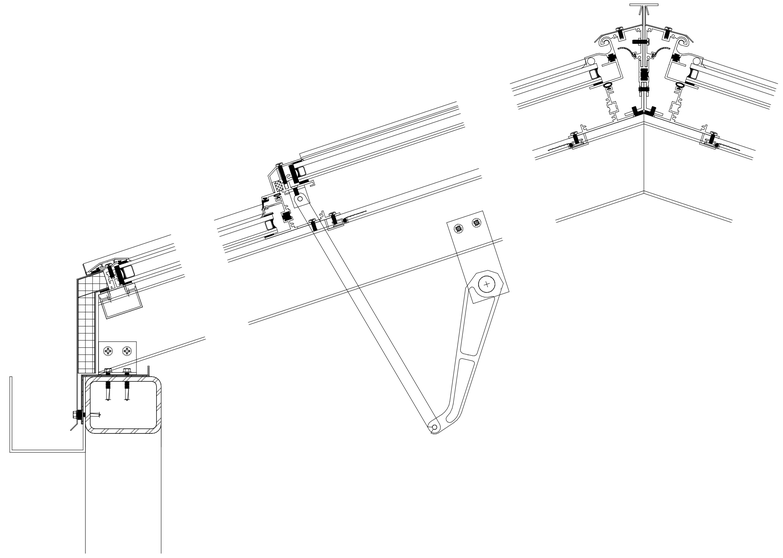
GREENHOUSE FRAMING DETAILS

S-510

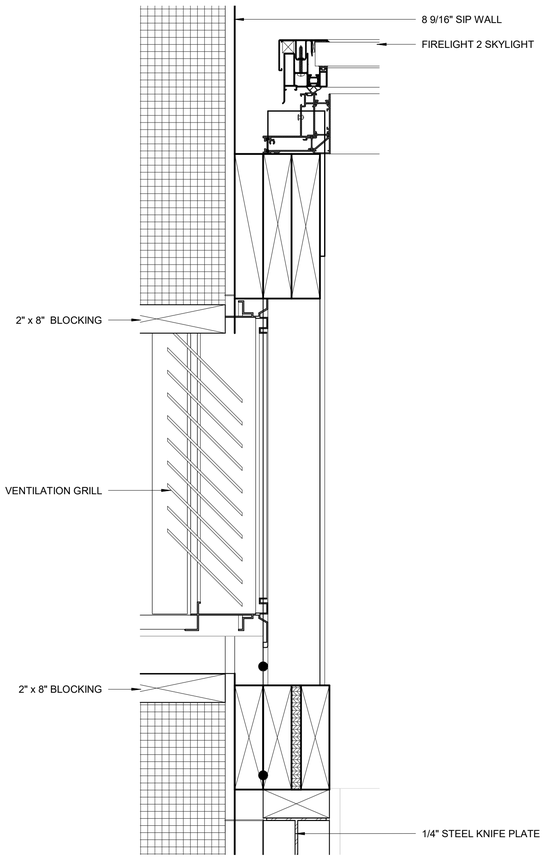




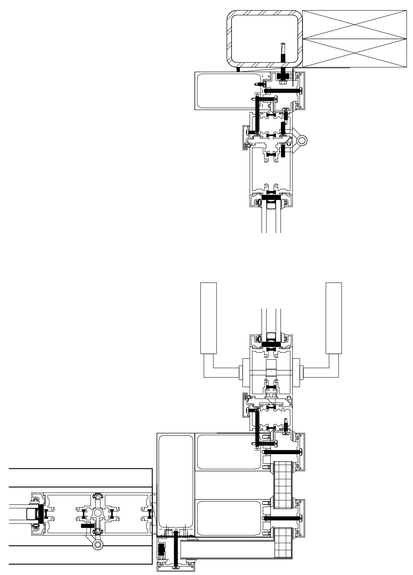
6 GREENHOUSE EXTERIOR CORNER DETAIL
3" = 1'-0"



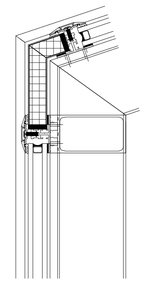
1 SKYLIGHT SECTION
3" = 1'-0"



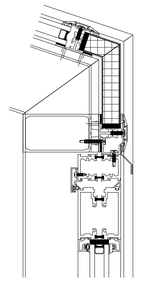
4 SKYLIGHT DETAIL AT WALL
3" = 1'-0"



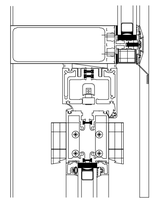
7 GREENHOUSE TERRACE DOOR PLAN DETAIL
3" = 1'-0"



2 CURTAIN WALL SECTION
3" = 1'-0"



3 TERRACE DOOR SECTION
3" = 1'-0"



5 FOLDING GLASS WALL SECTION
3" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

PROJECT NO. 001
DESIGNED Author
CHECKED Checker

GREENHOUSE SKYLIGHT DETAILS

S-511

SOLAR DECATHLON 2017

ACCOUNT NAME & CONTACT INFORMATION
UNIVERSITY OF MARYLAND 8223 PAINT BRANCH DRIVE COLLEGE PARK, MD, USA 20742 PHONE: 240-441-3952 FAX: N/A EMAIL: GCR@UMD.EDU CONTACT: GARTH ROCKCASTLE

SHIPPING ADDRESS	JOB SITE ADDRESS
SHIP TO 3907 METZEROTT ROAD COLLEGE PARK, MD, USA 20740	JOB SITE 3907 METZEROTT ROAD COLLEGE PARK, MD, USA 20740
TENTATIVE SHIPPING METHOD: COMMON CARRIER	

APPROVALS BY S.I. ACCOUNT REQUIRED		DATE
DESIGN APPROVED BY:	X	
DIMENSIONS APPROVED BY:	X	
FRAME COLOR APPROVED BY:	X	
GLAZING TYPE APPROVED BY:	X	

REVIEW PRIOR TO APPROVING SHOP DRAWINGS

IMPORTANT NOTES:
IT IS PURCHASERS RESPONSIBILITY TO VERIFY ALL DESIGN ELEMENTS AND SYSTEM INTEGRATION TO SURROUNDING ARCHITECTURE.
ALL ELEVATIONS ARE VIEWED FROM THE OUTSIDE OF STRUCTURE LOOKING IN.

PLEASE VERIFY ALL INFORMATION BEFORE APPROVING DESIGN, INCLUDING ACCESSORY LOCATION, OPERATION & SWING (INCLUDING DOORS, WINDOWS, RIDGE VENTS, HEATERS, FANS, ETC.), OVERALL DESIGN & DIMENSIONS, FRAME COLOR, GLASS MAKE UP, SUBSTRATES, AND CONNECTION DETAILS.

FINAL DRAWINGS MUST BE APPROVED WITHOUT MODIFICATION IN ORDER TO PROCEED TO FABRICATION. IN THE EVENT OF ANY CHANGES BY CUSTOMER, NEW SHOP DRAWINGS MUST BE PREPARED, SUBMITTED, AND APPROVED. FOR EXAMPLE, "APPROVED AS NOTED" OR ANY OTHER MODIFICATIONS TO DO NOT CONSTITUTE FINAL APPROVED SHOP DRAWINGS. PLEASE NOTE THAT FABRICATION AND LEAD TIMES WILL NOT BEGIN UNTIL FINAL APPROVAL WITHOUT CHANGES IS PROVIDED.

APPROVAL SIGNIFIES THAT DESIGN AND ALL FIELD MEASUREMENTS HAVE BEEN VERIFIED AND THIS PROJECT MAY BE RELEASED FOR FABRICATION. PER OUR TERMS AND CONDITIONS, APPROVED SHOP DRAWINGS ARE FINAL AGREEMENT OF ALL DESIGN AND PRODUCTION CRITERIA AND SUPERCEDE QUOTE AND OTHER PRIOR DOCUMENTS. LEAD TIMES OFFICIALLY BEGIN UPON RECEIPT OF SIGNED SHOP DRAWINGS. IN ORDER TO EXPEDITE FABRICATION, PLEASE SIGN AND RETURN ONE (1) FULL SET SHOP DRAWINGS, INCLUDING ANY PAGES WHICH MAY REFLECT DIMENSION OR DETAIL ALTERATIONS.

CUSTOMER'S SIGNATURE OR MARK AT ANY LOCATION ON THIS PAGE SIGNIFIES ACCEPTANCE AND APPROVAL OF ALL SIGN OFF REQUIREMENTS INCLUDING DESIGN, DIMENSIONS, FRAME COLOR, GLAZING TYPE, ACCESSORIES, ETC FOR S.I. TO PROCEED WITH FABRICATION. ANY CHANGES TO SHOP DRAWINGS WILL RESULT IN ADDITIONAL CHARGES AND LEAD TIMES.

IF S.I. RECEIVES COVER PAGE ONLY , CUSTOMER CERTIFIES THAT NO CHANGES TO THE DRAWINGS ARE REQUIRED AND S.I. IS PERMITTED TO PROCEED WITH FABRICATION AS PER ITS LAST SUBMITTAL

S.I. DRAWING REVIEW SIGN OFF		
S.I. REP.	INITIAL	DATE
PRELIMINARY ENGINEER	KAE	7-26-17
SPECIALIST	PF	7-26-17
SPECIALIST		
PROJECT MANAGER	WK	7-26-17
OTHER		

GLAZING SCHEDULE (SLOPED & SLOPED ACCESSORIES) (QTY:)

TYPE	DESCRIPTION
1	1" INSULATED GLAZING UNITS 3/16" LoE 272 (ON SURFACE #2) TEMPERED 1/2" STAINLESS STEEL AIR SPACE (AIR FILLED)(CAPILLARY TUBES) 5/16" CLEAR ANNEALED LAMINATED WITH A .060" PVB INTERLAYER SILICONE SEAL

GLAZING SCHEDULE (VERTICAL & VERTICAL ACCESSORIES) (QTY:)

TYPE	DESCRIPTION
2	1" INSULATED GLAZING UNITS 1/4" LoE 272 (ON SURFACE #2) TEMPERED 1/2" STAINLESS STEEL AIR SPACE (AIR FILLED)(CAPILLARY TUBES) 1/4" CLEAR TEMPERED SILICONE SEAL

CAPILLARY TUBES REQUIRED IN GLASS: X YES ☐ NO ☐ YES - PER QUOTE

VERIFIED BY: ____ & ____

SOLAR INNOVATIONS USE ONLY

UNIT A

ONE (1) STRAIGHT EAVE DOUBLE PITCH SUNROOM WITH ONE (1) GABLE END

FRAMING TO BE: 2" x 4" & 2" x 5.5" ALUMINUM SYSTEM
GLAZING SET UP: 1" INSULATED GLAZING
FRAMING COLOR TO BE: ***AAMA CLASS 1 CLEAR ANODIZED***
METAL TO METAL SILICONE COLOR TO BE: LIGHT GRAY
METAL TO GLASS SILICONE COLOR TO BE: BLACK
GLASS TO GLASS SILICONE COLOR TO BE: BLACK

ALL INTERIOR PERIMETER SILICONE BY OTHER

TD-A

ONE (1) GEN-2 OUT-SWING TERRACE DOOR, HINGED-RIGHT, OUTFITTED WITH HOPPE "TORONTO" SWING DOOR LEVER & ADA SILL.

GLAZING SET UP: 1" INSULATED GLAZING

ADA OUT-SWING SILL & FLASHING COLOR TO BE: ***CLASS 1 CLEAR ANODIZED*** FINISH.

FRAMING COLOR TO BE: ***AAMA CLASS 1 CLEAR ANODIZED***

METAL TO METAL SILICONE COLOR TO BE: LIGHT GRAY
METAL TO GLASS SILICONE COLOR TO BE: BLACK
GLASS TO GLASS SILICONE COLOR TO BE: BLACK

HARDWARE INFORMATION (OUTSOURCE)

HANDLE: TORONTO HANDLE
LOCK: 3-POINT LOCK, DEADBOLT INT. & KEYED EXT.
HANDLE & TRIM PLATE COLOR: SATIN NICKEL

HARDWARE INFORMATION

HINGES: SEMI CONCEALED HINGES
HINGE COLOR: CLEAR ANODIZED
DOOR LIMITER

UNIT B

UNIT "A" - ONE (1) SPLIT WALL GEN. 2 SYSTEM W/ FLOATING JAMB, BOTTOM LOAD, FOLD-OUT, TWO (2) PANELS FOLD LEFT, TWO (2) PANELS FOLD RIGHT, RECESSED RAMP SILL, AS VIEWED FROM EXTERIOR.

GLAZING SET UP: 1" INSULATED GLAZING.

** UNIT OUTFITTED WITH 5 1/4" GEN. 2 SEMI-CONCEALED HINGES WITH HEAVY HINGE EXTENSIONS **

** UNIT OUTFITTED WITH 180° HEAVY TWO POINT LOCK SYSTEM **

METAL TO METAL SILICONE COLOR TO BE: LIGHT GRAY

GLAZING SILICONE COLOR TO BE: BLACK

RECESSED RAMP SILL COLOR TO BE SOLAR INNOVATIONS' STANDARD ***AAMA 611-12 CLASS 1 CLEAR ANODIZED*** FINISH.

FRAMING COLOR TO BE SOLAR INNOVATIONS' STANDARD ***TBD*** FINISH.

HARDWARE INFORMATION

2-POINT LOCK COLOR: TBD
5 1/4" GEN. 2 SEMI-CONCEALED HINGE WITH HEAVY HINGE EXTENSION COLOR: TBD
WIRE HINGE PULL HANDLE COLOR: TBD
RECESSED/ FLUSH HANDLE COLOR: TBD

ACCESSORY SCHEDULE (OUTSOURCE)

TYPE	DESCRIPTION
UA-A	TWO (2) WATER RESISTANT LINEAR ACTUATOR MOTORS FOR RIDGE VENTS LISTED BELOW (AC000659-00-00) ***MOTOR IS BLACK WITH SILVER ARM***
UA-B	TWO (2) ISOLATION RELAYS (AC000089-00-00) TO CONTROL RIDGE VENTS LISTED BELOW
UA-C	ONE (1) THERMOSTAT (AC000064-00-00) TO CONTROL RIDGE VENTS LISTED BELOW

ACCESSORY SCHEDULE

TYPE	DESCRIPTION
UA-D	040" ALUMINUM INTERIOR SILL FLASHING (***AAMA CLASS 1 CLEAR ANODIZED***)

REVISION KEY			
LETTER	DESCRIPTION	DATE	INITIAL

INTEGRATION OF NEW STRUCTURES WITH EXISTING STRUCTURES INVOLVES THE RISK OF DAMAGE TO EXISTING STRUCTURES. EXISTING STRUCTURES CAN CRACK OR FAIL DURING CONSTRUCTION THROUGH NO FAULT OF SI. IN THE ABSENCE OF NEGLIGENCE ON THE PART OF SI, SI IS NOT LIABLE FOR ANY DAMAGE CAUSED TO EXISTING STRUCTURES DURING THE PROCESS OF ERECTION AND INTEGRATION OF THE SI PRODUCT INTO EXISTING STRUCTURES. IN THAT EVENT, CUSTOMER ASSUMES ALL RESPONSIBILITY AND COSTS FOR THE REPLACEMENT OR REPAIR OF THE EXISTING STRUCTURE (INCLUDING ANY OF ITS COMPONENTS), AS WELL AS ANY REWORK REQUIRED BY SI TO UNINSTALL OR REINSTALL ANY SI PRODUCTS.

SOLAR HAS PROVIDED PROJECT SPECIFIC DRAWINGS BASED ON INFORMATION PROVIDED BY THE CUSTOMER. IN DOING SO, SI HAS RELIED ON THE ACCURACY OF ALL SUCH INFORMATION. CUSTOMER WARRANTS THAT ALL INFORMATION PROVIDED IS ACCURATE. SI WILL NOT BE HELD LIABLE FOR ANY SITE CONDITIONS/INSTALLATION CONCERNS WHICH ARE RELATED TO INCORRECT OR INCOMPLETE INFORMATION PROVIDED BY CUSTOMER, OR ANY DRAWINGS APPROVED BY CUSTOMER WHICH CONTAIN ERRONEOUS INFORMATION.

ALL DATA CONTAINED HERE IN IS CONSIDERED COMPANY CONFIDENTIAL INFORMATION AND IS SUBJECT TO OUR CONFIDENTIALITY AGREEMENT AS SET FORTH ON OUR WEBSITE AT http://www.solarinnovations.com/contact/

© 2017 Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

LAST PRINTED BY: Tyler J. Newhouse ON: 7/26/2017 2:16:39 PM REVISION: –

31 ROBERTS ROAD | PINE GROVE, PA 17963
PHONE: (570) 915-1500 OR (800) 618-0669 | FAX: (800) 618-0743
WEBSITE: www.solarinnovations.com | E-MAIL: skylight@solarinnovations.com

SOLAR INNOVATIONS® GLASS STRUCTURES

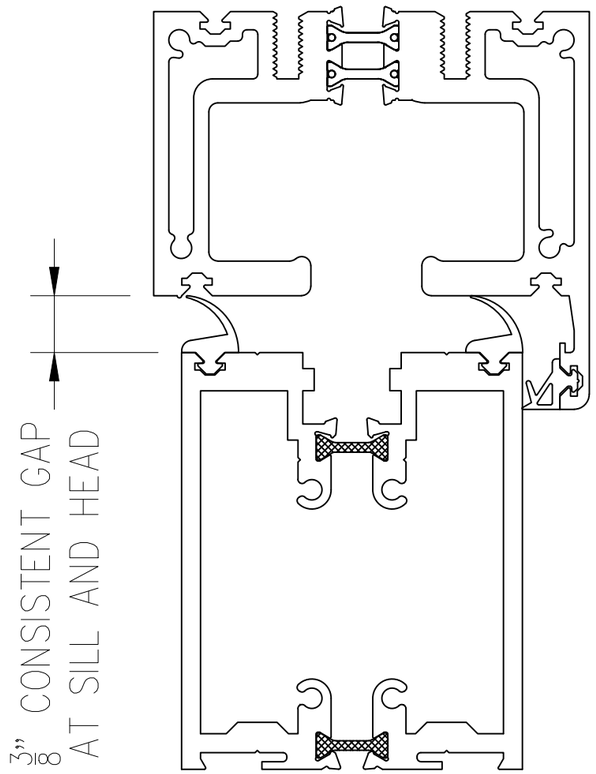
PRE. ENG.:	DRAFTER:	VANTAGE JOB #:	QUOTE:	ORIGINAL DRAWING DATE:
KAE	TYLER NEWHOUSE	SOLARDECATHL-1	98606	7-25-17
CUTLISTER: ---	PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)		JOB NO.: 17-04-173	COVER PAGE: SHEET No. 1 OF 51

NOTE:
UPON CUSTOMER REQUEST -
HEAD AND SILL CAN BE SHIPPED BLANK. FASTENER HOLES CAN THEN BE LOCATED IN FIELD TO SUIT FIELD CONDITIONS.

NOTE:
SILL WILL BE SHIPPED WITH DRAIN PIPE ALREADY ATTACHED. DIMENSIONS FOR DRAIN TUBE MUST HOLD +/- 1/8" FOR DRAIN TUBE TO ACCEPT DRAIN PIPE.

NOTE:
RECESSED RAMP SILL USED IN INTERIOR OR LOW AIR AND WATER PERFORMANCE APPLICATIONS.

NOTE:
FINISH ON WIRE HINGE PULL HANDLES, SEMI-CONCEALED HINGES, AND 2-POINT LOCKS MAY NOT BE A PERFECT MATCH, BUT COLOR WILL BE CLOSE.



INITIAL HEAD
& SILL SETUP

IMPORTANT INSTALLATION NOTE:
DO NOT "FINISH" IN FOLDING GLASS WALL JAMBS BEFORE TESTING UNIT FIT. REMOVAL OR ADDITION OF SHIMS MAY BE REQUIRED BY OTHERS.

STRUCTURAL FOOTERS ARE REQUIRED BY OTHERS FOR ALL APPLICATIONS UNLESS OTHERWISE NOTED. IT IS THE CUSTOMER'S RESPONSIBILITY TO VERIFY SUBSTRATES AND ALL APPLICABLE FOOTINGS MEET OR EXCEED THE STRUCTURAL LOADING IMPOSED BY THE SYSTEM INSTALLED AND COMPLIANCE WITH LOCAL BUILDING CODE.

SOLAR INNOVATIONS® WINDOWS & DOORS

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7–25–17	TJN

DRAWN BY: TYLER NEWHOUSE
PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

DRAWING SCALE: NOT TO SCALE

JOB NO.: 17-04-173

QUOTE NO.: 98606

PAGE No.: 1A OF 51

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

SPECIAL NOTES

1.) ANY REVISIONS REQUESTED & DRAWN AFTER PRELIMINARY ENGINEERING ARE SUBJECT TO MODIFICATION AFTER FINAL REVIEW BY THE CUSTOMER AND FINAL REVIEW BY ENGINEERING TO MEET APPLICABLE CODE.

2.) DRAWING IS SUBJECT TO WIND AND SEISMIC MODIFICATION PER FINAL REVIEW BY ENGINEERING INCLUDING, BUT NOT LIMITED TO: WIND BRACING, SEISMIC BRACING, AND SYSTEM MODIFICATION TO MEET IMPOSED LOADS.

3.) UNLESS OTHERWISE NOTED, SOLAR INNOVATIONS, INC. WILL ASSUME THAT THE BOTTOM OF BASEWALL IS EQUAL TO THE FINISHED FLOOR HEIGHT. THIS INCLUDES ANY JOB THAT SITS ON PRESSURE TREATED WOOD PLATES OR SITS DIRECTLY ON A CONCRETE PAD.

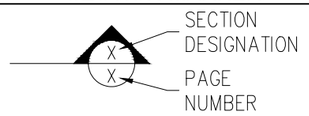
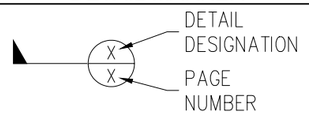
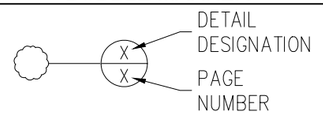
4.) IN ORDER TO APPROVE ANY JOB FOR FABRICATION, SOLAR INNOVATIONS, INC. REQUIRES THAT ALL FOUR (4) OF THE LINES IN THE "APPROVAL BY SI ACCOUNT" BOX BE SIGNED AND DATED. ALSO, ALL REMAINING PAGES REQUIRE CUSTOMER INITIALS AND DATE. IF YOUR COMPANY'S POLICY IS TO STAMP DRAWINGS AS APPROVED, OR TO SIGN AND DATE ONLY ONE (1) PAGE OF A SET OF DRAWINGS, SOLAR INNOVATIONS, INC. WILL CONSIDER ALL PAGES FULLY REVIEWED AND APPROVED. THIS INCLUDES, BUT IS NOT LIMITED TO ALL DIMENSIONS, COLORS, GLASS MAKE-UPS, SYSTEM DESIGN AND DESIGNATIONS, ACCESSORY LAYOUTS, AND DESIGN PARAMETERS.

5.) ALL WOOD PRODUCTS MUST BE SEALED COMPLETELY AND THOROUGHLY PRIOR TO EXPOSURE TO ENVIRONMENTAL ELEMENTS, INCLUDING BUT NOT LIMITED TO TEMPERATURE AND HUMIDITY. SEALER MUST BE EXTERIOR GRADE AND PROFESSIONALLY SEALED ESPECIALLY ON SEAMS AND EDGES. FAILURE TO DO SO COULD RESULT IN STAINS ON WOOD, WARPING OF THE WOOD, OR DELIMITATION OF WOOD VENEERS. FAILURE TO COMPLY WILL RESULT IN VOIDING OF PRODUCT WARRANTY. ALSO, ANY REQUIRED REWORK OR REPLACEMENT OF PARTS OF PRODUCTS THAT ARE DEFECTIVE AS A RESULT OF NOT FOLLOWING THE ABOVE MENTIONED REQUIREMENTS WILL BE AT THE CUSTOMER'S EXPENSE.

6.) UNLESS SPECIFICALLY NOTED ON THE COVER PAGE OF THESE DRAWINGS, THE STRUCTURE WILL NOT BE PRE-ASSEMBLED OR PRE-GLAZED. THE STRUCTURE WILL BE SHIPPED IN INDIVIDUAL FABRICATED PARTS THAT ARE TO BE FINAL ASSEMBLED IN THE FIELD. REGARDLESS OF INDIVIDUAL CUSTOMER REQUESTS, SOLAR INNOVATIONS, INC RESERVES THE RIGHT TO SHIP UNITS KD (KNOCKED-DOWN) BASED ON SHIPPING METHODS AND LOGISTICS. IF FEASIBLE, AND FOR AN EXTRA FEE, SOLAR INNOVATIONS, INC WILL PRE-ASSEMBLE AND PRE-GLAZE JOBS AT THEIR DISCRETION BASED ON SIZE AND SHIPPING LIMITATIONS.

7.) SOLAR INNOVATIONS RECOMMENDS THE USE OF LAMINATED GLASS IN ALL OVER HEAD APPLICATIONS. IT IS TYPICALLY REQUIRED BY CODE. THE CUSTOMER ASSUMES ALL LIABILITY IF CHOOSING NOT TO USE IT.

8.) SOLAR INNOVATIONS PRICE INCLUDES THE USE OF A 1/2" MAXIMUM BEAD OF SILICONE ON THE OUTSIDE PERIMETER ONLY. ALL OTHER FINISH IS TO BE PROVIDED, OR WILL REQUIRE A CONTINUOUS SHIM "BY OTHER".

SECTION MARKER	DETAIL MARKER	BUBBLE MARKER
		

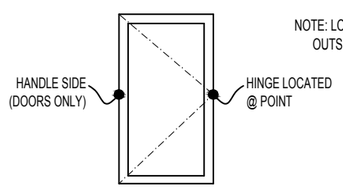
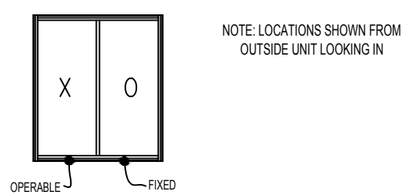
HINGE IDENTIFICATION KEY	SLIDING UNIT DESIGNATIONS
	

TABLE OF CONTENTS

SHEET # - 1 & 2	COVER SHEETS
SHEET # - 3	ENGINEERING & CODE COMPLIANCE
SHEET # - 4	STANDARD FLASHING SPLICE INFORMATION
SHEET # - 5	STANDARD GLAZING INFORMATION
SHEET # - 6	ISOMETRIC VIEW
SHEET # - 7	CURB PLAN
SHEET # - 8	SILL PLAN
SHEET # - 9	ROOF PLAN
SHEET # - 10 - 12	ELEVATIONS
SHEET # - 13 & 14	SECTIONS
SHEET # - 15 - 38	DETAILS
SHEET # - 39 - 42	FLASHING SPLICE ISOMETRIC
SHEET # - 43	FGW ELEVATION
SHEET # - 44 - 51	FGW DETAILS

JOB SPECIFIC INFORMATION	
SILL HEIGHT FROM EXTERIOR GRADE	$116\frac{5}{16}$"
BASEWALL HEIGHT FROM INTERIOR FINISH FLOOR	$116\frac{5}{16}$"
EAVE HEIGHT FROM FINISH FLOOR	$120\frac{7}{8}$"
RIDGE HEIGHT FROM FINISH FLOOR	$147\frac{3}{16}$"
LARGEST PIECE OF GLASS-SIZE AND WEIGHT	$40\frac{17}{32}$" x $113\frac{15}{32}$" ≈ 210 LBS
LONGEST FRAMING MEMBER & LENGTH RAFTER, SILL SECTION, ETC.	11'-$9\frac{15}{16}$" - FGW SILL
MAX CRATE DIMENSIONS AND REASON (LIFT GATE, ELEVATOR, CUSTOMER REQUEST, ETC.	

SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7–25–17	TJN

DRAWN BY: TYLER NEWHOUSE

PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

DRAWING SCALE: NOT TO SCALE

JOB NO.: 17-04-173

QUOTE NO.: 98606

PAGE No.: 2 OF 51

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

ENGINEERING AND CODE COMPLIANCE

SOLAR INNOVATIONS STANDARD DESIGN SPECIFICATIONS

UNLESS OTHERWISE STATED BELOW IN THE ENGINEERING DESIGN CRITERIA, SOLAR INNOVATIONS, INC. DESIGNS IT'S STRUCTURES AS PER THE APPROPRIATE SECTIONS OF THE IBC 2009 BUILDING CODE. LOADS APPLIED INCLUDE A COMBINATION OF 30 PSF ROOF LIVE OR SNOW LOAD AND LATERAL LOADS BASED ON APPLYING 90 MPH WINDS USING A WIND EXPOSURE OF "B" AT GROUND LEVEL. ANY DEVIATION FROM THESE LOAD SPECIFICATIONS MUST BE PROVIDED TO SOLAR INNOVATIONS, INC. IN WRITING BY THE CUSTOMER AND MAY AFFECT THE PRICE OF THE STRUCTURE, INCLUDING, BUT NOT LIMITED TO CHANGES IN MATERIAL, LABOR, AND ENGINEERING COSTS.

JOB LOCATION:	P.E. STAMP PROVIDED BY SOLAR INNOVATIONS, INC:
COLLEGE PARK, MD, USA 20740	***NO***

ENGINEERING DESIGN CRITERIA

VIEWED CODE: 2015 IBC

SNOW LOAD: 25 PSF

WIND VELOCITY: 115 MPH (VULT), EXP. B

IMPORTANCE FACTOR: II

IF ENGINEERING FORM IS NOT PROVIDED PLEASE REFER TO SOLAR INNOVATIONS STANDARD DESIGN SPECIFICATIONS NOTED ABOVE.

INSTALLATION LIMITATIONS

INSTALLATION OF SYSTEM INCLUDES ONLY THE ERECTION OF THE FRAME, GLASS, AND ACCESSORIES AS PROVIDED BY SOLAR INNOVATIONS, INC. ABSOLUTELY NO PLUMBING, ELECTRICAL, FOUNDATION, OR SUBSTRATE WORK IS INCLUDED WITH ANY SOLAR INNOVATIONS JOB UNLESS OTHERWISE SPECIFIED AND REFLECTED ON THE SIGNED CONTRACT.

INSTALLATION MANUALS ARE SUPPLIED AS A GUIDE ONLY. VARIATIONS OF DESIGN AND APPLICATIONS OCCUR AND ARE ADDRESSED ON A JOB-BY-JOB BASIS. WHEN VARIATIONS OCCUR, SHOP DRAWINGS SHALL SUPERCEDE INSTALLATION MANUALS.

FOR FURTHER ASSISTANCE, PLEASE CONTACT YOUR PROJECT MANAGER OR SOLAR INNOVATIONS. FAILURE TO FOLLOW SHOP DRAWINGS AND INSTALLATION INSTRUCTIONS AS DESCRIBED IN THE MANUAL AND/OR FAILURE TO CONTACT SOLAR INNOVATIONS WITH QUESTIONS OR UNCERTAINTIES SHALL VOID WARRANTY OF PRODUCT.

CODE COMPLIANCE

BUYER IS SOLELY RESPONSIBLE FOR COMPLIANCE WITH ANY AND ALL BUILDING CODES. BUYER IS REQUIRED TO OBTAIN APPROVAL/ACCEPTANCE FROM ANY STATE, LOCAL, OR OTHER CODE OFFICIALS WITH REGARD TO PRODUCT MANUFACTURING, SPECIFICATION, PERFORMANCE, AND SAFETY REQUIREMENTS PRIOR TO QUOTE ACCEPTANCE. SI DOES NOT ACCEPT LIABILITY FOR PRODUCT NON-CONFORMACE TO WARRANTIES ASSOCIATED WITH OTHER STRUCTURES/PROPERTY OF BUYER.

FALL PROTECTION REQUIREMENTS

THE INTERNATIONAL BUILDING CODE STATES THAT WINDOWS WITH OPENINGS MORE THAN 72" ABOVE FINISHED GRADE ARE TO HAVE A MINIMUM SILL HEIGHT OF 24" ABOVE THE INTERIOR FINISHED FLOOR. IN CASES WHERE THE SILL HEIGHT IS LESS THAN 24", THE WINDOW SHALL NOT HAVE AN OPENING GREATER THAN WHAT WOULD ALLOW FOR A 4" DIAMETER SPHERE TO PASS THROUGH. WHERE THE WINDOW OPENING IS GREATER THAN THE PRESCRIBED 4" LIMITATION, AN APPROVED WINDOW GUARD MUST BE INSTALLED. SOLAR INNOVATIONS, INC. IS NOT RESPONSIBLE FOR CODE COMPLIANCE. IT IS THE RESPONSIBILITY OF THE CUSTOMER TO VERIFY CODE REQUIREMENTS WITH PROJECT DESIGN PROFESSIONALS AND ENSURE COMPLIANCE WITH ALL APPLICABLE CODES. IF A WINDOW OR DOOR LIMITER IS REQUIRED TO MEET THE 4" REQUIREMENTS, ADDITIONAL COSTS WILL APPLY.

KEY FOR TESTING ACRONYMS

AWSIC - AIR, WATER, STRUCTURAL, IMPACT & CYCLING TESTING
AWS - AIR, WATER & STRUCTURAL TESTING
OITC - OURDOOR/INDOOR TRANSMITTANCE CLASS
STC - SOUND TRANSMITTANCE CLASS
NFRC - NATIONAL FENESTRATION RATING COUNCIL (THERMAL TESTING)
HVHZ - HIGH VELOCITY HURRICANE ZONE

PRESSURE TREATED WOOD NOTE

ALUMINUM SHOULD NOT BE USED IN DIRECT CONTACT WITH ACQ (ALKALINE COPPER QUATERNARY) PRESSURE-TREATED WOOD.
SPACER MATERIALS OR OTHER PHYSICAL BARRIERS ARE REQUIRED TO PREVENT DIRECT CONTACT OF ACQ PRESSURE-TREATED WOOD AND ALUMINUM PRODUCTS. FASTENERS FOR PRESSURE-PRESERVATIVE TREATED WOOD SHALL BE OF HOT-DIP ZINC-COATED GALVANIZED STEEL, STAINLESS STEEL, SILICON BRONZE OR COPPER. THE COATING WEIGHTS FOR ZINC-COATED FASTENERS SHALL BE IN ACCORDANCE WITH ASTM A 153. EXCEPTIONS: ONE-HALF INCH (12.7MM) DIAMETER OR LARGER STEEL BOLTS. FASTENERS OTHER THAN NAILS AND TIMBER RIVETS SHALL BE PERMITTED TO BE OF MECHANICALLY DEPOSITED ZINC-COATED STEEL WITH COATING WEIGHTS IN ACCORDANCE WITH ASTM B 695, CLASS 55, MINIMUM.

WOOD

FOR THIS PROJECT, SOLAR INNOVATIONS, INC. ASSUMES THAT THE MANUFACTURED PRODUCT PROVIDED BY SOLAR INNOVATIONS, INC. WILL BE ATTACHING TO A STANDARD 2X WOOD PACKOUT WITH PROPER EMBEDMENT AND EDGE DISTANCES. THIS STANDARD PACKOUT IS DEFINED AS A 2X WITH A MINIMUM OF (2) ¼" LAG FASTENERS PERPENDICULAR TO THE GRAIN ABLE TO WITHSTAND A MINIMUM BEARING STRENGTH OF 220 LBS AT ANY ONE POINT. IT IS THE ENGINEER OF THE CUSTOMER'S RESPONSIBILITY TO ENSURE THAT THE SUBSTRATE USED MEETS AT LEAST THE MINIMUM STANDARD. TO ATTACH TO THIS PACKOUT, SOLAR INNOVATIONS INTENDS TO USE A STANDARD QUALIFIED FASTENER FOR ATTACHMENT PURPOSES. ANY NON-STANDARD FASTENER NEEDED TO ATTACH TO WOOD WILL REQUIRE A CHANGE ORDER FOR ADDITIONAL COSTS.

- ALL LUMBER ON OR BELOW GRADE, WITHIN 18" OF FINISHED GRADE SHALL, OR DIRECTLY BEARING ON CONCRETE OR MASONRY SHALL BE ACQ PRESSURE TREATED SOUTHERN YELLOW PINE #2 GRADE (G=0.55
- ALL LUMBER ABOVE GRADE SHALL BE SOUTHERN YELLOW PINE #2 GRADE (G=0.55)
- ALL FRAMING LUMBER SHALL BE HEM-FIR #2 GRADE (G=0.43)

GLU-LAM (LVL) BEAM WOOD

N/A

- STRUCTURAL PROPERTIES AND ALLOWABLE STRESS
  E:1,600,000 PSI MIN.
  POISSON: .347
  DENSITY: 40 PCF
  Fb: 1800 PSI MIN.
  Fc: 1900 PSI MIN. (PARALLEL, 650 PSI MIN. (PERPENDICULAR)
  Ft: 1150 PSI MIN.
  Fvx: 195 PSI MIN.

CONCRETE

N/A

FOR THIS PROJECT, SOLAR INNOVATIONS, INC. ASSUMES THAT THE MANUFACTURED PRODUCT PROVIDED BY SOLAR INNOVATIONS, INC. WILL BE ATTACHING TO SOLID CONCRETE WITH PROPER EMBEDMENT AND EDGE DISTANCES. THIS STANDARD PACKOUT IS DEFINED AS A 2,000PSI CONCRETE ABLE TO WITHSTAND MINIMUM BEARING STRENGTH OF 750 LBS WITH A 1" EMBEDMENT FOR A MINIMUM OF (2) ¼" TAPCON FASTENERS. IT IS THE ENGINEER OF THE CUSTOMER'S RESPONSIBILITY TO ENSURE THAT THE SUBSTRATE USED IS AT LEAST THIS MINIMUM STANDARD. TO ATTACH TO THIS SUBSTRATE, SOLAR INNOVATIONS INTENDS TO USE A STANDARD QUALIFIED FASTENER FOR ATTACHMENT PURPOSES. ANY NON-STANDARD FASTENER NEEDED TO ATTACH TO CONCRETE WILL REQUIRE A CHANGE ORDER FOR ADDITIONAL COSTS.

- ALL CONCRETE GRADE BEAMS AND FOOTING SHALL BE 2500 PSI MIN.
- ALL SLABS ON GRADE SHALL HAVE 4" NOMINAL THICKNESS WITH FIBERMESH ON 6 MIL POLYETHYLENE VAPOR BARRIER
- ALL REINFORCING SHALL BE GRADE 50 (50 KSI MIN.) DEFORMED BARS. #3 MAY BE GRADE 40

MASONRY

N/A

- ALL MASONRY SHALL COMPLY WITH I.B.C. SECTION 2103
- CONCRETE MASONRY UNITS (CMU) SHALL BE STANDARD HOLLOW UNITS AND SHALL BE 1500 PSI MIN. BASED ON TYPE M OR S MORTAR
- ALL MORTAR SHALL BE OF TYPE M OR S
- ALL GROUT SHALL BE 1800 PSI MIN. AND HAVE MAXIMUM COARSE AGGREGATE SIZE OF ⅜"

STRUCTURAL STEEL

N/A

FOR THIS PROJECT, SOLAR INNOVATIONS, INC. ASSUMES THAT THE MANUFACTURED PRODUCT PROVIDED BY SOLAR INNOVATIONS, INC. WILL BE ATTACHING TO A MAXIMUM ⅛" TO ¼" THICK STEEL MEMBER WITH PROPER EMBEDMENT, CLEARANCE FOR COMPLETE FASTENER, A MINIMUM OF 3 THREADS, AND EDGE DISTANCES. THIS STEEL MEMBER IS TO WITHSTAND A MINIMUM BEARING STRENGTH OF 854 POUNDS OF FORCE FOR A MINIMUM OF (2) ¼" TEK-5 FASTENERS. IT IS THE ENGINEER OF THE CUSTOMER'S RESPONSIBILITY TO ENSURE THAT THE SUBSTRATE USED IS AT LEAST THIS MINIMUM. TO ATTACH TO THIS SUBSTRATE, SOLAR INNOVATIONS INTENDS TO USE A STANDARD QUALIFIED FASTENER FOR ATTACHMENT PURPOSES. ANY NON-STANDARD FASTENER NEEDED TO ATTACH TO STEEL WILL REQUIRE A CHANGE ORDER FOR ADDITIONAL COSTS. IF STEEL THICKNESS EXCEEDS ¼", ADDITIONAL COSTS FOR THE UNIT AND FABRICATION TIME TO PRE-DRILL HOLES WILL APPLY. ADDITIONAL COSTS WILL ALSO APPLY FOR SOLAR INNOVATIONS TO INSTALL UNIT INTO STEEL MEMBERS WITH A THICKNESS OF MORE THAN ¼".

- ALL STRUCTURAL STEEL CONFORMS TO ASTM A36 OR ASTM A572 GRADE 50 MIN. PRIMED, PAINTED, GALVANIZED OR OTHERWISE PROTECTED AGAINST CORROSION
- ALL STRUCTURAL STEEL TUBING SHALL BE ASTM A500, GRADE B, PIPES SHALL BE ASTM A53, GRADE B, PRIMED, PAINTED, GALVANIZED, OR OTHERWISE PROTECTED AGAINST CORROSION

ALUMINUM

- IN ALL INSTANCES WHERE ALUMINUM COMES INTO CONTACT WITH STEEL, OR PRESSURE TREATED LUMBER PROVIDE DIELECTRIC SEPARATION

SITE PREPARATION

- ALL FOUNDATION SYSTEMS MUST BE IN PLACE ON CLEAN, COMPACTED, TERMITE-TREATED (WHERE APPLICABLE) FILL/SOIL WITH VAPOR BARRIER
- STRUCTURAL FOOTERS ARE REQUIRED BY OTHERS FOR ALL APPLICATIONS UNLESS OTHERWISE NOTED. IT IS THE CUSTOMER'S RESPONSIBILITY TO VERIFY SUBSTRATES AND ALL APPLICABLE FOOTINGS MEET OR EXCEED THE STRUCTURAL LOADING IMPOSED BY THE SYSTEM INSTALLED AND COMPLIANCE WITH LOCAL BUILDING CODE.

RESPONSIBILITY

- ALL SITE WORK SHALL BE PERFORMED BY A LICENSED CONTRACTOR IN ACCORDANCE WITH APPLICABLE BUILDING CODES, LOCAL ORDINANCES, ETC
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND DETAILS, NOTIFYING ENGINEER OF ANY DISCREPANCIES BETWEEN DRAWINGS, FABRICATED ITEMS, OR ACTUAL FIELD CONDITIONS
- ALUMINUM ADDITIONS ARE NOT TO BE INSTALLED ON A MANUFACTURED HOME, TRAILER HOME, OR PREFAB HOME. IF THE EXISTING STRUCTURE IS ONE OF THESE, A SEPARATE SUPPORT SYSTEM MUST BE ENGINEERED SO THAT NO ADDITIONAL LOADING IS PLACED ON THE EXISTING STRUCTURE

FASTENERS

- ALL LAG BOLTS SHALL CONFORM TO STAINLESS STEEL TYPE 300 18-8 WITH STANDARD FLAT WASHER UNLESS MANUFACTURER GALVANIZED BOLTS SPECIFIES FOR USE WITH ACQ PRESSURE TREATED WOOD
- ALL BOLTS SHALL BE ASTM A325, PLATED WITH STANDARD FLAT WASHERS AND NUTS
- ALL CONCRETE SCREWS SHALL BE ¼" X 2¼" MIN., SIMPSON, HILYI, RAWL, TAPCON, REDHEAD, DYNABOLT, OR APPROVED EQUAL
- ALL METAL TIES AND ASSOCIATED ACCESSORIES SHALL BE HOT DIPPED GALVANIZED
- ALL LAG BOLTS SHALL HAVE A MINIMUM EMBEDMENT OF 8X BOLT DIAMETER INTO STRUCTURAL FRAMING (G=.43 MIN.)
- LAG BOLTS AND SCREWS INTO WOOD FRAMING SHALL BE PROVIDED WITH PILOT HOLES HAVING A DIAMETER NOT GREATER THAN 70% OF THE THREAD DIAMETER OF THE BOLT OR SCREW. ALL LAG BOLTS AND SCREWS SHALL BE INSERTED IN PILOT HOLES BY TURNING AND UNDER NO CIRCUMSTANCES BY DRIVING WITH A HAMMER
- ALL FASTENERS CONNECTING ALUMINUM COMPONENTS OR PRESSURE TREATED LUMBER ARE STAINLESS STEEL TYPE 300 18-8 UNLESS MANUFACTURER GALVANIZED BOLTS SPECIFIES FOR USE WITH ACQ PRESSURE TREATED WOOD, OR OTHERWISE NOTED
- ALL FASTENERS SHALL COMPLY WITH ASTM A153
- ALL CONNECTORS SHALL COMPLY WITH ASTM A653 CLASS G-185
- SEE INSTALL MANUAL FOR FASTENER TORQUE CHART.

© 2017 Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7–25–17	TJN

DRAWN BY: TYLER NEWHOUSE
PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

DRAWING SCALE: NOT TO SCALE

JOB NO.: 17-04-173

QUOTE NO.: 98606

PAGE No.: 3 OF 51

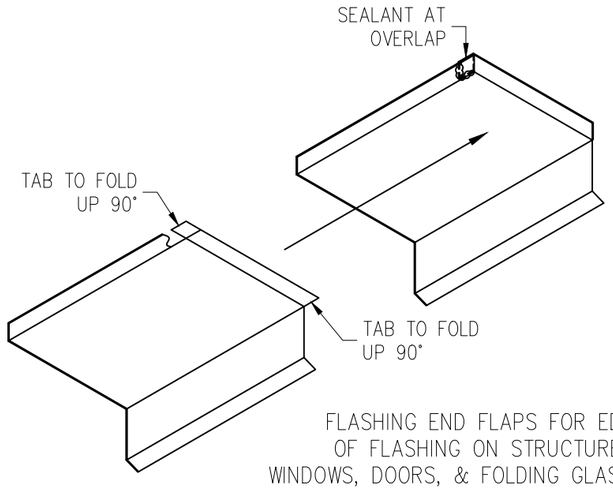
FLASHING SPLICE INFORMATION SHEET

NOT JOB SPECIFIC!

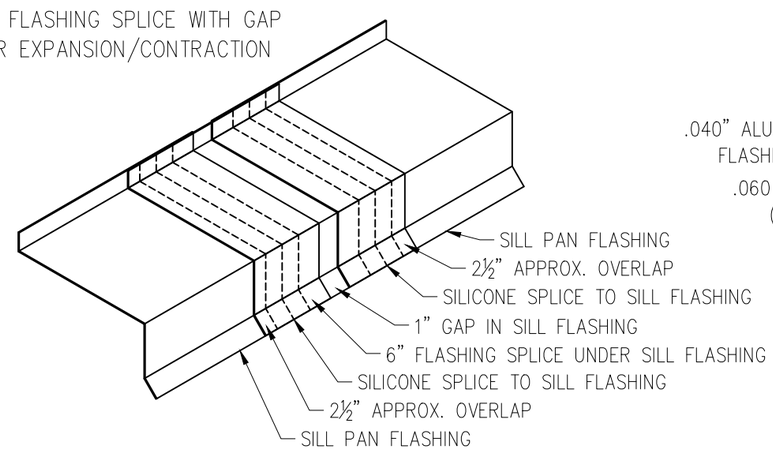
SEE FLASHING ISOMETRIC PAGES AT END OF DRAWINGS

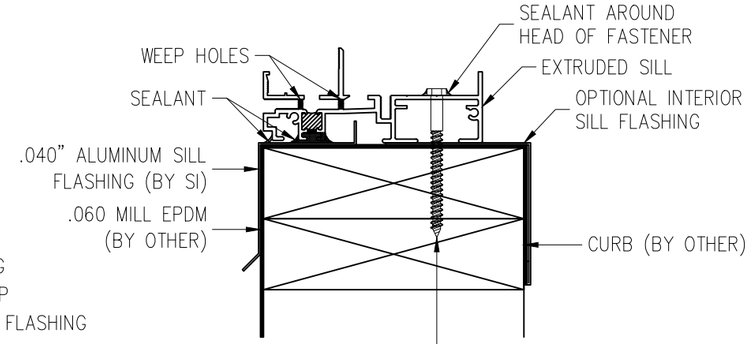
2a) Flashing Installation: Cut flashing and fold under with sealant joining the overlapping area. Make sure uplegs are sealed together. Overlaps of flashing should be a minimum of 6" thoroughly sealed together.

2b) Miter sill flashing and join with splice under entire corner. Make sure that uplegs are sealed together. Be sure that continuous sealant from front to back is utilized in both methods.



FLASHING END FLAPS FOR EDGE OF FLASHING ON STRUCTURES, WINDOWS, DOORS, & FOLDING GLASS WALLS

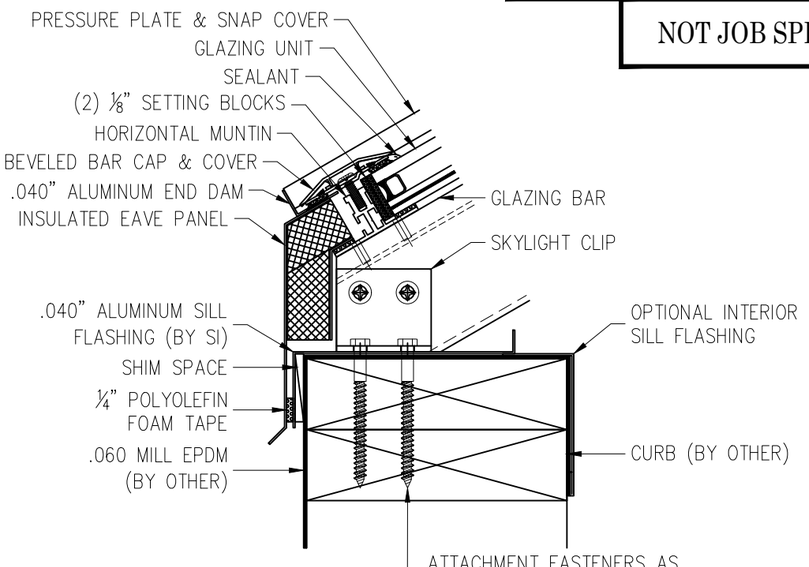




TYPICAL SILL FLASHING

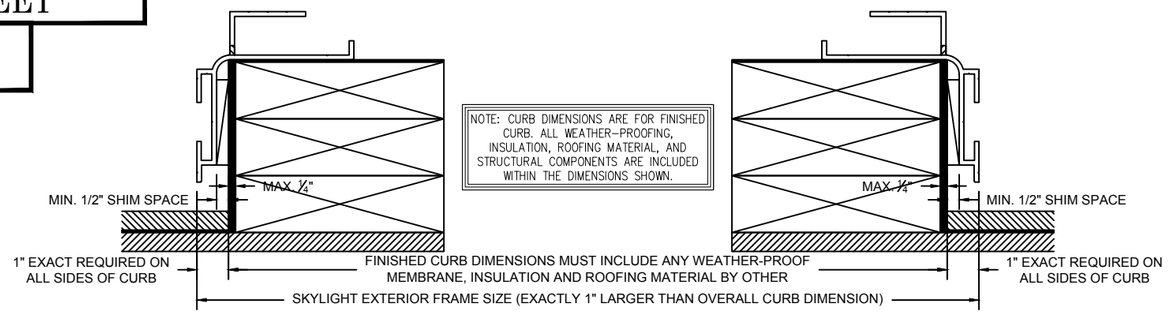
SKYLIGHT CURB/SILL LAYOUT INFORMATION SHEET

NOT JOB SPECIFIC!

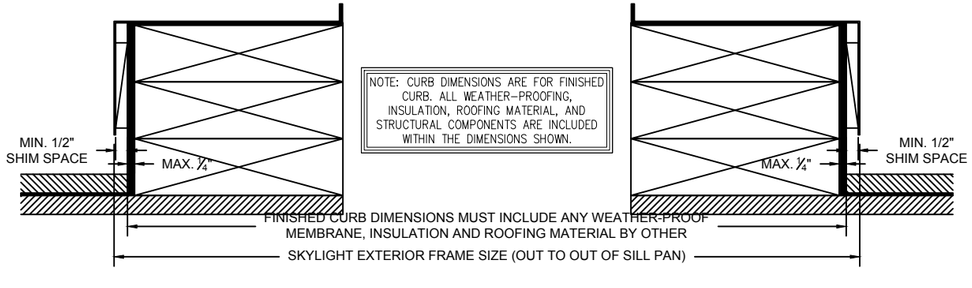


TYPICAL SKYLIGHT PAN FLASHING

STANDARD WELDED CURB DIMENSIONS



STANDARD PAN FLASHING SILL DIMENSIONS



SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7-25-17	TJN

DRAWN BY: TYLER NEWHOUSE

PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

DRAWING SCALE: NOT TO SCALE

JOB NO.: 17-04-173

QUOTE NO.: 98606

PAGE No.: 4 OF 51

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

GLAZING INFORMATION SHEET

NOT JOB SPECIFIC!

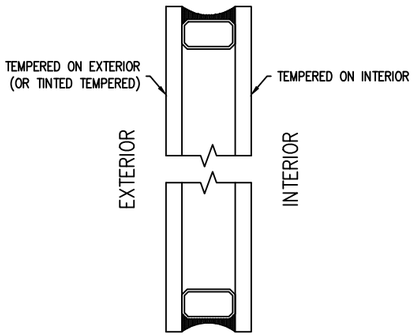
IMPORTANT NOTES:

- –LAMINATED LAYER IS TO BE ON THE INTERIOR OF THE UNIT.
- –TEMPERED LAYER IS TO BE ON EXTERIOR OF UNIT.
- –LOW–E TEMPERED LAYER TYPICALLY ON THE EXTERIOR IN SOUTHERN LOCATIONS.
  - –TO KEEP HEAT OUT OF ENCLOSURE
- –LOW–E TEMPERED LAYER TYPICALLY ON THE INTERIOR IN NORTHERN LOCATIONS.
  - –TO GAIN HEAT INSIDE OF ENCLOSURE
- –TINTED LAYER IS TYPICALLY ON THE EXTERIOR OF THE UNIT.

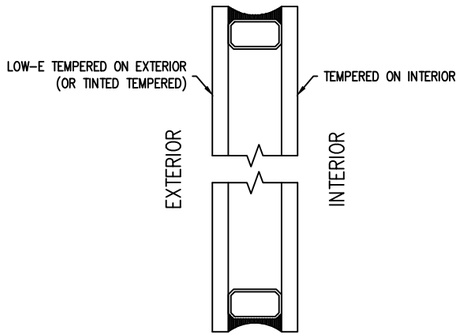
TYPICAL CONFIGURATIONS
CONSULT THE DETAILS, COVER PAGE OF DRAWINGS,
AND OR PM TO CONFIRM PROJECT SPECIFIC GLASS ORIENTATION

VERTICAL GLAZING

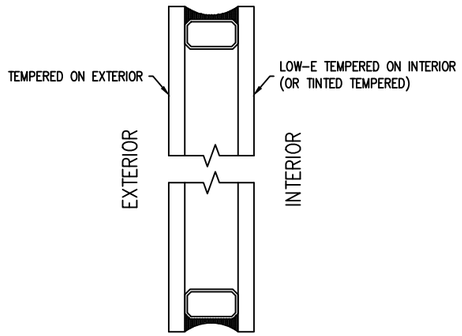
TEMPERED OVER TEMPERED (VERTICAL)



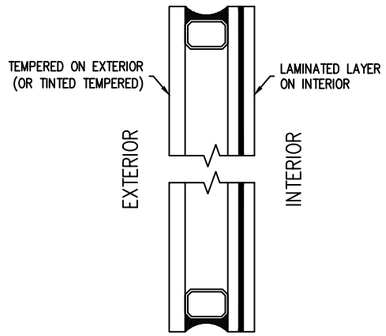
LOW–E TEMPERED OVER TEMPERED (VERTICAL)
FOR UNITS LOCATED IN SOUTH



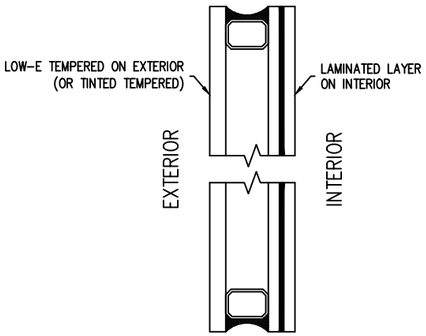
LOW–E TEMPERED OVER TEMPERED (VERTICAL)
FOR UNITS LOCATED IN NORTH



TEMPERED OVER LAMINATED (VERTICAL)

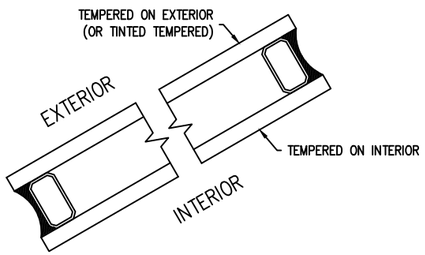


LOW–E TEMPERED OVER LAMINATED (VERTICAL)

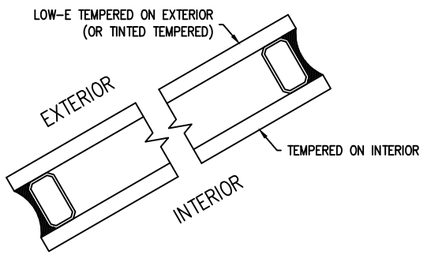


SLOPED GLAZING

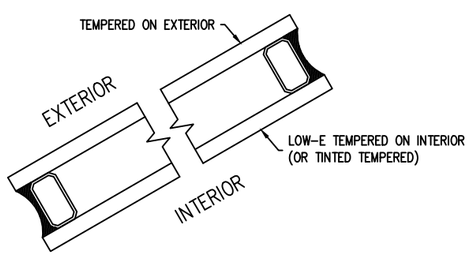
TEMPERED OVER TEMPERED (SLOPED)



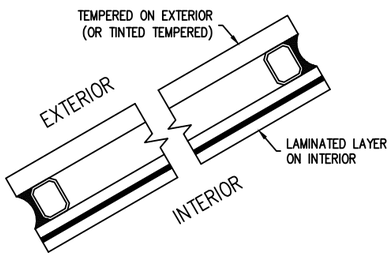
LOW–E TEMPERED OVER TEMPERED (SLOPED)
FOR UNITS LOCATED IN SOUTH



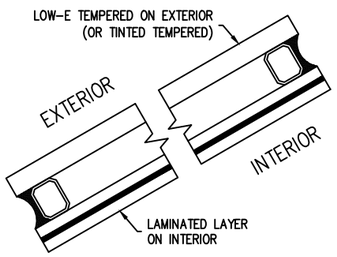
LOW–E TEMPERED OVER TEMPERED (SLOPED)
FOR UNITS LOCATED IN NORTH



TEMPERED OVER LAMINATED (SLOPED)



TEMPERED OVER LAMINATED (SLOPED)



© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7–25–17	TJN

DRAWN BY: TYLER NEWHOUSE

PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

DRAWING SCALE: NOT TO SCALE

JOB NO.: 17-04-173

QUOTE NO.: 98606

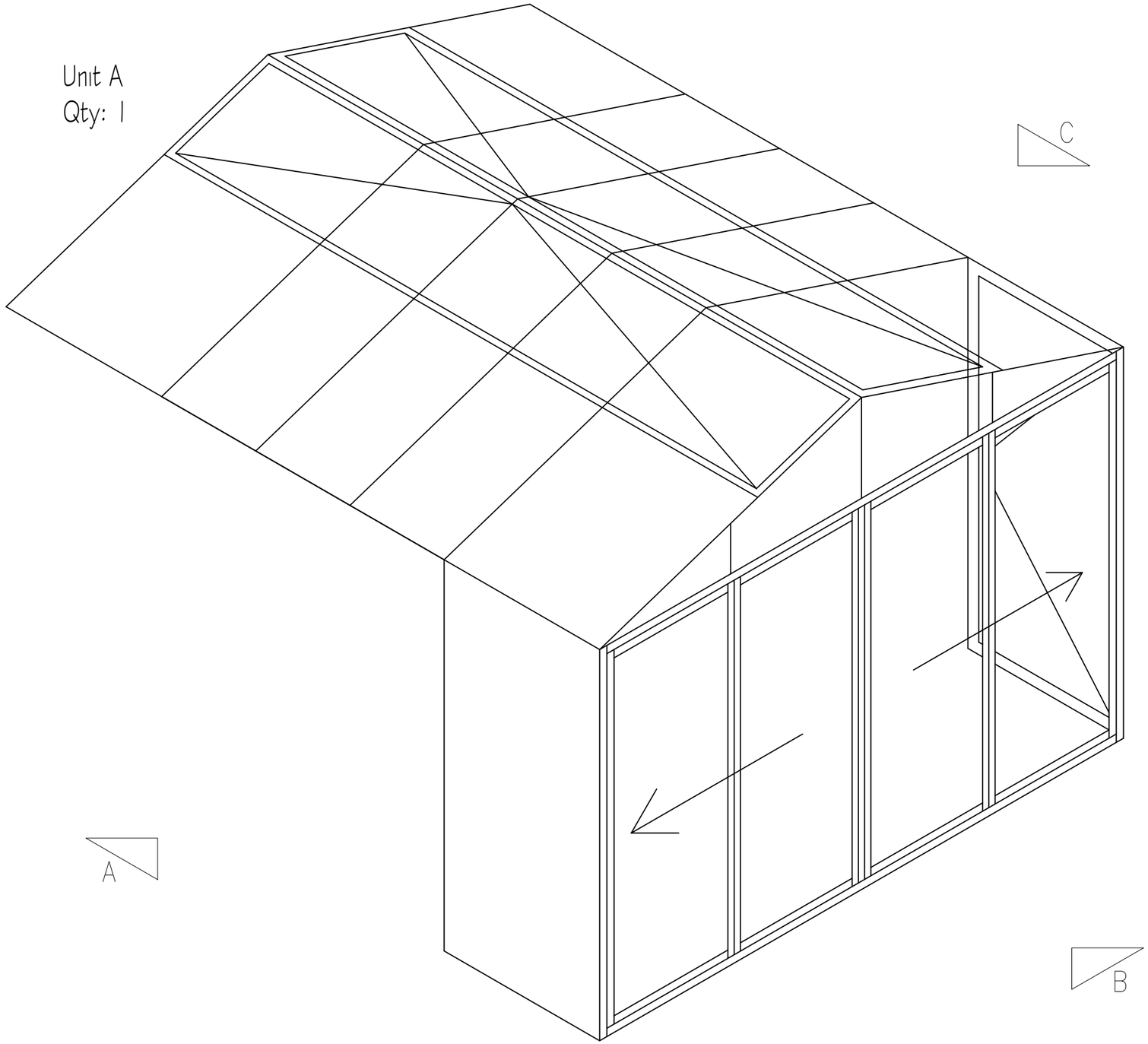
PAGE No.: 5 OF 51

ISOMETRIC

FOR PERSPECTIVE ONLY

NOTE: ISOMETRIC IS FOR BASIC VISUAL REPRESENTATION ONLY. ACTUAL SIZE AND LAYOUT OF FINISHED PRODUCT IS DETAILED IN THE FOLLOWING PAGES.

Unit A
Qty: 1



SOLAR INNOVATIONS®
GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7–25–17	TJN

DRAWN BY: TYLER NEWHOUSE

PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

DRAWING SCALE: NOT TO SCALE

JOB NO.: 17-04-173

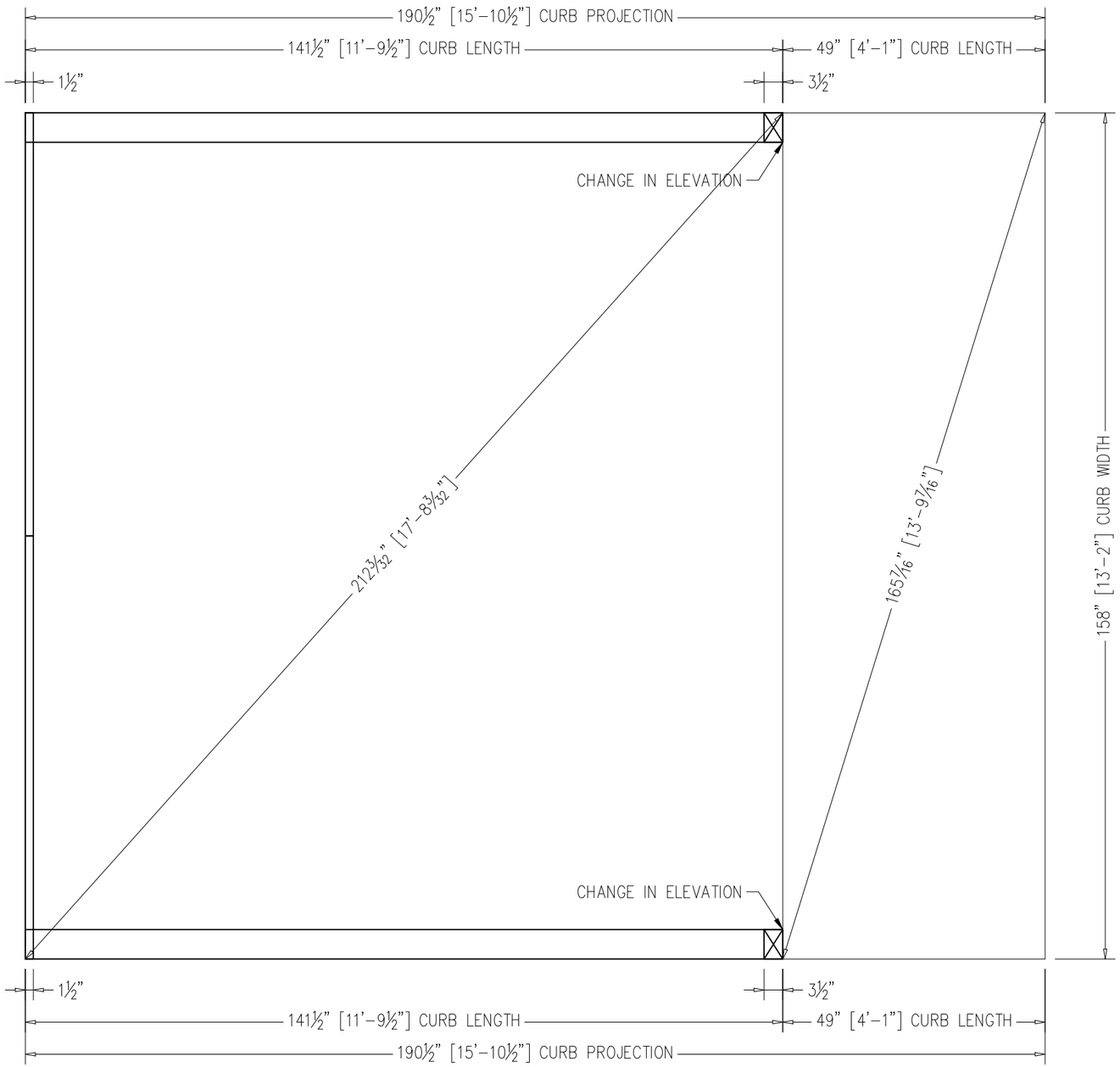
QUOTE NO.: 98606

PAGE No.: 6 OF 51

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

CURB PLAN

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



SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7–25–17	TJN

DRAWN BY: TYLER NEWHOUSE

PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

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

JOB NO.: 17-04-173

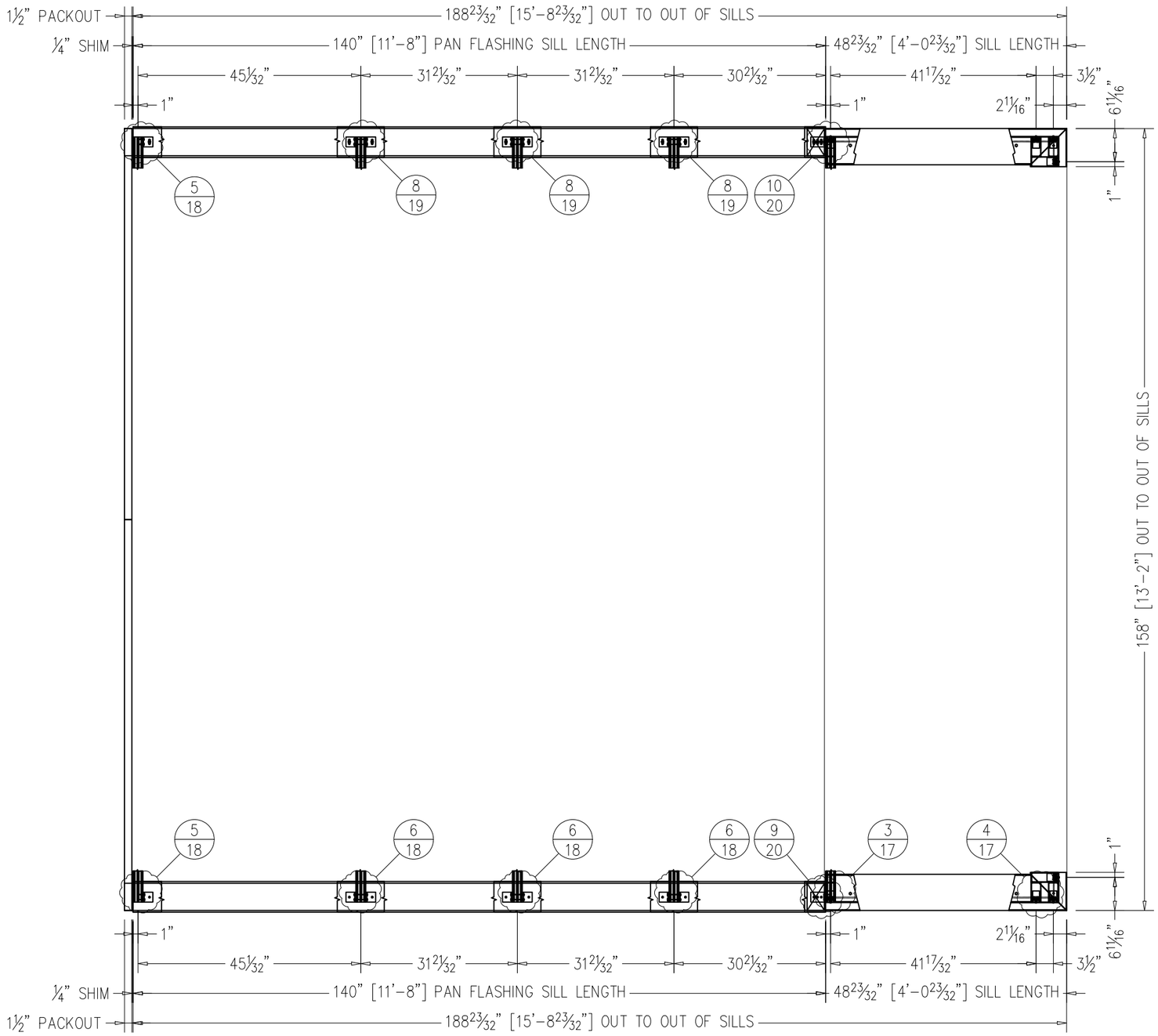
QUOTE NO.: 98606

PAGE No.: 7 OF 51

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

SILL PLAN

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



SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7-25-17	TJN

DRAWN BY: TYLER NEWHOUSE

PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

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

JOB NO.: 17-04-173

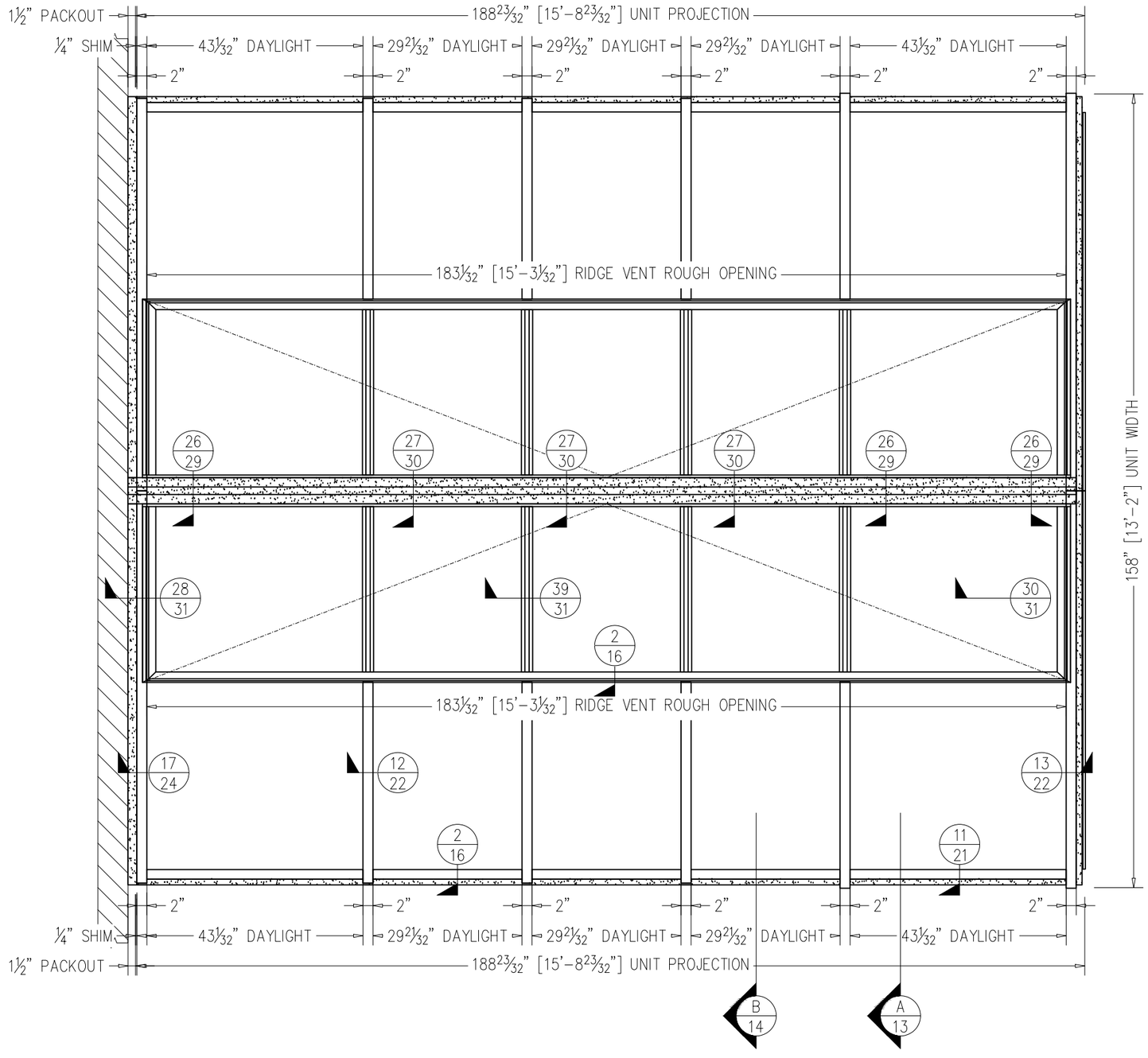
QUOTE NO.: 98606

PAGE No.: 8 OF 51

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

ROOF PLAN

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



SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7-25-17	TJN

DRAWN BY: TYLER NEWHOUSE

PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

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

JOB NO.: 17-04-173

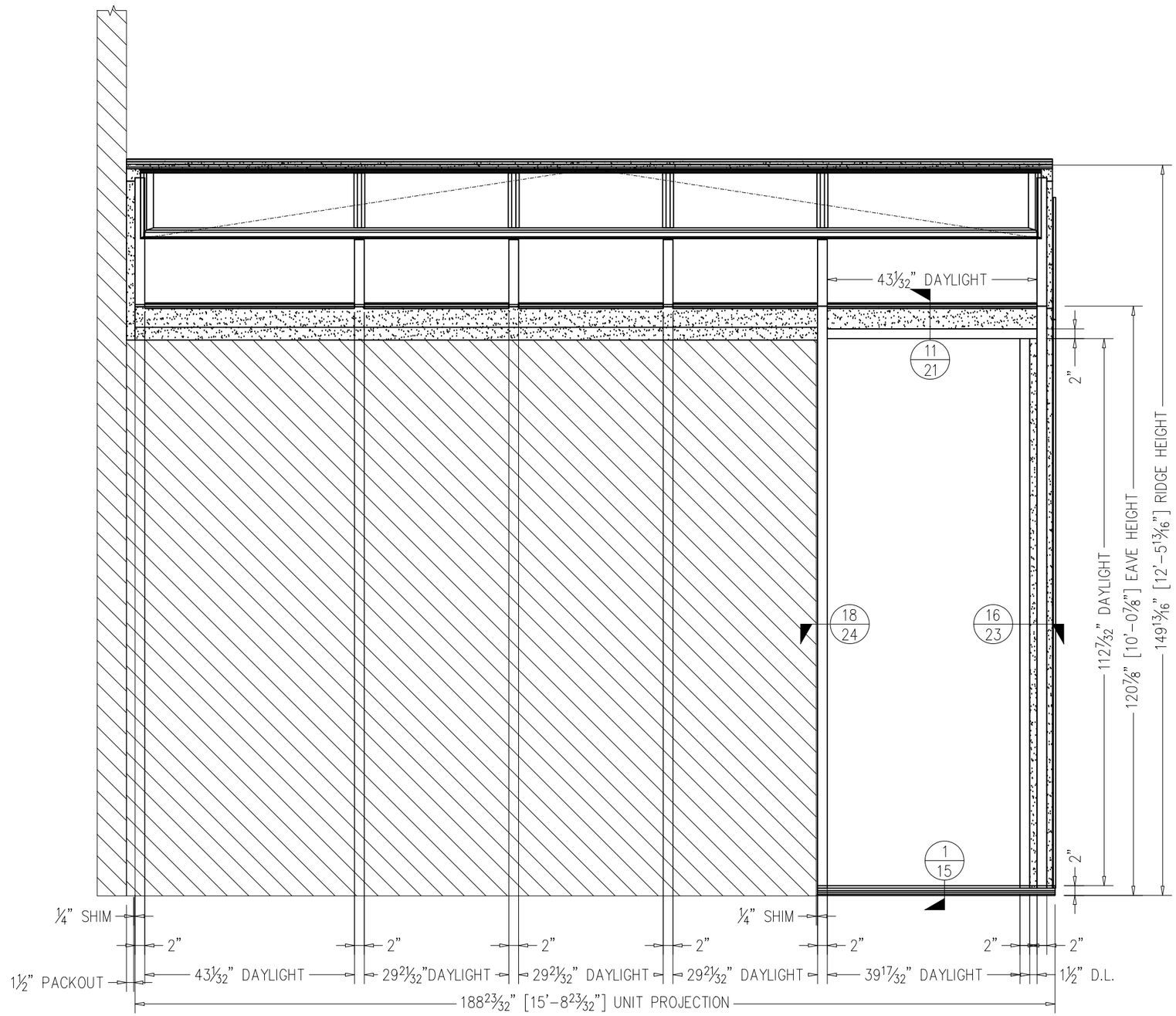
QUOTE NO.: 98606

PAGE No.: 9 OF 51

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

ELEVATION A

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



SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7-25-17	TJN

DRAWN BY: TYLER NEWHOUSE

PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

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

JOB NO.: 17-04-173

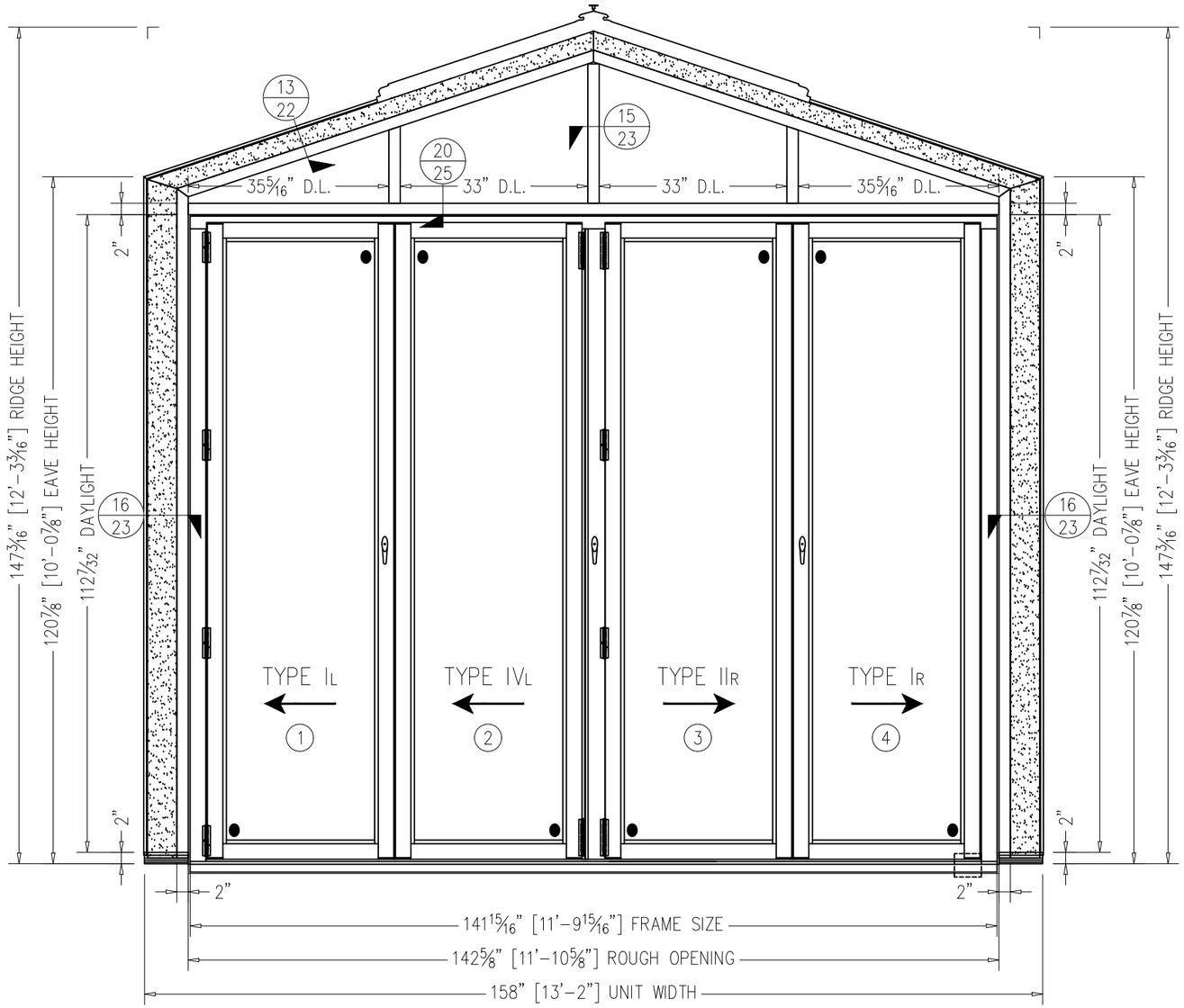
QUOTE NO.: 98606

PAGE No.: 10 OF 51

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

ELEVATION B

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



© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7-25-17	TJN

DRAWN BY: TYLER NEWHOUSE

PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

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

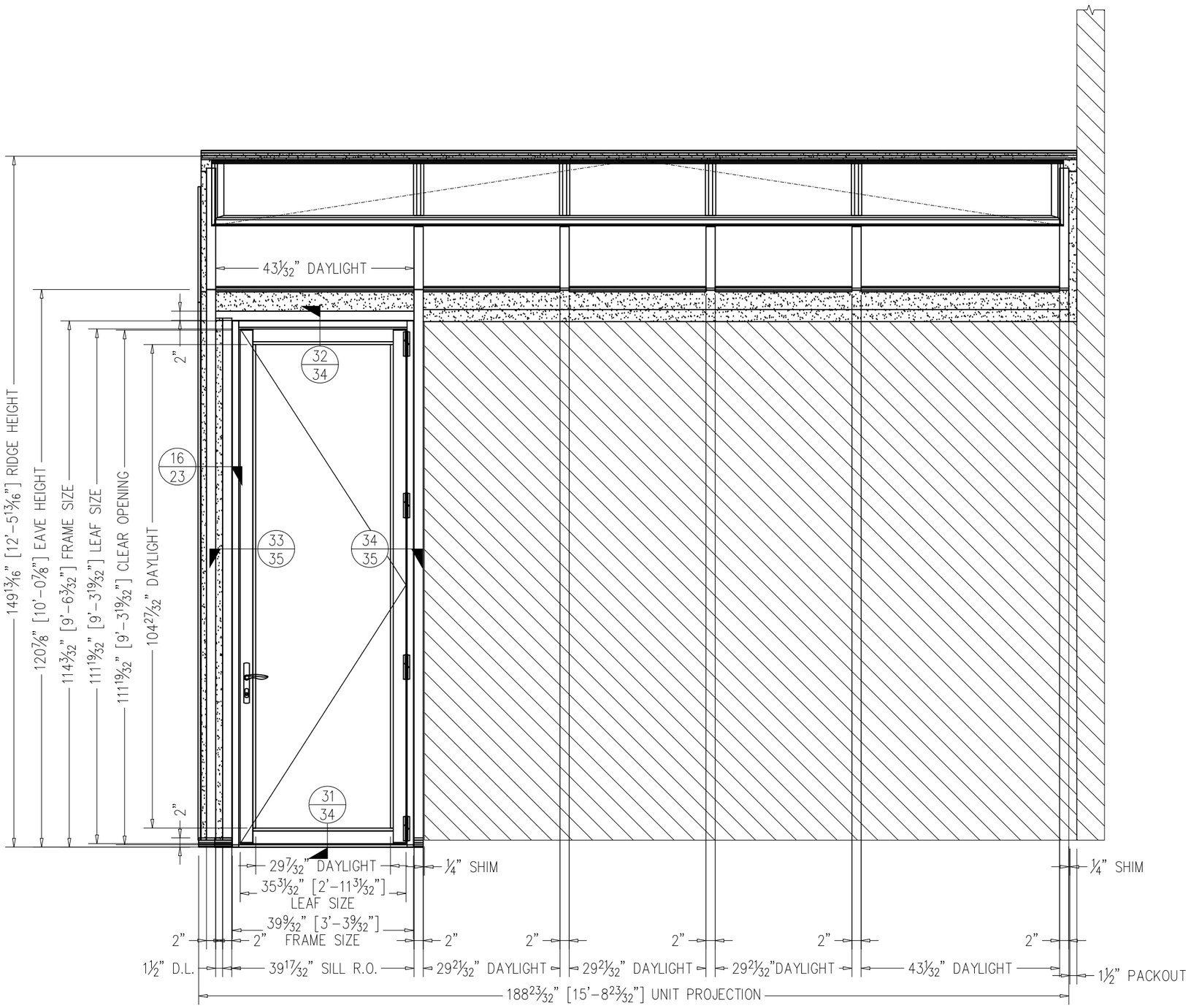
JOB NO.: 17-04-173

QUOTE NO.: 98606

PAGE No.: 11 OF 51

ELEVATION C

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



SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7-25-17	TJN

DRAWN BY: TYLER NEWHOUSE

PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

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

JOB NO.: 17-04-173

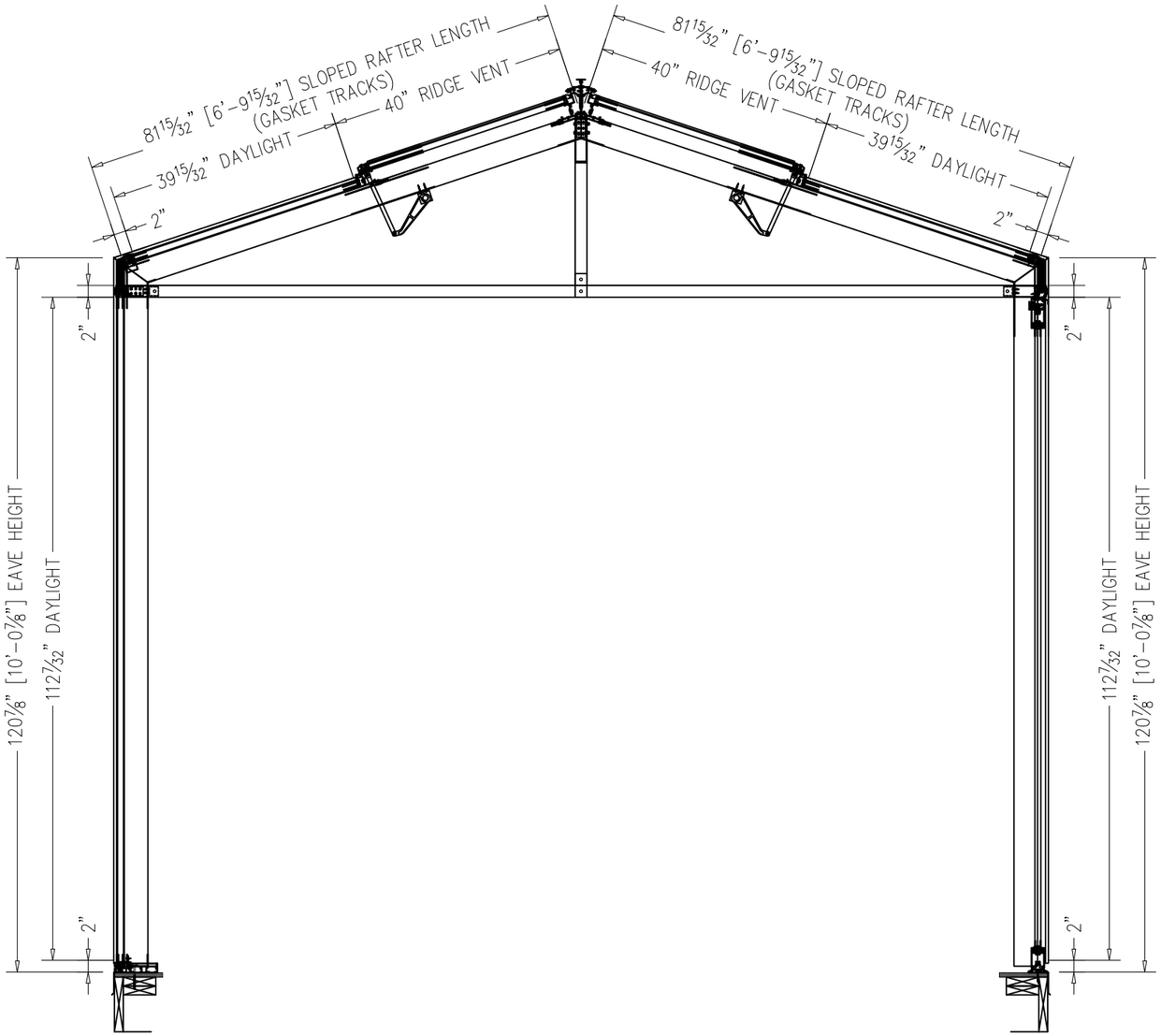
QUOTE NO.: 98606

PAGE No.: 12 OF 51

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

SECTION A

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



SOLAR INNOVATIONS®
GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7-25-17	TJN

DRAWN BY:
TYLER NEWHOUSE

PROJECT MANAGER:
WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

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

JOB NO.:
17-04-173

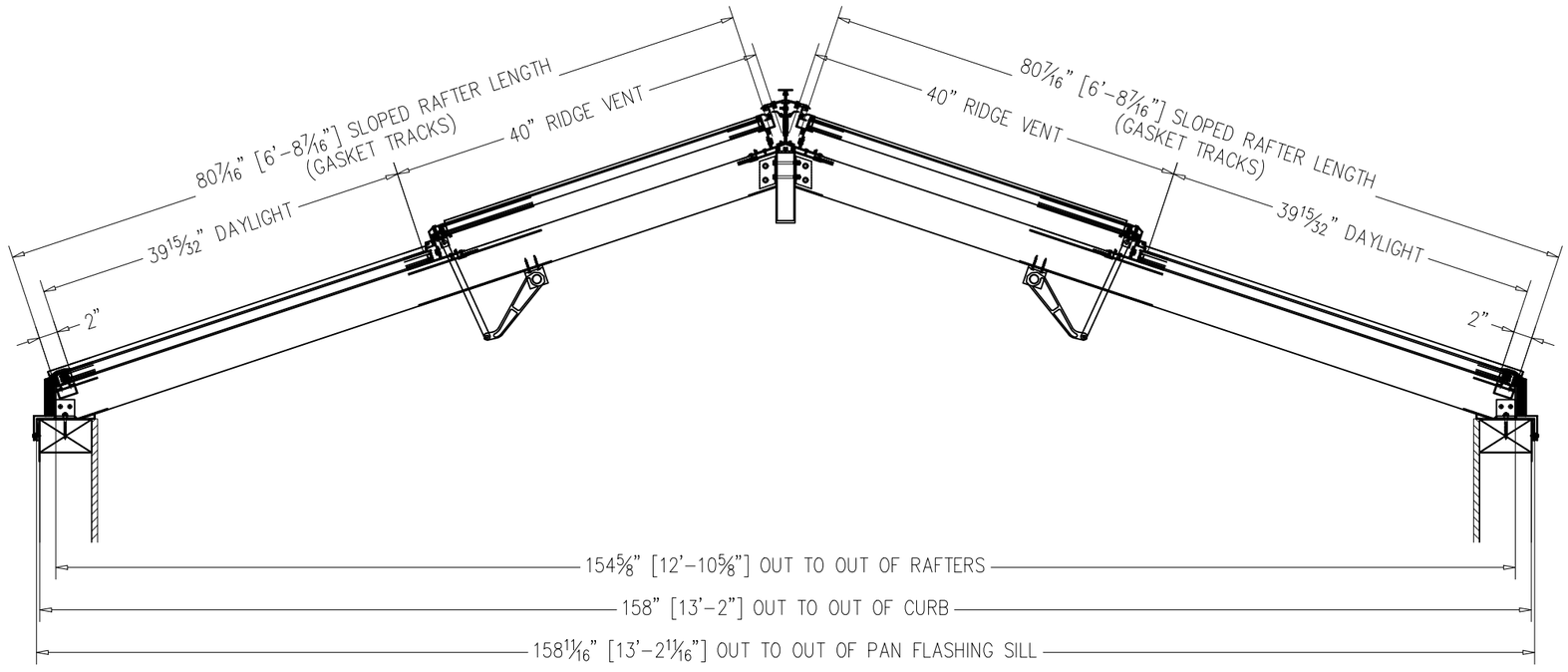
QUOTE NO.:
98606

PAGE No.:
13 OF 51

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

SECTION B

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



SOLAR INNOVATIONS®
GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7-25-17	TJN

DRAWN BY:
TYLER NEWHOUSE

PROJECT MANAGER:
WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

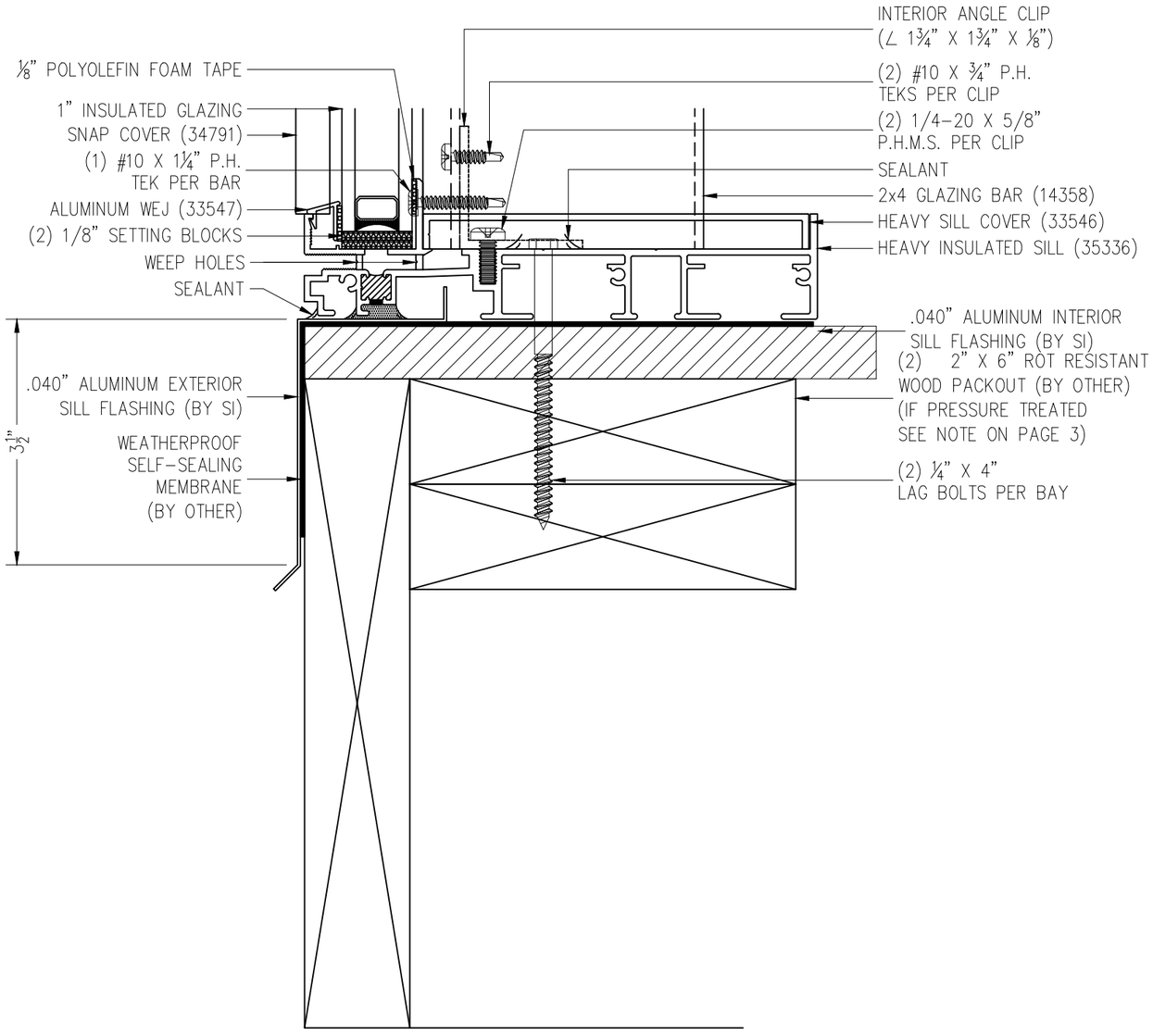
DRAWING SCALE:
3/4" = 1'-0"

JOB NO.:
17-04-173

QUOTE NO.:
98606

PAGE No.:
14 OF 51

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.



1 SILL DETAIL

STANDARD DETAIL

SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7–25–17	TJN

DRAWN BY: TYLER NEWHOUSE

PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

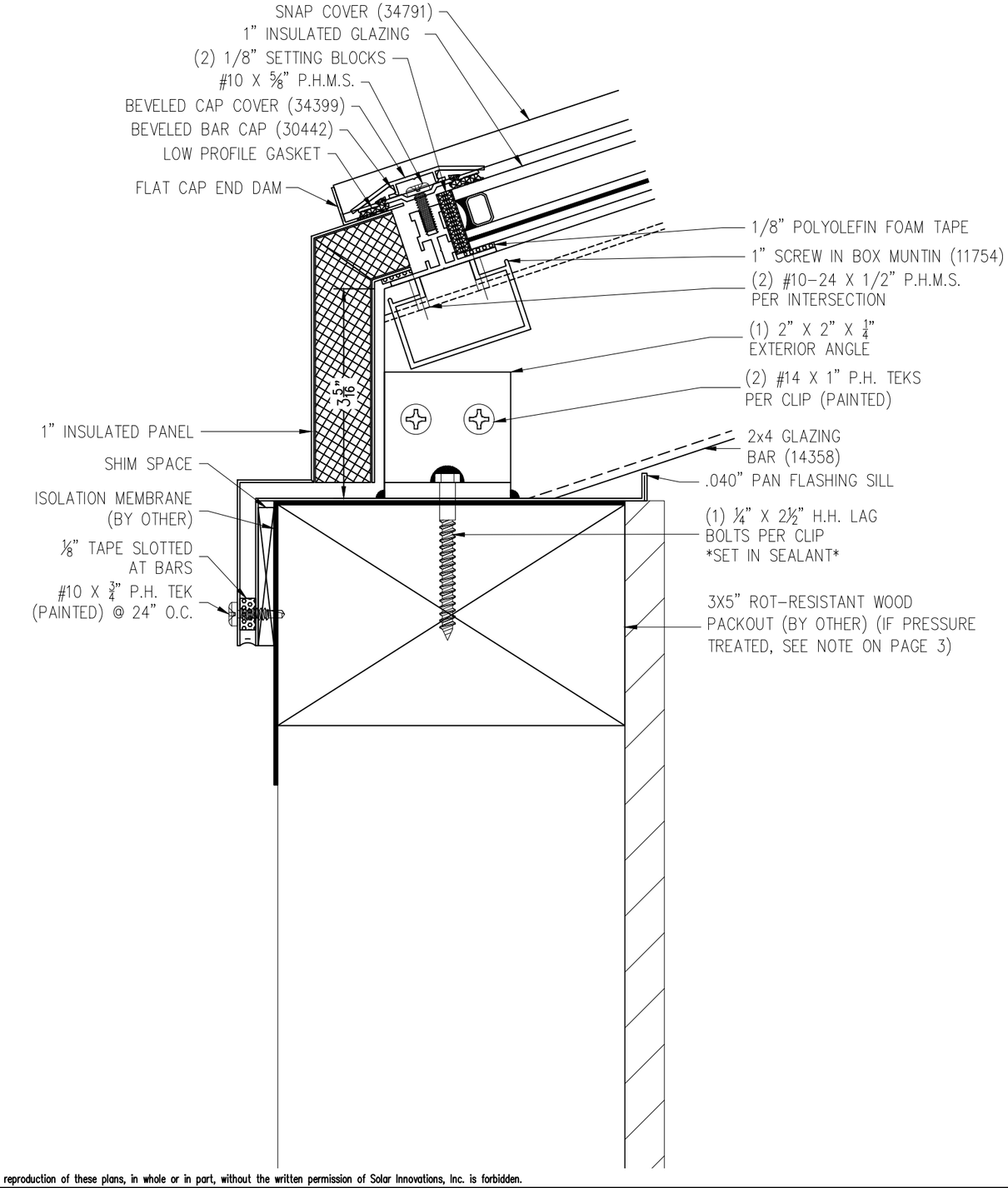
DRAWING SCALE: 6" = 1'-0"

JOB NO.: 17-04-173

QUOTE NO.: 98606

PAGE No.: 15 OF 51

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.



2 SILL DETAIL

STANDARD DETAIL

SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7-25-17	TJN

DRAWN BY: TYLER NEWHOUSE
PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

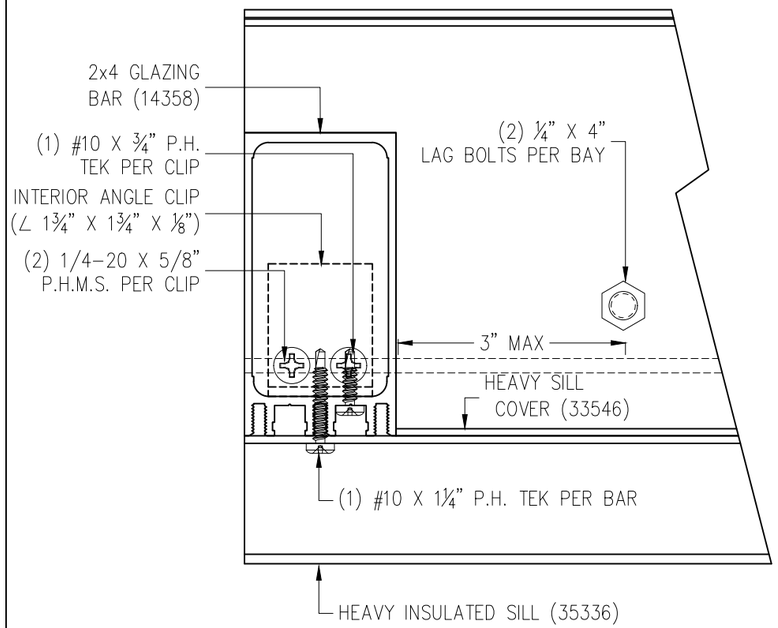
DRAWING SCALE: 6" = 1'-0"

JOB NO.: 17-04-173

QUOTE NO.: 98606

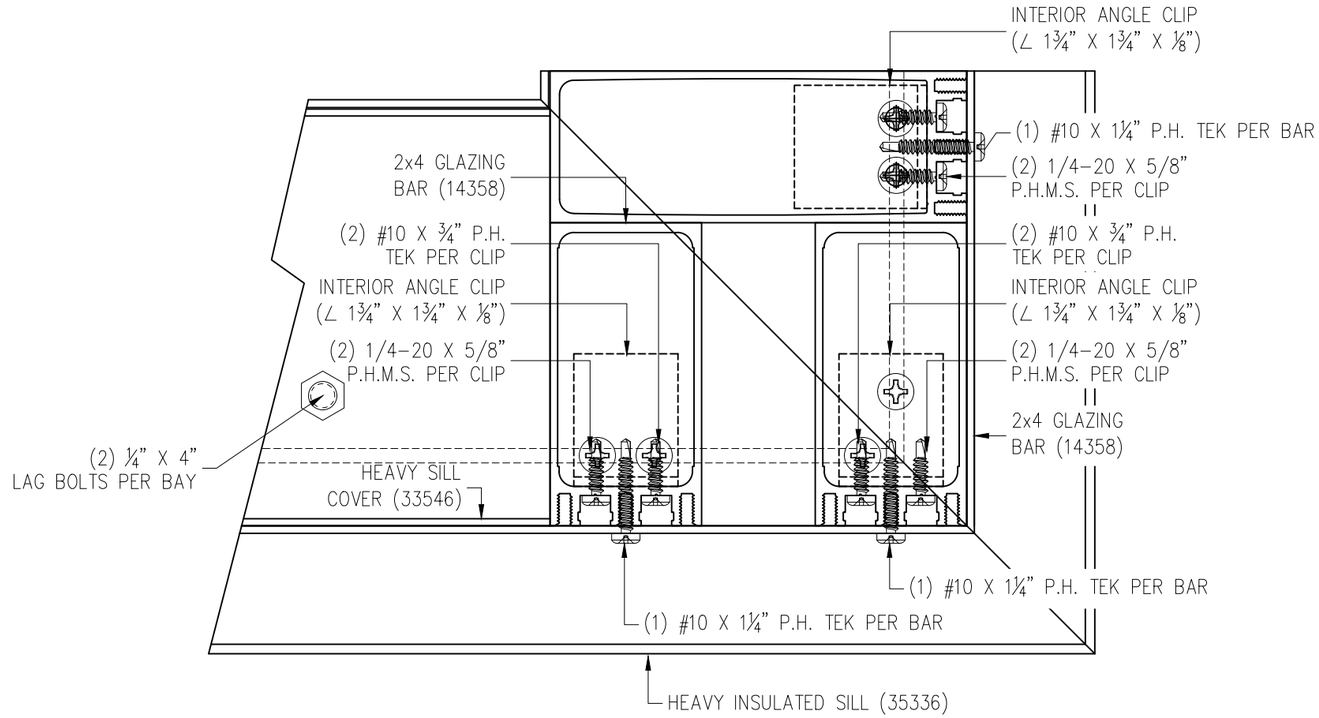
PAGE No.: 16 OF 51

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.



3 SILL DETAIL

STANDARD DETAIL



4 SILL DETAIL

STANDARD DETAIL

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7-25-17	TJN

DRAWN BY: TYLER NEWHOUSE
PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

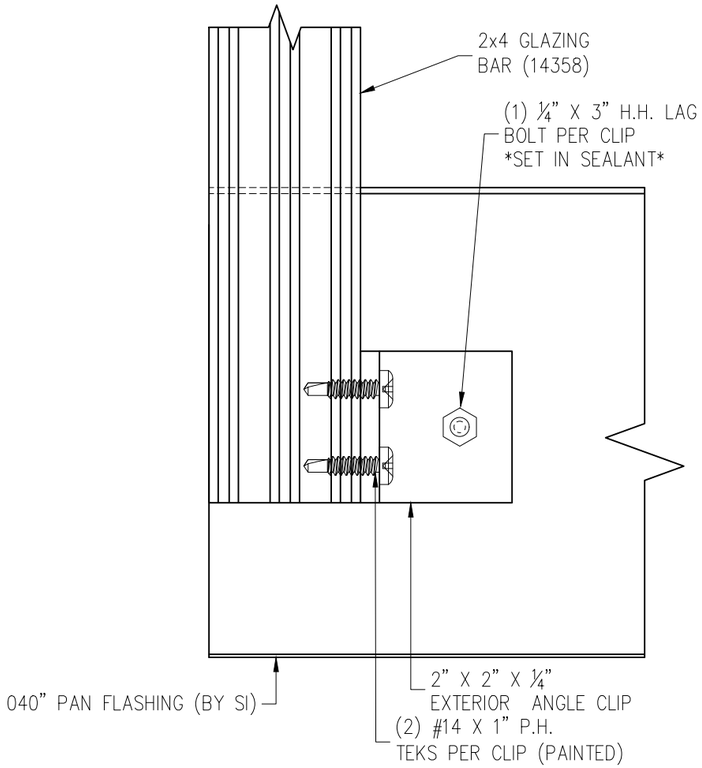
ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

DRAWING SCALE: 6" = 1'-0"

JOB NO.: 17-04-173

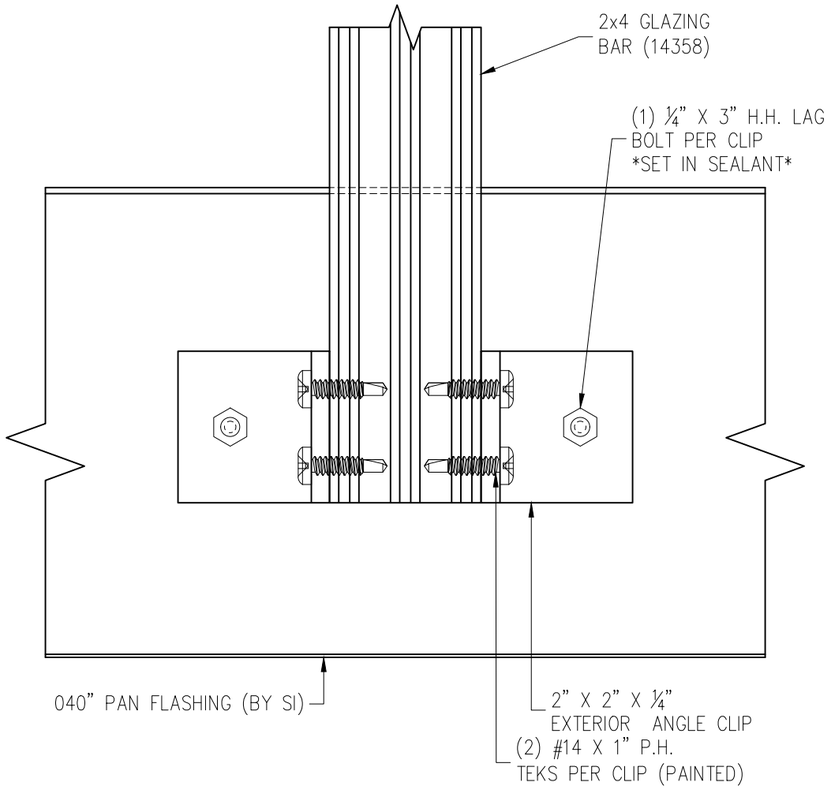
QUOTE NO.: 98606

PAGE No.: 17 OF 51



5 SILL DETAIL

STANDARD DETAIL



6 SILL DETAIL

STANDARD DETAIL

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

SOLAR INNOVATIONS®
GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7–25–17	TJN

DRAWN BY: TYLER NEWHOUSE
PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

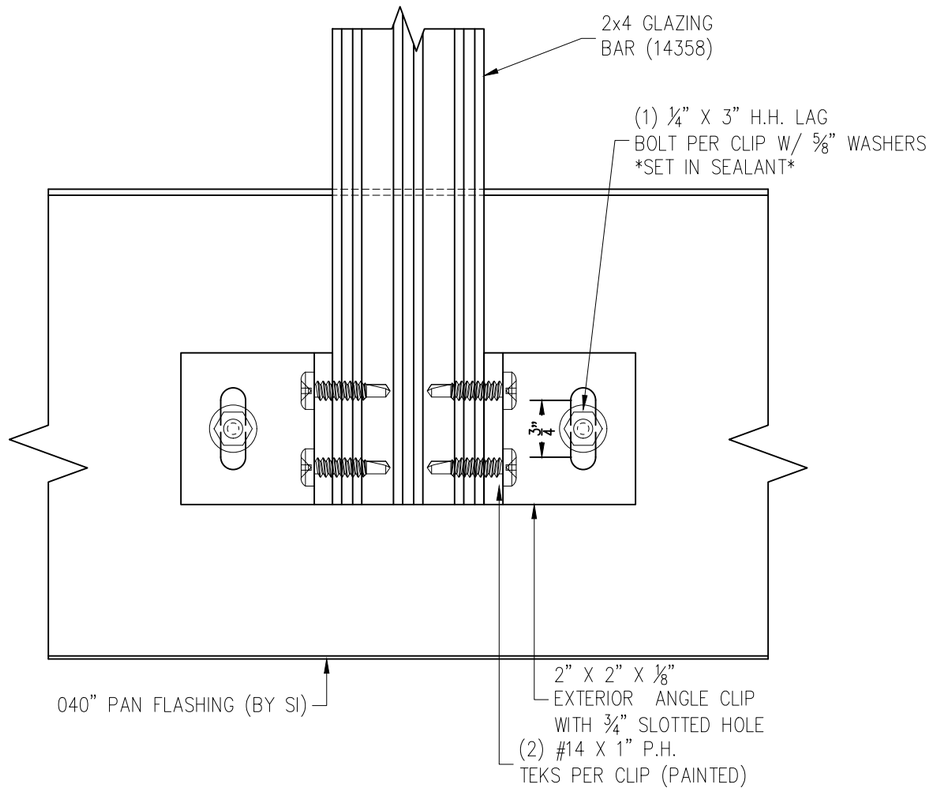
DRAWING SCALE: 6" = 1'-0"

JOB NO.: 17-04-173

QUOTE NO.: 98606

PAGE No.: 18 OF 51

7 DETAIL REMOVED DURING REVIEW



8 SILL DETAIL

STANDARD DETAIL

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7–25–17	TJN

DRAWN BY: TYLER NEWHOUSE
PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

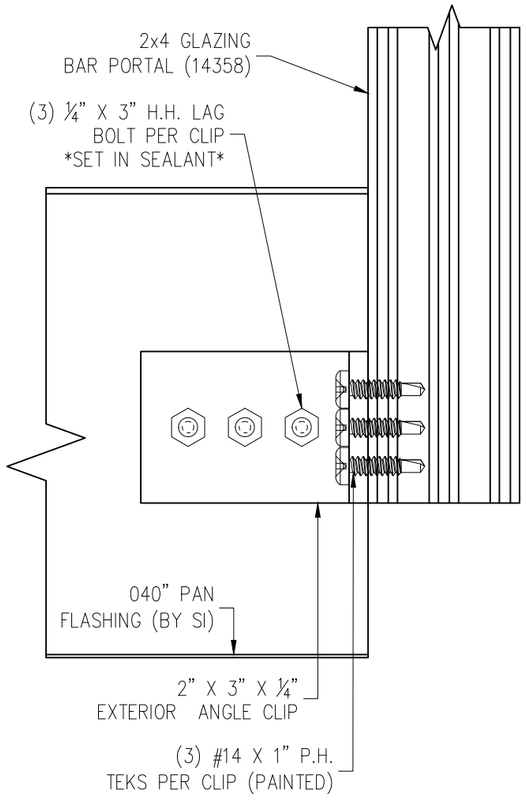
ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

DRAWING SCALE: 6" = 1'-0"

JOB NO.: 17-04-173

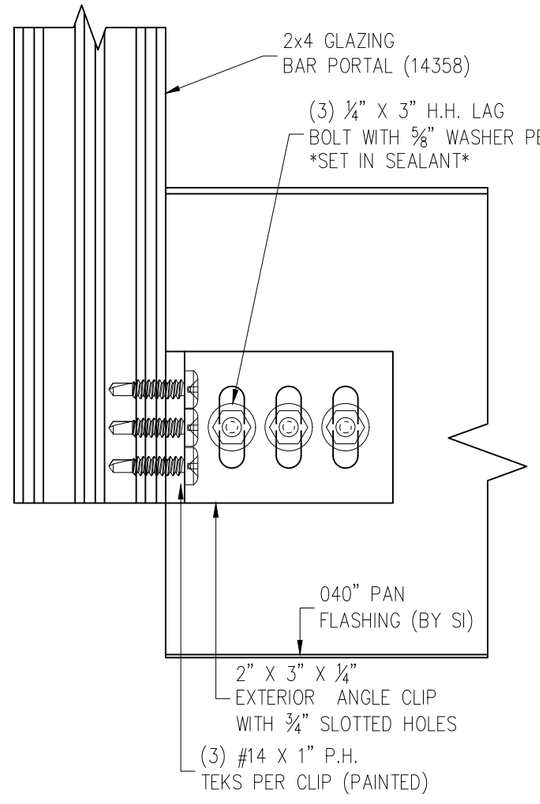
QUOTE NO.: 98606

PAGE No.: 19 OF 51



9 SILL DETAIL

STANDARD DETAIL



10 SILL DETAIL

STANDARD DETAIL

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

SOLAR INNOVATIONS®
GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7-25-17	TJN

DRAWN BY:
TYLER NEWHOUSE

PROJECT MANAGER:
WALTER KNIGHT (EXT. 3097)

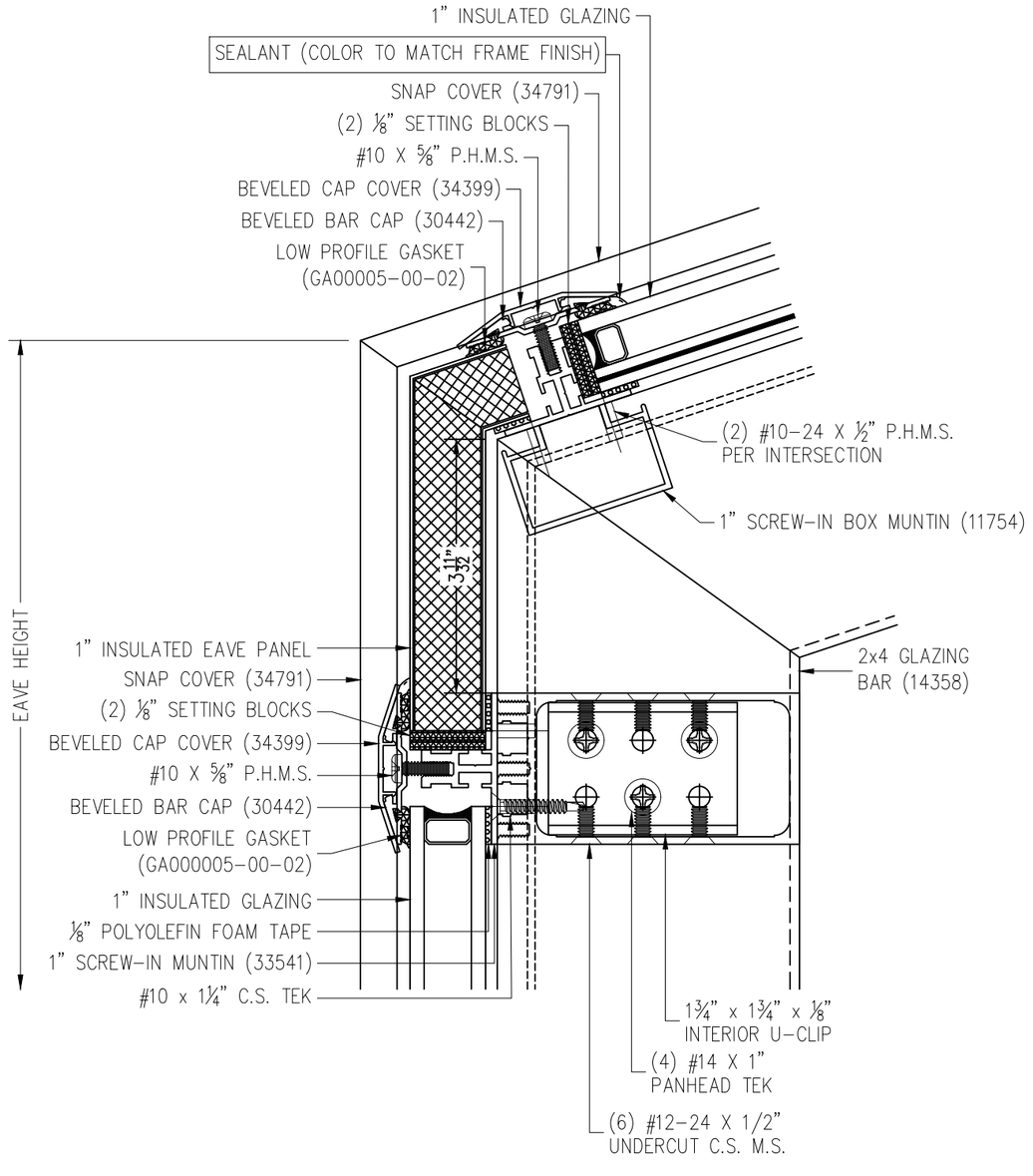
ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

DRAWING SCALE:
6" = 1'-0"

JOB NO.:
17-04-173

QUOTE NO.:
98606

PAGE No.:
20 OF 51



11 EAVE DETAIL

STANDARD DETAIL

SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7-25-17	TJN

DRAWN BY: TYLER NEWHOUSE
PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

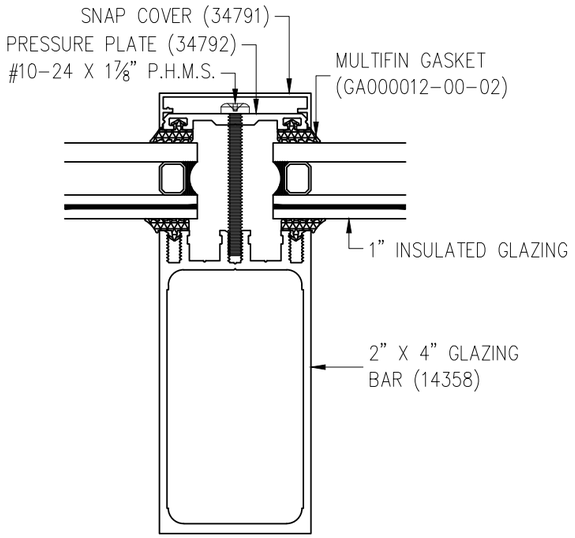
DRAWING SCALE: 6" = 1'-0"

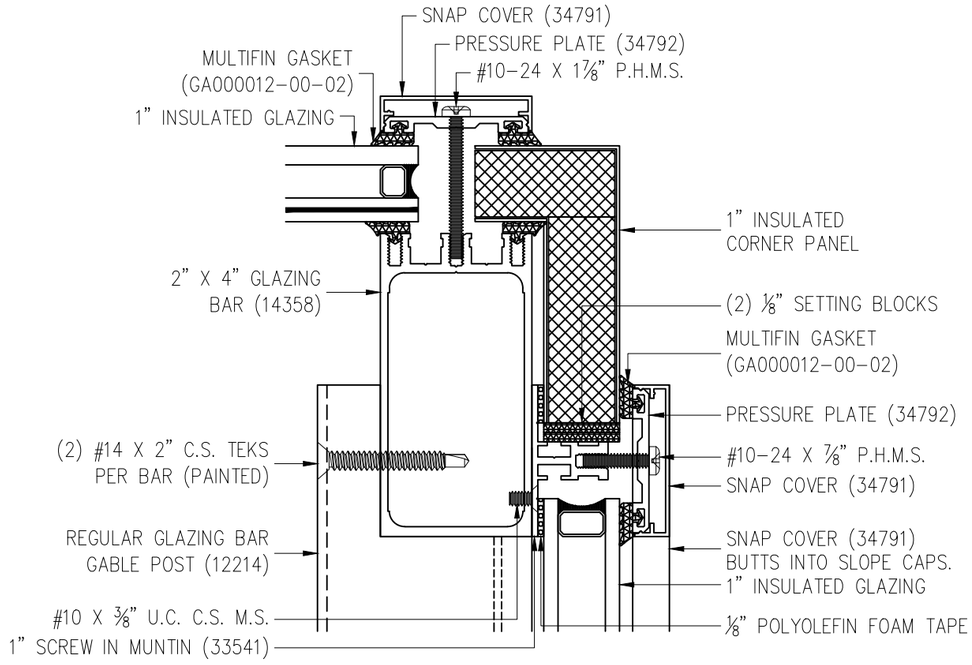
JOB NO.: 17-04-173

QUOTE NO.: 98606

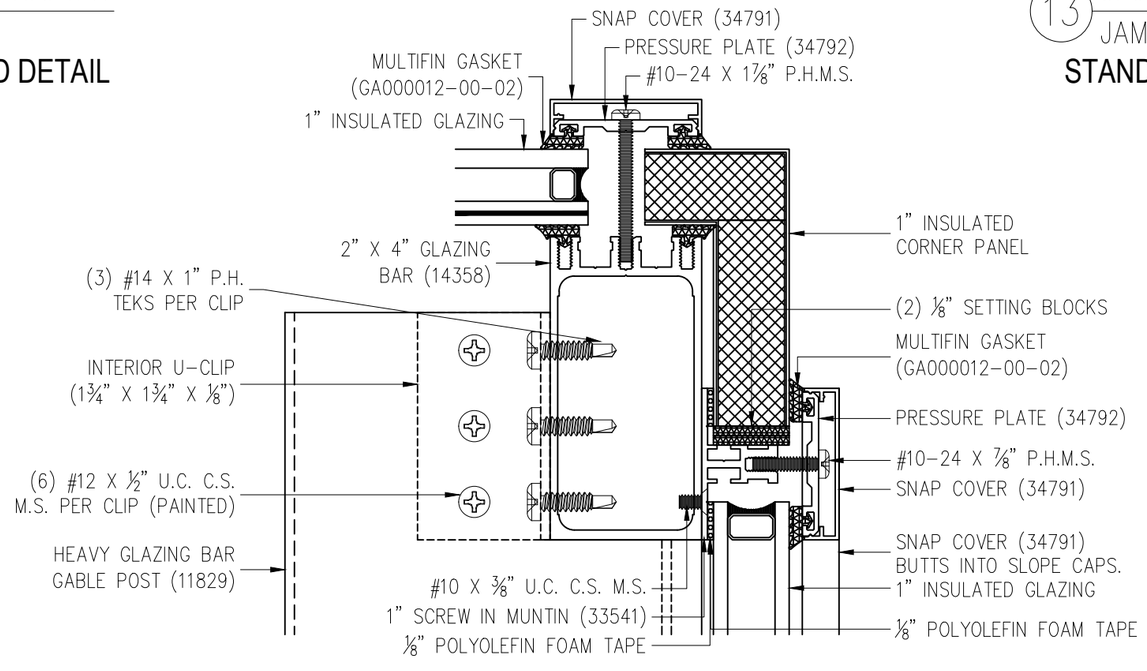
PAGE No.: 21 OF 51

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.





12 SLOPED RAFTER DETAIL
STANDARD DETAIL



13 SLOPED RAFTER JAMB DETAIL
STANDARD DETAIL

13A SLOPED RAFTER JAMB DETAIL
STANDARD DETAIL

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7-25-17	TJN

DRAWN BY: TYLER NEWHOUSE
PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

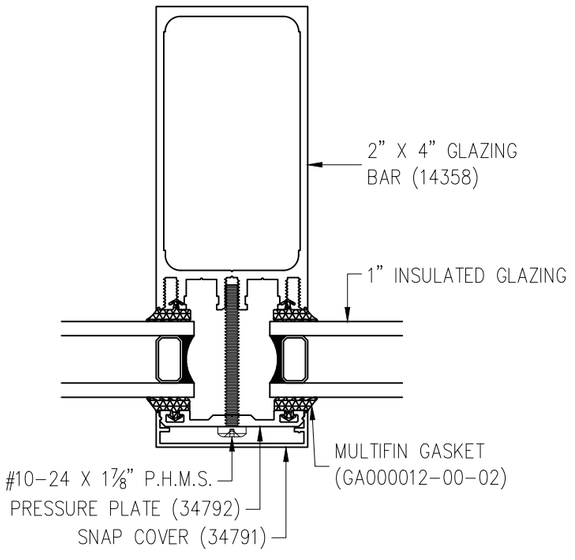
ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

DRAWING SCALE: 6" = 1'-0"

JOB NO.: 17-04-173

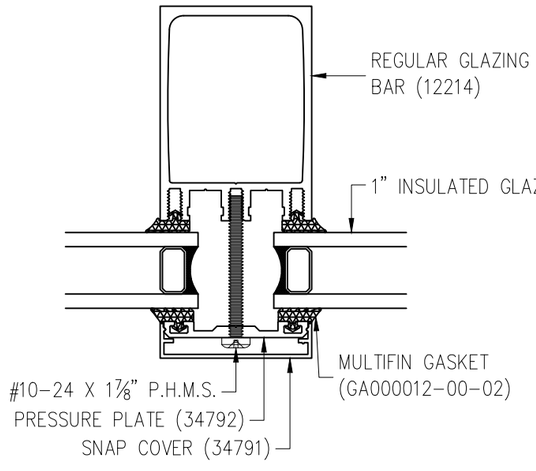
QUOTE NO.: 98606

PAGE No.: 22 OF 51



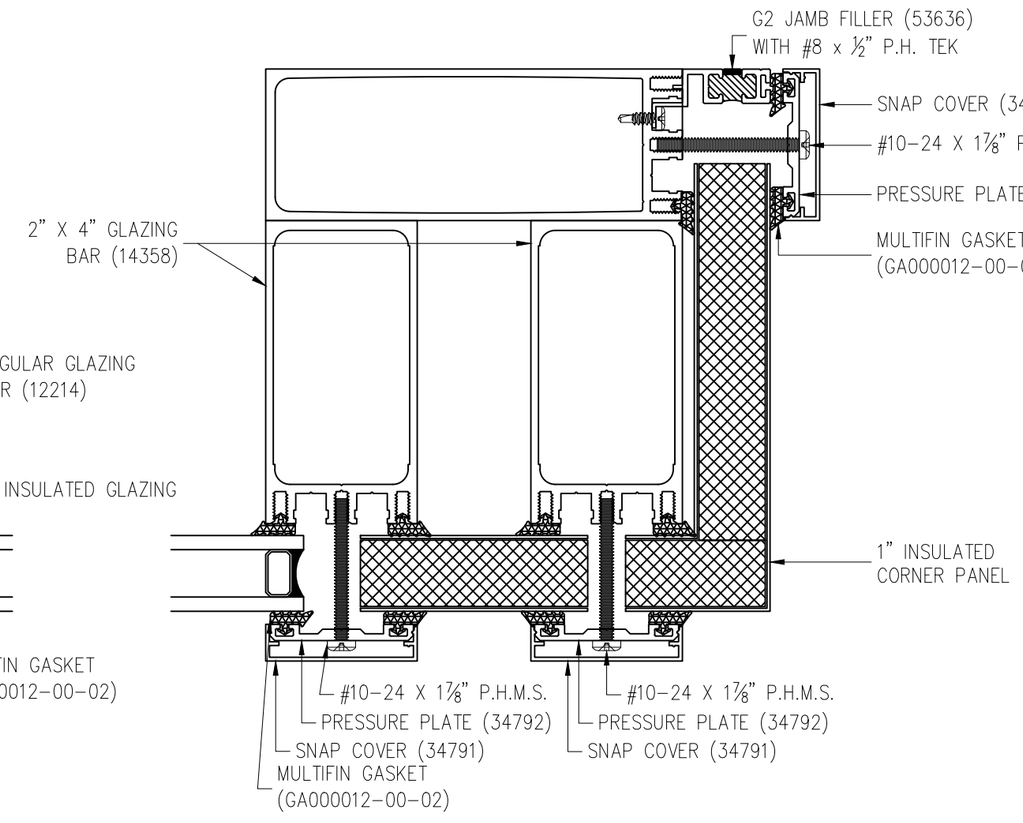
14 VERTICAL GLAZING BAR DETAIL

STANDARD DETAIL



15 VERTICAL GLAZING BAR DETAIL

STANDARD DETAIL



16 VERTICAL GLAZING BAR DETAIL

STANDARD DETAIL

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7-25-17	TJN

DRAWN BY: TYLER NEWHOUSE
PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

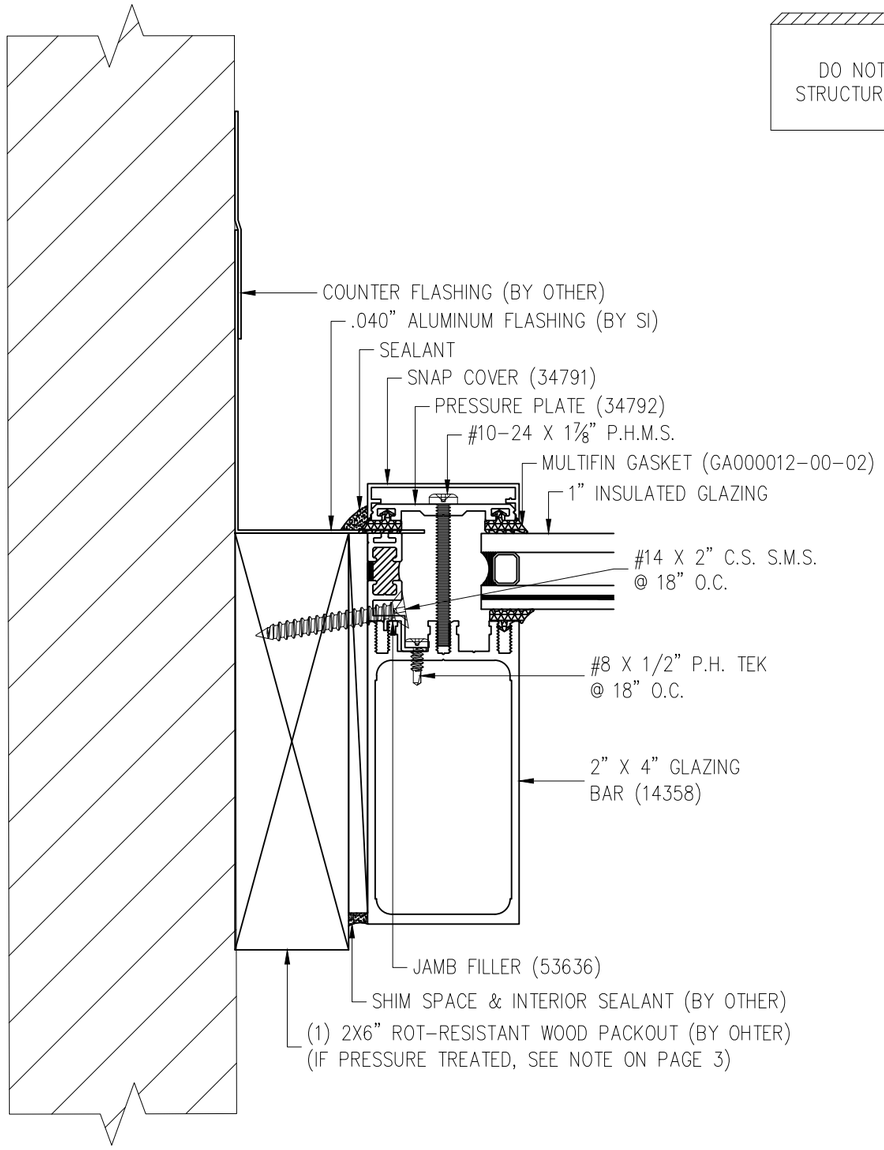
DRAWING SCALE: 6" = 1'-0"

JOB NO.: 17-04-173

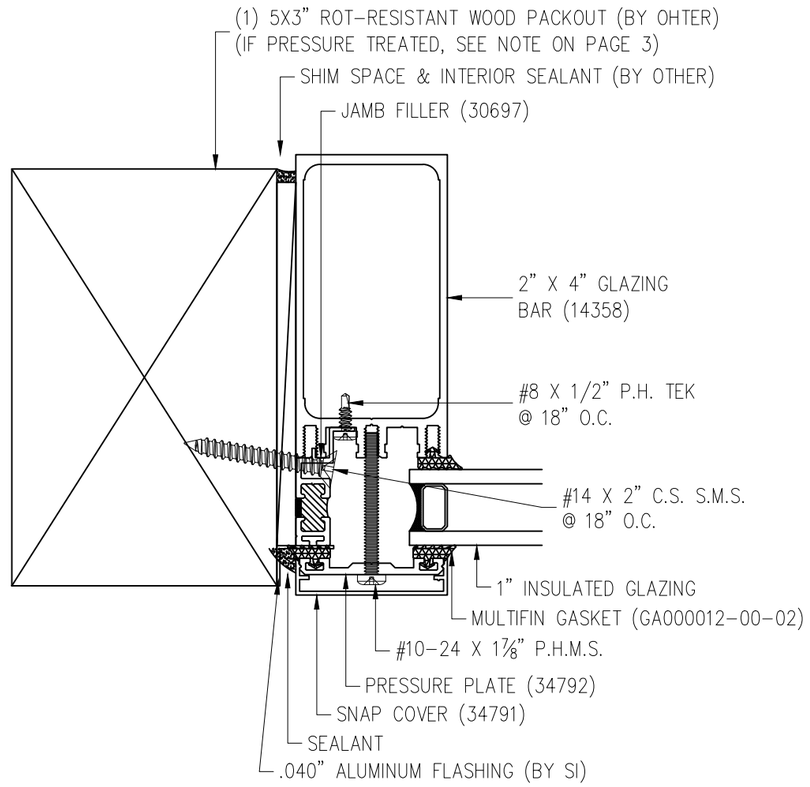
QUOTE NO.: 98606

PAGE No.: 23 OF 51

NOTE:
DO NOT INSTALL C.S. S.M.S. UNTIL STRUCTURE IS IN PERMANENT LOCATION



17 SLOPED GLAZING BAR JAMB DETAIL
STANDARD DETAIL



18 VERTICAL GLAZING BAR JAMB DETAIL
STANDARD DETAIL

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7-25-17	TJN

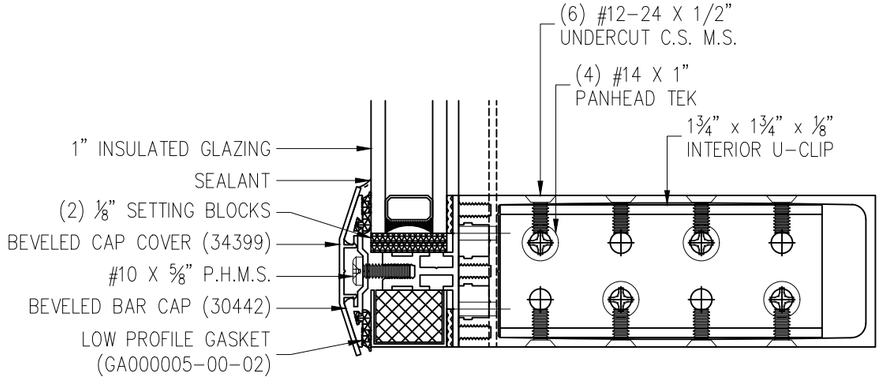
DRAWN BY: TYLER NEWHOUSE
PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

DRAWING SCALE: 6" = 1'-0"

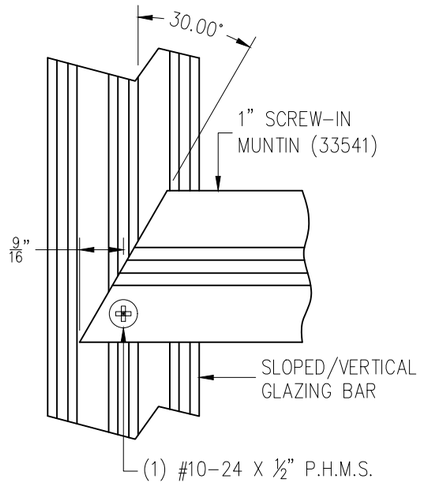
JOB NO.: 17-04-173

QUOTE NO.: 98606



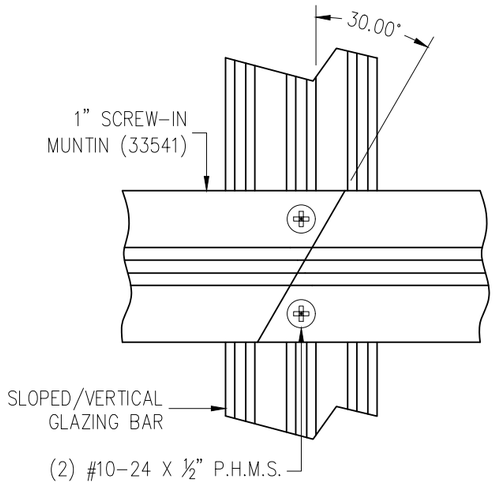
19 HORIZONTAL MUNTIN CONNECTION DETAIL

STANDARD DETAIL



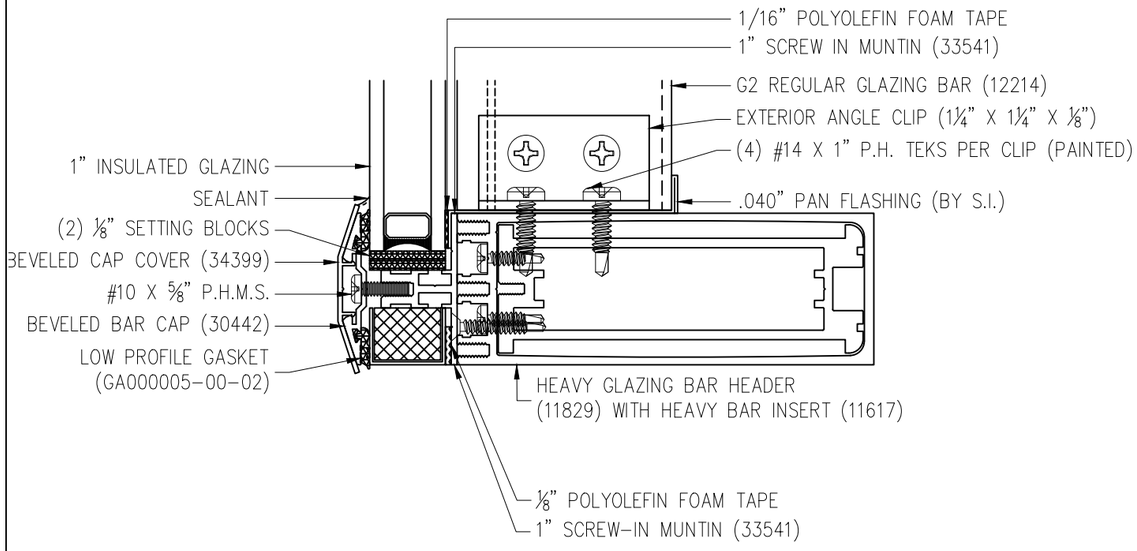
/ HORIZONTAL MUNTIN DETAIL

STANDARD DETAIL



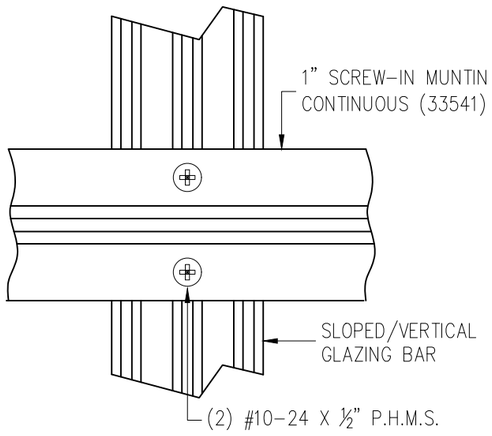
/ HORIZONTAL MUNTIN DETAIL

STANDARD DETAIL



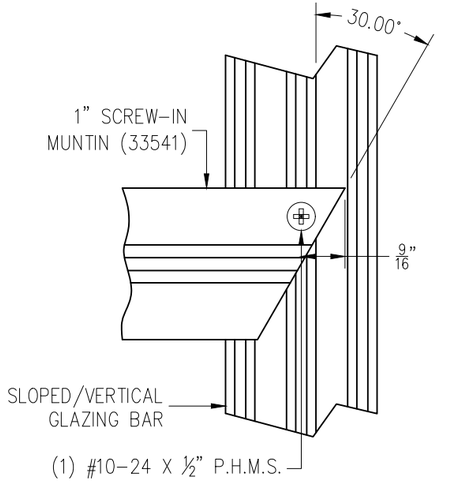
20 HORIZONTAL MUNTIN DETAIL

STANDARD DETAIL



/ HORIZONTAL MUNTIN DETAIL

STANDARD DETAIL



/ HORIZONTAL MUNTIN DETAIL

STANDARD DETAIL

SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7-25-17	TJN

DRAWN BY: TYLER NEWHOUSE
PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

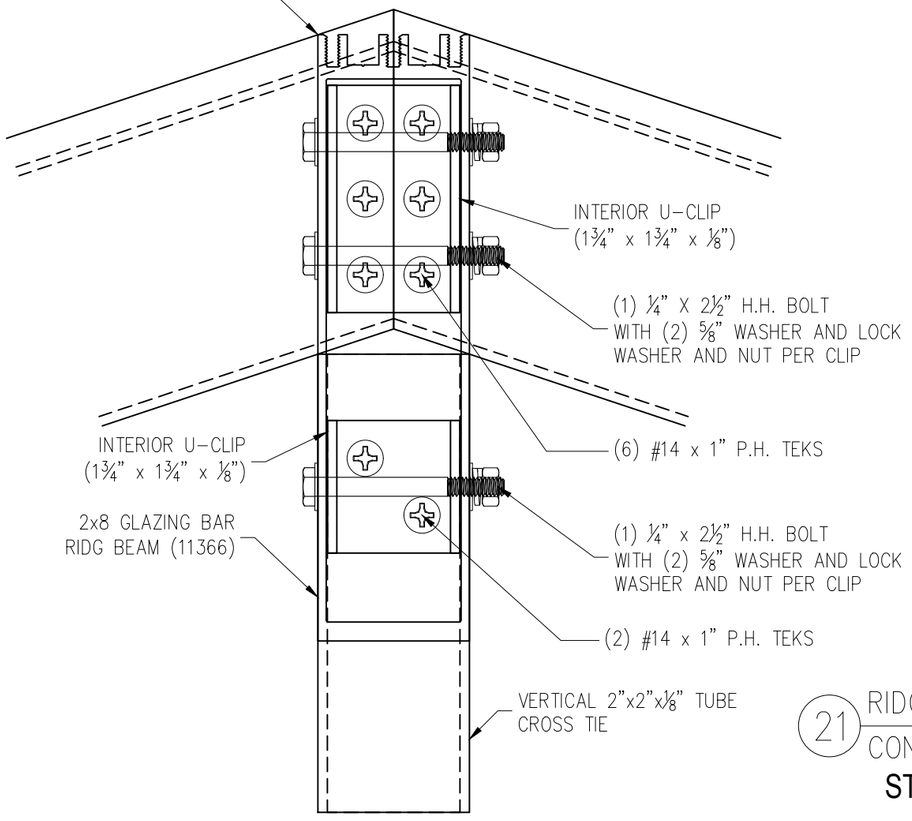
DRAWING SCALE: 6" = 1'-0"

JOB NO.: 17-04-173

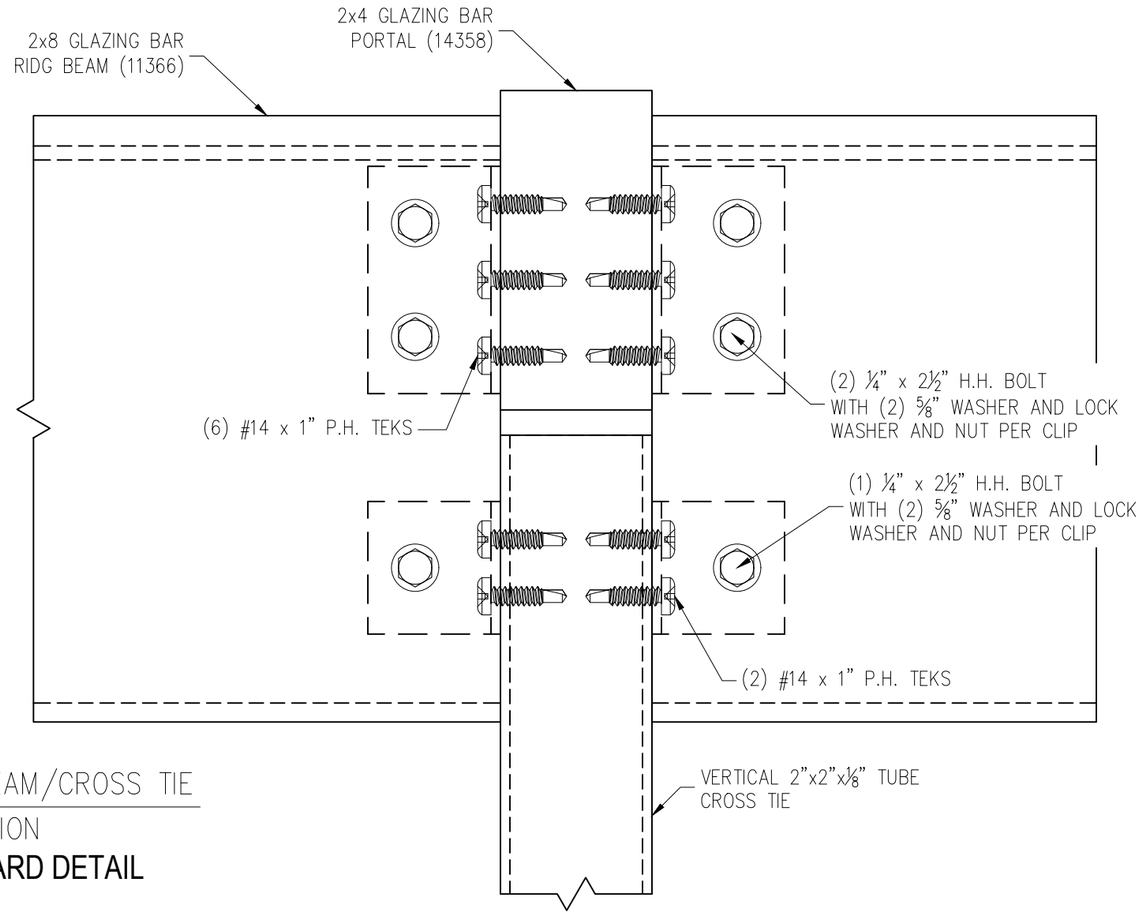
QUOTE NO.: 98606

PAGE No.: 25 OF 51

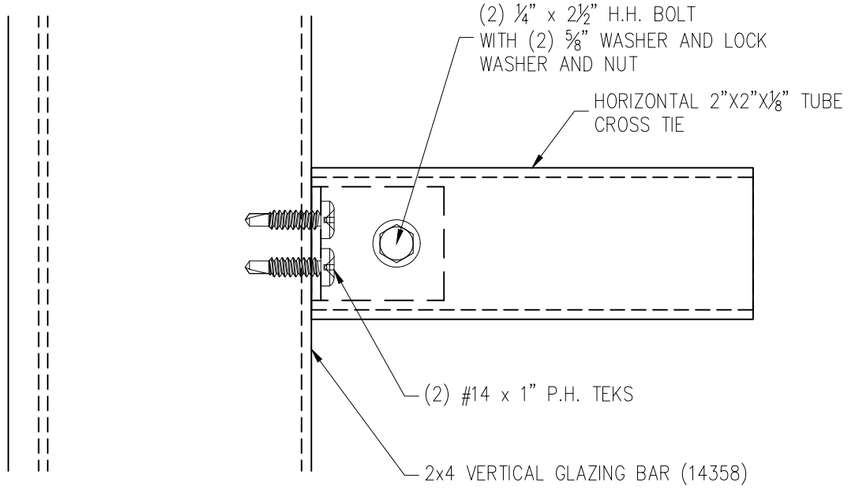
© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.



21 RIDGE BEAM/CROSS TIE CONNECTION
STANDARD DETAIL



22 CROSS TIE CONNECTION
STANDARD DETAIL



© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7–25–17	TJN

DRAWN BY: TYLER NEWHOUSE
PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

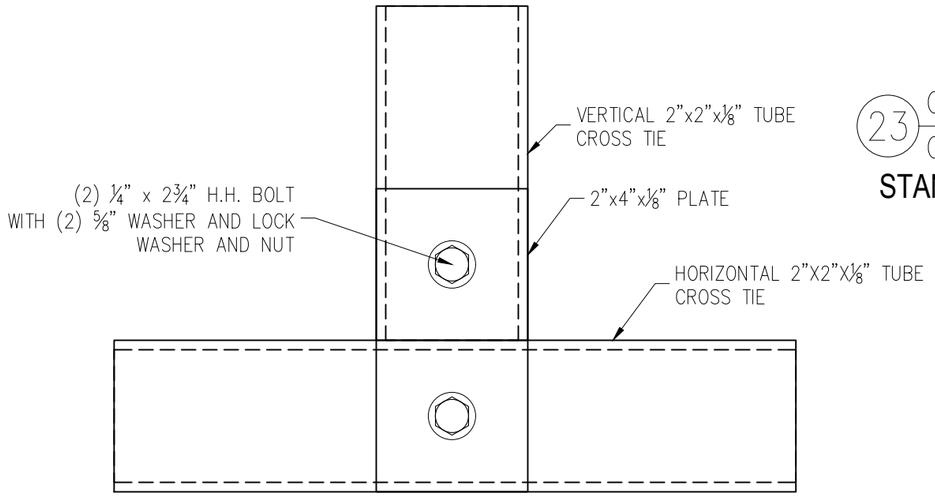
ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

DRAWING SCALE: 6" = 1'-0"

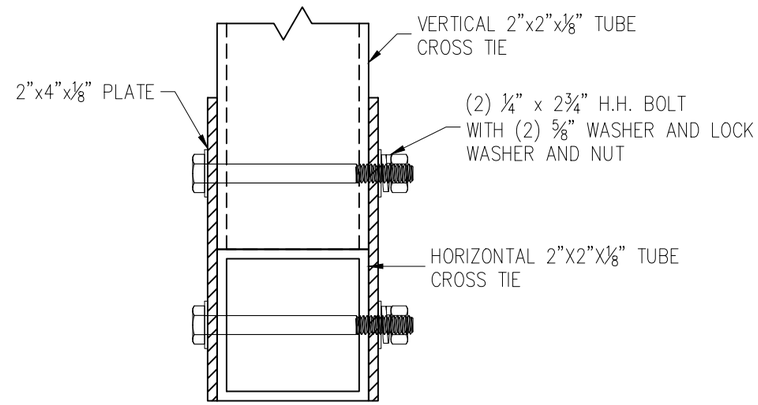
JOB NO.: 17-04-173

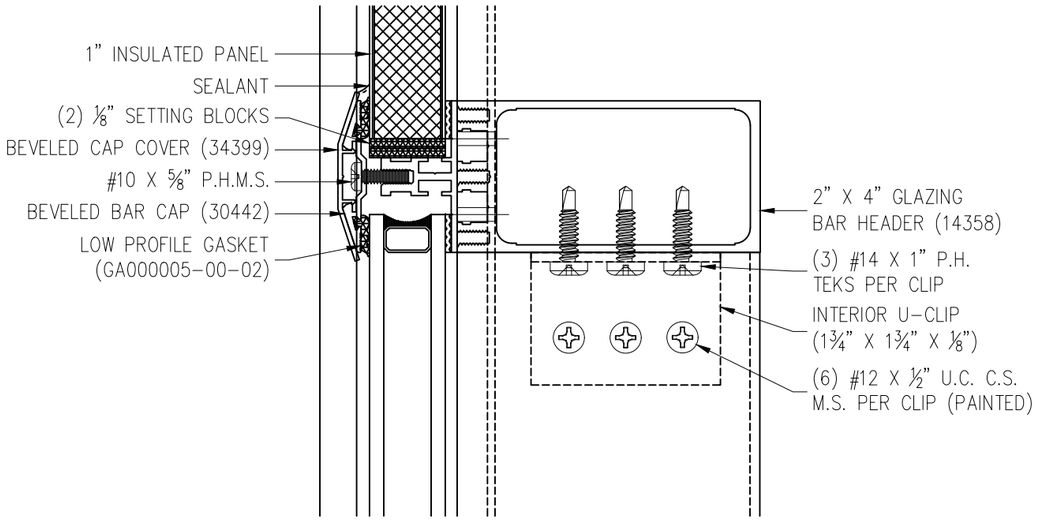
QUOTE NO.: 98606

PAGE No.: 26 OF 51

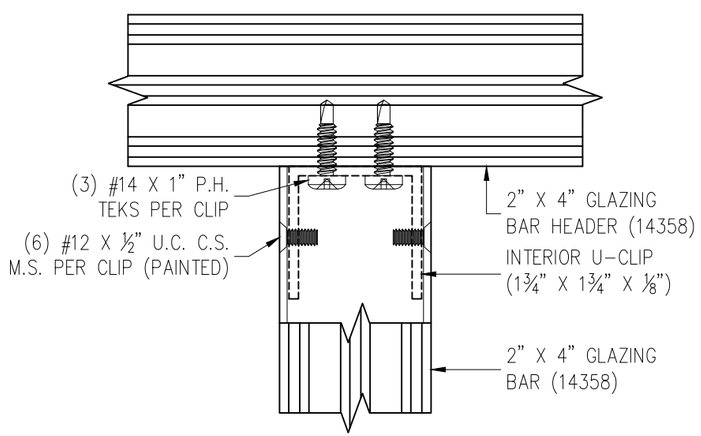


23 CROSS TIE CONNECTIONS
STANDARD DETAIL

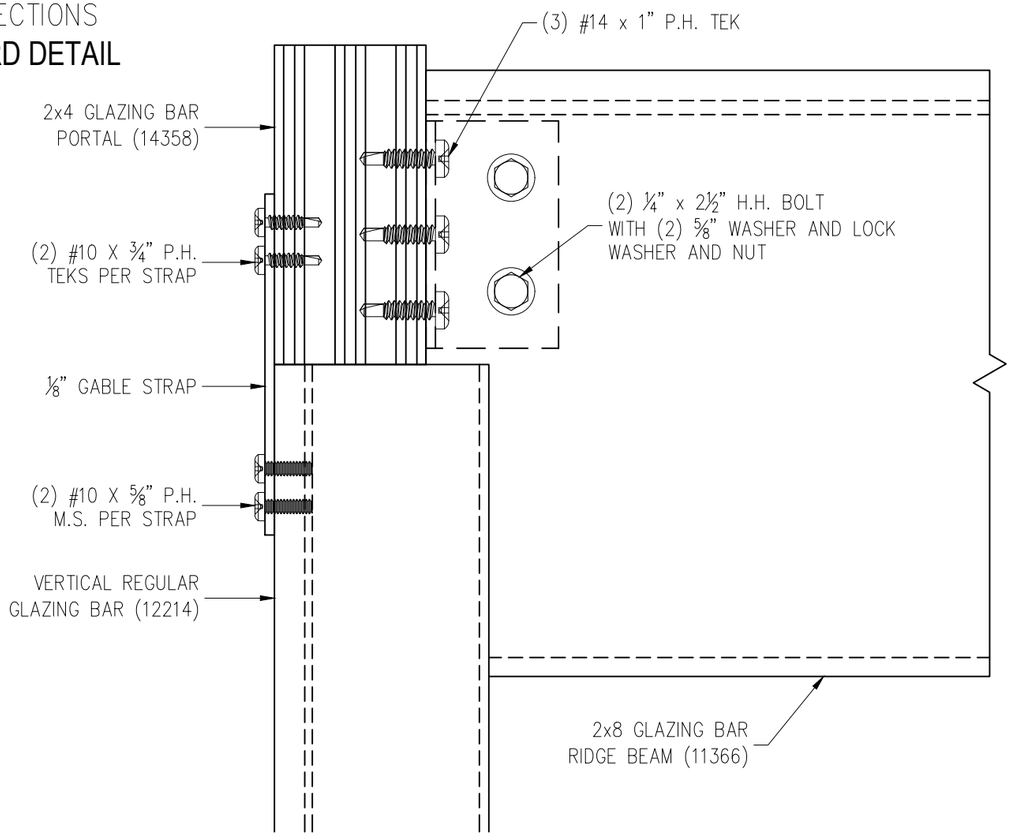




23A VERTICAL BAR CONNECTIONS @ MUNTIN
STANDARD DETAIL



24 RIDGE BEAM CONNECTIONS
STANDARD DETAIL



SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7-25-17	TJN

DRAWN BY: TYLER NEWHOUSE
PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

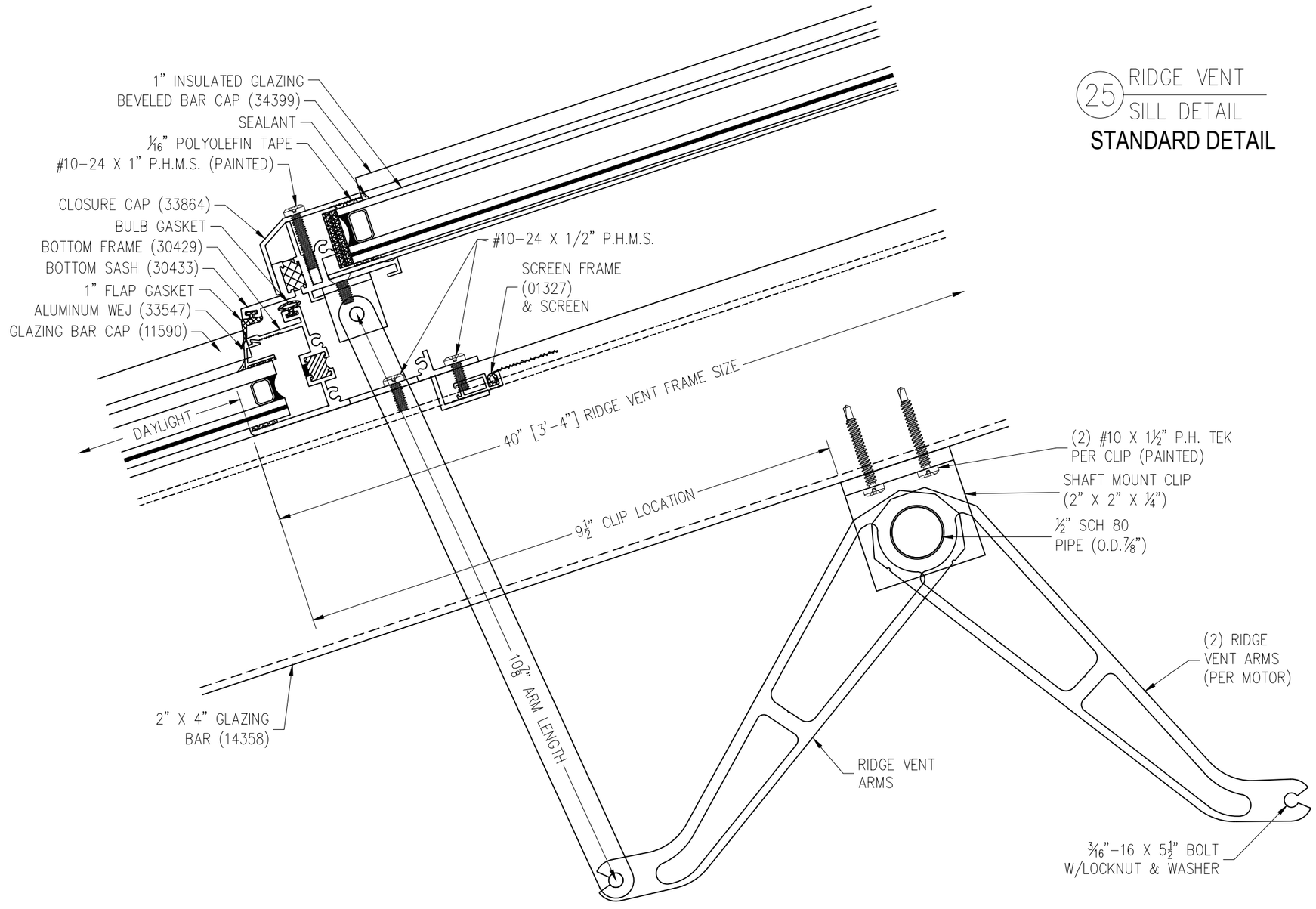
DRAWING SCALE: 6" = 1'-0"

JOB NO.: 17-04-173

QUOTE NO.: 98606

PAGE No.: 27 OF 51

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.



25 RIDGE VENT SILL DETAIL

STANDARD DETAIL

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	–	DATE	BY
		7-25-17	TJN

DRAWN BY: TYLER NEWHOUSE
PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

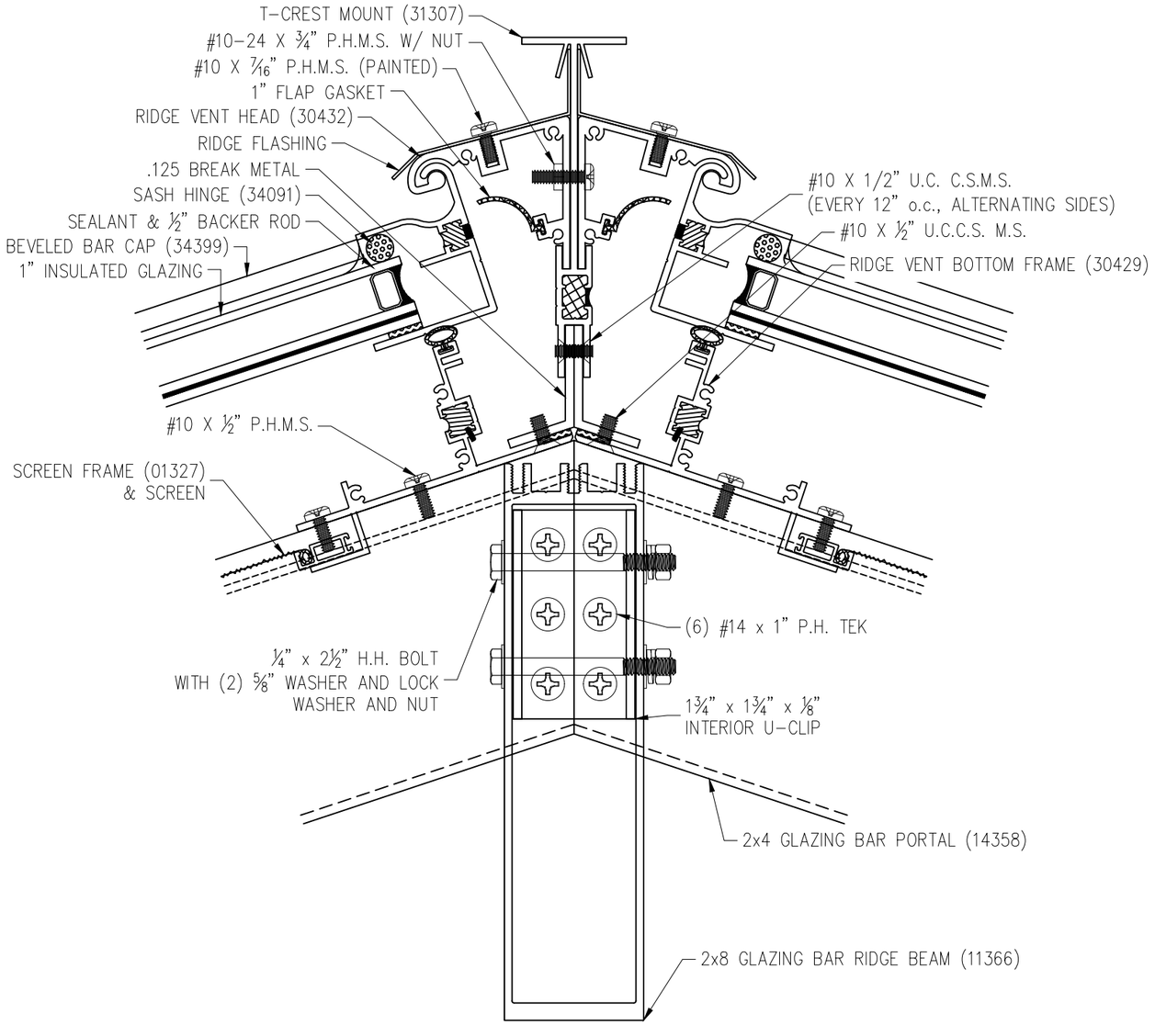
ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

DRAWING SCALE: 6" = 1'-0"

JOB NO.: 17-04-173

QUOTE NO.: 98606

PAGE No.: 28 OF 51



26 RIDGE VENT HEAD DETAIL

STANDARD DETAIL

SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7-25-17	TJN

DRAWN BY: TYLER NEWHOUSE

PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

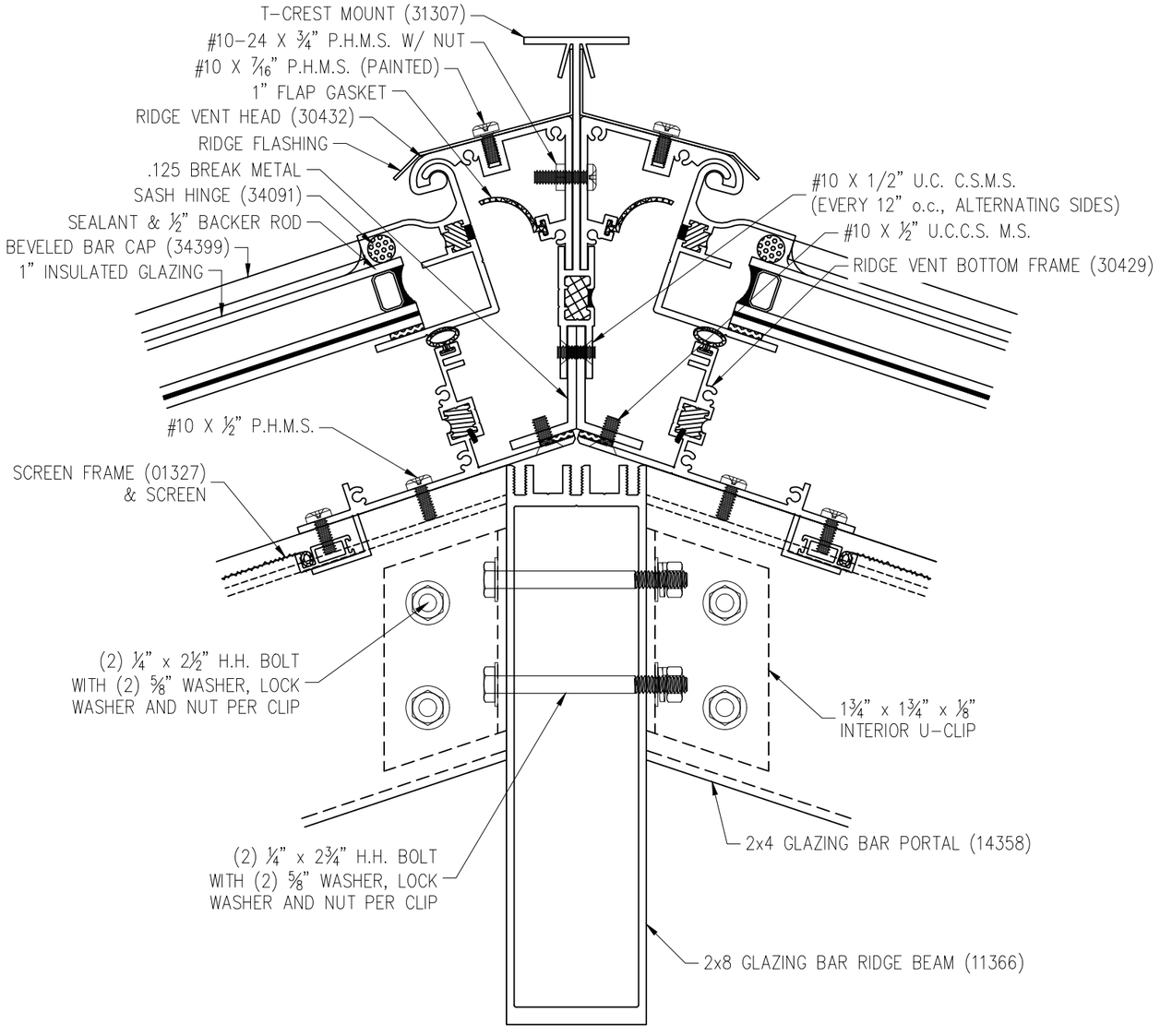
DRAWING SCALE: 6" = 1'-0"

JOB NO.: 17-04-173

QUOTE NO.: 98606

PAGE No.: 29 OF 51

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.



27 RIDGE VENT HEAD DETAIL

STANDARD DETAIL

SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7-25-17	TJN

DRAWN BY: TYLER NEWHOUSE

PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

DRAWING SCALE: 6" = 1'-0"

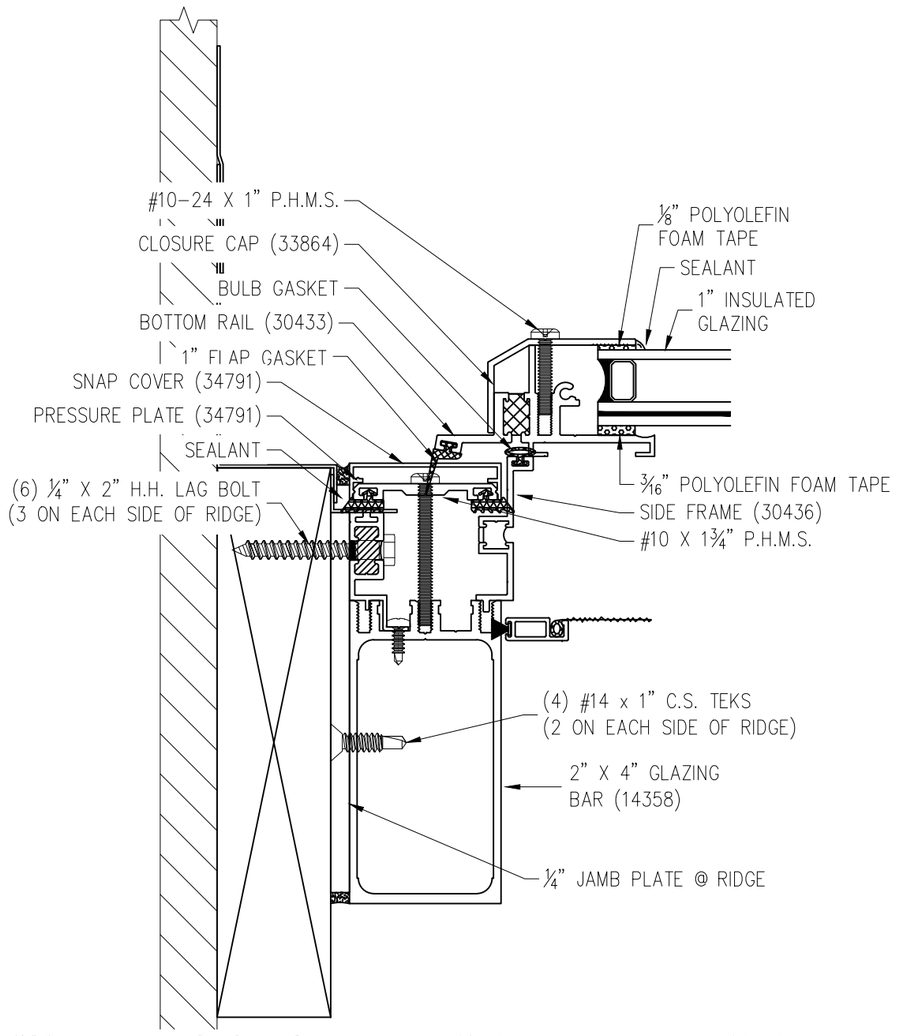
JOB NO.: 17-04-173

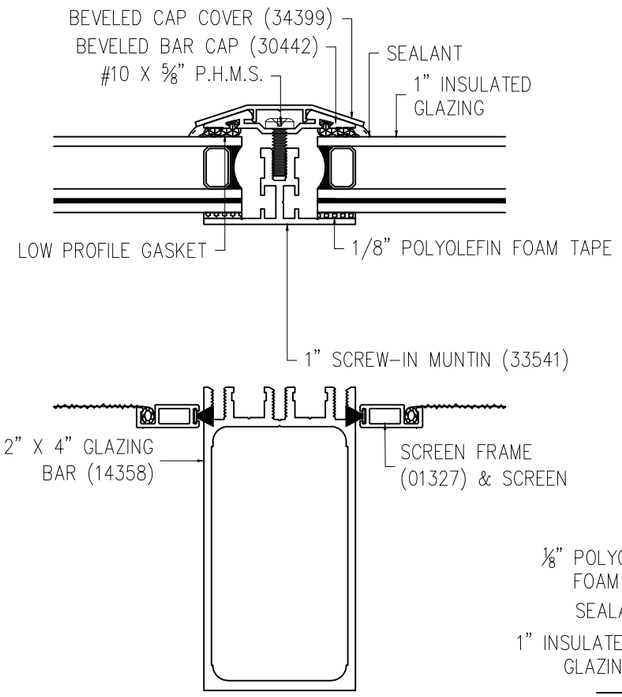
QUOTE NO.: 98606

PAGE No.: 30 OF 51

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

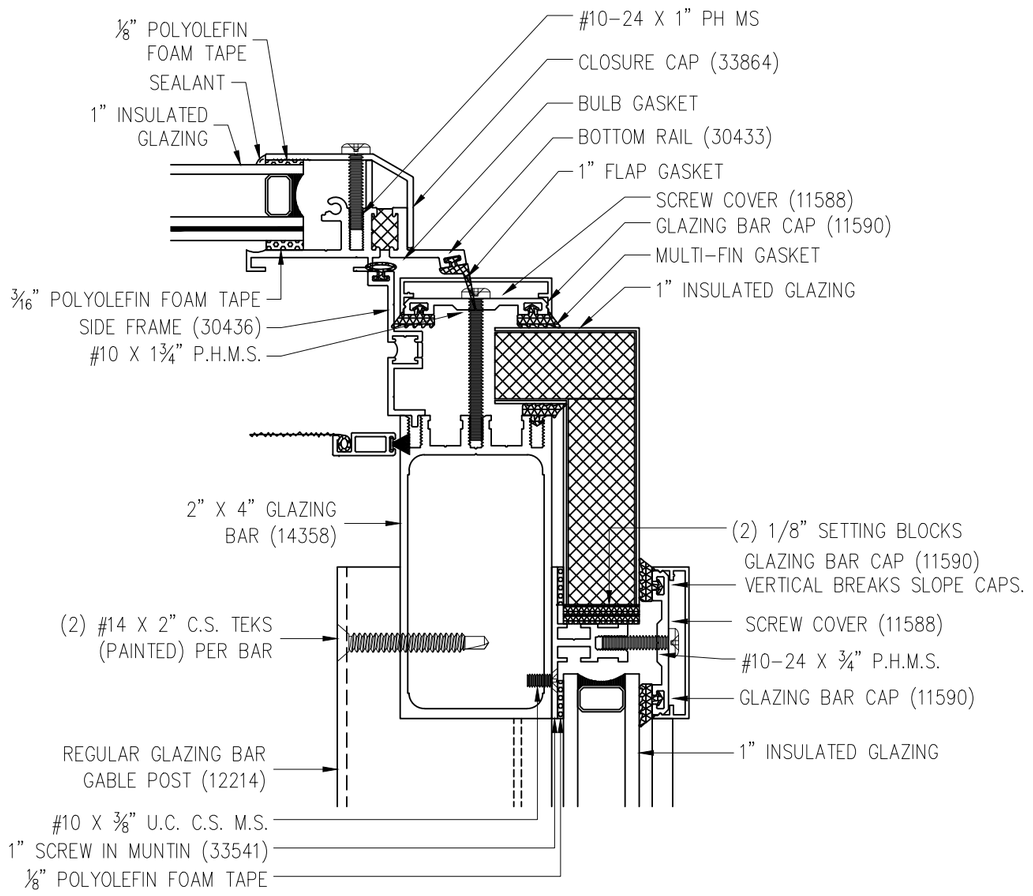
28 RIDGE VENT JAMB DETAIL
STANDARD DETAIL





29 RIDGE VENT DETAIL
STANDARD DETAIL

30 RIDGE VENT JAMB DETAIL
STANDARD DETAIL



© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7–25–17	TJN

DRAWN BY: TYLER NEWHOUSE
PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

DRAWING SCALE: 6" = 1'-0"

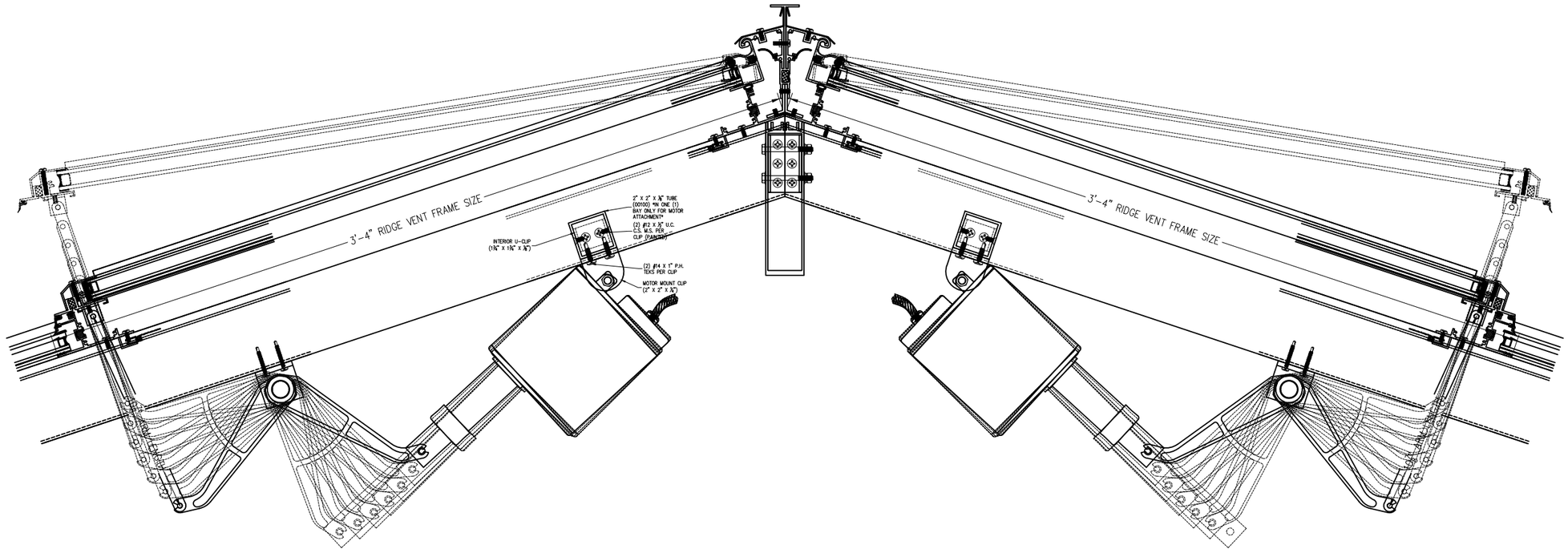
JOB NO.: 17-04-173

QUOTE NO.: 98606

PAGE No.: 31 OF 51

RIDGE VENT SECTION

STANDARD DETAIL



© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

SOLAR INNOVATIONS®
GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7-25-17	TJN

DRAWN BY:
TYLER NEWHOUSE

PROJECT MANAGER:
WALTER KNIGHT (EXT. 3097)

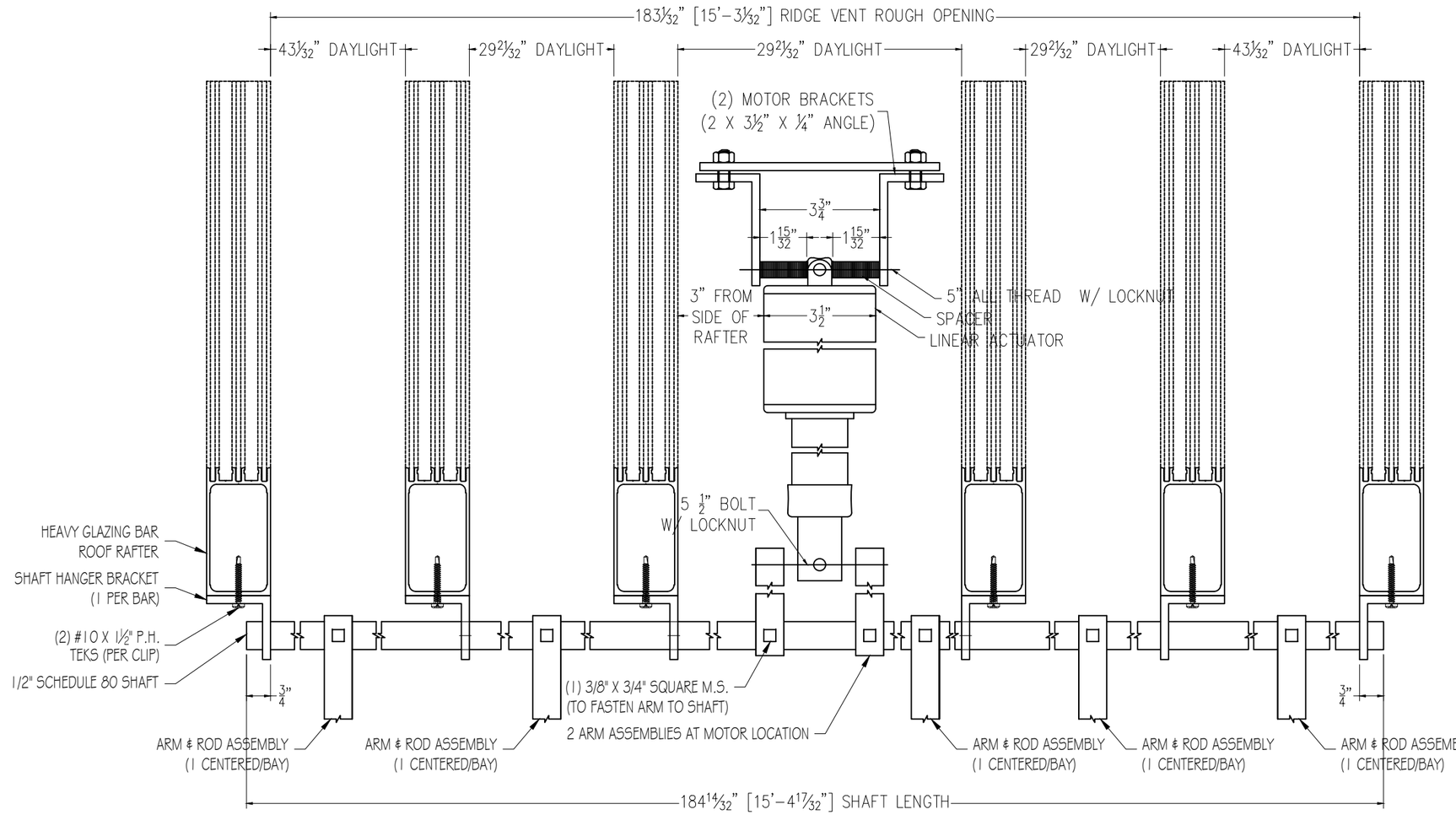
ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

DRAWING SCALE:
1 57/64" = 1'-0"

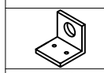
JOB NO.:
17-04-173

QUOTE NO.:
98606

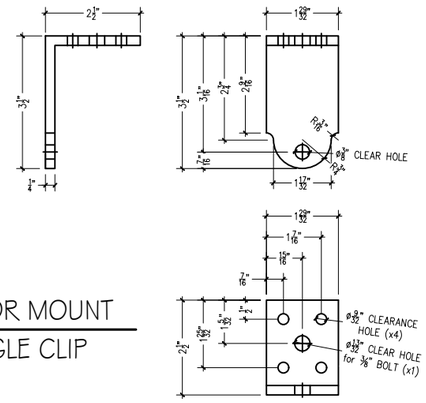
PAGE No.:
32 OF 51



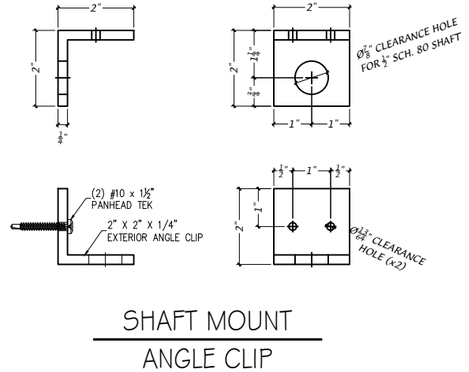
FIVE (5) BAY RIDGE VENT (QTY:2)

	ITEM	NOTES	QTY
	MOUNTING CLIPS	2X2X.25	6
	MOTOR MOUNT CLIPS	2X3.5X.25 W/ RADIUS	2
	RIDGE VENT ARMS	SINGLE	5
	ACTUATOR ARMS	SINGLE	2
	SHAFT	1/2" SCH. 80	1

RIDGE VENT MOTOR LOCATION AND SHAFT LENGTHS



MOTOR MOUNT ANGLE CLIP



SHAFT MOUNT ANGLE CLIP

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7-25-17	TJN

DRAWN BY: TYLER NEWHOUSE
PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

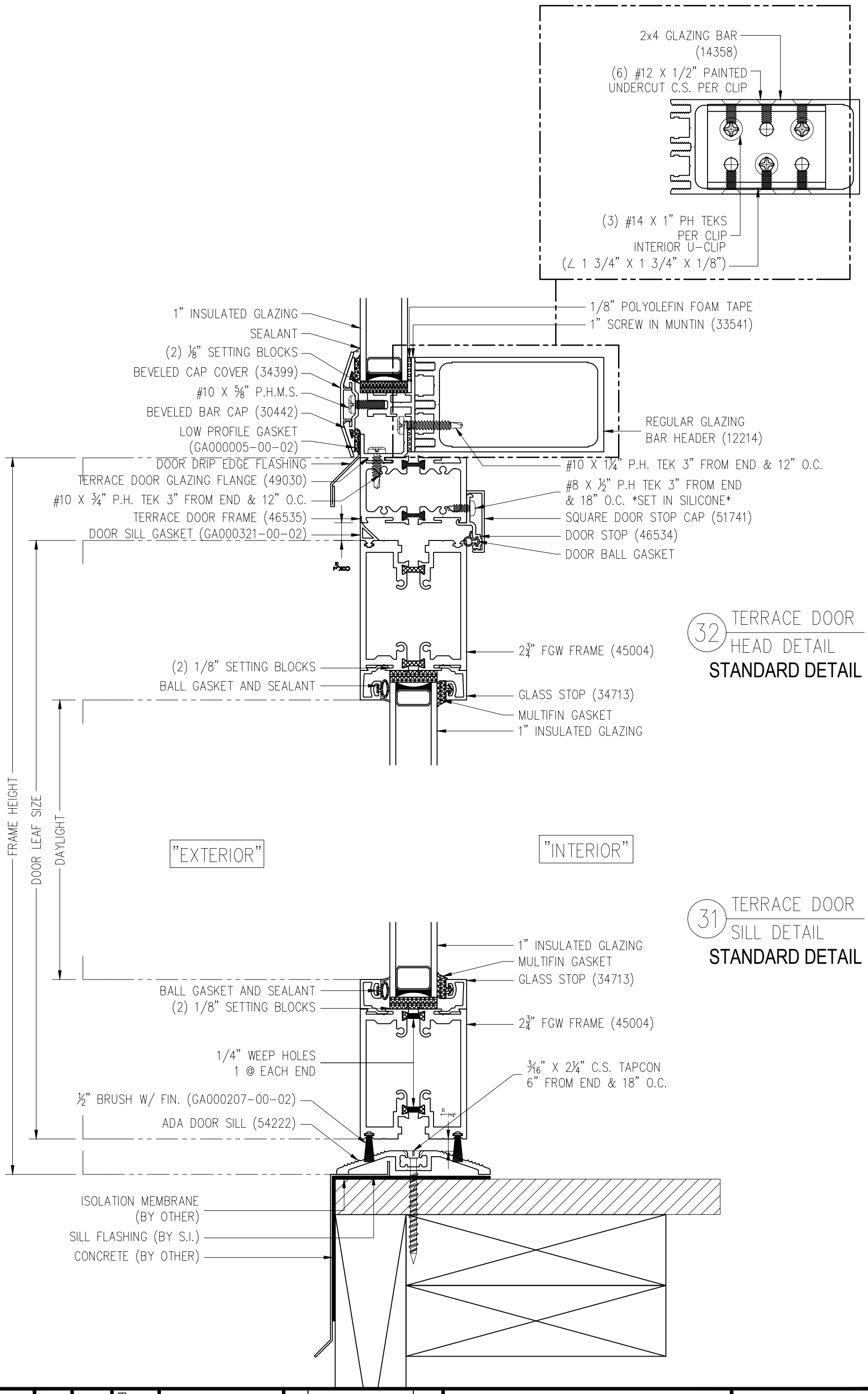
DRAWING SCALE: 3" = 1'-0"

JOB NO.: 17-04-173

QUOTE NO.: 98606

PAGE No.: 33 OF 51

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

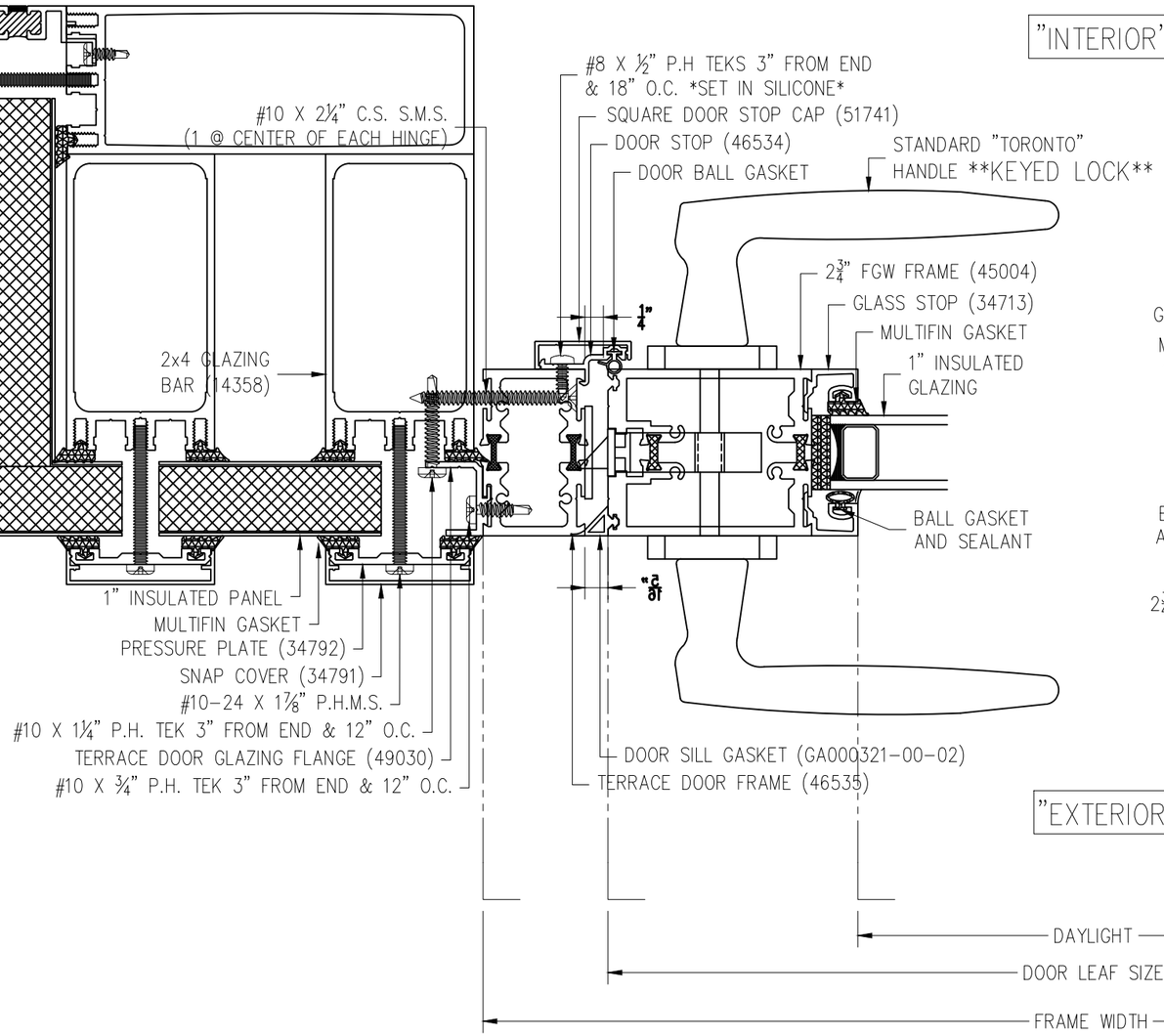


32 TERRACE DOOR HEAD DETAIL
STANDARD DETAIL

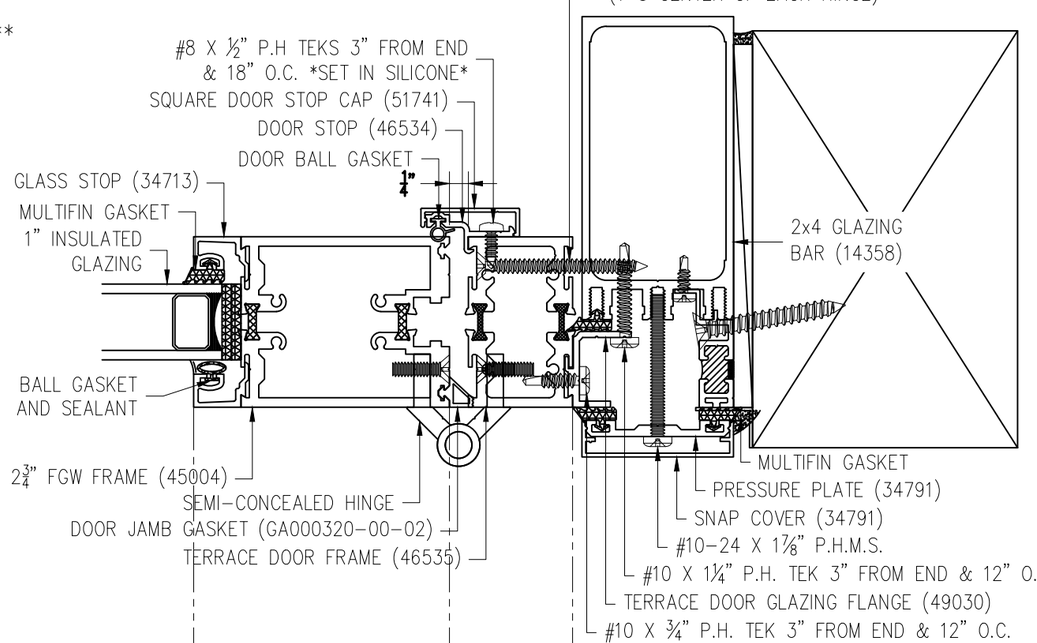
31 TERRACE DOOR SILL DETAIL
STANDARD DETAIL

PAGE No.: 34 OF 51	DRAWN BY: TYLER NEWHOUSE	**SOLAR DECATHLON 2017**
QUOTE NO.: 98606	PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)	UNIVERSITY OF MARYLAND
JOB NO.: 17-04-173	– 7-25-17 TJN	COLLEGE PARK, MD, USA 20742
DRAWING SCALE: 6" = 1'-0"	# DATE BY	SOLAR INNOVATIONS GLASS STRUCTURES
ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.		

33 TERRACE DOOR JAMB DETAIL
STANDARD DETAIL



34 TERRACE DOOR JAMB DETAIL
STANDARD DETAIL



SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7-25-17	TJN

DRAWN BY: TYLER NEWHOUSE
PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

DRAWING SCALE: 6" = 1'-0"

JOB NO.: 17-04-173

QUOTE NO.: 98606

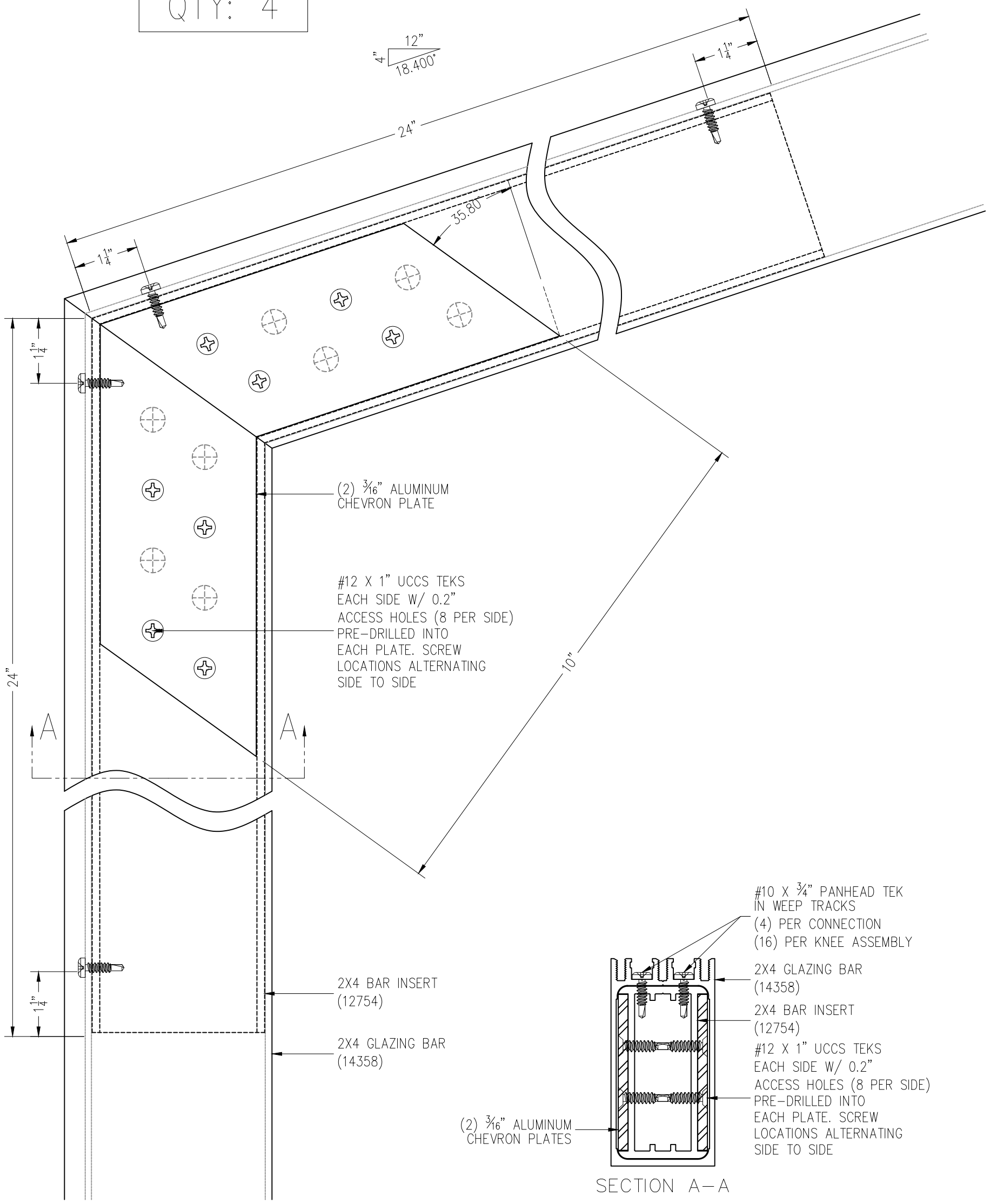
PAGE No.: 35 OF 51

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

A STANDARD STAGE 1 (EAVE) 2" X 4" KNEE ASSEMBLY

QTY: 4



SECTION A–A

–	7–25–17	TJN
#	DATE	BY

DRAWN BY: TYLER NEWHOUSE

PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

DRAWING SCALE: 6" = 1'-0"

JOB NO.: 17-04-173

QUOTE NO.: 98606

PAGE No.: 36 OF 51

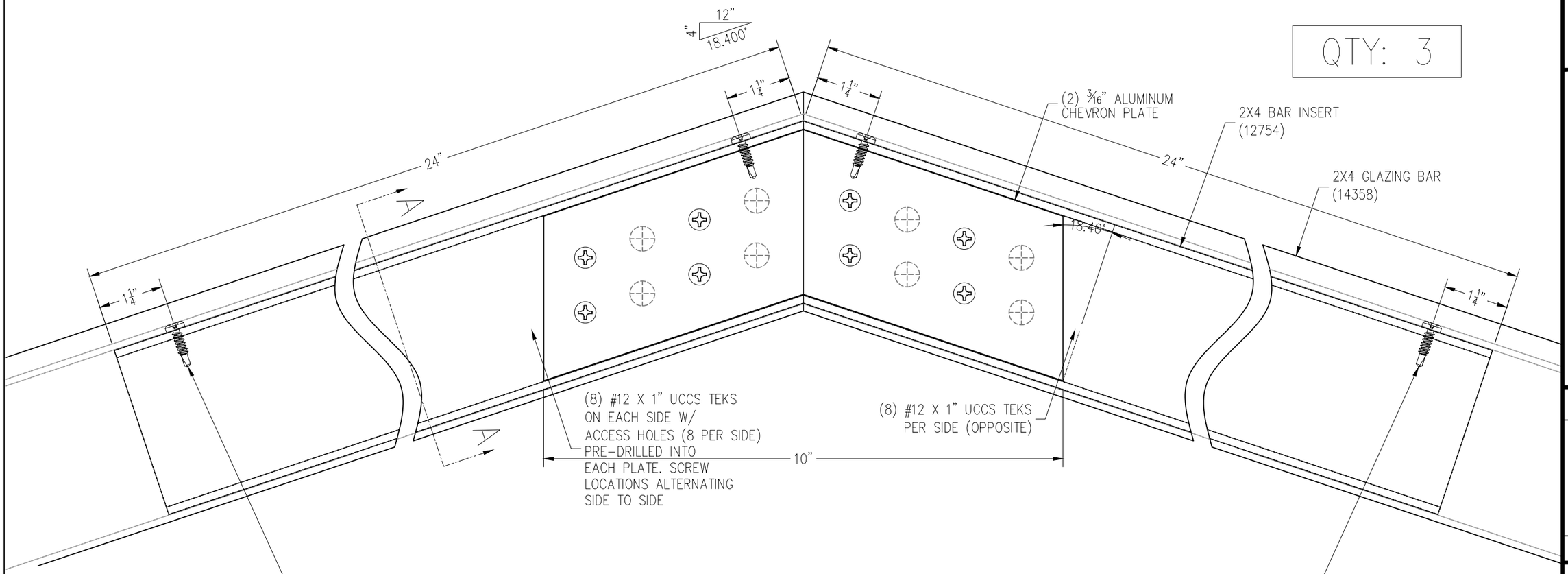
SOLAR DECATHLON 2017

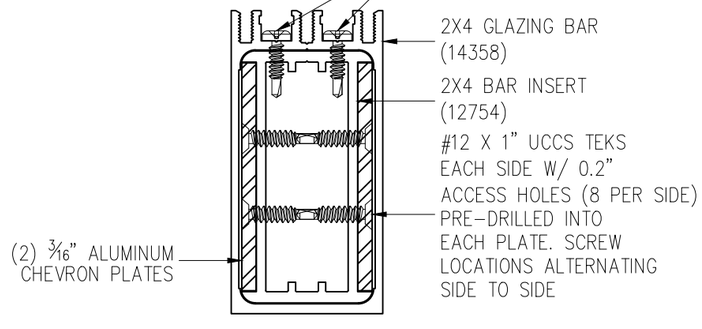
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

SOLAR INNOVATIONS® GLASS STRUCTURES

B STANDARD STAGE 1 (RIDGE) 2" X 4" KNEE ASSEMBLY

QTY: 3





SECTION A–A

SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7-25-17	TJN

DRAWN BY: TYLER NEWHOUSE
PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

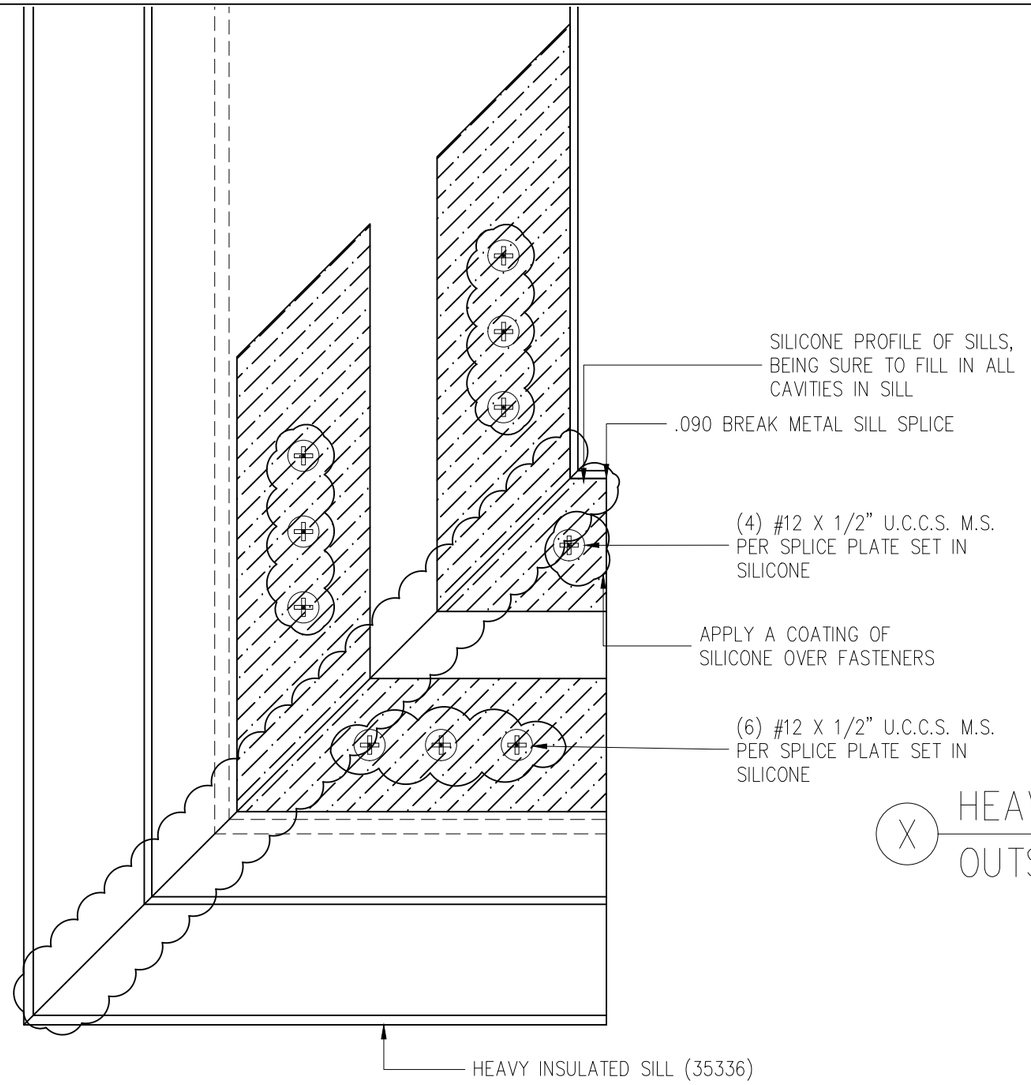
DRAWING SCALE: 6" = 1'-0"

JOB NO.: 17-04-173

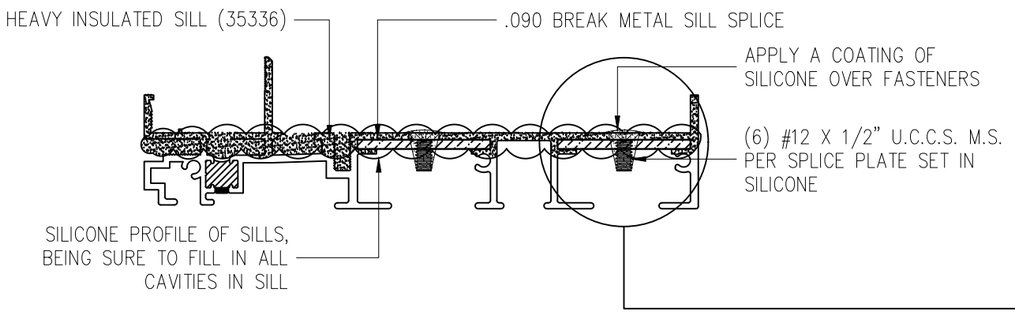
QUOTE NO.: 98606

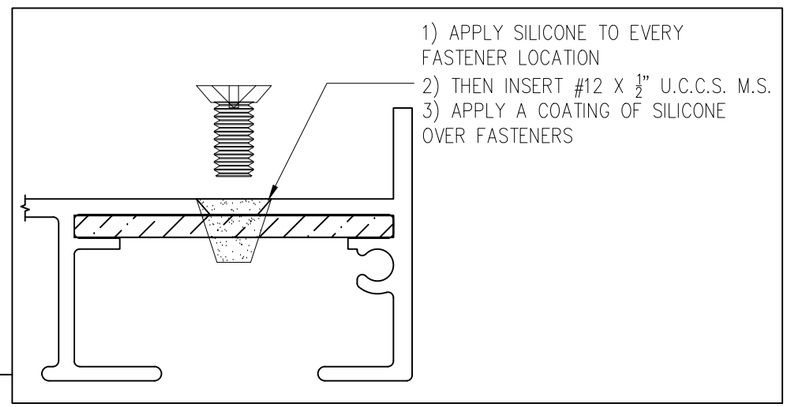
PAGE No.: 37 OF 51

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.



X HEAVY SILL OUTSIDE CORNER DETAIL





© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7–25–17	TJN

DRAWN BY: TYLER NEWHOUSE
PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

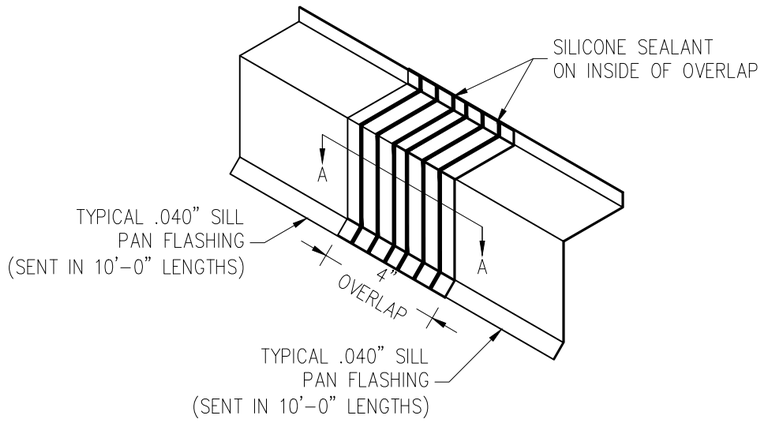
DRAWING SCALE: 6" = 1'-0"

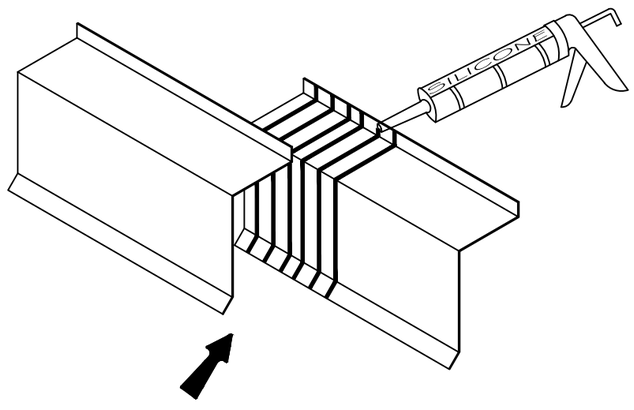
JOB NO.: 17-04-173

QUOTE NO.: 98606

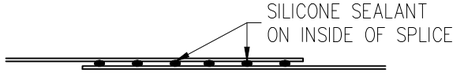
PAGE No.: 38 OF 51

6 BEADS OF SILICONE APPROX.
½" APART

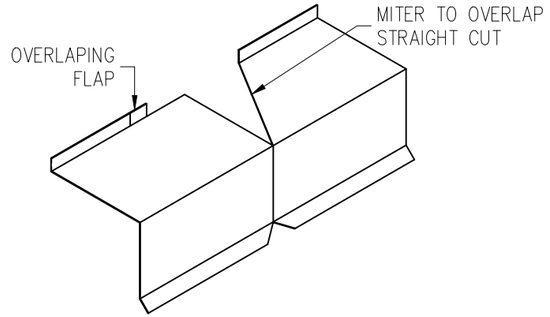


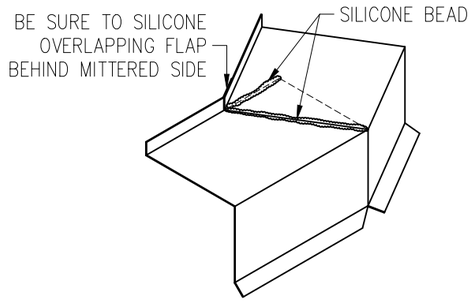


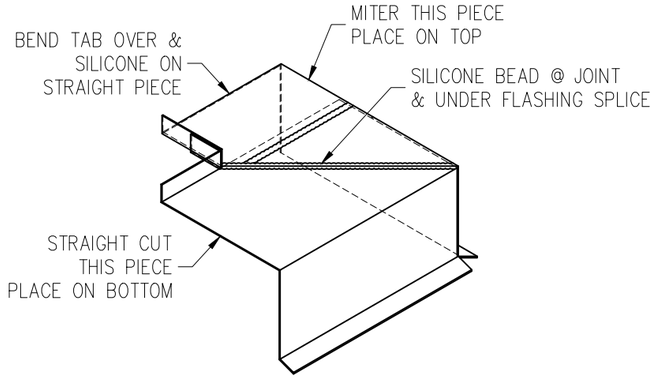
"TYPICAL STRAIGHT SILL PAN OVERLAP"



VIEW A-A







1 EXTERIOR FLASHING
FINISHED CORNER

SOLAR INNOVATIONS®
GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7-25-17	TJN

DRAWN BY:
TYLER NEWHOUSE

PROJECT MANAGER:
WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

DRAWING SCALE:
6" = 1'-0"

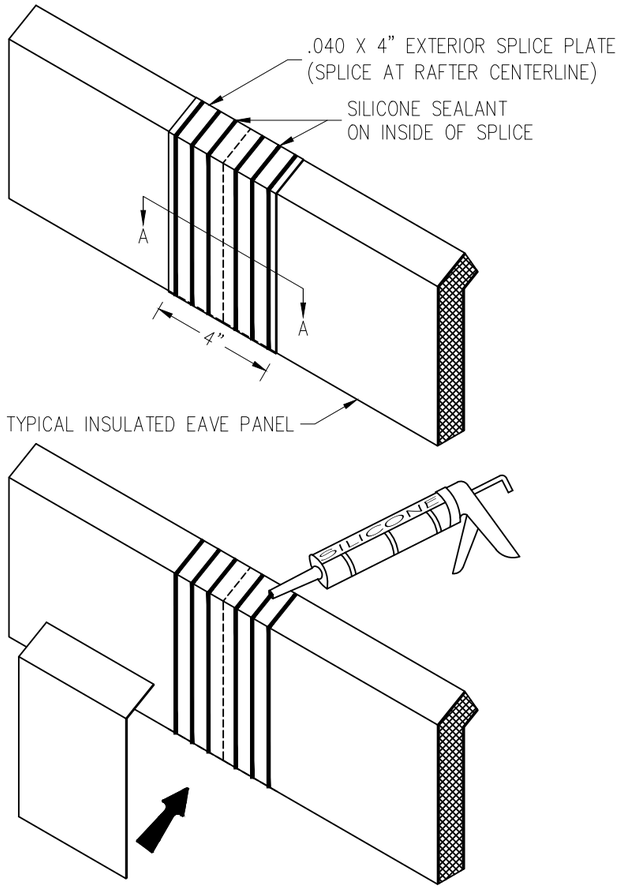
JOB NO.:
17-04-173

QUOTE NO.:
98606

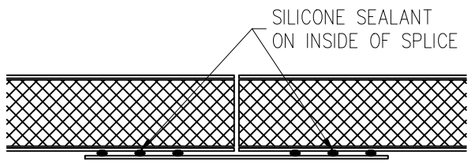
PAGE No.:
39 OF 51

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

3 BEADS OF SILICONE PER SIDE
OF SPLICE APPROX. ½" APART

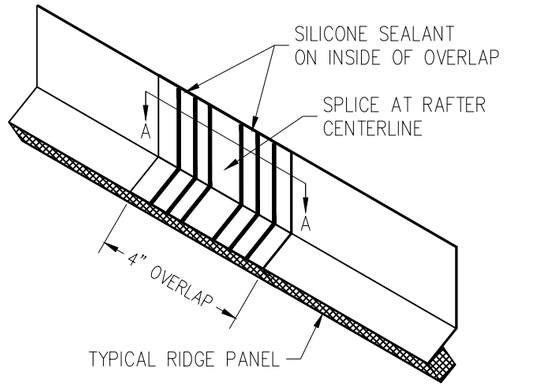


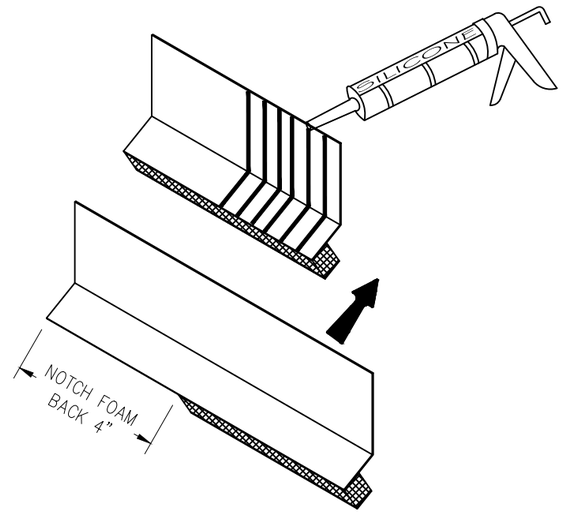
"TYPICAL EAVE PANEL SPLICE"



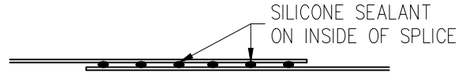
VIEW A-A

3 BEADS OF SILICONE PER SIDE
OF SPLICE APPROX. ½" APART





"TYPICAL RIDGE PANEL SPLICE"



VIEW A-A

SOLAR INNOVATIONS®
GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7–25–17	TJN

DRAWN BY:
TYLER NEWHOUSE

PROJECT MANAGER:
WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

DRAWING SCALE:
6" = 1'-0"

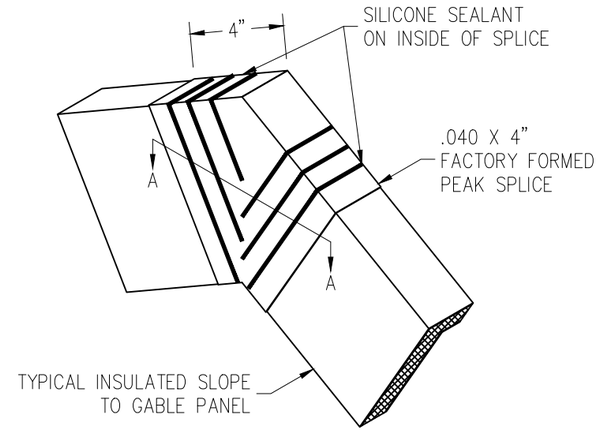
JOB NO.:
17-04-173

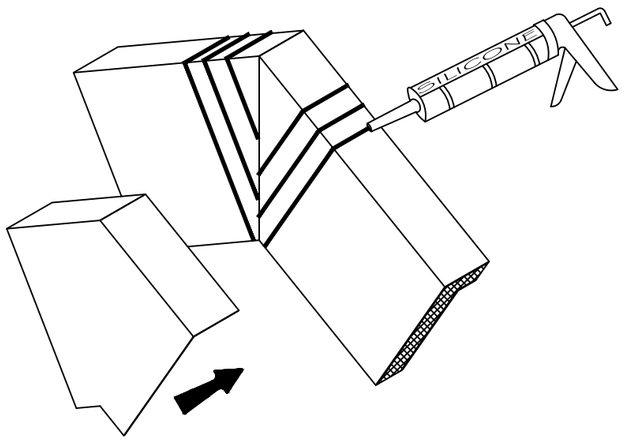
QUOTE NO.:
98606

PAGE No.:
40 OF 51

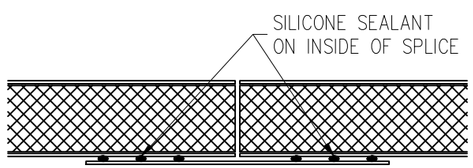
© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

3 BEADS OF SILICONE PER SIDE
OF SPLICE APPROX. ½" APART



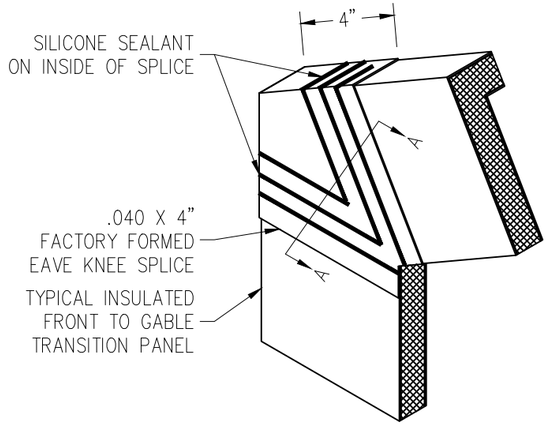


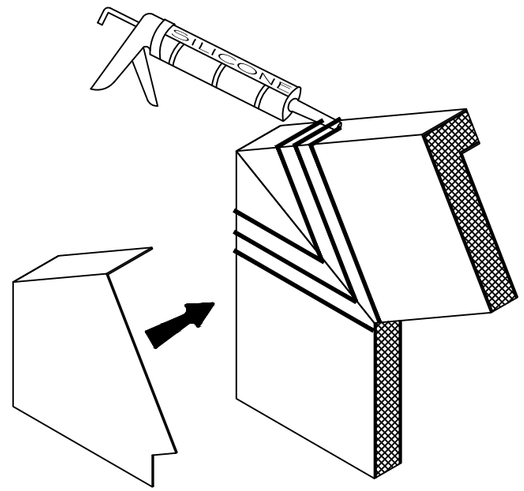
"SLOPE TO GABLE PEAK TRANSITION SPLICE"



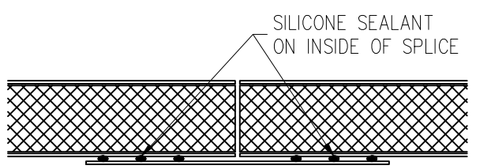
VIEW A-A

3 BEADS OF SILICONE PER SIDE
OF SPLICE APPROX. ½" APART





"VERTICAL TO SLOPE GABLE KNEE TRANSITION SPLICE"



VIEW A-A

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

SOLAR INNOVATIONS®
GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7–25–17	TJN

DRAWN BY:
TYLER NEWHOUSE

PROJECT MANAGER:
WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

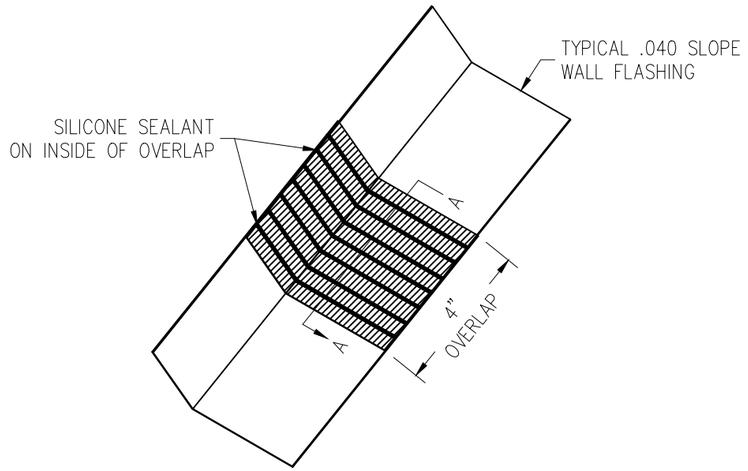
DRAWING SCALE:
6" = 1'-0"

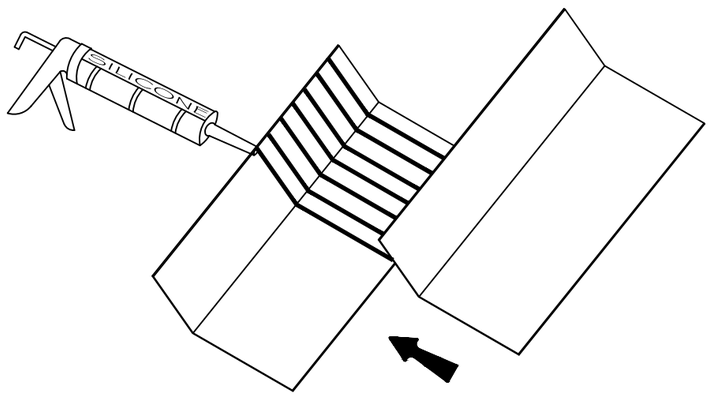
JOB NO.:
17-04-173

QUOTE NO.:
98606

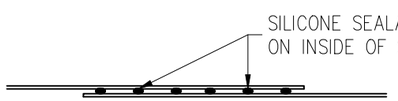
PAGE No.:
41 OF 51

6 BEADS OF SILICONE APPROX.
½" APART

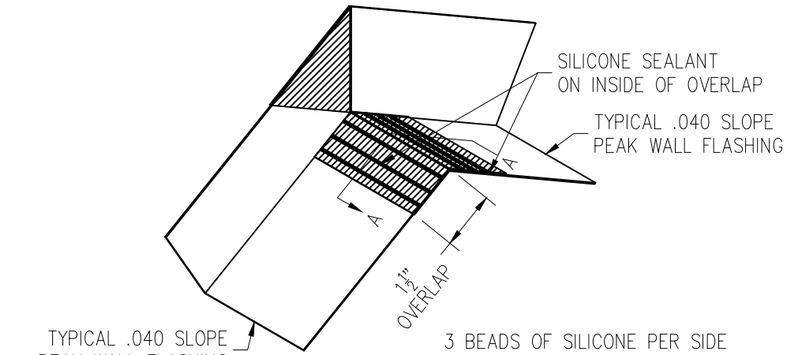




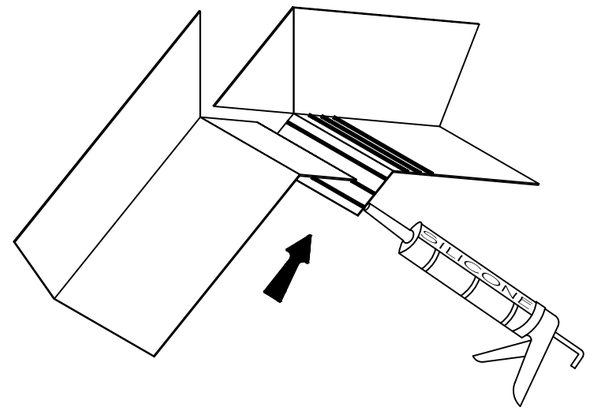
"SLOPE AT WALL FLASHING OVERLAP"



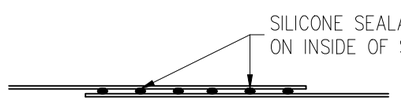
VIEW A-A



3 BEADS OF SILICONE PER SIDE
OF SPLICE APPROX. ½" APART



"PEAK SLOPE AT WALL FLASHING OVERLAP"



VIEW A-A

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

SOLAR INNOVATIONS®
GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7–25–17	TJN

DRAWN BY:
TYLER NEWHOUSE

PROJECT MANAGER:
WALTER KNIGHT (EXT. 3097)

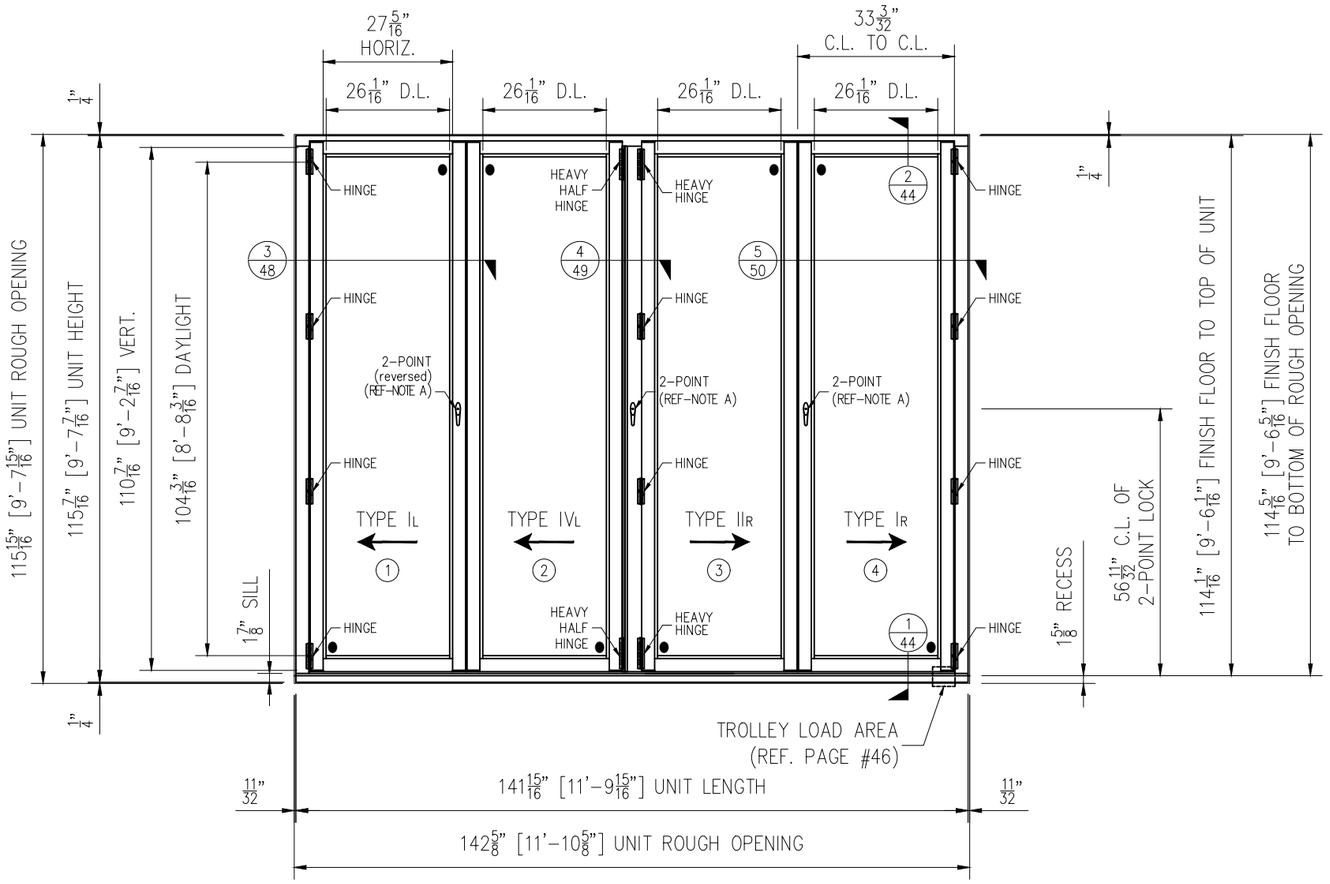
ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

DRAWING SCALE:
6" = 1'-0"

JOB NO.:
17-04-173

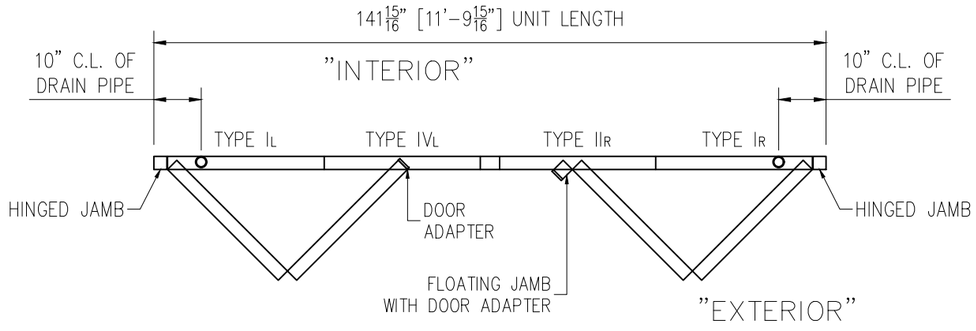
QUOTE NO.:
98606

PAGE No.:
42 OF 51



EXTERIOR ELEVATION UNIT B

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



PLAN VIEW

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

NOTE A:
2-POINT LOCKS ARE SHOWN ON THE EXTERIOR ELEVATION FOR REFERENCE ONLY ~ ACTUAL LOCATION IS INTERIOR

NOTE B:
FINISHED FLOOR CANNOT EXCEED ½" AT ANY POINT ~ THIS WOULD CAUSE INTERFERENCE WHEN OPERATING THE FGW

NOTE C:
● DESIGNATES LOCATION OF SETTING BLOCKS FOR CROSS BLOCKING GLAZING IN PANELS. REFER TO PAGE #51 FOR LOCATIONS.

MAX HEADER DEFLECTION .125"

MUST SHIM TO FIT EXISTING R.O.

SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
-	7-25-17	TJN

DRAWN BY: TYLER NEWHOUSE
PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

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

JOB NO.: 17-04-173

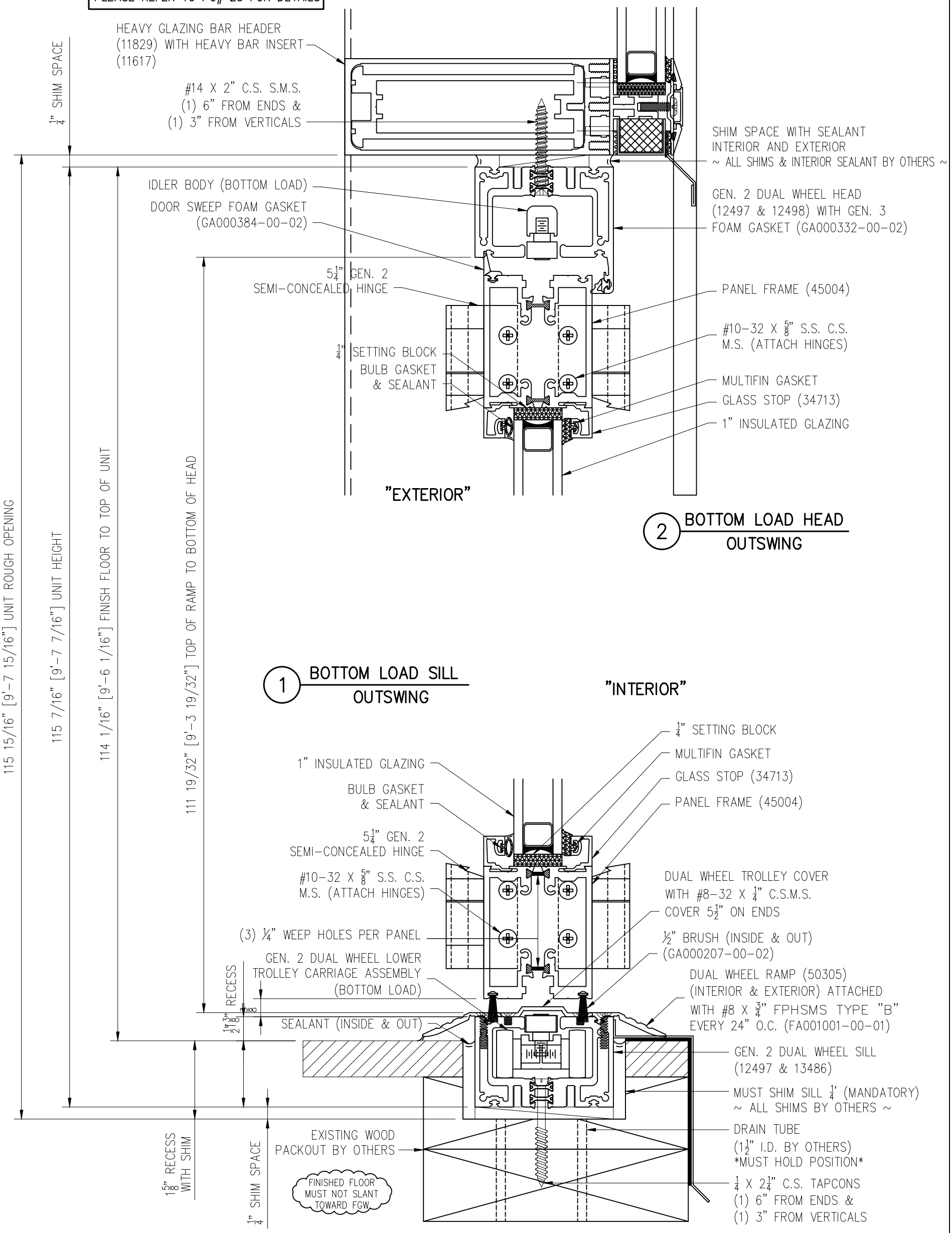
QUOTE NO.: 98606

PAGE No.: 43 OF 51

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

PLEASE REFER TO PG# 25 FOR DETAILS



~TYPICAL SECTION ~

** UNIT – "B" **

STANDARD DETAIL

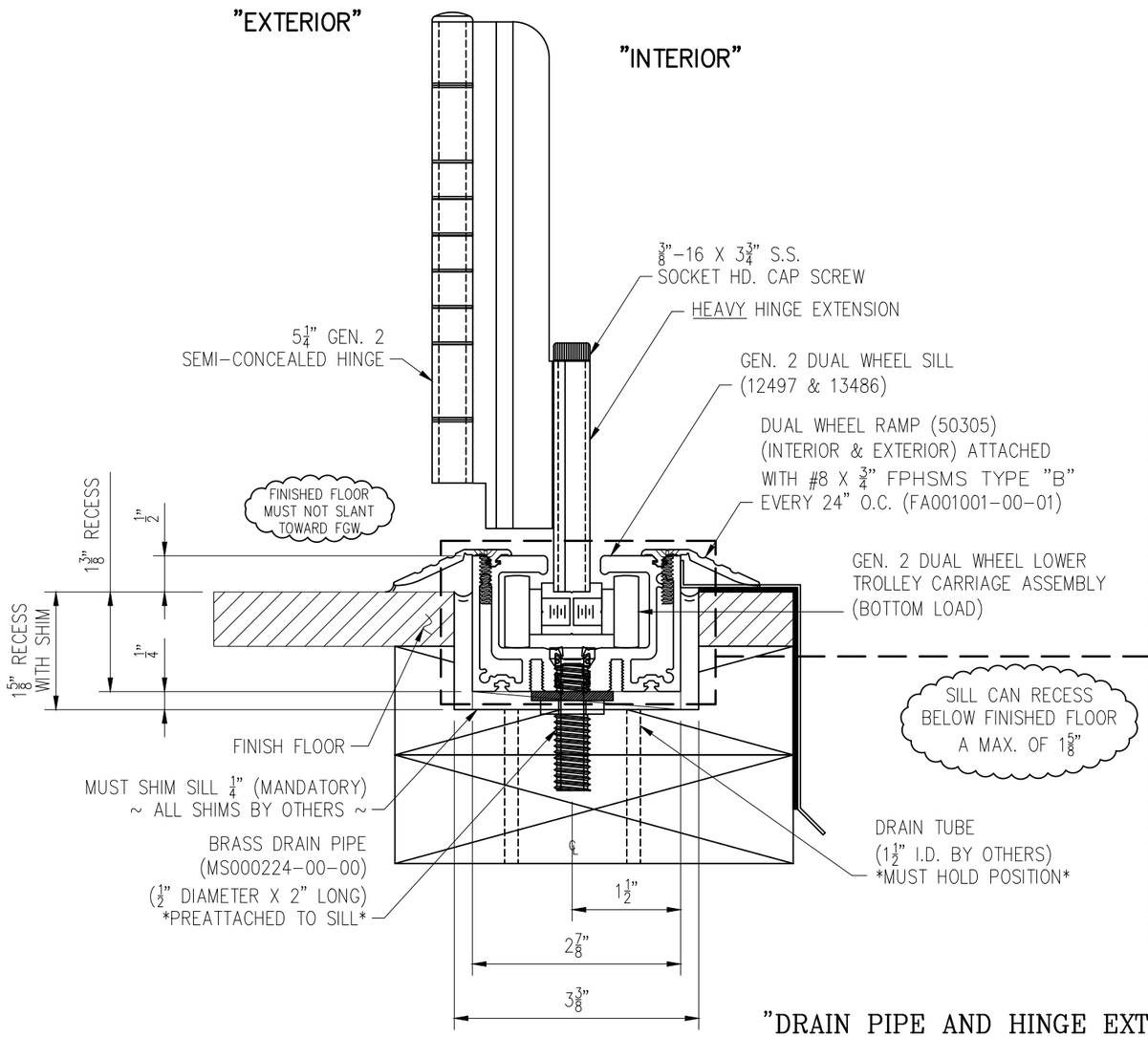
PAGE No.: 44 OF 51	DRAWN BY: TYLER NEWHOUSE	SOLAR DECATHLON 2017
QUOTE NO.: 98606	PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)	UNIVERSITY OF MARYLAND
JOB NO.: 17-04-173	– 7-25-17 TJN	COLLEGE PARK, MD, USA 20742
DRAWING SCALE: 6" = 1'-0"	# DATE BY	SOLAR INNOVATIONS GLASS STRUCTURES
ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.		

SOLAR INNOVATIONS

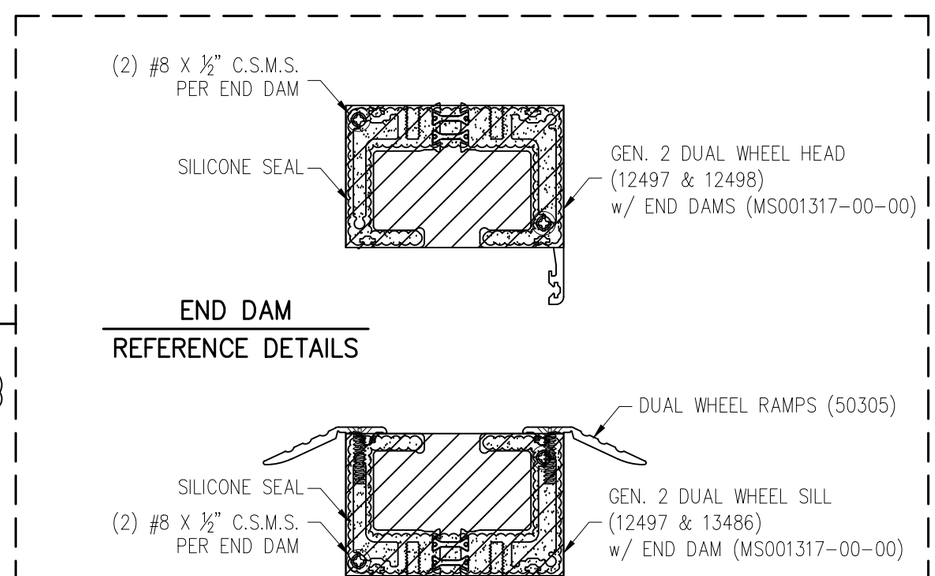
FOLDING GLASS WALL SYSTEMS

"FOLD-OUT: BOTTOM LOAD"

** UNIT – "B" **



"DRAIN PIPE AND HINGE EXTENSION REFERENCE DETAIL"



END DAM REFERENCE DETAILS

STANDARD DETAIL

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7-25-17	TJN

DRAWN BY: TYLER NEWHOUSE

PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

DRAWING SCALE: 6" = 1'-0"

JOB NO.: 17-04-173

QUOTE NO.: 98606

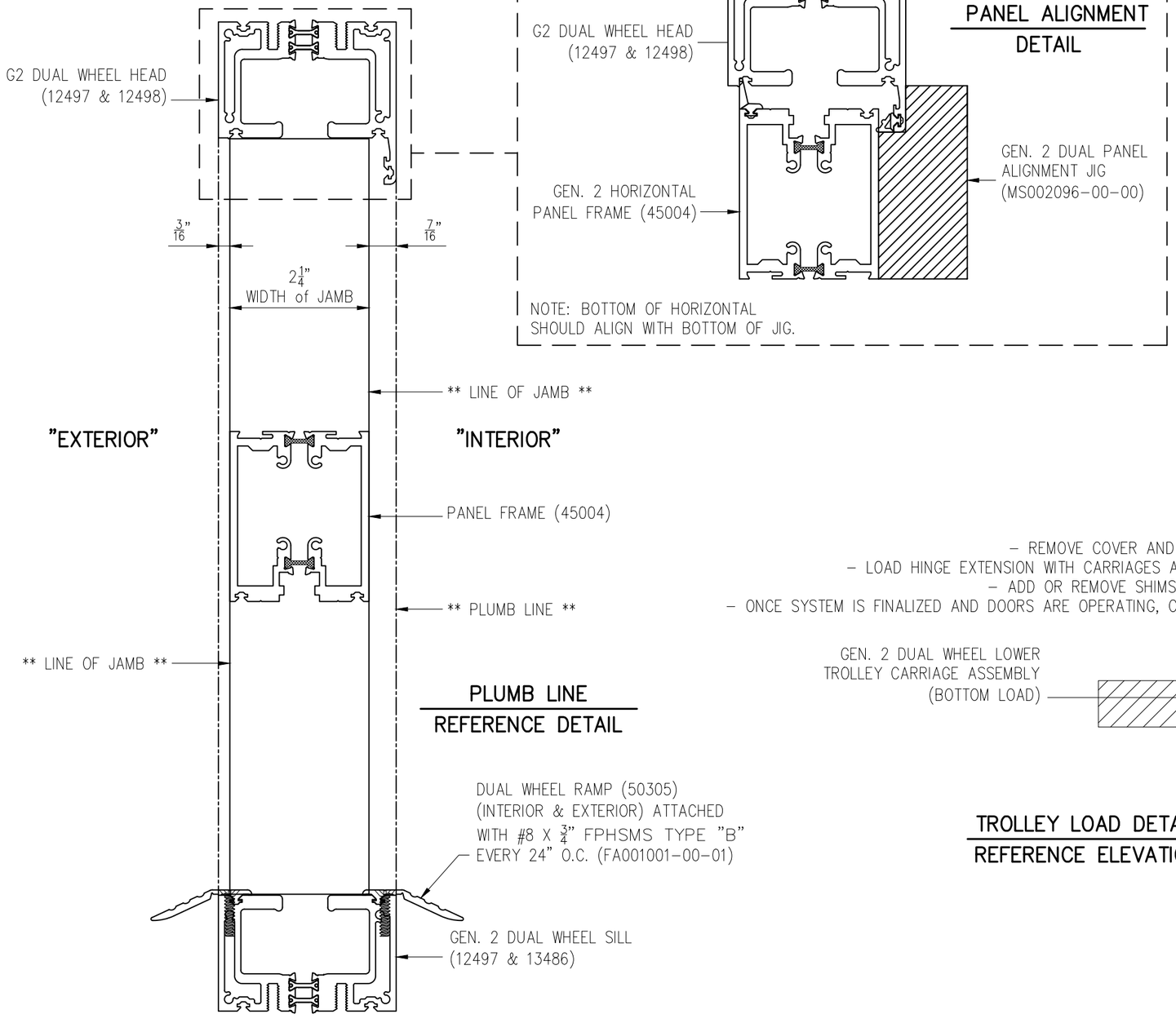
PAGE No.: 45 OF 51

SOLAR INNOVATIONS

FOLDING GLASS WALL SYSTEMS

"FOLD-OUT: BOTTOM LOAD"

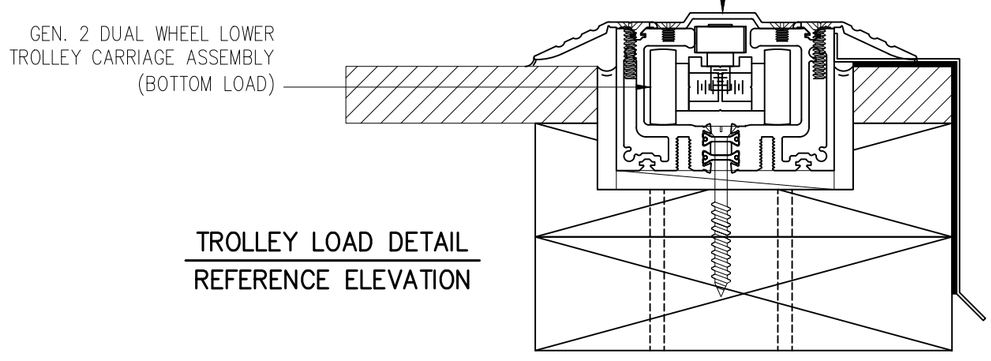
** UNIT – "B" **



PLUMB LINE
REFERENCE DETAIL

PANEL ALIGNMENT
DETAIL

IMPORTANT NOTE:
– REMOVE COVER AND FASTEN SILL TO SUBSTRATE
– LOAD HINGE EXTENSION WITH CARRIAGES AND FASTEN JAMBS AND SILL
– ADD OR REMOVE SHIMS IN JAMBS FOR ADJUSTMENT
– ONCE SYSTEM IS FINALIZED AND DOORS ARE OPERATING, COVER CAN BE RE-ATTACHED



TROLLEY LOAD DETAIL
REFERENCE ELEVATION

STANDARD DETAIL

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7-25-17	TJN

DRAWN BY: TYLER NEWHOUSE
PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

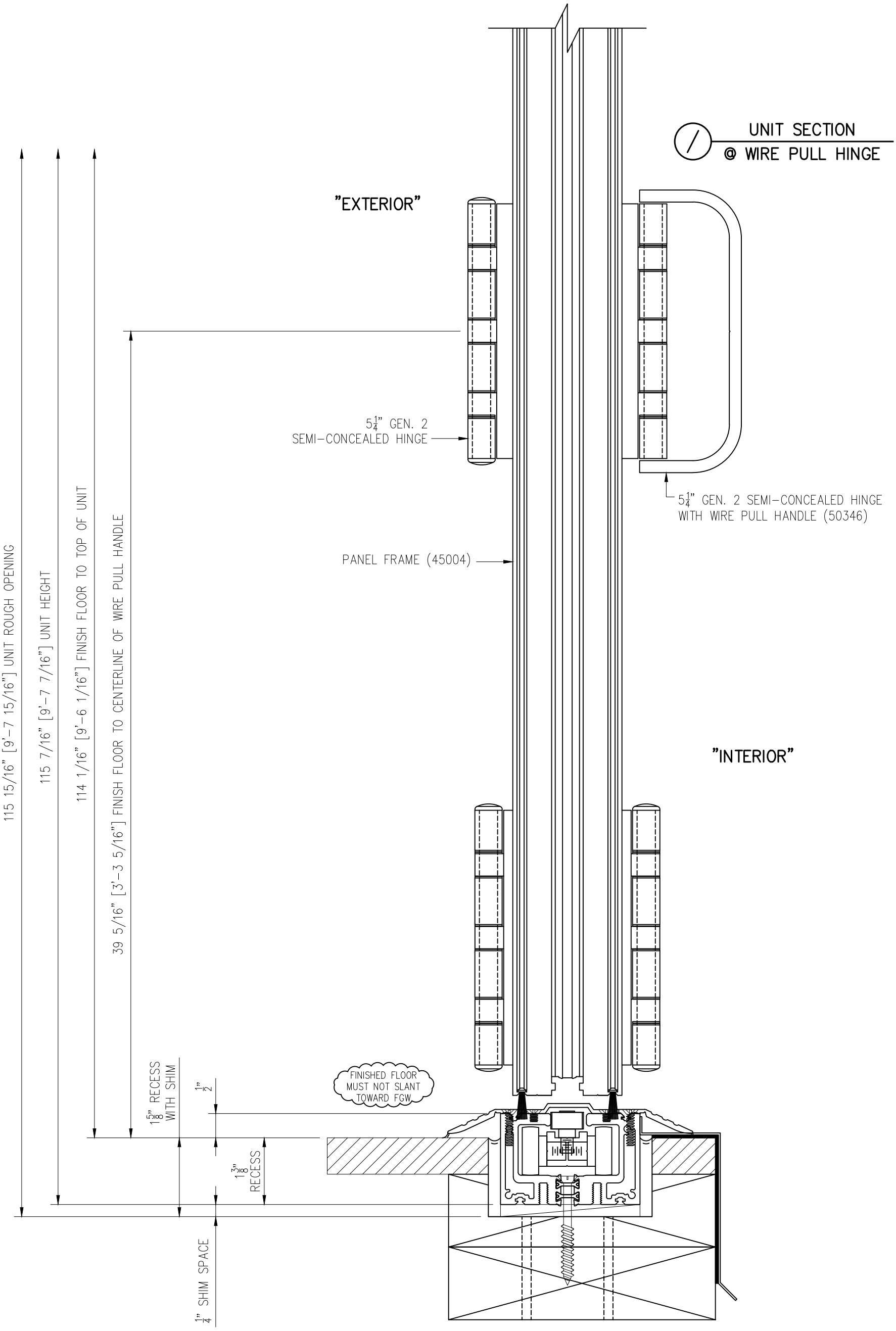
DRAWING SCALE: 6" = 1'-0"

JOB NO.: 17-04-173

QUOTE NO.: 98606

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

"WIRE PULL HANDLE REFERENCE DETAIL"



** UNIT – "B" **

STANDARD DETAIL

PAGE No.:	47 OF 51
QUOTE NO.:	98606
JOB NO.:	17-04-173
DRAWING SCALE:	6" = 1'-0"
	ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.
DRAWN BY:	TYLER NEWHOUSE
PROJECT MANAGER:	WALTER KNIGHT (EXT. 3097)

#	DATE	BY
–	7–25–17	TJN

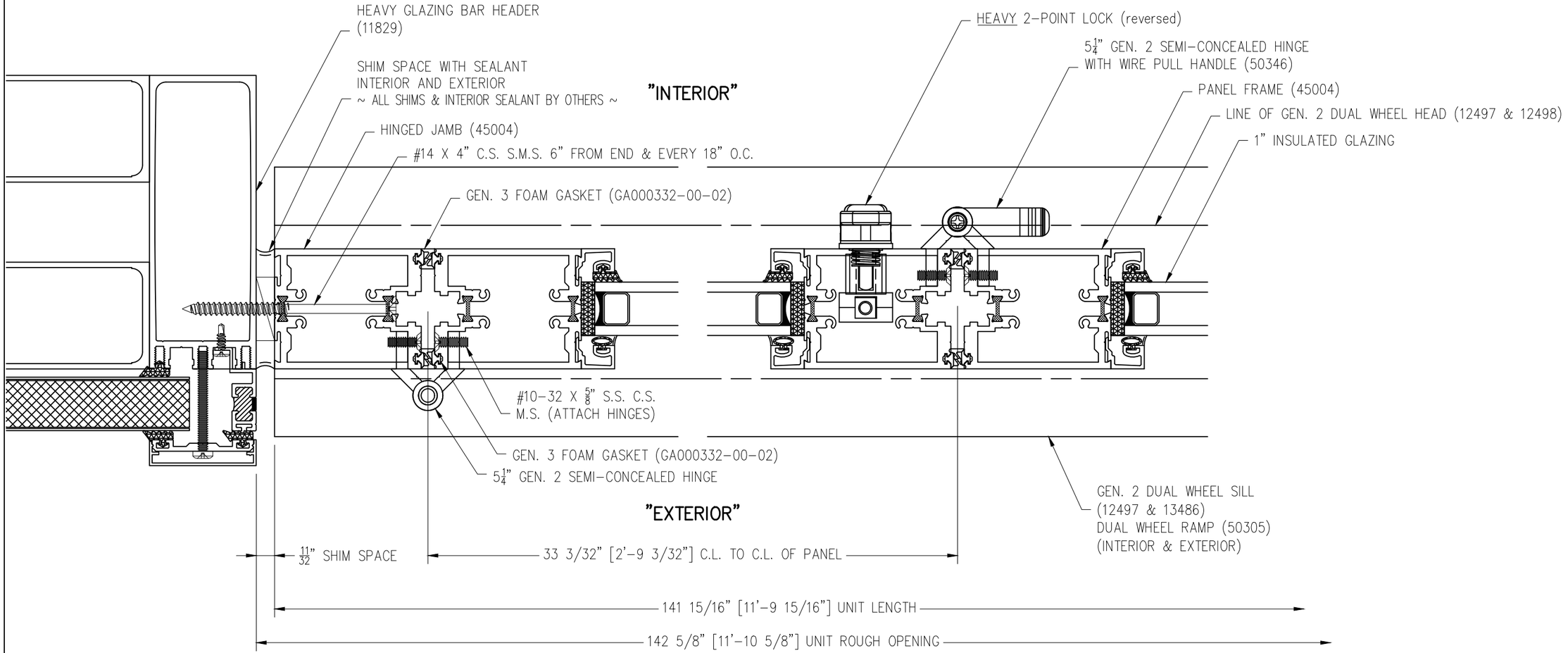
SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

SOLAR INNOVATIONS® GLASS STRUCTURES

PLEASE REFER TO PG# XX FOR DETAIL

3 UNIT SECTION @ HINGED JAMB

IMPORTANT INSTALLATION NOTE:
DO NOT "FINISH" IN FOLDING GLASS WALL JAMBS BEFORE TESTING UNIT FIT. REMOVAL OR ADDITION OF SHIMS MAY BE REQUIRED BY OTHERS.



** UNIT – "B" **

STANDARD DETAIL

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	–	DATE	BY
		7-25-17	TJN

DRAWN BY: TYLER NEWHOUSE
PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

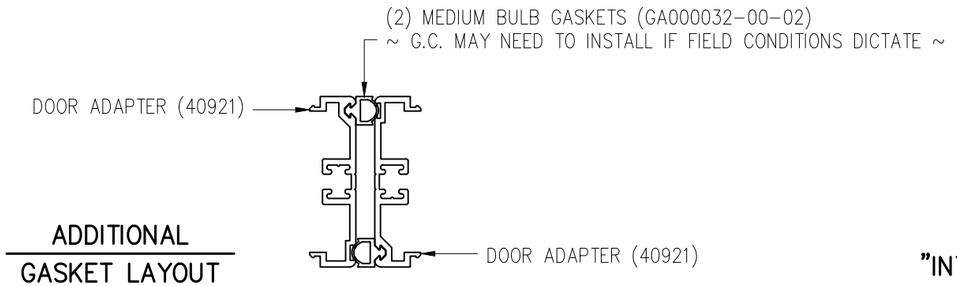
ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

DRAWING SCALE: 6" = 1'-0"

JOB NO.: 17-04-173

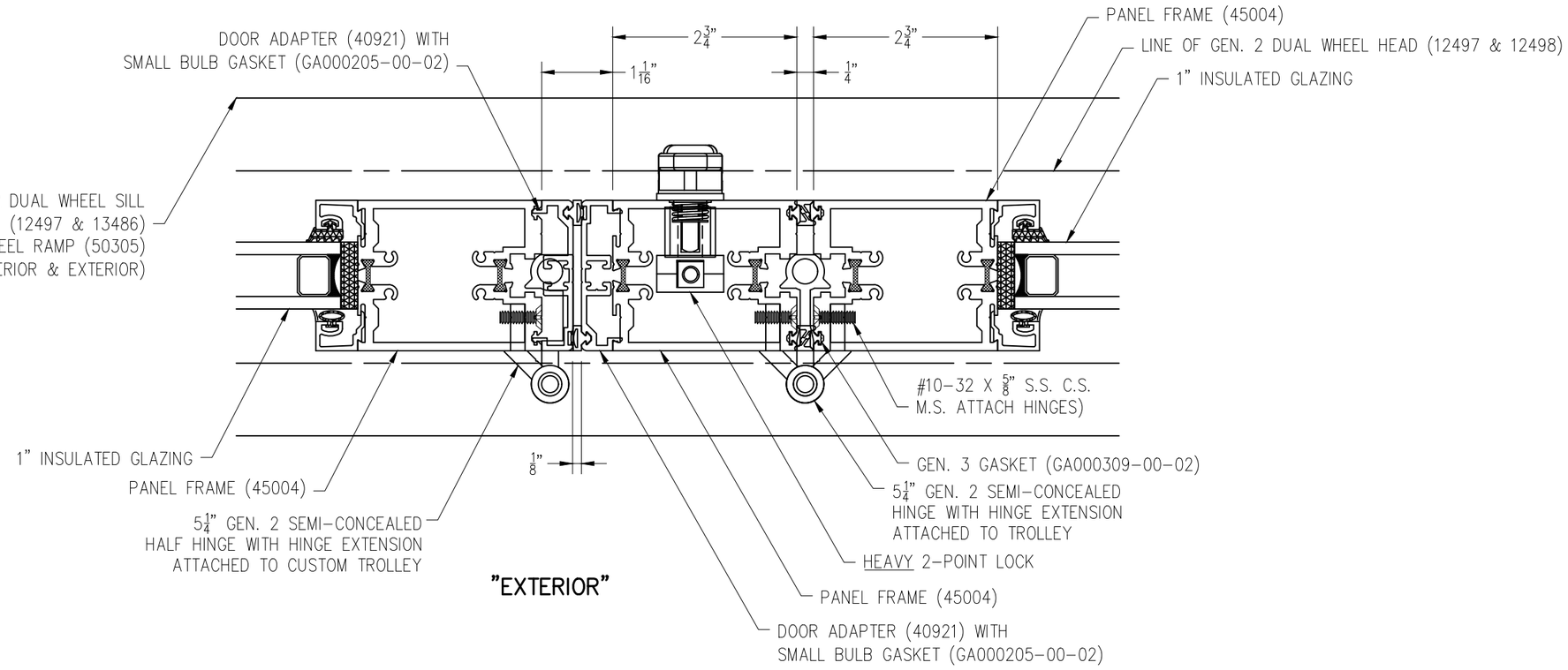
QUOTE NO.: 98606

PAGE No.: 48 OF 51



ADDITIONAL
GASKET LAYOUT

4 UNIT SECTION
@ EVEN ON EVEN



** UNIT – "B" **

STANDARD DETAIL

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7-25-17	TJN

DRAWN BY: TYLER NEWHOUSE
PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

DRAWING SCALE: 6" = 1'-0"

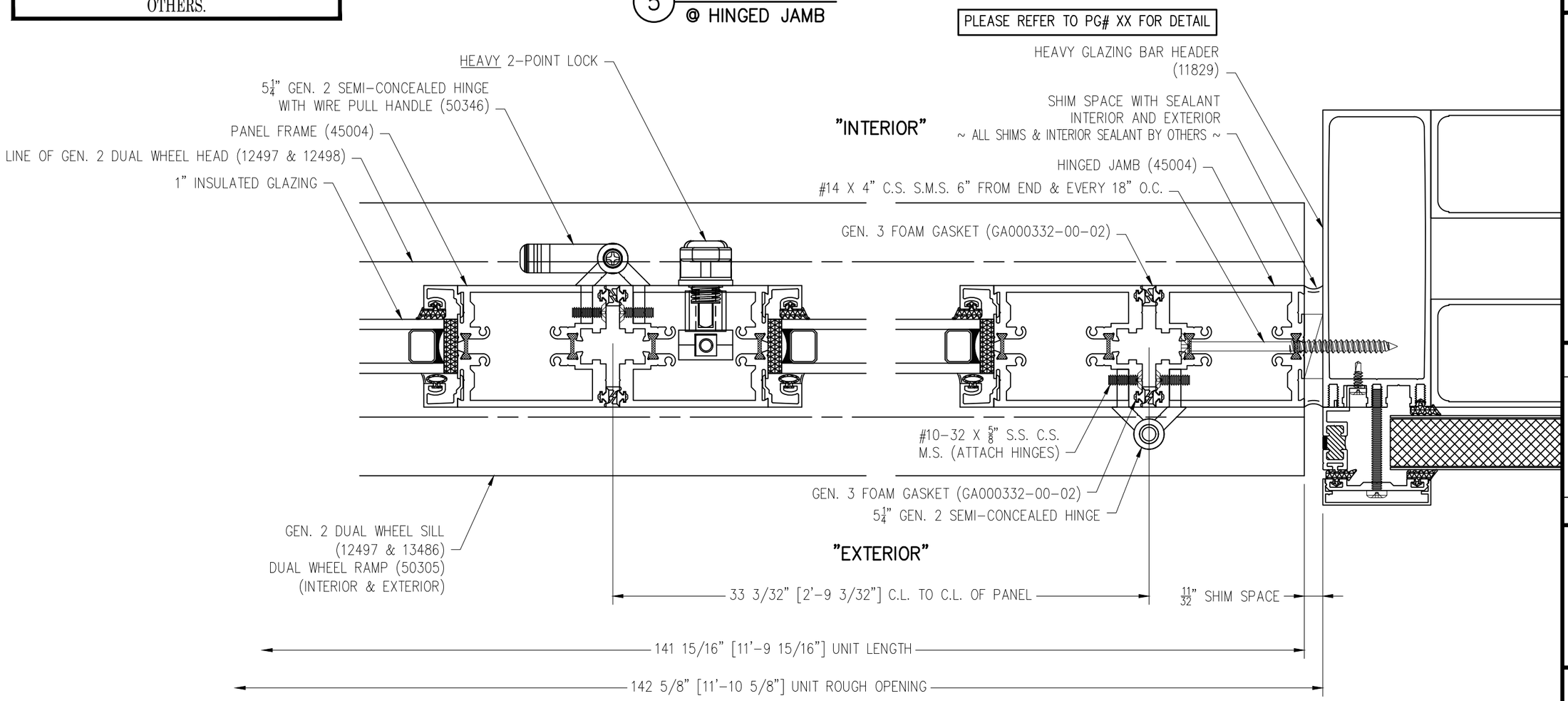
JOB NO.: 17-04-173

QUOTE NO.: 98606

PAGE No.: 49 OF 51

IMPORTANT INSTALLATION NOTE:
DO NOT "FINISH" IN FOLDING GLASS WALL JAMBS BEFORE TESTING UNIT FIT. REMOVAL OR ADDITION OF SHIMS MAY BE REQUIRED BY OTHERS.

5 UNIT SECTION @ HINGED JAMB



** UNIT – "B" **

STANDARD DETAIL

© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7-25-17	TJN

DRAWN BY: TYLER NEWHOUSE
PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

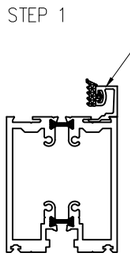
DRAWING SCALE: 6" = 1'-0"

JOB NO.: 17-04-173

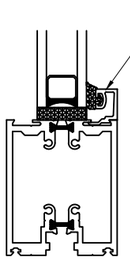
QUOTE NO.: 98606

PAGE No.: 50 OF 51

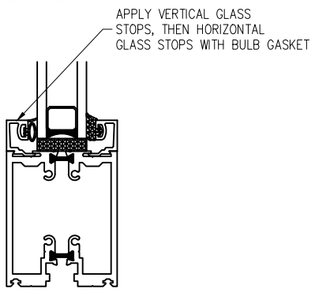
STEP 1



STEP 2

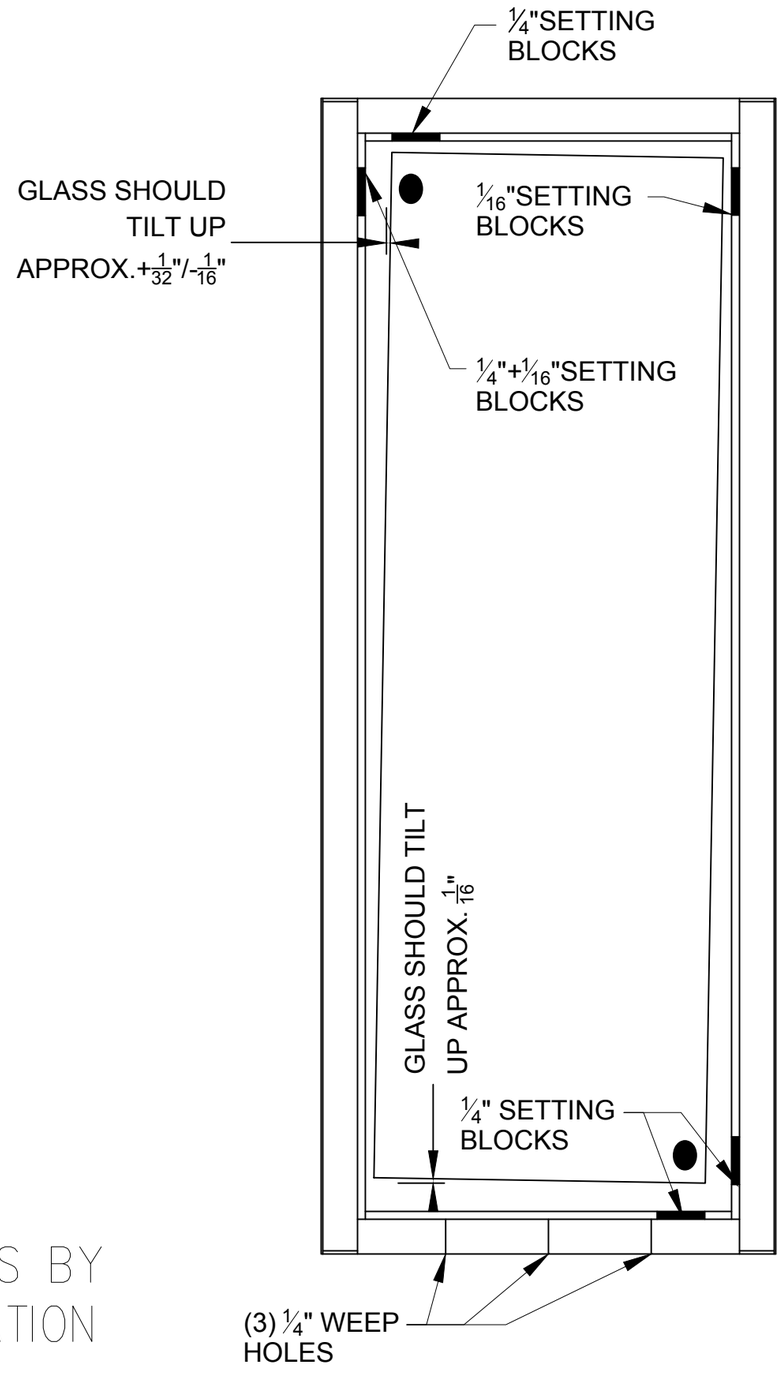


STEP 3



NOTE:

FOR FIELD INSTALLATION OF GLASS BY OTHERS ALSO REFER TO INSTALLATION MANUAL.



© 2017, Solar Innovations, Inc. – All Rights Reserved. These plans are the property of Solar Innovations, Inc. Any use or reproduction of these plans, in whole or in part, without the written permission of Solar Innovations, Inc. is forbidden.

SOLAR INNOVATIONS® GLASS STRUCTURES

SOLAR DECATHLON 2017
UNIVERSITY OF MARYLAND
COLLEGE PARK, MD, USA 20742

#	DATE	BY
–	7–25–17	TJN

DRAWN BY: TYLER NEWHOUSE
PROJECT MANAGER: WALTER KNIGHT (EXT. 3097)

ALL DRAWINGS ARE VIEWED FROM THE EXTERIOR LOOKING IN.

DRAWING SCALE: 1" = 1'-0"

JOB NO.: 17-04-173

QUOTE NO.: 98606

PAGE No.: 51 OF 51

GENERAL NOTES & DESIGN CRITERIA

DESIGN LOADS:

- DESIGN LOADS PER 2015 INTERNATIONAL RESIDENTIAL CODE PER ARCH DWGS.
- ROOF LOADS: 35 PSF LIVE, 55 PSF DEAD, 90 PSF TOTAL. LOAD DEFLECTION L/360 RECOMMENDED & L/240 MAX ALLOWABLE DEFLECTION.
- FLOOR LOADS: 50 PSF LIVE, 15 PSF DEAD, 65 PSF TOTAL LOAD
- WIND: V= 115 MPH, PRESUMPTIVE EXPOSURE C.
- SEISMIC: DESIGN CATEGORY: B

FRAMING MEMBERS:

- 2x LET-INS, WALL & ROOF LUMBER SPLINES, & HEADERS, IN-GRADE BASE DESIGN VALUES, SPRUCE-PINE-FIR (SPF) SPECIES, Fb=875 PSI, Ft=450 PSI, Fc PERP.=425 PSI, Fc PARALLEL = 1150 PSI, Fv=70 PSI, E=1,400,000 PSI, GRADE NO.2 OR BETTER, U.S. DOMESTIC OR CANADIAN.
- COLUMN, BEAM, OR HEADER PRODUCT, LAMINATED VENEER LUMBER (LVL), MICRO=LAM BY TRUSJOIST MACMILLAN, Fb = 2600 PSI, E = 1,900,000 PSI, Fc PERP. = 750 PSI (PARALLEL TO GLUE LINE), Fc PARALLEL = 2510 PSI, Fv = 285 PSI (HORIZ. SHEAR PERP. TO GLUE LINE), G = 118,750 PSI (SHEAR MOD. OF ELASTICITY).
- BEAM, HEADER, OR RIM JOIST PRODUCT, LAMINATED STRAND LUMBER (LSL),TIMBER STRAND LSL BY TRUSJOIST MACMILLAN, Fb = 1700 PSI, E = 1,300,000 PSI, Fc PERP = 680 PSI (PARALLEL TO WIDE FACE OF STRANDS), Fc PERP. = C PSI (PERP. TO WIDE FACE OF STRANDS), Fc PARALLEL = 1400 PSI, Fv = 400 PSI (TO WIDE FACE OF STRANDS), G = 81,250 PSI (SHEAR MOD. OF ELASTICITY).
- BEAMS OR POSTS, GLUE-LAMINATED (GLULAM) WOOD, DOUGLAS FIR (D.F.) SPECIES, ARCHITECTURAL GRADE, COMBINATION SYMBOL 24F-V4 DF/DF, Fb =2400 PSI IN TENSION ZONE AND 1850 PSI IN COMPRESSION ZONE, Fc PERP. = 650 PSI (IN TENSION OR COMPRESSION FACES), Fv PARALLEL = 240 PSI, E = 1,800,000 PSI, DOMESTIC OR CANADIAN.

SIP SCREWS:

PANEL SCREWS ARE 0.190" SHANK DIA. CASE HARDENED AND TEMPERED CARBON STEEL (2.750" THREAD LENGTH) WITH PANCAKE HEAD SCREW WITH INTERNAL SCREW DRIVE WITH 2" DIA. GALVALUME STEEL PRESSURE PLATE AT SPACING SHOWN. IF SPACING NOT INDICATED, SUCH SHALL BE 12" O.C. SPECIAL WIND PRESSURES MAY PERMIT CLOSER TOGETHER OR FARTHER APART SPACINGS. FASTENERS ARE TRUFAST BRYAN, OH PART NO. SIPTP (OR SIPLD OR SIPHD IF SPECIFIED ON DRAWINGS & DETAILS). FASTENERS ARE REQUIRED TO PENETRATE A MINIMUM OF ½" TO 2" PREFERRED INTO SUITABLY ATTACHED WOOD NAILERS, BEAMS, OR OTHER WOOD SUPPORT MEMBERS. ALTERNATE SIP SCREWS MAY BE USED IF APPROVED BY MM&I.

REVIEWING CLIENT APPROVAL DRAWINGS:

WHEN REVIEWING THESE DRAWINGS, BEGIN BY CHECKING THE FOLLOWING:

- CHECK AND CONFIRM THAT ALL OVERALL DIMENSIONS MATCH THOSE OF THE ARCHITECTURAL SET OF PLANS ISSUED FOR THE PROJECT.
- IF THERE IS A SIP WALL PANEL PACKAGE FOR THIS PROJECT, THE SIP WALL PANELS WILL BE SHOWN ON A KEYED FLOOR PLAN SEPARATED INTO FIRST AND SECOND FLOORS (WHEN NECESSARY). THE SIP WALL PANELS WILL BE CUT INTO LENGTHS THAT BEST SUIT RENEGADE'S MANUFACTURING. EACH PANEL WILL BE LABELED. NOTE THAT SOME WALL LENGTHS WILL BE SHORTER DUE TO CORNER LAPS AND PANEL THICKNESS. CHECK SIP PANEL THICKNESS, CORNER LAPS AND SIP WALL LENGTHS AND HEIGHTS.
- CHECK THAT ALL WINDOW AND DOOR ROUGH OPENINGS ARE CORRECT SIZES AND THAT THEY ARE LOCATED AND DIMENSIONED CORRECTLY.
- CHECK LOCATIONS OF ELECTRICAL CHASES. ADD NOTES TO THE PLANS REGARDING ANY CHANGES OR ADDITIONS TO ELECTRICAL CHASES.
- IF THERE ARE SIP ROOF PANELS FOR THIS PROJECT, CHECK ROOF PITCHES, RIDGE CONFIGURATION/LAYOUT AND OVERHANGS AT EAVES AND GABLES. IF THERE ARE SKYLIGHTS, CHECK THE ROUGH OPENING SIZES AND LOCATIONS.

THESE DRAWINGS ARE TO BE REVIEWED BY THE OWNER/CONTRACTOR AND APPROVED CONFIRMING ALL DIMENSIONS. IF THERE ARE ANY CHANGES/CORRECTIONS, NOTE THEM ON THESE DRAWINGS AND FORWARD TO MM&I FOR REVISIONS.

REVISION POLICY:

MM&I UNDERSTANDS THAT SOME PROJECTS MAY REQUIRE ALTERATIONS. WE WILL DO OUR BEST TO HONOR YOUR CHANGES AND/OR ADJUSTMENTS, WITHIN REASON. IT SHOULD BE UNDERSTOOD THAT EACH CUSTOMER INITIATED CHANGE TO SHOP DRAWINGS MAY RESULT IN A COST REVIEW, ADDITIONAL CHARGES AND MAY AFFECT DELIVERY SCHEDULE.

VENTILATION NOTE:

A MECHANICAL VENTILATION SYSTEM IS REQUIRED TO PROVIDE AIR MOVEMENT & REMOVE HUMIDITY. EXCESS HUMIDITY IN THE BUILDING COULD RESULT IN A BUILD UP OF WATER VAPOR IN UNWANTED AREAS CAUSING SEVERE DAMAGE TO THE STRUCTURAL INSULATED PANELS OR OTHER BUILDING MATERIALS.

RENEGADE SIP NOTES

GENERAL/STANDARD NOTES:

BEFORE INSTALLATION OF YOUR RENEGADE PANELS, MM&I REQUIRES THAT YOU ARE FAMILIAR WITH THE PROVIDED RENEGADE INSTALLATION AND CONSTRUCTION GUIDE.

MM&I MAKES EVERY EFFORT TO SUPPLY COMPLETE PANEL LAYOUT DRAWINGS FROM THE ORIGINAL ARCHITECTURAL AND/OR STRUCTURAL DRAWINGS PROVIDED TO US. IT IS THE RESPONSIBILITY OF THE CONTRACTOR AND/OR OWNER TO CHECK AND VERIFY ALL DIMENSIONS, NOTES AND DETAILS ON THE PANEL DRAWINGS FOR COMPATIBILITY WITH THE ARCHITECTURALS AND OTHER CONSULTANTS' DRAWINGS AND EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF WORK.

THE CONTRACTOR ASSUMES RESPONSIBILITY FOR COORDINATING THE VARIOUS OTHER CONSTRUCTION DOCUMENTS WITH THE CURRENT MM&I PANEL LAYOUT DRAWINGS TO ASSURE CODE COMPLIANCE AND CORRECTNESS OF WORK.

THE CONTRACTOR IS ALSO RESPONSIBLE FOR OBTAINING FINAL COMMENTS AND APPROVAL FROM ALL LOCAL GOVERNING AGENCIES.

BY USE OF THESE DOCUMENTS, THE OWNER AND THE CONTRACTOR CERTIFY THAT THEY HAVE REVIEWED THEM AND ARE IN AGREEMENT WITH THEIR CONTENT.

SHOULD ANY DISCREPANCIES OR OMISSIONS BE FOUND, IT IS UP TO THE CONTRACTOR OR OWNER TO NOTIFY A MM&I REPRESENTATIVE (IN WRITING) AS SOON AS POSSIBLE SO THAT CORRECTIONS CAN BE MADE.

FURTHERMORE, THE CONTRACTOR OR OWNER SHALL NOTIFY (IN WRITING) OF ALL CHANGES TO SITE AND FIELD CONDITIONS PRIOR TO THE START OF PANEL FABRICATION.

IT IS UP TO THE CONTRACTOR OR OWNER TO PROVIDE A LEVEL AND SQUARE FOUNDATION TO ENSURE A GOOD FIT OF THE RENEGADE PANELS. MM&I DOES NOT ASSUME RESPONSIBILITY FOR ANY VARIANCES FROM THE FINAL SIGNED PANEL DRAWINGS AND SPECIFICATIONS OR ADJUSTMENTS REQUIRED RESULTING FROM THE CONDITIONS ENCOUNTERED ON THE JOB SITE, AND IS THE SOLE RESPONSIBILITY OF THE OWNER OR CONTRACTOR.

MM&I PANEL LAYOUT DRAWINGS ARE TO BE USED AS A GUIDE FOR THE CORRECT PLACEMENT AND INSTALLATION OF THE PANELS AND ARE BY NO MEANS A REPLACEMENT FOR ARCHITECTURAL OR STRUCTURAL DRAWINGS. THESE DRAWINGS EXCLUDE ANY DESIGN OF SITE, FOUNDATION, MECHANICAL, ELECTRICAL OR PLUMBING.

ALL WRITTEN DIMENSIONS SHOWN ON PLANS, SECTIONS AND DETAILS TAKE PRECEDENCE OVER SCALED DRAWINGS.

THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY BRACING REQUIRED FOR STRUCTURE STABILITY AND FOR CONSTRUCTION LOADING UNTIL THE PROJECT IS COMPLETED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING AND SUPERVISING ALL SAFETY PRECAUTIONS DURING CONSTRUCTION AND SHALL ENSURE COMPLIANCE TO CURRENT AND LOCAL REGULATIONS.

PANEL SCREWS TO HAVE 1-1/2" MIN. PENETRATION INTO STRUCTURAL SUPPORT AT WALL TOP PLATES AND BEAMS UNLESS NOTED OTHERWISE.

AS PANELS ARE UNLOADED AFTER DELIVERY, GENERAL CONTRACTOR IS RESPONSIBLE TO VERIFY SIP PANELS ARE STACKED ON WOOD SKIDS ABOVE GROUND & LEVEL. IT IS THE GENERAL CONTRACTOR'S RESPONSIBILITY TO PROVIDE TEMPORARY WEATHER PROTECTION (TARPS) AT THE TOP, ENDS, & SIDES OF PANEL STACKS UNTIL TIME OF INSTALLATION.

FOR MATERIAL SPECIFICATIONS ON RENEGADE SIPS, REFER TO NTA LISTING REPORT MM&IC81512-4 ISSUED MARCH 11, 2014. ALSO, FIND US ON THE WEB AT WWW.SIPSOFTHESOUTH.COM.

COORDINATION OF TRADES:

PRIOR TO FABRICATION OF THE SIP PANELS, MM&I CONSTRUCTION AND DESIGN, INC. HAS REVIEWED THE ARCHITECTURAL DRAWINGS PROVIDED AND HAS MADE EVERY EFFORT TO PROVIDE ANY REQUIRED PLUMBING, VENTILATION, OR OTHER CHASES SHOWN ON THE ARCHITECTURAL DRAWINGS. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND THE OWNER TO COORDINATE SUCH CHASES WITH THE RESPONSIBLE TRADES PRIOR THE THE COMMENCEMENT OF EACH TRADES WORK IN AN EFFORT TO LINE UP THE PLUMBING, VENT, ETC. WITH THE CHASES PROVIDED IN THE SIP PANELS.

AFTER THE MM&I CONSTRUCTION AND DESIGN, INC. CREW HAS FABRICATED THE SIP PANELS, ANY ALTERATIONS, CUTS, PENETRATIONS, DAMAGE, ETC. OF THE INTERIOR OR EXTERIOR OSB SKINS OF THE SIP PANELS IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND/OR OWNER. IF ANY CUTS OR PENETRATIONS ARE REQUIRED, IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND THE OWNER TO NOTIFY MM&I CONSTRUCTION AND DESIGN, INC. FOR GUIDANCE AND A POSSIBLE SOLUTION PRIOR TO ACTUALLY ALTERING THE SIP PANELS. IF THE SIP PANELS HAVE ALREADY BEEN ALTERED, THE ADDED COST FOR THE DESIGN AND REPAIR WILL BE AN ADDITIONAL COST TO THE GENERAL CONTRACTOR AND/OR THE OWNER. IDEALLY, AFTER THE SIP PANELS ARE ERECTED, THE INTERIOR & EXTERIOR OSB SKINS SHOULD NOT BE DAMAGED OR ALTERED IN ANY WAY.

VENTILATION NOTE:

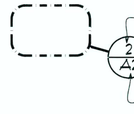
A MECHANICAL VENTILATION SYSTEM IS REQUIRED TO PROVIDE AIR MOVEMENT & REMOVE HUMIDITY. EXCESS HUMIDITY IN THE BUILDING COULD RESULT IN A BUILD UP OF WATER VAPOR IN UNWANTED AREAS CAUSING SEVERE DAMAGE TO THE STRUCTURAL INSULATED PANELS OR OTHER BUILDING MATERIALS.

SYMBOLS:

- RENEGADE STRUCTURAL INSULATED PANELS (SIZE PER PLAN & DETAILS)
- 2x STUD WALL = 3½" OR 5½" ACTUAL STUD WALL (EXT. STUD WALLS 6" = 5½" STUD W/ ½" SHEATHING)
- INTERIOR LOAD BEARING STUD WALL
- UNDISTURBED EARTH
- BACK FILL MATERIAL
- RIGID INSULATION (FOAM)
- FIBERGLASS BATT INSULATION (SIZE PER PLAN & DETAILS)

SECTION LETTER

SHEET NUMBER



DETAIL NUMBER

SHEET NUMBER

12
8
OR 8:12

ROOF PITCH RATIO

3'-9"

FLAT DIMENSIONS PER PLAN & DETAILS

4'-8¼"

BOXED DIMENSIONS ARE ITEMS DRAWN FLAT BUT DIMENSIONED ALONG THE SLOPE

ABBREVIATIONS:

A
- @ AT
- ADJ. ADJUSTABLE
- AFF. ABOVE FINISH FLOOR
- ALUM. ALUMINUM
- ARCH. ARCHITECT/ARCHITECTURAL

B
- BD. BOARD
- BFF. BELOW FINISH FLOOR
- BM. BEAM
- BOT. BOTTOM
- BP. BEAM POCKET
- BRG. BEARING

C
- ℄ OR C.L. CENTERLINE
- CLG. CEILING
- CMU. CONCRETE MASONRY UNIT
- CONC. CONCRETE
- CONT. CONTINUOUS
- COL. COLUMN

D
- DBL. DOUBLE
- DET. DETAIL
- DIA. DIAMETER (OR ⌀)
- DIM. DIMENSION
- DN. DOWN
- DWG. DRAWING

E
- EA. EACH
- ELEV. ELEVATION
- EPS. EXPANDED POLYSTYRENE
- EQ. EQUAL
- EWP. ENG. WOOD PRODUCT
- EXT. EXTERIOR

F
- FDN. FOUNDATION
- FLR. FLOOR

G
- GALV. GALVANIZED
- GLULAM GLUE-LAMINATED
- GYP. BD. GYPSUM BOARD

H
- HDR. HEADER
- HORIZ. HORIZONTAL
- HT. HEIGHT
- HVAC HEATING, VENTILATING & AIR CONDITIONING

I
- INSUL. INSULATION
- INT. INTERIOR

J
- JST. JOIST

L
- LAM. LAMINATED
- LB. POUNDS
- LL. LIVE LOAD
- LSL. LAMINATED STRAND LUMBER
- LVL. LAMINATED VENEER LUMBER

M
- MAX. MAXIMUM
- MFR. MANUFACTURER
- MIN. MINIMUM
- MISC. MISCELLANEOUS

N
- N.A. NOT APPLICABLE
- NO. NUMBER
- NOM. NOMINAL
- N.T.S. NOT TO SCALE

O
- O.C. ON CENTER
- O.H. OVERHEAD OR OVERHANG
- O.O. OUT TO OUT
- OPG. OPENING
- O.S.B. ORIENTED STRAND BOARD

P
- PLF POUNDS PER LINEAL FOOT
- PLY. PLYWOOD
- POLY. POLYETHYLENE
- PRELIM. PRELIMINARY
- PSF POUNDS PER SQUARE FOOT
- P.T. PRESSURE TREATED
- PSL PARALLEL STRAND LUMBER

Q
- QTY. QUANTITY

R
- RAD. RADIUS
- REINF. REINFORCEMENT/ REINFORCED
- REQ. REQUIRED
- RM. ROOM
- R.O. ROUGH OPENING

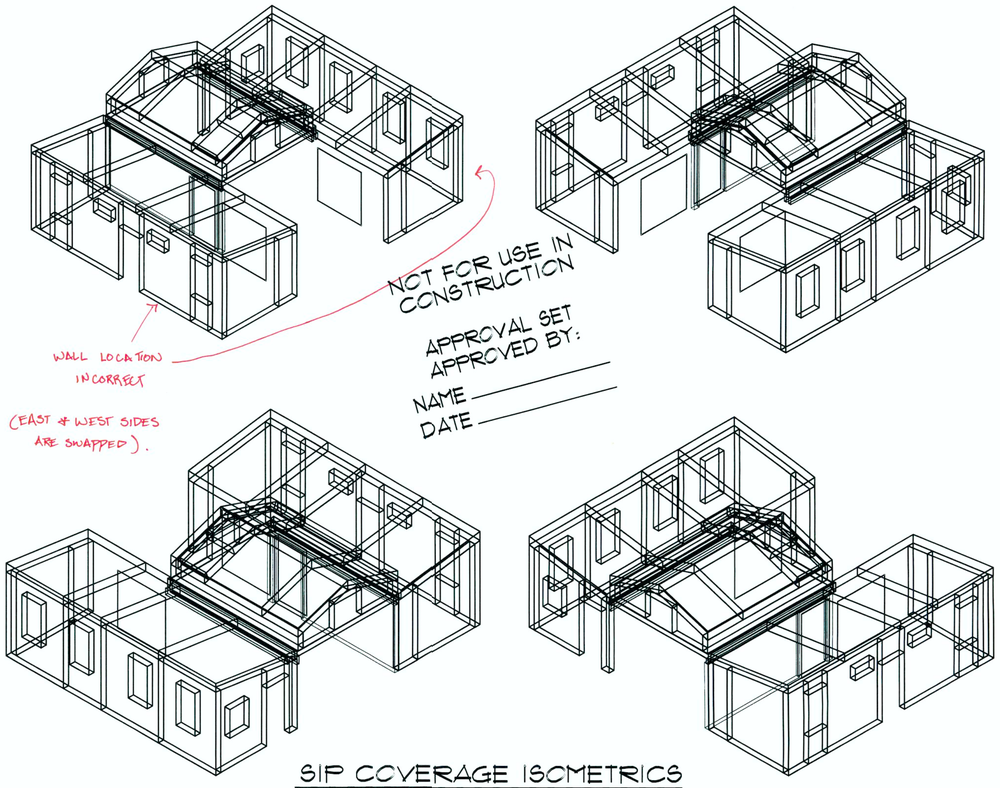
S
- SF. SQUARE FOOT OR SQ. FT.
- SHT. SHEET
- SIM. SIMILAR

S (CONT.)
- SIP. STRUCTURAL INSULATED PANEL
- SPEC. SPECIFICATIONS
- SQ. SQUARE
- SSTL. STAINLESS STEEL
- STD. STANDARD
- STL. STEEL

T
- T&G. TONGUE AND GROOVE
- TBD. TO BE DETERMINED
- THK. THICKNESS
- TRANS. TRANSOM
- TRAP. TRAPEZOID
- TRT. TREATED
- TYP. TYPICAL

V
- V.I.F. VERIFY IN FIELD
- V.R. VAPOR RETARDER

W
- WD. WOOD
- W/ WITH
- W/O WITHOUT
- # NUMBER (OR POUNDS)



SIP COVERAGE ISOMETRICS

NOT TO SCALE

MM&I CONSTRUCTION & DESIGN, INC
OFFICE: 615-673-9294
FAX: 615-673-9914

THESE DRAWINGS ARE THE SOLE PROPERTY OF MM, INC. ANY REPRODUCTION OR USE OF THESE DRAWINGS IS PROHIBITED WITHOUT EXPRESSED, WRITTEN PERMISSION FROM AN MM INC. REPRESENTATIVE. ANY QUESTIONS, CONCERNS OR COMMENTS SHOULD BE SUBMITTED TO KELLY OR ROBERT COSTANZA VIA E MAIL:
kelly@sipsofthesouth.com

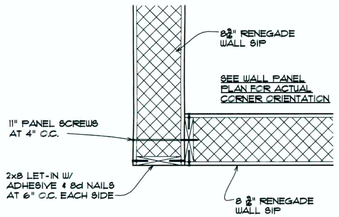
University of Maryland
U.S. Dept. of Energy Solar Decathalon 2017
COLLEGE PARK, MD 20742

ISSUED DATE:	
FOR APPROVAL	03/08/2017
REVISE/ RESUBMIT	03/13/2017
FOR APPROVAL	03/16/2017

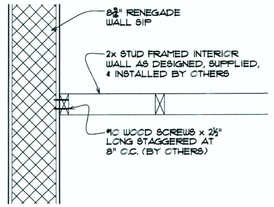
GENERAL NOTES
ISOMETRIC VIEWS

DRAWN BY: klt

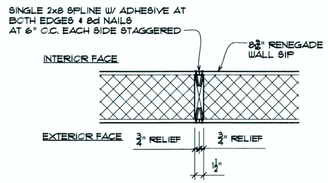
SHEET: C1



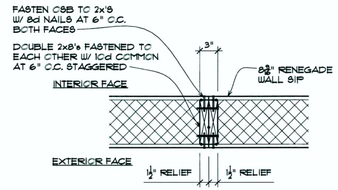
1 SIP CORNER DETAIL
1" = 1'-0"



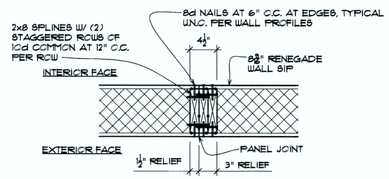
2 INTERIOR WALL TO SIP
1" = 1'-0"



3 SINGLE 2x WALL SPLINE
1" = 1'-0" PLAN VIEW



4 DOUBLE 2x WALL SPLINE
1" = 1'-0" PLAN VIEW

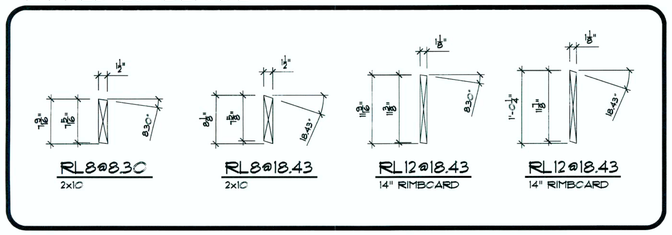


4A TWO AND ONE 2x WALL SPLINE
1" = 1'-0" PLAN VIEW

SHOP/ BUILDER NOTE:
APPLY CONT. DEGASEAL CONSTRUCTION ADHESIVE AT ALL LUMBER TO LUMBER OR LUMBER TO OSB POINTS OF CONTACT

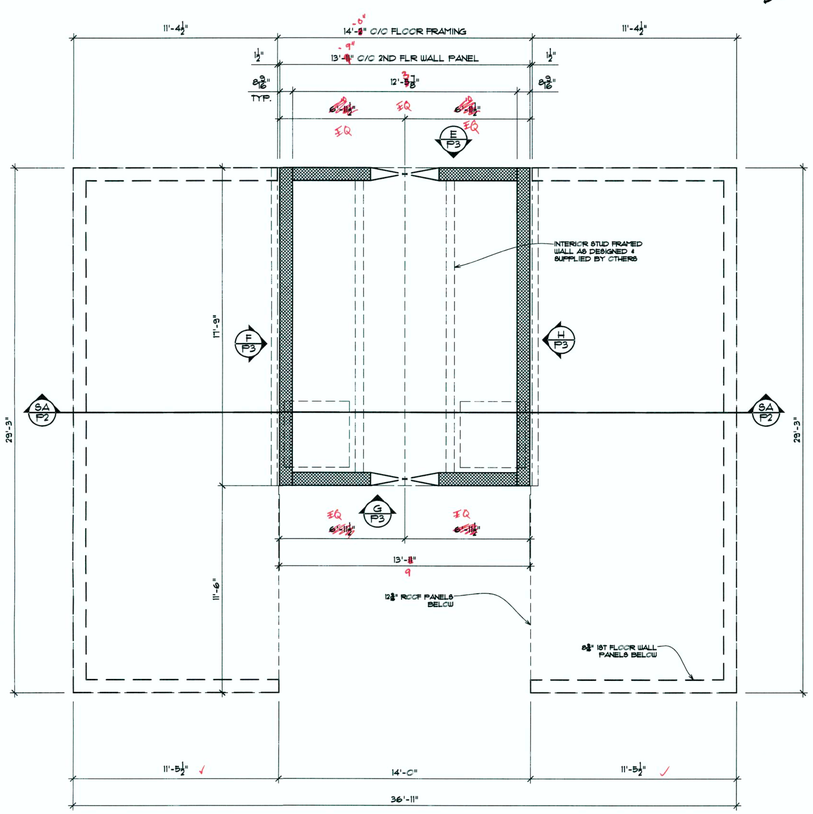
NOTE:
SEE WALL PROFILE FOR SPLINE TYPE & LOCATION

RIPPED LUMBER DETAILS



NOT FOR USE IN CONSTRUCTION

APPROVAL SET
APPROVED BY:
NAME _____
DATE _____



SECOND FLOOR WALL PANEL PLAN
1/4" = 1'-0" 8-9/16" PANELS

FIRST FLOOR WALL PANEL PLAN
1/4" = 1'-0" 8-9/16" PANELS

MM&I CONSTRUCTION & DESIGN, INC
OFFICE: 615-673-9294
FAX: 615-673-9914

THESE DRAWINGS ARE THE SOLE PROPERTY OF MMI, INC. ANY REPRODUCTION OR USE OF THESE DRAWINGS IS PROHIBITED WITHOUT EXPRESSED, WRITTEN PERMISSION FROM AN MMI INC. REPRESENTATIVE. ANY QUESTIONS, CONCERNS OR COMMENTS SHOULD BE SUBMITTED TO KELLY OR ROBERT COSTANZA VIA E MAIL:
kelly@sipsofthesouth.com

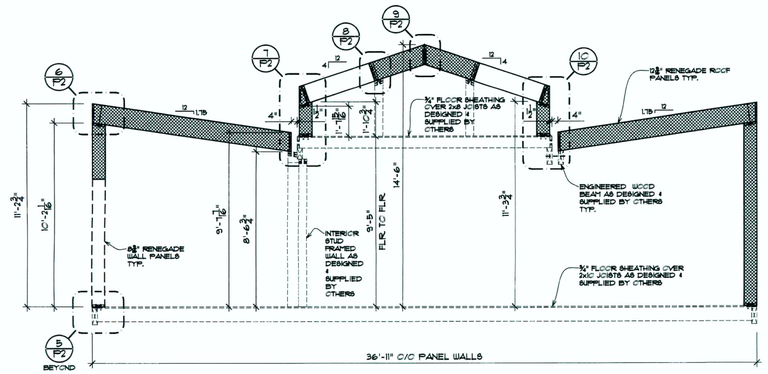
University of Maryland
U.S. Dept. of Energy Solar Decatholon 2017
COLLEGE PARK, MD 20742

ISSUED DATE:	
FOR APPROVAL	05/08/2017
REVISE/ RESUBMIT	05/13/2017
FOR APPROVAL	05/16/2017

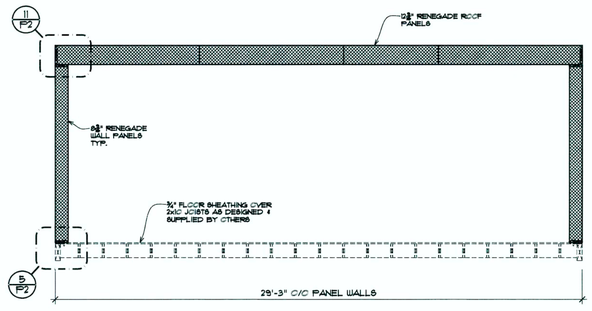
FIRST & SECOND FLOOR WALL PANEL PLAN, RIPPED LUMBER AND CONSTRUCTION DETAILS

DRAWN BY: ktt

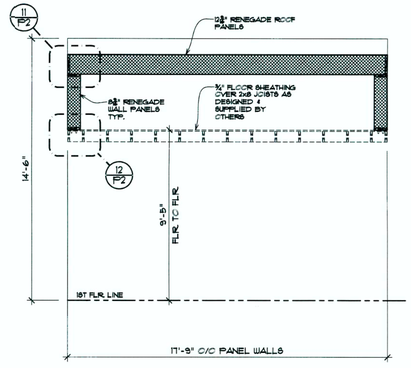
SHEET: P1



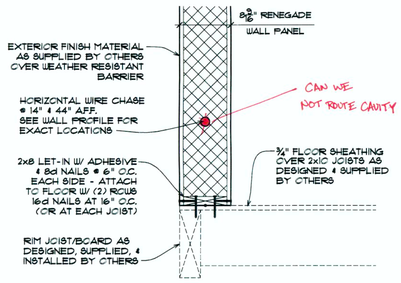
5A BUILDING SECTION
1/4" = 1'-0"



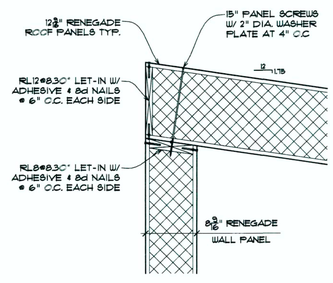
5B BUILDING SECTION
1/4" = 1'-0"



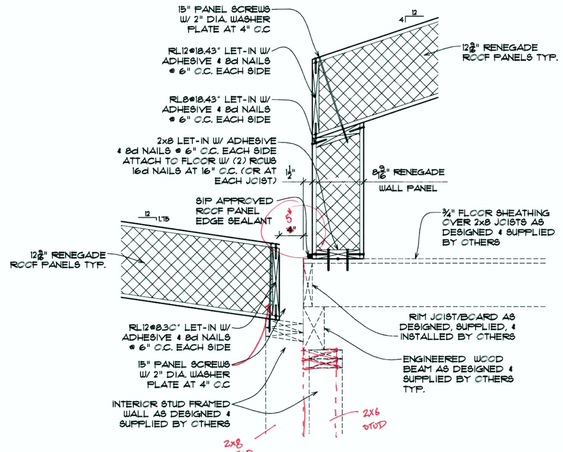
5C BUILDING SECTION
1/4" = 1'-0"



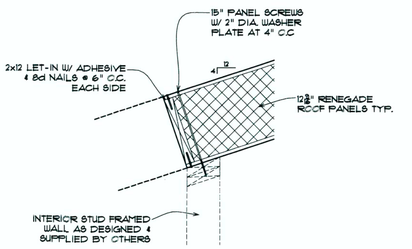
5 FIRST FLOOR
1" = 1'-0"



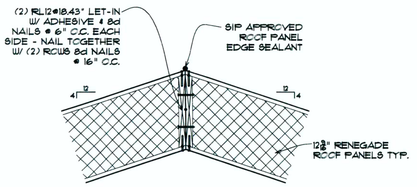
6 EAVE DETAIL
1" = 1'-0"



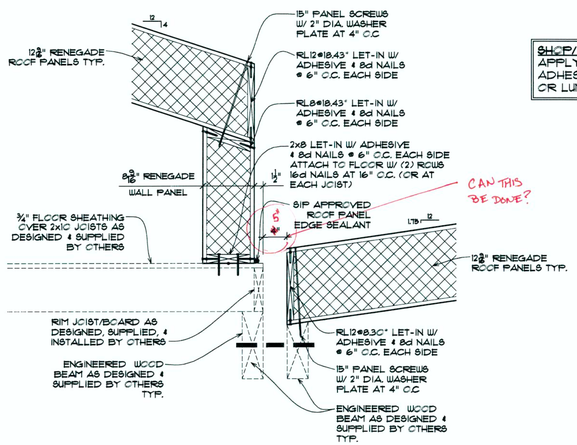
7 SECOND FLOOR/ EAVE
1" = 1'-0"



8 SIP ROOF/ WALL DETAIL
1" = 1'-0"

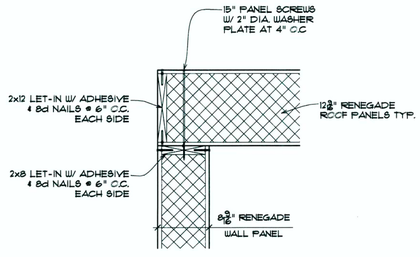


9 RIDGE DETAIL
1" = 1'-0"



10 SECOND FLOOR/ EAVE
1" = 1'-0"

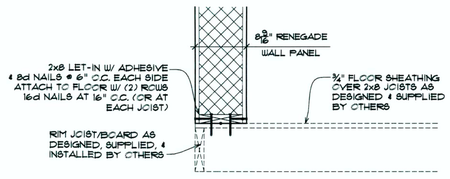
SHOP/ BUILDER NOTE:
APPLY CONT. DEGASEAL CONSTRUCTION ADHESIVE AT ALL LUMBER TO LUMBER OR LUMBER TO OSB POINTS OF CONTACT



11 SIP RAKE DETAIL
1" = 1'-0"

NOT FOR USE IN CONSTRUCTION

APPRCVAL SET
APPROVED BY:
NAME _____
DATE _____



12 SECOND FLOOR
1" = 1'-0"

MM&I CONSTRUCTION & DESIGN, INC
OFFICE: 615-673-9294
FAX: 615-673-9914

THESE DRAWINGS ARE THE SOLE PROPERTY OF MMI, INC. ANY REPRODUCTION OR USE OF THESE DRAWINGS IS PROHIBITED WITHOUT EXPRESSED, WRITTEN PERMISSION FROM AN MMI INC. REPRESENTATIVE. ANY QUESTIONS, CONCERNS OR COMMENTS SHOULD BE SUBMITTED TO KELLY OR ROBERT COSTANZA VIA E-MAIL:
kelly@sixofthesouth.com

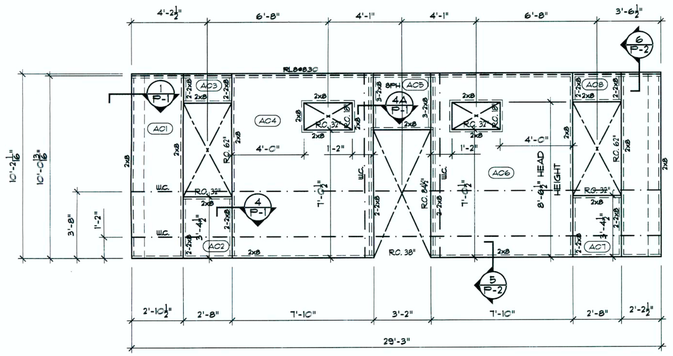
University of Maryland
U.S. Dept. of Energy Solar Decathlon 2017
COLLEGE PARK, MD 20742

ISSUED DATE:	
FOR APPROVAL	05/08/2017
REVISE/ RESUBMIT	05/13/2017
FOR APPROVAL	05/16/2017

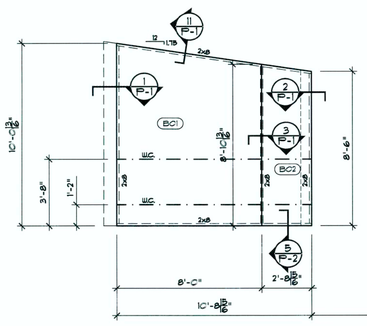
BUILDING SECTIONS & DETAILS

DRAWN BY: ktt

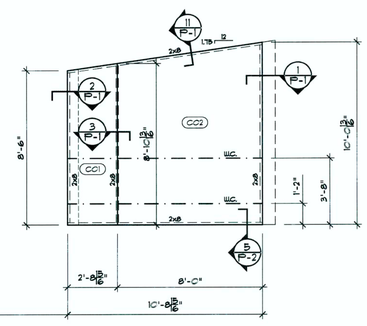
SHEET: P2



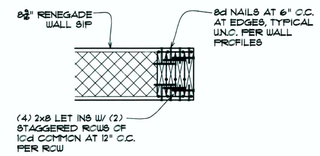
A WALL PROFILE
1/4" = 1'-0" 8 9/16" PANELS



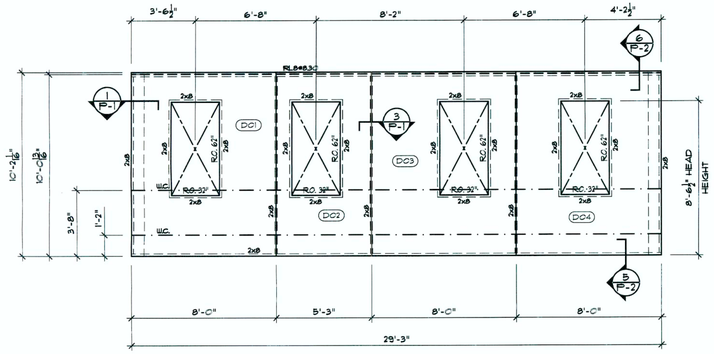
B WALL PROFILE
1/4" = 1'-0" 8 9/16" PANELS



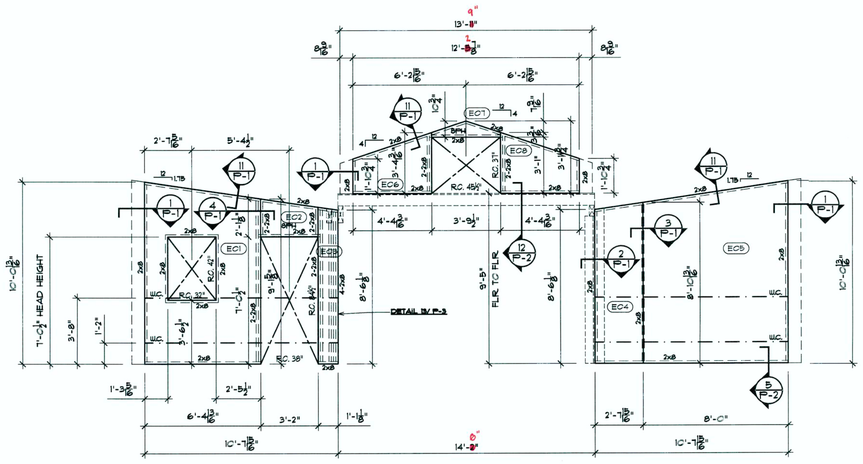
C WALL PROFILE
1/4" = 1'-0" 8 9/16" PANELS



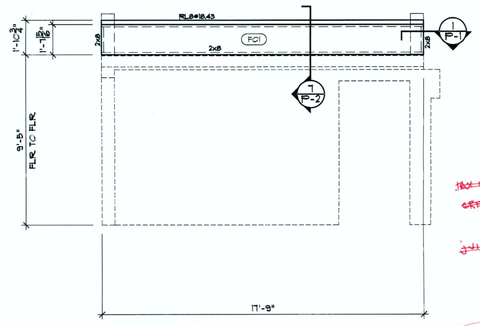
13 (4) 2X LET IN DETAIL
1" = 1'-0" PLAN VIEW



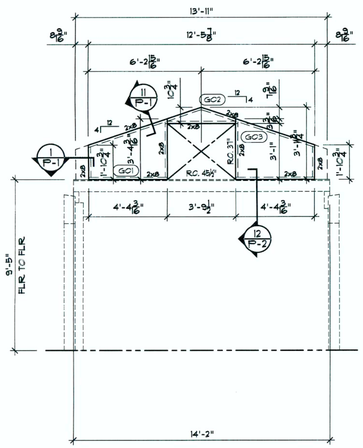
D WALL PROFILE
1/4" = 1'-0" 8 9/16" PANELS



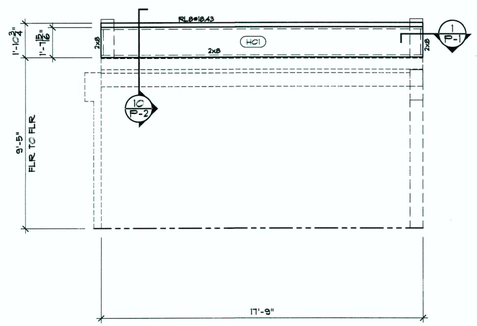
E WALL PROFILE
1/4" = 1'-0" 8 9/16" PANELS



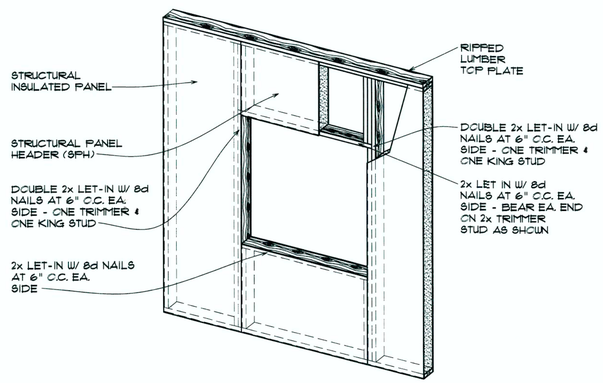
F WALL PROFILE
1/4" = 1'-0" 8 9/16" PANELS



G WALL PROFILE
1/4" = 1'-0" 8 9/16" PANELS



H WALL PROFILE
1/4" = 1'-0" 8 9/16" PANELS



ISOMETRIC STRUCTURAL PANEL HEADER
1/4" = 1'-0"

NOT FOR USE IN CONSTRUCTION

APPROVAL SET
APPROVED BY:
NAME
DATE

SHOP/ BUILDER NOTE:
APPLY CONT. DEGASEAL CONSTRUCTION ADHESIVE AT ALL LUMBER TO LUMBER OR LUMBER TO OSB POINTS OF CONTACT

SHOP/ BUILDER NOTE:
IF NOT NOTED OTHERWISE, SINGLE DASHED LINE IN PANEL REPRESENTS SINGLE 2x LET-IN (1½" FOAM RELIEF) W/ 8d NAILS AT 6" O.C. EA. SIDE

MM&I CONSTRUCTION & DESIGN, INC
OFFICE: 615-673-9294
FAX: 615-673-9914

THESE DRAWINGS ARE THE SOLE PROPERTY OF MMI, INC. ANY REPRODUCTION OR USE OF THESE DRAWINGS IS PROHIBITED WITHOUT EXPRESSED, WRITTEN PERMISSION FROM AN MMI INC. REPRESENTATIVE. ANY QUESTIONS, CONCERNS OR COMMENTS SHOULD BE SUBMITTED TO KELLY OR ROBERT COSTANZA VIA E MAIL:
kelly@slpsoftheso uth.com

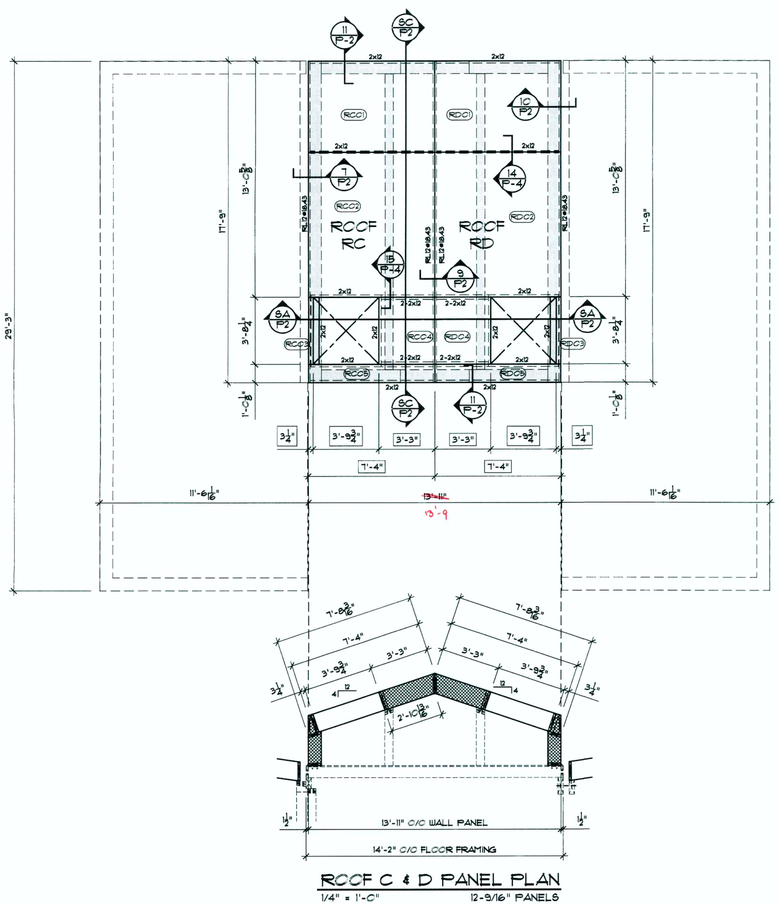
University of Maryland
U.S. Dept. of Energy Solar Decathlon 2017
COLLEGE PARK, MD 20742

ISSUED DATE:	
FOR APPROVAL	05/08/2017
REVISE/ RESUBMIT	05/13/2017
FOR APPROVAL	05/16/2017

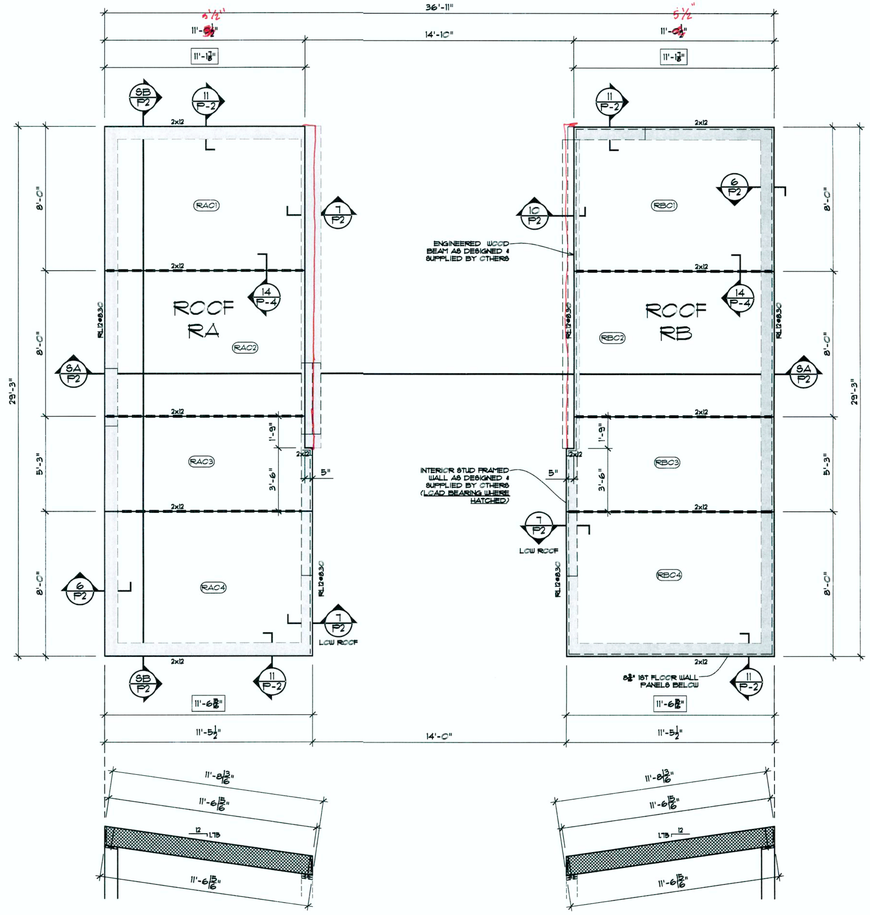
WALL PANEL PROFILES

DRAWN BY: ktt

SHEET: P3



RCCF C & D PANEL PLAN
1/4" = 1'-0" 12-9/16" PANELS



RCCF A & B PANEL PLAN
1/4" = 1'-0" 12-9/16" PANELS

NOT FOR USE IN CONSTRUCTION

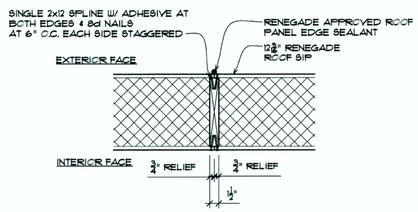
APPROVAL SET
APPROVED BY:

NAME _____

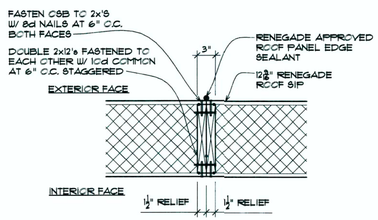
DATE _____

SHOP/ BUILDER NOTE:
APPLY CONT. DEGASEAL CONSTRUCTION ADHESIVE AT ALL LUMBER TO LUMBER OR LUMBER TO OSB POINTS OF CONTACT

SHOP/ BUILDER NOTE:
IF NOT NOTED OTHERWISE, SINGLE DASHED LINE IN PANEL REPRESENTS SINGLE 2x LET-IN (1½" FOAM RELIEF) W/ 8d NAILS AT 6" O.C. EA. SIDE



14 SINGLE 2x RCCF SPLINE
1" = 1'-0" SECTION



15 DOUBLE 2x RCCF SPLINE
1" = 1'-0" SECTION

RCCF PANEL KEY PLAN
1/8" = 1'-0" 12-9/16" PANELS

MM&I CONSTRUCTION & DESIGN, INC
OFFICE: 615-673-9294
FAX: 615-673-9914

THESE DRAWINGS ARE THE SOLE PROPERTY OF MMI, INC. ANY REPRODUCTION OR USE OF THESE DRAWINGS IS PROHIBITED WITHOUT EXPRESSED, WRITTEN PERMISSION FROM AN MMI INC. REPRESENTATIVE. ANY QUESTIONS, CONCERNS OR COMMENTS SHOULD BE SUBMITTED TO KELLY OR ROBERT COSTANZA VIA E MAIL:
kelly@pipoftheso uth.com

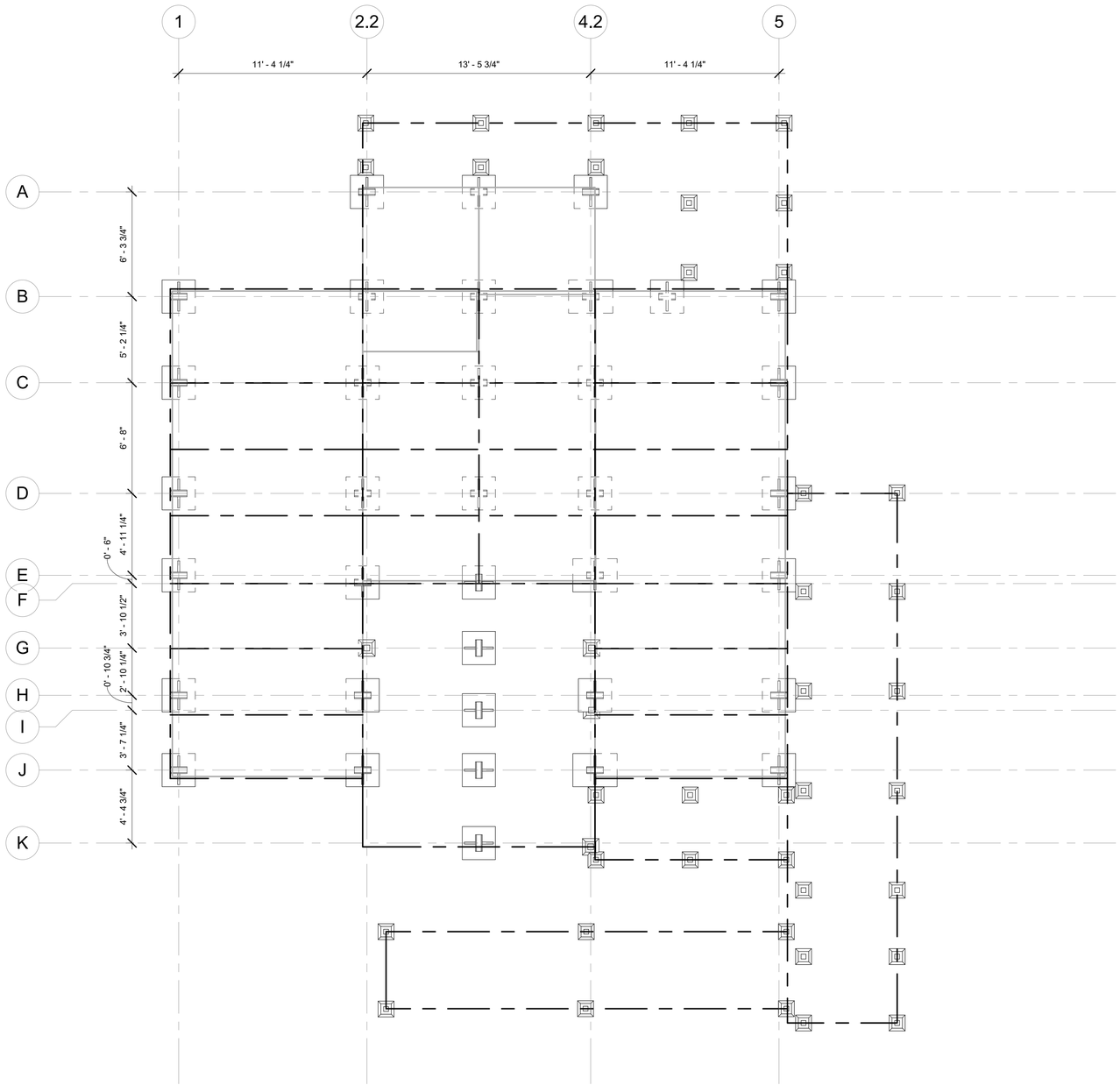
University of Maryland
U.S. Dept. of Energy Solar Decathalon 2017
COLLEGE PARK, MD 20742

ISSUED DATE:	
FOR APPROVAL	03/08/2017
REVISE/ RESUBMIT	03/13/2017
FOR APPROVAL	03/16/2017

OVERALL ROOF PANEL PLAN & DETAILS, SIP ROOF PROFILES

DRAWN BY: ktt

SHEET: P4



1 GROUND CONTACT PLAN
1/4" = 1'-0"

GENERAL NOTES

A. SLEEPERS FOR PLANTERS, TYPICAL

B. THRESHOLD PLATE

C. SEE SPEC NO.093040 FOR PERMEABLE PAVERS FOR WALKING AND DRIVING

D. SLEEPERS FOR FILTERED WASTE TANK, TYPICAL

E. SLEEPERS FOR GREYWATER TANK, TYPICAL

F. ALL FOUNDATION AND AUDLIARY ELEMENTS RESIDING ON GRADE SHALL NOT EXCEED THE MAXIMUM ALLOWABLE SOIL LOAD OF 2000 PSF AND SHALL COMPLY WITH RULE XXX FOUNDATION

G. FOR FOOTING DETAIL REFER TO S-500 SERIES

H. FOR ADJUSTABLE JACK REFER TO SPEC NO.109000

LEGEND

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

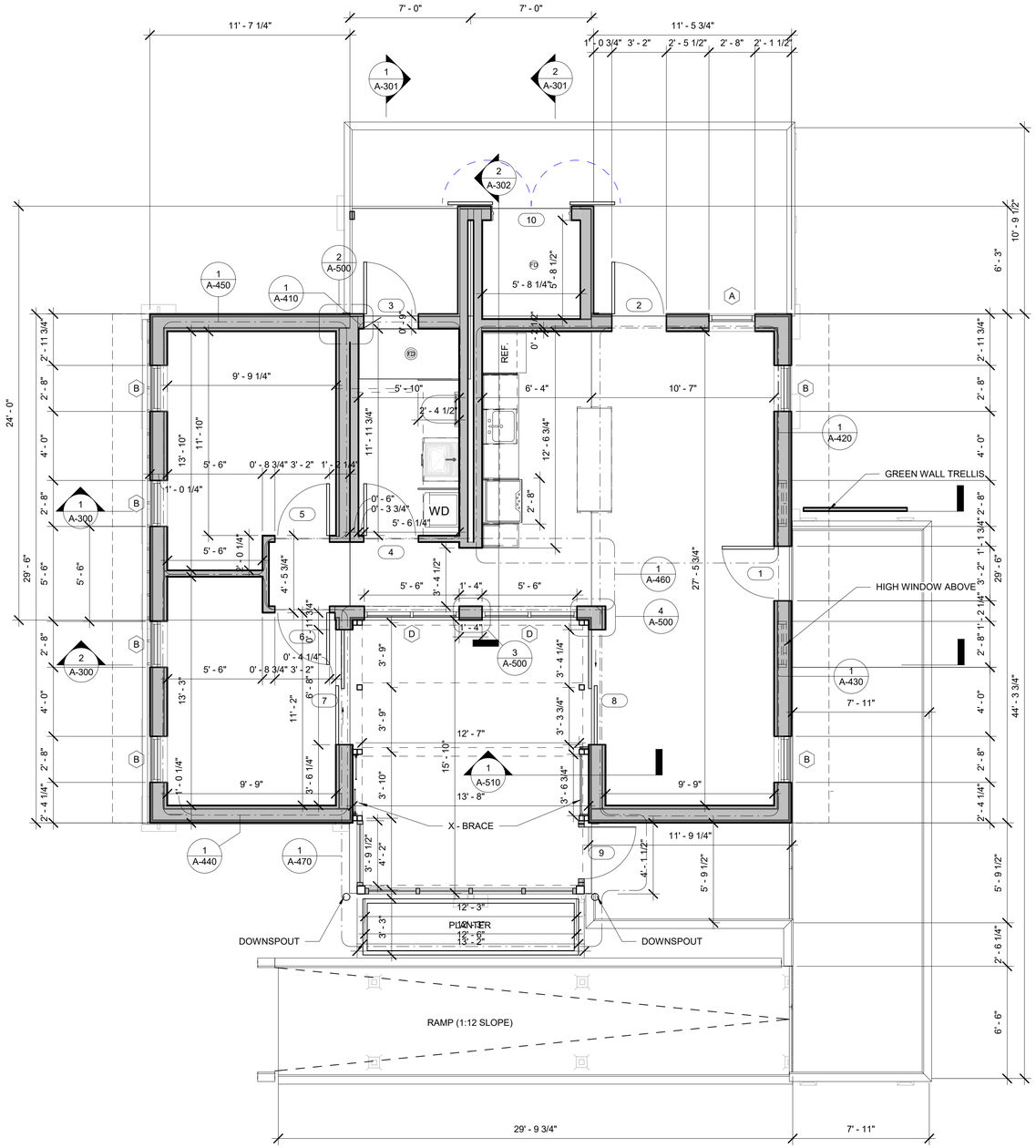
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

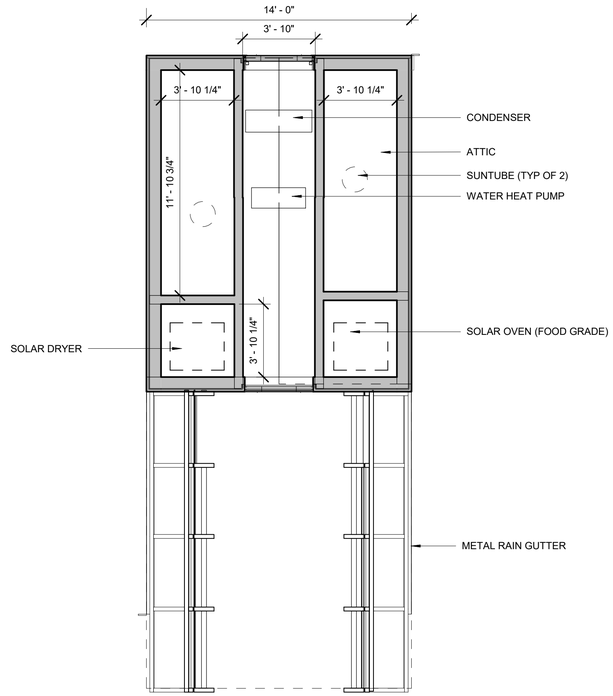
PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

GROUND CONTACT PLAN

A-100



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



2 ATTIC PLAN
1/4" = 1'-0"

GENERAL NOTES

A. FOR FINISH LEGEND REFER TO A-103

B. FOR ADDITIONAL FINISH INFORMATION REFER TO A-400 SERIES - ENLARGED PLANS AND ELEVATIONS

C. FOR ADDITIONAL FINISH INFORMATION REFER TO A-104 FOR FINISH FLOOR PLAN

D. FOR FINISH OF DOOR & FRAMES & THRESHOLD DETAILS REFER TO A-600 SERIES - DOOR AND WINDOW SCHEDULES

E. WHERE MULTIPLE FINISHES ARE SHOWN AT WALLS REFER TO INTERIOR ELEVATIONS OR ENLARGED DETAILS FOR CLARIFICATION

F. INTERIOR FINISHES AND MATERIALS REFER TO ARCHITECTURAL SPECIFICATIONS

LEGEND

FD FLOOR DRAIN

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

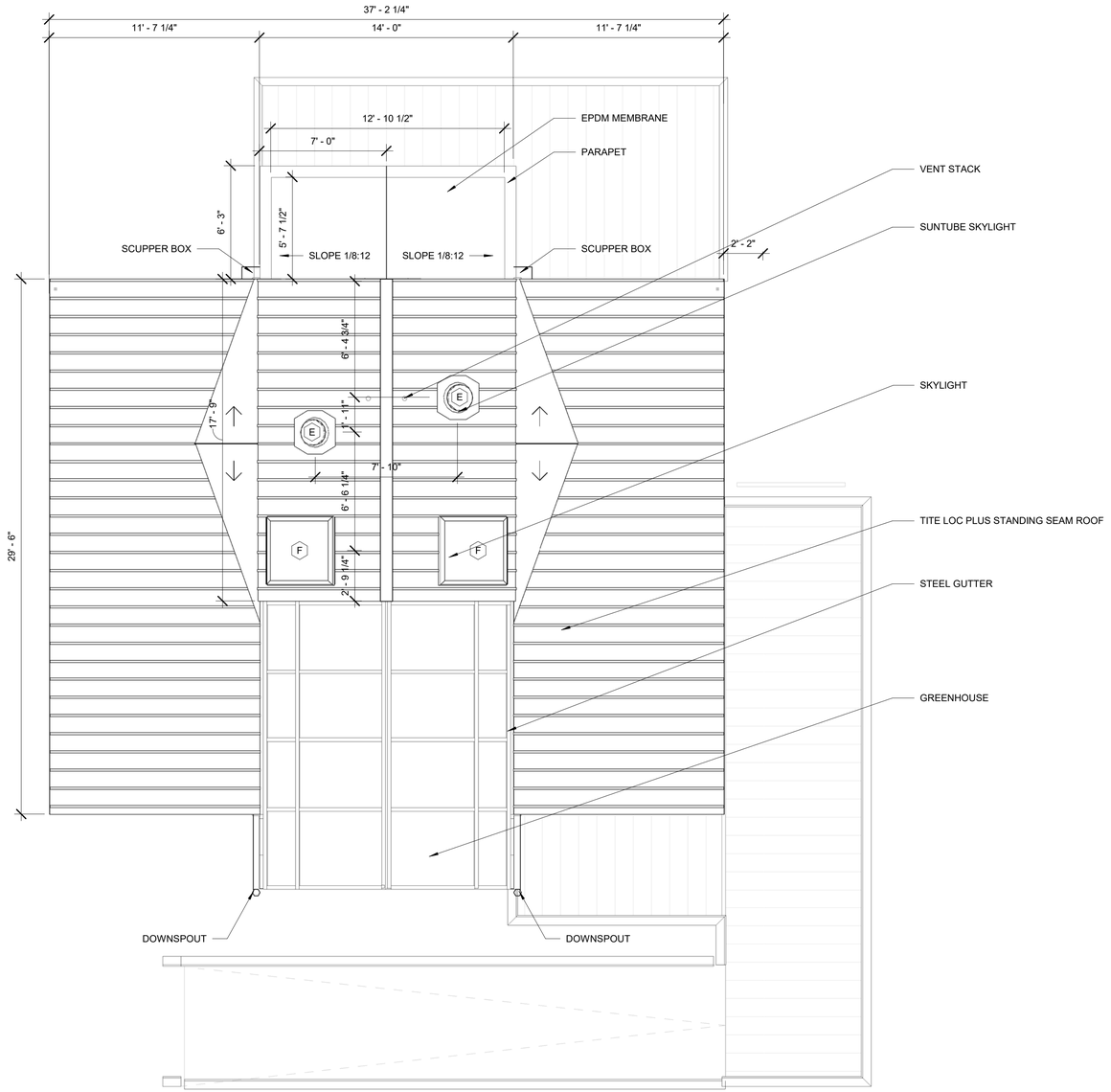
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

FLOOR PLAN

A-101



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

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

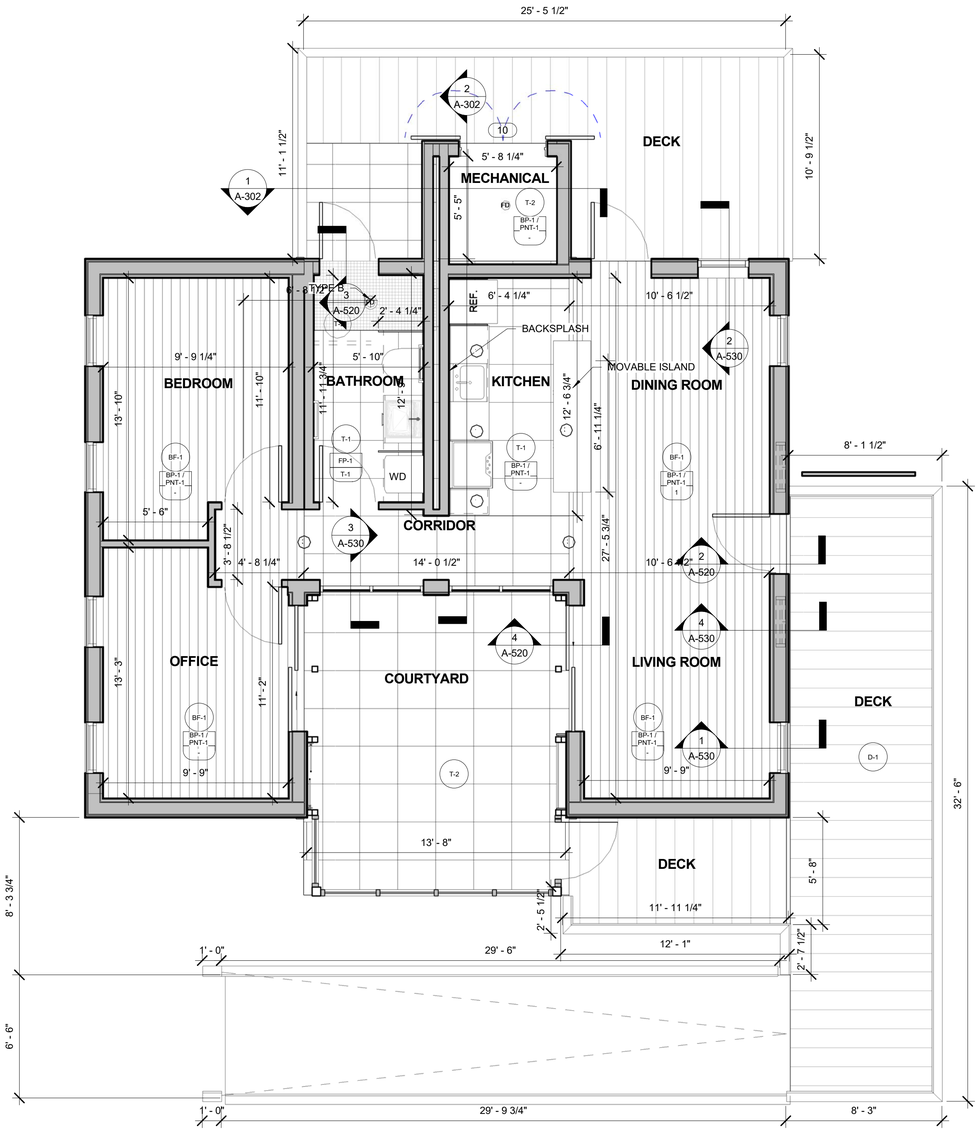
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

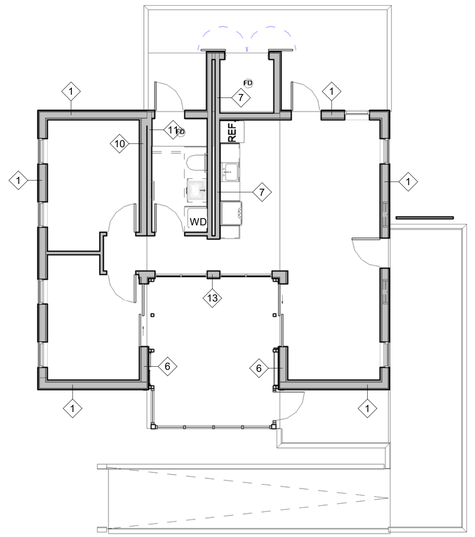
PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

ROOF PLAN

A-102



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



2 FINISH WALL TYPES
1/8" = 1'-0"

Wall Schedule		
Type Mark	Width	Type
1	1' - 0 3/16"	Exterior - 8" SIP w/ Wood Siding
1	1' - 0 3/16"	Exterior - 8" SIP w/ Wood Siding
1	1' - 0 3/16"	Exterior - 8" SIP w/ Wood Siding
1	1' - 0 3/16"	Exterior - 8" SIP w/ Wood Siding
1	1' - 0 3/16"	Exterior - 8" SIP w/ Wood Siding
1	1' - 0 3/16"	Exterior - 8" SIP w/ Wood Siding
2	0' - 10 3/8"	Exterior - 8" Stud - Corrugated/Shower
3	0' - 7"	Exterior - 5.5" Stud, 1.5" Corrugated
4	0' - 9 7/8"	Exterior - 8" Stud - Corrugated
4	0' - 9 7/8"	Exterior - 8" Stud - Corrugated
5	0' - 9 1/4"	Exterior - 8" Stud - Mech 2
6	0' - 11 7/8"	Exterior - 8" Stud - Wood w/ Furring
6	0' - 11 7/8"	Exterior - 8" Stud - Wood w/ Furring
7	0' - 6 1/8"	Interior - 5.5" Stud, 5/8" Gyp
7	0' - 6 1/8"	Interior - 5.5" Stud, 5/8" Gyp
8	0' - 8 3/4"	Interior - 6" Stud, (2) 5/8" GWB w/ Furring
9	0' - 6"	Interior - 6" Stud Wall
10	0' - 9 3/4"	Interior - 8" Stud Wall w/ Furring
11	0' - 6 1/8"	Interior - 5.5" Stud w/ Tile
11	0' - 6 1/8"	Interior - 5.5" Stud w/ Tile
12	0' - 4 5/8"	Interior - 3.5" Stud, (2) 5/8" Gyp
12	0' - 4 5/8"	Interior - 3.5" Stud, (2) 5/8" Gyp
12	0' - 4 5/8"	Interior - 3.5" Stud, (2) 5/8" Gyp
12	0' - 4 5/8"	Interior - 3.5" Stud, (2) 5/8" Gyp
12	0' - 4 5/8"	Interior - 3.5" Stud, (2) 5/8" Gyp
13	0' - 9 3/4"	Exterior - 8" Stud - Wood w/o Furring

GENERAL NOTES

A. TRANSITIONS FROM TILE TO WOOD SHALL INCLUDE A METAL TRANSITION STRIP

B. FLOOR DRAIN TO BE CENTERED TO SHOWER

C. GYPSUM WALLBOARDS SHALL BE FINSIHED WITH PNT-1. REFER TO A-601 FOR MATERIAL SCHEDULE

FINISH FLOOR PLAN SHEET NOTES

1. CO-1: COUNTERTOP
2. WD-1 WOOD
3. TS-1: TRANSITION STRIP

FINISH FLOOR PLAN FINISH LEGEND

- BF-1: BAMBOO FLOORING (SEE FINISH SCHEDULE)
- T-1: PORCELAIN TILE (24" x 24" x 3/8")
- T-2: PORCELAIN TILE (2" x 2" MOSAIC)
- BP-1/PNT-1: WHITE WASHED BIRCH PLYWOOD

FINISH TAG

Floor Finish
Wall Finish
Base Finish

- FLOOR FINISH
- WALL FINISH
- BASE FINISH

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

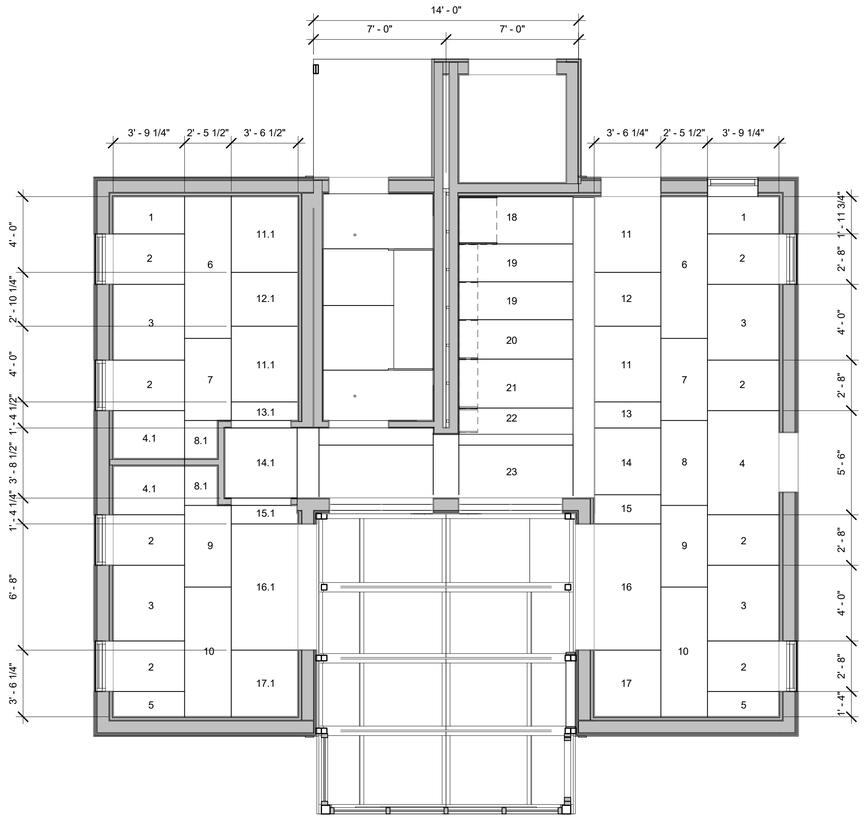
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

FINISH FLOOR PLAN

A-103



1 REFLECTED CEILING PLAN
1/4" = 1'-0"

INTERIOR CEILING PANEL SCHEDULE			
TYPE MARK	**QUANTITY**	**WIDTH**	**LENGTH**
1	2	3' - 9 1/4"	1' - 11 3/4"
2	8	3' - 9 1/4"	2' - 8"
3	4	3' - 9 1/4"	4' - 0"
4	1	3' - 9 1/4"	5' - 6"
4.1	2	3' - 9 1/4"	2' - 6 3/4"
5	2	3' - 9 1/4"	1' - 4"
6	2	2' - 5 1/2"	7' - 6"
7	2	2' - 5 1/2"	4' - 4"
8	1	2' - 5 1/2"	4' - 5 3/4"
8.1	2	1' - 8 3/4"	2' - 1"
9	2	2' - 5 1/2"	4' - 3 3/4"
10	2	2' - 5 1/2"	6' - 10 1/4"
11	2	3' - 5 3/4"	4' - 0"
11.1	2	3' - 6 1/4"	4' - 0"
12	1	3' - 5 3/4"	2' - 10 1/4"
12.1	1	3' - 6 1/4"	2' - 10 1/4"
13	1	3' - 5 3/4"	1' - 4 1/2"
13.1	1	3' - 6 1/4"	11 3/4"
14	1	3' - 5 3/4"	3' - 6 1/4"
14.1	1	3' - 6 1/4"	3' - 6 1/4"
15	1	3' - 5 3/4"	1' - 6 1/2"
15.1	1	3' - 6 1/4"	11 3/4"
16	1	3' - 5 3/4"	6' - 8"
16.1	1	3' - 6 1/4"	6' - 8"
17	1	3' - 5 3/4"	3' - 6 1/4"
17.1	1	3' - 6 1/4"	3' - 6 1/4"
18	1	3' - 5 3/4"	
19	2	6' - 0 1/2"	
20	1	6' - 0 1/2"	
21	1	6' - 0 1/2"	
22	2	6' - 0 1/2"	
23	1	6' - 0 1/2"	

**All Dimesions should be verified in field

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

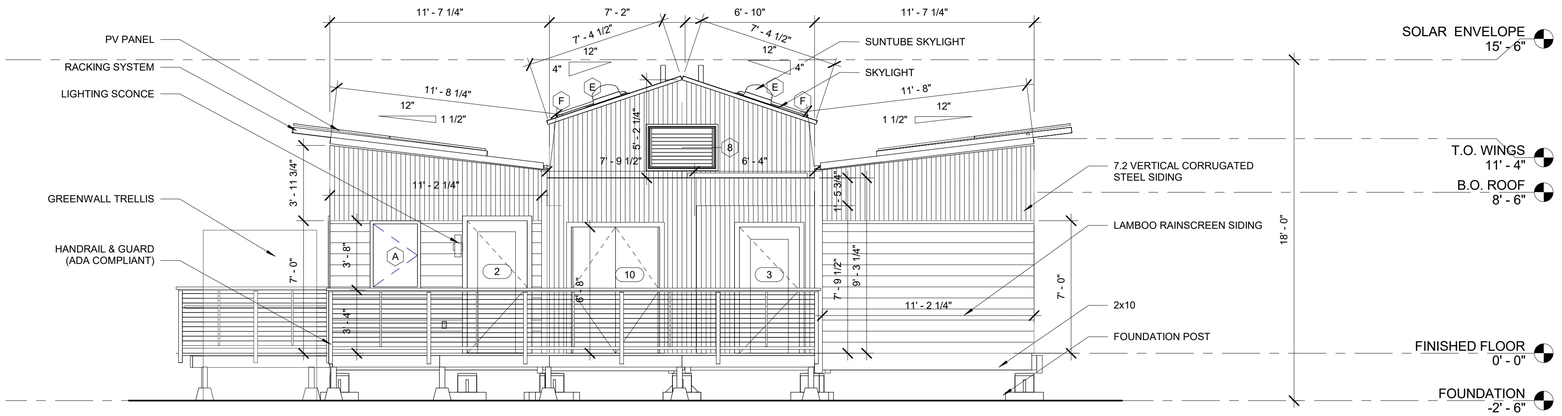
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

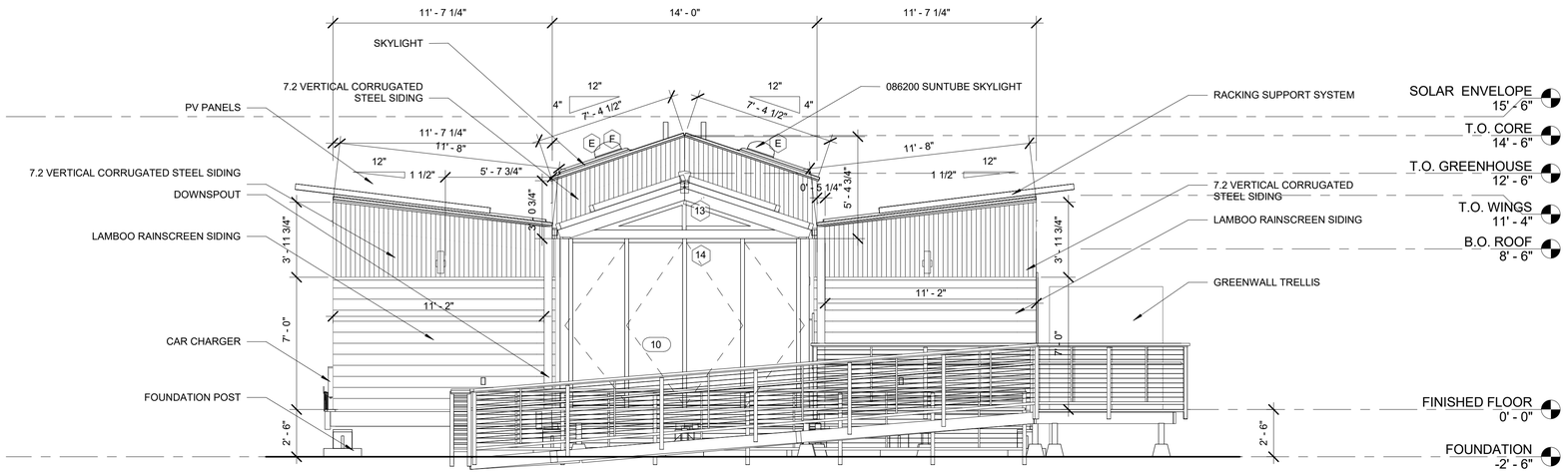
PROJECT NO. 001
DESIGNED Author
CHECKED Checker

REFLECTED CEILING PLAN

A-104



1 NORTH ELEVATION
1/4" = 1'-0"



2 SOUTH ELEVATION
1/4" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

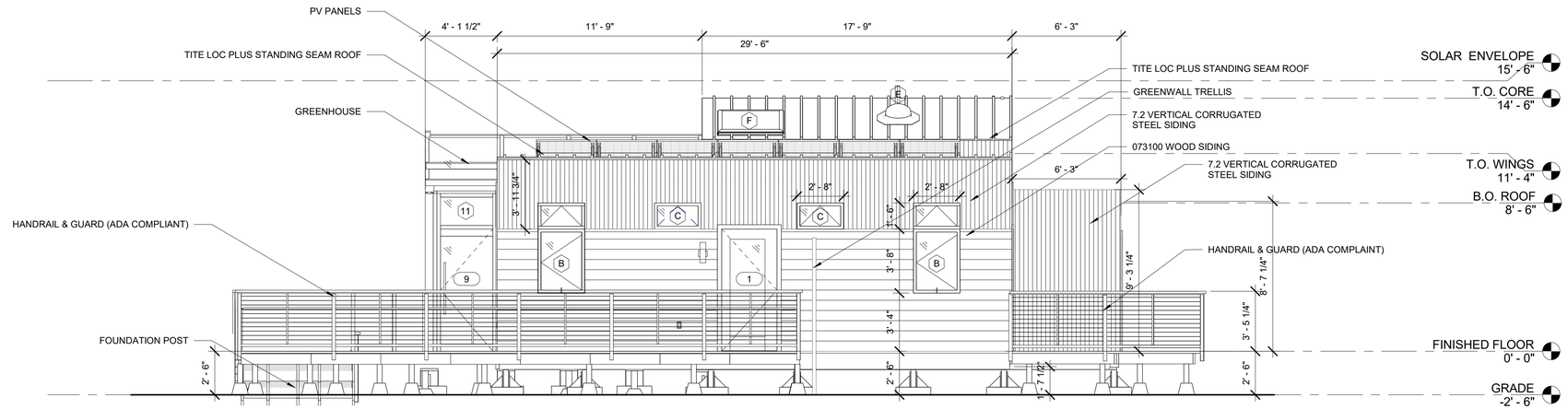
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

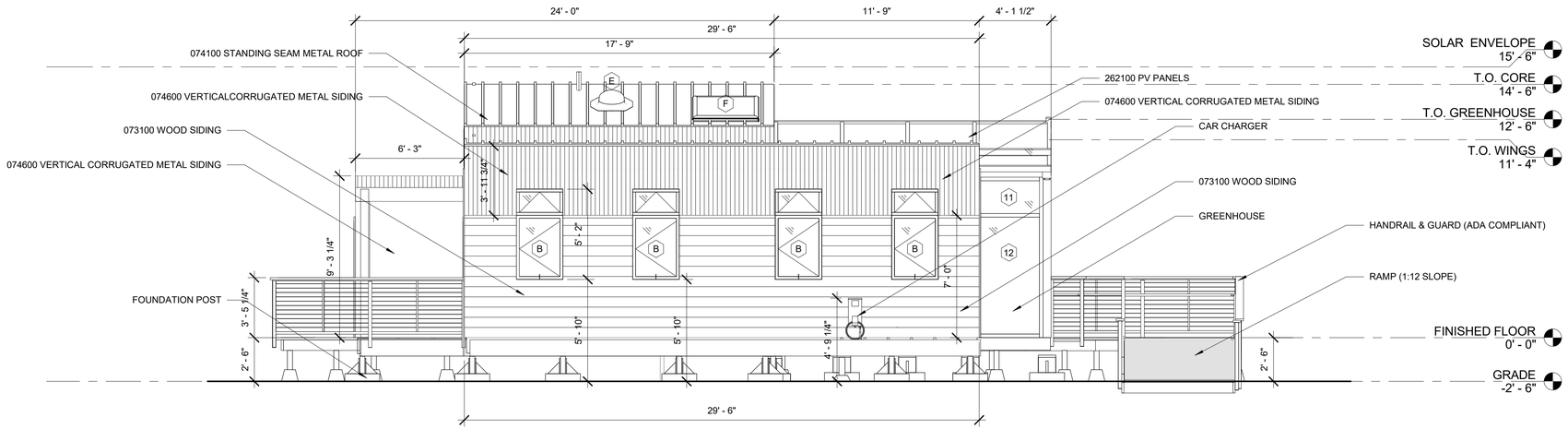
PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

NORTH & SOUTH EXTERIOR ELEVATIONS

A-200



1 EAST ELEVATION
1/4" = 1'-0"



2 WEST ELEVATION
1/4" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

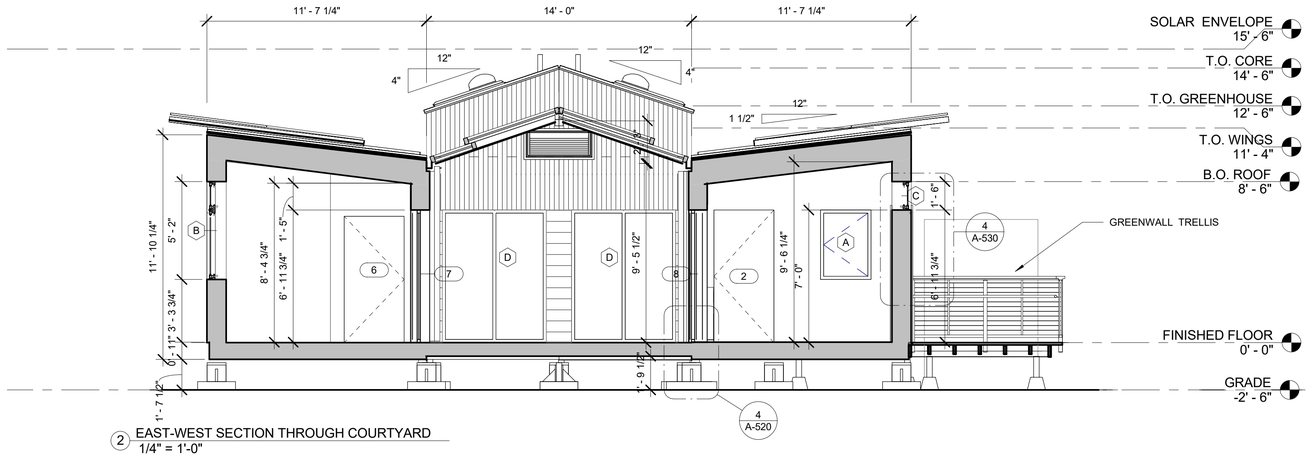
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

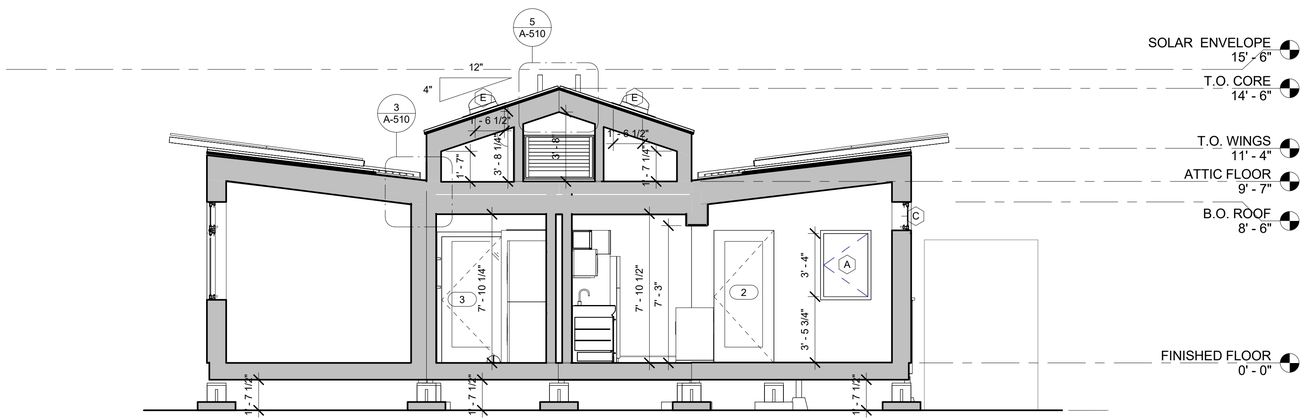
PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

EAST & WEST EXTERIOR ELEVATIONS

A-201



2 EAST-WEST SECTION THROUGH COURTYARD
1/4" = 1'-0"



1 EAST-WEST SECTION THROUGH BATHROOM/KITCHEN CORE
1/4" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

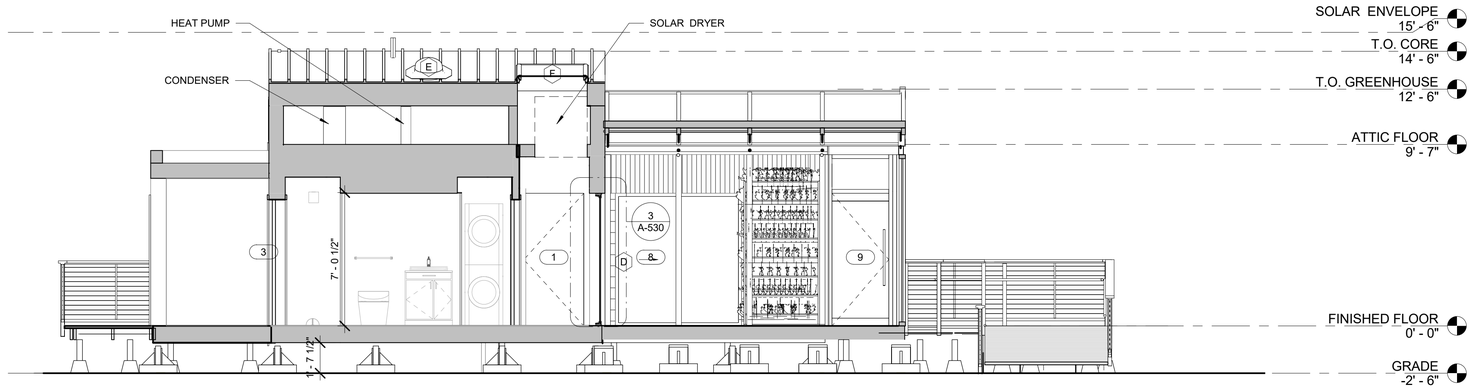
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

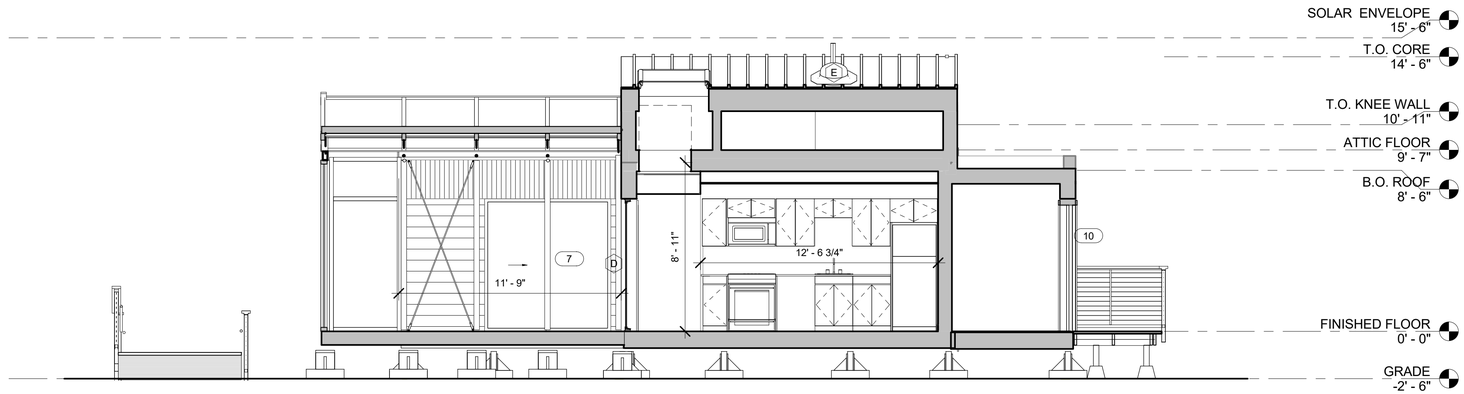
PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

BUILDING SECTIONS

A-300



1 NORTH-SOUTH SECTION THROUGH BATHROOM/COURTYARD
1/4" = 1'-0"



2 NORTH-SOUTH SECTION THROUGH KITCHEN/COURTYARD
1/4" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

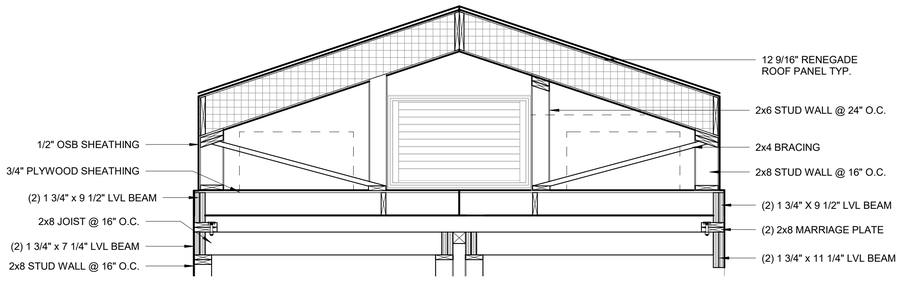
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

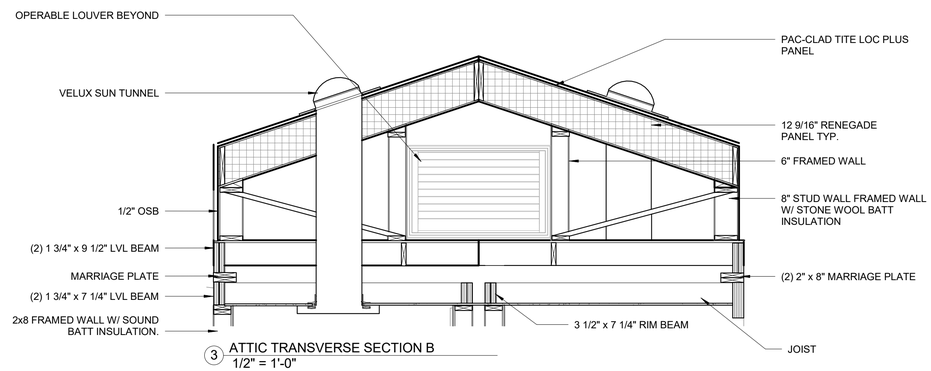
PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

BUILDING SECTIONS

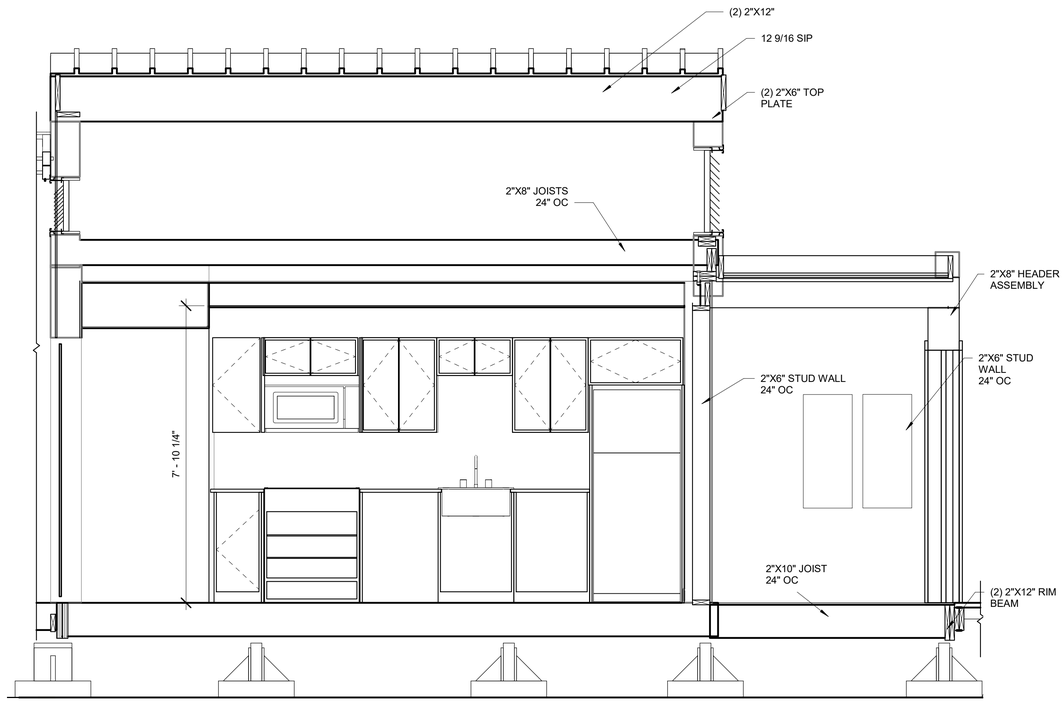
A-301



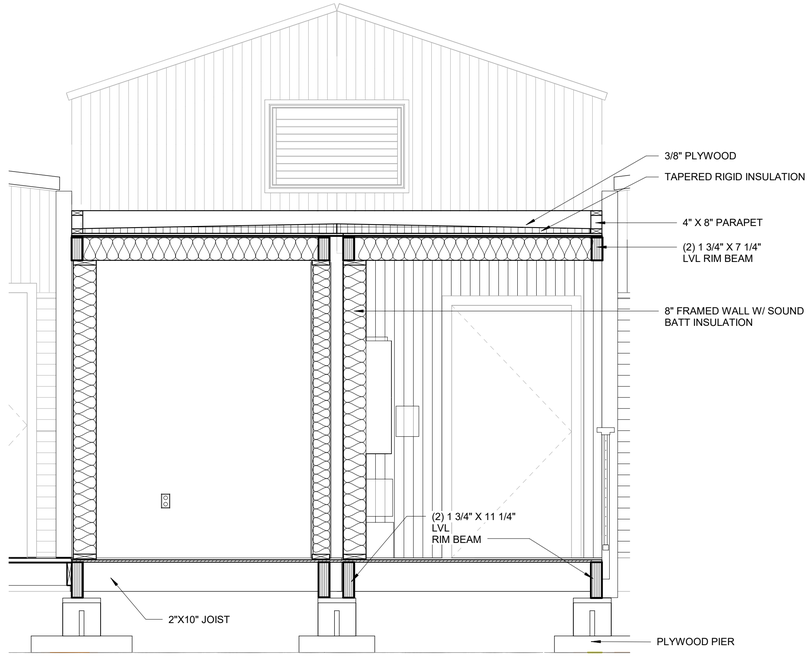
5 ATTIC TRANSVERSE SECTION A
1/2" = 1'-0"



3 ATTIC TRANSVERSE SECTION B
1/2" = 1'-0"



2 SECTION THROUGH CORE ARCH
1/2" = 1'-0"



1 SECTION THROUGH /MECHANICAL ROOM-ARCH
1/2" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

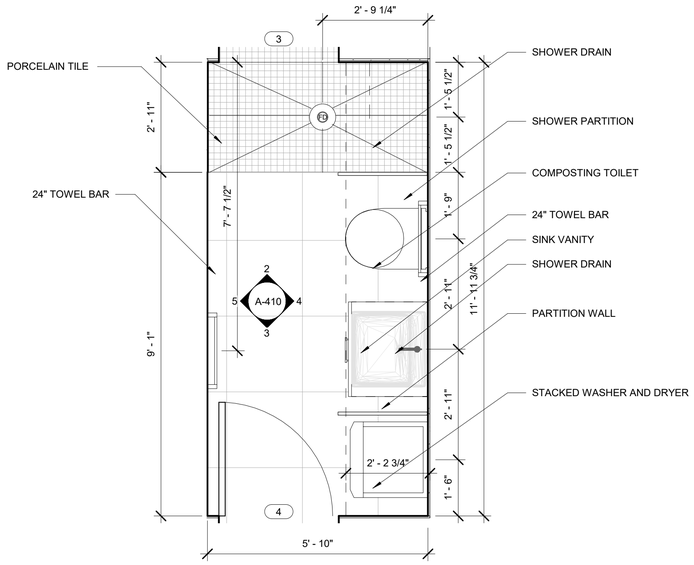
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

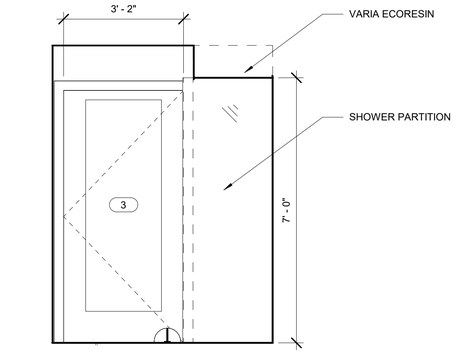
PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

BUILDING SECTIONS

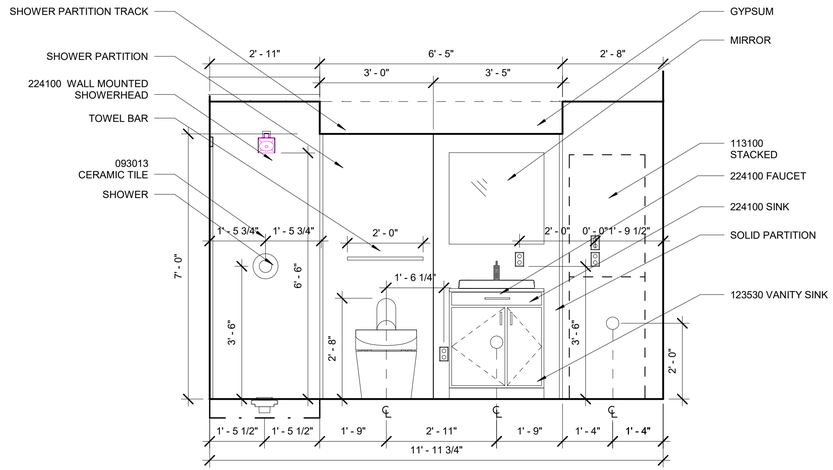
A-302



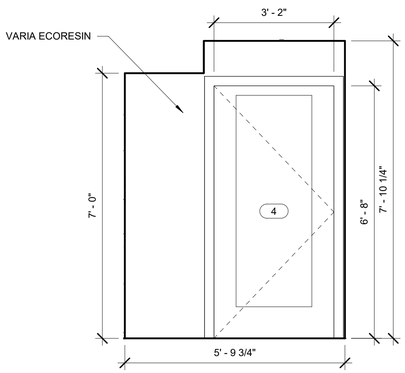
1 ENLARGED BATHROOM PLAN
1/2" = 1'-0"



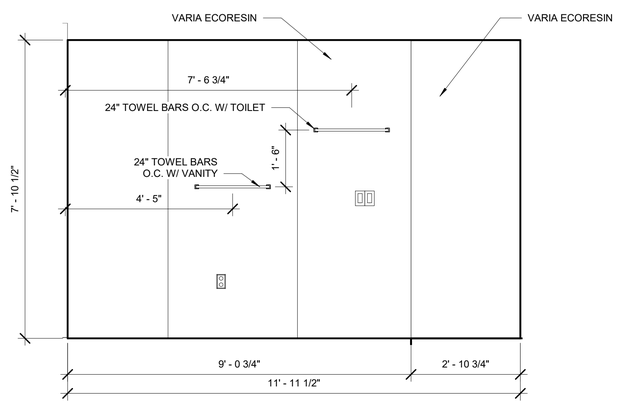
2 BATHROOM A
1/2" = 1'-0"



3 BATHROOM B (VANITY WALL)
1/2" = 1'-0"



4 BATHROOM C
1/2" = 1'-0"



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

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

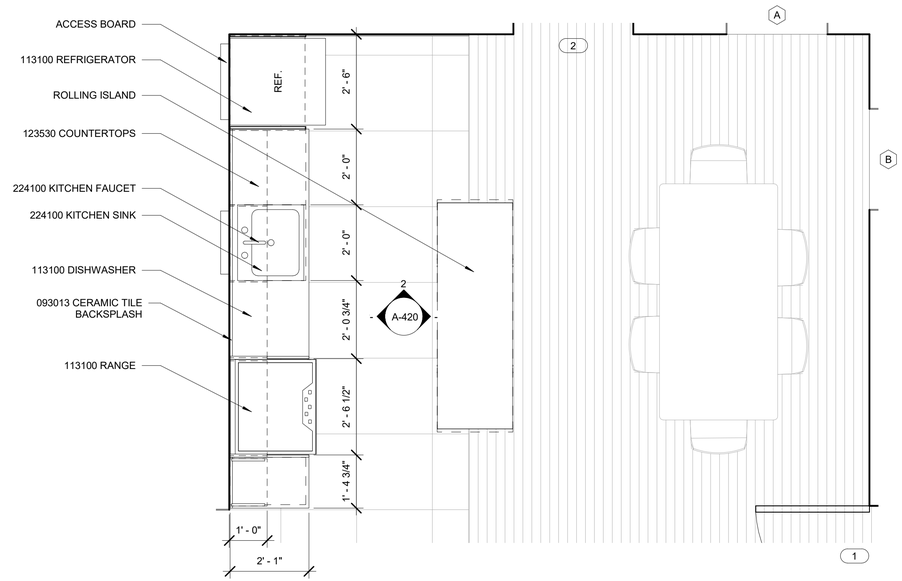
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

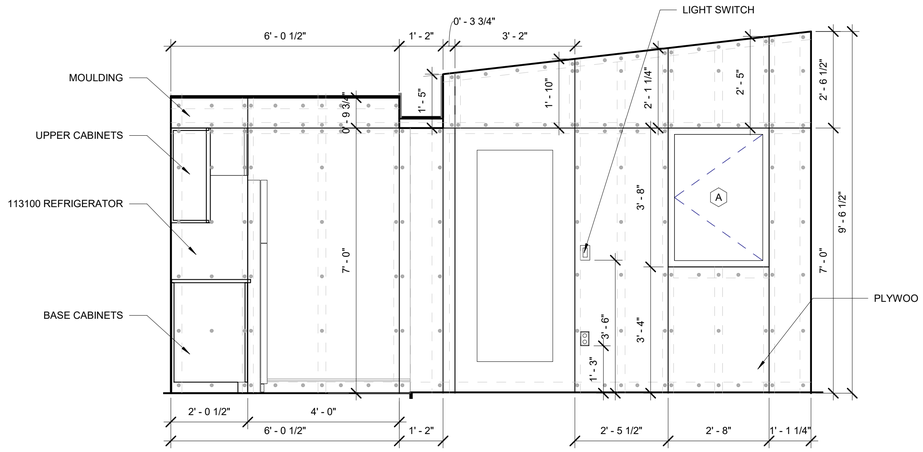
PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

ENLARGED BATHROOM PLANS & ELEVATIONS

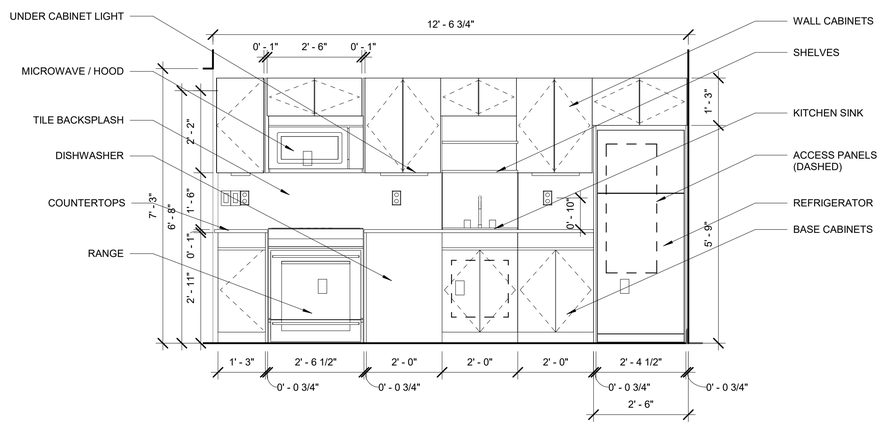
A-410



1 ENLARGED KITCHEN PLAN
1/2" = 1'-0"



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



3 KITCHEN - WEST
1/2" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

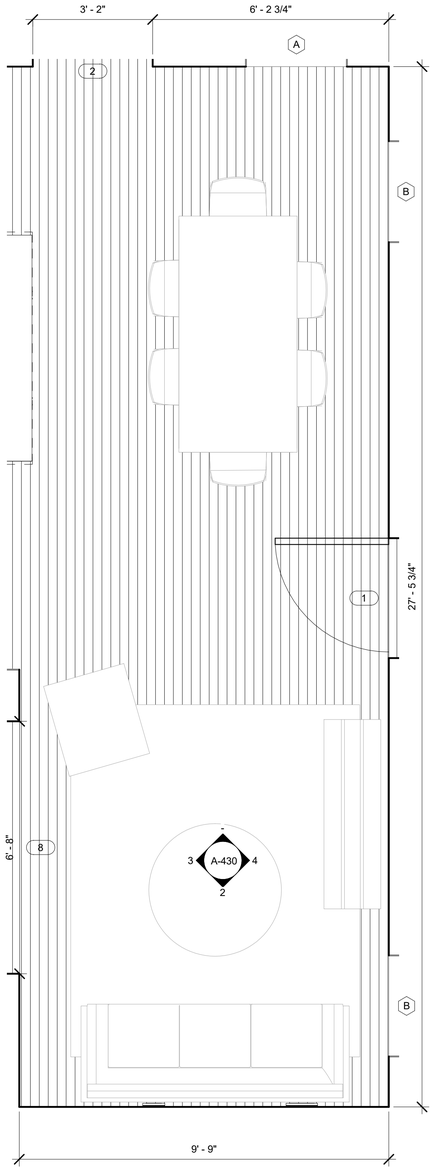
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

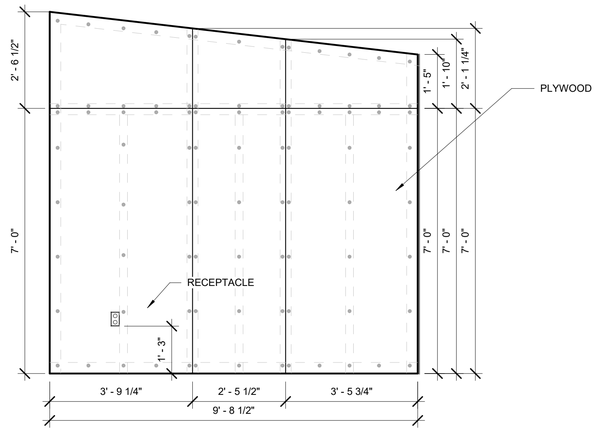
PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

ENLARGED KITCHEN PLANS & ELEVATIONS

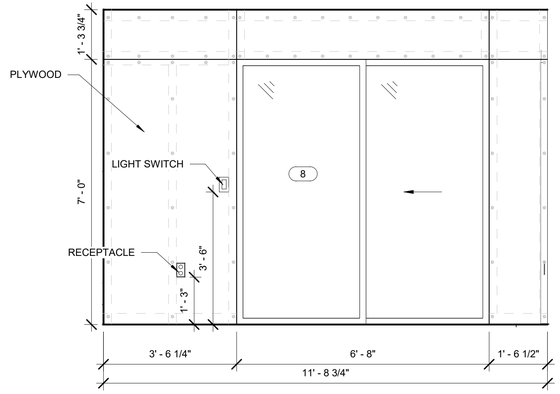
A-420



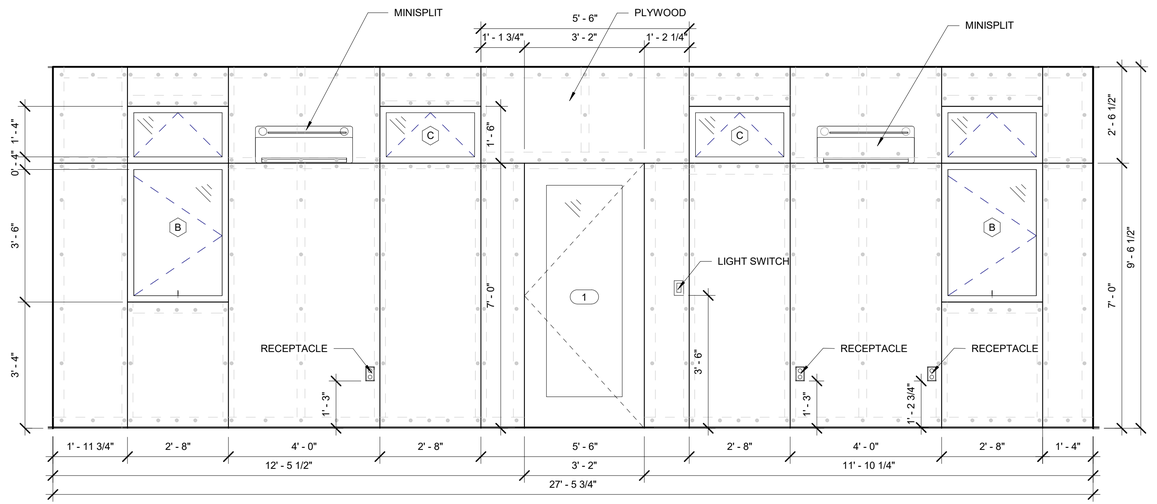
1 ENLARGED LIVING ROOM PLAN
1/2" = 1'-0"



2 LIVING ROOM - SOUTH
1/2" = 1'-0"



3 LIVING ROOM - WEST
1/2" = 1'-0"



4 LIVING ROOM - EAST
1/2" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

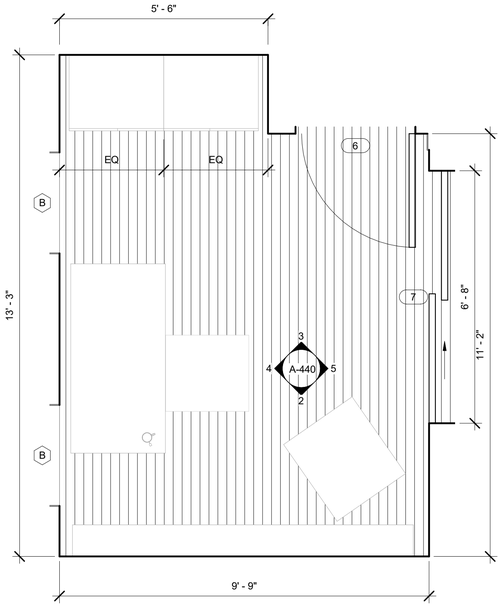
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

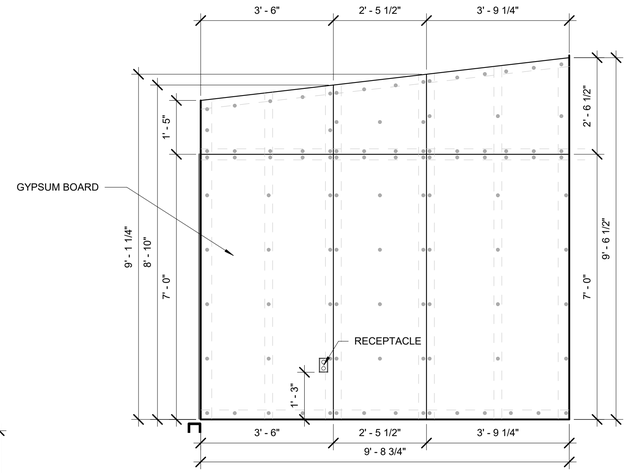
PROJECT NO. 001
DESIGNED Author
CHECKED Checker

ENLARGED LIVING ROOM PLAN & ELEVATIONS

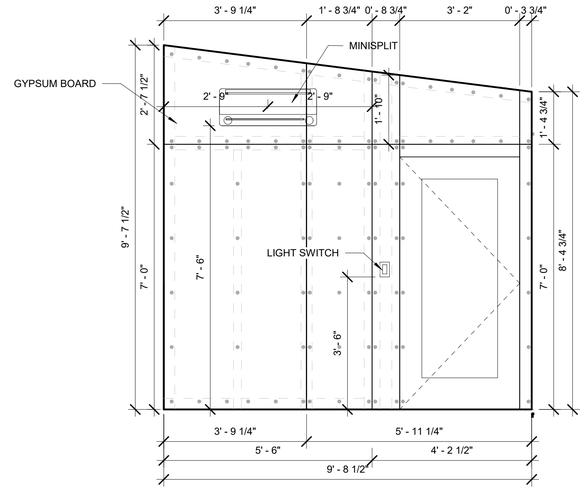
A-430



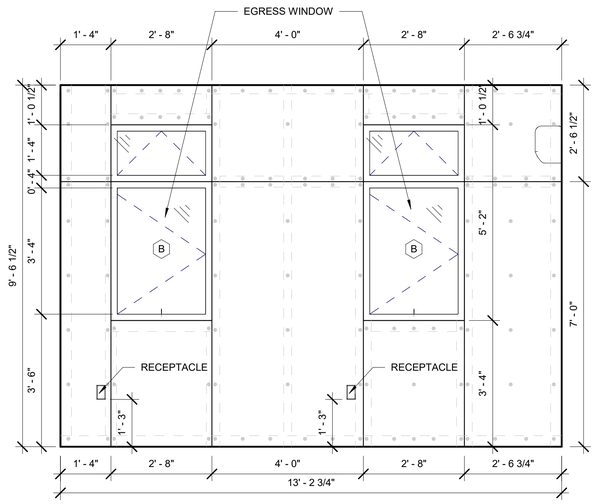
1 ENLARGED STUDY ROOM PLAN
1/2" = 1'-0"



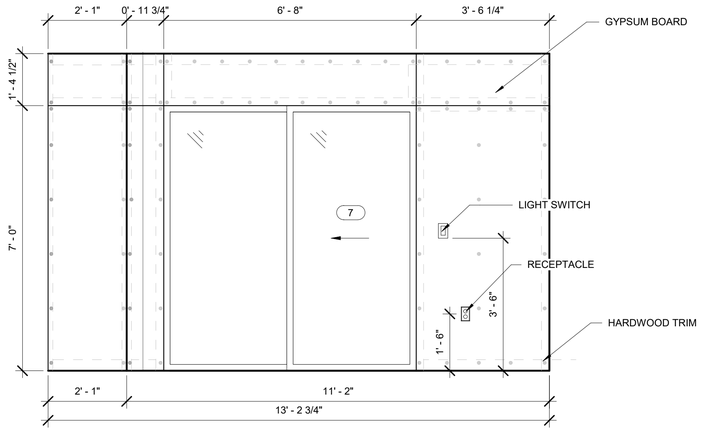
2 STUDY - SOUTH
1/2" = 1'-0"



3 STUDY - NORTH
1/2" = 1'-0"



4 STUDY - WEST
1/2" = 1'-0"



5 STUDY - EAST
1/2" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

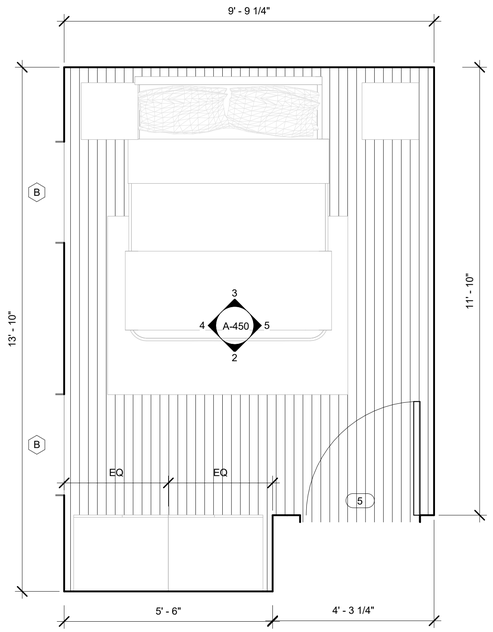
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

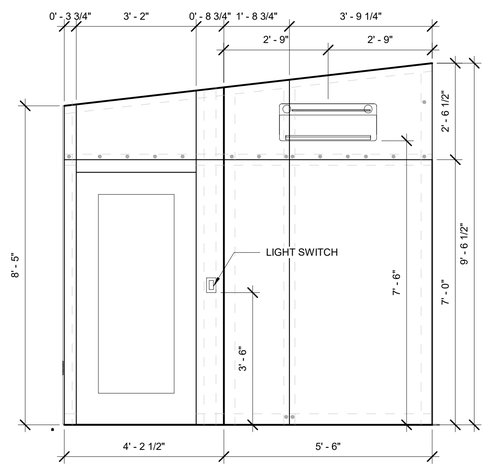
PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

ENLARGED BEDROOM/STUDY PLAN & ELEVATIONS

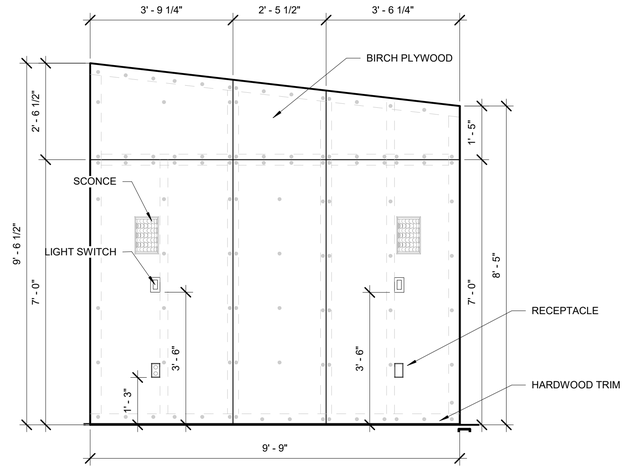
A-440



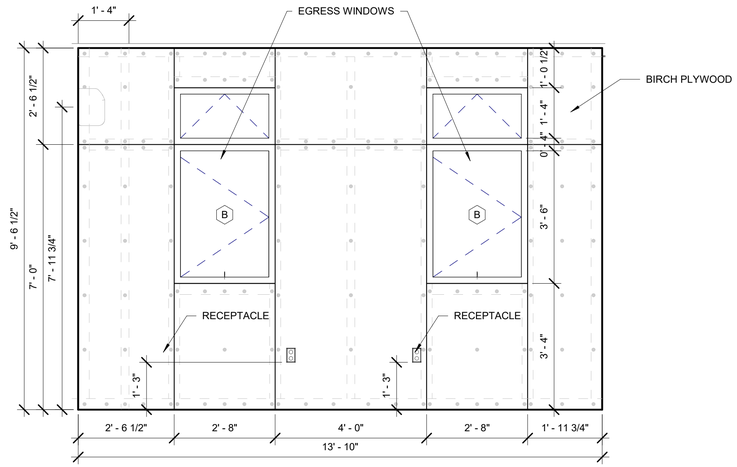
1 ENLARGED BEDROOM PLAN
1/2" = 1'-0"



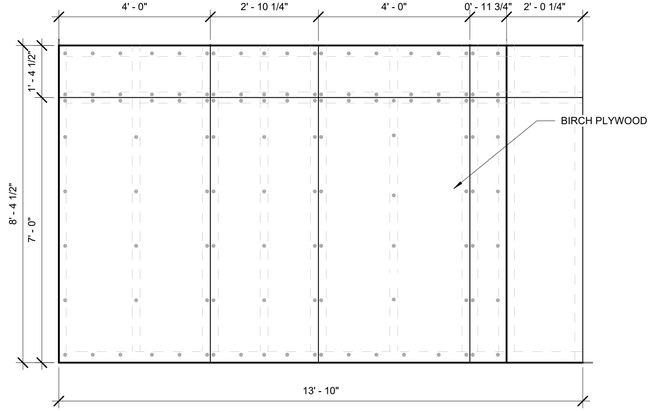
2 BEDROOM - SOUTH
1/2" = 1'-0"



3 BEDROOM - NORTH
1/2" = 1'-0"



4 BEDROOM - WEST
1/2" = 1'-0"



5 BEDROOM - EAST
1/2" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

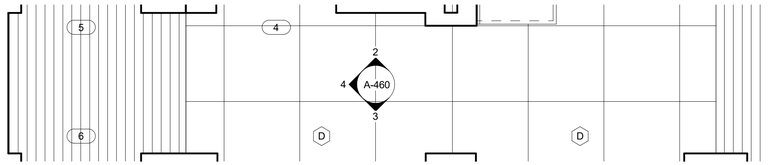
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

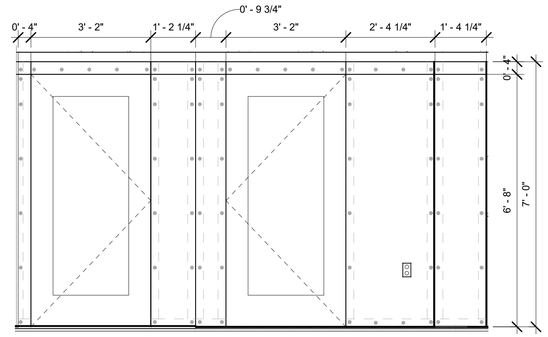
PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

ENLARGED BEDROOM PLAN & ELEVATIONS

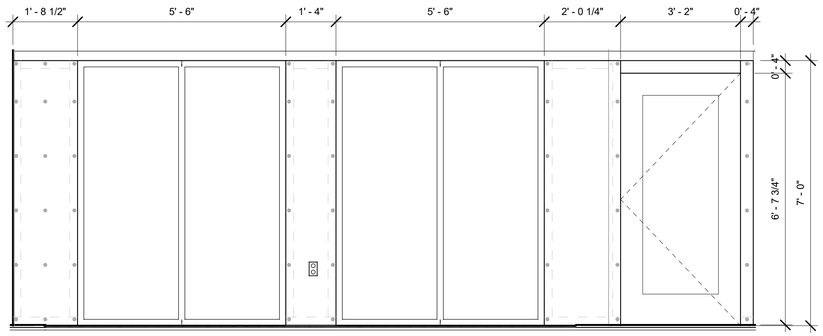
A-450



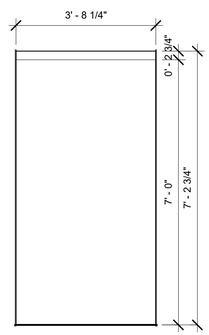
1 ENLARGED CORRIDOR PLAN
1/2" = 1'-0"



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



3 CORRIDOR - SOUTH
1/2" = 1'-0"



4 CORRIDOR - WEST
1/2" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

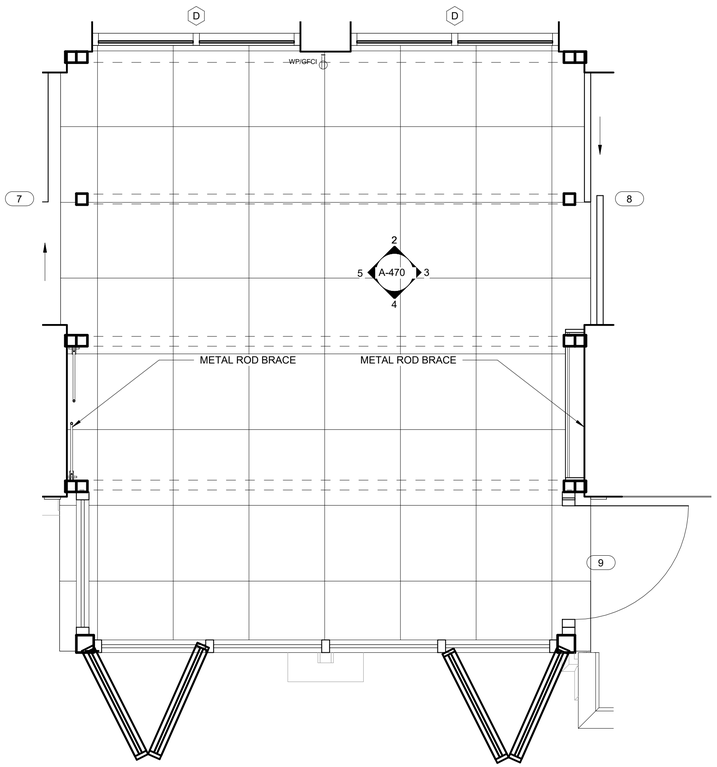
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description

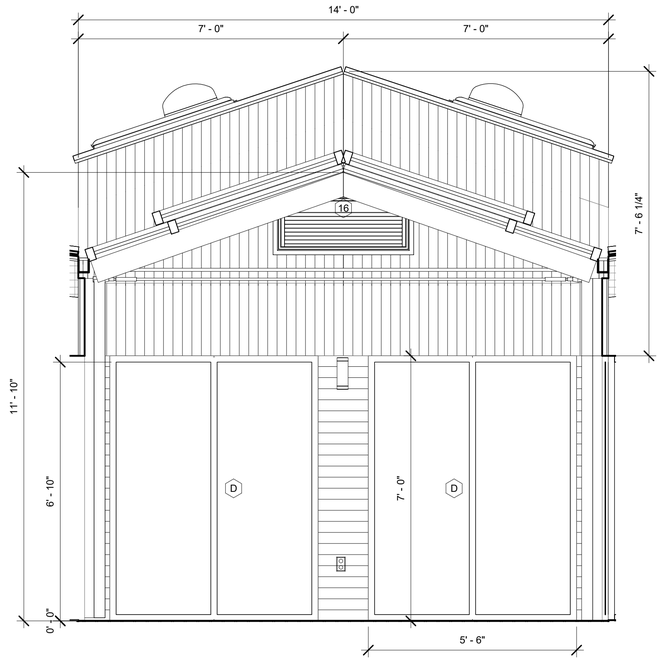
PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

ENLARGED CORRIDOR PLAN & ELEVATIONS

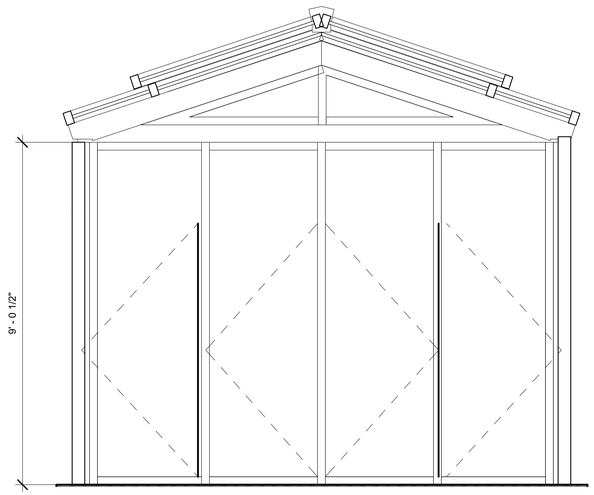
A-460



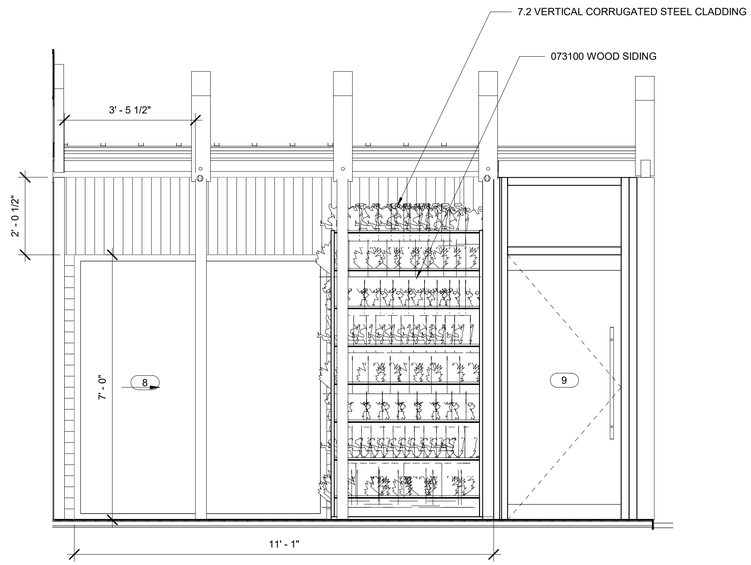
1 ENLARGED COURTYARD PLAN
1/2" = 1'-0"



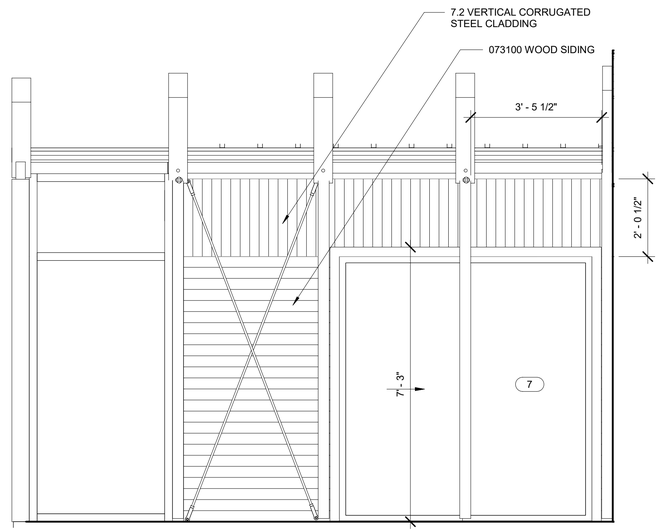
2 COURTYARD A - LOOKING NORTH
1/2" = 1'-0"



4 COURTYARD C - LOOKING SOUTH
1/2" = 1'-0"



3 COURTYARD B - LOOKING EAST
1/2" = 1'-0"



5 COURTYARD D - LOOKING WEST
1/2" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

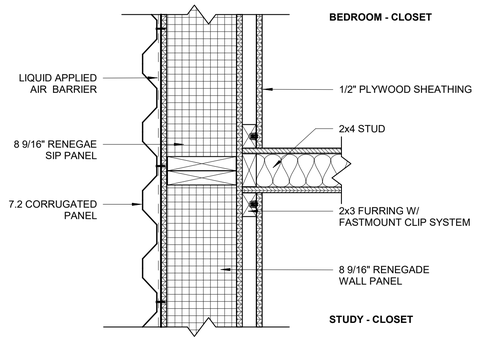
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

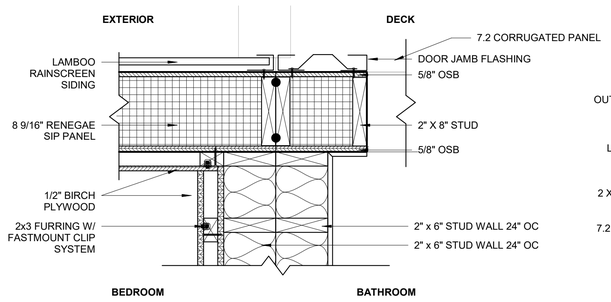
PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

ENLARGED COURTYARD PLAN & ELEVATIONS

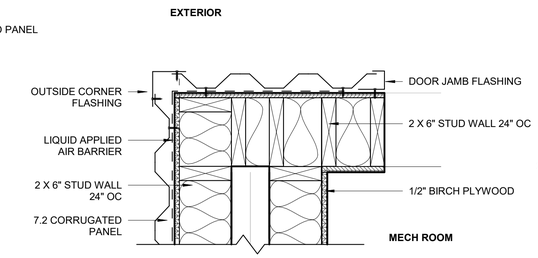
A-470



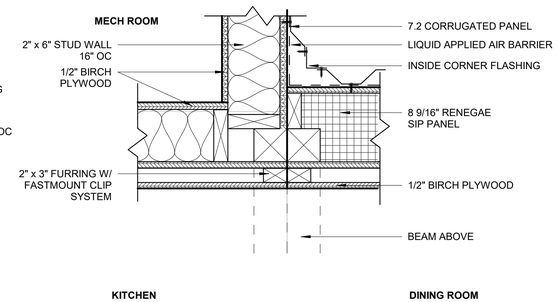
1 INTERIOR WALL TO SIP ARCH
1 1/2" = 1'-0"



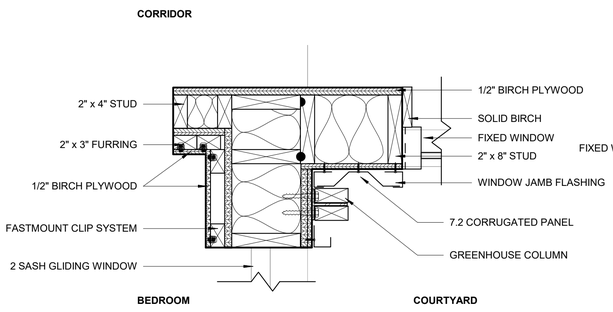
2 MODULE TO WING AT BEDROOM ARCH
1 1/2" = 1'-0"



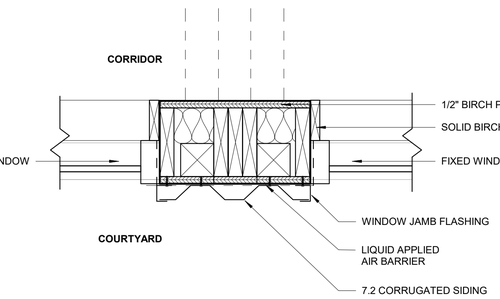
7 MODULE TO MODULE AT SPINE 2 ARCH
1 1/2" = 1'-0"



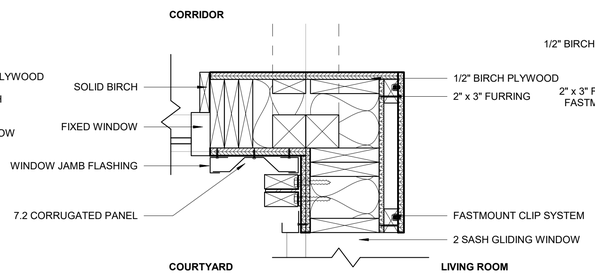
5 MODULE TO WING AT KITCHEN ARCH
1 1/2" = 1'-0"



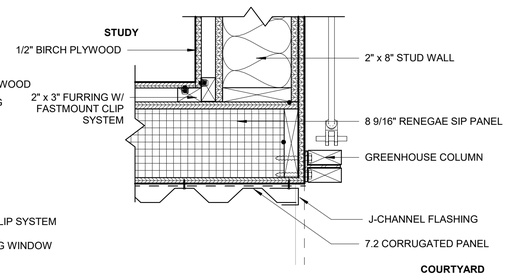
6 MODULE CONNECTION OFFICE TO CORE ARCH
1 1/2" = 1'-0"



3 MODULE CONNECTION AT CORE ARCH
1 1/2" = 1'-0"



4 MODULE TO WING AT CORNER ARCH
1 1/2" = 1'-0"



8 SIP CORNER DETAIL ARCH
1 1/2" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

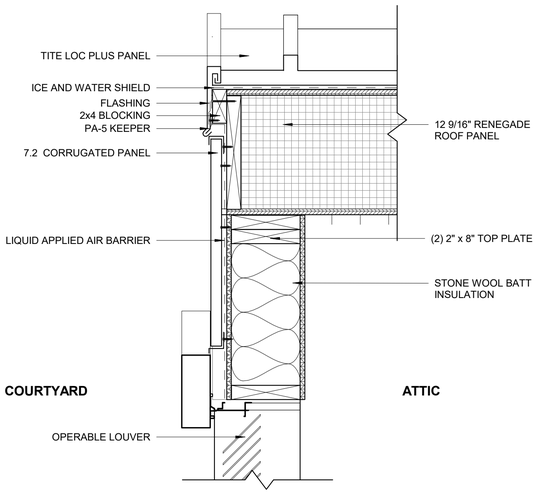
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

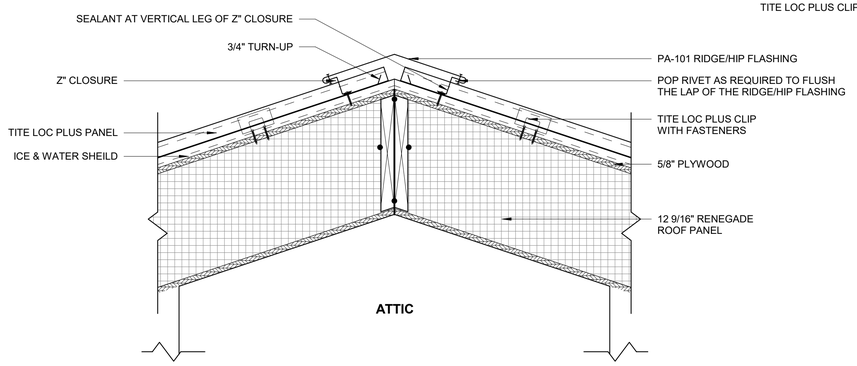
PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

PLAN DETAILS

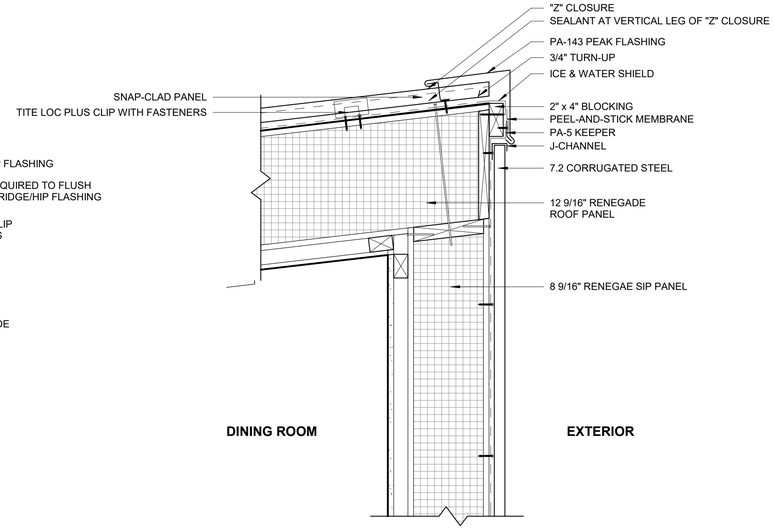
A-500



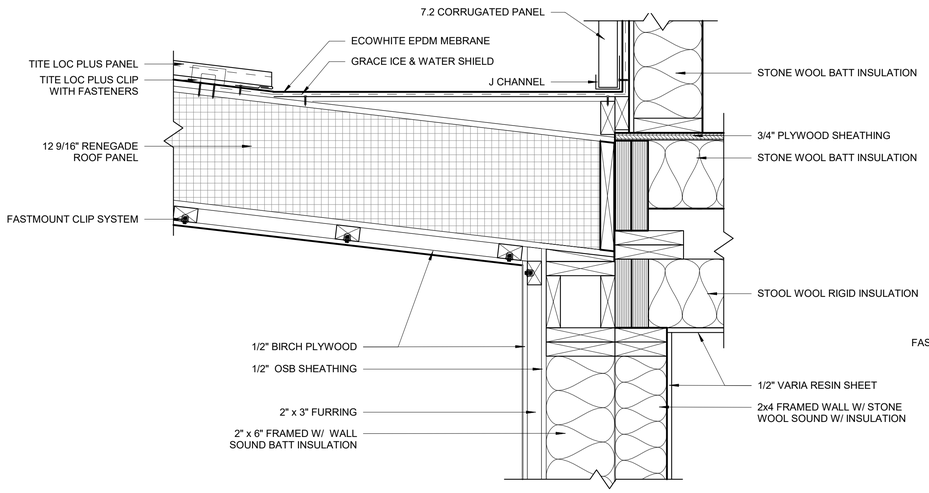
4 SECTION THROUGH SOLAR DRYERS B ARCH
1 1/2" = 1'-0"



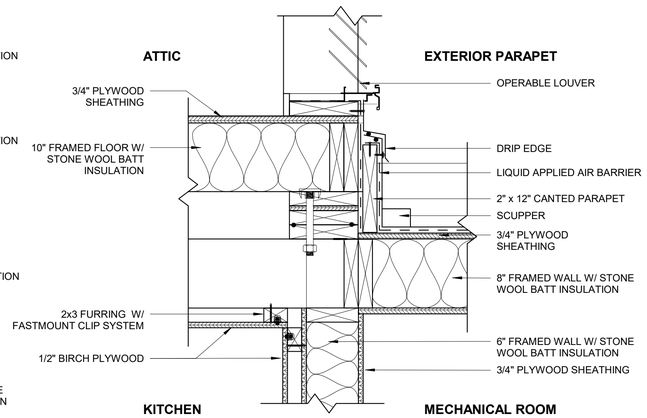
5 RIDGE DETAIL
1 1/2" = 1'-0"



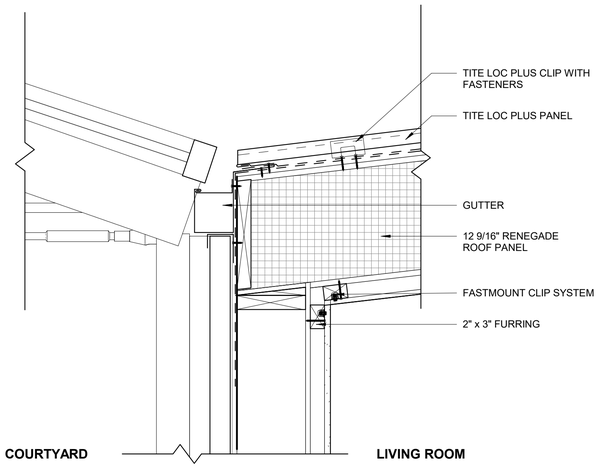
6 PEAK DETAIL
1 1/2" = 1'-0"



3 WALL FRAMING AT BEDROOM - ROOF ARCH
1 1/2" = 1'-0"



2 ATTIC FLOOR TO MECHANICAL ROOF ARCH
1 1/2" = 1'-0"



1 SECTION THROUGH COURTARD & WING
1 1/2" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

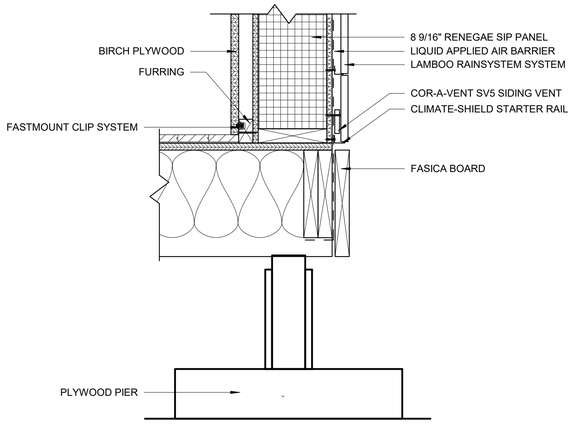
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

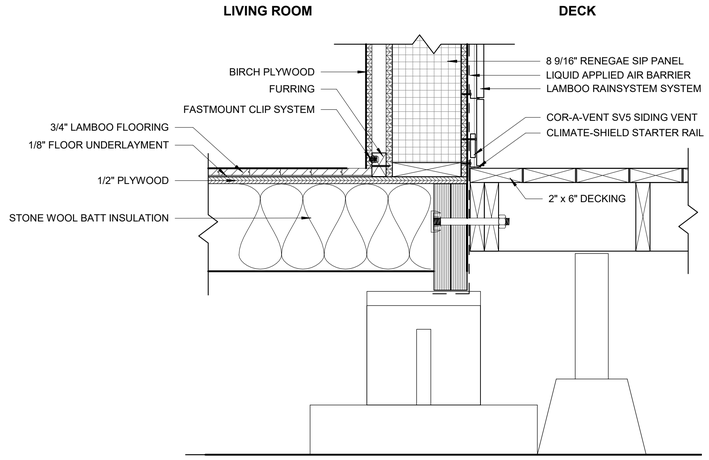
PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

ROOF SECTION DETAILS

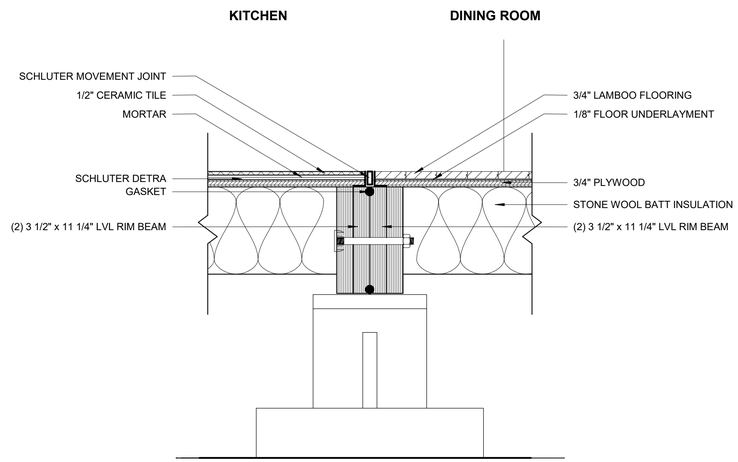
A-510



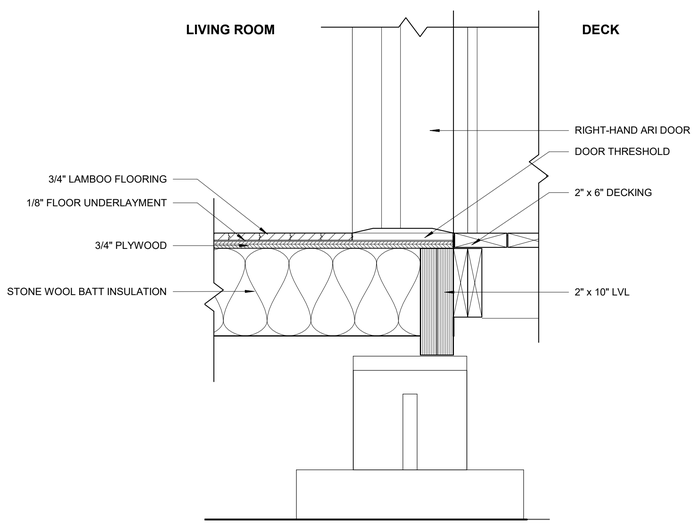
5 FLOOR TO WALL DETAIL
1 1/2" = 1'-0"



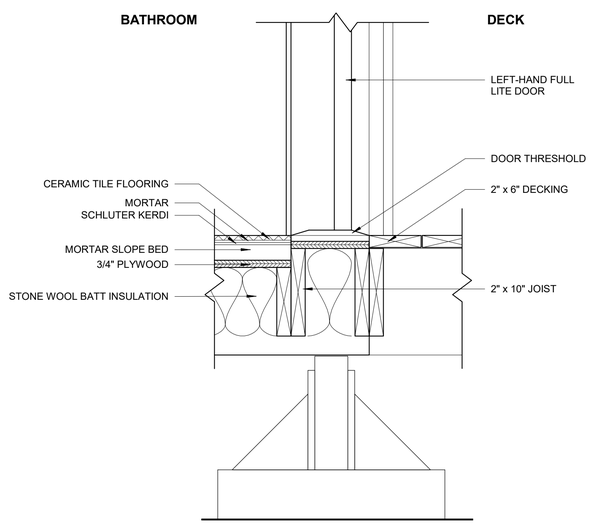
6 FLOOR & WALL TO EXTERIOR DECK DETAIL
1 1/2" = 1'-0"



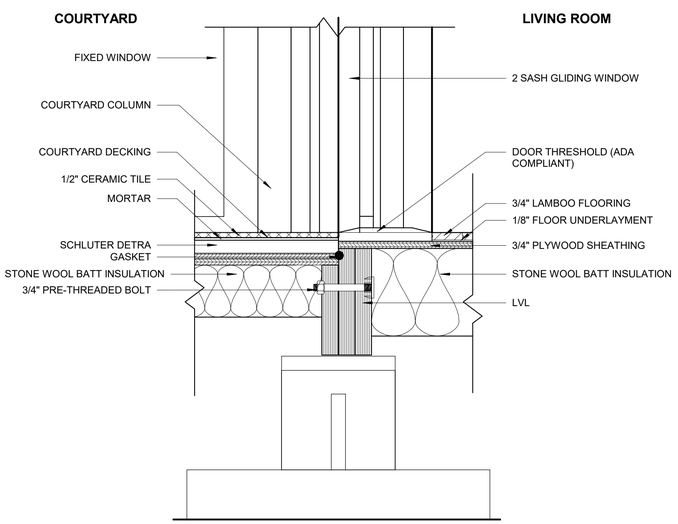
1 TILE TO HARDWOOD DETAIL BETWEEN TWO MODULES
1 1/2" = 1'-0"



2 HARDWOOD TO EXTERIOR DECK
1 1/2" = 1'-0"



3 SHOWER TILE TO EXTERIOR DECK
1 1/2" = 1'-0"



4 HARDWOOD TO COURTYARD TILE
1 1/2" = 1'-0"

REFER TO A-540 FOR LAMBOO RAINSCREEN SIDING DETAILS

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

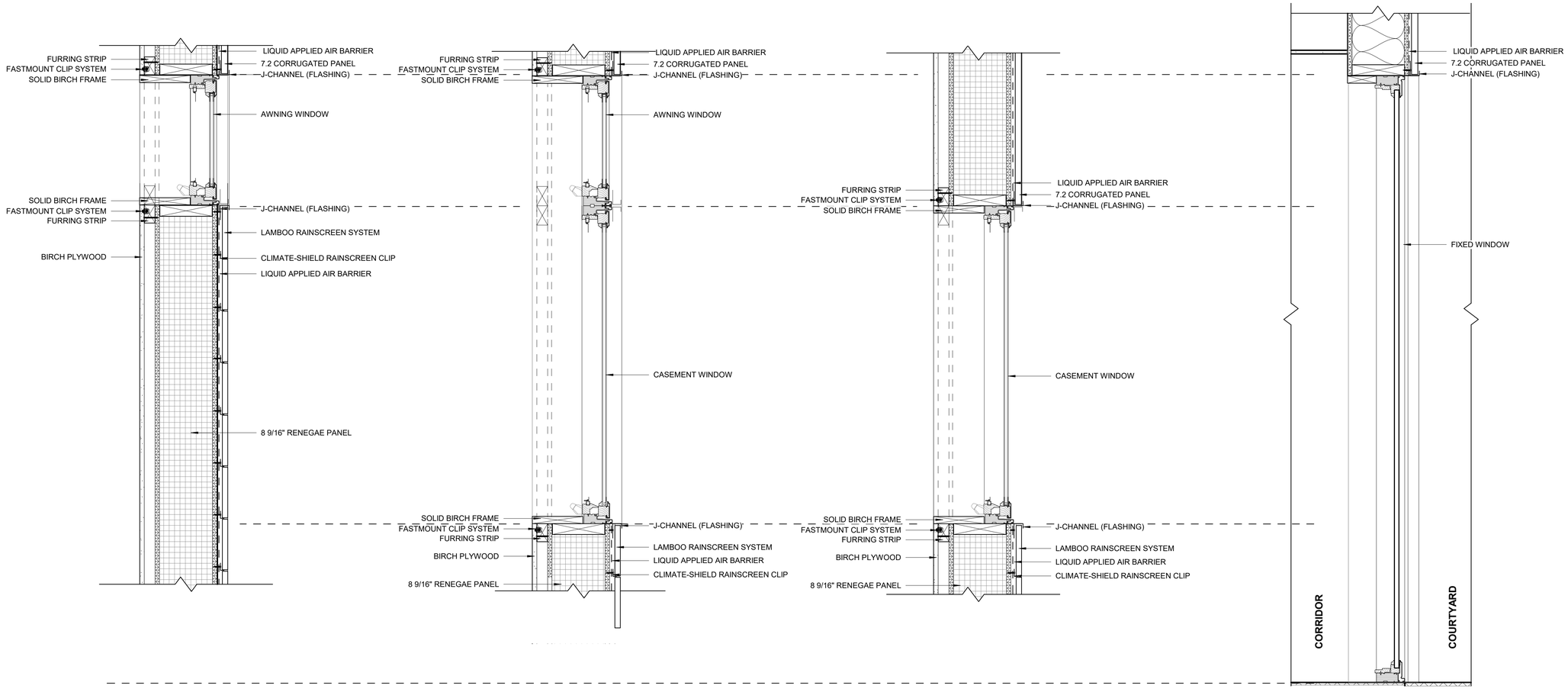
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

FLOOR SECTION DETAILS

A-520



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

1 CASEMENT/EGRESS WINDOW DETAIL
1 1/2" = 1'-0"

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

3 WINDOW DETAIL (NOT OPERABLE)
1 1/2" = 1'-0"

REFER TO A-540 FOR LAMBOO RAINSCREEN SIDING DETAILS

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

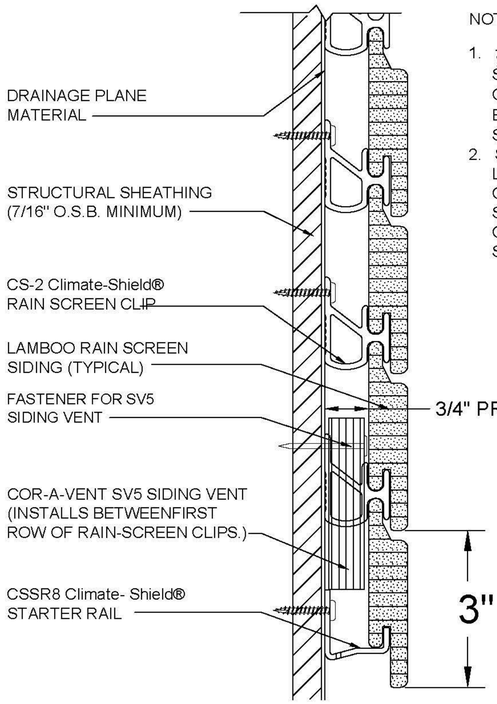
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description

PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

WINDOW DETAILS

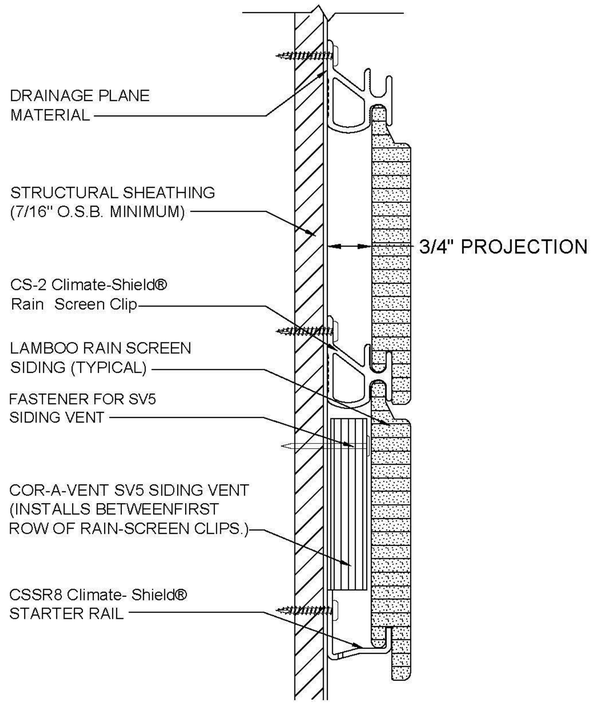
A-530



LAMBOO RAIN SCREEN SIDING; 3" FACING

NOTES:

1. 7/16" STRUCTURAL SHEATHING, THAT IS SUPPORTING LAMBOO RAIN SCREEN WITH CLIMATE-SHIELD® CLIPS, MUST BE SUPPORTED EVERY 16" O.C. CLIMATE-SHIELD® CLIPS MAYBE SPACED AT 20" MAX.
2. STRUCTURAL SHEATHING, THAT IS SUPPORTING LAMBOO RAIN SCREEN WITH CLIMATE SHIELD CLIPS, ½" THICKNESS (OR THICKER) MAY BE SUPPORTED A MAXIMUM OF 20" O.C. ALL CLIMATE-SHIELD® CLIPS MAYBE AT 24" MAX SPACING.



LAMBOO RAIN SCREEN SIDING; 5" FACING

LAMBOO RAIN SCREEN SIDING w/ CLIMATE-SHIELD® INSTALLATION SYSTEM

FILE NAME	
CONTRACT NO	001–0001
DRAWN	01/03/2017
CHECK	1/3/2017 JH
APPR.	1/3/2017 JH
ISSUED	1/3/2017 JH

LAMBOO TECHNOLOGIES, LLC

RAIN SCREEN SIDING

SIZE	FSCM NO	DWG NO	REV
B	–	001-0001	–
SCALE NTS	WEIGHT	SHEET 1	

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description

PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

RAINSCREEN SIDING DETAILS

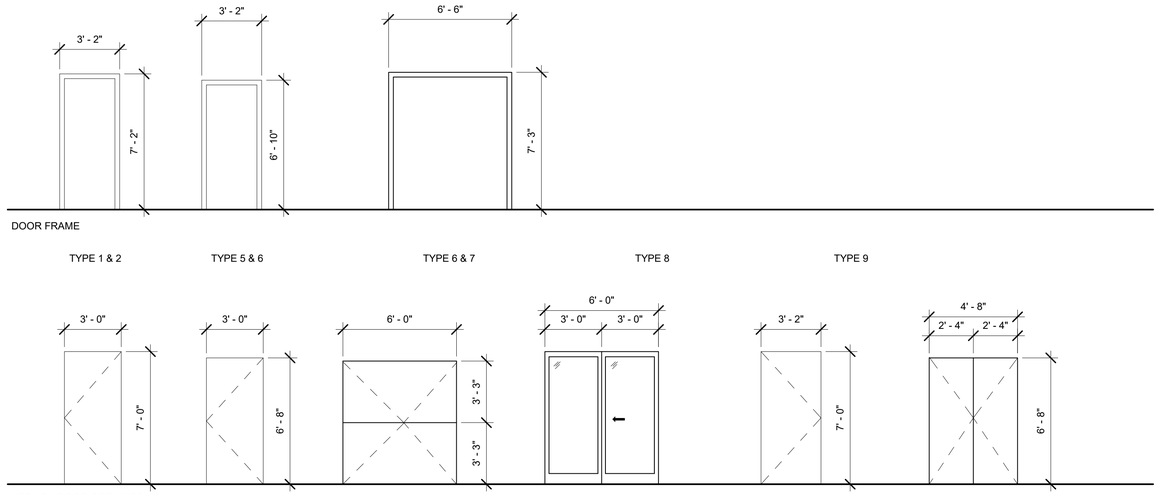
A-540

DOOR SCHEDULE

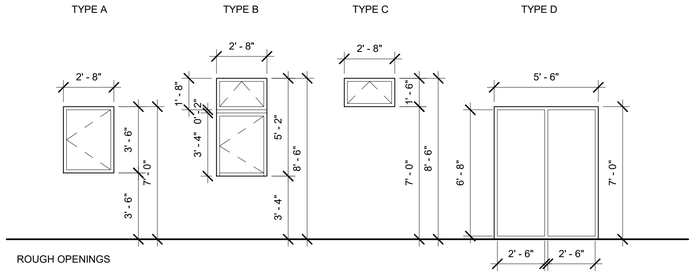
Type Mark	Location	Manufacturer	Model	Height	Width	Thickness	Finish	Frame Material	Operation	Count	Function	Fire Rating	Comments
1	Living Room	REEB		7' - 0"	3' - 2"	0' - 2"			RIGHT HAND	1	Exterior		
2	Kitchen	REEB		7' - 0"	3' - 2"	0' - 2"			LEFT HAND	1	Exterior		
3	Bathroom	REEB		6' - 8"	3' - 2"	0' - 2"			LEFT HAND	1	Interior		
4	Bedroom	REEB		6' - 8"	3' - 2"	0' - 2"			RIGHT HAND	1	Interior		
5	Study	REEB		6' - 8"	3' - 2"	0' - 2"			LEFT HAND	1	Interior		
6	Study/Courtyard	ANDERSEN		7' - 0"	6' - 8"	0' - 2"			SLIDING	1	Exterior		
7	Living Room/Courtyard	ANDERSEN		7' - 0"	6' - 8"	0' - 2"			SLIDING	1	Exterior		
8	Courtyard	ANDERSEN		7' - 0"	3' - 0"				LEFT HAND	1	Exterior		
9	Mechanical Room	REEB		6' - 8"	4' - 8"	0' - 2"				1	Exterior	1 Hour	
10	Bathroom Deck 2	REEB		6' - 8"	3' - 2"	0' - 2"				1	Exterior		

WINDOW SCHEDULE

TYPE MARK	QNTY.	WINDOW TYPE	MANUFACTURER	MODEL	MATERIAL	ROUGH WIDTH	ROUGH HEIGHT	Sill Height	Head Height	Type	Comments
A	1	CASEMENT	ANDERSON			2' - 8"	3' - 8"	3' - 4"	8' - 6"	ANDERSON E SERIES CASEMENT	FRAME DARK ASH
B	6	CASEMENT	ANDERSON			2' - 8"	5' - 2"	3' - 4"	8' - 6"	ANDERSON E SERIES AWNING & CASEMENT	FRAME DARK ASH
C	2	PUSH OUT AWNING	ANDERSON			2' - 8"	1' - 6"	7' - 0"	8' - 6"	ANDERSON E SERIES AWNING	FRAME DARK ASH
D	2	FIXED	ANDERSON					0' - 0"	7' - 0"	ANDERSON TALL FIXED CASEMENT	FRAME DARK ASH
E	2	SUNTUBE	VELUX	TGF 014		1' - 2 1/2"	12' - 0"			VELUX TGF 014	The VELUX TGF UTILIZES LOW PROFILE FLASHING FLEXIBLE TUNNEL CONSTRUCTION.
F	2	SKYLIGHT	VELUX	VSE		3' - 8 1/4"	3' - 9 3/4"			S06	ELECTRIC VENTING DECK MOUNTED SKYLIGHT



1 DOOR ELEVATIONS
1/4" = 1'-0"



2 WINDOW ELEVATIONS
1/4" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

PROJECT NO. 001
DESIGNED Author
CHECKED Checker

WINDOW & DOOR SCHEDULE

A-600

MATERIAL SCHEDULE						
SYMBOL	**ITEM**	**MANUFACTURER**	**NAME**	**COLOR/FINISH**	**SIZE**	**COMMENTS**
INTERIOR MATERIALS						
FLOORING						
BF-1	BAMBOO FLOORING	LAMBOO TECHNOLOGIES	LAMBOO FLOORING SYSTEM	CHERRY	3" x 16' (3/4" thick)	RAPIDLY RENEWABLE MATERIAL
T-1	PORCELAIN TILE	MOSA TILES	TERRA GREYS (203V)	BLACK ABSOLUTE	24" x 24"	CRADLE TO CRADLE SILVER
T-2	PORCELAIN TILE	AMERICAN OLEAN	UNGLAZED COLORBODY PROCELAIN MOSAIC	BLACK (A34)	2" x 2"	MOSAIC
WALLS						
BP-1	BIRCH PLYWOOD	TW PERRY	FINISHED BIRCH PLYWOOD	FINISHED GRADE	4' x 8'	
FP-1	FINISH PANEL	3FORM	VARIA ECORESIN	HINT FLOW	48" x 96" (1/2" thick)	CONTAINS 40% PRE-CONSUMER RECYCLED CONTENT
PNT-1	PAINT	BENJAMIN MOORE	NATURA	EGGSHELL (513)	-	CERTIFIED ASTHMA & ALLERGY FRIENDLY & ZERO VOC
CEILINGS						
BP-1	BIRCH PLYWOOD	TW PERRY	FINISHED BIRCH PLYWOOD	FINISHED GRADE	4' x 8'	
FP-1	FINISH PANEL	3FORM	VARIA ECORESIN	HINT FLOW	48" x 96" (1/2" thick)	CONTAINS 40% PRE-CONSUMER RECYCLED CONTENT
PNT-1	PAINT	BENJAMIN MOORE	NATURA	EGGSHELL (513)	-	CERTIFIED ASTHMA & ALLERGY FRIENDLY & ZERO VOC
CASEWORK						
C-1	COUNTERTOP	3FORM	100PERCENT	SNOWMELT OR NIGHTSKY	44" x 112"	100 PERCENT BLEND OF RECYCLED CONTENT
ROOF						
SS-1	STANDING SEAM	PETERSEN PAC-CLAD	TITE LOC PLUS PANEL	SILVER	-	PRE/POST CONSUMER RECYCLED CONTENT
WALLS						
CS-1	CORRUGATED STEEL	PETERSEN PAC-CLAD	7.2 PANEL	SILVER	-	PRE/POST CONSUMER RECYCLED CONTENT
BC-1	BAMBOO CLADDING	LAMBOO TECHNOLOGIES	LAMBOO RAINSCREEN SYSTEM	MODERN BUFF	7" x 16' (3/4" thick)	RAPIDLY RENEWABLE MATERIAL
DECK						
D-1	DECKING	TW PERRY	SOLID PINE	CONTRUCTION GRADE	2" x 6"	

INTERIOR FINISH SCHEDULE								
ROOM NO.	**ROOM NAME**	**FLOOR**	**NORTH WALL**	**EAST WALL**	**SOUTH WALL**	**WEST WALL**	**CEILING**	**COMMENTS**
100	BEDROOM	BF-1	BP-1 / PNT-1	BP-1 / PNT-1	BP-1 / PNT-1	BP-1 / PNT-1	BP-1 / PNT-1	
101	STUDY	BF-1	BP-1 / PNT-1	BP-1 / PNT-1	BP-1 / PNT-1	BP-1 / PNT-1	BP-1 / PNT-1	
102	BATHROOM	T-1 / T-2	FP-1	FP-1	FP-1	FP-1	FP-1	
103	KITCHEN	T-1	BP-1 / PNT-1	-	-	FP-1	BP-1 / PNT-1	
104	DINING ROOM	BF-1	BP-1 / PNT-1	BP-1 / PNT-1	-	-	BP-1 / PNT-1	
105	LIVING ROOM	BF-1	-	BP-1 / PNT-1	BP-1 / PNT-1	BP-1 / PNT-1	BP-1 / PNT-1	
106	CORRIDOR	T-1	BP-1 / PNT-1	-	BP-1 / PNT-1	BP-1 / PNT-1	BP-1 / PNT-1	
107	COURTYARD	T-1	CS-1	CS-1 / BC-1	-	CS-1 / BC-1	-	
108	MECH ROOM	T-2	BP-1 / PNT-1	BP-1 / PNT-1	BP-1 / PNT-1	BP-1 / PNT-1	BP-1 / PNT-1	

EXTERIOR MATERIAL SCHEDULE			
ELEVATION	**WALL**	**DECK**	**COMMENTS**
NORTH	CS-1 / BC-1	D-1	
EAST	CS-1 / BC-1	D-1	
SOUTH	CS-1 / BC-1	D-1	
WEST	CS-1 / BC-1	D-1	

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description
07/06/2017	Construction Set
02/23/2017	D6

PROJECT NO. 001
DESIGNED Author
CHECKED Checker

MATERIAL SCHEDULE

A-601

KITCHEN PANEL SCHEDULE

TYPE...	QUANTITY	ELEVATION	WIDTH	LENGTH
N1	1	A-420 / 2	2' - 0 1/2"	0' - 9 3/4"
N2	1	A-420 / 2	2' - 0 1/2"	7' - 0"
N3	1	A-420 / 2	4' - 0"	0' - 9 3/4"
N4	1	A-420 / 2	4' - 0"	7' - 0"
N5	1	A-420 / 2	1' - 2"	?
N6	1	A-420 / 2	1' - 2"	7' - 0"
N7	1	A-420 / 2	0' - 3 3/4"	1' - 5" ~ 1' - 5 1/2"
N8	1	A-420 / 2	0' - 3 3/4"	7' - 0"
N9	1	A-420 / 2	3' - 2"	1' - 5 1/2" ~ 1' - 10"
N10	1	A-420 / 2	3' - 2"	7' - 0"
N11	1	A-420 / 2	2' - 3 3/4"	1' - 10" ~ 2' - 1 1/4"
N12	1	A-420 / 2	2' - 3 3/4"	7' - 0"
N13	1	A-420 / 2	2' - 8"	2' - 1 1/4" ~ 2' - 5"
N14	1	A-420 / 2	2' - 8"	7' - 0"
N15	1	A-420 / 2	1' - 1 1/4"	2' - 5" ~ 2' - 6 1/2"
N16	1	A-420 / 2	1' - 1 1/4"	7' - 0"

**All dimesions should be verified in field.

LIVING ROOM PANEL SCHEDULE

TYPE...	QUANTITY	ELEVATION	WIDTH	LENGTH
S1	1	A-430 / 2	3' - 9 1/4"	2' - 6 1/2" ~ 2' - 1 1/4"
S2	1	A-430 / 2	3' - 9 1/4"	7' - 0"
S3	1	A-430 / 2	2' - 5 1/2"	2' - 1 1/4" ~ 1' - 10"
S4	1	A-430 / 2	2' - 5 1/2"	7' - 0"
S5	1	A-430 / 2	3' - 5 3/4"	1' - 10" ~ 1' - 5"
S6	1	A-430 / 2	3' - 5 3/4"	7' - 0"
W1	1	A-430 / 3	3' - 6 1/4"	1' - 3 3/4"
W2	1	A-430 / 3	3' - 6 1/4"	7' - 0"
W3	1	A-430 / 3	6' - 8"	1' - 3 3/4"
W4	1	A-430 / 3	1' - 6 1/2"	1' - 3 3/4"
W5	1	A-430 / 3	1' - 6 1/2"	7' - 0"
E1	1	A-430 / 4	1' - 11 3/4"	2' - 6 1/2"
E2	1	A-430 / 4	1' - 11 3/4"	7' - 0"
E3	4	A-430 / 4	2' - 8"	2' - 6 1/2"
E4	4	A-430 / 4	2' - 8"	7' - 0"
E5	2	A-430 / 4	4' - 0"	2' - 6 1/2"
E6	2	A-430 / 4	4' - 0"	7' - 0"
E7	1	A-430 / 4	5' - 6"	2' - 6 1/2"
E8	1	A-430 / 4	1' - 1 3/4"	7' - 0"
E9	1	A-430 / 4	1' - 2 1/4"	2' - 6 1/2"
E10	1	A-430 / 4	1' - 4"	7' - 0"
E11	1	A-430 / 4	1' - 4"	2' - 6 1/2"

**All dimesions should be verified in field.

STUDY PANEL SCHEDULE

TYPE...	QUANTITY	ELEVATION	WIDTH	LENGTH
S1	1	A-440 / 2	3' - 6"	1' - 5" ~ 1' - 10"
S2	1	A-440 / 2	3' - 6"	7' - 0"
S3	1	A-440 / 2	2' - 5 1/2"	1' - 10" ~ 2' - 1 1/4"
S4	1	A-440 / 2	2' - 5 1/2"	7' - 0"
S5	1	A-440 / 2	3' - 9 1/4"	2' - 1 1/4" ~ 2' - 6 1/2"
S6	1	A-440 / 2	3' - 9 1/4"	7' - 0"
N1	1	A-440 / 3	3' - 9 1/4"	2' - 7 1/2" ~ 2' - 1 3/4"
N2	1	A-440 / 3	3' - 9 1/4"	7' - 0"
N3	1	A-440 / 3	1' 8 3/4"	2' - 1 3/4" ~ 1' - 11"
N4	1	A-440 / 3	1' 8 3/4"	7' - 0"
N5	1	A-440 / 3	0' - 8 3/4"	1' - 11" ~ 1' - 10"
N8	1	A-440 / 3	0' - 8 3/4"	7' - 0"
N9	1	A-440 / 3	3' - 2"	1' - 10" ~ 1' - 5 1/4"
N10	1	A-440 / 3	3' - 2"	7' - 0"
N11	1	A-440 / 3	0' - 3 3/4"	1' - 5 1/4" ~ 1' - 4...
N12	1	A-440 / 3	0' - 3 3/4"	7' - 0"
W1	1	A-440 / 4	1' - 4"	2' - 6 1/2"
W2	1	A-440 / 4	1' - 4"	7' - 0"
W3	2	A-440 / 4	2' - 8"	2' - 6 1/2"
W4	2	A-440 / 4	2' - 8"	7' - 0"
W5	1	A-440 / 4	4' - 0"	2' - 6 1/2"
W6	1	A-440 / 4	4' - 0"	7' - 0"
W7	1	A-440 / 4	2' - 6 3/4"	2' - 6 1/2"
W8	1	A-440 / 4	2' - 6 3/4"	7' - 0"
E1	1	A-440 / 5	2' - 1"	1' - 4 1/2"
E2	1	A-440 / 5	2' - 1"	7' - 0"
E3	1	A-440 / 5	0' - 11 3/4"	1' - 4 1/2"
E4	1	A-440 / 5	0' - 11 3/4"	7' - 0"
E5	1	A-440 / 5	6' - 8"	1' - 4 1/2"
E6	1	A-440 / 5	6' - 8"	7' - 0"
E7	1	A-440 / 5	3' - 6 1/4"	1' - 4 1/2"
E8	1	A-440 / 5	3' - 6 1/4"	7' - 0"

**All dimesions should be verified in field.

BEDROOM PANEL SCHEDULE

TYPE MARK	QUANTITY	ELEVATION	WIDTH	LENGTH
S1	1	A-450 / 2	0' - 3 3/4"	1' - 5" ~ 1' - 5 1/2"
S2	1	A-450 / 2	3 3/4"	7' - 0"
S3	1	A-450 / 2	3' - 2"	1' - 5 1/2" ~ 1' - 10"
S4	1	A-450 / 2	3' - 2"	7'-0"
S5	1	A-450 / 2	0' - 8 3/4"	1' - 10" ~ 1' - 11"
S6	1	A-450 / 2	0' - 8 3/4"	7' - 0"
S7	1	A-450 / 2	1' - 8 3/4"	1' - 11" ~ 2' - 1 1/4"
S8	1	A-450 / 2	1' - 8 3/4"	7' - 0"
S9	1	A-450 / 2	3' - 9 1/4"	2' - 1 1/4" ~ 2' - 6 1/2"
S10	1	A-450 / 2	3' - 9 1/4"	7' - 0"
N1	1	A-450 / 3	3' - 9 1/4"	2' - 6 1/2" ~ 2' - 1 1/4"
N2	1	A-450 / 3	3' - 9 1/4"	7' - 0"
N3	1	A-450 / 3	2' - 5 1/2"	2' - 1 1/4" ~ 1' - 10"
N4	1	A-450 / 3	2' - 5 1/2"	7' - 0"
N5	1	A-450 / 3	3' - 6 1/4"	1' - 10" ~ 1' - 5"
N6	1	A-450 / 3	3' - 6 1/4"	7' - 0"
W1	1	A-450 / 4	2' - 6 1/2"	2' - 6 1/2"
W2	1	A-450 / 4	2' - 6 1/2"	7' - 0"
W3	2	A-450 / 4	2' - 8"	1' - 0 1/2"
W4	2	A-450 / 4	2' - 8"	3' - 4"
W5	1	A-450 / 4	4' - 0"	2' - 6 1/2"
W6	1	A-450 / 4	4' - 0"	7' - 0"
W7	1	A-450 / 4	1' - 11 3/4"	2' - 6 1/2"
W8	1	A-450 / 4	1' - 11 3/4"	7' - 0"
E1	2	A-450 / 5	4' - 0"	1' - 4 1/2"
E2	2	A-450 / 5	4' - 0"	7' - 0"
E3	1	A-450 / 5	2' - 10 1/4"	1' - 4 1/2"
E4	1	A-450 / 5	2' - 10 1/4"	7' - 0"
E5	1	A-450 / 5	0' - 11 3/4"	1' - 4 1/2"
E6	1	A-450 / 5	0' - 11 3/4"	7' - 0"
E7	1	A-450 / 5	2' - 0 1/4"	1' - 4 1/2"
E8	1	A-450 / 5	2' - 0 1/4"	7' - 0"

**All dimesions should be verified in field.

CORRIDOR PANEL SCHEDULE

TYPE...	QUANTI...	ELEVAT...	WIDTH	LENGTH
N1	1	A-460/2	0' - 4"	0' - 4"
N2	1	A-460/2	0' - 4"	7' - 0"
N3	2	A-460/2	3' - 2"	0' - 4"
N4	2	A-460/2	3' - 2"	7' - 0"
N5	1	A-460/2	1' - 2 1/4"	0' - 4"
N6	1	A-460/2	1' - 2 1/4"	7' - 0"
N7	1	A-460/2	0' - 9 3/4"	0' - 4"
N8	1	A-460/2	0' - 9 3/4"	7' - 0"
N9	1	A-460/2	2' - 4 1/4"	0' - 4"
N10	1	A-460/2	2' - 4 1/4"	7' - 0"
N11	1	A-460/2	1' - 4 1/4"	0' - 4"
N12	1	A-460/2	1' - 4 1/4"	7' - 0"
S1	1	A-460/3	1' - 8 1/2"	7' - 0"
S2	1	A-460/3	1' - 4"	7' - 0"
S3	1	A-460/3	2' - 0 1/4"	7' - 0"
S4	1	A-460/3	3' - 2"	0' - 4"
S5	1	A-460/3	0' - 4"	7' - 0"
W1	1	A-460/4	3-8 1/4"	7' - 0"

**All dimesions should be verified in field.

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

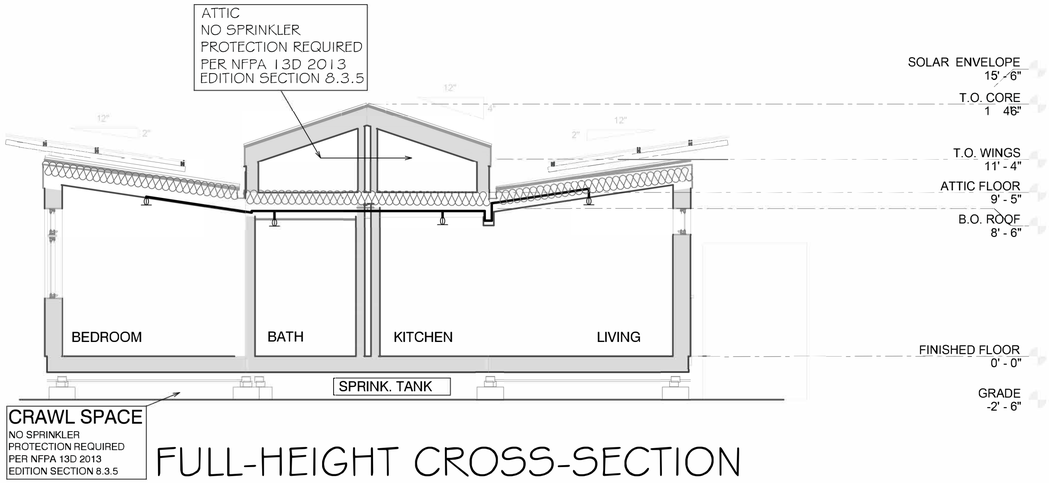
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description

PROJECT NO. 001
DESIGNED Author
CHECKED Checker

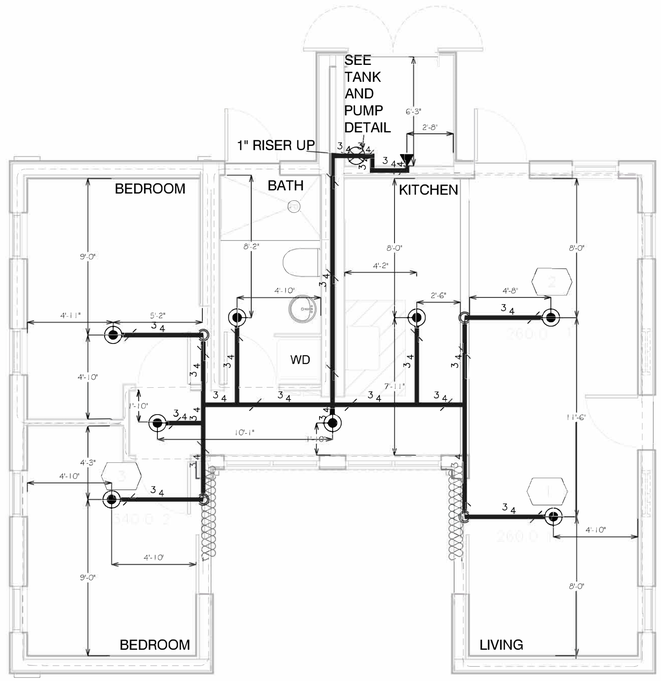
INTERIOR WALL PANEL SCHEDULES

A-602



FULL-HEIGHT CROSS-SECTION

SCALE 1/4" = 1'-0"



FIRST FLOOR PLAN

SCALE: 1/4" = 1' 9 SPRINKLERS

GENERAL NOTES

SCOPE: THE SCOPE OF THIS PROJECT IS TO PROVIDE AUTOMATIC SPRINKLER PROTECTION FOR THE NEW RESIDENCE AS SHOWN.

CODES: ALL WORK SHALL COMPLY WITH NFPA 13D- 2013 EDITION, AND THE BUILDING CODES OF UNIVERSITY OF MARYLAND. ALL WORK SHALL BE TO THE SATISFACTION OF THE UNIVERSITY PERMIT APPLICATION CENTER, AND SOLAR DECATHLON 2017 COMPETITIONTHE UNIVERSITY FIRE MARSHALL.

BUILDING CONSTRUCTION: BUILDING CONSISTS OF ORDINARY WOOD CONSTRUCTION. STRUCTURAL INSULATED PANES. ½" MIN OSB GLUED TO EXPANDED POLY CORES.

SPRINKLER SYSTEM NOTES:

1. THIS HOME SHALL BE PROTECTED BY A WET PIPE AUTOMATIC SPRINKLER SYSTEM, FED BY A PUMP AND TANK WATER SUPPLY.

2. THE SPRINKLER SYSTEM SHALL BE A HYDRAULICALLY DESIGNED TREE TYPE SYSTEM,

3. ALL NEW CONCEALED PIPING SHALL CONSIST OF SPEARS CPVC PLASTIC PIPING AND FITTINGS. ALL PIPING SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ITS UL LISTING.

4. ALL INSULATION SHALL BE PROVIDED AND INSTALLED BY OTHERS. ABSOLUTE FIRE PROTECTION SHALL NOT BE HELD LIABLE FOR PIPING SUBJECTED TO FREEZING.

5. HANGERS SHALL SATISFY THE PLUMBING CODE PER NFPA 13D. HANGERS SHALL CONSISTS OF TWO HOLE PIPE STRAPS WITH SCREWS.

6. THE FOLLOWING DISTANCES MUST BE MAINTAINED BETWEEN A SPRINKLER AND A HEAT SOURCE OR OBSTRUCTION: 1'-0" LATERALLY FROM THE SURFACES OF RANGES AND WALL OVENS; 3'-0" LATERALLY FROM THE EDGES OF FIRE PLACES AND 5'-0" FROM THE FRONT OF A FIREPLACE; 0'-6" LATERALLY AND 2'-0" ABOVE THE SURFACES OF FURNACES, WATER HEATERS, AND LIGHT FIXTURES; 1'-0" LATERALLY FROM THE SURFACES OF HOT AIR FLUES, UNINSULATED HEATING DUCTS, AND UNINSULATED WATER PIPES; 2'-0" LATERALLY FROM THE EDGES OF A CEILING MOUNTED HOT AIR DIFFUSER; 3'-0" FROM THE CENTER OF A MOUNTED CEILING FAN.

7. MAXIMUM SPACING SHALL BE:
16 x 16 sq.ft. FOR TWO OR MORE SPRINKLERS PER COMPARTMENT
18 x 18 sq.ft. FOR ONE SPRINKLER PER COMPARTMENT

8. THE SPRINKLER SYSTEM SHALL BE INSPECTED AND TESTED AS REQUIRED BY THE UNIVERSITY OF MARYLAND FIRE MARSHALL.

HYDRAULIC CALCULATION NOTES:

REMOTE AREA #1: (2 PENDENT CALC)
VIKING VK468, SEMI-RECESSED PENDENT, K=4.9 16'X 16' SPACING
DEMAND AT "SRC": 26.9 PSI @ 26.5 GPM; AVAILABLE AT "SRC": 61.0 PSI
SAFETY FACTOR: 34.1 PSI OR 56.0 %

REMOTE AREA #2: (1 PENDENT CALC)
VIKING VK468, SEMI-RECESSED PENDENT, K=4.9 18'X 18' SPACING
DEMAND AT "SRC": 25.9 PSI @ 17.0 GPM; AVAILABLE AT "SRC": 75.0 PSI
SAFETY FACTOR: 49.1 PSI OR 65.0 %

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

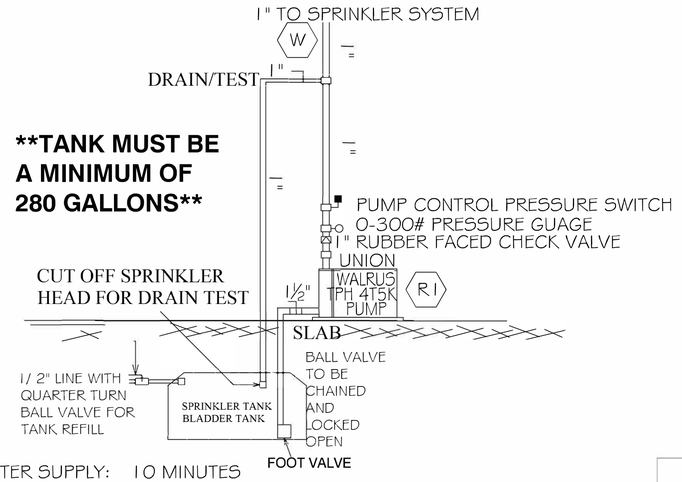
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Date	Description

PROJECT NO.	Project Number
DESIGNED	Author
CHECKED	Checker

FIRE SUPPRESSION COVERAGE

F-102

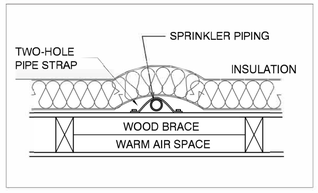


WATER SUPPLY: 10 MINUTES

* TOTAL DEMAND 27.1 GPM X 10 MINUTES = 271 GALLONS
* 1 - 300 GALLON WATER TANK IS ADEQUATE
* BALL VALVE ON FEED LINE FROM TANK SHALL BE CHAINED AND LOCKED OPEN
*PUMP SHALL NOT SIT DIRECTLY ON THE FLOOR PER NFPA 13D 2013 EDITION SECTION 6.2.1(4)

PUMP / TANK DETAIL

NO SCALE



INSULATION DETAIL

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Date	Description

PROJECT NO.	Project Number
DESIGNED	Author
CHECKED	Checker

FIRE SUPPRESSION DETAILS

F-500

LEGEND

30 X 42

SPRINKLER SYMBOL	THREAD SIZE	TYPE	MAKE	MODEL	PART NO.	INSTALLATION ORIENTATION	K-FACTOR	TEMP.	QR/SR	FINISH	QUANTITY
●	½"	PD	VIKING	VK468	VK468	SEMI-REC	4.9	155°	QR	WHITE	8
◁	½"	SW	VIKING	VK484	VK484	SEMI-REC	4.2	155°	QR	WHITE	1

NEW SPRINKLER PIPING WITH HANGER

SPRINKLERS THIS SHEET: 9

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

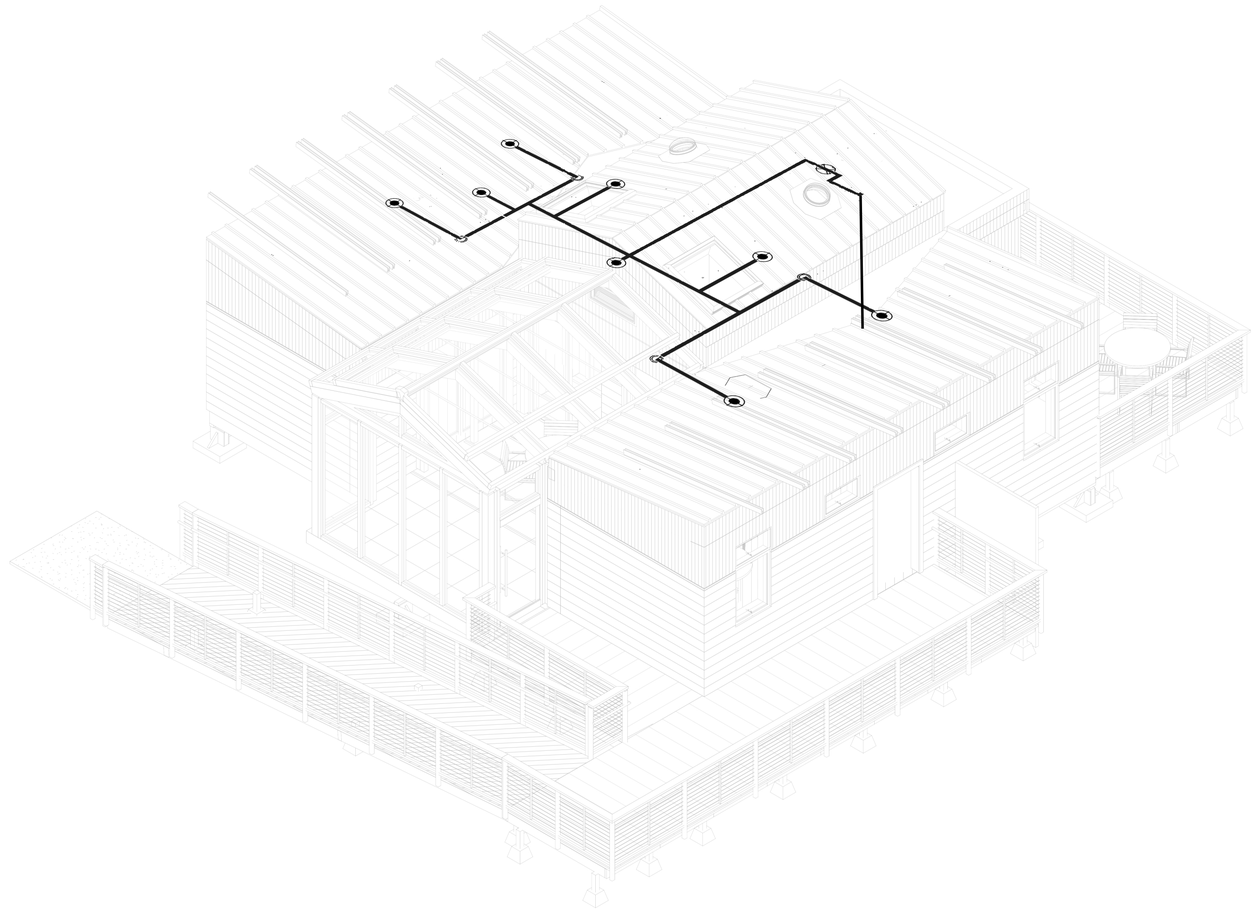
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Date	Description

PROJECT NO.	Project Number
DESIGNED	Author
CHECKED	Checker

FIRE PROTECTION SCHEDULES

F-600



1 SPRINKLER ISOMETRIC

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Date	Description

PROJECT NO.	Project Number
DESIGNED	Author
CHECKED	Checker

SPRINKLER ISOMETRIC

F-901

R.322.1.7 PROTECTION OF WATER SUPPLY AND SANITARY SEWAGE SYSTEMS
NEW AND REPLACEMENT WATER SUPPLY SYSTEMS SHALL BE DESIGNED TO MINIMIZE OR ELMINATE INFILTRATION OF FLOOD WATERS INTO THE SYSTEMS IN ACCORDANCE WITH THE PLUMBING PROVISIONS OF THIS CODE. NEW AND REPLACEMENT SANITARY SEWAGE SYSTEMS SHALL BE DESIGNED TO MINIMIZE OR ELIMINATE INFILTRATION OF FLOODWATERS INTO SYSTEMS AND DISCHARGES FROM SYSTEMS INTO FLOODWATERS IN ACCORDANCE WITH THE PLUMBING PROVISIONS OF THIS CODE AND CHAPTER 3 OF THE INTERNATIONAL PRIVATE SEWAGE DISPOSAL CODE.

P2503.5.1 ROUGH PLUMBING
DWV SYSTEMS SHALL BE TESTED ON COMPLETION OF THE ROUGH PIPING INSTALLATION BY WATER OR FOR PIPING SYSTEMS OTHER THAN PLASTIC, BY AIR WITH NO EVIDENCE OF LEAKAGE. EITHER TEST SHALL BE APPLIED TO THE DRAINAGE SYSTEM IN ITS ENTIRETY OR IN SECTIONS AFTER ROUGH PIPING HAS BEEN INSTALLED, AS FOLLOWS:
1). WATER TEST. EACH SECTION SHALL BE FILLED WITH WATER TO A POINT NOT LESS THAN 10 FEET (3048 MM) ABOVE THE HIGHEST FITTING CONNECTION IN THAT SECTION, OR THE HIGHEST POINT IN THE COMPLETED SYSTEM. WATER SHALL BE HELD IN THE SECTION UNDER TEST FOR A PERIOD OF 15 MINUTES. THE SYSTEM SHALL PROVE LEAK FREE BY VISUAL INSPECTION.
2). AIR TEST. THE PORTION UNDER TEST SHALL BE MAINTAINED AT A GAUGE PRESSURE OF 5 POUNDS PER SQUARE INCH (PSI) (34 KPA) OR 10 INCHES OF MERVURY COLUMN (34 KPS). THIS PRESSURE SHALL BE HELD WITHOUT INTRODUCTION OF ADDITIONAL AIR FOR A PERIOD OF 15 MINUTES.

P2503.5.2 FINISHED PLUMBING
AFTER THE PLUMBING FIXTURES HAVE BEEN SET AND THEIR TRAPS FILLED WITH WATER, THEIR CONNECTIONS SHALL BE TESTED AND PROVED GAS TIGHT AND/ OR WATER TIGHT AS FOLLOWS:
1). WATER TIGHTNESS. EACH FIXTURE SHALL BE FILLED AND THEN DRAINED. TRAPS AND FIXTURE CONNECTIONS SHALL BE PROVEN WATER TIGHT BY VISUAL INSPECTION.
2). GAS TIGHTNESS. WHEN REQUIRED BY THE LOCAL ADMINISTRATIVE AUTHORITY. A FINAL TEST FOR GAS TIGHTNESS OF THE DWV SYSTEM SHALL BE MADE BY THE SMOKE OR PEPPERMINT TEST AS FOLLOWS:
2.1). SMOKE TEST. INTRODUCE A PUNGENT, THICK SMOKE INTO THE SYSTEM. WHEN THE SMOKE APPEARS AT VENT TERMINALS, SUCH TERMINALS SHALL BE SEALED AND A PRESSURE EQUIVALENT TO A 1-INCH WATER COLUMN (249 PA) SHALL BE APPLIED AND MAINTAINED FOR A TEST PERIOD OF NOT LESS THAN 15 MINUTES.
2.2). PEPPERMINT TEST. INTRODUCE 2 OUNCES (59 ML) OF OIL OF PEPPERMINT INTO THE SYSTEM. ADD 10 QUARTS (9464 ML) OF HOT WATER AND SEAL ALL VENT TERMINALS. THE ODOR OF PEPPERMINT SHALL NOT BE DETECTED AT ANY TRAP OR OTHER POINT IN THE SYSTEM.

P2503.6 SHOWER LINER TEST
WHERER SHOWER FLOORS AND RECEPTORS ARE MADE WATER TIGHT BY THE APPLICATION OF MATERIALS REQUIRED BY SECTION P2709.2, THE COMPLETED LINER INSTALLATION SHALL BE TESTED. THE PIPE FROM THE SHOWER DRAIN SHALL BE PLUGGED WATER TIGHT FOR THE TEST. THE FLOOR AND RECEPTOR AREA SHALL BE FILLED WITH POTABLE WATER TO A DEPTH OF NOT LESS THAN 2 INCHES (51 MM) MEASURED AT THE THRESHOLD. WHERE A THRESHOLD OF AT LEAST 2 INCHES HIGH DOES NOT EXIST, A TEMPORARY THRESHOLD SHALL BE CONSTRUCTED TO RETAIN THE TEST WATER IN THE LINED FLOOR OR RECEPTOR AREA TO A LEVEL NOT LESS THAN 2 INCHES DEEP ,EASURED AT THE THRESHOLD. THE WATER SHALL BE RETAINED FOR A TEST PERIOD OF NOT LESS THAN 15 MINUTES AND THERE SHALL BE NO EVIDENCE OF LEAKAGE.

P2503.8 INSPECTION AND TESTING OF BACKFLOW PREVENTION DEVICES
INSPECTION AND TESTING OF BACKFLOW PREVENTION DEVICES SHALL COMPLY WITH SECTIONS P2503.8 AND P2503.8.2

P2902.3 BACKFLOW PREVENTION
A MEANS OF PROTECTION AGAINST BACKFLOW SHALL BE PROVIDED IN ACCORDANCE WITH SECTIONS P2902.3.1 THROUGH P2902.3.6. BACKFLOW PREVENTION APPLICATIONS SHALL CONFORM TO TABLE P2902.3, EXCEPT AS SPECIFICALLY STATED IN SECTIONS P2902.4 THROUGH P2902.5.5.

P2902.4 PROTECTION OF POTABLE WATER OUTLETS
POTABLE WATER OPENINGS AND OUTLETS SHALL BE PROTECTED BY AN AIR GAP, REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER WITH ATMOSPHERIC VENT, ATMOSPHERIC-TYPE VACUUM BREAKER, PRESSURE-TYPE VACUUM BREAKER OR HOSE CONNECTION BACKFLOW PREVENTER.

P2902.5 PROTECTION OF POTABLE WATER CONNECTIONS
CONNECTIONS TO THE POTABLE WATER SHALL CONFORM TO SECTIONS P2902.5.1 THROUGH P2902.5.5.

P2902.5.1 CONNECTIONS TO BOILERS
THE POTABLE SUPPLY TO THE BOILER SHALL BE EQUIPPED WITH A BACKFLOW PREVENTER WITH AN INTERMEDIATE ATMOSPHERIC VENT COMPLYING WITH ASSE 1012 OR CSA B64.3. WHERE CONDITIONING CHEMICALS ARE INTRODUCED INTO THE SYSTEM, THE POTABLE WATER CONNECTION SHALL BE PROTECTED BY AN AIR GAP OR A REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER COMPLYING WITH ASSE 1013, CSA B64.4 OR AWWA C511.

P2902.5.2 HEAT EXCHANGERS
HEAT EXCHANGERS USING AN ESSENTIALLY TOXIC TRANSFER FLUID SHALL BE SEPARATED FROM THE POTABLE WATER BY DOUBLE- WALL CONSTRUCTION. AN AIR GAP OPEN TO THE ATMOSPHERE SHALL BE PROVIDED BETWEEN THE TWO WALL. HEAT EXCHANGERS UTILIZING AN ESSENTIALLY NONTOXIC TRANSFER FLUID SHALL BE PERMITTED TO BE OF SINGLE- WALL CONSTRUCTION.

P2902.5.3 LAWN IRRIGATION SYSTEMS
THE POTABLE WATER SUPPLY TO LAWN IRRIGATION SYSTEMS SHALL BE PROTECTED AGAINST BACKFLOW BY AN ATMOSPHERIC VACUUM BREAKER, A PRESSURE VACUUM BREAKER ASSEMBLY OR A REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY. VALVES SHALL NOT BE INSTALLED DOWNSTREAM FROM AN ATMOSPHERIC VACUUM BREAKER. WHERE CHEMICALS ARE INTRODUCED INTO THE SYSTEM, THE POTABLE WATER SUPPLY SHALL BE PROTECTED AGAINST BACKFLOW BY A REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTION ASSEMBLY.

P2703.1 FIXTURE TAIL PIECES MINIMUM SIZE
FIXTURE TAIL PIECES SHALL BE NOT LESS THAN 1-1/2 INCHES IN DIAMETER FOR SINKS, DISHWASHERS, LAUNDRY TUBS, BATHTUBS AND SIMILAR FIXTURES, AND NOT LESS THAN 1-1/4 INCHES IN DIAMETER FOR BIDETS, LAVATORIES AND SIMILAR FIXTURES.

P2704.1 JOINT ACCESS
SLIP JOINT SHALL BE MADE WITH AN APPROVED ELASTOMERIC GASKET AND SHALL BE INSTALLED ONLY ON THE TRAP OUTLET, TRAP INLET ARD WITHIN THE TRAP SEAL. FIXTURES WITH CONCEALED SLIP-JOINT CONNECTIONS SHLL BE PROVIDED WITH AN ACCESS PANEL OR UTILITY SPACE NOT LESS THAN 12 INCHES IN ITS SMALLEST DIMENSION OR OTHER APPROVED ARRANGEMENT SO AS TO PROVIDE ACCESS TO THE SLIP CONNECTIONS FOR INSPECTION AND REPAIR.

P2705.1 INSTALLATION
THE INSTALLATION OF FIXTURES SHALL CONFORM TO THE FOLLOWING:

1). FLOOR- OUTLETS OR FLOOR- MOUNTED FIXTURES SHALL BE SECURED TO THE DRAINAGE CONNECTION AND TO THE FLOOR, WHERE SO DESIGNED, BY SCRES, BOLTS, WASHERS, NUTS AND SIMILAR FASTENERS OF COPPER, BRASS OR OTER CORROSION- RESISTANT MATERIAL.
2). WALL- HUNG FIXTURES SHALL BE RIGIDLY SUPPORTED SO THAT STAIN IS NOT TRANSMITTED TO THE PLUMBING SYSTEM.
3). WHERE FIXTURES COME IN CONTACT WITH WALLS AND FLOORS, THE CONTACT AREA SHALL BE WATER TIGHT.
4). PLUMBING FIXTURES SHALL BE USABLE.
5). WATER CLOSETS, LAVATORIES AND BIDETS. A WATER CLOSET, LAVATORY OR BIDET SHALL NOT BE SET CLOSER THAN 15 INCHES FROM ITS CENTER TO ANY SIDE WALL, PARTITION OR VANITY OR CLOSER THAN 30 INCHES CENTER - TO- CENTER BETWEEN ADJACENT FIXTURES. THERE SHALL BE A CLEARANCE OF NOT LESS THAN 21 INCHES IN FRONT OF A WATER CLOSET, LAVATORY OR BIDET TO ANY WALL, FIXTURE OR DOOR.
6). THE LOCATION OF PIPING, FIXTURES OR EQUIPMENT SHALL NOT INTERFERE WITH THE OPERSTION OF WINDOWS OR DOORS.
7). IN FLOOD HAZARD AREAS AS ESTABLISHED BY TABLE R301.2(1), PLUMBING FIXTURES SHALL BE LOCATED OR INSTALLED IN ACCORDANCE WITH SECTION R322.1.7.
8). INTEGRAL FIXTURE- FITTING MOUNTING SURFACES ON MANUFACTURED PLUMBING FIXTURES OR PLUMBING FIXTURES CONSTRUCTED ON SITE, SHALL MEET THE DESIGN REQUIREMENTS OF ASME A112.19.2/CSA B45.1 OR ASME A 112.CSA B45.1.

P2706.2 WASTE RECEPTOR STANDPIPES
STANDPIPES SHALL EXTEND NOT LESS THAN OF 18 INCHES BUT NOT GREATER THAN 42 INCHES ABOVE THE TRAP WEIR. ACCESS SHALL BE PROVIDED TO STANDPIPE TRAPS AND DRAINS FOR RODDING.

SHOWERS
P2708.1 SHOWERS
SHOWER COMPARTMENTS SHALL HAVE NOT LESS THAN 900 SQUARE INCHES OF INTERIOR CROSS-SECTIONAL AREA. SHOWER COMPARTMENTS SHAL BE NOT LESS THAN 30 INCHES IN MINIMUM DIMENSION MEASURED FROM THE FINISHED INTERIOR DIMENSION MEASURED FROM THE FINISHED INTERIOR DIMENSION OF THE SHOWER COMPARTMENT, EXCLUSIVE OF FIXTURE VALVES, SHOWER HEADS, SOAP DISHES, AND SAFETY GRAB BARS OR RAILS. THE MINIMUM REQUIRED AREA AND DIMENSION SHALL BE MEASURED FROM THE FINISHED INTERIOR DIMENSION AT A HEIGHT EQUAL TO THE TOP OF THE THRESHOLD AND AT A POINT TANGENT TO ITS CENTERLINE AND SHALL BE CONTINUED TO A HEIGHT OF NOT LESS THAN 70 INCHES ABOVE THE SHOWER DRAIN OUTLET. HINGED SHOWER DOORS SHALL OPEN OUTWARD.

P2708.3 SHOWER CONTROL VALVES
INDIVIDUAL SHOWER AND TUB/SHOWER COMBINATION VALVES SHALL BE EQUIPPED WITH CONTROL VALVES OF THE PRESSURE BALANCE, THERMOSTATIC- MIXING OR COMBINATION PRESSURE- BALANCE/ THERMOSTATIC- MIXING VALVE TYPES WITH A HIGH LIMIT STOP IN ACCORDANCE WITH ASSE 1016 OR ASME A112.18.1/ CSA B125.1. THE HIGH LIMIT STOP SHALL BE SET TO LIMIT THE WATER TEMPERATURE TO NOT GREATER THAN 120 DEGREE F. IN-LINE THERMOSTATIC VALVES SHALL NOT BE USED FOR COMPLIANCE WITH THIS SECTION.

P2709.1 SHOWER CONSTRUCTION
WHER A SHOWER RECPETOR HAS A FINISHED CURB THRESHOLD, IT SHALL BE NOT LESS THAN 1 INCH BELOW THE SIDES AND BACL OF THE RECEPTOR. THE CURB SHALL NOT BE LESS THAN 2 INCHES AND NOT MORE THAN 9 INCHES DEEP WHEN MEASURED FROM THE TOP OF THE CURB TO THE TOP OF THE DRAIN. THE FINISHED FLOOR SHALL SLOPE UNIFORMLY TOWARD THE DRAIN NOT LESS THAN 1/4 UNIT VERTICAL IN 12 UNITS HORIZONTAL (2-PERCENT SLOPE) NOR MORE THAN 1/2 UNIT VERTICAL PER 12 UNITS HORIZONTAL (4-PERCENT SLOPE) AND FLOOR DRAINS SHALL BE FLANGED TO PROVIDE A WATER- TIGHT JOINT IN THE FOOR.

P2709.2 LINING REQUIRED
THE ADJOINING WALLS AND FLOOR FRAMING ENCLOSING ON- SITE BUILT UP SHOWER RECEPTORS SHALL BE LINED WITH ONE OF THE FOLLOWING MATERIALS:

3). PLASTIC LINER MATERIAL THAT COMPLIES WITH ASTM D 4068 OR ASTM D 4551;
5). SHEET- APPLIED LOAD-BEARING, BONDED WATERPROOF MEMBRANES THAT COMPLY WITH ANSI A 118.10.

THE LINING MATERIAL SHALL EXTEND NOT LESS THAN 2 INCHES BEYOND OR AROUND THE ROUGH JAMBS AND NOT LESS THAN 2 INCHES ABOVE THE FINISHED THRESHOLDS. SHEET- APPLIED LOAD BEARING, BONDED WATERPROOF MEMBRANES SHALL BE APPLIED IN ACCORFANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

P2709.2.4 LIQUID- TYPE, TROWEL-APPLIED, LOAD-BEARING, BONDED WATERPROOF MATERIALS
LIQUID- TYPE, TROWEL-APPLIED, LAD-BEARING, BONDED WATERPROOF MATERIALS SHALL MEET THE REQUIREMENTS OF ANSI A118.10 AND SHALL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

P2709.3 INSTALLATION
LINING MATERIALS SHALL BE SLOPED ONE- FOURTH UNIT VERTICAL IN 12 UNITS HORIZONTAL (2-PERCENT SLOPE) TO WEEP HOLES IN THE SUBDRAIN BY MEANS OF A SMOOTH, SOLIDLY FORMED SUBBASE, SHALL BE PROPERLY RECESSED AND FASTENED TO APPROVED BACKING SO AS NOT TO OCCUPY THE SPACE REQUIRED FOR THE WALL COVERING, ANDSHALL NOT BE NAILED OR PERFORATED AT ANY POINT LESS THAN 1 INCH ABOVE THE FINISHEDD THRESHOLD.

R307.2 BATHTUB AND SHOWER SPACES
BAHTTUB AND SHOWER FLOORS AND WALLS ABOVE BATHTUBS WITH INSTALLED SHOWER HEADS AND IN SHOWER COMPARTMENTS SHALL BE FINISHED WITH A NONABSORBENT SURFACE. SUCH WALL SURFACES SHALL EXTEND TO A HEIGHT OF NOT LESS THAN 6 FEET ABOVE THE FLOOR.

WATER- CLOSET, LAVATORIES, LAUNDRY
P2711.3 LAVATORY WASTE OUTLETS
LAVATORIES SHALL HAVE WASTE OLTLETS NOT LESS THAN 1-1/4 INCH IN DIAMETER. A STRAINER, POP-UP STOPPER, CROSSBAR OR OTHER DEVICE SHALL BE PROVIDED TO RESTICT THE CLEAR OPENING OF THE WASTE OUTLET.

P2712.1 WATER CLOSET
WATER CLOSET SHALL CONFORM TO THE WATER CONSUMPTION REQUIREMENTS OF SECTION P2903.2 AND SHALL CONFORM TO ANSI Z124.4, ASME A112.19.2/ CSA B45.1, ASME A112.19.3/ CSA B45.4 OR CSA B45.5. WATER CLOSETS TANK SHALL CONFORM TO ANSI Z124.4 OR CSA B45.5. WATER CLOSETS THAT HAVE AN INVISIBLE SEAL AND UNVENTILATED SPACE OR WALLS THAT ARE NOT THOROUGHLY WASHED AT EACH DISCHARGE SHALL BE PROHIBITED. WATER CLOSETS THAT PERMIT BACKFLOW OF THE CONTENTS OF THE BOWL INTO THE FLUSH TANK SHALL BE PROHIBITED.

P2714.1 SINK WASTE OUTLETS
SINKS SHALL BE PROVIDED WITH WASTE OUTLETS NOT LESS THAN 1-1/2 INCHES IN DIAMETER. A STRAINER, CROSSBAR OR OTHER DEVICE SHALL BE PROVIDED TO RESTRICT THE CLEAR OPENING OF THE WASTE OUTLET.

P2715.1 LAUNDRY TUB WASTE OUTLET
EACH COMPARTMENT OF A LAUNDRY TUB SHALL BE PROVIDED WITH A WASTE OUTLET NOT LESS THAN 1-1/2 INCHES IN DIAMETER AND A STAINER OR CROSSBAR TO RESTRICT THE CLEAR OPENING OF THE WASTE OUTLET.

P2717.1 PROTECTION OF WATER SUPPLY
THE WATER SUPPLY FOR DISHWASHERS SHALL BE PROTECTED BY AN AIR GAP OR NTEGRAL BACKFLOW PREVENTER.

P2717.2 SINK AND DISHWASHER
A SINK AND DISHWASHER ARE PERMITED TO DISCHARGE THROUGH A SINGLE 1-1/2-INCH TRAP. THE DISCHARGE PIPE FROM THE DISHWASHER SHALL BE INCREACED TO NOT LESS THAN 3/4 INCH IN DIAMETER AND SHALL BE CONNECTED WITH A WYE FITTING TO THE SINK TAILPIECE. THE DISHWASHER WASTE LINE SHALL RISE AND BE SECURELY FASTENED TO THE UNDERSIDE OF THE COUNTER BEFORE CONNECTING TO THE SINK TAILPIECE.

P2718.1 WASTE CONNECTION
THE DISCHARGE FROM A CLOTHES WASHING MACHINE SHALL BE THROUGH AN AIR BREAK.

P2719.1 FLOOR DRAINS
FLOOR DRAINS SHALL HAVE WASTE OUTLETS NOT LESS THAN 2 INCHES IN DIAMETER AND A REMOVABLE STRAINER. THE FLOOR DRAIN SHALL BE CONSTRUCTED SO THAT THE DRAIN CAN BE CLEANED. ACCESS SHALL BE PROVIDED TO THE DRAIN INLET. FLOOR DRAINS SHALL NOT BE LOCATED UNDER OR HAVE THEIR ACCESS RESTRICTED BY PERMANENTLY IN STALLED APPLIANCES.

FIXTURES AND FITTING
P2722.1 GENERAL FIXTURE FITTING
FIXTURE SUPPLY VALVES AND FAUCETS SHALL COMPLY WITH ASME A112.18.1/ CSA B125.1 AS LISTED IN TABLE P2701.1. FAUCETS AND FIXTURES FITTINGS THAT SUPPLY DRINKING WATER FOR HUMAN INGESTION SHALL CONFORM TO THE REQUIREMENTS OF NSF 61, SECTION 9. FLEXIBLE WATER CONNECTORS SHALL CONFORM TO THE REQUIREMENTS OF SECTION P2905.7.

P2722.2 HOT WATER FIXTURE FITTING
FIXTURE FITTING AND FAUCETS THAT ARE SUPPLIED WITH BOTH HOT AND COLD WATER SHALL BE INSTALLED AND ADJUSTED SO THAT THE ;EFT-HAND SIDE OF THE WATER TEMPERATURE CONTROL REPRESENTS THE FLOW OF HOT WATER WHEN FACING THE OUTLET.

P2722.3 HOSE- CONNECTED OUTLETS
FAUCETS AND FIXTURE FITTINGS WITH HOSE-CONNECTED OUTLETS SHALL CONFORM TO ASME A112.18.3 OR ASME A112.18.1/ CSA B125.1.

VENTILLATION
917.2 STACK SIZE
DRAINAGE STACKS SHALL BE SIZED IN ACCORDANCE WITH TABLE 917.2. STACKS SHALL BE UNIFORMLY SIZED BASED ON THE TOTAL CONNECTED DRAINAGE FIXTURE UNIT LOAD. THE STACK VENT SHALL BE THE SAME SIZE AS THE DRAINAGE STACK. A 3- INCH STACK SHALL SERVE NOT MORE THAN TWO WATER CLOSETS.

SECTION P3114 AIR ADMITTANCE VALVES
P3114.2 INSTALLATION
THE VALVES SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF THIS SECTION AND THE MANUFACTURER'S INSTRUCTIONS. AIR ADMITTANCE VALVES SHALL BE INSTALLED AFTER THE DWV TESTING REQUIRED BY SECTION P2503.5.1 OR P2503.2 HAS BEEN PERFORMED.

917.3 BRANCH SIZE
HORIZONTAL BRANCHES CONNECTION TO A SINGLE STACK VENT SYSTEM SHALL BE SIZED IN ACCORDANCE WITH TABLE 710.1(2). NOT MORE THAN ONE WATER CLOSET SHALL DISCHARGE INTO A 3-INCH HORIZONTAL BRANCH AT A POINT WITHIN A DEVELOPED LENGTH OF 18- INCHES MEASURED HORIZONTALLY FROM THE STACK.

WHERE A WATER CLOSET IS WITHIN 18 INCHES MEASURED HORIZONTALLY FROM THE STACK AND NOT MORE THAN ONE FIXTURE WITH A DRAIN SIZE OF NOT MORE THAN 1½ INCH, CONNECTS TO A 2-INCH HORIZONTAL BRANCH, THE BRANCH DRAIN CONNECTION TO THE STACK SHALL BE MADE WITH A SANITARY FEE.

917.4 LENGTH OF HORIZONTAL BRANCHES
THE LENGTH OF HORIZONTAL BRANCHES SHALL CONFORM TO THE REQUIREMENTS OF SECTIONS 917.4.1 THROUGH 917.4.3.

917.4.1 WATER CLOSET CONNECTION
WATER CLOSET CONNECTIONS SHALL BE NOT GREATER THAN 4 FEET IN DEVELOPED LENGTH MEASURED HORIZONTALLY FROM THE STACK.

EXCEPTION WHERE THE CONNECTION IS MADE WITH A SANITARY TEE. THE MAXIMUM DEVELOPED LENGTH SHALL BE 8 FEET.

917.4.2 FIXTURE CONNECTIONS
FIXTURES OTHER THAN WATER CLOSETS SHALL BE LOCATED NOT GREATER THAN 12 FEET (3657 M) IN DEVELOPED LENGTH, MEASURED HORIZONTALLY FROM THE STACK.

917.4.3 VERTICAL PIPING IN BRANCH
THE LENGTH OF VERTICAL PIPING IN A FIXTURE DRAIN CONNECTING TO A HORIZONTAL BRANCH SHALL NOT BE CONSIDERED IN COMPUTING THE FIXTURE'S DISTANCE IN DEVELOPED LENGTH MEASURED HORIZONTALLY FROM THE STACK.

917.8 PROHIBITED LOWER CONNECTIONS
STACKS GREATER THAN 2 BRANCH INTERVALS IN HEIGHT SHALL NOT RECEIVE THE DISCHARGE OF HORIZONTAL BRANCHES ON THE LOWER TWO FLOORS. THERE SHALL BE NO CONNECTIONS TO THE STACK BETWEEN THE LOWER TWO FLOORS AND A DISTANCE OF NOT LESS THAN 10 PIPE DIAMETERS DOWNSTREAM FROM THE BASE OF THE SINGLE STACK VENTED SYSTEM.

P2801.5 REQUIRED PAN
WHERE A STORAGE TANK- TYPE WATER HEATER OR A HOT WATER STORAGE TANK IN INSTALLED IN A LOCATION WHERE WATER LEAKAGE FROM THE TANK WILL CAUSE DAMAGE, THE TANK SHALL BE INSTALLED WILL CAUSE DAMAGE, THE TANK SHALL BE INSTALLED IN A GALVANIZED STEEL PAN HAVING A MATERIAL THICKNESS OF NOT LESS THAN 0.0236 INCH (0.6010 MM) (NO. 24 GAGE), OR OTHER PANS APPROVED FOR SUCH USE. LISTED PANS SHALL COMPLY WITH CSA LC3

P2801.7 WATER HEATER SEISMIC BRACING
IN SIESMIC DESIGN CATEGORIES D0, D1, AND D2 AND TOWNHOUSES IN SEISMIC DESIGN CATEGORY C, WATER HEATERS SHALL BE ANCHORED OR STRAPPED IN THE UPPER ONE- THIRD AND IN THE LOWER ONE-THIRD AND IN THE LOWER ONE- THIRD OF THE APPLIANCE TO RESIST A HORIZONTAL FORCE EQUAL TO ONE- THIRD OF THE OPERATING WEIGHT OF THE WATER HEATER, ACTING IN ANY HORIZONTAL DIRECTION, OR IN ACCORDANCE WITH THE APPLIANCE MANUFACTURER'S RECOMMENDATION.

P2705.1 GENERAL
THE INSTALLATION OF FIXTURES SHALL CONFORM TO THE FOLLOWING:

1). FLOOR- OUTLET OR FLOOR- MOUNTED FIXTURES SHALL BE SECURED TO THE DRAINAGE CONNECTION AND TO THE FLOOR, WHERE SO DESIGNED, BY SCREWS, BOLTS, WASHERS, NUTS, AND SIMILAR FASTENERS OF COPPER, BRASS OR OTHER CORROSION- RESISTANT MATERIAL.
2). WALL- HUNG FIXTURES SHALL BE RIGISLY SUPPORTED SO THAT STRAIN IS NOT TRANSMITTED TO THE PLUMBING SYSTEM.
3). WHERE FIXTURES COME IN CONTACT WITH WALLS AND FLOORS, THE CONTACT AREA SHALL BE WATER TIGHT.
4). PLUMBING FIXTURES SHALL BE USABLE.
5). WATER CLOSETS, LAVATORIES AND BIDETS. A WATER CLOSET, LAVATORY OR BIDET SHALL NOT BE SET CLOSER THAN 15 INCHES (381 MM) FROM ITS CENTER TO ANY SIDE WALL, PARTITION OR VANITY OR CLOSER TO ANY SIDE WALL,PARTITION OR VANITY OR CLOSER THAN 30 INCHES (762 MM) CENTER- TO-CENTER BETWEEN ADJACENT FIXTURES. THERE SHALL BE A CLEARANCE OF NOT LESS THAN 21 INCHES (533 MM) IN FRONT OF A WATER CLOSET, LAVATORY OR BIDET TO ANY WALL, FIXTURE OR DOOR.
6). THE LOCATION OF PIPING, FIXTURES OR EQUIPMENT SHALL NOT INTERFERE WITH THE OPERATION OF WINDOWS AND DOORS.
7). IN FLOOD HAZARD AREAS AS ESTABLISHED BY TABLE R301.2.(1). PLUMBING FIXTURES SHALL BE LOCATED OR INSTALLED IN ACCORDANCE WITH SECTION R322.1.7.
8). INTEGRAL FIXTURE- FITTING MOUNTING SURFACES ON MANUFACTURED PLUMBING FIXTURES OR PLUMBING FIXTURES CONSTRUCTED ON SITE, SHALL MEET THE DESIGN REQUIREMENTS OF ASME A112.19.2/ CSA B45.1 OR ASME A112.19.3/ CSA B45.1.

P2709.3 INSTALLATION
LINING MATERIALS SHALL BE SLOPED ONE- FOURTH UNIT VERTICAL IN 12 UNITS HORIZONTAL (2-PERCENT SLOPE) TO WEEP HOLES IN THE SUBDRAIN BY MEANS OF A SMOOTH, SOLIDLY FORMED SUBBASE, SHALL BE PROPERLY RECESSED AND FASTENED TO APPROVED BACKING SO AS NOT TO OCCUPY THE SPACE REQUIRED FOR THE WALL COVERING, AND SHALL NOT BE NAILED OR PERFORATED AT ANY POINT LESS THAN 1 INCH (25.4 MM) ABOVE THE FINISHED THRESHOLD.

P3005.1 DRAINAGE FITTINGS AND CONNECTIONS
CHANGES IN DIRECTION IN DRAINAGE PIPING SHALL BE MADE BY THE APPROPRIATE USE OF SANITARY TEES, WYES, SWEEPS, BENDS OR BY A COMBINATION OF THESE DRAINAGE FITTINGS IN ACCORDANCE WITH TABLE P3005.1. CHANGE IN DIRECTION BY COMBINATION FITTINGS, HEEL OR SIDSE INLETS OR INCREASERS SHALL BE INSTALLED IN ACCORDANCE WITH TABLES P3005.1.4. BASED ON THE PATTERN OF FLOW CREATED BY THE FITTING.

TABLE P3005.1 FITTINGS FOR CHANGE IN DIRECTION

TYPE OF FITING PATTERN	CHANGE IN DIRECTION		
	HORIZ. TO VERT.	VERT. TO HORIZ.	HORIZ. TO HORIZ.
SIXTEENTH BEND	X	X	X
EIGHTH BEND	X	X	X
SIXTH BEND	X	X	X
QUARTER BEND	X	X[A]	X[A]
SHORT SWEEP	X	X[A,B]	X[A]
LONG SWEEP	X	X	X
SANITARY TEE	X	-	-
WYE	X[C]	X	X
COMBINATION WYE AND EIGHTH BEND	X	X	X

FOR SI: 1 INCH = 25.4 MM
A. THE FITTINGS SHALL ONLY BE OERMITTED FOR A 2-INCH OR SMALLER FIXTURE DRAIN.
B. THREE INCHES AND LARGER
C. FOR A LIMITATION ON MULTIPLE CONNECTION FITTINGS, SEE SECTION P3005.1.1.

PLUMBING ABBREVIATIONS

WFSU	WATER SUPPLY FIXTURE UNITS
DFU	DRAINAGE FIXTURE UNITS
VTR	VENT TO ROOF
DBP	DOMESTIC BOOSTER PUMP
SP	SUMP- PUMP
BA	BASIN
DHW	DOMESTIC HOT WATER
PWT	POTABLE WATER TANK
WWT	WASTE WATER TANK
ET	EXPANSION TANK
PM	PLUMBING MANIFORLD
WM	WASHING MACHINE
LAV	LAVATORY
SK	SINK
DW	DISHWASHER
SH	SHOWER
WC	WATER CLOSET

SYMBOLS

COLD WATER
HOT WATER
GATE VALVE
CHECK VALVE
BALL VALVE
PUMP
CLEANOUT
BREAK
HEAT TRAP
P-TRAP
SUMP PUMP
FLOOR DRAIN
TRANSITION (FLOOR PLAN)
DOUBLE CHECK VALVE
DUAL OUTLET SHUTOFF VALVE

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

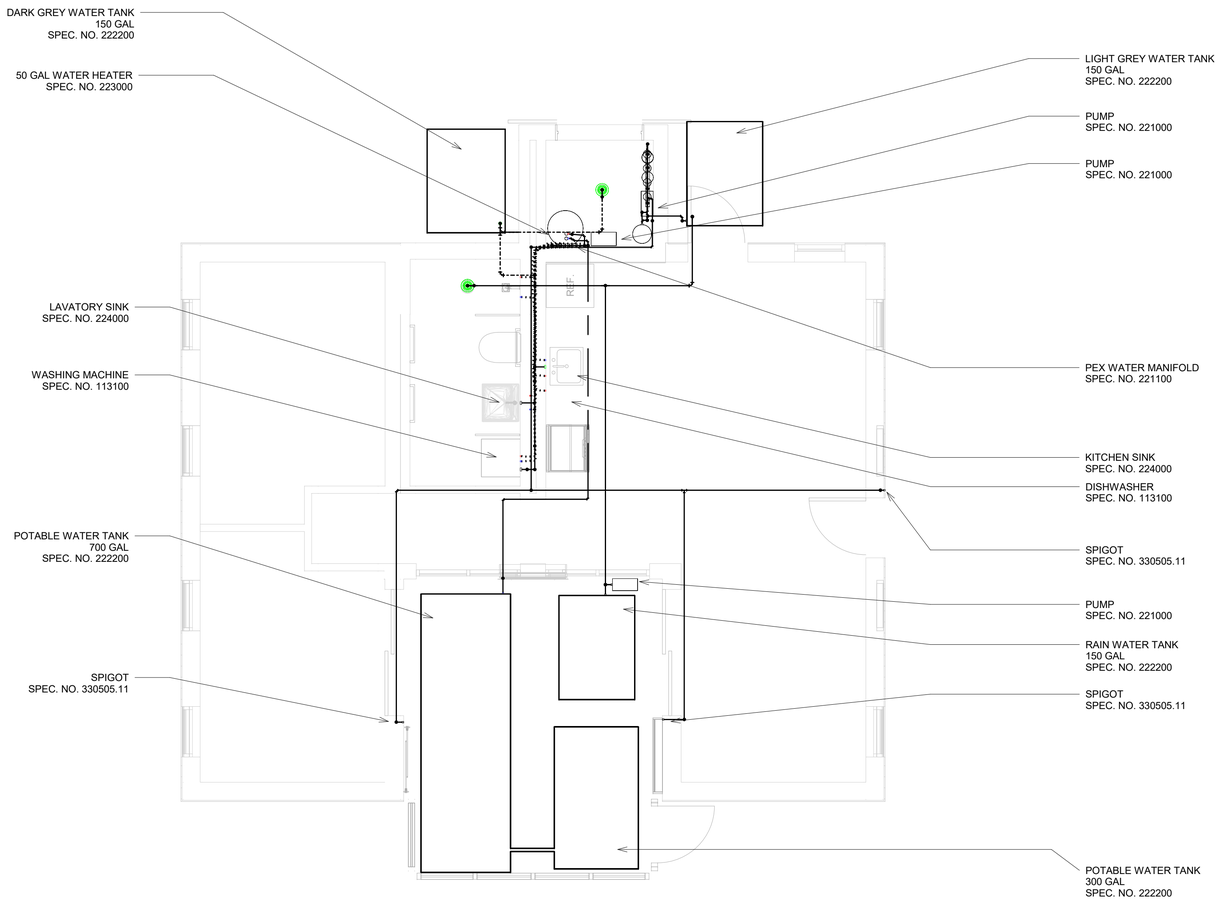
reACT
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description

PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

PLUMBING SYMBOLS AND NOTES

P-001



1 PLUMBING
1/4" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

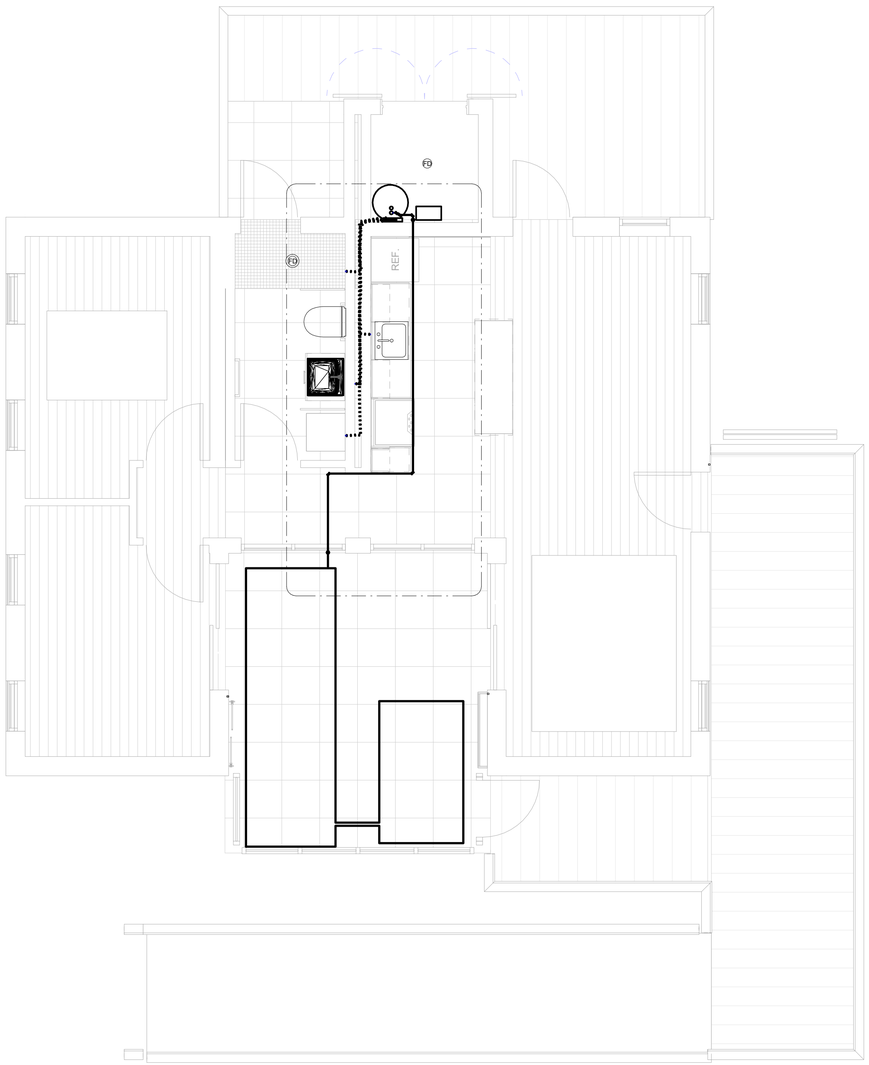
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Date	Description

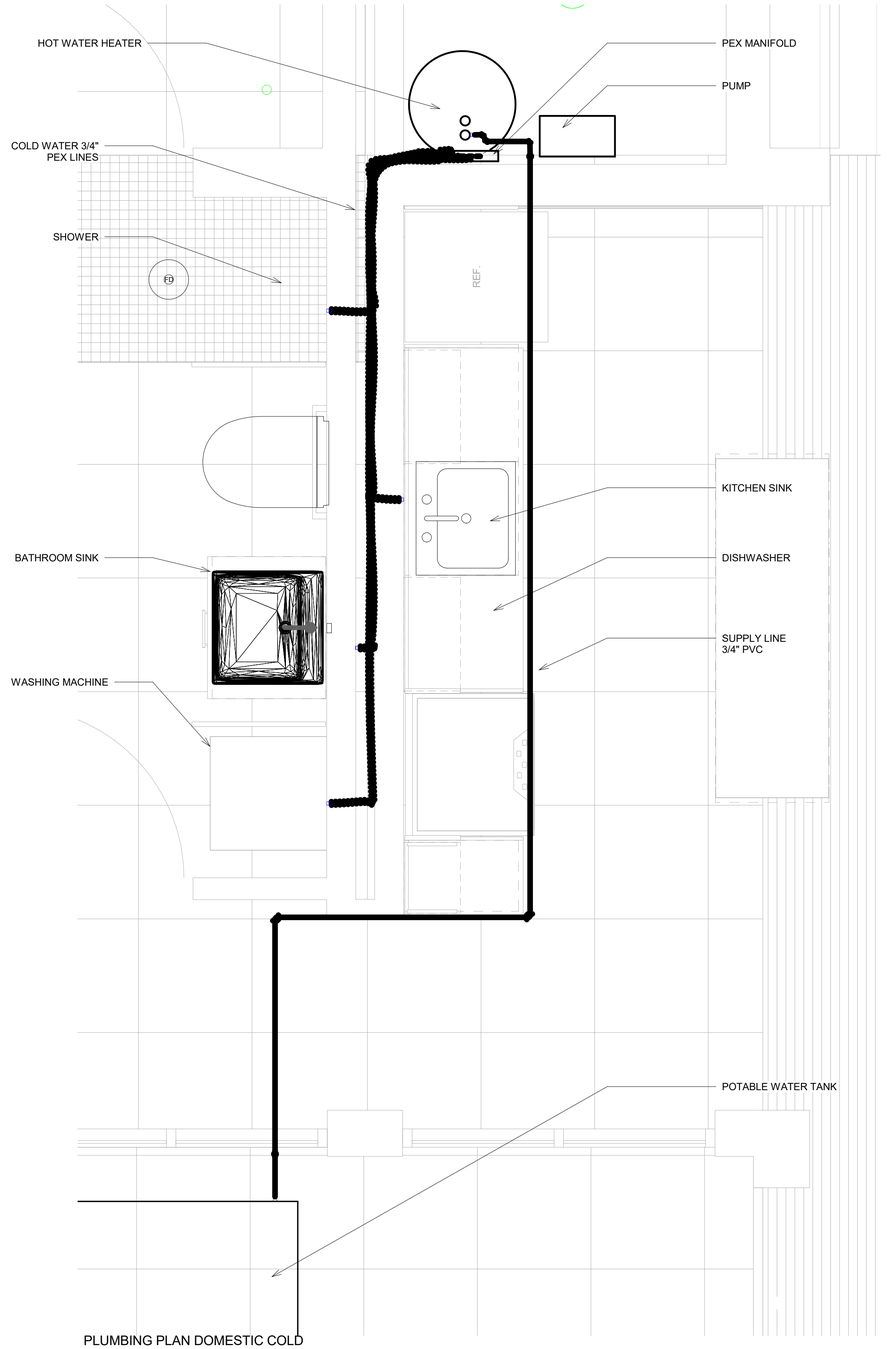
PROJECT NO.	Project Number
DESIGNED	Author
CHECKED	Checker

DOMESTIC SUPPLY

P-100



1 PLUMBING PLAN DOMESTIC COLD WATER
1/4" = 1'-0"



2 PLUMBING PLAN DOMESTIC COLD WATER CALLOUT
3/4" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

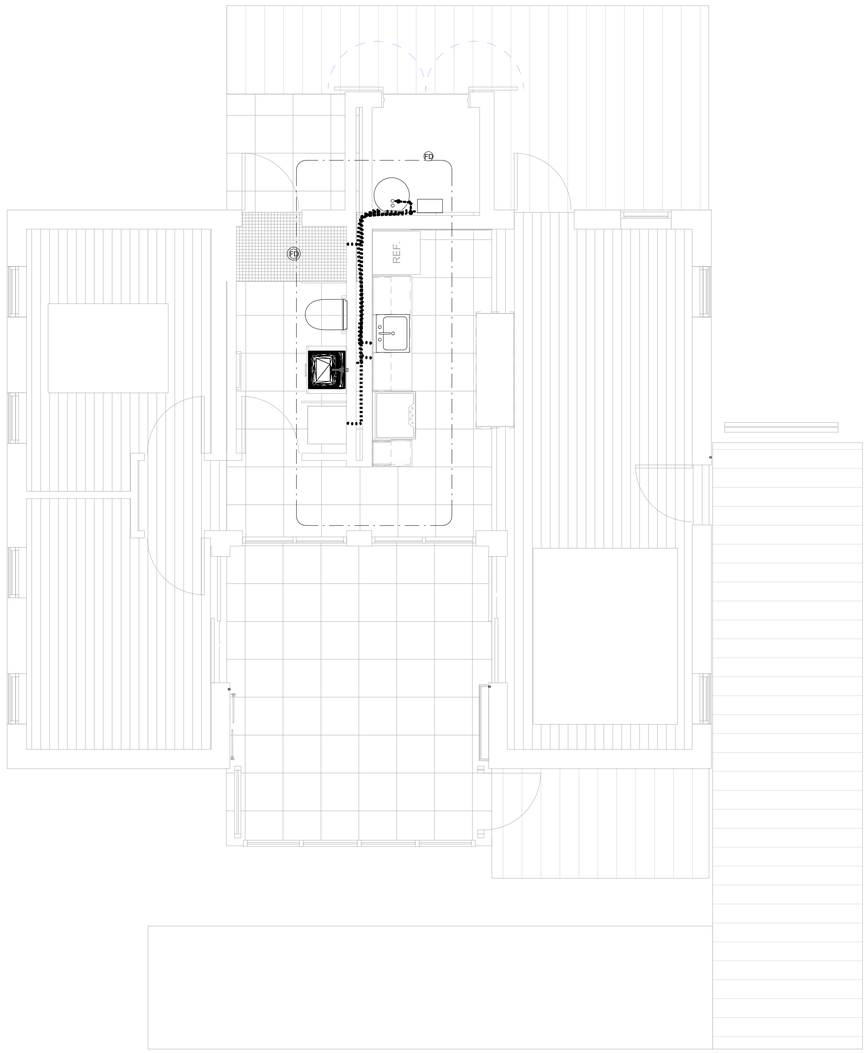
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Date	Description

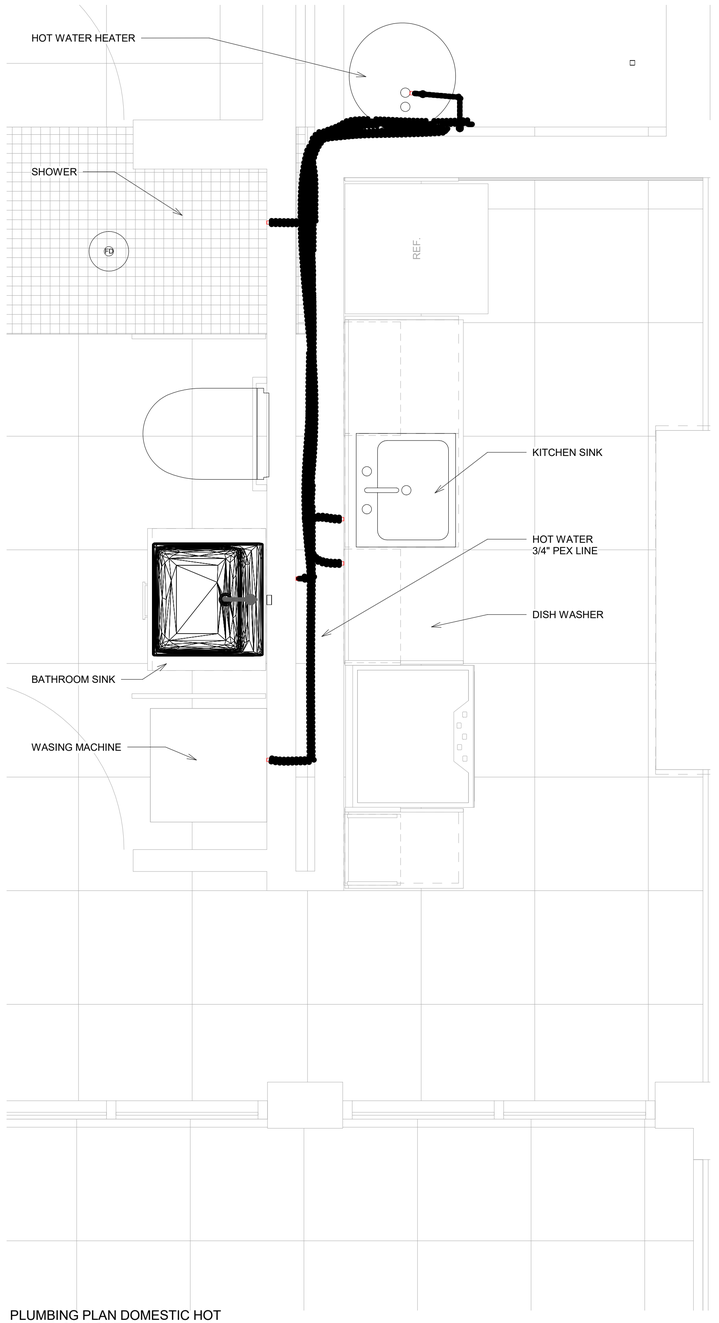
PROJECT NO.	Project Number
DESIGNED	Author
CHECKED	Checker

DOMESTIC COLD

P-102



1 PLUMBING PLAN DOMESTIC HOT WATER
1/4" = 1'-0"



2 PLUMBING PLAN DOMESTIC HOT WATER CALLOUT
3/4" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

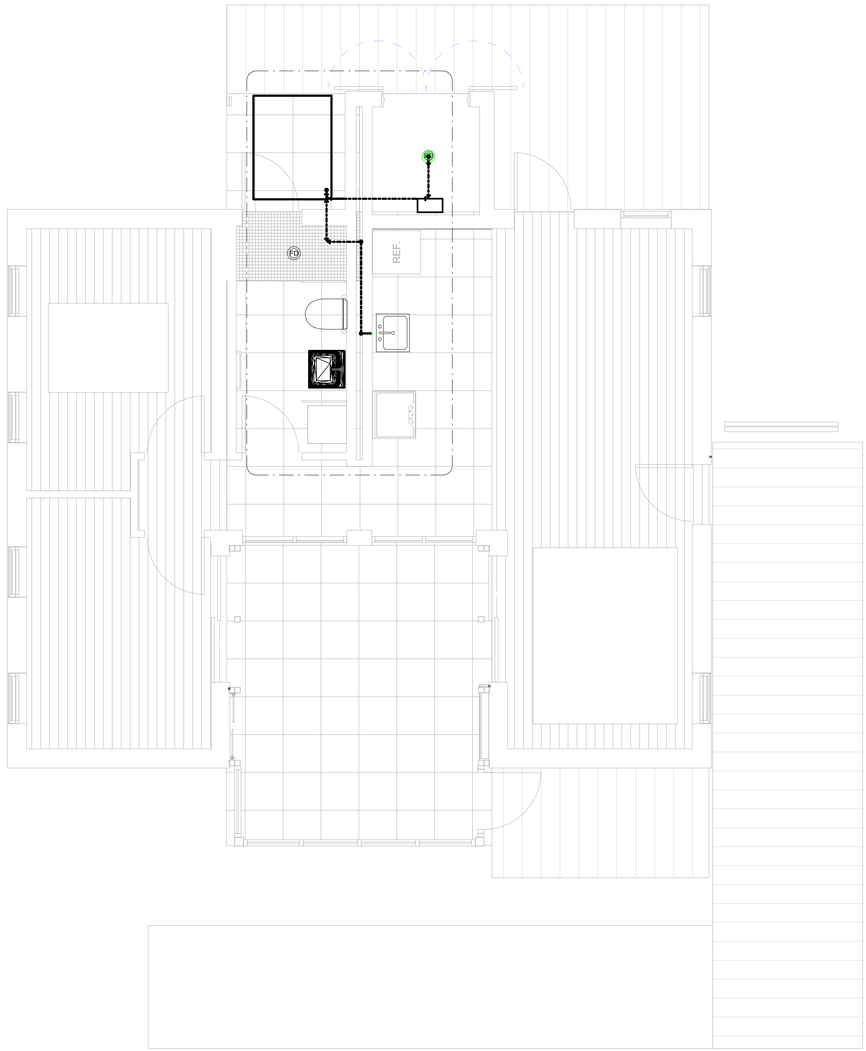
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Date	Description

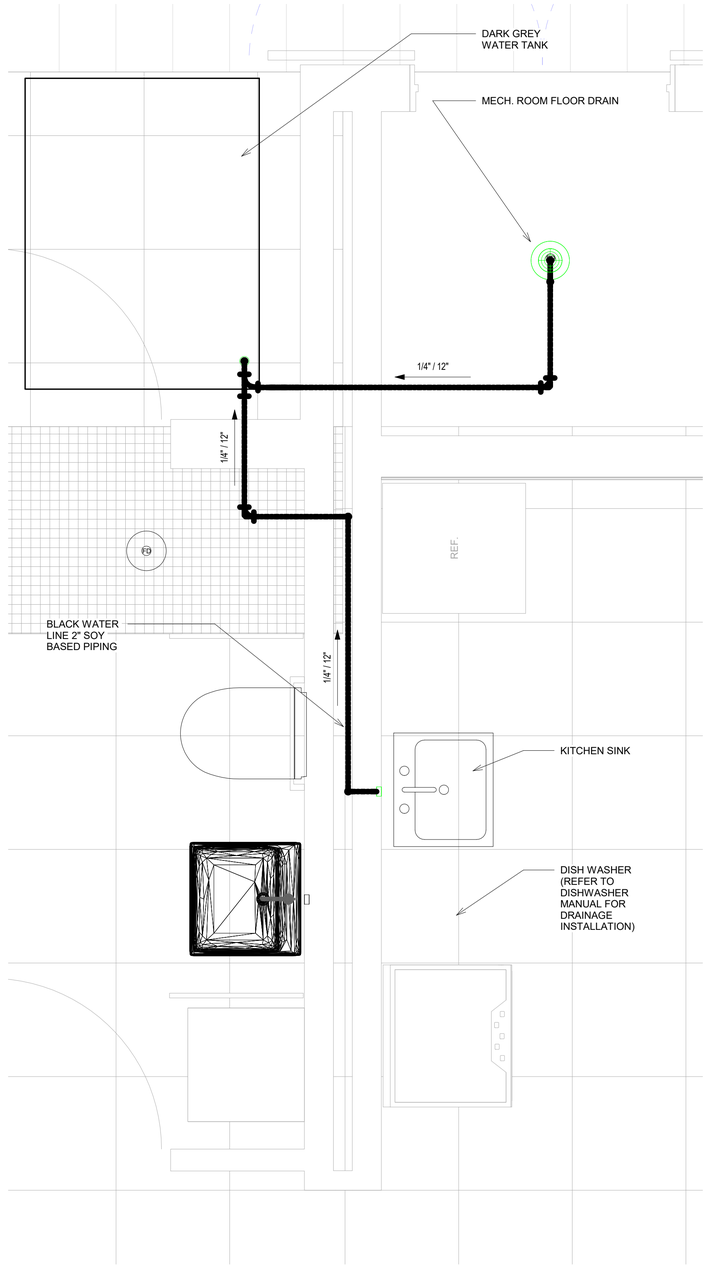
PROJECT NO.	Project Number
DESIGNED	Author
CHECKED	Checker

DOMESTIC HOT

P-103



1 PLUMBING PLAN SANITARY
1/4" = 1'-0"



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

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

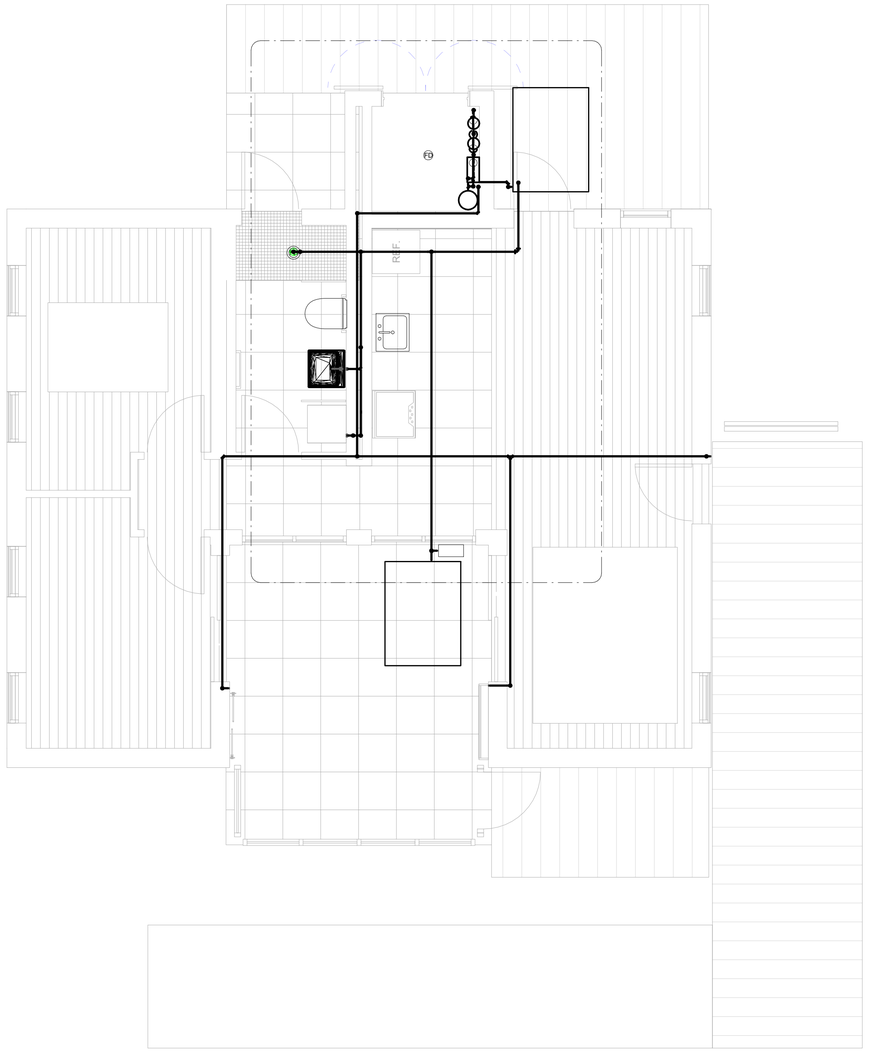
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Date	Description

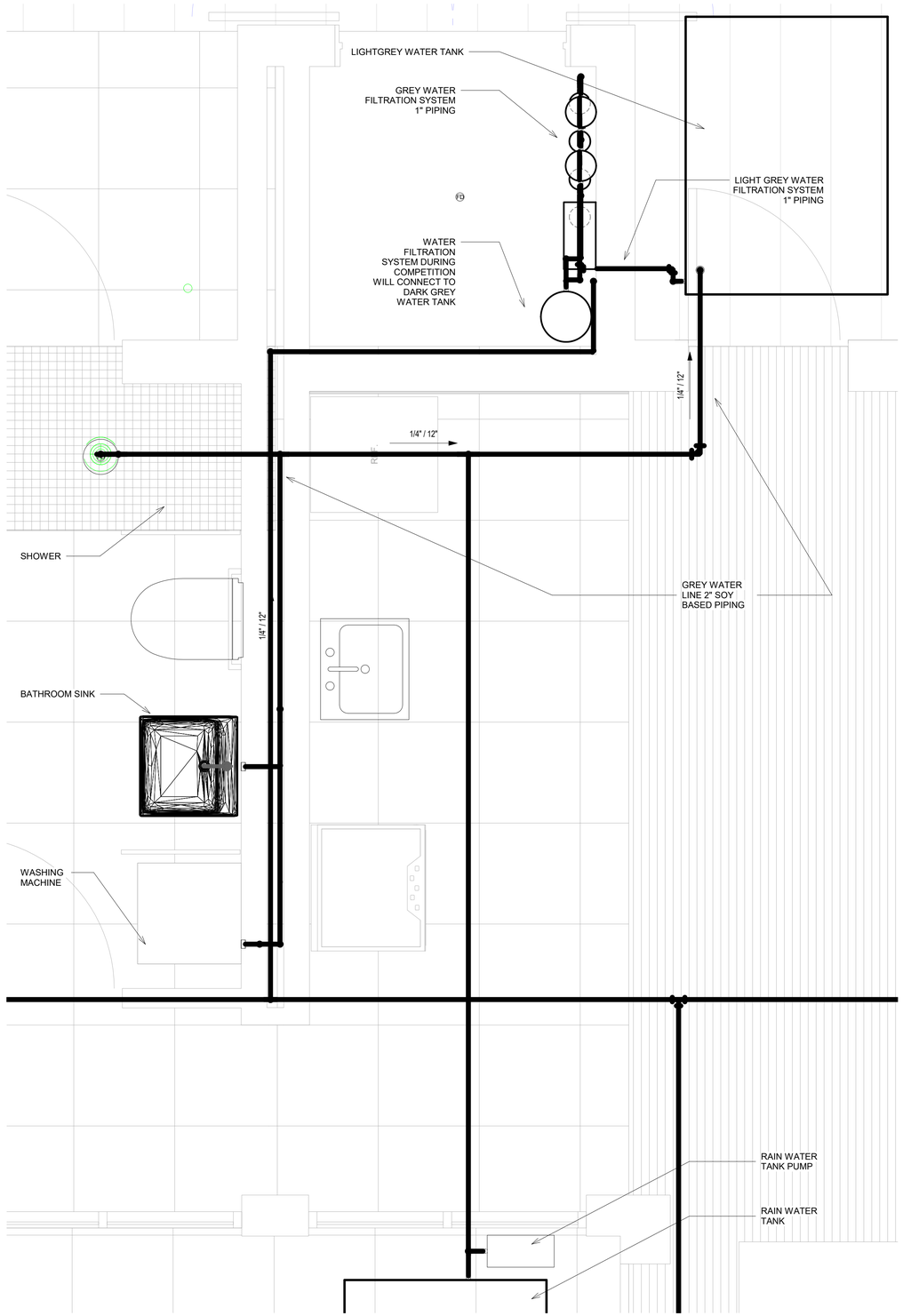
PROJECT NO.	Project Number
DESIGNED	Author
CHECKED	Checker

DOMESTIC SANITARY

P-104



1 PLUMBING PLAN GREY
1/4" = 1'-0"



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

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

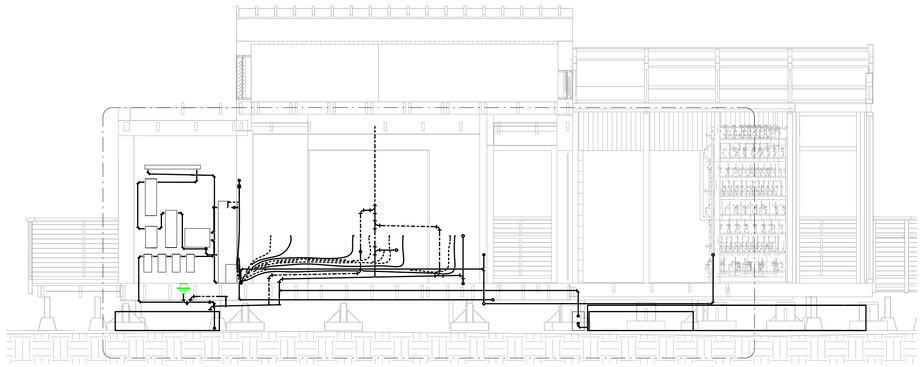
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Date	Description

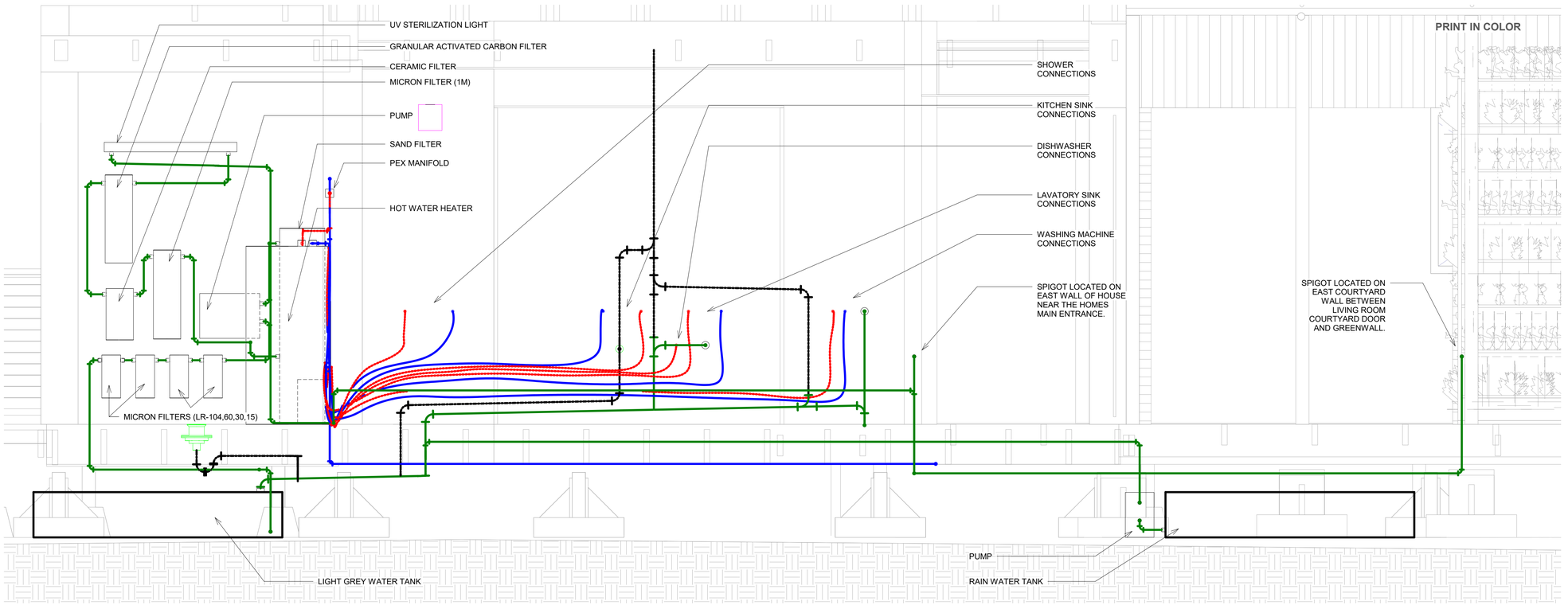
PROJECT NO.	Project Number
DESIGNED	Author
CHECKED	Checker

DOMESTIC GREY

P-105



1 PLUMBING SECTION EAST
1/4" = 1'-0"



2 PLUMBING SECTION EAST CALLOUT
3/4" = 1'-0"

PRINT IN COLOR

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

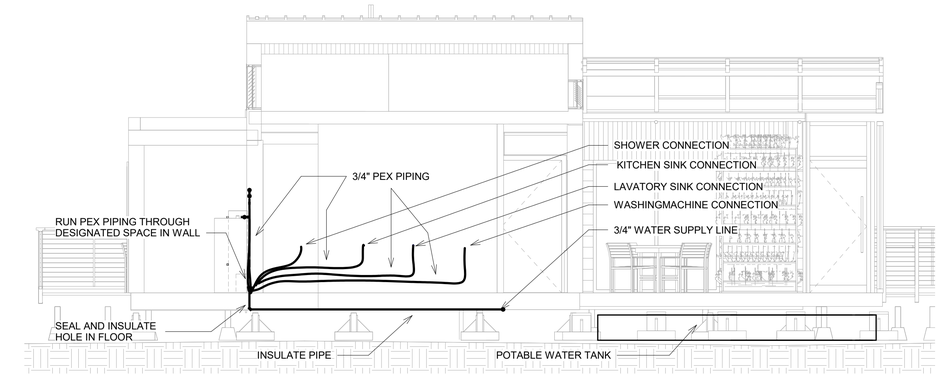
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Date	Description

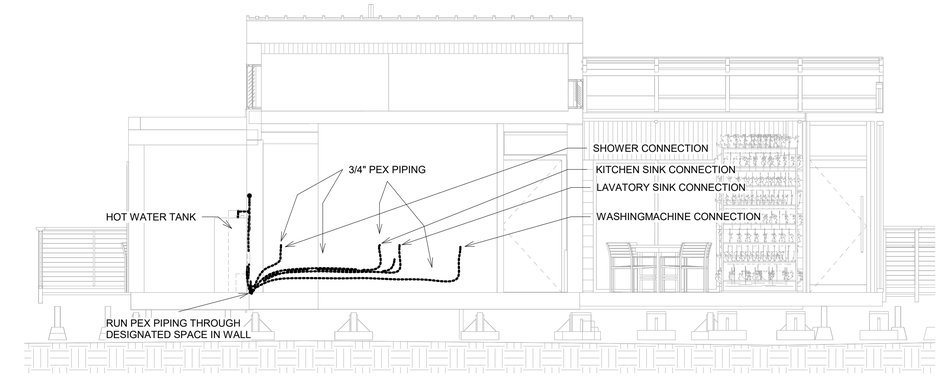
PROJECT NO.	Project Number
DESIGNED	Author
CHECKED	Checker

SPINE SECTION EAST

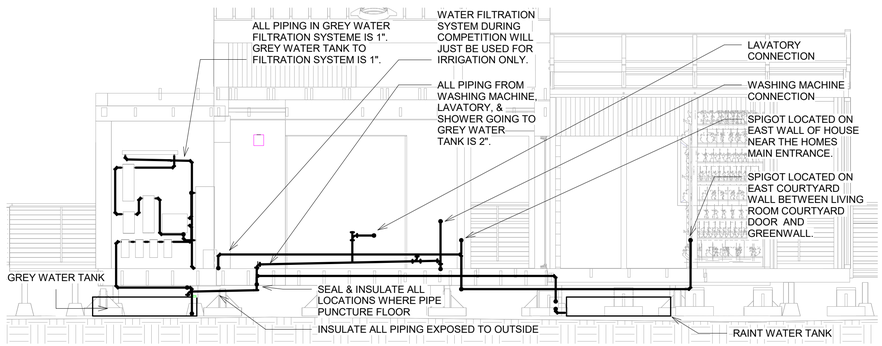
P-300



1 PLUMBING SECTION EAST COLD WATER
1/4" = 1'-0"



2 PLUMBING SECTION EAST HOT WATER
1/4" = 1'-0"



3 PLUMBING SECTION EAST GREY WATER
1/4" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

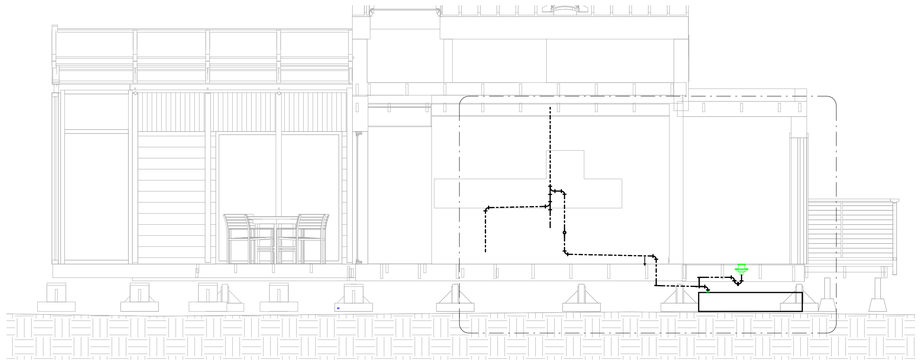
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Date	Description

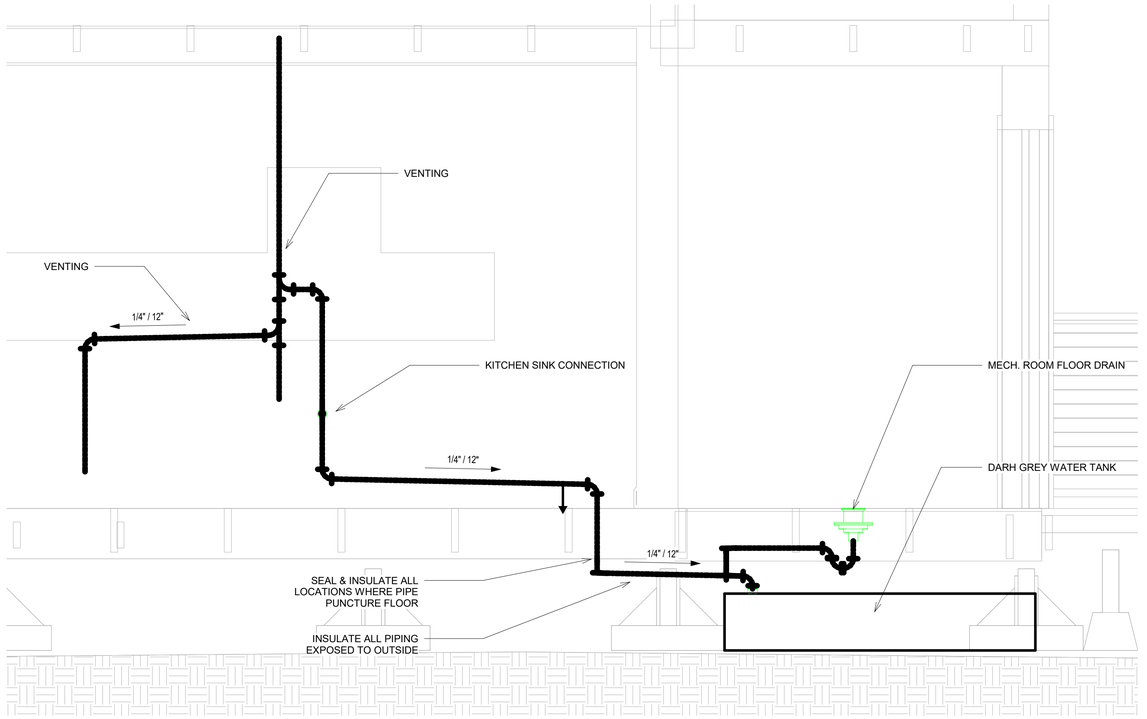
PROJECT NO.	Project Number
DESIGNED	Author
CHECKED	Checker

SPINE SECTION EAST - HOT, COLD, GREY

P-301



1 PLUMBING SECTION WEST
1/4" = 1'-0"



2 PLUMBING SECTION WEST CALLOUT
3/4" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

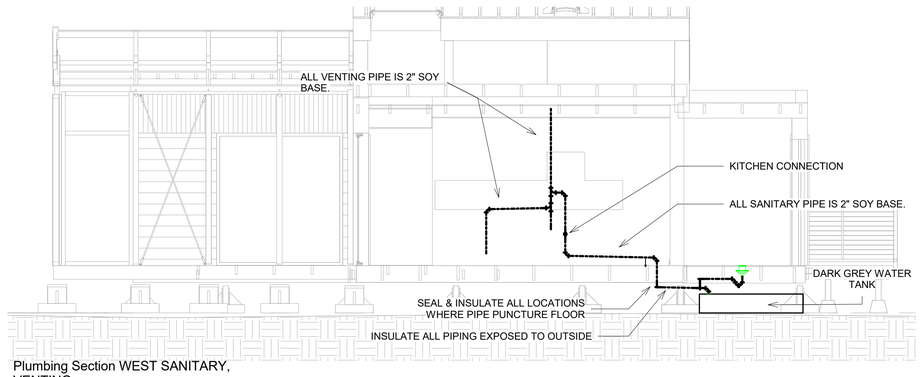
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Date	Description

PROJECT NO.	Project Number
DESIGNED	Author
CHECKED	Checker

SPINE SECTION WEST

P-302



Plumbing Section WEST SANITARY, VENTING
3 1/4" = 1'-0"

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

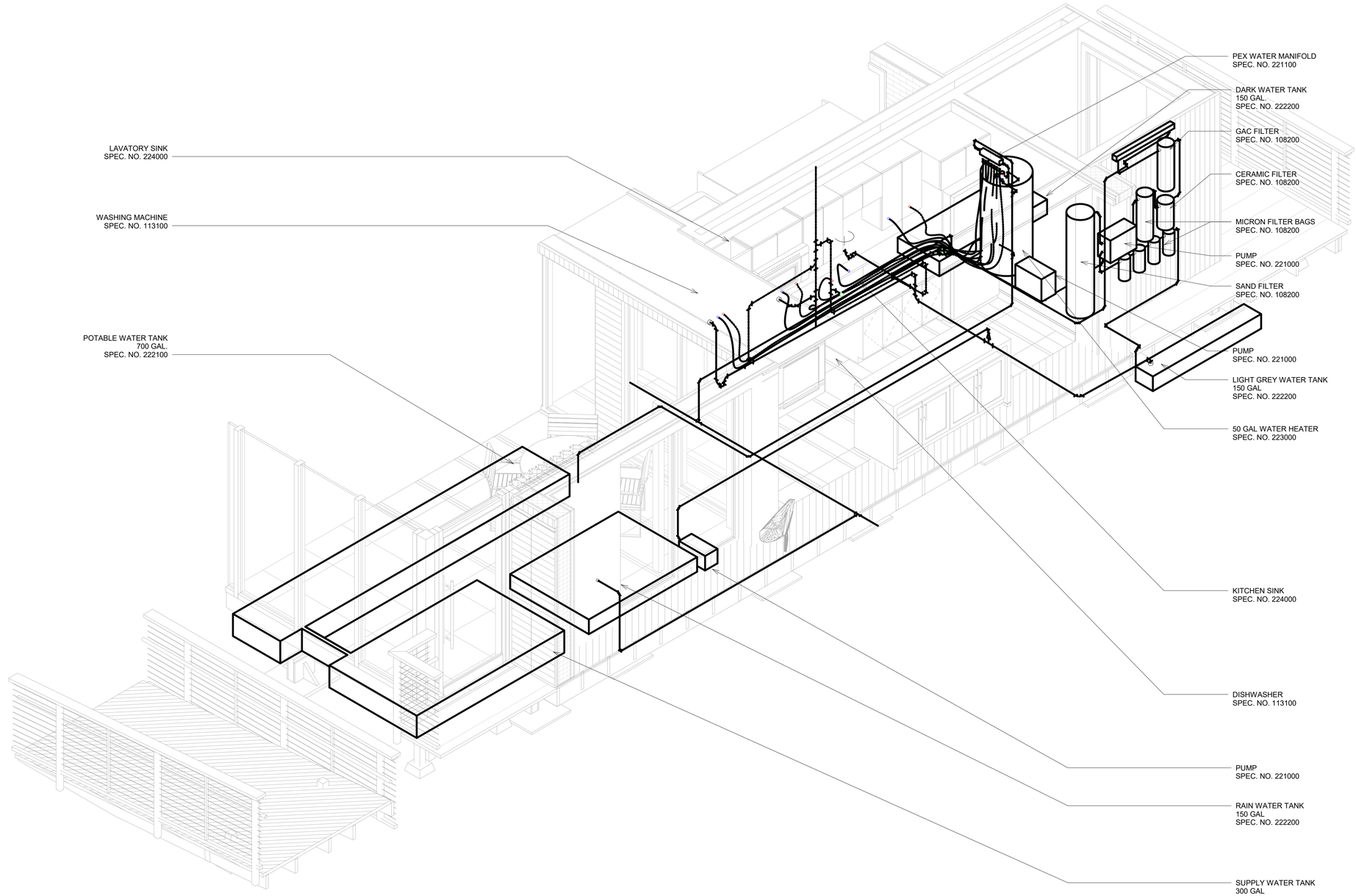
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Date	Description

PROJECT NO.	Project Number
DESIGNED	Author
CHECKED	Checker

SPINE SECTION WEST - SANITARY, VENTING

P-303



1 PLUMBING AXON

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

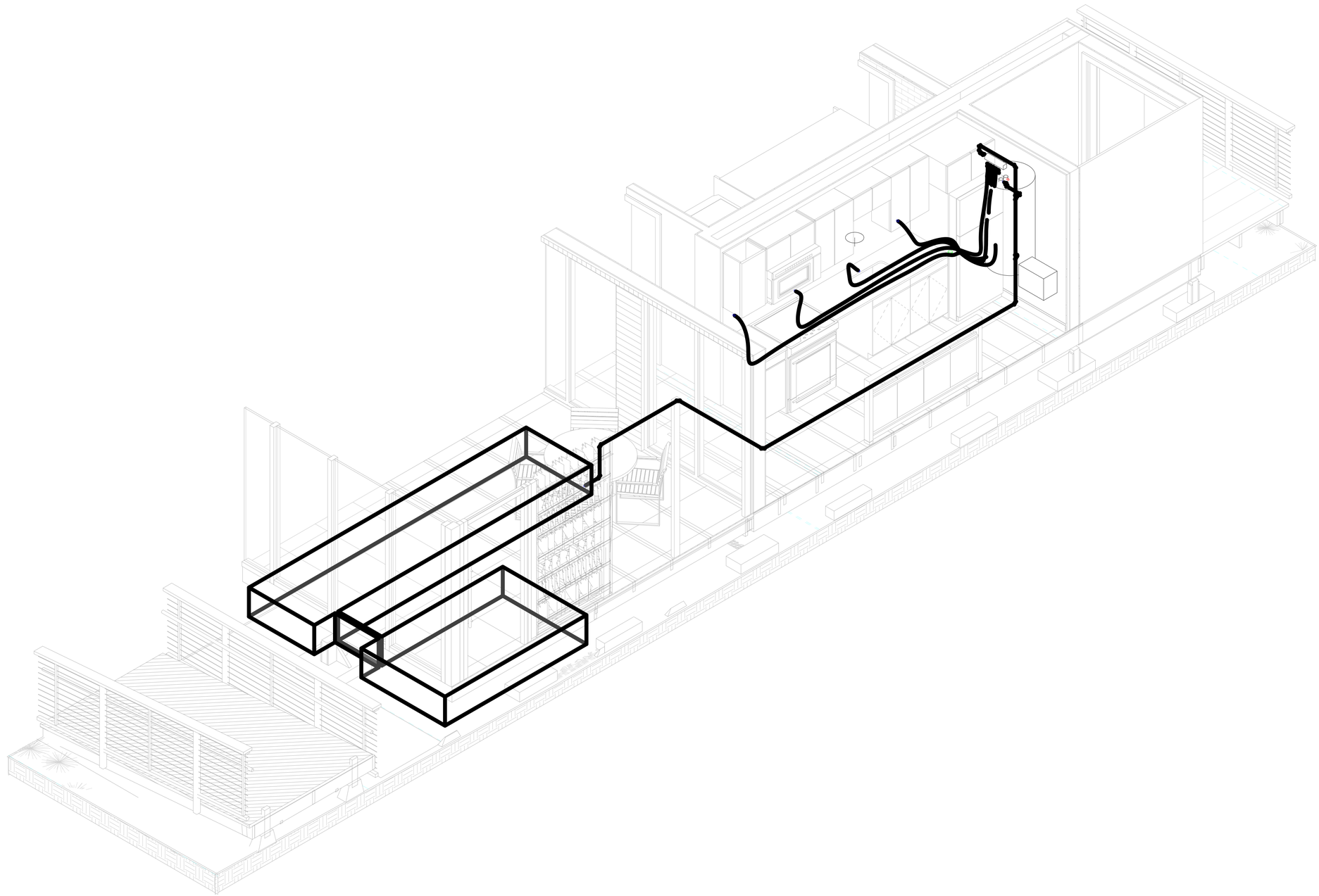
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Date	Description

PROJECT NO.	Project Number
DESIGNED	Author
CHECKED	Checker

SUPPLY ISOMETRIC

P-901



1 PLUMBING AXON DOMESTIC COLD

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

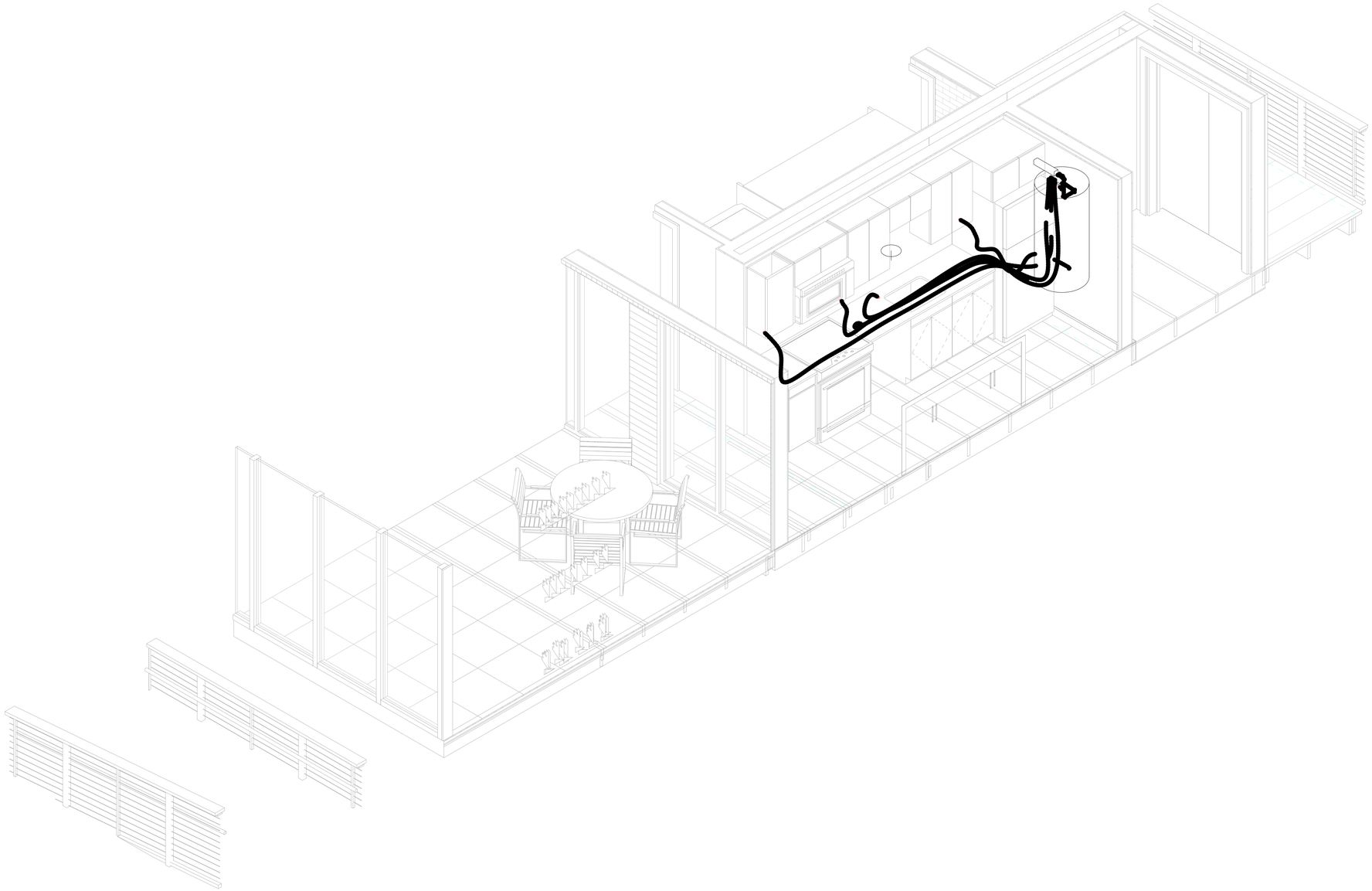
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Date	Description

PROJECT NO.	Project Number
DESIGNED	Author
CHECKED	Checker

DOMESTIC COLD ISOMETRIC

P-902



1 PLUMBING PLAN DOMESTIC HOT

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

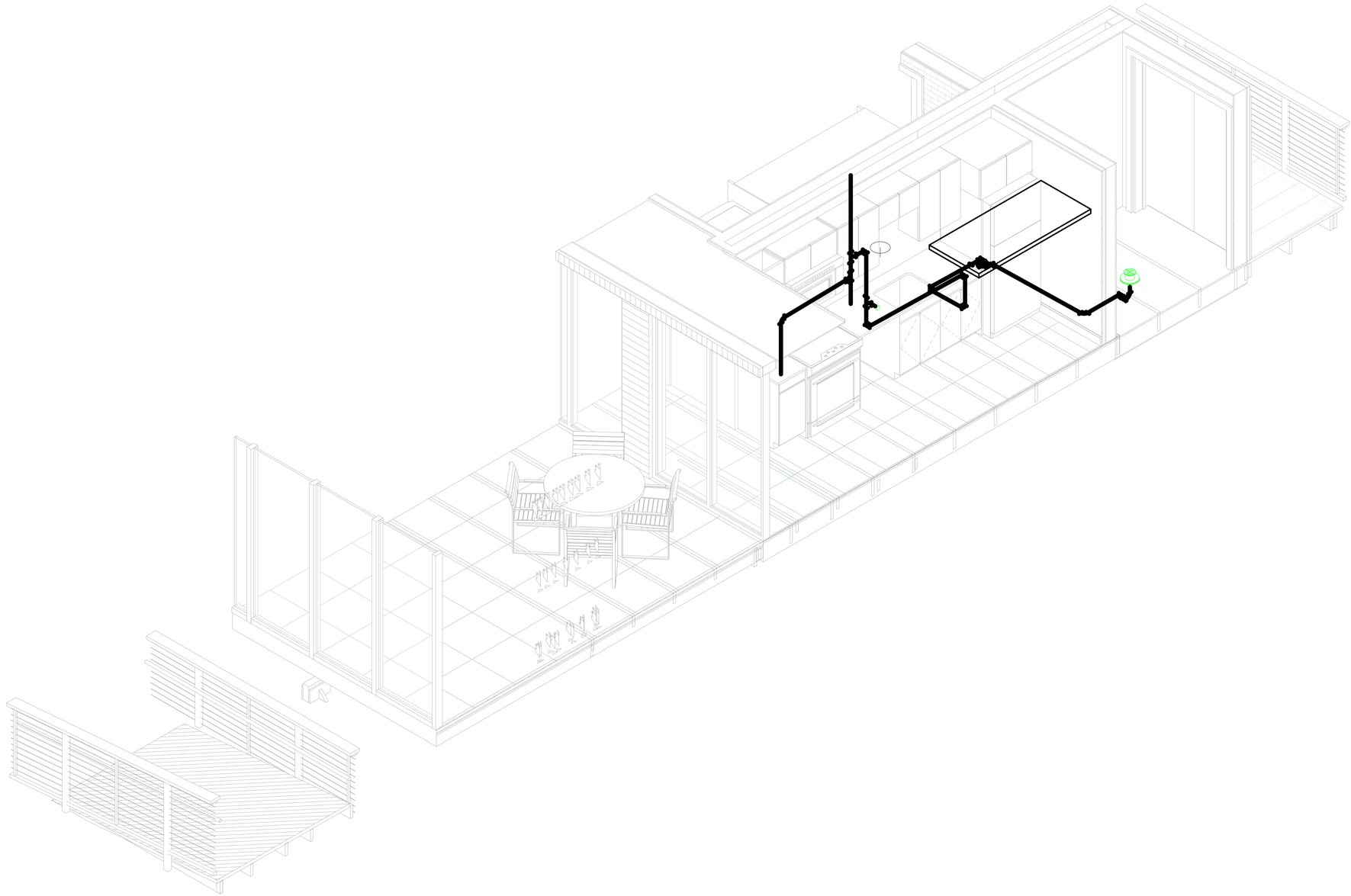
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Date	Description

PROJECT NO.	Project Number
DESIGNED	Author
CHECKED	Checker

DOMESTIC HOT ISOMETRIC

P-903



1 PLUMBING AXON SANITARY

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

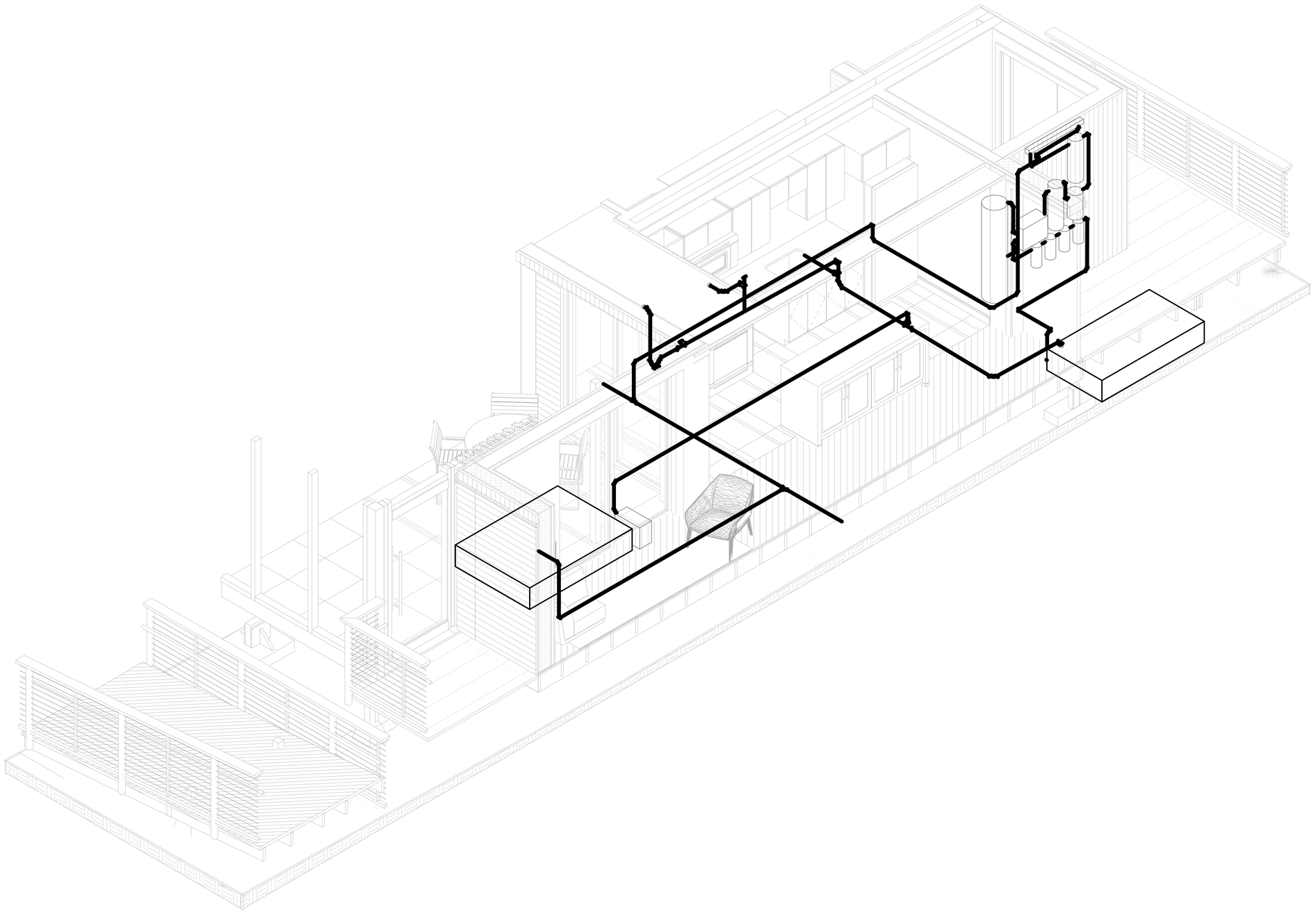
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Date	Description

PROJECT NO.	Project Number
DESIGNED	Author
CHECKED	Checker

DOMESTIC SANITARY ISOMETRIC

P-904



1 PLUMBING AXON GREY

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Date	Description

PROJECT NO.	Project Number
DESIGNED	Author
CHECKED	Checker

DOMESTIC GREY ISOMETRIC

P-905

SECTION R106.1.1
INFORMATION ON CONSTRUCTION DOCUMENTS

CONSTRUCTION DOCUMENTS SHALL BE DRAWN UPON SUITABLE MATERIAL. ELECTRONIC MEDIA DOCUMENTS ARE PERMITTED TO BE SUBMITTED WHEN APPROVED BY THE BUILDING OFFICIAL. CONSTRUCTION DOCUMENTS SHALL BE OF SUFFICIENT CLARITY TO INDICATE THE LOCATION, NATURE AND EXTENT OF THE WORK PROPOSED AND SHOW IN DETAIL THAT IT WILL CONFORM TO THE PROVISIONS OF THE CODE AND RELEVANT LAWS, ORDINANCES, RULES AND REGULATIONS, AS DETERMINED BY THE BUILDING OFFICIAL. WHERE REQUIRED BY THE BUILDING OFFICIAL, ALL BRACED WALL LINES, SHALL BE IDENTIFIED ON THE CONSTRUCTION DOCUMENTS AND ALL PERTINENT INFORMATION INCLUDING, BUT NOT LIMITED TO, BRACING METHODS, LOCATION AND LENGTH OF BRACED PANELS, FOUNDATION REQUIREMENTS OF BRACED WALL PANELS AT TOP AND BOTTOM SHALL BE PROVIDED.

SECTION M1307
APPLIANCE INSTALLATION

M1307.1 GENERAL.
INSTALLATION OF APPLIANCES SHALL CONFORM TO THE CONDITIONS OF THEIR LISTING AND LABEL AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. THE MANUFACTURER'S OPERATING AND INSTALLATION INSTRUCTIONS SHALL REMAIN ATTACHED TO THE APPLIANCE.

M1307.2 ANCHORAGE OF APPLIANCES.
APPLIANCES DESIGNED TO BE FIXED IN POSITION SHALL BE FASTENED OR ANCHORED IN AN APPROVED MANNER. IN SEISMIC DESIGN CATEGORIES D1 AND D2, WATER HEATERS SHALL BE ANCHORED OR STRAPPED TO RESIST HORIZONTAL DISPLACEMENT CAUSED BY EARTHQUAKE MOTION. STRAPPING SHALL BE AT POINTS WITHIN THE UPPER ONE-THIRD AND LOWER ONE-THIRD OF THE APPLIANCE'S VERTICAL DIMENSIONS. AT THE LOWER POINT, THE STRAPPING SHALL MAINTAIN A MINIMUM DISTANCE OF 4 INCHES ABOVE THE CONTROLS.
M1307.5 ELECTRICAL APPLIANCES
ELECTRICAL APPLIANCES SHALL BE INSTALLED IN ACCORDANCE WITH CHAPTERS 14, 15, 19, 20 AND 34 THROUGH 43 OF THIS CODE.
M1307.6 PLUMBING CONNECTIONS
POTABLE WATER AND DRAINAGE SYSTEM CONNECTIONS TO EQUIPMENT AND APPLIANCES REGULATED BY THIS CODE SHALL BE IN ACCORDANCE WITH CHAPTER 29 AND 30.

SECTION M1308
MECHANICAL SYSTEMS INSTALLATION

M1308.1 DRILLING AND NOTCHING.
WOOD-FRAMED STRUCTURAL MEMBERS SHALL BE DRILLED, NOTCHED OR ALTERED IN ACCORDANCE WITH THE PROVISIONS OF SECTIONS R602.8, R602.6, R602.6.1 AND R802.7. HOLES IN LOAD-BEARING MEMBERS OF COLD-FORMED STEEL LIGHT-FRAME CONSTRUCTION SHALL BE PERMITTED ONLY IN ACCORDANCE WITH SECTIONS R505.2.5, R603.2.5 AND R804.2.5. IN ACCORDANCE WITH THE PROVISIONS OF SECTIONS R505.3.5, R603.3.4 AND R804.3.4, CUTTING AND NOTCHING OF FLANGES AND LIPS OF LOAD-BEARING MEMBERS OF COLD FORMED STEEL LIGHT FRAME CONSTRUCTION SHALL NOT BE PERMITTED. STRUCTURAL INSULATED PANELS (SIPS) SHALL BE DRILLED AND NOTCHED OR ALTERED IN ACCORDANCE WITH THE PROVISIONS OF SECTION R613.7.

M1308.2 PROTECTION AGAINST PHYSICAL DAMAGE.
IN CONCEALED LOCATIONS WHERE PIPING, OTHER THAN CAST-IRON OR GALVANIZED STEEL, IS INSTALLED THROUGH HOLES OR NOTCHES IN STUDS, JOISTS, RAFTERS OR SIMILAR MEMBERS LESS THAN 1.5 INCHES FROM THE NEAREST EDGE OF THE MEMBER, THE PIPE SHALL BE PROTECTED BY SHIELD PLATES. PROTECTIVE STEEL SHIELD PLATES HAVING A MINIMUM THICKNESS OF 0.0575-INCH, SHALL COVER THE AREA OF THE PIPE WHERE THE MEMBER IS NOTCHED OR BORED, AND SHALL EXTEND MINIMUM OF 2 INCHES ABOVE SOLE PLATES AND BELOW TOP PLATES.

SECTION M1401
GENERAL

M1401.1 INSTALLATION.
HEATING AND COOLING EQUIPMENT AND APPLIANCES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND THE REQUIREMENTS OF THIS CODE.

M1401.2 ACCESS.
HEATING AND COOLING EQUIPMENT AND APPLIANCES SHALL BE LOCATED WITH RESPECT TO BUILDING CONSTRUCTION AND OTHER EQUIPMENT AND APPLIANCES TO PERMIT MAINTENANCE, SERVICING AND REPLACEMENT. CLEARANCES SHALL BE MAINTAINED TO PERMIT CLEANING OF HEATING AND COOLING SURFACES; REPLACEMENT OF FILTERS, BLOWERS, MOTORS, CONTROLS AND VENT CONNECTIONS; LUBRICATION OF MOVING PARTS; AND ADJUSTMENTS.

EXCEPTION: ACCESS SHALL NOT BE REQUIRED FOR DUCTS, PIPING, OR OTHER COMPONENTS APPROVED FOR CONCEALMENT.

M1401.3 SIZING
HEATING AND COOLING EQUIPMENT AND APPLIANCES SHALL BE SIZED IN ACCORDANCE WITH ACCA MANUAL S BASED ON BUILDING LOADS CALCULATED IN ACCORDANCE WITH ACCA MANUAL J OR OTHER APPROVED HEATING AND COOLING CALCULATION METHODOLOGIES.

M1401.4 EXTERIOR INSTALLATIONS.
EQUIPMENT AND APPLIANCES INSTALLED OUTDOORS SHALL BE LISTED AND LABELED FOR OUTDOOR INSTALLATION. SUPPORTS AND FOUNDATIONS SHALL PREVENT EXCESSIVE VIBRATION, SETTLEMENT OR MOVEMENT OF THE EQUIPMENT. SUPPORTS AND FOUNDATIONS SHALL BE IN ACCORDANCE WITH SECTION M1305.1.4.1.

M1401.5 FLOOD HAZARD.
IN FLOOD HAZARD AREAS AS ESTABLISHED BY TABLE R301.2(1), HEATING AND COOLING EQUIPMENT AND APPLIANCES SHALL BE LOCATED OR INSTALLED IN ACCORDANCE WITH SECTION R322.1.6.

SECTION M1403
HEAT PUMP EQUIPMENT

M1403.1 HEAT PUMPS.
THE MINIMUM UNOBSTRUCTED TOTAL AREA OF THE OUTSIDE AND RETURN AIR DUCTS OR OPENINGS TO A HEAT PUMP SHALL BE NOT LESS THAN 6 SQUARE INCHES PER 1,000 BTU/H OUTPUT RATING OR AS INDICATED BY THE CONDITIONS OF THE LISTING OF THE HEAT PUMP. ELECTRICAL HEAT PUMPS SHALL CONFORM TO UL 1995.

M1403.2 FOUNDATIONS AND SUPPORTS
SUPPORTS AND FOUNDATIONS FOR THE OUTDOOR UNIT OF A HEAT PUMP SHALL BE RAISED AT LEAST 3 INCHES ABOVE THE GROUND TO PERMIT FREE DRAINAGE OF DEFROST WATER, AND SHALL CONFORM TO THE MANUFACTURER'S INSTALLATION INSTRUCTION.

SECTION M1411
HEATING AND COOLING EQUIPMENT

M1411.1 APPROVED REFRIGERANTS.
REFRIGERANTS USED IN DIRECT REFRIGERATING SYSTEMS SHALL CONFORM TO THE APPLICABLE PROVISIONS OF ANSI/ASHRAE 34.

M1411.3 CONDENSATE DISPOSAL.
CONDENSATE FROM ALL COOLING COILS OR EVAPORATORS SHALL BE CONVEYED FROM THE DRAIN PAN OUTLET TO AN APPROVED PLACE OF DISPOSAL. SUCH PIPING SHALL MAINTAIN A MINIMUM HORIZONTAL SLOPE IN THE DIRECTION OF DISCHARGE OF NOT LESS THAN ¼ UNIT VERTICAL IN 12 UNITS HORIZONTAL (1-PERCENT SLOPE). CONDENSATE SHALL NOT DISCHARGE INTO A STREET, ALLEY OR OTHER AREAS WHERE IT WOULD CAUSE A NUISANCE.

M1411.3.1 AUXILIARY AND SECONDARY DRAIN SYSTEMS.
IN ADDITION TO THE REQUIREMENTS OF SECTION M1411.3, A SECONDARY DRAIN OR AUXILIARY DRAIN PAN SHALL BE REQUIRED FOR EACH COOLING OR EVAPORATOR COIL WHERE DAMAGE TO ANY BUILDING COMPONENTS WILL OCCUR AS A RESULT OF OVERFLOW FROM THE EQUIPMENT DRAIN PAN OR STOPPAGE IN THE CONDENSATE DRAIN PIPING. SUCH PIPING SHALL MAINTAIN A MINIMUM HORIZONTAL SLOPE IN THE DIRECTION OF DISCHARGE OF NOT LESS THAN 1/8 UNIT VERTICAL IN 12 UNITS HORIZONTAL (1-PERCENT SLOPE). DRAIN PIPING SHALL BE A MINIMUM OF 3/4-INCH NOMINAL PIPE SIZE. ONE OF THE FOLLOWING METHODS SHALL BE USED:

1. AN AUXILIARY DRAIN PAN WITH A SEPARATE DRAIN SHALL BE INSTALLED UNDER THE COILS ON WHICH CONDENSATION WILL OCCUR. THE AUXILIARY PAN DRAIN SHALL DISCHARGE TO A CONSPICUOUS POINT OF DISPOSAL TO ALERT OCCUPANTS IN THE DEPTH OF 1.5 INCHES (38 MM), SHALL NOT BE LESS THAN 3 INCHES LARGER THAN THE UNIT OR THE COIL DIMENSIONS IN WIDTH AND LENGTH AND SHALL BE CONSTRUCTED OF CORROSION-RESISTANT MATERIAL. GALVANIZED SHEET STEEL PANS SHALL HAVE A MINIMUM THICKNESS OF NOT LESS THAN 0.0236-INCH (NO. 24 GAGE). NONMETALLIC PANS SHALL HAVE A MINIMUM THICKNESS OF NOT LESS THAN 0.0625 INCH.
2. A SEPARATE OVERFLOW DRAIN LINE SHALL BE CONNECTED TO THE DRAIN PAN INSTALLED WITH THE EQUIPMENT. THIS OVERFLOW DRAIN SHALL DISCHARGE TO A CONSPICUOUS POINT OF DISPOSAL TO ALERT OCCUPANTS IN THE EVENT OF A STOPPAGE OF THE PRIMARY DRAIN. THE OVERFLOW DRAIN LINE SHALL CONNECT TO THE DRAIN PAN AT A HIGHER LEVEL THAN THE PRIMARY DRAIN CONNECTION.
3. AN AUXILIARY DRAIN PAN WITHOUT A SEPARATE DRAIN LINE SHALL BE INSTALLED UNDER THE COILS ON WHICH CONDENSATION WILL OCCUR. THIS PAN SHALL BE EQUIPPED WITH A WATER LEVEL DETECTION DEVICE CONFORMING TO UL 508 THAT WILL SHUT OFF THE EQUIPMENT SERVED PRIOR TO OVERFLOW OF THE PAN. THE PAN SHALL BE EQUIPPED WITH A FITTING TO ALLOW FOR DRAINAGE. THE AUXILIARY DRAIN PAN SHALL BE CONSTRUCTED IN ACCORDANCE WITH ITEM 1 OF THIS SECTION.
4. A WATER LEVEL DETECTION DEVICE CONFORMING TO UL 508 SHALL BE INSTALLED THAT WILL SHUT OFF THE EQUIPMENT SERVED IN THE EVENT THAT THE PRIMARY DRAIN IS BLOCKED. THE DEVICE SHALL BE INSTALLED IN THE PRIMARY DRAIN LINE, THE OVERFLOW DRAIN LINE OR THE EQUIPMENT-SUPPLIED DRAIN PAN, LOCATED AT A POINT HIGHER THAN THE PRIMARY DRAIN LINE CONNECTION AND BELOW THE OVERFLOW RIM OF SUCH PAN.

M1411.3.1.1 WATER-LEVEL MONITORING DEVICES.
ON DOWN-FLOW UNITS AND ALL OTHER COILS THAT HAVE NO SECONDARY DRAIN OR PROVISIONS TO INSTALL A SECONDARY OR AUXILIARY DRAIN PAN, A WATER-LEVEL MONITORING DEVICE SHALL BE INSTALLED INSIDE THE PRIMARY DRAIN PAN. THIS DEVICE SHALL SHUT OFF THE EQUIPMENT SERVED IN THE EVENT THAT THE PRIMARY DRAIN BECOMES RESTRICTED. DEVICES SHALL NOT BE INSTALLED IN THE DRAIN LINE.

M1411.3.2 DRAIN PIPE MATERIALS AND SIZES.
COMPONENTS OF THE CONDENSATE DISPOSAL SYSTEM SHALL BE CAST IRON, GALVANIZED STEEL, COPPER, POLYBUTYLENE, POLYETHYLENE, ABS, CPVC OR PVC PIPE OR TUBING. ALL COMPONENTS SHALL BE SELECTED FOR THE PRESSURE AND TEMPERATURE RATING OF THE INSTALLATION. JOINTS AND CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH THE MATERIALS SPECIFIED IN CHAPTER 30. CONDENSATE WASTE AND DRAIN LINE SIZE SHALL BE NOT LESS THAN 3/4-INCH (19 MM) INTERNAL DIAMETER AND SHALL NOT DECREASE IN SIZE FROM THE DRAIN PAN CONNECTION TO THE PLACE OF CONDENSATE DISPOSAL. WHERE THE DRAIN PIPES FROM MORE THAN ONE UNIT ARE MANIFOLDED TOGETHER FOR CONDENSATE DRAINAGE, THE PIPE OR TUBING SHALL BE SIZED IN ACCORDANCE WITH AN APPROVED METHOD.

M1411.3.3 APPLIANCES, EQUIPMENT AND INSULATION IN PANS.
WHERE APPLIANCES, EQUIPMENT OR INSULATION ARE SUBJECT TO WATER DAMAGE WHEN AUXILIARY DRAIN PANS FILL, THOSE PORTIONS OF THE APPLIANCES, EQUIPMENT AND INSULATION SHALL BE INSTALLED ABOVE THE FLOOD LEVEL RIM OF THE PAN. SUPPORTS LOCATED INSIDE OF THE PAN TO SUPPORT THE APPLIANCE OR EQUIPMENT SHALL BE WATER RESISTANT AND APPROVED.

M1411.4 AUXILIARY DRAIN PAN.
CATEGORY IV CONDENSING APPLIANCE SHALL HAVE AN AUXILIARY DRAIN PAN WHERE DAMAGE TO ANY BUILDING COMPONENT WILL OCCUR AS A RESULT OF STOPPAGE IN THE CONDENSATION DRAINAGE SYSTEM. THESE PANS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF T=SECTION M1411.3.

EXCEPTION: FUEL-FIRED APPLIANCES THAT AUTOMATICALLY SHUT DOWN OPERATION IN THE EVENT OF A STOPPAGE IN THE CONDENSATE DRAINAGE SYSTEM.

M1411.5 INSULATION OF REFRIGERANT PIPING.
PIPING AND FITTINGS FOR REFRIGERANT VAPOR (SUCTION) LINES SHALL BE INSULATED WITH INSULATION HAVING A THERMAL RESISTIVITY OF AT LEAST R-4 AND HAVING EXTERNAL SURFACE PERMEANCE NOT EXCEEDING 0.05 PERM WHEN TESTED IN ACCORDANCE WITH ASTM E 96.

M1411.6 LOCKING ACCESS PORT CAPS.
REFRIGERANT CIRCUIT ACCESS PORTS LOCATED OUTDOORS SHALL BE FITTED WITH LOCKING-TYPE TAMPER-RESISTANT CAPS OR SHALL BE OTHERWISE SECURED TO PREVENT UNAUTHORIZED ACCESS.

SECTION M1503
RANGE HOODS

M1503.1 GENERAL
RANGE HOODS SHALL DISCHARGE TO THE OUTDOORS THROUGH A SINGLE-WALL DUCT. THE DUCT SERVING THE HOOD SHALL HAVE A SMOOTH INTERIOR SURFACE, SHALL BE AIR TIGHT, SHALL BE EQUIPPED WITH A BACK-DRAFT DAMPER, AND SHALL BE INDEPENDENT OF ALL OTHER EXHAUST SYSTEMS. DUCTS SERVING RANGE HOODS SHALL NOT TERMINATE IN AN ATTIC OR CRAWL SPACE OR AREAS INSIDE THE BUILDING.

EXCEPTION: WHERE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS, AND WHERE MECHANICAL OR NATURAL VENTILATION IS OTHERWISE PROVIDED, LISTED AND LABELED DUCTLESS RANGE HOODS SHALL NOT BE REQUIRED TO DISCHARGE TO THE OUTDOORS.

SECTION M1506
EXHAUST DUCTS AND EXHAUST OPENINGS

M1506.1 DUCTS.

WHERE EXHAUST DUCT CONSTRUCTION IS NOT SPECIFIED IN THIS CHAPTER, CONSTRUCTION SHALL COMPLY WITH CHAPTER 16.

M1506.2 EXHAUST OPENINGS.
AIR EXHAUST OPENINGS SHALL TERMINATE NOT LESS THAN 3 FEET FROM PROPERTY LINES; 3 FEET FROM OPERABLE AND NONOPERABLE OPENINGS INTO THE BUILDING AND 10 FEET FROM MECHANICAL AIR INTAKES EXCEPT WHERE THE OPENING IS LOCATED 3 FEET ABOVE THE AIR INTAKE. OPENINGS SHALL COMPLY WITH SECTIONS R303.5.2 AND R303.6.

SECTION M1601
DUCT CONSTRUCTION

M1601.1 DUCT DESIGN.
DUCT SYSTEMS SERVING HEATING, COOLING AND VENTILATION EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE PROVISIONS OF THIS SECTION AND ACCA MANUAL D OR OTHER APPROVED METHODS.

M1601.1.1 ABOVE-GROUND DUCT SYSTEMS.
ABOVE-GROUND DUCT SYSTEMS SHALL CONFORM TO THE FOLLOWING:

1.EQUIPMENT CONNECTED TO DUCT SYSTEMS SHALL BE DESIGNED TO LIMIT DISCHARGE AIR TEMPERATURE TO A MAXIMUM OF 250°F.

2. FACTORY-MADE AIR DUCTS SHALL BE CONSTRUCTED OF CLASS 0 OR CLASS 1 MATERIALS AS DESIGNATED IN TABLE M1601.1.1(1).

3.FIBROUS DUCT CONSTRUCTION SHALL CONFORM TO THE SMACNA FIBROUS GLASS DUCT CONSTRUCTION STANDARDS OR NAIMA FIBROUS GLASS DUCT CONSTRUCTION STANDARDS.

4. MINIMUM THICKNESS OF METAL DUCT MATERIAL SHALL BE AS LISTED IN TABLE M1601.1.1(2). GALVANIZED STEEL SHALL CONFORM TO ASTM A 653. METALLIC DUCTS SHALL BE FABRICATED IN ACCORDANCE WITH SMACNA DUCT CONSTRUCTION STANDARDS METAL AND FLEXIBLE.

5.USE OF GYPSUM PRODUCTS TO CONSTRUCT RETURN AIR DUCTS OR PLENUMS IS PERMITTED, PROVIDED THAT THE AIR TEMPERATURE DOES NOT EXCEED 125°F AND EXPOSED SURFACES ARE NOT SUBJECT TO CONDENSATION.

6. DUCT SYSTEMS SHALL BE CONSTRUCTED OF MATERIALS HAVING A FLAME SPREAD INDEX NOT GREATER THAN 200.

7. STUD WALL CAVITIES AND THE SPACES BETWEEN SOLID FLOOR JOISTS TO BE USED AS AIR PLENUMS SHALL COMPLY WITH THE FOLLOWING CONDITIONS:

7.1. THESE CAVITIES OR SPACES SHALL NOT BE USED AS A PLENUM FOR SUPPLY AIR.

7.2. THESE CAVITIES OR SPACES SHALL NOT BE PART OF A REQUIRED FIRE-RESISTANCE-RATED ASSEMBLY.

7.3 STUD WALL CAVITIES SHALL NOT CONVEY AIR FROM MORE THAN ONE FLOOR LEVEL.

7.4. STUD WALL CAVITIES AND JOIST-SPACE PLENUMS SHALL BE ISOLATED FROM ADJACENT CONCEALED SPACED SPACES BY TIGHT-FITTING FIREBLOCKING IN ACCORDANCE WITH SECTION R602.8.

7.5 STUD WALL CAVITIES IN THE OUTSIDE WALLS OF BUILDING ENVELOPE ASSEMBLIES SHALL NOT BE UTILIZED AS AIR PLENUMS.

M1601.2 FACTORY-MADE DUCTS.
FACTORY-MADE AIR DUCTS OR DUCT MATERIAL SHALL BE APPROVED FOR THE USE INTENDED, AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. EACH PORTION OF A FACTORY-MADE AIR DUCT SYSTEM SHALL BEAR A LISTING AND LABEL INDICATING COMPLIANCE WITH UL 181 AND UL 181A OR UL 181B.

M1601.2.1 VIBRATION ISOLATORS.
VIBRATION ISOLATORS INSTALLED BETWEEN MECHANICAL EQUIPMENT AND METAL DUCTS SHALL BE FABRICATED FROM APPROVED MATERIALS AND SHALL NOT EXCEED 10 INCHES IN LENGTH.

M1601.3 DUCT INSULATION MATERIALS.
DUCT INSULATION MATERIALS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS: 1. DUCT COVERINGS AND LININGS, INCLUDING ADHESIVES WHERE USED, SHALL HAVE A FLAME NOT HIGHER THAN 25, AND A SMOKE-DEVELOPED INDEX NOT OVER 50 WHEN TESTED IN ACCORDANCE WITH ASTM E 84 OR UL 723, USING THE SPECIMEN PREPARATION AND MOUNTING PROCEDURES OF ASTM E 2231.

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

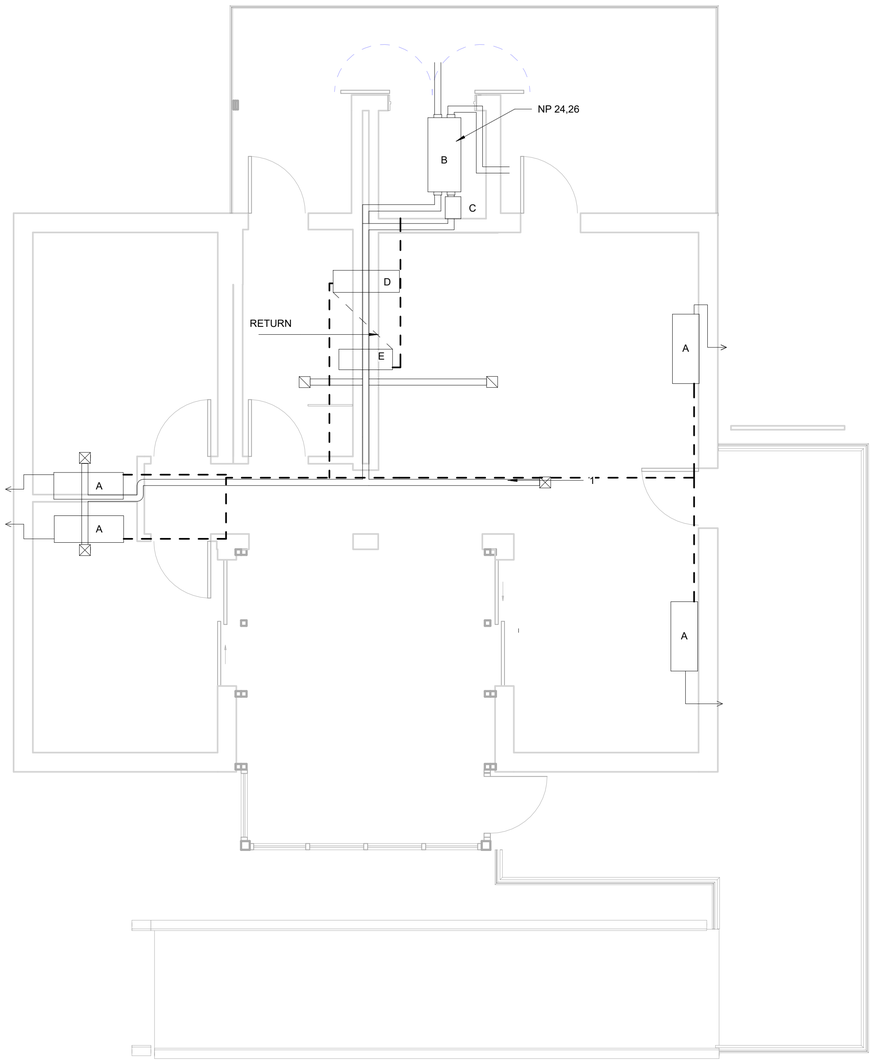
reACT
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description

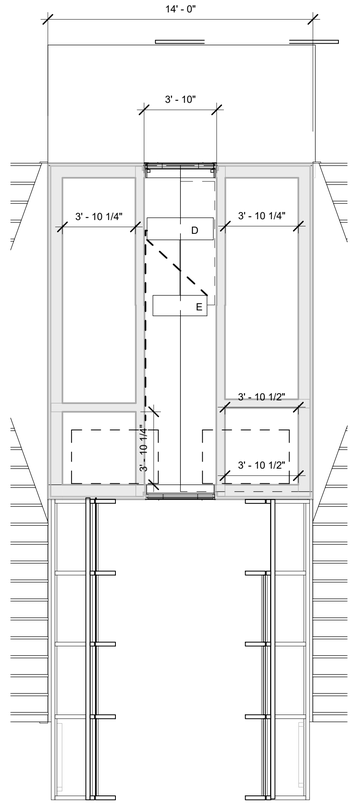
PROJECT NO. 001
DESIGNED Author
CHECKED Checker

MECHANICAL SYMBOLS AND NOTES

M-001



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



2 ATTIC PLAN
1/4" = 1'-0"

HVAC EQUIPMENT AND DISTRIBUTION PLAN GENERAL NOTES

REFRENCE E-600 FOR LOAD CALCULATIONS

HVAC EQUIPMENT AND DISTRIBUTION SHEET NOTES

1. REFRIGERANT LINE FROM MINI SPLIT VARIABLE REFRIGERANT FLOW SYSTEM
2. FRESH AIR SUPPLY
3. 3" DUCT FROM FRESH AIR INTAKE TO ERV.
4. EXHAUST
5. CONDENSING UNIT TO BE PLACED IN ATTIC SPACE; NOTE THAT NO OTHER EQUIPMENT SHOULD BE PLACED WITHIN 3' IN FRONT OF THE FAN.

HVAC EQUIPMENT AND DISTRIBUTION ABREIATIONS LEGEND

- A — MINI SPLIT UNITS
- B — ERV
- D — CONDENSOR UNIT (LOCATED IN ATTIC)
- E — HEAT PUMP (LOCATED IN ATTIC)
- FRESH AIR SUPPLY
- EXHAUST GRILLE (RETURN)
- REFRIGERANT LINE
- DUCT

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

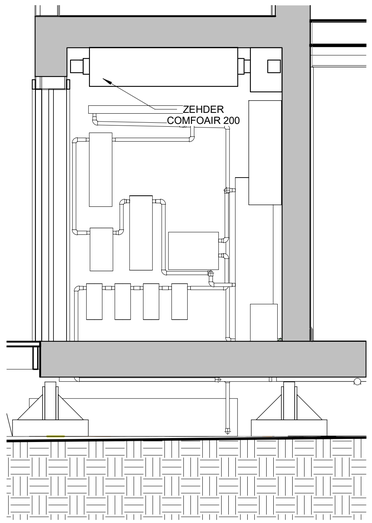
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description

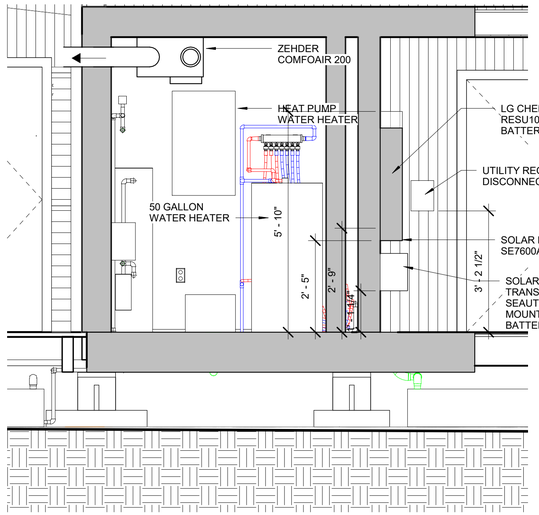
PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

HVAC EQUIPMENT AND DISTRIBUTION PLAN

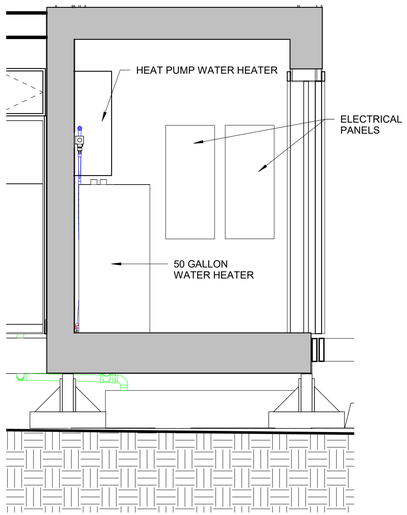
M-100



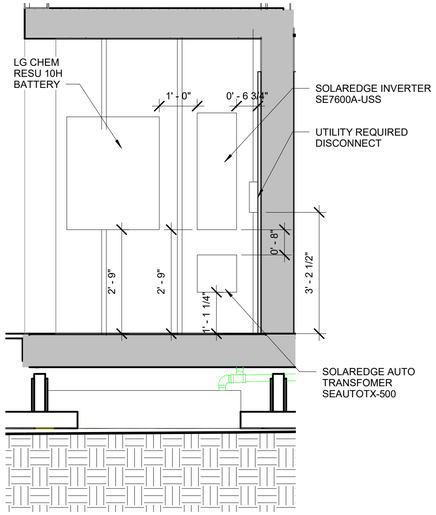
A MECHANICAL A
1/2" = 1'-0"



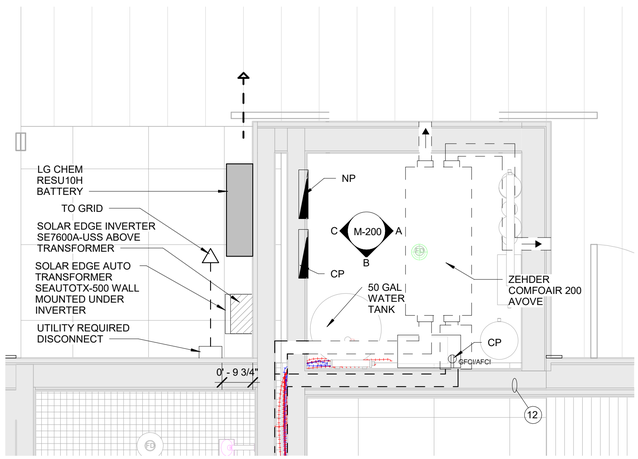
B MECHANICAL B
1/2" = 1'-0"



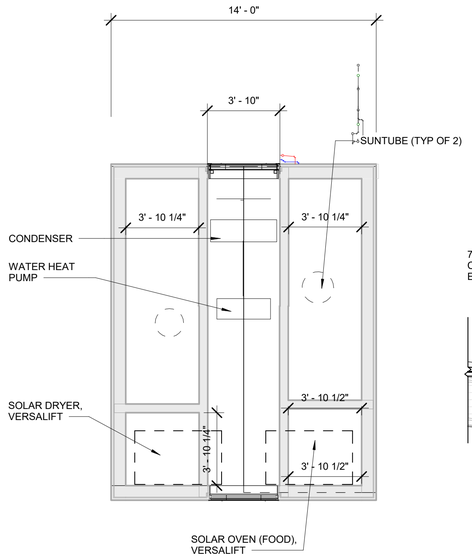
C MECHANICAL C
1/2" = 1'-0"



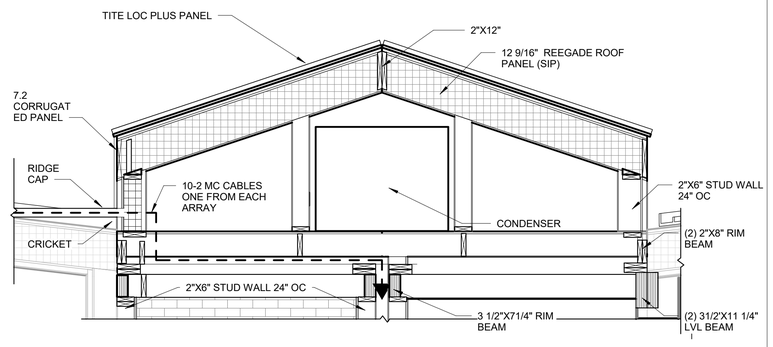
4 BATTERY WALL ELEVATION
1/2" = 1'-0"



1 MECHANICAL ROOM PLAN
1/2" = 1'-0"



3 ATTIC PLAN
1/4" = 1'-0"



REFER TO A-500 FOR ROOF SECTION DETAILS

2 SECTION THROUGH ATTIC ARCH Copy 1
1/2" = 1'-0"

MECHANICAL ELEVATIONS GENERAL NOTES

MECHANICAL ELEVATIONS SHEET NOTES

1. #6 AWG PV WIRE
2. TESLA POWER WALL 1
3. SOLAREDGE INVERTER SE7600A-USS
4. SOLAREDGE AUTO TRANSFORMER SEAUTO-TX-5000 WALL MOUNTED UNDER INVERTER
5. CONDENSING UNIT
6. ERV
7. 50 GAL WATER HEATER SPEC. NO. 223000
8. GRAY WATER TANK NO. 1 150 GALLONS SPEC. NO. 222200
9. CHARCOAL FILTER SPEC. 108200
10. MICRON FILTER BAGS SPEC. 108200
11. UVA STERILIZER SPEC. NO. 108200
12. 3 #8 AWG THHN, 1 #10 GND, 1" EMT CONDUIT

MECHANICAL ELEVATION PLAN LEGEND

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description

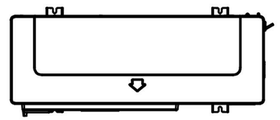
PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

MECHANICAL ELEVATION

M-200

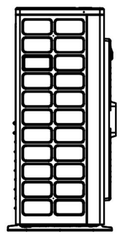
HVAC EQUIPMENT SCHEDULE									
MARK	DESCRIPTION	MANUFACTURER	MODEL	ROOM NAME	COUNT	DESCRIPTION	WIDTH	HEIGHT	DEPTH
A	INDOOR MINI SPLIT UNITS	LG	LMN078HVT	BEDROOM/STUDY/LIVING/DININ(	4	VRF MINI SPLIT WALL MOUNTED UNIT	37.40625"	32 27/32"	15.65625"
B	CONDENSOR UNIT	LG	LMU30CHV	ATTIC	1	VRF MINI SPLIT CONDENSOR	37.4"	32.8"	15.7"
C	HUMIDIFIER	HONEYWELL	HE 120	MECHANICAL ROOM	1	INSTALL WITHIN ERV TO ENABLE EASY DISTRIBUTION OF HUMIDITY TO ALL PARTS OF HOUSE	9.2"	10.9"	12.8"
D	ERV	ZENEHDER	COMOFOAir 200	MECHANICAL ROOM	1	ENERGY RECOVERY VENTILATOR INTEGRATED WITH HUMIDIFIER TO PROVIDE MOISTURE FOR T	21.40"	47.25"	12.50"
	HEAT PUMP WATER HEATER – INDOOR UNIT	LG	HU031.UE2	ATTIC	1	THIS WILL BE CONNECTED TO THE OUTDOOR UNIT FOR OPERATION AS HEAT PUMP. THE WATER IN HOT WATER TANK WILL HEATED BY THIS UNIT.	12.40"	33.46"	19.29"

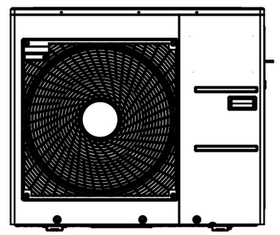
HVAC EQUIPMENT DETAILS



■ Note

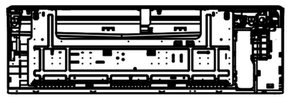
1. For more information,
   Refer to product Data Book. (PDB)
2. This drawing is made for CAD working of spec - in.
   For Product Specification, Installation, Service,
   Refer to the related manuals.





■ DIMENSIONS

Dimensions (W x H x D)	mm	950 x 834 x 330
	inch	37-13/32 x 32-27/32 x 13



■ DIMENSIONS

Dimensions (W x H x D)	mm	1030 × 325 × 245
	inch	40-9/16 × 12-13/16 × 9-11/16

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description

PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

MECHANICAL SCHEDULES

M-600

GENERAL ELECTRICAL NOTES

1. INSTALLATION OF ELECTRICAL CONDUCTORS, RACEWAYS, AND DEVICES SHALL CONFORM TO THE 2014 NATIONAL ELECTRIC CODE AND THE 2017 SOLAR DECATHLON BUILDING CODE.
2. ALL ELECTRICAL EQUIPMENT SHALL CARRY AN APPROVED TESTING AGENCY LISTING IN ACCORDANCE WITH IRC SECTION 140.11 AND SECTION 110.2 OF THE NEC, OR SHALL HAVE BEEN APPROVED BY THE SOLAR DECATHLON BUILDING OFFICIAL AND SOLAR DECATHLON ELECTRICAL INSPECTORS FOR EMPORARY USE DURING THE SOLAR DECATHLON 2017 EVENT.
3. THE GROUNDING ELECTRODE CONDUCTOR FROM THE MAIN SERVICE EQUIPMENT TO THE SOLAR DECATHLON 2017 RGANIZER UTILITY PANEL SHALL BE A MINIMUM SIZE OF 4 AWG COPPER AND SHALL BE BONDED BY QUALIFIED ELECTRICAL PERSONNEL TO THE ORGANIZER GROUNDING ELECTRODE SYSTEM AT THE ORGANIZER UTILITY PANEL LOCATION.
4. THE EQUIPMENT GROUNDING ELECTRODE CONDUCTOR SHALL BE THE FIRST TO BE CONNECTED AND LAST TO DISCONNECTED DURING INSTALLATION, DE-INSTALLATION, OR SERVICING OF PHOTOVOLTAIC MODULES AND INVERTERS.
5. BRANCH CIRCUIT CONDUCTORS SHALL HAVE AN AMPACITY NOT LESS THAN THE MAXIMUM LOAD TO BE SERVED. CONDUCTORS SHALL BE SIZED TO CARRY NOT LESS THAN THE LARGER OF NEC 210.19(A)(1)(a) OR (b). CONDUCTORS SPECIFIED IN THE ELECTRICAL PLAN SHALL BE SIZED IN COMPLIANCE WITH NEC TABLE 310.15(B)(16). MINIMUM AC CONDUCTOR SIZE SHALL BE #14 AWG. MINIMUM DC CONDUCTOR SIZE SHALL BE #12 AWG.
6. EXCEPT WHERE OTHERWISE NOTED, CONDUCTORS SHALL BE COPPER WITH 600 VOLT INSULATION.
7. RACEWAYS BETWEEN PULL BOXES SHALL NOT CONTAIN MORE THAN THE EQUIVALENT OF FOUR QUARTER BENDS (360 DEGREES TOTAL).
8. EXTERIOR RACEWAYS AND WIRING DEVICES BELOW THE FIRST LEVEL FLOOR SHALL BE SELECTED FOR MECHANICAL PROTECTION. EXTERIOR FITTINGS FOR RACEWAYS SHALL BE COMPRESSION TYPE AND LIQUIDTIGHT.
9. ALL PANELBOARDS SHALL BE PROVIDED WITH A FACTORY-INSTALLED GROUND BUS FOR CONNECTING TO GROUND THE GREEN OR BARE GROUND WIRE IN ALL BRANCH CIRCUITS.
10. PLUG-IN TYPE OVERCURRENT PROTECTION DEVICES OR PLUG-IN TYPE MAIN LUG ASSEMBLIES THAT ARE BACKFED SHALL BE SECURED IN PLACE BY AN ADDITIONAL FASTENER THAT REQUIRES OTHER THAN A PULL TO RELEASE THE DEVICE FROM THE MOUNTING MEANS ON THE PANEL PER NEC 408.37(D).
11. PROVIDE IDENTIFICATION OF ALL BRANCH CIRCUITS ON A TYPEWRITTEN DIRECTORY CARD IN THE PANELBOARD DOOR.
12. FOR MECHANICAL EQUIPMENT DETAIL REFER TO MECHANICAL DRAWINGS AND EQUIPMENT SPECIFICATIONS IN THE PROJECT MANUAL.
13. ALL EXTERIOR 125V BRANCH CIRCUIT RECEPTACLES SHALL BE LISTED AS WEATHER-RESISTANT, GROUND FAULT PROTECTED, AND EQUIPPED WITH "IN-USE" TYPE WEATHER PROTECTION.
14. ALL INTERIOR NON-LOCKING 125V BRANCH CIRCUIT RECEPTACLES SHALL BE TAMPER RESISTANT PER NEC 406.12.
15. ALL 120V SINGLE PHASE 15 AMP AND 20 AMP BRANCH CIRCUITS SUPPLYING OUTLETS OR DEVICES INSTALLED IN THE LOCATIONS SPECIFIED IN NEC SECTION 210.12(A) SHALL INCLUDE ARC FAULT CIRCUIT INTERRUPTER PROTECTION BY ANY OF THE MEANS SPECIFIED IN NEC 210.12(A) NUMBERS (1) THROUGH (6). ARC FAULT CIRCUIT INTERRUPTER PROTECTION SHALL BE INSTALLED IN A READILY ACCESSIBLE LOCATION.
16. ALL 125V SINGLE PHASE 15 AMP AND 20 AMP RECEPTACLES INSTALLED IN THE LOCATIONS SPECIFIED IN NEC SECTION 210.8(A) NUMBERS (1) THROUGH (10) SHALL HAVE GROUND FAULT CIRCUIT INTERRUPTER PROTECTION FOR PERSONNEL.
17. AN OUTLET INSTALLED FOR THE PURPOSE OF CHARGING ELECTRIC VEHICLES SHALL BE SUPPLIED BY A SEPARATE BRANCH CIRCUIT HAVING NO OTHER OUTLETS PER NEC 210.17.

TEAM SHALL PROVIDE A CLEAR INSTALLATION ROUTE FOR ORGANIZER ETHERNET AND POWER CABLES FROM THE ORGANIZER UTILITY PANEL TO THE ORGANIZER ENCLOSURE.

TEAM SHALL SUPPLY A DEDICATED 15A 2P BRANCH CIRCUIT BREAKER, ON PANEL SCHEDULE DEDICATED 2 POLE, 15 A BREAKER IN PANEL. ADEQUATE GROUND AND NEUTRAL BUS BAR TERMINALS IN THE TEAM PANEL BOARD FOR VOLTAGE SENSE CIRCUITRY CONNECTIONS TO THE ORGANIZER PV MONITORING METER TO BE CONNECTED BY ORGANIZER'S QUALIFIED ELECTRICAL PERSONNEL.

ELECTRICAL SYMBOLS

	DUPLEX RECEPTACLE
GFCI	GROUND-FAULT CIRCUIT INTERRUPTER
WP	WEATHERPROOF IN-USE 120V DUPLEX RECEPTACLE
R	GROUND-FAULT CIRCUIT INTERRUPTER 250V DUPLEX RECEPTACLE
D	GROUND-FAULT CIRCUIT INTERRUPTER 250V DRYER RECEPTACLE
	WALL MOUNTED DATA OUTLET
TV	TELEVISION OUTLET
	DISCONNECT SWITCH
SM	MOTOR RATED SWITCH
	CAR CHARGING STATION
NP	NON-CRITICAL PANEL
CP	CRITICAL PANEL

ELECTRICAL ABBRIVIATIONS

ACCU	AIR COOLED CONDENSING UNIT
AHU	AIR HANDLING UNIT
CT	CURRENT TRANSFORMER SENSOR
DHW	DOMESTIC HOT WATER
DSC	DC DISCONNECT
DW	DISHWASHER
DX	LIGHT DRIVER
ERV	ENERGY RECOVERY VENTILATOR
EV	ELECTRIC VEHICLE CHARGER
GFCI	GROUND-FAULT CIRCUIT INTERRUPTER
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUG ONLY PANELBOARD
REF	REFRIGERATOR
W/D	WASHER/DRYER

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUEMNTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 42368, EXPIRATION DATE:06/03/2018

STATE OF MARYLAND · ANDREW MEYERS · 42368 · PROFESSIONAL ENGINEER

8/9/17

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

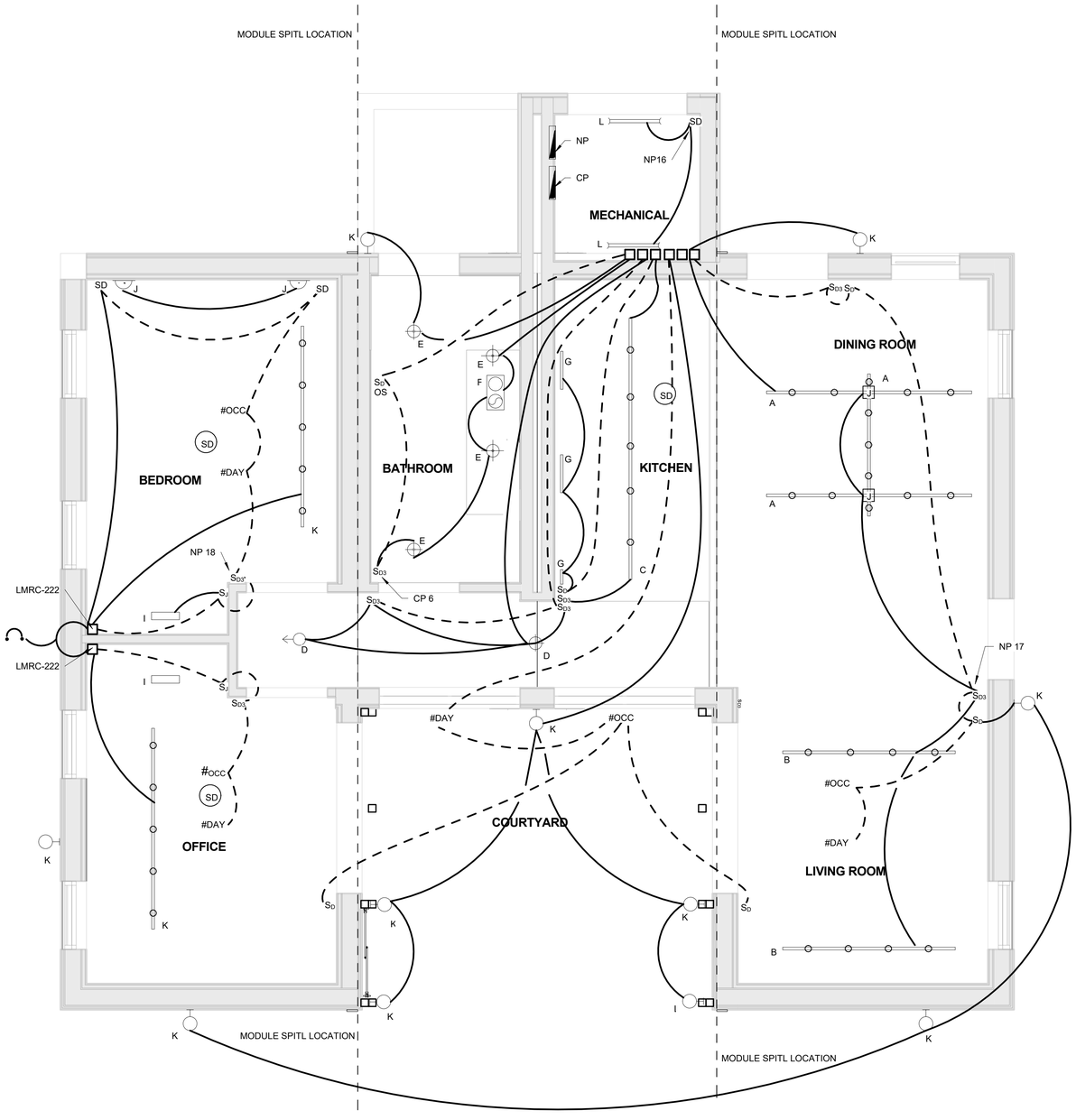
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description

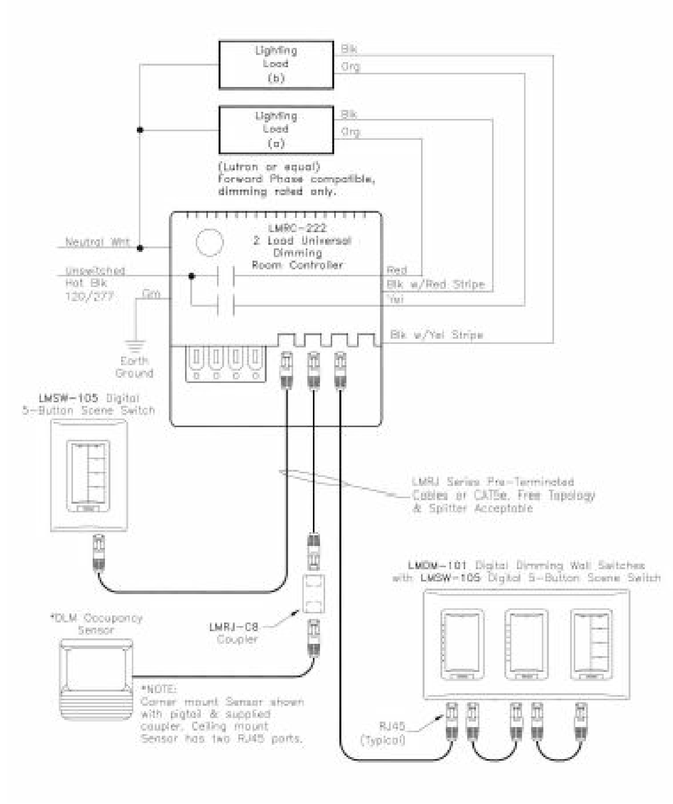
PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

ELECTRICAL SYMBOLS & NOTES

E-001



2 LIGHTING Copy 1
3/8" = 1'-0"



LIGHTING PLAN GENERAL NOTES

LIGHTING PLAN SHEET NOTES

REFRENCE SHEET E-600 FOR LIGHTING SCHEDULE AND CIRCUIT SCHEDULE

EXAMPLE

A_1

A: FIXTURE TYPE 1: CIRCUIT

1. LED INTERIOR LIGHTING, SPEC #265119
2. LED EXTERIOR LIGHTING, SPEC #265619
3. VENT DAMPERS, SPEC #235113.16

LIGHTING PLAN SYMBOLS LEGEND

- TRACK LIGHTING
- WALL MOUNTED EXTERIOR LIGHTING
- RECESSED (DIRECTIONAL) LIGHTING
- CEILING MOUNTED LIGHTING
- WARDROBE LIGHTING
- WALL SCONCES
- FAN/LIGHT COMBINATION
- UNDERCABINET LIGHTING
- S_D DIMMER SWITCH
- S_{D3} 3-WAY DIMMER SWITCH
- NP NORMAL PANEL
- CP CRITICAL PANEL
- SD SMOKE ALARM
- J JUNCTION BOX
- VANITY LIGHT
- $\#_{DAY}$ DAY SENSOR
- $\#_{OCC}$ OCCUPANCY SENSOR

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUEMNTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 42368, EXPIRATION DATE:06/03/2018

STATE OF MARYLAND ANDREW MEISEL 42368 PROFESSIONAL ENGINEER

8/9/17

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

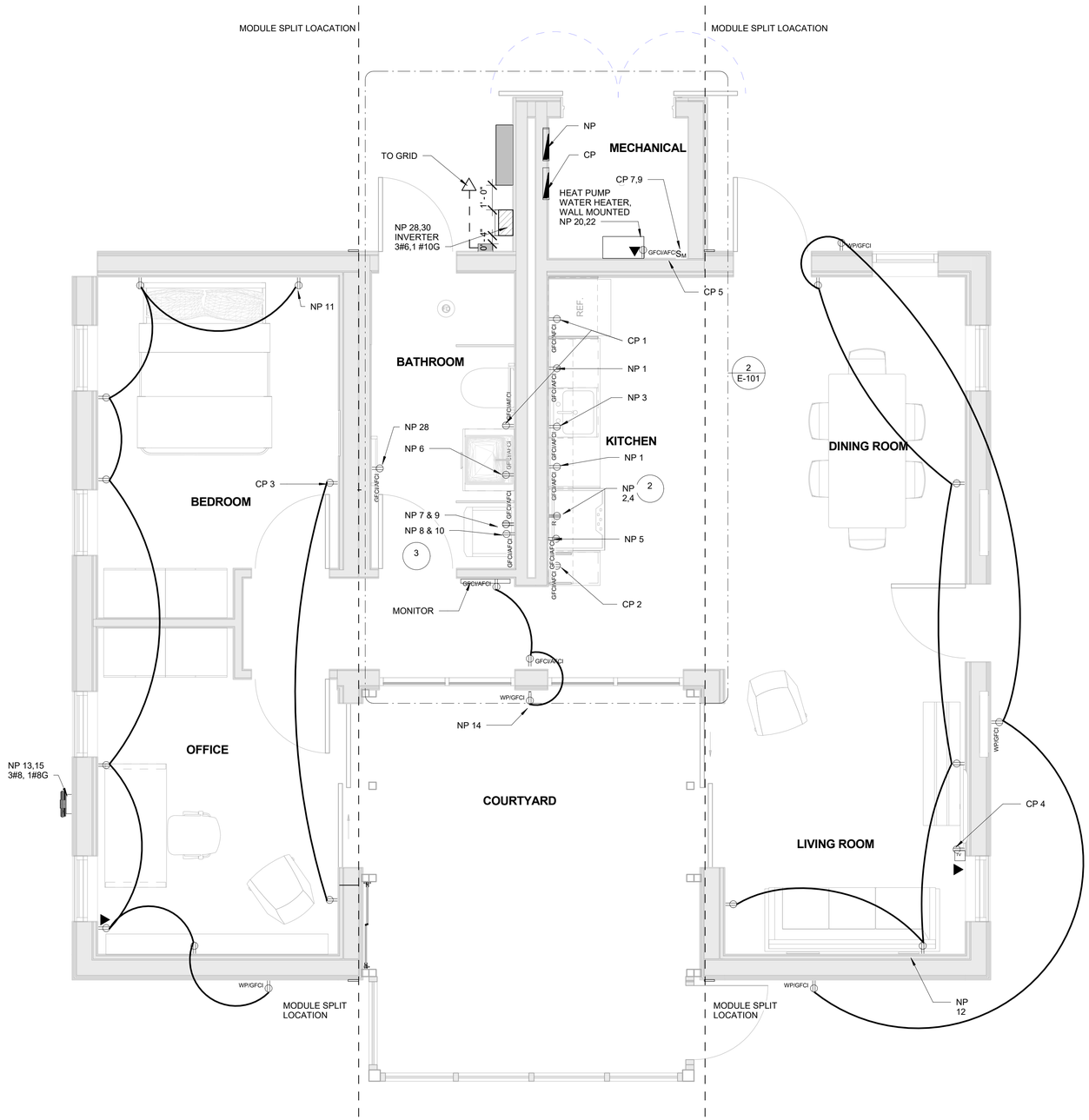
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description

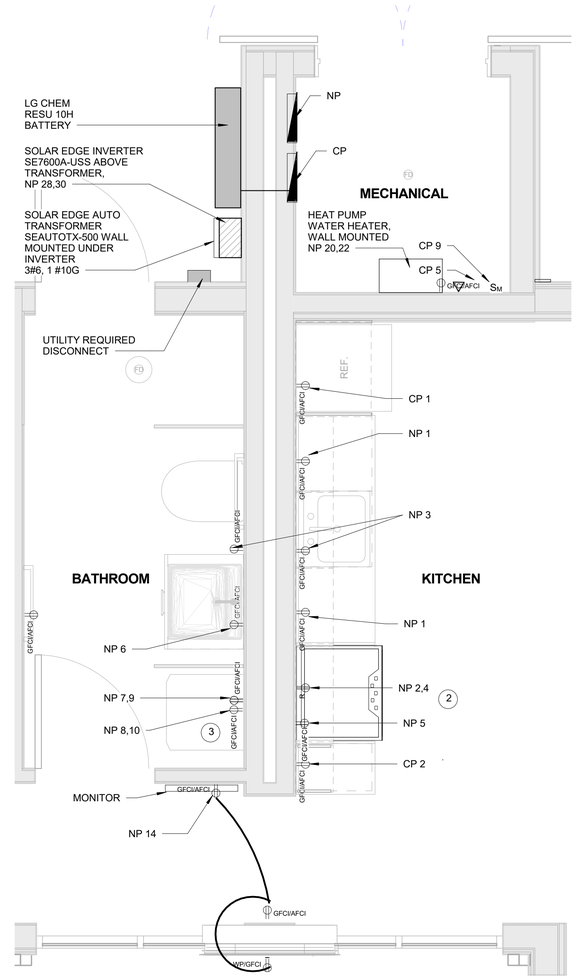
PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

LIGHTING PLAN

E-100



1 ELECTRICAL DISTRIBUTION
3/8" = 1'-0"



2 ELECTRICAL DISTRIBUTION - Callout 1
1/2" = 1'-0"

ELECTRICAL POWER PLAN GENERAL NOTES

ELECTRICAL POWER PLAN SHEET NOTES

1. PROVIDE LOCKABLE CIRCUIT BREAKER
2. RANGE IS A 50 AMP 250 VOLT RECEPTACLE NEMA 14-50R. SHOWN AS NP 2,4. 6-3 NM WIRE TO RECEPTACLE FROM PANEL
3. WASHER SHOWN AS NP 7,9. DRYER USE 30 AMP 250 VOLT RECEPTACLE NEMA 14-30R. SHOWN AS NP 8,10. 10-3 NM WIRE TO RECEPTACLE FROM PANEL.
4. REFER TO PANEL SCHEDULES ON E-600 FOR MORE INFORMATION

1. PANEL BOARD (JUNCTION BOX), SPEC #262416
2. ENCLOSED SWITCHES AND CIRCUIT BREAKER, SPEC #262816

ELECTRICAL POWER LEGEND

- DUPLEX RECEPTACLE
- GFCI, AFCI — GROUND FAULT CIRCUIT INTERRUPTERS/ ARC-FAULT CIRCUIT INTERRUPTER
- WP — GFCI WEATHER PROOF RECEPTACLE
- R — RANGE RECEPTACLE
- WALL MOUNTED DATA OUTLET
- TV — TELEVISION OUTLET
- SM — MOTOR RATED SWITCH
- CAR CHARGING STATION
- NP — NORMAL PANEL
- CP — CRITICAL PANEL
- UTILITY DISCONNECT SWITCH

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUEMNTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 42368, EXPIRATION DATE:06/03/2018

STATE OF MARYLAND · ANDREW MEYERS · 42368 · PROFESSIONAL ENGINEER

8/9/17

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

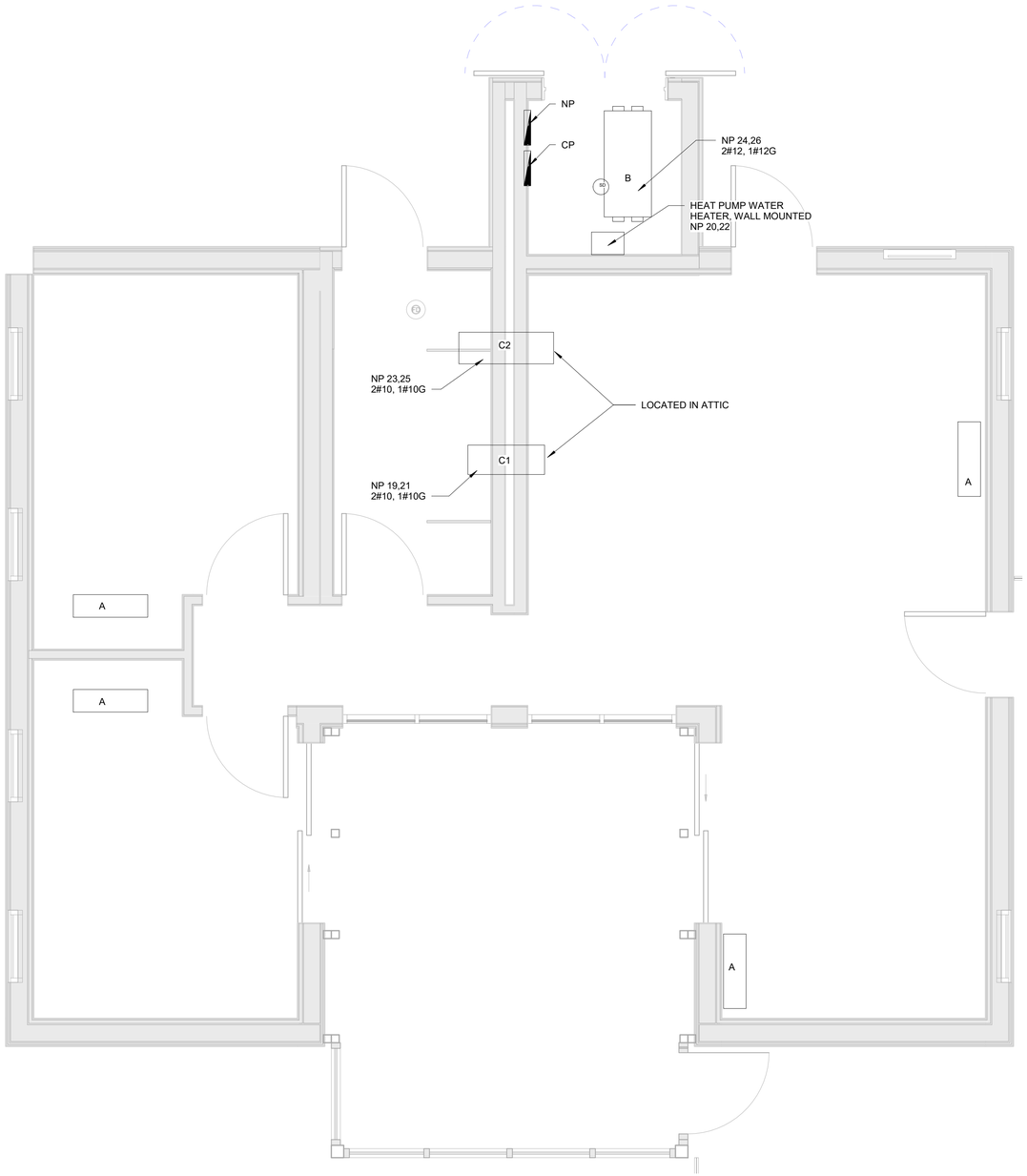
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description

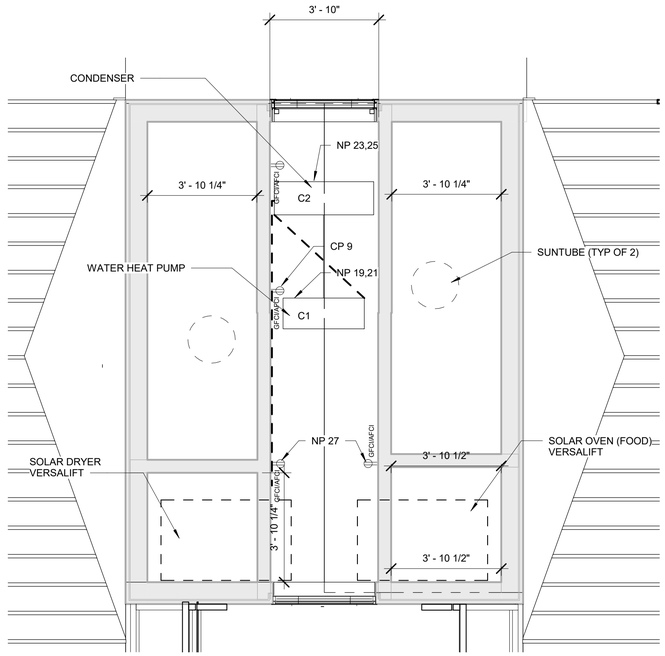
PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

ELECTRICAL POWER PLAN

E-101



1 ELECTRIC HARD-WIRED EQUIPMENT
3/8" = 1'-0"



2 ATTIC PLAN
3/8" = 1'-0"

HARD-WIRED EQUIPMENT PLAN GENERAL NOTES

HARD-WIRED EQUIPMENT PLAN SHEET NOTES

A. SYSTEM AIR CONDITIONERS, SPEC #
B. ENERGY RECOVERY VENTAILATOR (ERV), SPEC
C_1. CONDENSOR - HOT WATER HEATER, SPEC
C_2. CONDENSOR - AIR, SPEC
D. DAMPER ALONG AIR DUCT, SPEC
E. HUMIDIFIER, SPEC
F. EXHAUST FAN, SPEC

1. PANEL BOARD (JUNCTION BOX), SPEC #262416
2. WATER PUMP, SPEC #222400
3. SPLIT SYSTEM AIR CONDITIONS, SPEC #238126

HARD-WIRED EQUIPMENT PLAN ABREIATIONS LEGEND

A	MINI SPLIT SYSTEM
B	ERV
C_1	CONDENSOR - HOT WATER
C_2	CONDENSER - AIR
D	DAMPER ALONG AIR DUCT
F	EXHAUST FAN
NP	NORMAL PANEL
CP	CRITICAL PANEL
SD	SMOKE DETECTOR

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUEMNTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 42368, EXPIRATION DATE:06/03/2018

STATE OF MARYLAND · ANDREW MEYERS · 42368 · PROFESSIONAL ENGINEER

8/9/17

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description

PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

HARD-WIRED EQUIPMENT PLAN

E-102

PV MODULE RATINGS @ STC	
MODULE MAKE	Sunpower
MODULE MODEL	SPR-X21-335-BLK
MAX POWER-POINT CURRENT IMP	5.83A
MAX POWER-POINT VOLTAGE VMP	57.3V
OPEN CIRCUIT VOLTAGE VOC	67.9V
SHORT CIRCUIT CURRENT ISC	6.23A
MAX SERIES FUSE (OCPD)	20A
MAXIMUM POWER PMAX	335W
MAX VOLTAGE (TYP 600VDC)	600V UL
VOC TEMPERATURE COEFFICIENT(mV/c)	-167 mV/C

SIGNS (for warning etc.)	
RATED MPP CURRENT	17.49A
RATED MPP VOLTAGE	573V
MAX SYSTEM VOLTAGE	1143.67V

OPERATING CONDITION AND MECHANICAL DATA	
TEMPERATURE	– 40°F to +185°F (– 40°C to +85°C)
MAX LOAD	Wind: 50 psf, 2400 Pa, 245 kg/m² front & back Snow: 112 psf, 5400 Pa, 550kg/m² front
IMPACT RESISTANCE	1 inch (25 mm) diameter hail at 52 mph (23 m/s)
SOLAR CELL TYPE	96 Monocrystalline Maxeon Gen III Cells
WEIGHT	41 lb (18.6 kg)
DIMENSIONS (in)	61.24 x 41.18 x 1.81

AUTO TRANSFORMER RATINGS	
TRANSFORMER MAKE	SolarEdge
MODEL	SEAUTO-TX-5000
MAX RATED POWER (PEAK)	7600VA for 10sec
RATED POWER (CONTINUOUS)	5000VA
SPLIT PHASE IMBALANCE(@RATED POWER)	Upto 25A
NOMINAL AC VOLTAGE	240V
MAX AC CURRENT	25A

OPERATING CONDITION AND MECHANICAL DATA	
TEMPERATURE	– 13°F to +140°F (– 25°C to +60°C)
WEIGHT	29.7 lb (13.5 kg)
PROTECTION RATING	NEMA 3R
DIMENSIONS (in)	6.7 x 7.9 x 5.5 (wall mounted)

INVERTER RATINGS	
INVERTER MAKE	SolarEdge
INVERTER MODEL	SE7600A-USS
MAX DC VOLT RATING	500V
MAX POWER @ 40C	5000W @STC
NOMINAL AC VOLTAGE	240V
MAX AC CURRENT	32A

OPERATING CONDITION AND MECHANICAL DATA	
TEMPERATURE	– 13°F to +140°F (– 25°C to +60°C)
WEIGHT	58.5 lb (26.5 kg)
DIMENSIONS (in)	37 x 12.5 x 7.2

DC-DC OPTIMIZER RATINGS	
OPTIMIZER MAKE	SolarEdge
OPTIMIZER MODEL	P400
MAX DC INPUT VOLTAGE	80V
MAX DC INPUT CURRENT	10A
MAX INPUT POWER @ 40C	400W @STC
MAXIMUM OUTPUT VOLTAGE	60V
MAXIMUM OUTPUT CURRENT	15A
MAX OCPD RATING	20A

OPERATING CONDITION AND MECHANICAL DATA	
TEMPERATURE	– 40°F to +185°F (– 40°C to +85°C)
WEIGHT	1.5 lb (700g)
DIMENSIONS (in)	8.2 x 6.1 x 1.16

BATTERY RATINGS (LG CHEM)	
BATTERY MAKE	LG CHEM
BATTERY MODEL	RESU10H
DC VOLT RATING	Charge 400-450 VDC Discharge 350-430 VDC
POWER discharge and peak	6.6kW discharge, 7kW peak for 10 sec.
ENERGY @ 25C, 2kW charge/discharge power	6.4 kWh
DC CURRENT, continuous and peak	18.9A@370V for 10 sec

OPERATING CONDITION AND MECHANICAL DATA LG RESU10H	
OPERATING CONDITIONS	IP55 rated
WEIGHT	214 lb (97kg) Floor or Wall Mount
DIMENSIONS (in)	29.29x35.7x8.11

PHOTOVOLTAIC SYSTEMS INFORMATION GENERAL NOTES

PHOTOVOLTAIC MOUNTING DETAIL SHEET NOTES

THE SYSTEM USED (P400 + STORRDGE INVERTERS) HAS A BUILT IN CONTROL MECHANISM THAT MAINTAINS THE STRING VOLTAGE AT A CONSTANT MAXIMUM OF 350V AND THE PER MODULE VOLTAGE AT A MAXIMUM OF 60V. THIS NEGATES THE NEED FOR ANY SEPERATE CONCERNS OVER THE FLUCTUATION OF VOLTAGES WITH THE LOCATION TEMPERATE.

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUEMNTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 42368, EXPIRATION DATE:06/03/2018

STATE OF MARYLAND · ISAAC ANDREW MEYERS · 42368 · PROFESSIONAL ENGINEER

8/9/17

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

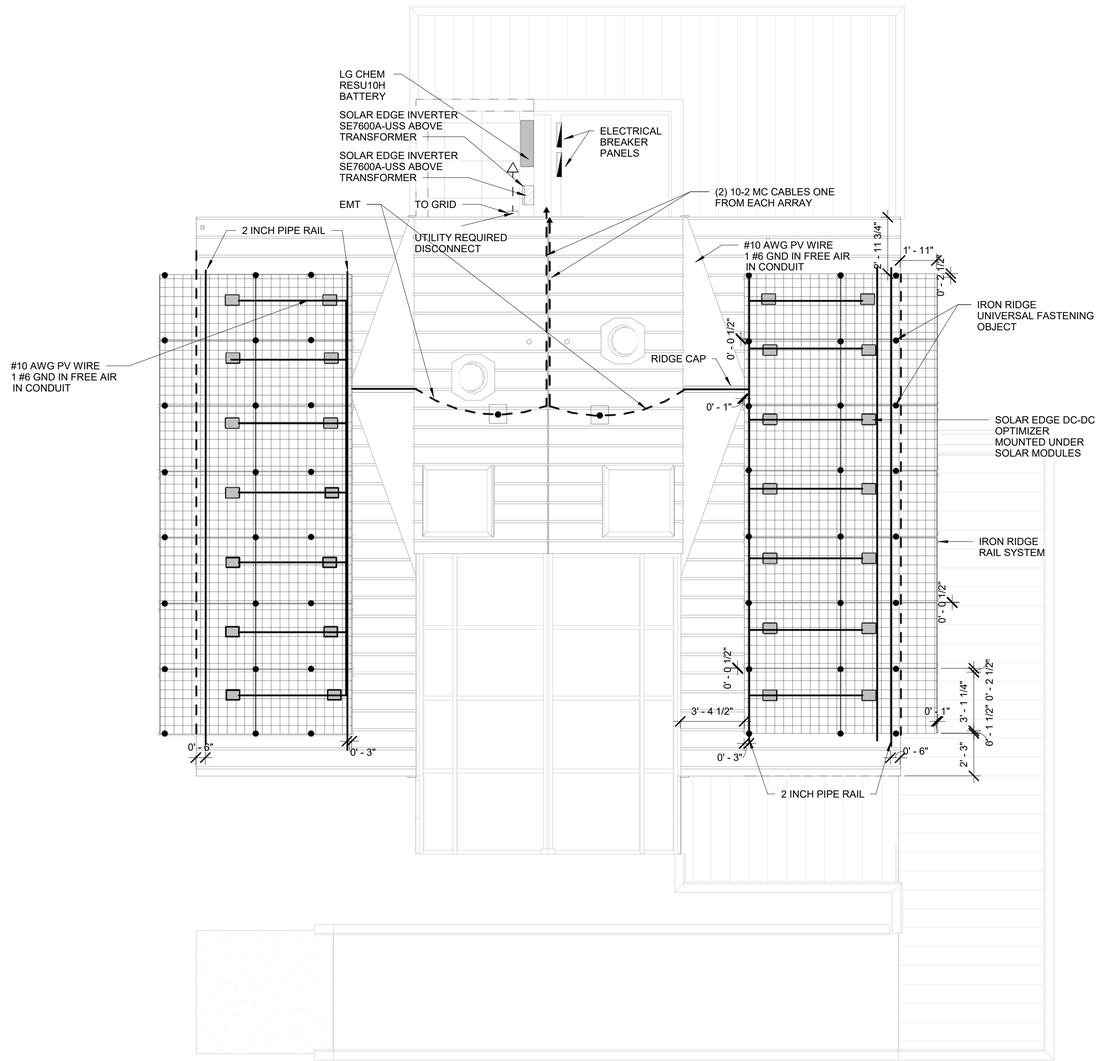
UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description

PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

PHOTOVOLTAIC SYSTEMS INFORMATION

E-103



1 SOLAR ARRAY PLAN
1/4" = 1'-0"

PHOTOVOLTAIC ARRAY ROOF PLAN GENERAL NOTES

A. REFER TO SHEET E-500 FOR PANEL INSTALLATION.

PHOTOVOLTAIC ARRAY ROOF PLAN SHEET NOTES

A. REFER TO SHEET E-601 ADN E-602 FOR MORE INFORMATION

B. REFER TO SHEET E-104 FOR PHOTOVOLTAIC SYSTEMS INFORMATION

C. PV MODULE SPEC. #263100

SUNPOWER X21-355 BLK PC MODULE

SOLAR EDGE, P400 DC-DC OPTIMIZER

10 AWG PV WIRE

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUEMNTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 42368, EXPIRATION DATE:06/03/2018

STATE OF MARYLAND
ANDREW MEYERS LO
42368
PROFESSIONAL ENGINEER

8/9/17

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

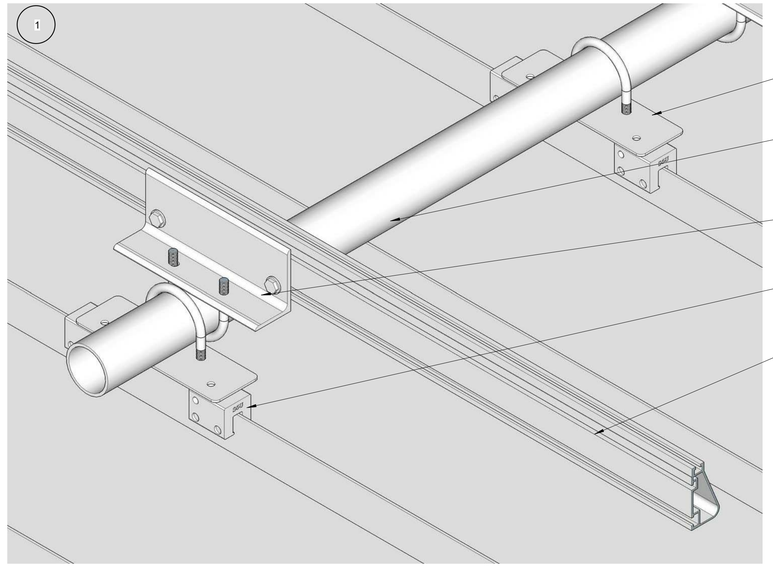
Revision Date	Description

PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

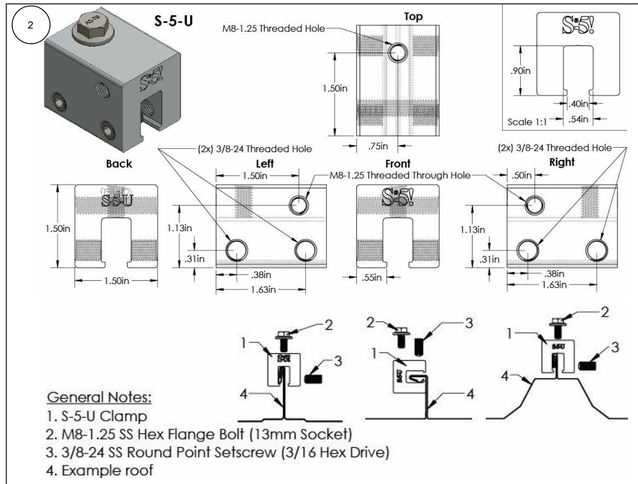
PHOTVOLTAIC ARRAY ROOF PLAN

E-104

1

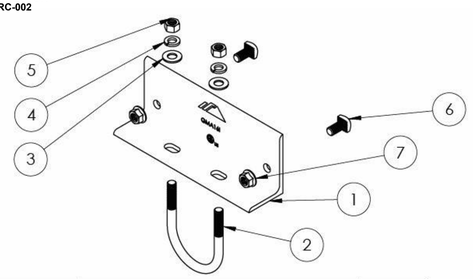


2

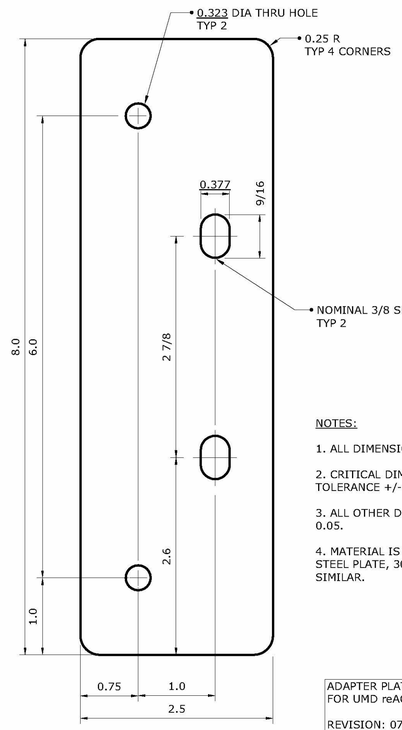


General Notes:
1. S-5-U Clamp
2. M8-1.25 SS Hex Flange Bolt (13mm Socket)
3. 3/8-24 SS Round Point Setscrew (3/16 Hex Drive)
4. Example roof

BONDED RAIL CONNECTOR IRONRIDGE GM-BRC-002



Item Number	Component	Qty in Kit
1	RAIL, 2" PIPE ATTACHING BRKT	1
2	UBOLT, CUSTOM SGA PIPE	1
3	WASHER, FLAT 3/8 GALV	2
4	WASHER, LOCK 3/8 GALV	2
5	NUT, HEX 3/8-16 GALV	2
6	BOLT, BOND 3/8-16 X .75 LG SQ HEAD	2
7	NUT, FLANGE HEX 3/8-16 SS	2



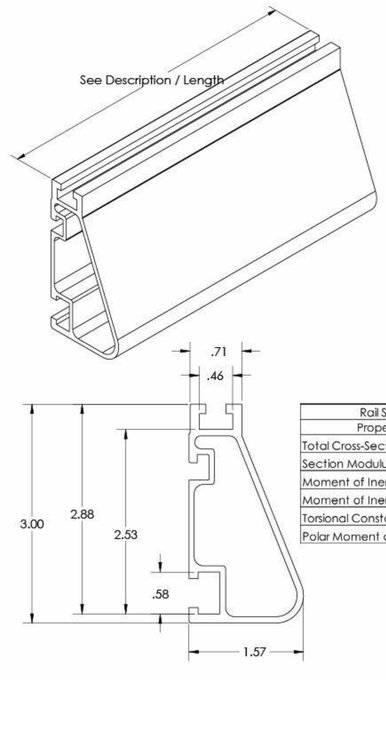
NOTES:

1. ALL DIMENSIONS ARE IN INCHES.
2. CRITICAL DIMENSIONS ARE UNDERLINED, TOLERANCE +/- 0.002.
3. ALL OTHER DIMENSIONS TOLERANCE +/- 0.05.
4. MATERIAL IS 12 GAUGE STAINLESS STEEL PLATE, 304 STAINLESS STEEL OR SIMILAR.

ADAPTER PLATE FOR S-5! CLAMPS
FOR UMD reACT SOLAR DECATHLON 2017

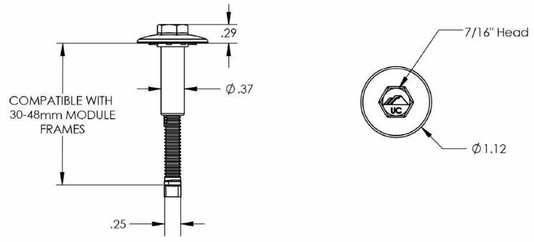
REVISION: 07-29-2017

IRON RIDGE XR-1000-132A RAIL

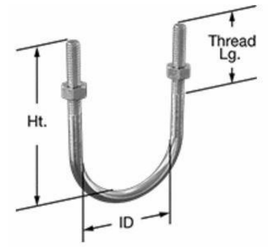


Rail Section Properties	
Property	Value
Total Cross-Sectional Area	0.807 in^2
Section Modulus (X-axis)	0.530 in^3
Moment of Inertia (X-axis)	0.843 in^4
Moment of Inertia (Y-axis)	0.182 in^4
Torsional Constant	0.436 in^3
Polar Moment of Inertia	0.330 in^4

UNIVERSAL MODULE CLAMP, UFO-CL-001



U BOLT FOR 2 IN SCH 40 PIPE,SS
McMASTER-CARR, 8896T26



PHOTOVOLTAIC MOUNTING DETAIL GENERAL NOTES

PHOTOVOLTAIC MOUNTING DETAIL SHEET NOTES

1. IRON RIDGE RACK MOUNTED UNTO S-5-E SEAM CAMP, PV ASSEMBLY SYSTEM.
2. S-5-E SEAM CLAMP FOR STANDING SEAM METAL ROOF PANELS.

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUEMNTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 42368, EXPIRATION DATE:06/03/2018

STATE OF MARYLAND · ANDREW MEYERS · 42368 · PROFESSIONAL ENGINEER

8/9/17

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description

PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

PHOTOVOLTAIC MOUNTING DETAILS

E-500

LOAD TYPE	LOAD VALUE (VA)	MULTIPLIER/DEMAND	TOTAL (STANDARD METHOD)	OPTIONAL METHOD	NEC ref.
General Lighting Small Appliance branch circuit Laundry Circuit	1166 sq ft. x 3VA = 3498 VA min. 2 x 1500VA = 3000VA 1 circuit @ 1500 VA	3000@ 100% 4998@ 35%	4750 VA	Total of 45,704VA: 10,000VA @ 100% 35,704VA @ 40%	220.12+220.42 220.11(C)(1)+220.52(A) 220.11(C)(2)+220.52(B)
Electric Dryer	1 Dryer @ max(5000 VA, nameplate rating)	5000@ 100%	5000 VA		220.54
Hot water heater Dishwasher EV charger UV Lamp	Fixed-appliance loads total = 1400 (for dishwasher) + 7200 (for EV charger) +16 (for UV lamp) + 5020 (for water heater) = 13,636VA	Total of 4 fixed appliances @ 75%	10227 VA		220.53
Electric Range Pump (SCALA) Pump (BMQ) Mini-split condenser unit Mini split indoor units (x4) ERV unit + Drum Humidifier Highest motor load	1 range @ 13300 VA 550 VA 2400 VA max(2490 W for heating, 2310W for cooling) = 2490W 184VA 143W+3VA 2400VA	8000 VA + 5%(8000) = 8400VA 550 VA@ 100% 2400 VA@ 100% 2490VA 184VA 146VA 2400@25%	8400 VA 550 VA 2400 VA 2490VA 184VA 146VA 600VA		Table 220.19 220.14(C)
	TOTAL = 45,704 VA		Total = 34,747VA MAIN BREAKER RATING = 150A WIRE SIZE: 2/0 AWG Alu or 1 AWG copper	Total = 24,281VA MAIN BREAKER RATING = 100A	

LOAD TYPE	CONTRIBUTION (100%unless otherwise indicated)	TOTAL (STANDARD METHOD)
General Lighting Small Appliance branch circuit Laundry Circuit	7998	7998 VA
Hot water heater Dishwasher EV charger UV Lamp	Total of 4 fixed appliances = 8616 VA	8616 VA
Pump (SCALA) Pump (BMQ) Mini-split condenser unit Mini split indooe units (x4) ERV unit + Drum Humidifier Highest motor load	550 VA 2400 VA 2490VA 184VA 146VA 2400@25%	550 VA 2400 VA 2490VA 184VA 146VA 600VA
		Total = 22,984VA Neutral conductor size = #4 cu or #2 al

LIGHTING SCHEDULE

LETTER	DESCRIPTION	TYPE	COUNT	WATTAGE	COLOR TEMPERATURE/CRI/BEA MSPREAD	DIMMABLE	MOUNTING	FIXTURE	COLOR	MANUFACTURER	BULB
A	TRACK LIGHTING DINING ROOM (3)	LED	15	105W (7W PER BULB)	-	YES	CEILING 2" SUSPENSION	FIXTURE: TECH LIGHTING 800CBL5PN (INCLUDING A JUNCTION BOX)	MATTE NICKEL FINISH	TECH LIGHTING	MAXLITE LED GU5.3 7MR16 LAMPS
B	TRACK LIGHTING LIVING ROOM (2)	LED	10	70W (7W PER BULB)	-	YES	CEILING 2" SUSPENSION	FIXTURE: TECH LIGHTING 800CBL5PN BULB: (INCLUDING A JUNCTION BOX)	MATTE NICKEL FINISH	TECH LIGHTING	MAXLITE LED GU5.3 7MR16 LAMPS
C	TRACK LIGHTING KITCHEN (1)	LED	5	35W (7W PER BULB)	-	YES	CEILING 2" SUSPENSION	FIXTURE: TECH LIGHTING 800CBL5PN BULB: (INCLUDING A JUNCTION BOX)	MATTE NICKEL FINISH	TECH LIGHTING	MAXLITE LED GU5.3 7MR16 LAMPS
D	HALLWAY	LED	2	22W	2700K	YES	CEILING	FIXTURE: TESLA 3.5 INCH PRO LED ROUND 0-30 DEGREE ADJUSTABLE HIGH OUTPUT TRIM, OPTION: DIMMABLE	BRUSHED NICKEL	WAC LIGHTING	
E	BATHROOM MOISTURE RESISTANT	LED	4	(44W)11W	2700K	NO	CEILING	FIXTURE:ECO 2 LED 3 1/2" ROUND SHOWER TRIM	BRUSHED CHROME	CONTRAST LIGHTING	
F	BATHROOM EXHAUST FAN LIGHT	LED	1	3W	2700K	NO	CEILING	FIXTURE: HIB TURBO LED ILLUMINATED INLINE CEILING FAN - HIB-33900	CHROME	TAPWARE HOUSE	MR16 3 Watt LED
G	KITCHEN UNDERCABINET	LED	3	24W (8W PER BULB)	2700K	YES	UNDER KITCHEN CABINETS	FIXTURE: G.K. SLIM LINE LED UNDERCABINET COLLECTION: (2) 10 Inch Modular Track (1) 21 Inch LED Under-Cabinet Light (WHITE FINISH), LED LIGHT (BULB INCLUDED)	WHITE	LEGRAND ADORNE	
H	WARDROBE LIGHTS	LED	2	15W	2700K	NO	MOUNTED ON CEILING ON WARDROBE	FIXTURE: LED LIGHT STRIP, STRIBERG	ALUMINUM	IKEA	
I	BEDROOM SCONCES	LED	2	16W (8W PER BULB)	3000K	YES	NORTH FACING WALL	FIXTURE: KOVACS P4308-084 BULB: MAXLITE 11A19DLED30/G4,	BRUSHED NICKEL	GEORGE KOVACS	
J	TRACK LIGHTING BEDROOM (2)	LED	10	35W (7W PER BULB)	-	YES	CEILING 2" SUSPENSION	FIXTURE: TECH LIGHTING 800CBL5PN	MATTE NICKEL FINISH	TECH LIGHTING	MAXLITE LED GU5.3 7MR16 LAMPS
K	EXTERIOR LIGHTING	LED	11	181.5W (16.5W PER BULB)	3000K	NO	MOUNTED ON WALLS	FIXTURE: OUTDOOR CYLINDERS TWO-LIGHT WALL SCONCES, SMALL SIZE,	BRUSHED NICKEL	SEA GIL LIGHTING	
L	MECHANICAL ROOM LIGHTING	LED	3	70W(35 P34 BULB)	3000K	YES (NOT NECESSARY)	CEILING MOUNTED	FIXTURE: LITHONIA LIGHTING FMLL 9 30840 WHITE LITEPUFF* FLUSH MOUNT 4000K LED CEILING	GRAPHITE	BEGA	
M	STUDY LAMP	LED	1	6W		YES	DESK LAMP	PIXO OPTICAL TASK LAMP (COLOUR TBD)		FERNANDO PARDO	

SCHEDULES GENERAL NOTES

SCHEDULES SHEET NOTES

SCHEDULES LEGEND

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUEMNTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 42368, EXPIRATION DATE:06/03/2018

STATE OF MARYLAND · ANDREW MEYERS · 42368 · PROFESSIONAL ENGINEER

8/9/17

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description

PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

LOAD SCHEDULES

E-600

Critical Panel Schedule

PANEL NO. CP						Bus: 1Ø 3 Wire			MAIN LUGS ONLY	AMP:125
LOCATION: MECHANICAL ROOM										
A.I.C. RATING:10 K	SERIES RATED				FLUSH				TOP FEED	
LOAD TYPE	CIRCUIT DESCRIPTION	CIRCUIT BREAKER AMP	POLE	CKT	PHASE	CIRCUIT BREAKER CKT	Pole	AMP	CIRCUIT DESCRIPTION	LOAD TYPE
	REFRIDGERATOR RCPT.	15	1	1	A	2	1	20	KITCHEN RCPT.	
	BEDROOM/STUDY RCPT.	20	1	3	B	4	1	15	LIVING ROOM RCPT.	
	MECH ROOM	15	1	5	A	6	1	20	BATHROOM LIGHT	
	FIRE SUPP. PUMP DISCONNECT SWITCH	15	2	7	B	8	1	15	GREEN HOUSE SKYLIGHT	
	FIRE SUPP. PUMP DISCONNECT SWITCH	15		9	A	10	1	15	SPARE	
	SPARE	15	2	11	B	12	1	15	SPARE	
	SPARE	15	2	13	A	14	1	15	SPARE	
	SPARE	15	1	15	B	16	1	15	SPARE	

NORMAL PANEL

PANEL NO. NP						Bus: 1Ø 3 Wire			Main C.B.	AMP:150
LOCATION: MECHANICAL ROOM	SERVING:									
A.I.C. Rating :10 K	SERIES RATED				FLUSH				TOP FEED	
	CIRCUIT DESCRIPTION	Circuit Breaker AMP	POLE	CKT	PHASE	Circuit Breaker CKT	Pole	AMP	CIRCUIT DESCRIPTION	
	KITCHEN RCPTS.	20	1	1	A	2	2	50	RANGE RCPT.	
	DISHWASHER/TOILET RCPT.	15	1	3	B	4		50	RANGE RCPT.	
	MICROWAVE RCPT.	20	1	5	A	6	1	20	BATHROOM RCPT.	
	WASHER RCPT.	15	2	7	B	8	2	30	DRYER RCPT.	
	WASHER RCPT.			9	A	10		30	DRYER RCPT.	
	BEDROOM/STUDY/WEST WING EXT. RECPT.	15	1	11	B	12	1	15	LIVING RM/DININING RM/EAST WING EXT. RCPT.	
	CAR CHARGER RCPT.	40	2	13	A	14	1	15	COURTYARD/ HALLWAY RCPT.	
	CAR CHARGER RCPT.			15	B	16	1	15	MECH RM/KITCHEN LIGHT	
	LIVING ROOM/DINING RM LIGHT	15	1	17	A	18	1	15	BEDROOM/STUDY LIGHT	
	VRF AIR COND. OUTDOOR RCPT.	25	2	19	B	20	2	25	HEAT PUMP WATER HEATER RCPT.	
	VRF AIR COND. OUTDOOR RCPT.	25		21	A	22		25	HEAT PUMP WATER HEATER RCPT.	
	HEAT PUMP WATER HEATER [illegible]	25	2	23	B	24	2	20	ERV	
	HEAT PUMP WATER HEATER	25		25	A	26		20	ERV	
	VERSALIFT/VELUX	15	1	27	B	28	1	20	LAUNDRY RCPT.	
	SPARE	15	1	29	A	30	1	15	SPARE	
	SPARE	15	1	31	B	31	1	15	SPARE	
	SPARE	15	1	33	A	34	1	15	SPARE	
	SPARE	15	1	35	B	36	2	15	BREAKER	
	SPARE	15	1	37	A	38			BREAKER	
	SPARE	15	1	39	B	40	2	40	INVERTER	
	SPARE	15	1	41	A	42		40	INVERTER	

NOTE:

WIRES TO FEED NORMAL PANEL:

TYPE SE-3-CONDUCTOR, SHALL BE PROTECTED IN ACCORDANCE WITH NEC ART. 230.50 (B)

CONDUCTOR: 2/0 COPPER OR 4/0 ALUMINUM

MAIN PANEL 150 AMP RATED WITH 150 AMP MAIN BREAKER

PANEL SCHEDULE SHEET NOTES

(1) PROVIDE LOCKABLE CIRCUIT BREAKER

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUEMNTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 42368, EXPIRATION DATE:06/03/2018

STATE OF MARYLAND · ANDREW MEYERS · 42368 · PROFESSIONAL ENGINEER

8/9/17

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

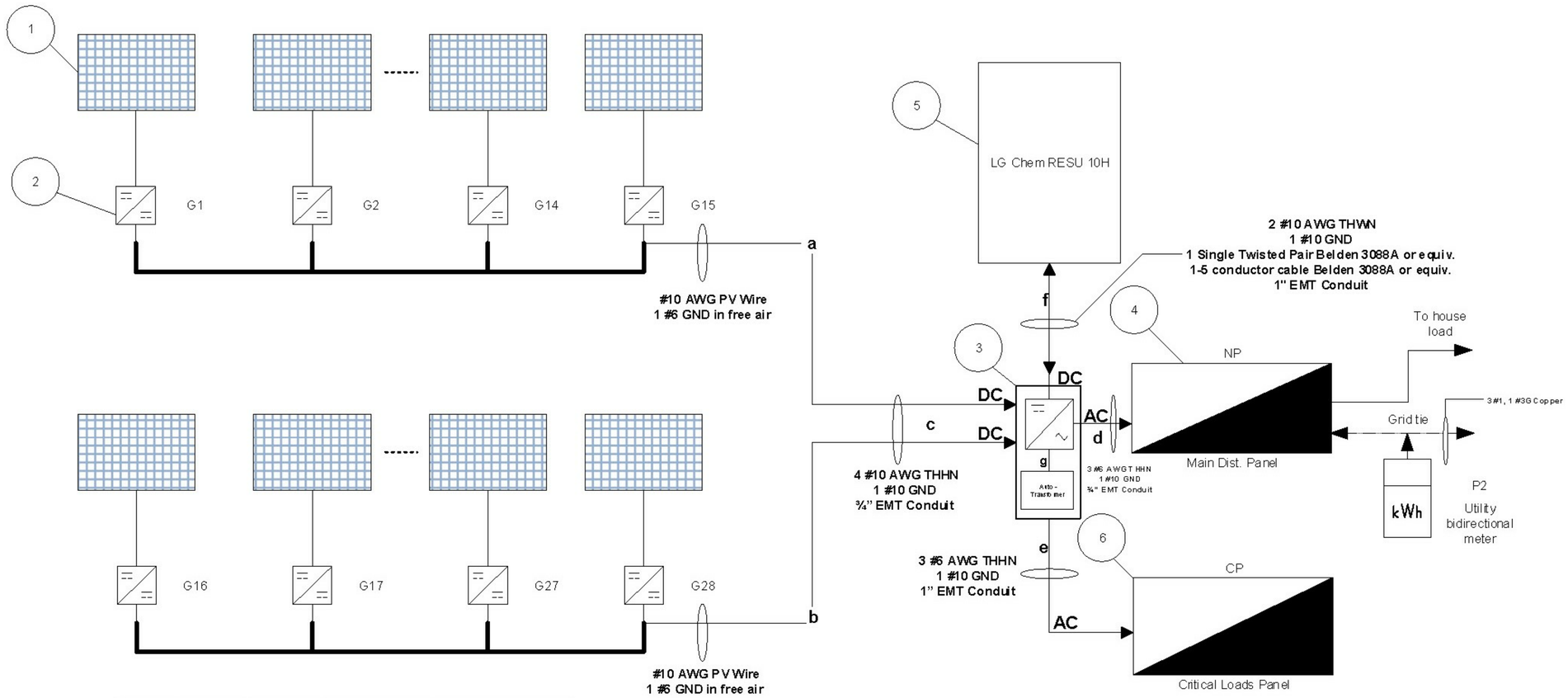
Revision Date	Description

PROJECT NO. 001
DESIGNED Author
CHECKED Checker

PANEL SCHEDULES

E-601

One Wire Diagram: StorEdge GridTie (with battery backup)



S no.	Max Amps	No. of wires	Wire guage	Location
a	23A	3	2 - 10 AWG wire 1 - #6 AWG GND	Roof (String 1)
b	23A	3	2 - #10 AWG wire 1 - #6 AWG GND	Roof (String 2)
c	23A	5	4 - #10 AWG wire 1 - #10 AWG GND	3/4" EMT Conduit
d	32A	3	2 - #6 AWG wire 1 - #10 AWG GND	3/4" EMT Conduit
e	32A	3	2 - #6 AWG wire 1 - #10 AWG GND	1" EMT Conduit
f	25A	3	2 - #10 AWG wire 1 - #10 AWG GND	1" EMT Conduit
g	32A	4	3 - #8AWG THHN 1 - #10 GND 1 Single twisted pair, Belden 3088 or equivalent	3/4" EMT Conduit

Tag	Description	Part Number	Notes
1	PV module	X21-335 BLK	SunPower, Quantity - 28 modules
2	DC-DC optimizer	P400	SolarEdge, Quantity - 28 units
3 a)	DC-AC String Inverter	SE7600A-USS	SolarEdge, Quantity - 1 units
3 b)	Auto Transformer	SEAUTO-TX-5000	SolarEdge, Quantity -1 units, Connected to the inverter with 3 #8 AWG THHN, 1 #10 GND, 1 Single twisted Pair Belden 3099 or equiv. 3/4" EMT Conduit
4	Main Service Panel	HOM3060M150PCVP	SquareD Homeline 150A, 30 space, 60 Circuit
5	Battery Pack	LG CHEM RESU 10H	LG, integrated with StorEdge inverter
6	Emergency Sub-Panel	HOM1224L125PGCVP	Square D Homeline 125A, 12 Space, 24 Circuit

NOTES

1. ALL CONDUCTORS ARE COPPER.
2. THE SOLAREDGE OPTIMIZERS, INVERTER, AUTOTRANSFORMER AND BATTERY SHALL BE INSTALLED, WIRED, GROUNDED AND COMMISSIONED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
3. MAIN DISTRIBUTION PANEL (NP PANEL) GROUND, THE CRITICAL LOADS PANEL (CP PANEL) GROUND AND THE PV ARRAY EQUIPMENT GROUND SHALL BE BONDED TO THE PREMISES GROUND ROD USING A 6 AWG GEC AS A MININUM.

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUEMNTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 42368, EXPIRATION DATE:06/03/2018

STATE OF MARYLAND · ANDREW MEYERS · 42368 · PROFESSIONAL ENGINEER

8/9/17

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

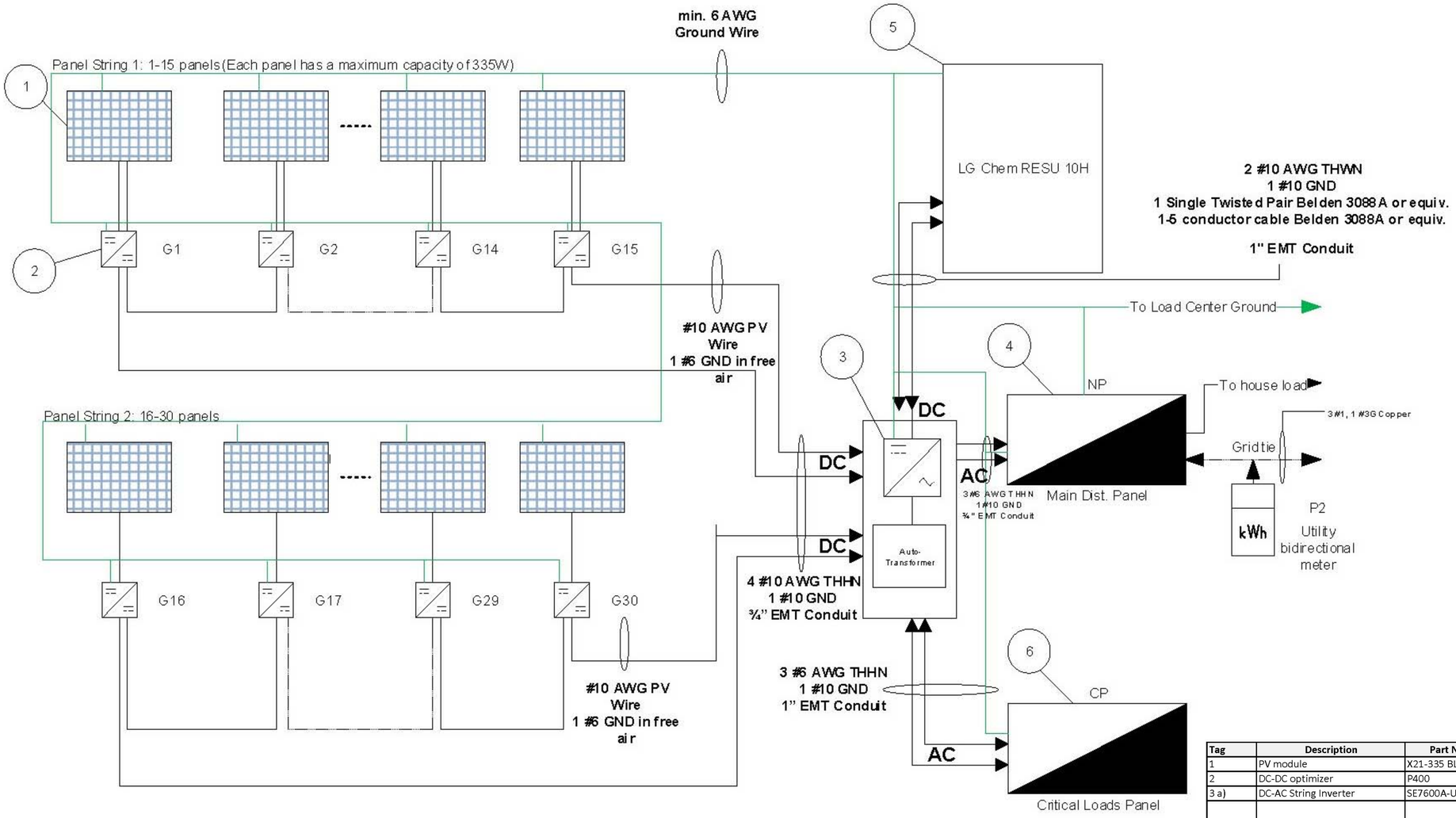
Revision Date	Description

PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

PV ONE LINE WIRE DIAGRAM

E-602

Three Line Diagram: StorEdge GridTie (with battery backup)



NOTES

1. ALL CONDUCTORS ARE COPPER.
2. THE SOLAREDGE OPTIMIZERS, INVERTER, AUTOTRANSFORMER AND BATTERY SHALL BE INSTALLED, WIRED, GROUNDED AND COMMISSIONED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
3. MAIN DISTRIBUTION PANEL (NP PANEL) GROUND, THE CRITICAL LOADS PANEL (CP PANEL) GROUND AND THE PV ARRAY EQUIPMENT GROUND SHALL BE BONDED TO THE PREMISES GROUND ROD USING A 6 AWG GEC AS A MININUM.

Tag	Description	Part Number	Notes
1	PV module	X21-335 BLK	SunPower, Quantity - 28 modules
2	DC-DC optimizer	P400	SolarEdge, Quantity - 28 units
3 a)	DC-AC String Inverter	SE7600A-USS	SolarEdge, Quantity - 1 units
3 b)	Auto Transformer	SEAUTO-TX-5000	SolarEdge, Quantity -1 units, Connected to the inverter with 3 #8 AWG THHN, 1 #10 GND, 1 Single twisted Pair Belden 3099 or equiv. 3/4" EMT Conduit
4	Main Service Panel	HOM3060M150PCVP	SquareD Homeline 150A, 30 space, 60 Circuit
5	Battery Pack	LG CHEM RESU 10H	LG, integrated with StorEdge inverter
6	Emergency Sub-Panel	HOM1224L125PGCVP	Square D Homeline 125A, 12 Space, 24 Circuit

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUEMNTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 42368, EXPIRATION DATE:06/03/2018

STATE OF MARYLAND · ANDREW MEYER · 42368 · PROFESSIONAL ENGINEER

8/9/17

UNIVERSITY OF MARYLAND
COLLEGE PARK, MD 20742

reACT

UNIVERSITY OF MARYLAND, COLLEGE PARK
SOLAR DECATHLON 2017 SUBMISSION

Revision Date	Description

PROJECT NO.	001
DESIGNED	Author
CHECKED	Checker

PV THREE LINE WIRE DIAGRAM

E-603