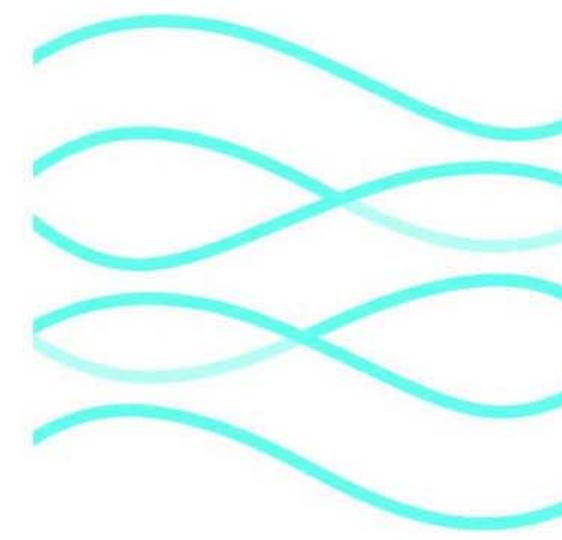
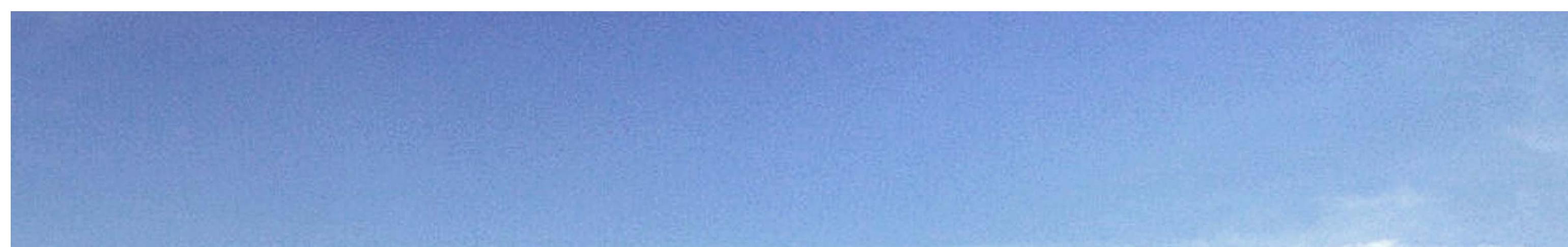


1 2 3 4 5 6 7



SURE HOUSE

a new direction for coastal housing



Tom Meyers has indicated that you are on the cusp between yellow and green for approval of this submission from the perspective of building code compliance. Please review his comments and submit a revised document.

NOT APPROVED

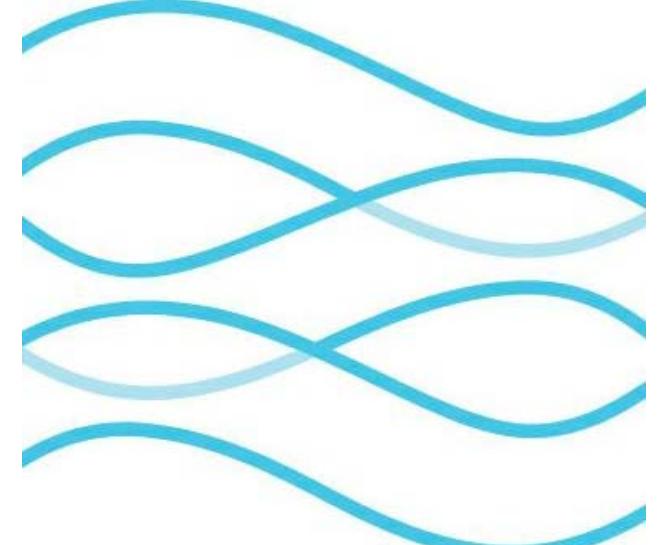


Item Reviewed	Reviewer
SD Building Code content and compliance	Tom Meyers
PV/DC Code content and compliance	Ryan Mayfield
Electrical system from AC load center to AC loads	Ryan Mayfield
Site Operations and Microgrid content and compliance	Chuck
Grid interconnection	Bob Butt
Project Manual and Construction Drawings Sheet Size Correct (22"x34")	Joe Simon
Construction Drawings Overall Completion (approx. 80% or greater)	Joe Simon
Construction Drawings PDF created without scaling issues	Joe Simon
Drawings PDF provided in correct NCS compliant subset order	Joe Simon
No Clearly Incorrectly Plotted Drawing Sheets included in PDF	Joe Simon
Reasonable NCS Compliance in Drawings	Joe Simon
Drawings include dimensions, where appropriate	Joe Simon
Drawings annotated to a reasonable level	Joe Simon

Drawings and Project Manual are approved for payment when no red boxes remain.

REVIEWED
By Thomas Meyers CBO at 10:37 am, Oct 18, 2014

Electrical drawing grid interconnection submittal approved



SURE HOUSE

TEAM NAME: SURE HOUSE
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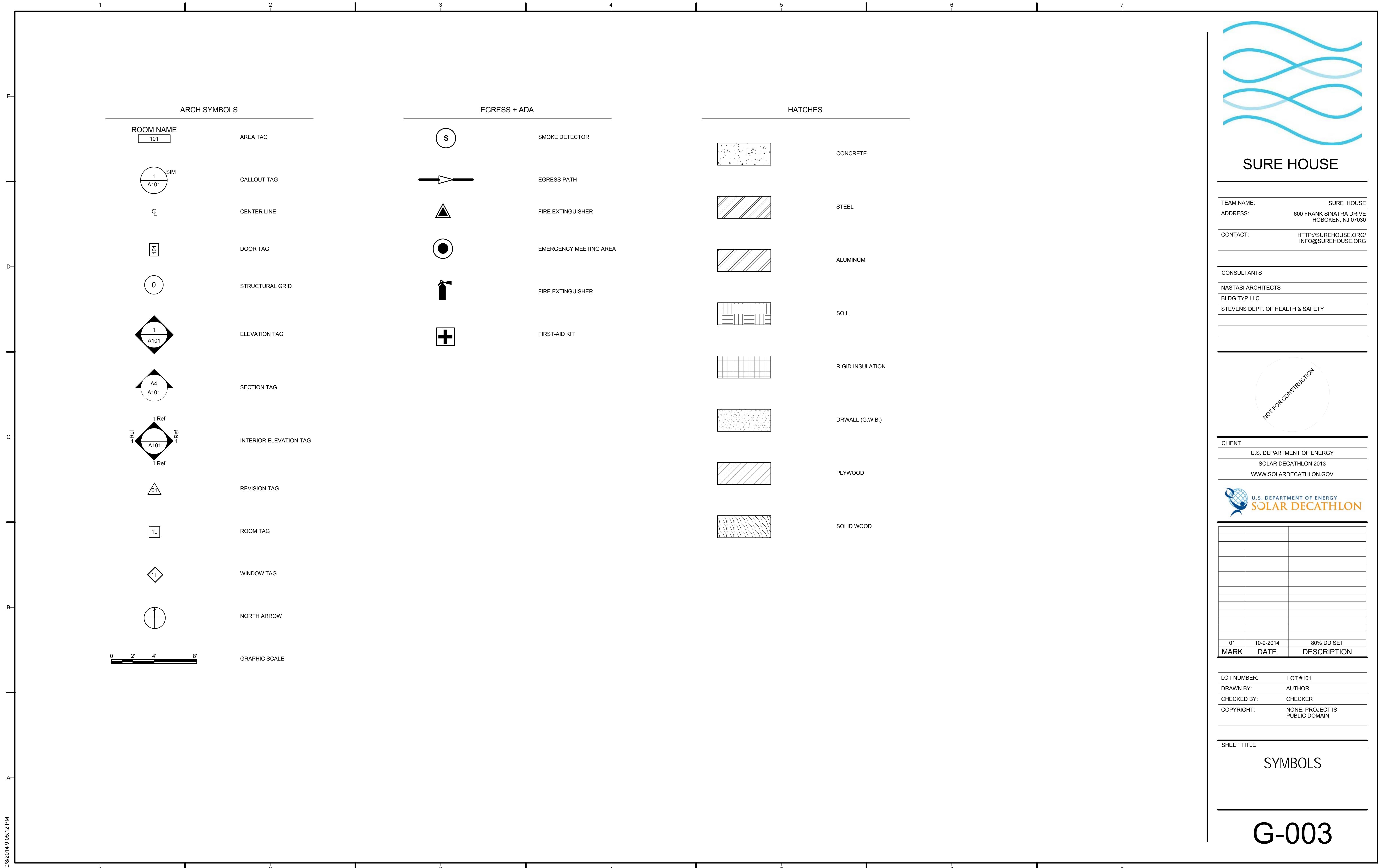
01 10-9-2014 80% DD SET
MARK DATE DESCRIPTION

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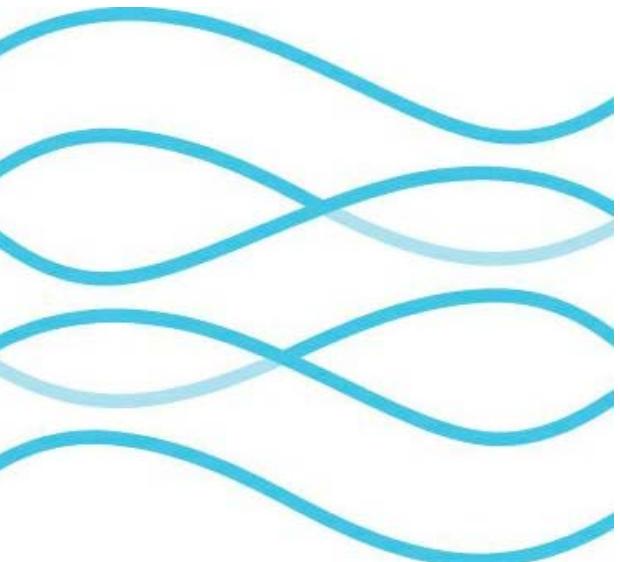
SHEET TITLE
COVER SHEET & PROJECT TITLE

G-001





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E GENERAL BUILDING CODE NOTES	D APPLICABLE CODES	C NOT FOR CONSTRUCTION	B FIRE SUPPRESSION: BUILDING TO BE FULLY SPRINKLERED WITH NFPA 150 SYSTEM (SECTION 403)	A CLIENT: U.S. DEPARTMENT OF ENERGY SOLAR DECATHLON 2013 WWW.SOLARDECATHLON.GOV																																																									
<p>1. ALL WORK ON THE PROJECT WILL CONFORM TO ALL RELEVANT CODES AND BE PERFORMED BY LICENSED CONTRACTORS IN THE APPROPRIATE JURISDICTIONS REQUIRED BY LOCALE.</p> <p>2. R303.1 ALL HABITABLE ROOMS SHALL HAVE AN AGGREGATE GLAZING AREA OF NOT LESS THAN 8 PERCENT OF THE FLOOR AREA OF SUCH ROOMS. NATURAL VENTILATION SHALL BE THROUGH WINDOWS, DOORS, LOUVERS OR OTHER APPROVED OPENINGS TO THE OUTDOOR AIR. SUCH OPENINGS SHALL BE PROVIDED WITH READY ACCESS OR SHALL OTHERWISE BE READILY CONTROLLABLE BY THE BUILDING OCCUPANTS.</p> <p>3. R303.3 BATHROOMS, WATER CLOSET COMPARTMENTS AND OTHER SIMILAR ROOMS SHALL BE PROVIDED WITH AGGREGATE GLAZING AREA IN WINDOWS OF NOT LESS THAN 3 SQUARE FEET (0.279 M²), ONE-HALF OF WHICH MUST BE OPENABLE. Exception: The glaze areas shall not be required where artificial light and a mechanical ventilation system are provided.</p> <p>4. R304.1 EVERY DWELLING UNIT SHALL HAVE AT LEAST ONE HABITABLE ROOM THAT SHALL HAVE NOT LESS THAN 120 SQUARE FEET (11 M²) OF GROSS FLOOR AREA.</p> <p>5. R304.2 OTHER HABITABLE ROOMS SHALL HAVE A FLOOR AREA OF NOT LESS THAN 70 SQUARE FEET (6.5 M²).</p> <p>6. R304.3 HABITABLE ROOMS SHALL NOT BE LESS THAN 7 FEET (2134 MM) IN ANY HORIZONTAL DIMENSION.</p> <p>7. R305.1 HABITABLE ROOMS SHALL HAVE A CEILING HEIGHT OF NOT LESS THAN 7 FEET 6 INCHES (2286 MM) AND HALLWAYS, CORRIDORS, BATHROOMS, TOILET ROOMS, AND LAUNDRY ROOMS SHALL HAVE A CEILING HEIGHT OF NOT LESS THAN 7 FEET (2134 MM). THE REQUIRED HEIGHT SHALL BE MEASURED FROM THE FINISH FLOOR TO THE LOWEST PROJECTION FROM THE CEILING.</p> <p>8. R310.1.1 ALL EMERGENCY ESCAPE AND RESCUE OPENINGS SHALL HAVE A MINIMUM NET CLEAR OPENING OF 5.7 SQUARE FEET (0.530 M²).</p> <p>9. R310.1.2 THE MINIMUM NET CLEAR OPENING HEIGHT OF AN EMERGENCY ESCAPE AND RESCUE OPENING SHALL BE 24 INCHES (610 MM).</p> <p>10. R310.1.3 THE MINIMUM NET CLEAR OPENING WIDTH OF AN EMERGENCY ESCAPE AND RESCUE OPENING SHALL BE 20 INCHES (508 MM).</p> <p>11. R311.3 THE MINIMUM WIDTH OF A HALLWAY SHALL BE NOT LESS THAN 3 FEET (914 MM).</p> <p>12. R703.1 EXTERIOR WALLS SHALL PROVIDE THE BUILDING WITH A WEATHER-RESISTANT EXTERIOR WALL ENVELOPE. THE EXTERIOR WALL ENVELOPE SHALL INCLUDE FLASHING AS DESCRIBED IN SECTION 703.8. THE EXTERIOR WALL ENVELOPE SHALL BE DESIGNED AND CONSTRUCTED IN SUCH A MANNER AS TO PREVENT THE ACCUMULATION OF WATER WITHIN THE WALL ASSEMBLY BY PROVIDING A WATER RESTRICTIVE BARRIER BEHIND THE EXTERIOR VENEER AS REQUIRED BY SECTION R703.2.</p> <p>EGRESS NOTES:</p>	<p>2015 SOLAR DECATHLON BUILDING CODE 2015 SOLAR DECATHLON RULES 2015 SOLAR DECATHLON MINIMUM BUILDING DESIGN CONSIDERATIONS</p> <p>2012 IBC INTERNATIONAL BUILDING CODE 2012IRC INTERNATIONAL RESIDENTIAL CODE 2012 NFPA NATIONAL ELECTRIC CODE 2012 ICC INTERNATIONAL FIRE CODE 2009 IBC INTERNATIONAL BUILDING CODE NEW JERSEY EDITION</p> <p>ACCESSIBILITY</p> <p>2012 STANDARD FOR ACCESSIBLE DESIGN</p> <p>SECTION 504 OF THE REHABILITATION ACT (PARTIAL FEDERAL FUNDING ASSISTANCE) WITH COMPLIANCE OF UNIFORM FEDERAL ACCESSIBILITY STANDARDS (U.F.A.S.)</p> <table border="1"> <thead> <tr> <th><u>REGULATION</u></th> <th><u>LIMITATIONS</u></th> <th><u>CONDITIONS PROPOSED</u></th> </tr> </thead> <tbody> <tr> <td>HEIGHT (MAX): FINISHED SQUARE FOOTAGE (PER ANSI Z765-2003)</td> <td>18 FT. 600 S.F. MIN, 1000 S.F. MAX.</td> <td>13 FT. 4 IN. 940 S.F. - FIRST FLOOR</td> </tr> <tr> <td>LOT DIMENSIONS:</td> <td>78 FT. X 60 FT. 4680 S.F.</td> <td>78 FT. X 60 FT. 4680 S.F.</td> </tr> </tbody> </table> <p>FIRE RESTANT CONSTRUCTION</p> <table border="1"> <thead> <tr> <th>FIRE SEPARATION DISTANCE REQ'MTS <10 FT. (EXCLUDING PARTY WALLS)</th> <th>REQ'MNT OF IBC/IRC</th> <th>PROVIDED</th> <th>REFERENCE</th> <th>REMARKS</th> </tr> </thead> <tbody> <tr> <td>MAX AREA OF EXT. 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ADDRESS: 600 FRANK SINATRA DRIVE HOBOKEN, NJ 07030
CONTACT: HTTP://SUREHOUSE.ORG/ INFO@SUREHOUSE.ORG

CONSULTANTS
NASTASI ARCHITECTS
BLDG TYP LLC
STEVENS DEPT. OF HEALTH & SAFETY

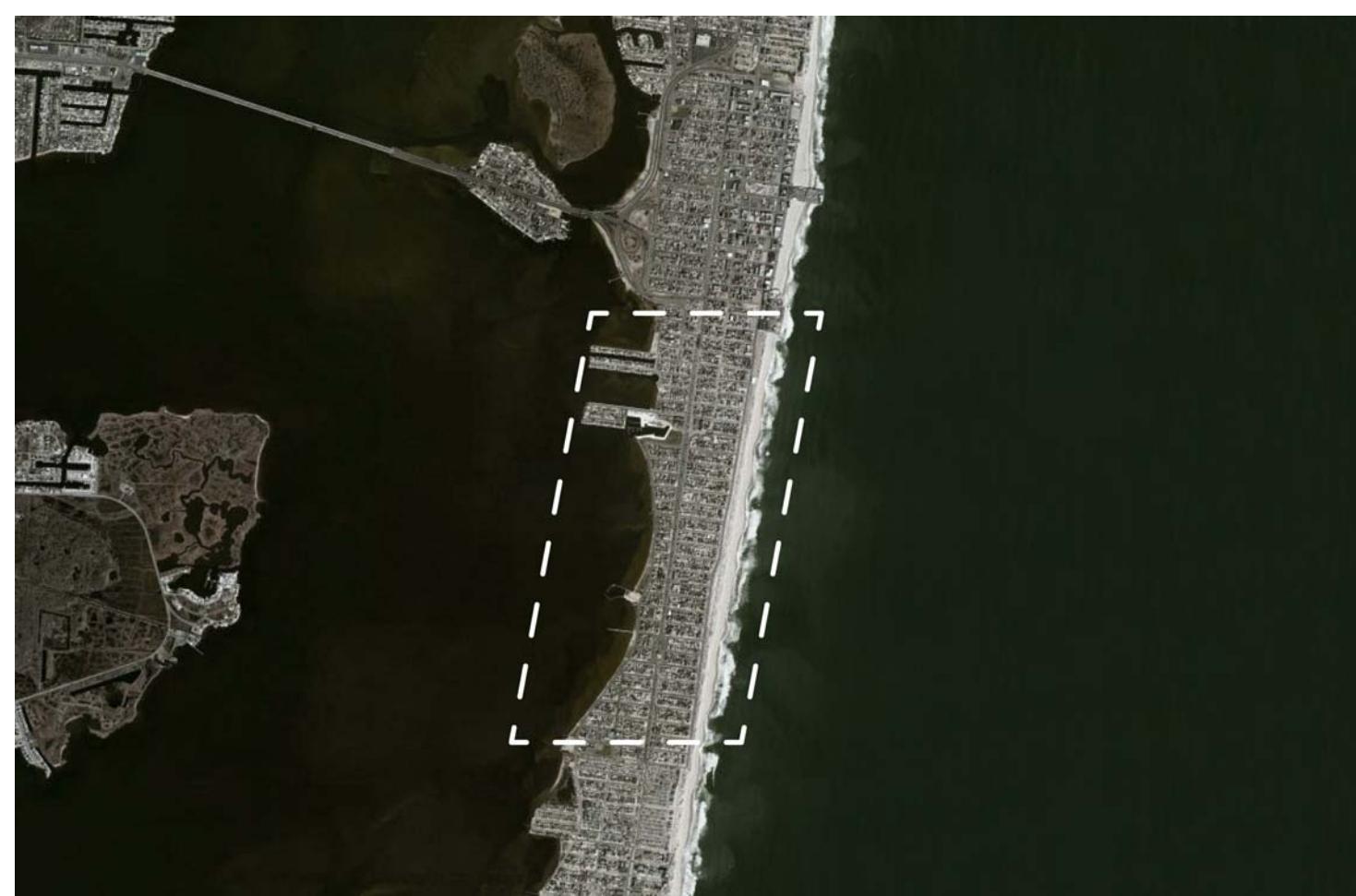


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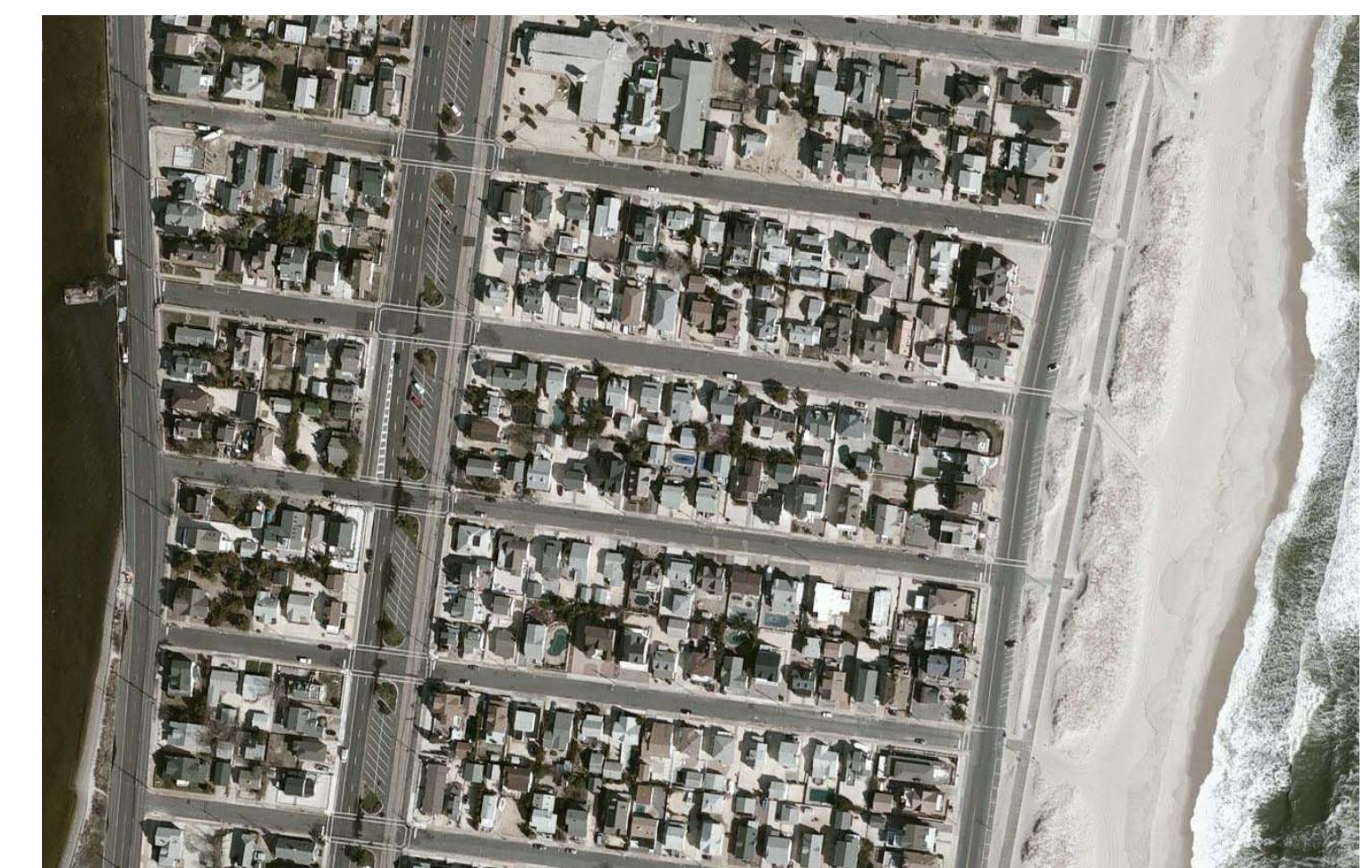
E
D
C
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REGIONAL MAP



SEASIDE PARK



SEASIDE PARK TYP. BLOCK

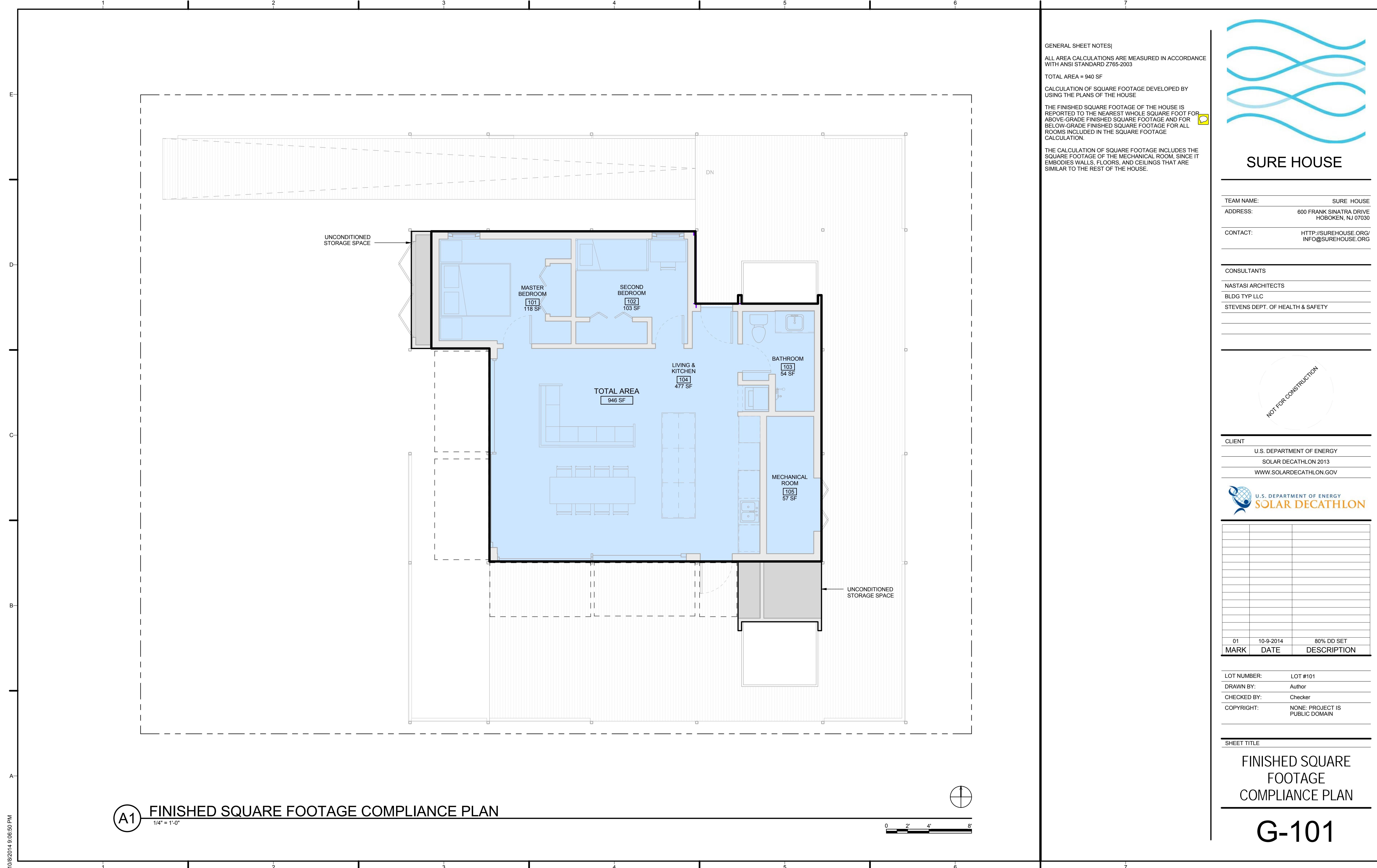
The SURE HOUSE is designed for New York and New Jersey coastal cities and towns, especially those which experienced severe damage from Hurricane Sandy during the fall of 2012. The storm surge, high winds and flooding associated with Hurricane Sandy reshaped the landscape along the Atlantic coast and highlighted the vulnerability of shore neighborhoods. In addition to these physical changes, NY and NJ coastal towns have experienced dramatic changes as a result of economic and policy factors. Currently, FEMA and the National Flood Insurance Program (NFIP) policy are driving the rebuilding of these communities, often resulting in costly renovations and, sadly, unsuccessful streetscapes. The SURE HOUSE will fulfill the need in these regions for durable, safe, and resilient sustainable homes. The inclusion of storm and flood resilience to this solar-powered home sets it apart from other homes and fulfills a critical need within the housing stock of this area, serving as a model for future resilient development and construction in storm-vulnerable environments.

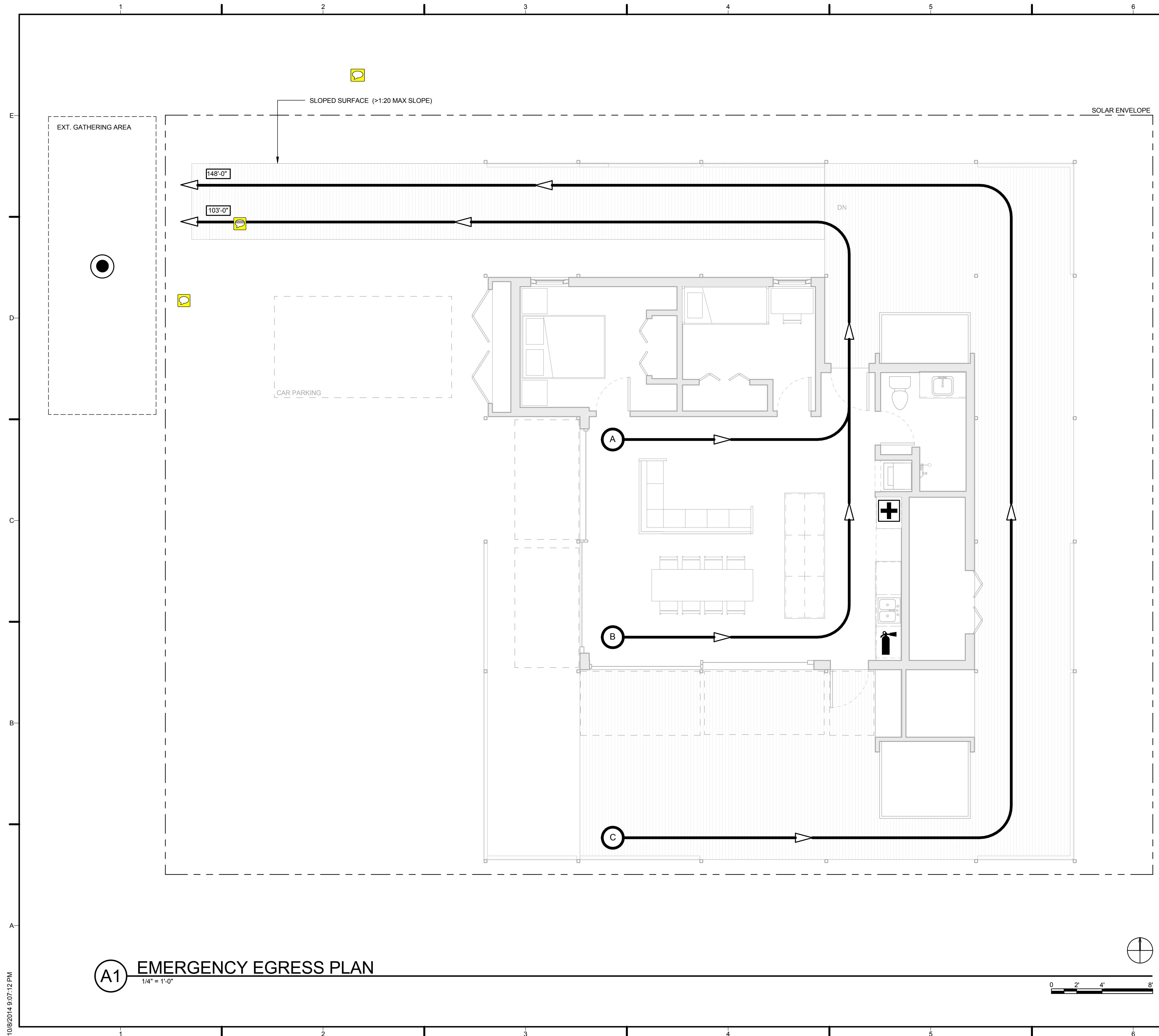
These shore regions have a rich history as vibrant middle-class summer communities; however, in addition to the summer visitors, these regions are also home to tight-knit neighborhoods of full-time residents who represent the target market for the SURE HOUSE. The architecture of these communities is varied and vibrant, with many historic homes alongside contemporary and mid-century modern structures. The SURE HOUSE draws from this rich culture for its style, materials and patterns of living to create a safe, sustainable home which will fit well within these developed coastal areas.

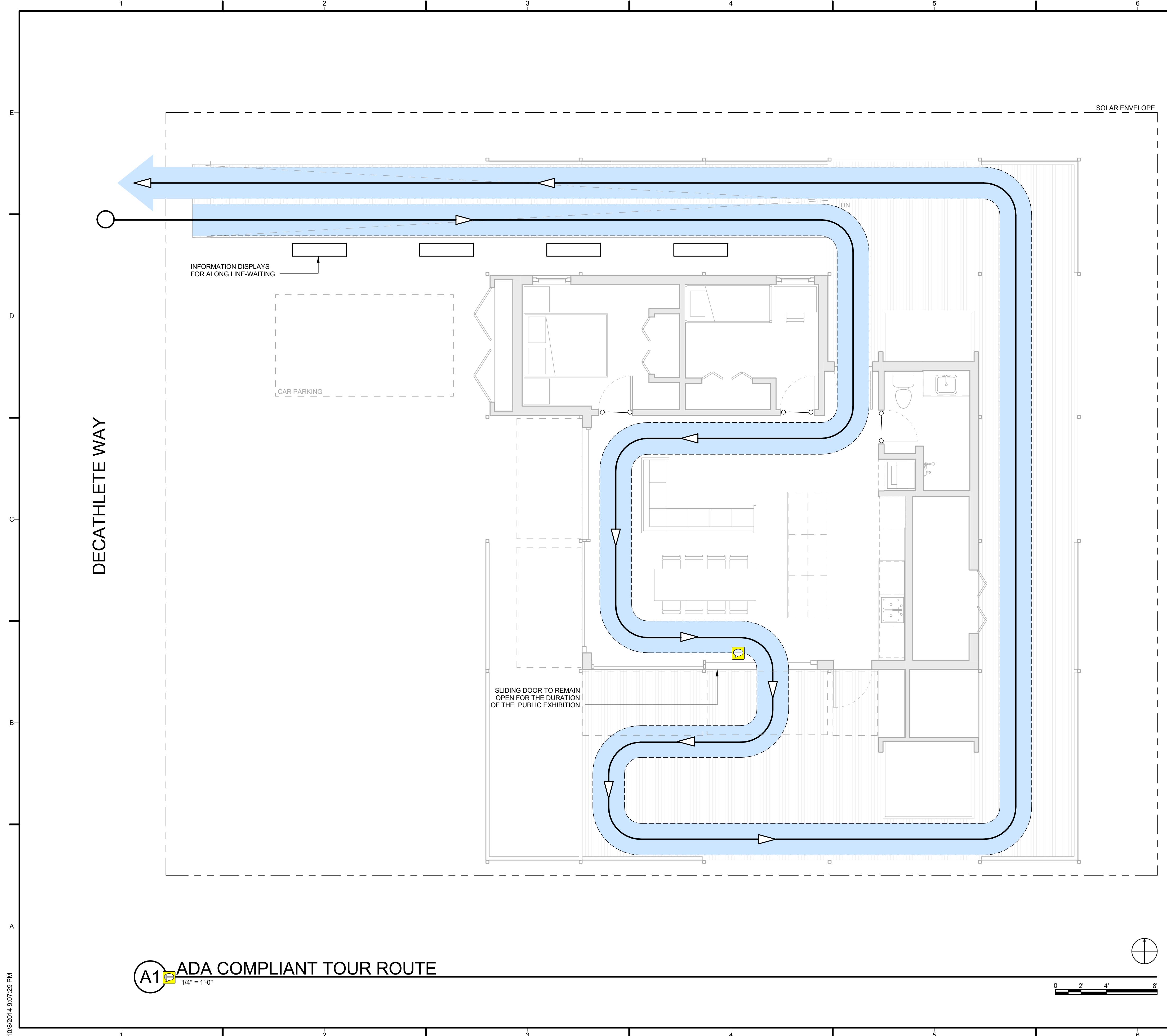
SURE HOUSE

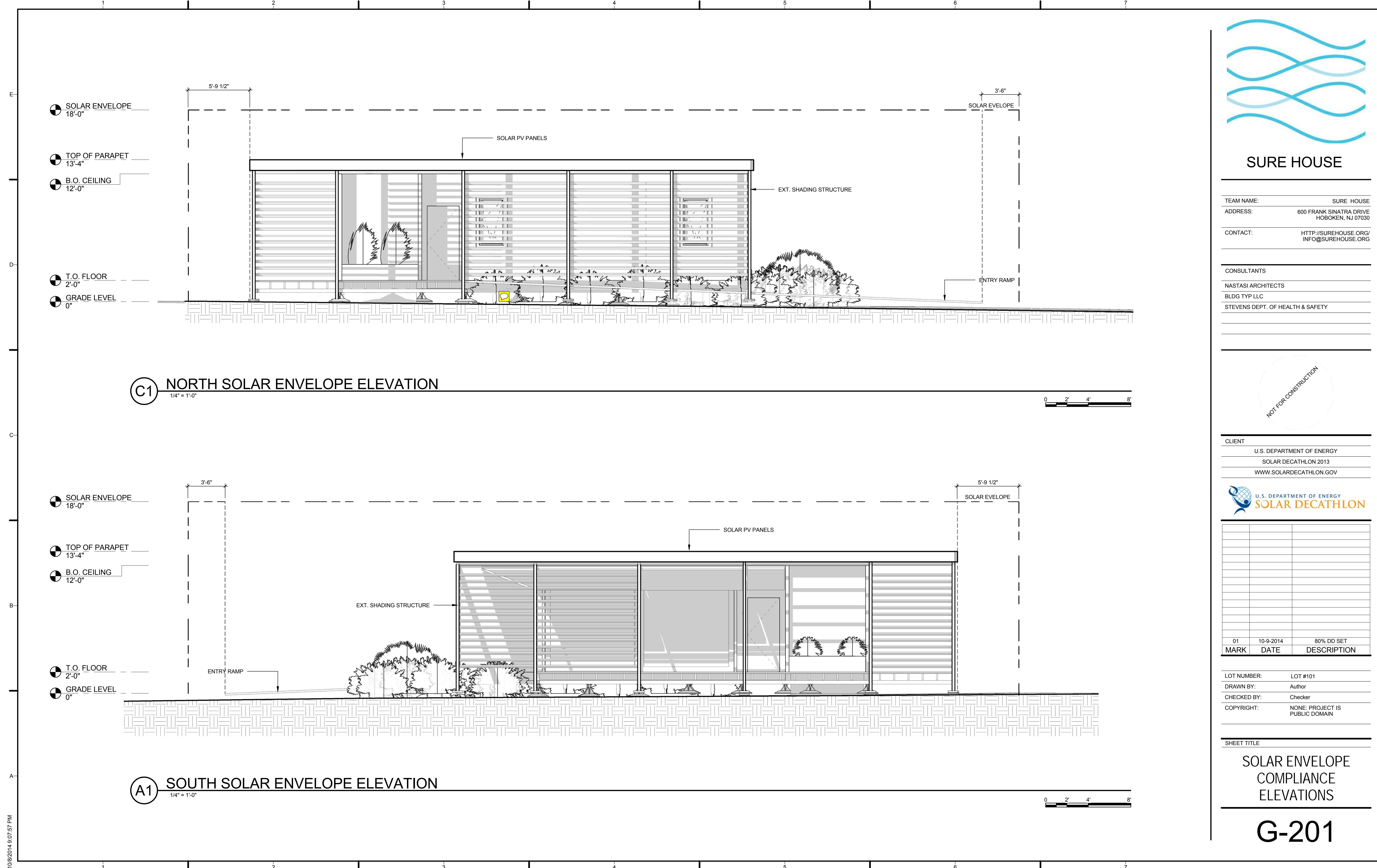
TEAM NAME:	SURE HOUSE	
ADDRESS:	600 FRANK SINATRA DRIVE HOBOKEN, NJ 07030	
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<hr/>		
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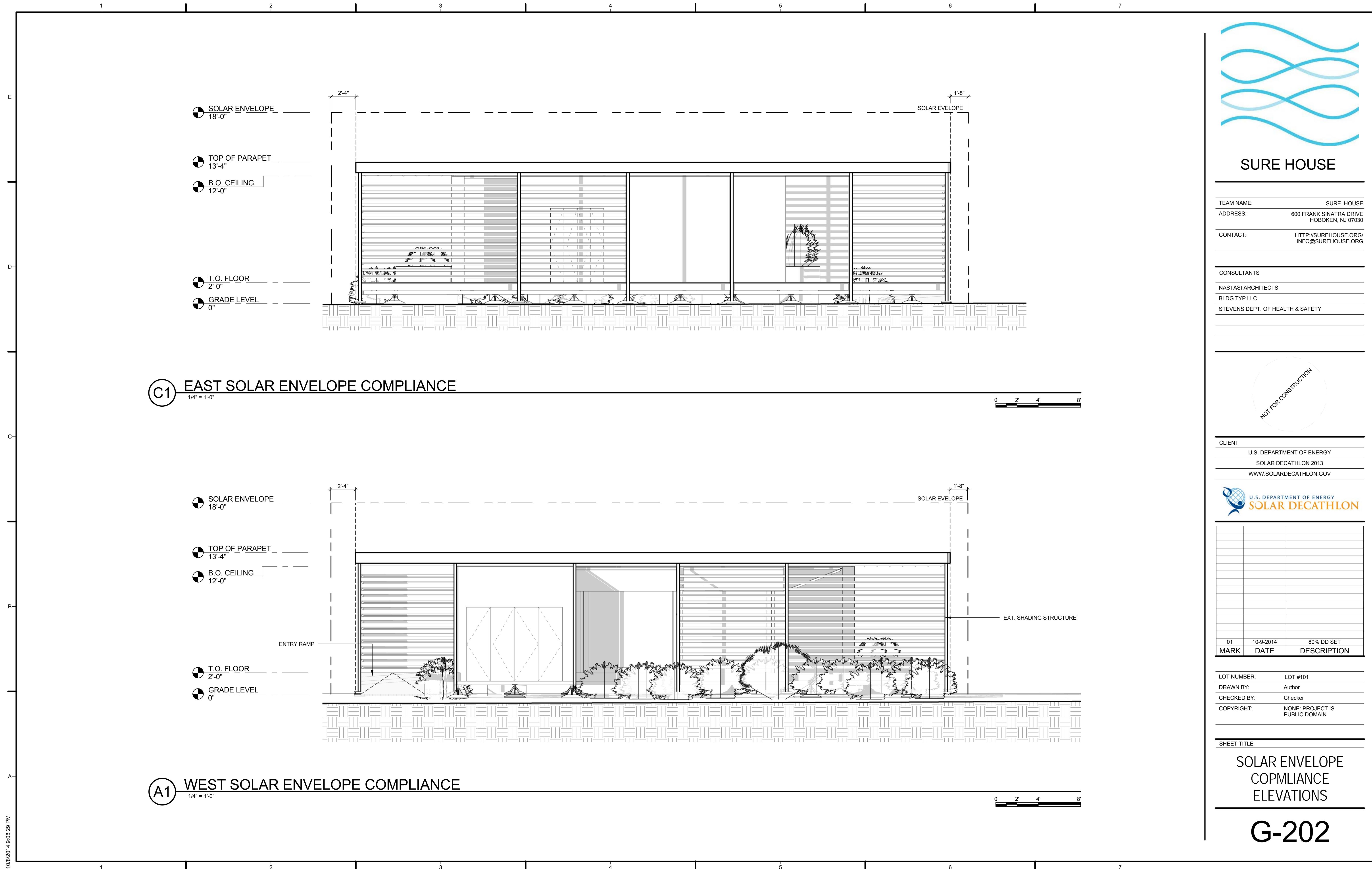
G-011

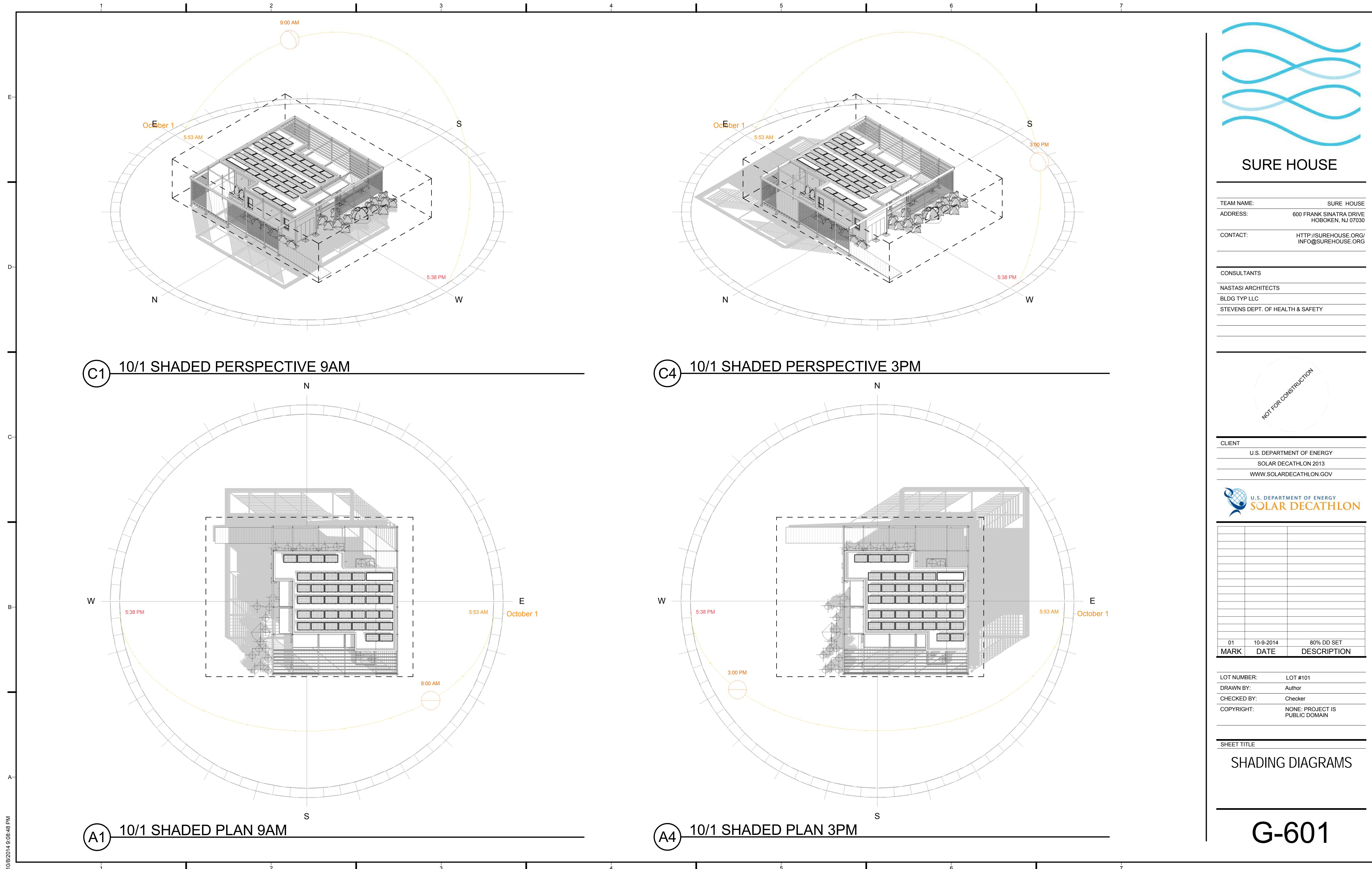


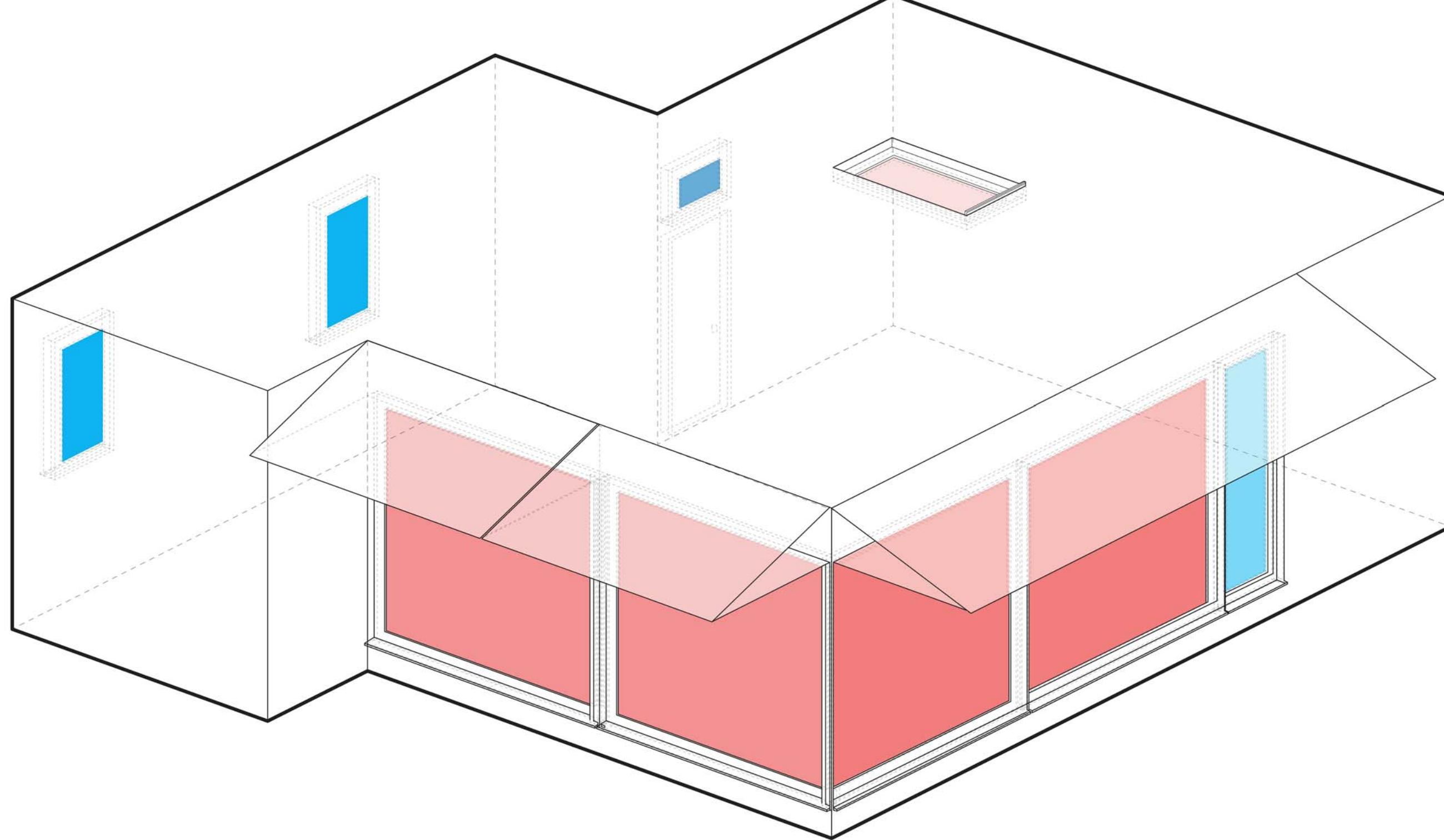










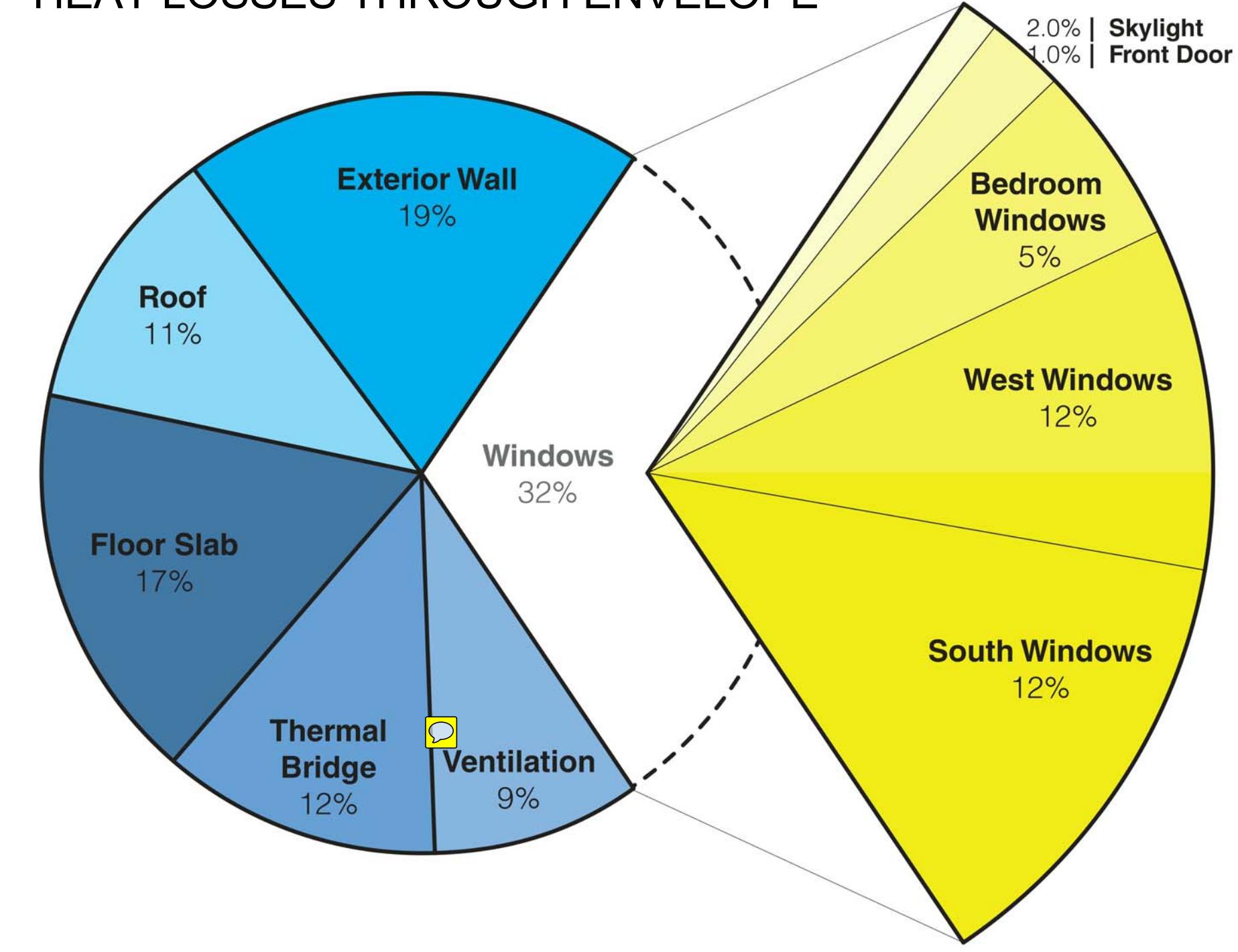


ENVELOPE PERFORMANCE

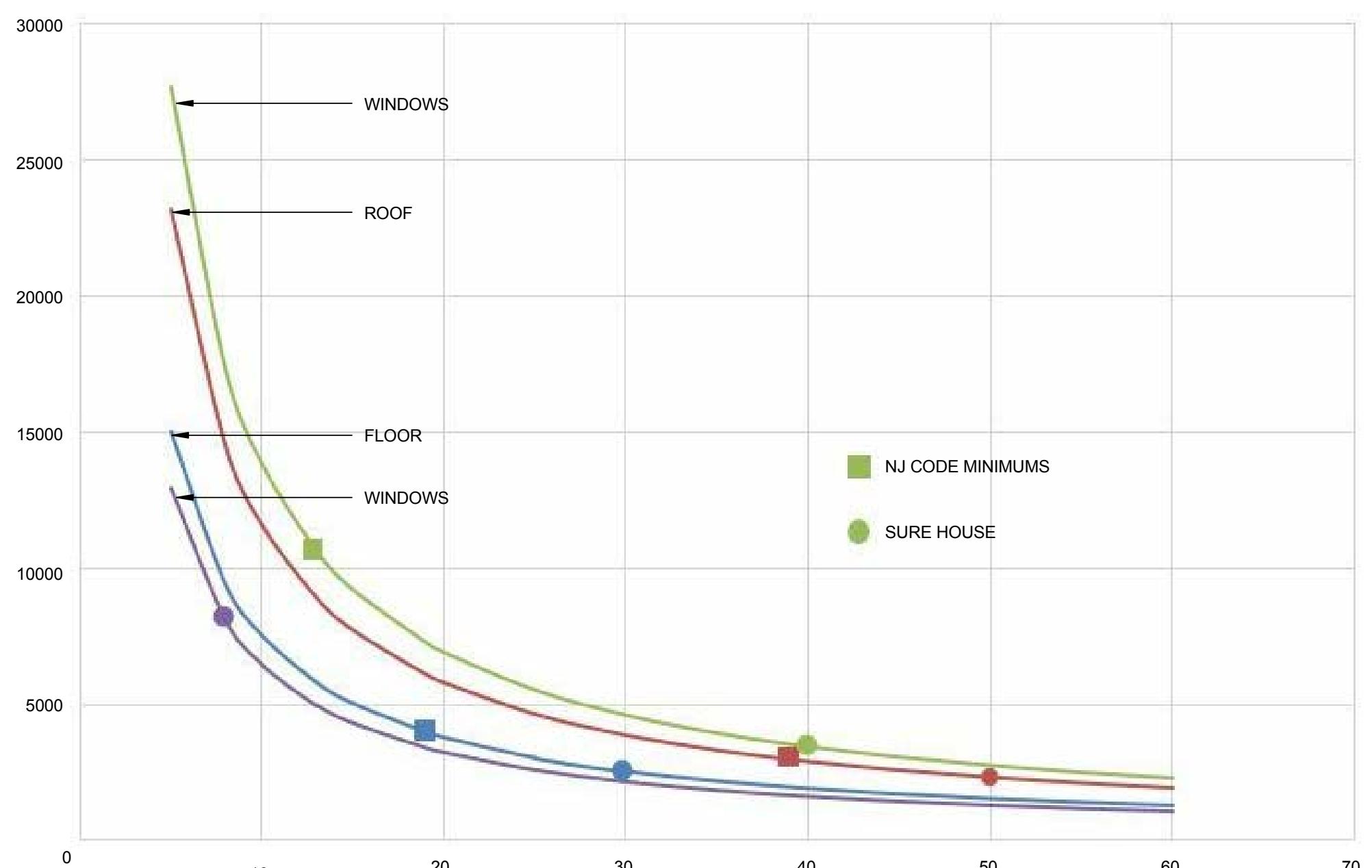
	AREA	R-VALUE		U-VALUE	SHGC	WINTER NET ENERGY	SUMMER NET ENERGY	YEARLY NET ENERGY
UNITS	ft ²	SURE HOUSE	NJ CODE MINIMUMS	Btu/h ft ² F	-	kBtu/yr	KBTY/YR	KBTY/YR
WALLS	1205	40	19	0.025	N/A	-4484	-2464	-6222
ROOF	931	50	39	0.02	N/A	-2772	-1523	-4296
FLOOR	948	30	13	0.033	N/A	-3867	-2355	-6222
ROOF WINDOW	17	6	1.67	0.167	0.4	238	533	771
NORTH WINDOWS	30	6	1.67	0.167	0.62	-337	164	-173
EAST WINDOWS	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SOUTH WINDOWS	207	8	1.67	0.125	0.62	335	3213	3548
WEST WINDOWS	180	8	1.67	0.125	0.62	1497	5610	7108

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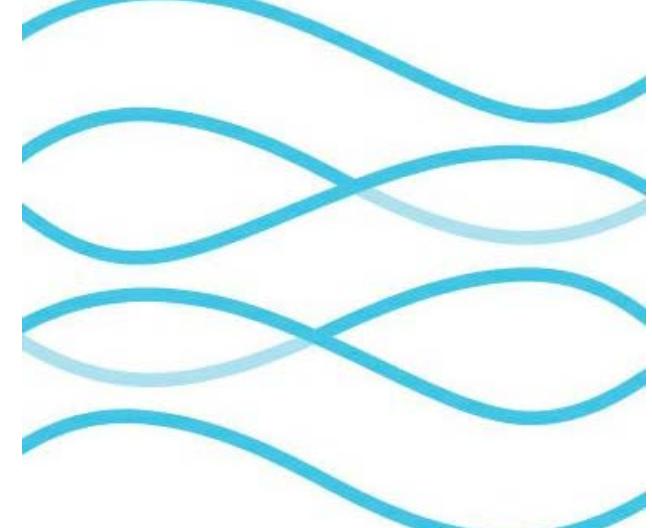
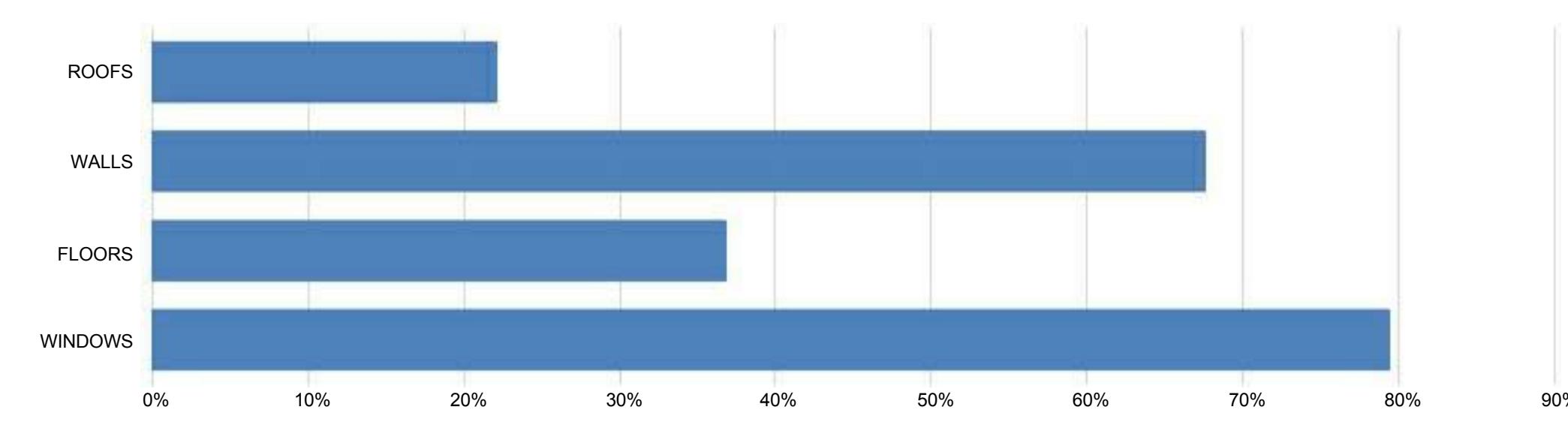
HEAT LOSSES THROUGH ENVELOPE



DETERMINATION OF R-VALUES



PERCENTAGE DECREASE IN HEAT LOSSES



SURE HOUSE

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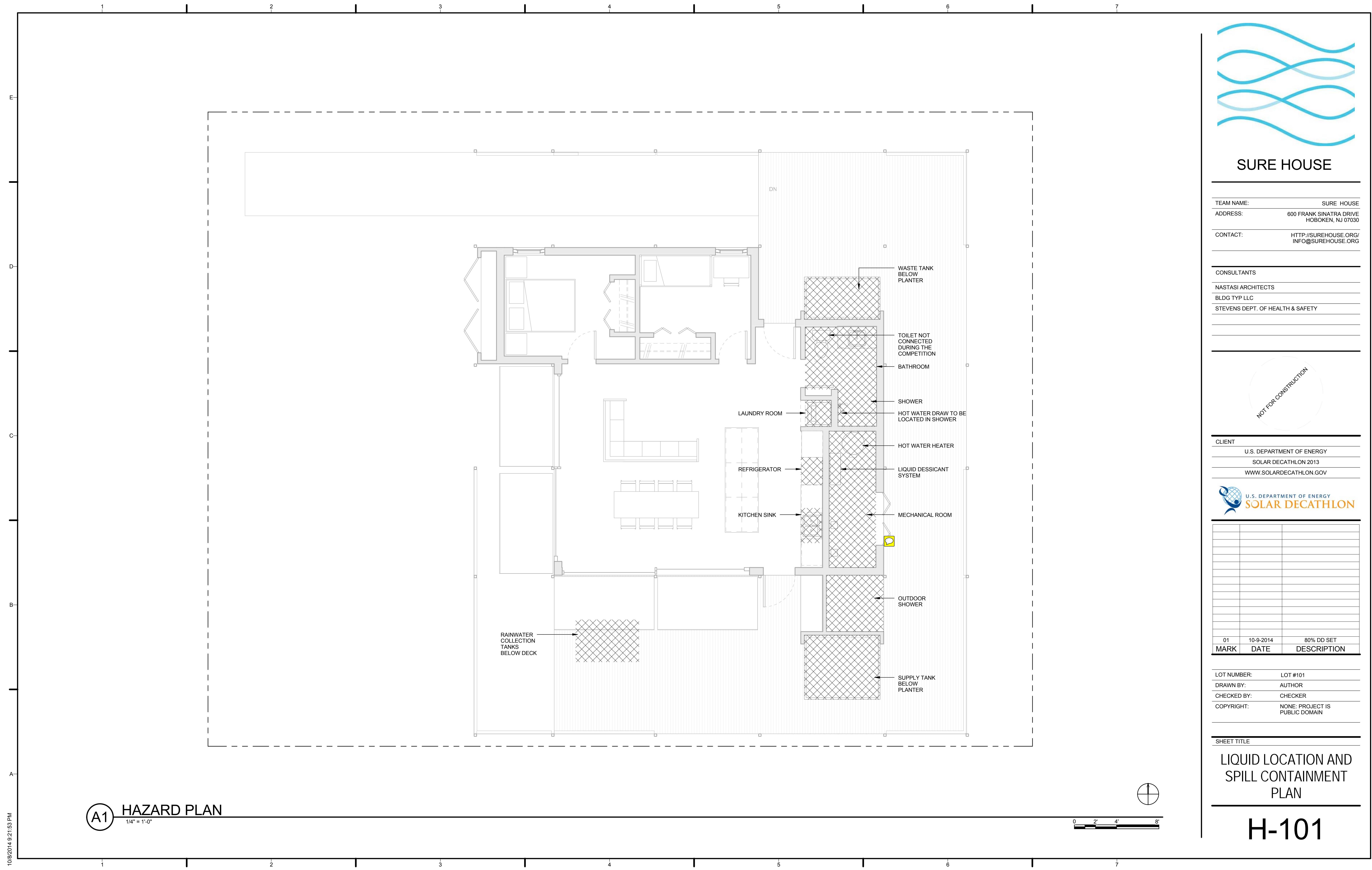


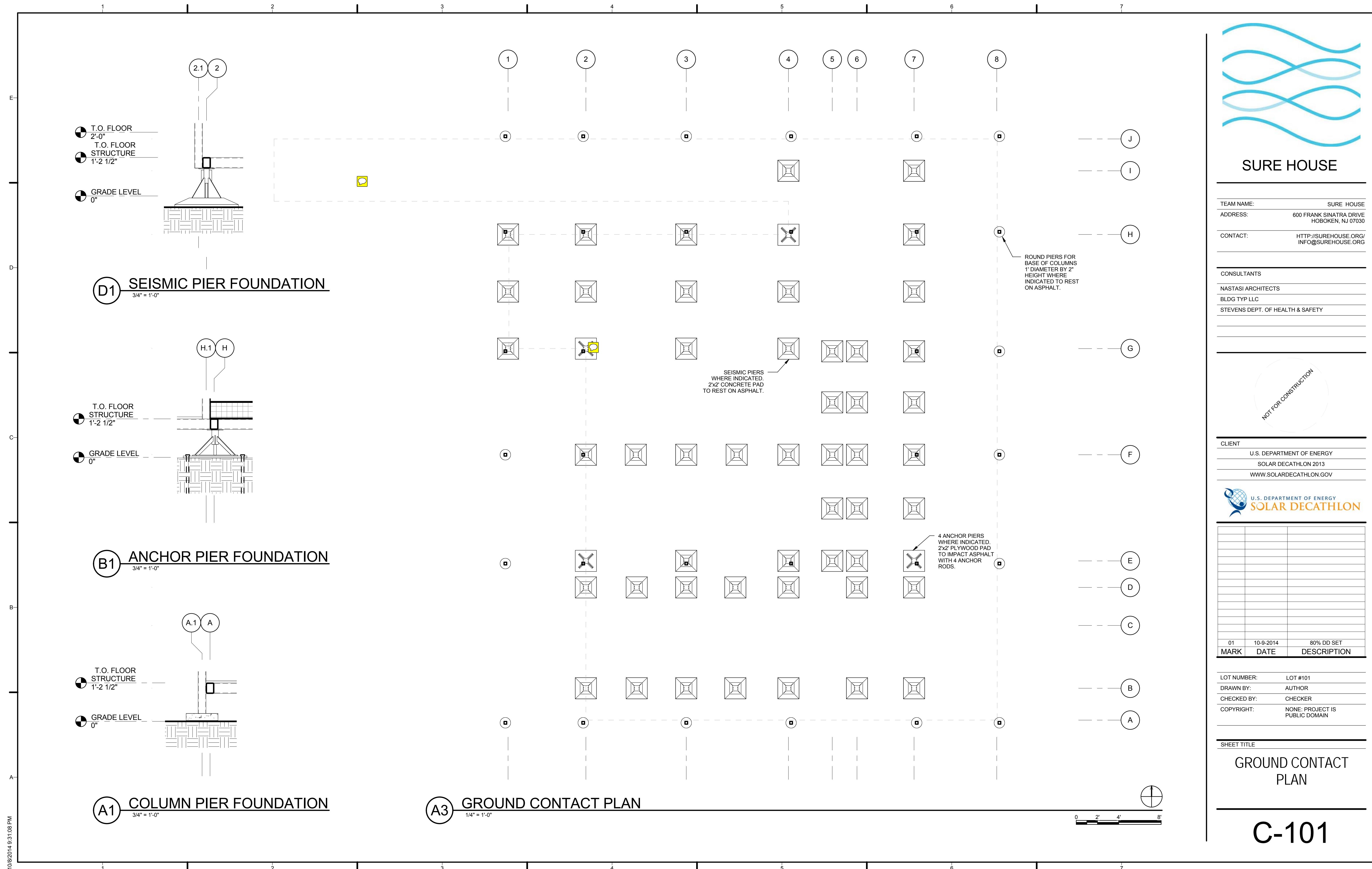
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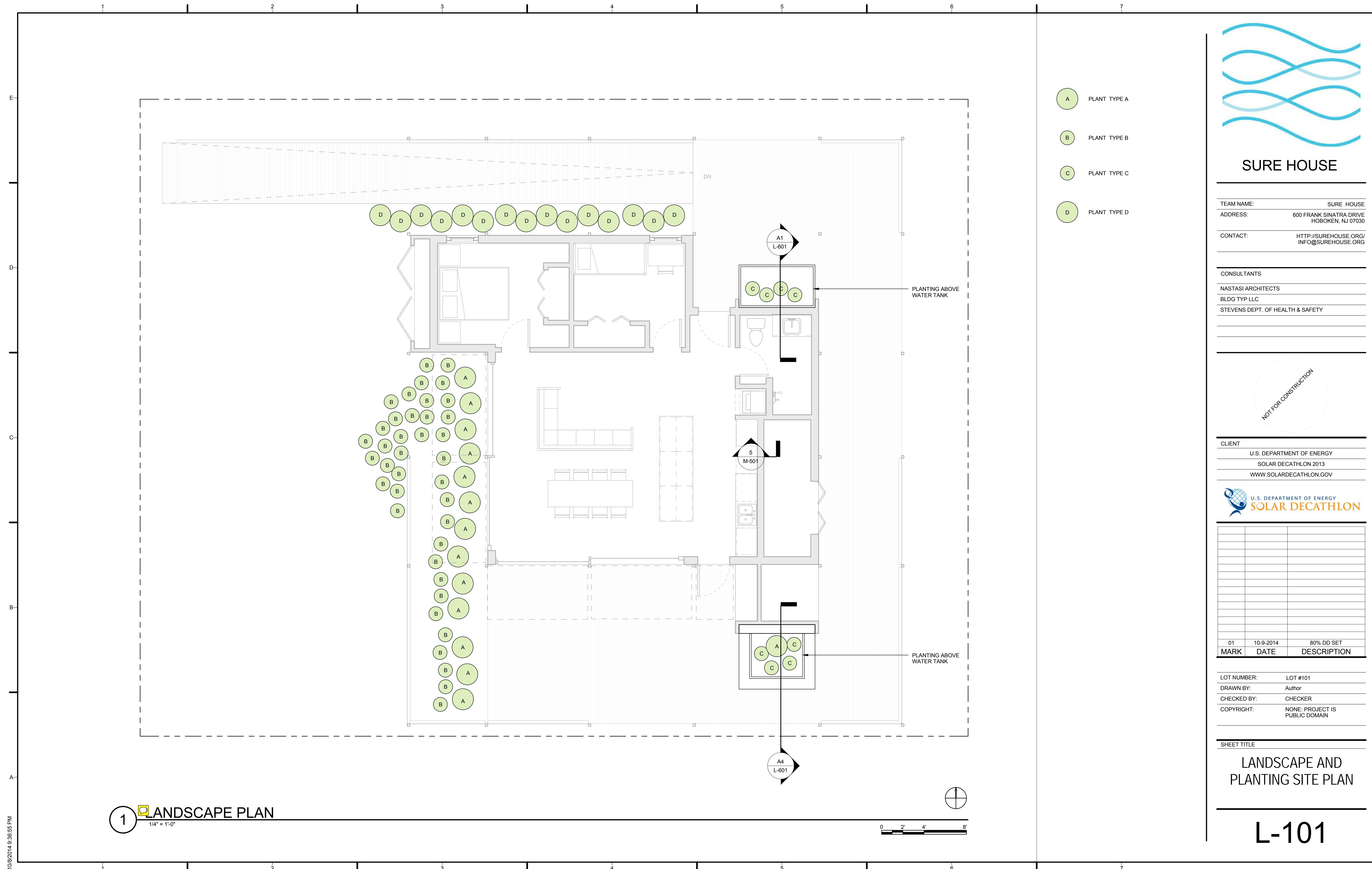
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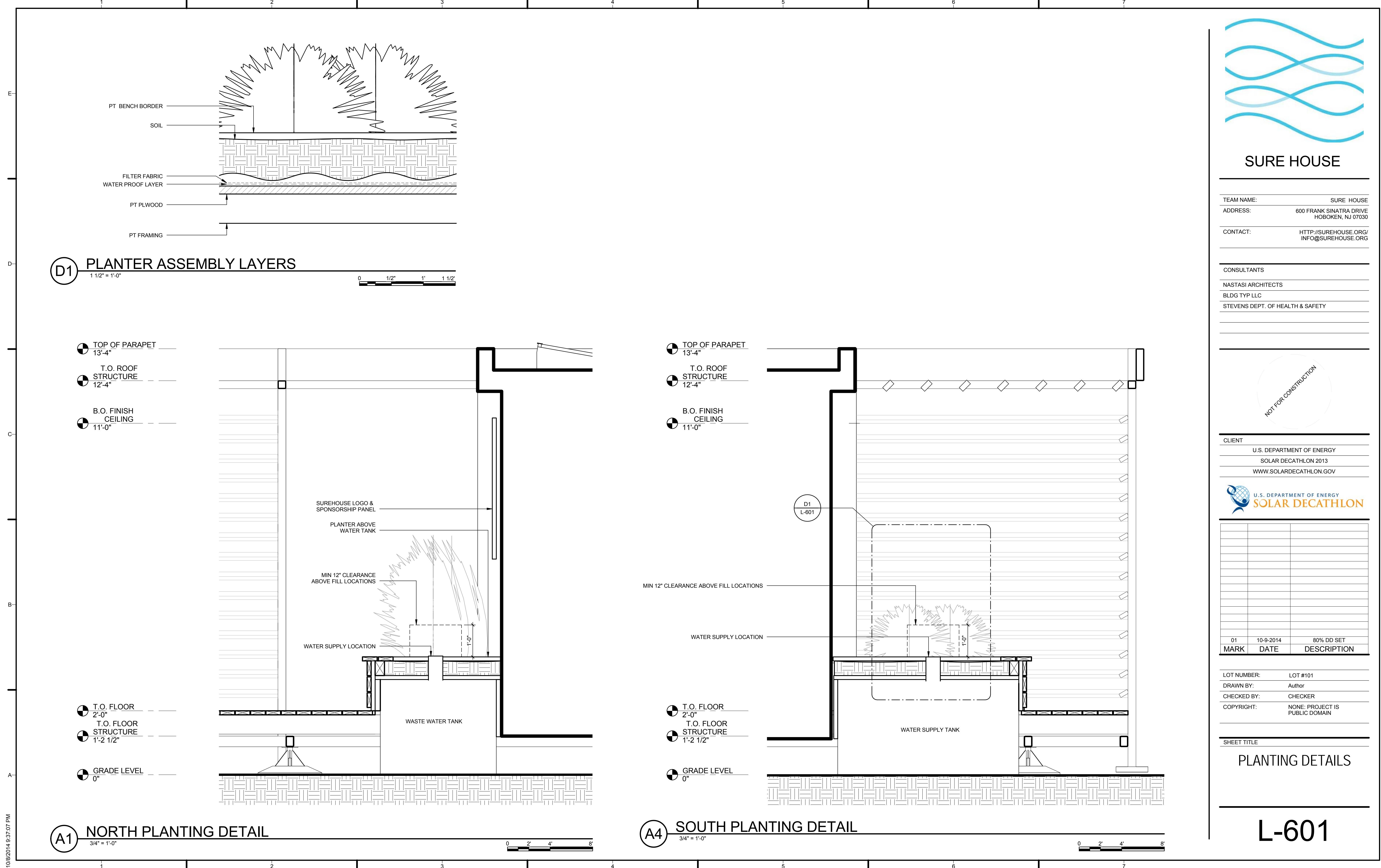
SHEET TITLE
ENVELOPE PERFORMANCE

G-602









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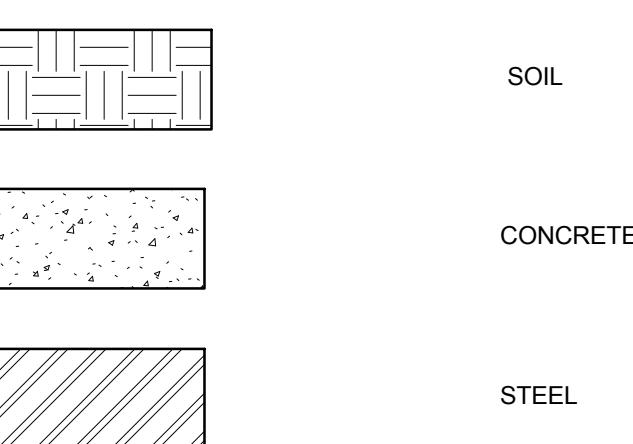
GENERAL NOTES

ALL STRUCTURAL ELEMENTS SHALL CONFORM TO THE APPLICABLE REFERENCE STANDARDS
1. 2015 SOLAR DECATHLON BUILDING CODE 205
2. 2015 SOLAR DECATHLON RULES
3. 2015 SOLAR DECATHLON MINIMUM BUILDING DESIGN CONSIDERATIONS
4. 2012 INTERNATIONAL BUILDING CODE
5. 2012 INTERNATIONAL RESIDENTIAL CODE
6. 2009 INTERNATIONAL BUILDING CODE (NEW JERSEY EDITION)
7. ASCE 7-10, MINIMUM DESIGN CODES FOR BUILDINGS OR OTHER STRUCTURES

BEAMS AND COLUMNS

- HOLLOW TUBE
- STRUCTURAL ANGLE
- STRUCTURAL C

HATCHES

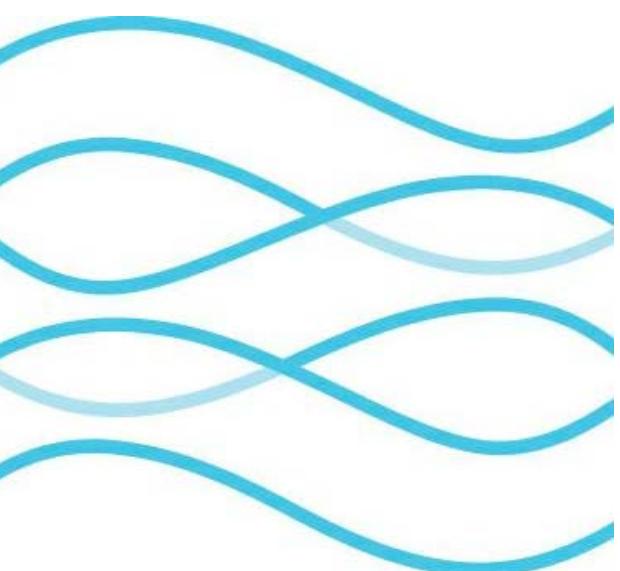


COMPOSITE SIP



LOAD SCHEDULE

LIVE LOAD
DECK: 100 PSF
HOUSE: 50PSF
DEAD LOAD
GENERAL: 20 PSF
SNOW LOAD
GENERAL: 5 PSF
WIND LOAD
GENERAL: 39 PSF
SEISMIC LOAD
GENERAL: 284 LB



SURE HOUSE

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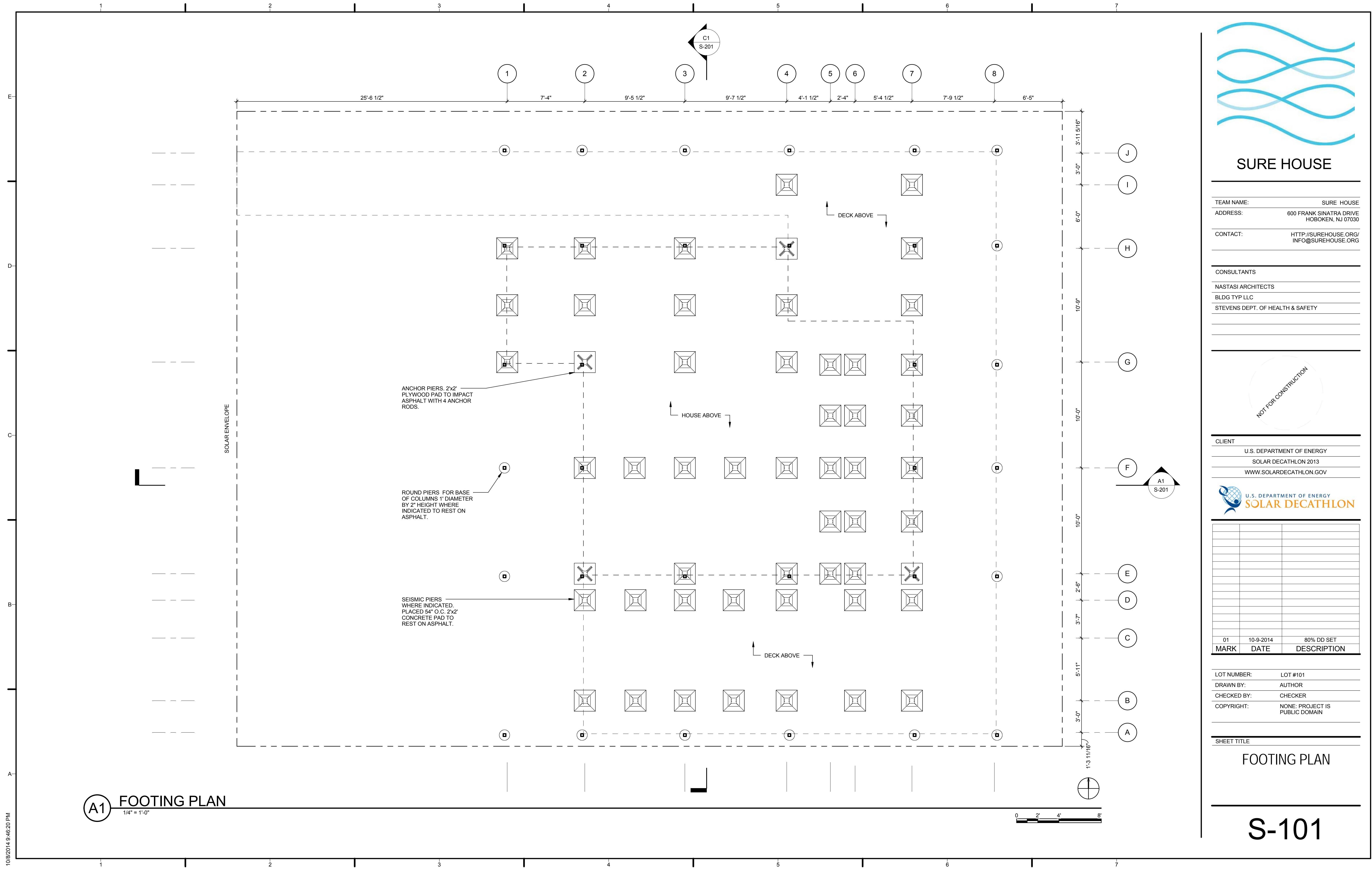


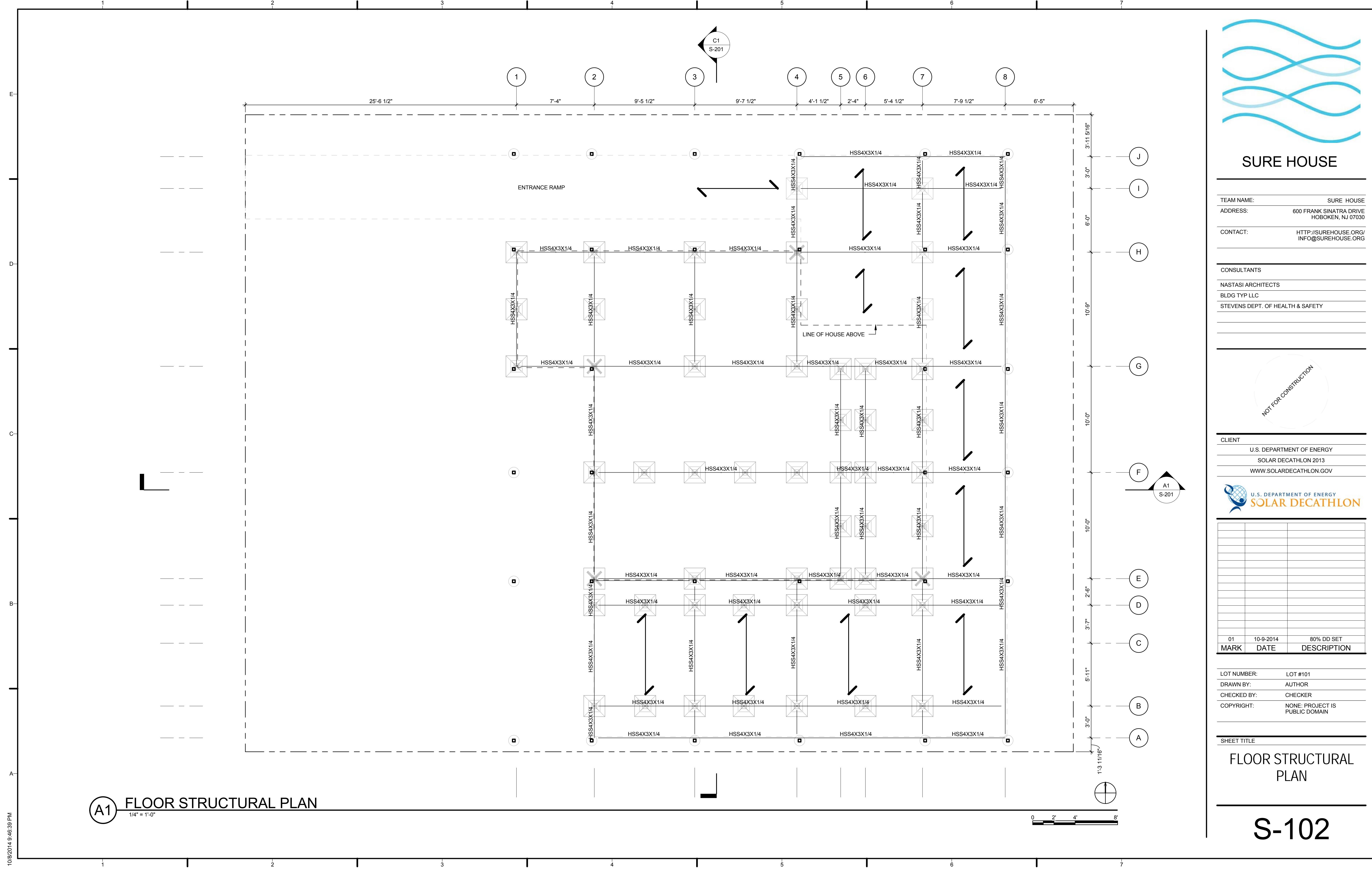
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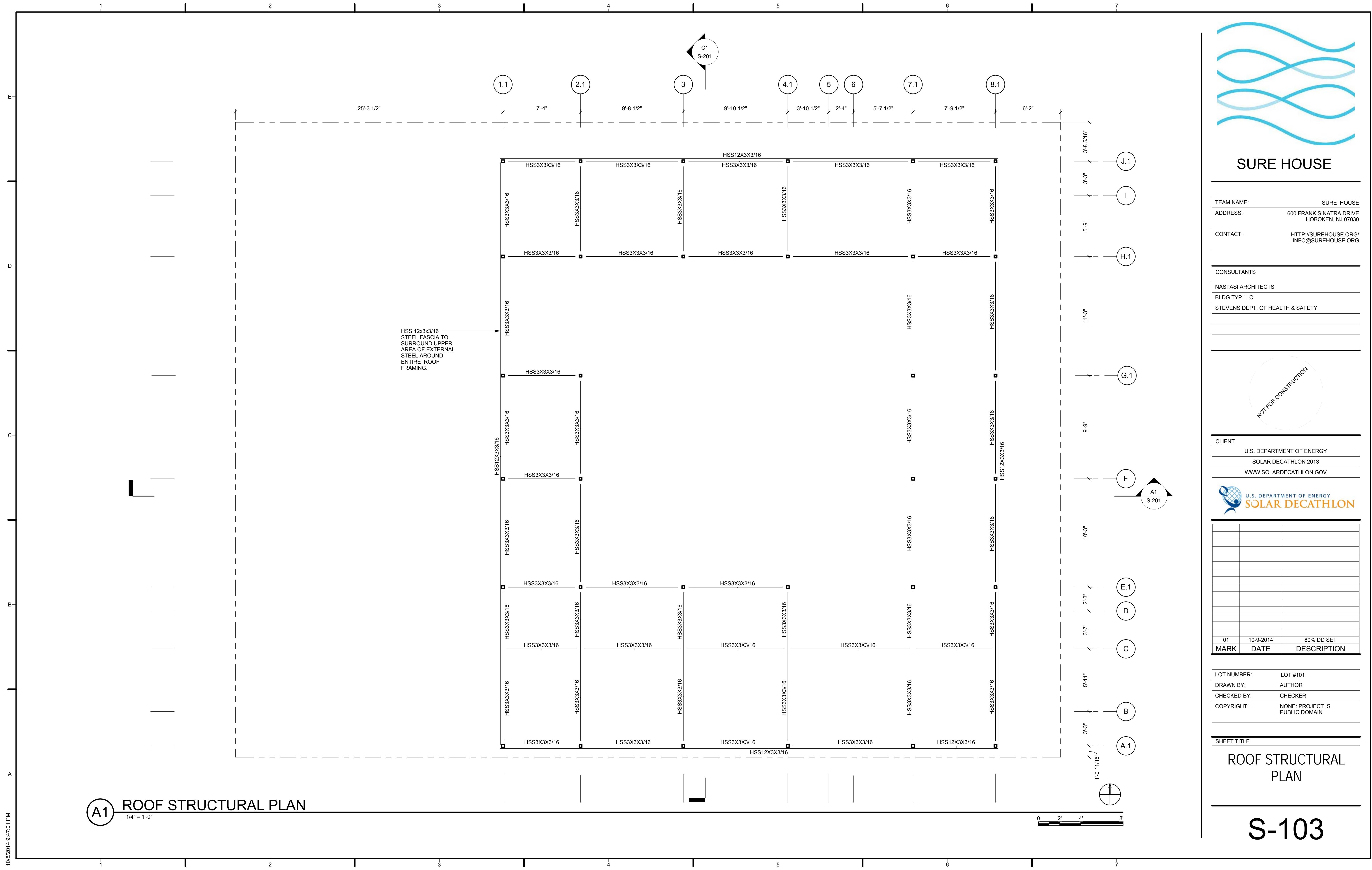
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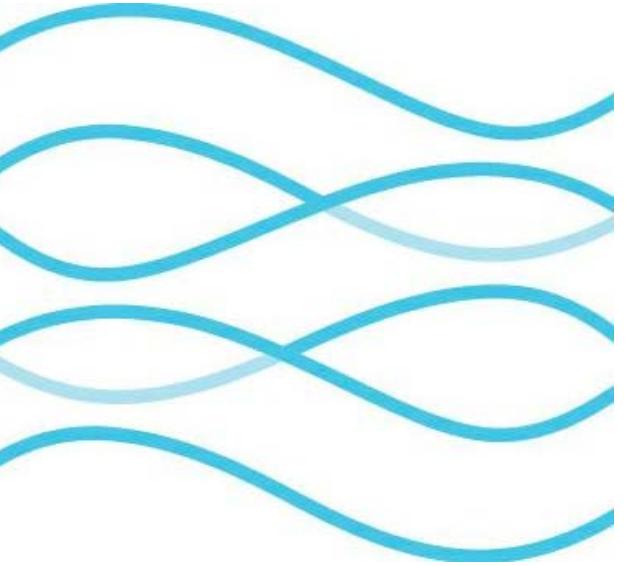
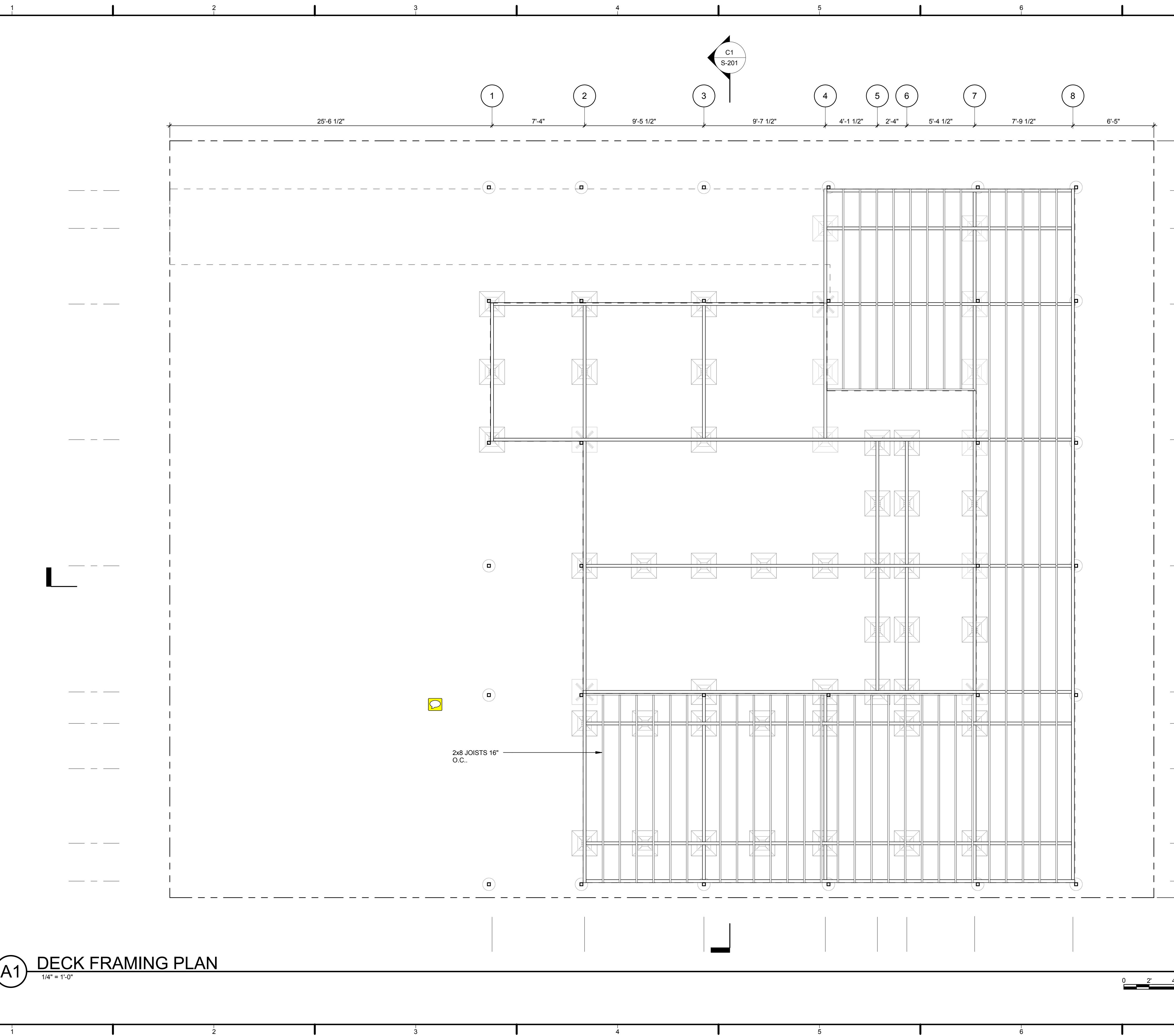
SHEET TITLE
STRUCTURAL NOTES
AND SYMBOLS

S-001









SURE HOUSE

TEAM NAME: SURE HOUSE
ADDRESS: 600 FRANK SINATRA DRIVE
HOBOKEN, NJ 07030

CONTACT: [HTTP://SUREHOUSE.ORG/](http://SUREHOUSE.ORG)
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CONSULTANTS
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BLDG TYP LLC
STEVENS DEPT. OF HEALTH & SAFETY

CLIENT
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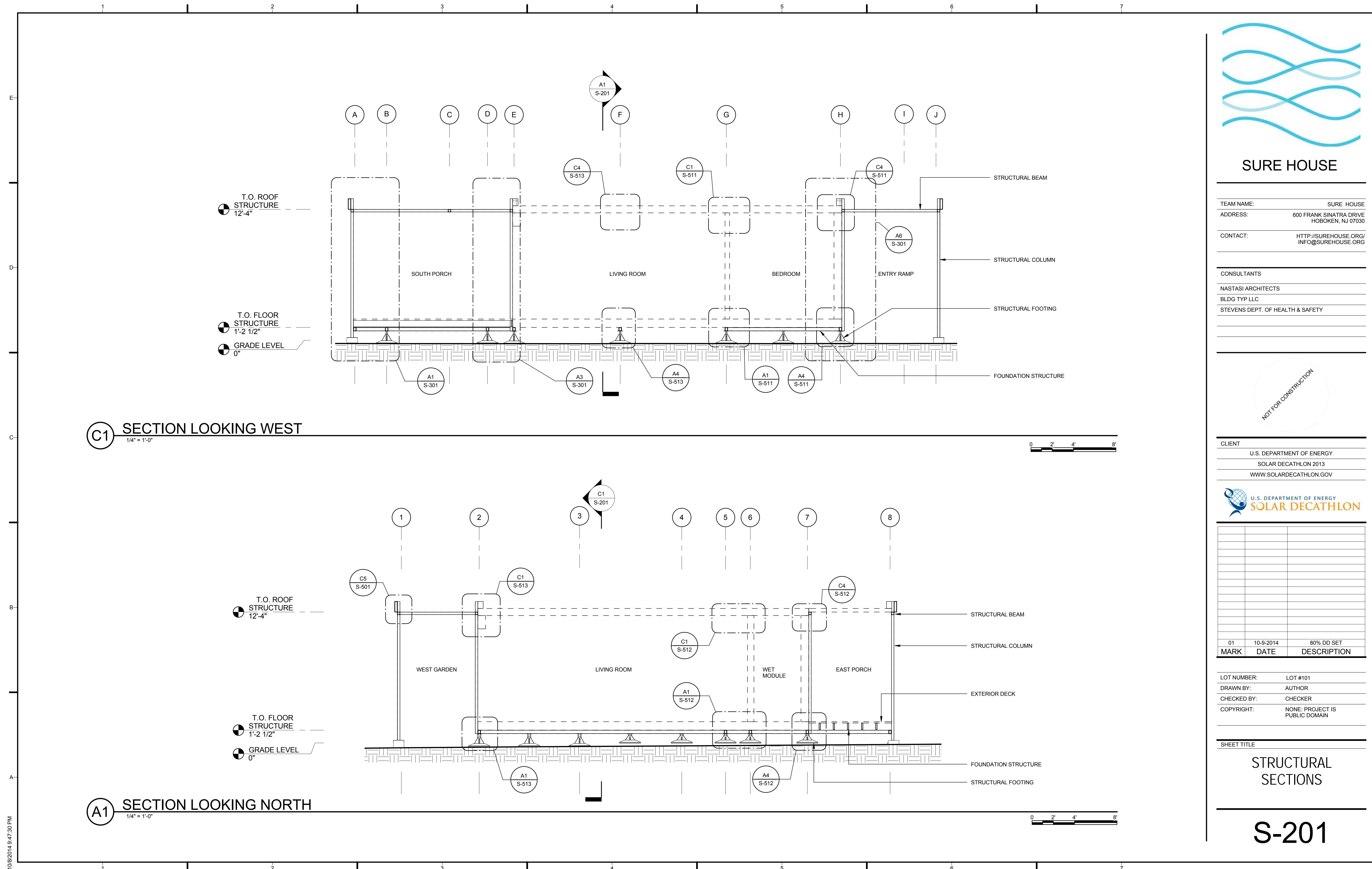
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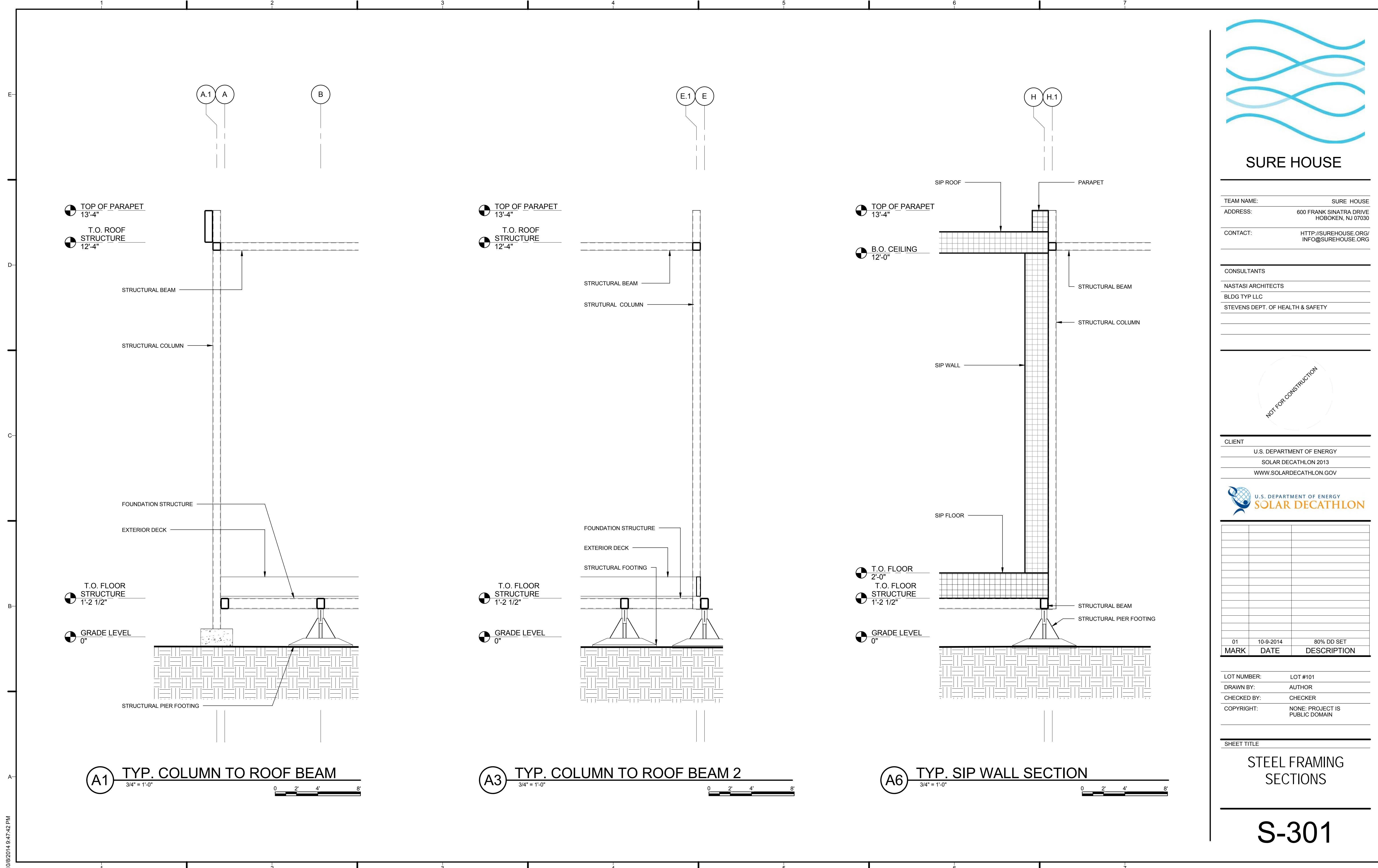
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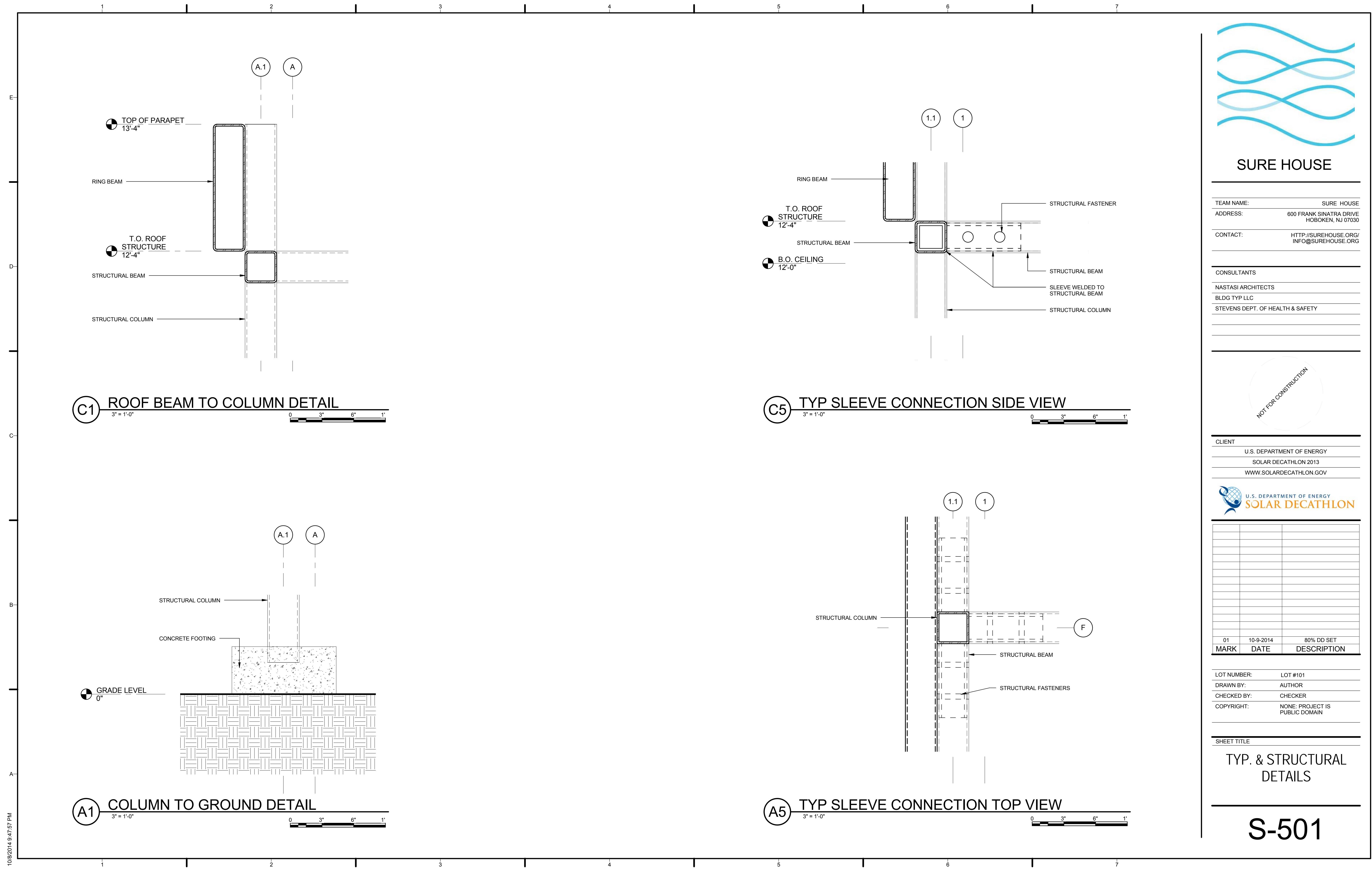
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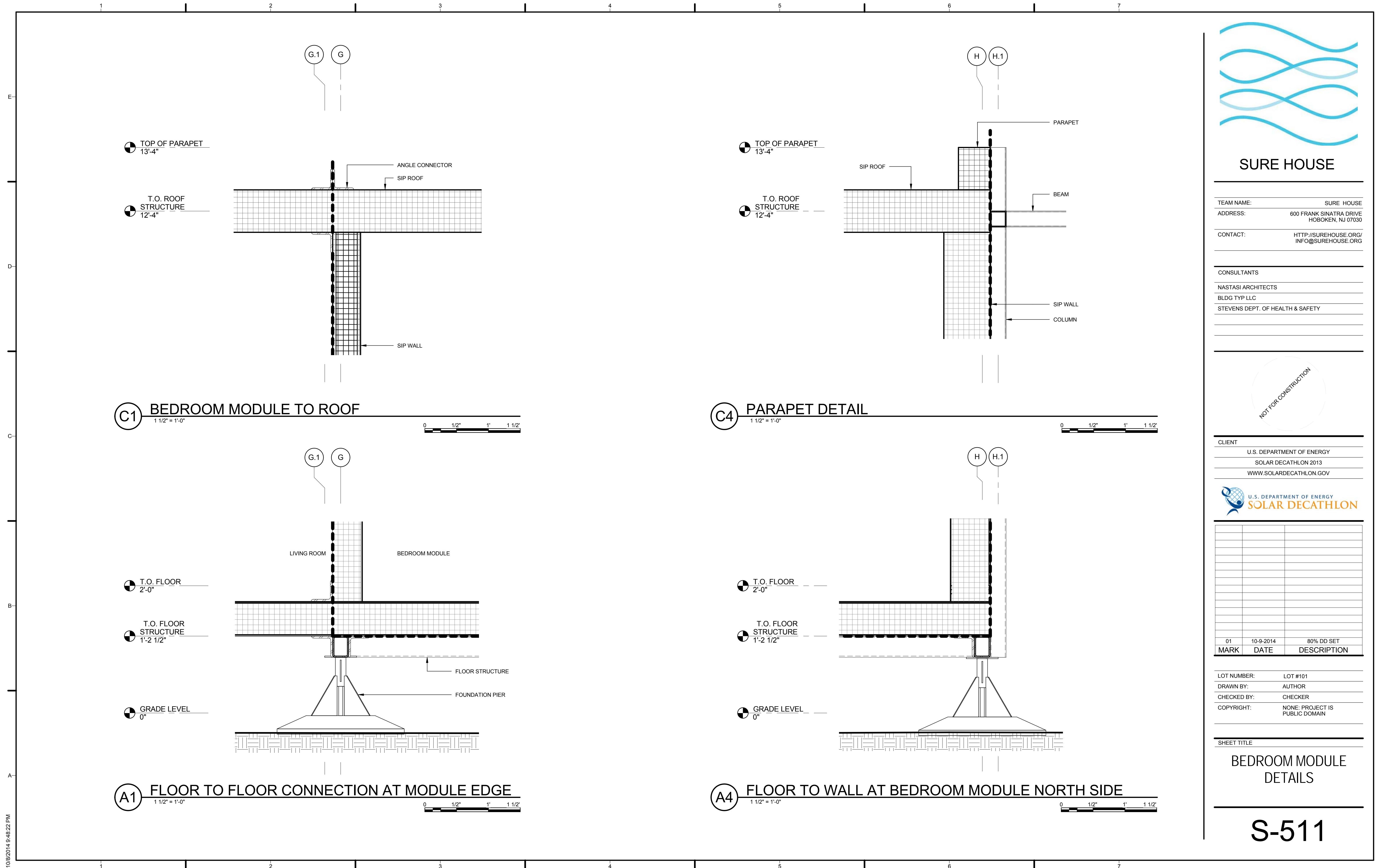
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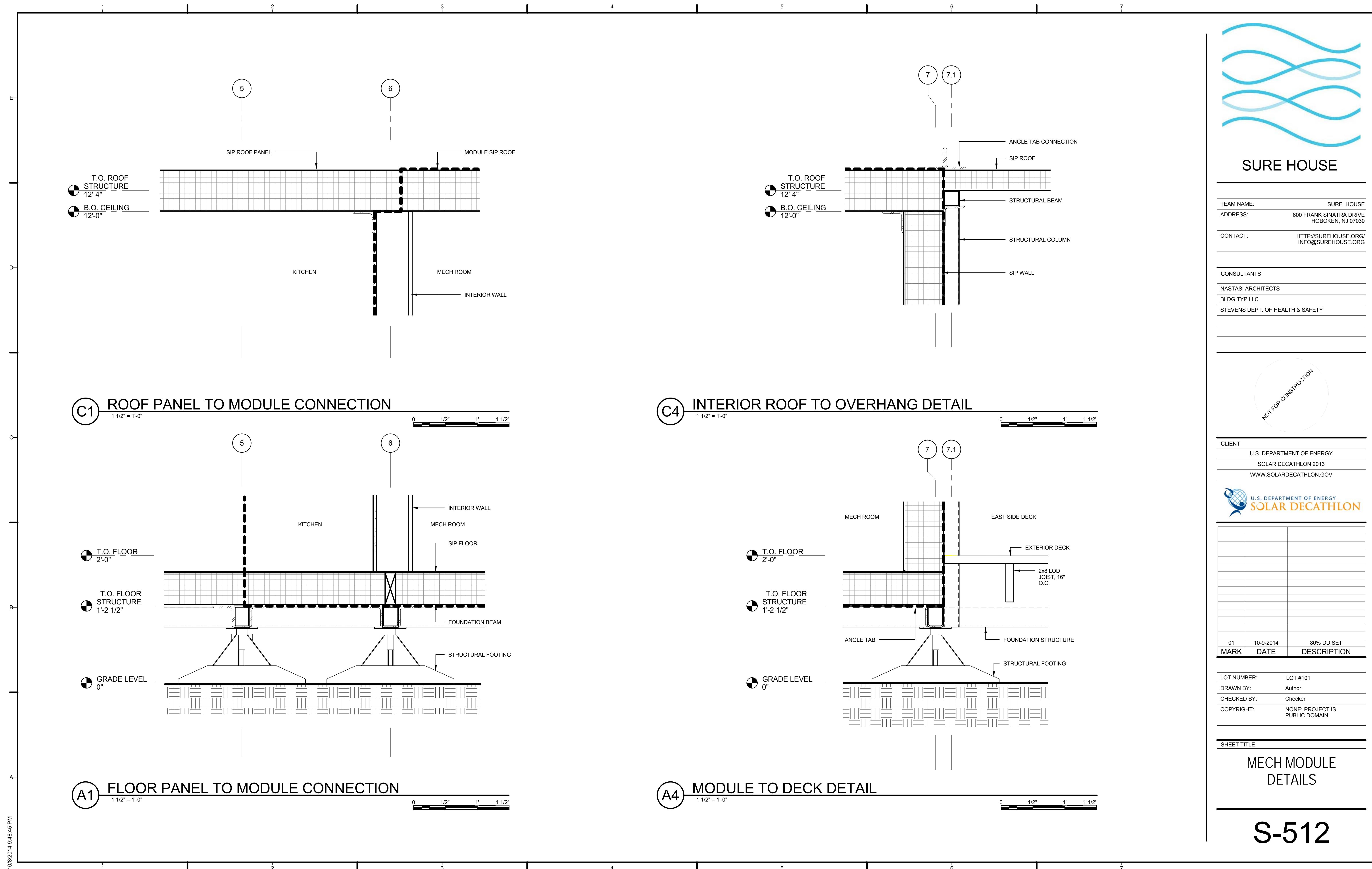
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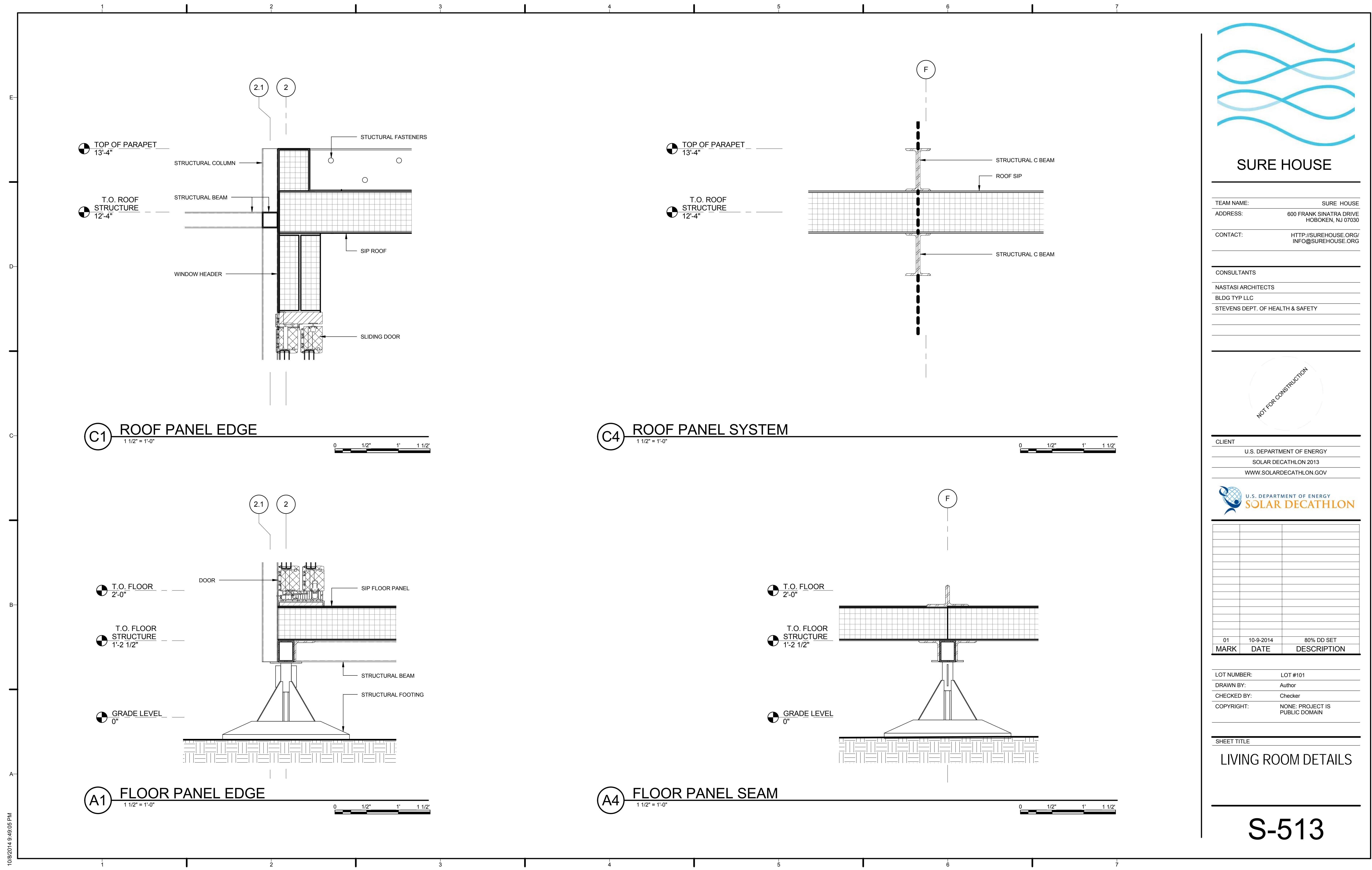












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SURE HOUSE

STRUCTURAL FRAMING SCHEDULE		
Type	Count	Length
2x8	8	6'-9 1/2"
2x8	13	9'-0"
2x8	1	9'-5"
2x8	10	10'-0"
2x8	5	10'-9"
2x8	1	11'-9 1/2"
2x8	28	15'-0"
2x8	2	15'-0 1/2"
2x8	1	21'-0 3/4"
HSS3X3X3/16	7	7'-4"
HSS3X3X3/16	1	7'-9 1/2"
HSS3X3X3/16	3	7'-10 1/2"
HSS3X3X3/16	6	9'-0"
HSS3X3X3/16	5	9'-8 1/2"
HSS3X3X3/16	4	9'-9"
HSS3X3X3/16	1	9'-10 1/2"
HSS3X3X3/16	4	9'-11 1/2"
HSS3X3X3/16	4	10'-3"
HSS3X3X3/16	3	11'-3"
HSS3X3X3/16	3	11'-9"
HSS3X3X3/16	1	11'-10"
HSS3X3X3/16	6	15'-0"
HSS4X3X1/4	1	2'-3"
HSS4X3X1/4	2	2'-6"
HSS4X3X1/4	4	3'-0"
HSS4X3X1/4	1	6'-0"
HSS4X3X1/4	3	9'-6"
HSS4X3X1/4	6	10'-0"
HSS4X3X1/4	4	10'-9"
HSS4X3X1/4	1	15'-0"
HSS4X3X1/4	3	19'-7 1/2"
HSS4X3X1/4	1	19'-9"
HSS4X3X1/4	1	20'-0"
HSS4X3X1/4	1	26'-5"
HSS4X3X1/4	5	38'-8 1/2"
HSS4X3X1/4	1	46'-0 1/2"
HSS4X3X1/4	1	54'-9"
HSS12X3X3/16	2	47'-0 1/2"
HSS12X3X3/16	2	55'-9"

STRUCTURAL COLUMN SCHEDULE		
Type	Count	Length
HSS3X3X3/16	3	11'-5 1/2"
HSS3X3X3/16	11	12'-5 1/2"
HSS3X3X3/16	18	13'-1"

STRUCTURAL FOUNDATION SCHEDULE		
Type	Count	
Anchor Pier	4	
Column Piers	18	
Seismic Pier 7 in	31	
Seismic Pier 11 in	18	



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ADDRESS:	600 FRANK SINATRA DRIVE HOBOKEN, NJ 07030
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CONSULTANTS	
NASTASI ARCHITECTS BLDG TYP LLC STEVENS DEPT. OF HEALTH & SAFETY	
<hr/>	
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CLIENT	U.S. DEPARTMENT OF ENERGY SOLAR DECATHLON 2013 WWW.SOLARDECATHLON.GOV



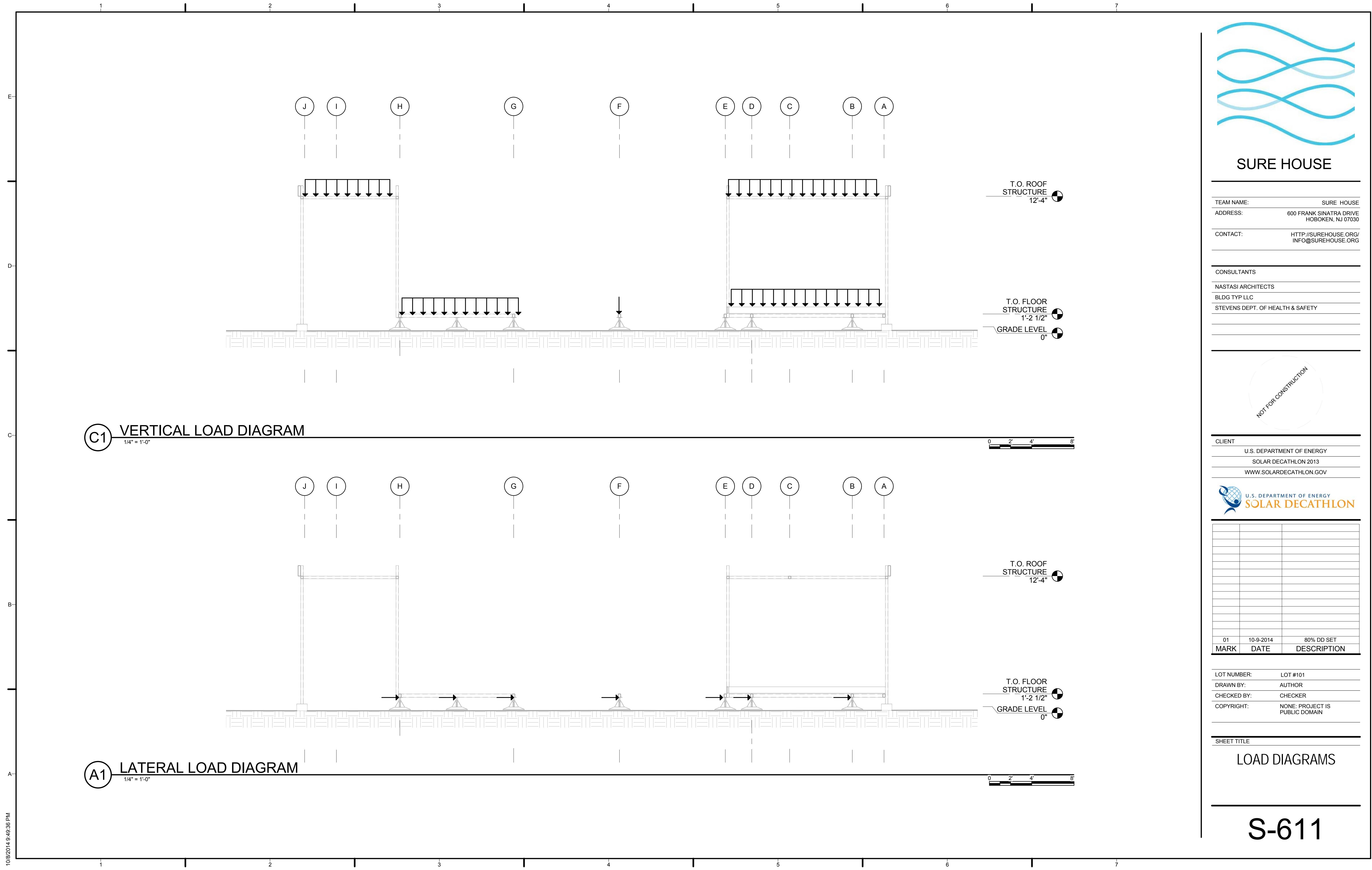
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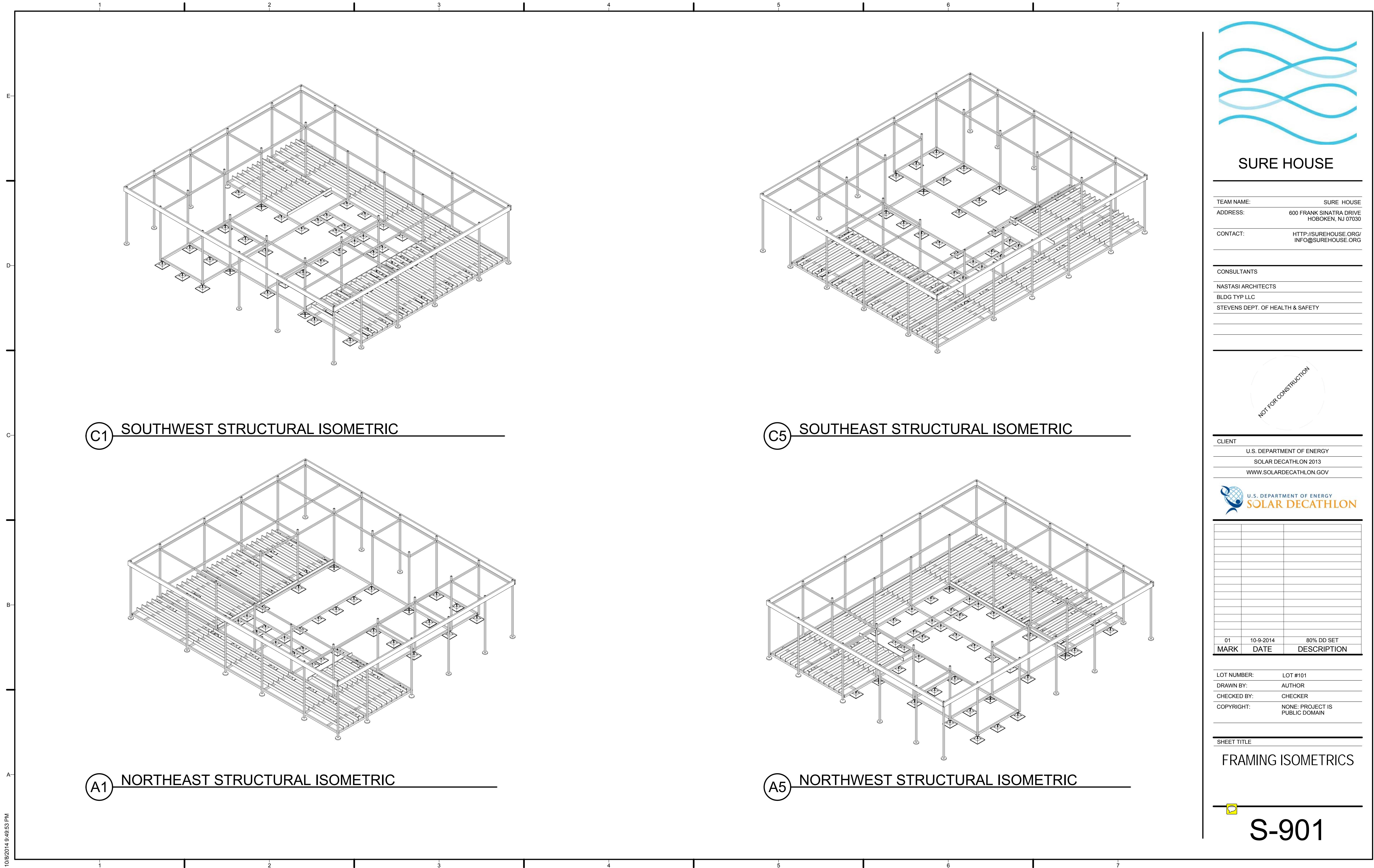
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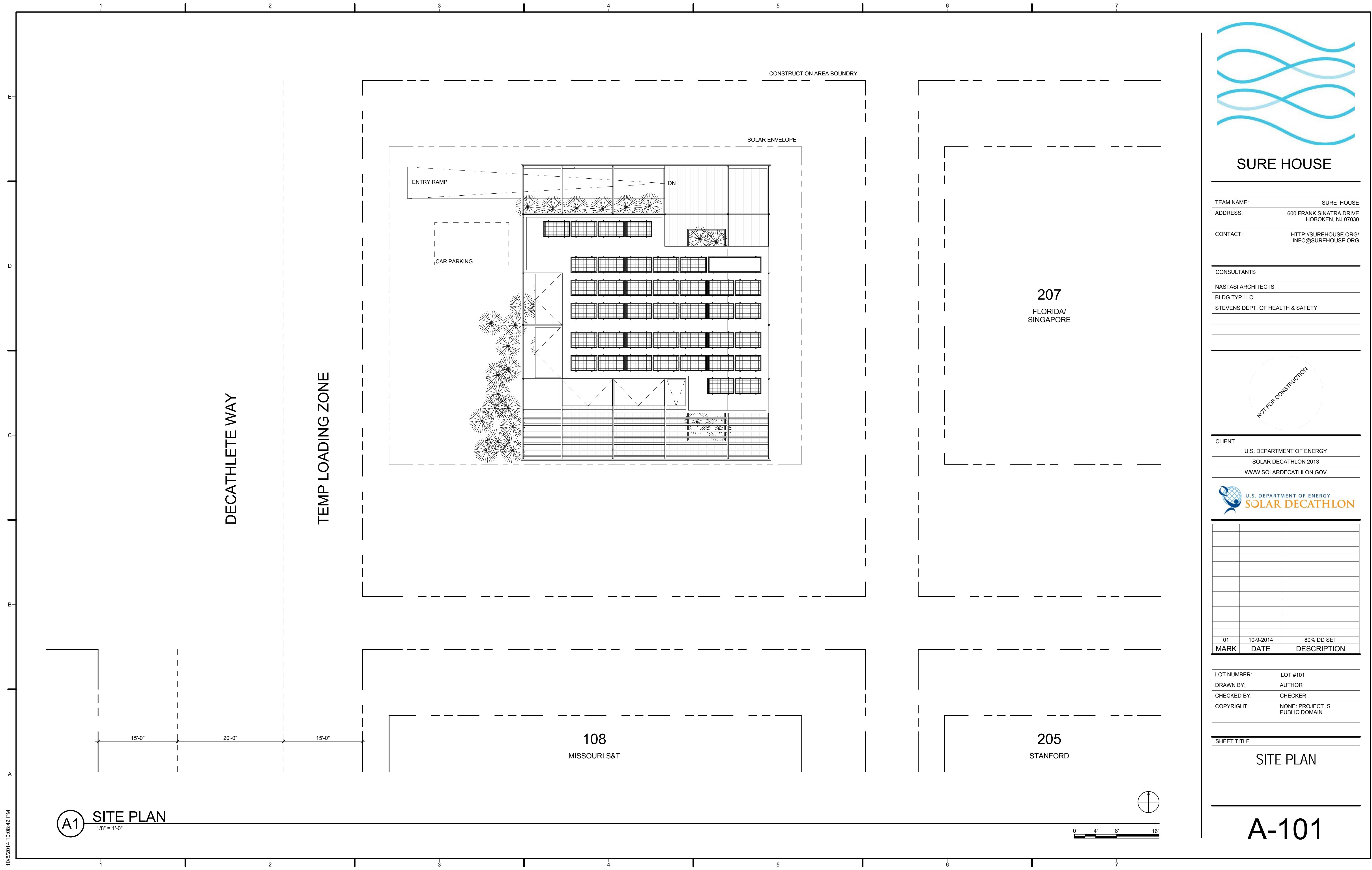
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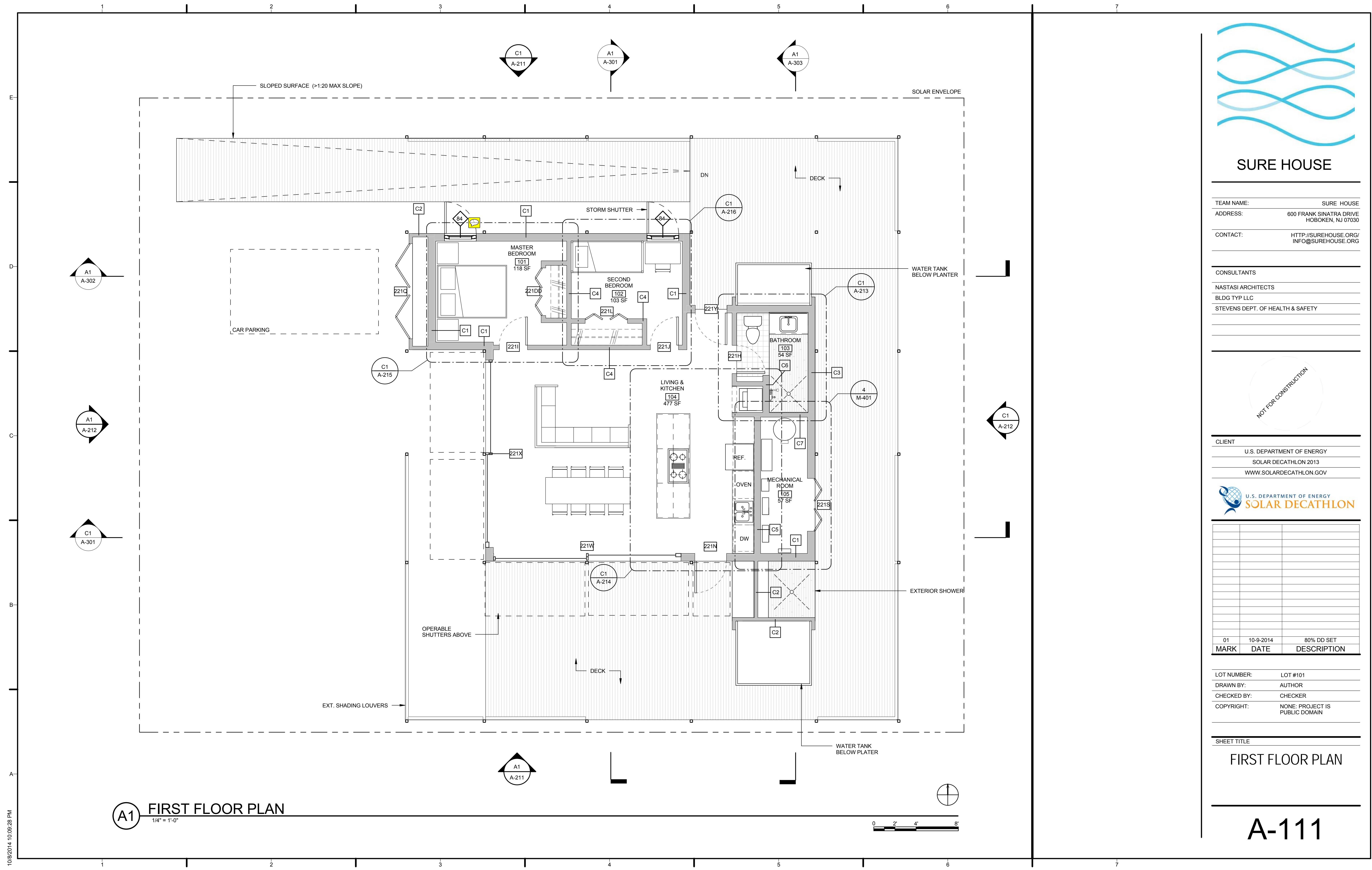
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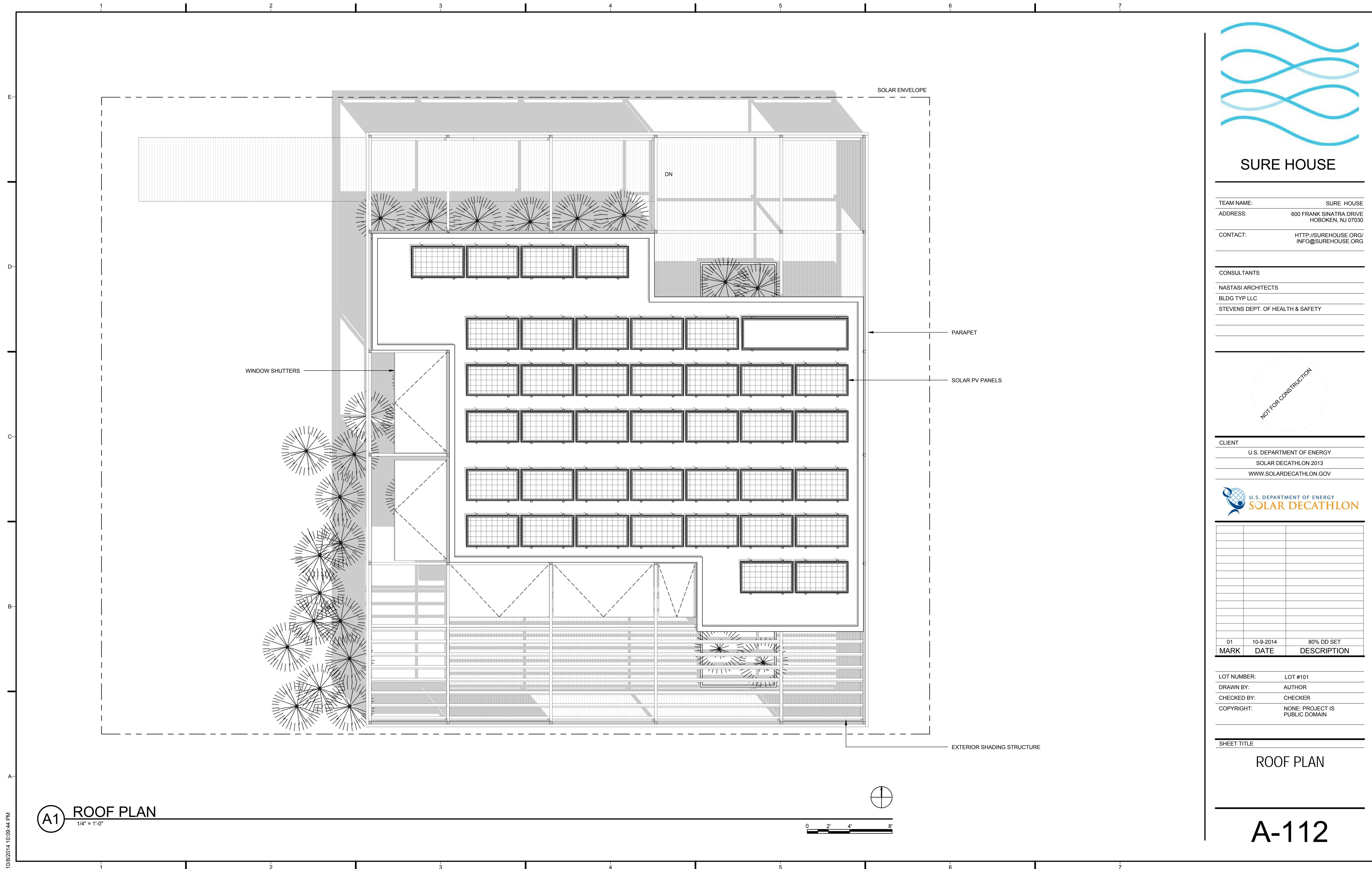
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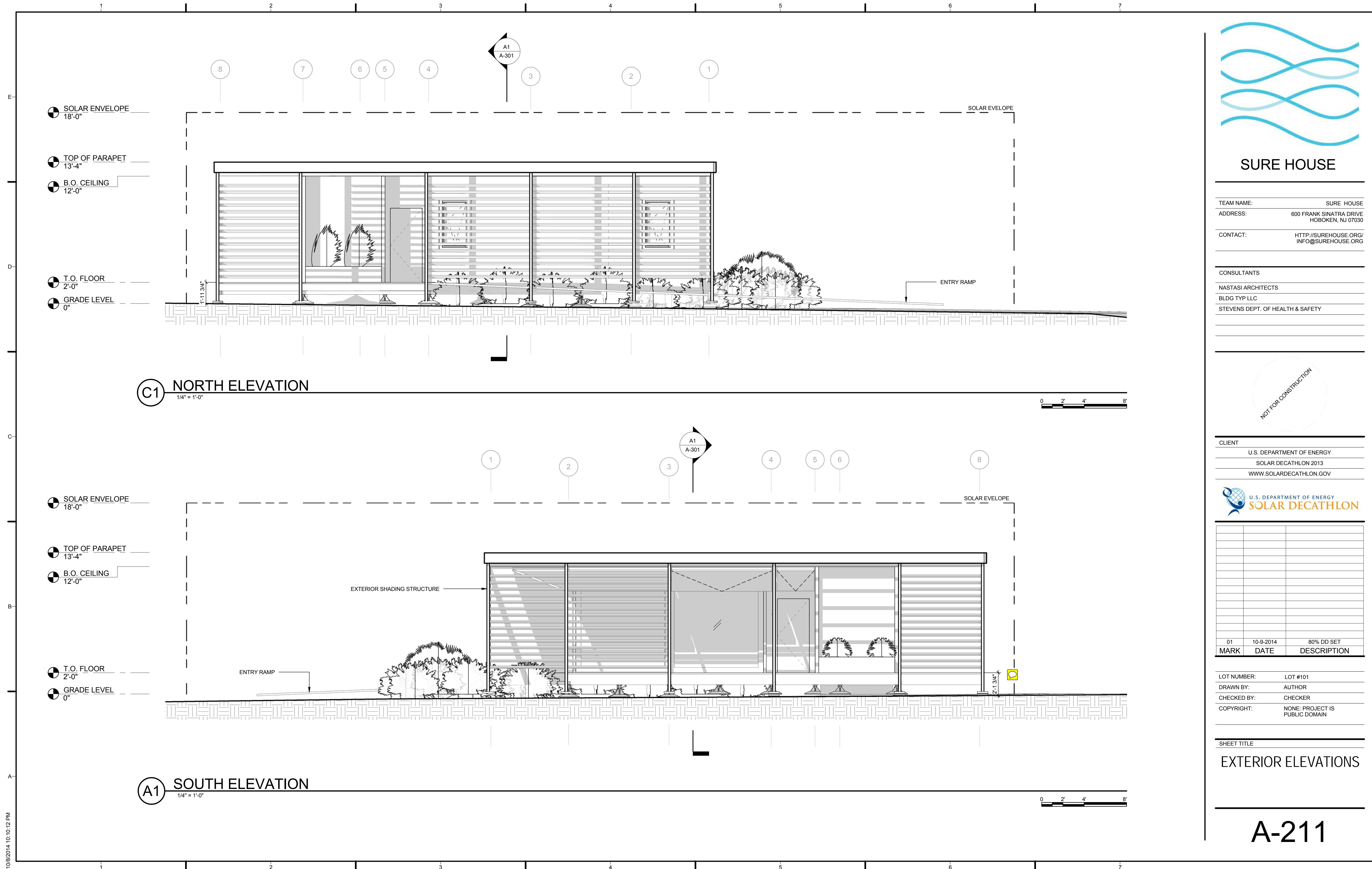


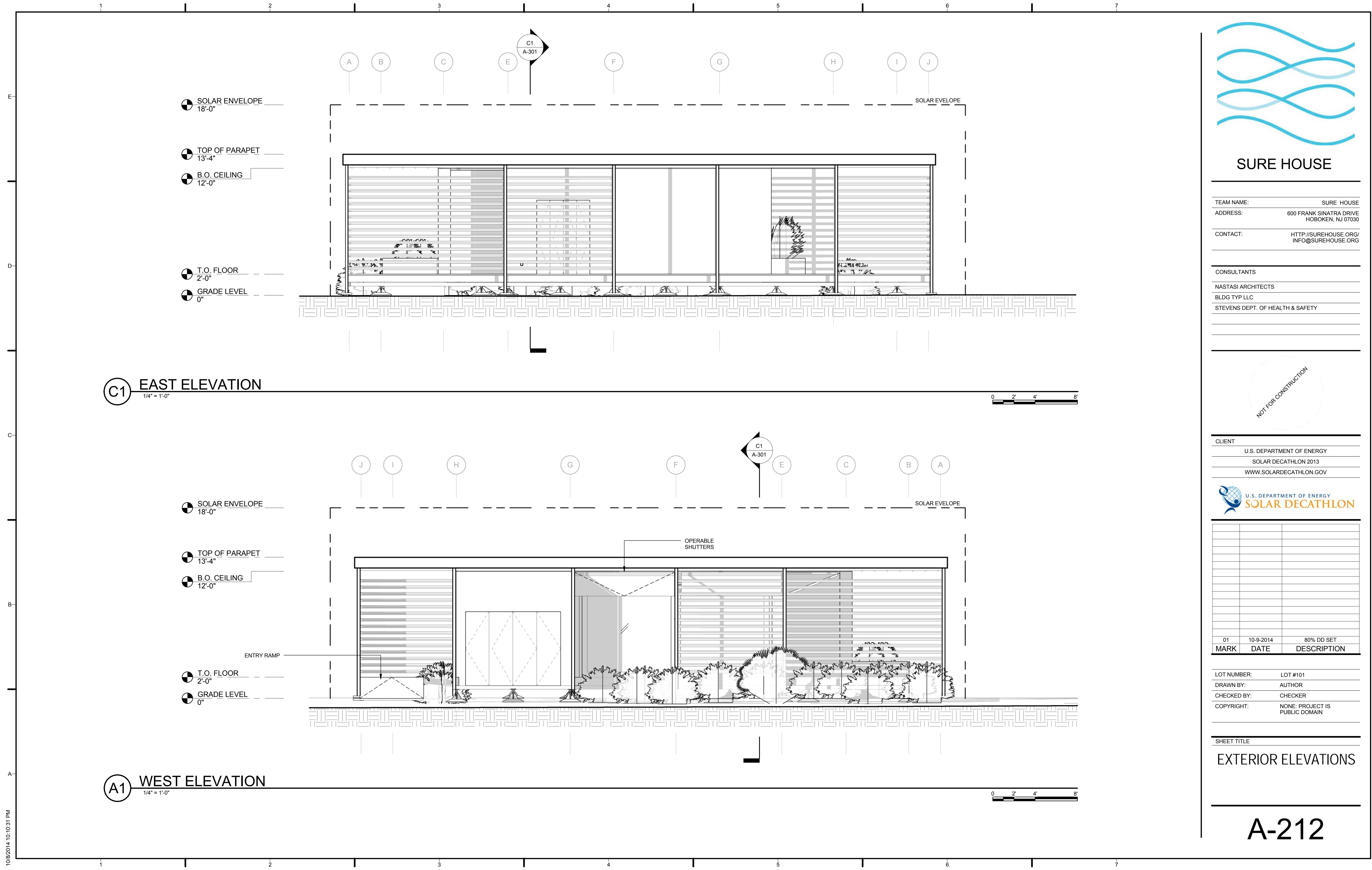


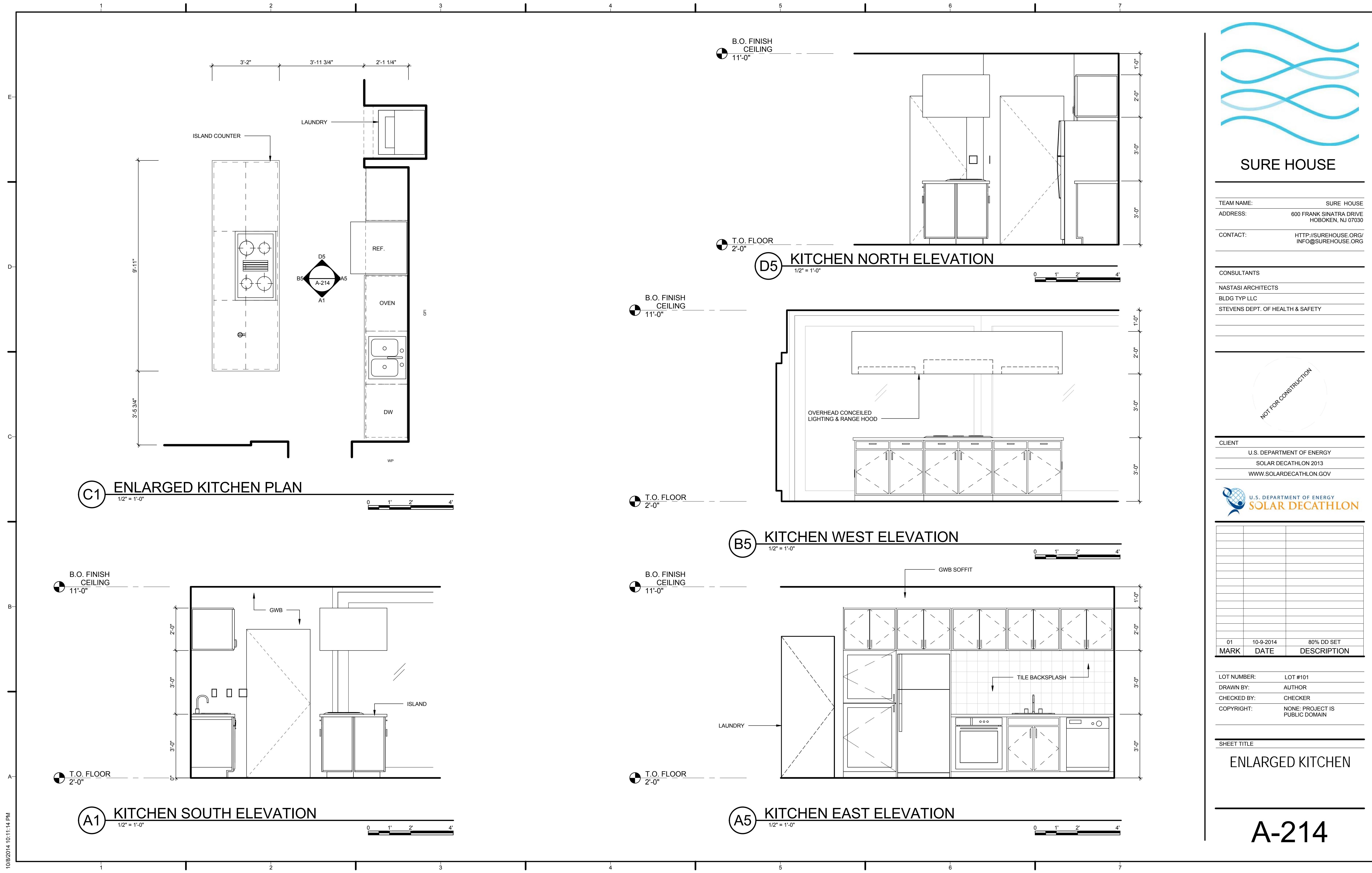


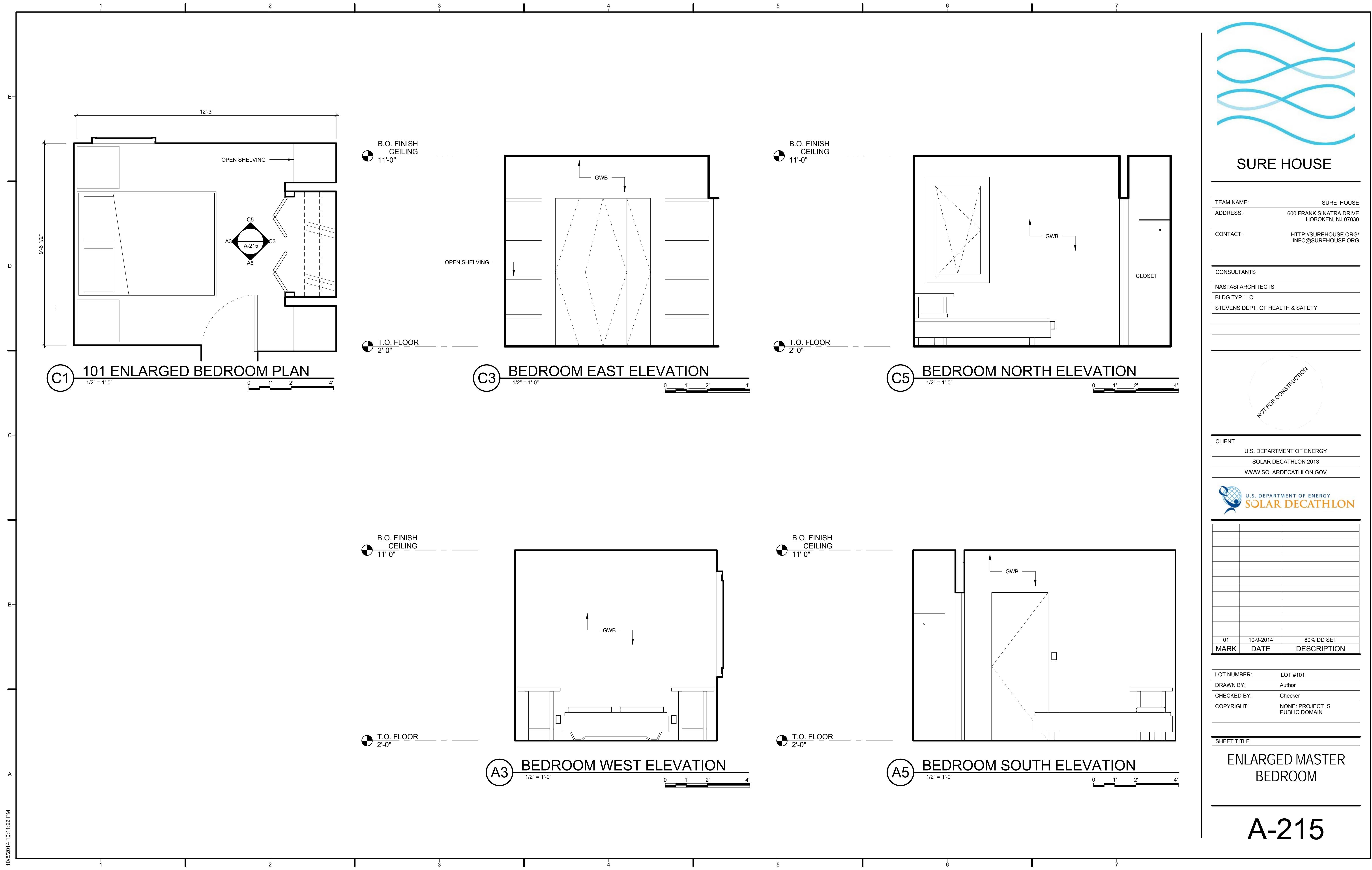


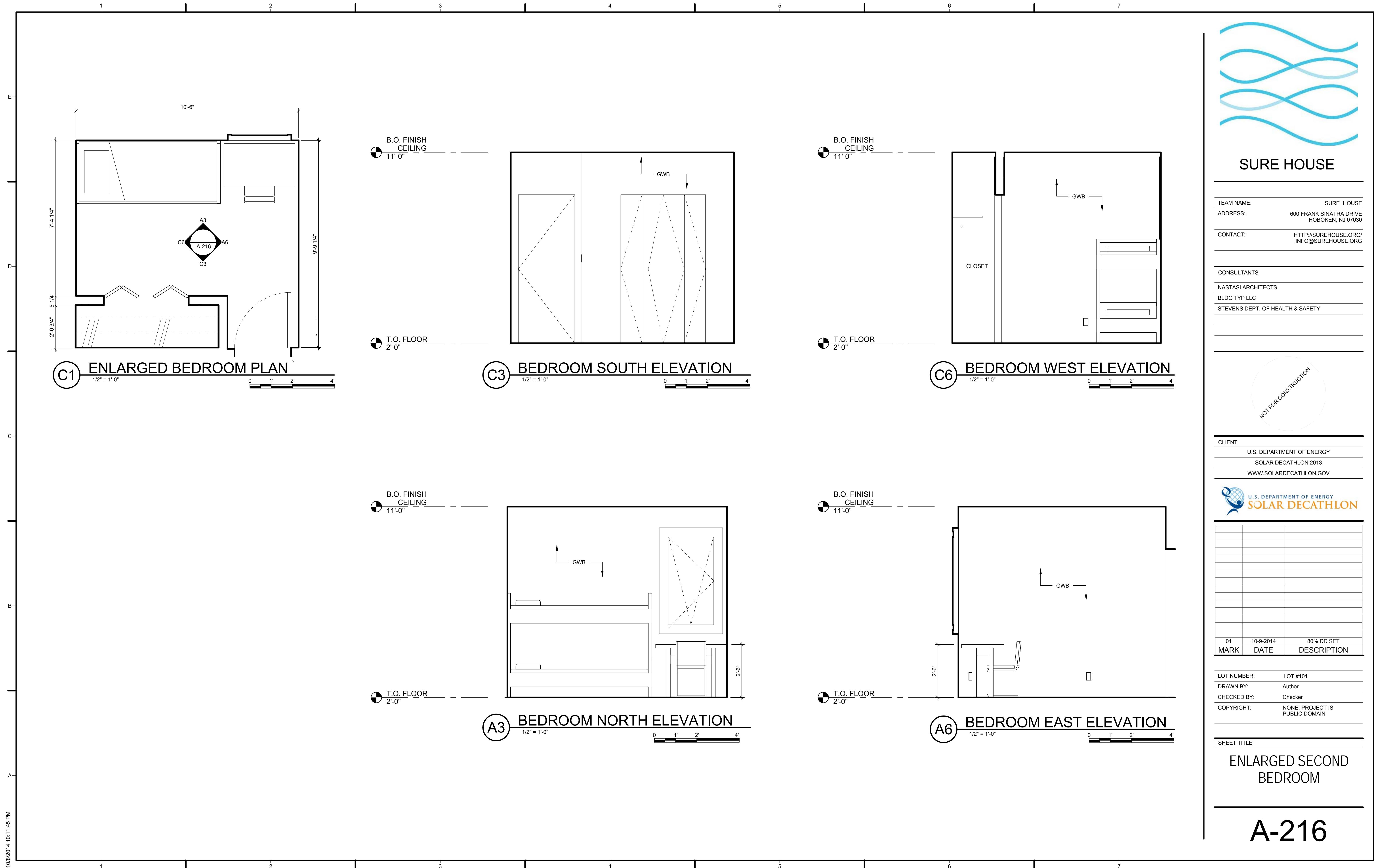


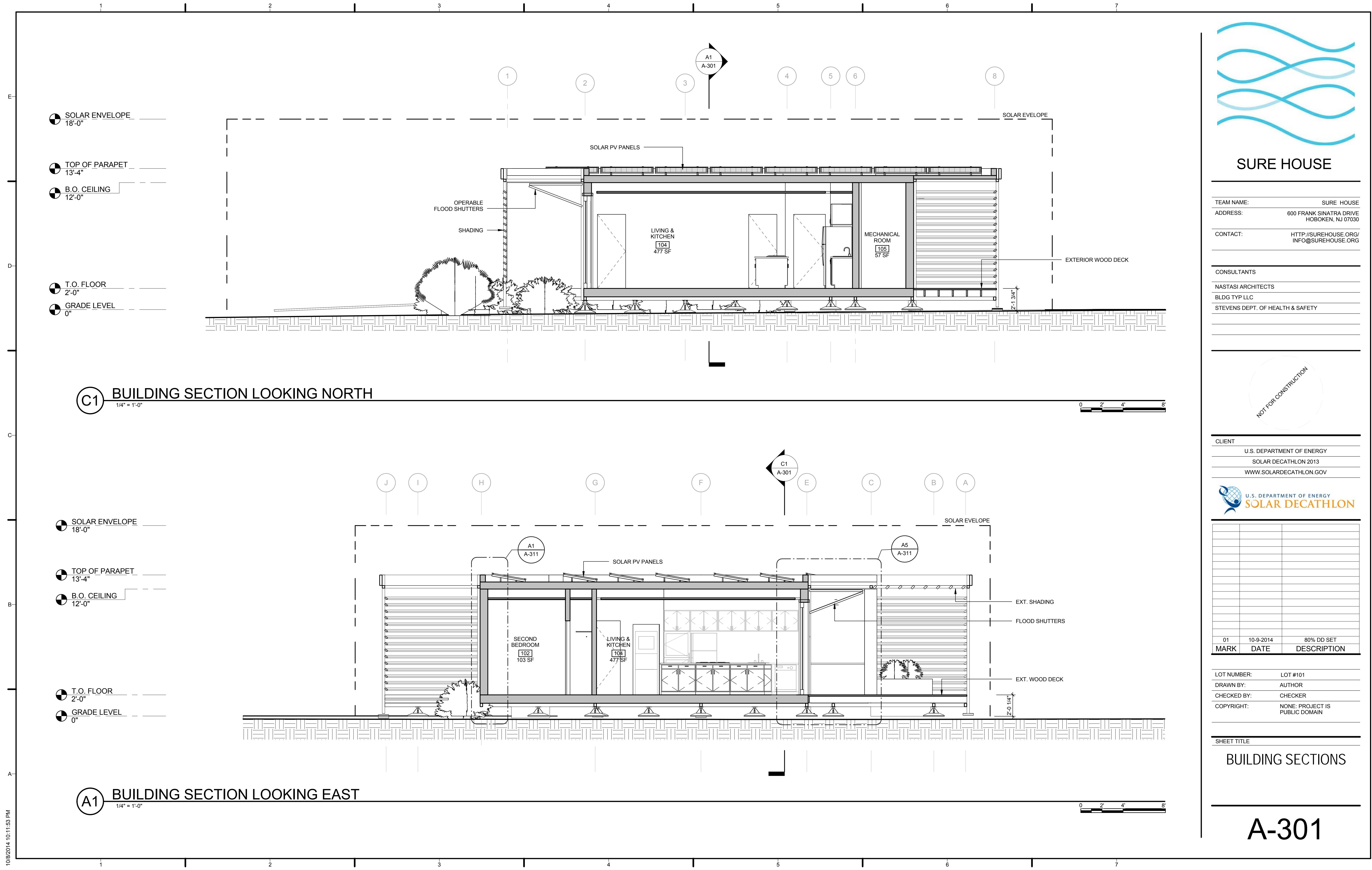


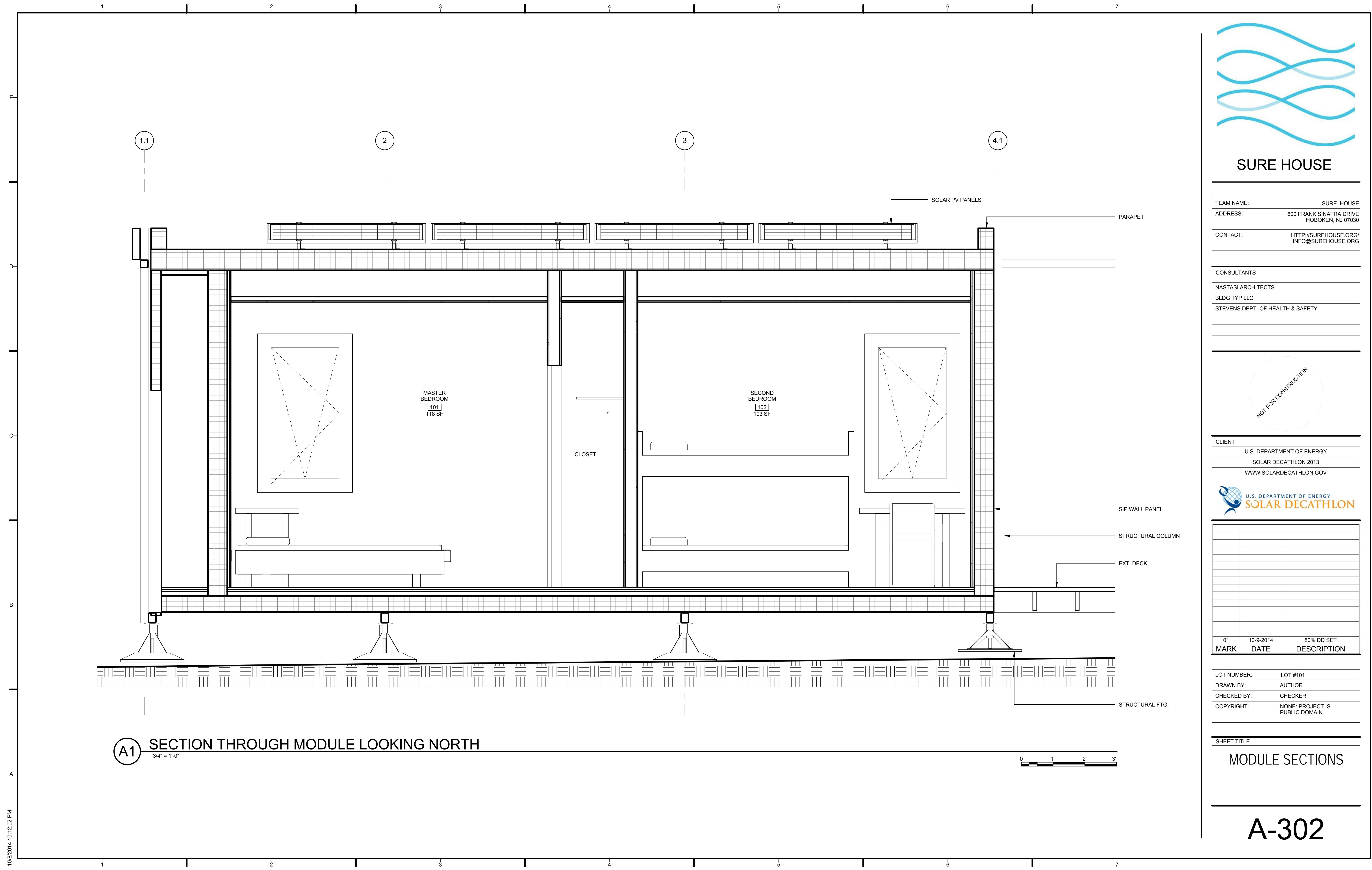


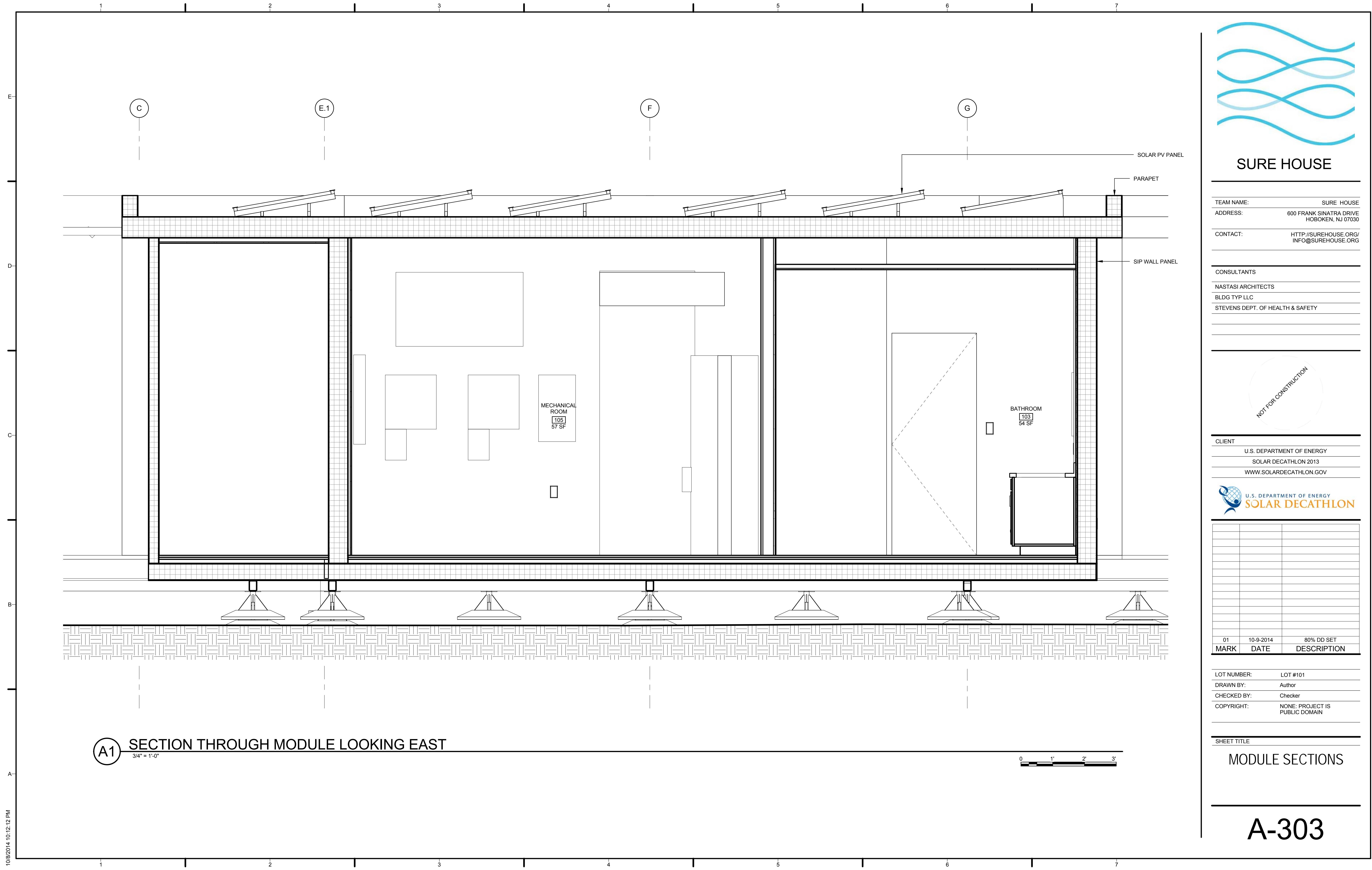


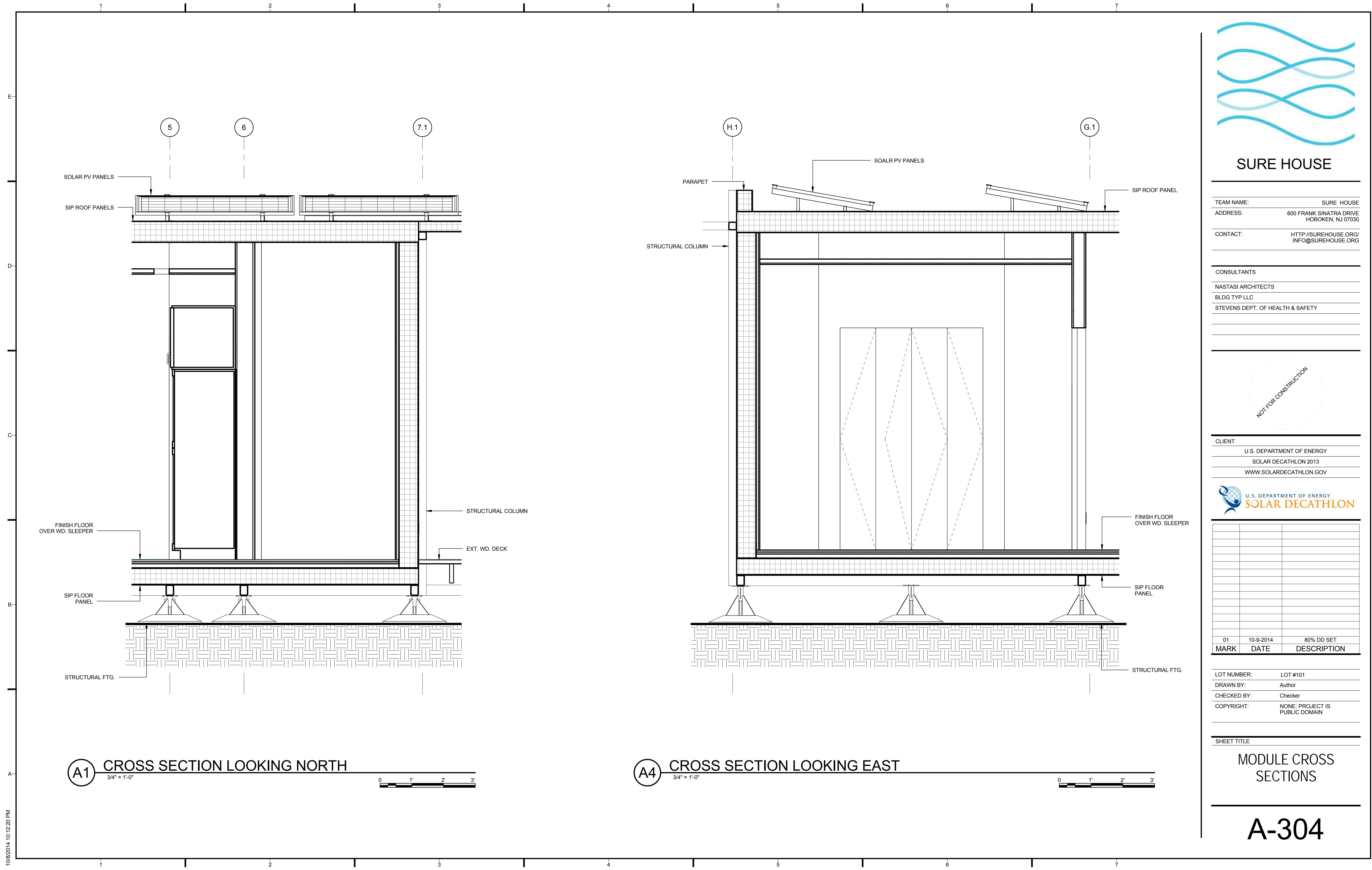


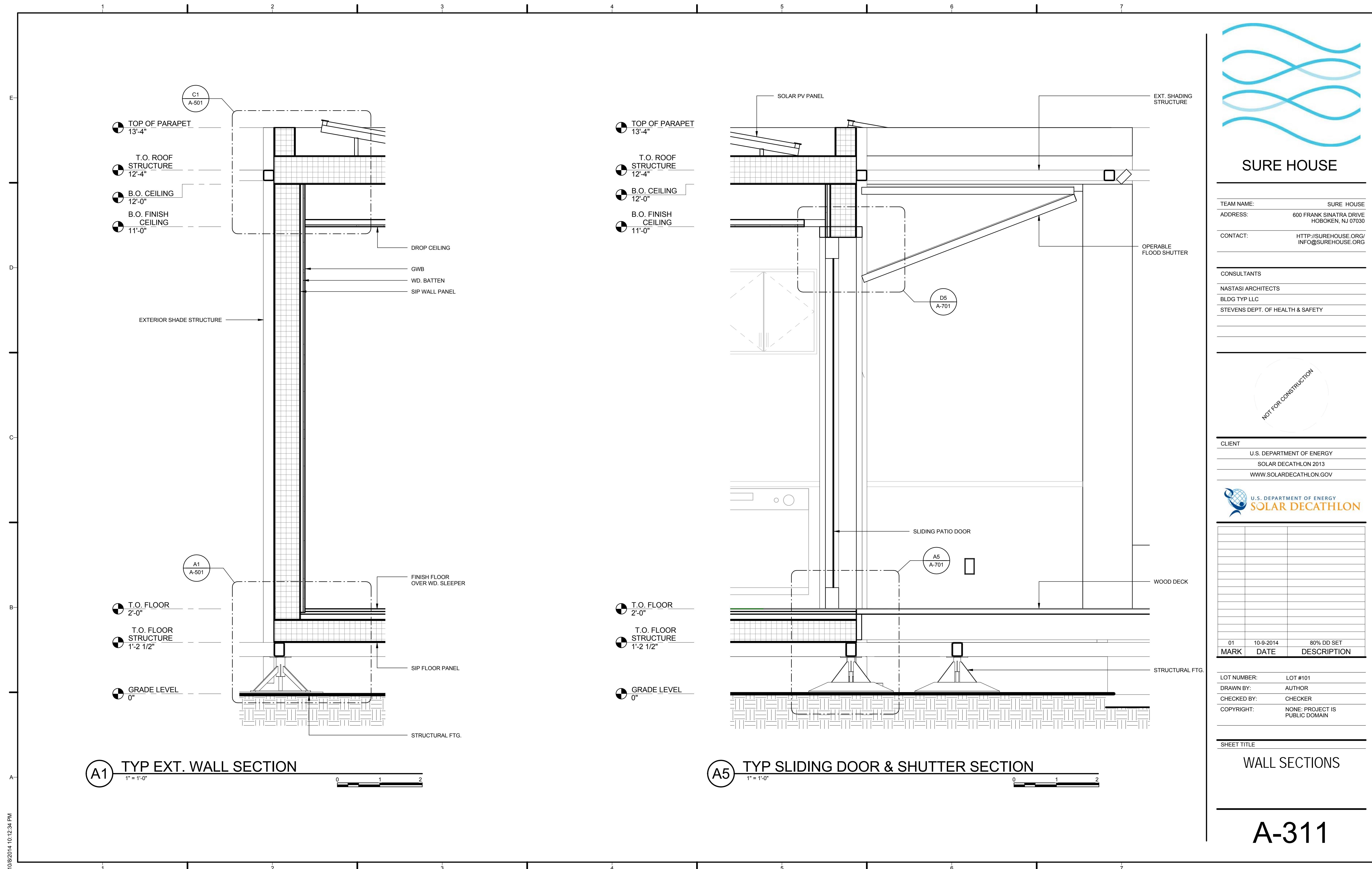


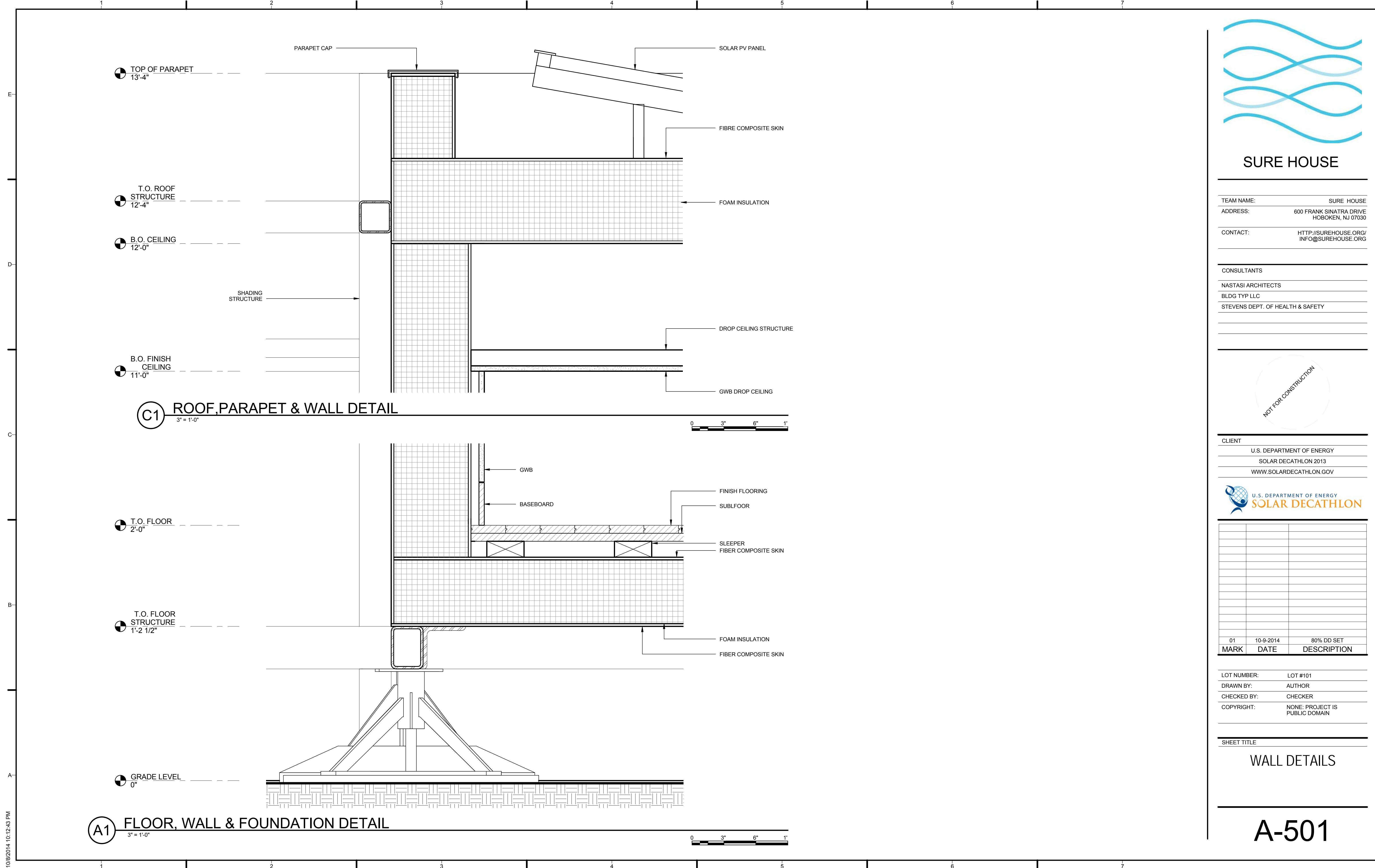


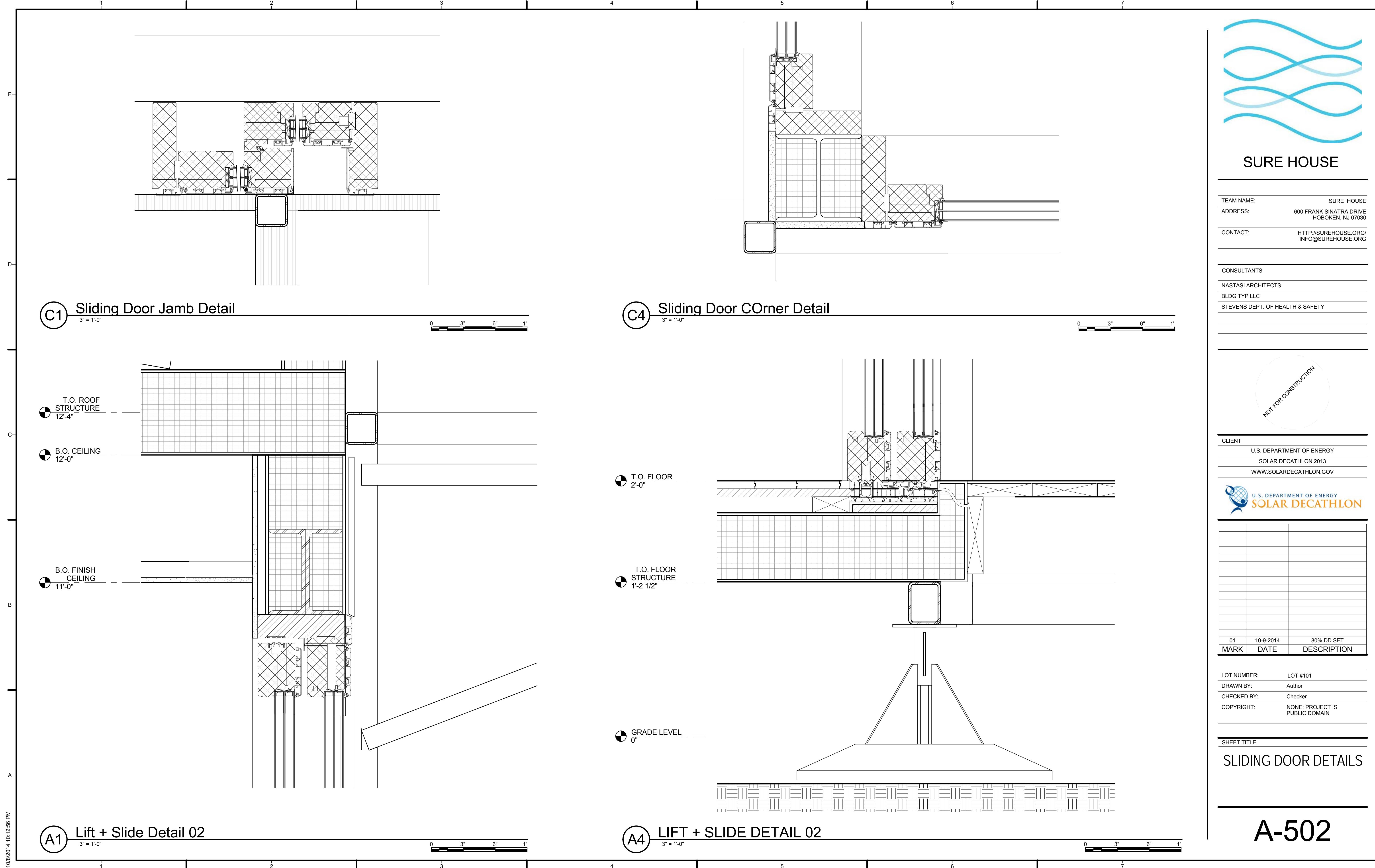


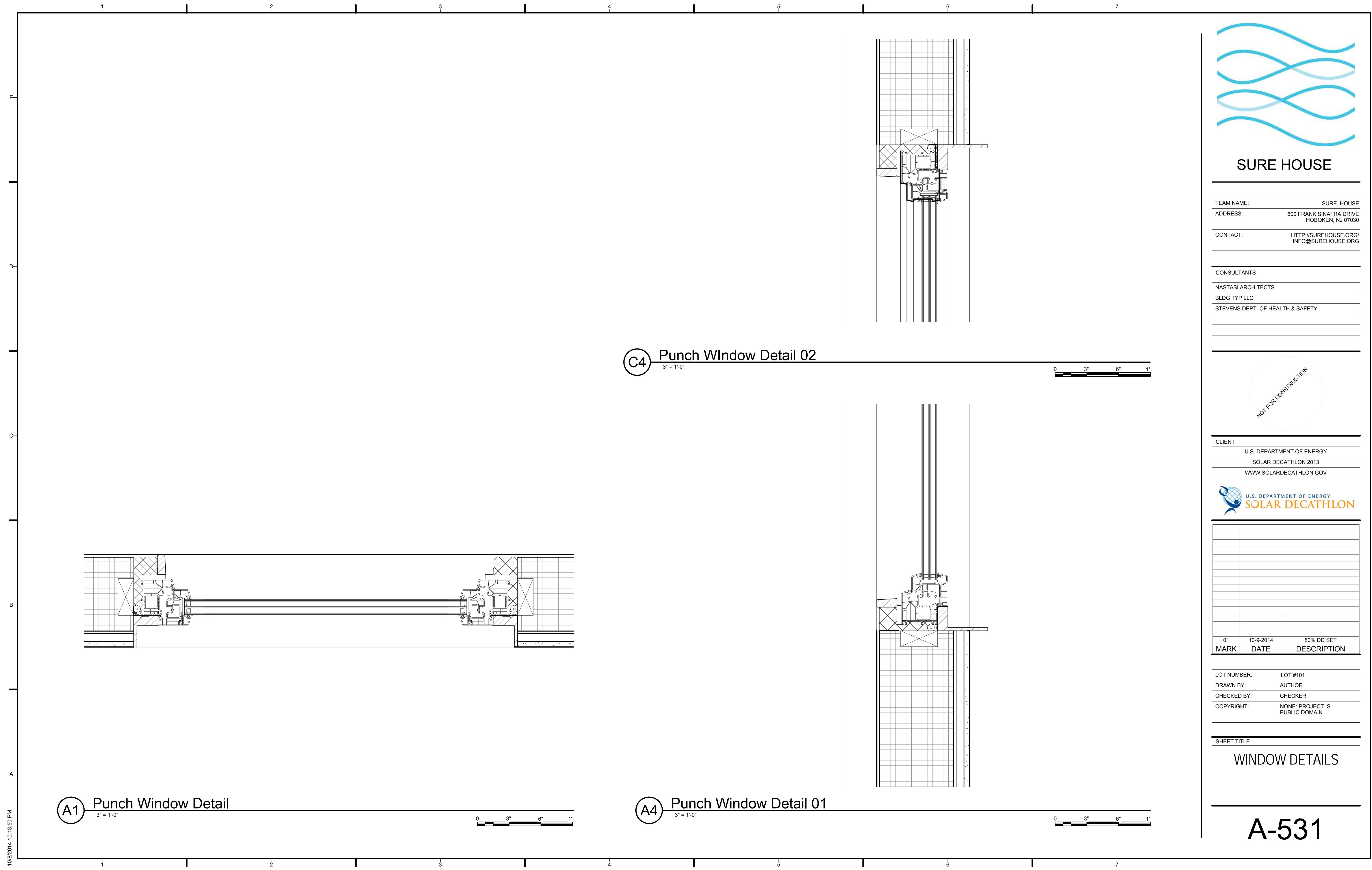






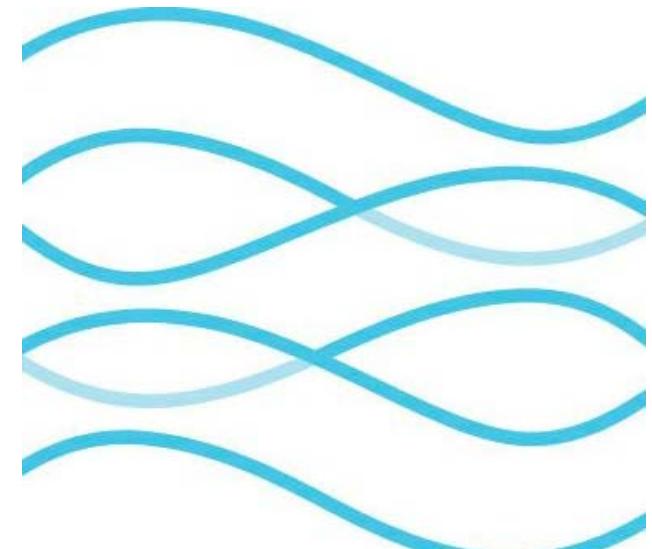
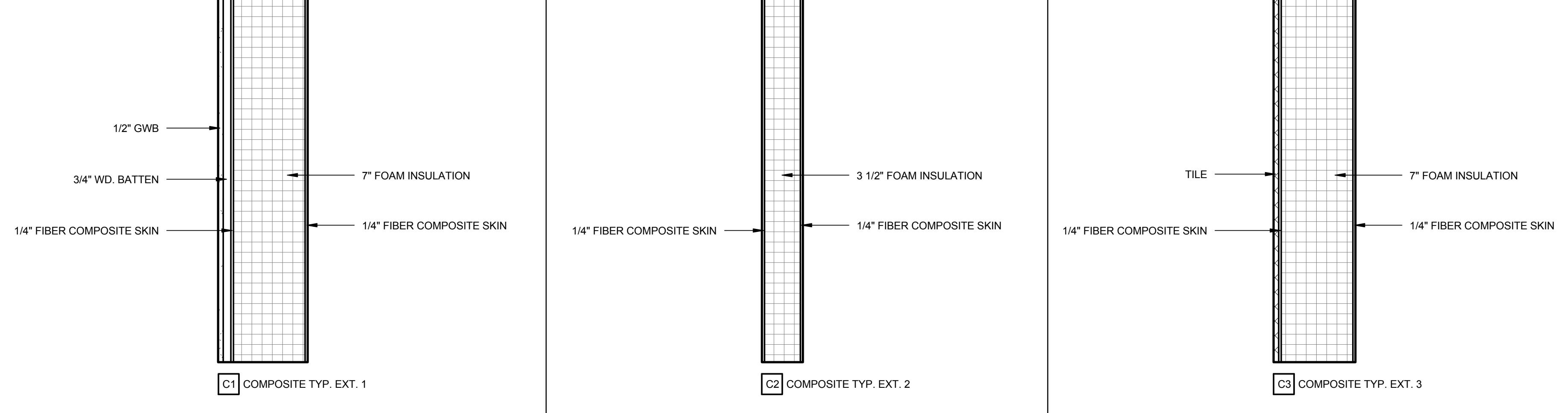






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EXTERIOR WALL PARTITION TYPES


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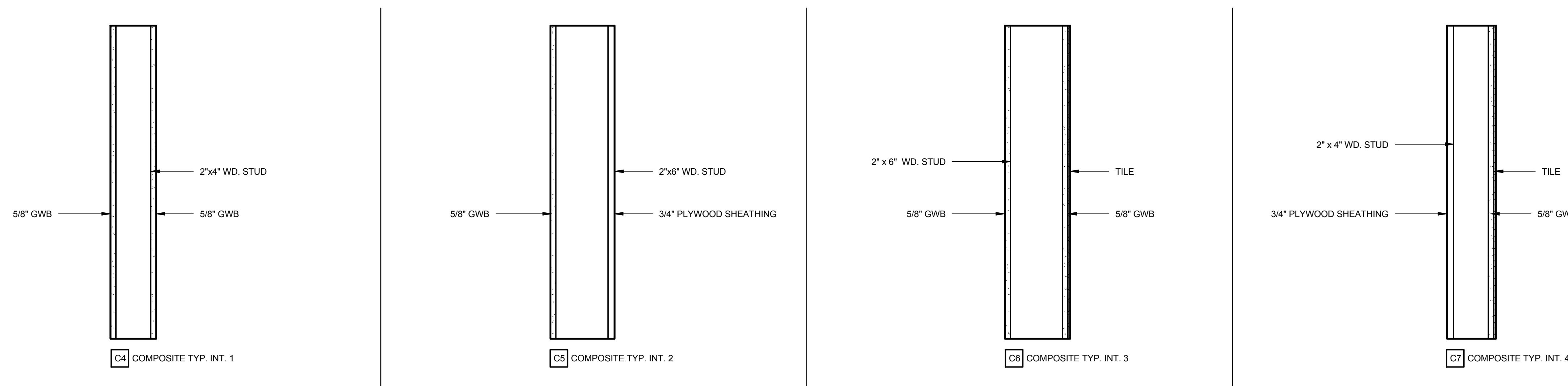
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EXTERIOR WALL PARTITION TYPES



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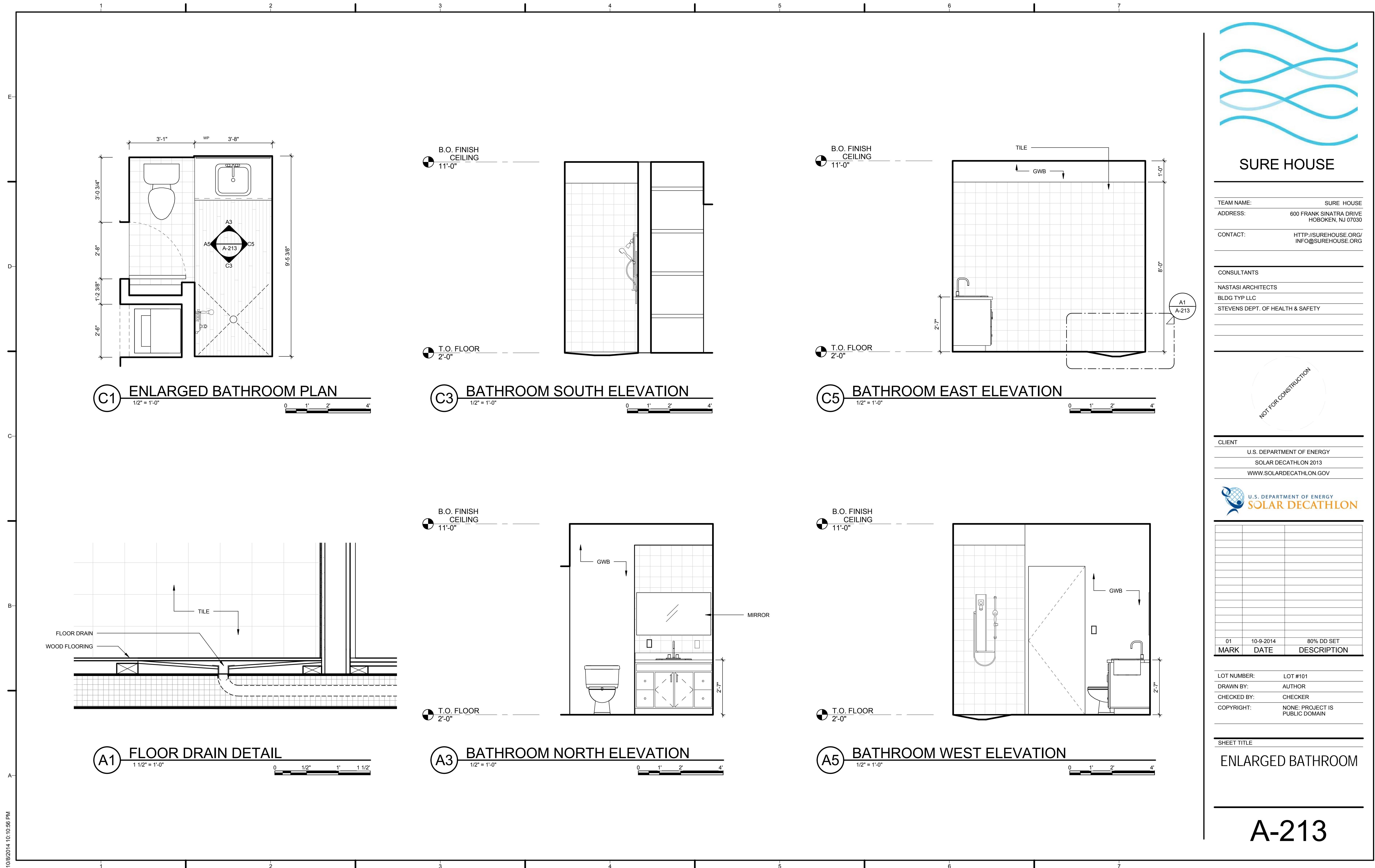
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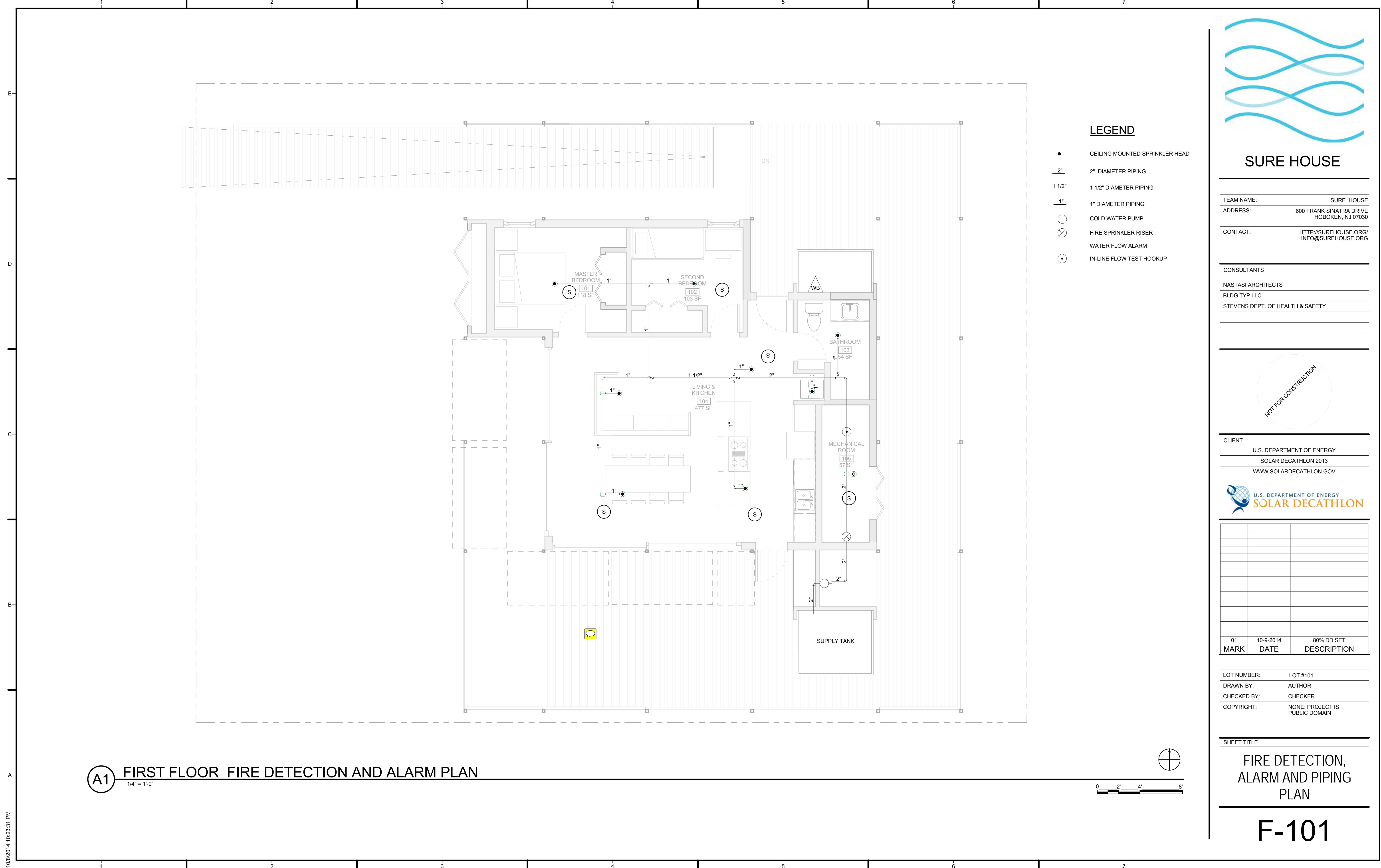
A-601

00_WALL TYPE SCHEDULE										
wt	Type Mark	Function	Width	Count	Length	Area	Cost	Fire Rating	Thermal Resistance (R)	
COMPOSITE TYP EXT 1	C1	Exterior	8 3/4"	9	119'-3 3/4"	769 SF				
COMPOSITE TYP EXT 2	C2	Exterior	4"	9	31'-11 1/8"	258 SF				
COMPOSITE TYP EXT 3	C3	Exterior	8"	2	13'-11 3/4"	135 SF				
TYP INT 1	C4	Interior	5 1/4"	11	68'-0 1/4"	518 SF				
TYP INT 2	C5	Interior	7 3/8"	1	13'-5 7/8"	129 SF				
TYP INT 3	C6	Interior	7 1/2"	1	3'-8 11/16"	35 SF				
TYP INT 4	C7	Interior	5 5/8"	1	4'-3 1/4"	42 SF				









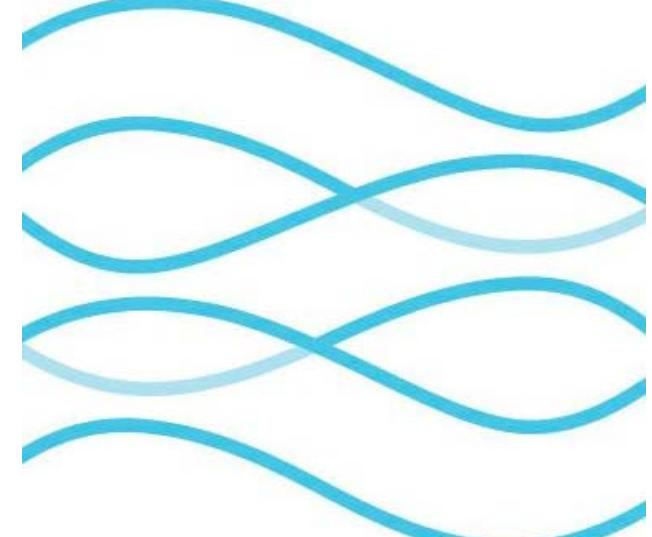


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PLUMBING DRAWING LIST

SHEET NO.	SHEET NAME
P-101	PLUMBING SITE PLAN
P-102	DOMESTIC SUPPLY
P-103	DOMESTIC RETURN
P-601	SCHEDULES
P-901	PLUMBING SUPPLY RISER
P-902	PLUMBING RETURN RISER



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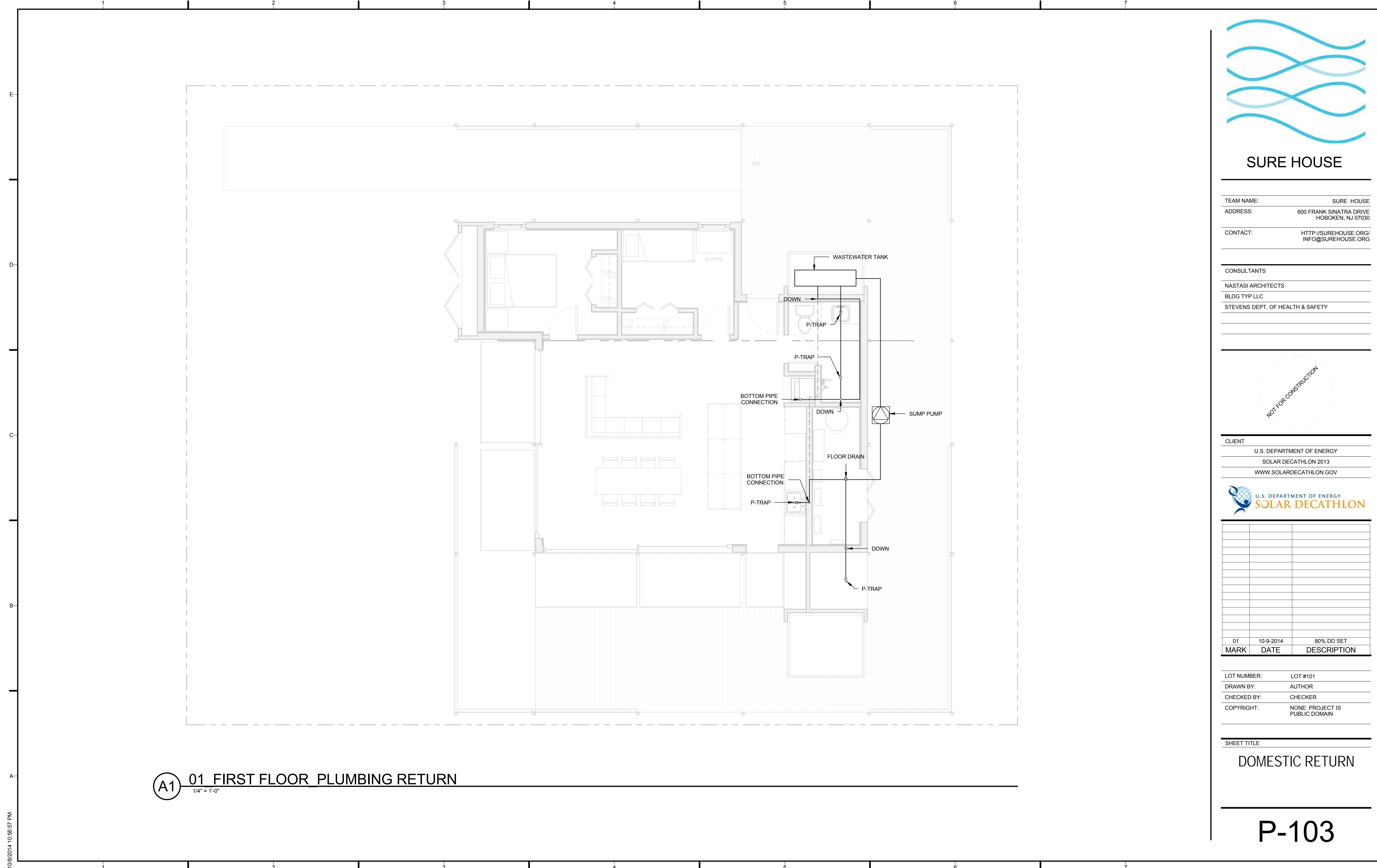
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SHEET TITLE

PLUMBING DRAWING LIST SYMBOLS AND NOTES

P-001





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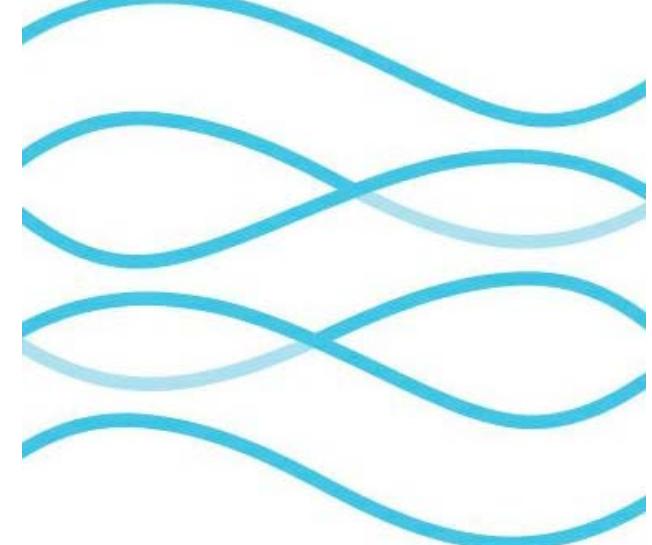
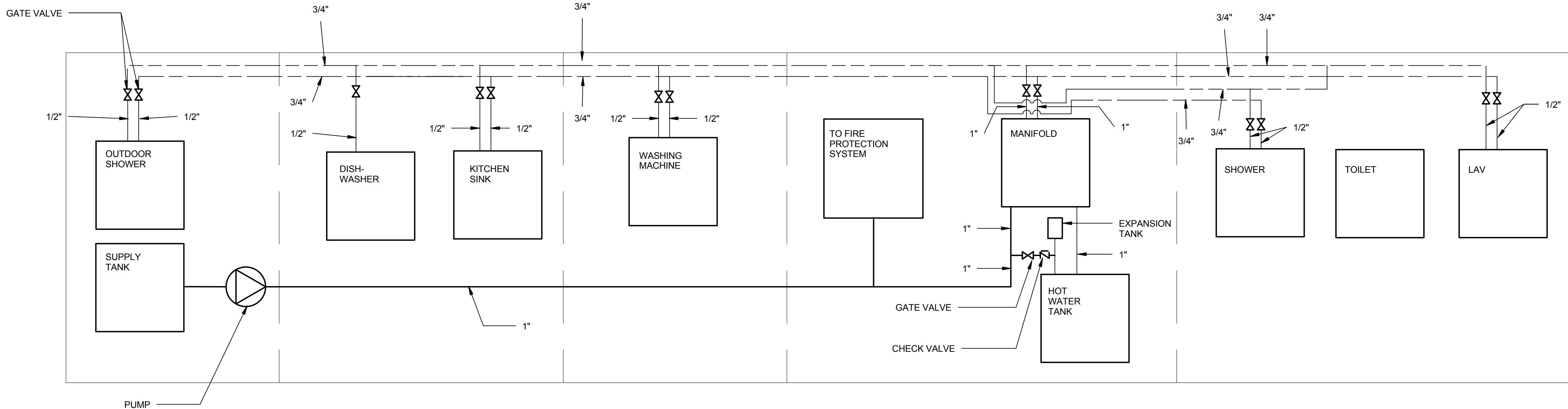
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(B1) PLUMBING SUPPLY RISER
3/8" = 1'-0"



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ADDRESS: 600 FRANK SINATRA DRIVE
HOBOKEN, NJ 07030
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SHEET TITLE
PLUMBING SUPPLY
RISER

P-901

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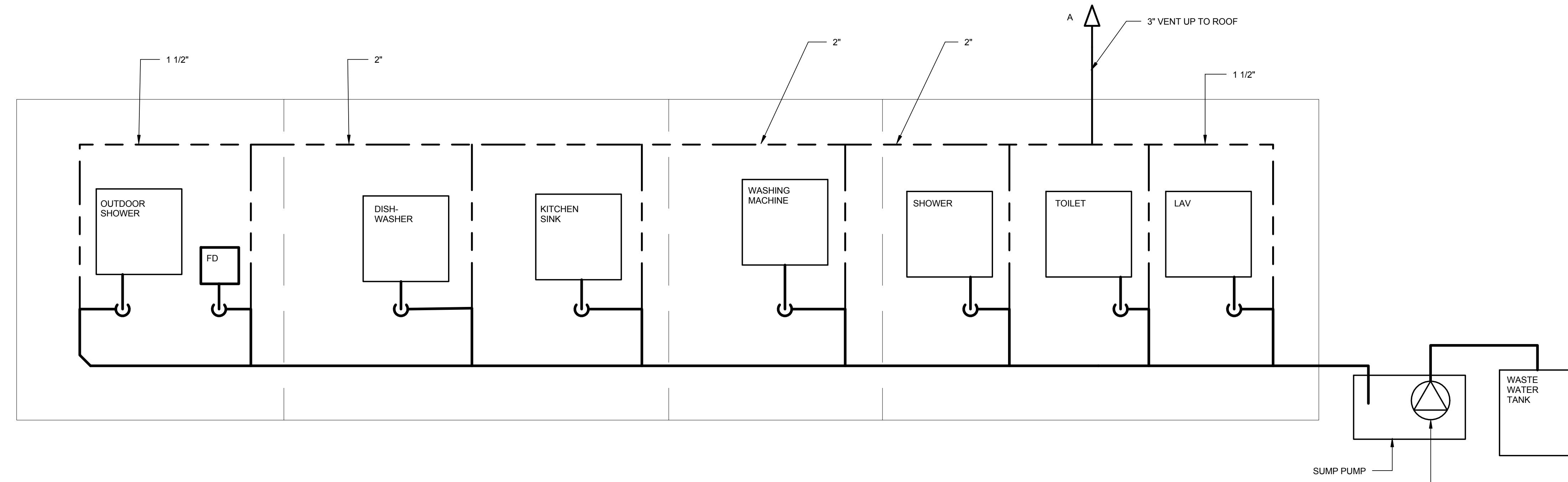
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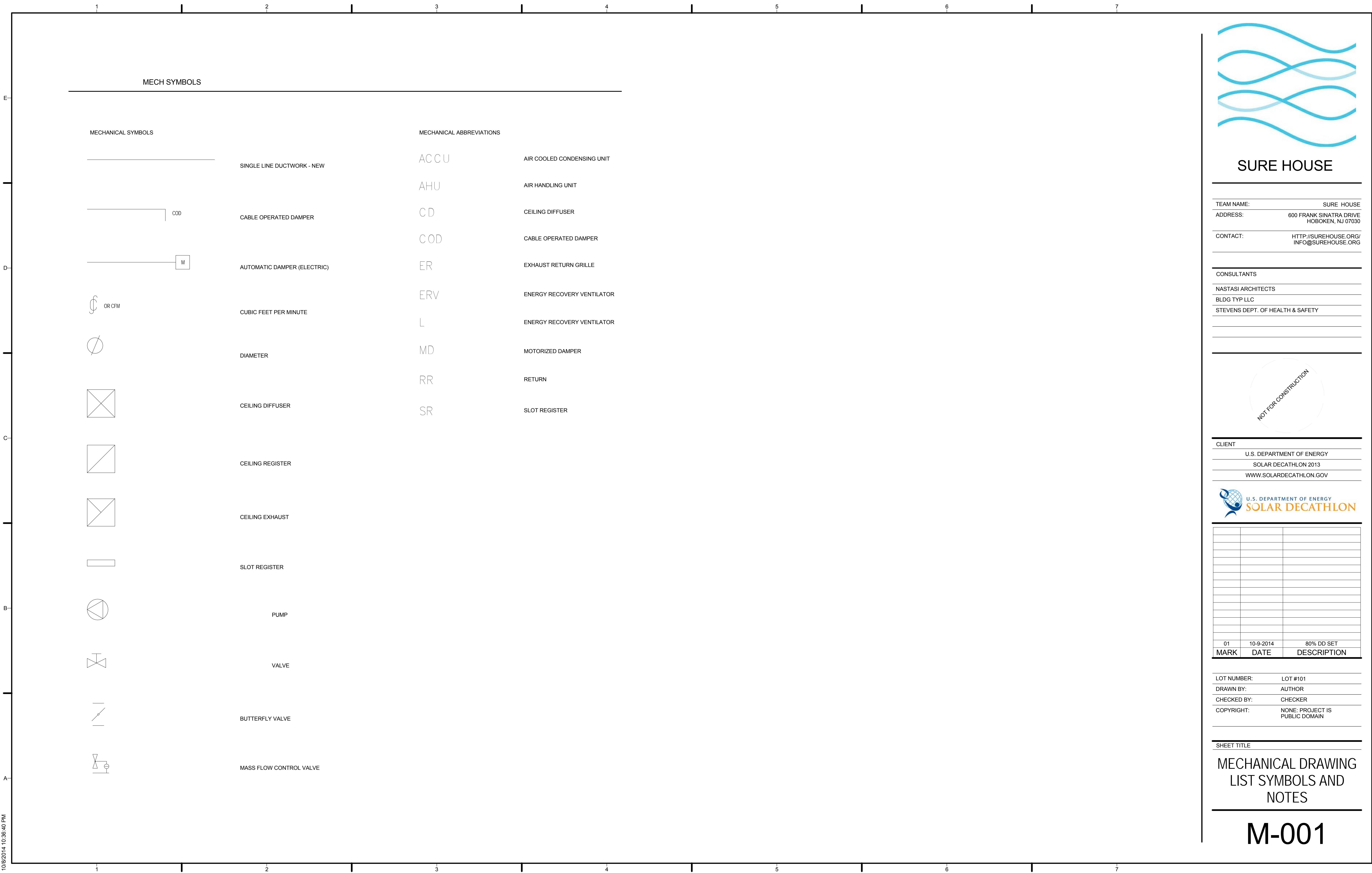
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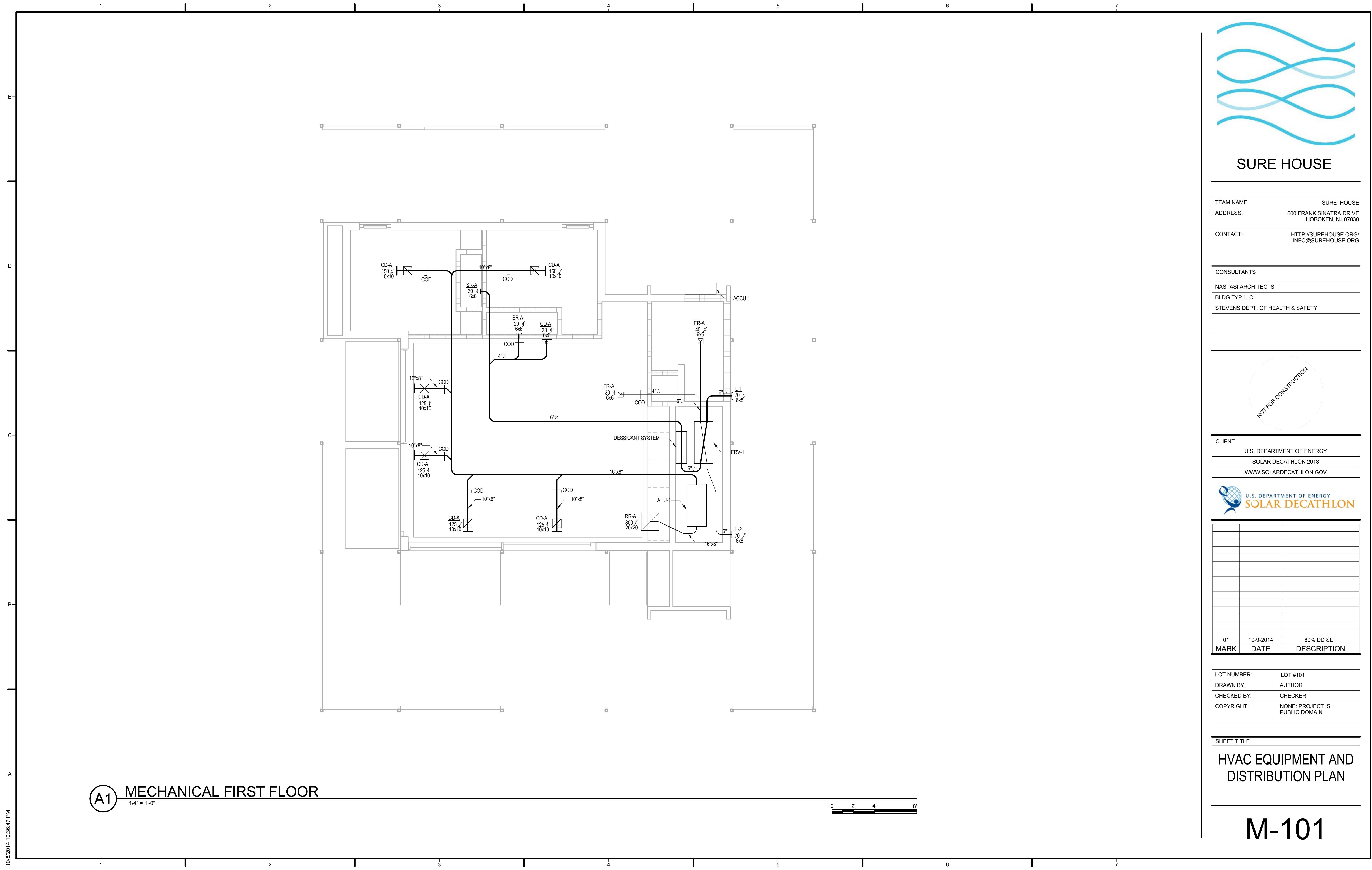


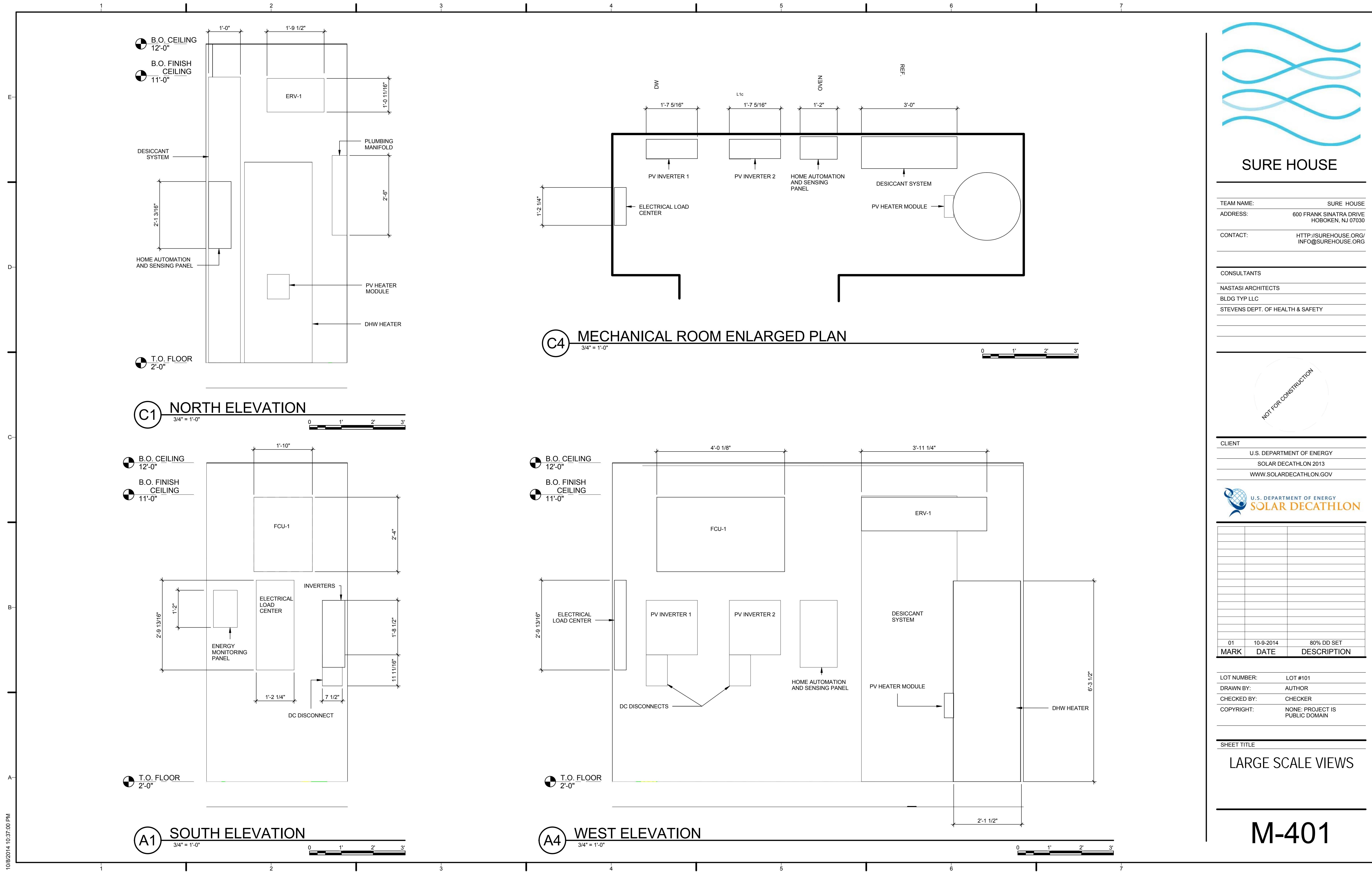
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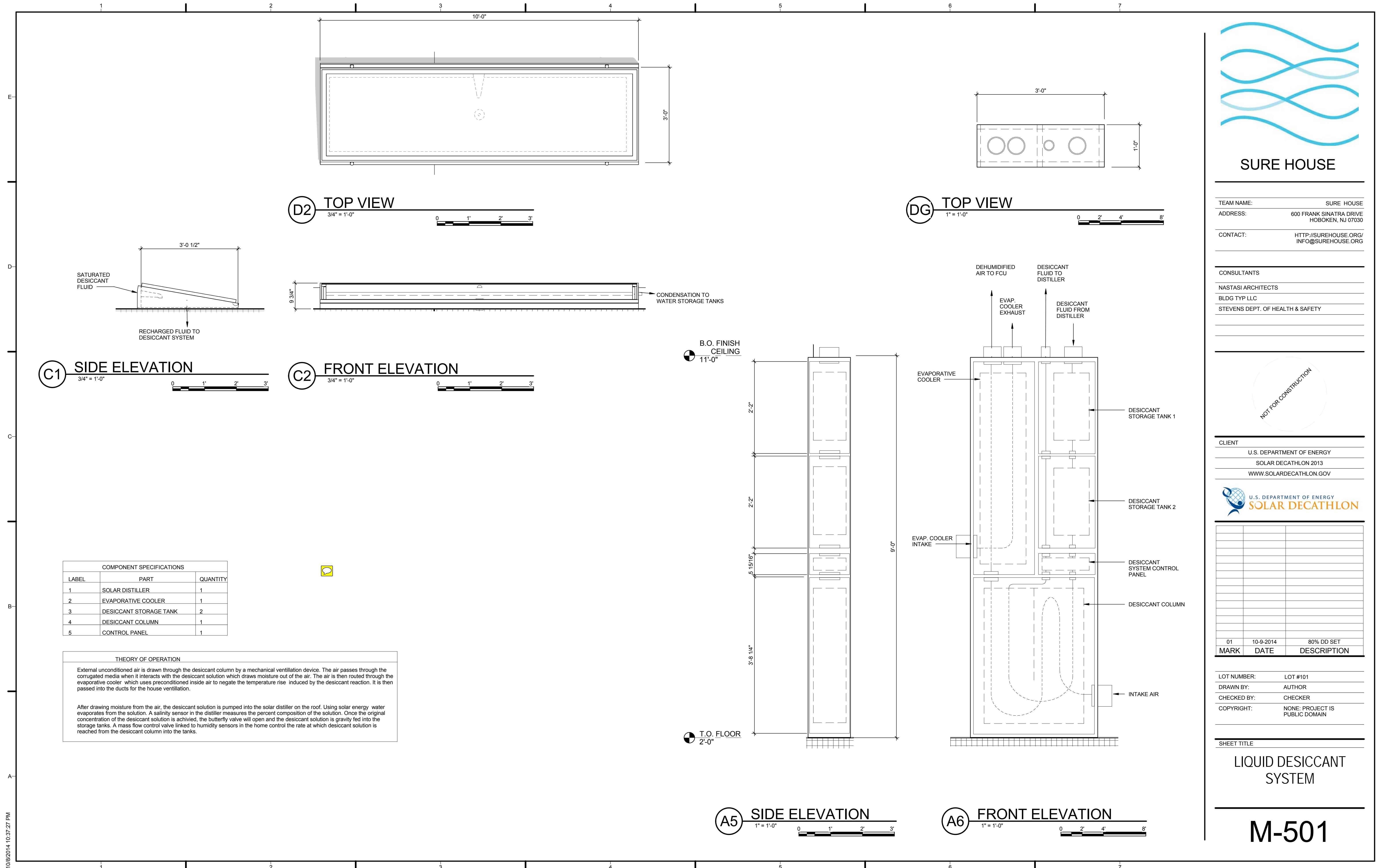
**PLUMBING RETURN
RISER**

P-902

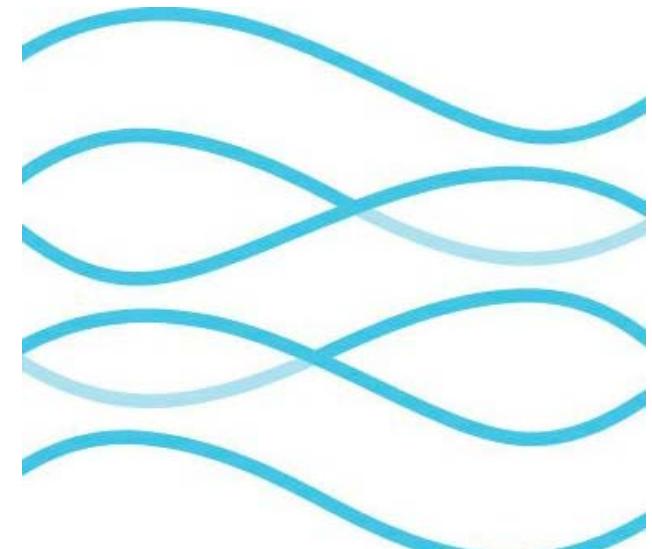








1 2 3 4 5 6 7



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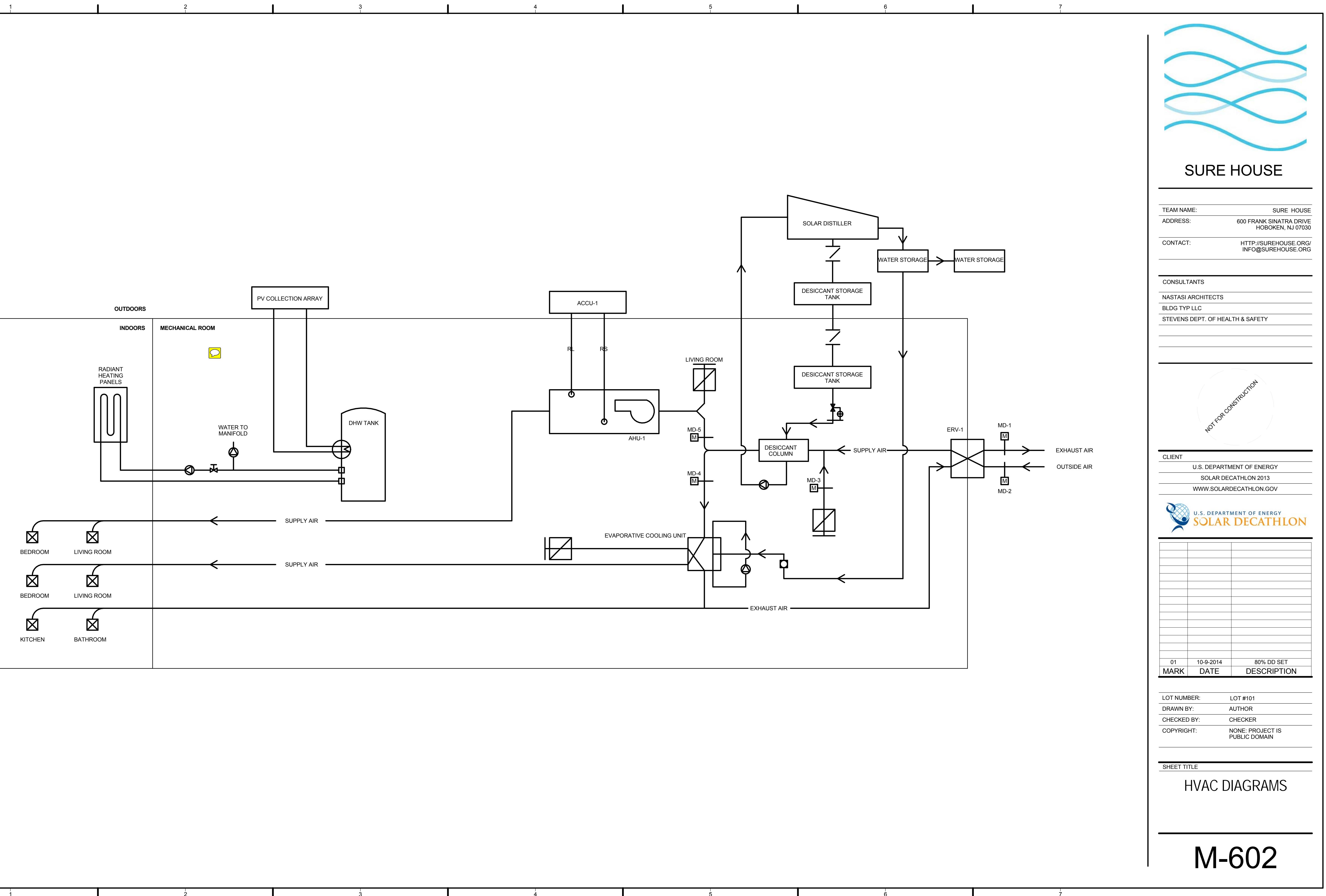
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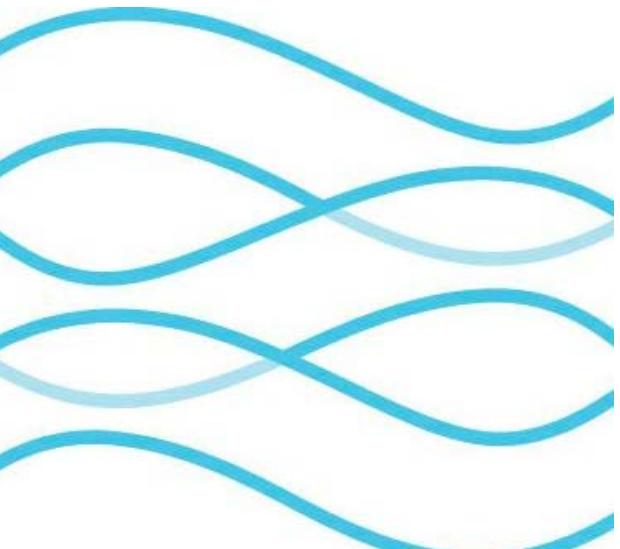
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SHEET TITLE
 SCHEDULES

M-601

MARK	DESCRIPTION	MANUFACTURER	MODEL	UNIT DIMENSION (in)				ELECTRICAL		
				WIDTH	HEIGHT	DEPTH	DIAMETER	AMPS	VOLTS	VA
M01	HORIZONTAL AIR HANDLER (INDOOR UNIT)	DAIKIN	FTQ24PBVJU	48.13	22.00	26.00	N/A	12	240 VAC	2880
M02	SKYAIR HEAT PUMP (PUTDOOR CONDESSING UNIT)	DAIKIN	RZQ24PVJU9	35.44	30.32	12.63	N/A	10.3	240 VAC	2472
M03	ENERGY RECOVERY VENTILATOR	ZEHENDER	COMFOAIR 200	21.00	47.25	12.50	N/A	0.13	230 VAC	29.9
M04	XO ISLAND CHIMNEY RANGE HOOD	XO	XOBI36S	36.00	31.19	23.63	N/A	4	115 VAC	460
M05	DESSICANT SYSTEM UNIT	CUSTOM-BUILT	N/A	36.00	108.00	12.00	N/A	<6.8	120 VAC	816
M06	RADIANT PANELS	MESSANA								
DUCT ACCESSORIES										
M07	THREE WAY DIFFUSER	HART & COOLEY	A503MS/A503OB	10	3.5	10	N/A	N/A	N/A	N/A
M08	THREE WAY DIFFUSER	HART & COOLEY	A503MS/A503OB	6	3.5	6	N/A	N/A	N/A	N/A
M09	RETURN GRILLE	HART & COOLEY	659	6	1.625	4	N/A	N/A	N/A	N/A
M10	REUTRN GRILLE	HART & COOLEY	659	20	1.625	20	N/A	N/A	N/A	N/A
M11	CURVED-BLADE REGISTER	HART & COOLEY	301	6	1.75	6	N/A	N/A	N/A	N/A



	1		2		3		4		5		6		7							
E														 SURE HOUSE <hr/> <p>TEAM NAME: SURE HOUSE ADDRESS: 600 FRANK SINATRA DRIVE HOBOKEN, NJ 07030 CONTACT: HTTP://SUREHOUSE.ORG/ INFO@SUREHOUSE.ORG</p> <hr/> <p>CONSULTANTS NASTASI ARCHITECTS BLDG TYP LLC STEVENS DEPT. OF HEALTH & SAFETY</p> <hr/> <p>NOT FOR CONSTRUCTION</p> <hr/> <p>CLIENT U.S. DEPARTMENT OF ENERGY SOLAR DECATHLON 2013 WWW.SOLARDECATHLON.GOV</p> <hr/> <p> U.S. DEPARTMENT OF ENERGY SOLAR DECATHLON</p> <hr/> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>01</td><td>10-9-2014</td><td>80% DD SET</td></tr> <tr><td>MARK</td><td>DATE</td><td>DESCRIPTION</td></tr> </table> <hr/> <p>LOT NUMBER: LOT #101 DRAWN BY: AE CHECKED BY: AG COPYRIGHT: NONE. PROJECT IS PUBLIC DOMAIN</p> <hr/> <p>SHEET TITLE ELECTRICAL SYMBOLS AND NOTES</p> <hr/> <p>E-001</p>	01	10-9-2014	80% DD SET	MARK	DATE	DESCRIPTION
01	10-9-2014	80% DD SET																		
MARK	DATE	DESCRIPTION																		
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C																				
D																				
E																				

