Construction Drawings

Santa Clara University Radiant House
GENERAL SHEET NOTES

1. INSTALLATIONS SHALL CONFORM TO THE 2013 SOLAR DECATHLON BUILDING CODE AND WITH ALL APPLICABLE MUNICIPAL, STATE AND FEDERAL REGULATIONS.

2. ANY OMISSIONS OR CONFLICTS WITHIN THE REPORTED TO THE ENGINEERS BEFORE PLAN CUT LINE IS TAKEN AT 4'-0" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE.

3. ALL ABBREVIATIONS USED ARE REFERENCED FROM THE UNIFORM DRAWING SYSTEM TERMS AND ABBREVIATIONS MODULE PUBLISHED IN THE NATIONAL CAD STANDARD VERSION 4.

4. NOTES ON DRAWINGS SHALL APPLY TO ALL SIMILAR CONDITIONS WHETHER REPEATED OR NOT. DETAILS NOT SHOWN ARE SIMILAR IN CHARACTER TO THOSE SHOWN.

5. THE TEAM NAME, ADDRESS, CONTACT, CONSULTANTS, CLIENT, U.S. DEPARTMENT OF ENERGY, SOLAR DECATHLON 2013, WWW.SOLARDECATHLON.GOV, 08/22/13, DOE AS BUILT SUBMISSION, 08/12/13, AS BUILT REVISIONS, CD CITY INSPECTION 3, 07/26/13, CD CITY INSPECTION 2, 07/19/13, CD RESUBMISSION 2, 05/10/13, CD RESUBMISSION, 04/04/13, CD RESUBMISSION, 02/14/13, CD SUBMISSION, 11/20/12, DD RESUBMISSION, 10/11/12, DD SUBMISSION, MARK DATE DESCRIPTION.

6. SHEET TITLE:

LOT NUMBER: NONE: PROJECT IS PUBLIC

DRAWN BY: CHECKED BY:

COPYRIGHT: TABLE OF CONTENTS
GENERAL SHEET NOTES

1. All construction materials and design solutions shall comply with the 2013 Solar Decathlon Building Code and all applicable municipal, state and federal regulations.

2. Any omissions or conflicts within the drawings, notes or details shall be reported to the engineers before proceeding with work.

3. Existing structural grid lines are parallel in N-S and E-W directions.

4. Unless noted otherwise, plan cut lines are taken at 4'-0" above finished floor.

5. All abbreviations used are referenced from the Uniform Drawing System Terms and Abbreviations Module published in the National CAD Standard Version 5.

6. Notes on drawings shall apply to all similar conditions whether repeated or not. Details not shown are similar in character to those shown.

ABBREVIATIONS

ADJ. = Adjustable
ALUM. = Aluminum
BLDG. = Building
BOS. = Bottom of Steel
CTR. = Center
DN. = Down
DR. = Door
DS. = Dowsnspout
EL. = Elevation
EXT. = Exterior
FLASH. = Flashing
FT. = Foot or Feet
GALV. = Galvanized
GND. = Ground
GYP. = Gypsum
HT. = Height
INSUL. = Insulation
INT. = Interior
MFR. = Manufacturer
MECH. = Mechanical
MTL. = Metal
MTD. = Mounted
NTS. = Not to Scale
PLYWD. = Plywood
PNL. = Panel
RD. = Roof Drain
SCHED. = Schedule
SECT. = Section
STOR. = Storage
TYP. = Typical
U-PVS. = Unplasticized-Polyvinyl Chloride
WD. = Wood
WP. = Waterproof

GENERAL SYMBOLS

- Conditioned Space
- Unconditioned Space
- Architectural Footprint
- Fire Extinguisher
- Smoke Detector
- Egress Plan
- Meeting Zone
- North Arrow

GRAPHIC SCALE

1/8" to 1' (Example)
1. The finished area of the house has been calculated in accordance with the American National Standard for Single-Family Residential Buildings Z765-2003.

2. Square footage calculations were made based on plan dimensions only and may vary from the finished square footage of the house as built.

3. All measurements are rounded to the nearest whole square foot in accordance with ANSI Z765-2003.
GENERAL SHEET NOTES

1. The maximum slope of all ramps on the site shall be 1:12. Slope may be less depending on site conditions.

2. Radius of curvature of entry ramp centerline to not exceed 30'.

REFERENCE KEYNOTES

26 05 33.A4
METER LOAD CENTER

A2
TOUR ROUTE COMPLIANCE
GENERAL SHEET NOTES

1. The house and all associated components have been designed to fit within the defined solar envelope.

A2 SOLAR ENVELOPE COMPLIANCE WEST

A2 ROOF MODULE INSCAPE

A2 FINISH FLOOR

A2 T.O. GRADE LEVEL

A2 CEILING

C2 SOLAR ENVELOPE COMPLIANCE EAST

C2 ROOF MODULE INSCAPE

C2 FINISH FLOOR

C2 T.O. GRADE LEVEL

C2 CEILING

SHEET KEYNOTES

3 SOLAR ENVELOPE

SHEET TITLE:

LOT NUMBER:

DRAWN BY:

CHECKED BY:

COPYRIGHT:

CLIENT:

U.S. DEPARTMENT OF ENERGY

SOLAR DECATHLON 2013

WWW.SOLARDECATHLON.GOV

TEAM NAME:

ADDRESS:

CONTACT:

MESSANA CONSULTANTS:

WALSCHON FIRE PROTECTION INC.

S.O.S. STEEL CO., INC.

SUMMERS & SONS ELECTRIC, INC.

NONE: PROJECT IS PUBLIC DOMAIN

MARK DATE DESCRIPTION

10/11/12 DD SUBMISSION

11/20/12 DD RESUBMISSION

02/14/13 CD SUBMISSION

04/04/13 CD RESUBMISSION

05/10/13 CD RESUBMISSION 2

07/19/13 CD CITY INSPECTION

07/26/13 CD CITY INSPECTION 2

08/06/13 CD CITY INSPECTION 3

08/12/13 AS BUILT REVIEW

08/22/13 DOE AS BUILT SUBMISSION

G-201 SOLAR ENVELOPE COMPLIANCE ELEVATIONS

PRODUCED BY AN AUTODESK STUDENT PRODUCT
GENERAL SHEET NOTES

1. The house and all associated components have been designed to fit within the defined solar envelope.

A1 SOLAR ENVELOPE COMPLIANCE SOUTH

A2 SOLAR ENVELOPE COMPLIANCE NORTH

C1 SOLAR ENVELOPE COMPLIANCE SOUTH
GENERAL SHEET NOTES

1. LIQUID IN FIRE SUPPRESSION SYSTEM, SOLAR THERMAL, HYDRONIC SYSTEMS NOT FULLY SHOWN
2. REFER TO FP SERIES FOR DETAILS ON FIRE SUPPRESSION WATER SYSTEM
3. REFER TO P SERIES FOR DETAILS ON DOMESTIC WATER SYSTEM
4. REFER TO M SERIES FOR DETAILS ON SOLAR THERMAL WATER SYSTEM AND HYDRONIC WATER SYSTEM
5. ALL PRESSURIZED WATER SYSTEMS SHALL HAVE PROPER CONTAINMENT AND SHALL BE EQUIPPED WITH AN OVERFLOW PAN OR VALVE AND DRAIN IN THE EVENT OF A SMALL LEAK
6. IN THE EVENT OF A SPILL, TEAM TO CONSULT SAFETY PLAN AND CONTACT EVENT ORGANIZERS

LIQUID CONTAINMENT LEGEND

STANDING POTABLE WATER
STANDING WASTE WATER
PLUMBING WALL
PLUMBING WALL
<table>
<thead>
<tr>
<th>PLANT NAME</th>
<th>QUANTITY</th>
<th>SIZE (GALLON)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEER GRASS</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>WINDMILL PALM</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>LAVENDER</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>BUSH MONKEY FLOWER</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>GOLDEN GODDESS (BAMBOO)</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>ROSEMARY</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>COTINUS COGGYGRIA SMOKE TREE</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>LENONOTIS LEONURUS LION'S TAIL</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>SCARLET BUGLER</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>KANGAROO PAWS</td>
<td>23</td>
<td>1</td>
</tr>
<tr>
<td>ALOE CAMERONI</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>BUSH MARIGOLD</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>CYSTO CACTUS STRAUSII</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>ALOE STRIATA</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>DYCKIA FOSTERANA HYBRID</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>ALOE PLICATILLIS</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>AENIUM ZORCFOFT</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>
GENERAL STRUCTURAL NOTES

1. GENERAL NOTES AND TYPICAL DETAILS APPLY TO ALL STRUCTURAL FEATURES UNLESS OTHERWISE SHOWN OR NOTED.

2. CODE: 2010 CALIFORNIA BUILDING CODE

3. DESIGN LIVE LOADS:

<table>
<thead>
<tr>
<th>LOAD TYPE</th>
<th>LOAD VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 PSF</td>
<td>UNITS</td>
</tr>
<tr>
<td>50 PSF</td>
<td>UNITS</td>
</tr>
</tbody>
</table>

REMARKS

20 PSF
25 PSF
50 PSF
60 PSF

PER SD 2013 BUILDING CODE

5. DECKS:

<table>
<thead>
<tr>
<th>LOAD TYPE</th>
<th>LOAD VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 PSF</td>
<td>UNITS</td>
</tr>
</tbody>
</table>

REMARKS

100 PSF
150 PSF
200 PSF

PER SD 2013 BUILDING CODE

TO BEST PRACTICE AND SHALL BE THE CONTRACTOR'S RESPONSIBILITY.


NON-STRUCTURAL FEATURES NOT FULLY SHOWN OR NOTED ON THE STRUCTURAL DRAWINGS INCLUDE BUT ARE NOT LIMITED TO:

A. SIZE AND LOCATIONS OF ALL DOOR AND WINDOW OPENINGS.
B. CHANGES IN LEVEL, CHAMFERS, GROOVES, INSERTS, ETC.
C. DIMENSIONS NOT SHOWN IN THE STRUCTURAL DRAWINGS


CONSTRUCTION SHEAR WALLS SHALL BE DESIGNED BUT NOT LIMITED TO PROVIDING LOADS DUE TO CONSTRUCTION EQUIPMENT AND MATERIALS. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.

CONTRACTOR'S RESPONSIBILITY:

1. CONTRACTOR SHALL CONFIRM TO THE REQUIREMENTS OF THE SOLAR DECATHLON CODES PERMITTED ON PREPARED SITE PREPARATION AND FOUNDATION.
2. METAL, PRE STRESS AND PRE CAST FOR FOUNDATION SHALL BE MANUFACTURED OF CORRUGATED. PERM TO INSTALLATION SHALL BE IN ACCORDANCE WITH THE CALIFORNIA STATE UNIFORM BUILDING CODE FOR EXCAVATION NUMBER 4 AND INSTALLATION"
3. ALL SPECIAL INSPECTIONS PERFORMED BY A CERTIFIED SPECIAL INSPECTOR FROM AN INDEPENDENT TESTING AGENCY WHO IS RESPONSIBLE FOR NOTIFYING STRUCTURAL ENGINEER 48 HOURS BEFORE WORK IS READY FOR INSPECTION. NOTIFICATIONS SHALL INCLUDE REINFORCEMENT AND EMBEDDED ITEMS, PRIOR TO CONCRETE PLACEMENT.
4. CONTINUOUS AND PERIODICAL SPECIAL INSPECTIONS SHALL BE IN ACCORDANCE WITH CBC 1701.6
5. CONTINUOUS AND PERIODICAL SPECIAL INSPECTIONS SHALL BE IN ACCORDANCE WITH CBC 1701.6
6. FOUNDATION TYPES: TYPICAL FOUNDATION RIGID AND STANDARD FOUNDATION SYSTEM IS IN PLACE. THE CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.

DESIGN SHEET NOTES

POSTED SHEET NUMBER: 2100-01
ALLOWABLE SERVICE PRESSURE: 500 PSF

ALLEGED STRUCTURAL NOTES FOLLOW MANUFACTURED SPECIFICATIONS IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.

CONSTRUCTION OBSERVATIONS AND TESTING

A. THE CONTRACTOR SHALL PROVIDE A PROGRESS REPORT TO THE SPECIAL INSPECTOR IN ORDER TO DISCUSS THE SPECIFIC REQUIREMENTS OF THIS SECTION.

F. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK WAS, TO THE BEST OF THE SPECIAL INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS AND STANDARDS OF QUALITY OF THE 2010 CBC.

CONSTRUCTION OBSERVATIONS AND TESTING

A. THE SPECIAL INSPECTOR SHALL ASSURE THE WORK ASSESSED FOR CONFORMANCE WITH THE APPROVED DRAWINGS AND SPECIFICATIONS.

B. THE SPECIAL INSPECTOR SHALL REVIEW THE CONTRACTOR'S COMPLETED WORK AND REPORT ANY DEFICIENCIES.

C. THE SPECIAL INSPECTOR SHALL SUMMARIZE THE RESULTS REPORTED AND WHETHER THE WORKMANSHIP PERFORMANCE OF THE CONTRACTOR ASSESSED FOR CONFORMANCE.

D. THE CONTRACTOR SHALL HOLD A PRE-CONSTRUCTION MEETING INVOLVING THE STRUCTURAL ENGINEER AND THE SPECIAL INSPECTOR IN ORDER TO DISCUSS THE SPECIFIC REQUIREMENTS OF THIS SECTION.

E. IN ADDITION TO INSPECTION OF THE SPECIAL INSPECTOR, THE STRUCTURAL ENGINEER WILL INSPECT THE STRUCTURAL COMPLIANCE WITH THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL PROVIDE A PROGRESS REPORT TO THE SPECIAL INSPECTOR IN ORDER TO DISCUSS THE SPECIFIC REQUIREMENTS OF THIS SECTION.

F. THE CONTRACTOR SHALL PROVIDE A PROGRESS REPORT TO THE SPECIAL INSPECTOR IN ORDER TO DISCUSS THE SPECIFIC REQUIREMENTS OF THIS SECTION.
GENERAL SHEET NOTES

1. REFER TO GENERAL STRUCTURAL NOTES & DETAILS FOR GENERAL REQUIREMENTS OF CONSTRUCTION, MATERIALS, AND REQUIREMENTS OF CONSTRUCTION OBSERVATIONS.

2. REFER TO GENERAL MATERIALS & DETAILS FOR ALL FINISHES, FIRE PROTECTION, THERMAL AND MOISTURE PROTECTION, WATERPROOFING, AND ACOUSTICAL REQUIREMENTS.

3. REFER TO THE SHEET NOTES BELOW FOR ALL REQUIREMENTS.
GENERAL SHEET NOTES:
1. REFER TO GENERAL STRUCTURAL NOTES & DETAILS FOR GENERAL REQUIREMENTS OF CONSTRUCTION MATERIALS & REQUIREMENTS.
2. EACH SHEAR WALL IS CORRESPONDING TO A SHEAR WALL SCHEDULE.
3. SEE S-601 FOR SHEAR WALL SCHEDULE.
4. ALL EXTERIOR STUD WALLS ARE STAGGERED STUD 2X4 AT 16" O.C.

LEGEND:
- HOUSE:
- 4X4 POST:
- SHEAR WALL:
- GRAVITY WALL:

S-104 WALL FRAMING PLAN

SHEET TITLE:
LOT NUMBER:
DRAWN BY:
CHECKED BY:
COPYRIGHT:
CLIENT:
WWW.SOLARDECATHLON.GOV
TEAM NAME:
ADDRESS:
CONTACT:
MESSANA
CONSULTANTS:
WALSHON FIRE PROTECTION INC.
S.O.S. STEEL CO., INC.
SUMMERS & SONS ELECTRIC, INC.
2224 ALBERTA LANE
CAPITOLA CA 95010
1015 TERMINAL WAY
SAN CARLOS, CA 94070
1160 RICHARD AVENUE
SANTA CLARA, CA 95050
808 S. MAIN STREET
MILPITAS, CA 95035

S-104 WALL FRAMING PLAN

MARK DATE DESCRIPTION
08/22/13 DOE AS BUILT SUBMISSION
08/22/13 3:12:59 PM
GENERAL SHEET NOTES

1. REFER TO GENERAL STRUCTURAL NOTES & DETAILS FOR GENERAL REQUIREMENTS OF CONSTRUCTION, MATERIALS, AND REQUIREMENTS OF CONSTRUCTION OBSERVATIONS.

2. SEE S-601 FOR JOIST HANGER SCHEDULE.

3. SEE S-601 FOR PLYWOOD DIAPHRAGM SCHEDULE.

4. 1 - 4X12 TRIMMED RIM JOIST NAILED TOGETHER SHALL RUN CONTINUOUSLY INSIDE STEEL ANGLE.

UPPER ROOF DIAPHRAGM

3/8" = 1'-0"

UPPER ROOF MODULE FRAMING PLAN

OPEN TO BELOW

2-2X10 EDGE JOISTS

4X12 TRIMMED RIM JOIST

TOP ROOF DIAPHRAGM

ALGIN JOINT

LEGEND

- ROOF DIAPHRAGM
- PLYWOOD BORDER

UPPER ROOF MODULE FRAMING PLAN

S-106
GENERAL SHEET NOTES

1. ALL BEAMS SHOWN ARE PROVIDE FOR THE DECK AND ARE STANDARD PILLARS.
GENERAL SHEET NOTES:

1. REFER TO GENERAL STRUCTURAL NOTES & DETAILS FOR GENERAL REQUIREMENTS OF CONSTRUCTION, MATERIALS, AND REQUIREMENTS OF CONSTRUCTION OBSERVATIONS.

2. S.A.D. FOR ALL DIMENSIONS NOTED.

3. S.A.D. FOR ALL FINISHES, FIRE PROTECTION, THERMAL, AND ACOUSTICAL REQUIREMENTS.

4. S.A.D. FOR ALL CEILINGS, WALLS, FLOORS, ROOF DECKS AND TERRACES.

5. SEE S-601 FOR FOOTING SCHEDULE.

6. BEARING CAPACITY AND FOOTING DESIGN BASED ON GOVERNING CASE OF GRAVITY AND LATERAL FORCES.

7. MAXIMUM BEARING CAPACITY FOR ALL FOOTINGS TO BE 1500 PSF.

[Diagram and detailed notes related to building structure and specifications]
GENERAL SHEET NOTES

1. REFER TO GENERAL STRUCTURAL NOTES & DETAILS FOR GENERAL REQUIREMENTS OF CONSTRUCTION OBSERVATIONS.
2. S.A.D. FOR ALL DIMENSIONS AND FINISH ELEVATIONS NOT NOTED.
3. S.A.D. FOR ALL FINISHES, FIRE PROTECTION, THERMAL AND MOISTURE PROTECTION, WATERPROOFING, AND ACOUSTICAL REQUIREMENTS FOR ALL CEILINGS, WALLS, FLOORS, ROOF DECKS, AND TERRACES.

CERAMIC COATED LAG SCREW (SUNPLANTER RAILS)
### General Sheet Notes

1. See S.O.S. Steel Co., Inc. Sheet D1, Detail 12-PL1/2X~1PL1 for Module A and B Seismic Pier Plate Details.

### Bill of Material

<table>
<thead>
<tr>
<th>SHEET MARK</th>
<th>PIECE MARK</th>
<th>QTY.</th>
<th>DESCRIPTION</th>
<th>LENGTH</th>
<th>GRADE</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PL1</td>
<td>PL1</td>
<td>4</td>
<td>PL1/2X24</td>
<td>2'-8</td>
<td>A36</td>
<td>SHIP LOOSE</td>
</tr>
</tbody>
</table>

**Plated Holes**

11 threads/inch

---

### Sheet Title:

**Module C Seismic Pier Plate**

---

**Team Name:** SANTA CLARA UNIVERSITY

**Address:** 2224 ALBERTA LANE, CAPITOLA CA 95010

**Contact:** 1015 TERMINAL WAY, SAN CARLOS, CA 94070

**Copyright:** 2013

---

**Module C Seismic Pier Plate Details**
TYPICAL 4' BAMBOO PANEL

"TOP SECTION"

TOP SECTION DURING MUSHROOM GROWTH AND SHIPMENT

TEMPORARY SCRAP LUMBER OR LUMBER USE AS NEEDED FOR FORMWORK FOR MUSHROOM INSULATION AND SUPPORT DURING SHIPPING.

TOP SECTION DURING MUSHROOM INSULATION.

TEMPORARY MUSHROOM INSULATION. GROWN PLAN TO 3 5/8" THICKNESS. PROVIDE OPENING FOR ELECTRICAL CHASE AS SHOWN.

TOP SECTION DURING MUSHROOM INSULATION.

OPENING IN MUSHROOM INSULATION FOR ELECTRICAL TO MATCH 1" DIAMETER HOLES IN BAMBOO CLUMPS.

GRAVITY WALLS

LEFT ELEVATION

FRONT ELEVATION FOR FINAL USE

FRONT ELEVATION DURING MUSHROOM GROWTH AND SHIPMENT

1/2" BAMBOO PLYWOOD

1 1/2" X 3 1/2" BAMBOO PLANK, TYPICAL TOP AND BOTTOM.
### SHEAR WALL SCHEDULE

<table>
<thead>
<tr>
<th>WALL</th>
<th>HEIGHT</th>
<th>WIDTH</th>
<th>CAPACITY (FV)</th>
<th>EARTHQUAKE RESISTANT</th>
<th>SHANK</th>
<th>VERTICAL HOUSING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>12'</td>
<td>12'</td>
<td>1200</td>
<td>1</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>12'</td>
<td>12'</td>
<td>1200</td>
<td>1</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>12'</td>
<td>12'</td>
<td>1200</td>
<td>1</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>12'</td>
<td>12'</td>
<td>1200</td>
<td>1</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>12'</td>
<td>12'</td>
<td>1200</td>
<td>1</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>12'</td>
<td>12'</td>
<td>1200</td>
<td>1</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>12'</td>
<td>12'</td>
<td>1200</td>
<td>1</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>12'</td>
<td>12'</td>
<td>1200</td>
<td>1</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>12'</td>
<td>12'</td>
<td>1200</td>
<td>1</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>12'</td>
<td>12'</td>
<td>1200</td>
<td>1</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>12'</td>
<td>12'</td>
<td>1200</td>
<td>1</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>12'</td>
<td>12'</td>
<td>1200</td>
<td>1</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>12'</td>
<td>12'</td>
<td>1200</td>
<td>1</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>12'</td>
<td>12'</td>
<td>1200</td>
<td>1</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>12'</td>
<td>12'</td>
<td>1200</td>
<td>1</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>12'</td>
<td>12'</td>
<td>1200</td>
<td>1</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>12'</td>
<td>12'</td>
<td>1200</td>
<td>1</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>12'</td>
<td>12'</td>
<td>1200</td>
<td>1</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>12'</td>
<td>12'</td>
<td>1200</td>
<td>1</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>12'</td>
<td>12'</td>
<td>1200</td>
<td>1</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>12'</td>
<td>12'</td>
<td>1200</td>
<td>1</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>12'</td>
<td>12'</td>
<td>1200</td>
<td>1</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>12'</td>
<td>12'</td>
<td>1200</td>
<td>1</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>12'</td>
<td>12'</td>
<td>1200</td>
<td>1</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>12'</td>
<td>12'</td>
<td>1200</td>
<td>1</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>12'</td>
<td>12'</td>
<td>1200</td>
<td>1</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>12'</td>
<td>12'</td>
<td>1200</td>
<td>1</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>12'</td>
<td>12'</td>
<td>1200</td>
<td>1</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>12'</td>
<td>12'</td>
<td>1200</td>
<td>1</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>12'</td>
<td>12'</td>
<td>1200</td>
<td>1</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>12'</td>
<td>12'</td>
<td>1200</td>
<td>1</td>
<td>1/2&quot;</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>12'</td>
<td>12'</td>
<td>1200</td>
<td>1</td>
<td>1/2&quot;</td>
<td></td>
</tr>
</tbody>
</table>

**NOTES:**

1. **VERTICAL EDGE NAILING** SHALL BE 10D @ 12" O.C. UNBLOCKED.
2. **SHANK WALL SHEATHING** SHALL BE FULL HEIGHT.

### FOOTING SCHEDULE

<table>
<thead>
<tr>
<th>TYPE</th>
<th>MIN HEIGHT</th>
<th>MAX HEIGHT</th>
<th>ADJUSTABILITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>STAND. PIER</td>
<td>6&quot;</td>
<td>8&quot;</td>
<td>2&quot;</td>
</tr>
<tr>
<td>STAND. PIER</td>
<td>8&quot;</td>
<td>10&quot;</td>
<td>2&quot;</td>
</tr>
<tr>
<td>STAND. PIER</td>
<td>10&quot;</td>
<td>12&quot;</td>
<td>2&quot;</td>
</tr>
<tr>
<td>STAND. PIER</td>
<td>12&quot;</td>
<td>14&quot;</td>
<td>2&quot;</td>
</tr>
<tr>
<td>STAND. PIER</td>
<td>14&quot;</td>
<td>16&quot;</td>
<td>2&quot;</td>
</tr>
</tbody>
</table>

**NOTES:**

1. VARIOUS SIZE PIER PROVIDED TO ACCOMMODATE 18" SITE VARIABILITY.
2. **VERTICAL EDGE NAILING** SHALL BE 10D @ 12" O.C. UNBLOCKED.
3. **SHANK WALL SHEATHING** SHALL BE FULL HEIGHT.

---

**FOOTING SCHEDULE**

<table>
<thead>
<tr>
<th>NAME</th>
<th>TYPE</th>
<th>SIZE</th>
<th>MARKING 1 (INCH)</th>
<th>MARKING 2 (INCH)</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>Std.</td>
<td>14&quot;</td>
<td>14&quot; X 14&quot;</td>
<td>STEEL CHANNEL</td>
</tr>
<tr>
<td>F2</td>
<td>Sem.</td>
<td>14&quot;</td>
<td>14&quot; X 24&quot;</td>
<td>STEEL CHANNEL</td>
</tr>
</tbody>
</table>
E-W Shear Wall Distribution

N-S Shear Wall Distribution
1. ALL PIPING, DUCTS, ETC. THAT PENETRATE FLOOR SLABS SHALL BE INSTALLED IN A MANNER THAT WILL PRESERVE THE INDICATED STRUCTURAL INTEGRITY OF THE HOUSE.

2. ALL JOINTS AND PENETRATIONS IN INSULATION BARRIER SHALL BE FULLY SEALED WITH ADHESIVE SEALANT TO PROVIDE CONTINUOUS AIR TIGHT INSULATION.

3. DETAILS NOT SHOWN ARE SIMILAR IN CHARACTER TO THOSE DETAILED.

4. ALL SILLS, WINDOW HEADS, AND SHELF ANGLES SHALL HAVE FLASHING EXTENDED TO THE OUTSIDE OF THE WALL WHETHER OR NOT SHOWN ON THE DRAWINGS.

5. WHERE DISCREPANCIES EXIST BETWEEN THE DRAWINGS OF THE VARIOUS TRADES, CONSULT THE ENGINEER PRIOR TO PROCEEDING WITH WORK.

6. ALL GLAZING SHALL BE SAFETY GLAZED WHEN WITHIN 18" OF THE FLOOR OR WITHIN 3'-0" HORIZONTAL DISTANCE FROM ANY DOOR.
GENERAL SHEET NOTES

1. All spot elevations are measured from highest point on the solar envelope lot.

2. All flat roofs will be at a minimum 1/4" : 12" slope for water runoff.

REFERENCE KEYNOTES

1. ROOF DRAINS
2. HEATING SOLAR COLLECTORS
3. PHOTOVOLTAIC COLLECTORS

SHEET KEYNOTES

1. ROOF MODULE PICK POINT
2. ROOF MODULE PICK POINT 1.5

ROOF PLAN

PRODUCED BY AN AUTODESK STUDENT PRODUCT
GENERAL SHEET NOTES

SECTION OF THE ACCESS FLOOR COVERED BY ACCESS PANELS ARE NOT TO BE INSULATED

SHEET KEYNOTES

1. FRAMING TO BE INSTALLED 16" ON CENTER

2. REMOVABLE ACCESS PANELS

3. SPACE TO BE USED FOR MACH, DISTRIBUTION, AND EQUIPMENT. SEE M & P SHEETS FOR DETAILS.

ACCESS FLOOR FRAMING PLAN

SECTION NOTES

REV.

DATE

DESCRIPTION

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]

[Signature]
GENERAL SHEET NOTES
1. All dimensions measured from finished floor.
2. Top of grade level located under the north east corner of the house.

SHEET KEYNOTES
1. SOLAR ENVELOPE
2. FINISH FLOOR
3. CEILING
4. T.O. GRADE LEVEL

NORTH SITE ELEVATION
FINISH FLOOR
T.O. GRADE LEVEL - 2'-0 3/4"
CEILING 7'-11 1/2"
SOLAR ENVELOPE 16'-4"

SOUTH SITE ELEVATION
FINISH FLOOR
T.O. GRADE LEVEL - 2'-0 3/4"
CEILING 7'-11 1/2"
SOLAR ENVELOPE 16'-4"
GENERAL SHEET NOTES

1. ALL ELEVATIONS MEASURED FROM FINISHED FLOOR
2. TOP OF GRADE LEVEL LOCATED UNDER THE NORTH EAST CORNER OF THE HOUSE
GENERAL SHEET NOTES
1. WINDOW AND DOOR HEAD HEIGHT IS MEASURED FROM FINISHED FLOOR.
GENERAL SHEET NOTES
1. WINDOW AND DOOR HEAD HEIGHT IS MEASURED FROM FINISHED FLOOR

SHEET KEYNOTES

NORTH ELEVATION

SOUTH ELEVATION

C1

A1

FINISH FLOOR
CEILING
ROOF MODULE DISCONNECT
CEILING
FINISH FLOOR
BOTTOM OF STEEL
1'-5 3/4"
ROOF MODULE DISCONNECT
8'-11 3/4"
6'-10"
SHEET TITLE:
LOT NUMBER:
DRAWN BY:
CHECKED BY:
COPYRIGHT:
CLIENT:
WWW.SOLARDECATHLON.GOV
TEAM NAME:
ADDRESS:
CONTACT:
MESSANA
CONSULTANTS:
WALSCHON FIRE PROTECTION INC.
S.O.S. STEEL CO., INC.
SUMMERS & SONS ELECTRIC, INC.
2224 ALBERTA LANE
CAPITOLA CA 95010
1015 TERMINAL WAY
SAN CARLOS, CA 94070
SOLAIR HOUSE
SANTA CLARA UNIVERSITY
1160 RICHARD AVENUE
SANTA CLARA, CA 95050

S.O.S. STEEL CO., INC.
SUMMERS & SONS ELECTRIC, INC.

08/22/13
DOE AS BUILT SUBMISSION
**REFERENCE KEYNOTES**

- 05 12 00 STRUCTURAL STEEL FRAMING
- 06 17 00.C0 WOOD I JOIST
- 07 21 26 SPRAYED INSULATION
- 07 42 13 METAL WALL PANELS
- 23 83 16 RADIANT-HEATING HYDRONIC PANELS W/ GYP BOARD FINISH
- 26 31 00 PHOTOVOLTAIC COLLECTORS

**SHEET KEYNOTES**

- 19 PARAPET

**BUILDING SECTIONS**

- A1 MODULE A SECTION
- A2 MIDDLE MODULE SECTION
- A3 ROOF MODULE DISCONNECT
- 01 71.10 SUBFLOOR
- 01 71.30 BOTTOM OF STEEL
- 01 71.50 CEILING
- 01 71.75 FLOORtwitter/ceiling
- 01 71.94 ROOFtwitter/ceiling

**Reference Notes**

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

<table>
<thead>
<tr>
<th>MAIN</th>
<th>LOCATION</th>
<th>FRAME TYPE</th>
<th>WIDTH</th>
<th>HEIGHT</th>
<th>MANUFACTURER</th>
<th>MODEL</th>
<th>MATERIALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>WEST</td>
<td>SWING</td>
<td>3'-0&quot;</td>
<td>6'-8&quot;</td>
<td>MASONITE</td>
<td>ENTRY</td>
<td>STEEL</td>
</tr>
<tr>
<td>2</td>
<td>NORTH</td>
<td>SLIDING</td>
<td>11'-11 1/2&quot;</td>
<td>6'-9 1/2&quot;</td>
<td>MILGARD</td>
<td>4 PANEL</td>
<td>ALUMINUM ALUMINUM</td>
</tr>
<tr>
<td>3</td>
<td>SOUTH</td>
<td>SWING</td>
<td>3'-0&quot;</td>
<td>6'-8&quot;</td>
<td>MASONITE</td>
<td>FULL LITE</td>
<td>STEEL STEEL</td>
</tr>
<tr>
<td>4</td>
<td>BEDROOM</td>
<td>SWING</td>
<td>3'-2&quot;</td>
<td>6'-8&quot;</td>
<td>MASONITE</td>
<td>HARDWOOD VENEER</td>
<td>RED FLUSH BIRCH DOOR</td>
</tr>
<tr>
<td>5</td>
<td>BATHROOM</td>
<td>POCKET</td>
<td>3'-0&quot;</td>
<td>6'-8&quot;</td>
<td>MASONITE</td>
<td>HARDBOARD VENEER</td>
<td>FLUSH BIRCH DOOR</td>
</tr>
<tr>
<td>6</td>
<td>BEDROOM</td>
<td>SWING</td>
<td>3'-0&quot;</td>
<td>6'-8&quot;</td>
<td>MASONITE</td>
<td>FULL LITE</td>
<td>ENTRY DOOR WOOD WOOD</td>
</tr>
<tr>
<td>7</td>
<td>MECH</td>
<td>DOUBLE</td>
<td>6'-0&quot;</td>
<td>6'-8&quot;</td>
<td>MASONITE</td>
<td>FULL LITE</td>
<td>STEEL PATIO DOOR</td>
</tr>
</tbody>
</table>

WINDOW SCHEDULE

<table>
<thead>
<tr>
<th>MAIN</th>
<th>MARK</th>
<th>ROUGH OPENING</th>
<th>QUANTITY</th>
<th>WINDOW TYPE</th>
<th>MANUFACTURER</th>
<th>MODEL</th>
<th>FRAME MATERIAL</th>
<th>DETAIL</th>
<th>GLAZING TYPE</th>
<th>HEAD</th>
<th>JAMB</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6'-0&quot;</td>
<td>2'-8&quot;</td>
<td>1</td>
<td>HALF VENT</td>
<td>MILGARD</td>
<td>1120 HV</td>
<td>ALUMINUM</td>
<td>0.077</td>
<td>D3/A-531</td>
<td>D1/A-531</td>
<td>DOUBLE PANED</td>
</tr>
<tr>
<td>2</td>
<td>3'-7&quot;</td>
<td>2'-8&quot;</td>
<td>1</td>
<td>HALF VENT</td>
<td>MILGARD</td>
<td>1120 HV</td>
<td>ALUMINUM</td>
<td>0.077</td>
<td>D3/A-531</td>
<td>D1/A-531</td>
<td>DOUBLE PANED</td>
</tr>
<tr>
<td>3</td>
<td>1'-0 1/8&quot;</td>
<td>63'-0 3/8&quot;</td>
<td>8</td>
<td>GLASS BLOCK</td>
<td>PITTSBURGH</td>
<td>CORNING</td>
<td>B5/A-531 ALUMINUM</td>
<td>A5/A-531</td>
<td>GLASS BLOCK</td>
<td>6'-10&quot;</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>6'-0&quot;</td>
<td>1'-1&quot;</td>
<td>1</td>
<td>HALF VENT</td>
<td>MILGARD</td>
<td>1120 HV</td>
<td>ALUMINUM</td>
<td>0.077</td>
<td>D3/A-531</td>
<td>D1/A-531</td>
<td>DOUBLE PANED</td>
</tr>
<tr>
<td>5</td>
<td>3'-0&quot;</td>
<td>2'-0&quot;</td>
<td>3</td>
<td>FIXED</td>
<td>MILGARD</td>
<td>920 PW</td>
<td>ALUMINUM</td>
<td>0.077</td>
<td>A3/A-531</td>
<td>A1/A-531</td>
<td>DOUBLE PANED</td>
</tr>
<tr>
<td>6</td>
<td>4'-0&quot;</td>
<td>1'-1&quot;</td>
<td>1</td>
<td>HALF VENT</td>
<td>MILGARD</td>
<td>1120 HV</td>
<td>ALUMINUM</td>
<td>0.077</td>
<td>D3/A-531</td>
<td>D1/A-531</td>
<td>GLASS BLOCK</td>
</tr>
<tr>
<td>7</td>
<td>2'-0&quot;</td>
<td>1'-4&quot;</td>
<td>2</td>
<td>SINGLE HUNG</td>
<td>MILGARD</td>
<td>1520 SH</td>
<td>ALUMINUM</td>
<td>0.077</td>
<td>C3/A-531</td>
<td>C1/A-531</td>
<td>DOUBLE PANED</td>
</tr>
<tr>
<td>8</td>
<td>3'-0&quot;</td>
<td>1'-3&quot;</td>
<td>1</td>
<td>HALF VENT</td>
<td>MILGARD</td>
<td>1120 HV</td>
<td>ALUMINUM</td>
<td>0.077</td>
<td>D3/A-531</td>
<td>D1/A-531</td>
<td>DOUBLE PANED</td>
</tr>
<tr>
<td>9</td>
<td>1'-4 1/8&quot;</td>
<td>2'-0&quot;</td>
<td>1</td>
<td>GLASS BLOCK</td>
<td>PITTSBURGH</td>
<td>CORNING</td>
<td>B5/A-531 ALUMINUM</td>
<td>A5/A-531</td>
<td>DOUBLE PANED</td>
<td>6'-10&quot;</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>7'-0&quot;</td>
<td>1'-4&quot;</td>
<td>1</td>
<td>FIXED</td>
<td>MILGARD</td>
<td>920 PW</td>
<td>ALUMINUM</td>
<td>0.077</td>
<td>A3/A-531</td>
<td>A1/A-531</td>
<td>DOUBLE PANED</td>
</tr>
<tr>
<td>11</td>
<td>5'-6&quot;</td>
<td>1'-4&quot;</td>
<td>3</td>
<td>FULL AWNING</td>
<td>MILGARD</td>
<td>920 FA</td>
<td>ALUMINUM</td>
<td>0.077</td>
<td>B3/A-531</td>
<td>B1/A-531</td>
<td>DOUBLE PANED</td>
</tr>
<tr>
<td>12</td>
<td>4'-0&quot;</td>
<td>1'-4&quot;</td>
<td>1</td>
<td>FIXED</td>
<td>MILGARD</td>
<td>920 PW</td>
<td>ALUMINUM</td>
<td>0.077</td>
<td>A3/A-531</td>
<td>A1/A-531</td>
<td>DOUBLE PANED</td>
</tr>
<tr>
<td>13</td>
<td>2'-9&quot;</td>
<td>1'-4&quot;</td>
<td>1</td>
<td>FIXED</td>
<td>MILGARD</td>
<td>920 PW</td>
<td>ALUMINUM</td>
<td>0.077</td>
<td>A3/A-531</td>
<td>A1/A-531</td>
<td>DOUBLE PANED</td>
</tr>
</tbody>
</table>

SCHEDULES

<table>
<thead>
<tr>
<th>MARK</th>
<th>DATE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>8/22/13</td>
<td>DOE AS BUILT SUBMISSION</td>
</tr>
<tr>
<td>B</td>
<td>8/22/13</td>
<td>GOP AS BUILT SUBMISSION</td>
</tr>
</tbody>
</table>

MARK LOCATION

FRAME

TYPE

DIMENSIONS

MANUFACTURER MODEL

MATERIALS

WINDOW ELEVATIONS

DOOR ELEVATIONS

1/2" = 1'-0"
FIRE DETECTION PLAN

1. REFER TO FP-01 FOR SUBCONTRACTOR DRAWINGS OF FIRE SUPPRESSION PIPING
WATER DELIVERY PLAN

REFERENCE KEYNOTES

SHEET KEYNOTES

PRODUCED BY AN AUTODESK STUDENT PRODUCT
REFERENCE KEYNOTES

1. THE TOILET IS NOT TO BE CONNECTED TO ANY PLUMBING SUPPLY OR WASTE SYSTEMS DURING THE COMPETITION.

GENERAL SHEET NOTES

PLUMBING FIXTURE PLAN

A2

SCALE: 1/4" = 1'-0"
GENERAL SHEET NOTES

1. The venting method shown in drawing A1 is representative of all venting for other sinks and fixtures that require venting.

SINK P TRAP

SUBFLOOR

FINISH FLOOR

3'-0"

-6"

1/2"

1/2"
### PIPE SCHEDULE

<table>
<thead>
<tr>
<th>SYSTEM TYPE</th>
<th>DIAMETER</th>
<th>LENGTH</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOMESTIC COLD WATER</td>
<td>2&quot;</td>
<td>5&quot;</td>
<td>DOMESTIC COLD WATER</td>
</tr>
<tr>
<td>DOMESTIC COLD WATER</td>
<td>2&quot;</td>
<td>1'-7&quot;</td>
<td>DOMESTIC COLD WATER</td>
</tr>
<tr>
<td>DOMESTIC HOT WATER</td>
<td>1 1/2&quot;</td>
<td>10'-11&quot;</td>
<td>DOMESTIC HOT WATER</td>
</tr>
<tr>
<td>DOMESTIC HOT WATER</td>
<td>1&quot;</td>
<td>18'-7&quot;</td>
<td>DOMESTIC HOT WATER</td>
</tr>
<tr>
<td>DOMESTIC RETURN</td>
<td>2&quot;</td>
<td>1&quot;</td>
<td>DOMESTIC RETURN</td>
</tr>
<tr>
<td>WATER RETURN</td>
<td>2&quot;</td>
<td>1&quot;</td>
<td>WATER RETURN</td>
</tr>
<tr>
<td>CHIMNEY RETURN</td>
<td>2&quot;</td>
<td>1&quot;</td>
<td>CHIMNEY RETURN</td>
</tr>
<tr>
<td>CHIMNEY RETURN</td>
<td>1 1/2&quot;</td>
<td>3&quot;</td>
<td>CHIMNEY RETURN</td>
</tr>
<tr>
<td>CHIMNEY RETURN</td>
<td>1&quot;</td>
<td>16'-8&quot;</td>
<td>CHIMNEY RETURN</td>
</tr>
<tr>
<td>CHIMNEY RETURN</td>
<td>1&quot;</td>
<td>1&quot;</td>
<td>CHIMNEY RETURN</td>
</tr>
<tr>
<td>OTHER</td>
<td>1 1/2&quot;</td>
<td>5&quot;</td>
<td>OTHER</td>
</tr>
<tr>
<td>OTHER</td>
<td>1 1/2&quot;</td>
<td>5&quot;</td>
<td>OTHER</td>
</tr>
<tr>
<td>OTHER</td>
<td>1&quot;</td>
<td>1&quot;</td>
<td>OTHER</td>
</tr>
<tr>
<td>OTHER</td>
<td>1&quot;</td>
<td>16'-8&quot;</td>
<td>OTHER</td>
</tr>
<tr>
<td>OTHER</td>
<td>1&quot;</td>
<td>16'-8&quot;</td>
<td>OTHER</td>
</tr>
</tbody>
</table>

### PIPE FITTING SCHEDULE

<table>
<thead>
<tr>
<th>NOTES</th>
<th>SIZE</th>
<th>COUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>COUPLING</td>
<td>1&quot;ø-1&quot;ø</td>
<td>14</td>
</tr>
<tr>
<td>COUPLING</td>
<td>2&quot;ø-2&quot;ø</td>
<td>3</td>
</tr>
<tr>
<td>ELBOW</td>
<td>1&quot;ø-1&quot;ø</td>
<td>167</td>
</tr>
<tr>
<td>ELBOW</td>
<td>2&quot;ø-2&quot;ø</td>
<td>26</td>
</tr>
<tr>
<td>REDUCER</td>
<td>2&quot;ø-2&quot;ø</td>
<td>2</td>
</tr>
<tr>
<td>TEE</td>
<td>1&quot;ø-1&quot;ø-1&quot;ø</td>
<td>20</td>
</tr>
<tr>
<td>TEE</td>
<td>2&quot;ø-2&quot;ø-2&quot;ø</td>
<td>8</td>
</tr>
<tr>
<td>TRANSITION</td>
<td>1&quot;ø-1&quot;ø</td>
<td>19</td>
</tr>
<tr>
<td>TRANSITION</td>
<td>2&quot;ø-1&quot;ø</td>
<td>4</td>
</tr>
<tr>
<td>TRANSITION</td>
<td>2 1/2&quot;x2 1/2&quot;</td>
<td>6</td>
</tr>
<tr>
<td>TRANSITION</td>
<td>2&quot;x2&quot;</td>
<td>4</td>
</tr>
</tbody>
</table>

### FIRE FITTING SCHEDULE

<table>
<thead>
<tr>
<th>NOTES</th>
<th>SIZE</th>
<th>COUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>COUPLING</td>
<td>2 1/2&quot;x2 1/2&quot;</td>
<td>4</td>
</tr>
<tr>
<td>COUPLING</td>
<td>2&quot;x2&quot;</td>
<td>4</td>
</tr>
<tr>
<td>TRANSITION</td>
<td>2&quot;x2&quot;</td>
<td>4</td>
</tr>
</tbody>
</table>
1. Refer to M-103 for details on radiant system panels.
ALL ELECTRICAL SYSTEMS FOLLOW THE NFPA 70 NATIONAL ELECTRIC CODE (NEC).
GENERAL SHEET NOTES

1. All kitchen and bathroom outlets are GFCI protected. All other interior outlets are AFCI unless otherwise noted.

2. All interior wall outlets are located at 16" above finished floor. All counter receptacles in kitchen are located at 40" above finished floor.

3. All exterior outlets are GFCI protected and weatherproof.

4. All exterior outlets are mounted at 18" above the finished floor.

5. All outlets are tamper resistant.

6. Refer to E-601 for circuit breaker panel schedule.

7. L1 refers to main electric panel board. Numbers represent circuit number.

REFERENCE KEYNOTES

22 11 23 Domestic water pumps
26 24 16 A1 Main electric panelboard
26 30 00 A1 120V duplex receptacle
26 30 00 A3 240V duplex receptacle

A1 INTERIOR ELECTRICAL DISTRIBUTION

PRODUCED BY AN AUTODESK STUDENT PRODUCT
1. All PV systems will be designed and installed in compliance with 2011 National Electric Code, UL 1703 requirements, ASTM standards and SD rules and regulations.

2. All PV strings to use manufactured provided cable.

3. The PV array conductors, grounding, and overcurrent protection devices are in accordance with Article 690 of NEC 2011.

REFERENCE KEYNOTES

26 31 00 PHOTOVOLTAIC COLLECTORS
26 31 00.A4 TIGO ENERGY GATEWAY
26 31 00.A6 PV RACKING SYSTEM

GENERAL SHEET NOTES

1. All PV systems will be designed and installed in compliance with 2011 National Electric Code, UL 1703 requirements, ASTM standards and SD rules and regulations.

2. All PV strings to use manufactured provided cable.

3. The PV array conductors, grounding, and overcurrent protection devices are in accordance with Article 690 of NEC 2011.
LIGHTING SCHEDULE

<table>
<thead>
<tr>
<th>FUNCTION</th>
<th>MANUFACTURER</th>
<th>MODEL</th>
<th>LAMP</th>
<th>WATTS</th>
<th>QTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>2&quot; DOWN LIGHTS</td>
<td>EST</td>
<td>DL 23L</td>
<td>LED</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>2&quot; LINEAR LIGHTS</td>
<td>M1084M110</td>
<td></td>
<td>LED</td>
<td>54</td>
<td>50</td>
</tr>
<tr>
<td>BATHROOM VANITY LIGHT</td>
<td>NITONE</td>
<td>769 RL</td>
<td>LED</td>
<td>28</td>
<td>1</td>
</tr>
<tr>
<td>KITCHEN RECESSED</td>
<td>EST</td>
<td>P 30</td>
<td>LED</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>TABLE LAMPS</td>
<td>LITOMA</td>
<td>L1035</td>
<td>LED</td>
<td>108</td>
<td>1</td>
</tr>
<tr>
<td>EXTERIOR WALL LIGHT</td>
<td>ROSSINI</td>
<td>RW25</td>
<td>LED</td>
<td>35</td>
<td>7</td>
</tr>
<tr>
<td>DECK LIGHTS</td>
<td>HAMPTON BAY</td>
<td>W77347</td>
<td>LED</td>
<td>10</td>
<td>34</td>
</tr>
</tbody>
</table>

REFERENCE KEYNOTES

1. ALL LED INTERIOR LIGHTS ARE DRIVEN BY TRANSFORMERS MANUFACTURED BY EST LIGHTING.
2. TRANSFORMERS FOR LIGHTS IN MODULE A ARE LOCATED ABOVE KITCHEN UPPER CABINETS AND ARE POWERED BY SWITCHED OUTLETS.
3. TRANSFORMERS FOR LIGHTS IN MODULE C AND D ARE LOCATED IN THE MECHANICAL ROOM.
4. CURVED ARROWS REPRESENT HOMERUN TO TRANSFORMER.

GENERAL SHEET NOTES

1. ALL LED INTERIOR LIGHTS ARE DRIVEN BY TRANSFORMERS MANUFACTURED BY EST LIGHTING.
2. TRANSFORMERS FOR LIGHTS IN MODULE A ARE LOCATED ABOVE KITCHEN UPPER CABINETS AND ARE POWERED BY SWITCHED OUTLETS.
3. TRANSFORMERS FOR LIGHTS IN MODULE C AND D ARE LOCATED IN THE MECHANICAL ROOM.
4. CURVED ARROWS REPRESENT HOMERUN TO TRANSFORMER.

REFERENCE KEYNOTES

1. ALL LED INTERIOR LIGHTS ARE DRIVEN BY TRANSFORMERS MANUFACTURED BY EST LIGHTING.
2. TRANSFORMERS FOR LIGHTS IN MODULE A ARE LOCATED ABOVE KITCHEN UPPER CABINETS AND ARE POWERED BY SWITCHED OUTLETS.
3. TRANSFORMERS FOR LIGHTS IN MODULE C AND D ARE LOCATED IN THE MECHANICAL ROOM.
4. CURVED ARROWS REPRESENT HOMERUN TO TRANSFORMER.

GENERAL SHEET NOTES

1. ALL LED INTERIOR LIGHTS ARE DRIVEN BY TRANSFORMERS MANUFACTURED BY EST LIGHTING.
2. TRANSFORMERS FOR LIGHTS IN MODULE A ARE LOCATED ABOVE KITCHEN UPPER CABINETS AND ARE POWERED BY SWITCHED OUTLETS.
3. TRANSFORMERS FOR LIGHTS IN MODULE C AND D ARE LOCATED IN THE MECHANICAL ROOM.
4. CURVED ARROWS REPRESENT HOMERUN TO TRANSFORMER.
## MAIN SERVICE PANEL SCHEDULE

<table>
<thead>
<tr>
<th>CIRCUIT LOAD</th>
<th>BRKR.</th>
<th>CIRCUIT LOAD</th>
<th>BRKR.</th>
<th>CIRCUIT LOAD</th>
<th>BRKR.</th>
<th>CIRCUIT LOAD</th>
<th>BRKR.</th>
<th>CIRCUIT LOAD</th>
<th>BRKR.</th>
<th>CIRCUIT LOAD</th>
<th>BRKR.</th>
</tr>
</thead>
<tbody>
<tr>
<td>MV 1000</td>
<td>20</td>
<td>MV 1000</td>
<td>20</td>
<td>MV 1000</td>
<td>20</td>
<td>MV 1000</td>
<td>20</td>
<td>MV 1000</td>
<td>20</td>
<td>MV 1000</td>
<td>20</td>
</tr>
<tr>
<td>MV 3000</td>
<td>20</td>
<td>MV 3000</td>
<td>20</td>
<td>MV 3000</td>
<td>20</td>
<td>MV 3000</td>
<td>20</td>
<td>MV 3000</td>
<td>20</td>
<td>MV 3000</td>
<td>20</td>
</tr>
<tr>
<td>MV 4000</td>
<td>20</td>
<td>MV 4000</td>
<td>20</td>
<td>MV 4000</td>
<td>20</td>
<td>MV 4000</td>
<td>20</td>
<td>MV 4000</td>
<td>20</td>
<td>MV 4000</td>
<td>20</td>
</tr>
</tbody>
</table>

### TOTAL A (VA): 20445

### TOTAL B (VA): 22085
SMI SB8000TL-US INVERTER WITH DC DISCONNECT
AC DISCONNECT WITH ONE INDEPENDENT 30 A FUSED SWITCH
MAIN SERVICE PANEL L1
SD VILLAGE GRID
AWG #10 600V TYPE PV RHH/RHW-2
UTILITY DISCONNECT 200A BREAKER
AWG #6 BARE COPPER GROUNDING CONDUCTOR
BI-DIRECTIONAL UTILITY METER 240 Vac, 1 PHASE
AWG #6 THWN-2 AWG #6 COPPER GROUND IN 3/4" EMT CONDUIT
4/0 ALUMINUM SER POWER CABLE
POSITIVE AND NEGATIVE CONDUCTORS
AWG #10 600V TYPE PV RHH/RHW-2
AWG #6 COPPER GROUND
IN 3/4" LIQUIDTIGHT FMC
AWG #6 THWN-2 AWG #6 COPPER GROUND IN 3/4" EMT CONDUIT
200 AMP BUSSING
200 A MAIN SERVICE PANEL 65,000A MAXIMUM UL SHORT CIRCUIT RATING
4/0 ALUMINUM SER POWER CABLE IN 1.5" FMT
2 QTY PV RATED Y-CONNECTORS ONE FOR POSITIVE HOMERUNS ONE FOR NEGATIVE HOMERUNS
14 QTY TIGO MAXIMIZERS
BY EATON, TYPE "BR3040L200"
14 QTY BOSCH 255 W PANELS
14 QTY TIGO MAXIMIZERS
STRING A
14 QTY BOSCH 255 W PANELS
14 QTY TIGO MAXIMIZERS
STRING B
14 QTY BOSCH 255 W PANELS
14 QTY TIGO MAXIMIZERS
Y
M
E-611
Interactive Bamboo Joist Exhibit

PUBLIC EXHIBIT SIGNAGE

X-101