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EVALUATION REPORT

Applicant File Number: E10540
Report Number: E10540-1201

Applicant: Mr. Bob Smith
AGT Products Inc.
2311 Royal Windsor Drive
Mississauga, ON, L5J 1K5

Edition 1: July 30, 2013; Initial Report, Application Number E10540 – Coquitlam Office
Issued by: Colby Manley, Project Manager;
Reviewed by: Simon Hodson, Electrical Lead Engineer

Contents: Pages 1 through 12,
Figures 1 through 10.

APPLICABLE REQUIREMENTS:

- CSA Standard C22.2 No 203-M91 - Modular Wiring Systems for Office Furniture
- UL 962 - UL Standard for Safety Household and Commercial Furniture

SUBJECT:

Wall Assembly used as interior wall panels. Provides premade wall sections that contain channels & outlet boxes to be used for NMD conductors.

Wall Assembly for Indoor use only, permanently connected. Used as feed through only, no electrical connections internally except inside approved electrical boxes.

Use with maximum of 2 NMD conductors, 15A maximum.

Manufacturing Location(s):	Client Number	QAI Number
1) 2311 Royal Windsor Drive Mississauga, ON, L5J 1K5	E10540	E10540-1201

Labeling Location(s):	Client Number	QAI Number
1) 2311 Royal Windsor Drive Mississauga, ON, L5J 1K5	E10540	E10540-1201

MODELS:

<u>Model Designation</u>	<u>Voltage</u>	<u>Frequency</u>	<u>Current</u>
SmartWall Plain Panel	120Vac	60Hz	15A
SmartWall Light Switch Panel	120Vac	60Hz	15A
SmartWall Plug Panel	120Vac	60Hz	15A

The above 3 models contain the same components, or a subset, of the critical components table described in this report.

Description

SmartWall Plain Panel, contains electrical conductor channels only, see APPENDIX C for dimension and composition. No boxes or exterior openings are present.

SmartWall Light Switch Panel, has one opening containing one electrical box approximately 48” from the bottom. For overall dimensions and channel spacing refer to APPENDIX C.

Smart Wall Plug Panel, has one opening containing one electrical box approximately 18” from the bottom. For overall dimensions and channel spacing refer to APPENDIX C.

CONDITIONS OF ACCEPTANCE:

1. The manufacturer's compliance label must be placed on each unit prior to application of the cQAIus mark.
2. Wall panels to be constructed as per the Construction Details.
3. All components used in the construction are products suitable as building products.
4. Wall panels to be installed as per instructions shipped with the unit.
5. Only up to two NMD90 wire, or equivalent sheathed cables, are present through the channels
6. 15A maximum branch circuits are present in the wall panels
7. Strain relief is present a maximum of 18" from conductor entering / leaving wall panel.

Marking Methods

Marking Method A:

Class III permanent label – made of material not affected by water, it shall be attached by means of non-water-soluble adhesive. These materials shall not be located on surfaces having temperatures exceeding 79°C.

Marking Method B:

Permanent plate made of metal having a minimum thickness of 0.30mm, securely attached by mechanical means (anodized aluminum, riveted, is acceptable).

Warning and Caution Labels:

Warnings and Cautions shall be written in text having a minimum height of 2mm on a contrasting background.

MARKINGS (ENGLISH):

Each unit is marked with the following:

Each wall assembly is marked with the manufacturer's name, trademark, or file number E10540 and the catalogue number or type designation. The marking is readily visible during normal servicing.

1. The following information, as applicable, shall be included in the marking of each luminaire:
 - a. The manufacturer's name, trademark, or other descriptive marking;
 - b. The voltage rating, input amperes, and frequency;
 - c. Suitable installation and maintenance instructions;
 - d. The approval marks will be cQAIus;
 - e. The catalogue, style, model or other type designation

- f. The month and year of manufacturer, at least, in a location at least visible during installation. Date coding, serial numbers or equivalent may be used;
- g. QAI file number;
- h. A statement “Conforms to CAN/CSA C22.2 No. 203-M91 & UL 962” or equivalent located adjacent to the cQAIus mark.

2. Marking shall comply with CSA Standard C22.2 No. 0.

DEFINITIONS:

Recognized Component – A component part, which has been previously evaluated by an accredited certification body with some restrictions and must be evaluated as part of the basic product considering the Conditions of Acceptability.

Listed Component – A component part, which has been previously Listed or Certified by an accredited Certification Body with no restrictions and is used within its established application and ratings.

Unlisted Component – A part that has not been previously evaluated to the appropriate component standard or is being used outside its established ratings.

Critical Components – An essential part, material, subassembly, system, software or accessory of a product that provides a direct bearing on the product’s compliance to the applicable standard but may not be electrical in nature and or subject to a listing program.

Construction Details – For specific construction details, reference should be made to the photographs and descriptions. All dimensions are approximate unless otherwise indicated. See below for the following general requirements that apply.

Spacings – In primary circuits, minimum 3.2mm spacings are maintained through air and 6.4mm over surfaces of insulating material between current-carrying parts of opposite polarity and between current-carrying parts and dead-metal parts.

Grounding & Bonding – The main ground terminates singly is an listed and suitable terminal, provided with a suitable six inch lead or other means that comply with the requirement of CSA C22.2 no. 0.4. All other bonding is accomplished by positive mechanical means such as welds, hardware, appropriate sized bonding wires or equivalent means.

Mechanical Assembly – Components such as switches, fuseholders, connectors, wiring terminals and display lamps are mounted and prevented from shifting or rotating by the use of lockwashers, starwashers, or other mounting format that prevents turning of the component.

Corrosion Protection – All ferrous metal parts are protected against corrosion by painting, plating or the equivalent means.

Accessibility of Live Parts – All uninsulated live parts in primary circuitry are housed within a metal enclosure constructed such that any openings are not penetrable by the articulate.

Markings – See the markings section for applicable markings. Products for end-use in Canada may be required to have markings in both French and English. It is the responsibility of the Applicant to determine any such requirement and provide bilingual markings, where applicable, in accordance with the Provincial Regulatory Authorities.

Internal Wiring – All conductors are certified Type TEW, TR-64, TR-32, AWM SR-PVC or AWM XL PVC, rated min. 18 AWG, 105 C, 300 V ac (for circuits operating at less than 300 V ac). All wiring is suitably routed and secured away from sharp edges and moving parts to prevent chafing of the insulation. At points where internal wiring passes through metal walls or partitions, the wiring insulation is protected against abrasion or damage by plastic bushings, grommets, retention or metal components meeting minimum thickness requirements.

Installation, Operating and Safety Instructions - Instructions for the proper installation and safe use of this product are provided by the manufacturer as required by the standard. Refer to Illustrations for details.

Components

All components shall be Listed or Recognized or otherwise evaluated by an NRTL for the intended application as required by the Standard. All components shall be used in an application consistent with the component evaluation.

Use of Recognized Components in luminaire constructions shall be authorized by QAI. Acceptability of the following recognized components may be evaluated at the factory:

1. Marking and Labelling Systems – A Recognized Component Marking and Labelling System , shall be rated for the type of surface to which it is affixed and for a temperature of at least 150° C unless otherwise described in the product description.
2. Appliance Wiring Material – Any Recognized Component Appliance Wiring Material complying with the conditions of use.
3. Special-Use Switches – Recognized Component special-use switches that have been investigated for compliance with the Standard for Special-Use Switches, UL 1054, shall be used within the recognized rating and conditions of use.
4. Insulating Bushing-Recognized Component used for protection of conductors that pass over edges of metal.

Assembly and packaging

All splices and electrical connections shall be completed at the factory, unless packaging requires partial disassembly. Only assembly and electrical connections that can be accomplished with ordinary tools or tools supplied with the luminaire shall be completed at the installation site.

A luminaire that requires partial assembly in the field shall be provided with assembly instructions as specified in Table 20.1.1, Item 1.33.

Enclosures

A luminaire enclosure shall perform the following functions:

1. Reduce the risk of contact with live parts;
2. Enclose electrical parts and components that can involve a risk of fire;
3. Protect internal parts from mechanical damage; and
4. Protect internal parts from the environment.

All ferrous metal parts, including hinges, bolts, and fasteners, exposed after assembly shall be protected against corrosion by painting, coating, or plating. Copper, aluminum, alloys of copper and aluminum, stainless steel, and similar materials having inherent resistance to atmospheric corrosion are not required to have additional corrosion protection.

ALTERATIONS:

None

FACTORY TESTS:

Constructional Verification

One sample in each production batch must comply with the dimension described in Appendix C. The measurement must comply within ±0.50% of the dimensions.

DESCRIPTION:

Refer to:

- 1 – Construction Details – Appendix ‘A’**
- 2 – Construction Photos – Appendix ‘B’**
- 3 – Construction Dimensions – Appendix ‘C’**

TESTS:

Sampling:

Various models, provided by the client as a typical production sample, received between November 11, 2012 May 06, 2013 and were tested between November 11, 2012 and May 30, 2013 as being a representative sample.

Testing was conducted in accordance with CSA Standard No. 203-M91 & UL 962.

CONCLUSION:

Products were found to comply with applicable requirements and are acceptable for listing.

Issued : By	_____ <small>SIGNATURE</small>	Project Manager	_____ <small>TITLE</small>	Colby Manley	_____ <small>PRINTED</small>
Reviewed : By	_____ <small>SIGNATURE</small>	Electrical Lead Engineer	_____ <small>TITLE</small>	Simon Hodson	_____ <small>PRINTED</small>

APPENDIX A

Construction Details

The following include Critical Components in the design of the corresponding luminaires. Construction of the wall assembly must contain the Critical Components listed in the below tables and built as per the Construction Details, see Appendix C. See Appendix B for photos of various models.

Component	Manufacturer/ trademark	Type/model	Value / rating	Standard	Approval/ Reference
EPS Foam	PolyForm	NEOPOR	NEOPOR, 23"x96"	ULC S701-11	Evaluated as part of the equipment*
OSB	Various	Various	Various, 96" length	-	Evaluated as part of the equipment*
Drywall	Various	Various	Various, 23"x96"	-	Evaluated as part of the equipment*
Electrical Box	Steel City	Utility Box, 68371	18.8 Cu. In. Capacity	UL 514A, CSA C22.2 No. 18.1	CSA, UL
Strain Relief	IBERVILLE	CI4040	3/8" trade size, metal, 2 cables maximum	CSA C22.2 No. 18.3	CSA
Extension Screws	Various	Various	Various, 0.375" extension	-	Evaluated as part of the equipment
Supplementary information: Components not certified to standards have been evaluated during this investigation and found to be suitable for the application.					
* Components must be suitable for use and approved as a building product.					

APPENDIX B

The photos below are representative samples of the products being produced by AGT products.



Figure 1 - Wall Assembly, Front



Figure 2 - Wall Assembly, Side View



Figure 3 - Wall Assembly, Overall



Figure 4 - Wall Assembly, Top edge



Figure 5 - Outlet box, installed in panel



Figure 6 - Outlet box, with extension screws

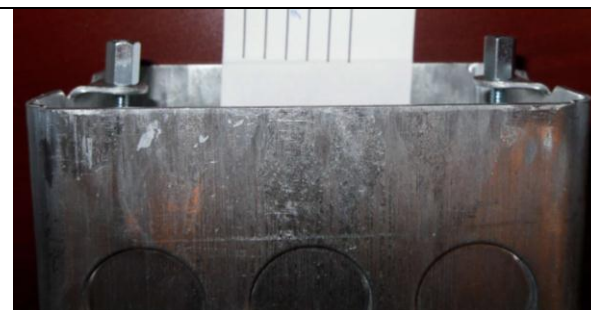


Figure 7 - Outlet box, with extension screws side view

APPENDIX C

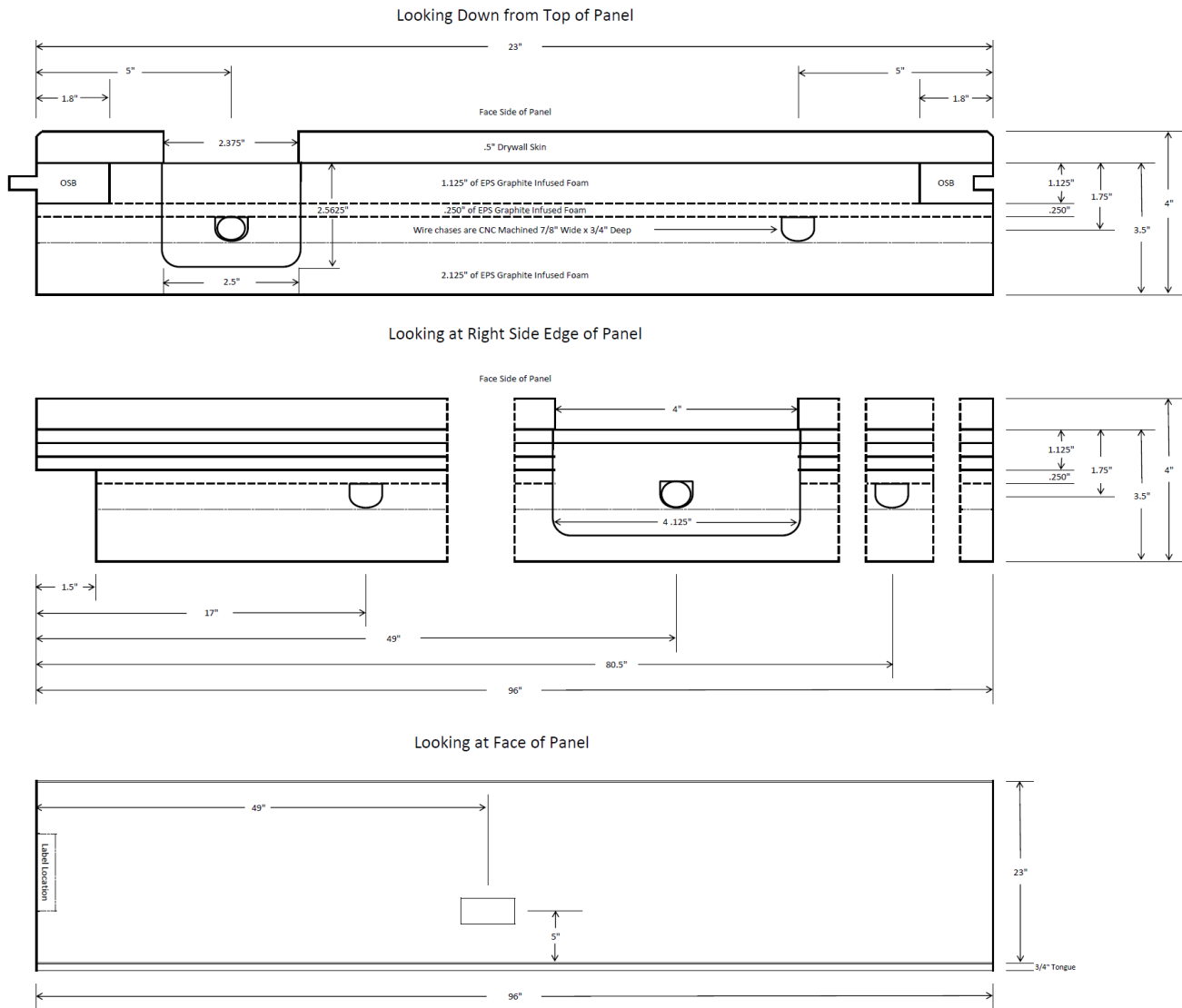


Figure 8 – SmartWall Light Switch Panel, Dimensional Overview

APPENDIX C

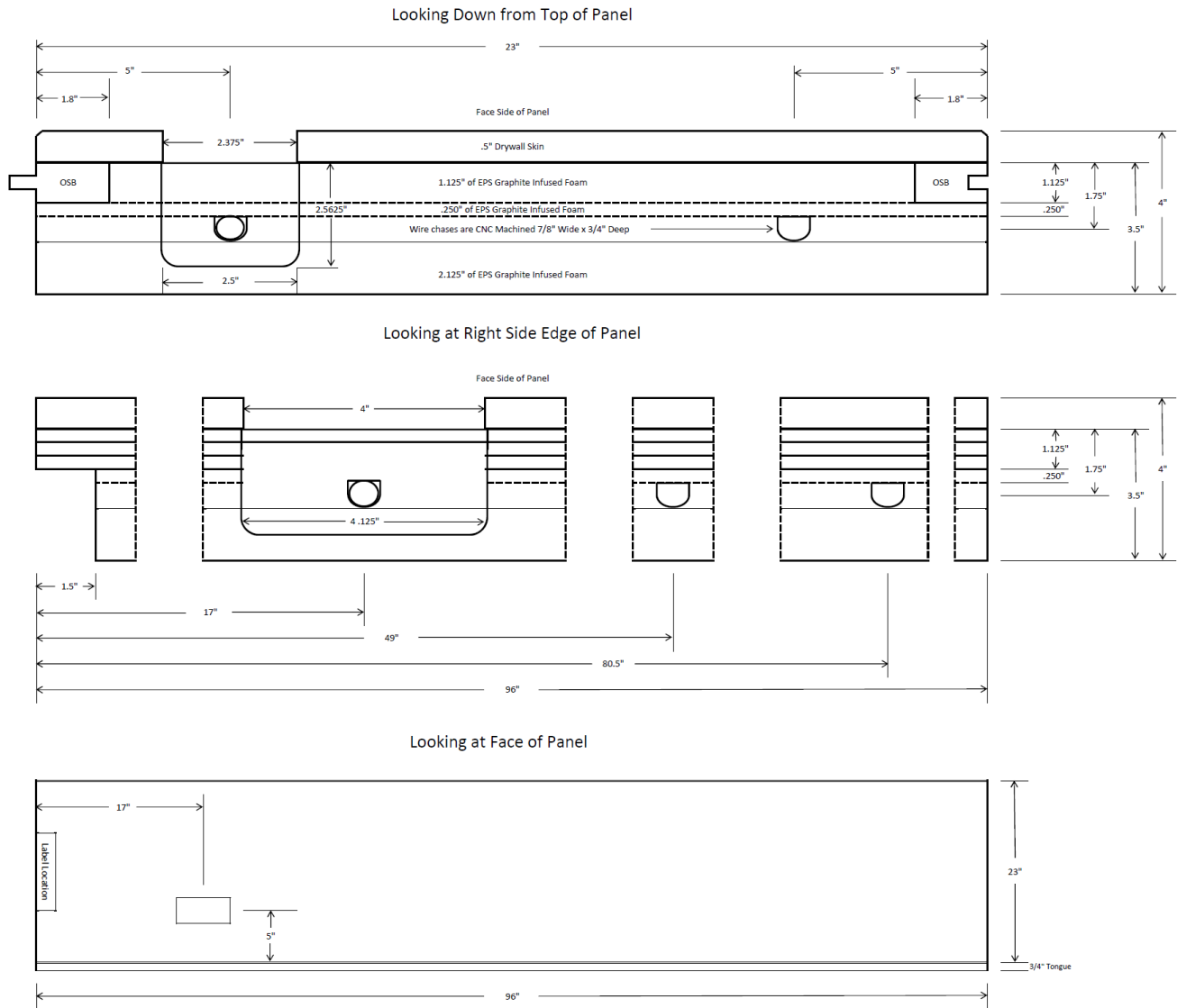


Figure 9 - SmartWall Plug Panel, Dimensional Overview

APPENDIX C

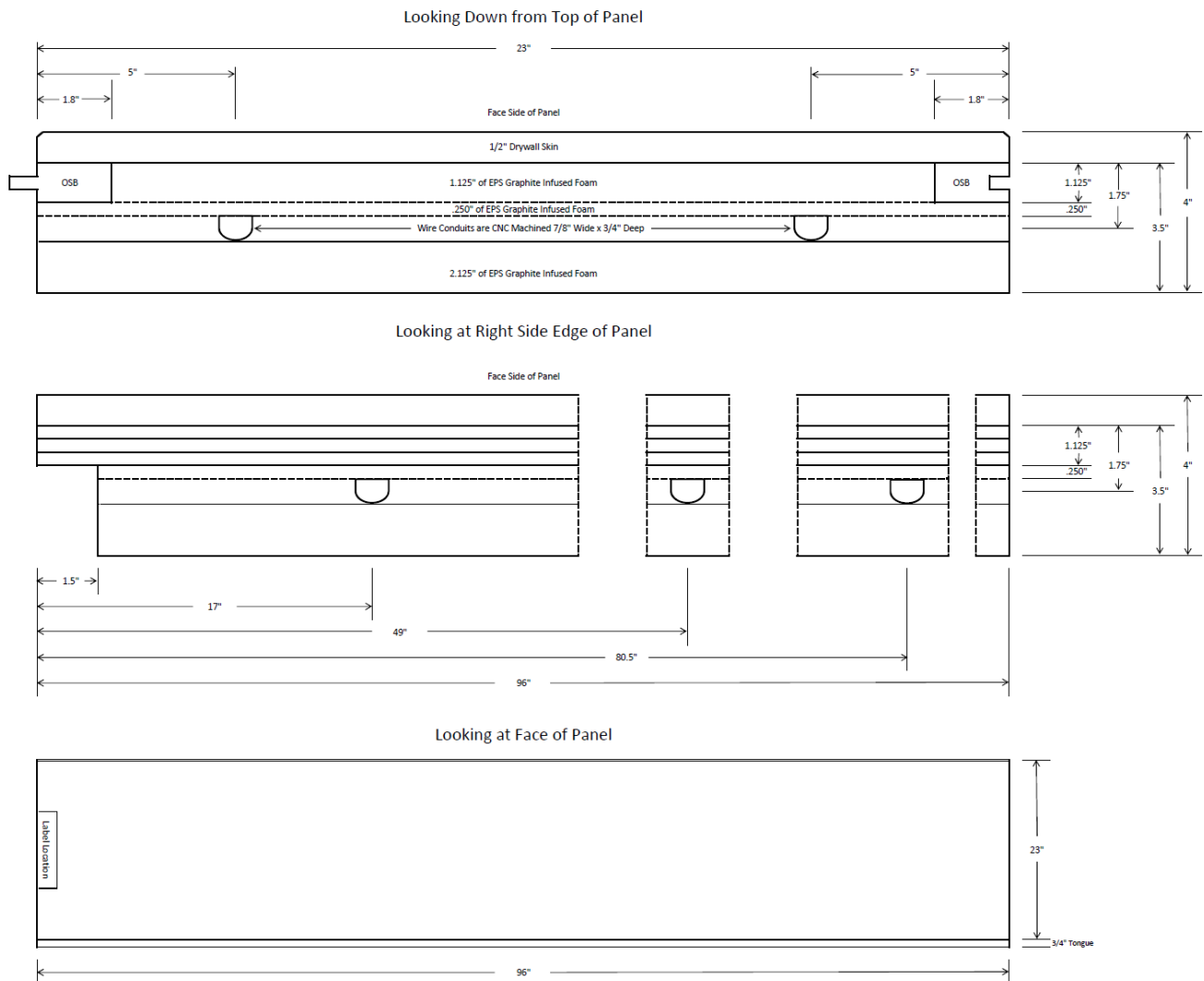


Figure 10 - SmartWall Plain Panel, Dimensional Overview