CBUCK Engineering

CBUCK, Inc. Florida Certificate of Authorization # 8064

Specialty Structural Engineering

Evaluation Report

of

Streamline Roofing & Construction, Inc.

"175 SL"

Metal Roof Assembly

for

Florida Product Approval

 # FL 7207.8 R1

Florida Building Code 2007

Per Rule 9B-72

Method: **1 - D**

Category: **Roofing**

Sub - Category: **Metal Roofing**

Product:	*"175 SL" Roof Panel*
Material:	*Steel*
Panel Thickness:	*24 Gauge*
Panel Width(s):	*18"*
Support Type:	*Steel Purlins*

Prepared for:

Streamline Roofing & Construction, Inc.

P.O. Box 2378

Tallahassee, Florida 32316

Prepared by:

James L. Buckner, P.E.

Florida Professional Engineer # 31242

Florida Evaluation ANE ID: 1916

Project Manager: Diana Galloway

Report No. 08-137-175-SL-18-S4P -ER

Date: 10 / 10 / 08

Contents:

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Florida P.E. #31242
10/23/08

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Manufacturer:	**Streamline Roofing & Construction, Inc.**
Product Name:	**"175 SL"**
Product Category:	Roofing
Product Sub-Category	Metal Roofing
Compliance Method:	State Product Approval Rule 9B-72.070 (1) (d)
Panel Description:	"175 SL", Steel, Snap-Lock, Standing Seam Roof Panel attached to Steel Purlins.
Panel Material / Standards:	Material**:** Steel Yield Strength: 40 ksi minimum Corrosion Resistance: Material shall comply with the Florida Building Code (FBC), 2007 Section 1507.4.3.
Panel Dimension(s)	Thickness: 24 Gauge minimum Width: 18" Maximum (Net Coverage Width) Rib Height: 1-3/4"
Support Type:	**Steel Purlins** (Design of support system is not included in this evaluation)
Support Description:	• Steel Supports, 16 Gauge minimum • Yield Strength: 50 ksi minimum
Slope Range:	Minimum slope shall comply with FBC 2007, including Sections 1507.4.2, 1504.7 and in accordance with the Manufacturers recommendations.
Insulation:	**(Optional)** Rigid Insulation Board, 4" maximum thickness and with a density of 1.8 pcf (lbs/ft^3) minimum or a compressive strength of 25 psi minimum.
Fire Classification:	Fire Classification is outside the scope of Rule 9B-72, and is therefore not included in this evaluation. Additional approved substrates may be added for Fire Classification purposes.

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Attachment Component Description:

Roof Panel Clips
Material**:** Steel
Thickness: 18 gauge
Yield Strength: 45 ksi minimum
Nominal Dimension: 1-7/8" (tall) x 3-1/2" (long) x 1-3/8" (horizontal leg)
Corrosion Resistance: Per FBC Section 1506.7

Bearing Plates (To be installed with optional insulation board)
Material**:** Steel
Thickness: 16 gauge
Yield Strength: 50 ksi minimum
Nominal Dimension: 4" x 5"
Corrosion Resistance: Per FBC Table 1507.4.3(2)

Clip Fasteners
Type: Pancake head self-drilling screws
Material: Steel
Size(s):
1. (No insulation board) **#10-16** x 1" (3/4" min. penetration through purlins)
2. (With insulation board) **#14-13** x 5/8" min. penetration through purlins

Corrosion Resistance: Per FBC Section 1507.4.4 and 1506.6
Standard: Per SAE J78-1979

Installation:

Streamline "175 SL" Roof Panel Attached to Steel Purlins:

- **Purlin Spacing: 48" o.c.** maximum
  (along the length of the panel, at each purlin intersection)
- **TWO** Fasteners per Clip
- Rib Interlock: Snap-Lock
  (Panel ribs shall be fully engaged to form an integral snap-lock**.**)

  Minimum fastener penetration or embedment into steel purlins, 3/4".

Design Uplift Pressure:

- 52.5 PSF (Safety Factor of 2:1)
@ maximum support spacing, 48" (based on 2 or more spans)

Install the system in compliance with the attached installation method.
Refer to manufacturer's installation instructions as a supplemental guide for attachment.

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Quality Assurance: The manufacturer has demonstrated compliance of roof panel products in accordance with the Florida Building Code and Rule 9B-72.070 (3) for manufacturing under a quality assurance program audited by an approved quality assurance entity through **Underwriter's Laboratories, Inc.** (FBC Organization #: QUA 1743)

Performance Standards: The product described herein has demonstrated compliance with:

- **UL580-94 –** ***Test for Uplift Resistance of Roof Assemblies – with Revisions through February 1998.***

Code Compliance: The product described herein has demonstrated compliance with the Florida Building Code 2007, Section 1504.3.2

Evaluation Report Scope: This product evaluation is limited to compliance with the structural wind load requirements of the Florida Building Code, as related to Rule 9B-72.

System Limitations: The required design wind loads shall be determined for each project per FBC, 2007, Section 1609. Any rational analysis computations shall consider web crippling and fastener pullout/pullover per AISI Cold-Formed Steel specification and prepared by a qualified design professional as required by FBC 2007, Sections 104, 105, 106. The maximum fastener/clip and support spacing listed herein shall not be exceeded. Diaphragm and axial load capacity is outside the scope of this evaluation. This report does not evaluate use of this product in the High Velocity Hurricane Zone.

Referenced Data:

1. UL Uplift Class 90
   By Underwriters Laboratories, Inc., (FBC Organization #CER ID: 1739)
   UL File # TGKX.255
   Based on UL580-94 (with February 1998 Revisions) Uplift Test

2. Quality Assurance
   Underwriters Laboratories, Inc. (FBC Organization #QUA ID:1743)

3. Certification of Independence
   By James L. Buckner, P.E. @ CBUCK Engineering
   (FBC Organization# ANE ID: 1916)

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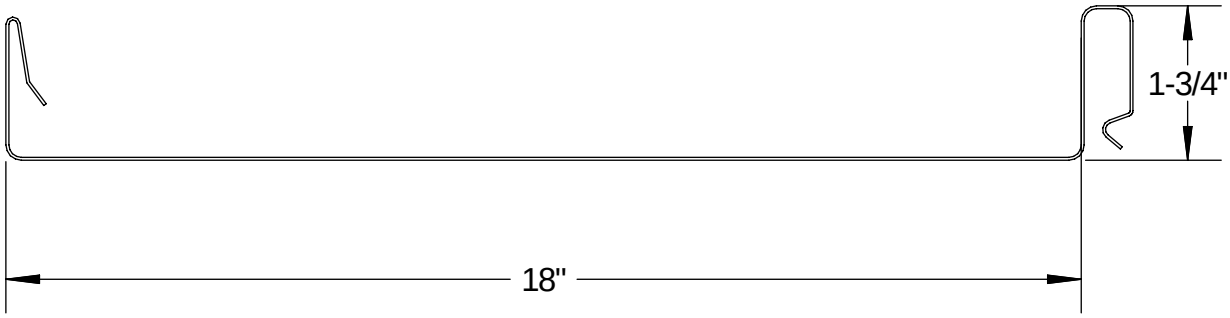
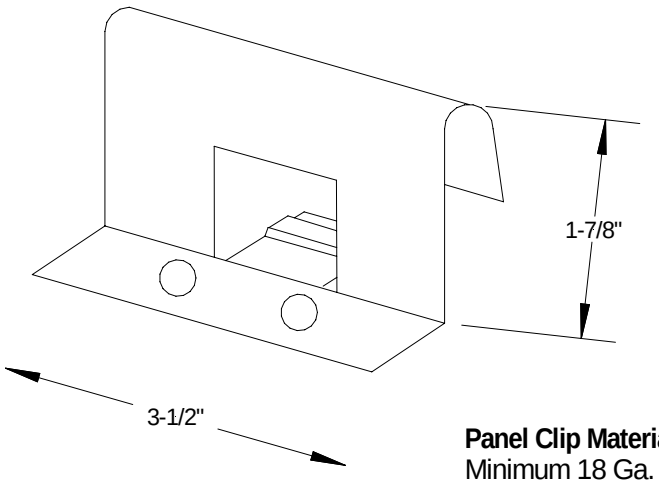
Installation Method

Streamline Roofing & Construction, Inc.

"175 SL" (24 Ga. Steel) Roof Panel Attached to Steel Purlins



Panel Profile View



Panel Clip Material -
Minimum 18 Ga.
Galv. or Stainless Steel

Panel Clip

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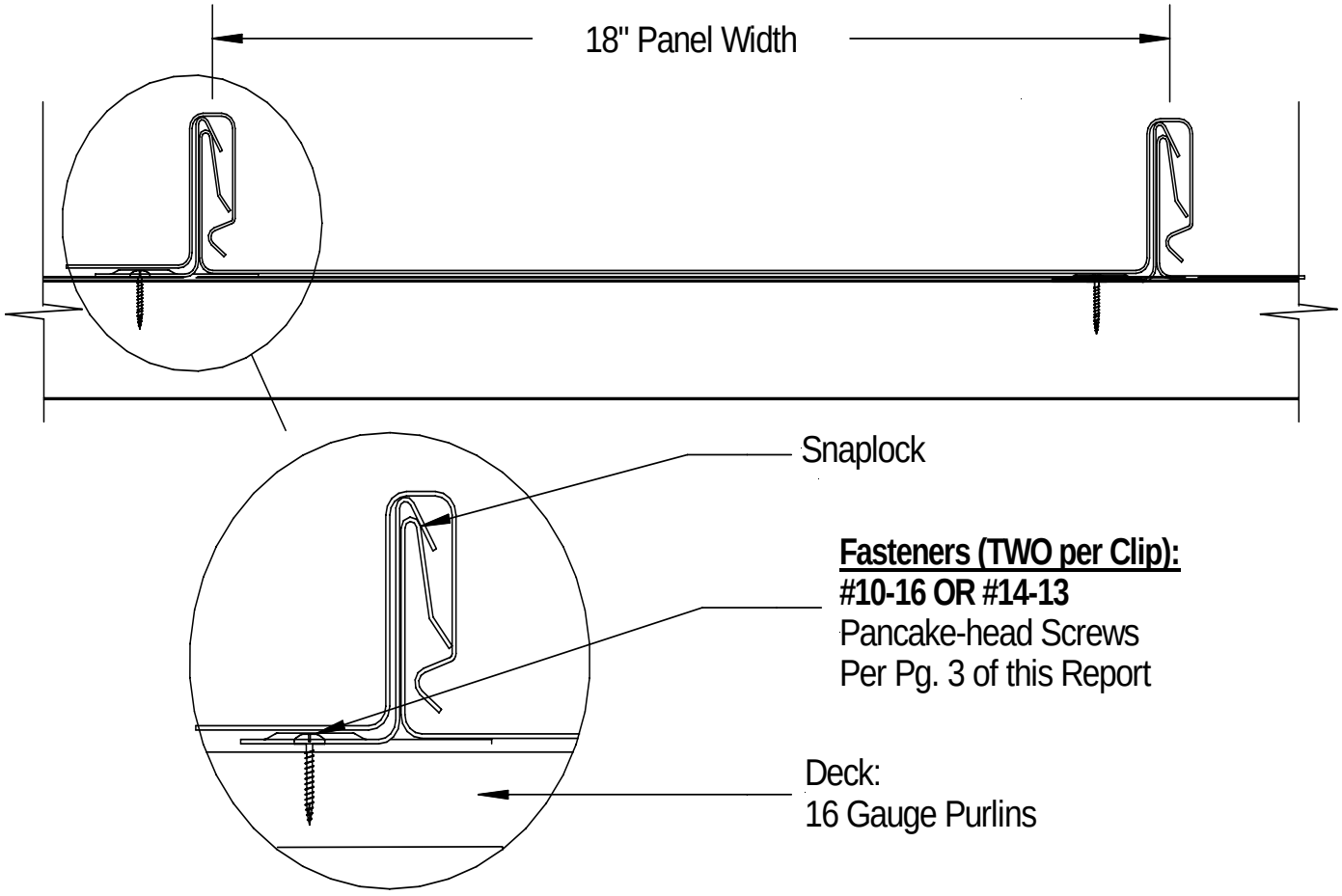

Typical Assembly Profile View

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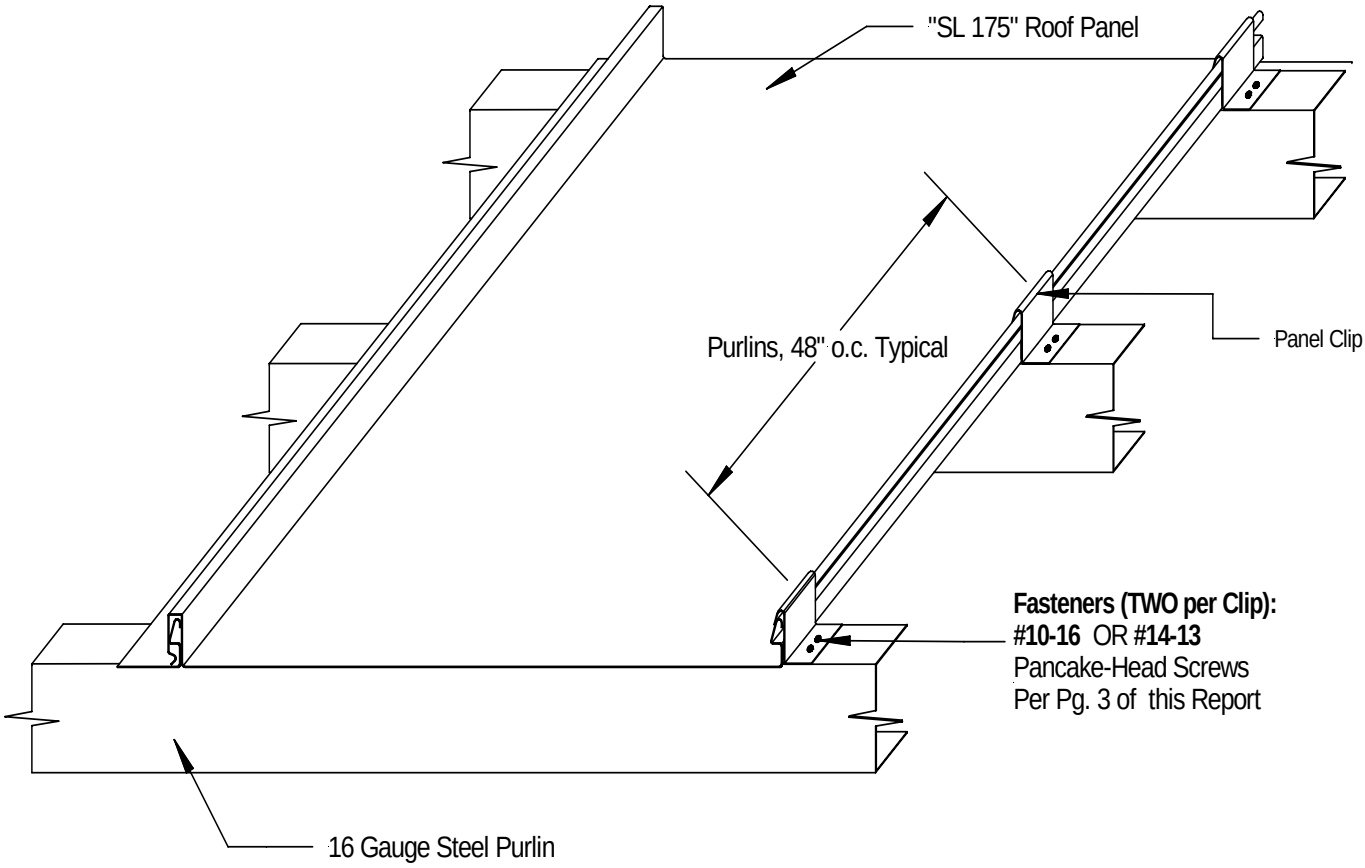

Typical Assembly Isometric View

Optional Insulation:

Rigid Insulation Board, 4" maximum thickness and with a density of 1.8 pcf (lbs/ft^3) minimum or a compressive strength of 25 psi minimum.