



MIAMI-DADE COUNTY
BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING

140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 375-2908

NOTICE OF ACCEPTANCE (NOA)

www.miamidade.gov

Thybar Corporation
913 South Kay Avenue
Addison, IL 60452

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Division (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: TC-5 Style Steel Roof-Curb for Carrier Rooftop Units

APPROVAL DOCUMENT: Drawing No. RC07653, titled "Roofcurb by Thybar Corporation ", sheets 1 through 5 of 5, prepared by Paul Selman, P.E., dated April 29, 2009, last revision #1 dated October 28, 2009, signed and sealed by Paul Selman, P.E., bearing the Miami-Dade County Product Control Approval stamp with the Notice of Acceptance number and the approval date by the Miami-Dade County Product Control Division.

MISSILE IMPACT RATING: None

LABELING: Each roof-curb shall bear a permanent label with the manufacturer's name or logo, Addison IL, Akron OH, Louisville KY, Dallas TX, or Reno NV and the following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA consists of this page 1, evidence submitted page E-1 as well as approval document mentioned above. The submitted documentation was reviewed by **Helmy A. Makar, P.E., M.S.**



Helmy A. Makar
 02/03/2010

NOA No. 09-0416.04
Expiration Date: 02/03/2015
Approval Date: 02/03/2010

Thybar Corporation

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

1. *Drawing No. RC07653, titled "Roofcurb by Thybar Corporation", sheets 1 through 5 of 5, prepared by Paul Selman, P.E., dated April 29, 2009, last revision #1 dated October 28, 2009, signed and sealed by Paul Selman, P.E.*

B. TESTS

1. *None.*

C. CALCULATIONS

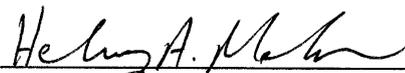
1. *Calculation titled "146 MPH Wind Load Calculation", dated April 14, 2009, sheets 1 through 4 of 4, signed and sealed by Paul J. Selman, P.E.*
2. *Calculation titled "146 MPH Wind Load FBC 2007", dated October 28, 2009, sheets 1 through 35 of 35, signed and sealed by Paul J. Selman, P.E.*

D. QUALITY ASSURANCE

1. *By Miami-Dade County Building Code Compliance Office.*

E. MATERIAL CERTIFICATIONS

1. *None.*

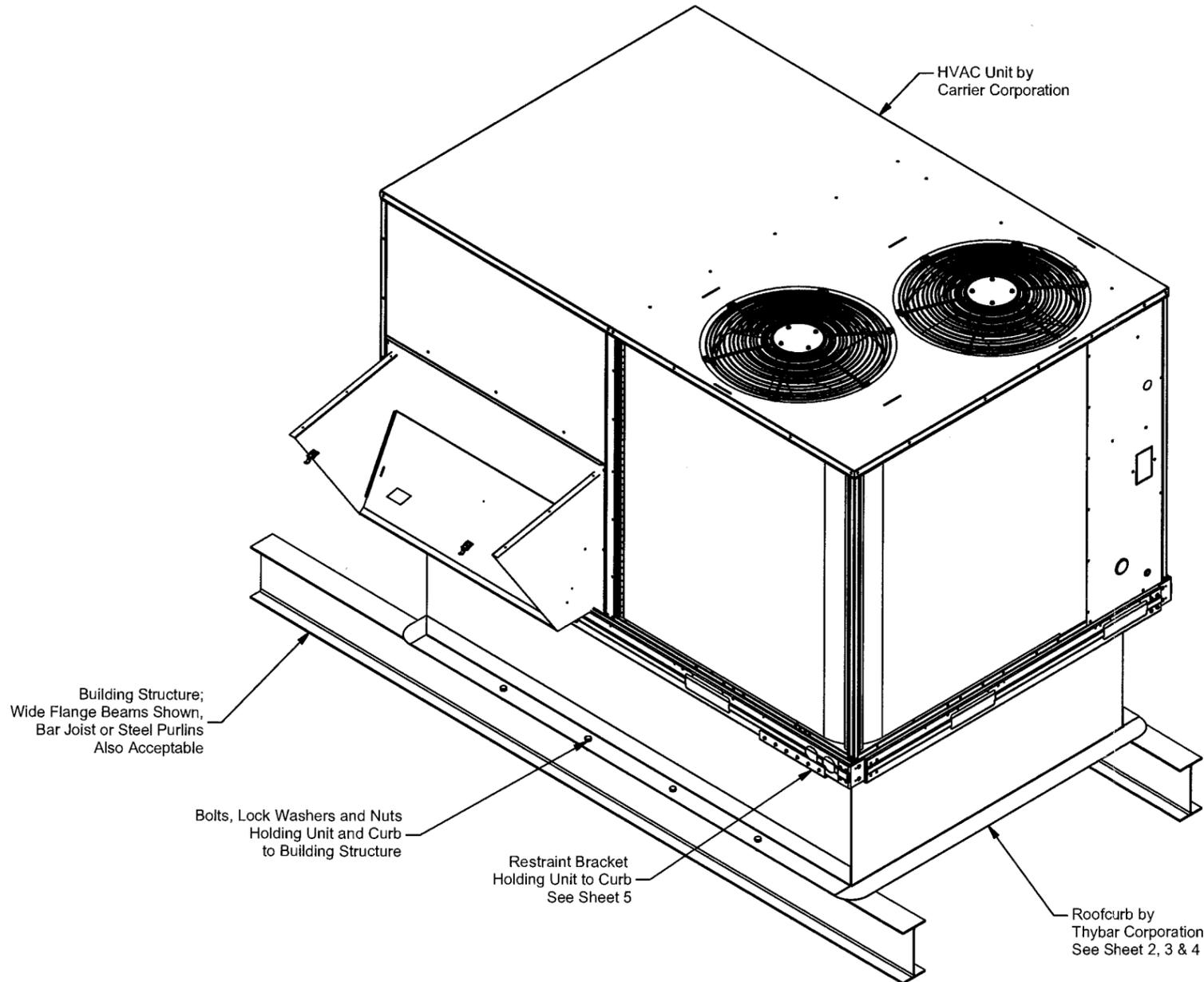


Helmy A. Makar, P.E., M.S.
Senior Product Control Examiner

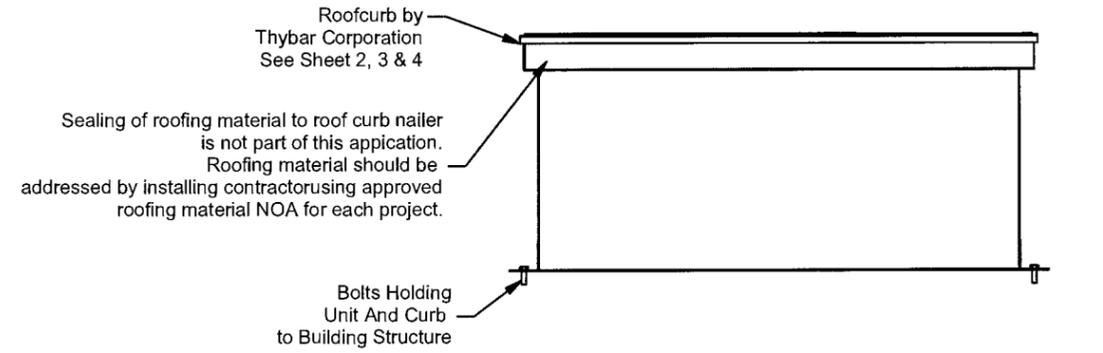
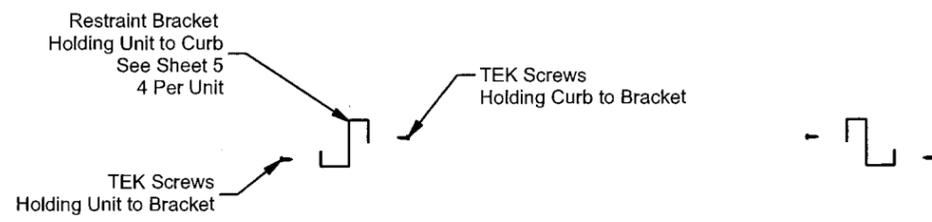
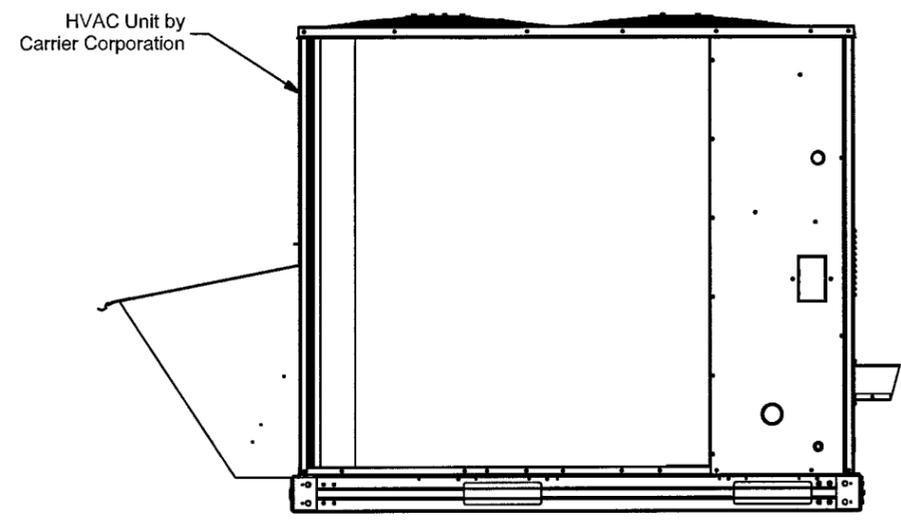
NOA No. 09-0416.04

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Assembled Isometric View



Exploded End View

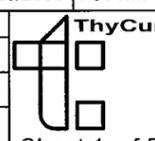
This Notice of Acceptance application is limited to the attachment of the HVAC unit to the roof curb, the roof curb itself and the attachment of the roof curb to the roof structure. The attached calculations show that model 50TC-A09 is the worst case as far as windload requirements are concerned. Therefore, the restraint system shown in these drawings will be acceptable for all Carrier units with the following model numbers: **48/50TCA08-A12 and 48/50TCD08-D12**

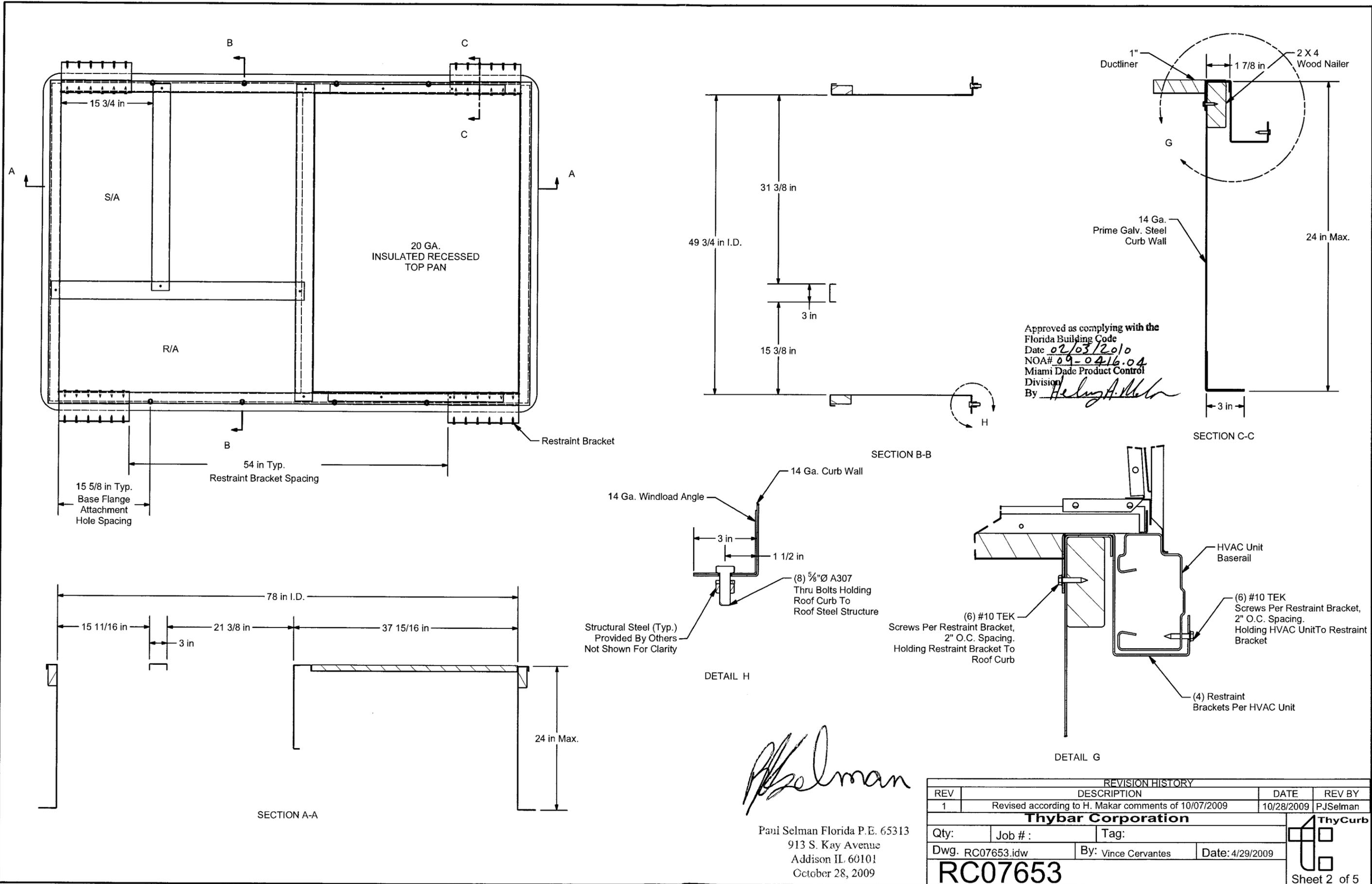
General Notes:
 1) These drawings provide a method of attachment so that a Carrier Corporation manufactured HVAC unit will be able to resist the force generated by a 146MPH wind when the unit is installed on a Thybar Corporation manufactured roofcurb as required by the latest version of the Florida Building Code (FBC).
 2) The following analysis is being submitted to the Miami-Dade County Product Control Division for review and consideration in assigning a Notice of Acceptance (NOA) for Carrier units installed on Thybar Corporation roofcurbs and restraint brackets.

Analysis:
 1) The design wind load for a rooftop-mounted HVAC unit was determined following the requirements of FBC2007 Section 1609.1.1 and Section 6.5.15 of The American Society of Civil Engineers Standard 7 (ASCE7-05).
 2) Static analysis was used to ensure that all components between the rooftop-mounted HVAC unit and the building structure are of sufficient strength.
 a) The load path from the rooftop equipment to the building structure is of sufficient strength to keep the equipment in place while resisting the tension, shear, moment and uplift forces generated by the wind force acting on the rooftop equipment.
 b) The rooftop unit restraints, the roofcurb wall and the curb attachments to the building structure were all designed and manufactured with the ability to safely transfer the wind-generated force into the building structure.

Approved as complying with the Florida Building Code
 Date 02/03/2010
 NOA# 09-0416.04
 Miami Dade Product Control Division
 By *Helena A. M...*

Paul Selman
 Paul Selman Florida P.E. 65313
 913 S. Kay Avenue
 Addison IL 60101
 October 28, 2009

REVISION HISTORY			
REV	DESCRIPTION	DATE	REV BY
1	Revised according to H. Makar comments of 10/07/2009	10/28/2009	PJSelman
Thybar Corporation			
Qty:	Job #:	Tag:	
Dwg: RC07653.idw	By: Vince Cervantes	Date: 4/29/2009	
RC07653			 Sheet 1 of 5



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 Date 02/03/2010
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 Division
 By *Helmut A. Makar*

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1	Revised according to H. Makar comments of 10/07/2009	10/28/2009	PJSelman

Thybar Corporation

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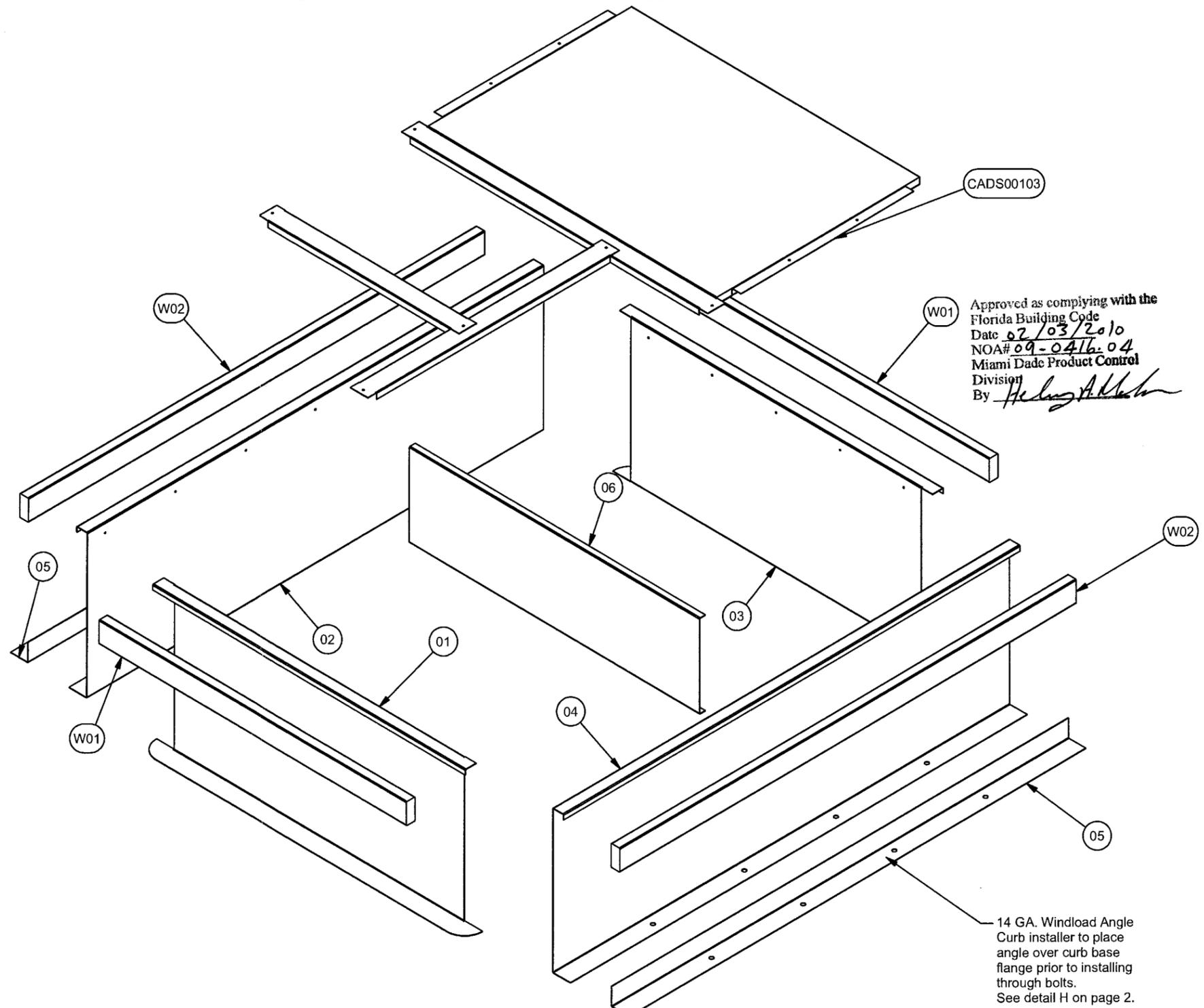
RC07653

ThyCurb
 Sheet 2 of 5

P. Selman

Paul Selman Florida P.E. 65313
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Part	Qty	Part Number	Description	Material
01	1	RC07653-01	Curb Wall 1	Prime Galv Steel 14 Ga.
02	1	RC07653-02	Curb Wall 2	Prime Galv Steel 14 Ga.
03	1	RC07653-03	Curb Wall 3	Prime Galv Steel 14 Ga.
04	1	RC07653-04	Curb Wall 4	Prime Galv Steel 14 Ga.
05	2	RC07653-05	Angle, Windload	Prime Galv Steel 14 Ga.
06	1	RC07653-06	Channel	Prime Galv Steel 14 Ga.
W01	2	RC07653-W01	52 3/4 in	2X4 Wood Nailer
W02	2	RC07653-W02	78 in	2X4 Wood Nailer
CADS00103	1	CADS00103	Duct Support Channels	Assembly



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 By *Heidi A. K...*

14 GA. Windload Angle
 Curb installer to place
 angle over curb base
 flange prior to installing
 through bolts.
 See detail H on page 2.

Paul Selman

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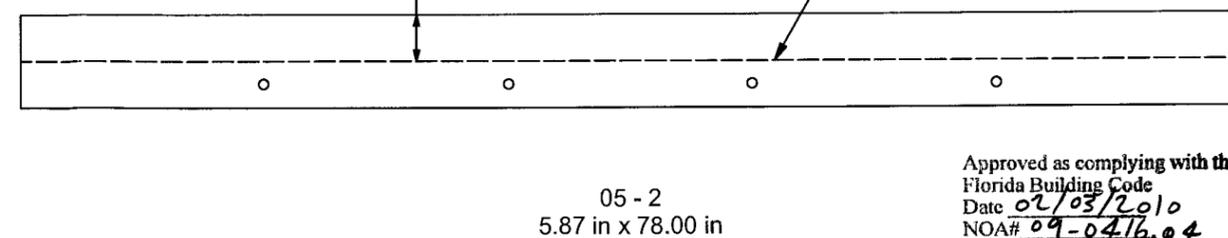
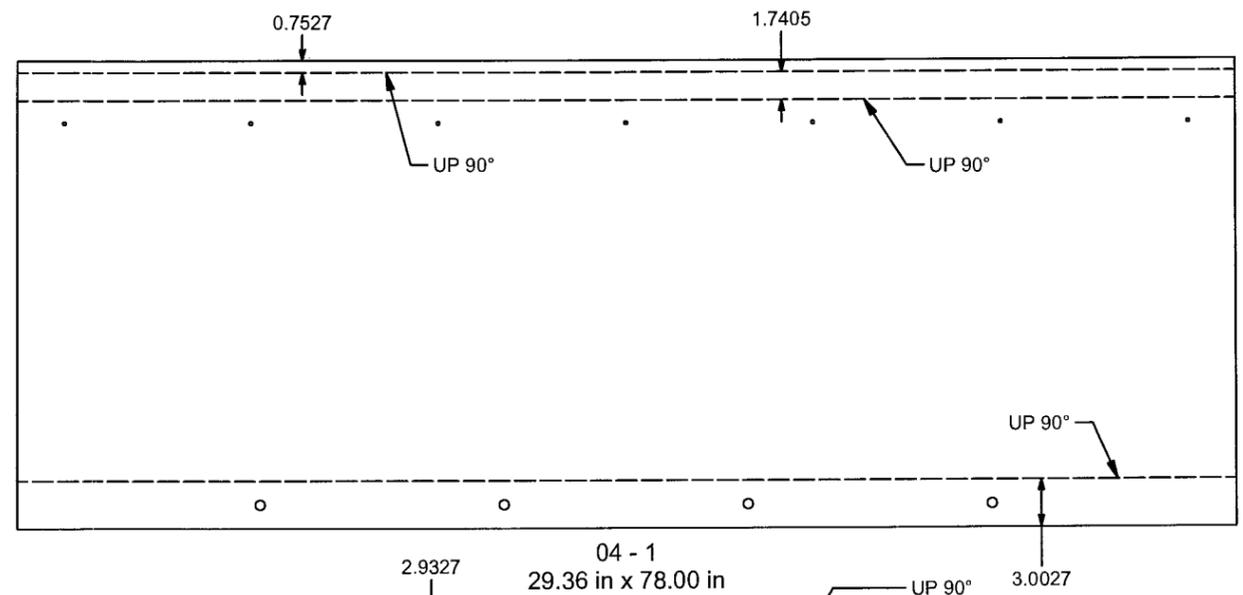
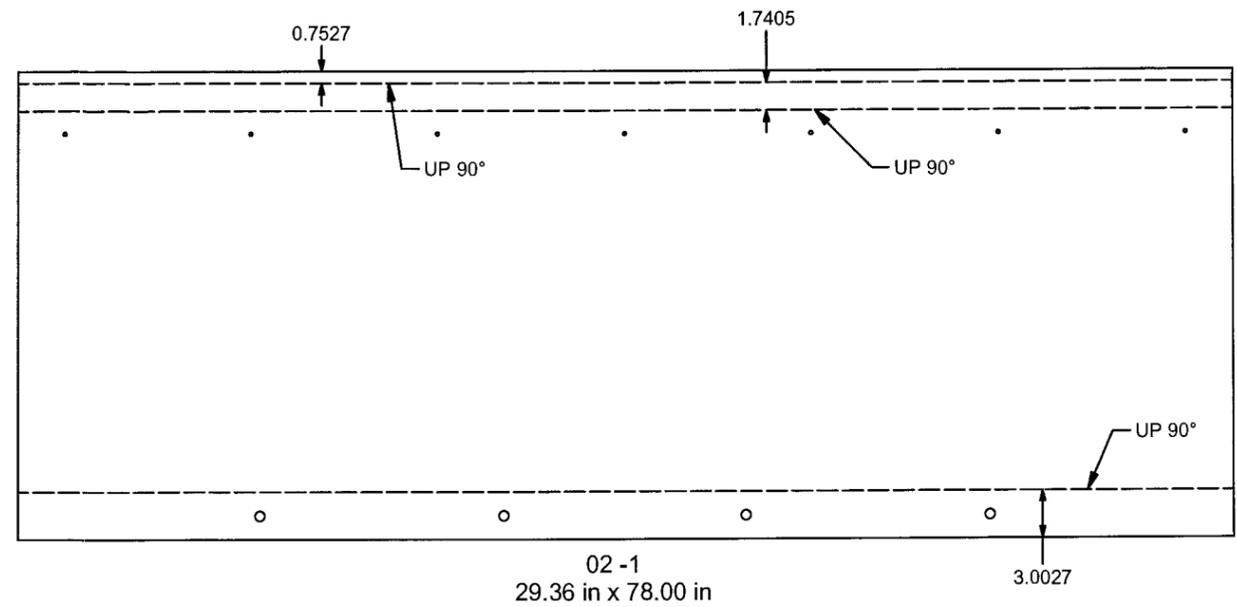
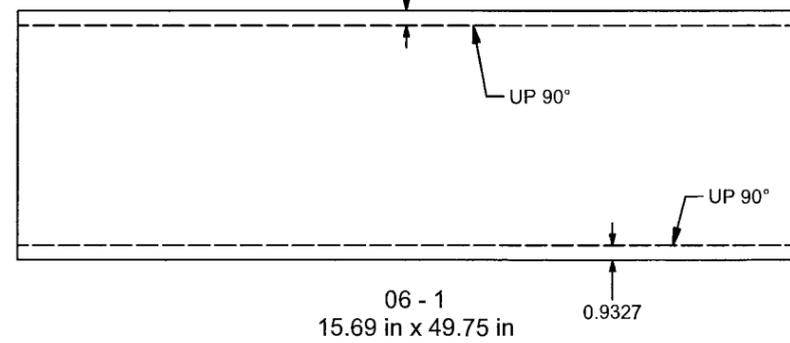
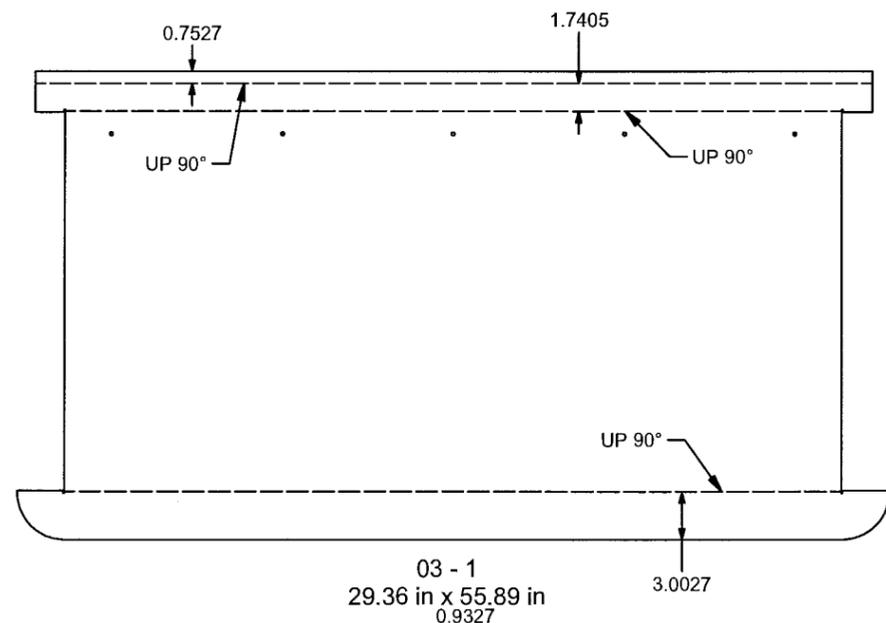
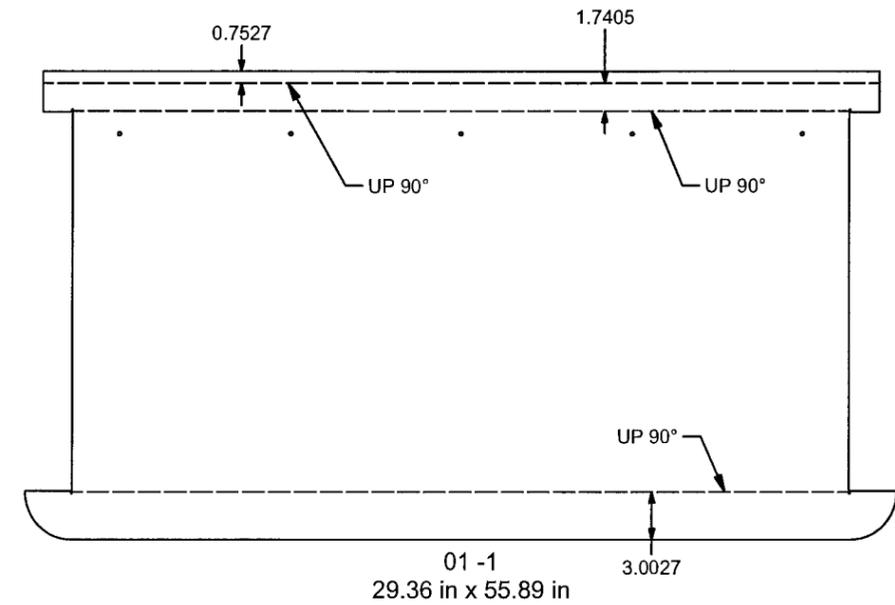
Thybar Corporation

Qty: Job #: Tag:

Dwg. RC07653.idw By: Vince Cervantes Date: 4/29/2009

RC07653

Sheet 3 of 5



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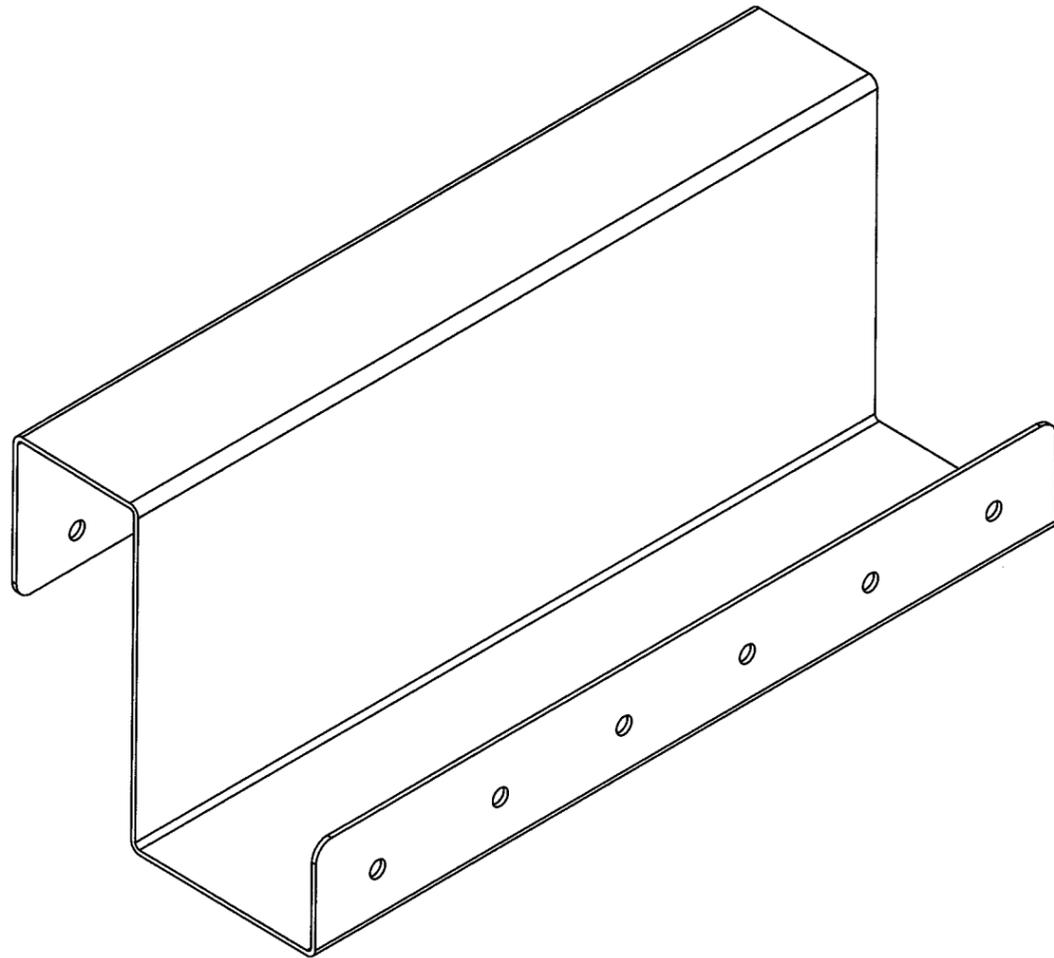
Paul Selman

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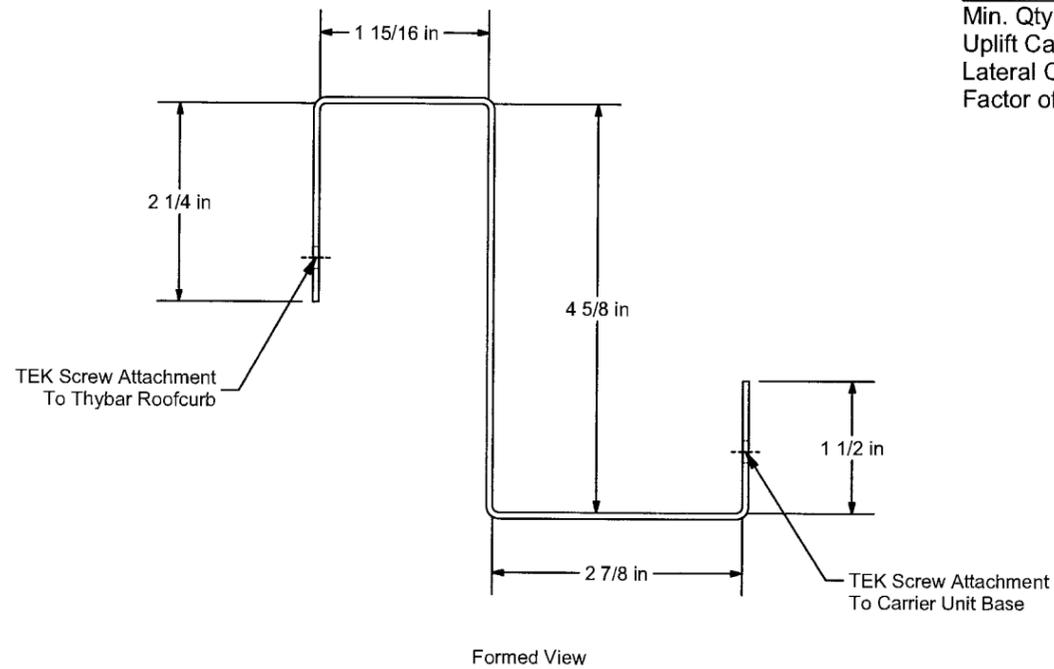
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RC07653

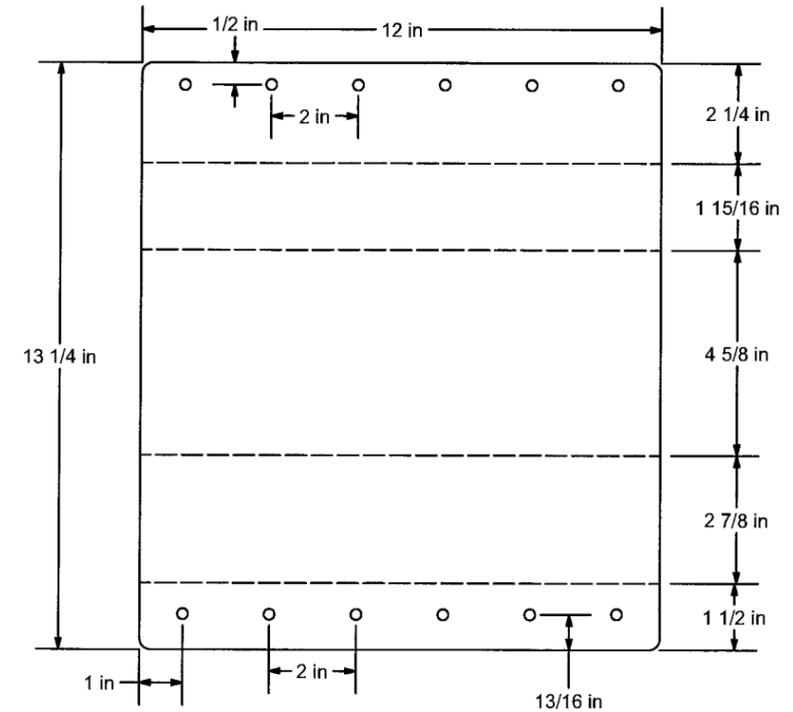
ThyCurb
Sheet 4 of 5



Isometric View



Formed View



Flat Pattern

MATERIAL LIST:

Bracket: 14 GA. Prime Galv. Steel
 Hardware: (12) #10 x 1" TEK Screws Per Bracket

Bracket Capacity

Min. Qty.: 4 per Curb
 Uplift Capacity: 2,200lb
 Lateral Capacity: 4,500lb
 Factor of Safety: 2

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RC07653

ThyCurb

 Sheet 5 of 5