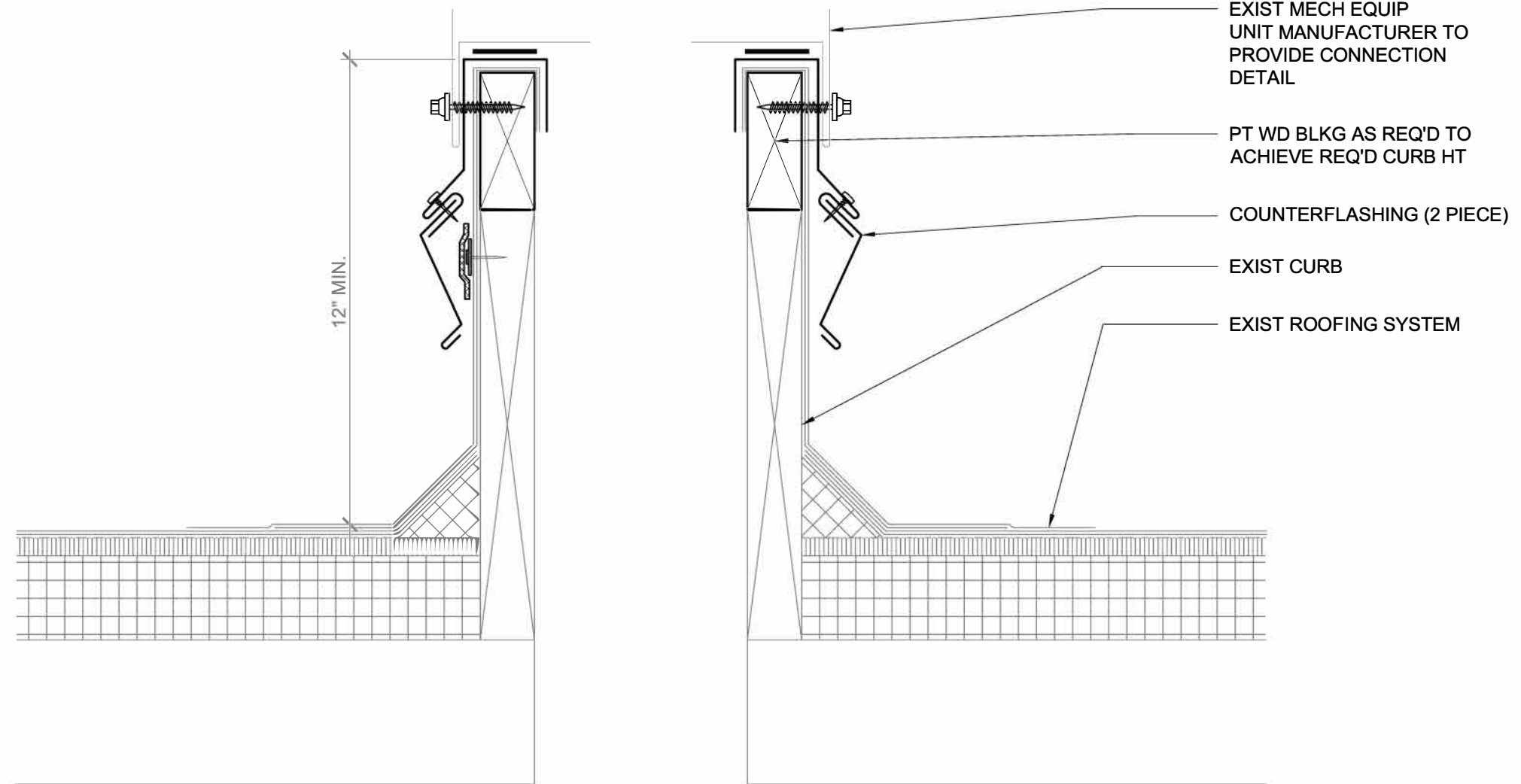




ENGINEERING SUBMITTALS

WINDLOAD CERTIFICATION

February 23, 2016 .

CODE FBC 2014 / ASCE7-10

WIND SPEED: 150 MPH, 3 SEC. GUST

EXPOSURE: "D"

CATEGORY II

INTERNAL PRESSURE COEFF: 0.00

JOB:
HILLSBOROUGH COUNTY SHERIFF'S OFFICE
2211 N. FALKENBURG ROAD
TAMPA, FLORIDA 33619
CARRIER 50HCB-F04A / ADAPT CURB

PAUL WELCH INC.
Mechanical Electrical Civil Engineering
1984 S.W. Biltmore St. Suite #114
Port Saint Lucie, FL 34984
Phone (772) 785-9888
pwelchinc@aol.com



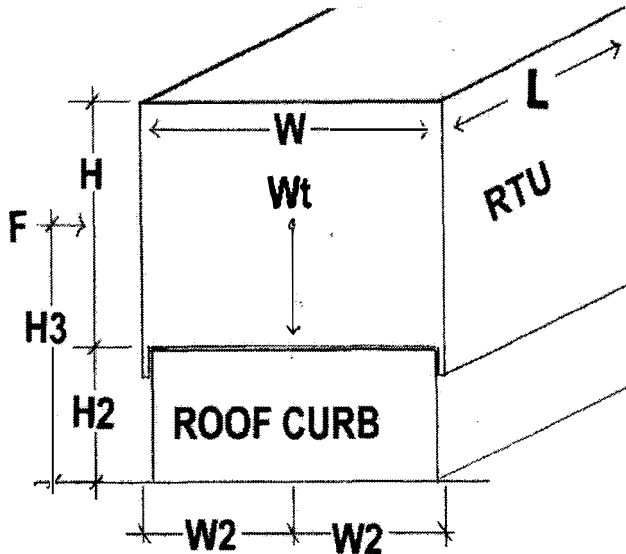
Paul Welch P.E.
Fla Reg No: 29945

PAUL WELCH INC.

Mechanical Electrical Civil Engineering
1984 S.W. Biltmore St. Suite #114
Port Saint Lucie, FL 34984
Phone (772) 785-9888

JOB: HILLSBOROUGH CO SHERIFF 50HCBF04/ADAPT

February 23, 2016



<u>L</u> =	47	(in)
<u>W</u> =	75	(in)
<u>W2</u> =	37.5	(in)
<u>H</u> =	34	(in)
<u>H2</u> =	20	(in)
<u>H3</u> =	37	(in)
<u>Wt</u> =	590	(lb)
<u>curb</u> =	16	(ga)
<u>WIND (V)</u> =	150	mph 3 sec.

Exposure = D

60 ft MAX Hieght

Equation (29.3-1) ASCE 7-10

$$q_h = 0.00256 K_z K_{zt} K_d V^2 \text{ (lb / ft}^2\text{)}$$

$$q_h = 0.00256 (1.31) (1.0) (0.90) (150)^2 \text{ (lb/ft}^2\text{)}$$

$$q_h = 67.9 \text{ (lb / ft}^2\text{)}$$

Equation (29.5-2) ASCE 7-10

$$F_h = q_h (GC_r) A_f \text{ (lb)}$$

$$F_h = 67.9 (3.1) (11) \text{ (lb)}$$

$$F_h = 2336.21 \text{ (lb)}$$

Equation (29.5-3) ASCE 7-10

$$F_v = q_h (GC_r) A_f \text{ (lb)}$$

$$F_v = 67.9 (1.5) (24) \text{ (lb)}$$

$$F_v = 2493.59 \text{ (lb)}$$

$$\Sigma M = 0$$

$$+ 37 \text{ (in)} \times 2336.2 \text{ (lb)} = 86439.85 \text{ (in lb)}$$

$$+ 37.5 \text{ (in)} \times 1246.8 \text{ (lb)} = 46754.72 \text{ (in lb)}$$

$$- 37.5 \text{ (in)} \times 590 \text{ (lb)} = 22125 \text{ (in lb)}$$

$$\text{Difference} = 111069.6 \text{ (in lb)}$$

$$\#12 \text{ SMS in SHEER / 16 ga steel} = 423 \#$$

$$(4) \#12 -14 \text{ SMS} = 1692 \#$$

$$75 \text{ (in)} \times 1692 \text{ (lb)} = 126900 \text{ (in lb)}$$

$$126900 \text{ (in lb)} > 111069.6 \text{ (in lb)}$$

THEREFORE CURB AND FASTENING OK

NOTE: UNIT TO CURB ATTACHMENT SHALL BE WITH (8) - #12-14 SMS AT EACH LONG SIDE OF UNIT EVENLY SPACED AND WITH (4) - #12-14 SMS AT EACH SHORT SIDE OF UNIT EVENLY SPACED.

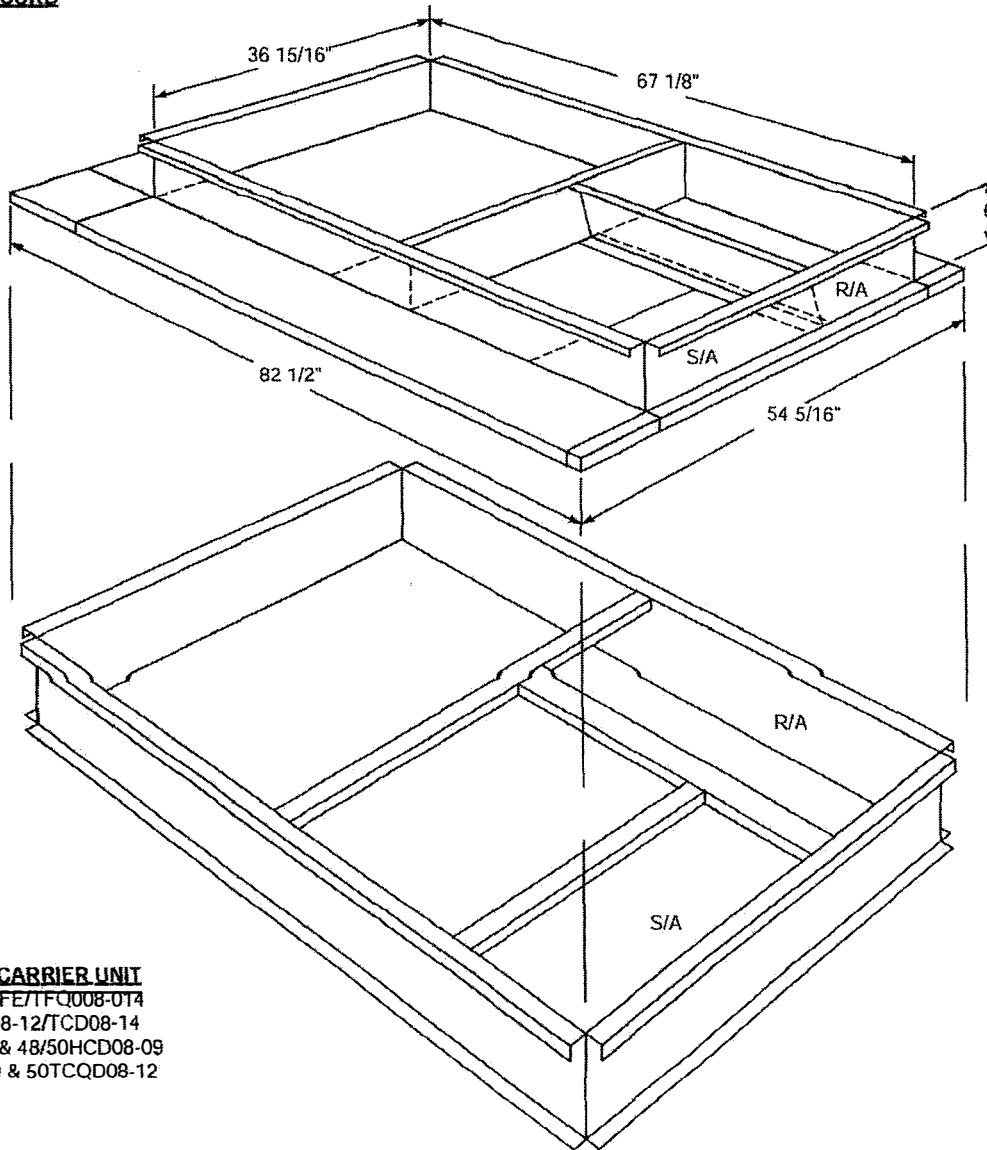
NOTE: ALTERNATE UNIT TO CURB ATTACHMENT MAY BE WITH 16 GA CLIPS OR STRAPS WITH THE SAME NUMBER OF ATTACHMENT SPECIFIED ABOVE FOR BOTH CLIP OR STRIP TO UNIT AND FOR CLIP OR STRIP TO CURB.

Paul Welch, P.E.
Fla Reg No. 29945

ADAPTER CURB FOR CARRIER

48/50TCA04-07 & 48/50HCA04-06 & 48/50TCQA04-07

ADAPTER CURB



EXISTING CARRIER UNIT

48/50TFF/TFE/TFQ008-014
 48/50TCA08-12/TC08-14
 48/50HCA07 & 48/50HCD08-09
 50HCQ07-09 & 50TCQD08-12

INSTRUCTIONS:

1. REMOVE OLD A/C UNIT.
2. APPLY 1/4" x 1 1/4" GASKETING.
3. INSTALL & SECURE ADAPTER CURB ON EXISTING CURB AS REQUIRED BY LOCAL BUILDING CODE.
4. APPLY 1/4" x 1 1/4" GASKETING ON ADAPTER CURB.
5. INSTALL & SECURE NEW A/C UNIT ON ADAPTER CURB AS REQUIRED BY LOCAL BUILDING CODE.

STANDARD FEATURES:

- * HEAVY GA. GALV. STEEL CONSTRUCTION
- * FULLY INSULATED WITH 1" - 1.5 LB. DENSITY INSULATION
- * 1/4" x 1 1/4" GASKETING
- * SHIPPED FULLY ASSEMBLED
- * SUPPLY AND RETURN DUCT CHAMBERS INCLUDED

PRODUCT SUBMITTAL

QUOTE # _____



P.O. BOX 1890
 PINELLAS PARK, FL 33780-1890
 PHONE: 800-237-2275
 FAX: 800-238-1819
 www.plenums.com
 plenums@ix.netcom.com

Plenums Inc. Model CC345ACC812

Manufacturers Equip. _____

Approved _____

Date _____

CARRIER: Chassis #1 and #2

48/50TC and 50TCQ size 04 (min) through 07 (max)

48/50KC, 50KCQ, 48/50HC, 50HCQ, and 48/50LC size 04 (min) through 06 (max)

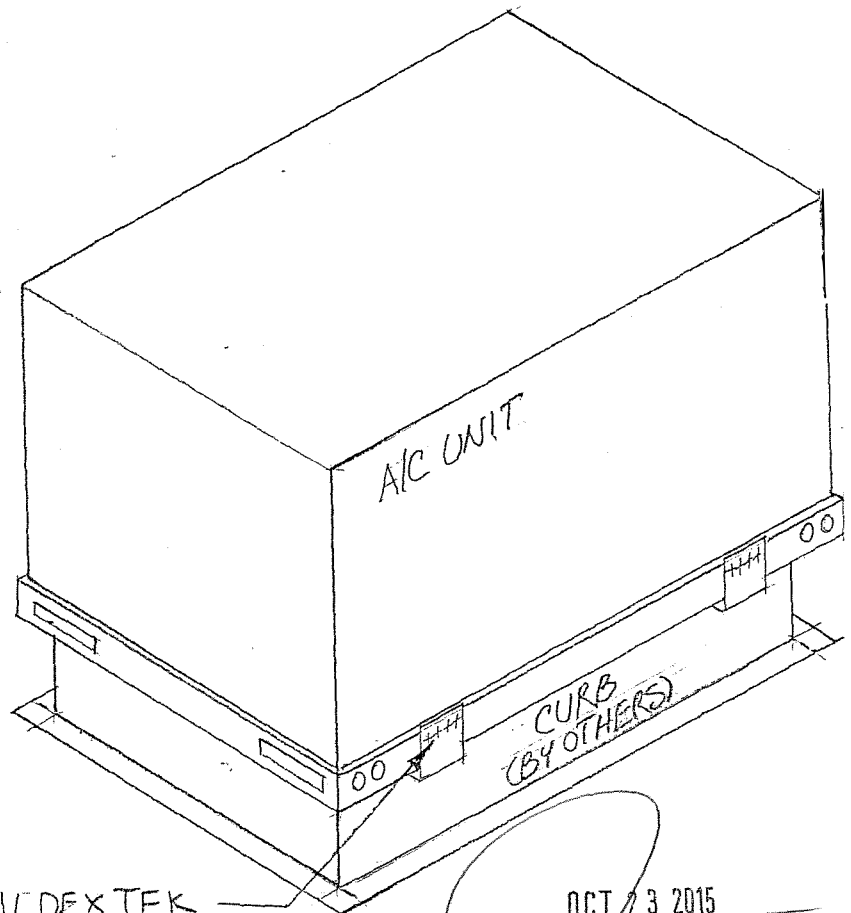
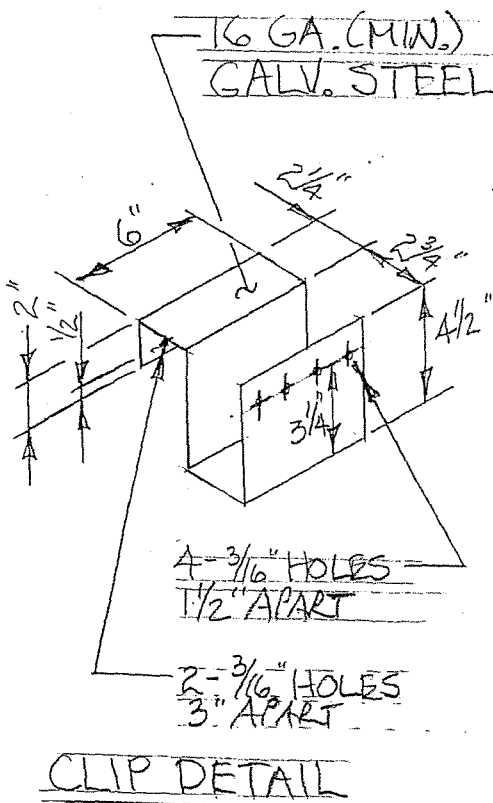
Each package air conditioning unit listed above conforms to the Florida Building Code 5th Edition (2014) requirements for installation including High Velocity Hurricane Zone (HVHZ), Risk Category III/IV Building ($V = 186\text{mph}$), exposure category "D", and installation height up to and including 65 feet above grade. Worst case is -07 (Chassis 2) 74-3/8" x 46-3/4" x 41-3/8" tall.

ALLOWABLE DESIGN PRESSURES FOR THE UNIT ITSELF:

Design Lateral Pressure = 197.18 lb/ft^2

Design Uplift Pressure = 95.41 lb/ft^2

CURB MOUNTING



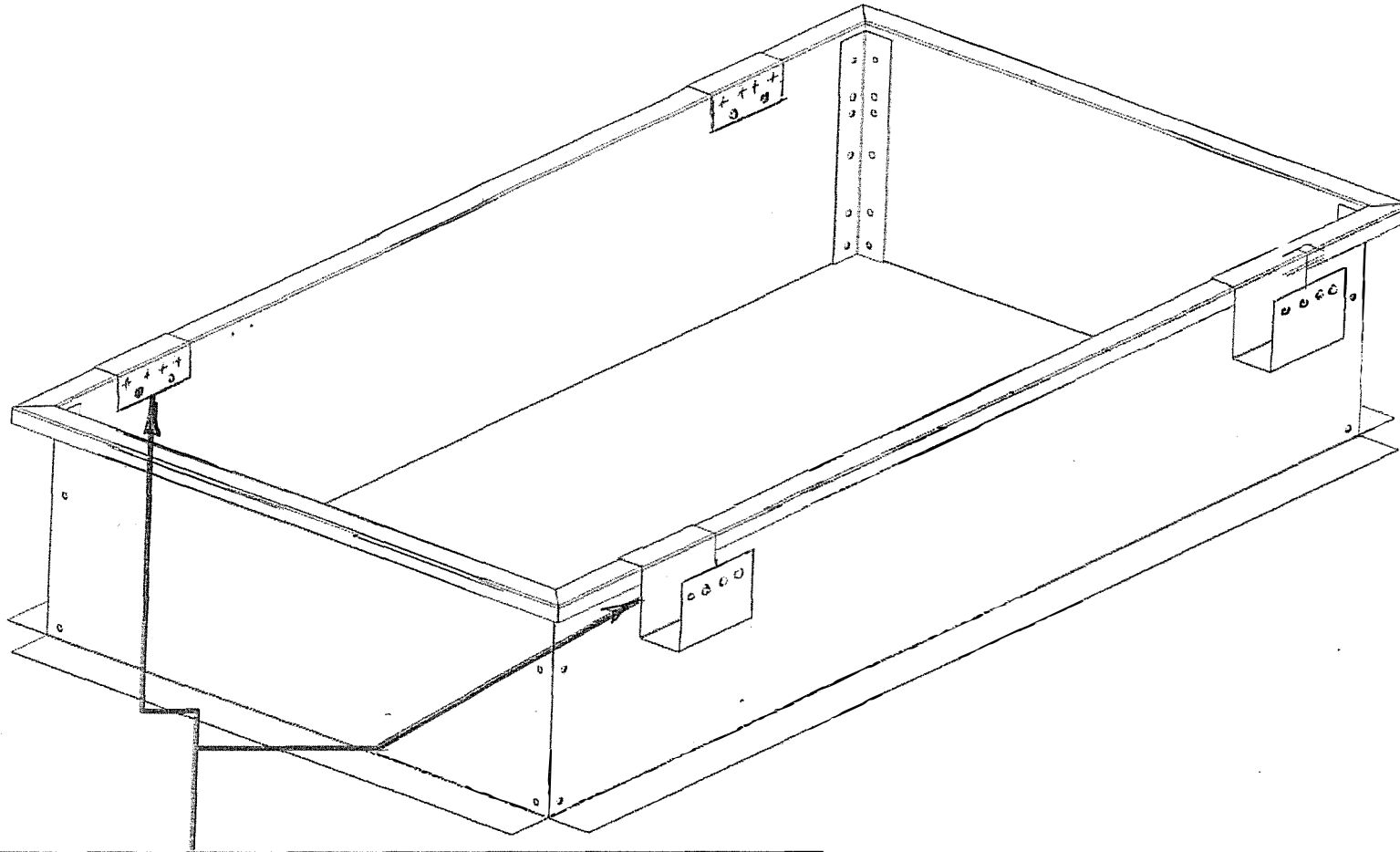
QTY. 4. - 1/4" BULDEX TEK
OR EQUAL X 6" LONG
4 PLACES

OCT 23 2015

John D. Buerosse
Florida P.E. 0050867
750 E. Sample Rd.
Bldg. 3, Suite 220
Pompano Beach, FL 33064
954-633-4692

Chassis # 1 & 2 UTC Corporate Rooftops to Roof Curb

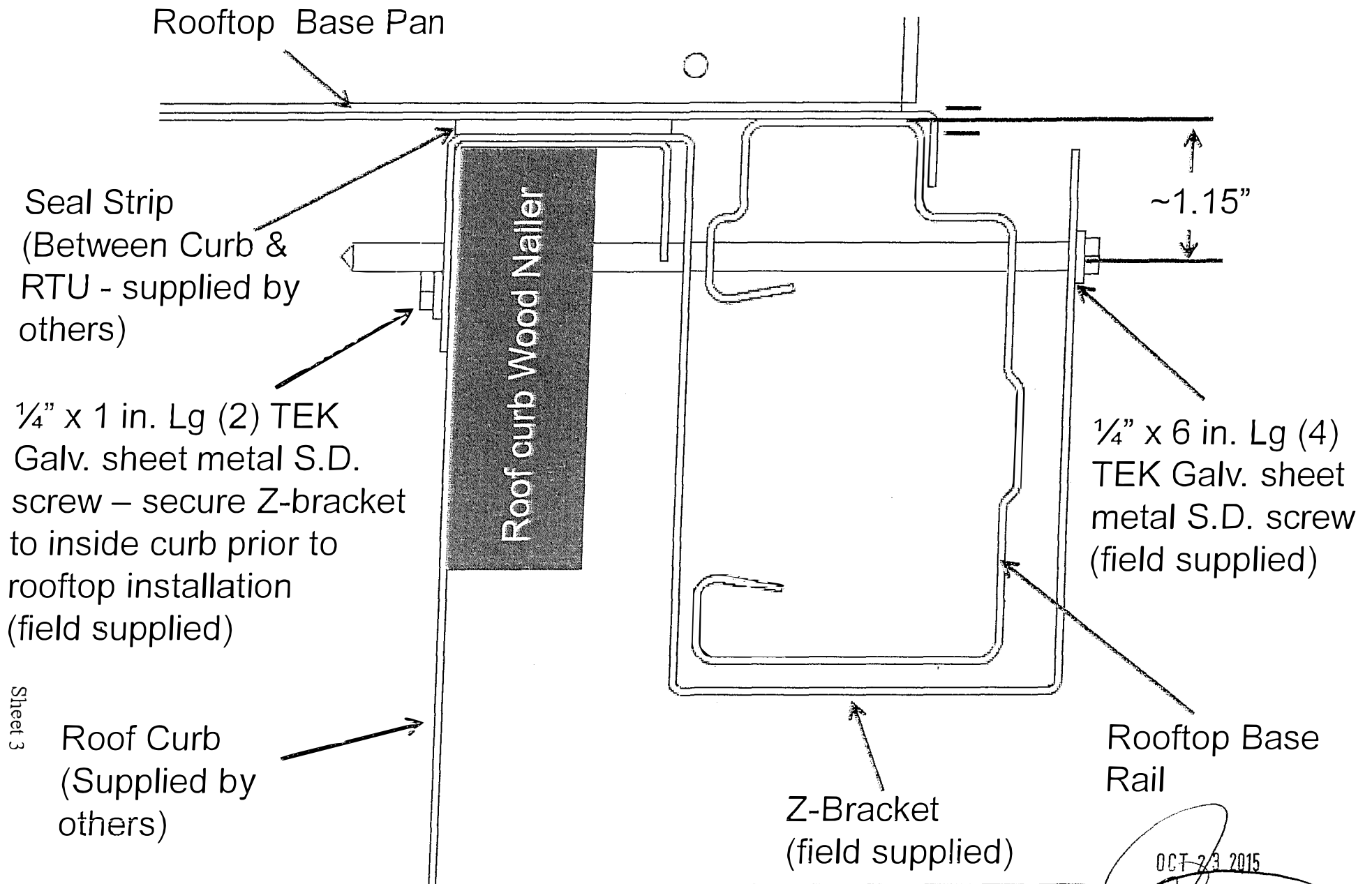
Sheet 2



Z-Brackets installed on Roof Curb prior to installation of seal strip & Rooftop

OCT 23 2015

John D. Buerosse
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Bldg. 3, Suite 220
Pompano Beach, FL 33064
954-633-4692



Wind Load Fastening of Rooftop to Roof Curb

OCT-23-2015
John D. Buerosse
Florida P.E. 0050867
750 E. Sample Rd.
Bldg. 3, Suite 220
Pompano Beach, FL 33064
954-633-4692