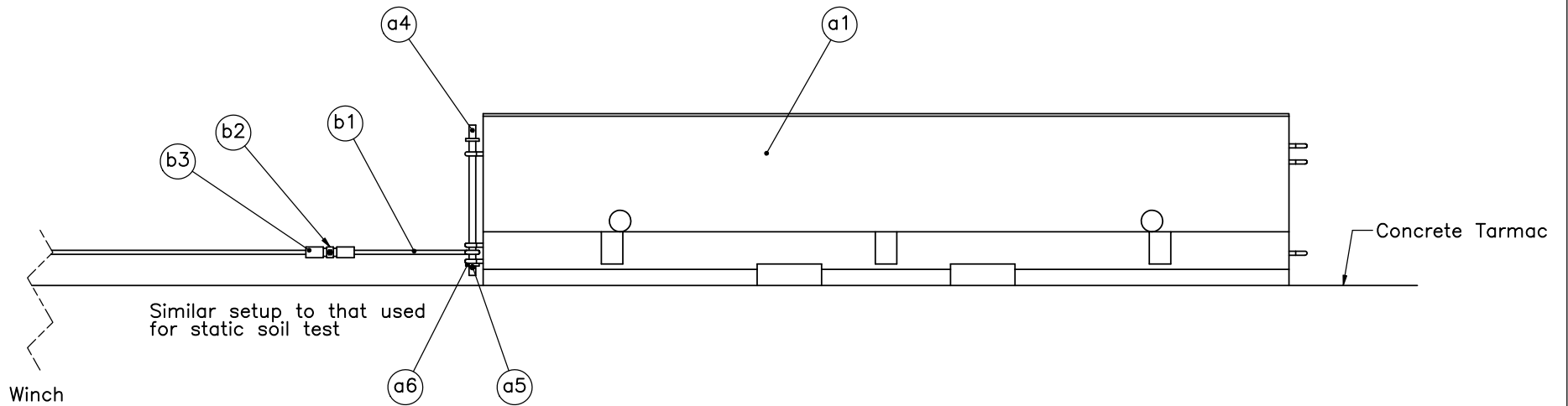


Test No.	Description
1	Standard PCB without bearing pad



- Notes:
- (1) Static pull test with load cell(s).
 - (2) Similar pull setup and speed to that used in static testing of posts in soil.
 - (3) Need enough pull distance to allow for barrier to be displaced 4' [1219].
 - (4) Clean and brush concrete surface under barrier and in pull path before and after each test.
 - (5) Pull cable must not angle upward, but instead it should remain parallel to ground.
 - (6) Weigh PCB prior to each test.
 - (7) Single JVC camera side view.
 - (8) May use two load cells in series if desired for redundancy.
 - (9) Determine the static and kinetic frictional coefficients from the testing.



Midwest Roadside
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Low Deflection PCB

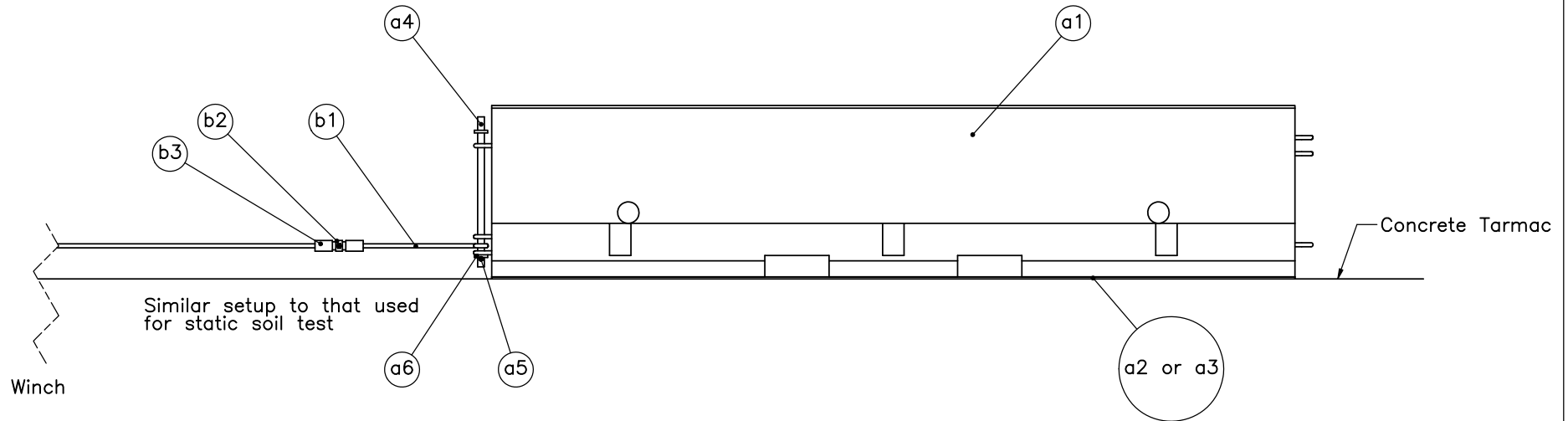
Friction Test No. 1

DWG. NAME.
PCB-Pad_R7

SCALE: 1:30
UNITS: in.[mm]

SHEET:
1 of 6
DATE:
5/17/2012
DRAWN BY:
CWP
REV. BY:
RWB/JGP/
KAL/RKF

Test No.	Description
2	Standard PCB with 50 Durometer bearing pad
3	Standard PCB with 70 Durometer bearing pad

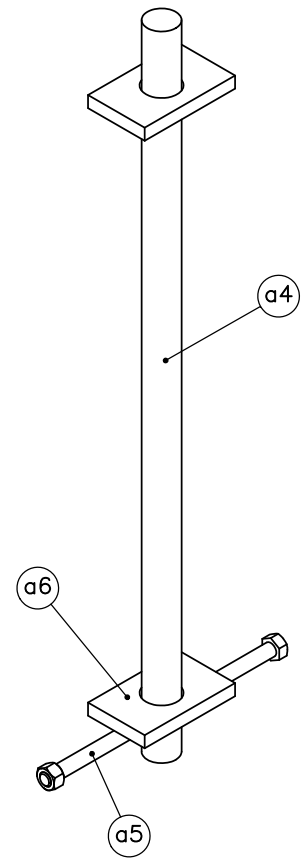
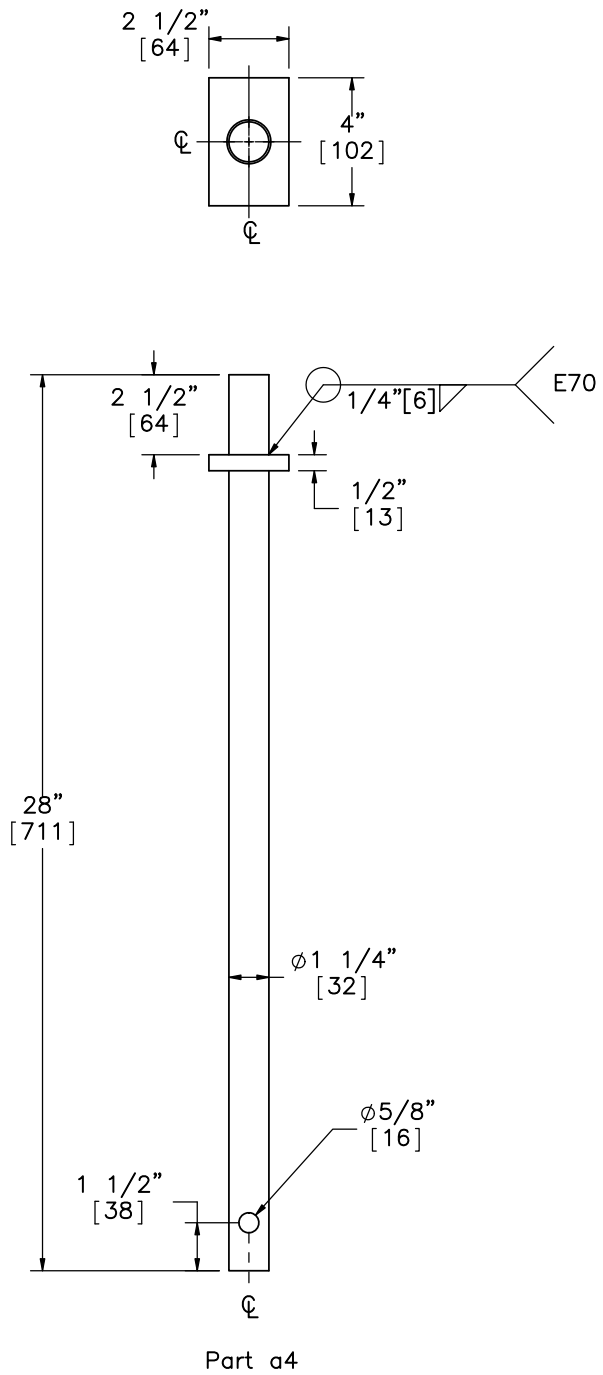


- Notes:
- (1) Static pull test with load cell(s).
 - (2) Similar pull setup and speed to that used in static testing of posts in soil.
 - (3) Need enough pull distance to allow for barrier to be displaced 4' [1219].
 - (4) Clean and brush concrete surface under barrier and in pull path before and after each test.
 - (5) Pull cable must not angle upward, but instead it should remain parallel to ground.
 - (6) Weigh PCB prior to each test.
 - (7) Single JVC camera side view.
 - (8) May use two load cells in series if desired for redundancy.
 - (9) Determine the static and kinetic frictional coefficients from the testing.



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Low Deflection PCB	SHEET:	2 of 6
	DATE:	5/17/2012
Friction Test Nos. 2 and 3	DRAWN BY:	CWP
	REV. BY:	RWB/JGP/ KAL/RKF
DWG. NAME: PCB-Pad_R7	SCALE: 1:30	UNITS: in.[mm]



Midwest Roadside Safety Facility

Low Deflection PCB

Connector Pin Assembly

DWG. NAME:
PCB-Pad_R7

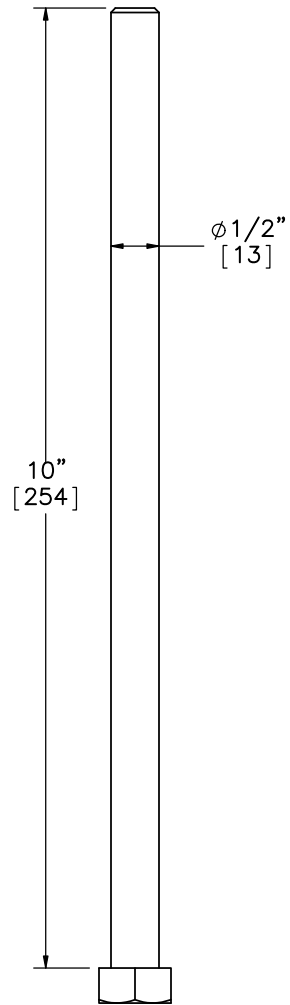
SCALE: 1:6
UNITS: in.[mm]

SHEET:
3 of 6

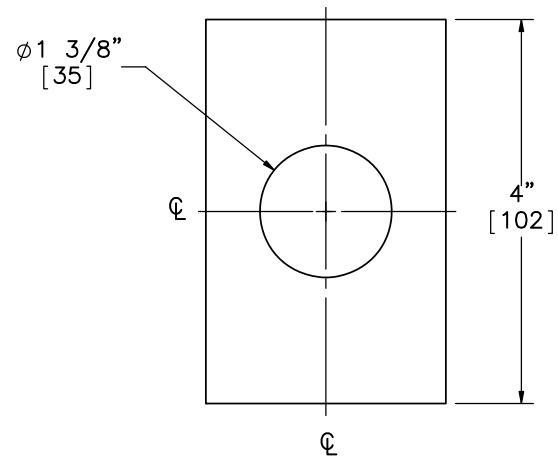
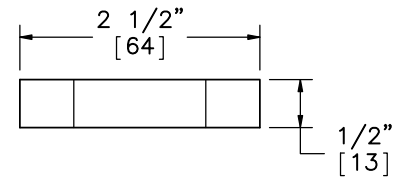
DATE:
5/17/2012

DRAWN BY:
CWP

REV. BY:
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KAL/RKF



Part a5



Part a6



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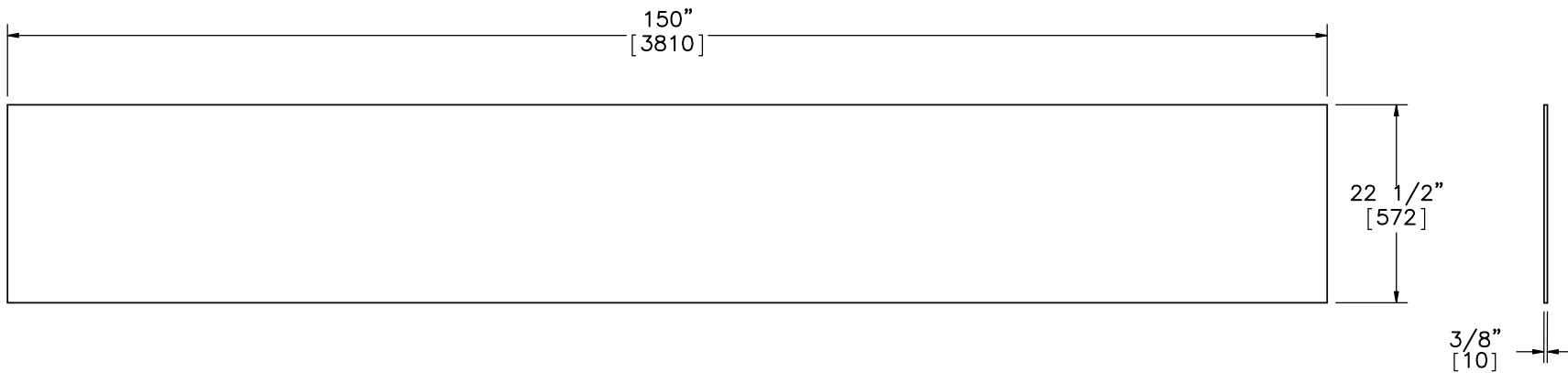
Low Deflection PCB

Connector Pin Components

DWG. NAME.
PCB-Pad_R7

SCALE: 1:2
UNITS: in.[mm]


SHEET:
4 of 6
DATE:
5/17/2012
DRAWN BY:
CWP
REV. BY:
RWB/JGP/
KAL/RKF



TOP VIEW

Part a2 and a3

- Notes: (1) The 50 Durometer and 70 Durometer neoprene materials are sold by both Warco Biltrite and Williams Products.
 (2) Use ChemRex CX-941 Polyurethane adhesive.
 (3) Clean and roughen up concrete surface prior to glueing pad to barrier.
 (4) Refer to adhesive installation instructions for surface preparation, coating, and curing information.

 Midwest Roadside Safety Facility	Low Deflection PCB		SHEET: 5 of 6
	Neoprene Mat		DATE: 5/17/2012
DWG. NAME: PCB-Pad_R7		SCALE: 1:20 UNITS: in.[mm]	DRAWN BY: CWP REV. BY: RWB/JGP/ KAL/RKF

Item No.	QTY.	Description	Material Specification	Hardware Guide
a1	1	Portable Concrete Barrier	min f'c=5000 psi [34.5 MPa]	SWC09
a2	1	150"x22.5"x3/8" [3810x572x10] Neoprene Mat	50 Durometer AASHTO Grade 3 Bearing Pad	—
a3	1	150"x22.5"x3/8" [3810x572x10] Neoprene Mat	70 Durometer AASHTO Grade 3 Bearing Pad	—
a4	1	Connector Pin	ASTM A36	FMW02
a5	1	1/2"—13 Dia. x 10" Long [M13x254] Hex Head Bolt and Nut	ASTM A325 and ASTM A563 DH	FMW03
a6	2	2 1/2"x4"x1/2" [64x102x13] Washer	ASTM A36	FMW03
b1	2	3/4" [19] Dia. Cable	Steel	—
b2	1	50,000—lb Load Cell	N/A	—
b3	2	Load Cell Coupler	N/A	—
—	1	Polyurethane Adhesive	ChemRex CX-941	—



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<p>Low Deflection PCB</p> <p>Bill of Materials</p>	<p>SHEET: 6 of 6</p>
	<p>DATE: 5/17/2012</p>
	<p>DRAWN BY: CWP</p>
<p>DWG. NAME: PCB—Pad_R7</p>	<p>SCALE: 1:2 UNITS: in.[mm]</p>
	<p>REV. BY: RWB/JGP/ KAL/RKF</p>