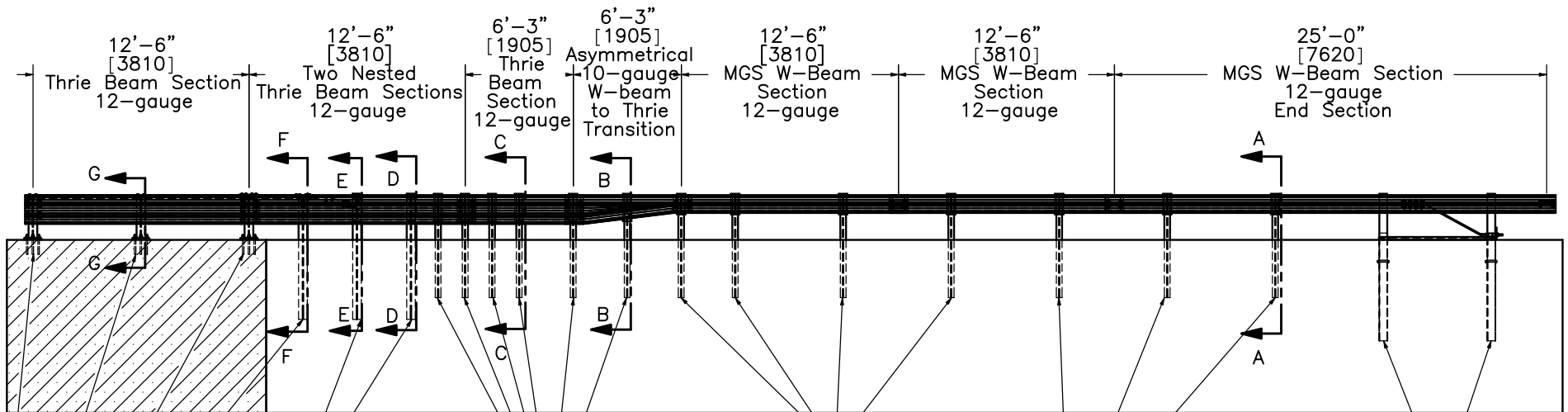


PLAN VIEW



ELEVATION VIEW



Midwest Roadside Safety Facility

MWT Standard Post System Layout

DWG. NAME.
MWT-SP-3_R3

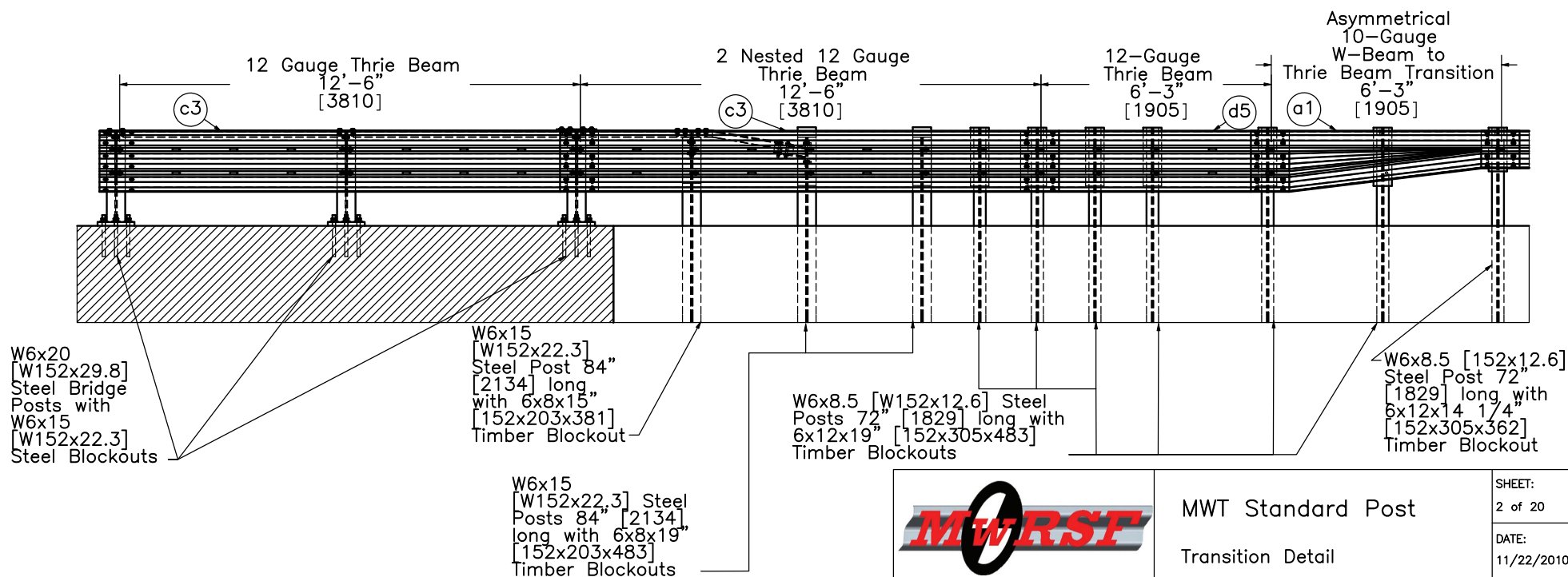
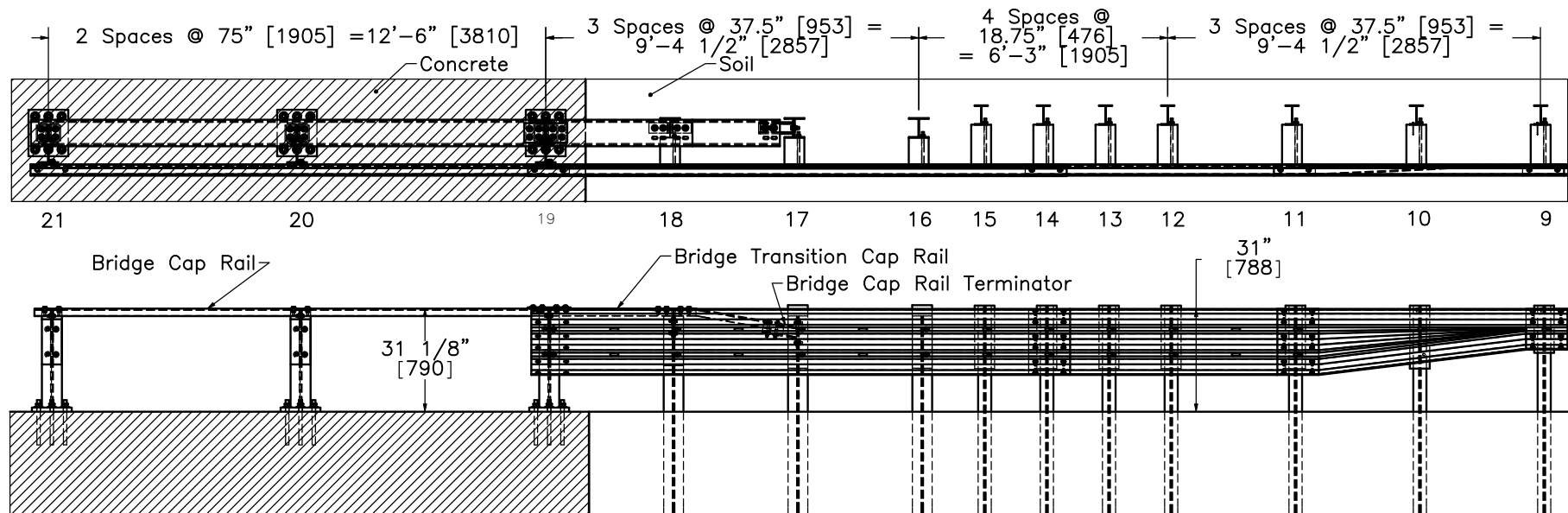
SCALE: 1:110
UNITS: In./mm

REV. BY:
KAP/SKR/RKF

SHEET:
1 of 20

DATE:
11/22/2010

DRAWN BY:
EMA/RJT



Midwest Roadside
Safety Facility

MWT Standard Post
Transition Detail

DWG. NAME.
MWT-SP-3_R3

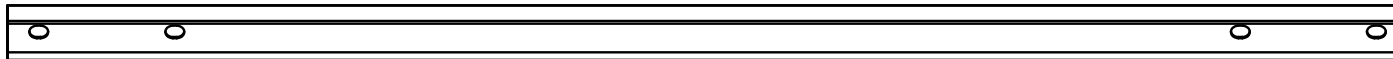
SCALE: 1:50
UNITS: In./mm

SHEET:
2 of 20

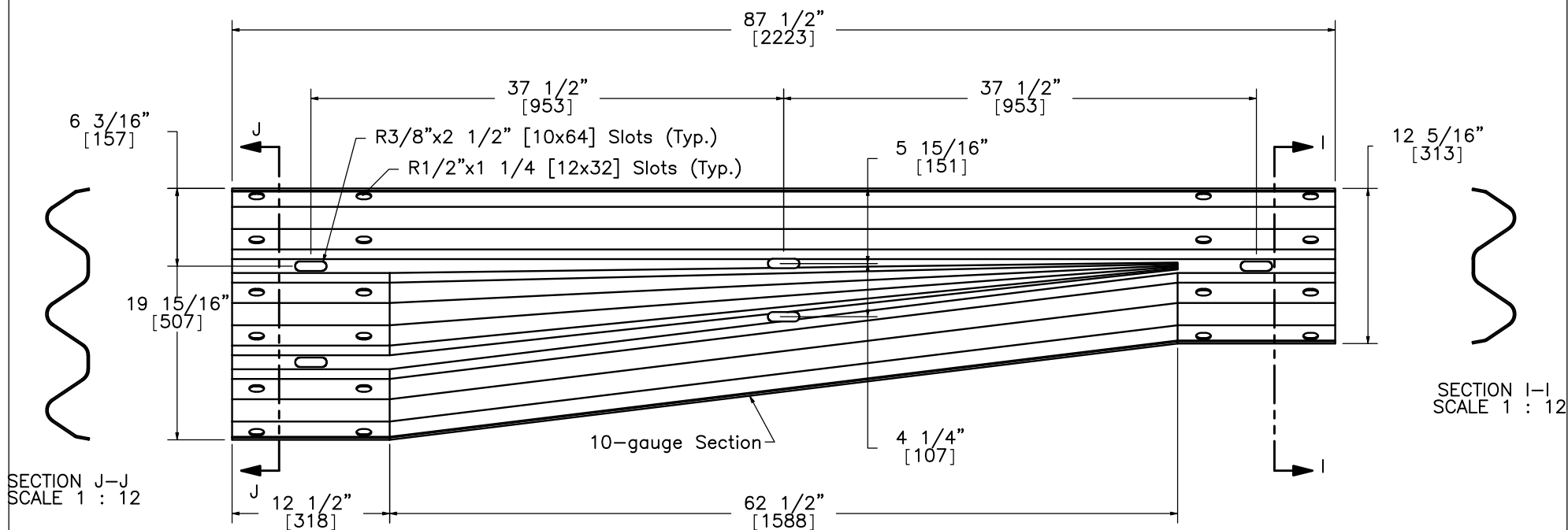
DATE:
11/22/2010

DRAWN BY:
EMA/RJT

REV. BY:
KAP/SKR/
RKF



PLAN VIEW



ELEVATION VIEW



Midwest Roadside
Safety Facility

MWT Standard Post

Asymmetrical W-Beam
to Thrie Beam Transition
Rail Section Detail

DWG. NAME.
MWT-SP-3_R3

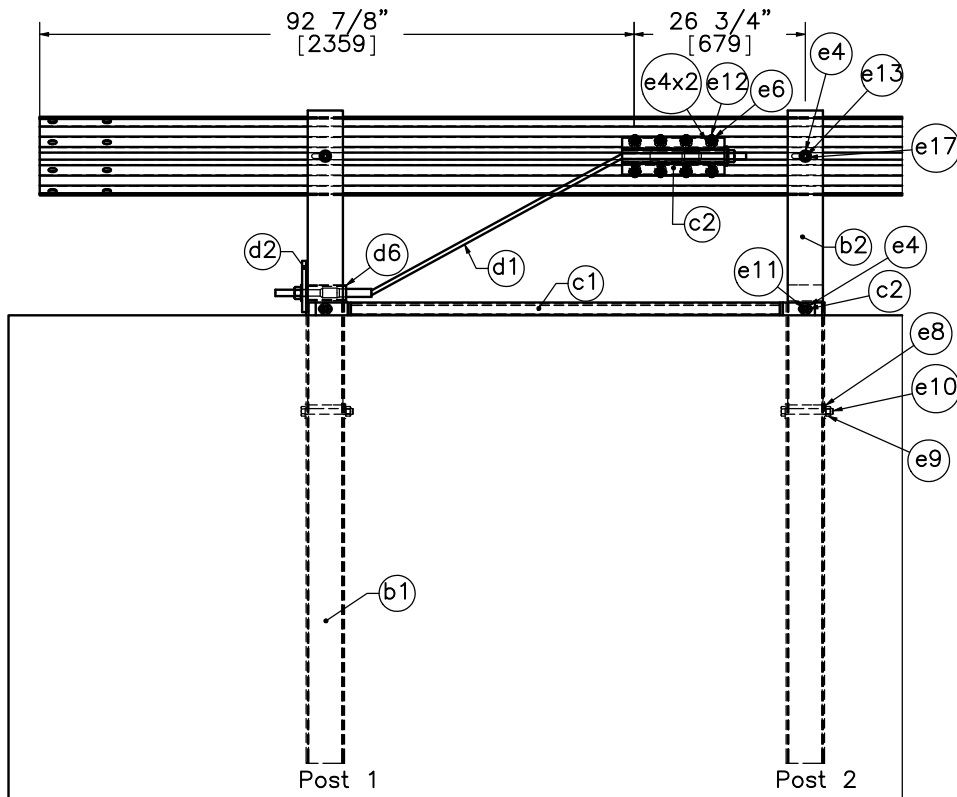
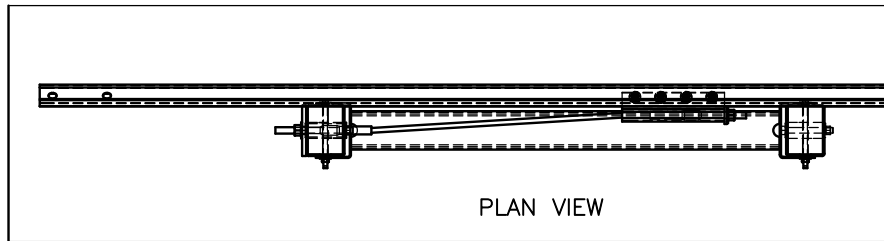
SCALE: 1:10
UNITS: In./mm

SHEET:
3 of 20

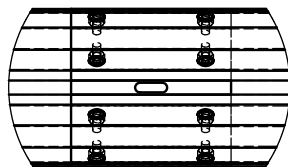
DATE:
11/22/2010

DRAWN BY:
EMA/RJT

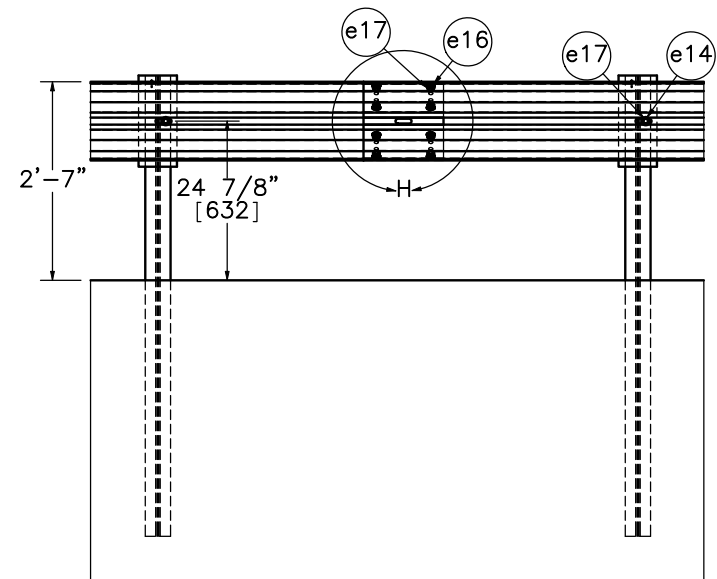
REV. BY:
KAP/SKR/
RKF



ELEVATION VIEW
END RAIL DETAIL



DETAIL H
SCALE 1 : 15



ELEVATION VIEW
SPLICE DETAIL



Midwest Roadside
Safety Facility

MWT Standard Post

Splice Detail
End Rail Detail

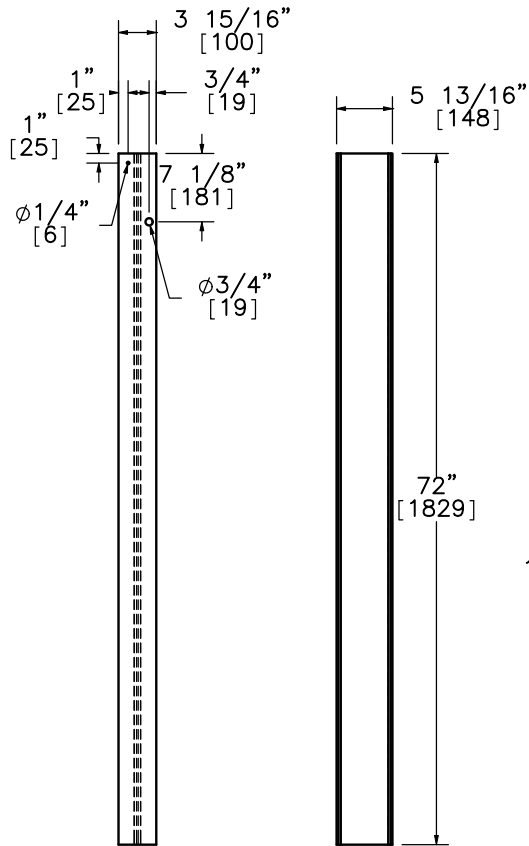
DWG. NAME.
MWT-SP-3_R3

SCALE: None
UNITS: In./mm

SHEET:
4 of 20
DATE:
11/22/2010
DRAWN BY:
EMA/RJT
REV. BY:
KAP/SKR/
RKF

I

PLAN VIEW

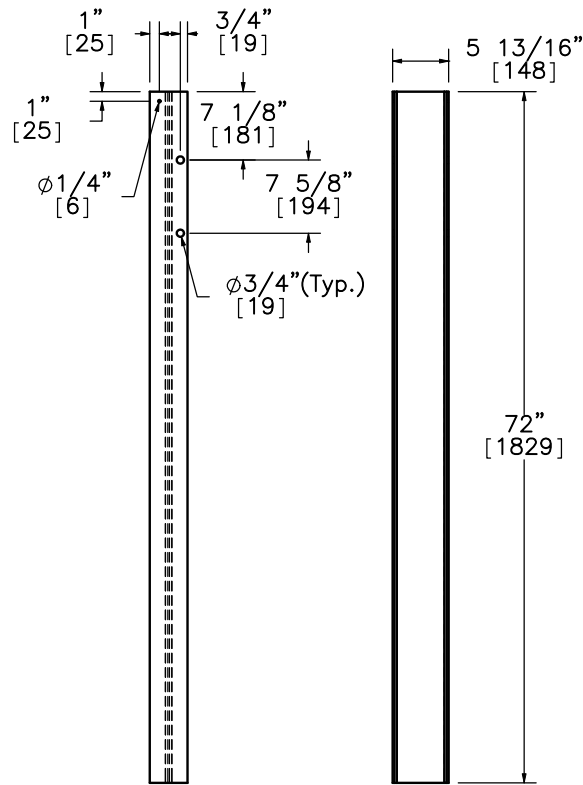


ELEVATION VIEW PROFILE VIEW

POST 3-9
W6x8.5
[W152x12.6]
Part f1

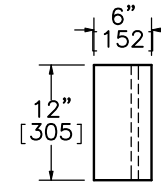
I

PLAN VIEW

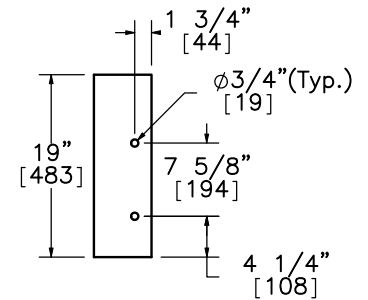


ELEVATION VIEW PROFILE VIEW

POST 10-15
W6x8.5
[W152x12.6]
Part f2



PLAN VIEW



ELEVATION VIEW

BLOCKOUT
Post 10-15
Part a3



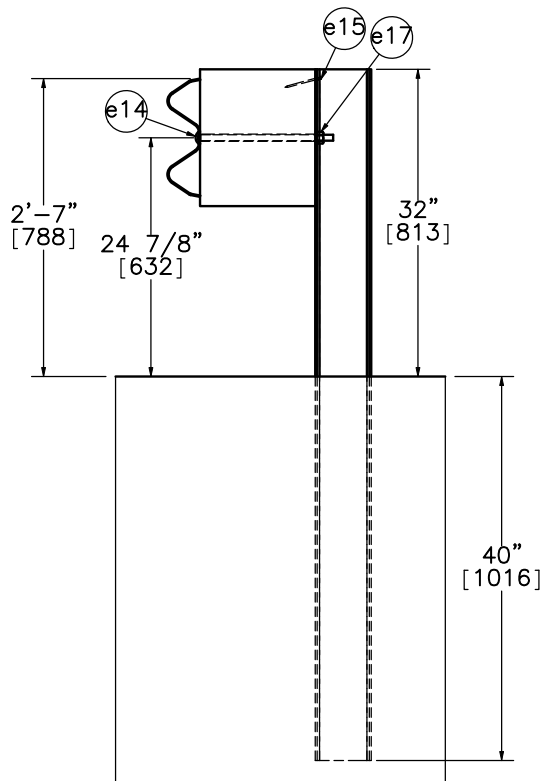
Midwest Roadside
Safety Facility

MWT Standard Post
Posts 3-15
Details

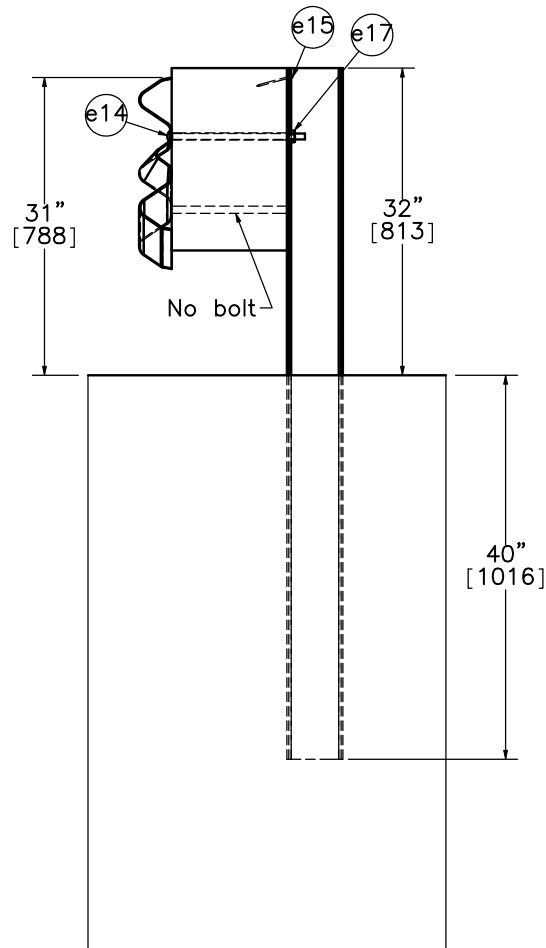
DWG. NAME.
MWT-SP-3_R3

SCALE: 1:20
UNITS: In./mm

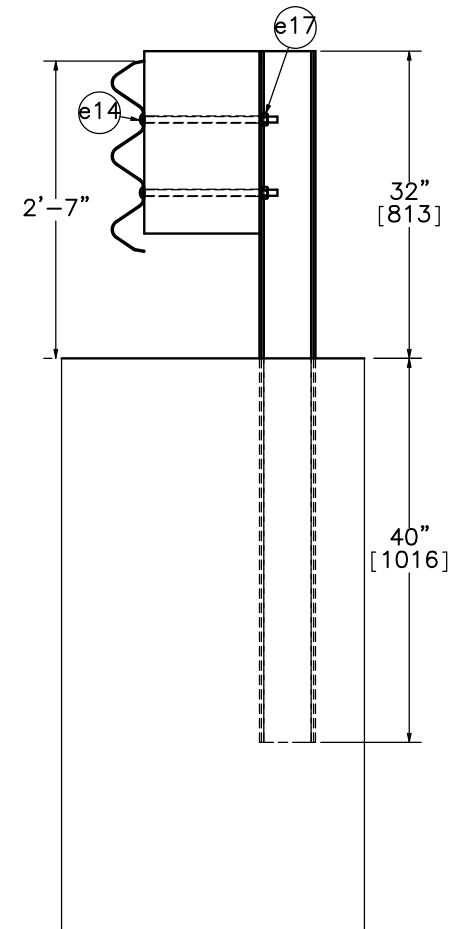
SHEET:
5 of 20
DATE:
11/22/2010
DRAWN BY:
EMA/RJT
REV. BY:
KAP/SKR/
RKF



SECTION A-A
Post 3-9



SECTION B-B
Post 10



SECTION C-C
Post 11-15



Midwest Roadside
Safety Facility

MWT Standard Post

Posts 3-15 Details
with Rail

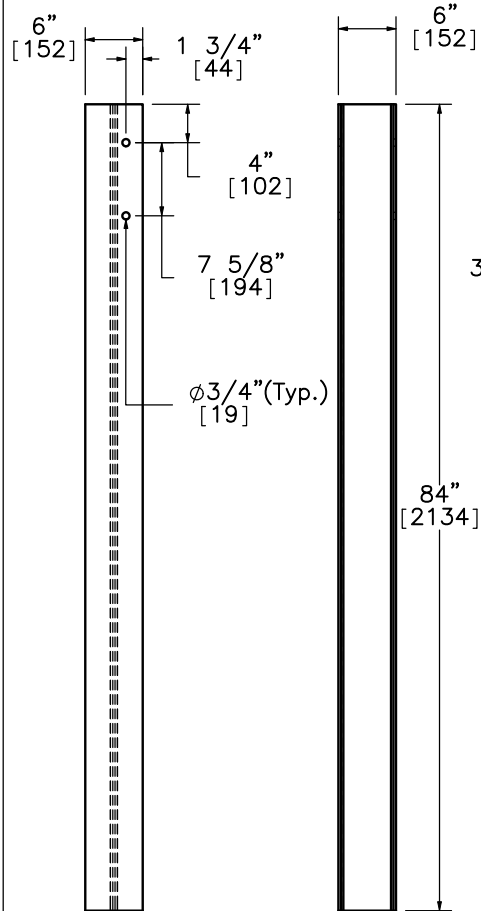
DWG. NAME.
MWT-SP-3_R3

SCALE: 1:20
UNITS: In./mm

SHEET:
6 of 20
DATE:
11/22/2010
DRAWN BY:
EMA/RJT
REV. BY:
KAP/SKR/
RKF



PLAN VIEW



ELEVATION VIEW

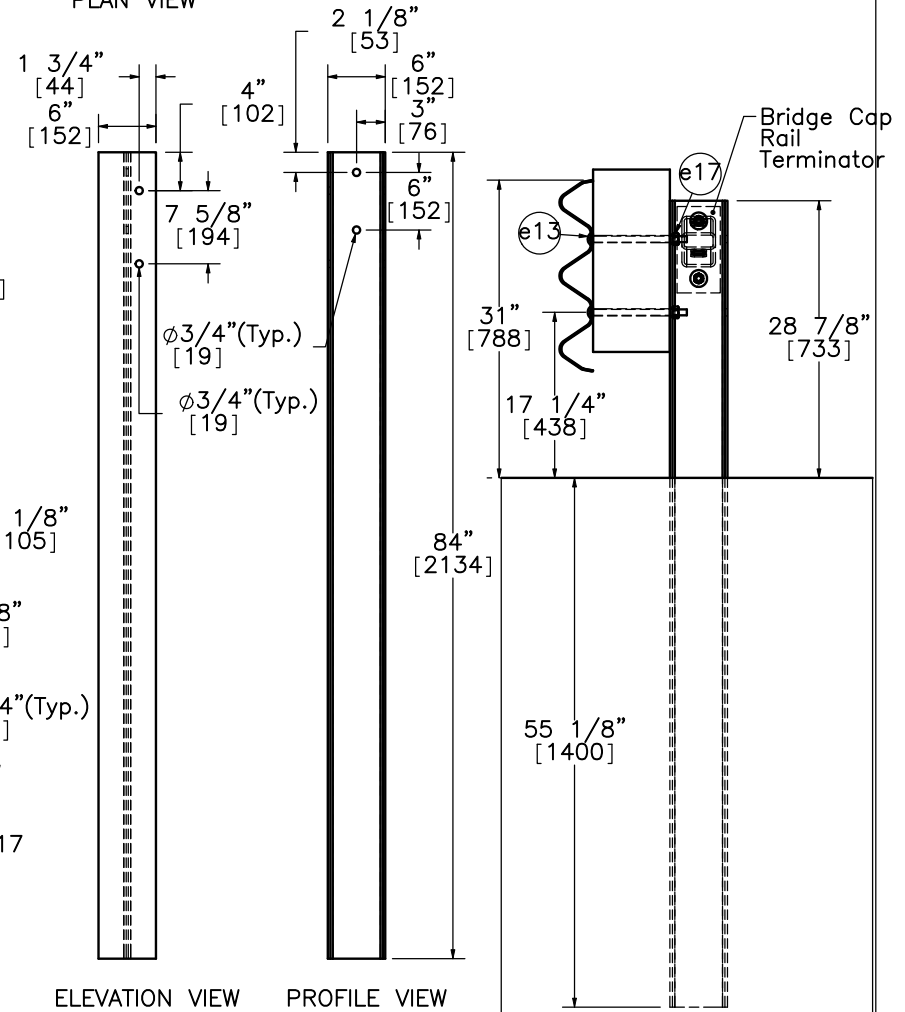
PROFILE VIEW

SECTION D-D

POST 16
W6x15
[W152x22.3]
Part f3



PLAN VIEW

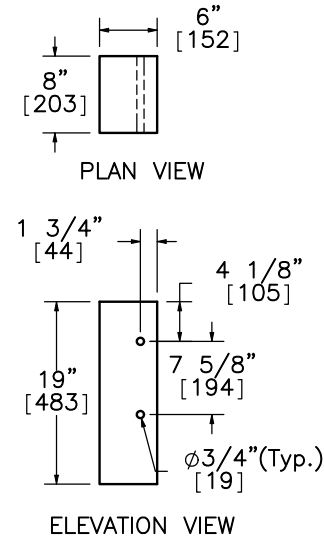


ELEVATION VIEW

PROFILE VIEW

SECTION E-E

POST 17
W6x15
[W152x22.3]
Part f4



PLAN VIEW

ELEVATION VIEW

BLOCKOUT
Post 16 & Post 17
Part a4



Midwest Roadside
Safety Facility

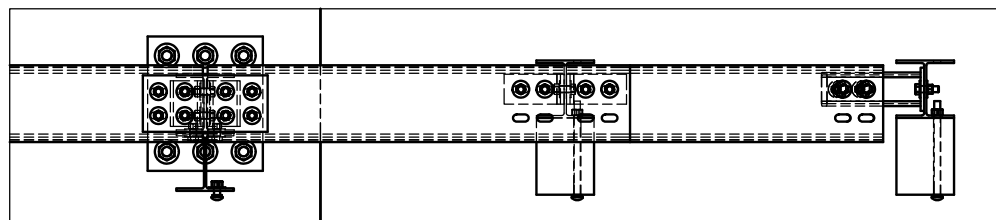
MWT Standard Post

Posts 16 & 17
Detail

DWG. NAME.
MWT-SP-3_R3

SCALE: 1:20
UNITS: In./mm

SHEET:
7 of 20
DATE:
11/22/2010
DRAWN BY:
EMA/RJT
REV. BY:
KAP/SKR/
RKF

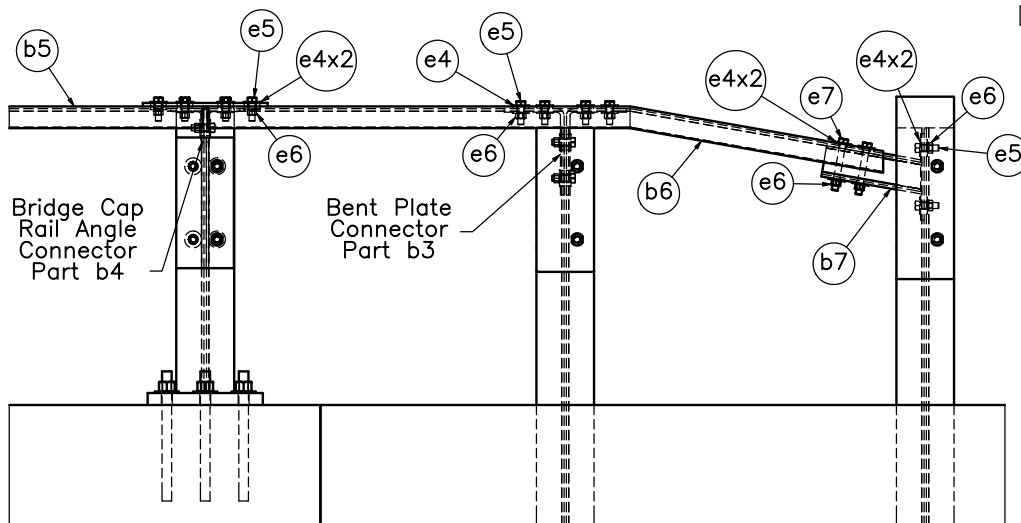


19

18

17

PLAN VIEW



Bridge Cap
Rail Angle
Connector
Part b4

Bent Plate
Connector
Part b3

ELEVATION VIEW

CAP RAIL DETAILS



PLAN VIEW

1 3/4" [44]

4" [102]

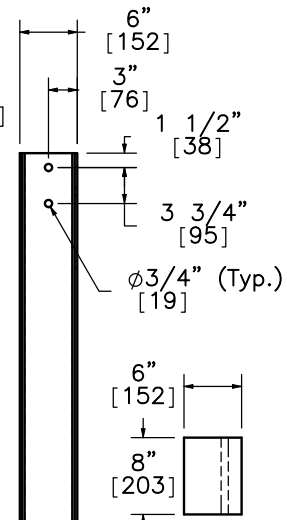
7 5/8" [194]

ø3/4" [19] (Typ.)

84" [2134]

ELEVATION VIEW

POST 18
W6x15
Part f5



6" [152]

3" [76]

1 1/2" [38]

3 3/4" [95]

ø3/4" (Typ.) [19]

6" [152]

8" [203]

PLAN VIEW

3 3/8" [86]

1 3/4" [44]

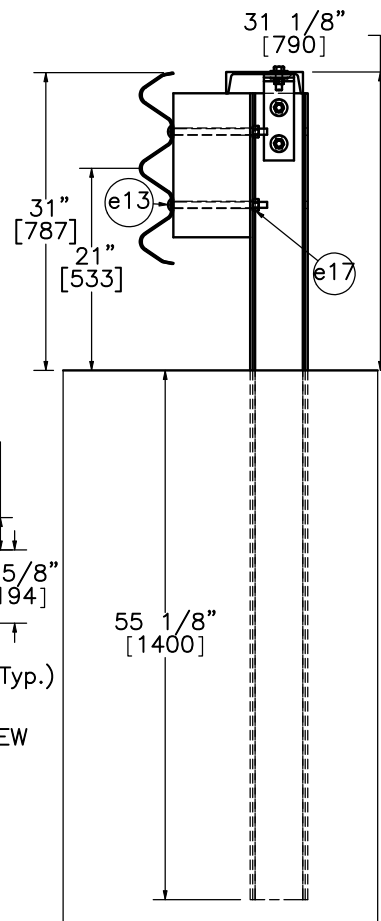
15" [381]

7 5/8" [194]

ø3/4" (Typ.) [19]

ELEVATION VIEW

BLOCKOUT
Post 18
Part a5



31 1/8" [790]

31" [787]

21" [533]

55 1/8" [1400]

SECTION F-F



Midwest Roadside
Safety Facility

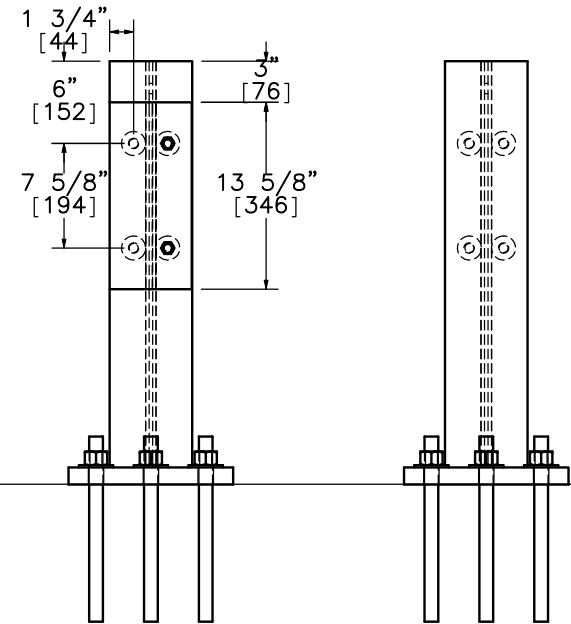
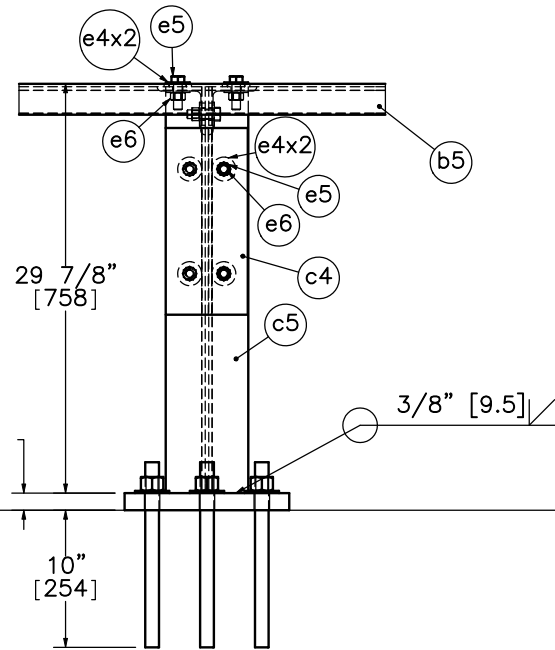
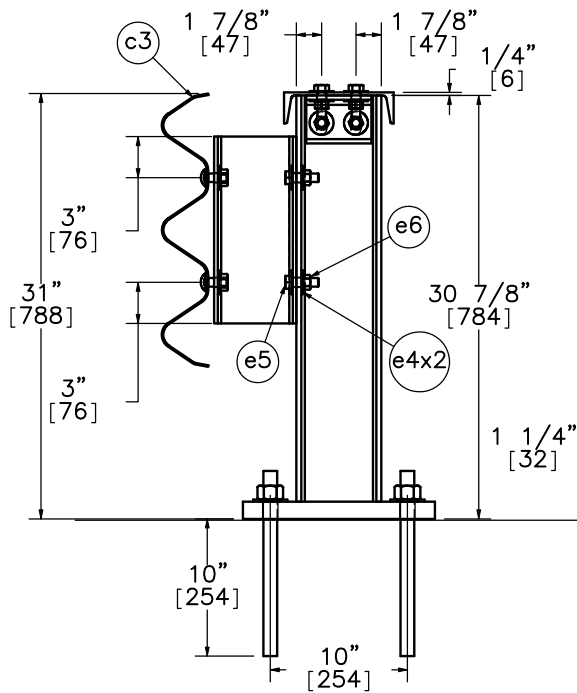
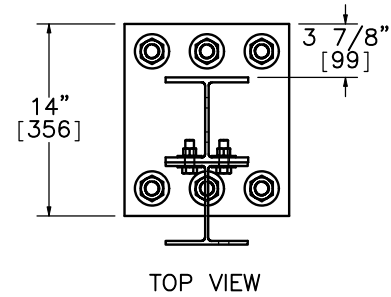
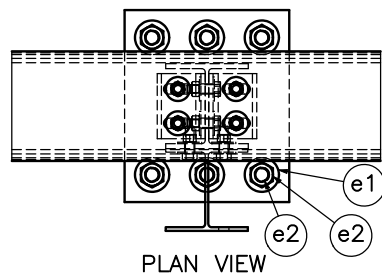
MWT Standard Post

Cap Rail Hardware Details
Post 18 Detail

DWG. NAME.
MWT-SP-3_R3

SCALE: 1:20
UNITS: In./mm

SHEET:
8 of 20
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11/22/2010
DRAWN BY:
EMA/RJT
REV. BY:
KAP/SKR/
RKF



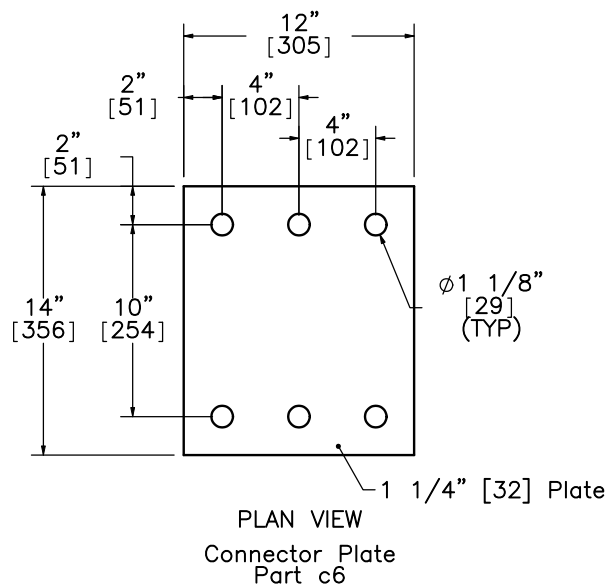
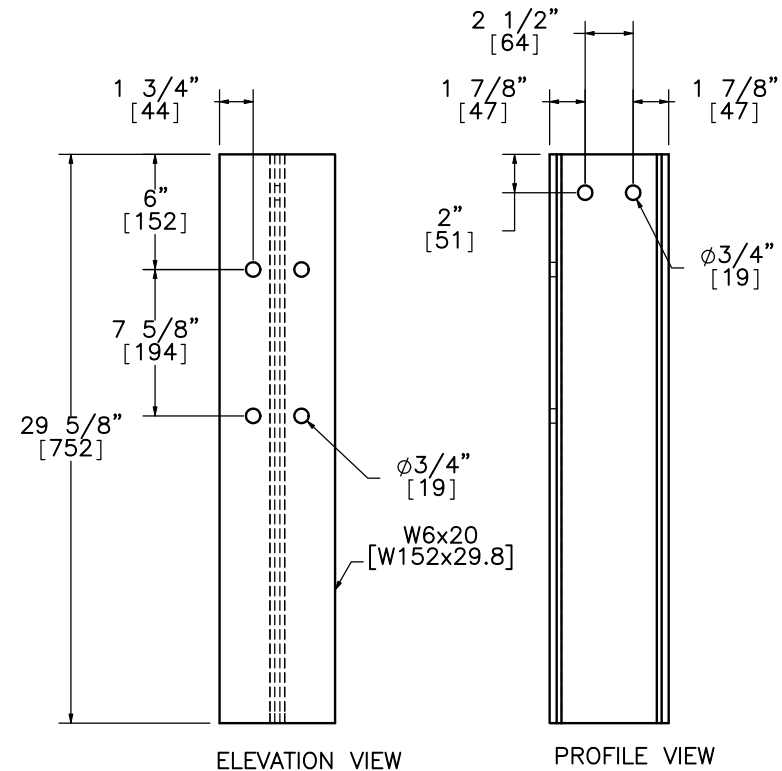
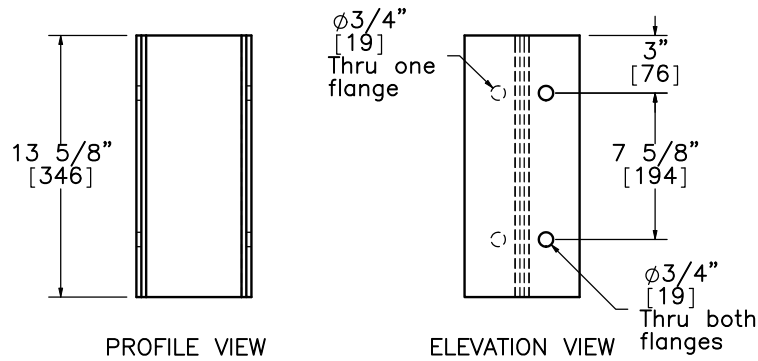
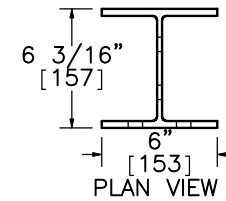
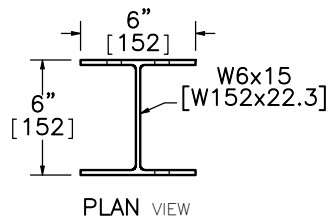
Midwest Roadside
Safety Facility

MWT Standard Post
Bridge Rail Details

DWG. NAME.
MWT-SP-3_R3

SCALE: 1:14
UNITS: In./mm

SHEET:
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11/22/2010
DRAWN BY:
EMA/RJT
REV. BY:
KAP/SKR/
RKF



Steel Blockout
Part c4

Steel Post
Part c5



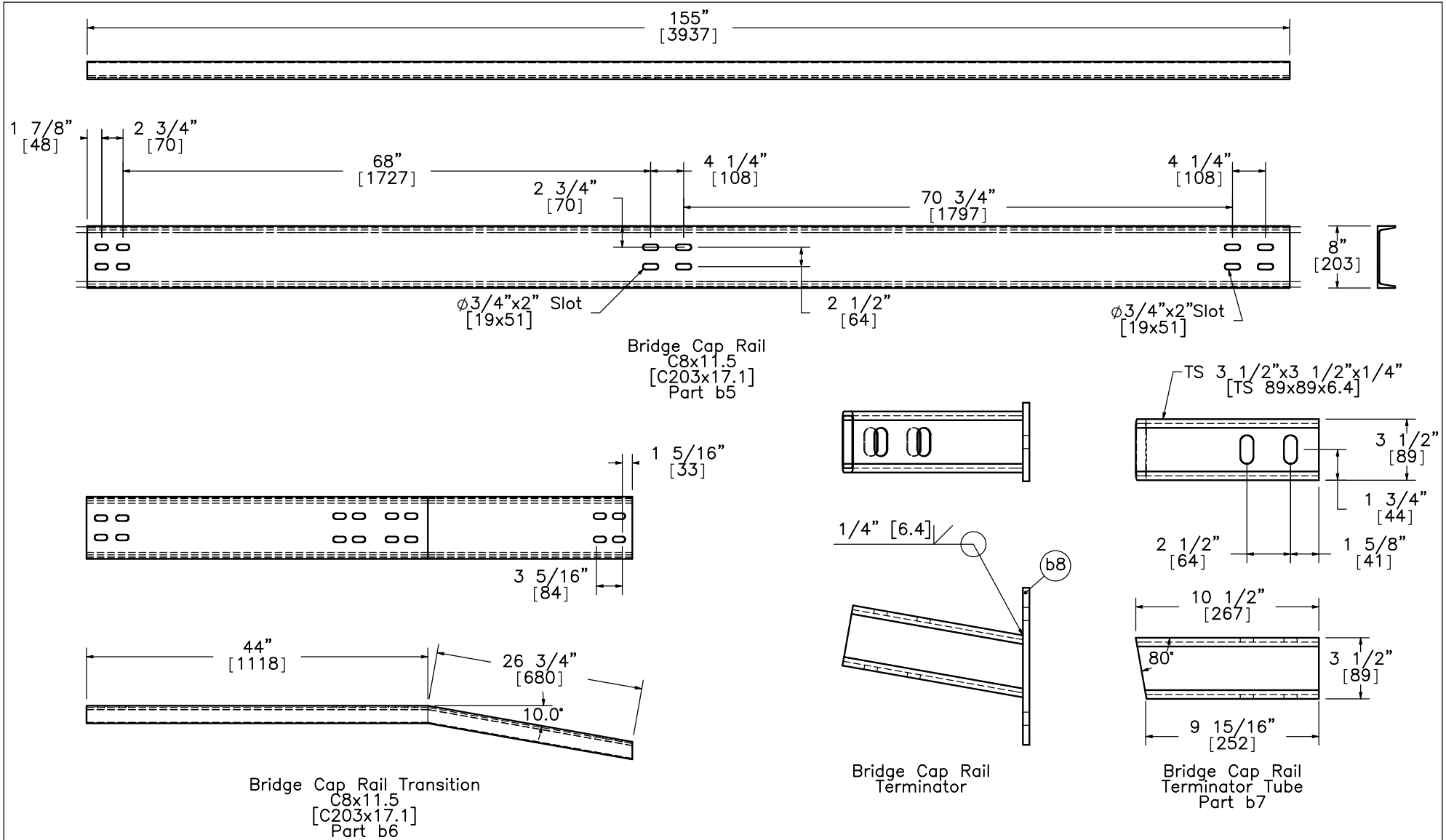
Midwest Roadside
Safety Facility

MWT Standard Post
Bridge Rail Details

DWG. NAME.
MWT-SP-3_R3

SCALE: 1:10
UNITS: In./mm

SHEET:
10 of 20
DATE:
11/22/2010
DRAWN BY:
EMA/RJT
REV. BY:
KAP/SKR/
RKF



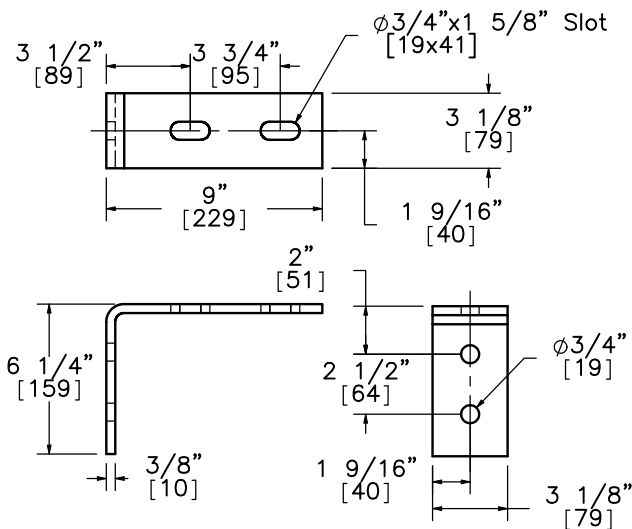
Midwest Roadside
Safety Facility

MWT Standard Post
Bridge Rail Details

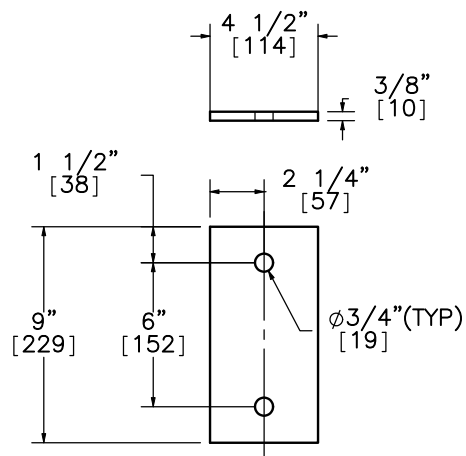
DWG. NAME.
MWT-SP-3_R3

SCALE: None
UNITS: In./mm

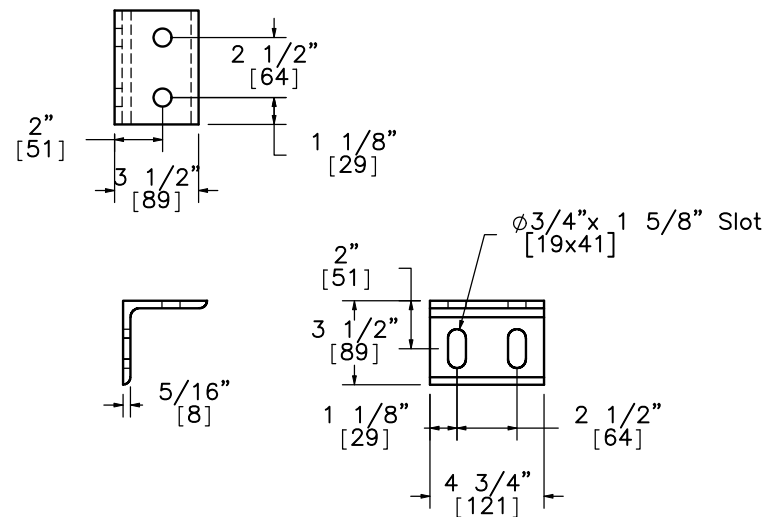
SHEET:
11 of 20
DATE:
11/22/2010
DRAWN BY:
EMA/RJT
REV. BY:
KAP/SKR/
RKF



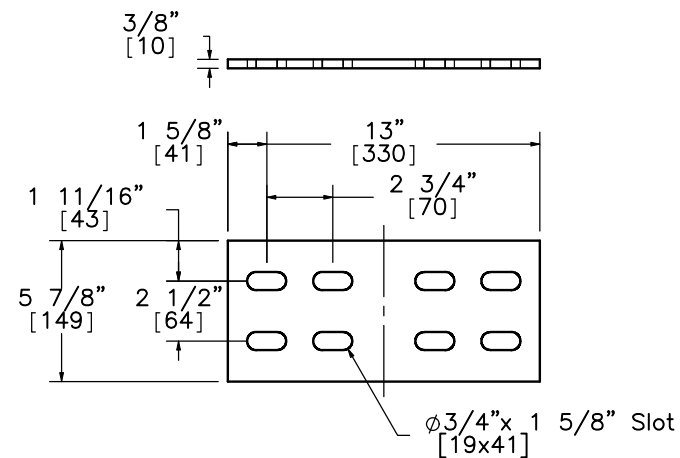
Bent Plate Connector
L 6 1/4"x9"x3/8"
[L 159x229x10]
Part b3



Bridge Cap Rail
Terminator Plate
Part b8



Cap Rail Angle
L 3 1/2"x3 1/2"x5/16"
[L 89x89x8]
Part b4



Splice Plate
Part b9



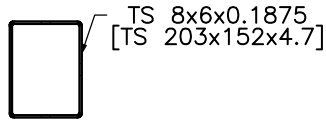
Midwest Roadside
Safety Facility

MWT Standard Post
Bridge Rail Details

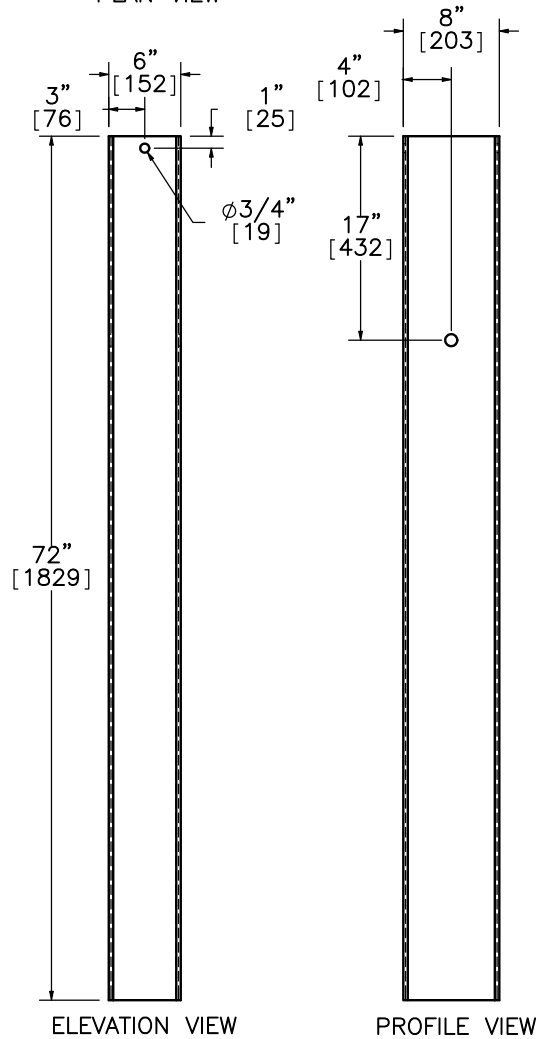
DWG. NAME.
MWT-SP-3_R3

SCALE: 1:8
UNITS: In./mm

SHEET:
12 of 20
DATE:
11/22/2010
DRAWN BY:
EMA/RJT
REV. BY:
KAP/SKR/
RKF



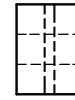
PLAN VIEW



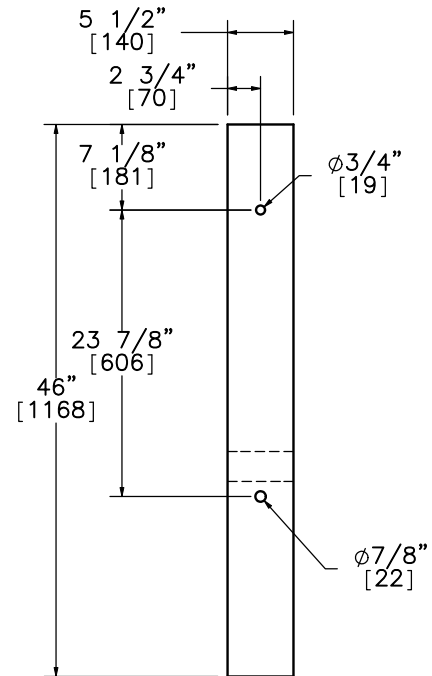
ELEVATION VIEW

PROFILE VIEW

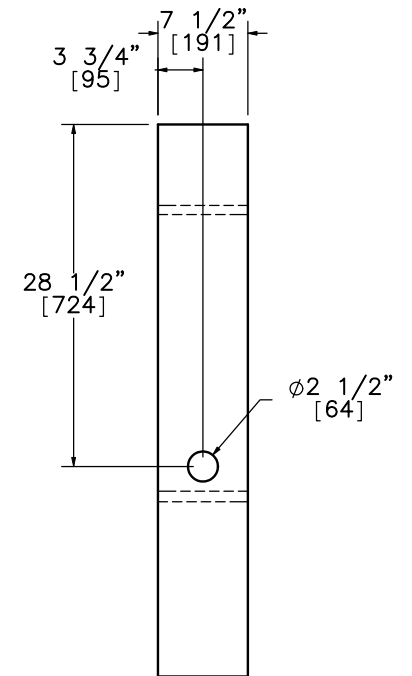
Foundation Tube
Part b1



PLAN VIEW



ELEVATION VIEW



PROFILE VIEW

BCT (MGS) Timber Post
Part b2



Midwest Roadside
Safety Facility

MWT Standard Post
BCT Timber Posts &
Foundation Tube Detail

DWG. NAME.
MWT-SP-3_R3

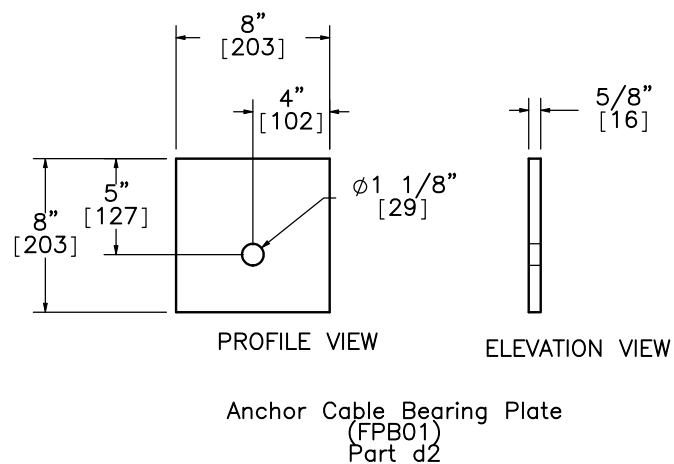
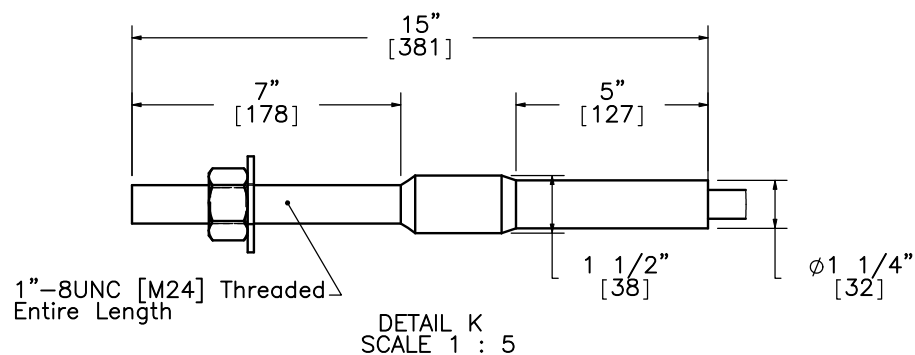
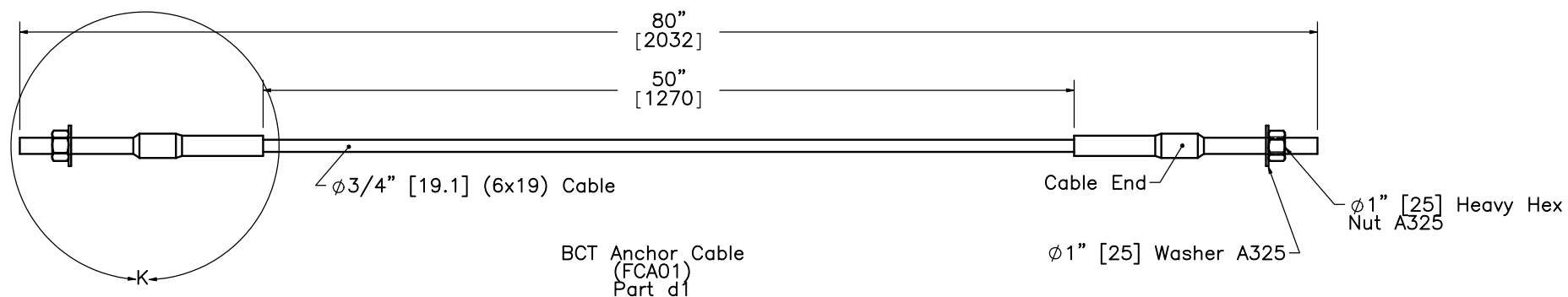
SCALE: 1:16
UNITS: In./mm

REV. BY:
KAP/SKR/
RK

SHEET:
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DATE:
11/22/2010

DRAWN BY:
EMA/RJT

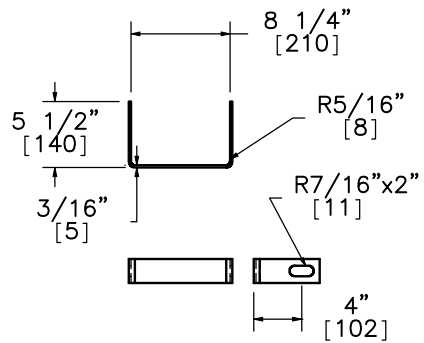


MWT Standard Post
BCT Anchor Cable Detail

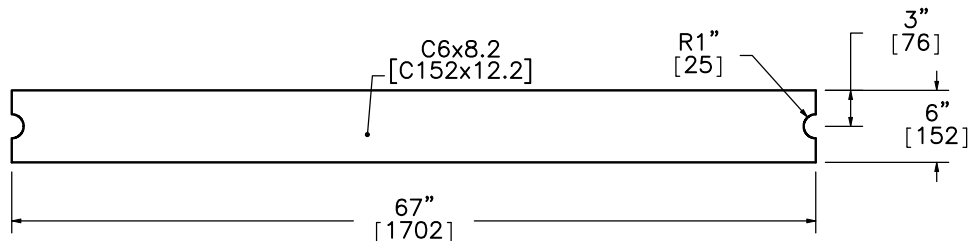
DWG. NAME.
MWT-SP-3_R3

SCALE: 1:10
UNITS: In./mm

SHEET:
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DATE:
11/22/2010
DRAWN BY:
EMA/RJT
REV. BY:
KAP/SKR/
RKF



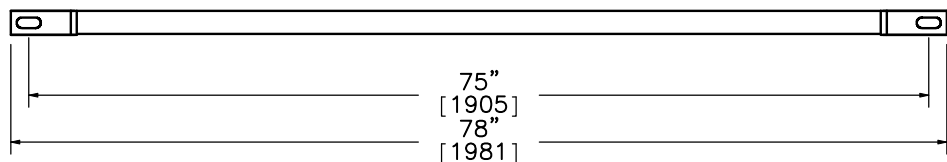
Yoke Detail



Strut Detail

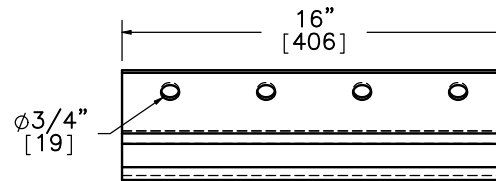


PLAN VIEW

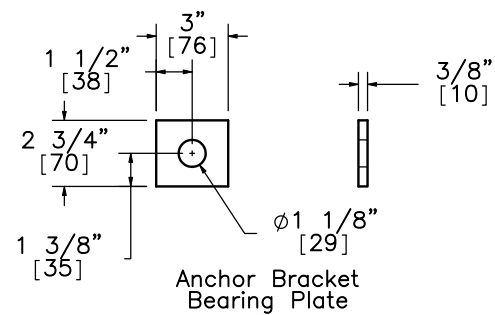
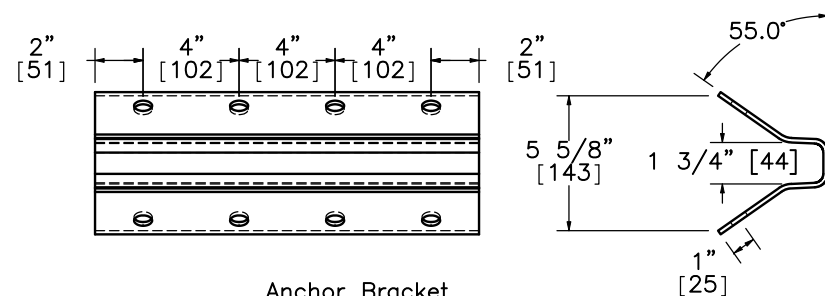


ELEVATION VIEW

Ground Strut
Part c1



Anchor Bracket
Part c2



Anchor Bracket
Bearing Plate



Midwest Roadside
Safety Facility

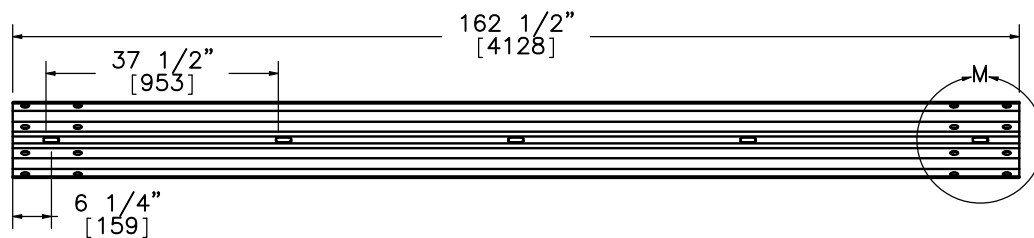
MWT Standard Post

Ground Strut & Anchor
Bracket Details

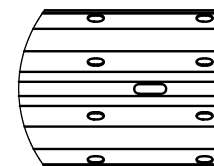
DWG. NAME.
MWT-SP-3_R3

SCALE: None
UNITS: In.[mm]

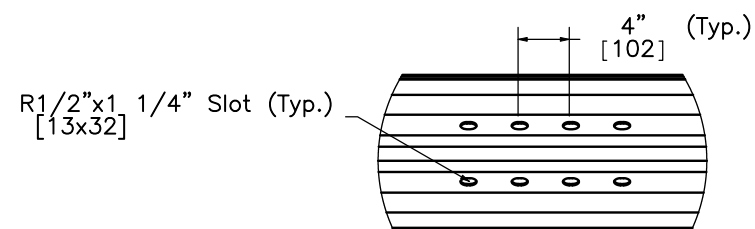
SHEET:
15 of 20
DATE:
11/22/2010
DRAWN BY:
EMA/RJT
REV. BY:
KAP/SKR/
RKF



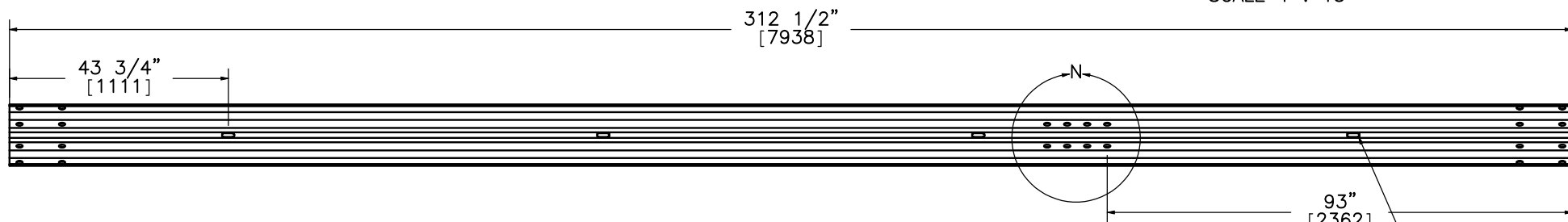
12'-6" [3810] MGS W-Beam, 12 gauge
Part d4



DETAIL M
SCALE 1 : 15



DETAIL N
SCALE 1 : 15



25' [7620] MGS W-Beam End Section, 12 gauge
Part d3

3/4" x 2 1/2" Slots (Typ.)



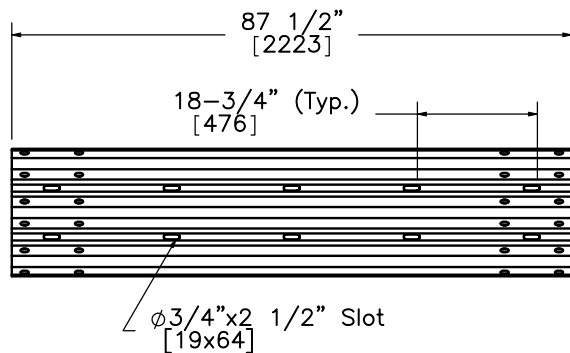
Midwest Roadside
Safety Facility

MWT Standard Post
Rail Section Details

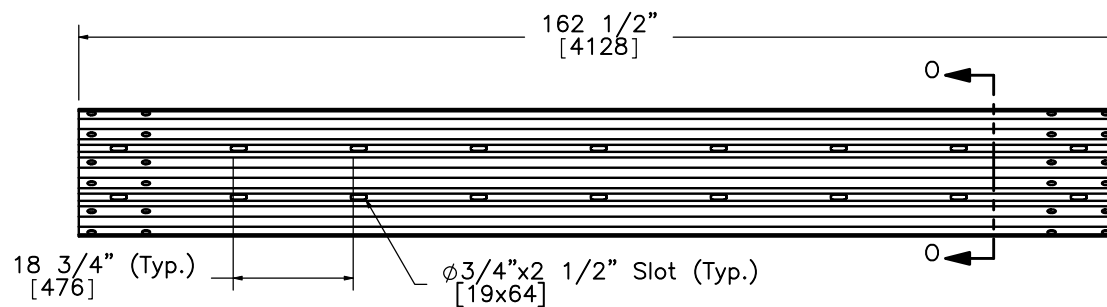
DWG. NAME.
MWT-SP-3_R3

SCALE: 1:31
UNITS: In./mm

SHEET:
16 of 20
DATE:
11/22/2010
DRAWN BY:
EMA/RJT
REV. BY:
KAP/SKR/
RKF



6'-3" [1905] Thrie Beam Section, 12 gauge,
1/4 Post Spacing
Part d5



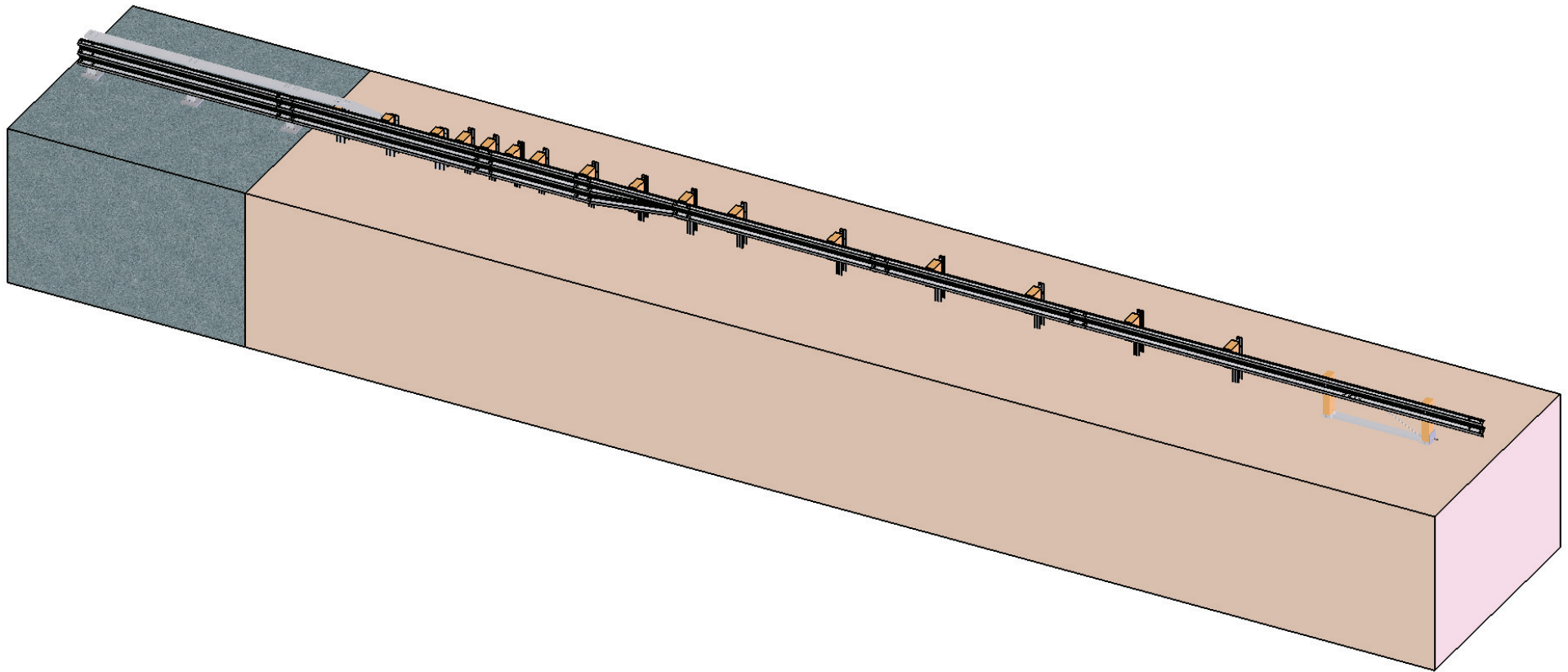
12'-6" [3810] Thrie Beam Section, 12 gauge,
1/4 Post Spacing
Part c3

SECTION 0-0

	MWT Standard Post		SHEET: 17 of 20
	Rail Section Details		DATE: 11/22/2010
Midwest Roadside Safety Facility	DWG. NAME: MWT-SP-3_R3		DRAWN BY: EMA/RJT
	SCALE: 1:30 UNITS: In./mm		REV. BY: KAP/SKR/ RKF

Midwest Guardrail System with Standard Post Spacing							
Item No.	QTY.	Description	Material Spec	Hardware Guide			
a1	1	6'-3" [1905] W-Beam to Thrie-Beam Transition Section	10 gauge AASHTO M180	—			
a2	7	6x12x14 1/4" [152x305x362] Blockout	SYP Grade No.1 or better	—			
a3	6	6x12x19" [152x305x483] Blockout - Post 10-15	SYP Grade No.1 or better	—			
a4	2	6x8x19" [152x305x483] Blockout - Post 16-17	SYP Grade No.1 or better	—			
a5	1	6x8x15" [152x305x381] Blockout - Post 18	SYP Grade No.1 or better	—			
b1	2	72" [1829] Foundation Tube	A500 Grade B	PTE05			
b2	2	BCT Timber Post -MGS Height	SYP Grade No. 1 or better	PDF01			
b3	2	Bridge Cap Rail Bent Plate Connector 6 1/4x9x3/8" [159x229x9.5]	A36 Steel	—			
b4	6	Bridge Cap Rail Angle 3 1/2x3 1/2x5/16" [89x89x7.9]	A36 Steel	—			
b5	1	Bridge Cap Rail C8x11.5 [C203x17.1]	A36 Steel	—			
b6	1	Bridge Cap Rail C8x11.5 [C203x17.1]	A36 Steel	—			
b7	1	Bridge Cap Rail Terminator Tube 3 1/2x3 1/2x1/4" [89x89x6.4]	A36 Steel	—			
b8	1	Terminator Plate 9x4 1/2x3/8" [229x114x9.5]	A36 Steel	—			
b9	1	Bridge Cap Rail Splice Plate 5 7/8x13x3/8" [149x330x9.5]	A36 Steel	—			
c1	1	Strut and Yoke Assembly	A36 Steel	PFP01			
c2	1	Anchor Bracket	A36 Steel	FPA01			
c3	3	12'-6" [3810] Thrie Beam Section - 1/2 Post Spacing	12 gauge AASHTO M180	—			
c4	3	W6x15 [W152x22.3] Steel Bridge Blockout	A36 Steel	—			
c5	3	W6x20 [W152x29.8] Steel Bridge Post	A36 Steel	—			
c6	3	12x14x1 1/4" [305x356x32] Bridge Cap Connector Plate	A36 Steel	—			
d1	1	BCT Anchor Cable 6' [1829] Long	6x19 Cable	FCA01			
d2	1	8x8x5/8" [203x203x15.9] Anchor Bearing Plate	A36 Steel	FPB01			
d3	1	25' [7620] W-Beam MGS End Section	12 gauge AASHTO M180	—			
d4	2	12'-6" [3810] W-Beam MGS Section	12 gauge AASHTO M180	—			
d5	1	6'-3" [1905] Thrie Beam Section - 1/2 Post Spacing	12 gauge AASHTO M180	—			
d6	1	2 3/8" [60] O.D.x 6" [152] long BCT Hole insert	ASTM A53 Grade B Schedule 40	FMM02			
				MWT Standard Post		SHEET: 18 of 20	
				Bill of Materials		DATE: 11/22/2010	
			Midwest Roadside Safety Facility	DWG. NAME. MWT-SP-3_R3		SCALE: None UNITS: In./mm	DRAWN BY: EMA/RJT
						REV. BY: KAP/SKR/ RKF	

Midwest Guardrail System with Standard Post Spacing						
Item No.	QTY.	Description	Material Spec	Hardware Guide		
e1	20	1”Dia. [25] Flat Washer	Grade 5	FWC24a		
e2	20	1”Dia. [25] Heavy Hex Nut	Grade 5	A325 or A449 Substitute		
e3	18	1”Dia. [25] Threaded Rod	Grade A307	—		
e4	116	5/8”Dia. [15.9] Flat Washer	Grade 5	—		
e5	42	5/8”Dia. x 2” [M16x51] long Hex Head Bolt	Grade 5	FBX16a		
e6	54	5/8”Dia. [15.9] Hex Nut	Grade 5	A325 or A449 Substitute		
e7	2	5/8”Dia. x 5” [M16x127] long Hex Head Bolt	Grade 5	FBX16a		
e8	4	7/8”Dia. [22.2] Flat Washer	Grade 5	FWC22a		
e9	2	7/8”Dia. [22.2] Hex Nut	Grade 5	FBX22a		
e10	2	7/8”Dia. x 7 1/2” [M22x191] long Hex Head Bolt	Grade 5	FBX22a		
e11	2	5/8”Dia. x 10” [M16x254] long Hex Head Bolt	Grade 5	FBX16a		
e12	8	5/8”Dia. x 1 1/2” [M16x38.1] long Hex Head Bolt	Grade 5	FBX16a		
e13	8	5/8”Dia. x 10” [M16x254] long Guardrail Bolt	Grade A307	FBB03		
e14	18	5/8”Dia. x 14” [M16x356] long Guardrail Bolt	Grade A307	FBB06		
e15	8	16D Double Head Nail	—	—		
e16	66	5/8”Dia. x 1 1/2” [M16x38] Guardrail Bolt	Grade A307	FBB01		
e17	92	5/8”Dia. [15.9] Guardrail Nut	Grade 5	—		
f1	7	W6x8.5 [W152x12.6] 72” [1829] long — Post Nos. 3–9	A36 Steel	—		
f2	6	W6x8.5 [W152x12.6] 72” [1829] long — Post Nos. 10–15	A36 Steel	—		
f3	1	W6x15 [W152x22.3] 84” [2134] long — Post No. 16	A36 Steel	—		
f4	1	W6x15 [W152x22.3] 84” [2134] long — Post No. 17	A36 Steel	—		
f5	1	W6x15 [W152x22.3] 84” [2134] long — Post No. 18	A36 Steel	—		
				MWT Standard Post		SHEET: 19 of 20
				Bill of Materials		DATE: 11/22/2010
			Midwest Roadside Safety Facility	DWG. NAME. MWT–SP–3_R3	SCALE: None UNITS: In./mm	DRAWN BY: EMA/RJT
						REV. BY: KAP/SKR/ RKF



Midwest Roadside
Safety Facility

MWT Standard Post
Isometric System View

DWG. NAME:
MWT-SP-3_R3

SCALE: 1:105
UNITS: In.[mm]

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EMA/RJT
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RKF