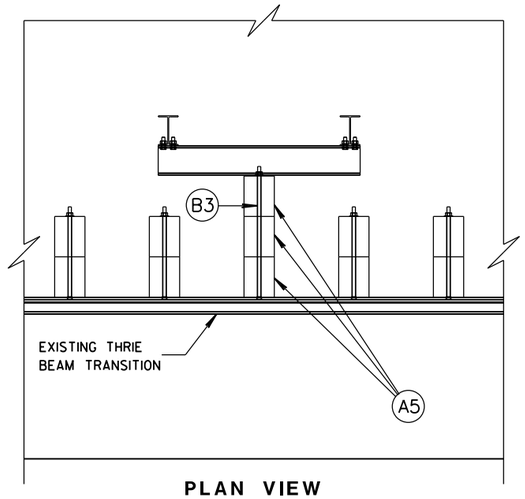
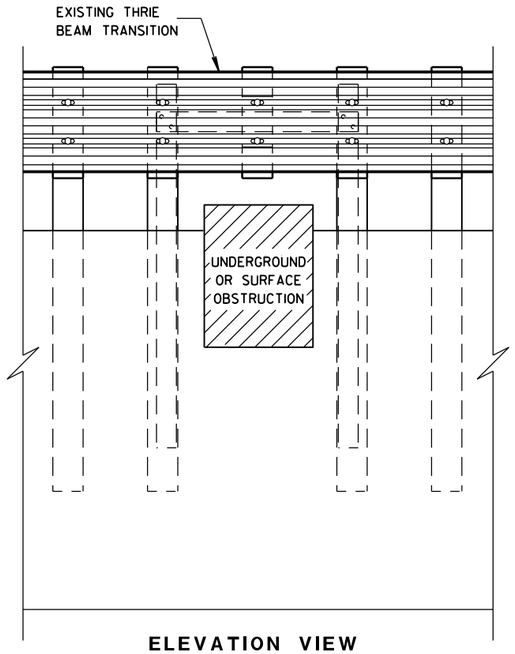
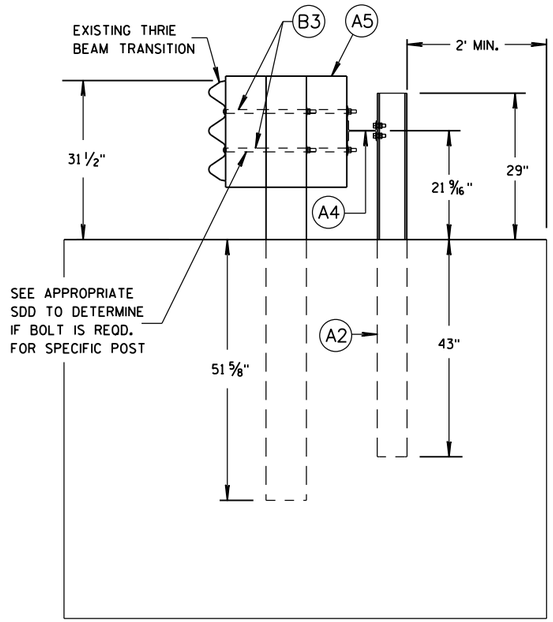
SDD 14B50-a Thrie Beam Approach Retrofit Installation of Missing Post - Missing Post Cross-Beam Layout



PLAN VIEW



ELEVATION VIEW



SIDE VIEW

72" MISSING POST CROSS-BEAM

GENERAL NOTES

ONLY ONE SUCH POST RETROFIT PER SYSTEM.

SEE SDD 14B20 FOR MORE INFORMATION ON THE THRIE BEAM TRANSITIONS.

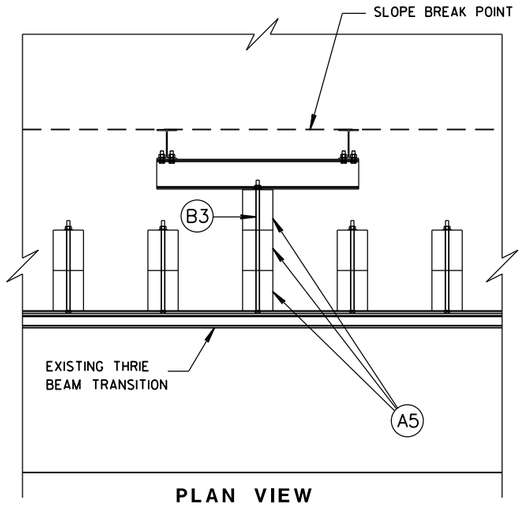
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½-INCHES AND 12-INCHES IN DIAMETER AROUND POST. SEE SDD 14B20 OR 14B45 FOR MORE DETAILS.

ONLY STEEL POST CAN BE USED.

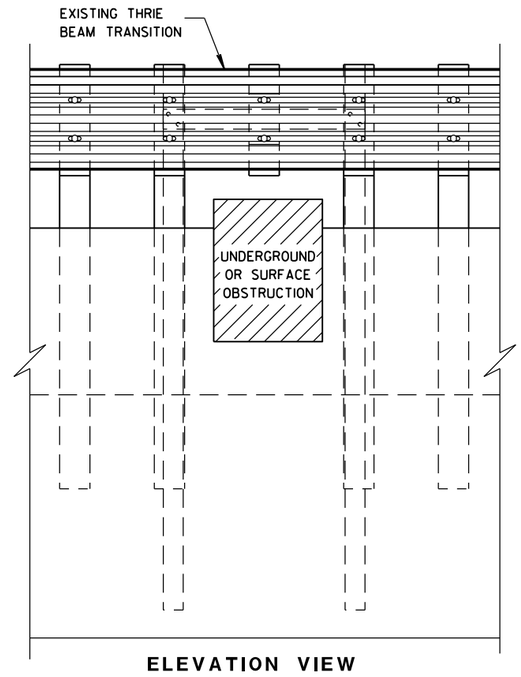
BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN ALL HARDWARE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH.

ONLY ONE WASHER AND ONE NUT CAN BE INSTALLED AT A CONNECTION. CUT THREADING OF BOLTS SO THAT NO MORE THAN ¼-INCH TO ½-INCH OF THREADING IS BEYOND THE NUT.

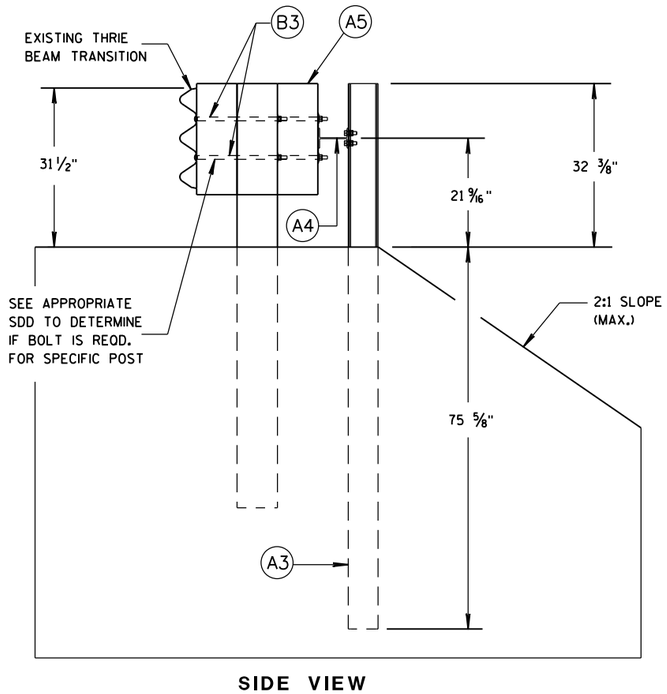
WHEN USING APPROACH RETROFIT POST BID ITEM, REVIEW SDD 14B20 INSTALL POST INFORMATION AND LOCATION, BLOCK AND HARDWARE.



PLAN VIEW



ELEVATION VIEW



SIDE VIEW

108" MISSING POST CROSS-BEAM

THRIE BEAM APPROACH
RETROFIT INSTALLATION
OF MISSING POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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S.D.D. 14 B 50-1a

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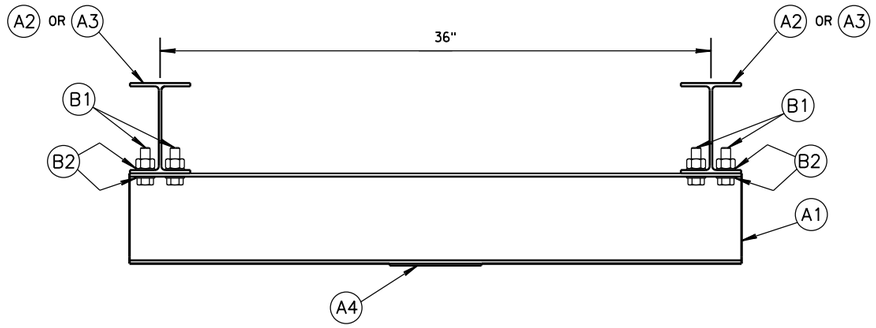
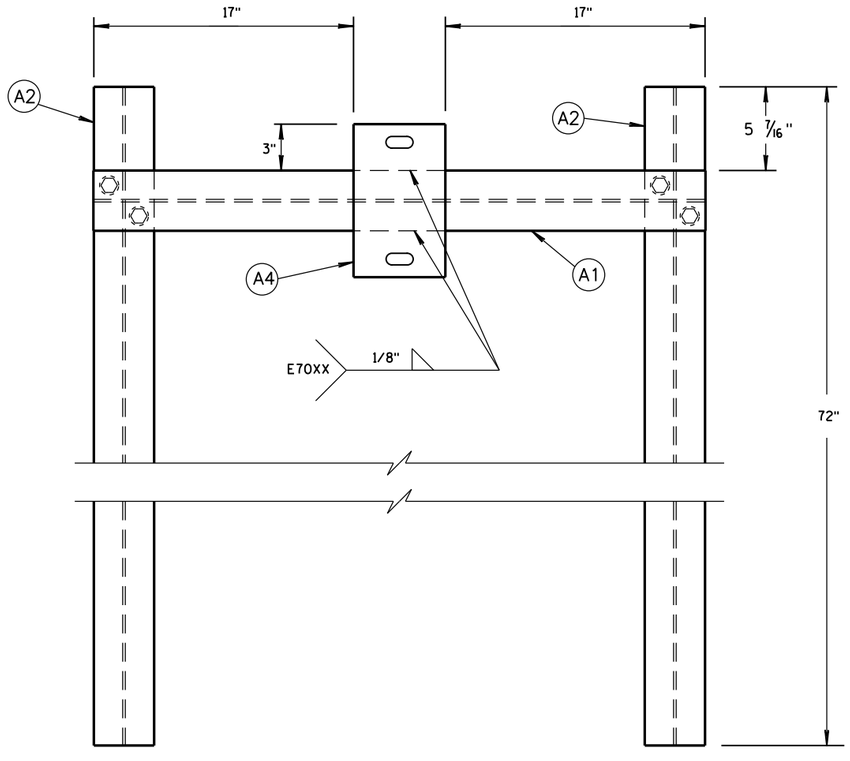
S.D.D. 14 B 50-1a

SDD 14B50-b Thrie Beam Approach Retrofit Installation of Missing Post - Missing Post Cross-Beam Components

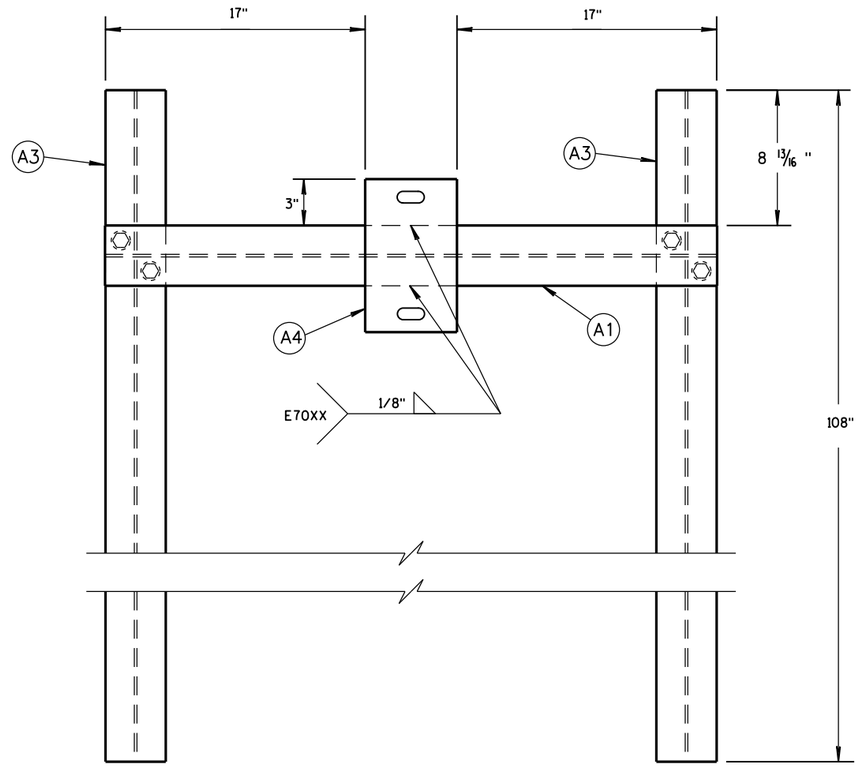


PLAN VIEW



ELEVATION VIEW

72" POST



ELEVATION VIEW

108" POST

MISSING POST CROSS-BEAM DETAIL

THRIE BEAM APPROACH
RETROFIT INSTALLATION
OF MISSING POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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S.D.D. 14 B 50-1b

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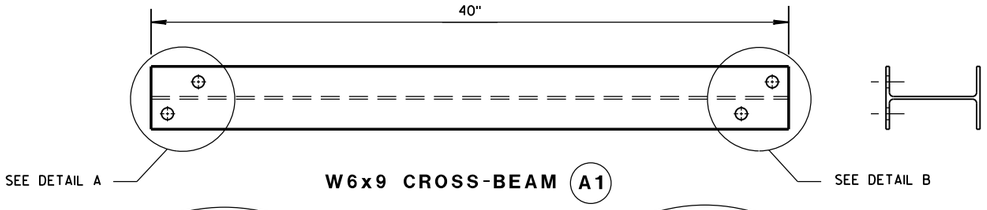
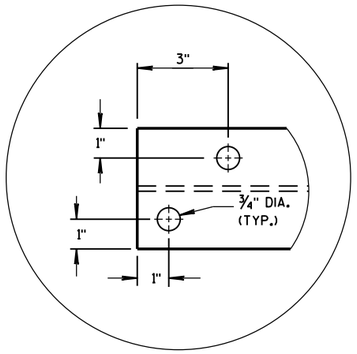
S.D.D. 14 B 50-1b

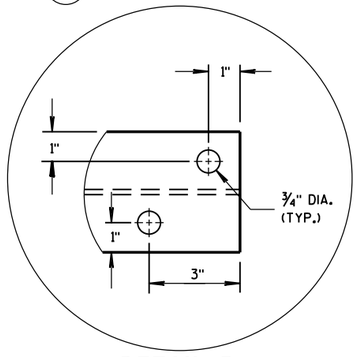
SDD 14B50-c Thrie Beam Approach Retrofit Installation of Missing Post -Post Details, Bill of Materials



W6x9 CROSS-BEAM (A1)

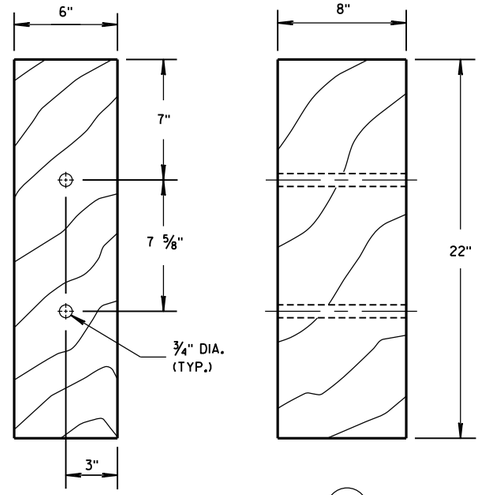


DETAIL A

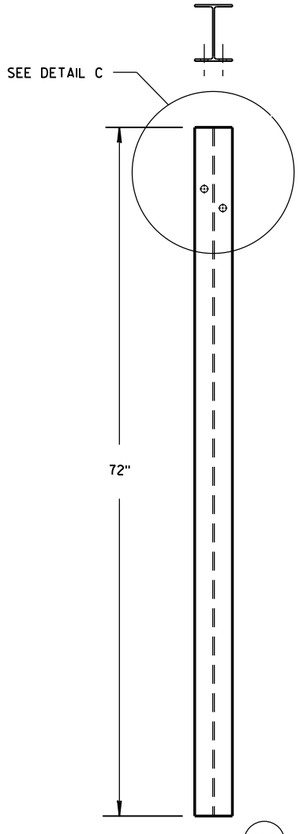


DETAIL B

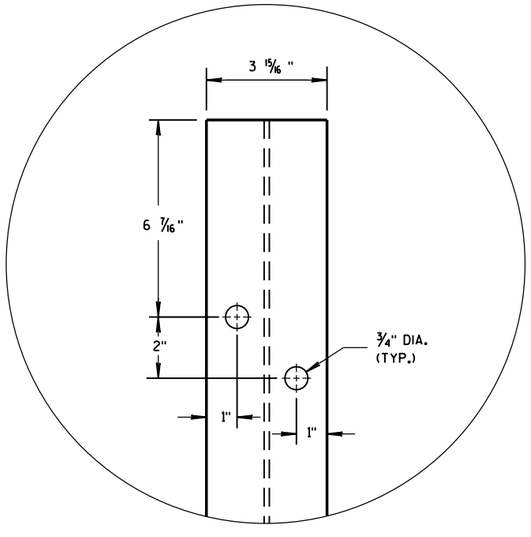
BILL OF MATERIALS			
ITEM NO.	QTY.	DESCRIPTION	MATERIAL SPECIFICATION
(A1)	1	40" LONG W6x9 CROSS-BEAM	ASTM A992 GR. 50 OR ASTM A36
(A2)	2	72" LONG W6x9 POST	ASTM A992 GR. 50 OR ASTM A36
(A3)	2	108" LONG W6x9 POST	ASTM A992 GR. 50 OR ASTM A36
(A4)	1	6" x 10" x ⅛" BACKUP PLATE	ASTM A992 GR. 50 OR ASTM A36
(A5)	3	6" x 8" x 22" BLOCKOUT	
(B1)	4	⅝" DIA. - HEX HEAD BOLT	BOLT: HEAVY HEX HEAD ASTM A307 OR SAE J429 GRADE 2 NUT: HEAVY HEX HEAD ASTM A563 A
(B2)	8	⅝" DIA. NARROW FLAT WASHER	ASTM F436
(B3)	2	LONG, ⅝" DIA. - POST BOLT AND NUT	BOLT: SAE J429 GRADE 2 OR ASTM A307 GRADE C OR ASTM F1554 GRADE 36 NUT: ⅝" DIA. ASTM A563 A DOUBLE RECESSED (DR) HEAVY HEX HEAD
(B4)	2	⅝" DIA. PLAIN ROUND WASHER	ASTM F844



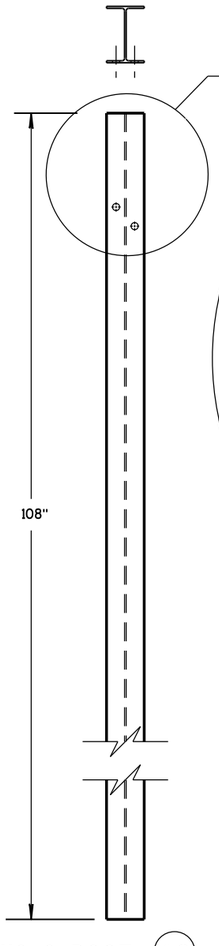
BLOCKOUT (A5)



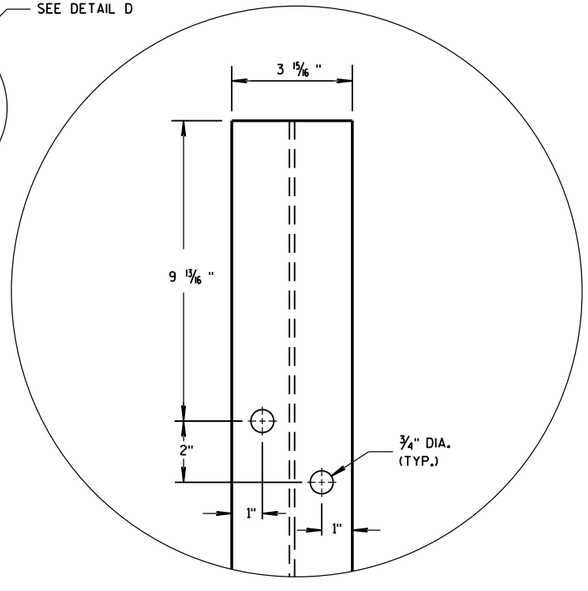
W6x9 POST (A2)



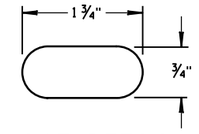
DETAIL C



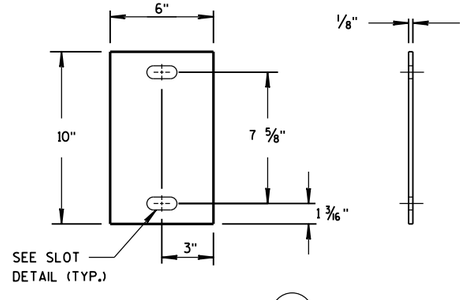
W6x9 POST (A3)



DETAIL D



SLOT DETAIL



BLACKUP PLATE (A4)

THRIE BEAM APPROACH
RETROFIT INSTALLATION
OF MISSING POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2014
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

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S.D.D. 14 B 50-1c

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S.D.D. 14 B 50-1c

Version 1 **Standard Detail Drawing 14B50** (sheet abc) *June 26, 2014*

Thrie Beam Approach Retrofit Installation of Missing Post

References:

Standard Spec 614
FDM 11-45-30
TRP 03-266-12

Bid items associated with this drawing:

ITEM NUMBER	DESCRIPTION	UNIT
614.0215	Steel Thrie Beam Structure Approach Retrofit Span	EACH
614.0216	Steel Thrie Beam Structure Approach Retrofit Post	EACH

Standardized Special Provisions associated with this drawing:

STSP NUMBER	TITLE
NONE	

Other SDDs associated with this drawing:

SDD 14B20 Thrie Beam Structure Approaches

Design Notes:

Use this retrofit alternative on 3R projects with an existing thrie beam transition that is missing the upstream of first post next to the bridge parapet on Class A thrie beam transitions to rigid barrier. Retrofit alternative is not for new installations of thrie beam transitions or new bridge parapets. These installations should be designed to accommodate all posts and proper grading of the thrie beam transition.

Review FDM 11-45-30.5 and FDM 11-45 Attachment 20.1 to determine if using the retrofit alternative is feasible. Type of work near thrie beam transition may influence what options are available.

- Option 1: Installing a post using bid item Steel Thrie Beam Structure Approach Retrofit Post.
- Option 2: Installing multiple blocks and retrofit assembly using Steel Thrie Beam Structure Approach Retrofit Span.

Use Option 2 when a flume, shallow pipe or other object can prevent the use of option 1. Review width of flume, shallow pipe or other object when using Option 2. Option 2 may not have the span length needed to bridge all obstacles

Do not use this retrofit alternative in combination with other retrofits or thrie beam deficiencies. If other deficiencies can be repaired (e.g. torn thrie beam rail or busted post is repaired…) then it is acceptable to use retrofit alternative. If a significant amount of repair is required, installing a new transition may be the best choice.

Contact Person:

Erik Emerson (608) 266-2842