VIRGINIA DEPARTMENT OF TRANSPORTATION

STRUCTURE AND BRIDGE DIVISION

INSTRUCTIONAL AND INFORMATIONAL MEMORANDUM

GENERAL SUBJECT: Bridge Touchdown Points	NUMBER: IIM-S&B-83
SPECIFIC SUBJECT: Procedure for Establishing HPB Funding Eligibility	DATE: June 17, 2009
	SUPERSEDES: None
DIVISION ADMINISTRATOR APPROVAL: /original signed/ Kendal R. Walus, P.E. State Structure and Bridge Engineer Approved: June 17, 2009	

Changes are shaded.

EFFECTIVE DATE:

This memorandum is effective upon receipt.

POLICY:

This memorandum establishes criteria for determining project eligibility and project limits (touchdown points) utilizing Highway Bridge Program (HBP) Funding.

CRITERIA FOR DETERMINING ELIGIBILITY OF BRIDGE WORK FOR HBP FUNDING:

The following <u>four criteria</u> must be met for a structure to qualify for (HBP) funding previously known as Highway Bridge Rehabilitation and Replacement Program (HBRRP):

1. BRIDGE MUST HAVE AN OPENING MEASURED ALONG THE CENTER OF THE ROADWAY OF MORE THAN TWENTY (20) FEET between undercopings of abutments or springlines of arches, or extreme ends of the openings for multiple boxes or pipes.

2. BRIDGE MUST NOT HAVE BEEN REPLACED OR REHABILITATED DURING THE PAST TEN YEARS (the “10-year rule”).

3. BRIDGE MUST BE STRUCTURALLY DEFICIENT OR FUNCTIONALLY OBSOLETE.

4. BRIDGE MUST HAVE A SUFFICIENCY RATING (SR) OF:

≤ 80 FOR REHABILITATION / RECONSTRUCTION
< 50 FOR REPLACEMENT

A classification of **STRUCTURALLY DEFICIENT** (Bridge Inventory Records) will be determined as follows:

GENERAL CONDITION RATING OF “4” OR LESS for one of the following:

- Decks (Item 58)
- Superstructures (Item 59)
- Substructures (Item 60)
- Culverts (Item 62)

(Item 62 is applicable only if Item 43 is coded 19)

- or -

APPRAISAL RATING OF “2” OR LESS for one of the following:

- Structural Condition (Item 67)
- Waterway Adequacy (Item 71)

(Item 71 applies only if the last digit of Item 42 is coded 0, 5, 6, 7, 8, or 9)

A classification of **FUNCTIONALLY OBSOLETE** (Bridge Inventory Records) will be determined as follows:

APPRAISAL RATING OF “3” or less for one of the following:

- Deck Geometry (Item 68)
- Under-clearances (Item 69)

(Item 69 applies only if the last digit of item 42 is coded 0, 1 2, 4, 6, 7 or 8)

- Approach Roadway Alignment (Item 72)

- or -

APPRAISAL RATING OF "3" for one of the following:

- Structural Condition (Item 67)
- Waterway Adequacy (Item 71)

(Item 71 applies only if the last digit of item 42 is coded 0, 5, 6, 7, 8 or 9)

QUALIFYING APPROACH WORK ITEMS AND SAFETY APPURTANCES:

1. Transitions to existing roadway to accommodate minimum design criteria.
2. Temporary detours (when used).
3. Temporary drainage.
4. Approach slabs (when used).
5. Guardrail and attachments.
6. Earthwork for bridge fill.
7. Right of way costs (except utilities).
8. Preliminary Engineering costs.
9. Construction costs.

NON-QUALIFYING ITEMS (when constructed beyond the approved touchdown points):

1. Interchanges and ramps.
2. Long approach fills.
3. Connecting roadways.
4. Causeways.
5. Construction of extensive earth structures.
6. Utility work.

PROCEDURE FOR ESTABLISHING TOUCHDOWN POINTS FOR ELIGIBLE BRIDGES:

Requirements specified in 23 CFR Sec. 650.405 under "Eligible Projects", available at: http://a257.g.akamaitech.net/7/257/2422/12feb20041500/edocket.access.gpo.gov/cfr_2004/aprqtr/pdf/23cfr650.405.pdf shall be considered in establishing reasonable touchdown points for approach work to be funded with HBP funds.

Every deficient bridge scheduled for rehabilitation or replacement shall be evaluated individually to establish reasonable touchdown points for approach work.

The Project Manager shall submit a completed Form SB 107 (Federal Bridge Replacement Program Determination of Touchdown Points) for approval to the Assistant State Structure and Bridge Engineer for Inspection and Maintenance. See Appendix B for a completed sample form.

The reasonable touchdown points for all eligible bridges shall be determined by the Project Manager based on the following two criteria:

1. The cost of the approach work funded with HBP funds does not exceed 25% of the bridge rehabilitation or replacement cost on the Federal-aid System and 50% on the Off-System.

2. The length of the eligible approach work on each side of the bridge is less than 600 feet. For ease in establishing project limits, the Project Manager may adjust the approach work limits to just one side of the bridge not to exceed 1200 feet for ease in determining quantities and cost.

If the Project Manager feels that the reasonable touchdown points should exceed both of the criteria above, then the project shall be submitted to FHWA with supporting documentation for review and approval.

EXAMPLES:

See examples in Appendix A for eligible work.

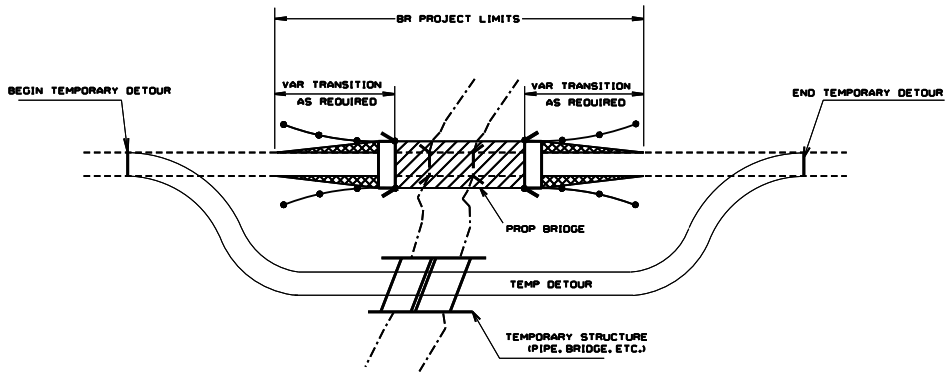
Cc: Chief Engineer
Chief Financial Officer
Location and Design Division Administrator
Local Assistance Division Administrator
Programming Division Administrator
Assistant State Structure and Bridge Engineers
District Preliminary Engineering Managers
District Structure and Bridge Engineers
Structure and Bridge Program Managers

APPENDIX A

EXAMPLE 1 : SUBSTANDARD BRIDGE ON EXISTING LOCATION (Bridge Project Only):

When replacing or rehabilitating a substandard bridge to minimum standards or greater, on existing grade and location, all approach work items required to transition back into the existing roadway and safety appurtenances pertaining to the bridge are eligible. The cost of any temporary detour required for maintenance of traffic while the structure is being built is eligible.

EXISTING LOCATION - BRIDGE ONLY
SUBSTANDARD STRUCTURE ON EXISTING LOCATION AND GRADE

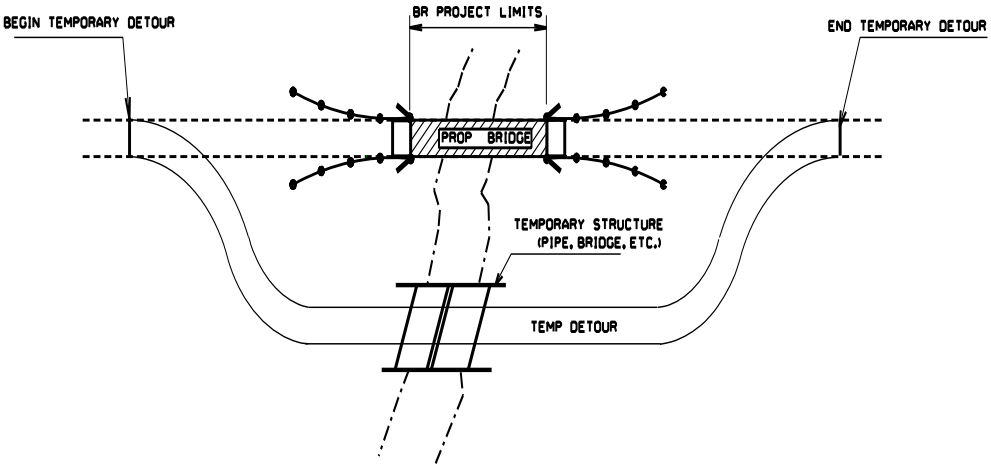


APPENDIX A

EXAMPLE 2: STANDARDS COMPLIANT BRIDGE ON EXISTING LOCATION

When replacing a bridge that conforms to standard widths on existing grade and location, all approach work items and safety appurtenances pertaining to the bridge are eligible. The cost of any temporary detour required for maintenance of traffic while the structure is being built is eligible.

EXISTING LOCATION- BRIDGE ONLY
STRUCTURE CONFORMS TO STANDARD WIDTHS – ON EXISTING LOCATION AND GRADE

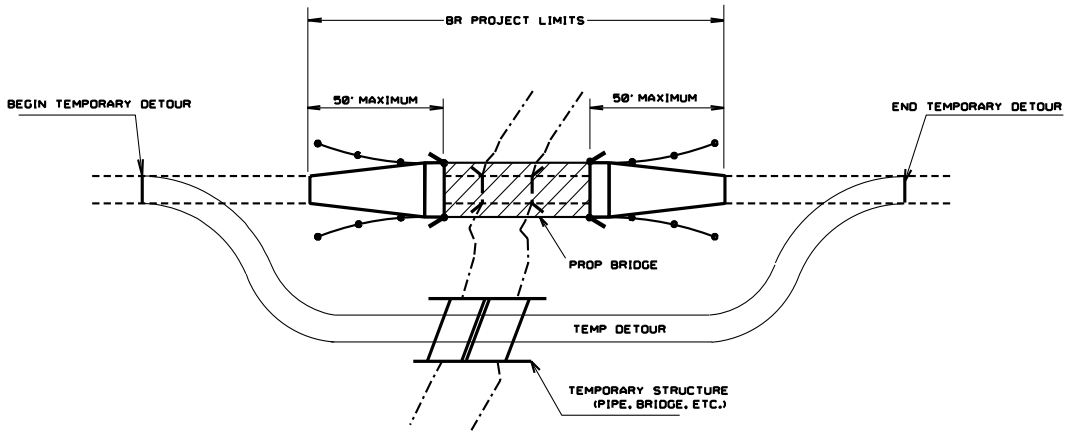


APPENDIX A

EXAMPLE 3: SUBSTANDARD BRIDGE AND ROADWAY ON EXISTING LOCATION (Project to upgrade roadway and rehabilitate or replace a deficient bridge):
When replacing or rehabilitating a substandard bridge to minimum standards or greater, on existing grade and location, bridge work items will be limited to 50 feet of approach work at beginning and end of bridge.

All approach work items within 100 feet are eligible for consideration. (This allows the coverage of the cost of approach slabs, select material behind the abutments, guardrail attachments and other approach work items.) If a detour is required, associated roadway costs required for maintenance of traffic while the structure is being built are eligible.

EXISTING LOCATION –
BRIDGE AND ROADWAY UPGRADE
SUBSTANDARD STRUCTURE - EXISTING LOCATION & GRADE



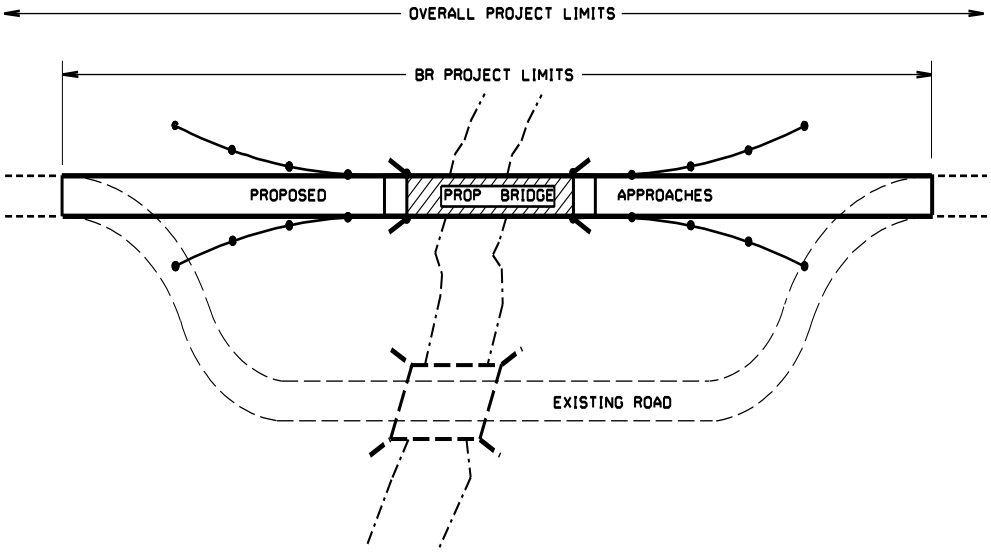
APPENDIX A

EXAMPLE 4: SUBSTANDARD BRIDGE ON NEW LOCATION

When replacing a bridge that needs to be raised or relocated due to substandard vertical and horizontal alignment, substandard clearances, hydraulic design issues, constructability issues, etc., the minimum amount of approach roadway work necessary to tie the relocated alignment back into the existing roadway is eligible. The alignment will conform to current AASHTO standards based on the functional classification and projected traffic volumes for that particular roadway.

When a section of roadway that has poor geometry is being upgraded, and this roadway section includes the replacement of a bridge that does not have a geometric problem, engineering judgment shall be used in determining the amount of approach work to be funded with HBRRP funds.

BRIDGE ON NEW LOCATION
REPLACEMENT OF QUALIFYING STRUCTURE ON RELOCATED ALIGNMENT



APPENDIX B

SAMPLE FORM

DETERMINATION OF TOUCHDOWN POINTS			
DISTRICT:	Bristol	PROJECT NO.:	0058-084-120,B601
ROUTE NO.:	58	UPC:	77344
COUNTY/CITY:	Scott County	PROJ. MNGR.:	John Smith
PROJECT LIMITS	FROM STA.: 10+00	DATE SUBMITTED:	June 1, 2009
	TO STA.: 28+00		

EXISTING STRUCTURE		PROJECT ESTIMATED COST	
CROSSING OVER:	Deer Crossing Creek	PE:	$ 500,000
VA STRUC. NO.:	1012	ROW/UTIL:	$ 250,000
FED. STRUC ID.:	189675	CONSTR:	$ 4,000,000
STRUC. LENGTH (ft):	120	TOTAL:	$ 4,750,000
SUFF. RATING :	30		

PROPOSED STRUCTURE		BRIDGE EST. COST	
BEGIN STA.:	15+00	PE:	$ 150,000
END STA.:	18+50	ROW:	$ 50,000
BRIDGE LENGTH (ft):	150	CONSTR.:	$ 2,000,000
APPROACHES (ft):	200	APPROACHES:	$ 100,000
TOTAL LENGTH (ft):	350	TOTAL:	$ 2,300,000

APPROVED STRUCTURE REPLACEMENT PROJECT LIMITS			
BEGIN STA.:	15+00		
END STA.:	18+50	APPROVED BY:	Anwar S. Ahmad, P.E.
BRIDGE LENGTH (ft):	150		For State S&B Engineer
APPROACHES (ft):	200		
TOTAL LENGTH (ft):	350	DATE:	June 05, 2009

Comments: The proposed bridge replacement and approach roadway limits are approved.
This request doesn't require FHWA approval.

FHWA REVIEW AND APPROVAL*

APPROVED BY: DATE:

Comments:

* Submit this form to FHWA for review and approval when **BOTH** the cost of the approach roadway work exceeds 25% the cost of the bridge located on Federal Aid route or 50% of the bridge located on non-Federal Aid route **AND** the total length of approaches exceed 1200 feet.

CC: Programming Division Administrator
Local Assistance Division Administrator
FHWA (Attn: VA Division Bridge Engineer)
District Preliminary Engineer
State Structure & Bridge Engineer