

BRIDGE PRIORITY SELECTION POLICY

Summer 2007

POLICY

The prime policy objective for the Federal Highway Bridge Program (HBP) is to replace or rehabilitate structurally deficient and functionally obsolete bridges. Since there is a significant shortfall in the federal, state and local funding available to replace deficient bridges, the uses of HBP funding must be focused in order to accomplish the replacement or rehabilitation of as many bridges as possible.

It is recognized that it is not good engineering, nor good economic planning, to replace a bridge with a new bridge that will be functionally obsolete before the end of its structural design life.

HBP funding should be allocated in general categories to match the deficiencies of Oregon's bridges. This should be done by matching the ratios of category allocations to the funding received from FHWA which is based on Oregon's bridge deficiencies. This allocation method should be used to determine funding in each of the following categories:

1. All State Bridges.
2. Local agency bridges with existing areas of 30,000 SF or greater ("Large" bridges).
3. Local agency bridges with existing areas of less than 30,000 SF ("Small" bridges).

"Small" bridges should be further sub-allocated to:

4. Bridges on the Federal-Aid System (Functionally classified Major Collector or greater)
5. Bridges off the Federal-Aid System (Functionally classified Minor Collector or less).

HBP project selection is done through the Local Agency Bridge Selection Committee. (LABSC) The LABSC shall use the following criteria when selecting projects and determining eligible expenses of HBP funds:

- I. The "Large" bridges selection and eligibility shall be determined based on criteria developed through the local agencies with "large" bridges. The development of this policy shall be independent of the policies for the "small" bridges.
- II. "Small" bridge rehabilitations projects will be considered on an individual basis, comparing the benefits of the proposed rehabilitation to the priority of "small" bridges being proposed for replacement. A rehabilitation project must have a Sufficiency Rating of at least 80 at the completion of the project.
- III. The "Small" bridge replacement selection should be based primarily on a technical ranking, developed and approved by local agencies. The criteria for the technical ranking shall be based on the federal sufficiency rating, but shall be enhanced by additional criteria critical to Oregon local agency bridges. These other criteria

enhancements include: freight mobility, single access problems and cost benefit. (The current Technical Ranking System in the attached Appendix "A.")

- IV. Exceptions to the technical ranking priority may be made to account for critical situations not covered adequately by the technical ranking system. Examples of exceptions include, but are not limited to:
 1. Making sure that one load limited structurally deficient bridge is not left remaining on a truck corridor after all of the other bridges have been fixed.
 2. Known heavy truck use when bridge is to be used as a detour for a state highway.
 3. Provides access to a public or private investment that creates or sustains jobs.
- V. Eligible project element expenses for the use of HBP funds on "small" bridges shall be subject to the following criteria:
 1. The highest priority should be for project elements that provide structural capacity for trucks to operate over the bridge.
 2. High priority should also be given to project elements that improve the safe operation of all vehicles and prolong the service life of the structures.
 3. Secondary priority should be given to project elements that are not identified as deficiencies in the FHWA Bridge Sufficiency Rating. Whenever possible funding sources other than HBP should be used for these other project elements. However, if federal or state law requires these elements, and no other funding source is available, then HBP funding may be used (if eligible for HBP funding).
 4. HBP funding should be used to provide additional bridge width, including additional lanes, to bring the bridge into conformance with AASHTO design standards for current traffic volumes. HBP funding may also be used for design features that will allow for anticipated future increases in bridge width.
 5. Additional lanes should only be included in the HBP projects if the roadway on which the bridge is constructed also has the same number of lanes, or if funds have been allocated to construct those lanes in the near future.

APPLICATION PROCESS
BRIDGE PROGRAM

1. ODOT shall send applications to each local agency. The Letter with the applications will include the following:
 - a. A notice of the available funding and the time frame the funding will be available.
 - b. The deadline for application submittals.
 - c. A list of the bridges in each agency eligible for HBP funding.
 - d. For each eligible bridge, the NBIS data elements that will be used to calculate the technical ranking priority points.
 - e. A copy of this policy statement, including the Technical Ranking System.
 - f. Application forms.
 - g. Bridge Cost Estimating spreadsheet.

2. Each local agency shall submit all bridge projects that they want considered for HBP funding. The application shall include the following information:
 - a. ODOT Project Prospectus, Part 1.
 - b. The cost estimate for the bridge, using an estimating system approved by ODOT.
 - c. Any work being proposed to be done at the same time, but not using HBP funds (Not to be used for “leverage” in setting priority, but to understand the total project).
 - d. If the local agency believes any of the ODOT provided NBIS data elements are incorrect, a statement of what the local agency believes the correct data element should be.

3. For small bridges (under 30,000 S.F.) the following additional information shall be included in the application:
 - a. An explanation of any special reasons this project should be given higher priority than will be established by the Technical Ranking System (See Paragraph IV in the above “Policy” section).
 - b. If multiple bridges are being proposed as a single project, an explanation of why,
 - c. If rehabilitation of the bridge is proposed instead of replacement, an estimate of the extended life of the bridge and an analysis showing the Sufficiency Rating of the bridge after the project has been completed.
 - d. If a bridge width is being proposed using the AASHTO Geometric Design of Very Low Volume Local Roads (ADT < 400), the basis of the proposed width should be explained.
 - e. Current Load Rating of Bridge. If local agency’s proposed Load Rating is less than that currently provided by ODOT, the local agency must provide the calculations establishing the proposed Load Rating. The calculation must follow ODOT’s Load Rating Guidelines.

- f. Additional verification of the following NBIS Data Elements:
 - Average Annual Daily Traffic (AADT)
 - Detour Length (a map of the detour route is to be included with the application).
 - The detour should represent the total additional travel for a vehicle which would result from closing of the bridge.
 - The detour shall use roads with functional classifications equal to or greater than one functional classification less than the functional classification of the road with the bridge.
 - The detour route must have no alignment or load limitations for non-permit trucks. (If no detour route is available for non-permit trucks, code as a dead end road.)
 - g. The following information, currently not in the NBIS data base, shall also be provided.
 - Truck AADT
 - The truck AADT is to be the AADT of the bridge if there were no posted load limit on the bridge.
 - Trucks are vehicles with gross vehicle weights greater than 26,000 pounds
 - Truck ADT will be calculated at a default value of 5% of AADT unless the application includes one of the following:
 - An actual truck count (Example of use: into an industrial park)
 - An analysis of the seasonal truck traffic, converted to an average annual daily traffic. (Example of use: access to agricultural lands)
 - An analysis of multi-year truck traffic, converted into an average annual daily traffic. (Example of use: access to aggregate site or forest lands or to an aggregate site)
 - Is the bridge heavily used by fire trucks? To meet this threshold at least 25% of the responses from a fire station must use the bridge.
4. Upon receipt of the local agency applications, ODOT shall review all application information for accuracy, change the NBIS data as necessary, recalculate the NBIS Sufficiency Ratings, and then calculate the technical ranking priority points for the small bridges. This effort may take several months.

5. ODOT will provide the LABSC with a report containing the following information:
 - a. A summary of the bridges that have been identified with special needs (See items “3.a,” “3.b” and “3.c” in the above POLICY section). The summary will include the basic information for each project, the reasons given by the local agency for special consideration and any comments the ODOT staff consider appropriate for the project.
 - b. A summary of all Large Bridge submittals. The summary will include the basic information for each project and any comments the ODOT staff consider appropriate for the project.
 - c. A spreadsheet showing the calculations of the Technical Ranking System for all of the submitted small bridges, sorted in priority order.
 - d. A statement of the available funding that is to be allocated to the “Small Bridge” and “Large Bridge” programs

6. The LABSC will meet and select the projects to be funded. This process will include:
 - a. Determination of the funding for Large Bridge projects.
 - b. Determination of the funding priority for rehabilitation projects.
 - c. Determination of priority of projects with special needs outside of the technical ranking system.
 - d. Selection of the Small Bridge projects

7. In making its decisions the LABSC may request additional information and/or analysis from ODOT or the local agencies submitting bridge projects.

APPENDIX “A”

TECHINCAL RANKING SYSTEM

For SMALL BRIDGES (Deck Area Under 30,000 S.F.)

The following formula is to be used for calculating the Priority Points for local agency bridges with deck areas less than 30,000 square feet.

$$\text{Priority Points} = (\text{SRF} + \text{LDF} + \text{CBF}) \times 0.5 \times \text{TMTM} \times \text{FCM}$$

$$\text{Max. Priority Points} = (50+25+25) \times 0.5 \times 1.414 \times 1.414 = 100 \text{ points}$$

WHERE:

SRF = NBIS Sufficiency Factor = **(50 – Sufficiency Rating)** [Maximum 50 points]

LDF = Load Deficiency Factor [Maximum 25 points]

Load	
Inventory Rating (Less Than)	Deficiency Points
5	25
10	20
40	15
42	5
45	2

CBF = Cost Benefit Factor [Maximum 25 points]

$$\text{CBF} = 25 - 0.05 \times \frac{\text{Cost of Bridge Replacement}}{\text{ADT} \times \text{Detour Length}}$$

TMTM = Truck Miles Traveled Multiplier [Maximum 1.414]

TMTM	
Truck Miles Traveled	Importance Factor
2900	1.414
1500	1.300
800	1.200
300	1.100
0	1.000
Dead End or Near Fire Station	
199	1.414

FCM = Functional Classification Multiplier [Maximum 1.414]

Functional Classification			
Functional Classification		Required Width	Importance Factor
1	Rural Interstate	88	1.414
2	R. Principal Art.	88	1.414
6	R. Min. Art	42	1.414
7	R. Maj. Collector	36	1.300
8	R. Min. Col.	32	1.200
9	R. Local	28	1.000
14	U. Other Prin. Art.	42	1.400
16	U. Min. Art	42	1.400
17	U. Coll.	36	1.250
19	U. Local	32	1.000