EXHIBIT 6-C PIN FOR BARRIER RAIL REPLACEMENT PROJECTS

Following is the formula to be used to calculate the priority index number for HBRR Barrier Rail Replacement projects:

Description and Evaluation of Priority Factors

Total Bridge Rail Priority Points = F1 + F2 + F3 + F4 + F5 + F6 + F7

F1: **Bridge Rail Type** - Among the types of rails where NBI item 36A is coded 0 in the Bridge Inspection Report, some are considered to be less effective than others. Listed below are the assigned points (ten points maximum per project - if one side is good, project applies to bad side only - if project is for two sides with different points, use average):

F1 = 10 points: no bridge rail, or lightweight timber rails;

F1 = 6 points: lightweight concrete post or metal baluster, Tuthill, or equal;

F1 = 3 points: lightweight concrete window (Todd rail), unreinforced masonry; metal beam or lattice, or equal;

F1 = 0 points: all other rail types

F2: **Consequence of Penetration**

F2 = 6 points: bridges over an area of moderate or heavy public use (i.e., main road, street or railroad, playgrounds, parking lots, etc.);

F2 = 0 points: otherwise.

F3: **Inadequate Approach Rail System -** Points are given for inadequate approach guardrails, inadequate approach guardrail to bridge rail connections, and inadequate approach guardrail terminals (five points maximum per project - if it varies, use average of rails to be replaced):

F3 = 1 point: inadequate approach guardrail transitions;

F3 = 3 points: inadequate approach guardrail;

F3 = 1 point: inadequate approach guardrail terminal;

(Two-way bridges less than 18.3 meters wide should have an adequate approach guardrail system at all four corners).

F4: **Accidents** - All accidents involving the bridge rail, bridge ends and approach guardrails in the last 5 years are counted. One point is given for each Property

Damage Only (PDO) accident while 5 points are given for each fatal or injury accident.

F4 = 5 points: x (# of fatal or injury accidents) + 1 point: x (# of PDO accidents)

If replacing rail on only one side, use accidents involving the rail to be replaced.

F5: **ADT/Lane -** This is a measure of the number of conflicts on the bridge. The most critical case is at a volume/capacity ratio of 0.50, This is equivalent to 4,000 ADT/Lane, (Average Daily Traffic/Lane) on 2-lane, 2-way roads and 8,000 ADT/Lane on multi-lane roads. Points are given as follows (Use the "ADT" information from the Bridge Inspection Report.):

On 2-Lane, 2-Way Roads		**On Multi-Lane Roads**
F5 Points	**(ADT/Lane)=L**	**(ADT/Lane)=L**
0	L<800	L<1,600
1	800 ≤ L ≤ 1,600	1,600 ≤ L ≤ 3,200
2	1,600 ≤ L ≤ 2,400	3,200 ≤ L ≤ 4,800
3	2,400 ≤ L ≤ 3,200	4,800 ≤ L ≤ 6,400
4	3,200 ≤ L ≤ 4,000	6,400 ≤ L ≤ 8,000
5	L ≥ 4,000	L ≥ 8,000

F6: **Site Conditions -** This rating factor is affected by many variables such as vertical alignment, horizontal alignment, bridge width, or access roads being close to the bridge. For each variable that is slightly worse than the design standard, add 1/2 point. For each variable that is significantly worse than the design standard, add 1-1/2 points. The points for F6 shall be as follows:

F6 = 0 points: site conditions are excellent

F6 = 1 point: site conditions are good

F6 = 2 points: site conditions are fair

F6 = 3 points: site conditions are average

F6 = 4 points: site conditions are poor

F6 = 5 points: site conditions are critical

The maximum number of points for F6 on any bridge shall be 5.

F7: Potential for future bridge replacement - Top priority is to replace obsolete barrier rails on bridges with long life expectancy.

F7 = 10 points if Sufficiency Rating (SR) >80

F7 = 6 points if 70 < SR ≤80

F7 = 5 points if 60 < SR ≤ 70

F7 = 4 points if 50 < SR ≤ 60

F7 = 0 points if SR ≤ 50.

For each candidate project provide each of the factors above with explanation for why each factor was selected. THIS INFORMATION MUST BE PROVIDED FOR THE APPLICATION TO BE ACCEPTED.

Factor	Value	Justification (Attach additional pages if required)
F1		
F2		
F3		
F4		
F5		
F6		
F7		

PIN= ∑ Values above = _____

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