

EXHIBIT 6-A HBRRP APPLICATION/SCOPE DEFINITION FORM

See Section 6.6, Chapter 6 of the LAPG for information about this form.

This form shall replace Exhibit 7-D, "Major Structure Data," from Chapter 7, "Field Review," of the LAPM. Wherever the LAPM requires Exhibit 7-D for other programs, Exhibit 6-A may be substituted. Bridge projects funded entirely through other programs should continue to use Exhibit 7-D.

(One bridge per application, separate applications are required for multiple bridges at same location. Multiple bridges may be combined into one federal aid project later.)

State Bridge No. 10C0065 Local Bridge No. 10C0065 (C.R. 104, M.P. 0.97)
 Project Number _____ (Caltrans to provide project number for new projects)
 Responsible Agency Mendocino County D.O.T.
 Caltrans District _____
 County Mendocino
 Project Manager Kidd Immel
 Title Civil Engineer
 Phone (707) 463-4071 Cell (707) 489-0336
 E Mail immelk@co.mendocino.ca.us
 Project Location North State Street over Ackerman Creek
 Project Limits 400 feet each side of the existing bridge.

Type of Work Bridge Replacement

Work Description Widen and rehabilitate existing bridge OR replace existing bridge with new modern wide bridge. Construct new wider roadway approaches.

HBRRP Category:

- | | |
|--|---|
| <input checked="" type="checkbox"/> Rehabilitation | <input type="checkbox"/> Scour Countermeasure |
| <input checked="" type="checkbox"/> Replacement | <input type="checkbox"/> Replacement Due to Flood Control Project |
| <input type="checkbox"/> Painting | <input type="checkbox"/> New Bridge to Replace Ferry Service |
| <input type="checkbox"/> Bridge/Railing/Approach Barrier Replacement | <input type="checkbox"/> Historic Bridge |
| <input type="checkbox"/> Low Water Crossing Replacement | <input type="checkbox"/> High Cost Bridge |
- Minimal Application: Only questions 1,2,3, 4, cost data and signoff will be completed. Other information will be submitted at a later time after PE has been federally authorized to scope the project. See Section 6.6.2 "Minimum Application Requirements" for additional information.

The field review process enables the proper scoping of projects. Some field reviews are mandatory, most are optional. Field reviews are critically important to identify difficult environmental, Right of Way, and bridge type selection issues early in the project development phase. Please see Chapter 7 of the LAPM for further discussion.

- 1. Do you request that Caltrans initiate a field review? Yes No
- 2. Do you need help with consultant selection/oversight? Yes No
- 3. Do you need help with the federal process? Yes No
- 4. Caltrans engineers are available to provide an optional cursory review of the PS&E. The review looks at buildability, standard details and specifications, foundation/hydraulic design, and HBRRP funding eligibility. Do you request Caltrans perform a cursory PS&E review for this project? (If yes, please also request a field review.) Yes No

Federal Congressional District(s) 1

State Senate District(s) 2

State Assembly District(s) 1

Preliminary Engineering by: Local Agency Staff Consultant Other...

Design by: Local Agency Staff Consultant Other...

Foundation Investigation by: Local Agency Staff Consultant Other...

Hydrology Study by: Local Agency Staff Consultant Other...

Detour, stage construction, or close road? stage construction

Length of detour: 3.7 miles

Resident Engineer for Bridge Work: Local Agency Staff Consultant Other...

For painting & scour scopes of work, skip this page.

**NBI data is from the Bridge Inspections Report (SI&A sheet)
Contact the DLAE/SLA for assistance, if needed**

Date Constructed (NBI Item 27): 1965 Historical Bridge Category (NBI Item 37) 5

Structure Data	Existing	Proposed	Minimum AASHTO Standards
Structure type	Concrete slab	concrete/steel	
Structure length (specify units)	150 ft	160 +/- ft	
Spans (No. and length)	3 @ 48 ft	4 +/- @ 40' +/- T.B.D. based on engineering analysis	
Curb to Curb width (See NBI Item 51 definition)	28 ft	46 ft	46 ft
Number of lanes	2	3	
Lane widths	12 ft	11 ft / 12 ft / 11 ft	11 ft / 12 ft / 11 ft
Shoulder widths	<u>2 ft</u> Lt <u>2 ft</u> Rt	<u>6'</u> Lt <u>6'</u> Rt	6' ft
Bike lanes (identify only if <u>not</u> included in the shoulder dimensions)	<u>0</u> Lt <u>0</u> Rt	<u>0 ft</u> Lt <u>0 ft</u> Rt	(Included in SHLD dimension above)
Sidewalks/ separated bikeways	<u>0'</u> Lt <u>0'</u> Rt	<u>6' +/-</u> Lt <u>6' +/-</u> Rt (5' minimum)	4 ft min (5 ft min recommended for ADA)
Approach roadway width (traveled way + paved shoulders, tapered approaches should be measured at the touchdown points not the abutments)	28 ft	46 ft (curb to curb, includes bike lanes)	46 ft
Approach road length (from each abutment)	<u>400'</u> abt1 <u>400'</u> abt2	<u>400'</u> abt1 <u>400'</u> abt2	
Total bridge deck width	34 ft	60 ft +/-	

Summary of Major Deficiencies of Existing Bridge (See Section 6.12 for information)
(Contact the DLAE/SLA for assistance, if needed)

Data is from SI&A Sheet (Last page of Bridge Inspection Report)

SD = Structurally Deficient
 FO = Functionally Obsolete
 Blank = Not SD or FO
 NG = Not Good (Deficiency)

Sufficiency Rating (SR) = 76.1

Status SD FO Blank

Description of Data Item	NBI Data Item	Deficient Criteria	Results	What are the Deficiencies?
Deck	Item 58 = 6	≤ 4 is problem	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NG-SD	
Superstructure	Item 59 = 6	≤ 4 is problem	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NG-SD	
Substructures	Item 60 = 7	≤ 4 is problem	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NG-SD	
[Item 62 applies only if the last digits of Item 43 are coded 19.]				N/A
Culvert and Retaining Walls	Item 62 = N	≤ 4 is problem	<input type="checkbox"/> OK <input type="checkbox"/> NG-SD	
Structural Condition	Item 67 = 6	≤ 3 is problem	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NG	
[Item 71 applies only if the last digit of Item 43 is coded 0, 5, 6, 7, 8, or 9.]				
Waterway Adequacy	Item 71 = 8	≤ 3 is problem	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NG	
Deck Geometry	Item 68 = 2	≤ 3 is problem	<input type="checkbox"/> OK <input checked="" type="checkbox"/> NG-FO	Bridge is too narrow.

Description of Data Item	NBI Data Item	Deficient Criteria	Results	What are the Deficiencies?
[Item 69 applies only if the last digit of Item 42 is coded 0, 1, 2, 4, 6, 7 or 8.]				
Under-clearances	Item 69 = N	≤ 3 is problem	<input type="checkbox"/> OK <input type="checkbox"/> NG-FO	N/A
Approach Roadway Alignment	Item 72 = 8	≤ 3 is problem	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NG-FO	
Scour Criticality	Item 113 = 5	≤ 3 is problem	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NG	
Bridge Railing	Item 36A = 1	= 0 Review	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NG	
Guardrail Transition, Approaches, Guardrail Ends	Item 36B = 0 Item 36C = 0 Item 36D = 0	= 0 Review	<input type="checkbox"/> OK <input checked="" type="checkbox"/> NG	Does not meet current standards or none provided.
Other deficiencies not identified in Bridge Inspection Report	<p>1) The narrow two-lane bridge and its approach roadway do not fit the newly improved roadway capacity (roadway has been widened from 2-lanes to 3-lanes since last bridge report). The bridge squeezes a 3-lane road down to a 2-lane road without sidewalks to cross the bridge. The bridge is unsafe for pedestrian and bicyclists.</p> <p>2) There is a 6 ft high check dam immediately downstream of the existing bridge to maintain channel grade near the bottom of footings. The check dam is at least 60 years old and constructed from redwood logs, steel piles, and rip-rap. This feature also hinders fish passage in spite of the fish ladder which was installed. The check dam's failure would jeopardize the existing bridge and its approaches.</p> <p>3) The existing bridge's abutments are cantilevered seat-type abutments with only 10-inch seats. Seismic calculations predict 20 +/- inches of longitudinal displacement during a maximum-credible earthquake. The existing bridge's ends would slide off the abutment seats and collapse during such an event.</p> <p>4) There is a high vehicular accident rate at the bridge (greater than 1 accident per year). The alignment of the roadway and geometry of the bridge and the proximity of driveways at the northerly approach is likely a contributing factor.</p>			

5. If this application is for rehabilitation or replacement scope, will all deficiencies be resolved by the project? If no, please discuss below or attach discussion on separate pages to application.

Yes No Not Applicable

6. Discuss any special condition or proposed design exceptions:

A check dam with a portable fish ladder is immediately down-stream of the bridge that maintains the channel grade near the bottom of the bridge's footings.

- The check dam was built at some unknown time before 1951.
- The check dam is deficient because it is not suitable for fish passage.
- Caltrans' bridges HWY 101 over Ackerman Creek are located 800 feet upstream.

It is suspected that the geometry and likely the vertical alignment (crest) of the bridge combined with the existing driveways to the businesses at the northwesterly end of the bridge are responsible for the accident rate at the bridge. The proposed center turn lane will likely reduce the high accident rate. An engineering analysis (intersection type design) that studies the sight, decision, and stopping distances needs to be done. Such an analysis may determine that to maintain the business access, a nonstandard metal beam guard rail and/or end terminal system may be needed, or possibly omitting the rail and/or ETS all together. A design exception may possibly be used to meet the constraints. The 10-year accident history at the location of the bridge is included with this application.

Contingent on cost and a number of factors including alignment (traffic safety and access) and hydraulic profile a design that passes storm flows with reduced freeboard may be considered during type selection as an option.

Property on the southwesterly side of project is "Indian lands"; this is expected to make the right-of-way acquisition process for this parcel slower and more costly, and may constrain the alignment.

7. Identify and justify "betterments" that are HBRRP participating but are not related to the major deficiencies. Attach additional pages as needed.

Sidewalks, bike lanes, and channel work: Channel work relating to fish passage and stream restoration will likely be a significant environmental component of this project. Sidewalks, bike lanes, curb and gutter and other accouterments will be constructed to match the bridge and route.

8. Refer to Exhibit 6-B. Identify and justify specific items requiring Caltrans funding approval. Attach additional pages as needed.

- 1) An additional center turn lane is proposed: to meet traffic demands, AASHTO standards, safety requirements, including wide shoulders for bike lanes.
- 2) The determination of replacement vs. rehabilitation will be based on an engineering analysis and addressed during the bridge type selection (project's P.E. phase). The existing structure has seismic issues as well as geometric issues that need further analysis; existing structure may not be suitable for rehabilitation.
- 3) Sidewalks should be installed for pedestrian safety.
- 4) The existing check dam with fish ladder, and the remnants of previous bridges in the channel need to be considered for environmental requirements and commitments, as well as hydraulics and stream stability. This may involve removal, replacement, or retrofit of the dam and ladder, and other channel work and measures.

9. Other comments: (identify non-HBRRP participating work)

Preliminary engineering analysis is required to determine if the existing bridge should remain and be rehabilitated or if the structure should be completely replaced. This decision is contingent on:

- 1) Channel hydraulics and stream characteristics.
- 2) Traffic/roadway engineering analysis.
- 3) Environmental constraints and agency requirements.
- 4) Comparative cost and feasibility of retrofitting/widening versus replacing structure.

Estimated Construction Costs:

Exclude Contingencies, Supplementary Work, and Construction Engineering

	HBP Participating	NOT HBP Participating*
Construct	2,000,000	0
Bridge Removal	20,000	0
Slope Protection	30,000	0
Channel Work	100,000	0
Detour – Stage Construction	20,000	0
Approach Roadway	200,000	0
Utility Relocation	5,000	0
Mobilization	237,000	0
Total	2,612,000	0
Total Cost	2,612,000	

- * Items that are not HBRRP participating could be participating through other federal programs. See the LAPG for other eligibility requirements of other programs. Local agencies that are unsure which project costs are HBRRP participating should contact the DLAE/SLA for resolution.

Note that the total of the HBRRP participating costs should carry over into the construction line (direct costs) on the next page.

Summary of HBRRP Participating Costs

Please indicate the HBRRP total participating (eligible for reimbursement) costs for this project. Based on the amounts below and the federal reimbursement rate, Caltrans will program (reserve) the HBRRP funds needed for this project. Other federal funds (RSTP, TEA, etc.) needed for this project should be shown in the Field Review form Exhibit 7-B from Chapter 7 of the LAPM.

Target dates represent a commitment by the local agency when the project will need HBRRP funding. Failure to meet target dates may cause funds to be reprogrammed to other projects by other local agencies. The reprogramming of HBRRP funds is at the discretion of Caltrans.

- PE = Preliminary Engineering (Total not to exceed the greater of \$75 K or 25% of CON and consultant contract management and quality assurance not to exceed 15% of consultant costs).
- R/W = Right of Way
- CE = Construction Engineering (Not to exceed 15% of CON).
- CON = Construction
- Cont = Contingency (including supplement work) not to exceed 25% (preliminary estimate) nor 10% of CON for final design \$5 K min.

Enter PE Rate: 25%
 Enter CE Rate: 15%
 Enter Contingency Rate: 25%

	Direct Costs	Indirect Costs*	HBP Participating \$**	Target Dates
PE	653,000	0	653,000	06/2011
R/W			200,000	06/2013
CON	2,612,000			
CE	391,000	0		
Cont	653,000			
Subtotal	3,656,000	0	3,656,000	12/2014
Total Participating Cost			4,509,000	
Enter Fed. Match Rate			88.53%	
HBRRP Requested			3,991,000	

* See Chapter 5, "Accounting/Invoices," of the LAPM for approval of indirect costs.

** Participating costs exclude ineligible work items. Please review the HBRR Program Guidelines for reimbursable scopes of work and program cost limits. Other federal funds will be shown in the Field Review form, Exhibit 7-B, Chapter 7, "Field Review," of the LAPM.

Caltrans, please notify this agency to confirm this project has been programmed in the HBRRP Multi-Year Plan. I understand that reimbursable work shall not commence until a request for authorization (E76) has been processed by Caltrans and a notice to proceed has been received by this agency.

I certify that this project is in compliance with Chapter 6 (HBRRP) of the *Local Assistance Program Guidelines*. I understand that changes to the project scope/cost/schedule impacting the information in Exhibit 6-A and Exhibit 6-B require the processing of Exhibit 6-D (HBRRP Scope/Cost/Schedule Change Request).

Two (2) copies plus one original of this application (with attachments) will be included in the transmittal package to the DLAE.



Kidd C. Immel, C.E., L.S.
Local Agency Project Manager

5-19-10

Date

Attachments:

- 1) Exhibit 6-B, LAPG, HBRRP Special Cost Approval Checklist
- 2) Bridge Inspection Report with SI&A Sheet
- 3) Sketch of General Plan or marked up as-built
- 4) Sketch of typical section
- 5) Photographs: 4 corners looking at the bridge & 2 elevation views, & views of each approach, for a total of 8 photographs (minimum).
- 6) Exhibit 7-B, Field Review Form, Chapter 7, LAPM
- 7) Exhibit 7-C, Roadway Data Sheet, Chapter 7, LAPM
- 8) Exhibit 6-C, PIN for Barrier Rail Replacement Projects (include only if applying for Bridge Railing Replacement funds.)
- 9) Other:
- 10) Request for Authorization is included in this application package for expedited processing?
 Yes No

Thank you for assembling the application package. Please send this package to your District Local Assistance Engineer to start the programming process. Please e-mail your suggestions to improve this form to eric.bost@dot.ca.gov or shannon.mlcoch@dot.ca.gov.

For Caltrans use only:

I have reviewed this application for completeness and have forwarded copies to the Office of Program Management and SLA.

- I recommend approval. (Attach comments as needed.)
- I do not recommend approval for the following reasons: See attached memo/e-mail to the Office of Program Management.
- I request SLA review of this application for the following reasons: (Attach memo/e-mail justifying increased Caltrans oversight).

DLAE or authorized staff

Date