



Healdsburg Avenue Bridge over the Russian River



Public Meeting #2

Healdsburg City Council
Chambers
July 29, 2010 6:00 PM

Healdsburg Avenue Bridge Project Process



Project Summary

Marjie Pettus, City Manager

Michael Kirn, Public Works Director



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Healdsburg Avenue Bridge Project Process



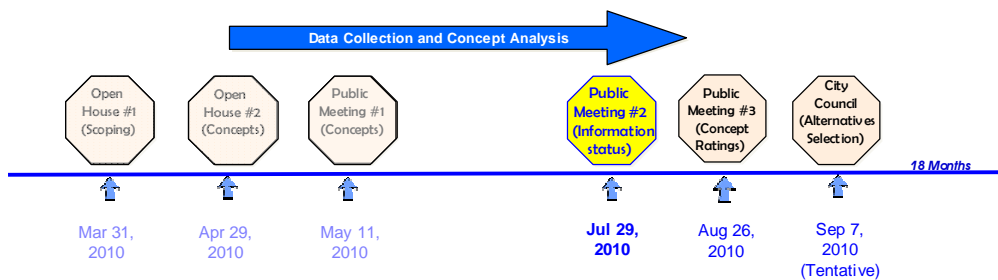
- The Project is expected to take about 24 months
- We are on schedule for this result



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This Public Meeting is the 4th in a series of Six Public Meetings



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- This is the 4th Community Meeting,
- We have one more meeting scheduled for August 26, 2010 prior to the City Council Presentation/Recommendation in September



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Healdsburg Avenue Bridge Project Process



- 15 Concepts developed from public input received from two Open Houses
- Concepts presented in “sketch” format at the May 11, 2010 Public Meeting

12 Concepts Retain Existing Historic Bridge Structure



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Section 106 Compliance Significant Historic Structures

Steve Mikesell, ICF International



Stephen Mikesell. Principal ICF International;
Cultural Resource Management.

- Deputy State Historic Preservation Officer.
- 20 years in the cultural resource field,
- Owner of a small consulting firm, and
- Employee of the Office of Historic Preservation and Caltrans.
- Vast experience in Section 106 compliance
- Extensive knowledge of procedures
- Wrote a book on historic highway bridges in CA



Healdsburg Avenue Bridge Project Process



- The Three topics I want to discuss are:
 - 1) General outline of the Section 106 process;
 - 2) City of Healdsburg performance in meeting its Section 106 obligations; and
 - 3) The significance of tomorrow's hearing at the Office of Historic Preservation.
- Generally, Section 106 is broken down in three steps:
 - 1) Identifying historic resources,
 - 2) Assessing effects, and
 - 3) Mitigating effects.
- The City of Healdsburg is at the beginning of this process but has gone to extraordinary lengths to get public and professional input into project impacts, before it settles on a final alternative.



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- The City is exploring 15 alternatives, 12 of which will preserve the bridge, in place or in a relocated location. Highly unusual, in fact, a broader range of alternatives than I have seen for a bridge replacement project.
- I think the city is doing an excellent job in paving the way for an orderly Section 106 process.
- It is likely that the resources to be considered will include the highway bridge, the nearby railroad bridge, and possibly an alignment of trees on the west side of the river.
- Section 106 guidelines require that an eligible bridge be treated with exactly the same degree of consideration as a listed bridge. If the bridge gets listed tomorrow, that will be a point of pride for the city but it will not change how Section 106 is handled for the bridge.



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Overview of Refined Concepts

H. Ross Ainsworth, OMNI-MEANS

Doug Ries, OMNI-MEANS



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The 15 Project Concepts are Undergoing Preliminary:

- Engineering
- Environmental
- Right of Way
- Traffic Operations & Safety
- Cost & Financing



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Concept 1 – No Build



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CONCEPT 1A: No Build - Leave Existing Bridge As Is



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Concept 2 – Rehabilitate Existing Structure



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CONCEPT 2A: Rehabilitate Existing Bridge In Place



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CONCEPT 2B: Rehabilitate Existing Bridge And Convert To One-way Westbound



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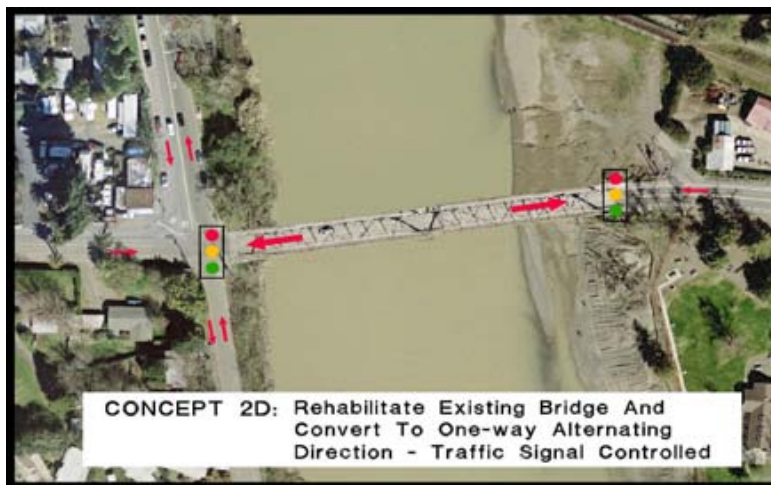
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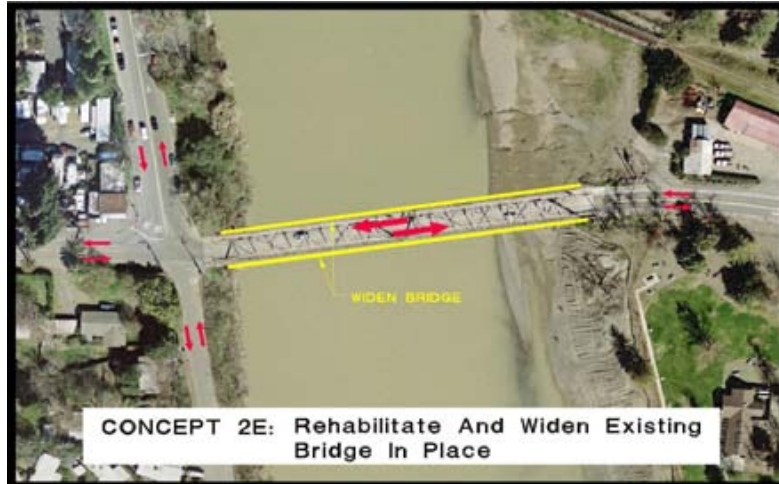
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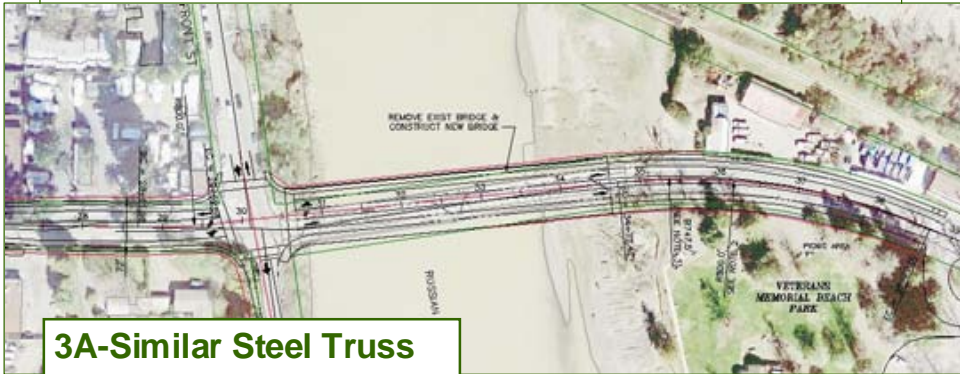
Concept 3 – Replace
Existing Structure with New
Structure



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3A-Similar Steel Truss

3B-Precast Concrete



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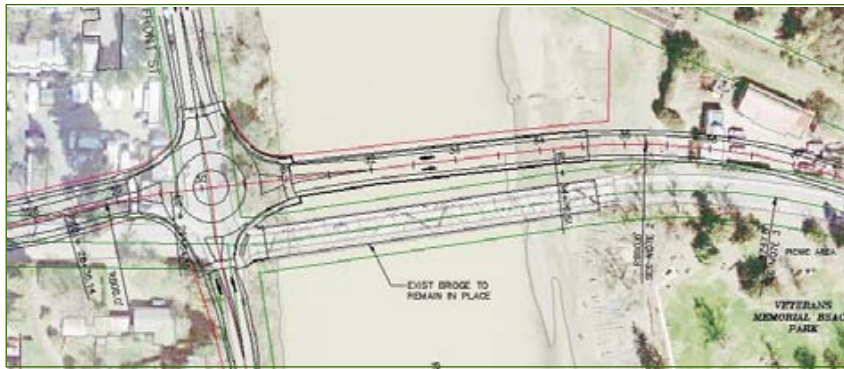
**Concept 4 – Rehabilitate Existing Structure for Bike/Ped Use Only;
Construct New Vehicle Structure on New Alignment**



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4A – New Vehicle Bridge to North



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4B- New Vehicle Bridge to the South



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Concept 4C : Rehabilitate Existing Structure for Bike/Ped Use Only; Construct New Vehicle Structure on New Alignment

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Concept 4D: Rehabilitate Existing Structure for Bike/Ped Use Only; Construct New Vehicle Structure on New Alignment

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April 29, 2010

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Concept 5 – Rehabilitate Existing Structure for Bike/Ped Use Only and Relocate; Construct New Vehicle Structure on Existing Alignment



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5A- Relocate Existing Bridge to the North



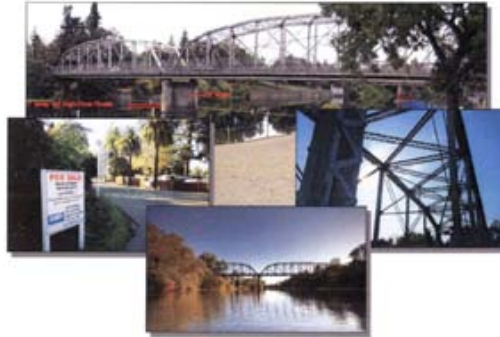
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Healdsburg Avenue Bridge Project Process



Overview of
*Healdsburg Avenue Bridge
Over the Russian River*
Concept Selection Analysis Matrix
(CSAM) Process



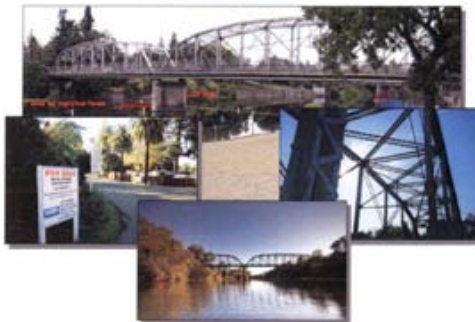
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Healdsburg Avenue Bridge Project Process



Overview of
*Healdsburg Avenue Bridge
Over the Russian River*
Concept Selection Analysis Matrix
(CSAM) Process



Evaluation Criteria

1. Historic Preservation
2. Public Safety
3. Environmental Sensitivity
4. Right of Way Impacts
5. Constructability
6. Design Standard Conformance
7. Cost
8. Transportation Operations
9. Funding Capability (City Contribution)



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Healdsburg Avenue Bridge Project Process



PROJECT PURPOSE CHECKLIST

Criteria

Address Public Safety
Consistent with General Plan
Facilitate Goods Movement
Improve Public Transportation Opportunities
Minimize Negative Impacts to Veterans Memorial Park
Enhance Pedestrian and Bicycle Access and Facilities

Need and Purpose Rating

Relative Conformance	Point
Strongly Meets	10
Adequately Meets	7
Somewhat Meets	4
Does NOT Meet	0



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Healdsburg Avenue Bridge Project Process



Historic Preservation

Historic Impacts	Point Value
No Impact	10
Minimal (or minor)	7
Moderate Impact	4
Substantial Impact	0



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Healdsburg Avenue Bridge Project Process



PUBLIC SAFETY	
Criteria	
	Motor Vehicle Traffic
	Pedestrian traffic
	Bicycle Traffic
	Emergency Response

Safety		
Level of Improvement		Point Value
Substantial	Improves public safety at all locations	10
Moderate	Improves public safety at some but not all locations	7
Minimal (minor)	Minimal or minor improvement to public safety	4
No Change	Provides no improvements to public safety	0



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Criteria
Cultural Resources ¹
<i>Built Environment & Landscapes</i>
<i>Parks - Section 4 (f)</i>
Biological Resources
Wild Life, Botany, Wetlands
Fisheries
Visual Resources
Noise
Total Unweighted Score
Total Weighted Score
Total Calibrated Score (10 High)

Environmental Impact	
Level of Impact	Point
No Impact	10
Minimal (or minor)	7
Moderate Impact	4
Substantial Impact	0



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RIGHT-OF-WAY	
Criteria	
Homes Impacted	
Commercial Buildings Impacted	
Public Lands Required (ac)	
Private Vacant Land (ac)	
Relocation Assistance	

Right-of-Way Impacts		
Impacts	Point Value	
	Structures/ Relocation	Acreage
0	10	10
1	7	8
2	4	6
3	0	4
4	0	1
>4	0	0



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CONSTRUCTABILITY	
Criteria	
Traffic Handling	
Ped/Bicycle Access	
Equipment Accessibility	
Adequate Staging Areas	
Veterans Beach Impacts	
Temporary Utility Relocations*	

Constructability Scoring		
Improvement Phasing (structure, street, utility)	Ped/Bike/Beach Access	Point Value
Readily	Access Maintained	10
Limited	Access Limited	7
Minimal (or minor)	Access Restricted	4
None	Access Eliminated	0



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DESIGN STANDARDS
Criteria
Bridge Structure Standards
Current Seismic
AASHTO Structural
AASHTO Geometric
L.R.F.D. Design Methods
Roadway Standards
Travel Lane Width
Shoulder Width
Height Clearance
Caltrans Bicycle Facility
Other Standards:
FHWA Scour Criteria
FHWA Hydraulic Criteria

Design Standards	
Level of Conformity	Point Value
Fully Conforms	10
Minor Deviation	7
Acceptable Deviation	4
Un-acceptable Deviation	0



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Healdsburg Avenue Bridge Project Process



COST
Criteria
Bridge Structure Improvements
Roadway Improvements
Utility Relocations
Street Lighting Improvements
Traffic Signal Improvements
River Walls
Streambed Improvements
Veterans Memorial Park Improvements
Healdsburg Avenue West Approach Improvements
Pedestrian/Bicycle Improvements
Landscape Improvements
Sub-Total Capital Improvements
Right of Way—Homes
Right of Way—Commercial Structures
Public Lands
Vacant Land
Sub-Total Right of Way Costs
Planning and Design Fees
Construction Engineering
Right of Way Services
Project Engineering and Administrative Costs
TOTAL CAPITAL COST (\$1000's)
PROJECT LIFE CYCLE MAINTENANCE COST (\$1000's)
TOTAL OPINION OF TOTAL COST (\$1000's)



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Healdsburg Avenue Bridge Project Process



Design Year 2035 - Transportation Operations
Prime Study Intersections
Peak Hour Level of Service (LOS)
Healdsburg Ave (old Redwood Hwy) & 101 Ramps
Healdsburg Ave & Bailhache
Healdsburg Ave & Veterans Park Ent
Healdsburg Ave & Front/Kennedy
Healdsburg Ave (Central Healdsburg) & NB 101 Off-ramp
Healdsburg Ave & Mill Street
Front Street & Hudson Street
Public Transportation
Public Transit and School Bus Operations
Bicycle Facilities
Bicycle Facilities
Pedestrian Facilities
Pedestrian Facilities

Traffic Operations	
Level of Impact	Point Value
Substantial	10
Moderate	7
Minimal (or minor)	4
No Change	0

LOS Operations Point System	
Level of Service	Point Value
A	10
B	10
C	7
D	3
E	0
F	0

Public Transit/Bicycle/Pedestrian Point System	
Quality of Service	Point Value
Public Transit/School Bus Service	
Full Access	10
Limited Access	5
No Access	0
Bicycle/Pedestrian Facilities	
Full Access	10
Limited Access	5
No Access	0



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Healdsburg Avenue Bridge Project Process



Funding Capability-City Contribution (Funds in 1000's)	
City of Healdsburg Funds Required	Rating Scale
\$1500K	10
\$2000k	9
\$2500k	7
\$3000k	5
\$3300k	3
\$3600k	2
\$4000k	1
>\$4000K	0



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RELATIVE WEIGHING WORKSHEET		
	Raw Summary	Weighing Factor
1. Historic Preservation	3.19	1.00
2. Safety	4.68	1.47
3. Environmental Sensitivity	3.89	1.22
4. Right of Way Impacts	3.47	1.09
5. Constructability	3.54	1.11
6. Design Standards Conformance	3.19	1.00
7. Cost	3.57	1.12
8. Transportation Operations	4.17	1.31
9. Funding Capability	4.01	1.26
Total	33.7	



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Concept Cost & Potential Funding Availability



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Concept Planning **PRELIMINARY** Cost Estimates (\$ x1000)

Concept	PE	R/W (Incl row encr)	CE	Construction			Total Proje ct
				Structure	Roadway	Total	
2A - Rehab. & Retrofit Existing Bridge for Two Way Traf	\$830		\$830		\$0	\$8,300	\$9,960
2B - Rehab. & Retrofit Existing Bridge for One Way WB	\$832		\$832		\$15	\$8,315	\$9,975
2C - Rehab. & Retrofit Existing Bridge for One Way EB T	\$832	\$0	\$832	\$8,300	\$15	\$8,315	\$9,975
2D - Rehab. & Retrofit Existing Bridge for Bidirectional O	\$877		\$877		\$465	\$8,765	\$10,425
2E - Rehab., Retrofit, & Widen Existing Bridge	-	-	-	Researching	\$11	-	-
3A - Replace Existing Bridge with Steel Truss Bridge	\$2,130	\$1,785	\$2,130	\$19,600	\$1,700	\$21,300	\$27,345
3B - Replace Existing Bridge with 420ft long, 72ft wide Bo	\$1,240	\$1,785	\$1,240	\$10,700	\$1,700	\$12,400	\$16,665
4A - Rehab. and Convert Existing Bridge to Ped/Bike Bridge	\$1,480	\$6,195	\$1,480	\$13,100	\$1,700	\$14,800	\$23,955
4B - Rehab. and Convert Existing Bridge to Ped/Bike Bridge	\$1,570	\$2,625	\$1,570	\$13,100	\$2,600	\$15,700	\$21,465
4C - Rehab. and Convert Existing Bridge to Ped/Bike Bridge	\$2,670	\$2,415	\$2,670	\$18,500	\$8,200	\$26,700	\$34,455
4D - Rehab. and Convert Existing Bridge to Ped/Bike Bridge	\$2,260	\$21,420	\$2,260	\$17,800	\$4,800	\$22,600	\$48,540
5A - Rehab. and Convert Existing Bridge to Ped/Bike Bridge North of Existing Alignment Build new 37-ft wide	\$1,380	\$2,310	\$1,380	\$11,800	\$2,000	\$13,800	\$18,870
5B - Rehab. and Convert Existing Bridge to Pedestrian Bridge South of Existing Alignment, Build new 420ft long.	\$1,290	\$2,205	\$1,290	\$11,800	\$1,100	\$12,900	\$17,685



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Potential Funding Availability

Local Assistance Program Guidelines

Chapter 6

Highway Bridge Replacement and Rehabilitation Program

CHAPTER 6 HIGHWAY BRIDGE REPLACEMENT AND REHABILITATION PROGRAM (HBRRP)

Eligible Project costs are funded 88% Federal and 12% Local



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1. Rehabilitation funding is for major reconstruction of a bridge to meet current standards anticipating the transportation needs for a minimum of 10 years into the future, but not to exceed the lessor of 20 years or the remaining design life of the rehabilitated bridge. The development of a rehabilitation project shall correct major deficiencies including structural problems, load capacity improvement, deficient deck geometry, deficient approach roadway alignment, underclearance problems, waterway adequacy, seismic deficiencies, scour problems, painting, and bridge railing/approach guardrail replacement. Major reconstruction not triggered by the above deficiencies is not participating. (23CFR650.405(b)(2))



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6.2.2 BRIDGE REPLACEMENT

1. Bridges must be rated SD or FO with the SR < 50 to be eligible candidates for replacement.

2. The Code of Federal Regulations (CFR) defines the replacement scope of work as follows:

"23CFR650.403(1) Replacement. Total replacement of a structurally deficient or functionally obsolete bridge with a new facility constructed in the same general traffic corridor. A nominal amount of approach work, sufficient to connect the new facility to the existing roadway or to return the gradeline to an attainable touchdown point in accordance with good design practice is also eligible. The replacement structure must meet the current geometric, construction and structural standards required for the types and volume of projected traffic on the facility over its design life."

Per AASHTO's "A Policy on the Geometric Design of Highways and Streets," 1994 edition, projected needs beyond 20 years are not practical. Therefore, even though the design life of a new bridge may be 25 to 100 years, the HBRP will only participate in the geometries of bridge based on 20 year projected traffic needs.

3. Increases in lane capacity on bridge replacement projects require Caltrans funding approval. See Section 6.2.1 on page 6-5, item (2) for approval requirements.
4. Even though a bridge may be eligible for replacement (SR < 50), rehabilitation shall still be considered to ensure the most cost-effective solution is selected. When appropriate (determined by the local agency), a cost analysis should be included in the local agency's project file. The SR, by itself, shall not be the sole justification for bridge replacement.



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Healdsburg Avenue Bridge Project Process



COMBINED HBRRP AND “MANDATORY” SEISMIC RETROFIT PROJECTS

The funds identified in the approved seismic retrofit strategy under the “Mandatory” Seismic Retrofit Program may be combined into an eligible rehabilitation, replacement, painting, or bridge railing replacement project. See Chapter 7, “Seismic Safety Retrofit” of the LAPG for additional information.

Requesting HBRRP funds for rehabilitation or replacement in excess of funds provided by the “Mandatory” Seismic Retrofit Program requires a formal application for funds as described in this Chapter.



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6.2.10 SPECIAL HISTORIC BRIDGE WORK

2. A “historic bridge” is a bridge that is listed on, or eligible for listing on, the National Register of Historic Places. This data may be downloaded from the HBRRP website. For qualifying bridges, NBI data item 37, Historical Significance, is rated 1 or 2.

The National Register of Historic Places (NRHP) is a federally mandated listing of historically or archaeologically significant sites maintained by each state. The NRHP does not contain all significant sites. It only lists those currently identified and that the owner has allowed to be listed. There are many eligible sites that have not been registered, either because they have not been found or they have not yet been nominated.

3. 23USC144(o)(3) authorizes the use of HBRRP funds for the reasonable costs associated with actions to preserve, or reduce the impact of a HBRRP project on the historical integrity of a designated bridge.



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6.5.11 "REPLACED" BRIDGES TO REMAIN IN PLACE

Sometimes when a bridge is "replaced" with a new bridge on a new alignment but on the same corridor, the old bridge does not need to be demolished. The old bridge can remain in place to carry pedestrian and bicycle traffic. The old bridge may not be rehabilitated with HBRRP funds unless it is of historical significance. See Section 6.2.10 on page 6-13.



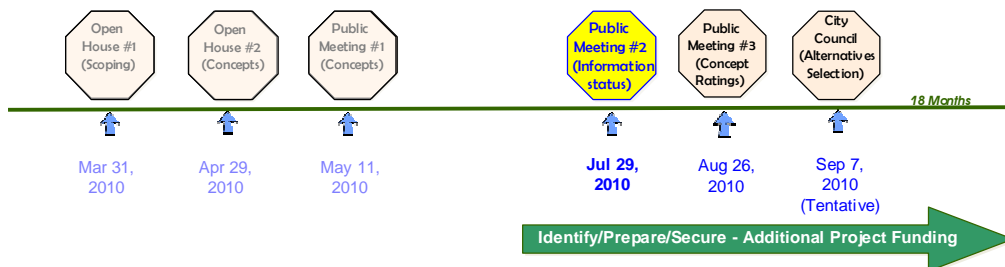
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Another Facet of our effort is to assist the city in identifying and securing additional project funding



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Other Funding Sources

- Now that we are closing in on more current cost information we are beginning our search for additional funding sources.
- Blais Associates will be coordinating this effort



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Healdsburg Avenue Bridge Project Process



The Team's effort will be composed of three major tasks;

- **Locate Potential Grants:** Identify any grant opportunities whether **Local, State or Federal**.
- **Prepare Grant Applications:** Work closely with the City to develop the grant application. **B&A**, has a **track record of winning approximately 60 percent** of the time.
- **Other Funding:** Other funding sources such as not-for-profit foundations and government earmarks.



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Healdsburg Avenue Bridge Project Process



Public Meeting # 3

August 26, 2010

6:00 PM Council Chambers

(Concept Analysis Process Results)

Thank You for Attending



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Healdsburg Avenue Bridge Project Process



Public Comments



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Closing Remarks

Marjie Pettus, City Manager

Michael Kirn, Public Works Director

