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Memorandum Date: June 17, 2010
Meeting Date: July 7, 2010

TO: Board of County Commissioners
DEPARTMENT: Public Works
PRESENTED BY: Bill Morgan, County Engineer
AGENDA ITEM TITLE: REPORT BACK – GOODPASTURE COVERED
BRIDGE (BRIDGE 39C119) BRIDGE REDUCED LOAD
POSTING.

I. MOTION

None, discussion only.

II. AGENDA ITEM SUMMARY

Public Works staff appeared before the Board on May 5, 2010, to update the Board on the status of the effort to increase the load-carrying capacity of the Goodpasture Covered Bridge above the current 15-ton load limit imposed by the Board on January 6, 2010 pursuant to the recommendation of the County's consultant, OBEC Consulting Engineers. The information presented included five major alternatives. At the conclusion of the staff presentation and questions from the Board, staff was given direction to pursue Alternative #1 (re-roofing with lighter weight metal roofing to remove some of the bridge's dead load) for the near term, and Alternative #2 (installation of steel trusses to facilitate replacement of decayed structural members and post-tensioning to restore the positive camber of the main span, once available funding can be obtained).

Staff wishes to update the Board on the progress of efforts in this regard since the last report.

III. BACKGROUND/IMPLICATIONS OF ACTION

A. Board Action and Other History

Lane County has received a grant in the amount of \$182,000 (subject to change) under the National Historic Covered Bridge Preservation Program (NHCBP) for the funding of a project to remove and replace the current roofing on the Goodpasture Bridge. Under Alternative #1, OBEC had concluded that utilization of a lightweight metal roofing material would reduce the dead load on the bridge to the extent that the load limit could be raised to 25 tons in the interim until funding could be obtained and work completed on the full rehabilitation of the bridge, which would restore full legal loading.

The bridge was roofed in the early 1990s with a cement/wood fiber composite shingle, which has proven to be not durable due to absorption of water and leakage over time. OBEC had recommended that removal of this material and replacement with TAMKO Astonwood® Steel shingles would allow the bridge to be posted for a 25-ton load limit. This material would provide the advantages of lightweight, long life, low maintenance and attractive appearance.

This alternative required review by Oregon State Historic Preservation Office (SHPO) to assure compliance with the requirements of the bridge's listing in the National Register for Historic Places and therefore its eligibility for existing or future funding under the National Historic Covered Bridge

Preservation Program.

Over the last few weeks, County and OBEC staff met with SHPO staff members on several occasions in an attempt to gain concurrence on the installation of the steel shingles on this bridge. However SHPO has stated that the steel shingles would not be historically accurate and is therefore not willing to approve them either on a permanent or temporary basis, and are recommending sawn red cedar shingles as the appropriate material for the roofing on this bridge.

The installed weight of the Astonwood® shingles is 0.61 pounds per square foot, as compared to an installed weight of about 4.0 pounds per square foot for cedar shingles. Even though the additional weight of the cedar shingles will limit the posted load limit for the bridge to 20 tons rather than 25 tons, county staff feels that it is important to move forward immediately with the bidding process to accomplish the roof replacement during the current construction season.

Please see the attached letter to Chris Leedham, P. E. of the ODOT Bridge Engineering Section stating the intention to move ahead with the cedar shingle roof in order to avoid further delay in assuring the roof will be weather tight for the coming winter season. This will halt further deterioration in the structural components of the bridge due to roof leaks, and the utilization of the cedar shingles will be a permanent roof cover that will not need to be redone in connection with the full rehabilitation.

The existing siding will need to be substantially or completely removed and cannot be economically salvaged at the time of the full rehabilitation, so it is still recommended that the planned repainting be delayed until the full rehabilitation.

B. Policy Issues

Goodpasture Covered Bridge is a historic structure that is also an attraction that contributes to tourism and travel in Lane County. The Board has, in the past, been supportive of efforts to preserve and protect historic covered bridges in the County. Continued eligibility for NHCBP grants as well as Highway Bridge Program (HBP) grants in the future is important, particularly in the case of this historical, high-maintenance bridge that serves as the only river crossing for several hundred residents along Goodpasture Road.

C. Board Goals

Repair or replacement of this bridge is consistent with the County Goals of contributing "to appropriate community development in the area of transportation and telecommunications infrastructure, housing, growth management and land development", and protection of the "public's assets by maintaining, replacing or upgrading the County's investments in systems and capital infrastructure". Also in the Lane County Strategic Plan under Section B-3(d)(6), it is stated that "Operation, maintenance, and preservation (OM&P) of the existing County road system will receive the highest priority."

D. Financial and/or Resource Considerations

The County has received approval of a Grant under the 2008 National Historic Covered Bridge Preservation Program (NHCBP) in the maximum amount of \$182,000 for a project to remove the existing roof and replace it with a lighter weight and more durable roof cover. Any work in excess of the current grant will need to come from the Road Fund unless other state and/or

federal funding can be obtained. Staff has also submitted grant applications for \$628,110 under the 2014-2015 Highway Bridge Program and for \$1,390,634 under the 2010 NHCBP Program. The higher amount was determined based on additional estimates provided by OBEC in the context of the Technical Memorandum previously submitted to the Board.

Emergency service providers are currently able to be accommodated within the 15-ton posted limit or within a 20-ton load limit with a slightly smaller load under a Special Transportation Permit. Public Works staff will request a recommendation from OBEC with regard to whether the Special Transportation Permit load limit can be extended to 25 tons for emergency vehicles and for limited numbers of trips by other vehicles once the re-roofing is complete. It is not anticipated that the roof replacement and the slight increase in the posted load rating resulting from it will have a significant negative impact on the Technical Ranking System (TRS) of the bridge undertaken for the 2014-2015 Highway Bridge Program, because the bridge serves as the sole public crossing for the Goodpasture Road residents and surrounding resource uses, and due to the excessive length of the known detour routes.

E. Analysis

As previously noted, Lane County has received a grant in the amount of \$182,000 (subject to change) under the National Historic Covered Bridge Preservation Program (NHCBP) for the funding of a project to remove the current roofing on the Goodpasture Bridge. This project has been shown in the 2010-2014 Capital Improvement Program for construction during the 2009-10 fiscal year.

The amount requested under the 2014-2015 HBP was \$628,110 based on information available at the time, which would require a Lane County match in the amount of \$71,890 (10.27%). The 2010 NHCBP application in the amount of \$1,390,634 will require a match of \$159,242 plus any costs in excess of the grant amount. If either of these grants is approved, the match will need to be provided from the Road Fund. The proposed 2011-2015 CIP shows \$121,000 allocated to grant match for this bridge. Additional grant match funding could be allocated from the \$325,000 shown in the CIP for preservation of covered bridges. If neither of these grants is approved, staff will continue to pursue any other available funding sources.

IV. TIMING/IMPLEMENTATION

Unless the Board directs otherwise, staff will proceed with advertising and letting of the contract to re-roof the bridge with cedar shingles, as per the recommendation from OBEC as soon as possible.

V. ATTACHMENTS

Attachment 1 – Letter from Bill Morgan, P. E., County Engineer to
Chris Leedham, P. E. ODOT Bridge Engineering Section



Lane County Public Works Department
Engineering & Construction Services Division

June 17, 2010

Chris Leedham, P.E.
ODOT Bridge Engineering Section
355 Capitol St. NE, Rm 301
Salem, OR 97301-3871
christopher.r.leedham@odot.state.or.us

Dear Chris:

Subject: Goodpasture Covered Bridge
Bridge 39C119

I wanted to write and tell you that Lane County appreciates the recent efforts of both ODOT and the Oregon SHPO as we explored options to reduce dead load and provide for an increased load limit at the Goodpasture Covered Bridge. I understand that our proposed use of lightweight metal shingles resulted in concern at several levels of review and as an Adverse Effect, potentially threatened our ability to use National Historic Covered Bridge Preservation (NHCBP) funding awarded to this bridge.

I'd like you know that in order to avoid any further delay and assure that we can have a new weather tight roof in place by this winter, we have decided that our best course is to proceed using historically accurate cedar shingles. We will be providing this information to our Board of County Commissioners in early July, as they had previously approved the use of metal shingles. OBEC believes this 4-psf solution will reduce the current roof weight by approximately 50%, and increase the load rating on the Goodpasture Bridge from 15 to 20 tons.


Although this is not the 25 tons we were hoping for with the lighter metal roof material, it represents a marked improvement and meets funding program objectives. With the recently posted 10 MPH speed limit and annual inspections, a new roof system will hopefully "buy" the Goodpasture Covered Bridge adequate structural time until we can obtain sufficient funding for the bridge's complete rehabilitation. ODOT may have already received our revised compliance documentation, proposing a "Finding of No Adverse Effect" for this project. If not, Sarah Jalving should be receiving it shortly.

Engineering Administration

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Lane County will continue to pursue all available options for funding the full and still much needed rehabilitation of the Goodpasture Covered Bridge in as short a timeframe as is possible. Your office has been most helpful throughout this discussion and I know that you are well aware of the issues that remain with this bridge. We will look for your continued support and advice in helping us preserve this important landmark for Oregon's future.

Sincerely,


Bill Morgan, P. E.
County Engineer

CC: Chris Bell (ODOT) christopher.s.bell@odot.state.or.us
Ian Johnson (SHPO) ian.johnson@state.or.us
Roger Roper, Deputy SHPO roger.roper@state.or.us
Greg Ausland, (OBEC) gwa@obec.com