

## ***II.c. Bridge Inspection/Maintenance/Replacement***

### **BRIDGE INSPECTION PROGRAM**

Bridge structures within the off-system inventory (County maintained) are inspected and rated every two years. Major structures (those with a span of 20 feet or greater) are inspected by an engineering consultant under contract with the Colorado Department of Transportation. Minor structures are inspected and rated every two years by a consultant under contract with Archuleta County. Based upon the inspection and rating performed by the consultant, structures are generally classified as follows:

- **Sufficient** – Capable of carrying legal loads and posing no threat to safety such as narrow width or poor alignment.
- **Structurally Deficient** – Structure is not capable of carrying established legal loads either due to inadequate original design, deterioration or damage since construction. Load posting is required to restrict the weight of vehicles using the structure to a level below the legal loads established for the overall transportation system by the Federal Highway Administration and Colorado Department of Transportation.
- **Functionally Obsolete** – Capable of carrying legal loads but does not meet current safety standards due to factors such as narrow width, poor alignment, etc.

In addition to the above described inspections by a private consultant, the Public Works Department, Road and Bridge Division performs the following inspections on both major and minor bridge structures:

- Periodic observations of those bridges which require load posting are performed by a Supervisor to verify that the proper load posting signs are in place.
- Biannual observations of load posted bridges are performed by a Supervisor.
- Annual observations of all bridges are performed by a Supervisor.

### **BRIDGE MAINTENANCE PROGRAM**

The Road and Bridge Division's Bridge Maintenance Program is an intense preventive maintenance program designed to preserve the functional and structural integrity of the County's bridges.

### **PROGRAM METHODOLOGY**

The methodology adopted by the program consists of the following:

1. The identification of structures deemed to be excessively deteriorated to warrant a large expenditure of time and money for maintenance. These structures will be replaced as funding permits.
2. The identification of structures that require no maintenance at this time
3. The identification of those structures which require specific maintenance as identified by the most recent field inspection, whether by the private consultant or a Supervisor.

### **PROGRAM PROCEDURAL DIRECTIVE**

The procedures outlined below are intended to facilitate an objective and systematic observation and are not intended to be a strict line of order. Sound judgment is still required. The Supervisor will be responsible for assuring conformance to this procedure.

- For all load posted bridges, schedule and perform an observation of the load posting signage once per month. Repair or replace signage as necessary.
- For all structures with a sufficiency rating of 50 or less, schedule and perform an observation of the structure every six months to identify minor maintenance items or unsafe conditions. Complete a preventative maintenance checklist form.
- For all other structures, perform an observation once per year and complete a preventative maintenance checklist form.
- Preventative maintenance of all structures for which preventative maintenance is recommended will be scheduled and performed as budgetary constraints allow. by the Bridge Team or Road Maintenance Team. All performed maintenance activities will be documented and the document shall be placed in the most recent inspection file.

Non-critical maintenance items shall be at the discretion of the Supervisor. Maintenance activities that involve structural changes or modifications shall be reported to and discussed with the Public Works Director prior to work being performed.

### **BRIDGE REPLACEMENT PROJECTS**

The Archuleta County Bridge Replacement Program is designed to preserve the integrity of the County's transportation system.

Major bridge structures which are rated as either Structurally Deficient or Functionally Obsolete are eligible for off-systems Federal bridge funding (BRO funds) for design and construction of a replacement structure or rehabilitation of the existing structure. Eligible structures appear on the Select List published by the Colorado Department of Transportation.

Minor structures are not eligible for federal funding for replacement or rehabilitation. They must therefore be replaced or rehabilitated using local funding.

The goal of the bridge replacement program is to achieve a bridge inventory, both major and minor structures, which reflects only structures rated as sufficient.

Generally speaking, non-sufficient structures will be prioritized for replacement in consideration of several factors including sufficiency rating, eligibility for federal or state funding, local funding constraints, level of traffic served, availability of alternative access routes or detours, etc.

In 2012 Archuleta County was awarded a \$1,200,000 grant, administered by CDOT, for the replacement of the Rio Blanco Bridge (CR 337A). Contained within the grant is the 20% (\$240,000) matching fund amount the County must contribute. The design and necessary Right-of-Way acquisition is scheduled to be completed in the early spring of 2013 with construction to follow over the summer of 2013.

Included within this section is a copy of the most recent bridge inspection data for both Major and Minor structures. The individual bridge inspection reports are not included herein, only the summary.