Type: Transverse Glulam Deck w/Glulam Beams
County: Carbon
Owner: Carbon County, Montana
Engineer: Ben Hurlbut
Spans over: East Fork Rosebud Creek
Bridge length: 128’-6”
Roadway width: 16’-0”

Directions: From Columbus and the intersection of I-94 and SR 78 take SR 78 south toward Roscoe. At Roscoe turn right onto East Rosebud Creek Rd. The bridge site is 3 miles from the intersection of SR 78 and East Rosebud Creek Rd.
GEOMETRY

Number of Spans: 2
Out-to-out length: 128'-6"
Center-of-bearing span lengths: 62'-6"
Skew: 0 degrees
Number of lanes: 1
Out-to-out width: 16'-0"
Rail-to-rail width: 15'-0"
Superstructure square footage: 2,056

Design load: HS-20
Deadload: 325 lbs/ft/beam
Averaged daily traffic: 75
Superstructure design by: Ben Hurlbut
Abutment material: Wood
Abutment type: Treated timber, retaining wall, w/timber anchors & steel tie rods
Abutment height (bottom of footings to top of deck): 13'-6"
Abutment design by: Merv Eriksson, USDA Forest Service

Pier: Existing timber crib filled w/reinforced concrete
Total project cost: $140,600
Total superstructure cost: $88,000
Total superstructure cost /sq ft: $44.53

MATERIAL

DECK
Material: Wood/glulam
Species: Coastal Douglas-fir
Allowable bending stress: 1920 psi
Sizes used: 5-1/8" x 48" x 16'-0"
Quantity: 10,127 bf
Preservative treatment: Pentachlorophenol
Wearing surface: 1/4" black steel plate

BEAMS/STRINGERS
Material: Wood/glulam
Species: Coastal Douglas-fir
Allowable bending stress: 2400 psi
Sizes used: 8-3/4" x 42" x 60'-0" & 63'-0"
No. and spacing: 4 @ 4'-4"
Quantity: 15,068 bf
Preservative treatment: Pentachlorophenol

GUIDERAIL POSTS
Material: Wood/glulam
Species: Coastal Douglas-fir
Sizes used: 6-3/4" x 7-1/2" x 5'-6"
Preservative Treatment: Pentachlorophenol

GUIDERAIL
Material: Wood/glulam
Species: Coastal Douglas-fir
Size: 5-1/8" x 6"
Preservative Treatment: Pentachlorophenol

ABUTMENTS
Material: Wood
Species: Coastal Douglas-fir
Grade: No. 1 or better
Preservative treatment: Pentachlorophenol
Hardware & structural steel: A36 (uncoated), A307 bolts & nuts (uncoated)

PIER:
Existing treated timber crib (8" x 8" members) top 2' filled with new reinforced concrete

LOCAL IMPACT: This bridge carries East Rosebud Creek Road over the East Fork of Rosebud Creek. Logging trucks, ranch equipment, and recreation traffic use the bridge.

BRIDGE PERFORMANCE: This single lane, 2 span, glued-laminated bridge replaced a 3 span timber/steel bridge (1 span-timber beams, 1 span-timber truss, and 1 span-steel beams). One mid-span, rock-filled, treated timber crib was repaired and filled with reinforced concrete.

FUNDING SOURCES: USDA Forest Service: $45,100; Balance of funding from Carbon County, Montana.

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