OLD VANDERBILT ROAD BRIDGE, OTSEGO COUNTY, MI

DESIGN TYPE: STRESS-LAMINATED SLAB DECK
YEAR BUILT: 1989
DESIGN ENGINEER: WHEELER CONSOLIDATED
FABRICATED BY: WHEELER CONSOLIDATED
INSTALLED BY: PRINCE CONSTRUCTION
SPANS OVER: STURGEON RIVER
LOCATION: SW¼, Sec. 29, T32N R2W

FROM THE VILLAGE OF VANDERBILT GO 3½ MILES EAST ON STURGEON VALLEY ROAD, TURN RIGHT ONTO OLD VANDERBILT ROAD, GO DOWN ONE MILE TO BRIDGE.
Old Vanderbilt Road Bridge

BRIDGE GEOMETRY

- Spans: 1
- Number of Lanes: 2
- Total Length (feet): 40
- Out-to-Out Width (feet): 27
- Curb-to-Curb Width: 25
- Lamina Size: 4" x 12"
- Load Rating: HS-20
- Average Daily Traffic: 100
- Abutment Material: Timber Piling
- Superstructure Lumber Tally: 12.5 MBF
- Superstructure Cost: $108,000
- Superstructure Cost/ft²: $104
- Total Project Cost: $192,000

BRIDGE MATERIALS

DECK
- Species: Red Pine
- Quantity: 12.5 MBF
- Preservative: Creosote
- Stressing Rods: 10

SUBSTRUCTURE
- Type: Timber Piling
- Species: Red Pine
- Preservative: Creosote

GUIDERAILS
- Species: Glu-Lam Douglas Fir 6" x8"
- Preservative: Creosote

WEARING SURFACE
- Asphalt (3") over geotextile fabric

LOCAL IMPACT

Old Vanderbilt Road Bridge was the first bridge built through the efforts of the Michigan Timber Bridge Initiative. The bridge replaced an old jack-arch concrete structure with a 15-ton load limit. The new structure saves about nine miles of travel on lesser quality roads for school buses, snow plows and other heavy traffic.

BRIDGE PERFORMANCE

The bridge had load tests and has been inspected every two years with no performance problems noted.

FABRICATION & ERECTION

The bridge panels were nail-laminated into panels and delivered to the site. The panels were placed side-by-side and the stressing rods were threaded through as each panel was placed. Once all the panels were placed, the rods were stressed initially, then one week later and then about a month after that. The panels were re-stressed about four years later.

FUNDING SOURCES

- USDA Forest Service: 18%
- Other Sources: 82%

LOCAL CONTACT

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WIT Program Proposal Number: NA-05-89
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COOPERATING AGENCIES

USDA FOREST SERVICE NORTHEASTERN AREA STATE & PRIVATE FORESTRY

Otsego County Road Commission

MICHIGAN DNR

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