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Historic Property Inventory Report for Puyallup River/ Meridian Street Bri **at** Meridian River Crossing Puyallup River, Puyallup, WA **SCAN NUMBER:** 152

LOCATION SECTION

Field Site No.: **OAHP No.:** 27-3221 **Date First Recorded:** 03/15/1979

Historic Name: Puyallup River/ Meridian Street Bridge **Common Name:**

Property Address: Meridian River Crossing Puyallup River, Puyallup, WA 98424 **Comments:**

County	Township/Range				Quadrangle
	Township/Range/EW	Section	1/4 Sec	1/4 1/4 Sec	
Pierce	T20R04E	21	SE	SE	PUYALLUP

UTM Reference
UTM Zone: 10 Spatial Type: Point Acquisition Code: Unknown
Sequence: 1 Easting: 553590 Northing: 5227750

Tax No./Parcel No.: N/A **Plat/Block/Lot:** N/A **Supplemental Map(s):** **Acreage** < 1 acre

IDENTIFICATION SECTION

Field Recorder: Charles T. Luttrell **Date Recorded:** 07/12/2000

Owner's Name:	Owner Address:	City/State/Zip:
WSDOT	Transportation Building, 310 Maple Park Ave. E.	Olympia, WA 98501

Classification: Structure

Within a District? No

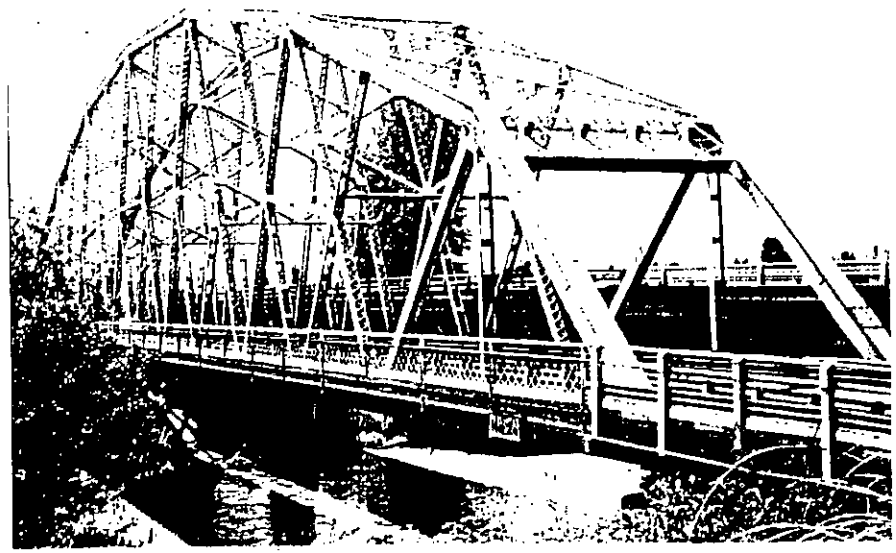
Contributing?

Resource Status	Comments
Survey/Inventory	1979, 2000
Determined Not Eligible - SHPO	1980

National Register Nomination:

Local District:

National Register District/Thematic Nomination Name:



View of North end **taken** 07/12/2000

Photography Neg. No (Roll No./Frame No.): Roll 5, Frame 3

Comments:

DESCRIPTION SECTION

Historic Use: Transportation - Road-Related (vehicular)

Current Use: Transportation - Road-Related (vehicular)

Plan: Other **No. of Stories:**

Structural System: Steel

Changes to plan: Moderate **Changes to interior:** **Style** **Form**

Changes to original cladding: **Changes to other:**

Changes to windows: **Other (specify):**

Cladding	Foundation	Roof Material	Roof Type

NARRATIVE SECTION | **Date Of Construction:** 1925/1951

Architect: M.M. Caldwell **Engineer:** Modern Construction and Fabricating **Builder:** Puget Sound Bridge and Dredging Company

Property appears to meet criteria for the National Register of Historic Places: No

Property is located in a potential historic district (National and/or local): No

Study Unit	Other
Transportation	

Statement of Significance

Although the Puyallup River/Meridian Street Bridge was included in the 1979 HAER inventory of Washington bridges, it was not recommended for listing on the National Register (Soderberg 1980). This bridge was identified as a Category II structure that, at the time, did not meet the critieria of the National Register. As described by the Washington Office of Archaeology and Historic Preservation (OAHP), Olympia, sufficient information was already on hand in OAHP site records. Extensive photograpicy documentation was recommended for Category II structures; however, should there be a need for demolition of individual bridges. Overall physical condition and architectural integrity appear unchanged since the bridge was evaluated in 1979. Condition and integrity are ranked as good.

Description of Physical Appearance

This bridge is a 371-foot span, riveted steel and subdivided Warren Truss. Originally constructed in 1925, timber trestles were added in 1951. An adjacent prestressed concrete span was added in the 1970s. This latter 477-foot long structure is supported by re-inforced concrete dumbbell piers.

Major Bibliographic References

Soderberg, Lisa
1980 National Register of Historic Places Inventory-Nomination Form, Historic Bridges and Tunnels in Washington State. On file, Office of Archaeology and Historic Preservation, Olympia.

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HISTORIC PROPERTY INVENTORY FORM
(Continuation Sheet)

State of Washington, Department of Community, Trade and Economic Development
Office of Archaeology and Historic Preservation
420 Golf Club Road SE, Suite 201
Olympia, Washington 98504-8343

Field Site No. _____ OAHP No. 27-3221 Date Recorded 1979/2000

Site Name Historic: Puyallup River/Meridian Street Bridge

Common: _____

Meridian Road Crossing of the Puyallup River
Fife/Pierce County/ WA/98424

This property was re-evaluated by Archaeological and Historical Services (AHS), Eastern Washington University (EWU), Cheney, on July 12, 2000. The overall physical condition and architectural integrity appears unchanged since the property was last evaluated in 1979. Condition and integrity are ranked as good. Previous studies of this property include the initial Historic American Engineering Record (HAER) Washington State Bridge Inventory (1979) and the present investigation (2000).

Although the Puyallup River/Meridian Street Bridge was included in the 1979 HAER inventory of Washington bridges, it was not recommended for listing on the National Register (Soderberg 1980). This bridge was identified as a Category II structure that, at the time, did not meet the criteria of the National Register. As prescribed by the Washington Office of Archaeology and Historic Preservation (OAHP), Lacey, sufficient information was already on hand in OAHP site records. Extensive photographic documentation was recommended for Category II structures; however, should there be a need for demolition of individual bridges. The photograph below shows the bridge's north end, looking S (Roll 5, Frame 3, July 12, 2000).

Soderberg, Lisa
1980 National Register of Historic Places Inventory- Nomination Form, Historic Bridges and Tunnels in Washington State. On file, Office of Archaeology and Historic Preservation, Lacey.

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Washington State Department of Transportation

DETERMINATION OF ELIGIBILITY

FOR THE NATIONAL REGISTER OF HISTORIC PLACES
National Historic Preservation Act, 16 USC§ 470, as amended

PROPERTY NAME: **Puyallup River/Meridian Street Bridge** COUNTY: Pierce SR 167

COMMON NAME: PROJECT: Puyallup to SR 509

SITE NUMBER: 27-3221

LOCATION Meridian Rd. Crossing of the Puyallup River, Fife, WA 98424

CATEGORY OF PROPERTY

☐ Building(s) ☐ District ☐ Site ☒ Structure ☐ Object ☐ Traditional Cultural Place

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WASHINGTON STATE DEPARTMENT OF TRANSPORTATION DETERMINATION

☐ The historic property is **eligible** for inclusion in the National Register of Historic Places. (Explained on reverse.)

Applicable Criteria (36 CFR Part 60.4) ☐ A ☐ B ☐ C ☐ D ☐ Nationally ☐ Statewide ☐ Locally

Criteria considerations (exceptions) ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G

☒ The historic property is **not eligible** for inclusion in the National Register of Historic Places.

☐ **No historic properties** were identified in the area of potential effect.

☐ **No opinion:** Eligibility determination is deferred to the State Historic Preservation Officer or the Keeper of the National Register of Historic Places.

COMMENTS

Revaluation of previously recorded buildings was done and found not eligible for inclusion in the National Register of Historic Places.

SIGNED: for Thomas A. Whitney DATE: 4/14/03

Region Environmental Manager

STATE HISTORIC PRESERVATION OFFICER OPINION

I understand that the Washington State Department of Transportation is requesting the concurrence of the State Historic Preservation Officer in its determination of the eligibility of _____ for inclusion in the National Register of Historic Places and that my opinion may be submitted to the Keeper of the National Register of Historic Places with a formal request for a determination of eligibility on this property. This statement confirms that I have been consulted as part of the Section 106 review process.

☐ The historic property is **eligible** for inclusion in the National Register of Historic Places.

☒ The historic property is **not eligible** for inclusion in the National Register of Historic Places.

☐ **No historic properties** were identified in the area of potential effect.

☐ **No opinion**. Eligibility determination is deferred to the Keeper of the National Register of Historic Places.

COMMENTS

SIGNED: _____ DATE: 2-10-04

For State Historic Preservation Officer

I. STATE I.D. NO.

HAER INVENTORY 27-3221 TRAVELES 2/22

Historic American Engineering Record
Department of the Interior, Washington, D.C. 20240

2. INDUSTRIAL CLASSIFICATION: Bridges, Trestles, and Aqueducts — 7603
TRUSS: Steel
State/County/Local Designation #: 410 205 410000064 001

3. PRIORITY

5 DATE: 1925/51

4. DANGER OF DEMOLITION? (SPECIFY THREAT) ☐ YES ☐ NO ☐ UNKNOWN
Life expectancy:

6. GOVT SOURCE OF THREAT: OWNER ADMIN

7. OWNER/ADMIN: State/County/Municipality
Original Owner: State

8. NAME(S) OF STRUCTURE
Puyallup River Bridge
Meridian Street Bridge

9. OWNER'S ADDRESS
Department of Transportation
Highway Administration Building
Olympia, WA 98504

10. STATE COUNTY: WA 053 — COUNTY NAME: Pierce — CITY/VICINITY: Puyallup — CONG. DIST.: 3

STATE COUNTY: WA — COUNTY NAME: — CITY/VICINITY: — CONG. DIST.:

11. SITE ADDRESS (STREET & NO.) /Crossing: Puyallup River
410/6.4 E Jct. SR 5
S.T.R.

12. EXISTING SURVEYS ☐ NR ☐ NHL ☐ HABS ☐ HAER—I ☐ HAER ☐ NPS ☐ CL6
☐ CONF ☐ STATE ☐ COUNTY ☐ LOCAL ☐ OTHER

13. SPECIAL FEATURES (DESCRIBE BELOW)
☐ INTERIOR INTACT ☐ EXTERIOR INTACT ☐ ENVIRONS INTACT

14. UTM ZONE | EASTING | NORTHING | SIGN — SCALE ☐ 1:24 ☐ 1:62.5 ☐ OTHER — QUAD NAME

UTM ZONE | EASTING | NORTHING | SIGN — SCALE ☐ 1:24 ☐ 1:62.5 ☐ OTHER — QUAD NAME

15 CONDITION: 70 ☐ EXCELLENT 71 ☐ GOOD 72 ☐ FAIR 73 ☐ DETERIORATED 74 ☐ RUINS 75 ☐ UNEXPOSED 76 ☐ ALTERED 82 ☐ DESTROYED 85 ☐ DEMOLISHED

16. INVENTORIED BY: Lisa Soderberg — AFFILIATION: HAER/Washington State Bridge Inventory — DATE: 3/79

17. DESCRIPTION AND BACKGROUND HISTORY, INCLUDING CONSTRUCTION DATE(S), HISTORICAL DATE(S), PHYSICAL DIMENSIONS, MATERIALS, EXTANT EQUIPMENT, AND IMPORTANT BUILDERS, ENGINEERS, ETC.

Designer: M.M. Caldwell for County
Builder/Contractor: Modern Construction and Fabricating, Seattle; Puget Sound Bridge and Dredging Co.

This 371 foot span riveted, subdivided Warren Truss, was designed by M.M. Caldwell, consulting engineer for Pierce County and was constructed by the Puget Sound Bridge and Dredging Company of Seattle. The timber trestles were added in 1951, and the prestressed concrete span was added within the last decade by the adjacent shopping center. It rests on reinforced concrete dumbbell piers. The overall length is 477 feet, and the width is 21 feet.

(CONT OVER)

18. ORIGINAL USE: Bridge/vehicular — PRESENT USE: Bridge/vehicular — ADAPTIVE USE:

19. REFERENCES—HISTORICAL REFERENCES, PERSONAL CONTACTS, AND/OR OTHER

State Highway Department files
Nameplate

(CONT OVER)

20 URBAN AREA 50,000 POP. OR MORE? ☐ YES ☐ NO

21. NPS REGION: NW

22. PUBLIC ACCESSIBILITY ☐ YES, LIMITED ☐ YES, UNLIMITED ☐ NO ☐ UNKNOWN

23. EDITOR INDEXER

24. LOCATED IN AN HISTORIC DISTRICT? ☐ YES ☐ NO NAME DISTRICT I.D. NO

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DESIGN INFORMATION

Architectural or Decorative Features:

Superstructure
Structural Steel
Treated Timber/frame trestle
1-span riveted subdivided Warren Truss

STRUCTURAL INFORMATION

Length Overall: 477
Length Maximum Span: 371

Main Unit Span Type: 310 Number: 1

Secondary Spans Type: 20 Number: 5

Number	Type	Length
1	precast concrete	21' prestressed-built by shopping center
2	timber trestles	19'
1	steel truss	371'
2	timber trestles	19'

Width: 21' c to c

Clearance: low water: high water:
Navigable:

Substructure
Foundations:
Piers/bents: reinforced concrete/dumbbell
Abutments:
Wings:
Seats:

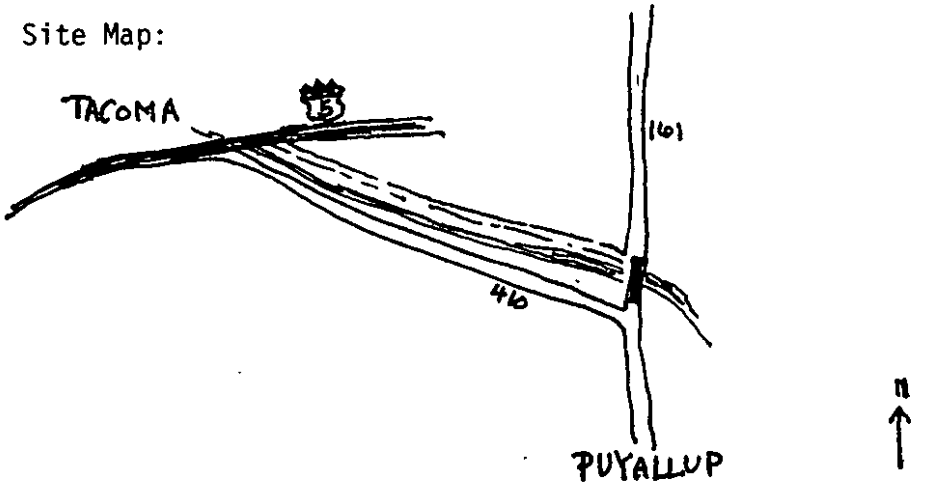
Floor System 6" concrete bridging at bents and at mid-spans.
End Beams:
Longitudinal Beams: inside lapped, outside butted.
End Stringers:
Surfacing: /deck: reinforced concrete; stringers rest on seats.

Connections/Expansion Joints
Pin:
Rigid: Sliding plate at ends of span.

Load Limit:

Existing Blueprints or Plans: CI No.D2

Site Map:



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MERIDIAN STREET BRIDGE / PUYALLUP RIVER BRIDGE ~~410/6~~ 1925/51

27

1

27

4

looking east

27

2

looking west

27

5

looking north

27

3

looking east

Historic Property Inventory Report

Location

Field Site No.

DAHP No.

Historic Name: Meridian Street Bridge

Common Name: Puyallup River Bridge 167/20E

Property Address: 0000 N Meridian St N, Puyallup, WA 98424

Comments:

Tax No./Parcel No.

Plat/Block/Lot

Acreage

Supplemental Map(s)

Township/Range/EW	Section	1/4 Sec	1/4 1/4 Sec	County	Quadrangle
T20R04E	21			Pierce	PUYALLUP

Coordinate Reference

Easting: 1194635

Northing: 686851

Projection: Washington State Plane South

Datum: HARN (feet)

Historic Property Inventory Report

Identification

Survey Name: Puyallup River Bridge 167/20E

Date Recorded: 02/03/2012

Field Recorder: Craig Holstine

Owner's Name: Washington State Department of Transportation

Owner Address: 310 Maple Park Blvd.

City: Olympia State: WA Zip: 98504

Classification: Structure

Resource Status: Survey/Inventory

Comments:

Within a District? No

Contributing? No

National Register:

Local District:

National Register District/Thematic Nomination Name:

Eligibility Status: Not Determined - SHPO

Determination Date: 1/1/0001

Determination Comments:

Description

Historic Use: Transportation - Road-Related (vehicular)

Current Use: Transportation - Road-Related (vehicular)

Plan: Unknown

Stories: not applic

Structural System: Steel

Changes to Plan: Slight

Changes to Interior: Not Applicable

Changes to Original Cladding: Not Applicable

Changes to Windows: Not Applicable

Changes to Other: Not Applicable

Other (specify):

Style:	Cladding:	Roof Type:	Roof Material:
Other	None	None	None

Foundation:	Form/Type:
Concrete - Poured	Other

Narrative

Study Unit	Other
Transportation	

Date of Construction: 1925 Built Date
1951 Remodel

Builder: Puget Sound Bridge & Dredging Co., Seattle

Engineer: M.M. Caldwell

Architect:

Property appears to meet criteria for the National Register of Historic Places:Yes

Property is located in a potential historic district (National and/or local): No

Property potentially contributes to a historic district (National and/or local): No

Statement of Significance:

The Puyallup River/Meridian Street Bridge is currently the longest, simply supported, steel riveted Warren through truss span built prior to 1940 remaining on the Washington State highway system. The popularity of the Warren truss emerged in the late 1930s, and continued through the 1950s. Very few truss bridges were built on State-owned highways after 1960. Although a modest number of Warren trusses still remain on the system, the number has declined. Narrow bridges with restricted vertical clearance, such as through trusses, are routinely replaced by wider concrete bridges.

The Puyallup River/Meridian Street is also significant for its unusual, perhaps unique truss configuration. As a variation from the standard Warren truss' horizontal top chord, the bridge has a parabolic top chord allowing for a longer span length than possible with the standard top chord. The parabolic configuration also avoided the need for heavier, or additional, truss components to reach the entire span length. Its subdivided panels and the addition of longitudinal members at the mid-panel heights in five truss panels achieved both strength and economy of steel. Those highly unusual modifications to the original Warren truss appear strikingly similar to the so-called Turner truss, patented by Claude A.P. Turner in 1923. Turner wrote that "The type of truss is one originated by the writer to eliminate the multiplicity of nominal members" (Turner 1922:180). In his patent description, Turner wrote that one important element of his design were the longitudinal struts connected to diagonal web members "at a point substantially midlength thereof" and that "the framework thus formed by said struts is applied only to alternate panels. The arrangement . . . works out very economically of material in practice. By my invention a truss as provided that uses a minimum of material, it has great stiffness and it eliminates, or greatly reduces, secondary stresses" (Turner 1923). In her Historic American Engineering report for the Liberty Memorial Bridge in North Dakota, Nancy Ross writes: "The primary modification [to the Warren truss] is the reinforcing of alternate panels with a framework of steel struts. Intended to increase the overall rigidity of the truss web, the modification gives the trusses a distinctive appearance that differs considerably from the conventional Warren profile. In spite of the advantages of this novel variant of the Warren truss, the Liberty Memorial Bridge is the only example of the application of this design" (Ross 1991:11).

Ross' conclusion seems to be borne out by the Puyallup River/Meridian Street Bridge in that, although very similar to the design used for the Liberty Memorial Bridge, including longitudinal bracing in alternate panels, it is not a Turner truss. The primary difference between the two designs is that the only vertical struts in the Puyallup/Meridian Bridge are those adjacent to each portal, whereas vertical members connect the longitudinal substruts and diagonals to the bottom chords in every panel on the Liberty Memorial Bridge. In his comparison of the two bridges, retired WSDOT bridge engineer Robert Krier noted: "the absence of vertical members [on the Puyallup/Meridian Bridge] requires the diagonals of the Meridian Truss to act directly, in both compression and tension," whereas in the Liberty Memorial Bridge, the numerous verticals in the truss panels transfer some of the vertical loads indirectly into the diagonals. In addition the panel lengths are significantly different on the two bridges: 26.5 feet on the Puyallup/Meridian Bridge; 17 feet on the Liberty Memorial Bridge. Although not visibly apparent, the resulting structural requirements for the relative floor systems of the two bridges are considerably different. In order to have a more complete understanding of the load distribution of the truss members and thereby perform a structural comparison between the two bridges, it would be necessary to have the details of the sequence of the steel erection, roadway deck construction and release of falsework (Krier 2010).

When comparing the Puyallup River/Meridian Street Bridge with the Liberty Memorial Bridge in North Dakota, structures of similar design, it seems unavoidable to ask: In designing the Puyallup Bridge in 1924, did M.M. Caldwell use or borrow details from Claude A.P. Turner's truss design, patented in 1923? Given that Turner published an article about his design of the Liberty Memorial Bridge in the Engineering News-Record, the most popular nation-wide trade journal of the day, in February 1922, Caldwell probably knew of the design. The article included small drawings of the bridge's elevation and floor system, and a somewhat more detailed drawing of "SUBDIVIDED TRIANGULAR TRUSSES." Those, along with simple drawings and explanations included in the patent, published in January 1923, would have provided ample inspiration for an engineer to adapt the Turner truss details to design any long-span bridge. Turner in fact labeled his patent "LONG-SPAN BRIDGE," perhaps in case the design's applicability was unclear (Turner 1922 and 1923). However, it is questionable whether Caldwell actually would have considered it necessary to incorporate any of Turner's "Long-Span" structural features into the Puyallup Bridge, since its span of 371 feet is 105 feet shorter (22%, a significant structural difference) than Turner's bridge. Further, the subdivided Warren truss (developed in the late 1800s) and the Pennsylvania truss (developed by the Pennsylvania Railroad in 1875 with the polygonal top chord for use in long-span railroad bridges) provided Caldwell with sufficient structural features for utilization in his bridge if he so desired. As no evidence is known to exist that Caldwell either legally used the patent, or perhaps simply borrowed liberally from it without acknowledging the source, further research may reveal Caldwell's awareness of Turner's design. Regardless of his possible knowledge of Turner's truss, Caldwell's design is nevertheless another variation of a subdivided Warren through truss with its own characteristics perhaps unique to this structure.

Although it is not actually a Turner truss, the Puyallup River/Meridian Street Bridge is significant for its design, which is the only one of its kind in Washington, and may very well be unique in the US if not the world, although additional research would be needed to confirm that conclusion. Despite modest alterations over the years, and additions made for safety and structural improvement, the bridge retains integrity of design, materials and workmanship, and is thus eligible for inclusion in the NRHP under Criterion C.

Historical Background

M.M. Caldwell, as he signed his name to drawings and documents, and as his name appears on bronze plaques on the structure, designed the Puyallup River/Meridian Street Bridge. Maury M. Caldwell was born May 19, 1875 in Waynesboro, Virginia. He reportedly arrived in Seattle in 1904, perhaps after working on the Devil's Corner Bridge over the Skagit River during the mining rush of the 1890s. (His obituary refers to his having worked on the Devil's "Elbow" Bridge. That bridge is a well-known crossing of the Big Piney River in Pulaski County, Missouri, built in 1923, and not on the Skagit as reported in the obituary: Seattle Times 2 July 1942). Caldwell first appears in Seattle city directories in 1917 as simply "engineer." The next year he is identified as a clerk with the Charles G. Huber Company, a Seattle firm then constructing a steel Petit truss bridge on the Cowlitz River in southwest Washington. By 1920 Caldwell had become "Chief Engineer" with the Union Bridge Company (Polks' 1916-1920). In that capacity he oversaw construction in 1921 of the James O'Farrell Bridge over the Carbon River in Pierce County, as well as construction of one mile of highway (presently SR 162) leading to the bridge (Clarke 1993:5; Hall 1994:303; Pierce County Public Works, Fairfax/O'Farrell/Carbon River Bridge file). By 1923 Caldwell was representing the Strauss Bascule Bridge Company of Chicago in promoting a movable bridge in Aberdeen, Washington (Pacific Builder and Engineer 1923:13). The company built the Wishkah River Bridge there the next year under Caldwell's direction (Lawrence 1993:3). By then he had become (in the city directory) a "consulting engineer," apparently no longer affiliated with the Union Bridge Company (Polks' 1921-1942). Caldwell retained that status through 1941, when he retired from his practice and went to work for Rumsey and Company developing a gold mine near Cottonwood, British Columbia. He died there in the summer of 1942. He was survived by his wife, Amy, and a sister, Nettie M. Caldwell, in Virginia (Seattle Times 2 July 1942).

In November 1924 Pierce County applied for federal aid to build what was called a "Steel Highway Bridge Crossing Puyallup River Between Secs. 21 & 22, T20N, R4E." On the drawing submitted with the application, the bridge appears in elevation view to be the design used to build the bridge the next year. M.M. Caldwell's name does not appear on the drawing, however, the only signature being that of C.H. Votaw, the County Engineer. Clifford Votaw eventually supervised construction of the Puyallup River/Meridian Street Bridge, as well as the Hylebos Bridge in Tacoma, among many other Pierce County road and bridge projects (Bonney 1927:491). Undated drawings in the County's Public Works Office do, however, bear the designer's name "M.M. CALDWELL, CONSULTING ENGINEER."
In early February 1925 Pierce County awarded a construction contract for $77,200 to the Puget Sound Bridge & Dredging Company of Seattle. Nine other firms had submitted bids, ranging in cost estimates from $78,989 to $93,905 (Pierce County Public Works, Meridian Street Bridge file). In announcing the award, the Puyallup Valley Tribune noted that "The new road [Meridian Street] will considerably shorten, by the northern route, the distance to Tacoma, and will also bring the big [Puyallup Indian] Reservation district a mile closer to Puyallup" (2/7/1925:1; all following citations in this paragraph are from that newspaper, except where noted). Piling and falsework had been erected across the river by mid May when the same newspaper reported that construction was ahead of schedule on the bridge, but that Meridian Street "is not in condition, nor have any definite steps been taken toward improvement or paving" (5/16/1925:1 & 10). Concrete piers were "virtually" complete when 380 tons of steel from the Virginia Bridge and Iron Company in Roanoke, Virginia, arrived on site the next month (6/13/1925:1; Pierce County Public Works, Meridian Street Bridge file). On July 4th C.J. Flem, superintendent of construction for the Company, reported that riveters had started work on the steel in place across the river, and that the 5 ½ inch-thick concrete deck was "virtually completed" (7/4/1925:1). The bridge was finished in time for the opening of the Western Washington State Fair on 21 September 1925, but Meridian Street remained unpaved, due to refusal by the City Council to fund improvements (9/19/1925:1). Finally County Commissioner Henry Ball had the street "put in shape" for Fair traffic, despite the Council's recalcitrance (9/26/1925:1). In October, work commenced near the bridge on the pyramidal concrete and stone marker with bronze plaque commemorating the first road or Indian trail across the river at the site, the first school in the Puyallup Valley housed in the Indian War blockhouse that stood "Near the north approach," and the first telegraph line to reach the community (7/26/1925:1; 10/17/1925:1).

Description of Physical Appearance:

The Puyallup River/Meridian Street Bridge's main span is a 371-foot long steel riveted, subdivided Warren through truss. Unlike the standard Warren truss, this bridge has parabolic top chords and alternating diagonal truss members, longitudinal braces between diagonals in alternating panels, and vertical members adjacent to the portals. In 1991 the portal sway braces and interior panel sway bracing was modified to increase vertical clearance for over-sized traffic from 14 feet 7 inches to 18 feet 7 inches. Although the modifications were sensitive to the original truss configuration, retaining as much of the old bracing as possible, the truss appearance has changed somewhat when viewed from the roadway. Among the changes to the deck are the 21 inch-high metal thrie beams attached to the inside (traffic) side of the trusses, reducing the roadway width by 9 inches to 21 feet. The south approach to the truss consists of a 21-foot long precast, prestressed girder span and two 19-foot long timber trestle spans (which replaced earlier timber spans), all added in 1951. The north approach consists of two 19-foot long timber trestle spans, also dating to 1951, bringing the total length of the structure to 468 feet. The truss piers are founded on timber piles, while the approach piers rest on concrete spread footings. A five-foot wide timber sidewalk is attached to the east side of the bridge. A decorative, cross-hatched lattice steel rail is attached to the outer edge of the sidewalk along the full length of the truss span, providing both improved safety for pedestrians and a somewhat aesthetic appearance to the east elevation. The bridge originally carried a lane of traffic in each direction until 1971 when a concrete bridge was built immediately adjacent to the west truss to carry southbound traffic. The modern concrete bridge rises several feet above the roadway of the historic truss bridge, detracting considerably from the aesthetics of the older bridge.

Major Bibliographic References:

Bonney, W.P. History of Pierce County, Washington. Vol. 3. Chicago: Pioneer Historical Publishing Company, 1927.
Caldwell, Maury M. Obituary. Seattle Times 2 July 1942, p. 24.

Clarke, Jonathan. Fairfax (James O'Farrell) Bridge Historic American Engineering Record report, HAER No. WA-72. August 1993.
George, Oscar R. "Bob." Puyallup River Bridge 167/20E evaluation form. Category 2 Bridges Evaluation Project, WSDOT Environmental Services Office, Tumwater, 2007.
Hall, Nancy Irene. Carbon River Coal Country. Orting: Heritage Quest Press, 1994.

Hufstetler, Mark. Liberty Memorial/Missouri River Bridge 32BL114, North Dakota. National Register of Historic Places nomination. 1996.
Krier, Robert. Turner Truss Bridges memo. On file, WSDOT Environmental Services Office, Tumwater, 29 June 2011.
Lawrence, William Michael. Wishkah River Bridge, Aberdeen, Washington, Historic American Engineering Record, HAER No. WA-92. August 1993.
Luttrell, Charles T. Fort Malone Historical Marker historic property inventory form. On file, DAHP, Olympia. 2000.
_____. Puyallup River/Meridian Street Bridge historic property inventory form. On file, DAHP, Olympia. 2000.
Pierce County Public Works. Meridian Street Bridge and Fairfax/O'Farrell/Carbon River Bridge files. Tacoma.
Polks' Seattle City Directories. Chicago. 1916-1942.

Puyallup Valley Tribune, all 1925, all page 1: "Contract for North Meridian Street Bridge Let For $77,200," 2/7; "Work Progresses On New Bridge," 5/16; "Receive Steel For New Bridge," 6/13; "Bridge Will Be Completed Soon," 7/4; "Huge Span at Puyallup Opens Soon," 7/26; "Puyallup Bridge Near Completion," 8/9; "New Bridge To Be Open For Fair," 8/15; "Bridge Finished; Street Unpaved," 9/19; "Ball Continues To Aid In Improving Meridian," 9/26; "Work Commenced On Concrete Marker," 10/17.
Ross, Nancy. Liberty Memorial Bridge, North Dakota. Historic American Engineering Record report, HAER No. ND-7. May 1991.
Soderberg, Lisa. Historic American Engineering Record inventory sheet for Category 2 Puyallup River/Meridian Street Bridge. On file, Department of Archaeology and Historic Preservation, Olympia, March 1979.
Turner, Claude A.P. "Open-Well Piers and Subdivided Warren Trusses of Bismarck-Mandan Bridge." Engineering News Record, Vol. 88, No. 5, 2 February 1922:180-83.
_____. Patent 1,441,387. United States Patent Office, Washington, D.C. Applied for 10 July 1913, renewed 21 January 1921, issued 9 January 1923.
WSDOT. Cardex and correspondence files. Bridge and Structures Office, Tumwater.

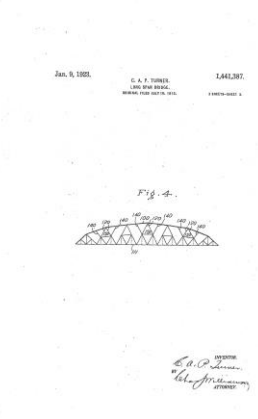
WSDOT. Plan drawings, inspection reports, etc. On line Bridge Engineering Information System (BEISt). Olympia.

Photos

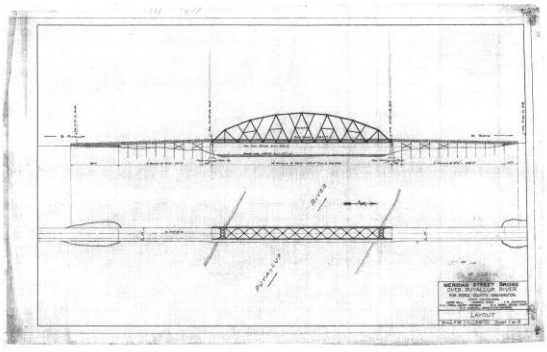
2011

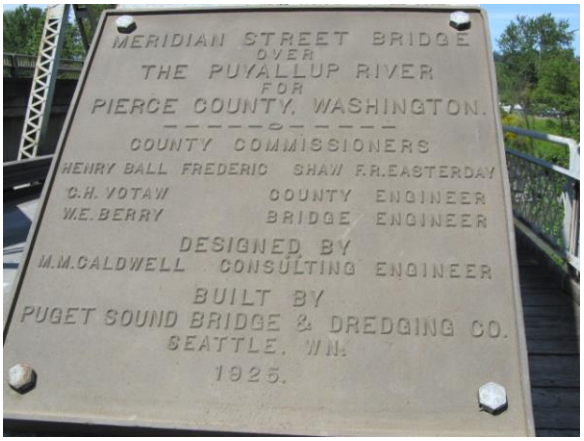
Original portal braces prior to removal and replacement.
1947

Deck view to north.
2011



C.A.P. Turner's 1923 patent for a long-span truss bridge.
1923





Meridian St. Bridge elevation drawing by M.M. Caldwell
2011

Replaced portal brace.
2011

Sidewalk on east side.
2011

Plaque on bridge showing M.M. Caldwell, designer, and Puget Sound Bridge & Dredging Co., Seattle, builder.
2011

Newer bridge (#167/20W, foreground) and older (1925) bridge to northeast.
2011

Subdeck to north.
2011

Historic Property Inventory Report

Identification

Survey Name: Puyallup River Bridge 167/20E Project
Date Recorded:
Field Recorder:
Owner's Name:
Owner Address:
City:
State:
Zip:
Classification:
Resource Status:
Comments:
Within a District?
Contributing?
National Register:
Local District:
National Register District/Thematic Nomination Name:
Eligibility Status: Not Determined - SHPO
Determination Date: 1/1/0001
Determination Comments:

Description

Historic Use:
Current Use:
Plan:
Stories:
Structural System:
Changes to Plan:
Changes to Interior:
Changes to Original Cladding:
Changes to Windows:
Changes to Other:
Other (specify):
Style:
Cladding:
Roof Type:
Roof Material:
Foundation:
Form/Type:

Narrative

Study Unit
Other
Date of Construction:
Builder:
Engineer:
Architect:

Property appears to meet criteria for the National Register of Historic Places:
Property is located in a potential historic district (National and/or local):
Property potentially contributes to a historic district (National and/or local):
Statement of Significance:

Description of Physical Appearance:

Major Bibliographic References:

Photos

Historic Property Inventory Report

Location

Field Site No. DAHP No. 27-03221

Historic Name: Puyallup River/ Meridian Street Bridge

Common Name:

Property Address: Meridian River Crossing Puyallup River , Puyallup, WA 98424

Comments:

Tax No./Parcel No. N/A

Plat/Block/Lot N/A

Acreage < 1 acre

Supplemental Map(s)

Township/Range/EW	Section	1/4 Sec	1/4 1/4 Sec	County	Quadrangle
T20R04E	21	SE	SE	Pierce	PUYALLUP

Coordinate Reference

Easting: 1194540

Northing: 686801

Projection: Washington State Plane South

Datum: HARN (feet)

Historic Property Inventory Report

Identification

Survey Name: No Name - 1/7/2005, 566

Date Recorded: 07/12/2000

Field Recorder: Charles T. Luttrell

Owner's Name: WSDOT

Owner Address: Transportation Building, 310 Maple Park Ave. E.

City: Olympia State: WA Zip: 98501

Classification: Structure

Resource Status: Survey/Inventory

Comments: 1979, 2000

Within a District? No

Contributing?

National Register:

Local District:

National Register District/Thematic Nomination Name:

Eligibility Status: Determined Not Eligible - SHPO

Determination Date: 10/10/2003

Determination Comments: 1980

Description

Historic Use: Transportation - Road-Related (vehicular)

Current Use: Transportation - Road-Related (vehicular)

Plan: Other Stories:

Structural System: Steel

Changes to Plan: Moderate

Changes to Interior:

Changes to Original Cladding:

Changes to Windows:

Changes to Other:

Other (specify):

Style: Cladding: Roof Type: Roof Material:

Foundation: Form/Type:

Narrative

Study Unit

Other

Transportation

Date of Construction: 1925 Built Date

Builder: Puget Sound Bridge and Dredging Company

Engineer: Modern Construction and Fabricating

Architect: Caldwell, M.M.

Property appears to meet criteria for the National Register of Historic Places: No

Property is located in a potential historic district (National and/or local): No

Property potentially contributes to a historic district (National and/or local):

Statement of Significance:	Although the Puyallup River/Meridian Street Bridge was included in the 1979 HAER inventory of Washington bridges, it was not recommended for listing on the National Register (Soderberg 1980). This bridge was identified as a Category II structure that, at the time, did not meet the critieria of the National Register. As described by the Washington Office of Archaeology and Historic Preservation (OAHP), Olympia, sufficient information was already on hand in OAHP site records. Extensive photograpicy documentation was recommended for Category II structures; however, should there be a need for demolition of individual bridges. Overall physical condition and architectural integrity appear unchanged since the bridge was evaluated in 1979. Condition and integrity are ranked as good.
Description of Physical Appearance:	This bridge is a 371-foot span, riveted steel and subdivided Warren Truss. Originally constructed in 1925, timber trestles were added in 1951. An adjacent prestressed concrete span was added in the 1970s. This latter 477-foot long structure is supported by re-inforced concrete dumbbell piers.
Major Bibliographic References:	Soderberg, Lisa 1980 National Register of Historic Places Inventory-Nomination Form, Historic Bridges and Tunnels in Washington State. On file, Office of Archaeology and Historic Preservation, Olympia.

Photos

North end

Historic Property Inventory Report

Location

Field Site No. DAHP No. 27-03221

Historic Name: Meridian Street Bridge

Common Name:

Property Address: , Puyallup, WA

Comments:

Tax No./Parcel No.

Plat/Block/Lot

Acreage

Supplemental Map(s)

Township/Range/EW	Section	1/4 Sec	1/4 1/4 Sec	County	Quadrangle
T20R04E	21	SE	SE	Pierce	

Coordinate Reference

Easting: 1194564

Northing: 686797

Projection: Washington State Plane South

Datum: HARN (feet)

Historic Property Inventory Report

Identification

Survey Name: Legacy for City of Puyallup
Date Recorded: 01/01/1900
Field Recorder:
Owner's Name:
Owner Address:
City:
State:
Zip:
Classification:
Resource Status:
Comments:
Within a District?
Contributing?
National Register:
Local District:
National Register District/Thematic Nomination Name:
Eligibility Status: Not Determined - SHPO
Determination Date: 1/1/0001
Determination Comments:

Description

Historic Use:
Current Use:
Plan:
Stories:
Structural System:
Changes to Plan:
Changes to Interior:
Changes to Original Cladding:
Changes to Windows:
Changes to Other:
Other (specify):
Style:
Cladding:
Roof Type:
Roof Material:
Foundation:
Form/Type:

Narrative

Study Unit
Other
Date of Construction:
Builder:
Engineer:
Architect:

Property appears to meet criteria for the National Register of Historic Places:
Property is located in a potential historic district (National and/or local):
Property potentially contributes to a historic district (National and/or local):
Statement of Significance:

Description of Physical Appearance:

Major Bibliographic References:

Photos