NPS Form 10-900
(10-90)

OMB No. 1024-0018

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NAT. REGISTER OF HISTORIC PLACES
NATIONAL PARK SERVICE

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in How to Complete the National Register of Historic Places Registration Form (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Yaquina Bay Bridge No. 01820

other names/site number Yaquina Bay (Newport) Bridge No. 01820

2. Location

street & number Oregon Coast Highway No. 9 (US 101), MP 141.67 not for publication ___

city or town Newport vicinity ___

state Oregon code OR county Lincoln code 041

zip code 97365

3. State/Federal/Tribal Agency Certification

As the designated authority under the National Historic Preservation Act of 1986, as amended, I hereby certify that this ☒ nomination ☐ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property ☒ meets ☐ does not meet the National Register Criteria. I recommend that this property be considered significant ☒ nationally ☐ statewide ☐ locally. (☐ See continuation sheet for additional comments.)

Dana Hamrick 14 June 2005
Signature of certifying official / Deputy SHPO Date

Oregon State Historic Preservation Office
State or Federal agency and bureau

In my opinion, the property ☐ meets ☐ does not meet the National Register criteria. (☐ See continuation sheet for additional comments.)

Signature of commenting or other official Date

State or Federal agency and bureau

4. National Park Service Certification

I, hereby certify that this property is:

☒ entered in the National Register Edson Beall
☐ See continuation sheet.
☐ determined eligible for the National Register
☐ See continuation sheet.
☐ determined not eligible for the National Register
☐ removed from the National Register
☐ other (explain):

Signature of Keeper Date of Action

5. Classification

Ownership of Property
(Check as many boxes as apply)

- ☐ private
- ☐ public-local
- ☒ public-State
- ☐ public-Federal

Category of Property
(Check only one box)

- ☐ building(s)
- ☐ district
- ☐ site
- ☒ structure
- ☐ object

Number of Resources within Property
(Do not include previously listed resources in the count)

Contributing	Noncontributing	
_____	_____	buildings
_____	_____	sites
1	_____	structures
_____	_____	objects
_____	_____	Total

Number of contributing resources previously listed in the National Register 0

Name of related multiple property listing
(Enter "N/A" if property is not part of a multiple property listing.)

C. B. McCullough Major Oregon Coast Highway Bridges, 1927-36.

6. Function or Use

Historic Functions
(Enter categories from instructions)

Transportation

Historic Subfunctions
(Enter subcategories from instructions)

Road-related

Current Functions
(Enter categories from instructions)

Transportation

Current Subfunctions
(Enter subcategories from instructions)

Road-related

7. Description

Architectural Classification
(Enter categories from instructions)

Late 19th and 20th Century Revivals
  Classic Revival
  Late Gothic Revival
Modern Movement
  Art Deco
  Moderne

Materials
(Enter categories from instructions)

Foundation	Concrete
Other	Steel
	Concrete

Narrative Description
(Describe the historic and current condition of the property on one or more continuation sheets)

See continuation sheets.

8. Statement of Significance

Applicable National Register Criteria
(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing)

☒ A Property is associated with events that have made a significant contribution to the broad patterns of our history.

☐ B Property is associated with the lives of persons significant in our past.

Narrative Description

The graceful Yaquina Bay Bridge is a combination of steel and reinforced-concrete arches. It spans Yaquina Bay at milepost 141.67 on the Oregon Coast Highway No. 9 (US 101) in the coastal resort town of Newport, Lincoln County, Oregon. The bay's north shore rises as a cliff nearly 100 feet above the water and its south shore consists of partially wooded sand dunes. The located is at the bay's mouth. To the west, one is offered an unobstructed ocean view. To the east lie Newport and its harbor.[1]

The bridge is 3,260 feet long and 37 feet wide. The roadway is 27 feet curb-to-curb, with two travel lanes. There are two 3'-6" sidewalks. The three main spans are steel arches. The central span over the navigation channel is a 600-foot steel semi-through arch supported by concrete piers that extend downward to a depth of approximately 50 feet below the water. The side spans are 350-foot deck arches. The bridge has five open-spandrel reinforced-concrete ribbed deck arch secondary spans south of the steel arches. They measure 265, 232, 204, 180, and 160 feet respectively, for a total of 1,041 feet. There are fifteen reinforced-concrete deck girder approach spans, five on the north end and ten on the south end, for a total of 882 feet. These approach spans vary in length from 51 to 70 feet.

Spaced 30 feet apart, the central arch trusses rise 226 feet from center of the end pins to the crown. The chords of the arch are of the box type and are silicon steel. They measure 18 ¾" x 26". McCullough employed box girders because they offered a cleaner appearance than the more common rolled channel and lacing. He constructed the central arch by cantilevering the ring halves from the piers and tying them back to the steel deck arches. The roadway is suspended from the arch rings by hangers. It is 246 feet above sea level and provides a navigable channel 400 feet wide by 133 feet high. The vertical clearance above the roadway is 14'-5".

Piers resting on timber piling driven to about 70 feet below the waterline support the concrete arches. McCullough designed these secondary spans as continuous arches, but employed Armand Considère's hinge near the skewbacks and at the crowns to aid in construction. Expansion joints in the concrete deck are cast chromium steel rollers riding on chromium steel plates set in the floor beams and stringers.[2]

On the Yaquina Bay Bridge, McCullough combined the vocabularies of classical and Gothic-style elements with the popular Art Deco and Moderne influences of the late 1920s and the 1930s. The bridge's concrete bents are tiered and ornamented in the Art Deco style primarily with vertical detailing and secondarily with horizontal scoring. Likewise, pier and column surfaces are broken by scoring. However, the web walls between main pier legs were cut away in the form of Gothic arches with sunburst fluting. In addition, ornamental elbow brackets are mounted at the top of the spandrel columns supporting and protruding beyond the sidewalks. The sidewalk balustrades include panels comprising small, stylized Gothic arches, which repeat the form seen in the piers and bents. They are stepped back in the Art Deco philosophy to create shadow lines and increase visual interest. (In 1981, the concrete railings along the central through arch and deck arches were replaced with a galvanized metal railing that replicates the Gothic arch form, but without the shadow lines of the old railing.)[3]

Pedestrian plazas at both ends of the bridge continue the combination of Gothic, classical, and Art Deco/Moderne elements. Long, elaborate curved stairways descend from each side of the deck to park sites (acquired and improved with Civilian Conservation Corps labor). Vertical concrete walls along the staircases were draped with chevron motif. Concrete walls of the approach spans and integral to the staircases mimic courses of cut stone with horizontal scoring

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[1]C. B. McCullough, "Five New Spans for Coast Highway," *Astoria Astorian Budget*, 26 February 1934; R. H. Baldock, "Bridge Builders' Secrets," *Oregon Motorist* 16, no. 4 (May 1936): 12.

[2]M. E. Reed, "Building the Yaquina Bay Bridge on the Oregon Coast Highway," *Western Construction News* May 1936, 134.

[3]Ibid.

and introduce a Moderne element into the design. Quoins are found in the corners. A band of large chevron dentils are tucked in below the sidewalk parapet. Curved concrete seats are mounted along the parapet walls at both entrances to the bridge. Bronze seal sculptures were proposed for concrete pedestals at the entrance plazas, but were never completed.[4]

McCullough employed a pair of tall pylons or towers on top of the main bents on either side of the central span. He believed that they helped emphasize the verticalness of the central through arch. Rising wedding-cake style, each of these pylons terminates in an obelisk point. Arched openings allow pedestrians to walk through the base of the towers. In the Art Deco-style, the surfaces are embellished with vertical scoring and horizontal banding. Likewise, smaller tiered pylons are found above the bents that support the steel deck arches and signify for the driver the beginning of the main spans. Interestingly these secondary pylons are considerably narrower than they are wide to accommodate travel lanes, but still give the impression in elevation of substantial size.[5]

Approximately 220 men were employed each week, with an average payroll of $5,000 a week. The contractors excavated 25,000 yards of dirt, placed 30,000 cubic yards of concrete in five arches, the viaduct and the roadway, drove 123,000 linear feet of piling, and utilized 1,123 tons of reinforcing steel and 2,065 tons of structural steel. The concrete mixing plant was mounted on a large barge. Channel piers were poured direct from the mixing plant moored alongside. The contract was awarded to Gilpin Construction Company, Portland, Oregon, and the General Construction Company, Seattle, Washington. The contract ran from 1 August 1934 to 28 November 1936. Final cost for the bridge was $1.3 million.[6]

The Yaquina Bay Bridge was the last of the five spans completed as part of the Public Works Administration project on the Oregon Coast Highway. It was dedicated on Saturday, 3 October 1936 as part of a somber celebration out of consideration for the townsfolk of Bandon, a south coast community that had recently been ravaged by fire. Beginning at 11:00 A.M., a mile-long parade including the seventh infantry band, a woman's drum corps, Boy Scouts, Girl Scouts, speakers, and prominent citizens marched along the streets of Newport to the bridge. Fog delayed the arrival of two Navy destroyers and seaplanes, but they arrived the next day. In the afternoon, Leslie M. Scott, chairman of the Oregon State Highway Commission from 1932 to 1935, gave the formal dedicatory address. Following the program, automobiles carrying dignitaries paraded across the bridge, with the lead vehicle breaking a ribbon tied across the entry to the structure. State officials and honored guests participated in a banquet that evening. Poor weather on Sunday cancelled further celebration.[7]

In 1985, the Oregon Department of Transportation carried out a "carbon paint anode" cathodic protection demonstration project on the two northernmost reinforced-concrete deck girder spans on the Yaquina Bay Bridge. In 1991 and 1995, the agency completed a two-phased, $13.4 million project on the steel arches and on the reinforced-concrete deck arches and deck girder spans south of the steel arches. The work included a latex-modified concrete deck overlay on the steel arches and reinforced-concrete arches and a micro silica concrete overlay on the south deck girder spans. In addition, the project included repairing longitudinal beams, floor beams, spandrel columns, and curtain walls on the concrete spans south of the steel arches. A zinc anode cathodic protection system was installed on the reinforced-concrete arches and south deck girder spans for added protection against the salt-laden coastal atmosphere. No cathodic protection was completed on the north deck girder span adjacent to the steel arches so that it could serve as a control for the cathodic

[4]Kenneth J. Guzowski, "Yaquina Bay Bridge, HAER No. OR-44, Report," Historic American Engineering Record, National Park Service, 1990.

[5]C. B. McCullough, "Five New Spans for Coast Highway."

[6]R. H. Baldock, "Bridge Builders' Secrets," 12; "Yaquina Bay Bridge is Last Link in Roosevelt Highway," *Marshfield Coos Bay News-Times*, 4 August 1982. See "Job Record," File No. 1820 (Yaquina Bay Bridge), ODOT Bridge Section files, Salem.

[7]A. M. Williams, "Dedication of Bridge Historic Occasion in Building Highway," *Salem Capital Journal*, 3 October 1936; "Newport Pays Honor to Last Coast Bridge," *Portland Oregon Journal*, 4 October 1936.

protection system. The Oregon State Historic Preservation Office and others participated during the project's development to ensure that the bridge's historic characteristics and basic structural integrity were maintained.

☒ C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.

☐ D Property has yielded, or is likely to yield information important in prehistory or history.

Criteria Considerations
(Mark "X" in all the boxes that apply.)

☐ A owned by a religious institution or used for religious purposes.

☐ B removed from its original location.

☐ C a birthplace or a grave.

☐ D a cemetery.

☐ E a reconstructed building, object, or structure.

☐ F a commemorative property.

☐ G less than 50 years of age or achieved significance within the past 50 years.

Areas of Significance
(Enter categories from instructions)

Engineering
Transportation

Period of Significance

1933-36

Significant Dates

Completed in 1936.

Significant Person
(Complete if Criterion B is marked above)

Cultural Affiliation

Architect/Builder

Conde B. McCullough, designer
Gilpin Construction Company, Portland, Oregon, contractor
General Construction Company, Seattle, Washington, contractor

Narrative Statement of Significance
(Explain the significance of the property on one or more continuation sheets.)

See continuation sheets.

9. Major Bibliographical References

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS)
☐ preliminary determination of individual listing (36 CFR 67) has been requested.
☐ previously listed in the National Register

Narrative Statement of Significance

The Yaquina Bay Bridge No. 01820 is being nominated under the Oregon Coast Highway Bridges Multiple Property Submission. It is significant under National Register criterion C because it embodies the distinctive characteristics of a type, period, and method of construction for mid-twentieth-century reinforced-concrete arch bridge technology. Just as important, it is the work of a master, Conde B. McCullough, Oregon, state bridge engineer from 1919 to 1936. The bridge is also significant under criterion A for its association with construction of the Oregon Coast Highway, which eventually ran the length of Oregon and connected with adjacent segments in California and Washington. The road would not have been completed without eleven major bridges, including the Yaquina Bay Bridge, and many other spans.

Newport received its name on 4 July 1866 and is one of the oldest settlements on the Oregon Coast. The area's economy was based on commercial fishing and timber. Steamship connections between San Francisco and Yaquina began in 1885. The location's sheltered harbor and broad strands, however, also made Yaquina Bay a vacation destination for tourists. They first came from the mid-Willamette Valley by train and then by the 1920s and 1930s they traveled there along the Oregon Coast Highway. When the Yaquina Bay Bridge opened on Labor Day weekend in 1936 it eliminated the last ferry crossing on the route and made driving and sightseeing along the nearly 400-mile Oregon Coast Highway even more pleasurable than before.[8]

The Yaquina Bay Bridge possesses national significance under criterion C as one of the six major bridges that McCullough constructed on the Oregon Coast Highway between 1931 and 1936 and spanned the remaining barriers to efficient travel along the route—three bays and three river estuaries that relied on an outmoded ferry service. (The others were the Alsea Bay Bridge at Waldport, the Siuslaw River Bridge at Florence, the Umpqua River Bridge at Reedsport, the Coos Bay (McCullough) Bridge at Coos Bay, and the Rogue River Bridge at Gold Beach.) Completion of these bridges (one in 1932 and five in 1936) is considered the dividing line between the period of relative isolation and dependence on sea transportation for many of Oregon's coastal communities and their newfound association with each other along this ribbon of asphalt, known as US 101. The Yaquina Bay Bridge is the last of the five PWA coastal bridges to be completed in 1936. Many believe that it is the most striking of the major coast bridges and is *the* signature bridge along the Oregon Coast Highway.

The Yaquina Bay Bridge is also significant under Criteria C as the work of a master, Oregon State Bridge Engineer, Conde B. McCullough, and due to its thematic association with several other major steel and reinforced-concrete bridges designed by McCullough and erected along the Oregon Coast Highway in the 1930s. During his years as State Bridge Engineer, and later as Assistant State Highway Engineer, McCullough authored several books and many technical articles on bridge design and construction. He is significant for his use of innovative bridge technology, and for his visually appealing designs. He attained international recognition for the large-scale structures he designed to span the major rivers and estuaries, and several other thematically-similar concrete arch, beam, and girder structures, along the Oregon Coast Highway.

McCullough's bridges also had in common design themes and elements executed in classical, Gothic, and Art Deco/Moderne styles. They are evident on sidewalk railing balustrades; bracketing; arched curtain walls, entrance pylons, columns, stringers, piers, staircases, and other structural members. Eric N. DeLony, chief of the Historic American Engineering Record, remarked in his book, *Landmark American Bridges*, that this family of spans on the Oregon Coast Highway "represents some of the best and most innovative concrete and steel bridges in the world." The Yaquina Bay Bridge represents the pinnacle of McCullough's use of Gothic and Art Deco/Moderne architectural elements. The Gothic arch forms seen in the handrails and piers complement the Art Deco verticalness seen in the pier legs, entry pylons, and flowing staircases to create a streamlined elegance.[9]

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[8]"Big Bay Bridge Open to Traffic," *Corvallis Gazzette-Times*, 5 September 1936.

[9]Eric DeLony, *Landmark American Bridges*, (New York: American Society of Civil Engineers and Bulfinch Press, 1993), 125-35 (quote, 125);

Falsework and formwork was central to McCullough's success with all his reinforced-concrete bridges, especially those found along the Oregon Coast Highway. In 1986, a *Eugene Register-Guard* reporter explained its importance, in particular, on the Yaquina Bay Bridge:

> All of the concrete work, from the bay floor, 30 feet below the water to the top of the ornamental spires, was formed in wood. The sculptured and fluted art-deco concrete detailing that has made the Yaquina span a favorite with bridge fanciers was actually the product of carpenter craftsmanship. The carpenter had to build it all in reverse so the concrete could be cast into it. The bridge is all carpentry. They just filled it with concrete, then took away the wood.[10]

In 1986, Bill Calder, of the *Oregon Coast* magazine, wrote that

> The graceful symmetry of the bridges harmonizes with the landscapes of the estuarine environment that they were designed for. Ornamental pylons and spires, gothic piers, spandrel brackets, arched railings, and landscaped waysides were utilized to make the bridges aesthetically pleasing. Despite the depression, architecture of the day tended towards streamlined decoration and finely crafted ornamentation. Such work was an artistic expression of optimism in a period of austerity. Amidst great fanfare, official dedications were held. There were christening ceremonies and bands, Coast Guard demonstrations and boat races—and even baby parades were scheduled to celebrate this important transportation milestone for the state of Oregon.[11]

Interestingly, McCullough once proudly exclaimed that "no architects were retained in connection with the design of the above [coastal] bridges. In other words, both the architectural and engineering design work was done in our bridge designing and drafting rooms." McCullough's sense of space, order, and proportion is evident, however, in this bridge that dances across the water in a ballerina-like way. The Yaquina Bay Bridge is truly an example of architecture creating art in mid-20th-century American engineering.[12]

The Yaquina Bay Bridge is significant under criterion A because of its association with the construction of the Oregon Coast Highway in the 1930s. Completion of the Oregon Coast Highway was a major public works effort in the early and mid-1930s to establish an uninterrupted transportation route from California to Washington. The effort was aided by the Oregon Coast Bridges Project in which the federal Public Works Administration provided funds for the construction of five modern bridges to replace the existing slow, cumbersome ferries that crossed the larger bays, rivers and estuaries. An immediate accomplishment of the route's completion was the construction jobs that it provided to many unemployed workers. In more long-lasting terms, the highway's completion was a major factor in the development of commerce and tourism in Oregon's coastal regions, and it has since become one of the most notable scenic routes in the United States. The Oregon Coast Highway is worthy of its recent designation as a National Scenic Byway.

The Yaquina Bay Bridge meets the property type and registration requirements for the C. B. McCullough Major Oregon Coast Highway Bridges Multiple Property Submission. It was completed during the period of significance (1927-36) on the then current alignment of the Oregon Coast Highway. It was designed by Oregon State Highway Department bridge engineers under the direction of Conde B. McCullough. Its primary or secondary main spans are reinforced-concrete arches. It possesses a high degree of original integrity of design and materials.

Elizabeth Shellin Atly, "C. B. McCullough and the Oregon Coastal Bridges Project," TMs, 1977, 12-14, copy held by author.

[10]Mike Thoele, "Yaquina Bridge Spans Bay 50 Years," *Eugene Register-Guard*, 27 September 1986.

[11]Bill Calder, "Golden Anniversary," *Oregon Coast*, April/May 1986, 45-49.

[12]C. B. McCullough to White and Wycoff Manufacturing Company, Holyoke, Massachusetts, 30 April 1946, ODOT Bridge Section Maintenance File #1820.

Major Bibliographic References

Atly, Elizabeth Shellin. "C. B. McCullough and the Oregon Coastal Bridges Project," TMs, 1977.

Baldock, R. H. "Bridge Builders' Secrets." *Oregon Motorist* 16, no. 4 (May 1936): 5-12.

"Big Bay Bridge Open to Traffic." *Corvallis Gazzette-Times*, 5 September 1936.

Calder, Bill. "Golden Anniversary." *Oregon Coast*, April/May 1986, 45-49.

Castle, Arlene, et al. *Yaquina Bay: 1778-1978.* Newport, OR: Lincoln County Historical Society, 1979.

Corning, Howard M., ed. *Dictionary of Oregon History.* Portland: Binsford & Mort Publishing, 1989.

DeLony, Eric. *Landmark American Bridges.* New York: American Society of Civil Engineers and Bulfinch Press, 1993.

Guzowski, Kenneth J. "Yaquina Bay Bridge, HAER No. OR-44, Report." Historic American Engineering Record, National Park Service, 1990.

Hadlow, Robert W. *Elegant Arches, Soaring Spans: C. B. McCullough, Oregon's Master Bridge Builder.* Corvallis: Oregon State University Press, 2001.

"History of Coast Bridge Program is Interesting." *North Bend Harbor*, 28 May 1936.

"Lovely Settings to Be Provided for New Bridges." *Marshfield Coos Bay Times*, 1 June 1936.

"Lumbermen to Meet to Protest Concrete for 5 Coast Bridges." *Cottage Grove Sentinel*, 7 July 1933.

"Newport Pays Honor to Last Coast Bridge." *Portland Oregon Journal*, 4 October 1936.

"North Bend Backs Bridge Engineers." *North Bend Harbor*, 6 July 1933.

McCullough, C. B. "Five New Spans for Coast Highway." *Astoria Astorian Budget*, 26 February 1934.

Oregon Department of Transportation. Bridge Section Maintenance File #1820.

Oregon State Highway Commission. *Eleventh Biennial Report, for 1933-34.*

--------. *Twelfth Biennial Report, for 1935-36.*

Paxson, G. S. "Construction of Coast Highway Bridges." *Civil Engineering* 6, no. 10 (October 1936): 651-55.

Peterson, Ernest W. "Conquest of Oregon Coast Nears End." *Portland Oregon Journal*, 6 September 1936, s. 4, p. 1.

--------. "Yaquina Bay Bridge Nearly Ready for Traffic." *Portland Oregon Journal*, 30 August 1936.

Reed, M. E. "Building the Yaquina Bay Bridge on the Oregon Coast Highway," *Western Construction News*, May 1936.

"Squabble Over Lumber Ties Up Five Bridges." *Portland Oregon Journal*, 9 July 1933.

Thoele, Mike. "Yaquina Bridge Spans Bay 50 Years." *Eugene Register-Guard*, 27 September 1986.

Williams, A. M. "Dedication of Bridge Historic Occasion in Building Highway." *Salem Capital Journal*, 3 October 1936.

"Work Started on Yaquina Bridge Survey." *Newport Journal*, 3 May 1933.

"Yaquina Bay Bridge is Last Link in Roosevelt Highway." *Newport News-Times* 4 August 1982.

"Yaquina Bridge Huge Structure." *Newport News*, 1 October 1936.

"Yaquina Span Affords Breath-Taking View." *Marshfield Coos Bay Times*, 1 June 1936.

☒ previously determined eligible by the National Register
☐ designated a National Historic Landmark
☐ recorded by Historic American Buildings Survey # _____
☒ recorded by Historic American Engineering Record # OR-44

Primary Location of Additional Data
☐ State Historic Preservation Office
☐ Other State agency
☒ Federal agency
☐ Local government
☐ University
☐ Other
Name of repository: Prints and Photographs Division, US Library of Congress

10. Geographical Data

Acreage of Property 4.44 acres

UTM References
(Place additional UTM references on a continuation sheet)

1	10	416227	4941402	3			
	Zone	Easting	Northing		Zone	Easting	Northing
2				4			

Verbal Boundary Description
(Describe the boundaries of the property on a continuation sheet.)

Boundary Justification
(Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title Robert W. Hadlow, Ph.D., Senior Historian

organization Oregon Department of Transportation date June 30, 2004

street & number 123 NW Flanders Street telephone (503) 731-8239

city or town Portland state OR zip code 97209-4037

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

USGS map (7.5 or 15 minute series) indicating the property's location.
sketch map for historic districts and properties having large acreage or numerous resources.

Photographs

Representative **black and white photographs** of the property.

Additional items (Check with the SHPO or FPO for any additional items)

Property Owner

(Complete this item at the request of the SHPO or FPO.)

name Oregon Department of Transportation

street & number 355 Capitol Street NE telephone

city or town Salem state OR zip code 97301

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 et seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P.0. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Project (1024-0018), Washington, DC 20503

United States Department of the Interior
National Park Service

NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Verbal Boundary Description

The property is described as beginning at the north end of the Yaquina Bay Bridge, at mile post 141.67 on the Oregon Coast Highway No. 9, and running 3,223 feet to the south end of the bridge. It is 60 feet wide (30 feet either side of center line on the bridge).

Boundary Justification

The boundary includes property associated historically with the Yaquina Bay Bridge.

United States Department of the Interior
National Park Service

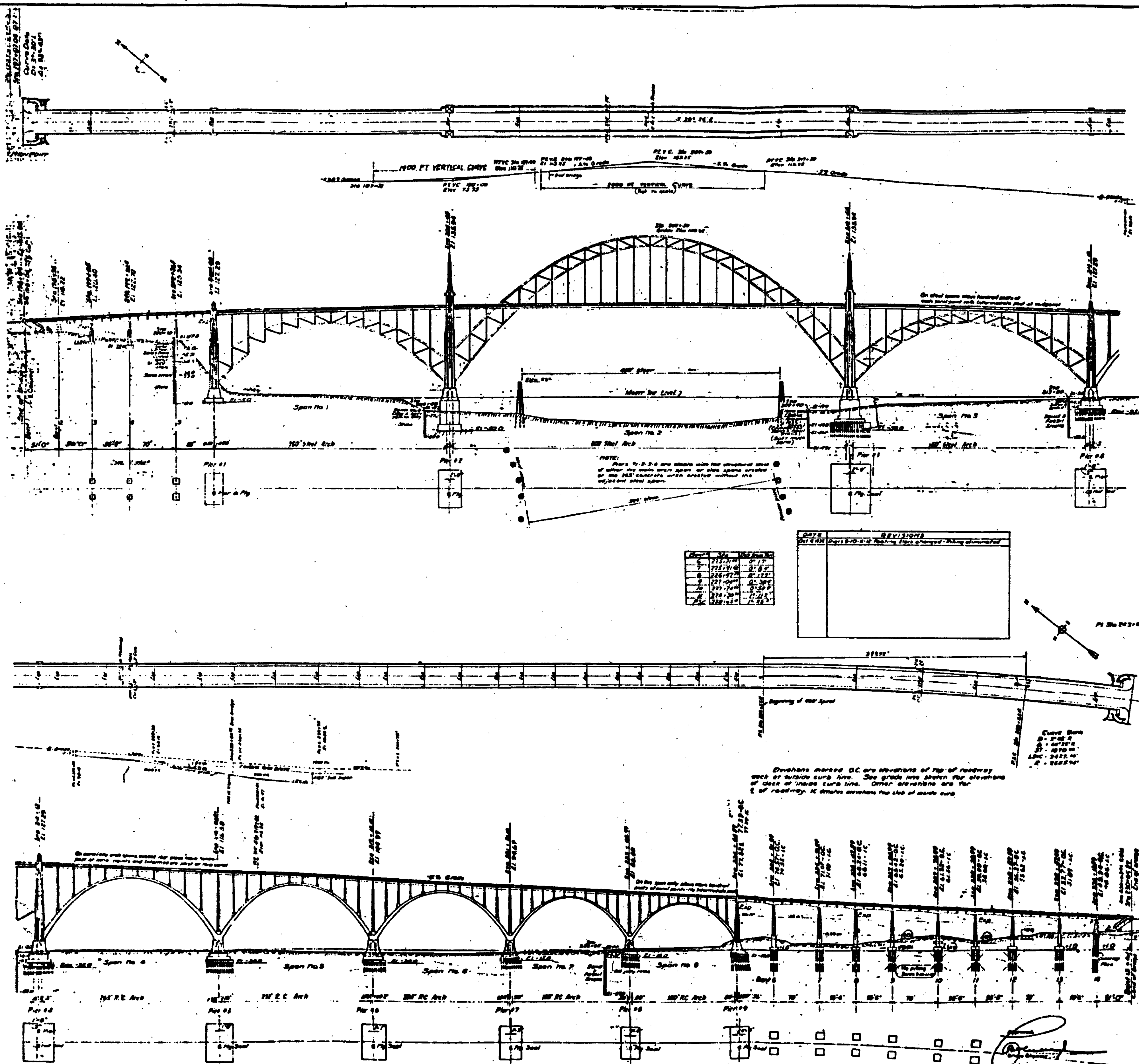
NATIONAL REGISTER OF HISTORIC PLACES CONTINUATION SHEET

Photographs

James B. Norman, Photographer, June 2003
(Original negatives housed at Oregon Department of Transportation, Salem, Oregon)

Photographic Description

View No.	Description
1	General view of the Yaquina Bay Bridge, view looking east.
2	General perspective view of the Yaquina Bay Bridge, view looking southeast.
3	General perspective view of the bridge, view locking southeast.
4	General perspective view of the bridge, view looking south.
5	General view of the bridge, view looking south.
6	General view of the bridge, view looking southwest.
7	General view of the bridge view looking northeast.
8	General view of the bridge, view looking southwest.
9	Detail view of the main through arch truss span, view looking southeast.
10	Detail view of the main through arch span, view looking south.
11	Detail view of the decorative concrete obelisk, view looking south.
12	Detail view of the decorative concrete pylon, view looking southwest.
13	Detail view of the pedestrian features at the north end of the bridge, view looking northeast.



GENERAL NOTES:

Deck and sidewalk slabs, curbs and handrail shall be class "D" mix.

Footings and Piers shall be class "A" mix.

Shafts, columns, beams, walls and all parts not noted shall be class "A" mix.

Arch ribs, columns, struts, beams, and walls shall be class "A" mix.

Concrete in the arch ribs, and the deck on the steel arch spans shall have a breaking strength of 4000 lbs per sq. inch at the age of thirty days except concrete in the considere hinges which shall have a breaking strength of 5000 lbs per sq. in. at the age of thirty days.

Designing stresses for concrete shall be as follows:

Class A. (footings, piers, columns, beams.) f_c = 800# per sq. inch. n = 12

Class A. (arch ribs) 1000#/sq. in. for DL & LL; f_c = 1200#/sq. in. all loads.

Class D. (deck of steel arch spans) f_c = 1000#/sq. in.

" " (deck of arches & approach spans) f_c = 900# per sq. inch.

Reinforcing Steel: All reinforcing steel shall be deformed bars, intermediate grade and shall be placed 2" clear from nearest face of concrete unless noted or shown otherwise, excepting where exposed to direct action of sea water in lower ribs and piers, where it shall be placed 4" clear from face.

Working stress for reinforcing steel shall be:

f_s = 18000#/sq. in. U = 80#/sq. inch.

Structural Steel: See dwgs. 4827-4851.

Copper Water Stops: All water stops shall be soft copper, weight 20 oz. per sq. ft. unless noted otherwise. All joints shall be soldered. Place water stops in all construction joints below El. + 12.00.

Loading: H-15 truck train loading. Maximum impact 30%. Impact on arches 25%.

Footing elevations may, at the discretion of the Engineer, be varied to secure suitable foundation.

All materials and workmanship shall conform to the specifications for the bridges of the Oregon State Highway Commission.

Structural Steel: All structural steel shall be open hearth structural steel A.S.T.M. Specification Structural Steel for Bridges A 7-33T and Structural Silicon Steel A 94-33.

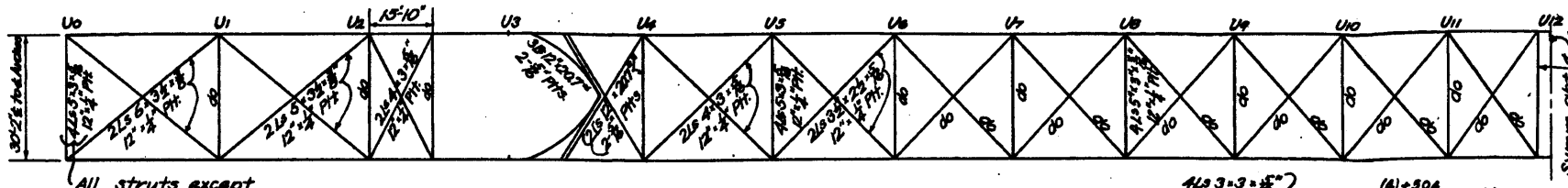
FOR INFORMATION ONLY

OREGON
STATE HIGHWAY COMMISSION

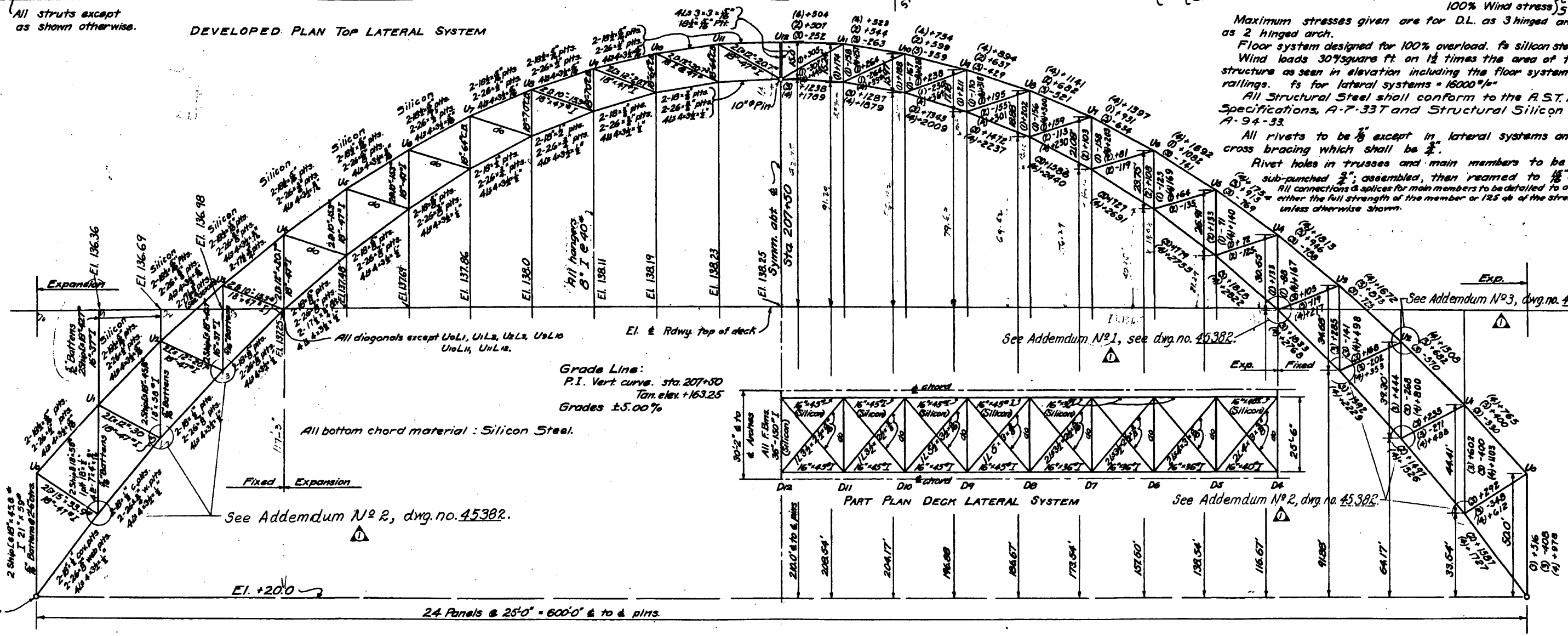
YAQUINA BAY BRIDGE
AT
NEWPORT – LINCOLN COUNTY
OREGON COAST HIGHWAY
PLAN AND ELEVATION

SCALE 1"=40'-0"	DRAWN BY V.D.	SHEET 1 OF
AUG. 31, 1933.	TRACED BY V.D.	BRIDGE NO. 1820.
CALC. BK. NO.	CHECKED BY	DRAWING NO. 4826
ACCOMPANIED BY DWGS. NO.		Roll File

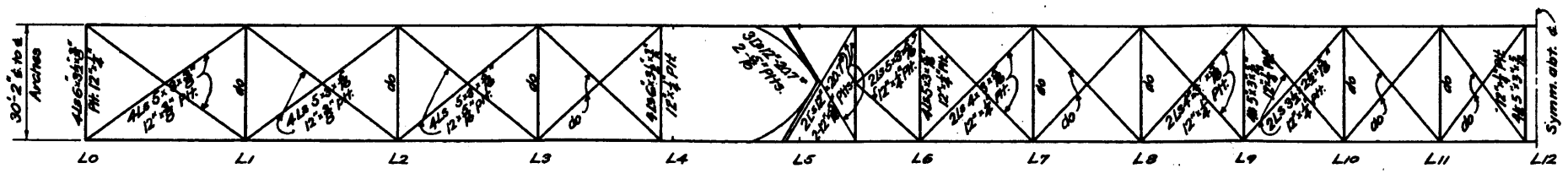
8-B-3



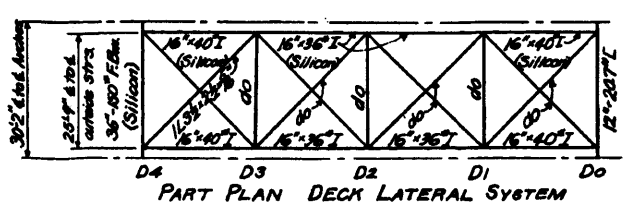
DEVELOPED PLAN TOP LATERAL SYSTEM



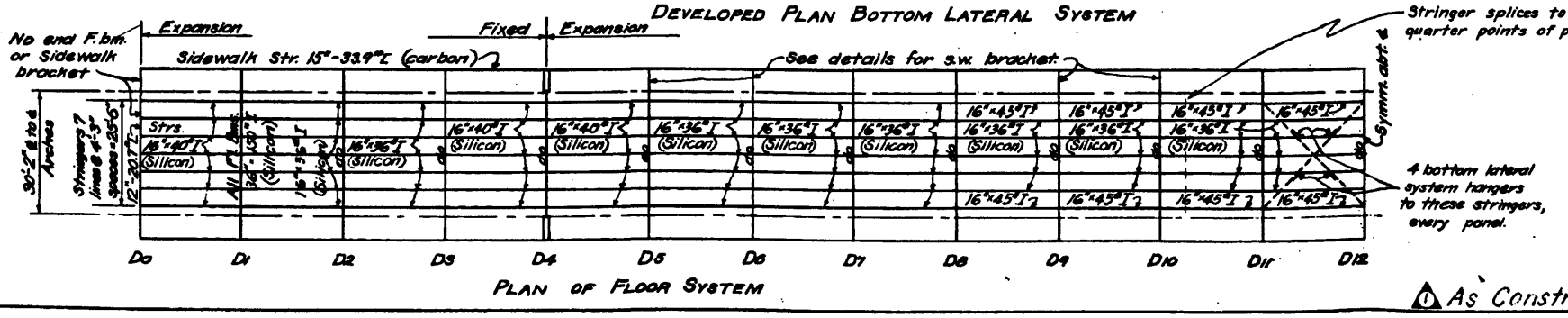
PART PLAN DECK LATERAL SYSTEM



DEVELOPED PLAN BOTTOM LATERAL SYSTEM



PART PLAN DECK LATERAL SYSTEM



PLAN OF FLOOR SYSTEM

GENERAL NOTES:

Stress Combinations: Case I. 100% D.L. stress. 50% L.L. stress. 100% Wind stress } C = 24000#/□" S = 33000#/□"

Case II. 100% D.L. stress 150% L.L. stress } C = 20000#/□" S = 27500#/□"

Case III. 100% D.L. stress 100% Wind stress } C = 20000#/□" S = 27500#/□"

Case IV
100% D.L. stress.
200% Wind stress.

fs { carbon steel = 24000#/□" + 20%
silicon steel = 33000#/□" + 20%

Maximum stresses given are for D.L. as 3 hinged and L.L. as 2 hinged arch.

Floor system designed for 100% overload. fs silicon steel = 33000#/□"

Wind loads 30#/square ft. on 1½ times the area of the structure as seen in elevation including the floor system and railings. fs for lateral systems = 16000#/□"

All Structural Steel shall conform to the A.S.T.M. Specifications, A-7-33T and Structural Silicon Steel, A-94-33.

All rivets to be ⅞" except in lateral systems and cross bracing which shall be ¾".

Rivet holes in trusses and main members to be sub-punched ¾"; assembled, then reamed to ⅞" dia.

All connections & splices for main members to be detailed to develop either the full strength of the member or 125 ak of the stress, unless otherwise shown.

FOR INFORMATION ONLY

Approved:

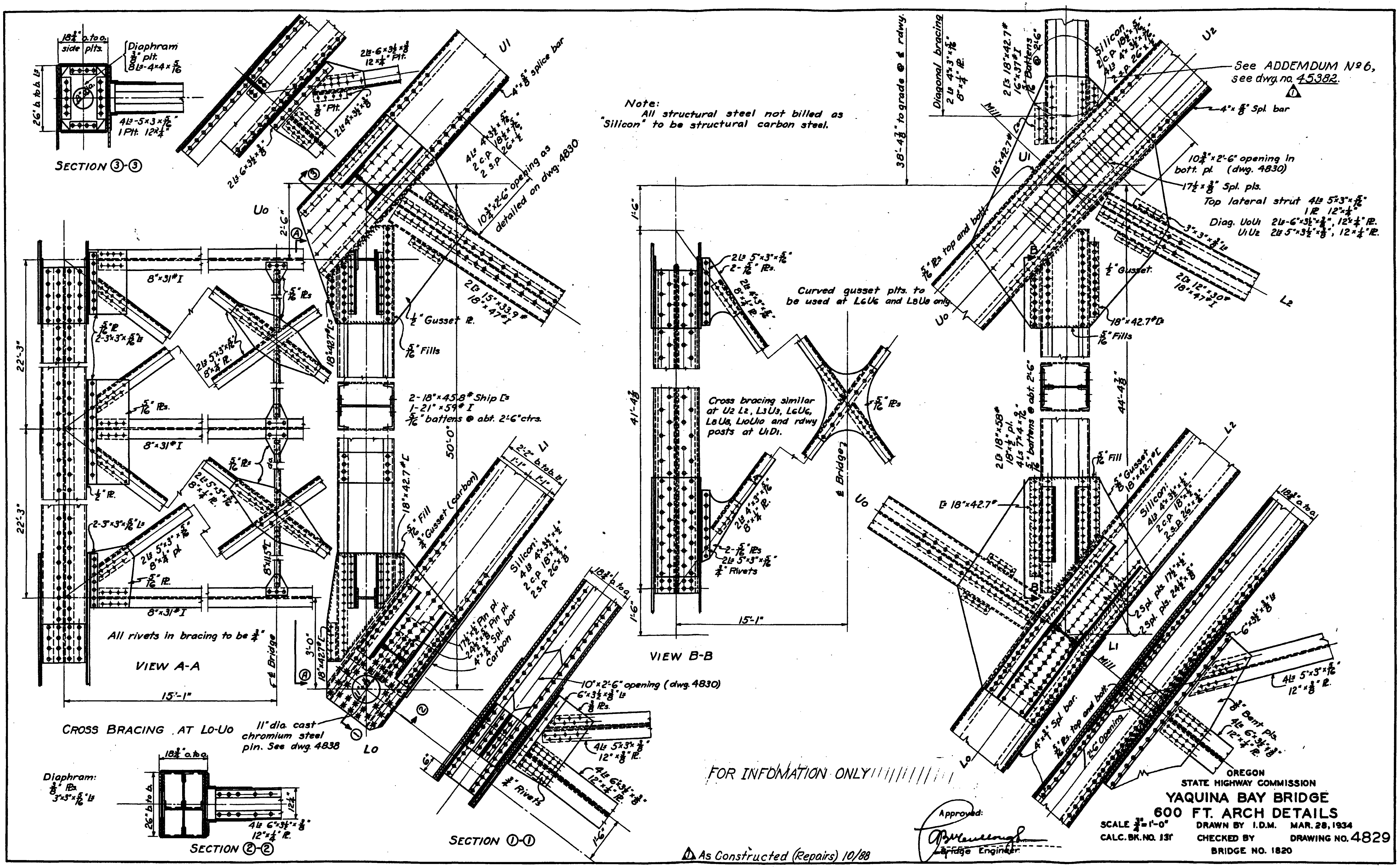
Bridge Engineer

OREGON
STATE HIGHWAY COMMISSION

YAQUINA BAY BRIDGE
STRESS SHEET - 600' ARCH

SCALE 1 IN. = 20 FT. DRAWN BY I. M. TRACED BY R.D.M.
NOV. 1, 1933 CHECKED BY DRAWING NO. 4827
CALC. BK. 131 BRIDGE NO. 1820

⚠1 As Constructed (Repairs) 10/38


SECTION ③-③
CROSS BRACING AT Lo-Uo
VIEW A-A
All rivets in bracing to be ¾"
11" dia. cast chromium steel pin. See dwg. 4838
SECTION ②-②
SECTION ①-①
10"×2'-6" opening (dwg. 4830)
10¾"×2'-6" opening as detailed on dwg. 4830
Note: All structural steel not billed as "Silicon" to be structural carbon steel.
38'-4⅞" to grade @ ℄ rdwy.
VIEW B-B
Cross bracing similar at U2 L2, L3U3, L6U6, L8U8, L10U10 and rdwy posts at U1D1.
Curved gusset plts. to be used at L6U6 and L8U8 only
See ADDEMDUM Nº6, see dwg. no. 45382.
Top lateral strut 4Ls 5"×3"×5/16" 1 PL 12"×¼"
Diag. UoU1 2Ls-6"×3½"×⅜", 12"×¼" PL.
U1U2 2Ls 5"×3½"×⅜", 12"×¼" PL.
FOR INFOMATION ONLY
Approved: Bridge Engineer
△1 As Constructed (Repairs) 10/88
OREGON
STATE HIGHWAY COMMISSION
YAQUINA BAY BRIDGE
600 FT. ARCH DETAILS
SCALE ⅜"=1'-0"
DRAWN BY I.D.M. MAR. 28, 1934
CALC. BK. NO. 131
CHECKED BY
DRAWING NO. 4829
BRIDGE NO. 1820

2-18"x⅜" Splice Pls.
Bend line
⅜" Bent Pls.
2 Lⁿ 3"x3"x⅜"
1 Pl. 12"x¼"
2 Lⁿ 3"x3"x⅜"
1 Pl. 12"x¼"
4 Lⁿ 4"x3"x⅜"
1 Pl. 12"x¼"
25'-0"
25'-0" panel lgt.
Typical floor beam connection on this post
3"x3"x⅜" Lⁿ
Mill
3½"x3½"x⅜" Lⁿ
Floor beam connection shown here for shorter column height
Typical floor beam connection to be used on higher column.
Gusset plate height on this post to be the same for both shorter and higher columns
6"x4"x½" Lⁿ
Same as U4U5
Same as U4U5
Side pls. only to be spliced
½" Gusset Pls.
2 Lⁿ 5"x3½"x⅜"
4 Lⁿ 6"x3½"x½"
1 Pl. 18"x⅜"
4 Lⁿ 5"x3½"x½"
1 Pl. 18"x⅜"
⅝" Gusset Pls.
Mill
3½"x3½"x⅜" Lⁿ
16-¾" dia. holes
1-18"x⅜" splice Pl.
4"x½" Strap
3"x½" Strap
Bend line
⅝" Bent Pls.
4 Lⁿ 4"x3"x⅜"
1 Pl. 12"x¼"
2 Lⁿ 3"x3"x⅜"
1 Pl. 12"x¼"
1 cover 18"x⅜" Top
2 webs 24"x⅜"
1 cover 18"x⅜" Bot.
2 Lⁿ 3"x3"x⅜" Top
2 Lⁿ 3½"x3½"x½" Bot.
1 Cov. Pl. 18"x⅜" Bot.
1 Cov. Pl. 18"x⅜" Top
2 Side Pls. 20"x⅜"
2 Lⁿ 3"x3"x⅜" Top
2 Lⁿ 3½"x3½"x⅜" Bot.
2 Lⁿ 5"x3½"x⅜"
Side pls. only to be spliced
⅝" Gusset Pls.
4 Lⁿ 6"x3½"x½"
1 Pl. 18"x⅜"
1 cov. 18"x⅜" Top
2 webs 24"x⅜"
1 cov. 18"x⅜" Bot.
2 Lⁿ 3"x3"x⅜" Top
2 Lⁿ 3½"x3½"x½" Bot.
4 Lⁿ 4"x3"x⅜"
1 Pl. 12"x¼"
2 Lⁿ 3"x3"x⅜"
1 Pl. 12"x¼"
2 Lⁿ 3"x3"x⅜"
1 Pl. 12"x¼"
⅝" Bent Pls.
Openings in bottom cover pls. @ app. 5'-0" ctrs. See Dwng #4831
2½" Pin with 2 std. nuts
⅜ Pls.
18"x⅝" pls. top & bot.
2 Lⁿ 3"x3"x⅜"
1 Pl. 12"x¼"
⅝" Bent Pls.
4 Lⁿ 4"x3"x⅜"
1 Pl. 12"x¼"
25'-0" Panel length
7½" rad.
± 350' Arch. Symm. abt ℄
except as shown and noted.
2 Lⁿ 3"x3"x⅜" (outside of Pls
2 Stiffener Lⁿ 3"x3"x⅜" (inside of Pls
2 Support Lⁿ 6"x4"x½" (outside " "
2½" ⁿ Pin for erection only
1" Clearance for abt Pl.
Cope I flange of I beam bet. Pls.
3½"x3½"x⅜" Lⁿ
These holes in gusset to be drilled and riveted in field after all dead load is on arch.
⅝" Gusset Pls.
Same as U4U5
Diagonal:
4 Lⁿ 6"x3½"x½"
1 Pl. 18"x⅜"
4 Lⁿ 6"x3½"x½"
1 Pl. 18"x⅜"
2 Lⁿ 5"x3"x⅜"
¾" Gusset Pls.
℄ of 350' Arch
½" Filler?
¾" Gusset Pl.
⅜" Bent Pl.
3½"x3½"x⅜" Lⁿ
18"x1" Pin Pl.
18"x½" Filler Pl.
⅜" Bent Pl.
24"x½" Pin Pl.
⅜" Bent Pl.
1 cov. 18"x⅝" Top
2 webs 24"x⅜"
1 cov. 18"x⅜" Bot.
2 Lⁿ 3"x3"x⅜" Top
2 Lⁿ 3½"x3½"x⅜" Bot.
4 Lⁿ 4"x3"x⅜"
1 Pl. 12"x¼"
2 Lⁿ 3"x3"x⅜"
1 Pl. 12"x¼"
2 Lⁿ 3"x3"x⅜"
1 Pl. 12"x¼"
⅜" Pls.
⅜" Bent Pl.
8"ϕ Pin with 2 std. recessed nuts

Approved:
Bridge Engineer.

FOR INFORMATION ONLY

OREGON
STATE HIGHWAY COMMISSION

YAQUINA BAY BRIDGE
STRUCTURAL DETAILS
350 FT. STEEL ARCH

SCALE 3/4"=1'-0" DRAWN BY NOE SEPT. 12, 1933
CALC. BK. NO. 136 CHECKED BY DRAWING NO. 4834
BRIDGE NO. 1820

27'-0" Roadway

11 panels @ 21'-3⅜" = 234'-3⅞"

11 Panels @ 18'-8¾" = 206'-0¼"

℄ of Column

(See Handrail details)

Dummy Exp. Joint ¼"×6" Mastic

℄ of Column

15 @ 12" = 15'-0"

1" Expansion (See details)

All Stirrups ½" ▫

¼"×6" Mastic Dummy Exp. Joint

Symm. about center line except for grade. Omit upper socket hinge on right half of arch. Set dowels at this point in usual manner.

See detail of bracket

10' below grade at all columns

Beam E

Beam F

Expansion Rollers

Beam E

Grade - 5%

3-¾" ⊕ bars

3-¾" ⊕ bars

Expansion Rollers See details

Column 5

Column 6

Considere Hinge (See Details)

Socket hinge Const. Jt. 7-1" ⊕ dowels

Crown Section

10'-0" below grade all cols.

14' below grade at all columns

4½" offset outside face Col. 4 (Omit on Col. 9)

Column 4

Const. Joint 7-1" ⊕ dowels 8'-0" long

SECTION on J-J
Scale ⅜" = 1Ft.

SEC. on H-H
Scale ⅜" = 1Ft.

R-Steel 7-1" ⊕ bars 2-½" ▫ Hoops ⅜" ⊕ 12" ctrs

SEC. on E-E
Scale ⅜" = 1Ft.

Column 3

Const. Joint 12-1" ⊕ dowels 9'-0" long

R. Steel 12-1" ⊕ 2-½" ▫ Hoops ⅜" ⊕ 12" ctrs.

SEC. on F-F
Scale ⅜" = 1Ft.

R. Steel 16-1" ⊕ 2-½" ▫ Hoops ⅜" ⊕ 12" ctrs.

SECTION on G-G
Scale ⅜" = 1Ft

Rein. Steel 16-1" ⊕ bars 2-½" ▫ Hoops ⅜" ⊕ 12" ctrs.

SECTION on K-K
Scale ⅜" = 1Ft.

Rib Steel 12-1" ▫ bars Top and bottom. ⅜" ⊕ hoops 1'-6" ctrs. 2-⅜" ⊕ cross ties per hoop.

Note: Bottom of floor beam at Columns 2, 3 and 4 same as shown for Col. 5 in section D-D. R = 19'-4" and 3'-0"

Lap bars 4'-0" @ splice.

4"×6" Mastic

Stirrups ½" ▫

9-1" with hooks

3-1" ⊕ bars

3-¾" ⊕ bars

R = 19'-4"

Socket hinge Const. Joint 7-1" ⊕ dowels 7'-0" long

Rib Steel 12-1" ▫ bars top & bottom ⅜" ⊕ hoops 1'-6" ctrs. 2-⅜" ⊕ ties per hoop.

SECTION on A-A
Scale ⅜" = 1Ft.

SEC. on M-M
Scale ⅜" = 1Ft.

Rein. Steel 18-1" ⊕ bars 4-½" ▫ bars Hoops ⅜" ⊕ 12" ctrs.

SECTION on L-L
Scale ⅜" = 1Ft.

Const. Joint 12-1" ⊕ dowels 10'-0" long

4 Hoops ⅜" × 10" × 2'-0", place Hor. on 2½" ctrs

SECTION on B-B
Scale ⅜" = 1Ft.

2-⅜" with hooks

½" Stirrups 10" ctrs.

2-⅜" ⊕ bars with hooks

SECTION OF BEAM D
Scale ⅜" = 1Ft.

Considere Hinge

See details

DETAIL OF INTER-RIB STRUTS
Scale ⅜" = 1Ft.

½" ▫ Hoop, 4 extra under each roller

½" ⊕ hoops @ 12" ctrs.

4-1" ⊕

R = 14'-4"

3-1" ⊕ bars

R = 3'-0"

Curb

Beam S

Stirrups ⅜" ⊕ 10" ctrs. 2-1" ⊕ bars

SECTION OF SIDEWALK BEAM
Scale ⅜" = 1Ft.

Const. Joint 14-1" ⊕ dowels 11'0" long

4-1" ⊕ bars with hooks

PART SEC. THRU WEB
Scale ⅜" = 1Ft.

12-1" ▫ bars with hooks

Considere Hinge

R = 12'-0"

Elev. +15.0

For information below elevation +15.0 see pier details.

PIER No. 7

232'-0" ARCH

204'-0" ARCH

PART SIDE ELEVATION

PART SECTION

Beam A

Beam B

Beam C

SECTIONS AT ℄ OF STRINGERS
Scale ½" = 1Ft.

Socket hinge Const. Joint (See details)

7-1" ⊕ dowels 8'-0" long

Rib Steel same as shown in Sec. A-A

SECTION ON D-D
Scale ⅜" = 1Ft.

SECTION ON C-C
Scale ⅜" = 1Ft.

For detail of pedestal see sheet 4842

FOR INFORMATION ONLY

Revised: Jan. 6, 1934
Revised Apr. 29, 1935

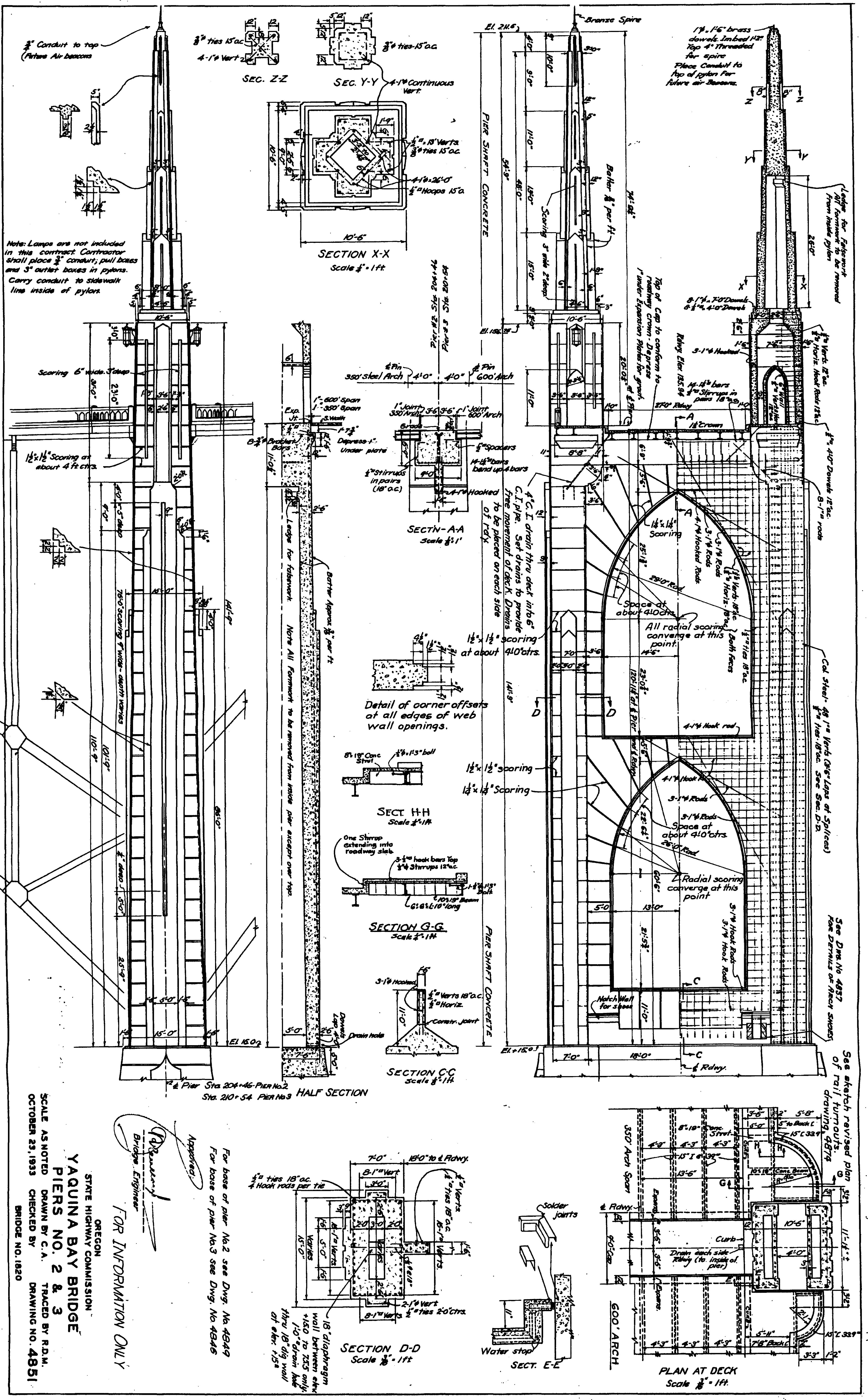
Approved:
Bridge Engineer.

OREGON
STATE HIGHWAY COMMISSION

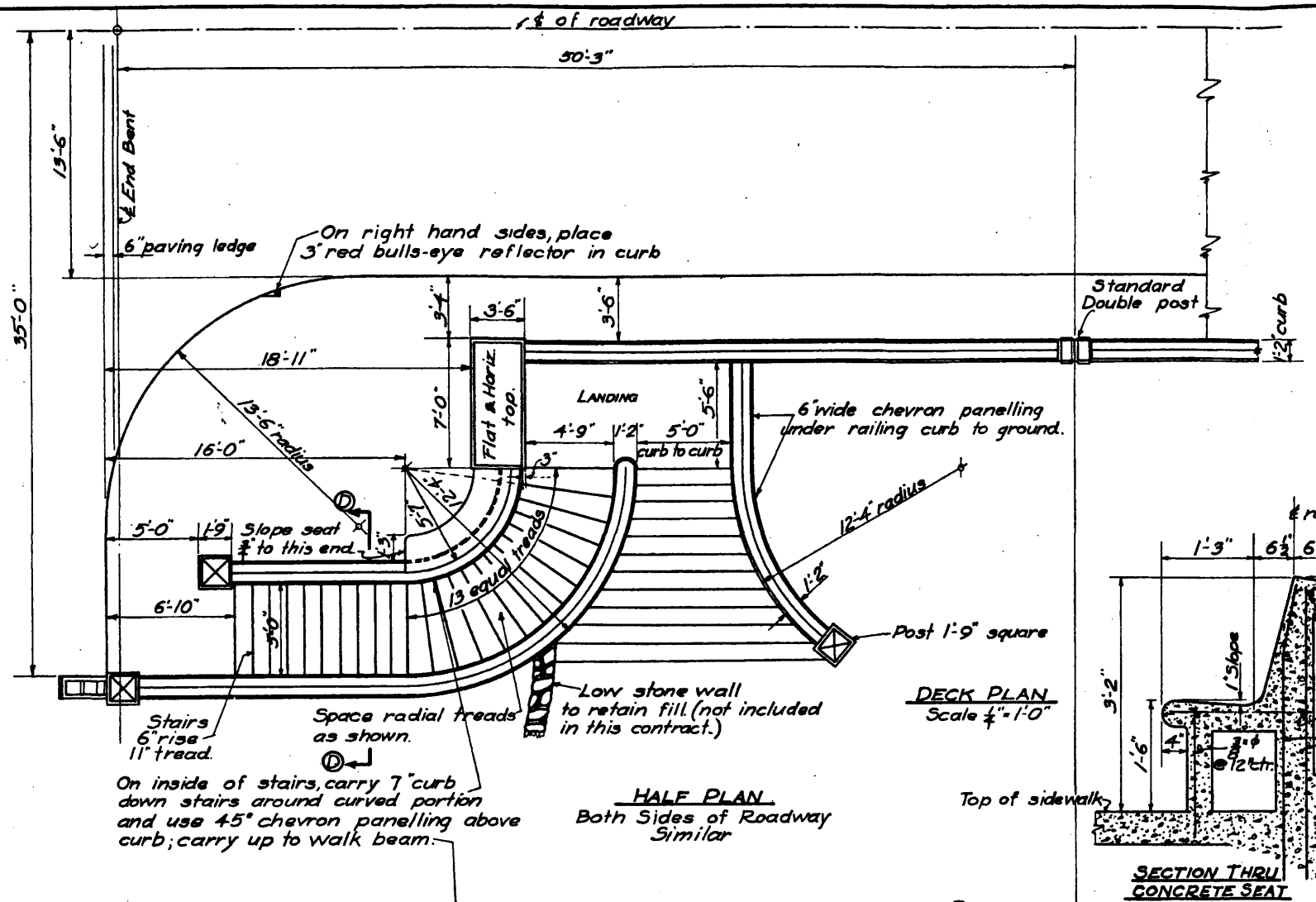
YAQUINA BAY BRIDGE

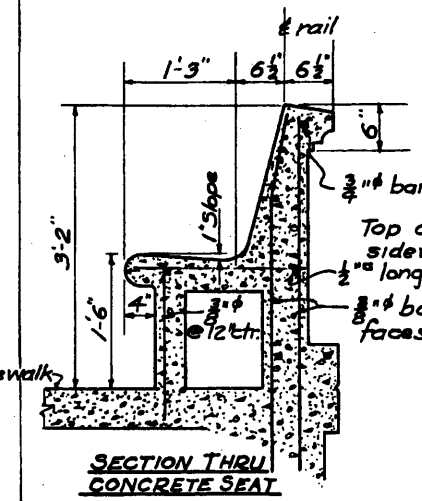
DETAILS 204 ARCH SPAN

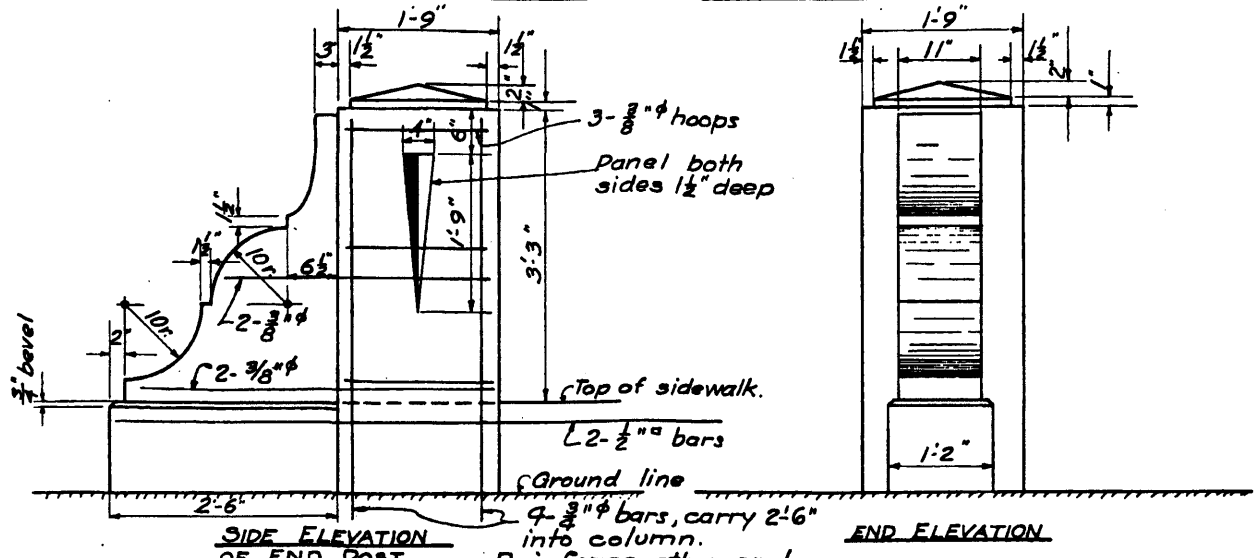
SCALE AS NOTED DRAWN BY D.R.S. TRACED BY R.D.M.
OCTOBER 25, 1933 CHECKED BY DRAWING NO. 4841
CALC. BK. # 138 BRIDGE NO. 1820

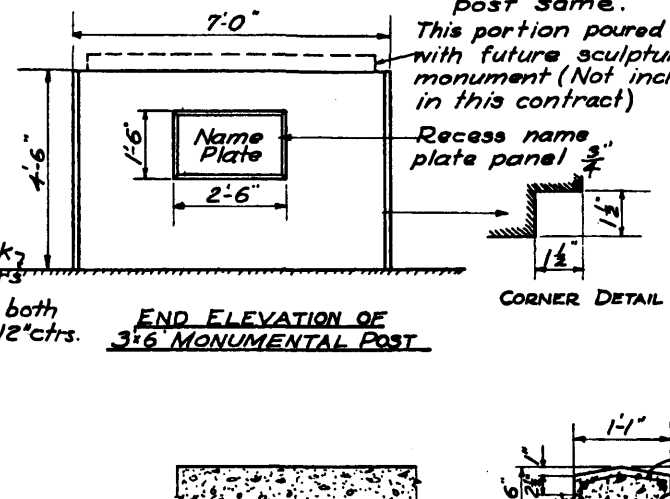


¾" Conduit to top (Future Air beacons)
SEC. Z-Z
SEC. Y-Y
4-1"ø Continuous Vert.
SECTION X-X
Scale ¼" = 1 ft.
Note: Lamps are not included in this contract. Contractor shall place ¾" conduit; pull boxes and 3" outlet boxes in pylons. Carry conduit to sidewalk line inside of pylon.
Bronze Spire
PIER SHAFT CONCRETE
Batter ⅛" per ft.
Scoring 6" wide, 3" deep
1½"x1½" Scoring at about 4 ft ctrs.
Top of Cap to conform to roadway crown - Depress 1" under Expansion Plates for growt.
SECT'N-A-A
Scale ½" = 1'
Detail of corner offsets at all edges of web wall openings.
4"ø C.I. drain thru deck into 6" C.I. pipe. Set drains to provide free movement of deck. Drains to be placed on each side of rdy.
All radial scoring converge at this point.
Space at about 4'-0" ctrs.
Radial scoring converge at this point
SECT. H-H
SECTION G-G
SECTION C-C
Ledge for falsework. Note All Formwork to be removed from inside pier except over top.
HALF SECTION
Pier Sta. 204+46 - PIER No. 2
Sta. 210+54 PIER No. 3
Ledge for falsework All formwork to be removed from inside pylon
See Dwg. No. 4857 for Details of Arch Shoes
See sketch revised plan of rail turnouts, drawing 4874
For base of pier No. 2 see Dwg. No. 4849
For base of pier No. 3 see Dwg. No. 4846
SECTION D-D
Scale ⅛" = 1 ft.
SECT. E-E
Water stop
Solder joints
350' Arch Span
600' ARCH
PLAN AT DECK
Scale ⅛" = 1 ft.
FOR INFORMATION ONLY
Approved:
Bridge Engineer
OREGON
STATE HIGHWAY COMMISSION
YAQUINA BAY BRIDGE
PIERS NO. 2 & 3
SCALE AS NOTED DRAWN BY C.A. TRACED BY R.D.M.
OCTOBER 23, 1933 CHECKED BY DRAWING NO. 4851
BRIDGE NO. 1820









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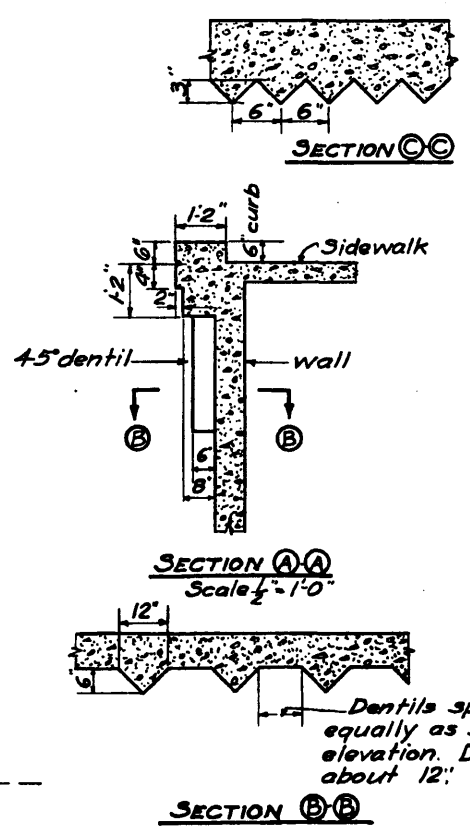
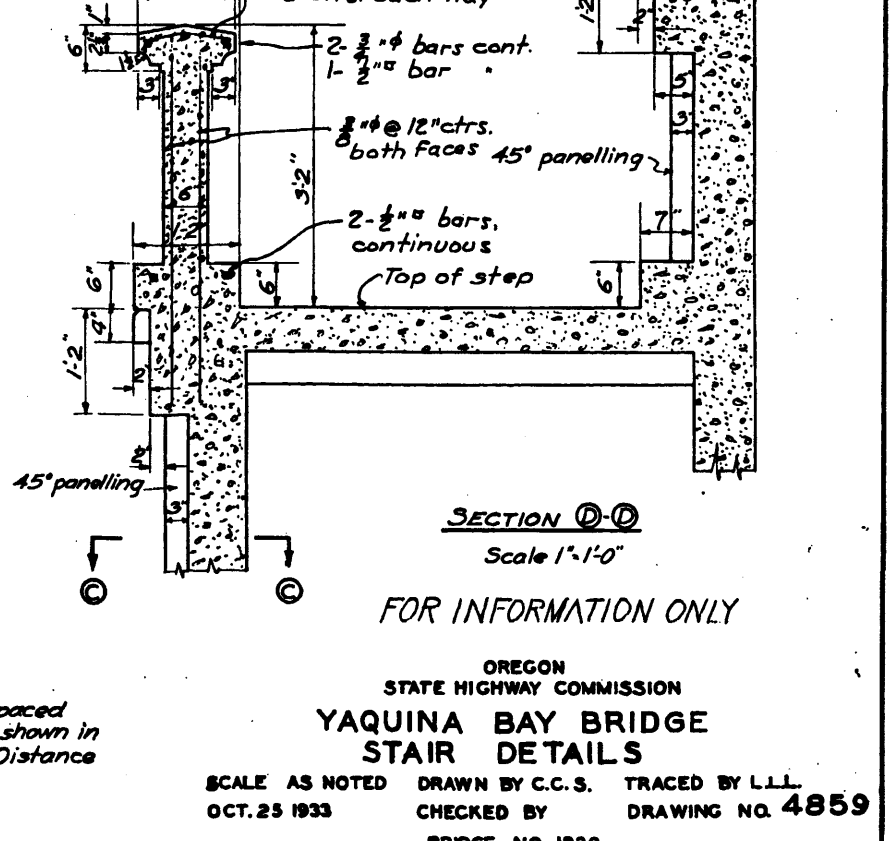
DO NOT SCALE.





FOR INFORMATION ONLY

OREGON
STATE HIGHWAY COMMISSION

YAQUINA BAY BRIDGE
STAIR DETAILS

SCALE AS NOTED | DRAWN BY C.C.S. | TRACED BY L.I.L.
OCT. 25 1933 | CHECKED BY | DRAWING NO. 4859
BRIDGE NO. 1820