Seventh Street Bridge Aesthetics Meeting #1

January 14, 2015

Agenda

- Housekeeping, Introductions and Agenda-Judith Buethe
- Welcome–David Leamon
- Project overview- Hans Strandgaard, PE
- Examples of bridge components and their significance-Will Henderson and Don MacDonald, FAIA
- Schedule and Opportunities for public review and feedback
- Questions and Answers
- Outline for Meeting #2

Purpose and Need

- Correct structural and hydraulic deficiencies, including restoring full truck carrying capacity
- Expand vehicular capacity of the 7th Street corridor
- Improve safety for vehicles, bicyclists, and pedestrians

Purpose and Need

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7th Street Bridge Project

Structural and Hydraulic Deficiencies

- Sufficiency rating of 2.0 (range is from 0 (low) to 100 (high)
- The low sufficiency rating is due to structural deficiencies due to excessive deflections, functional deficiencies (width), and load restrictions (4 tons)
- The structure is also vulnerable to collapse during an earthquake or flood event.

The sufficiency rating is one of the worst in California, and the structural and functional deficiencies must be corrected and load carrying capacity restored.

Bridge Deficiencies

Bridge Deficiencies

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Bridge Deficiencies

Purpose and Need

Vehicular Capacity of the 7th Street Corridor

- Important two-lane arterial roadway that carries traffic to and from downtown Modesto
- Currently, 15,719 average trips per day (ADT)
- Projected future ADT estimated at 23,000.
- Corridor will operate at unacceptable level of service “F” in the future if not widened
- Stanislaus Council of Governments 2011 and 2014 Regional Transportation Plans have identified the need to increase the 7th Street Bridge vehicular capacity from two lanes to four lanes

Purpose and Need

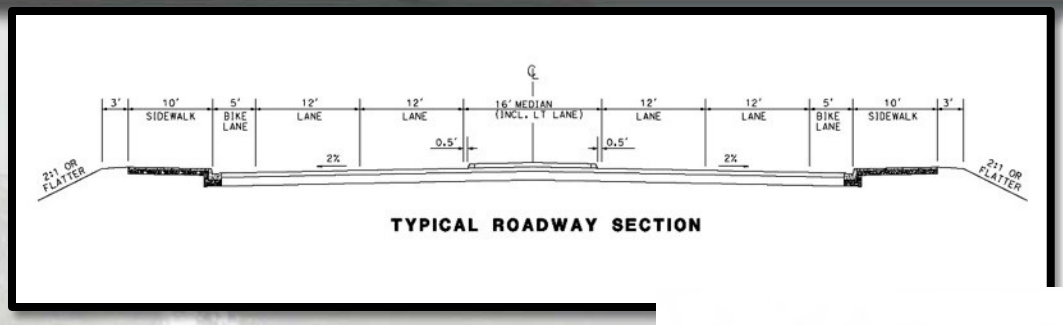
Vehicle, Bicycle, and Pedestrian Safety

- Narrow, substandard pedestrian walkway along each side
- Vehicles and bicycles have to share a single narrow travel lane with no shoulder
- The substandard walkways and lack of bicycle facilities is inconsistent with the City of Modesto Non-Motorized Transportation Master Plan, which calls for a complete network of bikeways, walkways, trails, and paths
- The Modesto Non-Motorized Transportation Master Plan designates a Class II Bike Lane along the 7th Street Bridge corridor.

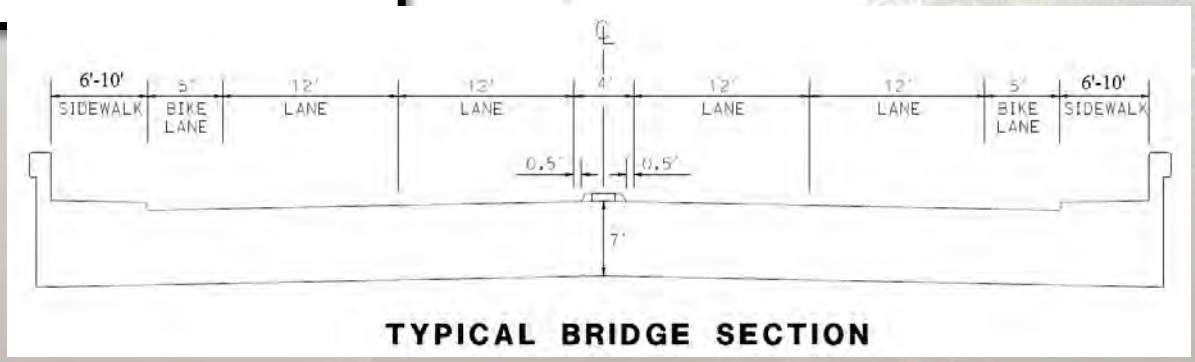
Bridge Deficiencies

Bridge Deficiencies

Proposed Facility



TYPICAL ROADWAY SECTION



TYPICAL BRIDGE SECTION

- 4-lane facility
- Design for 35 mph speed limit on 7th Street
- Accommodate trucks (both turning movements & weight)

100 Year Old Historic Bridge

- Bridge is eligible for listing in the National Register of Historic Places (NRHP)
- Eligible for listing in the California Register of Historical Resources (CRHR)
- Designed by well-known concrete bridge engineers John B. Leonard and William Day, and also featured unique architectural elements by architect Fay Spangler

How do we honor the old bridge? What should the new bridge look like if it will be there for the next 100 years?

Seventh Street Bridge Aesthetics Meetings

- Opportunity for the public to contribute ideas about how the replacement structure should look
- The ideas collected at today's meeting will be evaluated by the team's architect and then presented at aesthetics Meeting #2 for further discussion
- The ideas that are well received by the public during Meeting #2 will be considered during the final design of the new structure within the project funding limitations

Don MacDonald Architects

- Donald MacDonald is Principal of DMA.
  - 35 years of bridge architecture experience, AIA fellow
  - Master of Science in Architecture - Columbia University
- Will Henderson CA Licensed Architect
  - 15 years of experience.
  - University of Oregon
- The firm's projects have included:
  - New Bay Bridge
  - Cooper River Bridge in Charleston
  - 9th Street Bridge in Modesto
  - many more across the U.S.

Bridge Architecture Intro

1. Basic Bridge Elements

2. Bridge Viewpoints

3. 7th Street Bridge Design

Bridge Components

"When the history of our time is written, posterity will know us not by a cathedral or temple, but by a bridge."

- Montgomery Schuyler, 1877,

writing about John Roebling's Brooklyn Bridge

Abutments

Piers

Box Girders

Precast Girders

Arches

Structural Spans

Underside of Structure

Vehicle Lanes

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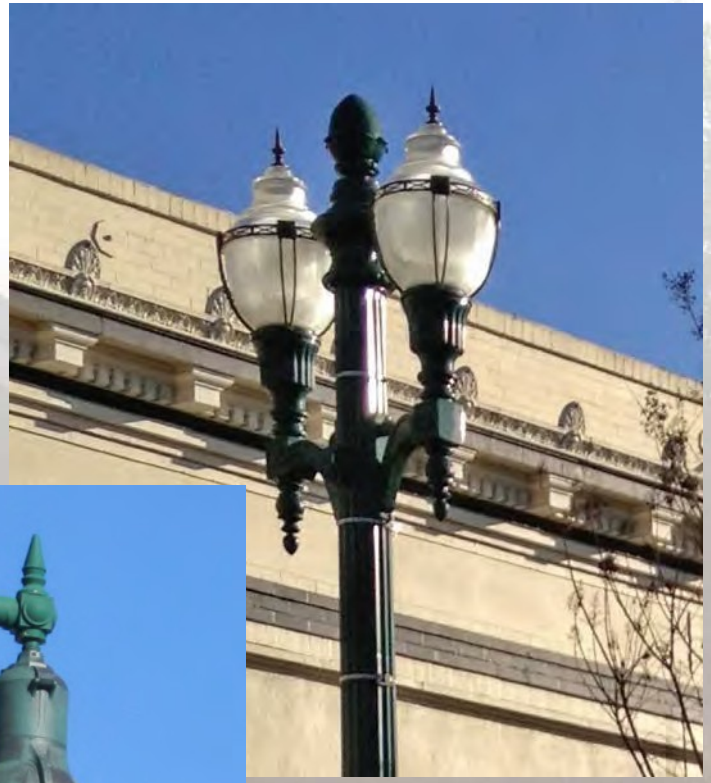
Pedestrian/Bicycle Lanes

Barriers

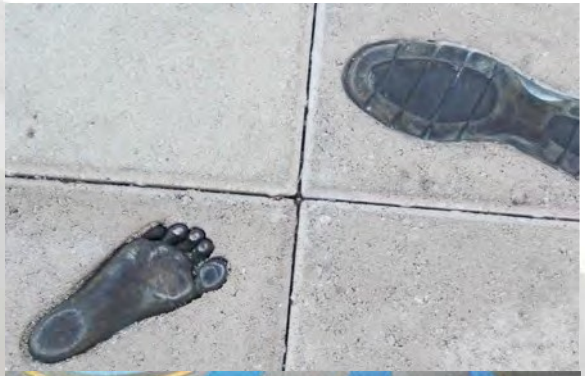
Safety Lighting



Traffic Signage

Overlooks

Public Art



Decorative Lighting

Color and Finish

History


HAER No. CA-158-3


PINE STREET BRIDGE
AT
HALLIDIE CROSSING
PREVIOUS THREE-HINGE STEEL ARCH BRIDGE
RECONSTRUCTED TO MATCH ORIGINAL DESIGN
(1903-1996)
CONTRACTOR
WEST COAST BRIDGE COMPANY
BENICIA, CA
DEDICATED NOVEMBER 16, 1996
THE CITY COUNCIL OF NEVADA CITY

Bridge Viewpoints

"When an individual forms an aesthetic impression of a bridge, where the bridge is viewed *from* will strongly affect his or her impression."

"Since the viewer's aesthetic reactions to the bridge will be almost completely created by his or her visual perceptions, we must be aware that what people *perceive* is not always what is *there*."

- Frederick Gottemoeller, 1998

Drivers' Viewpoint

Pedestrians' Viewpoint

Bicyclists' Viewpoint

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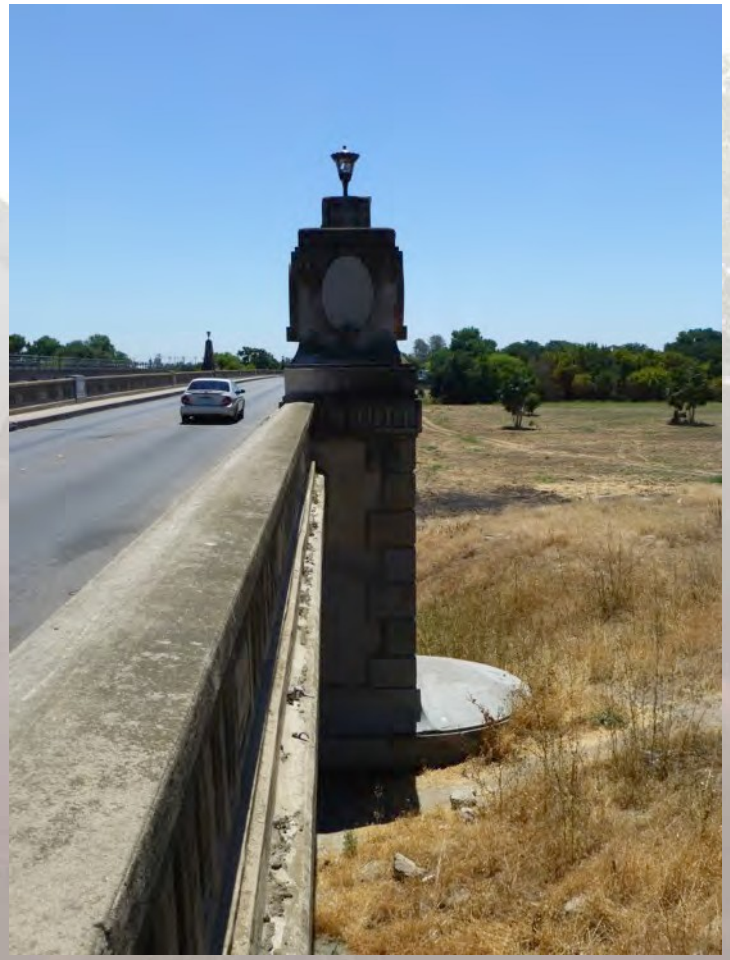
Viewpoint from a bridge



Park Users' Viewpoint

River Users' Viewpoint

Viewpoint From Afar

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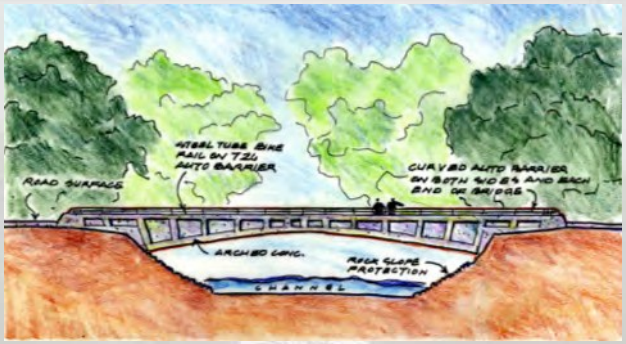
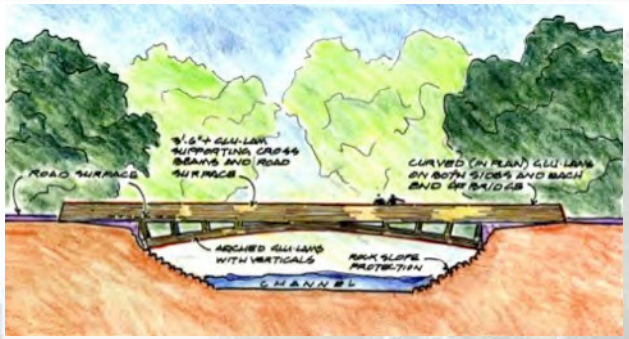
7th Street Bridge Design

Design Tools





Alternative 2A/2B - Existing Alignment-Close Bridge

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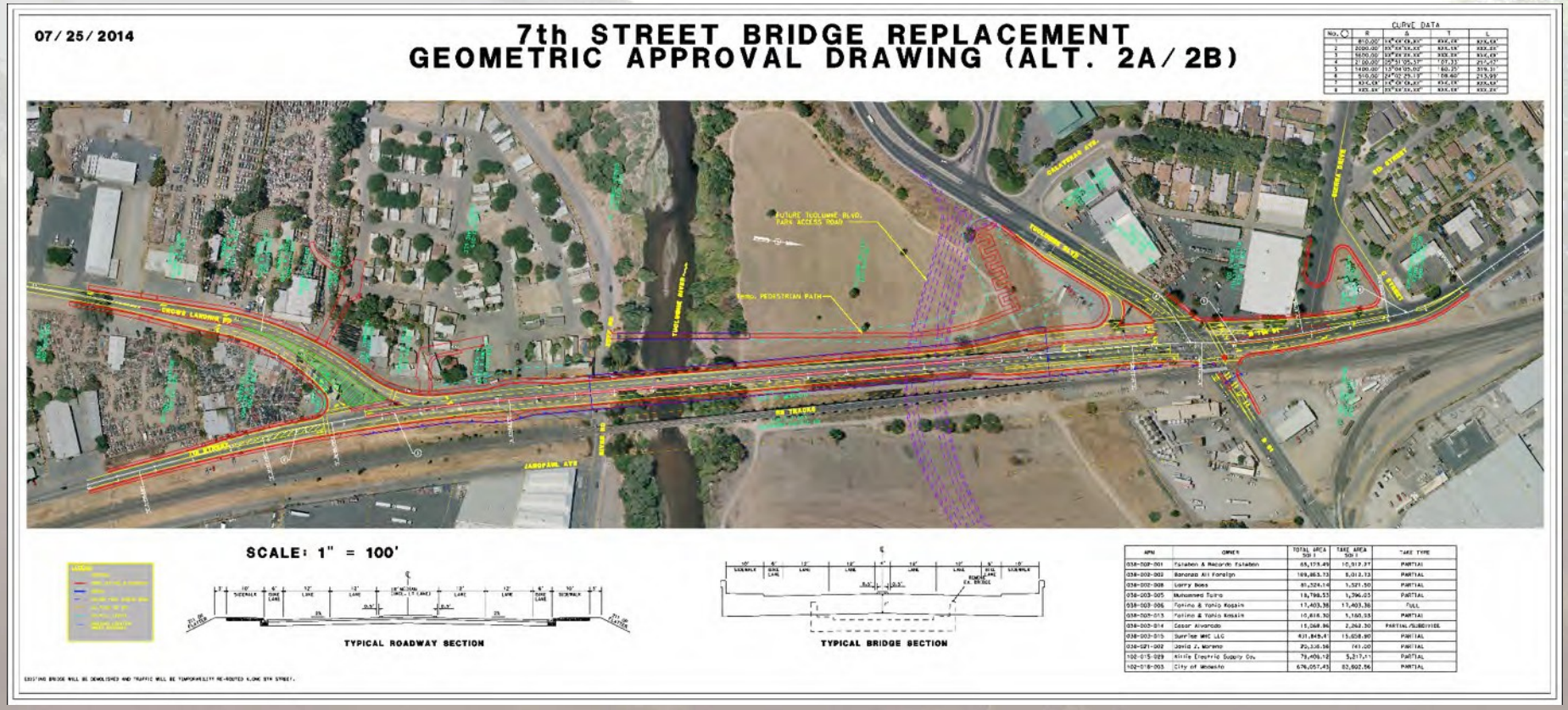

Bridge Alternative 2A

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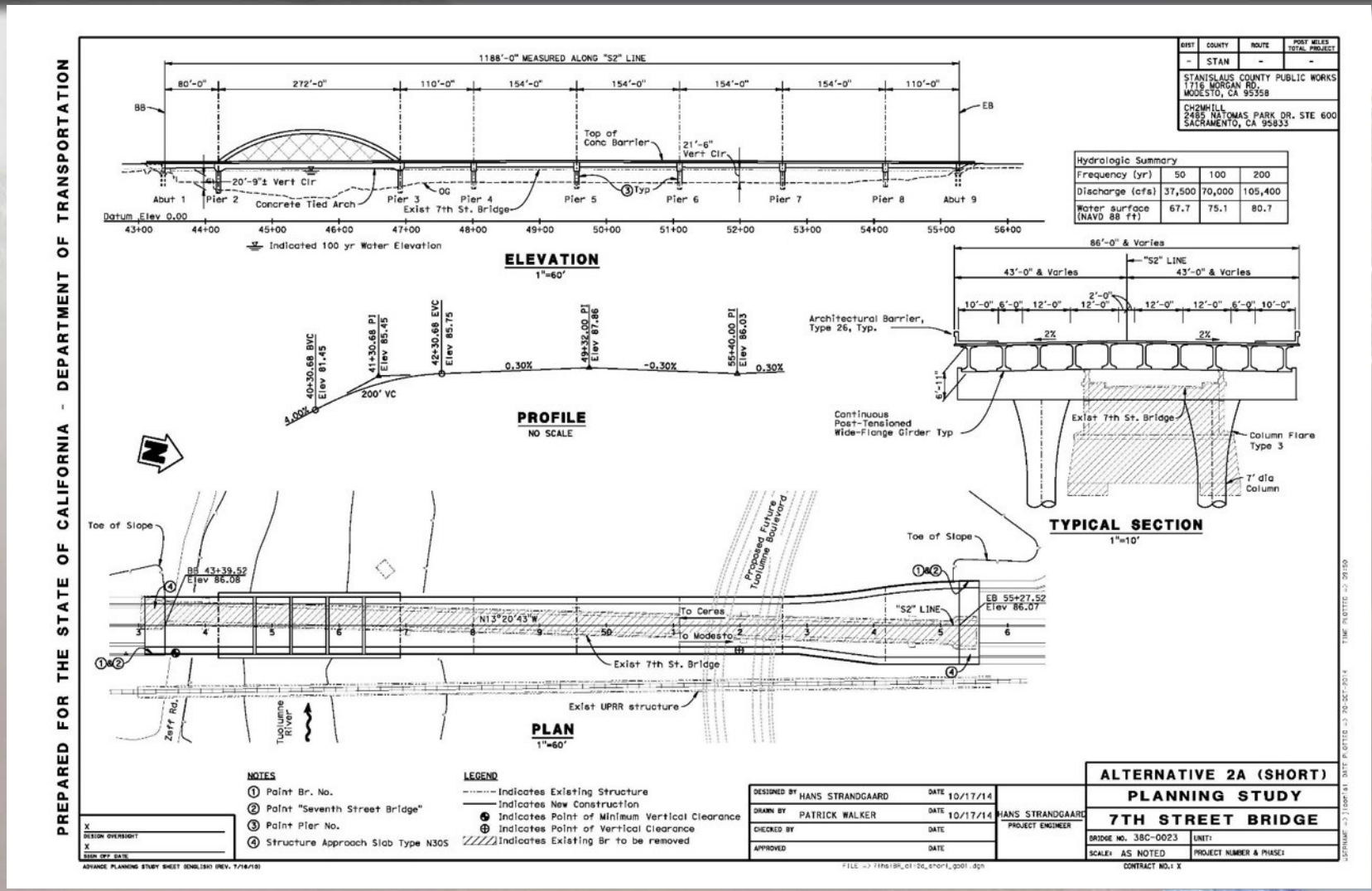

New 7th Street Bridge

Alternative 2A Rendering

Bridge Alternative 2B

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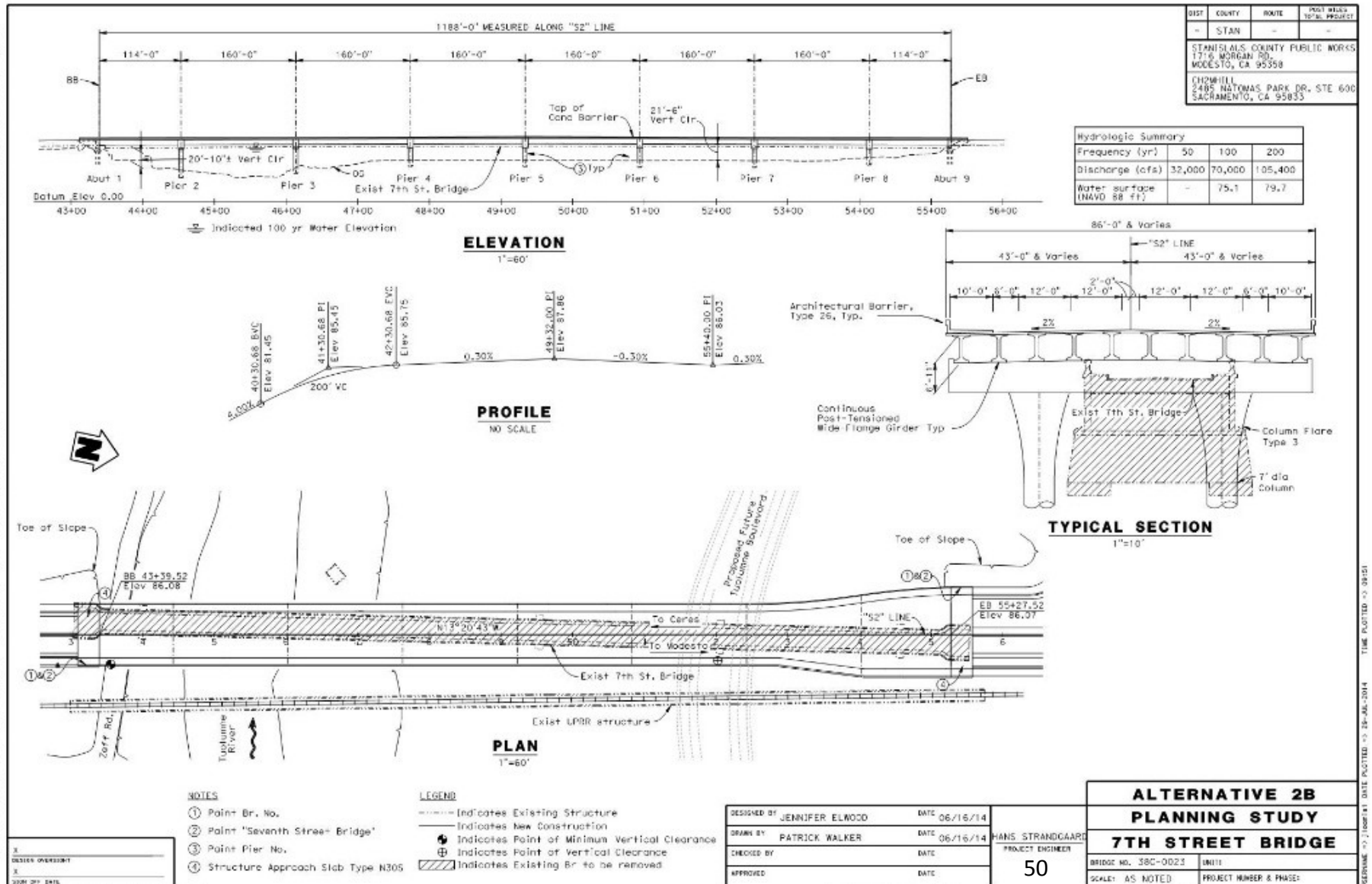
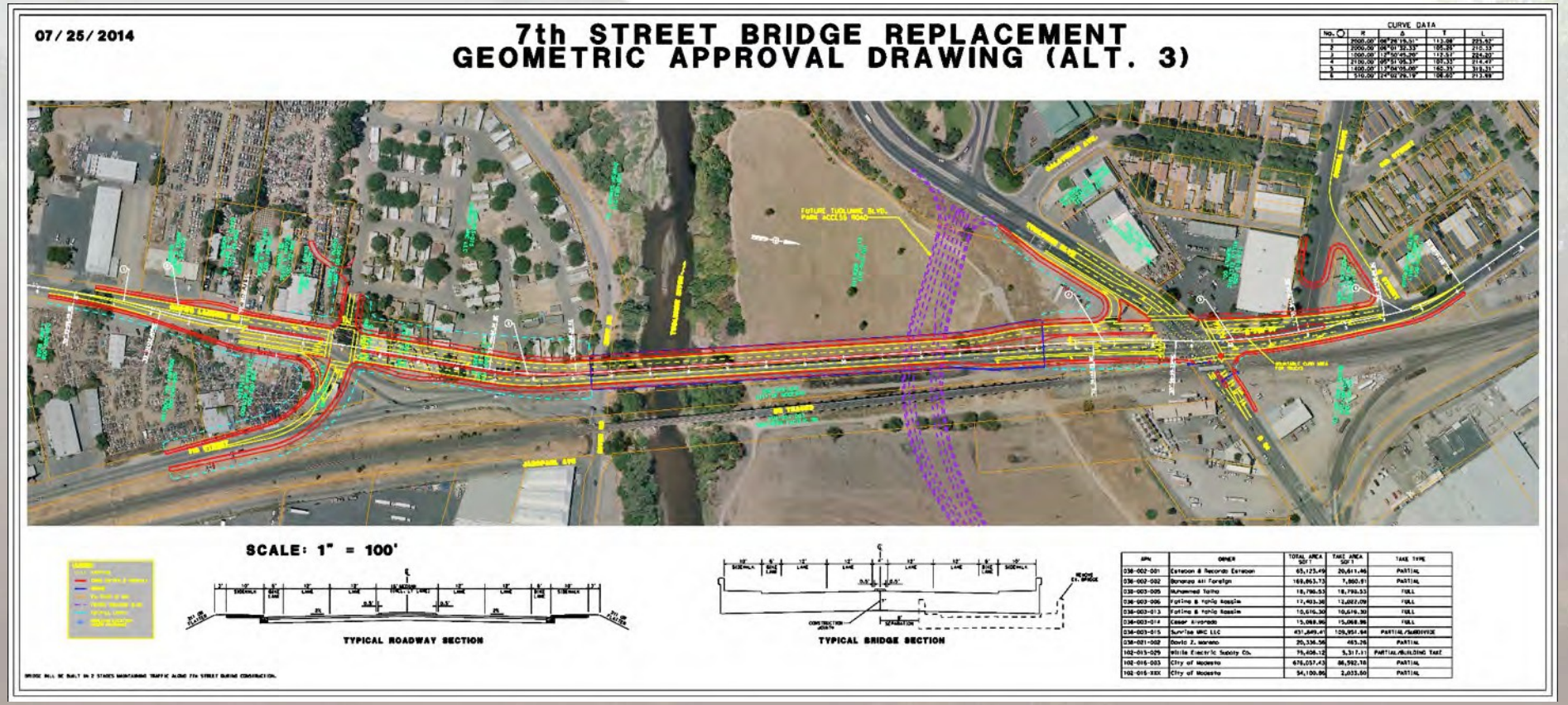


Alternative 3 - Existing Alignment (Staged)



Bridge Alternative 3

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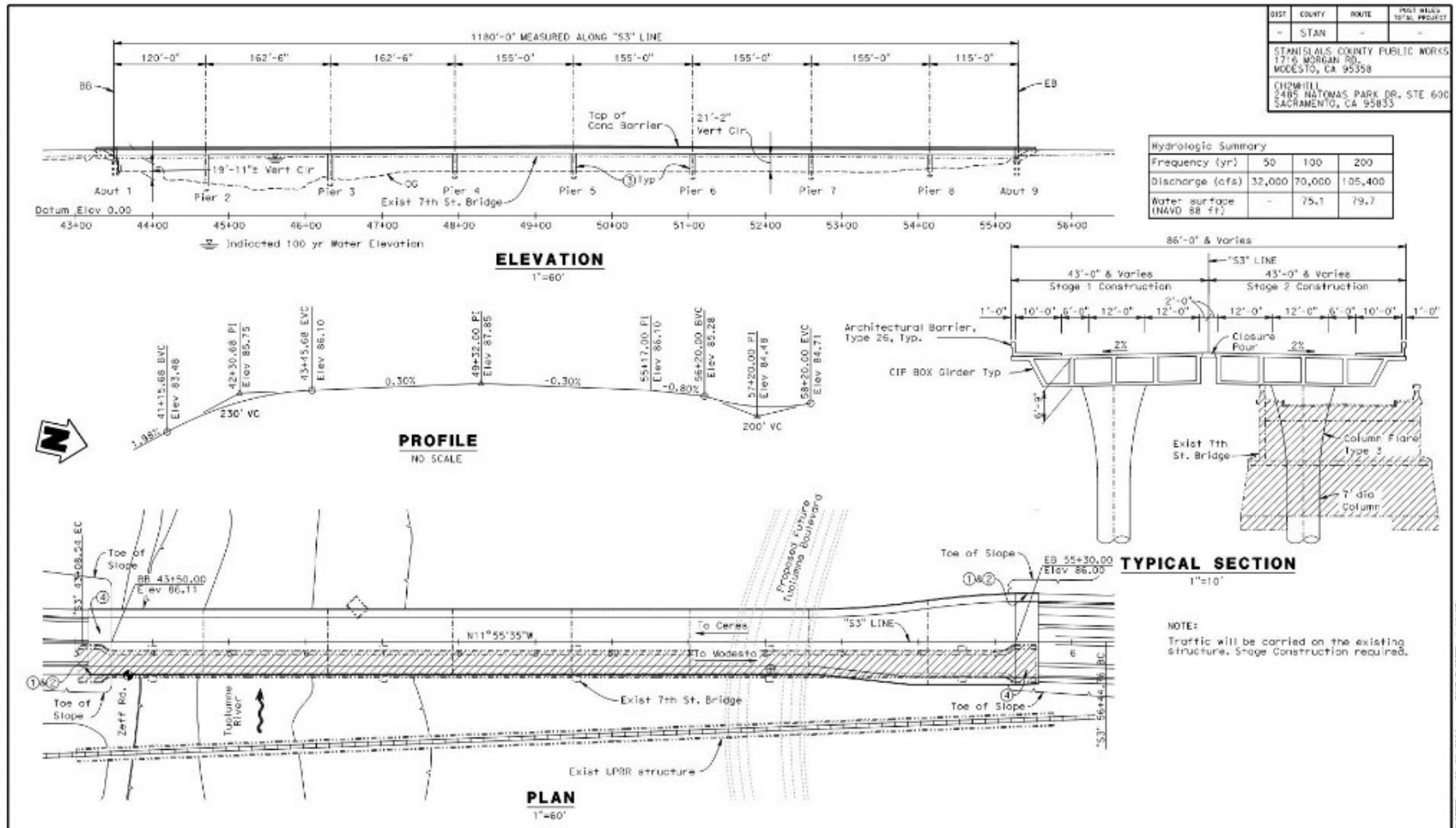

Alternative 4 - Rehabilitate Existing Bridge

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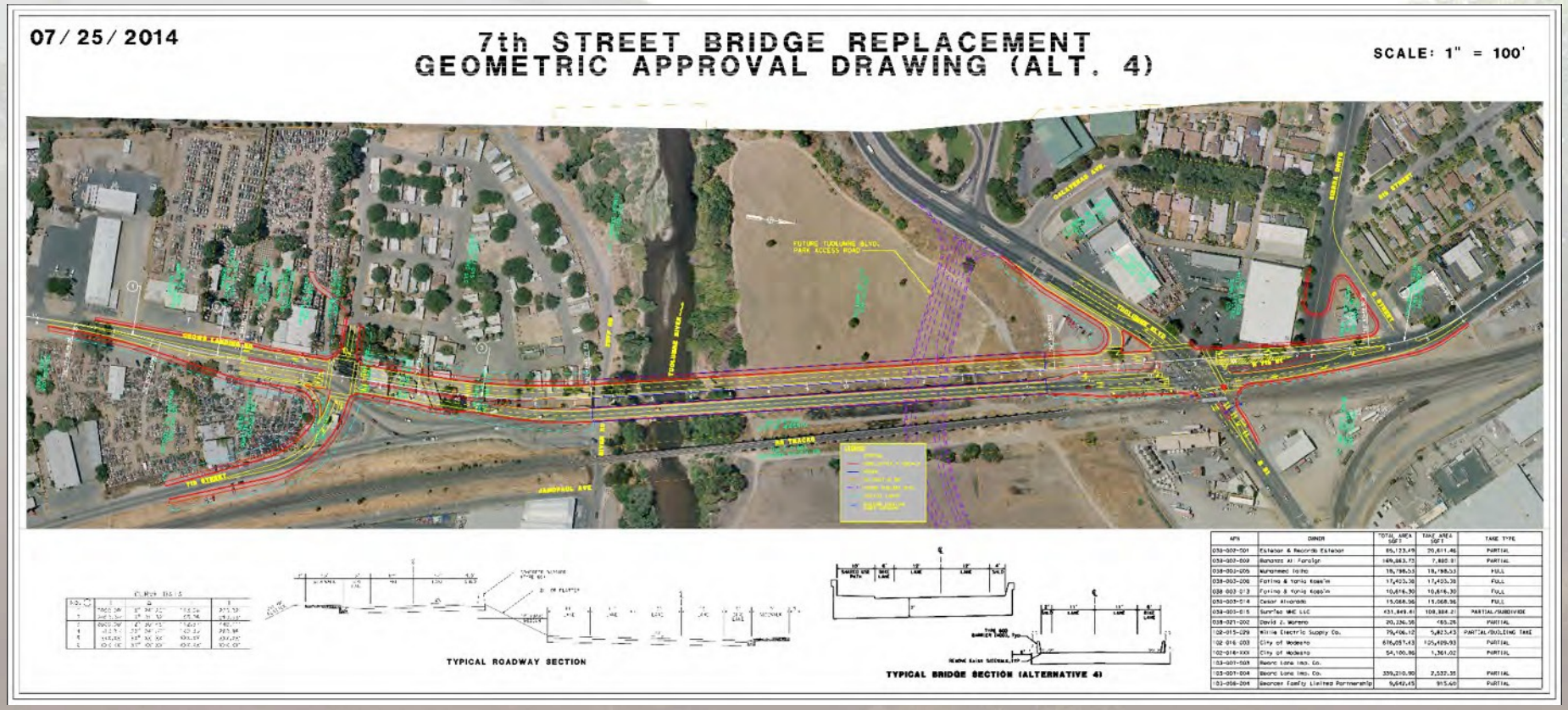

Bridge Alternative 4

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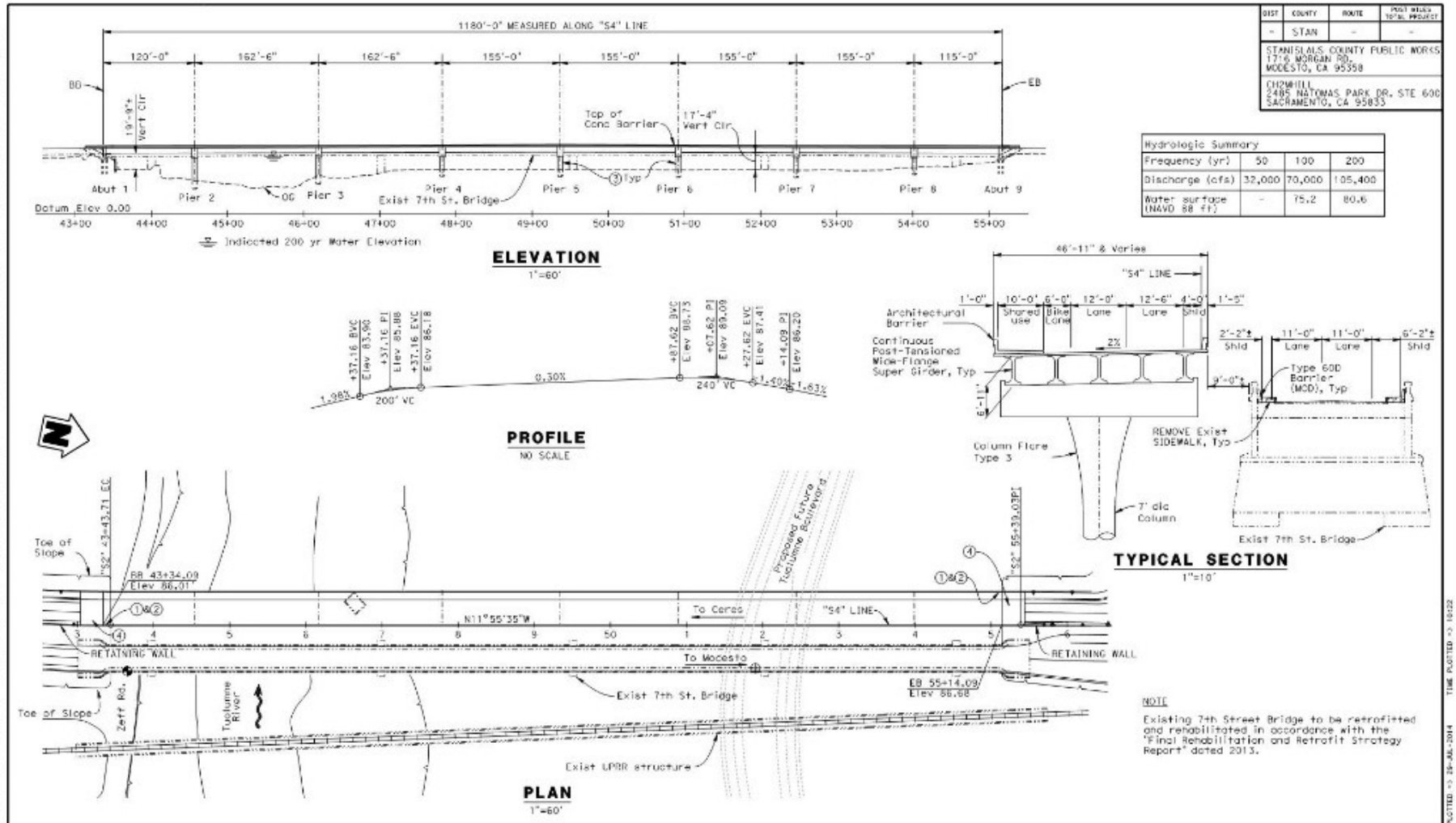
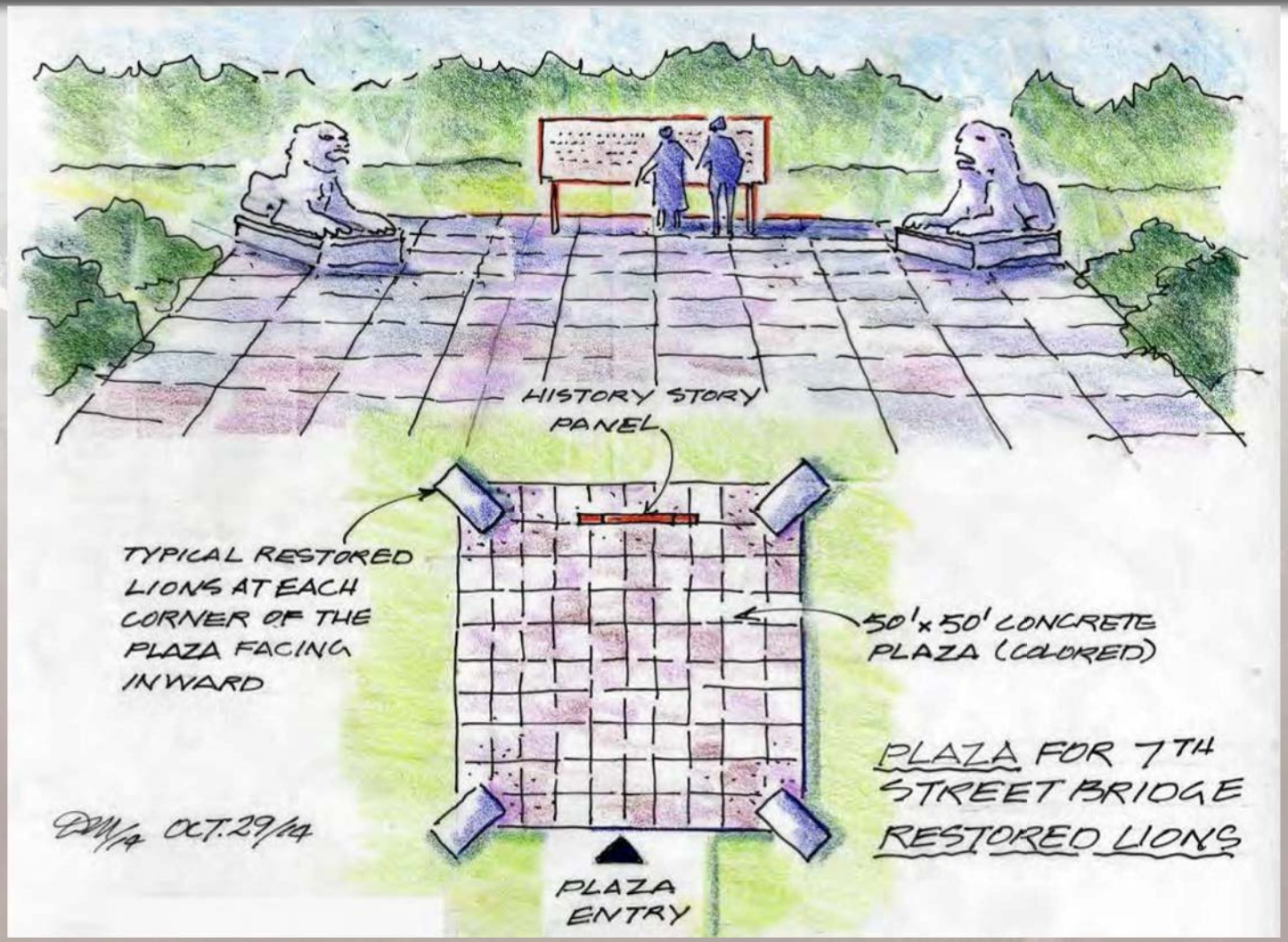


New 7th Street Bridge

Alternative 2B, 3, & 4 Rendering

New 7th Street Bridge Plaza



How does cost impact aesthetics? What aesthetic elements would you prioritize?

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Alternative	Bridge Cost	Project Cost	Staging	Type	Comments
2A	$42.6m	$55.6m	No	Arch Span, Precast Approaches	Temporary Pedestrian Bridge
2B	$24.0m	$37.0m	No	Precast Spans	Temporary Pedestrian Bridge
3	$32.3m	$50.0m	Yes	Box Girder	Built in two stages
4	$33.8m	$47.5m	Yes	Box Girder	Retrofit Existing Bridge

- Aesthetic improvements normally limited to 5% of bridge cost, so $1-2million maximum

What is the schedule?

• Alternatives Developed	2013-2014
• Environmental Studies	2013-2014
• Draft Project Report	Late 2014
• Environmental Doc complete	Late 2015
• Bridge Aesthetic Workshops	Jan and Feb,2015
• Type Select Bridge	Mid 2015
• Final Design	2015-2016
• Right-of-Way Acquisition	2016
• Construction	2017-2019

Public Involvement Opportunities

- ~~Community Advisory Group Meeting Oct 3, 2013~~
- ~~Public Scoping Meeting Oct 14, 2013~~
- ~~Public Comment Period on the Notice of Preparation thru Oct 30, 2013~~
- ~~Community Advisory Group Meeting Jan 9, 2014~~
- ~~Public Outreach Meeting (Alternatives) Feb 24, 2014~~
- Bridge Aesthetic Workshops in January and February 2015
- Public Comment Period on the Draft EIR in Summer 2015
- www.7thStreetBridge.org

Public Input and Review

- What aesthetic details are appropriate for this bridge in this community?
- Structure above and below the roadway
  - Prominent or discreet
- Bridge spans over the park and river
  - Use of the park by whom?
  - Use of the river by whom?
- Bike/pedestrian pathway
  - Mixed or separated by curbs or traffic barriers
  - Transparency of the handrails and auto barriers

Public Input and Review

- Location of pathways around outside or inside of the arches
- Patterns and colors on the pathways, piers, deck profiles, buttresses, and retaining walls
- Potential location of safety lights and decorative lights (no lighting under the structure)
- Signage and their support structures, light poles, and their relationship to the bridge's architectural vocabulary

Public Input and Review

- What new image is important to the stakeholders?
- Use of modern bridge heads similar in concept to the lions?
- Location of the outlooks on the bridge and the entries?
- What manmade and natural forms could influence the design of this new bridge to regionalize its place in this environment?

Public Input and Review

- Historic place making for the reuse of the four landmark lions and their pedestals?
  - Location should be out of the lower flood plain
  - Location would also have an extensive storyboard showing the history of the existing bridge

Questions and Answers (30 minutes)

- Questions and Answers?
- On the cards handed out, please write down your thoughts and ideas about the aesthetics of the bridge and the bridge elements discussed

Meeting #2

- Agenda will include results of Meeting #1
  - Input from the stakeholders is used to make the decisions influencing the final bridge design
- Illustrate three bridge types detailed in full elevation (tied arch, box girder, and precast girders)
- Illustrate close-up details of these structures
  - Box girder bridge – superstructure and substructure
  - Precast girder bridge – superstructure and substructure
  - Tied arch bridge – superstructure and substructure
  - Abutment walls

Meeting #2

- Illustrate bike/pedestrian sidewalk concepts
- Illustrate the outside pathway and the inside pathway at the tied arch
- Illustrate the patterns and colors on the pathways, piers, deck profiles, buttresses, and retaining walls
- Illustrate options for safety & decorative lighting
  - Combined lighting for above
  - Separate LED fixtures for the safety and decorative lighting

Meeting #2

- Illustrate modern bridge heads with regional significance
- Illustrate options for outlook locations
  - At the bridge entries
  - On the structure, over the river, over the park
- Illustrate options for the historical place marking for the landmark lions
- Meeting #2 will be held in February or March

7th Street Bridge Design