

**CITY OF CARPINTERIA  
ARCHITECTURAL REVIEW BOARD  
Meeting of July 16, 2009**

*Agenda Item #2*

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**COMMUNITY DEVELOPMENT DEPARTMENT  
PROJECT REVIEW**

**Planner:** Nick Bobroff

**Project:** Eighth Street Pedestrian Bridge Replacement; 07-1385-CUP/CDP  
**Address:** Terminus of Eighth Street and Calle Ocho at Carpinteria Creek  
**Applicant:** Charlie Ebeling, Public Works Director

**Project Review:**      Conceptual  
                               Preliminary  
                               Final

**PROJECT DESCRIPTION:**

This is the final review of a proposal to replace the existing 172-foot wooden Eighth Street pedestrian bridge with a new 165-foot steel arch-style bridge. The proposed bridge would be situated along the same approximate alignment as the existing bridge. The arch would be anchored into abutments at the top of the bank and would provide support for the deck. Total vertical rise of the arch is approximately 17 feet from the top of the deck to mid-span. The bridge would have a clear deck width of five feet six inches and a railing height of 42 inches.

The bridge framing, outriggers, arches, cables and associated hardware supporting the bridge would be constructed of steel. Handrails, posts and the deck flooring would be constructed of ipê hardwood (*Tabebuia* sp.). Concrete abutments constructed on top of Tubex Grout Injection (TGI) piles would be anchor the bridge at each end into the creek banks. The outer edge of the abutments would be above the current ground levels, necessitating the importation of approximately 100-150 cubic yards of backfill to slightly raise the grade at the bridge approach to provide a smooth, gentle transition from Eighth Street and Calle Ocho. The exposed concrete abutments would feature a river rock patterned finish in standard gray concrete.

An eight-inch water line would be relocated to the underside of the bridge outriggers to allow the Carpinteria Valley Water District to abandon their existing line which runs underneath Carpinteria Creek. Existing overhead lines will remain at this time although the City is continuing to explore options for the future relocation of these utilities.

Two willows and one sycamore would need to be removed to provide sufficient clearance for the new bridge. Five additional willow would be pruned to provide temporary clearance for construction. The large existing three-pronged sycamore will be protected in place. Ten new sycamores will be planted in the construction zone to make up for the loss of the one

sycamore and the pruned/removed willow shoots will be replanted in the construction zone as well. Non-native weeds within the work area will be removed and replaced with native vegetation.

Plans are attached as Exhibit A

## **PROJECT HISTORY:**

### *Architectural Review Board*

The project has most recently been reviewed by the ARB on October 25<sup>th</sup>, 2007. At the October ARB meeting, the design team presented revised plans showing how some of the ARB's previous comments (from the September ARB meeting) could be incorporated into the project. These changes included eliminating the inward bend of the arches and replacing the diagonal members and safety mesh for the handrails with wood pickets. The applicants also provided various concrete stain and formliner samples for the abutments. Several design modifications such as changing the shape or size of the arch tubes or narrowing the outriggers were deemed to be infeasible due either to cost or constructability/safety concerns.

After discussing the various aspects of the bridge design and taking public comment, the Board ultimately recommended preliminary approval of the design with the following comments:

- Pursue the design with the picket fence railings and the compound arch;
- Use a natural stone finish for the exposed concrete abutments;
- Consider ways to "square up" the I-beams;
- Hide or obscure the turnbuckles;
- The ARB would prefer to see square or rectangular arches used if feasible; and
- As an advisory, the Planning Commission should weigh their options between pursuing the proposed design and maintaining the existing bridge, or if necessary, replacing it like for like.

Copies of the Minutes from the September 27 and October 25, 2007 ARB meetings are attached as Exhibit 2.

### *Planning Commission*

The Planning Commission reviewed the project on March 10, 2008. After numerous comments from the public and a lengthy discussion amongst staff and the commissioners with respect to City policies, environmental regulations, accessibility requirements, building and safety codes and permit requirements from other government agencies, the Commission deadlocked in a split two-two vote, resulting in a procedural denial of the project.

### *City Council*

The City Manager appealed the Planning Commission's procedural denial to the City Council to allow the Council to hold a *de novo* hearing on the matter. Over the course of two hearings (March 10 and April 14, 2008, respectively), the Council took public comment from numerous citizens and weighed the pros and cons of two possible bridge designs: the arch-style bridge proposed by the City and a modified H-truss bridge design as requested by a group of concerned community members.

The Council ultimately voted to continue moving forward with the arch bridge but placed the following additional conditions on the project:

- The clear deck width of the bridge is to be reduced from six feet to five feet six inches;
- Existing native trees within the project zone are to receive the utmost protection during construction;
- Construction is to be expedited in order to minimize impacts to the adjacent neighborhoods and the environment; and
- The location of the abutment on the east bank (Calle Ocho side) is to be revised (if necessary) to avoid any buried cultural resources and to avoid the need for removing any of the trunks of the three-trunk sycamore.

### *California Coastal Commission*

The City Council's approval of the project was appealed to the Coastal Commission by a group of community members. At a public hearing on July 10, 2008, the Commission voted to find no substantial issue, thereby denying the appeal and upholding the City Council's approval. No changes were made to the project by the Coastal Commission.

### **PROJECT ANALYSIS:**

As requested by the Board, the final design for the bridge incorporates the compound arch (rather than the parallel arch) and features the ipé picket railings along the bridge and ramps. A condition was added during the environmental review process requiring that the ipé hardwood used for the decking and railing be certified as being sustainably harvested. This condition has been noted in the special provisions of the bid contract to ensure its compliance. A sample of the ipé hardwood will be available at the meeting for the Board to examine. The hardwood used on the bridge will be treated with a thin coating of tung oil to further help weatherproof it.

A river rock pattern form liner has been selected for the exposed portions of the concrete abutments. A four-foot by five-foot sample of the form liner to be used will be brought to the meeting for the Board's review. The plans call for using natural gray concrete for the abutments and coating the exterior of the exposed abutments with an anti-graffiti treatment such as Rainguard Products Co., "Vandal Guard" or Sonneborn-Contect,

“Sonoshield,” both of which are water clear, non-yellowing, non-flammable, water-based coatings suitable for use on concrete masonry surfaces and exposed metal surfaces and compliant with APCD standards. Chain link fencing will be used on top of the exposed abutments to discourage access to the bridge arches and outriggers.

The bridge structure is to be made primarily of corrosion-resistant, self-weathering grades of steel (A588, A242 or A847 as noted on the Summary of Steel Types table included as part of Exhibit 1). The arch tubes were not available in a self-weathering grade and will instead be carbon steel (A53 GR B or A106). The arch tubes will however be painted a rust color to match the self-weathering structural steel. Color samples for several available shades of rust-colored paint will be presented to the Board at the Meeting for their input as well as a sample of the self-weathering steel to compare the paint chips against. The hanger rod hardware including the rod, clevis, pins and turnbuckles are specified as galvanized steel and are not proposed to be painted at this time. Similarly, most of the bolts used on the bridge are specified as galvanized. Stainless steel woodscrews are to be used for the decking.

With respect to the structural changes requested by the ARB, the design team had previously explored alternative tubing shapes but noted cost and/or constructability were a concern with the square, rectangular and triangular arch tubing sections. The requested changes to the I-beams and the turnbuckles do not appear to have been incorporated into the final plans.<sup>1</sup> The reduction in deck width required by the City Council has been incorporated into the final drawings. The bridge now features a clear deck width of five feet six inches rather than six feet as previously presented to the Board. The total width of the outriggers remains at approximately 11 feet.

The bridge alignment has been moved slightly downstream to allow for the preservation of the triple-trunk sycamore in its entirety as specified by the City Council.<sup>2</sup> The revegetation and replanting plan has also been updated to show the proposed locations for the 10 new sycamores to be planted in the construction zone to make up for the loss of the one existing sycamore under the existing bridge. The revegetation plan also shows that blackberry and California rose are proposed to be planted around the bridge abutments. These planting should help to discourage unauthorized access to the abutments and underside of the bridge.

At this time, only the Carpinteria Valley Water District’s water main will be relocated to the underside of the bridge (on the underside of the outriggers). The City is continuing to discuss options for providing additional conduits under the bridge to allow other utility

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<sup>1</sup> Additional details about revising the I-beams and hiding or obscuring the turnbuckles were not available at the time of writing on this staff report. Staff or the design team will provide additional details at the ARB meeting on these matters if available.

<sup>2</sup> The note on sheet 20 of the attached plans that calls for the removal of the three-trunked sycamore is a mistake. A memorandum from the City to the contractor was issued to clarify that the triple trunked sycamore is to be protected in place and any trimming or pruning of this tree may only be done upon prior approval by the City Council.

providers to relocate their overhead lines to the underside of the bridge but nothing has been finalized at this time.

**SUMMARY OF ISSUES:**

- Exterior finish for exposed abutments;
- Paint color for arch tubes;
- Color/finish for bridge structure (i.e., hanger rod hardware, etc.); and
- Location of water line on underside of bridge.

**STAFF RECOMMENDATION:**

The Board's should provide input on the final working drawings and applicable details and make a recommendation for final approval with their comments attached.

**ATTACHMENTS:**

Exhibit A – Proposed final working drawings and relevant sections of the Standard Plans and Specifications for the bridge fabrication.

Exhibit B – ARB Minutes from the September 27 and October 25, 2007 meetings

# CITY OF CARPINTERIA, CALIFORNIA

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Date March 9, 2009

To: All Plan Holders

Sender: Thomas C. Evans, Project Manager

Subject: 8<sup>th</sup> St. Pedestrian Arch Bridge Project

*Members of the City Council*

Gregg Carty - Mayor

Al Clark - Vice Mayor

J. Bradley Stein

Joe Armendariz

Kathleen Reddington

## ADDENDUM #1

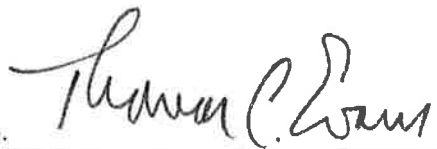
The following changes to the Special Provisions are hereby made as part of the Contract Documents:

1. **Contract Time period** - The original specifications called out a 145 working day contract period. This addendum changes this and splits the contract period into two separate timelines. The **procurement of materials, offsite fabrication, and delivery of the bridge** to the site will be considered as one contract period. This contract time shall be **180 calendar days**, which start with the initial "Notice to Proceed" sent by the City when the contracts are fully executed.  
  
Because the site work start date is yet unknown, the creek bank clearing, abutment installation and the bridge installation shall be a separate contract period. The City shall issue a second "Notice to Proceed" at such time as clearance has been obtained from the California Department of Fish and Game. The permit allows for work after September 15<sup>th</sup>, 2009, however the City may be able to move that date up, if biological surveys show no bird nesting or sensitive species. The contract period for the **site work and bridge installation shall be 90 calendar days**. Changes to the City contract form have been made and are included in the spec page substitutions attached hereto.
2. **Liquidated damages** – By way of this addendum, the liquidated damages for both contract periods spelled out above are hereby changed to **\$2,000** per calendar day. Bidders are reminded that the existing bridge is used daily by many of the people in the community and once it is taken out of service, there will be a need to complete the project with all due diligence. In addition, the various permits that have been obtained by the City for this project have limitations on working during wet winter live stream flows.
3. **Submittals** – Paragraph 2-5.3.1 is hereby amended to add the following items to the list of required submittals:
  - a) River rock form liner
  - b) Source and sample of rip rap rocks
  - c) Graffiti control coating - abutments
  - d) Ipe wood – certification from the supplier that the wood being provided to this project is considered as having been sustainably harvested by the Forest Stewardship Council (FSC)
  - e) Proposed import fill material
  - f) Storm Water Pollution Prevention Plan, including a designated washdown area
  - g) ESA sign
  - h) Paint for Steel Piping
4. **"County" to "City"** – paragraph 7-8.6.3 last word of section to be changed.
5. **delete the word "prefabrication"** – from paragraph 201-1.1.4

6. **Chain Link Fence** – delete section 206-6 entirely from special provisions; see plan sheet 6 for chain link fence requirements.
7. **Daily Construction Time** – All references to 7:30 AM as the start of the work day are hereby modified to say 7 AM. The allowable window of working time is from 7AM to 5 PM Monday through Friday, except on designated holidays.
8. **Detour Plan and Signage** – The Contractor shall be responsible for selecting, supplying, and maintaining the proper signage for the detour needed while the 8<sup>th</sup> street crossing is out of service.
9. **Cultural resources** – There is a possibility of finding cultural remains during the clearing and excavation process. The Contractor shall cooperate with City supplied monitors and professionals and suspend work in those areas (if any) where remains or artifacts are found.
10. **Training sessions** – The City biologists or other professionals may from time to time provide training and information exchanges with the Contractor's workers. The Contractor shall set aside the time needed for these sessions and direct the workers to attend.
11. **Ipe wood decking treatment** – The Contractor shall apply a coat of tung oil to all ipe wood surfaces, prior to acceptance by the City. The costs for said treatment shall be included in the bid price for the installation of wood decking (bid item #42).
12. **Replacement pages for the specifications** – attached are revised pages 14, 15, 16, 86, 94, and 101-104. These new pages are to be used in lieu of the previous versions.
13. **Replacement sheets for the plans** – attached are revised sheets #1, 2, 3, 4, 6, 7, 8, 9, 10, 12, 14, 16, 17, 20, and 21. The previous version of each of these sheets is now obsolete.

END OF ADDENDUM #1

Signed: \_\_\_\_\_



Thomas C. Evans, P.E.  
Project Manager

Bridge decking shall be nominal **5/4x6 planking (1 inch by 5.5 inches)** ~~2x8 planking (1.5 inches by 7.5 inches)~~ **with 2x2 (1.5"x1.5") and 2x6 (1.5" x 5.5")sleepers** and railing shall be nominal 4x4 (3.5 inches by 3.5 inches) and nominal 4x6 (3.5 inches by 5.5 inches) of material made from Ipe hardwood, also known as Brazilian Walnut, or approved equal, with the following characteristics:

Bending Stress: 4,100 psi

Shear Stress: 440 psi

Modulus of Elasticity: 3,010,000 psi

Density: 78 pcf

## **SECTION 205 PILES**

The following subsection shall be added to Section 205:

### 205-4 PIPE PILES

205-4.1 Pipe Piles – The following paragraph shall be added to Subsection 205-4:

The type of pile to be used for this project shall be of the "Tubex Grout Unit," or Augered Cast in Place Pile or approved equal. Pipe diameter and thickness shall be per the contract plans. Substitution shall be reviewed and approved by the Engineer prior to fabrication of materials.

Contractor shall submit pile calculations for review and approval by the Engineer based on the load demand shown on the plans in the Pile Data Table prior to fabrication of materials.

## **SECTION 206 MISCELLANEOUS METAL ITEMS**

### 206-1 STRUCTURAL STEEL, RIVETS, BOLTS, PINS, AND ANCHOR BOLTS

Structural steel, miscellaneous metal, bolts, and anchor bolts shall conform to the provisions in Section 206-1 and these special provisions.

206-1.2 Structural Steel – Unless otherwise specified all steel pipe and tube material shall conform to ASTM **A106 GR B** ~~A618 GR 3~~ and all rolled shapes shall conform to ASTM **A992 W** ~~A618 GR 3~~.

### BRIDGE RESTRAINER UNITS

For abutment restrainers refer to 2006 Caltrans Standard Specifications, Section 75-1.035.