

RESOLUTION NO.

Adopted by the Santa Cruz County Regional Transportation Commission
on the date of January 5, 2006
on the motion of Commissioner
duly seconded by Commissioner

A RESOLUTION AUTHORIZING THE EXECUTIVE DIRECTOR TO ENTER INTO AN
AGREEMENT WITH HNTB CORPORATION AND ADD FUNDS TO THE MILLER,
OWEN AND TROST CONTRACT FOR ADDITIONAL STRUCTURAL ANALYSIS WORK
ON THE SANTA CRUZ BRANCH RAIL LINE

WHEREAS, Systra Consulting and Biggs Cardosa Associates
produced a structural assessment report of the structures on the
Santa Cruz Branch Rail Line and presented the report to the
Regional Transportation Commission at its August 4, 2005 meeting;

WHEREAS, the structural assessment report recommended
additional detailed structural analyses of some structures;

WHEREAS, Union Pacific has agreed to pay up to \$30,000 of
the additional structural analysis work for the La Selva Beach
Trestle, to extend the right of entry agreement to perform the
additional structural analyses work, and to release the final
report to the public;

WHEREAS, RTC staff investigated and verified with Santa Cruz
County and Caltrans staff that the RTC may contract with HNTB for
the structural assessment work without a competitive bidding
process;and

WHEREAS, the RTC has made the necessary Fiscal Year 05-06
budget amendments to produce the recommended additional
structural analyses and peer review of those analyses;

BE IT RESOLVED BY THE SANTA CRUZ COUNTY REGIONAL TRANSPORTATION
COMMISSION:

1. The Executive Director is hereby authorized to:
 - a. Enter into an agreement with HNTB to produce the recommended additional structural analyses as shown on Exhibit A, Scope of Work, at a maximum amount of \$201,110, and to make the necessary amendments to that agreement to ensure completion of the project, provided that those amendments are within the original scope and maximum amount of the agreement; and
 - b. Amend the contract with Miller, Owen and Trost to add \$6,000 for structural assessment work including peer review by Biggs Cardosa Associates of the additional structural analyses to be produced by HNTB.

AYES: COMMISSIONERS

NOES: COMMISSIONERS

ABSTAIN: COMMISSIONERS

ABSENT: COMMISSIONERS

Ellen Pirie, Chair

ATTEST:

Pat Dellin, Secretary

Distribution: Auditor-Controller
SCCRTC Fiscal
Contractors

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Exhibit A

SCOPE OF SERVICES (Revised October 20, 2005)

Task 1. Project Management and Administration

HNTB will perform activities necessary to plan, direct, coordinate the work, and provide progress reporting.

- a. Supervise, coordinate, and monitor inspection activities and engineering analysis activities.
- b. Attend meetings with SCCRTC, UPRR and other Agencies as needed. A maximum of 6 meetings is proposed.
- c. Prepare monthly progress reports and invoices.
- d. Prepare project schedule and provide updates.
- e. Administration and Document control.
- f. Quality Assurance/Quality Control in accordance with HNTB's Northern California Best Practices QA/QC Manual.

Task 2. Data Collection and Document Review

HNTB will collect and review all existing data furnished by SCCRTC, UPRR, and other Agencies. At a minimum, HNTB will review the following information:

- a. As-Built Structural Plans.
- b. UPRR Bridge Inspection Records.
- c. UPRR Bridge Book and Maintenance Records.
- d. Reports by Biggs Cardosa.
- e. Reports by Modjeski & Masters.
- f. Correspondence.
- g. Geotechnical Information.
- h. Other pertinent information furnished by SCCRTC or UPRR.
- i. Collect and review as-built plans for the following bridges: MP 1.06b, MP 9.09, MP 15.89a, MP 15.89c, MP 15.89e, MP 19.43a, and MP 19.43b. HNTB does not anticipate that any as-built plans will be available for the retaining walls and the following bridges: MP 10.45, MP 15.89b, MP 15.89d, MP 23.54.

HNTB will work with SCCRTC and UPRR to obtain copies of the above information and reports. Access to the as-built plans indicated in item (i) above is critical to this project. The proposed fee is contingent upon access to the as-built plans indicated above, and the inability to review the as-built plans will require an increase in the proposed fee. HNTB understands that the other information listed above in (b), (e), (f), (g), and (h) may not be available, and the proposed fee is not contingent upon access to those items.

Task 3. Field Inspection

HNTB will perform a field inspection of the following structures:

BRIDGES TO BE STUDIED

MP 1.06b	300', 5 span steel through girder over Pajaro River	Priority 2
MP 9.09	340', 9 span, deck girder at La Selva Beach (Leonard Gulch)	Priority 1
MP 10.45	240', 16 span BDT, 3 tier	Priority 1
MP15.89a	120', 3 span precast box girder over Capitola Ave	Priority 2
MP 15.89b	215', 15 span ODT, 4 tier	Priority 2
MP 15.89c	148', 1 span deck truss over Soquel Creek	Priority 2
MP 15.89d	40', 3 span ODT, multi tier	Priority 2
MP 15.89e	60', 1 span prestressed concrete trough over Wharf Road	Priority 2
MP19.43a	240', 2 span steel though truss over San Lorenzo River	Priority 1
MP 19.43b	60', 1 span steel deck plate girder over San Lorenzo River	Priority 1
MP 23.54	16', 1 span ODT over Meder Creek	Priority 1

WALLS TO BE STUDIED

MP 4.45 Watsonville Slough to MP 4.87 Harkins Slough

29-11

MP 8.64 San Andreas Road to MP 9.09 La Selva Trestle
MP 9.09 north of Leonard Gulch (La Selva)

The following field inspection activities will be performed:

- a. Preparation for field work.
- b. Inspect representative elements of the above listed structures to determine general condition and evaluate section loss. Representative samples of each structural member type and connection type will be inspected and documented, however a detailed inspection of each individual structural member and each individual connection will not be conducted at this time. Inspection activities are anticipated to take 11 days using a 3 person inspection team.
- c. Prepare field inspection notes.
- d. Photograph the major bridge components to document existing condition.

Field review shall be limited to non-destructive measurement of representative substructure elements. Field measurements will be performed on a representative sample of accessible structural elements and used to assess estimated levels of corrosion and section loss for analysis purposes. Field measurements may require selected non-destructive removal of corrosion build-up on representative members to assess corrosion trends and remaining structural section.

Inspections of the bridge foundations will be limited to the portions that are visible above ground or water. Portions below ground and below water will not be inspected, and geotechnical investigations will not be performed as part of this work.

Task 4. Service Load Analysis

HNTB will perform service load calculations for the following bridge structures:

MP 1.06b Pajaro River
MP 9.09 La Selva Trestle (Leonard Gulch)
MP 10.45 16 span BDT
MP 15.89c Soquel Creek
MP 19.43a San Lorenzo River
MP 19.43b San Lorenzo River

For these bridges the following analysis activities will be performed:

- a. Perform calculations on critical elements to determine service load on critical members. Structural vertical service load analysis of primary substructure support members and secondary bracing members will be performed to determine safe operating service load rating. Analysis shall account for current member conditions and estimated section loss.
- b. Criteria will be per rail industry standards of the recommendations of the AREMA Manual for Railway Engineering pertaining to the rating of existing bridges.
- c. A detailed assessment of loading to each individual member will not be conducted at this time.
- d. Perform structural calculations on critical elements to determine capacities for critical members. A detailed assessment of each individual element capacity will not be conducted at this time.
- e. Summarize service load analysis results.

The following timber bridges will be inspected under Task 3, and a condition rating will be assessed for typical bridge members. A limited service load rating primarily focusing bridge stringers will be performed for these bridges:

10.45
15.89b
15.89d
23.54 Meder Creek

The following concrete bridges will be inspected under Task 3, but since these bridges are relatively new service load calculations will not be performed for these bridges:

15.89a Capitola Ave
15.89e Wharf Road

Task 5. Seismic Analysis for San Lorenzo Creek Bridges

HNTB will conduct a seismic vulnerability study of the San Lorenzo Creek Bridges (MP 19.43a and MP 19.43b). The following activities will be performed for the San Lorenzo Creek Bridges:

- a. Identify seismic vulnerabilities.
- b. Develop preliminary retrofit concepts.
- c. Calculate preliminary construction cost estimates for retrofit concepts.

Task 6. Report Preparation

HNTB will prepare a Structural Assessment and Repair Report which will document the condition of all of the bridges listed in this proposal. A Draft Structural Assessment and Repair Report will be prepared for review and comment by SCCRTC and UPRR. Comments will be incorporated into a Final Structural Assessment Report and distributed to SCCRTC. The Structural Assessment Report will include the following sections:

- a. Executive Summary
- b. Introduction
- c. Background
- d. Project Need and Purpose
- e. Description of Existing Conditions
- f. Service Load Analysis
- g. Description of Needed Repairs
- h. Preliminary Cost Estimates
- i. Conclusions and Recommendations
- j. Appendix A: Field Notes
- k. Appendix B: Field Photographs
- l. Appendix C: Calculations

The Report will contain recommendations pertaining to whether to 1) continue the current freight service operations at current levels; 2) limiting the freight service operations to load levels below the load rating determined by the detailed structural assessment; and/or 3) rehabilitate, reconstruct or replace the existing structure elements to increase the structure service load rating above anticipated freight operation requirements.

All construction cost estimates will be for planning level purposes and will be developed on an approximate cost per square foot or linear foot of bridge deck basis.

The report will be prepared in 8 ½" x 11" format. Ten (10) copies of the report will be submitted to SCCRTC. An electronic copy will be made available to SCCRTC in Microsoft Word format.

Work to be Performed by SCCRTC

- a. Coordination with other SCCRTC consultants, when needed.
- b. Review and Comment on Draft Assessment Report
- c. Approval of Final Assessment Report
- d. Community Relations
- e. Coordination with UPRR for UPRR Flagman and Hy-rail vehicle during 11 days of field inspection work. Cost of UPRR Flagman and Hy-rail to be paid by SCCRTC.
- f. SCCRTC to obtain Railroad Protective Liability Insurance Policy with HNTB named as additional insured. Cost of Railroad Protective Liability Insurance Policy to be paid by SCCRTC.
- g. SCCRTC to obtain UPRR Right of Entry Agreement for field inspection work. Cost of UPRR Right of Entry Agreement to be paid by SCCRTC.
- h. Formal agreements with UPRR.
- i. SCCRTC to obtain any necessary permits related to the field inspection work and assessment report.

Materials, Information, and Data to be Provided by SCCRTC.

- a. Information of current usage, including frequency of trains, size of trains, and size of train loads.
- b. Information of future usage, including any other anticipated uses .
- c. UPRR Bridge Books.
- d. UPRR Maintenance Records.
- e. As-Built Structural Plans.

- f. UPRR Inspection Reports.
- g. Prior reports completed by Biggs Cardoso.
- h. Prior reports completed by Modjeski & Masters.
- i. Other available pertinent information, data, and reports about the surrounding area.