

**THIS PRINT COVERS CALENDAR ITEM NO.: 9**  
**FOR THE MEETING OF: December 16, 2004**

**TRANSBAY JOINT POWERS AUTHORITY**

**BRIEF DESCRIPTION:**

Authorizing the Executive Director to execute a Professional Services Agreement with Parsons Transportation Group, Inc., to provide preliminary engineering design services for the Caltrain Downtown Extension project during an initial three year term with the option to renew the Agreement to include final engineering and design, preparation of construction contract documents as well as design services during construction for an additional six year term. The total amount of the agreement for the initial three year term will not exceed \$23,035,142.

The scope of services to be performed under this agreement consists of the preliminary engineering for the project, and will achieve an overall 30% completion level of final design. The preliminary engineering effort has been divided into Phase One and Phase Two for the purpose of this agreement and is summarized as a series of tasks and subtasks described in the attached Agreement, Appendix A, "Scope of Work". The agreement also includes a series of optional tasks that the TJPA may authorize, based on project needs and funding availability.

**SUMMARY:**

- On December 12, 2003, the TJPA issued a request for proposals (RFP) for a consultant to provide engineering design services for the Caltrain Downtown Extension for up to nine years.
- On January 20, 2004, the TJPA received two written proposals in response to the RFP. In accordance with Section XVII (M) of the RFP they were both rejected as non-responsive and the RFP was re-advertised.
- On February 4, 2004, the TJPA re-issued the RFP for a consultant to provide engineering design services for the Caltrain Downtown Extension for up to nine years. The Muni Contract Compliance Office established a DBE participation goal of 30% for this RFP.
- On March 5, 2004, the TJPA received two written proposals in response to the RFP. The Muni Contract Compliance Office reviewed these written proposals and determined that they were responsive to the RFP.
- A selection committee reviewed the proposals, evaluated strengths and weakness and scored the proposals.
- Based on the selection committee's evaluation scores of the two written proposals, the TJPA conducted interviews with both teams.
- Following interviews, the selection committee again evaluated strengths and weaknesses of the interviewed teams and scored their performance during the interview process.

- The results of the selection committee evaluations determined that the Parsons Transportation Group, Inc. (Parsons) proposal was most responsive to the RFP and that the proposer was well qualified to perform the scope of services.
- TJPA staff has negotiated an agreement with Parsons and recommends that the Board of Directors award this agreement. Parsons has committed to complying with the DBE participation goals established in the RFP.
- Funding for this agreement will be provided from Proposition K (Prop. K) and Regional Measure 2 (RM-2) funds. The Metropolitan Transportation Commission (MTC) allocated \$15,495,000 of RM-2 funds on September 22, 2004, for the “Part 1 - Preliminary Engineering” phase of the Transbay project. The San Francisco County Transportation Authority (SFCTA) Commission allocated \$3,725,000 of Prop. K funds on September 28, 2004 and committed to allocate an additional \$1,770,000 in FY 2005-06 for this phase of the project. A portion of these allocations will be used to fund the initial services under this agreement.
- The initial certification of funds for this agreement will be in the amount of \$10,950,230.

#### **ENCLOSURES:**

1. Resolution
2. Selection Committee Report
3. Agreement

#### **EXPLANATION OF SCOPE OF SERVICES:**

The TJPA developed the RFP for engineering design services for the Caltrain Downtown Extension project with input from San Francisco Muni, staff of member agencies, including the Peninsula Corridor Joint Powers Board (JPB) and the Alameda – Contra Costa Transit District (AC Transit). In addition, the TJPA provided an opportunity for industry review and comments on the RFP. On February 4, 2004, the TJPA issued a revised RFP for a consultant to provide engineering design services for the Caltrain Downtown Extension project for up to nine years.

The Caltrain Downtown Extension project requires a multi-disciplinary engineering design team to perform preliminary engineering and detailed design, prepare construction contract documents and provide design services during construction on behalf of the TJPA and assist in planning, managing and implementing this large and complex public infrastructure project. The project consists of a broad range of infrastructure improvements, including:

- a 1.3 mile extension of rail alignment in a mined and cut-and-cover tunnel with supporting systems through the rapidly developing South of Market section of San Francisco,
- rail systems with associated electrification, signal and supporting infrastructure,
- station and yard improvements at the existing Caltrain terminal,
- an operational plan for the transit terminal that will include rail and bus operations,

The complex and interrelated nature of these project components requires an engineering team with experience in successful delivery of major public infrastructure projects, including rail transit subway projects in urban environments. The Parsons team will also provide a wide variety of technical expertise and extensive past experience in coordinating complex multi-disciplinary projects. The engineering team will provide specialized expertise in transit tunnel design and construction, geotechnical engineering, railroad engineering, electrified rail systems, rail, bus and passenger operations planning, and other general civil engineering disciplines. This team will provide engineering expertise that will be critical to successful delivery of project scope, within budget and on schedule.

The scope of services for the Preliminary Engineering phase of the project has been developed in cooperation with project stakeholders and current best practices in planning and design of large public infrastructure projects.

During Phase One of the Preliminary Engineering work, the general responsibilities of the engineering consultant team are as follows:

- **Project Management**

Provide overall management and direction of the consultant team, including contract administration, budget and schedule control and subcontractor management and administration. Work will include:

- Developing and implementing a project management plan, including a detailed work plan for completing all tasks and subtasks included in the scope of work for this phase of the contract.
- Project scheduling and reporting
- Conducting regular project team meetings and coordinating the project team's efforts to insure efficient resource utilization and timely decision making
- Cost estimating
- Participating and supporting Value Engineering and Peer Review studies

- **Development of Design Criteria for the Caltrain Extension Project**

Prior to commencement of preliminary engineering analysis and design, the engineering team will prepare and develop design criteria for the project. The engineering team will develop these criteria in close cooperation with applicable jurisdictions, operators and permitting agencies. Project design criteria will include design criteria and guidelines for each discipline, including:

- Track and rail design
- Civil
- Traction power and overhead contact systems for electrified rail operations
- Corrosion control
- Communications systems
- Signal systems
- Fire and life safety
- Water and air supply systems
- Electrical systems
- Architectural design for the 4<sup>th</sup> and King Station(s)

- Cut-and-cover structures
- Tunnel construction
- **Rail Operations Analysis and Planning**  
 This operations planning work will address the entire program scope, including the Transbay Terminal and the tail tracks. The scope of work will focus on the following:
  - Analyze the currently proposed rail and station operations and prepare an initial recommended operating plan
  - Determine the physical improvements required to support the plan
  - Identify any opportunities for reducing costs without sacrificing services
  - Analyze the interim operations to support construction staging at the existing 4<sup>th</sup> and King Caltrain yard
 The rail operations analysis will evaluate several track configuration and rail operations scenarios to optimize the design of the project.
- **Station Operations Analysis**  
 The project team will meet with operators to evaluate currently available preliminary operations data and establish more detailed operations requirements with respect to future ridership, routes, service frequencies and layovers. The subsequent subtasks in the station transit operations analysis will include:
  - Defining and designing preliminary layouts for terminal transit components
  - Station transit operations analysis
  - Emergency evacuation requirements
  - Rail operations, including passenger flows
  - Bus operations
 This task will focus on studying the interaction of the passenger demands, the physical constraints of the building and the positioning of the vertical and horizontal circulation elements to achieve fire-life safety criteria, adequate pedestrian levels of service and operational performance criteria such as maximum platform clearance time.
- **Rail and Civil Engineering Design**  
 This task will develop conceptual engineering designs for the following project components:
  - Track alignment studies, including horizontal and vertical alignments and typical sections
  - Electrification systems design, including traction power and overhead contact systems
  - Civil design, including street reconstruction; grading and drainage design, including storm sewers
  - Corrosion control
  - Communications and signal systems
  - Fire and life safety, including ventilation and passenger egress facilities
  - Mechanical and electrical systems design
  - Architectural design for the 4<sup>th</sup> and King Station(s)

- **Geotechnical Engineering**

This effort will focus on developing the necessary geotechnical data, performing geotechnical analyses and evaluations, and preparing design recommendations for the construction of the underground facilities. The specific subtasks include the following:

- Collect and review available data
- Site exploration and in situ testing
- Laboratory testing to develop the necessary data to characterize the major subsurface soil strata and rock
- Prepare geotechnical data summaries for conceptual design
- Geotechnical engineering analysis for the cut-and-cover portion of the alignment
- Seismic evaluation and development of appropriate criteria for the design of the underground structures
- Design memoranda in support of the engineering for the tunnels and underground stations.

- **Tunnel Engineering**

This task involves developing the Conceptual design of the mined tunnel section. The work will be in two phases: (1) Tunnel Alternatives Evaluation, and (2) Preliminary Design (30% Design). The objective of the first phase is to evaluate the various construction methods that could be used to construct the tunnel in order to determine the method which best meets the goals of the project. In the second phase draft preliminary design documents (30% design level) will be developed for the selected method. This task focuses on construction of the underground work and the tunnel structure. In addition, a feasibility study will be performed to determine whether cut-and-cover construction can be reduced or eliminated in the Second Street area, from north of Folsom to the Terminal.

- **Cut and Cover Structures Design**

Prepare a Structure Type Selection Report for all retaining walls, U-sections and cut & cover box structures in the existing rail yard area from the south rail approach to the west end of the proposed new below grade station at 4th and King Street. The engineering effort shall include development of layout plans, elevations and typical sections to a conceptual level with a report on construction methods, phasing and conceptual cost estimates.

- **Engineering Support Activities**

The Engineering Support Task for the Caltrain Downtown Extension Project includes work associated with aerial surveys and mapping, right-of-way, utilities, hazardous materials and historic structures underpinning.

- **Quality Assurance**

This task will include preparation and implementation of the Project Quality Assurance Program which will establish the methodology for the preparation, review and checking of planning and design documents and for the overall management of the project.

- **Conceptual Design Report**

This work will consist of the consolidation of the individual engineering studies and reports into a single document that will summarize the conceptual design of the project. The report will document design criteria, issues and decisions made by the design team and TJPA during the course of the conceptual engineering. The report will include the conceptual cost estimate and will also include a conceptual construction schedule for the entire project. The cost estimate will be coordinated with the construction schedule.

Phase Two of Preliminary Engineering will further advance these tasks to achieve a 30% level of completion.

The consultant team will report to the Executive Director and the Deputy Director-Chief Engineer but work closely with all TJPA staff.

## **EXPLANATION OF SELECTION:**

The RFP was sent to 54 firms or individuals. It was advertised in the San Francisco Independent and was posted on the CCSF Contract Administration and TJPA websites. A pre-proposal conference was held on December 22, 2003, during the initial RFP advertisement period.

On March 5, two proposals were received from Parsons (teamed with Arup & Jacobs Associates) and Transbay Consultants (joint venture of HNTB, Earth Tech & SYSTRA). Muni Contract Compliance Office reviewed both proposals and determined that they complied with the requirements of and were responsive to the RFP.

The Executive Director convened a selection committee, composed of six individuals representing TJPA member agencies and project stakeholders, to review the proposals. The selection committee report is attached to this staff report.

The two proposals were evaluated and scored by the six-person Selection Committee on March 12. Evaluation criteria consisted of the following:

- Experience and qualifications of Lead Firm or Firms, subconsultants and Key Staff Assigned to the Project
- Expertise in the disciplines necessary to complete the indicated tasks;
- Relevance and success of recently completed projects, including adherence to schedules and budgets;

- Results of reference checks;
- Experience and qualifications of the Consultant's Assigned Project Manager:
  - Relevant recent experience;
  - Professional qualifications and education;
  - Ability to successfully lead the Consultant team, effectively manage the work of subconsultants, remain on schedule and within budget and otherwise meet project requirements;
  - Results of reference checks;
- Project Understanding and Approach:
  - Understanding of the Scope of Work and the services required for each proposed task;
  - Understanding of special Project issues and constraints and approach to mitigating and resolving them;
  - Approach to ensuring good quality control and a well-integrated design;
  - Approach to ensuring good schedule adherence;
  - Approach to ensuring that Project funds are used cost-effectively and that the Project remains within budget;
  - Ability to provide timely, qualified, and adequate staffing and services to support the Project throughout the term of the Contract.

The committee discussed the strengths and weaknesses of each written proposal and subsequently each member of the committee scored each proposal individually. The raw scores of the written proposal evaluations were then tabulated and ranked. Based on the scoring of the written proposals, both firms were selected for oral presentation and interview. The two firms participated in an oral presentation and interviews on March 19, 2004.

The presentations and interviews were evaluated based on the following criteria:

- Experience and Qualifications of Lead Firm or Firms, subconsultants and Key Staff Assigned to the Project
- Experience and Qualifications of the Consultant's Assigned Project Manager
- Project Understanding and Approach
- Responses to technical questions

The oral presentation and interview scores provided by the selection committee were evaluated and ranked. The results of this process determined that Parsons (teamed with Arup & Jacobs Associates) was most responsive to the RFP and that the proposer was qualified to perform the work. Summaries of scores, strengths and weaknesses are included in the attached selection committee report.

The selected team includes the following DBE subconsultants:

- |                                |                                     |
|--------------------------------|-------------------------------------|
| ▪ Baseline Environmental       | ▪ Elite Reprographics               |
| ▪ Bello And Associates         | ▪ Merrill Morris Partners, Inc.     |
| ▪ Computer Design Solutions    | ▪ MGE Engineering, Inc.             |
| ▪ Chaudhary & Associates, Inc. | ▪ Robert Y. Chew Geotechnical, Inc. |
| ▪ CHS Consulting Group         | ▪ Robin Chiang & Company            |

- Southwest Signal Engineering Co.
- YEI Engineers, Inc.
- STRUCTUS, Inc.

## **RECORD OF NEGOTIATION:**

TJPA staff negotiated an agreement with Parsons with the assistance of members of the City Attorney's office and input from Muni staff. In preparation for negotiation, TJPA staff also consulted with Contracts and Procurement staff at the San Francisco International Airport and the JPB. Twelve negotiation meetings took place between May 24 and December 8, 2004. Participating in the negotiations on behalf of the TJPA were: Maria Ayerdi, Executive Director; Elizabeth Wiecha, Deputy Director/Chief Engineer; and Sheryl Bregman, Deputy City Attorney. The consultant team was represented by: (Parsons) Brian Dykes, Project Manager; John Selin, Principal Engineer, Lois Stevens, Principal Engineer, Martin Boson, Contracts Officer, (Arup) John Eddy, Associate Principal; (Jacobs) Kurt Winger, Contracts Officer.

The scope of work and schedule requirements were defined at initial meetings. Subsequent negotiations centered on resource requirements, compensation, insurance and indemnity requirements.

## **AGREEMENT PROVISIONS**

Services performed under this agreement will include the scope of services outlined above and require completion of certain deliverables in accordance with the schedule requirements of the contract. The scope, deliverables and schedule requirements are specified in Appendix A of the Agreement. Furthermore, the scope of services must be completed within the budget limits outlined in Appendix C of the Agreement.

Compensation for services performed under this agreement will be primarily on a cost reimbursable basis; however agreed price (lump sum) or time and materials methods of compensation may be used on a limited basis. Compensation will be subject to the Provisional Cost Reimbursement and Rate Agreement (PCRRA), Appendix B of the Agreement, which will establish direct labor and indirect cost rates based on consultant and subconsultant audit information. A fixed fee will be applied to direct and indirect costs in the manner specified in the PCRRA.

The total amount of this agreement will not exceed \$23,035,142 for the initial three year term. This contract limit consists of the following compensation limits:

- For Phase One – Preliminary Engineering: The total amount of compensation under Phase One will not exceed \$10,950,230. This amount consists of the following sublimits:
  1. Allowable actual costs not to exceed \$10,038,081,
  2. Total fixed fee not to exceed \$912,149



- For Phase Two – Preliminary Engineering: The total amount of compensation under Phase Two will not exceed \$7,859,912. This amount consists of the following sublimits:
  1. Allowable actual costs not to exceed \$7,211,487
  2. Total fixed fee not to exceed \$648,425
- Optional Tasks – Preliminary Engineering: The total amount of compensation for the Optional Tasks will not exceed \$4,225,000.

If the TJPA elects to award the final design, construction contract document preparation and design services during construction, contemplated as an option under this agreement, the scope of work and the contract limit will be adjusted subject to the approval of the Board.

## **CONTRACT FUNDING**

Near term funding for the Engineering Design Services contract for the Caltrain Downtown Extension will be provided from recent allocations of Prop. K sales tax funds and RM-2 bridge toll funds. MTC allocated \$15,495,000 in RM-2 Funds for the Part 1 Preliminary Engineering phase of the project. The SFCTA allocated \$3,725,000 for FY 2004-05 and committed to allocate an additional \$1,770,000 in FY 2005-06 for this phase of the project.

The adopted FY 2004-05 TJPA budget includes \$10,770,000 for the Engineering Design Services contract. The funds available to certify the contract are \$10,950,230 which includes planned FY 2005-06 expenditures that will be included in the FY 2005-06 TJPA budget. Certification of funds for this contract is contingent on final execution of the SFCTA's Standard Grant Agreement which will authorize the Prop. K funding. Additional allocations of committed funds will be required to complete the scope of work contemplated under this contract and included as options in the Agreement.

Attached to this staff report is the contract.

## **RECOMMENDATION:**

Staff recommends that the Board of Directors authorize the Executive Director to execute a Professional Services Agreement with Parsons Transportation Group, Inc., to provide engineering design services for the Caltrain Downtown Extension for an initial term of three years at a cost not to exceed Twenty - Three Million, Thirty - Five Thousand, and One Hundred Forty - Two Dollars (\$23,035,142).

**TRANSBAY JOINT POWERS AUTHORITY  
BOARD OF DIRECTORS**

**Resolution No. \_\_\_\_\_**

WHEREAS, On February 4, 2004, the Transbay Joint Powers Authority (TJPA) issued a request for proposals (RFP) to 54 firms and individuals for a consultant to provide engineering design services for the Caltrain Downtown Extension project for up to nine years; and

WHEREAS, On March 5, 2004, the TJPA received two proposals in response to the RFP and a selection committee evaluated each of them for responsiveness and qualifications; and

WHEREAS, The selection committee conducted interviews of both teams that submitted proposal following proposal evaluation; and

WHEREAS, The selection committee found the proposal submitted by Parson Transportation Group, Inc., teamed with Ove Arup & Partners California Ltd. and Jacobs Associates, to be the most responsive to the RFP and that the proposer is well qualified to perform the scope of services in a cost effective manner; and

WHEREAS, The Executive Director has negotiated the agreement with Parsons Transportation Group Inc., attached hereto for an initial term of three years renewable for an additional six year term at the Authority's option at a total cost not to exceed Twenty-Three Million, Thirty-Five Thousand, One Hundred Forty-Two Dollars (\$23,035,142) for the initial three year term; now, therefore be it

RESOLVED, That the TJPA Board of Directors authorizes the Executive Director to execute a Professional Services Agreement for Engineering Design Services for the Caltrain Downtown Extension project with Parsons Transportation Group, Inc., substantially similar in all respects to the document attached hereto, with only such minor changes as are necessary and approved by the Executive Director and Legal Counsel for an initial term of three years at a cost not to exceed Twenty-Three Million, Thirty-Five Thousand, One Hundred Forty-Two Dollars (\$23,035,142).

*I hereby certify that the foregoing resolution was adopted by the Transbay Joint Powers Authority Board of Directors at its meeting of \_\_\_\_\_.*

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*Secretary, Transbay Joint Powers Authority*