CAPITOL CORRIDOR JOINT POWERS AUTHORITY

REQUEST FOR STATEMENT OF QUALIFICATIONS (RFSOQ)

TO PROVIDE

CALIFORNIA PASSENGER INFORMATION DISPLAY SYSTEM FOR

THE CAPITOL CORRIDOR, SAN JOAQUINS, AND ALTAMONT CORRIDOR EXPRESS PASSENGER RAIL SERVICES

CCJPA RFSOQ201819-004

The Capitol Corridor Joint Powers Authority ("CCJPA" or the "Capitol Corridor") intends to enter into an agreement ("Agreement") with a transportation electronic signage company ("Vendor") to design, test, implement, and maintain a Passenger Information Display System (PIDS) for three passenger rail services in Northern California: the Capitol Corridor service, the San Joaquins service, and the Altamont Corridor Express (ACE) service. There is potential for other passenger rail agency partners to utilize this RFSOQ as a procurement mechanism to meet their own electronic station signage needs. This procurement is led and managed by the CCJPA, with inclusion of staff from the San Joaquin Joint Powers Authority ("SJJPA") and the San Joaquin Regional Rail Commission ("SJRRC"), who manage the San Joaquins and ACE services, respectively. As the lead procurement agency, CCJPA is issuing this Request for Statement of Qualifications ("RFSOQ") to prospective Vendors ("Proposers") as specified herein.

A. Service Description

The selected Vendor shall design, test, implement (including coordination with a separately procured and contracted installation team), and maintain various elements of a PIDS that will be used by three passenger rail services in Northern California: the Capitol Corridor, the San Joaquins, and ACE. There is potential for other passenger rail agency partners to utilize this RFSOQ as a procurement mechanism to meet their own electronic station signage needs. The purpose of this RFSOQ is to identify a qualified PIDS solution Vendor who can provide a complete PIDS technology solution that is continually optimized based on currently available technologies and that has a clear technology solution roadmap that ensures evolution of PIDS over time to meet the demands of CCJPA, its rail agency partners, and their passenger customers. The PIDS solution of this RFSOQ shall be referenced as CalPIDS in the rest of the document. Detailed CalPIDS technical requirements that need to be fulfilled by the Vendor are set forth in Attachment A, Scope of Services and Attachment D, CalPIDS Functional Requirements.

The Capitol Corridor (San Jose-Oakland-Sacramento-Auburn) and the San Joaquins (San Joaquin Valley-Fresno-Bakersfield) are California state-supported passenger rail services, operated by Amtrak, that implemented digital station signage solutions in the early 2000's. The ACE commuter train service (San Jose-Pleasanton-Stockton) also uses the same digital station signage solution as Capitol Corridor and San Joaquins. Existing station digital signage displays current time, ETA's of various passenger trains up to 30 minutes away, delay information, and other messages related to service amenities and changes to regular service. Audio announcements are synchronized with visual messages at all stations, indoor and outdoor.

The contract administrator of the Master Services Agreement to be awarded from this RFSOQ will be CCJPA, however, different Work Directives ("WD's") will be assigned by CCJPA for specific

work on different passenger rail corridors. Due to different station purposes and layouts, digital signage and audio will need to be customized for certain stations in each of the three corridors.

If a partner rail agency opts to utilize this procurement and Master Agreement as a basis for working with the selected Vendor, the CCJPA intends to maintain partnership flexibility with the Vendor and prospective partner rail agencies, wherein a partner rail agency may establish separate funding and payment pass-through WD based relationships with the selected Vendor. Working with a prospective rail agency partner would involve additional negotiation and a payment relationship with the selected Vendor, a potential agreement between CCJPA and the rail agency, and refined agreement amendments to the Master Contract with the selected Vendor.

B. Funding Sources

The funding sources will be identified by CCJPA for each Work Directive. CCJPA will be using funds controlled directly by CCJPA or using federal, state, regional, or local grant funds awarded to CCJPA. In general, CCJPA expects the CalPIDS to be delivered on a service-based or subscription-based model over a period of years. Some deviations for a one-time capital outlay followed by service operations and maintenance are possible, but the core funding mechanism for CalPIDS should be operational funds controlled by individual rail service agencies. CCJPA expects to enter into separate reimbursement agreements with other rail agency partners for funding of WD's that are for specific partners.

C. California Public Records Act

This RFSOQ and any material submitted by the Proposer are subject to public inspection under the California Public Records Act (California Government Code Section 6250 et seq.), unless exempted by law.

D. Service Duration

CCJPA intends to make one (1) award resulting from this RFSOQ, however, the Vendor will be expected to acquire sub-contractors on an as-needed basis, as identified by the Vendor or CCJPA. The term of the Agreement entered into pursuant to this RFSOQ will be for five (5) years from the date of execution of the Agreement, with options to renew for an additional five (5) years. As an intended service/subscription-based delivery model, the Agreement duration is meant to extend across technology, software, and hardware upgrades every few years. Additional option years may be pursued at the discretion of CCJPA in consultation with rail service partners and the selected Vendor.

E. Pre-submittal Meeting

A pre-submittal Meeting will be held on Monday, November 19, 2018. The meeting will convene at 1:00 PM, local time, in Room 1500, 15th Floor, 300 Lakeside Drive, Oakland, CA, 94612. Interested parties are encouraged to make every effort to attend this only scheduled pre-submittal meeting. A presentation addressing the Scope of Services and the RFSOQ process will be made at the pre-submittal meeting. CCJPA will also be scheduling individual 25-minute Q&A sessions with interested parties during the week of November 19; more information about these individual Q&A sessions will be available during the pre-submittal meeting.

F. CCJPA/BART Procedures

The CCJPA is a California joint powers authority with six member agencies. The San Francisco Bay Area Rapid Transit District ("BART", or the "District") is the managing agency of the CCJPA. The CCJPA models its administrative procedures upon those utilized by BART. Accordingly, reference may be made in this RFSOQ to certain BART administrative procedures which have been adopted as CCJPA administrative procedures.

G. CCJPA's Agreement

The selected Vendor will be expected to largely accept and comply with the terms and conditions contained in the *Example CCJPA Contract Agreement* included as Attachment B. See Section L for exceptions to the Example CCJPA Contract.

H. Compensation

CCJPA is seeking an evolving fixed price services/subscription-based agreement with the selected Vendor as the basis of compensation for the services provided under the Master Contract. Fixed prices shall be based on the Proposer's Pro Forma (see Attachment C) that is established initially with the Statement of Qualifications ("SOQ") as part of this RFSOQ, later refined for the Conformed Statement of Work ("CSOW") under the Master Agreement, and then further refined based on WD's issued. The fixed price agreement can be a lump sum amount, but it must be based on the pro forma that is annually updated with cumulative fixed prices mutually agreed to by the Vendor and CCJPA. Such compensation will be allowable only to the extent that costs incurred, or cost estimates included in negotiated, or otherwise established prices, are consistent with the Federal Cost Principles (Title 48, Code of Federal Regulations, Chapter 1, part 31).

I. Non-Discrimination in Subcontracting

It is the policy of the CCJPA to ensure that Vendors who contract with the CCJPA do not discriminate or give a preference in the work of their subcontractors on the basis of race, national origin, color, ethnicity, or gender.

J. Statements of Qualifications Submittal

Parties interested in being considered for award of the Agreement must submit the following as part of their submittals:

1. Letter of Interest not exceeding two (2) single-sided, letter-sized pages summarizing the firm's understanding of the Scope of Services requirements and why the Proposer is most qualified to perform the requested services.

2. Organization Chart of Project Team. Key Personnel at the time of SOQ submission shall be shown based on how the Vendor will staff critical positions involved in fulfilling the Scope of Services. As personnel changes throughout the duration of the Master Contract, Vendor will be expected to update and maintain the Organization Chart.

3. Resumes of Key Personnel. Resumes are to be submitted for the proposed Key Personnel to be utilized under the Agreement. Every person whose resume is provided shall be shown on the Organization Chart. Resumes submitted for persons who are not shown on the Organization Chart will not be considered. A total of five (5) resumes are to be submitted per Proposer firm (prime and sub distinct) and are limited to two pages in length per resume. Key Personnel shall not be replaced for the duration of the Project without prior written approval from CCJPA.

4. Example Projects which Best Illustrate Proposer's Qualifications. Projects listed must be relevant projects, which were completed or are ongoing by the Proposer. Select no more than three (3) projects per Vendor firm (prime and sub distinct) that demonstrate the Proposer's experience and capability to perform work similar to that required for this Agreement. In addition, identify which projects, if any, for which Project Team members have worked together. Visual demonstrations of completed or ongoing projects, such as videos showing the products or systems, are highly encouraged. Videos can be provided either as a link to an online webpage or as a separate electronic file in the submittal

package. Please also provide a point of contact, telephone number, and email address for each project listed, as the CCJPA may choose to contact these references.

5. <u>CalPIDS Solution Approach</u>. Include a narrative in this Section that discusses the Proposer's approach and any proposed innovations in delivering CalPIDS as required by the Scope of Services. The ability to pilot new technologies or added signage services are acceptable in this Section, but the core Scope of Services must be addressed fully before any innovations beyond the Scope of Services are introduced. Explain any exceptions or deviations that may be noted in the Functional Requirements (Attachment E). The Solution Approach should be a culmination of how the Project Team and the Proposer's qualifications and experiences, combined with hardware, software, reporting tools and data access capabilities, form a CalPIDS solution that is effective, dependable, responsive, flexible, and strategic in technological implementations as applied to digital station signage.

   Proposer shall provide as part of the Solution Approach a Product Development Roadmap, which includes a breakdown of technologies that relate directly to the Scope of Work and for each provide a narrative explaining what is currently available in the market, if it has been approved and deployed in a passenger rail environment, and its technology outlook in the next 12-18 months. The narrative shall include a critical analysis of the impact the latest product evolutions have within the passenger railroad environment and explain why they are or are not included within Proposer's CalPIDS Solution Approach. The purpose of this narrative is to understand the rationale of Proposer's product roadmap and the importance of technology updates that may become relevant to CalPIDS.

6. <u>CalPIDS Functional Requirements Acknowledgement.</u> Using the CalPIDS Functional Requirements document (Attachment E), indicate your team's understanding or acknowledgement of each CalPIDS requirement.

7. <u>Pro Forma (Confidential).</u> See Attachment C for Pro Forma submittal instructions. Costs and rate data presented in the Pro Forma shall be valid a period of one hundred and eighty (180) days from the submittal due date.

8. <u>Project Team.</u> Provide name and contact information for Proposer and all subcontractors who will be a part of the Project Team, including nature of their responsibilities in delivering the project.

9. <u>Statement of Qualifications and Business References (Confidential)</u>. See Exhibit 2.

K. <u>Conflict of Interest</u>

1. Depending upon the nature of the services performed, CCJPA Vendors are subject to the same conflict of interest prohibitions which apply to CCJPA and BART employees. These include, but are not limited to, the applicable conflict prohibitions of the Federal government, and the requirements of California law (including Government Code Sections 1090 <u>et seq.</u> and 87100 <u>et seq.</u>, and Title 2, Division 6 of the California Code of Regulations.) Notwithstanding subsection 2 below, the CCJPA reserves the right to disqualify any Proposer under this RFSOQ if the CCJPA, in its sole discretion, deems that the potential for conflicts of interest is likely to impair or restrict the Proposer's ability to furnish services contemplated within the Scope of Services.

2. A conflict of interest review will be performed by the CCJPA during evaluation of the submittals.

L. **Exceptions to the Agreement**

1. In order to meet the CCJPA's schedule requirements, it is critical that the Agreement be executed immediately following selection of a Vendor. Proposer shall be prepared to accept the terms and conditions of the Agreement immediately (a Sample Agreement for Services is provided as Attachment B).

2. If a Proposer desires to propose any changes in the Agreement, refer to Attachment E, PROTEST PROCEDURES. The Proposer must clearly identify in its submittal each and every proposed change, the reasons therefor and the specific alternative language proposed. These factors will be taken into account during the CCJPA's evaluation of SUBMITTALs and/or during negotiations of fair and reasonable compensation. The CCJPA may develop price-related factors to be applied to any exceptions taken. **Submittals that take substantial exceptions to the Agreement or proposed compensation terms may be determined by the CCJPA, in its sole discretion, to be unacceptable and no longer considered for award.**

M. **Submittal Due Date and Submittal Requirements**

Submittals must be received by 3:00 pm local time, Friday, January 11, 2019.

1. Proposer's submittal and all required attachments and forms shall be submitted to the following address:

> Shirley Qian
> Capitol Corridor Joint Powers Authority
> 300 Lakeside Drive, 14th Floor East
> Oakland, CA 94612
>
> Email: shirleyq@capitolcorridor.org

Envelopes or boxes containing submittals shall be labeled on the outside packaging as follows:

"CCJPA RFSOQ201718-004, California Passenger Information Display System"

2. The number of copies of the submittals to be furnished shall be as follows:

    a. Three (3) (hardcopy) complete copies, one of which shall be marked "ORIGINAL"

    b. One (1) additional copy, excluding Pro Forma and Exhibit 2, Confidential Statement of Qualifications and Business References. CalPIDS Solution Approach may be redacted for confidentiality reasons in this copy. This copy shall be clearly marked "PUBLIC RECORDS COPY" in conspicuous letters.

    c. One digital version (CD, DVD, USB, or via email as an attachment or link to an online data storage site) of the complete submittal.

N. **Rejection of Submittals**

Submittals may be rejected if they show such items as: alterations of form; additions not called for; conditional submittals; incomplete submittals; irregularities which make the submittal incomplete, indefinite, or ambiguous; improper markings and identification; or a signature by other than an authorized person.

O. Evaluation Procedure

Submittals will be first evaluated as to responsiveness to the requirements of the RFSOQ and responsibility of the Proposer.

1. A submittal will be considered responsive only if it complies in all material respects to the requirements of the RFSOQ.

2. A Proposer's organization will be considered responsible only if it has, or has indicated that it can obtain, the financial resources to fulfill successfully the requirements of the awarded Agreement and possesses the ability to perform successfully under the terms and conditions of an awarded Agreement.

3. If a submittal is determined to be non-responsive, or a Proposer's organization is determined to be not responsible for the purposes of the RFSOQ, such submittal and/or Proposer will not be considered for award.

4. Only those submittals that satisfy the foregoing requirements will be evaluated and scored on the basis of the qualifications and experience of the proposed Key Personnel and the firm(s). A competitive range will be established and used to determine those Proposers who will be "short-listed" and proceed to the oral presentation stage.

5. After the most qualified Proposer has been identified (by the evaluation procedure described herein) the CCJPA will, for the first time, review pricing information. A detailed cost analysis will be performed and utilized in negotiations in arriving at fair and reasonable compensation.

P. Evaluation Criteria and Selection Process

The CCJPA will utilize the data submitted in the Statement of Qualifications, including, but not excluded to, the Organization Chart, the experience of the Project Team, the technology path of the Vendor, reporting and monitoring tools and data access, clarity of product offerings, price clarity as presented in the Pro Forma, reference checks, and related supporting narratives, to evaluate and score the overall qualifications, experience, and CalPIDS solution approach of the Vendor. Subsequent to these evaluations, the oral presentation phase will be conducted for the short-listed firms.

Project Team qualifications (including subcontractors, if any) are weighted at 5%, experience of the firm(s) is weighted at 20%, and CalPIDS solution approach (e.g. technology path, how the Vendor will supply the service/subscription model) is weighted at 40%. The oral presentation will be weighted at 25% and comprise an evaluation of oral communication skills and a combination of how qualifications, experience, and CalPIDS solution as related to the Functional Requirements is communicated. The final 10%, which will only be applied to those Proposers who are invited for oral presentation, will be Pro Forma costs, organization, and incorporation into the service/subscription delivery model. The scoring will be as follows:

1. <u>Project Team Qualifications (including subcontractors)</u>. Evaluation based on written submittal with a weight of 5%. The following criteria will be evaluated. Subsections a. and b. below are of equal importance. References provided by the Proposer that the SOQ review panel may contact will be considered in this category.

   a. Qualifications and relevant experience of the Key Personnel relative to the Scope of Services, including how that experience can be applied to delivery through Work Directives.

b. Identification and explanation of how Project Team and their qualifications and relevant experience are applied to Work Directive delivery, ongoing operations and maintenance, and communications with CCJPA and partner agencies involved in different Work Directives.

2. <u>Experience of the Firm(s)</u>. Evaluation based on written submittal with a weight of 20%. References provided by the Proposer that the SOQ review panel may contact will be considered in this category. The following criterion will be evaluated.

   a. Demonstrated experience and knowledge of rail transit digital station signage system design, deployment, operations, maintenance, and reporting as outlined in the Scope of Services.

3. <u>CalPIDS Solution Approach</u>. Evaluation based on written submittal with a weight of 40%. References provided by the Proposer that the SOQ review panel may contact will be considered in this category. The following criteria will be evaluated.

   a. Responsive and thoughtful reflection of the Scope of Services, presented in a clear and organized manner that is consistent with the Pro Forma.

4. <u>Pro Forma</u>. Evaluation based on written submittal with a weight of 10%. The following criteria will be evaluated. Subsections a. and b. below are of equal importance.

   a. Clarity, transparency, and consistency of cost and rates across different categories.

   b. Consistency and integration of costs and rates with Solution Approach.

The above-described scoring will be used for the purpose of determining those Proposers with the highest scores to be short-listed and invited to an oral presentation. The short-listed Proposers will be provided with the format of the oral presentation.

5. <u>Oral Presentation</u>. The oral presentation will be weighted at 25%. The criteria to be used in scoring the oral presentation will again focus on the qualifications and experience of the Project Team and Proposer, in addition to the Proposer's CalPIDS solution approach and internal agreement with the Pro Forma.

6. <u>Vendor Selection.</u> All short-listed firms will be considered qualified. The submittals will be ranked in relation to the cumulative total of scores from Sections 1 through 5. The highest scoring Proposer, on the basis of the cumulative total of scores from the written submittal and the oral interview, will be deemed to be most qualified, and that Proposer will be selected to enter into negotiations regarding Agreement terms and conditions and fair and reasonable compensation. Failure to reach agreement on terms and conditions and fair and reasonable compensation will result in the formal conclusion of negotiations and the CCJPA will then undertake negotiations with the next most qualified firm.

P. Anticipated Selection Schedule. The tentative selection process schedule is as follows:

1. Release Date: November 9, 2018
2. Pre-Submittal Meeting: November 19, 2018
3. Submission Date: January 11, 2019
4. Notification - Short-list for Oral Interviews: January 25, 2019
5. Oral Interviews: February 8, 2019
6. Firm Selected for Negotiations: February 11, 2019

Q. Notification of Award and Debriefing

Proposers with accepted submittals shall be notified in writing regarding the party to be awarded the Agreement. Said notification shall be made within five (5) days of the date the CCJPA's Managing Director authorizes Award of the Agreement.

Firms that were not awarded the Agreement and desire a debriefing must request the debriefing in writing. Said request must be received by the CCJPA within five (5) days of the above-described notification of award.

R. Protest Procedures

Any protest or objection to this RFSOQ or other procurement procedures must be submitted in accordance with CCJPA's Protest Procedure, included herein as Attachment E.

S. Questions Regarding the RFSOQ

Questions regarding this RFSOQ or requests for additional information shall be directed in writing to the CCJPA's Contract Administrator. All inquiries shall be made to the CCJPA at least ten (10) calendar days before the SUBMITTAL submission date. Inquiries received less than ten (10) calendar days prior to such date may, at the CCJPA's sole option, not be responded to.

> Shirley Qian, Senior Planner
> Capitol Corridor Joint Powers Authority
> 300 Lakeside Drive, 14th Floor East
> Oakland, CA 94612
> (510) 874-7491
> shirleyq@capitolcorridor.org

This RFSOQ does not commit CCJPA to award an Agreement, to pay any costs incurred in the preparation of a submittal, or to procure or contract for any services. CCJPA reserves the right to reject any and all submittals received from this RFSOQ and reserves the right to negotiate with all qualified firms or to cancel this RFSOQ in whole or in part.

Documents Included in this RFSOQ are as follows:

Attachment A   Scope of Services
Attachment B   Sample Agreement for Services
Attachment C   Pro Forma Instructions
Attachment D   CalPIDS Functional Requirements
Attachment E   Protest Procedure

Exhibit 1   Project Team
Exhibit 2   Statement of Qualifications and Business References

ATTACHMENT A

SCOPE OF SERVICES

for the

THE CAPITOL CORRIDOR, SAN JOAQUINS, AND ALTAMONT CORRIDOR EXPRESS PASSENGER RAIL SERVICES

PASSENGER INFORMATION DISPLAY SYSTEM (PIDS)

1. **INTRODUCTION**

Capitol Corridor Joint Powers Authority (CCJPA), San Joaquin Joint Powers Authority (SJJPA), and San Joaquin Regional Rail Commission (SJRRC) are the managing agencies of the Amtrak California Capitol Corridor service, the Amtrak California San Joaquins service, and the Altamont Corridor Express (ACE) service, respectively. CCJPA, SJJPA, and SJRRC ("Rail Agencies") are seeking a new PIDS solution to replace the existing PIDS solution that is in use. There is potential for other passenger rail agency partners to utilize this RFSOQ as a procurement mechanism to meet their own electronic station signage needs.

The new PIDS solution, known as the California Passenger Information Display System ("CalPIDS"), will be fully ADA compliant while supporting modern technology/protocols and being easy to expand and upgrade. CalPIDS comprises audio and visual components and allows passengers to access schedules, train status, and any service messages inside and outside the stations via smartphones. Text to speech software on the server will allow Rail Agencies to easily build new audio announcement and audio announcement libraries that can be saved and used throughout the system. New station controllers will allow the system to better control messaging, signage and audio equipment at the stations. A new server will allow for faster operations. A mobile app will allow passengers to easily access train and connecting bus information and provides alerts including approaching station/bus stops.

The Rail Agencies are also considering allowing guest rail agencies (e.g. Amtrak, Caltrain) to share CalPIDS equipment at the stations. The shared equipment would display Capitol Corridor, San Joaquins, and/or ACE ETA's/messages as well as the guest rail agencies' ETA's/messages. All Capitol Corridor, San Joaquins, and ACE messages would be prioritized and not interfere with the guest rail agencies' information. All visual and audio messages will need to be clearly identified with its appropriate train service.

For potential other partner rail agencies who may work with CCJPA to utilize CalPIDS for their own electronic station signage needs, the details of their backend operations data structures are not included in this Scope of Work but would be addressed in future Work Directives between CCJPA, partner rail agency, and selected Vendor.

The selected CalPIDS Vendor will be responsible for the design, testing, hardware purchase, operations and the maintenance of the CalPIDS software and hardware. The selected Vendor will also be expected to coordinate with an installation team (procured and contracted separately by Rail Agencies as a public works project) for the installation of CalPIDS hardware.

CalPIDS can be broken down into the following components:
- User consoles

- o Full access user with standalone software console
- o Limited access user with browser-based console
- Station signage and audio
  - o Indoor/outdoor digital displays
  - o Station controller
  - o Indoor/outdoor speakers
  - o Audio amplification
- Server
  - o Amtrak ARROW database
  - o Amtrak ARISE Web Interface
  - o CalPIDS Server
  - o OBIS Server
- Mobile app
  - o Train location and ETA
  - o Connecting Amtrak bus location and ETA
  - o Subscribe/Push alerts

2. CALPIDS SYSTEM OVERVIEW

A fully implemented system will provide real time train tracking capability throughout the Capitol Corridor, the San Joaquin North and San Joaquin West, ACE, and for Amtrak's California Zephyr and Coast Starlight trains. Trains and buses will be tracked via the Global Positioning System (GPS) using the current National Marine Electronics Association (NMEA) GPS data standard. GPS data will be collected from various sources currently available on the trains and buses. The GPS data from the trains will be transmitted to a the CalPIDS central server for processing. The system will be flexible in its ability to use different data delivery systems and will avoid using proprietary data communication products and systems whenever possible.

The central server will be an IBM compatible computer utilizing the latest stable version of Microsoft Windows Server or Linux operating systems. Software will be written in a widely used programming language such as a "C based language" or Python and run as a service. The software will have a user interface allowing for troubleshooting and manual data input. All coding will be well commented at the code level and well documented at the user level. Source code will be made available to the Rail Agencies that are paying for this project under the terms of an Intellectual Property Agreement, with the terms to be negotiated between the Rail Agencies and the software developer.

The central server will process each GPS packet and link the information to the train/bus number, route and schedule. ETA's will be calculated based on GPS data, schedules, best run times and designated track/road speeds. The system will then use this data to estimate the train/bus time of arrival (ETA) and generate ETA's, Arrival and Boarding messages at downline stations.

The central server will also need to connect to and communicate with Amtrak via the ARISE system. ARISE is Amtrak's web interface that allows outside users the ability to pull and push information to the ARROW database. The ARROW database is a central repository for all Amtrak train data. The central server will need to push train status information to the ARROW system so that Amtrak can use it at National PIDS equipped stations in California. The central server will also need to pull information from ARROW for non-communicating or non-GPS equipped commuter trains in California. The CalPIDS system will require the ability to manually enter train consist information for the system to use.

Trains that are not equipped or have a non-functioning GPS will be tracked with location data pulled into the system from the Amtrak ARROW via the ARISE systems. The CalPIDS system will use this information in conjunction with schedules, best run times to generate ETA's, Arrival and Boarding messages for the train at down line stations.

Buses are equipped with GPS Wi-Fi radios or other Wi-Fi radios will be tracked with GPS, and buses that are not equipped or have a non-functioning GPS will have ETA's displayed at the stations based on bus schedule data. The current bus contractor will provide a GPS datalink to the CalPIDS system.

The central server will need to manage a stable connection with the station controller located at each CalPIDS equipped station to provide train status and other messages to awaiting passengers. The station controller will handle all communications with CalPIDS equipment at the station via IP based connections.

Information will be displayed in a variety of formats, including live maps and synoptic views, "airport style" LCD displays or LED message boards, depending on the station. LED/LCD displays, and audio services must be 100% compliant with the American with Disabilities Act (ADA).

Audio will be synchronized with its corresponding messages text and play concurrently on all displays. An audio amplifier will provide a stable and adjustable sound levels throughout the station via zones and ambient noise sensors.

The user's consoles will incorporate all current console functionality and expand that functionality with new features like delayed train automation and the addition of event driven popups. The automation and popups will be designed to assist the operators and provide awaiting customers with timely and accurate train status information.

a. Current California PIDS Environment

The current California PIDS system covers 49 stations located on the Capitol Corridor, San Joaquin, ACE and Pacific Surfliner corridors. Each station is equipped with a station controller, audio amplification and electronic signage. The PIDS server is in the Amtrak server farm in Southbury, CT. Trains are numbered based on the train schedule and train consist information pulled from Amtrak each morning. The server gathers train location data based on the train number from various sources to calculates train ETA's. The ETA's are then sent to the appropriate stations to be displayed on the electronic signage. The server can also send train informational messages and scheduled general messages to the electronic signage. Administrators/Users interact with the system through a user's console, which allows the operator to monitor and interact with trains and stations information along all corridors.

The data flows between different components of the current California PIDS system is shown below:
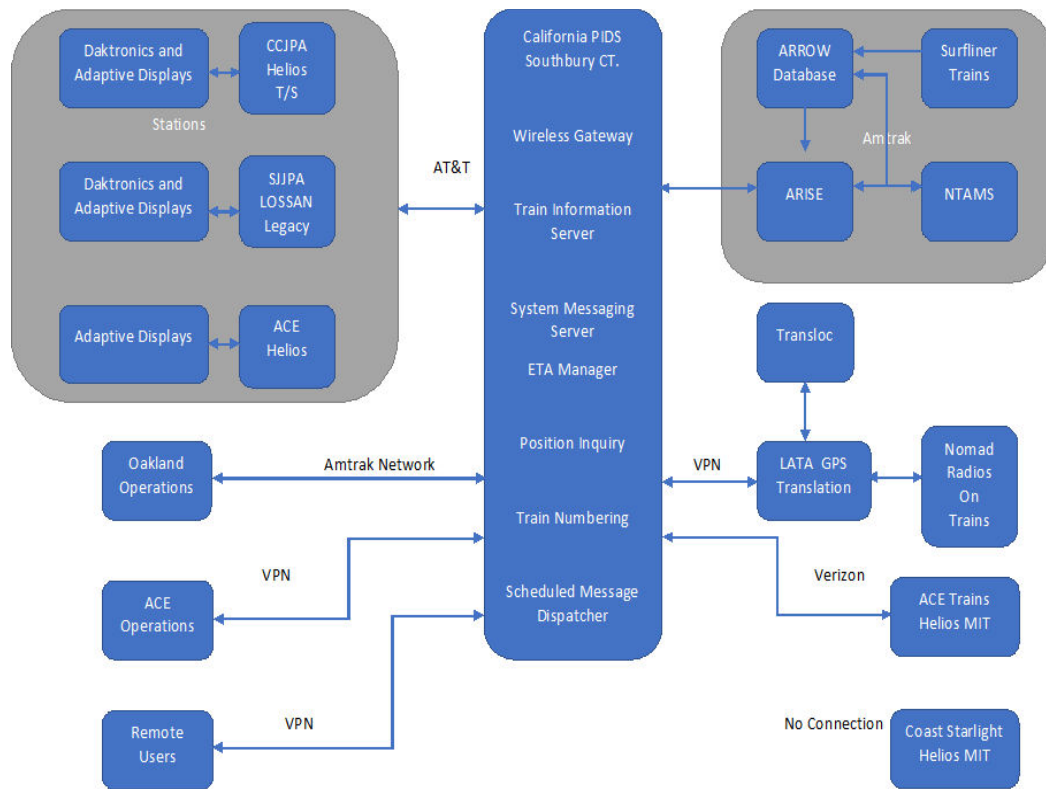
b. California Trains

The Capitol Corridor and the San Joaquins share train equipment and use the GPS data available via the on-board Nomad Wi-Fi system. The NMEA compliant GPS data is collected by Nomad and then sent to a translation server provided by XenaTech (formerly known as LATA). XenaTech translates the GPS data into a format the current California PIDS system can use. XenaTech then sends the GPS data to the PIDS server in Southbury, CT.

The Altamont Corridor Express (ACE) uses Helios MIT's that pass GPS data to the PIDS server in Southbury, CT via the cellular phone network.

The Pacific Surfliner uses the Amtrak NTAMS system, which uses x-point and stations arrivals to denote the trains position along the tracks. The PIDS system retrieves the train data from the Amtrak Arrow system and computes an ETA and sends it out to PIDS equipped stations.

The Coast Starlight, which traverses along both the Pacific Surfliner and Capitol Corridor routes, uses Helios MIT's. The Helios MIT's use the cellular phone network to send GPS data to the PIDS server in Southbury CT. Problems with the Helios MIT's, on-board power and cellular data coverage along the Coast Starlight route have made this an ineffective solution.

The California Zephyr runs from Emeryville CA. to Chicago Illinois. Currently, the California PIDS system does not track the California Zephyr.

c. Stations and Corridors

The current system covers 49 stations that are spread throughout California.

Table 1 Current California PIDS Stations

Capitol Corridor CC	San Joaquin SJ	Pacific Surfliner PS	Altamont Corridor ACE
Auburn	Antioch	San Luis Obispo	Stockton (ACE)
Rocklin	Stockton	Grover Beach	Lathrop
Roseville	Lodi	Guadalupe	Tracy
*Sacramento	Modesto	Lompoc	Vasco Road
Davis	Turlock/Denair	Goleta	Livermore
Fairfield/Vacaville	Merced	Santa Barbara	Pleasanton
Suisun/Fairfield	Madera	Carpentaria	
Martinez	Fresno	Ventura	
Richmond	Hanford	Los Angeles	
Berkeley	Corcoran	San Clemente	
Emeryville	Wasco	Solana Beach	
Oakland	Bakersfield	San Diego	
Oakland Col.		Old Town	
Hayward			
Fremont			
Santa Clara Great America			
Santa Clara University			
San Jose			
**BART			

*Amtrak National PIDS Station

**BART Call Center

Several stations are served by more than one train service.

The Amtrak Coast Starlight traverses the Pacific Surfliner and Capitol Corridor.

Table 2 Coast Starlight

Station	Corridor
Sacramento	Capitol Corridor
Davis	Capitol Corridor
Martinez	Capitol Corridor
Richmond	Capitol Corridor
Emeryville	Capitol Corridor
Oakland	Capitol Corridor
San Jose	Capitol Corridor
San Luis Obispo	Pacific Surfliner
Santa Barbara	Pacific Surfliner
L.A. Union Station	Pacific Surfliner

d. Platform Display System (PDS)

The current PIDS system uses two types of station controllers. The Legacy PDS was originally developed by GeoFocus in 2002. Prerecorded WAV Audio (female voice) files with station names and commonly used words and numbers were stored on the PDS. The WAV files are then concatenated together to form messages to be displayed on the LED displays at the station. Example: "524 SAC 9:48AM" would be read "Train 524 to Sacramento will be arriving at 9:48AM".

The Helios PDS made by EuroTech were installed on the Capitol Corridor in 2011 and the Altamont Corridor Express (ACE) in 2014. The Helios PDS added the ability to use Text to Speech and Pre-Recorded audio to announce trains. Only the Capitol Corridor Helios PDS has text to speech capabilities the ACE unit use pre-recorded audio.

e. Audio Amplification

The Legacy PDS and Helios PDS provide no or very little amplification for the audio messages and require an external amplifier. The audio amplifiers vary in power from 30 watts to 500 Watts depending on the size of the station and the number of speakers required.

f. LED Signage

The California PIDS system uses four types of LED signage. The Capitol Corridor, San Joaquin and Pacific Surfliner use 4-line (48x192) Daktronics 6120 displays. The ACE corridor utilizes 2-line Adaptive 2600 displays. The new Fairfield/Vacaville station installed Daktronics 6300 (32x192) double sided displays. The primary color of the outdoor displays LED's is Amber. The fourth type of LED sign is an Adaptive 3800 Tri-Color indoor display. Most of the signs are connected to the PDS via an RS485 termination except for

Fairfield/Vacaville which uses fiber optic backbone and a RS422 connection to the displays.

Note: The 8 Daktronics LED signs mounted on platforms 9/10 and 11/12 at L.A. Union Station belong to Metrolink and are controlled by the California PIDS system. These signs are not ADA compliant due to scrolling text.

3. **CURRENT CALIFORNIA PIDS SERVER SOFTWARE**

The current California PIDS system server is located at Amtrak's server farm in Southbury, CT. The PIDS server runs on Windows Server R2 2008 in a VMware environment with SQL 2008 as its main database software. The PIDS software is made up of 7 applications working in conjunction to communicate with the trains, stations and Amtrak's databases. All software is currently running as applications on the server.

   a. **Wireless Network Gateway (WNG)**

   The WNG manages connections to equipment mounted on the dining cars or the locomotives based on the cars number designation. The connection can be via cellular modem or direct network connection. The WNG is the interface between the Train Information Server (TIS) and the Train Equipment's network provider.

   b. **Train Information Server (TIS)**

   The Train Information Server (TIS) is the operational center of the system. The TIS collects data from each train, correlates the data with system schedules to determine each trains performance and then distributes the information across the network to the client's applications. The TIS also monitors the progress of each train, generating events when specific pre-defined criteria are met, such as when trains pass message trigger points or arrive at stations.

   c. **System Messaging Server (SMS)**

   The System Messaging Server (SMS) is responsible for delivering user-generated messages to trains and stations. The SMS also maintains the connection to the platform equipment at the stations.

   d. **ETA Manager**

   The ETA manager performs two functions. First, it provides updated train ETA information to the signs at the stations via the SMS. Second, it provides accurate ETA information to the Amtrak Arrow system via Position Inquiry

   e. **Train Numbering (TN)**

   Train Numbering retrieves consist information from the Amtrak Arrow system based on the days schedule. It then uses the train schedule to numbers each train 30 minutes prior to departure.

   f. **Position Inquiry (PI)**

   Position Inquiry is used to retrieve train position data from the Amtrak Arrow system to assist in positioning trains that do not have a GPS unit, or the unit is nonfunctioning. PI uses the train schedules to determine which train to track and when.

   g. **Scheduled Message Dispatcher**

   The Scheduled Message Dispatcher works with the SMS and allows the user to schedule messages to play at any station at a predetermined time in the future.

h. User Console

The PIDS user console allows operators to interact with and manually control train numbering and un-numbering, manually put a train in delay mode, view trains on a line map, and view all pertinent data about the trains. The user can view system reports and train schedules. User can view automated messages, create, send or delete preprogrammed and manually generated messages to/from all station and trains. The user can add/remove users on the system and see current system settings. Users can also test equipment at stations. All functions of the user console are permission based depending the user's login.

4. PROJECT SCOPE FOR NEW CALPIDS

This project covers the Capitol Corridor, San Joaquins North/West, Altamont Corridor Express (ACE), and two Amtrak long haul trains (California Zephyr and Coast Starlight) that pass through the stations that serve Capitol Corridor, San Joaquins North/West, and ACE. Currently, the Pacific Surfliner is not a part of the CalPIDS project. Project scope details for other potential partner rail agencies who may decide to work with CCJPA to implement CalPIDS in their service is not presented in this Scope of Work.

Table 1 California PIDS Stations

Capitol Corridor CC	San Joaquin SJ	Altamont Corridor Express ACE
Auburn	Antioch	Stockton (ACE)
Rocklin	Stockton	Lathrop
Roseville	Lodi	Tracy
Sacramento	Modesto	Vasco Road
Davis	Turlock/Denair	Livermore
Fairfield/Vacaville	Merced	Pleasanton
Suisun/Fairfield	Madera	
Martinez	Fresno	
Richmond	Hanford	
Berkeley	Corcoran	
Emeryville	Wasco	
Oakland	Bakersfield	
Oakland Coliseum		
Hayward		
Fremont		

Santa Clara Great America		
Santa Clara University		
San Jose		
*BART		

*Call Center, not a station

The system needs to announce the SJW, California Zephyr and the Coast Starlight trains at all stations they bypass. If the SJW, California Zephyr or Coast Starlight train does not stop at a station a message will need to be posted "The approaching train is the "SJW "XXX", California Zephyr or Coast Starlight" and does not stop here. Please step away from the tracks and stay behind the yellow line."

**Table 2 Altamont Corridor Express (ACE) Rail Traffic per Station**

Station	Trains that Stop at the Station
Stockton (ACE)	ACE, SJN
Lathrop	ACE
Tracy	ACE
Vasco Road	ACE
Livermore	ACE
Pleasanton	ACE
Fremont	ACE, CC
Santa Clara Great America	ACE, CC
Santa Clara University	ACE, CC
San Jose	ACE, CC, Coast Starlight

Table 3 San Joaquin North and West Corridors Rail Traffic per Station

Station	Trains that Stop at the Station
*Oakland Jack London	SJW, CC, Coast Starlight
*Emeryville	SJW, CC, California Zephyr, Coast Starlight
*Richmond	SJW, CC, California Zephyr, Coast Starlight
*Martinez	SJW, CC, California Zephyr, Coast Starlight
*Sacramento	SJN, CC, Coast Starlight

Antioch	SJW
Stockton	SJW
Lodi	SJN
Stockton ACE	SJN, ACE
Modesto	SJW, SJN
Turlock/Denair	SJW, SJN
Merced	SJW, SJN
Madera	SJW, SJN
Fresno	SJW, SJN
Hanford	SJW, SJN
Corcoran	SJW, SJN
Wasco	SJW, SJN
Bakersfield	SJW, SJN

The proposed CalPIDS layout is shown below:
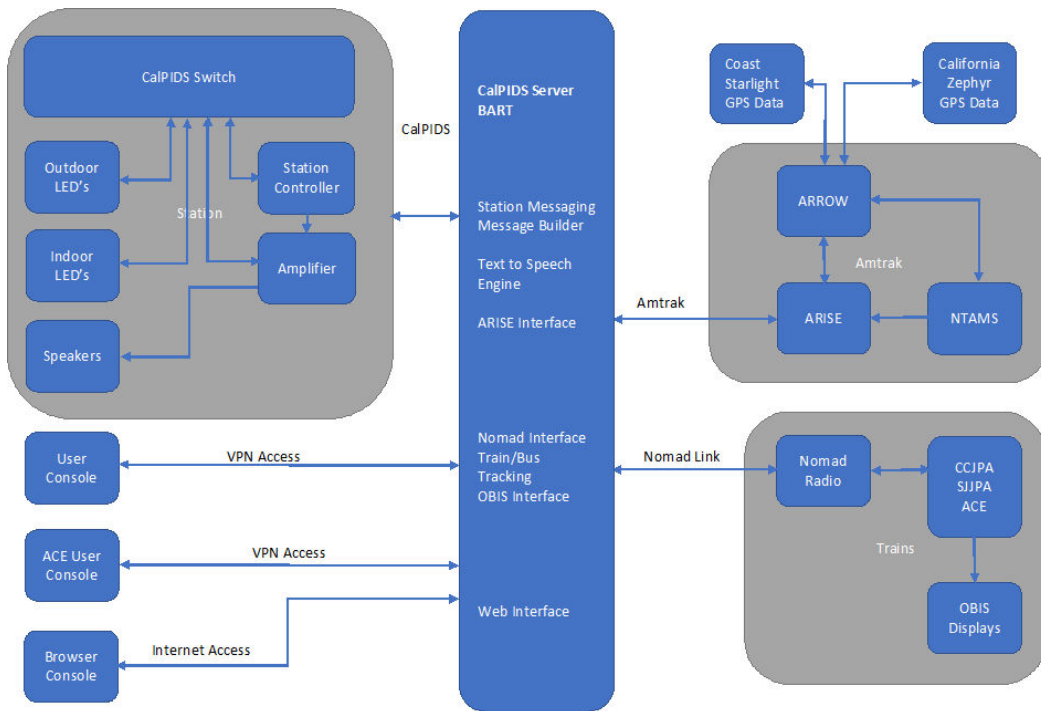
a. System Hardware Overview

All CalPIDS stations will require new station controllers to communicate with all CalPIDS station hardware. New and existing LED/LCD displays that will provide the customers a seamless viewing experience from when they arrive at the station until they depart from the station. New audio amplification and speakers inside the station and outside on the platform will provide a volume controlled listening environment. All CalPIDS station equipment will be networked together to allow for seamless remote control of displays and audio equipment.

The station controller and any other critical equipment will have an iBoot web power switch connected to its power input. This will allow for remote power reboots of the equipment.

b. Server Hardware

The CalPIDS server will reside at the BART server farm in California. The server will run a 4 to 8 core Xeon processor with 32 Gb of RAM and 3 (8 Gb) hard drives setup in a RAID 5 configuration. The rail agencies are also open to using a cloud based provider like Amazon Web Services (AWS) as an alternative to a standalone server.

c. Network Connectivity

The rail agencies will be installing new AT&T circuits at all 37 stations forming a private network for the CalPIDS system. Network speed will depend on the AT&T infrastructure available at the station and CalPIDS equipment requirements. AT&T will provide managed routers, switches and firewalls as needed. The circuits will be routed from the stations to the BART server farm in the San Francisco Bay Area.

d. Train Equipment

CCJPA and SJJPA are planning to implement an OBIS (Onboard Information System) on all train equipment. The OBIS provides Train Number, Destination ETA, plus other service-related information to passengers. Relevant messages are displayed based on the train's location along the tracks. OBIS is currently in pilot stages, and full implementation schedule will be known in early 2019. The rail agencies would like to interface directly with the OBIS system via CalPIDS.

e. System Software Design

All server software will be designed to run on the latest stable version of Microsoft Windows Server and run as services. A modular software design is preferred for all CalPIDS software. All software shall be designs with a large degree of future upgradeability and expansion in mind. The server software must seamlessly interface with the Amtrak ARISE and Arrow systems to pull/push train information. All data to/from Amtrak will be formatted to comply with Amtrak standards. If a cloud-based provider is chosen to host the CalPIDS system, all software must be optimized to run in the cloud.

Rules governing trains and messages on the current California PIDS system will need to be incorporated or modified to work with the design of the new CalPIDS system. New rules of operation shall be easy to add to the system.

The system will be required to track trains on all corridors and plot each train accurately on a map within 300 feet. The trains will be tracked primarily by GPS (Global Positioning System) from various sources or secondarily by information pulled from the Amtrak Arrow system. Information pulled from the Amtrak Arrow system will be used as if the data came directly from the primary data source.

The system will be capable of setting up geofencing around stations to allow targeted trains to trigger train specific messages at stations and station specific messages onboard trains and mobile app.

Automation of the current delayed train feature to include popup messages on the user console will help to insure timely train information is sent to the customers.

The addition of event triggered popup windows will allow operators to focus on current events affecting trains, stations and the systems operation as they happen.

The server will run text to speech software allowing for the creation of new audio/text messages in English only (the rail agencies may be open to some form of off-site message production) that will be downloaded and played by the station controllers. A message builder user interface will be located on the user console and will be accessible based on the user's login. The server must allow for the uploading and the addition of prerecorded messages, graphics and video files to the system. The server will then download the files to the station controller to be played and displayed to the customers.

The system will be required to announce buses based on their GPS location and schedules at all intermodal stations.

The system will be required to track the Coast Starlight and California Zephyr trains based on information pulled from the Amtrak Arrow system. Coast Starlight and California Zephyr trains will have GPS receivers on the locomotive and transmit their location information to the Arrow system.   The system will need to make announcements at stations the Coast Starlight and California Zephyr trains stop at and at stations they bypass. The system must be able to handle and differentiate between two trains with the same train number on the tracks at the same time.

The software will be capable of sending out automated error/trouble emails or text alerts to designated administrative personnel. The alerts will detail the type and location of the error i.e. server software or station software/equipment. Administrative level users will be able to select which errors/trouble will trigger an email or text alert.

All software provided by the winning bidder will be able to generate operational status reports that detail the software's performance and uptime. All software will be provided to the rail agencies in an executable file format with detailed instruction on how to load and configure the software.

f.   Website Interface

The rail agencies would like the CalPIDS system to interface directly with their corresponding websites. Train status, schedules and alerts that appear at the stations will appear on the websites in real-time. User will be able to send a message from the Operations Console and select where else the message will be sent I.e. The corridors website, social media sites, subscribers.

g.   Operations Console and User Interface

There will be two versions of the Operations Console, a Standalone full featured version and a Browser-based version. The Standalone version is intended for use in an operations environment by system operators and administrators while the Browser version will be used non-operations viewers.

i.   Standalone Operations Console

The Standalone Console will be an application that runs on an IBM compatible computer with a Microsoft Windows operating system. The console will be a full featured console that allows the operator to control most functions of the CalPIDS system. The console is intended to be used by the Operation Centers personnel and System Administrators. Operators will be able to create new messages and save them to the system for everyone to use. The console will have a screen dedicated to quick play messages, these messages will have preset high priority

run-times and play only a predetermined amount of time on the system per selection. Quick play messages that require a train or track number will allow operators to fill in the blanks from a predefined list of currently active trains. Quick play messages are meant to take the place of most live announcements, which are not ADA compliant. The console will be able to control information to/from train, bus and stations. Authorized users will be allowed to create new train/bus schedules and messages. Administrator level operators will have the ability to control/interact with station equipment, add/remove users and grant permissions for both types of consoles, change system parameters and generate new reports. Administrators will have the ability to add and remove trains and stations to/from the system. User accounts settings will allow for very restrictive access to full access administrator and allow for any feature to be turned off

ii. Browser-Based Console

The Browser-based console is intended to be used by non-operations users. The console will run in an https window on the latest versions of IE, Chrome and Firefox. The console will incorporate most if not all the features of the standalone console (if feasible). The browser-based console will have a screen dedicated to quick play messages, these messages will have preset high priority run-times and play only a predetermined amount of time on the system per selection. Quick play messages that require a train or track number will allow operators to fill in the blanks from a predefined list of currently active trains. Quick play messages are meant to take the place of most live announcements, which are not ADA compliant. The users will only be able to post and delete prerecorded announcements to stations based on their login. The user's login will determine the feature and permissions available to the user. User accounts settings will allow for very restrictive access to full access (administrator) and allow for any feature to be turned off.

h. Mobile Application

The rail agencies would like to display the CalPIDS information on mobile devices. Information passed to mobile devices will be in real-time and allow users to setup geofenced personal and general alerts for their train or station. User will be able to see all trains on all corridors utilizing CalPIDS. The mobile application will be optimized to run on both Apple and Android operating systems. Optional: The user will be able to select different languages i.e. English, Spanish, Mandarin Chinese etc.
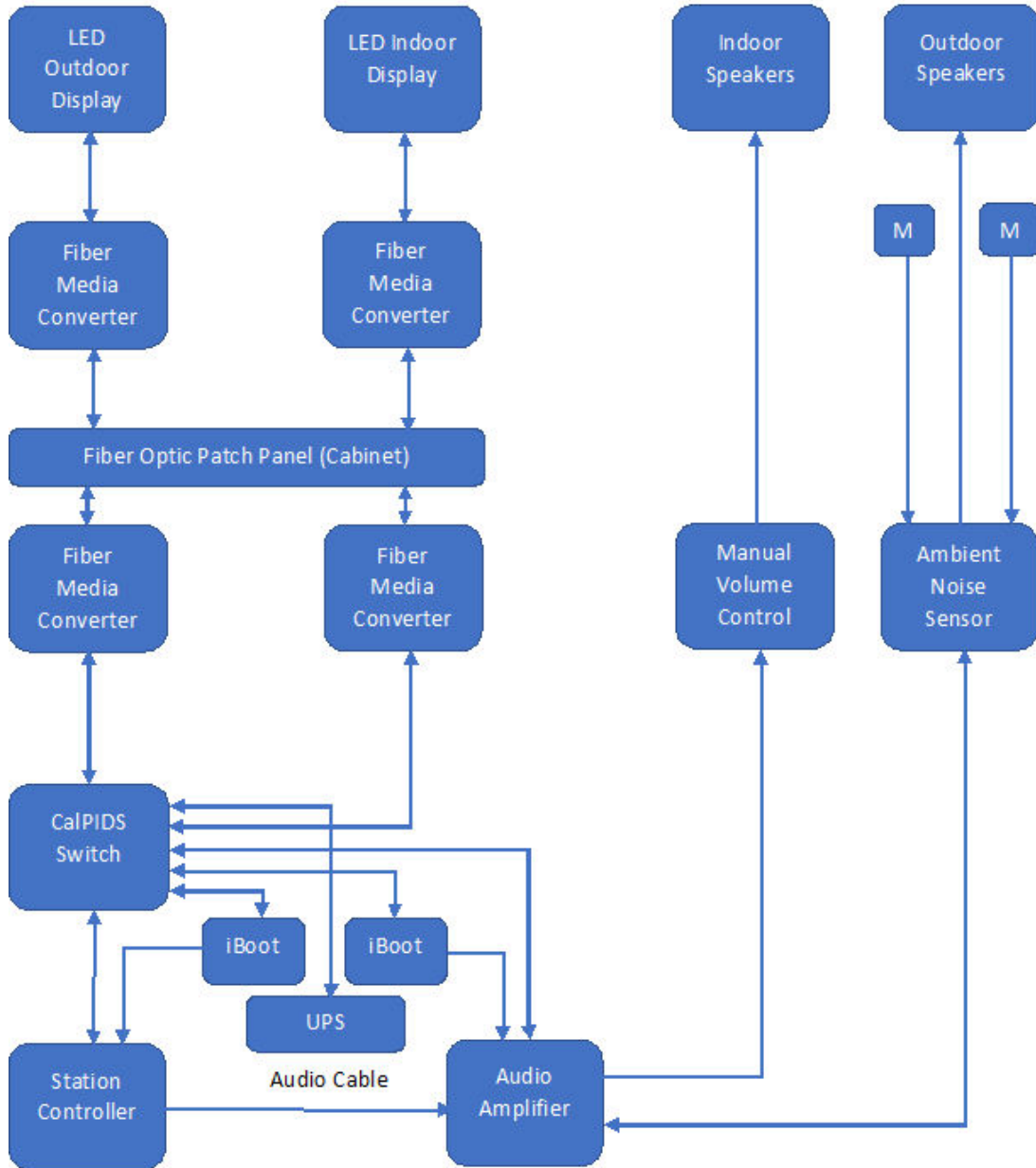
i. Station Equipment

All station hardware provided by the winning bidder must be commercially available for purchase by the rail agencies. All equipment must be under an active warranty and guaranteed to operate when installed. All equipment shall be rack mountable in a standard 19" rack configuration.

LED signage will be connected to the network with 50/125 multimode fiber optic cable. Each display will be setup in a homerun configuration with 2 fiber pair running from the display to the fiber patch pane (in cabinet) for each display.

Cat5 network cables connected to the media converters or other in cabinet equipment to the switch will be color coded and labeled with to/from information. The color code and label will help isolate equipment quickly i.e. Blue for outdoor displays, Orange for indoor displays, Yellow for iBoot, Green for Station Controller etc.

Equipment will be grouped according to type or equipment on the switch. I.e. Outdoor displays group 1, Indoor displays group 2, etc.

Speakers will be configured as a 70V speaker system with an outdoor zone and an indoor zone. All speakers in a zone will be daisy chained together. (2) pair 20 or 22-gauge speaker wire depending on the distance of the cable run. Cable runs over 1100' will require 20-gauge wire. Outdoor speaker volume will be controlled by ambient noise sensors as needed. Indoor speakers at staffed stations will require a manual volume adjustment that will be in a secure area.

j. Station Controller

The rail agencies are looking to modernizes how the Station Controller communicates with the LED/LCD and other station equipment at the stations. All equipment located on the platform and in the station will use an IP based communication setup. Each LED/LCD display and audio amplifier will have its own unique non-routable IP address which allows it to communicate with the station controller. The station controller will communicate with the central server. The station controller will receive IP targeted ETA's, messages, graphics and video files from the central server and send the information to the appropriate display/IP address to be presented to the customer.

The station controller must continue to operate and send ETA's and messages to the displays if the network connection is lost. All current train ETA's displaying at the station will continue until they expire. An automatic message informing the passengers of the network issue and directing them to download the mobile app for current train status. Scheduled messages will continue to display in a rotation until there expiration time and date has been reached. Once network connectivity has been reestablished and stabilized the server with automatically refresh the ETA's and messages on the station controller.

The station controller needs to be robust and with enough computing power and memory to play text and audio messages quickly and reliability. Audio for the ETA's and other messages must be synchronized and stay synchronized within .5 seconds every time the message plays. All displays that are playing the same message must be synchronized and playing at the same time.

The station controller must have the ability to receive large video files, streaming data or graphic files from the central server and load them on or stream them to the LED/LCD displays.

The station controller must have adequate and upgradable storage to hold prerecorded digital audio files that have been optimized for clear, high quality, non-choppy delivery.

The station controller setup should be easy with an interactive point and click design. All features of the controller's setup will be available from a central control panel i.e. display type, display size, display download speeds, display IP information, MAC addresses, and display parameters will all be accessible via pull down menus. Display type should contain all sign types and sizes in use on all California corridors. Messages will be automatically formatted for the type and size of display selected.

The station controller must have a robust error and reporting capability. All errors to/from the LED/LCD displays and the audio system will be logged on the controller and transmitted to the central server in a timely manner. Serious errors that affect the Station Controller's functionality or the displaying of messages of will be sent to the central server immediately.

The station controller should be capable of setting zones where message for trains will appear on platform displays and message for buses appear on the bus loop displays. High priority messages will appear on all displays regardless of the zone.

The station controller must be capable of automatically muting or delaying audio message if to many audio messages are playing in a row. High priority messages i.e. ETA's and train status information will always play with audio regardless of how many have played.

Station controller software updates will be done over the network and retain all current settings. Software updates to the LED/LCD displays will be done over the network via the station controller. The controller and controller manager on the user console will be capable of testing all the displays and audio amplifiers functionality.

k. Station Audio Amplifier

Stations are different sizes and using a one size fits all solution may not be cost effective.
. Amplifiers wattage will be sized per station. The audio amplifier needs to be IP addressable and connect to the network switch to allow for real-time monitoring of the audio equipment. The audio amplifier will need to rack mountable in a standard 19" rack configuration.

At larger stations the audio amplifier will be capable of setting up different zones for inside the building or shelter and out on the platform. Ambient noise sensors may be required to control the audio volume during busy times and when a train is at the station.

A VOIP or dialup connection coupled with two-way speakers connecting the Operations Center to each station and will interface with the audio amplifier. The audio amplifier will mute all audio coming from the station controller until the VOIP or dialup connection is terminated this will allow for emergency communications with passengers. Passengers will have access to a panic button that will automatically connect to the control center.

l. Station Interior Signs

The rail agencies are looking to replace all 12 Adaptive 3800 displays at staffed stations with 48 inches or above LCD or LED displays. Displays must be commercial grade and designed to operate 24/7/365 with 100,000 MTBF and connect to the station controller over ethernet. Displays must fit inside of a sealed enclosure to prevent tampering. Enclosures must comply with ADA guidelines.

Information on the interior displays will be displayed in an airport style format with train information on the top and messages displayed on the bottom. This type of display will also be utilized for graphic and video advertisements. Stations designated as historical landmarks may use a secure WIFI connection to the displays.

m. Station Exterior Signs

The rail agencies are looking at possibly replacing an estimated 108 Daktronics LED displays that are 8 years old and in fair condition. The signs have a usable lifetime of 11 years. The displays are currently connected in a daisy chain configuration via RS485 or fiber optic homerun configuration. The RS485 cable will need to be removed and a new fiber optic network installed at all stations. All stations will use 50/125 multimode fiber optic cables from the CalPIDS cabinet to the displays. Sun shields will be mounted on all exterior signs not covered by a canopy to prevent damage from the elements. All 15 Adaptive 2500/2600 displays located on the ACE corridor, and the BART call center will need to be replaced.

n. Equipment Cabinet

A new heavy-duty cabinet will be a minimum of 60"H x 24"W x 30"D with 19" rack mounts and lockable doors will be required to hold network equipment and CalPIDS equipment at each station. All unused space in the front of the cabinet will be filled with blank panels. Unstaffed stations with no secure shelter or air-conditioning will require an air-conditioned or fan cooled version of the cabinet. Outdoor cabinets may be smaller but must be fully insolated. All cabinets must be securely mounted to the floor or platform. Whenever possible cabinets should be located out of direct sunlight to help prevent equipment overheating.

o. Station Interior Audio

The noise level inside stations can vary depending on the time of day which makes it very difficult to maintain a comfortable level. The maximum PIDS volume at any time in the

station should never exceed 87db. Strategic mounting of the speakers combined with manual volume control inside of the building will help keep the audio at a comfortable level.

The manual volume control will be in a secure location, will allow the ability to adjust the inside volume without affecting the outside volume.

p. Station Exterior Audio

The noise level outside of stations can vary depending on the time of day which makes it very difficult to maintain a comfortable listening level. The maximum PIDS volume at any time outside the station should never exceed 87db. California stations have begun to move away from horn type speaker in favor of all-weather enclosed speakers which deliver a better frequency response and a better dispersion pattern to cover larger areas more effectively. Strategic mounting of the speakers combined with ambient noise sensors outside of the building will help keep the audio at a comfortable level.

q. Power Distribution Unit (PDU)

Two (2) rack mountable (6) outlet PDU's will be required at each station for power distribution. An iBoot or similar remote power reset devices will be attached to the power input of critical CalPIDS equipment.

r. Uninterruptable Power Supply (UPS)

A Managed 2200 VA UPS or greater with the ability to hold all equipment in the cabinet to include the Router, Switch, Station Controller, Fiber Media Adapters and Audio Amplifier for 6 to 10 minutes once power is lost. Software installed on the station controller will insure it is shutdown correctly before battery power is lost.

s. Train Hardware

All CCJPA and SJJPA trains will be running OBIS (On-Board Information System) and Nomad Wi-Fi radios. Nomad provides the Wi-Fi connectivity to all cars on the train and the GPS data to the CalPIDS.

CalPIDS would like to interface with the OBIS system to provide more information to the On-Board passengers.

5. TEST PLANS

The Vendor shall develop a complete and detailed testing plan for each feature of the CalPIDS software. Test plans need to cover the following areas: Server Software, Station Controller Hardware/Software, Station LED/LCD Displays, Mobile Applications, Amtrak ARISE Interface, Amtrak Arrow Interface, Audio System, Train Hardware and User Consoles. All test plans shall cover areas listed in the Functional Requirements (Attachment D). Testing may be expanded to include new features not listed in the Functional Requirements that are added to the system after the contract in awarded. Test plans must exercise each software feature in a real-world scenario and show verifiable results.   A final end-to-end integration test of all components will be conducted at select stations on each corridor within the CalPIDS system. Test plans are subject to review and approval by the CalPIDS Team will cover all installed systems.

6. USER TRAINING

The Vendor will provide four (4) separate training classes that will be videotaped and provided to the rail agencies. One class for the Operations Group covering system design and User Console operation. One class for Maintenance personnel to include setup, troubleshooting and maintenance which will cover system design, console installation and setup and station controller installation and setup. One class for system administration which will cover the overall system; Server setting, Console settings and the Station Controller settings. The number of hours required for each class shall not exceed 8 hours. In general, the class shall

discuss system overview, system functions, how components interface with one another, and diagnostics of failure reported to the central control center. Training manuals will be created for the trainer and participants and shall be supplied prior to all classes, with the intent that every participant receives his/her own copy. The trainer copy will have detailed system information.

7. SOFTWARE MAINTENANCE

Software maintenance will cover all software installed on and for the CalPIDS system. Consistent with a service-based approach of project delivery, the vendor will be responsible for the maintenance/repairs/updates/upgrade of all CalPIDS software, operating systems, databases and database software, security software, virus protection software and customized software used to interact with network equipment, LED/LCD displays and audio equipment. Vendor will be required to work with 3rd party vendors to help isolate network and equipment issue to minimize outage times.

No changes to the operational system software will be made without the full knowledge and authorization of the rail agencies.

a. Server Software

Routine maintenance should be presented in a service plan approach (e.g. four times a year). All server maintenance will be conducted in the overnight hours while no California trains are operational. Server software maintenance will consist of maintenance/repairs/updates/upgrade/optimization to all CalPIDS software, operating system, databases and database software, security software, virus protection software, log file archiving and hard drive cleanup. Log files will need to remain on the system and available for review for 365 days. Log files older than 365 days can be achieved and (depending on available space) stored on the system in a separate directory.

b. Station Controller Software

Routine maintenance should be presented in a service plan approach (e.g. four times a year). Station controller maintenance will be conducted in the overnight hours while no California trains are operational. Station controller maintenance/repairs/updates/upgrade/optimization of all CalPIDS software, operating system, database and database software, security software, virus protection software and customized software used to interact with network equipment, LED/LCD displays and audio equipment. Optimization of the database, files and hard drive cleanup will be conducted on an as needed basis.   The station controller will be set to automatically achieve log files older than 30 days. Archived log files may remain on the station controller (depending on available space) for 90 days and then must be removed.

c. Software Updates

The Microsoft, Linux and Browser auto-update features will be turned off on all system devices. All updates to software running on the system to include software written for the system, security software, virus protection etc. will be tested on the system testbed prior to being rolled out to the production system. All updates and upgrades to user consoles and station hardware shall be scheduled and then pushed from the server to the equipment once they have been thoroughly tested.

d. Unscheduled Outages

Unscheduled outages effecting the multiple stations or the full system and caused by a software failure will be acknowledged within 1 hour of the outage being reported. Fault isolation and repairs will begin immediately regardless of the day of the week to minimize

downtime. Outages affecting a station must be acknowledged within 1 hour of the outage being reported and repairs to begin within 24 hours. A full report as to the cause of the failure and the repair work completed will be required within 24 hours for multiple stations or the full system outage and by the end of the month for a station outage.

e. **Change Request**

All software modifications will start with a change request. The change request will detail the issue or problem that needs to be solved. The change request will then be reviewed by the rail agencies and assessed for its technical merit, potential side effects, overall impact to other components/functions and cost/time estimations. The rail agencies will either approved, placed on hold or deny the change request. Approved change request will then be forwarded to the software vendor. The software vendor will evaluate the change request and report back to the rail agencies representatives with a detailed report on how the change will affect the system, time to complete and any cost associated.

All software modifications will be well documented and detail the software code or database items that were changed. Any changes to the software will trigger a software version change. All software will be fully tested on the testbed prior to release to the production system. The software vendor will have a release procedure to load new software versions and a removal procedure to remove software that has an adverse effect on the system. The removal of adversely operating software from the system will return the system to a pre-software load operational status. The software vendor will be required to issue a report to the rail agencies detailing what went wrong with the software load.

f. **Testbed**

The software vendor will be required to have a fully operational software/hardware testbed that duplicates the currently deployed system. The testbed will have one of each component installed at a CalPIDS station.

8. **HARDWARE MAINTENANCE**

Hardware maintenance will cover the troubleshooting/repair/replacement of all equipment and cabling expressly installed for the CalPIDS system at all CalPIDS stations. Currently there are 36 stations planed with CalPIDS equipment on three different corridors throughout the State of California. Equipment will include LED/LCD displays, Station Controllers, Audio Equipment, Speakers, Cabling, Connectors, Cabinets and Air Conditioning attached to the cabinets. Vendor will be required to work with 3rd party vendors to help isolate network and equipment issue to minimize outage times.

a. **Safety Guidelines**

All maintenance personnel will be required to take and pass each of the controlling rail agencies 'Rail Safety Programs'. Maintenance personnel must dress appropriately, have ID badges and follow the respective rail agencies guidelines while on the platforms. Failure to follow railroad guidelines will result in the maintenance person being removed from the platform and the potential loss of the maintenance contract. At station where CalPIDS equipment is within proximity of the tracks a Flagman from the respective rail agency will be required to be on site while work is being performed. A Flagman will be provided within two weeks of the request being made for scheduled work. A Flagman will be dispatched on an as needed basis for unscheduled outages.

b. Unscheduled Hardware Maintenance

All station hardware will be kept is a good state of repair. An unscheduled outage will be handled and repaired regardless of the day of the week. The vendor will acknowledge a request for maintenance within one hour. The vendor must dispatch to the station within 12 hours of the original request for maintenance. Trouble tickets will be kept updated with the outage status. An outage report with details of the outage and repairs completed will be sent to the rail agencies at the end of each mouth.

c. Preventive Maintenance

Preventive maintenance should be presented in a service plan approach (e.g. two times a year). All equipment will be tested, cleaned and inspected for damage. Testing will consist of playing audio and text message on the system while checking each display and speaker. Cleaning will consist of wiping the displays and equipment down with an approved cleaner. Inspecting for damage will consist of looking for burned out LED, water damage, damaged cables, cables piled on top of CalPIDS equipment that can cause interference.

d. Equipment Warranties

All equipment warranty requirements will be followed by the Vendor for having the equipment repaired or replaced according to OEM standards.

e. Equipment Inventory

The vendor will be required to keep an accurate inventory of all equipment installed at the station. The inventory will consist of but not limited to the equipment's part number, serial number, installation location at the station, photos and any internal settings required to make the unit operational.

f. Required Equipment

The maintenance vendor will be required to have the following equipment on-hand when responding to an outage. Laptop computer, spare network cables, multimeter, spare connecters and termination tools, spare fuses and an 8-foot ladder. Spare station hardware may be needed depending on the type of outage reported. The maintenance vendor will be required to keep spare equipment critical to the systems operation on-hand and inventoried.

g. Required Skill Set

The maintenance personnel responding to tasks at stations will be required to have the following skill set.

i. Ability to read, write and speak English.
ii. Ability to pass the Rail Road's safety test.
iii. Ability to read and understand engineering drawings, schematics and other engineering documentation.
iv. In-depth knowledge of low voltage Direct Current (DC) circuits.
v. Working knowledge of alternating current (AC) circuits.
vi. In-depth knowledge of how to use a multimeter.
vii. In-depth knowledge of networks and network equipment setup.
viii. In-depth knowledge of network carriers and how circuits work.
ix. Working knowledge of Linux operating system
x. Working knowledge of Windows operating system

xi.	Ability to lift 70lbs
xii.	Ability to safely use small hand tools i.e. small screwdrivers
xiii.	Ability to work on equipment over your head
xiv.	Ability to climb and work from an 8-foot ladder
xv.	In-depth knowledge of network cabling
xvi.	In-depth knowledge of Fiber Optics
xvii.	Valid driver's license
xviii.	Valid Auto Insurance

9. <u>PROJECT MANAGEMENT AND ADMINISTRATION</u>

Other considerations as part of these services include:

a. **Communications/Meetings/Record Keeping:**

   i. VENDOR shall maintain a communication tracking system (e.g. email system), approved by RAIL AGENCIES, which identifies all formal communications between VENDOR and RAIL AGENCIES.

   ii. VENDOR shall maintain a reasonable level of team staff who attends meetings with the project team. CCJPA expects prudent management of the VENDOR's subcontractor team so that project costs are minimized and tailored for the meeting tasks at hand.

   iii. VENDOR shall be required to meet with Rail Agencies staff and members of the project team on a schedule to be determined by Rail Agencies and in consultation with the project team for each Work Directive. VENDOR will prepare and distribute a record of these meetings satisfactory to CCJPA within two (2) working days after the meeting.

b. **CalPIDS Documentation:**

   VENDOR shall prepare and submit to Rail Agencies key documents related to CalPIDS software and hardware. Specific documents are listed and described in Attachment D, Section AG.

c. **Reports:**

   VENDOR shall prepare and submit to Rail Agencies monthly performance reports that include CalPIDS data in a format mutually agreed upon between Rail Agencies and VENDOR. The reports shall be submitted within ten (10) days following the end of each month unless otherwise specified by Rail Agencies. Specific performance reports are listed and described in Attachment D, Sections AH and AI.

d. **Scheduling/Cost Management:**

   VENDOR shall develop schedules with deliverables and milestones for each Work Directive. Cost control and tracking against the pro forma sheets shall be done regularly.

e. **Pro Forma Maintenance and Update**

   VENDOR shall maintain and update the cost pro forma sheets that are a part of the Contract in coordination with the Rail Agencies on an annual basis.

f. **Product Development Roadmap & Upgrades**

VENDOR shall provide a software and hardware development roadmap on an annual basis following contract award. This roadmap shall include a schedule of enhancements that VENDOR plans to implement in the upcoming 12-18 month period. This roadmap shall also include product logical architecture changes, physical architecture changes, and web service interface modifications. VENDOR shall provide descriptions explaining each enhancement and an approximate timeframe by quarter of when these enhancements shall be available.

VENDOR and Rail Agencies shall mutually agree on the deployment schedule for updates, prior to any updates going into effect, and VENDOR shall provide documentation, training, and implementation support for all updates as necessary. The FAT/SAT configurations maintained by VENDOR shall be upgraded first and tested. FAT/SAT testing results and analysis shall be provided to Rail Agencies for their approval for use in service prior to VENDOR performing upgrades on in-service equipment and software. Rail Agencies reserve the right to not accept any modifications, enhancements or upgrades to the CalPIDS solution.

CCJPA is interested in a service-based commercial approach to CalPIDS delivery that includes all software and hardware components. VENDOR will be responsible for upgrading and replacing CalPIDS components through the entire contract lifecycle, and billing Rail Agencies a recurring fixed service fee for CalPIDS as an alternative to upfront capital expenditure. Under this approach all CalPIDS components implemented through a WD shall have a defined Usable Life that will be proposed by VENDOR and approved by Rail Agencies. The Usable Life is the shortest of:
   i.   The time that a component can reasonably be effective following date of installation, and
   ii. The time by which new technology will be available and a performance upgrade should be undertaken to ensure that the Solution is performing optimally.

For each component that reaches its agreed Usable Life, VENDOR will present options to Rail Agencies for upgrade or replacement including anticipated performance gains or other improvements. VENDOR will provide a detailed impact study of how the new component(s) can be integrated within the current system while minimizing any detrimental effects on the Solution operation during the process. Any additional Service Cost fee for the component replacement and implementation will be provided by VENDOR along with the new Usable Life of the new component for approval by Rail Agencies. Only under certain circumstances will the Rail Agencies approval that any component with an agreed Usable Life is not replaced within that time. In most circumstances this will be considered a breach of contract and will be managed through that process.

In addition to VENDOR-proposed upgrades, CCJPA may request specific enhancements to CalPIDS. VENDOR shall develop procedures for tracking, prioritizing and scheduling these requests. VENDOR shall define and formalize how Rail Agencies shall request changes to software, and work with Rail Agencies to determine the best path to implementation. Rail Agencies will reserve the right to reject or not accept any software that does not fully meet previously agreed-upon requirements.

ATTACHMENT B

SAMPLE AGREEMENT FOR CONSULTING SERVICES

AGREEMENT

Between

CAPITOL CORRIDOR JOINT POWERS AUTHORITY

And

_____

TO PROVIDE

**PASSENGER INFORMATION DISPLAY SYSTEM
FOR THE CAPITOL CORRIDOR, SAN JOAQUINS, AND ALTAMONT CORRIDOR
EXPRESS PASSENGER RAIL SERVICES**

CCJPA AGREEMENT NO. _____

2019

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Example Attachments

This is an example contract – as such the attachment references below are for illustrative purposes only. References within this Example Contract Agreement will be modified pursuant to the final form of the contract entered into with the selected Vendor.

ATTACHMENT A: SCOPE OF SERVICES

(CCJPA intends to utilize the Scope of Services included as Attachment A to this RFSOQ)

ATTACHMENT B: KEY PERSONNEL LIST

(No example provided but this would list the Key Personnel for the CalPIDS design and project management work)

ATTACHMENT C: PRO FORMA

(No example provided but this will be based off the Pro Forma submittal prepared following instructions in Attachment C of the RFSOQ)

ATTACHMENT D: PROJECT TEAM

(No example provided but this would mirror the information required in Exhibit 1)

PASSENGER INFORMATION DISPLAY SYSTEM
FOR THE CAPITOL CORRIDOR, SAN JOAQUINS, AND ALTAMONT
CORRIDOR EXPRESS PASSENGER RAIL SERVICES

CCJPA AGREEMENT NO. _____

Between

CAPITOL CORRIDOR JOINT POWERS AUTHORITY

And

_____

THIS AGREEMENT ("Agreement") is made and entered into this _____ day of _____, 20__, by and between CAPITOL CORRIDOR JOINT POWERS AUTHORITY, a California authority for the joint exercise of power ("CCJPA") and _____("VENDOR"), with offices at _____.

R E C I T A L S

This Agreement is made with reference to the following facts:

1. CCJPA proposes to obtain a new Passenger Information Display System (PIDS) for the Capitol Corridor intercity passenger rail service;

2. The design, implementation, and maintenance of PIDS provided in this Agreement cannot be performed satisfactorily by the officers and employees of CCJPA;

3. The parties hereto now wish to enter into this Agreement pursuant to which VENDOR will furnish services related to the design, implementation, and maintenance of a new PIDS as hereinafter provided.

* * *

A G R E E M E N T

In consideration of the mutual promises set forth herein and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties hereto agree as follows:

1.0   WORK TO BE PERFORMED

The parties agree that the work to be performed by the VENDOR under this Agreement shall be as hereinafter set forth in this Article 1.0;

1.1   SCOPE OF SERVICES

VENDOR's services are described in Attachment A, SCOPE OF SERVICES, incorporated herein and by this reference made a part hereof. VENDOR shall be responsible to perform or secure the performance of all requested services in their entirety subject to the prior written approval of work plan(s) ("Work Directive(s)" or "WD(s)") by a designated representative ("Project Director"). The Project Director may designate a different representative for each WD.

1.2   WORK DIRECTIVES

VENDOR shall provide services to CCJPA for the tasks as described in each WD subject to prior approval in accordance with the following procedures.

A.   Work Directive Proposal Request

CCJPA will initiate a WD by transmitting to the VENDOR a Work Directive Proposal Request ("WDPR") that describes an initial task description and implementation schedule.

B.   Work Directive Proposal

VENDOR will then prepare a detailed Work Directive Proposal ("WDP") and transmit it to CCJPA within the time specified in the WDPR. The WDP shall specify the following:

1.   Services to be performed by the VENDOR (see Article 1.1 above and Attachment A);

2.   Management Plan that includes a list of Key Personnel (see Article 1.5 below);

3.   Budget Plan including a detailed cost estimate and a cost-loaded schedule;

4.   Work Breakdown Structure;

5.   Schedule;

6.   List of subcontractors, their scope of work and estimated value of work;

7.   Work products (see Article 1.1 above and Attachment A); and

8.   WD project specific procedures (see Article 1.4, below).

C.   WDP Evaluation

CCJPA will evaluate the WDP. In its discretion, CCJPA may request VENDOR to revise and resubmit the WDP.

D.   Acceptance of WDP

CCJPA will notify VENDOR in writing whether a WDP has been accepted. A WDP not accepted in writing shall be deemed rejected.

E.   Rejection of WDP

If a WDP or its revision is rejected, neither party shall have any rights or obligations arising out of the WDP or WDPR.

F.   Acceptance of WD

Each WD shall be placed into effect by the Project Director and by the acceptance of the VENDOR. In addition, at any time during the course of the WD performance, the Project Director may revise the WD by project direction, subject to acceptance by VENDOR.

G.   Conflict of Interest

Each WD shall incorporate the provisions of this Agreement by reference. A conflict of interest review will be performed by CCJPA prior to issuing project direction under a WD.

1.3   MANAGEMENT PLAN AND PROCEDURES

A.   Management Plan

In response to a WDPR from CCJPA, at a minimum, VENDOR shall submit with each WDP a list of Key Personnel assigned as defined by Article 1.5 below.

VENDOR agrees not to make any substitution of subcontractors without prior approval of the Project Director after a WDP has been accepted in writing by the Project Director.

B.   Management Procedures

Apart from any specific WDs, VENDOR and those subcontractors at any tier that CCJPA at its discretion may identify, shall develop, implement and maintain procedures, all subject to approval by CCJPA's Project Director, who gives direction as to the performance of the work by VENDOR or subcontractor personnel, including, but not limited to, performance of WDs.

The intention of the parties is for VENDOR or its subcontractors, to develop, implement and maintain clear, concise, and project specific procedures to give CCJPA reasonable assurances that all charges for direct labor and other direct costs are relevant and necessary to accomplish the WD scope.

1.4   PROJECT AND ORGANIZATIONAL PROCEDURES

A.   Modification of Procedures

At the direction of the Project Director, pursuant to a WD, VENDOR shall develop or modify previously proposed WD project specific procedures in accordance with a schedule and in a form approved by the Project Director. Such procedures as developed or modified shall be specifically related to activities performed for the WD project and basic VENDOR functions including, but not limited to, the process of budgeting, invoicing, and submitting reports to CCJPA hereunder. The intention of the parties is for VENDOR to develop, implement and maintain clear and concise WD project specific procedures.

B.   Additional Modifications

In addition to any specific WD project procedures as described immediately above, and apart from any specific WDs, CCJPA may require VENDOR to revise its WD project procedures other than those set forth immediately above in Article 1.3 that are used throughout its organization if they conflict with the requirements of this Agreement.

1.5   PERSONNEL

A.   Key Personnel

VENDOR and CCJPA agree that the personnel listed in Attachment B, KEY PERSONNEL LIST, incorporated herein and by this reference made a part hereof, shall be designated as Key Personnel. VENDOR shall also make every effort to insure that the key personnel maintain, at a minimum, _____ percent (__%) of their proportionate share of the estimated number of hours for a WD.

VENDOR shall not remove any such Key Personnel prior to the completion of his/her assignment under the Project without the prior written approval of the Project Director, which approval will not be unreasonably withheld. VENDOR shall nominate a replacement individual to CCJPA and shall not remove any individual from the Project until his/her replacement has been approved by the Project Director.

B.   Notice of Temporary Assignment

VENDOR shall provide the Project Director with written notice of the temporary assignment of any personnel to an individual WD Project.

C.   Removal of Personnel

CCJPA's Project Director reserves the right to direct removal of any VENDOR or subcontractor personnel assigned to the Project when in CCJPA's opinion the individual's performance is unsatisfactory.

1.6   FINANCIAL ADMINISTRATION

Apart from any specific WDs, VENDOR and its subcontractors at any tier shall establish and maintain records pertaining to the fiscal activities of the Project. VENDOR's and subcontractors' accounting systems shall conform to generally accepted accounting principles and the following requirements:

A.   Cost Breakdown

All such records shall provide, at a minimum, a breakdown of total costs charged to the Project, including properly executed payrolls, time records, invoices and vouchers.

B. Labor Charging Procedures

For work performed on a basis other than fixed price, VENDOR and those subcontractors at any tier that CCJPA at its discretion may require, shall develop, implement and maintain labor charging (i.e. time card, or payroll) procedures that meet the following criteria:

1. All time records shall be in writing, recorded by the employee and verified by the immediate supervisor. Such records shall (i) be complete, (ii) record all employee's activities, Project and non-Project related, within a given accounting period and (iii) identify by means of cost codes what activities were being performed.

2. All charges for labor (direct/indirect or hourly as appropriate) by personnel for the Project shall be identifiable to the nearest half-hour.

C. "California Public Employees" Retirement System (CalPERS) Compliance

To ensure compliance with state laws and regulations related to membership in CalPERS, VENDOR shall comply with the following requirements:

1. Written verifications regarding prior service at a CalPERS agency:

    a. Prior to assigning an additional Vendor to this Agreement, VENDOR shall request that the individual verify in writing:

        1. Whether or not the individual has previously worked for a CalPERS employer; and
        2. Whether or not the individual is a CalPERS retired annuitant.

2. CalPERS members - Employee contribution to CalPERS:

    a. If the individual to be assigned to the position verifies that he or she has previously worked for a CalPERS employer and is not a retired annuitant, VENDOR shall require the individual to acknowledge in writing that if he or she is a CalPERS member, the employee contribution to CalPERS shall be deducted from each paycheck while performing work under this Agreement.

3. Limitations on Hours:

    a. Retired annuitant: If the individual to be assigned to this Agreement verifies that he or she has previously worked for a CalPERS employer and is a CalPERS retired annuitant, VENDOR shall monitor the individual's work hours to ensure that the individual does not exceed 960 hours per fiscal year. VENDOR shall inform the Project Director in writing as soon as the individual accrues 900 hours, in order to allow for timely replacement.

    b. No previous service at a CalPERS employer: If the individual to be assigned to perform work under this Agreement verifies that he or she has not previously worked for a CalPERS employer, VENDOR shall

monitor the individual's work hours to ensure that the individual does not exceed 1000 hours per fiscal year. VENDOR shall inform the Project Director in writing as soon as an individual accrues 900 hours, in order to allow for timely replacement.

4.   VENDOR Certification

     a.   VENDOR shall certify in writing that the hours of the individual performing work under this Agreement does not exceed the limitations set forth above (i.e., 960 hours per fiscal year if the individual is a CalPERS retired annuitant, or 1000 hours per fiscal year if the individual has not previously worked for a CalPERS employer). Such certification shall be submitted monthly with each invoice.

D.   Cost Reimbursement Services

For those services performed on a cost reimbursable basis by VENDOR and those subcontractors at any tier that CCJPA at its discretion may require, the following shall apply:

1.   For all indirect cost groupings, budgets shall be developed on an annual basis which coincide with the entity's fiscal year.

2.   The system of accounting shall at a minimum, (i) report on a quarterly basis, a comparison between the actual indirect costs incurred to that budgeted, and (ii) reconcile all compensation for direct costs including, but not limited to, payroll, inventory and accounts payable against incurred cost, as set forth in Article 3.1, COMPENSATION.

E.   Approval of Procedures

CCJPA's Project Director (i) may approve existing procedures that meet these criteria as well as waive certain specific requirements of this Article (provided that such approvals or waivers are made in writing); or (ii) may require copies of any of this accounting material, records, reports or procedures.

2.0   **TIME OF PERFORMANCE AND DELAYS**

2.1   TIME OF PERFORMANCE

A.   Performance of Scope of Service

VENDOR's performance of Scope of Services as described in Attachment A shall commence upon receipt of a Notice to Proceed issued by CCJPA for each respective WD and shall be completed within the number of calendar days specified in such WD, unless terminated earlier in accordance with Article 5.0, TERMINATION, or if the limit on maximum compensation established in Article 3.1, COMPENSATION, is reached.

B.   Term of Agreement

The term of this Agreement will be five (5) years from the date of execution of this Agreement, with option to renew for five (5) years. This agreement and any renewals are subject to termination as provided for in the Agreement.

2.2   DELAYS

Neither party hereto shall be considered in default in the performance of its obligations hereunder to the extent that the performance of any such obligation is prevented or delayed by unforeseen causes including acts of God, acts of the public enemy and governmental acts beyond the control and without fault or negligence of the affected party.

Each party hereto shall give notice promptly to the other of the nature and extent of any such circumstances claimed to delay, hinder or prevent performance of any obligations under this Agreement.

3.0   **COMPENSATION AND PAYMENT**

3.1   COMPENSATION

A.   Basis

The compensation for each WD performed under this Agreement will be on a fixed price basis, an incurred cost reimbursement basis plus a fixed fee, or some combination thereof. Such compensation will be allowable only to the extent that costs incurred or cost estimates included in negotiated, or otherwise established prices, are consistent with the Federal Cost Principles (Title 48, Code of Federal Regulations, Chapter 1, Part 31).

B.   Requirements

Such compensation shall be further subject to the following requirements:

1.   Conform with:

a.   the work to be performed pursuant to an accepted WD;

b.   any compensation limits or sub-limits set forth in such WD(s), and this Agreement; and

c.   all other terms of this Agreement.

2.   Be necessary in order to accomplish the work.

3.   Be reasonable for the services to be performed or goods to be purchased in connection with the performance of services hereunder.

4.   Be actual net costs or prices to the VENDOR or its subcontractors at any tier, (e.g. the cost or price less any refunds, rebates, or other items of value received by VENDOR or its subcontractors at any tier, that have the effect of reducing the cost or price actually incurred).

As used herein, the term "costs" shall include the following:

a. Those costs recorded by VENDOR that result, at the time of the request for reimbursement, from payment by cash, check, or other form of actual payment for items or services purchased directly for the work.

b. When VENDOR is not delinquent in payment of costs of agreement performance in the ordinary course of business, costs incurred, but not necessarily paid, for:

(1) Direct labor;
(2) Other direct costs that are not subcontracted;
(3) Indirect costs.

c. The amount of reimbursement that has been paid by VENDOR for subcontracted services under similar cost standards.

5. Be for direct costs or prices incurred for work performed after the effective date of this Agreement, and presented for payment within one hundred eighty days (180) days of the incurrence.

C. Rate Agreement

In addition to these requirements, the parties will negotiate in good faith and enter into a Pro Forma ("Rate Agreement") on an annual or multi-year basis for the work to be performed for each VENDOR fiscal year(s). At the end of the annual or multi-year period, either party may request a rate adjustment subject to negotiation between the parties and modification to the Rate Agreement. Should the parties fail to negotiate a new Rate Agreement, VENDOR agrees to accept the provisions of the previous Rate Agreement until such time as a new Rate Agreement is executed. If neither party requests a rate adjustment, the rates contained therein shall remain in effect until completion of Agreement No. ____-___.

D. Notification

The VENDOR shall inform the Project Director when total expenditures for <u>all</u> approved WDs exceed ____ percent (__%) of the maximum compensation for this Agreement.

E. VENDOR Costs

All VENDOR costs associated with providing services that are identified in this Agreement as being apart and separate from any individual WD, are considered to be either indirect costs or a portion of the VENDOR fee, as the case may be.

F. Compensation Limits

Subject only to changes made in conformance with Article 4.0, <u>CHANGES AND MODIFICATIONS</u>, below, it is expressly understood and agreed that:

1. In no event shall VENDOR be compensated in an amount greater than the amount in an individual WD, for services performed under such WD; and

2. In no event will the total compensation and reimbursement for expenses to be paid VENDOR for services described in Article 1.1, <u>SCOPE OF SERVICES</u>, above and services described in Attachment A hereto, exceed Three Million Dollars ($3,000,000).

3.2   DISALLOWED OR OTHERWISE UNRECOGNIZED COSTS

VENDOR understands and agrees to the following:

A.   Waiver

Any compensation or reimbursement received under this Agreement does not constitute a final decision by the CCJPA as to the allowability of such compensation or reimbursement and does not constitute a waiver of any violation by VENDOR of the terms of this Agreement (including, but not limited to, requirements of the Agreement to be included in VENDOR's subcontracts).

B.   Final Determination

Unless approved otherwise by the Project Director, the CCJPA will not make final determination about the allowability of compensation or reimbursement of cost received under this Agreement until an audit of this work performed under this Agreement has been completed.

C.   Notification

If the CCJPA determines that VENDOR or its subcontractor(s) is not entitled to either the compensation or reimbursement requested or received, the CCJPA will notify VENDOR stating the reasons therefor.

D.   Return of Funds

Completion of the work under this Agreement will not alter VENDOR's or its subcontractor(s)' obligation to return any funds due the CCJPA as a result of later refunds, corrections, or other transactions, nor alter the CCJPA's right to disallow or otherwise not recognize costs on the basis of a later audit or other review.

3.3   METHOD OF PAYMENT

A.   Monthly Invoices/Subcontractor Payment

Unless approved otherwise by the Project Director, VENDOR's services shall be invoiced on a monthly basis and payment will be made within thirty (30) calendar days of receipt of an acceptable invoice with satisfactory backup documentation, approved by the Project Director, provided a completed form W-9 is on file with CCJPA. As used herein, the term "invoice" shall include the VENDOR's bill or written request for payment under this Agreement for services performed. All invoices shall be made in writing and submitted with two duplicates at a minimum.

VENDOR shall promptly pay any and all subcontractors by an instrument that guarantees availability of funds immediately upon deposit of said instrument. The VENDOR shall include in its monthly invoice submission to CCJPA, amounts to pay for all subcontractors' acceptable invoices, no later than thirty (30) days after receipt of such invoices. Unless otherwise approved in writing by the Project Director, VENDOR shall, within ten (10) calendar days after receipt of the payment made by CCJPA, pay to each of its immediate subcontractors (or their respective assignees), for satisfactory performance of its contract, the amounts to which each is entitled, after deducting any prior payments and any amounts due and payable to VENDOR by those subcontractors. Any delay or postponement of payment among the parties may

take place only for good cause and with the CCJPA's prior written approval. If the VENDOR determines the work of the subcontractor to be unsatisfactory, the VENDOR must immediately notify in writing the Project Director and state the reasons therefor. Failure by VENDOR to comply with this requirement will be construed to be a breach of contract and may result in sanctions as specified in this Agreement.

In addition, the VENDOR must promptly return any retentions withheld to a subcontractor within thirty (30) days after the subcontractor's work is satisfactorily completed.

B.   Invoice Procedures

VENDOR shall invoice for the then current WD in conformance with procedures approved by the Project Director and the then current Rate Agreement.

1.   Such invoices shall segregate current costs from other costs. Current costs are those costs which have been paid within the last sixty (60) calendar days and not previously submitted to CCJPA for reimbursement. Other costs shall include, but not be limited to, the following:

   a.   Costs for which the CCJPA has requested additional justification for allowance;

   b.   Costs which have been recorded by VENDOR in the current accounting period and not incurred as an obligation within the last ninety (90) calendar days.

2.   Costs for individual labor shall be identified by activity and product in a manner consistent with that of the detailed cost estimate submitted with VENDOR's WDP.

3.   Notwithstanding the above, in no case shall VENDOR invoice for costs which CCJPA has disallowed or otherwise indicated that it will not recognize.

C.   Invoice Requirements

Such invoices shall be, at a minimum, (i) mechanically accurate, (ii) substantially vouchered and properly supported and (iii) in compliance with the specific requirements of Article 1.6, FINANCIAL ADMINISTRATION above.

D.   Certification

VENDOR shall also certify, for each invoice, that (i) the hourly rates for direct labor, whether for VENDOR or its subcontractor(s), to be reimbursed under this Agreement are not in excess of the actual hourly rates in effect for VENDOR or subcontractor employees engaged in the performance of services under this Agreement at that time, and (ii) that such hourly rates are in conformance with the then current Rate Agreement.

E.   Fixed Fee

The fixed fee for VENDOR or any of its subcontractors shall be billed monthly on a percent complete basis as approved by the Project Director.

CCJPA in its sole discretion may make any of the remaining fixed fee payments due VENDOR, or any of its subcontractors, in full; or may withhold any amount up to one

hundred percent (100%) thereof as CCJPA may find appropriate, based on the progress of VENDOR and/or any of its subcontractors.

F.   Invoice Submittal Address

All invoices, indicating this Agreement name and number, shall be made in writing and delivered or mailed to CCJPA as follows:

By email (preferred):   ap_supplier@bart.gov

By US mail: Capitol Corridor Joint Powers Authority
                                         300 Lakeside Drive
                                         14th Floor East
                                         Oakland, CA 94612

G.   Taxpayer Identification Number

VENDOR represents that VENDOR's taxpayer identification number (TIN) is evidenced by a completed Federal Form W9 on file with CCJPA on the date of execution of this Agreement. VENDOR- agrees to file such tax forms as may be reasonably requested by CCJPA to implement Internal Revenue Code Section 3406 and to accept as a part of any compensation due, any payments made by CCJPA to the Internal Revenue Service pursuant to that Section.

3.4   WITHHOLDING OF PAYMENT

CCJPA reserves the right to withhold payment(s) otherwise due VENDOR in the event of VENDOR's material non-compliance with any of the provisions of this Agreement, including, but not limited to, the requirements imposed upon VENDOR in Article 6.0, INSURANCE; Article 8.0, INDEMNIFICATION; and Article 9.1, WARRANTY OF SERVICES, below. CCJPA shall provide notice of withholding, and may continue the withholding until VENDOR has provided evidence of compliance which is acceptable to CCJPA.

4.0   CHANGES AND MODIFICATIONS

CCJPA reserves the right to order changes to this Agreement, and modifications to WDs, to be performed pursuant to this Agreement, as set forth below.

4.1   CHANGES

A.   Services

CCJPA reserves the right to order changes to this Agreement including but not limited to, the services to be performed by VENDOR. All such changes shall be incorporated in written change orders duly executed by CCJPA and VENDOR, which shall specify the changes ordered and the adjustment of compensation and completion time required therefor.

B.   Execution

Any such services added to the scope of this Agreement by a change order shall be executed under all applicable conditions of this Agreement. No claim for additional compensation or extension of time shall be recognized unless contained in a duly executed change order.

4.2   MODIFICATIONS

    A.   <u>Work Directive Modifications</u>

    CCJPA reserves the right to order modifications to WDs, including but not limited to, the services to be performed by VENDOR pursuant to an accepted WD. All such modifications to a WD shall be incorporated in written WDMs, executed by the Project Director and the VENDOR, which shall specify the modifications ordered and the adjustment of compensation and completion time required therefor.

    B.   <u>Additional Compensation</u>

    Any such services added to the scope of this Agreement by a Work Directive Modification ("WDM") shall be executed under all applicable conditions of this Agreement. No claim for additional compensation or extension of time with respect to a WD shall be recognized unless contained in a duly executed WDM. The parties also understand and agree that VENDOR will not be reimbursed for costs incurred prior to the effective date of a duly executed WDM.

5.0   <u>TERMINATION</u>

5.1   <u>TERMINATION FOR CONVENIENCE</u>

CCJPA may, at any time prior to completion of the work under any WD or the work under this Agreement, terminate any such WD, or this Agreement whenever CCJPA determines that such termination is in its best interest, by written notice to VENDOR. CCJPA's written notice to VENDOR shall state in detail the extent of such termination with respect to WD, or this Agreement. Effective on receipt of such notice of termination from CCJPA, no new work or obligation with respect to such WDs, or this Agreement will be undertaken by VENDOR unless so directed by CCJPA in writing. Upon such termination, VENDOR shall submit an invoice or invoices to CCJPA in amounts which represent the compensation specified herein for services actually performed to the date of such termination and for which VENDOR has not been previously compensated. Upon payment of the amount due, CCJPA shall be under no further obligation to VENDOR, financial or otherwise, with respect to terminated WDs, or this Agreement if it is terminated.

5.2   <u>TERMINATION FOR CAUSE</u>

If VENDOR should be in default and fails to remedy this default within five (5) calendar days after receipt from CCJPA of notice of such default, CCJPA may in its discretion terminate this Agreement or such portion thereof as CCJPA determines is most directly affected by the default.

The term "default" for purposes of this provision includes, but is not limited to, the performance of work in violation of the terms of this Agreement; abandonment, assignment or subletting of the Agreement without approval of CCJPA; bankruptcy or appointment of a receiver for VENDOR's property; failure of VENDOR to perform the services or other required acts within the time specified for this Agreement or any extension thereof; refusal or failure to provide proper workmanship; failure to take effective steps to end a prolonged labor dispute; and the performance of this Agreement in bad faith.

Upon CCJPA's termination of this Agreement or any portion thereof for default by VENDOR, CCJPA reserves the right to complete the work by whatever means it deems expedient and the expense of completing such work as well as any and all damages proximately caused by the default shall be charged to VENDOR.

5.3   <u>FORCE MAJEURE</u>

The performance of work under this Agreement may be terminated by CCJPA, in its discretion, upon application therefor by VENDOR for unforeseen causes beyond the control and without the fault or negligence of VENDOR, including acts of God, acts of the public enemy, governmental acts, fires and epidemics if such causes irrevocably disrupt or render impossible VENDOR's performance hereunder. An "act of God" shall mean an earthquake, flood, cyclone, or other cataclysmic phenomenon of nature beyond the power of VENDOR to foresee or make preparation in defense against.

6.0   <u>INSURANCE</u>

At all times during the life of this Agreement to acceptance of the work covered by the Agreement, or as may be further required by the Agreement, VENDOR, at its own cost and expense, shall provide the insurance specified in this Article 6.0, unless otherwise approved in advance and in writing by the Project Director.

A.   <u>Evidence Required</u>

At or before execution of this Agreement and at such other times as the CCJPA may request, VENDOR shall provide the CCJPA with Certificate(s) of Insurance executed by an authorized representative of the insurer(s) evidencing the VENDOR's compliance with the insurance requirements in this Article 6.0. The Certificate(s) shall reference the CCJPA's Agreement Number and Title to which the Certificate relates. In addition, a copy of all required endorsements shall be included with and attached to the Certificate(s) of Insurance.

B.   <u>Notice of Cancellation, Reduction or Material Change in Coverage</u>

All policies shall be endorsed to provide the CCJPA with thirty (30) calendar days prior written notice of any cancellation, reduction, or material change in coverage. The San Francisco Bay Area Rapid Transit District ("BART") is the managing agency of the CCJPA. Accordingly, all notices shall be sent to BART's Department Manager, Insurance, San Francisco Bay Area Rapid Transit District, P.O. Box 12688, Oakland, California, 94604-2688. The VENDOR shall annually submit to the BART's Department Manager, Insurance, certifications confirming that the insurance required has been renewed and continues in place.

C.   <u>Qualifying Insurers</u>

Policies shall be issued by California admitted companies which hold a current policyholders alphabetic and financial size category rating of not less than A:VIII according to Best's Insurance Reports.

D.   <u>Insurance Provided by VENDOR</u>

1.   <u>Commercial General Liability Insurance</u> for bodily injury (including death) and property damage which provides limits of Five Million Dollars ($5,000,000) per occurrence and Five Million Dollars ($5,000,000) annual general aggregate.

a. Coverage shall include:

    (1)   Premises and Operations;

    (2)   Broad Form Property Damage;

    (3)   Products and Completed Operations;

    (4)   Broad Form Contractual liability, expressly including liability assumed under the Agreement;

    (5)   Personal Injury Liability;

    (6)   Independent Contractors Liability;

    (7)   Cross Liability and Severability of Interest.

b. Such insurance shall include the following endorsements, copies of which shall be provided to the BART's Department Manager, Insurance:

    (1)   Inclusion of the CCJPA and BART as managing agency and their directors, officers, representatives, agents and employees as additional insured as respects to VENDOR's operations under this Agreement; and

    (2)   Stipulation that the insurance is primary insurance and that no insurance or self-insurance of the CCJPA will be called upon to contribute to a loss.

2.   Automobile Liability Insurance for bodily injury (including death) and property damage which provides limits of liability of not less than One Million Dollars ($1,000,000) combined single limit per occurrence applicable for all owned, non-owned and hired vehicles.

3.   Workers' Compensation/Employers' Liability Insurance for Statutory Workers' Compensation and Employers' Liability Insurance for not less than One Million Dollars ($1,000,000) per accident applicable to Employers' Liability coverage for all employees engaged in services or operations under this Agreement. The policy shall include Broad Form All States/Other States coverage. Coverage shall be specifically endorsed to include the insurer's waiver of subrogation in favor of the CCJPA and BART as managing agency and their directors, officers, representatives, agents and employees; a copy of which shall be provided to the BART's Department Manager, Insurance. Should any such work be subcontracted, VENDOR shall require each subcontractor of any tier to similarly comply with this Article 6.0, all in strict compliance with Federal and State law.

4.   Professional Liability Insurance for damages arising out of VENDOR's acts, errors or omissions. The policy shall provide a coverage limit of not less than Five Million Dollars ($5,000,000) per claim/aggregate as respects VENDOR's services provided under this Agreement. Such insurance shall be maintained for a period of not less than two (2) years following completion of services.

E.   Special Provisions

1.   The foregoing requirements as to the types and limits of insurance coverage to be maintained by VENDOR, and any approval of said insurance by the CCJPA is not intended to and shall not in any manner limit or qualify the liabilities and obligations otherwise assumed by VENDOR pursuant to this Agreement including but not limited to the provisions concerning indemnification.

2.   The CCJPA acknowledges that some insurance requirements contained in this article may be fulfilled by a funded self-insurance program of VENDOR. However, this shall not in any way limit liabilities assumed by VENDOR under this Agreement. Any self-insurance program must be approved in writing by the BART's Department Manager, Insurance.

3.   Should any of the work under this Agreement be subcontracted, VENDOR shall require each of its subcontractor(s) of any tier to provide the aforementioned coverage's, or VENDOR may insure subcontractors(s) under its own policies.

4.   CCJPA reserves the right to withhold payments to VENDOR in the event of material noncompliance with the insurance requirements of this Article 6.0.

5.   CCJPA reserves the right to terminate this Agreement in the event of material noncompliance with the insurance requirements of this Article 6.0.

7.0   INDEPENDENT CONTRACTOR

VENDOR is an independent contractor and not an employee or agent of CCJPA and has no authority to contract or enter into any other agreement in the name of CCJPA. VENDOR has, and hereby retains, full control over the employment, direction, compensation and discharge of all persons employed by VENDOR who are assisting in the performance of services under this Agreement. VENDOR shall be fully responsible for all matters relating to the payment of its employees, including compliance with social security, withholding tax and all other laws and regulations governing such matters. VENDOR shall be responsible for its own acts and those of its agents and employees during the term of this Agreement.

In its capacity as an independent contractor, VENDOR shall comply with any and all CCJPA operations rules and procedures which relate to the performance of its services on CCJPA property.

7.1   CONFLICT OF INTEREST

VENDOR, its subcontractors and suppliers shall perform all work under this Agreement in conformance with all applicable statutes and regulations pertaining to conflicts of interest, including but not limited to, the financial reporting requirements and the conflict prohibitions of federal law (see, e.g., Federal Transit Administration Circular 4220.1F, Third Party Contracting Requirements) and California law (see, e.g., Government Code Section 1090 et seq., Government Code Section 87100 et seq. and Title 2, Division 6 of the California Code of Regulations).

When, in the judgment of CCJPA, it is necessary in order to avoid any potential conflicts of interest, VENDOR, its subcontractors and suppliers may be precluded from subsequently participating as a vendor or contractor on projects for which they are providing services under this Agreement.

7.2   VENDOR PERSONNEL

VENDOR shall ensure that any person employed by VENDOR, whose duties include work on matters involving CCJPA, is made aware that he or she is required to disclose immediately to VENDOR any offer of employment from any person or entity currently doing business with CCJPA or proposing to do business with CCJPA. VENDOR shall immediately so notify the Project Director, and ensure that unless, and until the offer of employment is unequivocally rejected by VENDOR's employee in writing and a copy of this rejection is transmitted to the Project Director, VENDOR shall remove such employee from any projects or services relating to CCJPA. Failure of VENDOR to comply with the provisions of this section may result in termination of this Agreement by CCJPA for default upon written notice to VENDOR.

8.0   INDEMNIFICATION

VENDOR to the extent permitted by law, shall defend, indemnify and hold harmless CCJPA and BART as managing agency and their directors, officers, agents and employees from all claims, demands, suits, loss, damages, injury and liability, direct or indirect (including reasonable attorney's fees, and any and all costs and expenses in connection therewith), incurred by reason of any act, or failure to act, of VENDOR, its officers, agents, employees and subcontractors or any of them, under or in connection with this Agreement; and VENDOR agrees at its own cost, expense and risk to defend any and all claims, actions, suits, or other legal proceedings brought or instituted against CCJPA and BART as managing agency and their directors, officers, agents and employees, or any of them, arising out of VENDOR's services, and to pay and satisfy any resulting judgments.

Such indemnification includes without limitation any violation of proprietary rights, copyrights and rights of privacy, arising out of the publication, translation, reproduction, delivery, use or disposition of any data furnished under this Agreement.

9.0   WARRANTY OF SERVICES AND MATERIAL NONCOMPLIANCE BY VENDOR

9.1   WARRANTY OF SERVICES

A.   Warranty

VENDOR warrants that its consulting services will be performed in accordance with the standards imposed by law upon professional engineering service firms performing engineering services of a similar nature at the time such services are rendered. In addition VENDOR shall provide such specific warranties as may be set forth in individual WDs as agreed upon by the parties.

B.   Re-performance

In the event that any services provided by VENDOR hereunder are deficient because of VENDOR's or a subcontractor's failure to perform said services in accordance with the warranty standards set forth above, CCJPA shall report such deficiencies in writing to VENDOR within a reasonable time. CCJPA thereafter shall have:

1.   The right to have VENDOR re-perform such services at VENDOR's own expense, or

2.   The right to have such services done by others and the costs thereof charged to and collected from VENDOR if, within thirty (30) calendar days after written notice to VENDOR requiring such reperformance, VENDOR fails to give evidence satisfactory to CCJPA that it has undertaken such reperformance.

C.   Re-performed Services

If VENDOR is required to correct or re-perform any services as provided in Article 9.1 B.1. (immediately above), any services corrected or re-performed by VENDOR shall be subject to this Article 9.1 to the same extent as work initially performed.

9.2   MATERIAL NONCOMPLIANCE BY VENDOR

CCJPA reserves the right to withhold payments to VENDOR in the event of VENDOR's material noncompliance with Articles 8.0, INDEMNIFICATION and 9.0, WARRANTY OF SERVICES AND MATERIAL NONCOMPLIANCE BY VENDOR, above.

10.0   DATA TO BE FURNISHED BY CCJPA

All data, reports, surveys, studies, drawings, and any other documents and materials made available to VENDOR by CCJPA for use by VENDOR in the performance of its services under this Agreement shall be made available for information only and shall be returned to CCJPA at the completion or termination of this Agreement.

11.0   OWNERSHIP OF WORK PRODUCTS

11.1   DOCUMENTS

All drawings, designs, specifications, manuals, reports, studies, surveys, models and any other documents, materials, data and products ("Work Products") prepared or assembled by VENDOR or obtained from others ("Subcontractors") by VENDOR in connection with the services under this Agreement shall be the property of CCJPA; and copies shall be delivered to CCJPA promptly upon the completion of the work or upon an earlier termination of this Agreement. VENDOR shall be responsible for the preservation of any and all Work Products prior to transmittal to CCJPA; and VENDOR shall replace any such Work Products as are lost, destroyed or damaged while in its possession without additional cost to CCJPA.

11.2   ASSIGNMENT OF RIGHTS

VENDOR hereby assigns to CCJPA all right, title and interest including, but not limited to, copyright, patent, trademark and trade dress rights, in and to the Work Products. VENDOR acknowledges CCJPA's exclusive rights to reproduce, publish, display, create derivative works from, sell, transfer or otherwise exploit ("Use"), and permit others to Use all or any part of the Work Products, and to obtain and hold in its own name patents, copyright and/or trademark registrations for the Work Products. VENDOR shall provide all documentation, information and assistance reasonably required by CCJPA to obtain such registrations or patents, or with respect to claims that third parties have infringed the Work Products.

11.3   WARRANTY OF WORK PRODUCT

VENDOR warrants and represents that the Work Products are original to VENDOR or its Subcontractors and shall not infringe the copyright, trademark, trade secret, privacy, publicity, patent or other intellectual property or proprietary rights of any third party; VENDOR will not attempt to license or transfer to any person or entity any interest in the Work Products; and VENDOR shall obtain from all Subcontractors written assignment of all rights, title and interest, including copyright and other intellectual property rights, in their contributions to the Work Products.

12.0   PATENTS

VENDOR agrees to communicate promptly to CCJPA full particulars with respect to any and all improvements and inventions (whether or not patentable) conceived by it in connection with work performed by it hereunder. Subject to rights due to the United States Government under a grant of the FTA, if any, assisting the financing under this Agreement, such improvements and inventions shall become the property of CCJPA and VENDOR agrees to assign to CCJPA, upon CCJPA's request, all of its right, title and interest in and to ideas and inventions and in and to any and all patents and applications for patents based thereon, including both United States and foreign patents and applications for patents. VENDOR further agrees, upon CCJPA's request and at CCJPA's expense, to execute such proper instruments and to perform such proper acts as may be deemed by CCJPA necessary to evidence CCJPA's title to said improvements and inventions, and to enable CCJPA to obtain such patents and any continuations, reissues or extensions thereof.

13.0 <u>MATTERS CONFIDENTIAL AND PRIVILEGED</u>

All of the drawings, designs, specifications, manuals, reports, studies, surveys, models, or other data and products prepared or assembled by VENDOR, obtained from others by VENDOR or made available to VENDOR by CCJPA in connection with the services under this Agreement , shall be treated as confidential by VENDOR. At no time shall VENDOR use or disclose or make available, other than in the performance of VENDOR's services for CCJPA, confidential information gained in the course of or by reason of VENDOR's retention by CCJPA and/or performance of services for CCJPA, nor shall VENDOR permit such use or disclosure, without prior written approval by CCJPA. It is the intention of CCJPA to preserve and make use of all applicable legal privileges, and VENDOR shall make all reasonable efforts to cooperate with CCJPA in this regard.

14.0 <u>SUBCONTRACTS</u>

A. <u>Approved Subcontracts</u>

VENDOR shall use approved subcontractors as shown in Attachment PCT (Project Vendor Team) hereto and as listed in each WD. VENDOR shall not further subcontract all or any portion of its services under this Agreement or a WD without the prior written approval of the Project Director and any attempt to do so shall be void and unenforceable. Written approval by the Project Director of use of a subcontractor for specified services in connection with one WD or project shall not constitute approval for any other purpose. In the event that VENDOR enters into one or more subcontracts pursuant to this Article, it is understood and agreed that the participating subcontractors shall be solely and directly responsible to VENDOR, and CCJPA shall have no obligation to them.

B. <u>Subcontract Provisions</u>

VENDOR agrees that the requirements in: Articles 1.3 B, 1.4, 1.5, 1.6, 3.1A, 3.1B, 3.2 and 4.0 through 31.0, inclusive, of this Agreement, will be included in every subcontract entered into relating to services under this Agreement. Upon request, the VENDOR shall provide CCJPA with copies of all such subcontracts, with changes and amendments thereto.

15.0 <u>ASSIGNMENT OF AGREEMENT</u>

VENDOR shall not assign this Agreement, or any part thereof, without the prior express written consent of the Project Director, and any attempt to do so shall be void and unenforceable.

16.0   RECORDS

VENDOR shall maintain full and adequate records to show the actual time devoted and the cost incurred by VENDOR with respect to the performance of services under this Agreement.

VENDOR and its subcontractors shall establish and maintain records pertaining to the fiscal activities of the Project. VENDOR's and subcontractors' accounting systems shall conform to generally accepted accounting principles and all records shall provide a breakdown of total costs charged to the Project, including properly executed payrolls, time records, invoices and vouchers.

17.0   AUDIT

VENDOR and its subcontractors shall permit CCJPA and its authorized representatives to inspect, examine, make excerpts from, transcribe, and copy VENDOR's and subcontractor's books, work, documents, papers, materials, payrolls, records, accounts, and any and all data relevant to this Agreement at any reasonable time for the purpose of auditing and verifying statements, invoices or bills submitted by VENDOR pursuant to this Agreement, and shall provide such assistance as may be reasonably required in the course of such inspection including, but not limited to, the following:

A.   Audit Interviews

VENDOR shall arrange audit entrance and exit interviews in which VENDOR and/or its subcontractors and CCJPA and/or its authorized representatives will participate.

B.   Accessing Documents

VENDOR's and its subcontractors' accounting divisions shall provide instruction to CCJPA on accessing documents.

C.   Letter of Representation

VENDOR's management, or the management of a subcontractor, as well as the management of their appropriate units, will provide at CCJPA's request a letter of representation concerning such matters as CCJPA determines appropriate.

CCJPA further reserves the right, for itself and its authorized representatives, to examine and re-examine said books, work, documents, papers, materials, payrolls, records, accounts and data during the three-year period following the final payment under this Agreement and until all pending matters are closed; and VENDOR and its subcontractors shall in no event dispose of, destroy, alter or mutilate said books, work, documents, papers, materials, payrolls, records, accounts and any and all data in any manner whatsoever for three (3) years after the final payment under this Agreement, or until all pending matters are closed, whichever is later.

Pursuant to California Government Code Section 8546.7, the parties to this Agreement shall be subject to the examination and audit of the State Auditor, at the request of CCJPA or as part of any audit of CCJPA by the State Auditor, for a period of three (3) years after final payment under this Agreement. The examination and audit

shall be confined to those matters connected with the performance of this Agreement, including, but not limited to, the cost of administering this Agreement.

18.0   **PRICE REDUCTION FOR DEFECTIVE COST OR PRICING DATA**

If any price, including profit or fee, negotiated in connection with, or any reimbursement of cost including profit or fee, under this Agreement, any WD, modifications thereto, Rate Agreement or change order to this Agreement was increased because VENDOR furnished cost or pricing data that were not complete, accurate, and current at such time as the price was determined, the price or cost shall be reduced accordingly and the Agreement, WD(s), Rate Agreement(s), or change order(s) and any applicable invoice(s) shall be modified to reflect the reduction.

If CCJPA determines that a price or cost reduction should be made, VENDOR agrees not to raise the following matters as a defense:

A.   Bargaining Position

VENDOR was the sole source supplier or otherwise was in a superior bargaining position and thus the price would not have been modified even if accurate, complete and current costs or pricing data had been submitted;

B.   Cost and Pricing Data

CCJPA should have known that the cost or pricing data in issue were defective even though VENDOR took no affirmative action to bring the character of the data to the attention of CCJPA;

C.   Item Cost

The price was based on an agreement about the total cost of the work and there was no agreement about the cost of each item procured under the Agreement.

19.0   **NOTICES**

Except for invoices submitted by VENDOR pursuant to Article 3.0, COMPENSATION AND PAYMENT, above, and insurance notices submitted pursuant to Article 6.0 B., Notice of Cancellation, Reduction or Material Change in Coverage, above, all notices required hereunder or other communications to either party by the other may be given by personal delivery, U.S. Mail, courier service (such as Federal Express) or facsimile transmission. Notices shall be effective upon receipt at the following addresses:

To CCJPA by US Mail: District Secretary
                              San Francisco Bay Area Rapid Transit District
                              P.O. Box 12688
                              Oakland, California 94604-2688

                              Attention: CCJPA Contract Administrator

To CCJPA by Personal   District Secretary
Delivery or Courier   San Francisco Bay Area Rapid Transit District
                              300 Lakeside Drive, 21st Floor
                              Oakland, CA 94612

                              Attention: CCJPA Contract Administrator

	To VENDOR:	To be determined
		Attention: To be determined
		Project Manager
	Facsimile Transmission:	
	To CCJPA:	(510) 464-6501
	To VENDOR:	To be determined

Either party may change its address for notices by giving written notice of the new address as provided above.

20.0   NONDISCRIMINATION

The VENDOR or subcontractor shall not discriminate on the basis of race, color, national origin or sex in the performance of this Agreement. The VENDOR shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of U.S. Department of Transportation-assisted contracts. Failure by the VENDOR to carry out these requirements is a material breach of this Agreement, which may result in the termination of this Agreement or such other remedy as the CCJPA deems appropriate.

In connection with the performance of services under this Agreement, VENDOR shall not, on the grounds of race, religious creed, color, national origin, ancestry, handicap, medical condition, marital status, sex, sexual orientation or age, discriminate or permit discrimination against any person or group of persons in any manner prohibited by Federal, State or local laws.

For purposes of this Article "sexual orientation" shall mean a preference for heterosexuality, homosexuality or bisexuality; or having a history of, or being identified with, any such preference.

21.0   LAWS AND REGULATIONS

VENDOR shall comply with any and all laws, statutes, ordinances, rules, regulations, and procedural requirements of any national, state or local government, and of any agency of such government, including CCJPA, which relate to or in any manner affect the performance of this Agreement. This Agreement and any documents supplied hereunder are subject to public inspection of the California Public Records Act, California Government Code Section 6250 et seq., unless exempted by law.

22.0   ADDITIONAL FUNDING AGREEMENT REQUIREMENTS

This Agreement is subject to any additional restrictions, limitations or conditions that may be required by any local, State or Federal funding agreements applicable to this Agreement.

23.0   CHOICE OF LAW

All questions pertaining to the validity and interpretation of this Agreement shall be determined in accordance with the laws of the State of California applicable to agreements made and to be performed within the State, without reference to conflicts of law principles.

24.0   SEVERABILITY

If any provision of this Agreement is held by a court of competent jurisdiction to be invalid, void, or unenforceable, the remaining provisions shall nevertheless continue in full force without being impaired or invalidated in any way.

25.0   COVENANT AGAINST CONTINGENT FEES

VENDOR warrants that no person or selling agency has been employed or retained to solicit or secure this Agreement upon an agreement or understanding for a commission, percentage, brokerage or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by VENDOR for the purpose of securing business. For breach or violation of this warranty, CCJPA will have the right to annul this Agreement without liability, or at its discretion, to deduct from the Agreement price or consideration, or otherwise recover, the full amount of such commission, percentage, brokerage or contingent fee.

26.0   COVENANT AGAINST GRATUITIES

VENDOR warrants that it will not and has not offered or given gratuities in the form of entertainment, gifts or otherwise, to any director, officer or employee of CCJPA to secure favorable treatment in the awarding, amending or evaluating performance of the Agreement.

27.0   CAPTIONS

The captions of the Articles and paragraphs in this Agreement are for purposes of reference only, and shall not be construed to affect the meaning of any provision hereof.

28.0   BENEFIT OF AGREEMENT

This Agreement shall bind and benefit the parties hereto and their successors and permitted assigns.

29.0   ENTIRE AGREEMENT

This Agreement is the entire agreement of the parties, and supersedes and replaces all prior communications, written and oral, regarding the subject matter hereof. VENDOR represents that in entering into this Agreement, it has not relied on any previous representations, inducements, or understandings, written or oral, of any kind or nature.

IN WITNESS WHEREOF, this Agreement has been executed by the parties hereto as of the day and year first written above.

CAPITOL CORRIDOR JOINT POWERS AUTHORITY   (NAME OF VENDOR)

_____   _____
By Executive Director   By (Signature)
(or designee)

Name
and
Title _____

Print or Type

Name
and
Title_____

Print or Type

<u>**ATTACHMENT C**</u>

PRO FORMA INSTRUCTIONS

For RFSOQ procurements where a Work Directive is used to implement technology solutions over a discrete set of parameters, the contract with the selected Vendor will serve as a Master Contract, wherein a Conformed Statement of Work (CSOW) will be an attachment to the Master Contract. Whether responding with a capital outlay or a services approach, pricing across a number of categories needs to be consistently applied to individual Work Directives according to the disclosures and methodologies established in the CSOW at the time of Master Contract award. Pricing shall be maintained as an attachment to the Master Contract as a *pro forma* pricing sheet except the *pro forma* pricing sheet shall be a dynamic document meant to be updated with each Work Directive is completed and upon the anniversary of the Master Contract so that it is maintained as a current record of pricing and service delivery at cost.

Vendors who respond to RFSOQ procurements are required to disclose their per unit costs in various categories (hardware, staging, shipping/delivery, markups, financing and amortization [in the case of service contracts] and labor) in a clear an open manner using categorized cost tables that clearly show (per unit) costs that can be applied to comparative examples required in the RFSOQ response. For instance, when a Vendor discloses their hardware costs across a variety of hardware categories in their RFSOQ proposal (in cost sheets and any example pricing sheets, if those are required in the RFSOQ), it would follow that the final Master Contract will carry those costs forward through the Conformed Statement of Work as well as in a related and consistently developed cost *pro forma* for any subsequent Work Directive. From RFSOQ response through implementation via a Work Directive, CCJPA expects that the Vendor-supplied pricing tables are being consistently used (and using permitted rates escalations) for the life of the Master Contract. Pricing structure will be subject to audits at request by CCJPA consistent with use of public funds in the State of California.

The format for presenting these cost details in a Statement of Qualifications (SOQ) submittal is at the discretion of the Vendor. Modifications to the submitted format may be requested if the Vendor is selected, and refinements for clarity will be requested in future iterations of the pricing details during the terms of the Master Contract. A format that is lacking adequate detail and clarity will negatively affect the SOQ evaluations for the Vendor.

HARDWARE (GENERAL HARDWARE COSTS)
CCJPA anticipates that most Vendors have negotiated volume pricing with their original equipment manufacturers (OEM) for all commercial off the shelf (COTS) parts based on worldwide volumes. The CCJPA understand that Vendors should be insulated from market fluctuations in their hardware costs but believes that this consideration should be built into the Vendor-OEM negotiated fixed price, and as such avoid building risk into their pricing to account for things like exchange rate fluctuations. For COTS pricing, the Vendor should also demonstrate, and justify, their selected markup for all such hardware. If there are custom parts and there are volume discounts that can be applied (if ordering volumes are sensible), grouped unit scaled cost figures should be provided. If the Vendor believes that there is a specific project element that requires developing hardware or other system component that go beyond regular cost of doing business, an amortization rate over a select or suggested number of first-time units should be shown and then removed for any subsequent units.

Under a Master Contract, costs can be reviewed annually to reflect new unit cost per item provided under the contract terms. Since hardware installs may last multiple years, hardware pricing can fluctuate over time and it is understood that unit pricing may go up or down year to year.

In summary, the selected Vendor needs to provide a master hardware bulk unit pricing sheet that can be updated at most once per year based on the date of the Master Contract award. On an annual basis, the

range of unit pricing may rise at most 3% or the US Consumer Price Index, whichever is less, and may decrease at any rate offered by the selected Vendor. Increases over 3% in any given year for any category of hardware may be allowed but only based on a written justification and subject to approval by CCJPA based on the terms of the Master Contract.

HARDWARE PRICING (AMORTIZATION/FINANCING) IN SERVICE BASED CONTRACTS
With service-based procurements that include a hardware component, the expectation is that hardware, which is leased, will be upgraded as necessary to stay on a current technology path. The annual pricing sheet should reflect the technology road-map and be a point of engagement with the CCJPA for strategic upgrades on an assigned schedule. Thus, the pricing sheet for service-based contracts is a vital tool used by all parties to extend the technological relevance of hardware and software components. The Vendor should present a technology roadmap and CCJPA expects to see a commitment to investigate hardware and software evolutions for each pertinent item. While CCJPA understands that a solution roadmap will be a vision of how future developments may be undertaken and that actual development may not exactly follow this course, the Vendor will be expected to discuss and plan strategic upgrades according to adherence of the technology roadmap during the terms of the Master Contract. Any significant deviation from the technology roadmap that is not documented, explained, and approved by CCJPA, can be grounds for significant payment penalties including contract termination. It is an expectation of CCJPA that the technology roadmap and the life-cycle support plan put forward by the Vendor shall converge such that, as a hardware or software approaches end of life, the technology roadmap will have been faithfully followed and the appropriate replacement hardware or software already identified and documented, and thus be available for purchase and use under the terms of the Master Contract.

The costs of leased hardware should be presented in a clear manner to demonstrate how hardware technology upgrades will be considered and priced in a service model response. As an example – if station controllers are expected to be exchanged every 36 months and if a new station controller unit price has a $100 higher capital cost than the previous model, then the pricing sheet should amortize that price over the next 36 months so the cost to CCJPA is $135 / 36 so about $4 per month extra onto the current lease cost (per station controller unit).

The CCJPA intends to work with the selected Vendor within a service model to allow for reasonable adjustments in pricing between years of the contract based on documented changes that would affect the pricing sheet. It is the intention of CCJPA that the Vendor's annual cost categories and profit structure established during contract establishment are shared, discussed, reviewed and submitted to CCJPA for approval, on an annual basis, so that the service level agreement is satisfactorily maintained for both parties over the life of the Master Contract.

Except as otherwise provided in a specific Work Directive, CCJPA will make no ownership claim, no right, title and interest in all deliverables provided or generated by the Vendor under any Work Directive associated with the Master Contract to be executed as a result of this RFSOQ procurement. Upon completion of the contract terms, it is assumed that all hardware title will be fully owned by the Vendor unless CCJPA expressly purchased hardware items under a capital acquisition-based Work Directive.

SHIPPING AND DELIVERY
The Vendor should show separate shipping/delivery costs for applicable hardware installation and maintenance sites (delivery costs may vary over time and become more specific when Work Directives are developed). As with hardware pricing, whether via a capital or service (lease) delivery model, the dynamics of shipping and delivery should be shown and documented as part of the pricing sheet. As an example, if delivery of items can be stored on site and in bulk, then bulk shipping should be shown. If shipping is unique for particular items, those direct shipping costs should be provided. Recognizing the specifics of Work Directives, shipping/delivery costs may vary from the Master Contract pricing sheet to reflect specific Work Directive conditions such as timing, quantities, and other factors.

SOFTWARE LICENSES
Vendor shall provide the details of their baseline software licenses and any additional software options that may be available. CCJPA believes that it is unlikely that any specific code will be created for CCJPA

for this project. However, if this is not the case, and the code is not part of the Vendors roadmap, then the Vendor should provide details of any additional development effort in terms of number of full-time work equivalent-days, to be charged an agreed-upon development fee rate.

SOFTWARE LICENSES IN THE SERVICE BASED CONTRACTS
Software in a service-based contract should resemble the amortization considerations built into software as a service models (e.g. Office 365 "cost per month") rather than upfront funding with annual recurring costs to support the renewal of license.

CCJPA views Vendors who respond to technology RFSOQs fundamentally as software providers and system integrators. Prospective Vendors should develop their software pricing sheet details on a pay-to-use fee structure. CCJPA believes this model creates the advantage of being much easier to add and remove software features later as opposed to making additional new software license agreements and changes to annual recurring software license/ maintenance fees. Documentation of the software as pay-to-use should be presented in the SOQ, subject to the formatting under the discretion of the Vendor.

LABOR COSTS
As with hardware unit costs, labor costs of the Vendor are expected to vary over time. Labor costs to acquire, inventory, conduct quality assurance, test and configure, repackage for shipping, etc., each hardware unit should be considered, calculated and shown under either a capital or service delivery model. Tangible labor costs to design, customize, program, ship, etc., should also be considered and shown under either a capital or service delivery model.

For the RFSOQ submittal, prospective Vendors shall submit a labor rate table for different job classifications. Subject to annual evaluation and negotiation, this labor rate table will be included in the Master Contract and apply to subsequent Work Directives. As Work Directives are issued, the scale of maintenance and operations is expected to expand, and thus labor should reflect the scale in the collective ongoing service delivery under each Work Directive.

The labor rate table under the Master Contract can increase up to 3% at most once per year based on the date of the Master Contract award or according the change in the US Consumer Price Index, whichever is sooner. Increases higher than 3% may be allowed at the discretion of the CCJPA but written justification will need to be provided by the selected Vendor for evaluation by CCJPA.

ATTACHMENT D

CALPIDS FUNCTIONAL REQUIREMENTS

Requirement Level Key:

Mandatory	Absolutely required, no exceptions allowed
Required	Some exception allowed, please explain how core functionality can be delivered with Vendor solution
Acknowledge	Acknowledgement of understanding
Highly Desirable	Functionality desired, but not require

Item	Requirements or Desired Feature/Function	Requirement Level	Vendor Response/Comments
	ADA Compliance		
A1	CalPIDS System must be 100% ADA compliant	Mandatory	
A2	All LED/LCD displays must be 100% ADA compliant	Mandatory	
A3	All text displayed on digital signage must comply with ADA size requirements based on the height of the display	Mandatory	
A4	All audio must be 100% ADA compliant	Mandatory	
A5	All LED/LCD displays must be mounted per ADA requirements	Mandatory	
A6	All speakers must be mounted per ADA requirements	Mandatory	
A7	All audio must comply with ADA noise requirements	Mandatory	
	Trains and Corridors		
B1	Capitol Corridor, San Joaquin's (West and North) and ACE trains must be tracked	Mandatory	
B2	Amtrak Coast Starlight trains must be tracked while traversing the Capitol Corridor	Mandatory	
B3	Amtrak California Zephyr trains must be tracked while traversing the Capitol Corridor	Mandatory	
B4	All trains must be tracked to an accuracy of within 300 feet	Mandatory	
	Train ETA Announcements		

C1	All Passenger Trains must make an audio announcement and post an ETA message at every station it is scheduled to stop at.	Mandatory	
C2	All Passenger Trains that bypass a station must make an audio announcement and display a message stating that the approaching train does not stop at this station.	Mandatory	
C3	ETA announcements will start 30 minutes prior to the trains scheduled arrival at the station	Required	
C4	ETA announcements will play with audio at least once every 5 minutes (adjustable parameter) for on-time trains until the train arrives.	Required	
C5	ETA announcements will play with audio when a trains ETA changes (plus or minus) 1 minute.	Required	
C6	An arrival announcement will play with audio to announce an arriving train when the train is 2 minutes from the station. This is a high priority message that will play immediately.	Required	
C7	A Boarding announcement will play with audio when the system recognizes that the train has stopped at the station. This is a high priority message that will play immediately. This is a short 30 second message and must be played quickly to be relevant.	Required	
C8	Numbered trains will start to send ETA announcement to down line stations 30 minutes prior to its scheduled arrival at the station. Exceptions must be made for trains that number while still in the Oakland Maintenance Facility and move back into Oakland Jack London station. ETA's will be suppressed to downline stations until the train has stopped at the intended origin station.	Required	
C9	Prior to an ETA announcement, a chime will play twice. The chime should be non-intrusive but of enough volume to alert passengers.	Required	
C10	West bound trains will have a male voice for ETA, Arrivals and Boarding messages and East bound trains will have a female voice for ETA, Arrivals and Boarding messages.	Required	
	Train Tracking		

D1	Access and specifications to the Amtrak Arrow system will be granted once the contract has been awarded.	Acknowledge	
D2	Access and specifications to the Amtrak ARISE system will be granted once the contract has been awarded.	Acknowledge	
D3	Train location information will be connected to the individual train services' (Capitol Corridor, San Joaquin, and ACE) web pages for customers to view.	Acknowledge	
D4	Capitol Corridor, San Joaquin and ACE trains will be tracked via on-board GPS equipment using the current NMEA or TAIP GPS standard.	Acknowledge	
D5	Amtrak Coast Starlight and California Zephyr trains will be tracked via on-board GPS equipment through the Amtrak ARISE/Arrow system.	Acknowledge	
D6	The CalPIDS system will comply with the NMEA or TAIP GPS standards. No conversion of the GPS formats will be allowed.	Required	
D7	Trains that do not have on-board GPS available (GPS temporarily unavailable) will be tracked via the Amtrak Arrow system.	Required	
D8	Trains that are not tracking with on-board GPS (no GPS at all) will be tracked via the Amtrak Arrow system	Required	
D9	System must be able to use different GPS sources via the Amtrak system.	Required	
D10	The system must display the GPS or tracking source on the user console.	Required	
D11	The system must be able to communicate to/from the WIFI/GPS providers system installed on the train cars.	Required	
D12	WIFI equipped trains to server communications will be handled by the onboard Wi-Fi system.	Acknowledge	
D13	Non-WIFI equipped trains will communicate with cellular modems may require the system to help manage the connection.	Acknowledge	
D14	The system must be able to communicate with the Amtrak ARISE system (push data to and pull data from)	Required	

D15	The system will automatically choose and number the active unit in the consist with two or more Wi-Fi/GPS equipped cars	Required	
D16	The System must be able to communicate with the Amtrak Arrow system.	Required	
D17	The system must transmit computed locations to the Arrow system within (1) minute of a known position determination.	Required	
D18	All trains must send an OS (Operational Status) to the Arrow system when it arrives at a station within 1 minute.	Required	
D19	All trains must send an OS (Operational Status) to the Arrow system when it departs a station within 1 minute	Required	
D20	System must be able to use/modify train runtime tables.	Required	
D21	The ability to manually enter train consist information to allow the system to run without an Amtrak connection	Required	
D22	User console operators must be able to view information being sent to Amtrak	Required	
D23	System must be able to use/add waypoints to assist in tracking non-GPS and non-tracking trains.	Required	
D24	System must be able to learn and automatically adjust to changes in a train's best run-time, allowing the system to become more accurate over time.	Required	
D25	The ability to setup Geofencing around areas to trigger train specific messages to play at stations within the geofenced area. This will be an adjustable parameter.	Required	
D26	Host Railroads will provide a GPS data link to allow the CalPIDS system to view their train	Acknowledge	
	Train Numbering		
E1	Trains will be automatically numbered by the system 30 minutes prior to departure.	Required	
E2	On-time Trains will be automatically un-numbered in 10 minutes (adjustable parameter) at the completion of their run.	Required	

E3	Console Operators will have the ability to manually un-number trains without the system trying to re-number the train.	Required	
E4	Console Operators will have the ability to assign special train numbers and link it to special schedules.	Required	
E5	Console Operators will have the ability to create special train schedules.	Required	
E6	Late trains will stay numbered until operation manually un-numbers it. A popup will alert operators of the numbered late train every XX minutes (adjustable parameter)	Required	
E7	Late trains that cross-over into another day will continue to track and send information	Required	
	Delayed Trains		
F1	The system must be able to automatically recognize a delayed train if the train stops for over 5 minutes (adjustable parameter) along the tracks or at a station and automatically change the status of the train to delayed. The train operation center Console user must receive a warning popup that the train has stopped and about to be placed in delay mode. The popup will give the operator the ability to cancel the delay or post a reason for the delay. If the system does not receive an input from the operator within 1 (adjustable parameter) minutes the system will send a general delay message (i.e. 'Train 524 Delayed. Please stand by.')	Required	
F2	The system must be able to automatically remove a train from delayed status once the train starts to move at over 3 mph (adjustable parameter). The Operation Console user must receive a warning popup that the train has started moving and about to be taken out of delay mode. The pop-up will give the operator the ability to cancel and keep the train in delay mode.	Required	
F3	The Operations Console user must have the ability to manually override the automated system to place a train in delayed status.	Required	

F4	The Operations Console user must have the ability to manually override the automated system to remove a train from delayed status.	Required	
	Bus Statuses		
G1	All Amtrak Capitol Corridor and Amtrak San Joaquin buses will be tracked via on-board GPS equipment using the current NMEA or TAIP GPS standard	Highly Desirable	
G2	Buses will be tracked with an accuracy plus/minus 50 feet.	Highly Desirable	
G3	The ability to announce Amtrak buses at stations based on their GPS location and/or schedule information.	Highly Desirable	
G4	Buses with non-functioning GPS unit or no GPS units will be tracked based on their posted schedule.	Highly Desirable	
G5	Operators must be able to update/modify/duplicate the bus schedule via a user console interface.	Highly Desirable	
G6	The bus contractor will provide a GPS data link to the CalPIDS system	Acknowledge	
G7	Bus stations/stops may require solar power for VMS displays	Acknowledge	
	Station Connectivity		
H1	New CalPIDS circuits will be installed at all station.	Acknowledge	
H2	Circuit speeds shall be high enough to ensure no lag in communication between the central server and PIDS equipment.	Acknowledge	
H3	All stations will have a highly restricted firewall to prevent unauthorized access to the system.	Acknowledge	
H4	Switches at the stations will be managed and highly restricted to prevent unauthorized access.	Acknowledge	
H5	System must be able to communicate with station CalPIDS equipment via secure Telnet, secure FTP and/or a secure browser interface. No unsecured network traffic will be allowed.	Required	
H6	CalPIDS equipment must be password protected with a strong password.	Required	

H7	All cables will be labeled with to/from information at both ends.	Required	
H8	All network cables connected to the switch will be color coded based on the type of equipment it is connected to.	Required	
	LED Outdoor Displays		
I1	All LED signage will be connected to the system via an ethernet network.	Required	
I2	All LED signage will be connected to a switch	Required	
I3	All outdoors LED signage will be in a NEMA 4X rated enclosure and certified to work in an outdoor environment.	Mandatory	
I4	All LED signage, if not covered by a canopy, will have a sun shield that covers the top of the sign.	Required	
I5	Signage doors will open from the bottom and push up.	Required	
I6	All LED signage will be mounted as per the manufacturer's guidelines. This is to prevent damage to the signage and to comply with the manufacturer's warranty requirements.	Required	
I7	All outdoor LED signage will be mounted as per ADA guideline and California codes.	Required	
I8	All LED mounting hardware and designs must be pre-approved by the Rail Agencies.	Required	
I9	All outdoor displays will be connected to the CalPIDS system with 50/125 multimode fiber optic cable.	Required	
I10	All 50/125 multimode fiber optic cable will be terminated with SC style connectors.	Required	
I11	All fiber optic cables will be connected to a patch panel in the equipment cabinet.	Required	
I12	Fiber optic cable will NOT connect directly to the fiber optic media converter in the equipment cabinet. All fiber cables must go through the fiber patch panel.	Acknowledge	
I13	All fiber optic media converters will be certified to work with 50/125 fiber optic cable.	Required	
I14	All fiber optic media converters will be equipped with SC style connectors.	Required	
I15	All cables will have to/from labels on both ends.	Required	
I16	All fiber optic cable will be tested and certified operational prior to being accepted by the Rail Agencies.	Required	

	LCD/LED Indoor Displays		
J1	All LCD/LED signage will be connected to the system via an ethernet network and connect to a switch.	Required	
J2	All indoor electronic signage will be mounted as per ADA guideline and California codes.	Required	
J3	All indoor electronic signage enclosures must comply with NEMA and ADA guidelines.	Required	
J4	All indoor electronic signage will be mounted as per the manufacturer's guidelines. This is to prevent damage to the signage and to comply with the manufacturer's warranty requirements.	Required	
J5	All indoor electronic signage and displays will be certified to work in the environment they are installed in.	Required	
J6	All indoor electronic signage can be mounted in portrait or landscape orientations.	Required	
J7	All indoor electronic signage and displays will be commercial grade, designed for 24/7/365 operation and have a 100,000 MTBF.	Required	
J8	All indoor LCD/LED signage mounting hardware and designs must be pre-approved by the Rail Agencies	Required	
J9	All indoor electronic signage shall be capable of displaying static and full motion graphics/videos.	Required	
J10	A dimming/timing feature to put the display to sleep during the overnight hours will be needed to extend the displays lifetime.	Required	
J11	All indoor displays will be connected to the CalPIDS system with 50/125 multimode fiber optic cable.	Required	
J12	All 50/125 multimode fiber optic cable will be terminated with SC style connectors.	Required	
J13	All fiber optic cables will be connected to a patch panel in the equipment cabinet at the station.	Required	
J14	Fiber optic cable will NOT connect directly to the fiber optic media converter in the equipment cabinet. All fiber cables must go through the fiber patch panel.	Acknowledge	
J15	All fiber optic media converters will be certified to work with 50/125 fiber optic cable.	Required	
J16	All fiber optic media converters will be equipped with SC style connectors	Required	
J17	All cables will have to/from labels on both ends.	Required	

J18	All fiber optic cable will be tested and certified operational prior to being accepted by the Rail Agencies.	Required	
J19	Stations with an Historical Site designation may use WIFI to connect to the inside displays	Acknowledge	
	LED Outdoor Display Operation		
K1	All information must be formatted to fit the display size per ADA guidelines.	Required	
K2	All information must be displayed in a non-scrolling format. If the message is too long for one screen, the display will page flip to the next screen to show the remainder of the information, with a maximum message length being no more than two full screens.	Required	
K3	All messages that are too long for one full screen should be divided in such a way to display 1/2 of the message on screen one and 1/2 on screen two.	Required	
K4	ETA messages will be displayed with a header row at the top of the screen at least 6 trains (adjustable parameter) ETA's displayed under and aligned with the appropriate heading.	Required	
K5	ETA's will identify the corresponding train service name to on the left side of the screen.	Required	
	LCD/LED Indoor Display Operation		
L1	Display information like an airport displays format, with train information at the top and messages on the bottom	Required	
L2	Display color schema should reflect the train corridor (i.e. Capitol Corridor, San Joaquin, ACE) it is installed on.	Required	
L3	Train corridor information must be displayed at the top of the screen.	Required	
L4	All information must be displayed in a non-scrolling format. If the message is too long for one screen the display will page flip to the next screen to display the remainder of the information. With a maximum message being no more than two full screens.	Required	

L5	All messages that are too long for one full screen should be divided in such a way to display 1/2 of the message on screen one and 1/2 on screen two.	Required	
L6	Train information will be displayed based on the system's color coded to show the trains status. Example: on-time trains in 'Green' late trains in 'Yellow' or 'Red' depending on the degree of lateness. Delayed trains will be displayed as 'Mauve'.	Required	
L7	ETA's will identify the corresponding train service name on the left side of the screen.	Required	
L8	ETA messages will be displayed with a header row at the top of the screen and up to 6 (variable parameter) train ETA's displayed under and aligned with the appropriate heading. Number of trains displayed depends on size of display.	Required	
L9	All indoor display will be capable of displaying full motion video and graphics	Required	
	Audio Amplification System		
M1	All audio equipment (wattage) should be sized for the station and number of speakers.	Required	
M2	All audio equipment will be compatible with ambient noise sensors.	Required	
M3	All audio equipment should have audio equalization and tone controls.	Required	
M4	All audio equipment must be network ready.	Required	
M5	All audio equipment will be capable of creating audio zones.	Required	
M6	All audio equipment will be capable of operating with 70V speakers.	Required	
M7	All audio equipment must be designed to handle the rugged requirements of the station environment. Operating temperature range of -20 to +50 degrees C and storage temperatures of -40 to +70 degrees C and operating humidity up to 95% (non-condensing, at 50 degrees C)	Required	
M8	Proven and reliable off-the-shelf audio components and technology should be installed; however, as newer and more robust technology evolves the components of the system should be upgradeable over the life of the contract.	Highly Desirable	

M9	An iBoot or similar network connected device that allows remote restart will be connected to the power input of the audio amp.	Required	
	Audio Speakers		
N1	All outdoor speakers will be weather-proof.	Required	
N2	All outdoor speakers should be designed to work best with digital audio.	Required	
N3	All speakers will operate on a 70V system.	Required	
N4	All outdoor speakers will be directional to minimize the amount of noise leaving the station area.	Required	
N5	All indoor speakers will be mounted to optimize the acoustics of the station.	Required	
N6	All indoor speakers should be designed to work best with digital audio files.	Required	
N7	All stations will have at least 1 two-way speaker (microphone and speaker) to allow for two-way emergency communication with the operations center	Acknowledge	
	Equipment and Contract Purchases		
O1	The winning bidder will be responsible for purchasing all CalPIDS hardware and manage/oversee installation at the stations	Acknowledge	
O2	The winning bidder will be responsible for obtaining and maintaining all equipment and parts warranties for the duration of the contract.	Acknowledge	
O3	The winning bidder will keep the rail agencies informed when new equipment versions and equipment updates are released. New versions/updates to address urgent performance issues shall be tested and purposed for install within 90 days. Non-urgent versions/updates shall be included in the annual Technology Roadmap and Pro Forma update for discussion with the Rail Agencies.	Acknowledge	
O4	The winning bidder will keep the rail agencies informed of all equipment recalls and known defects that could affect the performance of the CalPIDS system with a written report within 90 days.	Acknowledge	
O5	The winning bidder will be responsible for any equipment rentals or leases obtained for CalPIDS duration of the contract.	Acknowledge	

O6	The winning bidder will be responsible for warranty and non-warranty equipment repairs for the duration of the contract	Acknowledge	
O7	The Rail Agencies reserve the right to purchase any equipment/hardware for a better price without sacrificing quality and maintaining specifications and project schedule. The Rail Agencies also reserve the right to directly oversee equipment installation work. The contractor shall in either case be responsible for system integration and testing.	Acknowledge	
O8	The Rail Agencies shall coordinate and manage the delivery of electrical power and local communications facilities required to support the operation of all station hardware.	Acknowledge	
O9	The Rail Agencies shall coordinate the permitting and inspection processes required by all applicable building and electrical regulations.	Acknowledge	
O10	The Rail Agencies shall coordinate any permitting at stations as it may apply to their historical landmark status.	Acknowledge	
O11	All electrical work shall be performed in a professional and complete manner, shall meet or exceed local building /electrical code, and shall conform with the State of California standards for appearance and workmanship	Acknowledge	
	Station Controller Hardware		
P1	The Station Controller must be commercially available (off-the-shelf) for purchase. Non-commercial equipment will not be allowed.	Required	
P2	The Station controller must have the ability to run Text to Speech software that is provided by Vendor.	Required	
P3	The Station Controller must be able to play pre-recorded audio files.	Required	
P4	The Station Controller must be able to connect to an ethernet network.	Required	
P5	The Station Controllers operating system must be DHCP compatible.	Required	

P6	The Station Controller must be able to connect to a UPS and can soft shutdown in case of a loss of AC power.	Required	
P7	The Station Controller must have the ability to auto restart after a power outage without human intervention.	Required	
P8	The Station Controller's operating system must support intrusion detection software.	Required	
P9	Station Controller's internal RAM memory and SSD storage must be expandable/replaceable.	Required	
P10	The Station Controller must be a self-contained unit with no external peripherals to make it interface with CalPIDS equipment.	Acknowledge	
P11	Equipment must be designed to handle the rugged requirements of the station environment. Operating temperature range of -20 to +50 degrees C and storage temperatures of -40 to +70 degrees C and operating humidity up to 95% (non-condensing, at 50 degrees C)	Required	
P12	The Station Controller must be able to handle a loss of AC power without a loss of data or damaging the operating system.	Required	
P13	The Station Controller must be able to accept secure connections for data transfers and updates. No unsecured communication will be allowed.	Required	
P14	The Station Controller must be able to auto reconnect to the network once the network has recovered from an outage.	Required	
P15	The Station Controller must have the ability to detect/log/report failures of attached equipment.	Required	
P16	The Station Controller must be able to auto reconnect any equipment connected to it (e.g. LED/LCD displays and audio equipment)	Required	
P17	An iBoot or similar network connected device will be connected to the power input of the Station Controller.	Required	
	Station Controller User Interface		
Q1	The Station Controller must be 100% remotely configurable via a user interface.	Required	

Q2	The Station Controller's user interface must be easy to use with all settings available from a central control panel.	Required	
Q3	The Station Controller software must have the ability to run internal diagnostics to help isolate hardware/software failures.	Required	
Q4	All Station Controller software must have the ability to be updated remotely.	Required	
Q5	The Station Controller must have the ability to push software updates to connected equipment.	Required	
	Station Controller Operation		
R1	The Station Controller must be robust and capable of 24/7/365 operation with minimum human intervention	Acknowledge	
R2	The Station Controller's message queues must be designed in such a way to give ETA's and train information messages priority play time over general/advertising messages.	Acknowledge	
R3	The Station Controller must be capable of generating an operational status report. The status report shall at minimum contain the following information: • Percentage of Availability (30, 60, 90 days etc.)• Last Restart • Previous Restarts • Errors (to include the equipment IP address that generated the error)	Required	
R4	The Station Controller must be able to operate in a temperature range of -20 to +50 degrees C (-4 to +122 F)	Required	
R5	The Station Controller must be able to communicate (to/from) with all connected equipment.	Required	
R6	The Vendor shall specify communication bandwidth and port requirements for Station Controllers.	Acknowledge	

R7	Ability to remotely control audio volume at the station or a volume control to allow the station agents to lower the volume inside the station. Station agents should never have to touch the main amplifier volume because it sets the whole station volume.	Highly Desirable	
R8	The ability to remotely mute or lower audio volume at stations to comply with noise pollution ordinances.	Required	
R9	The mute or lower volume feature should include an adjustable sleep timer i.e. sleep at 10:00 PM and wake at 6:00 AM. During the sleep hours audio will play at a lower volume or may be totally muted.	Required	
R10	The ability to remotely blackout LED signage without turning the sign power off at stations to comply with light pollution ordinances.	Required	
R11	The blackout feature should include an adjustable sleep timer i.e. sleep at 10:00 PM and wake at 6:00 AM. During the sleep hours no text will display.	Required	
R12	All Station controller hardware will be off-the-shelf technology with proven reliability.	Required	
R13	All equipment installed at the stations should be vandal-resistant.	Acknowledge	
R14	Wireless or other transmitting device shall not interfere with other station or railroad equipment in any way.	Required	
R15	The Station Controller shall continue to operate if the network connection to the central server is lost. Current ETA's and messages will continue to play until they expire. An automatic message will be generated by the controller informing the passengers of the network issue and directing them to download the mobile app.	Required	
R16	The Station Controller must be able to detect a loss of network connectivity and auto reconnect once the network has returned.	Required	
R17	The Station Controller must be WOL (Wake-on-LAN) compatible.	Required	

R18	The Station Controller must be able to automatically re-establish its connection to the central server if connection is lost.	Required	
R19	The Station Controller shall run on an operating system designed to be left unattended for long periods of time	Acknowledge	
R20	All LED/LCD signage will be independently controllable via Station Controllers, with functional interfaces within user consoles.	Required	
R21	The User Console system will have the ability to group LED/LCD signage together to play messages. Example: Signs 1 & 2 are in the bus loop and will play bus message. Signs 3,4,5 & 6 are on the platform and will display train messages.	Required	
R22	All station signs will play high priority or emergency messages without regard of grouping.	Required	
R23	The system will be able to test all the station signs functionality remotely via User Consoles i.e. run all LED pattern test, voltage test and display information.	Required	
R24	The system will be able to view and set Time/Date on the signs remotely via User Consoles	Required	
R25	The Station Controller must have the ability to download train schedules and messages.	Required	
R26	The Station Controller will be capable of software updates over the network	Required	
R27	All software updates to equipment attached to the station controller will be done over the network	Required	
R28	The station controller must be capable of a soft shutdown if AC power is lost.	Required	
R29	The station controller must be able to connect to a remote time server and synchronize the time to all attached displays.	Required	
R30	The ability to auto delay an audio message if too many audio announcements have played in a row.	Required	
R31	A VOIP or dialup connection to each station will automatically pause the station controller when activated allowing for live announcements at the stations. Once the VOIP or dialup connection is terminated the station controller will return to normal operation	Required	

R32	The station controller must have a secure user login and password	Required	
	User Console Operation		
S1	Different versions of user consoles will be provided by Vendor: full access user and a browser based version	Required	
S2	The full access consoles will run on IBM compatible computers running currently supported versions of Microsoft Windows.	Required	
S3	The full access user console will be a stand-alone application.	Required	
S4	The full access user console will have the ability to post messages to all stations and train service corridors.	Required	
S5	The full access user console operator will have the ability to permanently delete a message from a station/stations/corridor/all corridors.	Required	
S6	The full access user console will have the ability to create/delete/modify messages.	Required	
S7	The full access user console operator will have the ability to play audio and view a message on the console prior to sending it to the stations	Required	
S8	The full access user console operators will be prompted to spell check messages prior to sending them to the stations.	Required	
S9	The full access user console operator will be able to view how the message will appear on the station display from the console for all display sizes.	Required	
S10	The full access user console operator will have the ability to stop/pause all non-critical messages to a station/stations/corridor/all corridor	Required	
S11	The full access user console operator will receive a popup warning every 8 (variable parameter) minutes to remind them that non-critical messages has been stopped/paused to a station/stations/corridor/all corridor	Required	
S12	The full access user console operator will have the ability to set pop-up warning timers.	Required	
S13	Pop-up warning messages will be both audio and visual to the full access user console operator.	Required	

S14	The full access user console will have the ability to email/tweet/mobile app and interface with other social media sites from the console.	Required	
S15	The full access user console operators will be able to see OS (Operational Status) information that has been sent to the Amtrak Arrow system on the console	Required	
S16	The full access user console operators will be able to see all train consist information for all Amtrak California trains pulled from the Amtrak Arrow system on the console. Can be manually suspended	Required	
S17	The full access user console operators will have access to a quick access pulldown menus or screens populated with the most commonly used actions and messages. Operators will be able to add, edit and remove messages from the list.	Required	
S18	The full access user console operator must have the ability to download pre-recorded messages, graphics and videos to the system. Messages will be added to the system and made available for future use.	Required	
S19	The full access user console operator must have the ability to setup geofenced areas around stations.	Required	
S20	The full access user console operator must have the ability to setup popup windows to alert them to when a train has entered the geofenced areas	Required	
S21	The full access user console operator must have the ability to run reports on all functions of the system to include but not limited to the following i.e • Station Announcements • Station Equipment • System Operation • Arrivals and Departures • Trains GPS Status and Connections • Train performance • Train Messages • Operational Status (OS) Reports must be formatted to work with the rail agencies current BI software.	Required	
S22	The full access user console operator must have the ability create/save/print/email reports from the console	Required	

S23	The full access user console operator must have the ability to create/modify trains schedules and save them to the system	Required	
S24	The full access user console operator must have the ability to schedule the new train schedules release date.	Required	
S25	Browser based console will run in the latest IE, Chrome or Firefox browser.	Required	
S26	Browser based console will have the same functionality as the full access console and be restricted based on the user login.	Required	
S27	Browser based console will be configurable to view only mode, maps, train locations and ETA's	Required	
S28	Browser based console will not be allowed to create new messages and will be restricted to using only existing message templates.	Required	
S29	Browser consoles will run in an 'HTTPS' Secure window	Required	
S30	Both user consoles will be user configurable and savable based on login	Required	
S31	The consoles will have two types of Maps for users to view: Line and Area	Required	
S32	Messages containing audio and visual information must play together 'synchronized'	Required	
S33	The console operator will have the ability to interrupt a playing message with higher priority or live messages and then continue playing the original message	Required	
S34	The ability to auto delay an audio message if too many audio announcements have played in a row	Required	
S35	All messages displayed at stations must have an audio component	Required	
S36	All train ETA's displayed at the stations will be made available to be displayed on the Rail Agencies corresponding website via API (Application Programming Interface)	Required	
S37	All train service alerts sent to the station signs will be made available to be displayed on the Rail Agencies	Required	

	corresponding website via API (Application Programming Interface)		
S38	Console operators will be able to see the status and interact with all messages playing at each station	Required	
S39	Console operators will be able to see the status and interact with each station	Required	
S40	Console operators will be able to see the status and interact with each train	Required	
S41	Full access console users with admin access will be able to troubleshoot stations and equipment outage from the console	Required	
S42	Full access console users with admin access will be able to set all console parameters	Required	
S43	Console users will be able to take screen shots and open trouble tickets from the console	Required	
S44	All console user will be required to have their own login and password	Required	
S45	Console setting and setup will be tied to the user's login	Required	
S46	The user's consoles will incorporate all current console functionality and expand on that functionality.	Required	
S47	The full access console will allow authorized user to enter train consist information	Required	
	Audio Message Builder		
T1	Allows the operator to build audio messages for any of the display types installed on the corridors	Required	
T2	Allows the operator to select a station or stations, train or trains by number or broadcast to all stations or trains	Required	
T3	Has a character counter for each display type	Required	
T4	All messages created on the CalPIDS system will be English only.	Required	
T5	Allows the operator to play and listen to the message prior to sending	Required	
T6	The rail agencies may be open to some form of off-site message production methods i.e. naturalreaders or similar product to produce messages in other languages to be downloaded to the CalPIDS system.	Acknowledge	

T7	Has a phonetic dictionary to allow the text-to-speech software to pronounce difficult words correctly	Required	
T8	Allows for attachment and downloading of pre-recorded messages.	Required	
T9	Dictionary for spell checking and the ability to add new words.	Required	
T10	Allows the operator to select the display type for the message. The selected display type will be the only displays to receive the message.	Required	
T11	Allows for message scheduling (days of week and time of day)	Required	
T12	Message scheduling will allow for the use of message groups and time slot selection. Time slots will be broken up into 5-minute windows (adjustable parameter) allowing groups of messages to play at pre-selected times during the hour or day.	Required	
T13	All messages will have the option to be saved to the system for future use (based on the user's access level)	Required	
T14	All saved messages will be clearly marked with the display type and size the message is intended for.	Required	
	System Server Software		
U1	Server software will run as services	Required	
U2	All server software must have a user interface that allows for setting/adjustment of software parameters	Required	
U3	All server software must be able to restart automatically	Required	
U4	The process for adding or removing a station in the system will be simplified and not require additional software coding to complete. i.e. fill out a form and all changes to the database are made	Highly Desirable	
U5	All server software will run on an IBM compatible server running the latest version of Microsoft Windows VMware.	Required	
U6	All server software will have the ability to send out alerts/alarms via email or text to designated administrators.	Required	
U7	All data activity to/from the Amtrak Arrow and ARISE systems must be saved to log files.	Required	

U8	All data activity to/from station controllers must be saved to log files.	Required	
U9	All data activity to/from user consoles must be saved to log files.	Required	
U10	All log files need to be of enough detail to identify train equipment/station equipment/console/user that or who was logged in or connected to the system.	Required	
U11	All log files will be saved and searchable on the system for 365 days and then archived for a minimum of 7 years.	Required	
U12	All software will be written in one of the following languages: • Java • C • C++ • Python • C# Any other programming languages will need to be first approved by CCJPA.	Required	
U13	All server software must have the ability to generate an operational status report. Report will include at a minimum the following information: • Percentage of Availability (past 30, 60, 90 days etc.) • Last Restart • Previous Restarts • Errors	Required	
U14	The system will monitor all external equipment connected to the system and send alert text or emails to the on-call administrator if an issue occurs. This feature will be parameter controlled.	Required	
U15	The system will attempt to reconnect external equipment in case of disconnection.	Required	
U16	All software source code and programs written for the CalPIDS project will be archived and stored at a secure location.	Required	
U17	All server-based software for the CalPIDS project must be compatible with cloud-based providers such as Amazon Web Services (AWS).	Acknowledge	
U18	Server software must be able to communicate and send train location data to the OBIS system.	Required	

U19	Server software must not be tied to the system administration login and password.	Acknowledge	
	Mobile Application		
V1	Mobile app must run on Android and Apple operating systems	Required	
V2	Mobile app must display information for all trains on all corridors and Amtrak connecting bus routes that serve stations along the corridors	Required	
V3	Mobile app must display train and bus schedule information for all corridors	Required	
V4	Mobile app must display alerts and delay information for selected train/bus/corridor	Required	
V5	Mobile app must allow the user and personal alerts for selected trains and buses works with geofencing	Required	
V6	Mobile app must display map with selected train or bus real-time location and ETA for the selected station	Required	
V7	Provide an API/web service including documentation for third-party developers. The data feed should include at least the following: • Real-time location of trains and buses • Train ETA's • Train and bus schedules	Required	
V8	The mobile app must have a secure user login and password.	Required	
V9	User setting will be tied to the user's login credentials.	Required	
V10	The mobile app will come in different language formats i.e. English, Spanish and Mandarin Chinese	Desirable	
V11	The mobile app will be able to see all trains on all corridors utilizing CalPIDS	Required	
V12	The mobile app will have an SOS feature for rail agency employee use only based on the user's login credentials	Required	
	Software and Technical Support		
W1	The Rail Agencies intend to contract with the awardee for ongoing software and technical support of the CalPIDS system for a five-year term with a five-year extension option that can be exercised by the rail agencies. This support will include all software located at the stations, on train cars, user consoles and all server software.	Acknowledge	

W2	Technical support shall also include troubleshooting and assistance in system recovery as well as resolution of performance issues.	Acknowledge	
W3	Vendor shall be located off site from any Rail Agencies facility	Acknowledge	
W4	Software contractor shall remotely perform scheduled file maintenance and limited software program adjustments to a maximum of six time per year	Required	
W5	Software contractor will be allowed remote access to the CalPIDS server over a secure VPN link.	Acknowledge	
W6	Software contractor response time for any software related failure affecting the systems operation will be acknowledged within 1 hour of being reported. Repaired will start immediately regardless of the day of the week.	Required	
W7	Software contractor response time for any software related failure affecting a single station/console will be acknowledged within 1 hour of being reported. Repairs will begin within 12 hours regardless of the day of the week.	Required	
W8	Software contractor response time for any software related failures for any on-train equipment shall be acknowledged within 1 hour and work started to restore operations within 4 hours regardless of the day of the week.	Required	
	Password Security		
X1	System software must not be tied to the administrator's login and password	Required	
X2	Administrators password must be changeable without affecting the operation of the system	Required	
X3	User passwords must be strong allowing the use of 'Padding', 'Passphrases' or combinations of 'numbers/letters/special characters'	Required	
	Equipment Cabinets		
Y1	Cabinet will be heavy duty and a minimum 60"H x 24" W x 30" D with 19 rack mounts.	Required	
Y2	Cabinets must have lockable doors, with a key lock or an external lock. A lockbox with a key inside will be attached to the side of all cabinets.	Required	

Y3	Indoor cabinet must have a fan chassis for cooling.	Required	
Y4	All front space not occupied by equipment will be filled with black panels.	Required	
Y5	Outdoor cabinet will have an attached Air Conditioning unit and be well insulated.	Required	
Y6	Outdoor cabinets will be tamper proof- and graffiti-resistant	Required	
Y7	All cabinets will be well grounded	Required	
	Uninterruptable Power Supply (UPS)		
Z1	UPS shall be capable of holding power to all equipment in the station equipment cabinet for 6 to 10 minutes	Required	
Z2	UPS software shall be capable of communicating with attached station controller to allow for a soft shutdown if AC power is lost.	Required	
Z3	UPS will be managed to allow for remote power monitoring.	Required	
	Power Distribution Unit		
AA1	2 rack mountable (6) outlet PDU's will be required for each cabinet	Required	
AA2	An IBoot or similar device will be attached inline to all critical CalPIDS equipment to allow for remote reboots.	Required	
	Software Maintenance		
AB1	No changes to the operational system software will be made without the full knowledge and authorization of the Rail Agencies	Acknowledge	
AB2	All software maintenance will be scheduled in advance with the Rail Agencies	Required	
AB3	Server Software maintenance will be conducted during the overnight hours when no California trains are running. Maintenance will include, but is not limited to, the following: • Database Optimization • Log Archival • Hard Drive cleanup	Required	

AB4	Station Controller software maintenance will be conducted during the overnight hours when no California trains are running. Maintenance will include, but is not limited to, the following: • Database Optimization • Files and Hard Drive cleanup	Required	
AB5	Automatic software updates from Microsoft, Linux and Browser updates will always be turned off. All updates will be tested on the testbed prior to being released to the production system.	Required	
AB6	Unscheduled software outages will be handled regardless of the day of the week.	Required	
AB7	Unscheduled software outage reports will be required within 24 hours of an outage affecting the whole system. Reports will include, but is not limited to, the following: • Cause of the outage • Repair actions • Preventive actions	Required	
AB8	Vendor will acknowledge software outage tickets affecting the whole System within 1 hour of the outage being reported. Work to restore the system will begin immediately to minimize downtime.	Required	
AB9	Vendor will acknowledge software outage tickets affecting a station within 1 hour of the outage being reported. Work to restore the station will begin within 12 hours.	Required	
AB10	All software changes will be handled via software change request and will need advance approval by the rail agencies.	Required	
AB11	The vendor will be required to set up a testbed that can simulate the operational software and hardware installed on the CalPIDS system for extensive testing before installation.	Required	
AB12	The vendor will be required to have at least one of each component(s) installed at the stations connected to the testbed.	Required	

AB13	The vendor will be required to have a 10% inventory of all critical system components for spare parts.	Required	
	Hardware Maintenance		
AC1	Vendor will comply with all safety and security guideline for each Rail Agency and their respective host railroads. Failure to follow the guidelines will result in the removal of individuals from the station and potential loss of the vendors contract.	Mandatory	
AC2	At stations where CalPIDS equipment is near the tracks, a railroad Flagman will be required. Flagmen will be made available by each Rail Agency upon request.	Acknowledge	
AC3	Unscheduled hardware outage will be handled and repaired regardless of the day of the week.	Required	
AC4	Preventive hardware maintenance at all stations must be documented (e.g. twice a year). Preventive maintenance will include, but is not limited to, the following: • Cleaning all CalPIDS displays and speakers • Cleaning all CalPIDS equipment in the cabinet • Testing all displays • Testing all speakers • Inspecting all CalPIDS equipment for damage • Inspecting all CalPIDS cables and connectors	Required	
AC5	All equipment warranty requirements will be followed for the return and repair of equipment	Acknowledge	
AC6	Vendor will be required to keep an accurate inventory of all equipment installed at CalPIDS stations and provided to the rail agencies. Inventory will include, but is not limited to, the following: • Part Numbers • Serial Numbers • Installation locations • Photos of each piece of equipment at the station • Internal setting	Required	

AC7	Vendor will be required to have the following equipment on-hand while at stations. • Laptop Computer • Spare Network Cables • Multimeter • Spare Connectors • Termination tools • 8' Ladder • Spare Fuses • Rail Safety gear	Required	
AC8	The maintenance vendor and employees responding to work requests at the stations will be required to have the following skill set and safety guidelines. • Ability to read, write and speak English. • Ability to pass the host railroad's safety test. • Ability to read and understand engineering drawings, schematics and other engineering documentation. • In-depth knowledge of low voltage Direct Current (DC) circuits. • Working knowledge of alternating current (AC) circuits. • In-depth knowledge of how to use a multimeter. • In-depth knowledge of networks and network equipment setup. • In-depth knowledge of network carriers and how circuits work. • Working knowledge of Linux operating system • Working knowledge of Windows operating system • Ability to lift 70lbs • Ability to safely use small hand tools e.g. small screwdrivers • Ability to work on equipment over your head • Ability to climb and work from an 8-ft ladder • In-depth knowledge of network cabling • In-depth knowledge of Fiber Optics • Valid driver's license • Valid Auto Insurance	Required	
	Integration Testing Plans		

AD1	All Integration Testing Plans will be submitted to the Rail Agencies in writing prior to the start of any testing. The test plan will include for each functional component at each location, the following information. • Test Environment Specification • Unit Test Procedures • Integration Test Procedures • System Test Procedures • System Test vs. Functional Requirements Matrix • User Acceptance Test Procedures • Test Scripts for all test • Testing Resource Requirements	Required	
AD2	Contractor shall prepare an operational readiness report upon successful completion of acceptance testing.	Required	
AD3	The operational readiness report shall contain the following information: • Unit, integration and system test results (Cumulative Test Summary Report) • Detailed acceptance test results (including Acceptance Test Log) • Availability statistics for all CalPIDS components • Break/fix logs • Training materials • Complete user documentation • Complete operator documentation	Required	
AD4	Contractor shall prepare a Post Project Evaluation Report to include the following items: • Deliverable inventory • Test and Productivity Matrices • Plan Compliance (for test, Conversion and Implementation) • Lessons Learned • Project Successes • Project Improvement Suggestions • Project Control Analysis and Recommendations	Required	

AD5	All Station LED Displays will be tested to ensure they operate as expected. Testing is not limited to, but should include, the following. • Text is the correct size and format for the display • Long text messages are divided correctly and centered on the display and page flipped to the next screen • Text messages are centered top/bottom, left/right • Text is displayed in the correct colors • Text messages play for the expected time and then are cleared from the display • Default on the display shows the time and date • Advertisements graphics/text load and display correctly	Required	
AD6	All station LED displays will be tested to ensure the text being displayed and the audio being played are synchronized	Required	
AD7	All station LCD Displays will be tested to ensure they operate as expected. Testing is not limited to, but should include, the following. • All text is sized correctly for the display • All text is the correct color based on the trains status • ETA's are formatted correctly • Advertisements Video/Graphics/Text load and display correctly	Required	
AD8	All station computers with user consoles installed will be tested to ensure they operate as expected	Required	
AD9	All station speakers will be tested to ensure they operate as expected	Required	

AD10	All full-access user console software features will be tested to ensure they operate as expected. Testing is not limited to, but should include, the following. • Maps: Operation and Functionality • Reports: Operation and Functionality • Station Announcements: Operation and Functionality • Train Announcements: Operation and Functionality • Train Schedules: Operation and Functionality • Bus Schedules: Operation and Functionality • Administration Features: Operation and Functionality • Message Generation: Operation and Functionality • Station Equipment Management: Operation and Functionality • Popup messages are triggered and operate correctly	Required	
AD11	All Browser Console features will be tested to ensure they operate as expected. Testing is not limited too but should include the following. • Maps: Operation and Functionality • Station Announcements: Operation and Functionality • Train Announcements: Operation and Functionality • Quick access messages play and operate correctly	Required	
AD12	All station audio files will be tested to ensure they play as expected. Testing is not limited to, but should include, the following. • Audio is synchronized with the appropriate text message • ETA audio plays with the appropriate chime/sounds at the beginning.	Required	

| AD13 | All Station Controller features will be tested to ensure they operate as expected. Testing is not limited to, but should include, the following.
  • Text is sized/formatted on LED displays correctly
  • Text is sized/formatted on LCD displays correctly
  • Train schedules download correctly
  • Messages queues function correctly
  • Message parameters are downloaded and function correctly
  • Station Controller continues to function correctly if network connectivity is lost.
  • Station Controller reconnects to the central server automatically once connectivity has   been restored.
  • All messages are updated once network connectivity has returned
  • Station Controller can soft shutdown if   power is lost
  • Station Controller can power itself up after power is restored. | Required | |

AD14	All Server software features will be tested to ensure they operate as expected. Testing is not limited to, but should include, the following. 　• All software restarts correctly by itself after server is rebooted 　• All Train hardware can auto-reconnect itself to the central server 　• All Station hardware can auto-reconnect itself to the central server 　• Software interfaces correctly with Amtrak ARISE and Arrow 　• Messages are correctly downloaded and formatted for the correct type of displays 　• Databases are updated correctly 　• Full Access User consoles connect and work correctly 　• Browser console connect and work correctly 　• ETA's, Arrivals and Boarding messages　are accurate 　• Schedules update correctly 　• Log files update and are accurate 　• Errors are identified reported accurately 　• Stations are positioned correctly 　• Trains OS's correctly at each station	Required	
AD15	The Rail Agencies will accept responsibility of the CalPIDS system upon satisfactory completion of all integration testing following by a minimum of thirty contiguous days of operation with an availability of 99.5 percent	Required	
AD16	Components that do not meet the availability standard during the first thirty-day acceptance period will be accepted only after it is demonstrated that they have operated continuously for a contiguous thirty-day period with at least 99.5 percent availability.	Required	
	User Training		
AE1	All training courses will be video recorded and provided to the rail agencies	Acknowledge	
AE2	The number of hours required for each user training class will not exceed eight (8) hours.	Acknowledge	

AE3	Contractor will host 2 training days for up to 10 people each day per Rail Agency at a Rail Agency selected location to cover the use/functionality of the Full-Access Standalone and Browser based User Consoles. Training days and the number of students may change with advanced notification.	Required	
AE4	Contractor will host 1 training day for up to 10 people at a Rail Agency selected location to cover the overall system and station equipment Design/Functionality/Troubleshooting/Maintenance	Required	
AE5	Contractor will host 1 training day for up to 5 people at a Rail Agency selected location to cover the overall system Administration	Required	
AE6	All training manuals (instructor and student) shall be supplied prior to classes, with the intent that every participant receives their own copy.	Required	
	Contractor Requirements		
AF1	Contractor and subcontractors must receive certified safety training from the applicable railroad agency for all employees that will be working at any California train station. No contractor will be allowed to work at the stations without first completing the safety training. Host railroads that contractor and subcontractors may need safety training for include: • Amtrak • UP (Union Pacific) • BNSF • NCTD (North County Transit District) • Caltrain (JPB) • Metrolink	Acknowledge	
AF2	All safety training will be paid for by the contractor. This is a non-rememberable expense.	Acknowledge	
	Document Deliverables		
AG1	All Documents will be turned over to the Rail Agencies in the following form: one hard copy and one electronic copy to each of the Rail Agencies	Required	
AG2	All Station Controller Software design documents will be turned over to the Rail Agencies within 90 days after the completion of testing	Required	

AG3	All Station Controller documentation will be turned over to the Rail Agencies within 90 days after the completion of testing	Required	
AG4	All Station design documents will be turned over to the Rail Agencies within 90 days after the completion of testing	Required	
AG5	All Audio files will be turned over to the Rail Agencies within 90 days after the completion of testing	Required	
AG6	All Train hardware design documents will be turned over to the Rail Agencies within 90 days after the completion of testing	Required	
AG7	All Train software design documents will be turned over to the Rail Agencies within 90 days after the completion of testing	Required	
AG8	All Standalone Console software design documents will be turned over to the Rail Agencies within 90 days after the completion of testing	Required	
AG9	All Browser Based Console software design documents will be turned over to the Rail Agencies within 90 days after the completion of testing	Required	
AG10	All Server Based software design documents will be turned over to the Rail Agencies within 90 days after the completion of testing	Required	
AG11	All Database design documents will be turned over to the Rail Agencies within 90 days after the completion of testing	Required	
AG12	A current version of all software will be archived and stored on the server.	Required	
AG13	A current version of all software will be archived and stored in a secure offsite repository	Required	
AG14	All software will be version controlled and well documented	Required	
AG15	A Product Development and Technology Roadmap for the next 12-18 months shall be submitted to Rail Agencies for approval on an annual basis during the duration of the contract.	Required	
AG16	An updated Pro Forma cost sheet shall be submitted to Rail Agencies for approval on an annual basis during the duration of the contract.	Required	
	Reports		

AH1	Contractor shall prepare Post Project Evaluation Reports to include the following items: • Deliverable Inventory • Test and Productivity Matrices • Plan Compliance (Test, Conversion and Implementation) • Lessons Learned • Project Successes • Project Improvement Suggestions • Project Control Analysis and Recommendations	Required	
AH2	Monthly reports shall be delivered to the Rail Agencies Project Manager within five business days after the end of each calendar month	Required	
AH3	Monthly reports shall include the following information: • Break/fix log covering all CalPIDS equipment and software • Component time to repair for each item serviced • Total percentage availability by station and major subsystem (for the reporting month and cumulative year to date)	Required	
	Statement of Exceptions and Deviations - Deliverables		
AI1	A monthly project status report is required to be submitted to CCJPA on a monthly basis, while the project is in development phases. The project status report will include the following information: • Project status summary and budget reporting • Percentage completion of major milestone task • Activities performed since the last reporting period • Outstanding issues and concerns	Required	

AI2	Contractor shall prepare a change control report for all material changes to the functional capability, design, and planned operation of the CalPIDS system. The change control report shall include the following items: • Contract Change Number • Description of Change • Functional Impact • Operational Impact • Delivery Schedule Impact • Implementation Cost Impact • Operation and Maintenance Cost Impact • Rail Agencies Project Director Approval	Required	
AI3	A System Design Specifications document shall be developed by the Contractor near the beginning of the project and have enough detail to enable the development and unit testing of all CalPIDS hardware, software and communications components	Required	
AI4	The System Design Specifications document shall be written such that it clearly relates to the functional and technical requirements and scope of work as defined by the contract.	Required	

AI5	The System Design Specifications document shall include the following information • Functional Requirements • Data Requirements • Hardware and System Software Requirements • Capacity and Workload Requirements • Storage Requirements • System Interface Requirements and Design • User Interface Requirements and Design • Report Requirements and Design • Performance Requirements • Reliability Requirements • Communication Requirements and Design • Maintainability Requirements • Operational Requirements • Security Requirements • System Availability • Usability Requirements • Data Conversion Requirements • Implementation Requirements Plan • Installation Requirements Plan • Facilities Requirements and Plan • Training Requirements and Plan • Documentation Requirements • Testing Requirements • Risk Management Plan	Required	
AI6	Contractor shall furnish all testbed systems, software, utilities and equipment necessary for the development and testing of all components for the CalPIDS system on the contractor's own premises.	Required	
AI7	Contractor shall create and maintain a test laboratory configured to mirror the operational environment.	Required	
AI8	Contractor shall develop specifications for all local area and wide area communications facilities required above and beyond the existing Amtrak communications facilities present at the California stations. Communications onboard trains, and at the central sever location to be used by CalPIDS.	Required	

AI9	Contractor shall provide specifications of bandwidth requirements to meet peak loads for all wide area communications links.	Required	
AI10	The data communications plan shall include: • Station cabling, electrical and conduit requirements • Specification and location of all network communication devices (hubs, switches, routers, modems, etc.) • Interconnection points with existing Amtrak local area network facilities • Bandwidth requirement for peak loads for each station • Specification and installation plan for wide area communication facilities	Required	
AI11	The Rail Agencies shall direct the acquisition, delivery, installation and configuration of all communications hardware devices and necessary cabling, conduit, power, etc. required for the CalPIDS system	Acknowledge	
AI12	Contractor shall connect and configure all station hardware devices and necessary cabling, power, etc. required for the CalPIDS system	Acknowledge	
AI13	As-Built drawings depicting all communications facilities installed by the contractor at each location and each train shall be provided to the Rail Agencies Project Director.	Required	
AI14	Contractor shall provide, in electronic form, the make, model, and serial number of all contractor installed communications devices as well as documentation of the configuration settings used at installation.	Required	
AI15	The Rail Agencies reserve the right to purchase and equipment/hardware for a better price without sacrificing quality and maintaining specifications and project schedule	Acknowledge	
AI16	The Rail Agencies will coordinate the acquisition and installation/servicing of all station hardware through individual Work Directives	Acknowledge	

AI17	At the Rail Agencies option, contractor shall acquire, arrange site delivery of, and/or install some or all station hardware devices	Required	

ATTACHMENT E

PROTEST PROCEDURE

PROTEST PROCEDURE

A.   Submittal of Protests

All protests must be in writing, stating the name and address of the protestor, a contact person, the RFSOQ Number and Title and shall specify in detail the grounds of the protest and the facts supporting the protest.

All protests must be addressed as follows, to the District Secretary of the San Francisco Bay Area Rapid Transit District ("BART") who also serves as the CCJPA Board Secretary:

For Special Delivery or Hand Delivery: or   **By U.S. Mail**:
CCJPA c/o District Secretary   CCJPA c/o District Secretary
San Francisco Bay Area Rapid Transit District   San Francisco Bay Area Rapid Transit District
300 Lakeside Drive, 23rd Floor   P.O. Box 12688
Oakland, CA 94612   Oakland, CA 94604-2688

Protests not properly addressed to the District Secretary may not be considered by the CCJPA.

Copies of the District's Protest Procedures which are equally applicable to the CCJPA may be obtained from the District's Division of Contract Administration, P. O. Box 12688, Oakland, California 946042688, Telephone (510) 464-6543. SUBMITTALs will be opened and a Notice of Award will be issued by the CCJPA only in accordance with the Protest Procedures.

B.   Pre-submittal Protests

Pre-submittal protests are protests based upon the content of the solicitation documents. Five (5) copies of pre-submittal protests must be received by the District Secretary no later than ten (10) calendar days prior to SUBMITTAL opening. A written decision specifying the grounds for sustaining all or part of, or denying, the protest will be transmitted to the protestor in a manner that will provide verification of receipt, prior to the submission of SUBMITTALs. If the protest is sustained, the SUBMITTAL submission date may be postponed and an addendum issued to the RFSOQ document or, at the sole discretion of the CCJPA, the advertisement may be canceled. If the protest is denied, SUBMITTALs will be received on the scheduled date.

C.   Protests on the Recommended Award

All Proposers will be notified of the recommended award, if any. This notice will be transmitted to the Proposer at the address contained in its SUBMITTAL in a manner that provides verification of receipt. Any Proposer whose SUBMITTAL has not lapsed may protest the recommended award on any ground not specified in subsection B. above. Ten (10) copies of a full and complete written statement specifying in detail the grounds of the protest and the facts supporting the protest must be received by the District Secretary at the appropriate address set forth in subsection A. above no later than seven (7) calendar days following receipt of such notification. A written decision stating the grounds for allowing or denying the protest will be transmitted to the protestor and the Proposer recommended for award in a manner that provides verification of receipt, prior to execution of the Agreement. Such decision shall be final.

EXHIBIT 1

PROJECT TEAM

Name, Address and Telephone Numbers of All Firms Participating on the Project (including Proposer) and Subcontractors	Work Description
Proposer's Name Address Phone Number	
Name Address Phone Number	
Name Address Phone Number	
Name Address Phone Number	
Name Address Phone Number	
Name Address Phone Number	

EXHIBIT 2

CONFIDENTIAL

STATEMENT OF QUALIFICATIONS AND BUSINESS REFERENCES

Proposer shall complete the Statement of Qualifications and Business references below. In addition, Proposer submitting a submittal as a joint venture must have an executed Joint Venture Agreement as of the submittal due date and a copy of the Joint Venture Agreement shall be attached to this Exhibit 2. Proposers are free to attach additional material. Such material is to be attached to this Exhibit.

The information on this Proposer Sheet will be a factor in evaluating the awards.

1. Business Name of Proposer:

    a. Address: _____

    _____

    b. Telephone No.: _____

    c. Contact Person: _____

2. Form of Proposer Organization:

    a. Is Proposer a sole proprietorship?   Yes ____ No ____
    Name and address of Owner: _____

    _____

    b. Is Proposer a partnership?   Yes ____ No ____
    Name and address of Partners: _____

    _____

    _____

    c. Is Proposer a limited partnership?   Yes ____ No ____
    Name and address of General Partner: _____

    _____

    d. Is Proposer a corporation?   Yes ____ No ____
    State of Incorporation: _____
    Name of Officers: _____

    _____

    Corporation Number: _____
    Federal Taxpayer ID Number _____

    e. Is Proposer a joint venture?   Yes ___ No ___ **(*See Note Below)**
    Name of joint ventures: _____

    _____

---

*__Note:__ If Proposer is a joint venture, a copy of the Joint Venture Agreement shall be attached to this statement and submitted with your SUBMITTAL.

3.   Business License (documented) _____

     Taxpayer ID Number (Federal) _____

4.   How many years has your organization been in business under your present business name?

     _____

5.   How many years of experience has your organization had? _____

6.   How many years of experience has your organization had in the type of work similar to the work you are proposing? _____

7.   List similar types of projects your firm has successfully concluded for both Environmental document preparation and Track Design. Include names of individuals and telephone numbers, the CCJPA may contact including public bodies for these projects.

Year	Price	Contract Project Description	Names of Owner and Address	Contact Person
	Provide information in other part of this SOQ submittal			

8.   Name the Key Personnel who are to work on the project for which you are proposing and next to each person's name the project title of similar work to that upon which you are bidding which they have successfully participated. Attach resumes of these key people to this document. Indicate who will be the Project Manager and lead contact with CCJPA for execution and coordination of the work.

     _____

     _____

     Provide information in other part of this SOQ submittal

     _____

     _____

     _____

9.   How many years have the key people worked in your firm?

     _____

     _____

     _____

     _____

     _____

10. How many years of experience have the key people had working in areas similar to these projects?

_____
_____
_____
_____
_____
_____

11. Where is the location of offsite work to be done?

_____
_____
_____
_____
_____

Telephone No. _____

12. Have you or your organization failed to complete a contract? If so, give details:

_____
_____
_____
_____
_____
_____

13. Reference is hereby made to the following bank or banks as to financial responsibility of the Proposer:

Name of bank _____

Street address _____

City and state _____

Telephone No. _____

Officer familiar with Proposer's account _____

Name of bank _____

Street address _____

City and state _____

Telephone No. _____

Officer familiar with Proposer's account _____

Name of bank _____

Street address _____

City and state _____

Telephone No. _____

Officer familiar with Proposer's account _____

14. Reference is hereby made to the following surety company or companies as to the financial responsibility and general reliability of Proposer:

Name of surety company _____

Name of local agent (if different) _____

Local address: _____

City and State _____

Telephone No. _____

Person familiar with Proposer's Account _____

15. Provide as a part of this Exhibit, complete and audited financial statements (including all notes thereto) for your firm for the past three years. This should also include specific data that will allow CCJPA to evaluate the costs and rates as proposed in the Pro Forma.

16. In what other line of business are you financially interested? _____

_____

_____

_____

_____

17. Is any litigation pending against your organization? If so, give details. _____

_____

_____

_____

_____

I declare under penalty of perjury that the foregoing is true and correct:

Executed on _____ day of _____, 20___, at

_____, _____
City   State

Name of Proposer: _____

By:_____
Signature of Proposer or
Authorized Representative

_____
Print Name and Title of
Person Signing

Name of Proposer: _____