

CHABOT-LAS POSITAS COMMUNITY COLLEGE DISTRICT



**PRE-QUALIFICATIONS FOR
INVITATION FOR BID NO.: B20/21-13
DISTRIBUTED ANTENNA SYSTEM IMPLEMENTATION
CHABOT COLLEGE**

**Pre-Qualifications Due:
Tuesday April 6, 2021 by 2:00 P.M.**

Return Pre-Qualifications to:
District Office
Purchasing and Warehouse Services
7600 Dublin Boulevard, 3rd Floor
Dublin, CA 94568
or Email to:
Michael McClung, Bond Buyer at
mmclung@clpccd.org

NOTICE TO BIDDERS

NOTICE IS HEREBY GIVEN that the Board of Trustees of the Chabot-Las Positas Community College District, State of California, hereby calls for pre-qualifications to be delivered to the Facilities/Bond Programs & Operations Department at 7600 Dublin Boulevard, 3rd Floor, Dublin, CA 94568 by **2:00 p.m.** on **Tuesday April 6, 2021** at which time and place the pre-qualification will be reviewed for approval for **Bid No.: B20/21-13**, Distributed Antenna System Implementation, Chabot College. E-Mail to Michael McClung, Bond Buyer at mmcclung@clpccd.org will be accepted.

Firms who would like to participate in this bid must be pre-qualified by completing the following document listed as **Section D – Bidder Qualifications**, herein and accept Chabot-Las Positas Community College District's Standard Purchase Order Terms and Conditions and Non-Collusion form (Attachment A). Upon approval, the approved firm shall receive **Bid No.: B20/21-13**, Distributed Antenna System Implementation, Las Positas College by **Tuesday April 13, 2021**.

All Sealed Bid Proposals shall be submitted on forms furnished by the District. Bid Proposals must conform with, and be responsive to, the Bid and Contract Documents, copies of which will only be distributed to the pre-approved vendors. Only Bid Proposals submitted to the District at or prior to **Friday May 14, 2021 at 2:00 p.m.** shall be considered for the public opening and reading of Bid Proposals.

**DISTRIBUTED ANTENNA SYSTEM IMPLEMENTATION
AT CHABOT COLLEGE**

SECTION A - PROJECT OVERVIEW

Chabot College in Hayward, has limited cellular coverage and signal strength within its buildings. During the Measure B construction and modernization of several buildings on campus, high efficiency, IR reflecting, low-emission glass was installed. Cellular signal inside of these and many other buildings is virtually non-existent.

The poor cellular service inside of buildings has presented a safety and security issue for students, faculty and staff. While the building exterior coverage is the responsibility of the carrier macro-network, CLPCCD will be installing a **commercial** Distributed Antennae System (DAS) for the transmission of the cellular signal bands from 600-2700 MHz into its buildings. This DAS system will support multiple cellular service providers including AT&T, Verizon and T-Mobile. The DAS will be designed in a multi-sector topology for effective 911 identification.

Note that this system will not be a Public Safety DAS. This DAS project is a commercial DAS for staff, students, contractors and other campus visitors.
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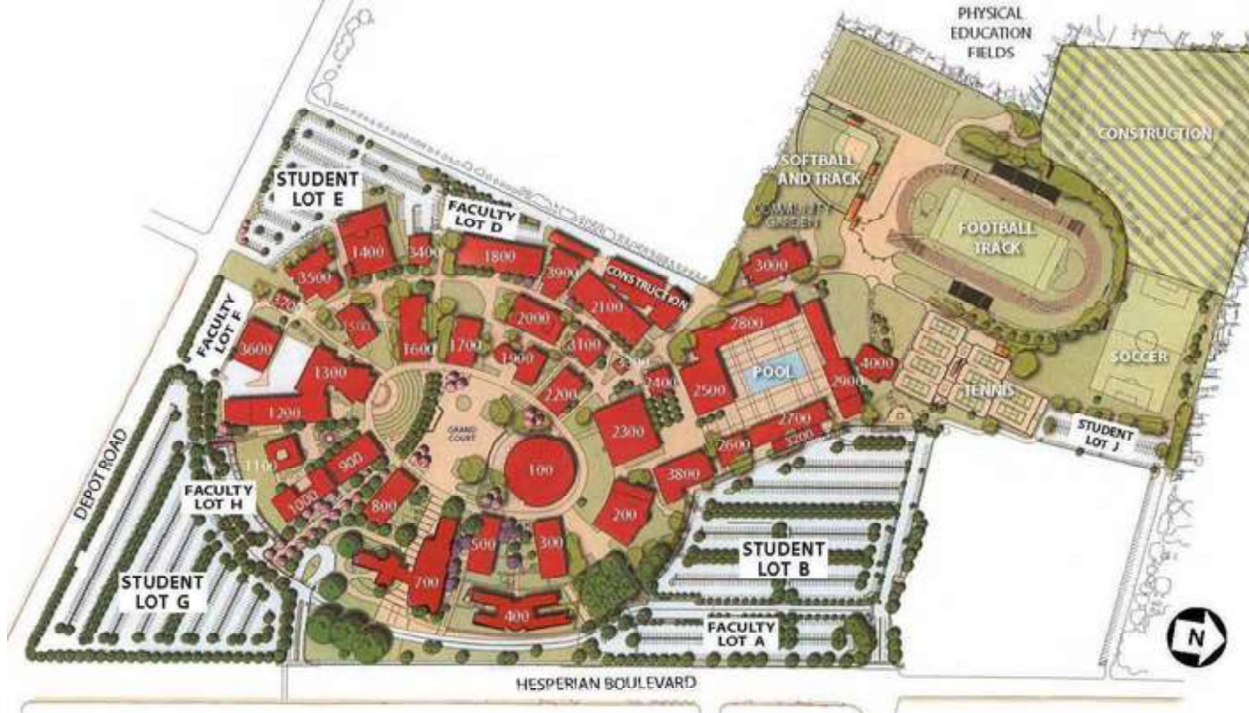
This bid includes the selection of a company to perform the role of overall, turn-key DAS Integrator for the design, installation, configuration and verification of an end-to-end DAS system in all buildings on the Chabot campus. The DAS Integrator will provide:

- Project Management
- Design of the DAS network, including but not limited to:
 - Site survey of all buildings.
 - Review of existing site survey documentation for cellular signal strength on campus.
 - Complete end-to-end design of the DAS system with multi-sector design for clear identification of 911 calls.
 - Design of UAP placement and coverage.
 - Procurement, installation and configuration of DAS equipment.
- Coordination with cellular providers for installation of cellular carrier feed to the campus.
- Configuration, turn-up, site survey and verification of a complete end-to-end DAS solution providing strong, reliable signal strength in all buildings on campus.
- Initiation of ongoing support contracts.

A complete turn-key bid is required, so that CLPCCD can partner with a DAS Integrator that will design and install a high-performing DAS solution at the Chabot campus.

Campus Topology

The Chabot College campus is located at 25555 Hesperian Blvd. in Hayward, CA. The campus consists of 35 main building varying in age (1961-2021) and construction, spread over 94 acres.



The MPOE/MDF for this campus is located in building 300. An OSP conduit/vault system delivers CommScope TERASPEED OS2 single mode fiber to each building and riser for multi-IDF buildings. Since the Measure B bond of 2004, all with-in building station cabling infrastructure has used CommScope SYSTIMAX Category 6A cabling.

Note that this bid includes all services and hardware for the DAS system for the current campus buildings. CommScope SYSTIMAX single mode fiber and Category 6A cabling is already provisioned in the Chabot College OSP and buildings. OSP or in-building cabling is NOT part of this bid.

SECTION B - PROJECT DETAILS

This section details the scope of work for this project. Any tasks not described, but necessary for the completion of a fully functional DAS System are to be included in the pricing of the bid response. With the bid response, provide a brief narrative with the description of any additional scope of work items that are included.

Project Management Services

The DAS Integrator will provide complete project management services for a comprehensive design, build and project implementation. Project Management services provided by the DAS Integrator will include, but are not limited to:

- Coordination with the CLPCCD ITS Project Manager, Maintenance and Operations (M&O) staff and other Chabot campus staff.
- Attendance at weekly project meetings.
- Development of the project schedule, timelines, detailed work methodologies, etc.
- Coordination of all sub-contractor activities.
- Coordination of the delivery all equipment for the DAS solution.
- Configuration and installation of all DAS components.
- Carrier coordination for the scheduling and provisioning of carrier cellular hand-off equipment. LOA provided by CLPCCD.
- Coordination with manufacturer, supplier and other entities as needed.

Note: Any carrier fees or additional construction required to support the carrier equipment will be specified by the DAS Integrator, but purchased by CLPCCD separately from this contract. Any contracts between CLPCCD and the carriers will be reviewed and signed by CLPCCD Executive Management.

It is expected that the DAS Integrator will have subcontractors of various specialties as part of their project team. CLPCCD will contract with the DAS Integrator as the “prime” for this project. All subcontractors and consultants used for this project will report to the DAS Integrator and be subject to the same contract requirements as the DAS Integrator.

Cellular Site Survey

User experience confirmed that the cellular telephone signal strength inside the buildings at the Chabot campus is inadequate. Functionality varies with the type of service accessed (phone calls, texts, etc.), the telephone type and the carrier (AT&T, Verizon, T-Mobile).

To understand the extent of the signal strength issue, CLPCCD engaged the services of Wireless Metrix (<https://www.wireless-metrix.com/>) to perform a comprehensive site survey. Wireless Metrix develops and vends equipment for the optimization, and benchmarking of 2G, 3G, and 4G networks. Typically working with cellular carriers for network transmission analysis and verification, Wireless Metrix produced a detailed analysis of the cellular coverage at the Chabot campus.

Conducted in the summer of 2017, the survey included measurement of carrier frequencies and signal strength in building interiors, exteriors and parking lots. The following frequencies were identified and mapped for the carriers at the Chabot College Campus:

Carrier	Frequency	Purpose
T-Mobile	731.5 MHz	700 MHz LTE
T-Mobile	2145 MHz	2100 MHz LTE
Sprint	866.30 MHz	800 MHz LTE
Sprint	862.900 MHz	800 MHz VOICE
Sprint	1932.50 MHz	1900 MHz VOICE
Sprint	1937.50 MHz	1900 MHz LTE
Sprint	1985 MHz	1900 MHz LTE
Sprint	1931.250 MHz	1900 MHz 3G DATA
Sprint	1992.50 MHz	1900 MHz LTE
Verizon	2120.000 MHz	2100 MHz LTE
Verizon	1985 MHz	1900 MHz LTE
Verizon	751.000 MHz	700 MHz LTE
Verizon	893.100 MHz	800 MHz 3G DATA
AT&T	1950.000 MHz	1900 MHz LTE
AT&T	2132.500 MHz	2100 MHz LTE
AT&T	872.000 MHz	800 MHz 3G VOICE
AT&T	739.000 MHz	700 MHz LTE
AT&T	877.00 MHz	800 MHz 3G VOICE

Note: Carriers may have modified their transmissions, particularly with the T-Mobile/Sprint merger.

Data collected for the signal strength was provided graphically and numerically. This effectively provided CLPCCD a “before DAS” state of cellular service.

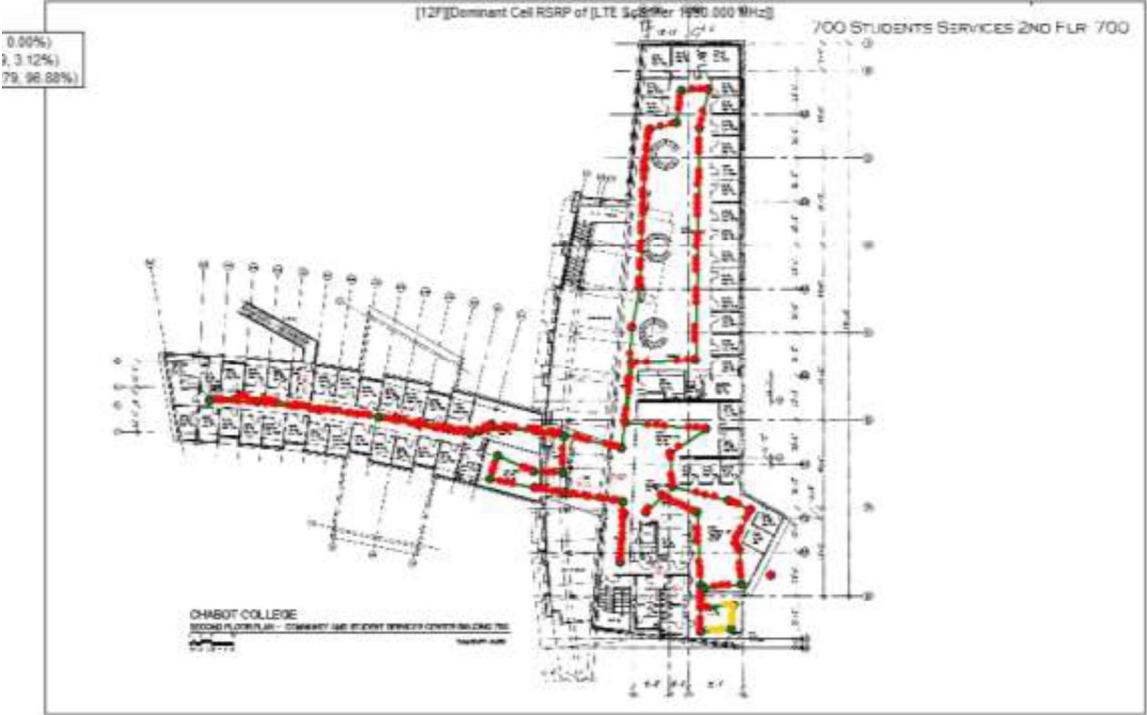
Samples of the graphical output are included below. The full set of documentation for all carriers, all frequencies, all buildings and campus exterior will be available to the selected DAS Integrator.

As indicated graphically, the colored “crumbs” show:

- **Green** – good cellular service > -80
- **Yellow** – marginal cellular service > -95
- **Red** – poor or non-existent cellular service <= -95

While the surveys are carrier and frequency specific, the main deliverable of this DAS implementation project is for all areas inside buildings to be “green” on all carrier frequencies, indicating a strong, robust cellular signal for user cell phones.

AT&T 1950.000 MHz LTE signal strength in the CSSC building 700, second floor.



T-Mobile 2145.000 MHz LTE parking lot scan



For validation of the correct function of the DAS system, following installation, configuration and commissioning, the DAS Integrator will perform the same comprehensive survey of the campus as was performed by Wireless Metrix. This includes 1) a survey of every room in every building on campus 2) verification of signal levels confirming strong cellular service, and 3) production of printed and electronic files, documenting the new service levels.

DAS Design

The DAS implementation is a new facility to the Chabot campus, and critical to the safety and security of the students and staff. A key task is the design of the DAS system to provide comprehensive coverage through the buildings. The DAS Integrator shall propose a DAS with an RF design and installation that meets the requirements in order to enable approval for interconnection to the cellular carrier's macro network(s). The system will not be turned on without carrier acceptance and retransmission agreement. The DAS Integrator is responsible to ensure the RF design adapts to the carrier requirements in all stages of the project.

The DAS Integrator will provide an experienced RF engineer to perform the DAS survey of all buildings on campus. Tools such as iBwave, or other software will be used to provide the design. Provide a resume of the RF Engineer with iBwave or other certifications as part of the bid response.

To facilitate the DAS design, CLPCCD will provide the following:

- pdf files of all buildings
- description of wall construction as available from as-built structural plans
- access to all buildings and rooms during site survey(s)
- drawings with locations of with-in ceiling Category 6A outlets that can be used for UAP connectivity.

Note: All buildings are equipped with Cisco 3802 802.11ac wireless access points, transmitting in the 2.4 and 5 GHz bands. This is used for data wireless. The DAS solution is NOT to interfere with the existing data wireless.

The RF Engineer will fully document the recommendations for the DAS design and present the design to CLPCCD/Chabot technical staff. The DAS Integrator's RF Engineer will provide:

- Final RF link budget
- Overlay of system Components on floor plans
- RF propagation modeling
- UAP placement

Upon review and approval, the DAS design will be used to more fully define the DAS implementation configuration, tasks and schedule, including the refinement the equipment bill of materials.

Cabling Infrastructure for DAS Equipment Connectivity

CLPCCD has standardized on Single Mode fiber backbones and Category 6A station cable for its data infrastructure in buildings. Available fiber and station cabling will be used for connectivity of the DAS equipment.

Backbone connections from DAS equipment in buildings to the DAS head-end equipment.

The main DAS Head-end will be installed in Building 300. This is the new campus MPOE and MDF. This room is UPS and generator protected.

All buildings have single mode fiber routing from the B300 MDF to the building BDF, or main IDF. A minimum of 24 strands of fiber has been provisioned from the MDF to each building and no more than half of the fiber strands are in use to each building. The oldest fiber was installed in 2007 and the newest was installed in 2020. CLPCCD has standardized on CommScope TERASPEED OS2 single mode fiber on campus. In buildings with multiple IDFs, 12 or 24 strand TERASPEED single mode riser fiber backbones are installed.

This project will place the new DAS equipment in available rack space in the existing building BDF/IDFs and use available strands in the existing single mode backbone and riser fibers for DAS equipment connectivity to B300. **NO ADDITIONAL SINGLE MODE FIBER BACKBONES WILL BE INSTALLED WITH THIS CONTRACT.** Where necessary, single mode patch cords will be installed as mechanical splices so that each building/IDF will have a home run back to the B300 MPOE for its uplink. CLPCCD will provide the fiber patch cords and patch cord installation to the backbone/riser fibers. The DAS Equipment Installation team will be responsible for patching to the DAS equipment at either end, and verifying that the transmission through the single mode fiber is working.

Within-building UAP connectivity

Inside new and renovated buildings, CLPCCD has installed CommScope SYSTIMAX Category 6A station cabling. With a data wireless rollout project, additional outlets were added in the buildings and ceiling space to support data 802.11ac access point connectivity. Additional Category 6A cabling was added to support connectivity to future DAS UAPs.

While the detailed DAS iBwave design for UAP quantity and placement will determine the precise location of the UAP equipment, CLPCCD feels that there is sufficient Category 6A cabling in the building ceilings/walls to support the DAS equipment. CLPCCD ITS has documentation showing the placement of ceiling or wall outlets available for the DAS equipment. Connectivity of the UAPs to the ceiling/wall outlets will be provided using CLPCCD-supplied patch cords. CLPCCD will define which outlet/jack shall be used for each UAP connection. The DAS Integrator will be responsible for installing the patch cord in the IDF and in the ceiling/wall for the DAS equipment connectivity in the offices/corridors/classrooms.

Cabling Exceptions

This project does not include single mode fiber, Category 6A cabling or patch cords. If during the design phase UAP placement determines the need for additional cabling, that will be addressed as a separate scope of work by CLPCCD, outside of this contract.

DAS Equipment

Based on the single mode fiber and Category 6A cabling infrastructure, CLPCCD has established the CommScope ERA digital DAS solution as the preferred DAS product to be implemented on the Chabot campus.

Note: Bidders can propose an “or equal” hardware/software configuration if there is a comparable solution from a different manufacturer that connects via single mode fiber and Category 6A cabling.

Based on the ERA product, the DAS equipment configurations include Central Access Nodes (CAN), Transport Extension Nodes (TEN) and Universal Access Points (UAP). Supplemental equipment includes the EPOI and GPS.

It is expected that the detailed DAS design provided by the successful bidder will define the precise bill of materials that will be implemented in each IDF.

In addition to the DAS equipment, the DAS Integrator will provide UPS equipment to power the equipment in each BDF/IDF for a minimum of 30 minutes. The IDFs have been equipped with an L5-30 twist-lock plug for this UPS. The UPS will be equipped with a network card for connection to the campus network.

DAS Equipment Installation

The DAS Integrator will be responsible for the complete installation of the DAS equipment. This includes the DAS equipment, and the UPSes for each building BDF/IDF. The tasks include, but is not limited to:

- Review of installation locations in IDFs, BDFs, MPOE and other locations. Confirm power and racking requirements in those locations.
- Perform site survey of cabling infrastructure. Identify any cabling issues for handling by CLPCCD.
- Perform site survey of buildings on campus, including analysis of wall/ceiling types and structures that would affect the methodology of installation of UAPs. Create iBwave design for UAP placement. Confirm detailed bill of materials.
- Receive, unpack and inventory all new equipment and verify with order list. Packing materials will be neatly assembled for discard. A small quantity of boxes will be preserved in case equipment needs to be shipped back.
- Assemble all DAS equipment according to configuration requirements for each building/IDF.

- Burn-in all equipment for a minimum of 24 hours. DOA and infant mortality equipment to be returned and replaced immediately at no charge to CLPCCD.
- Install DAS equipment in relay racks in the MPOE/BDFs/IDFs in the location specified by CLPCCD.
- Patch DAS equipment to fiber uplink(s).
- Power up DAS Equipment in MPOE/BDFs/IDFs.
- Configure and patch DAS equipment to CLPCCD identified data ports.
- Install UAP wall mounts, per manufacturer's installation documentation.
- Install UAP ceiling mounts with supplemental support (see below).
- Install UAPs in mounts. Label UAP with unique UAP identifier. Provide p-touch type label, black font on white background, legible from standing position under UAP
- Patch UAP to CLPCCD identified outlet/jack, dressing patch cord for minimum visibility and maximum neatness. Label patch cord with DAS port information
- Patch UAP to DAS equipment in BDF/IDF, labeling each patch cord at both ends with UAP unique identifier and DAS equipment port.
- Install and power up UPS equipment in BDFs/IDFs.
- Connect the UPS to the campus network. Configuration of network parameters for the DAS and UPS including network name, IP addressing, SNMP parameters, alerting levels.
- Labeling of all equipment and patch cords.

The ceiling mount UAP installations will use the manufacturer's installation kit for placement in a ceiling tile. However, this kit does not provide sufficient support with the tile material. The DAS Integrator will supply a wooden frame to be installed around the UAP, such that a stable installation in a 2'x2' ceiling is achieved. If the UAP is installed in a 4'x2' tile, the DAS integrator will cut the tile neatly to a 2'x2' size and install a cross bar to support the installation of the UAP and the ceiling tile.

Except for the UAP installation, the DAS Integrator can perform the equipment configuration and installation activities during the regular business hours, Monday-Friday, 7am to 5pm. UAP installation can only occur during specific times, evenings, weekends and school closure days such that the staff and students are not disrupted by the installation activities.

Note: CLPCCD does not intend to become trained and certified in the DAS equipment. Refer to SUPPORT AND SERVICES section below for complete requirements for support and ongoing maintenance.

DAS Configuration

The entire DAS system will be configured for operation by the DAS Integrator team. As the contract is structured by the DAS Integrator, this can include sub-contractors and consultants with the proper training and certifications or manufacturer's technical staff. The DAS Integrator is responsible for including all expertise required for the successful configuration of the DAS system.

The DAS system will support the following spectrum:

- LTE bands 2, 4, 5, 10, 12, 13, 14, 17, 25, 26, 30, 40, 41. Classification be found at http://niviuk.free.fr/lte_band.php.
- UMTS bands: 2, 5, 10. Classification can be found http://niviuk.free.fr/umts_band.php.
- CDMA-2000 bands: 0, 1, 15. Classification can be found http://niviuk.free.fr/cdma_band.php.

The DAS will support VoLTE and LTE-A (carrier aggregation) as required by individual operators. Each operator will deploy different wireless technology depending on spectrum that is owned; therefore, the following requirement table will apply to each band that is deployed.

UMTS – Thresholds are given as 95% of the building is greater than.

<u>Ec/No</u>	<u>-10 or better</u>
<u>Mobile RX (RSCP)</u>	<u>--85 or better</u>

LTE – Thresholds are given as 95% of the building is greater than.

<u>SINR</u>	<u>10 or better (or equivalent)</u>
<u>RSRP</u>	<u>-92 or better</u>

CDMA – Thresholds are given as 95% of the building is greater than.

<u>Ec/lo</u>	<u>-10 or better</u>
<u>Mobile RX</u>	<u>-75 or better</u>

The following Carrier Acceptance Requirements will be met:

<u>Drop call</u>	<u>0</u>
<u>Access failures</u>	<u>0</u>
<u>Throughput UL</u>	<u>As dictated by each operator</u>
<u>Throughput DL</u>	<u>As dictated by each operator</u>
<u>Ping</u>	<u>As dictated by each operator</u>
<u>Failed Connection attempts</u>	<u>As dictated by each operator</u>
<u>Dropped RRC connection</u>	<u>As dictated by each operator</u>

A call, either voice or data, will transition smoothly between the Macro (outside) network and the DAS during boundary transitions without loss of connectivity.

911 Sectorization Support

E911 is configured for sectors in a tower. Generally, phones will log in their GPS on the tower which is then reported to assisted GPS. On the Chabot campus, the DAS system will be configured for at least eight sectors to aid with the location identification of a 911 call from a cell using the DAS system.

Commissioning

The DAS Integrator will be present onsite at the Chabot campus to work with each carrier as the service is initiated. The DAS Integrator will work with each carrier to optimize the performance of the system and assure a smooth transition with existing macro networks. The system will be optimized as needed after turn-up to deliver the best possible user experience.

Acceptance Testing

The DAS Integrator will develop an Acceptance Testing Plan (ATP) with CLPCCD. This plan will fully detail the acceptance criteria in order for the system to be accepted. The goal of the ATP is to formally verify, document and certify that all areas of the DAS system are receiving required levels of RF coverage.

As detailed above, the final verification step will entail the DAS Integrator performing the same comprehensive survey of the campus as was performed by Wireless Metrix. This includes 1) a survey of every room in every building on campus 2) verification of signal levels confirming strong cellular service, and 3) production of printed and electronic files, documenting the new service levels.

As-built Documentation

Final as-built documentation will be developed with CLPCCD. This can include, but is not limited to:

- Maps showing placement of UAPs, jack the UAP is patched to, IDF that the UAP is connected to.
- Complete documentation of the configuration of CANs, TENs and UAPs with description of the reasons for the parameter changes.
- Documentation of sector design, carrier parameters and other configuration elements
- Backup of all configurations

Documentation will be provided in an electronic format specified by CLPCCD.

SECTION C - SUPPORT AND MAINTENANCE

It is extremely important that CLPCCD is provided with a comprehensive set of post-sale and post-implementation support services after the system deployment. While CLPCCD employs technical IT staff, the expertise does not include DAS, cellular and RF engineering. Nor does CLPCCD expect to build or hire this expertise. CLPCCD will serve in a role of facilitation when problems occur and rely on the support services contracted through the DAS Integrator for ongoing maintenance and support.

CLPCCD will contract for a full suite of onsite and remote support services for hardware, software, configuration and problem-solving support. Hardware replacement for failed components will also be included. This may be a combination of contracts from the DAS Integrator and/or direct from the manufacturer. As such, the remainder of this section refers to the entity providing post-sales and post-implementation support as the “Maintenance Provider”.

The DAS Integrator is to provide FIVE (5) years of pre-paid SUPPORT and MAINTENANCE. Support and ongoing maintenance contracts purchased by CLPCCD will commence with CLPCCD acceptance of the system when cut-over is complete and all equipment and systems are functioning based on project kick-off expectations.

Response to Hardware/Software Failures: CLPCCD requires a 24x7x4 hour response time for critical hardware and software failures. Provide a description of the process for initiating a trouble ticket through call-in or Internet access. This includes reporting the trouble and working with the call center for equipment dispatch to the Chabot campus. To ensure timely response, the CLPCCD will stock onsite spares for immediate access as needed to service critical failures at these sites.

Software and Materials Update Service: The CLPCCD support contract will include a distribution system that will allow the Maintenance Provider to have access to and perform software upgrades as needed to resolve bugs and limitations in the DAS equipment. CLPCCD may assist the Maintenance Provider when an upgrade is required, but will rely on the Maintenance Provider to determine when an upgrade is needed. In addition to software updates, this service will also provide access to bug notes, feature set releases and on-line or CD manual updates.

Configuration Assistance: The CLPCCD support contract requires access to specialists who can assist with configuration questions. Contact with the specialists may be initiated by email or direct telephone call. CLPCCD and the Maintenance Provider also require access to an on-line knowledge base that can be searched for white papers, configuration documents, known problems/fixes, etc. CLPCCD expects a two-hour callback for requests for configuration assistance.

Problem-Solving Assistance: As stated above, CLPCCD will *not* have onsite DAS and RF expertise to be able to thoroughly troubleshoot carrier problems. CLPCCD will contact the Maintenance Provider to open a ticket and work through the Maintenance Provider to identify the problem and resolve the issues. This may also include involvement of carrier support entities and other organizations that will participate in the problem resolution process. CLPCCD will rely on the Maintenance Provider to provide the direction during the problem solving process.

Remote Monitoring: CLPCCD maintains an SNMP server which can alert technical staff to operational issues. As part of the DAS configuration, SNMP will be configured so that when equipment failures occur, CLPCCD will be alerted.

The DAS equipment may also provide remote alerting through Internet, dial-out or other monitoring methods. Provide a full description and prices of remote monitoring contracts available to CLPCCD.

SECTION D – BIDDER QUALIFICATIONS

Responding firms must provide a complete statement of qualifications, capabilities and experience to provide the equipment procurement, design and implementation services. Responses must address the items listed below. Responses will be treated confidentially. Any items not addressed by the responding firm may render the response incomplete.

1. **Experience.** Complete and submit the following information on company experience:

- A. Scope of services typically provided or offered; summary of firm history in the DAS environment.
- B. Summary of completed DAS projects in the Northern California area. Of particular interest are any projects for other California Community Colleges or Universities.

2. **Staff and Technical Resources.** Complete and submit the information on staffing:

- A. Identify specific proposed **in-house** staff personnel which will be dedicated to the DAS Project; provide a description/resumé of each staff member's education and experience. For personnel identified, provide a description of the typical anticipated role(s) or responsibility(ies) of each staff member relative to the scope of this project. Specifically identify and provide credentials for the RF Engineer.
- B. If sub-contractors will be used, provide a complete description of the roles, responsibilities and expertise of their staff.
- C. Specifically outline the staff expertise provided for interfacing with AT&T, Verizon and T-Mobile for deployment of carrier head-end equipment.
- D. Provide the location of primary offices for the firm. Specify which office(s) would have responsibility for this project.
- E. Provide the location of primary support offices for the firm. Specify which support office would have responsibility for ongoing support and maintenance of the DAS system.

3. **Qualifications and Credentials.** Submit certificates and other documents showing the following qualification information:

- A. Credentials/certification for training and experience with iBwave or comparable DAS design software.
- B. ND6443 ION-E Installation and Commissioning (pre-requisites, class and course exam)
- C. One or more of the certifications achieved by completing the following courses: ND6401, ND6430, ND6431, ND6440, ND6450
- D. Currently registered as a CommScope In-Building Wireless (IBW) Installer Partner, CommScope Premier or Select Partner, Premier preferred.
- E. Comparable credentials if an alternate Cat6A/SMF digital DAS solution will be proposed.

4. **COVID-19 Work Procedures.**

All businesses operating under Alameda County Health Orders must prepare or update, post, and implement, a worksite-specific protection plan, as required by the State of California in its Industry Guidance. A template for the worksite-specific protection plan can be found in Appendix A of this Order. Businesses must comply with CalOSHA's COVID-19 Emergency Temporary Standards. Refer to the COVID-19 Construction Employees Checklist <https://files.covid19.ca.gov/pdf/checklist-construction> . Does the firm agree to comply with these directives?

5. **Project Exceptions.** Are there any products, services or other items described in the DAS for Chabot College project that the firm will not be able to provide? Describe.

SECTION E - STANDARD PURCHASE ORDER TERMS AND CONDITIONS

Chabot Las Positas Community College District Purchase Order Terms & Conditions For Purchase Order # _____

This Agreement is made by and between _____ ("Seller") and the Chabot-Las Positas Community College District (District) as of _____, 20__ for the purchase of Telecommunications System Replacement Equipment, Las Positas College, as follows:

1. **Entire Agreement:** The following terms and conditions, together with such terms as are set forth in this Purchase Order ("Order"), such plans, specifications or other documents as are incorporated by reference in the Purchase Order, and any amendments in any subsequent authorized writing from District, shall constitute the entire contract between the District and Seller and shall supersede all prior agreements, understandings, negotiations and discussions, whether oral or written, of the parties. There are no warranties, representations or other agreements between the parties in connection with the subject matter hereof, except as specifically set forth herein. If performance specifications, technical product descriptions or other similar descriptive materials submitted by Seller in connection with the Order have been incorporated by reference in the Purchase Order these shall not be deemed to supersede any contrary requirements of District, but to the extent that such materials are not inconsistent with District's requirements, they shall constitute a part of the basis of this agreement.
2. **Payment:** Payment terms are as set forth in the Purchase Order. . If no terms are specified, the net amount shall be payable within 30 days after the later of (i) delivery and acceptance of goods or other performance conforming with the terms of this Order or (ii) invoicing. Except as otherwise provided in the Purchase Order the price includes all applicable Federal, State and local taxes and duties. All Federal, State and local taxes and duties shall be separately itemized on any invoices. Seller assigns to District all rights to refunds of sales and use taxes paid in connection with this Order and agrees to co-operate with District in the processing of any refund claims.
3. **Changes:** District may make changes to this Order, including drawings and specifications for specially manufactured goods and place of delivery, by giving written notice to Seller. If such changes affect the cost of or the time required for performance of this Order, an equitable adjustment in the price or date of delivery or both shall be made. No change by Seller is allowed without written approval of District. Any claim of Seller for an adjustment under this Article must be made in writing within thirty (30) days from the date of receipt by Seller of notification of such change. Nothing in this Article excuses Seller from delivering the goods and services described in this Order. Except as otherwise provided herein, no other supplement, modification, waiver or termination of this Agreement shall be binding unless executed in writing by the parties to be bound thereby.
4. **Time:** If delivery or completion dates cannot be met, Seller shall inform District immediately. Such notice shall not, however, constitute a change to the delivery or completion terms of this Order unless District modifies this Order in writing. If any item is not received or if any element of the work is not completed by the date specified, the District, at District's option and without prior notice to Seller may either approve a revised date or may cancel this Order and may obtain such goods or work elsewhere and in either event the Seller shall be liable to the District for any resulting loss incurred by the District. Seller's sole remedy for a delay caused by District shall be an extension in

the time for Seller's performance equal to the duration of District's delay. Seller shall not be liable for damages resulting from Seller's failure to deliver or complete, or for delays in delivery or completion occasioned by strikes, lock-outs, fires, war or acts of God. TIMING OF DELIVERY IS CRITICAL FOR THIS ORDER.

5. **Improper Performance**: In addition to other remedies provided by law, District reserves the right to reject any goods or to revoke any previous acceptance and to cancel all or any part of the Order if Seller fails to deliver all or any part of the goods or perform any of the work in accordance with the terms and conditions of this Order. Acceptance of any part of the Order shall not bind the District to accept any future shipments or work nor deprive it of the right to return goods already accepted. At District's option, all disputes arising in connection with this Order shall be resolved by arbitration in accordance with the rules of the American Arbitration Association, except that each party shall have the discovery rights established by the California Code of Civil Procedure.
6. **Cancellations**: The District may cancel this Order in whole or in part, for no cause, upon written or fax notice to the Seller, effective when sent, provided such notice is sent at least fourteen (14) days prior to the delivery date specified on the face of this Order.

In addition, the District may cancel this Order in whole or in part at any time for cause by written or fax notice to the Seller, effective when sent, in the event that Seller: (a) fails to comply with any term or condition of this Order including, but not limited to, delivery terms; or (b) appoints a receiver, liquidator or trustee in bankruptcy or other similar officer over any or all of its property or assets; or (c) files a voluntary petition in bankruptcy; or (d) has had filed against it an involuntary petition in bankruptcy which remains in effect for thirty (30) days; or (e) voluntarily ceases trading; or (f) merges with or is acquired by a third party; or (g) assigns any of its rights or obligations under the Order to a third party without the District's advance written consent.

Upon the occasion of any one of the aforesaid and in addition to any remedies, which the District may have in law or in equity, the District may also cancel this order or any outstanding deliveries hereunder by notifying Seller in writing of such cancellation. Seller shall thereupon transfer title and deliver to the District such work in progress or completed material as may be requested by the District. The District shall have no liability to Seller beyond payment of any balance owing for materials purchased hereunder and delivered to and accepted by the District prior to the Seller's receipt of the notice of termination, and for work in progress requested for delivery to the District.

7. **Rescheduling**: The District may without liability at least fourteen (14) days prior to the scheduled delivery date appearing on the Order defer delivery on any or every item under said Order by giving oral notice to the Seller (confirmed in writing within ten (10) working days) of any necessary rescheduling.
8. **Warranty**: The goods and services furnished shall be exactly as specified in the Order, and shall be free from all defects in design, workmanship and materials. The goods and services are subject to inspection and test by the District at any time and place. If the goods and services furnished are found to be defective, the District may reject them, or require Seller to correct them without charge, or require a reduction in price, which is equitable under the circumstances. If Seller is unable or refuses to correct such items within a time deemed reasonable by the District, the District may terminate this Order in whole or in part. Seller bears all risks as to rejected goods and services. Seller shall reimburse the District for all transportation costs, other related costs incurred, and overpayments in respect of the neglected goods and services. These express warranties shall not be waived by reason of acceptance or payment by the District. This Order incorporates by reference all terms of the Uniform Commercial Code as adopted in the State of California providing any protection to the District, including but not limited to all warranty protection (express

or implied) and all of the District's remedies under the UCC. All goods and work shall also be subject to any stricter warranties specified in the Data Sheet or in other materials incorporated by reference.

9. **Risk of Loss**: Unless the Order expressly states otherwise, all goods shall be shipped FOB the "Ship to" location designated in the Purchase Order. Risk of loss shall not pass to District until goods called for in this Order actually have been received and accepted by the District at the destination specified herein. Seller assumes full responsibility for packing, crating, marking, transportation and liability for loss and/or damage even if District has agreed to pay freight, express or other transportation charges.
10. **Electronic/Facsimile Transmission**: If this Order is transmitted by telecopier or by other means of electronic transmission, such transmission shall have the legal significance of a duly executed original delivered to the Seller, but only if the Transmit Terminal Identification on the Purchase Order correctly includes the notation "Chabot-Las Positas Community College District," "Chabot Community College," or "Las Positas Community College".
11. **Hold Harmless**: From and after the date of this Order, the Seller agrees to indemnify, defend and hold harmless the District from any and all claims, regardless of by whom such claim or claims may be asserted, for personal injury or property damage or otherwise that may result directly or indirectly from the use, possession or ownership of the goods or from the services provided by Seller pursuant to this Order.
12. **Assignment/Subcontracting**: Neither party shall have any right to assign this Order or any benefits arising from this Order without prior written consent of the other and, unless otherwise agreed upon in writing, the rights of any assignee shall be subject to all set-offs, counterclaims, and other comparable rights arising hereunder. Seller shall not, except in the case of raw materials (including castings, forgings, and rough welded structures) or standard commercial goods or except as otherwise agreed in writing by the District, delegate or subcontract the work on any item of material or service to be delivered or performed under this Order.
13. **Shipping, Packaging and Labeling**: All Material purchased hereunder must be packed and packaged to ensure its safe delivery in accordance with good commercial practice and where incorporated, the District's packaging specification. The Seller shall mark on all containers, handling and loading instructions, shipping information, part number, purchase order number and item number, quantity in box, shipment date, and names and addresses of the Seller and the District. An itemized packing list must accompany each shipment. Each packing slip shall include; this Order number, quantity, item description, order date, shipping date and delivery address, but shall not include pricing information.
14. **Notification of Hazardous Products**: The Seller hereby agrees to notify the District of any inherent hazard related to any materials or goods being purchased herein that would expose the hazard during handling, transportation, storage, use, resale, disposal or scrap. Said notice shall be sent to the District's Director of Purchasing and shall specify the product name and part number, the nature of the hazard, proper precautions that must be undertaken by the District or others and any additional information that the District should reasonably expect to know to protect its interest.

All shipments of hazardous materials under this Order shall comply with current U.S. Department of Transportation (DOT) regulations as published in 49 CFR 100-199, and the labeling shall meet the current U. S. Occupational Safety and Health Administration (OSHA) regulations as published in 29 CFR 1910 1200, for the transporting and labeling of hazardous materials. Material Safety

Data Sheets (MSDS) shall be supplied with the first shipment of all hazardous materials, and these sheets shall be resubmitted if any changes or updates, as required, are made.

15. **Work On-Site:** The following additional conditions will apply if work is to be performed by the Seller at any of District's locations.
- a. All persons furnished by Seller shall be deemed Seller's employees or agents and Seller shall comply with all applicable statutes regarding worker's compensation, employer's liability, unemployment compensation, and/or old age benefits and all other applicable laws relating to or affecting the employment of labor.
 - b. Seller shall indemnify, hold harmless and defend District from any and all claims and liabilities for injuries or death and also for any and all claims and liabilities arising out of loss or damage to property, caused by or resulting from the performance of the work covered hereby.
 - c. Seller shall at all times during the term of this Agreement, or any extension thereof, maintain comprehensive general liability insurance coverage in the amount of \$1,000,000 per occurrence and in the aggregate for all claims made during any one policy year. Seller shall, upon request of the District, provide proof that the services provided are covered under its policy and that the District is named or fully covered as an additional insured.
 - d. Seller agrees to comply fully with all provisions of all applicable workers' compensation insurance laws, and shall procure and maintain in full force and affect worker's compensation insurance covering its partners, employees and agents while said persons are performing services pursuant to this Agreement. In the event that an employee of Seller performing this Agreement files a worker's compensation claim against the District, Seller agrees to defend and hold the District harmless from such claim.
 - e. The work shall be performed in a first class and workmanlike manner by qualified and efficient workers who shall not cause labor conflicts with any workers employed by the District or others working at District's facilities. The work shall be performed in strict conformity with the strictest quality standards mandated and/or recommended by all generally recognized organizations establishing quality standards for work of the type to be performed hereunder. Seller shall be solely responsible for controlling the manner and means by which it and its employees perform labor and services and it shall observe, abide by and perform all of its obligations in accordance with all legal requirements. Without limiting the foregoing, Seller shall control the manner and means of the labor and services so as to perform the work in a reasonably safe manner and comply fully with all applicable codes, regulations and requirements imposed or enforced by any government agencies, including all applicable requirements of the Occupational Safety and Health Administration (OSHA) and all safety codes and procedures mandated or recommended by insurance underwriting organizations and all generally recognized organizations establishing safety standards, including without limitation the National Fire Protection Association, for work of the type to be performed hereunder. Notwithstanding the foregoing, any stricter standard provided in plans, specifications or other documents incorporated as part of this Order shall govern.
 - f. Seller is responsible for securing all applicable licenses and permits and compliance therewith and the price shall be deemed to include the cost of these items.
 - g. The site shall be kept free of waste and, on completion, left "broom clean." In case of

dispute District may remove waste at Seller's expense.

- h. If requested, Seller shall furnish satisfactory evidence of the kind, quality and quantity of labor and materials used or to be used.
- i. The Seller, for itself and for all subcontractors and material men, agrees that no mechanic's lien or other claim shall be filed or maintained by the Contractor or by any subcontractor, material man, laborer or any other person, whatsoever, for or on account of any work done or materials furnished under this Order. This agreement shall be an independent contract and the Seller shall execute and deliver to District a separate Waiver of Liens (in form and substance satisfactory to the District).
- j. In every subcontract entered into by the Seller after the execution and delivery of this Order or in connection herewith, the Seller shall incorporate a provision, similar to the foregoing paragraph, to the effect that neither the subcontractor nor any party acting through or under him shall file or maintain any mechanic's lien or other claim against the District in connection with the work to be performed hereunder.

16. **Non-Discrimination in Employment**: In connection with the performance of work under this Order, the Seller agrees that it will not unlawfully discriminate on the basis of race, color, religion, gender, national origin, age or medical condition, sexual orientation or marital status or any other characteristic protected by law in the delivery of programs or services set forth herein. In the event of the Seller's non-compliance with the non-discrimination clauses of this Order or with any of the said rules, regulations, or orders, this Order may be cancelled, terminated or suspended in whole or in part and the Seller may be declared ineligible for further District contracts as provided by law.
17. **Compliance with Laws and Regulations**: The Seller represents and warrants to District that Seller and its employees, agents, and any subcontractors have filed all certifications and have obtained all licenses, permits, qualifications, and approvals of whatsoever nature that are legally required in connection with this Order.
18. **Waiver**: A waiver of any breach or any of the covenants, terms or provisions of this Agreement shall not be construed as a waiver of any subsequent breach of the same or any other covenant, term or provision.
19. **Termination for Convenience**: District may terminate this Order at any time without incurring liability to Seller for lost profits or any other costs other than the value of conforming work completed on site or goods delivered.
20. **Governing Law**: This Agreement shall be governed by and construed in accordance with the laws of the State of California.
21. **Venue**: In the event that either party brings any action against the other under this Agreement, the parties agree that trial of such action shall be vested exclusively in the state courts of California in the County of Alameda or in the United States District Court for the Northern District of California.
22. **No Third Party Beneficiaries**: Nothing in this Agreement shall be construed to create any duty to, any standard of care with reference to, or any liability to anyone other than the Parties to this Agreement. No one is an intended third-party beneficiary of this Agreement.
23. **Attorney's Fees**: If a party to this Agreement brings any action, including an action for declaratory relief, to enforce or interpret the provision of this Agreement, the prevailing party shall be entitled

to reasonable attorneys' fees in addition to any other relief to which that party may be entitled. The court may set such fees in the same action or in a separate action brought for that purpose.

24. **Captions**: The captions used herein as headings of the various paragraphs and subparagraphs hereof are for convenience only, and the parties agree that such captions are not to be construed as a part of the Agreement or to be used in determining or construing the intent or context of this Agreement.
25. **Counterparts**: This Agreement may be executed in any number of counterpart copies, all of which shall constitute one and the same Agreement and each of which shall constitute an original.
26. **Severability**: If any of the provisions or portions thereof of this Agreement are held to be unenforceable or invalid by any court of competent jurisdiction, the validity and enforceability of the remaining provisions or portions thereof shall not be affected thereby.

NON-COLLUSION AFFIDAVIT

STATE OF CALIFORNIA)
COUNTY OF _____)

PROJECT:

I, _____, being first duly sworn, deposes and says that I am
(Typed or Printed Name)
the _____ of _____, the party submitting
(Title) (Proposed Bidder Name)
the upcoming Bid Proposal ("the Proposed Bidder"). In connection with the upcoming Bid Proposal, the undersigned declares, states and certifies that:

1. The Upcoming Bid Proposal is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization or corporation.
2. The Upcoming Bid Proposal is genuine and not collusive or sham.
3. The Vendor has not directly or indirectly induced or solicited any other Vendor to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any other bidder or anyone else to put in sham bid, or to refrain from bidding.
4. The Vendor has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price, or that of any other bidder, or to fix any overhead, profit or cost element of the bid price or that of any other bidder, or to secure any advantage against the public body awarding the contract or of anyone interested in the proposed contract.
5. All statements contained in the Upcoming Bid Proposal and related documents are true.
6. The Vendor has not, directly or indirectly, submitted the bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any person, corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

Executed this ____ day of _____, 20__ at _____
(City, County and State)

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Signature

(Address)

Name Printed or Typed

(City, County and State)

(Area Code and Telephone Number)

(_____) (Area Code and Telephone Number)