



BOARD OF EDUCATION

Keshia Thomas, President
Valerie F. Davis, Clerk
Claudia Cazares
Genoveva Islas
Elizabeth Jonasson Rosas
Carol Mills, J.D.
Major Terry Static USMC (Retired)

SUPERINTENDENT

Robert G. Nelson, Ed.D.

November 16, 2020

ADDENDUM No. 2
RFP No. 21-13
STUDENT INTERNET SERVICE BEYOND CAMPUS – WIRELESS BROADBAND SOLUTION

NOTICE TO ALL BIDDERS

This addendum is attached to and made a part of the above entitled specifications for Fresno Unified School District with a scheduled proposal due date of November 20th prior to 10:01 A.M. 3:01 P.M. for Step 2 Design and Performance Specification Submittal. All changes and/or clarifications will appear in **bold** type and deletions will be struck out in revised sentences. Incorporate the following in your bid response.

I. REFERENCE: NOTICE OF INVITATION

Change: Step 2 Design and Performance Specification Submittal and Approval

Approved Vendors Design and Performance specifications must be received prior to ~~10:01 AM~~ **3:01 PM** on November 20, 2020, ~~in the Purchasing Department of the Fresno Unified School District, 4498 N. Brawley Ave., Fresno, CA 93722.~~ Vendors shall submit ~~one unbound original signed RFP on 8 1/2" x 11" paper and a USB flash drive loaded with a copy of the proposal in a sealed envelope prominently marked with the RFP number, RFP title, RFP opening time, date and name of vendor.~~ **Proposed Design and Performance Specifications may be emailed to edward.vanpatten@fresnounied.org by the deadline specified above.** Proposals received later than the designated time and date will not be accepted. ~~Faesimile (FAX) or e-mailed copies of submittals will not be accepted.~~

II. REFERENCE: QUESTIONS/CLARIFICATIONS

Clarification: See responses below to questions.

Q-1: For the 2 sites for the RF design: We'd need the addresses of the 2 schools and their building heights (tallest building in each site such as gymnasium or multipurpose room, etc.)”

A-1: Per RFP 21-13: “The High-Level Design Concept shall indicate estimated coverage and reach for each reference architecture as well as the associated estimated bandwidth and latency for end-user experience.”

STUDENT INTERNET SERVICE BEYOND CAMPUS – WIRELESS BROADBAND SOLUTION

The RFP requested a *reference* architecture for a high school and a middle school. By way of addendum #2, this RFP now includes a request for a *reference* architecture for an elementary school. A “reference architecture” generally means a model architecture for a typical instance of a class, in this instance a type of school. For the sake of making the meaning clearer and providing a level playing field for comparison of reference architectures, we will designate the following schools to use for the reference architecture:

- High School: Edison High School; the new classroom building on the east side is 40’.
- Middle School: Rutherford B. Gaston Middle School; the main building is 40’, the gym is 36’
- Elementary School: Addams Elementary School; the tallest building seems to be the MPR at 22’

Q-2: How many schools / sites that you would want us to include in the design and performance proposal?

A-2: One high school, one middle school, and one elementary school See A-1 above regarding the school sites for the high-level design.

Q-3: Can you give us the list of schools and their building heights that you would want us to include in the RF study design proposal?

A-3: The building heights are available via site visits and/or existing geospatial mapping tools. Estimated height are listed for the sites below.

Edison High ORG Building – 40’-0”	Roosevelt High East Hall Tower - 57’-6”
Sunnyside High Building ‘A’ & ‘G’ – 35’-0”±	Computech Middle School Gym – 34’-10”
Sequoia Middle School Gym – 35’-0”	Kings Canyon Middle School Gym – 35’-0”
Gaston Middle School Main Building – 41’-0”	Tehipite Middle School – 35’-4-1/4”
Terronez Middle School Clock tower of top of Admin – 50’-0”±	

Q-4: Are you looking for high level design and performance data based with a low resolution RF study which is free of charge; or more detailed design and performance data with a high resolution RF study which is a paid study?”

A-4: The goal is to provide as much reach into a neighborhood with RF/Wi-Fi broadband across the sites listed as possible. Bid respondents should provide their best approach to deliver RF/Wi-Fi to as many houses and spaces across these regions. The district will provide a KMZ indicating where students are using hotspots across Fresno (confidential and not for distribution). The bid respondent who is awarded the project will work with Fresno Unified to deploy services to areas based upon prioritized need which will be communicated to and coordinated with the awarded respondent. The budget for Phase I and Phase II is \$1.4 million. Ongoing Maintenance and Operations for five years should be listed separately within the RFP. The budget may or may not cover all of the schools/areas listed in the RFP. Bid respondents should indicate the coverage of their proposed model. The high-level design concept and minimum performance specifications would at most require a low-resolution RF study.

STUDENT INTERNET SERVICE BEYOND CAMPUS – WIRELESS BROADBAND SOLUTION

Q-5: How many students should we plan to be on this network in the PoC Phase 1?

How many students should we plan to be on this network initially after phase 2 implementation?

For Dimensioning purposes:

- a. In the desired architecture provided in Addendum No 1 there are 3 use cases drawn:
 - i. RF to RF on light pole Bridge to Wi-Fi with Access Point
 - ii. Customer Premises Ethernet Powered Mesh Wi-Fi
 - iii. Customer Premises Hotspot
- b. How many deployments of each use case does Fresno USD anticipate with in the 1mile radius?

A-5: The Phase I proof of concept explores the reference architectures at the high school, middle school, and elementary school (3 sites) and their interaction with the three types of last mile connections. The aim would be to deploy and assess sufficient samples of these types of last mile connections to understand their efficacy. We would expect at each of the 3 Proof of Concept Schools:

- 1) at least one of each of the three types of last mile connections
- 2) first) RF to RF on light pole Bridge to Wi-Fi with Access Point, and second) mesh RF to RF from school RF to RF on light pole to another RF on light pole Bridge to Wi-Fi with Access Point
- 3) at least five hotspot deployments over a broad geographic span within proximity of the school

This proof of concept will deploy and assess the three types of last mile connections, the possible coverage, identify where challenges might exist, how to overcome these challenges, and then how to deploy these three last mile connections across the prioritized areas for deployment.

There are 27,000 students in the areas covered by the schools listed. There are 4,000 students actively using hotspots. Many of the other students have broadband service that may be insufficient or isolated to their housing unit. There will likely be upwards of 5,000 to 10,000 students using this service.

Acknowledge receipt and understanding of this addendum in designated area of Proposal Signature Page Form.



Edward Collins

Executive Director of Purchasing