E-RATE Funding Year (2022-2023)
REQUEST FOR PROPOSAL (RFP)- Network Infrastructure Upgrades
470 # 220007054
Turlock Unified School District
1574 E. Canal Drive
Turlock, CA 95380
Questions and Responses - Addendum #2

Questions & Responses

Q1. Can the district provide the following information in regards to the Point-to-Point radio needed for Turlock Highschool Stadium:

- Distance between radios? Approximately 100 meters.

- Is there clear line of site? Yes.

- What speed/throughput is desired? 1Gbps.

Q2. Does the district have an mGig requirement for switching? No requirements were explicitly found in the original RFP, however there are WiFi6 requirements and Cat6A is referenced. If there is an mGig requirement for switching, what is the level of mGig required? 2.5Gbps,

2.5/5Gbps, or 2.5/5/10Gbps? We do not have specific requirements for mGig however, we want to take full advantage of WAP capabilities that are included in the proposal.

Q3. The RFP states a requirement of industry-standard POE, but desired/required POE levels are not specified. What is the required industry standard? 802.3at (POE+, 30W), 802.3bt type 2 (POE++/POH, 60W), or 802.3bt type 4 (POE++/POH, 90W)? TUSD prefers a minimum of 802.3bt type 2 (POE++/POH, 60W).

Q4. Is 40Gbps backbone capability required only for all switching in the datacenter, or is it also required for future upgradeability of site to datacenter? 40Gbps backbone capability is required for the Datacenter only.

Q5. On the original RFP it specifies a separate core switch for each location listed. For the locations of Child Care, e-Cademy Charter, Transportation, and Maintenance, is a collapsed core and access design configuration that meets/exceeds uplink capability requirements an acceptable solution? Yes, as long as stacking capabilities are possible by adding additional switches and/or stacking modules at a future date.

Q6. Can the district provide further information/clarification regarding optics needs/requirements:

- On the original RFP, mostly LRM optics are specified. On the walkthrough on 01/03/2022 it was stated that approximately 95% of fiber within the district is SM. Can the district provide a count of locations that utilize MM fiber as well as the type of MM fiber (OM1/OM2, or OM3/4/5) for an accurate count of LR and SR optics required? The THS Cafeteria is the only location that currently has MM OM1/OM2 fiber.

- There are notes for some Core locations that indicate EX, CX, and SR. Will these links terminate at IDFs? If so, can the district clarify which IDFs and optic quantities required? These are Spectrum uplinks, not IDFs.

- Some IDFs show optics (LR, LRM) but the quantities appear to be doubled. Can the district clarify proper quantities needed per IDF and MDF? This table lists the total number of optic per site. (IDF total x 2 plus one for uplink for all sites except the DO. DO is IDF total x 2 plus 2 for uplinks.) Bidders can recommend the appropriate type of optic per their proposed solution.

Site	Total # of Optics
Brown	17
Crowell	19
Cunningham	15
Dennis Earl	25
Julien	17
Medeiros	11
Osborn	13
Wakefield	19
Walnut	11
Dutcher	23
Turlock Junior High	23
eCademy	5
Pitman High	41
Roselawn High	7
Turlock High	51
Child Nutrition	1
Special Ed Office	3

District Office	13
Operations Center	3
Transportation Office	3
Farm	1

Q7: The RFP requirements state that "an identity and access control system (hereby referred to as IACS)" is required. Can the district provide further clarification on the following points:

- Does this requirement cover only wireless, or does it cover wired access as well? Both wired and wireless. Is there a preference for on-premise or cloud hosted IACS? On-prem is preferred. If an on-premise solution is proposed and/or required, does the district have the ability to provide the virtual server resources required or will a physical host/appliance be required in the proposal? Physical is preferred.

- How many current and future active users is the requested IACS solution expected to support?

14,000 students and 2,500 staff approximately.

- In the case where IACS is required for wired access, the district will need to provide MAC Address Lists for equipment that cannot perform 802.1x certificate authentication. Can the district provide this information. TUSD will provide this information to the winning bidder.

- In the case where IACS is not required for wired access, the district will need to provide accurate per port/patch panel VLAN access information for endpoints. Can the district provide this information?

Q8. Is the district requiring dual power supplies (PSU's) on the access layer switching as well as the core switching? Dual power supplies are required on core switching only.

Q9. The RFP states a requirement for Wireless APs to "be mounted horizontally with brackets per the manufacturer's recommendations where necessary." Can the district provide an accurate count of t-bar and/or hard-cap (metal plate) mounts that will be required? If any hard-cap mounts are required, can the district provide the locations where these mounts are necessary? We do not have this information readily available.

Q10: The district specifies a requirement for a post-implementation site survey and associated heat maps. Can the district provide architectural blueprints/maps in a digital format for site survey usage? TUSD will provide all available digital blueprints/maps to the winning bidder.

Q11: The district specifies a requirement that solution support "multiple protocols such as IP Data, Voice over IP (VoIP) telephony, streaming digital video, teleconferencing, etc." Can the

district provide any multicast requirement documents from the vendor for existing implemented technologies if/where required? We do not have this information readily available.

Q12: The district specifies a "preference for the project to be completed within nine (9) months of the project start date." What type of maintenance windows will the district provide? TUSD will work with the winning bidder to provide appropriate maintenance windows. Is there an expectation that the majority of refresh work will be performed after hours and/or on weekends? When school is in session, TUSD expects work to be completed outside of school hours. During weekends, summer, and other breaks, work can be completed during normal business hours. Can the district commit to providing reasonable maintenance windows where possible during business hours? Yes.

Q13: Does the district desire to perform any network design topology changes during implementation of winning bid/solution? Not at this time.

Q14: On walkthrough on 01/03/2022, it was stated that there is a belief that no daisy-chained IDF locations exist. Can the district provide confirmation, as well as documented locations where these such daisy-chained IDF locations may exist? TUSD believes there are two locations with daisy-chained IDFs. The first is located at the Turlock High woodshop building connecting to the maintenance office. The second is at TJHS E wing to temporary portables.

Q15: Can the district provide an accurate map of locations with IDF cabinets and/or mounting points higher than 6ft from the ground? We do not have this information readily available. If there are installation points located in areas that require access via an access hatch, can the district provide an accurate location map as well as access hatch dimensions? TUSD will provide location maps to the winning bidder. Height is not documented.

Q16: For IDF locations with multiple switches, are switches all located in the same IDF cabinet/rack, or are they located in multiple cabinet/racks within the same room? We do not have any locations with multiple cabinets. If any locations are the latter, can the district provide an accurate count of such locations as well as an accurate measurement of distance between the cabinets/racks so that appropriate stacking cable lengths can be specified on the BOM?

Q17: Does the district have any locations where an IDF cabinet/rack does not exist? No. If so, can the district provide an accurate count and site map identification for these locations so that appropriate mounting hardware/materials can be specified on the BOM?

Q18: On the RFP, there are two columns labeled "Twinax Needed" and "Twinax Lengths." Are these cables are to connect MDF access switching to MDF Core switching? Yes, twinax information was specific to MDF core/access switching.

Q19: Could you please add me to the list of vendors interested in participating in the E-rate project for networking for Turlock USD so we can receive any updates? All project updates can be found on the EPC portal or our Technology Projects page on the TUSD website.

Q20: Could you please forward me any Q&A from any vendors that have been shared so far, prior to

1/25/22 @ 12:30 pm PT? All Q&A will be posted on the EPC portal and our Technology Projects page on the TUSD website.

Q21: What challenges are you experiencing in your current environment that you would like to see resolved or improved? TUSD desires to upgrade its network infrastructure.

Q22: What are the desired characteristics of the new network? Please see the specifications in the RFP.

Q23: Could you send us floor plans and indicate the main internal wall types (ex. Drywall, brick, concrete?)?

please specify if there is any variance at each location. Floorplans will be provided to the winning bidder.

Q24: What does the placement look like for APs, are you doing 1 AP per classroom, or is it multiple classrooms (2-3?) per AP? We currently have an AP in every classroom and 2 in large gyms/cafeterias.

Q25: How many of the APs are intended for ceiling mount? How tall are most ceilings? Are any ceiling tracks different from typical non-recessed 15/16 ceiling mount? We do not have this information readily available. There is a mix of standard t-bar drop ceilings and vaulted ceilings.

Q26: How many APs are intended for wall mount or flat solid surface? We do not have this information readily available.

 Q27: Do any indoor APs require external antennas, if yes, list qty and locations ? No indoor Aps currently use external antennas.

Q28: Are any APs going to require protective enclosures, any estimate of #? Existing Gym & cafeteria Aps are currently protected by metal cages. TUSD would prefer to replace existing enclosures with non-metal enclosures.

Q29: Are any locations going to require a lift due to height, any examples would be helpful? Would this be provided by the school? A lift will likely be necessary in some locations such as Gyms and Cafeterias. The winning bidder is expected to provide all necessary equipment needed to complete the project.

Q30: How many clients / AP are targeted for support in some of the various types of locations? (ballpark is fine) See below.

Q31: How many clients / AP (in classrooms)? 40 - 50 minimum.

Q32: How many APs needed (for classrooms) total per school / please mark here or in attached spreadsheet? This table lists the total number of classrooms per site.

Site	Classrooms
Brown	33
Crowell	50
Cunningham	40
Dutcher	41
Earl	38
eCademy	6
Julien	38
Medeiros	42
Osborn	40
Pitman HS	85
Roselawn HS	10
Turlock HS	125
Turlock JHS	63
Wakefield	50
Walnut	39

Q33: How many clients / AP (in gyms / cafeterias)? 40 - 50 minimum.

Q34: How many APs needed (for gyms / cafeterias) per school / please mark here or in attached spreadsheet? Large cafeterias/gyms currently have 2 APs.

Q35: What are needs to be covered with outdoor APs? Distance requirements if available.
General wireless access.

Q36: Are outdoor APs just for clients to connect to? Yes. Any point to point requirements? One at the

Turlock High football stadium.

Q37: For coverage area, how many outdoor APs would need primary coverage within 300 feet for best signal? Single.

Q38: For coverage area, how many outdoor APs would need coverage area greater than 300 ft, leverage a sector antenna? Unknown.

Q39: How many outdoor APs would be exterior wall mounted? Unknown.

Q40: How many outdoor APs would be mounted on a small pole? (less than 2.75" circumference) . Unknow

Q41: How many outdoor APs would be mounted on a larger pole? (less than 3-15" circumference)

Unknown.

Q42: Do you have a high # of 2.4 GHz-only devices at this time, or are you mostly transitioned to devices that are 5 GHz capable? We are mostly transitioned to 5 Ghz for computers. We do have wireless thermostats/sprinkler controllers that are 2.4 Ghz only.

Q43: Are you currently leveraging all of your 2.4 GHz radios at this time or is a high proportion of them being turned off or underpowered due to interference? All 2.4 radios are on, we are not concerned with

2.4 performance.

Q44: Our engineer had notes about the fiber plant and optics requirements…

The RFP specifies LRM optics everywhere, however on the walk through most optics observed were using single mode fiber and it was discussed how there was a plan to make everything single mode.

Q45: Will there still be a requirement for any LRM optics for this project, and if so in which locations and what are the switches that will require them? This table lists the total number of optics per site.

(IDF total x 2 plus one for uplink for all sites except the DO. DO is IDF total x 2 plus 2 for uplinks.)
Bidders can recommend the appropriate type of optic per their proposed solution

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Transportation Office	3
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Q46: Do you have any recommendations on length of stacking cables? Would you prefer 0.5m or 1m as a standard? 0.5m is acceptable, 1m may be required in some locations

Q47: Shall we assume your requirements on ETH switch ports are 1G / 30W PoE+ on every port? Are there any locations where this is different? TUSD prefers a minimum of 802.3bt type 2 (POE++/POH,

60W).

(no specs are shown on RFP and I don't believe any info was gathered from the walkthrough w/ details

on this)

Q49: Trying to unpack the language in the RFP about an identity and access control system, - could you confirm if you are referencing a network access control solution? Yes.

Q50: Do you have a network access control solution implemented today? If so, what solution is it? Yes, Cloudpath.

Q51: Are you currently leveraging this NAC solution on the wireless, wired, or both? Currently wireless only, but we are planning to implement wired soon.

If you are looking to implement a NAC as part of this project, then please review the following questions

Q52: As part of this project, are you looking to implement a NAC solution on the wireless, wired, or both? Both.

Q53: What are the primary use cases for the NAC currently or anticipated in the future? Network Access

Control.

Q54: As part of this project, how many concurrent devices on an average 1 weeks that will be authenticated on the NAC?

Q54a - Access points Unknown.

Q54b - Wired switches Unknown.

Q54c - Wireless clients / devices Unknown.

Q54d - Wired clients / devices Unknown.

Q55: Would the district respond positively to solutions that can increase staff productivity & service levels through substantially reducing network complexity?   Yes.

Q56: Would the district respond positively to a solution that improves your time-to-service by automating network changes reducing the amount of individual actions? Yes.

Q57: Would the district respond positively to a solution that simplifies the number of protocols used in your network? Yes.

Q58: What tools do you use today for managing the network infrastructure? TUSD currently uses the following tools: Ansible, Oxidized, Libre, SmartZone, Cloudpath, Windows Network Policy Server.

Q59: If considering a cloud solution, is a solution that continues to function & provide On-Prem service &

services without interruption in the event of an outage with your Cloud services provider
a requirement? Yes.

Q60: How important is it that the cloud mgmt. system (if chosen) itself has full ISO 27001, ISO 27017, and ISO 27701 and other certifications for security, not just a data center a server is stored in? All proposed solutions should meet or exceed industry standards for security.

Q61: How important is it that the cloud mgmt. system (if chosen) has a record of 100% uptime and no breaches in the past 12 months? All proposed solutions should be reliable and secure.