

# **E-Rate Cat-2 2019 Equipment Requirements**

**Site:** J.G. Johnson Elementary

900 Jackrabbit Street. Pahrump, NV 89048

## WIRELESS

**Project Description:** Deliver ten (10) units of the compatible equipment, all product documentation, mounting hardware for drop-ceiling deployment, list of serial and MAC values, and send out with latest long-term-release firmware installed. In-house IT dept. will deploy and program.

**Justification:** Entire NCSD wireless infrastructure is Aruba and Aruba Instant controller is used for management. If proposing a product other than our existing infrastructure, please provide an explanation of how this will be implemented and work with our existing deployment and provide a single unified interface for management at each specific site. If certification or training is required to utilize the new equipment, please provide a cost per employee for training and certification.

1. Rm 32
2. Rm 28
3. Rm 22
4. Rm 21/23
5. Rm 17
6. Rm 14
7. Rm 7
8. Rm 6
9. Rm 1
10. Rm 4

**E-Rate Description:** Wireless AP Aruba IAP-325-US or equivalent which provides support for both the 5Ghz and 2.4Ghz bands and 802.11a/g/n/ac technologies.

Qty Requested = 10

### Vendor Selection

AP Hardware	Qty	Make and Model		Unit Price	\$	
Add'l Hardware	Qty	Make/Model/Desc		Unit Price	\$	
Add'l Hardware	Qty	Make/Model/Desc		Unit Price	\$	
Project Labor Total Cost	\$	Or	Qty	X	Unit Price	\$

### Notes:

### Section Total \$

Check here if additional information is attached.

## SWITCHING

**Project Description:** Deliver to central staging site ten (10) or more switches, depending on bid cost, of the compatible equipment with all product documentation, rack mounting hardware, and all appropriate licensing. For each switch include at least two 1G Fiber SFP modules, and if switch contains at least 4 SFP ports additionally include two 1G Ethernet SFP modules as described.

Bid to have on-site tech, unbox the units, mount the rack hardware, update the firmware to the latest long-term-release, load with a simple staging configuration that we provide, and deliver to main MDF of school site so In-house IT staff can rack and configure.

**Justification:** Entire NCSD routing and switching infrastructure is Cisco. If proposing a product other than our existing infrastructure, please provide an explanation of how this will be implemented and work with our existing deployment and any costs required to migrate the network to any non-Cisco standards like OSPF. If certification or training is required to utilize the new equipment, please provide a cost per employee for training and certification.

**E-Rate Description:** Cisco 2960X-48FPS-L or equivalent that provides close to 48 ports, and includes at least 2 1Gb Fiber modules and possibly 2 1G Ethernet modules, and additionally supports POE IEEE 802.3af (up to 15.4W) on all ports and can support up to 24 ports with 802.3at/POE+ (up to 30W)

Qty Requested = 10

### Vendor Selection

Base Hardware Qty	Make/Model/Desc			Unit Price \$
Add'l Hardware Qty	Make/Model/Desc			Unit Price \$
Add'l Hardware Qty	Make/Model/Desc			Unit Price \$
Add'l Hardware Qty	Make/Model/Desc			Unit Price \$
Project Labor Total Cost \$	Or	Qty	X	Unit Price \$

### Notes:

### Section Total \$

Check here if additional information is attached.

# FIBER PROJECT

Restore access to Modular building groups via new fiber connection. Original underground conduit was destroyed when playground canopy was put in. Currently the modular group is working via a temporary wireless bridge.

The modular buildings are in two groups, the bulk of all mods except for one group are all connected via a fiber spoke network. Currently this spoke is engaged by an edge connection in one of the mods which is joined to the larger network via network bridge from a nearby building (SESS). The second bridge joins the last mod pair to the larger group.

The most cost effective way to restore service seems to be a conversion of the wireless bridge virtual path to two new fiber connections in conduit.

Figure 1: Project Overview Diagram.

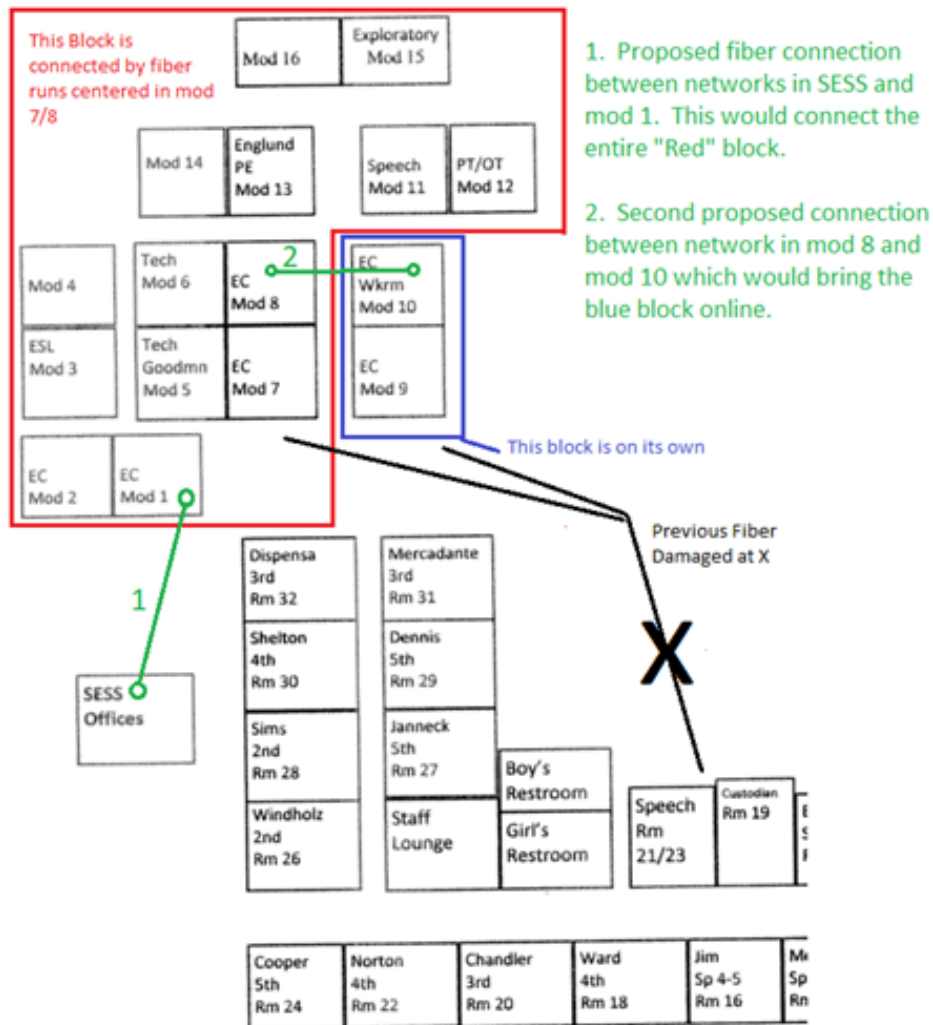


Figure 2: Main School Courtyard showing Mods 7 & 8 and Mods 9 & 10



Figure 3: Distance between SESS and Mods 1 & 2



Figure 4: SESS and Mod 1 & 2 Equipment



**Vendor Selection**

Supplies	Qty	Make/Model/Desc			Unit Price \$
Add'l Supplies	Qty	Make/Model/Desc			Unit Price \$
Add'l Supplies	Qty	Make/Model/Desc			Unit Price \$
Add'l Supplies	Qty	Make/Model/Desc			Unit Price \$
Add'l Supplies	Qty	Make/Model/Desc			Unit Price \$
Add'l Supplies	Qty	Make/Model/Desc			Unit Price \$
Add'l Supplies	Qty	Make/Model/Desc			Unit Price \$
Project Labor Total Cost \$		Or	Qty	X	Unit Price \$

**Notes:**

**Section Total \$**

Check here if additional information is attached.