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PHOENIX

TUCSON

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**Project Name**  
**City of El Mirage Public Works Building**  
**Budgetary**

**Presented To**



Attention:  
**Vincent Rostowsky**

**Scope of Work and Proposal**

***Respectfully Submitted By:***

**Robert Corrales**

**O: (480) 377-0225 x228**

**M: (602) 668-1096**

**[rcorrales@ctscabbling.com](mailto:rcorrales@ctscabbling.com)**

**Corporate Technology Solutions, LLC**

1971 E 5<sup>th</sup> St, Ste 111

Tempe, AZ 85281

O: (480) 377-0225

[www.ctscabbling.com](http://www.ctscabbling.com)

Structured Cabling • Fiber Optic • Access Control • Intrusion Detection • Video Surveillance • Audio/Video • Intercom/Paging

**SCOPE OF WORK**

**J-Hook Installation**

Manufacture	CEAS
Size(s)	2"

- Provide and install approximately (100) 2" j-hooks to support the horizontal cabling infrastructure.
- Provide and install approximately (100) ¼" wire rod j-hook supports.
- Provide and install all necessary attachment hardware to meet all applicable industry standards and codes.

**Work Area Cabling Data and Voice**

Manufacture	Berk-tek
Data Cable	LanMark - 6 Plenum - Blue

- Provide and Install (57) Category (6) UTP (plenum) cable(s) & (2) Coax cable(s) to approximately (41) locations. The standard outlet will consist of (1 & 2) data cable(s). Note: Each work area may consist of various configurations of data cable(s) as designated on the floor plans and is broken down as follows:

Description	Print #	Print Date	Qty (outlets)	Outlet Data Cables	Outlet CATV Cables	Total Data Cables	Total CATV Cables
Offices/Storage 1 Data Wall Location	E1.0	6/9/2023	9	1		9	0
Offices/Maps 2 Data Wall Location	E1.0	6/9/2023	9	2		18	0
Reception Floor Location	E1.0	6/9/2023	1	2		2	0
Conference Floor Location	E1.0	6/9/2023	2	2		4	0
Conference 2 Data Wall Location	E1.0	6/9/2023	1	2		2	0
Conference 1 Data/1 Coax TV Location	E1.0	6/9/2023	1	1	1	1	1
Break/Flex 2 Data Wall Location	E1.0	6/9/2023	1	2		2	0
Break/Flex 1 Data/1 Coax TV Location	E1.0	6/9/2023	1	1	1	1	1
Cubicle 1 Data Location	E1.0	6/9/2023	12	1		12	0
Cubicle 2 Data Printer Location	E1.0	6/9/2023	2	2		4	0
Access Point Location	E1.0	6/9/2023	2	1		2	0
			<b>41</b>	<b>Totals</b>		<b>57</b>	<b>2</b>

- CTS will provide a 3' to 5' service loop at the work area neatly coiled above the ceiling or at nearest junction box where possible.
- All cable bundles in the MTC/TC rooms will have Velcro straps around the cables every 8-12". *Note: This only applies to new installations.*
- Data cables in the equipment room will be terminated on Category (6) rack mount patch panels as needed utilizing the TIA/EIA T56B wiring scheme.

**Telecommunication Outlet (Faceplate)**

Manufacture	Leviton
Data Insert	Cat6 - White

- Office/Flush Mount - The telecommunications faceplate will be a (1 & 2) port configuration.
- Unused ports will have a blank insert installed.
- Category (6) data cables at the work area will be terminated on single CAT (6) inserts as needed, utilizing the TIA/EIA 568B wiring scheme.

**Patch Cords Work Area**

- CTS will **not** provide.

**Patch Cords MTC/TC**

- CTS will **not** provide.

**Fiber Optic Backbone Cabling Installation**

Manufacture	Corning
Connectivity	Corning
Connectors	Single-mode LC

- Provide and install (2) 24 Strand Single-mode fiber from each building.
  - (1) 24 Strand Single-mode fiber from the North Wastewater Treatment Building to the South Wastewater Treatment Building.
  - (1) 24 Strand Single-mode fiber from the South Wastewater Treatment Building to the new Public Works Building.
- Single Mode (SM) optical fiber will be terminated utilizing (LC) style fiber optic connectors.
- All coupler panels will coincide with the appropriate connector type(s).

**Cable TV Feed**

- Provide and install (1) RG11 Coax from the North Wastewater Treatment Building to the new Public Works Building.

**Telecommunication Room**

Cable Tray Manufacture	Chatsworth
Rack Manufacture	Chatsworth
Cabinet Manufacture	N/A

- Provide and install (1) 7’HX19W” equipment racks – Black
- Provide and install (2) 7’ vertical double sided wire managers to facilitate vertical cable management.
- Provide and install (2) horizontal double sided wire managers to facilitate and manage work area patch cords.
- Provide and install approximately (10) feet of 12” of cable tray.
- Provide and Install (2) wall angle end support brackets to support the cable tray.
- Provide and Install (1) triangular wall brackets to support the cable tray.
- Provide and install (1) rack top plates to secure the rack to the cable tray.

**Grounding/Bonding**

- Provide and Install (1) 4”X10” copper wall mount bus bar in MTC/TC room.
- The cable tray will be grounded together at all junctions (unless otherwise noted by the manufacture) with a copper ground strap to provide to the isolated ground bus bar.
- The equipment rack(s) will be grounded with a # 6 insulated ground wire to the isolated ground bar.
- The general contractor and/or customer will be responsible for providing CTS with an approved building ground that meets all applicable industry standards and local, state and federal codes in each MTC and TC room(s).

**Exclusions**

- Fire Rated Plywood in IDF
- Access Control
- Work Area Conduit, Back Boxes, Floor Boxes
- Conduit Bushing and/or Conduit End Connectors
- Lift Rental

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### **Testing - Copper**

- CTS will utilize the Fluke DSX-8000 field tester for this project. The DSX is the latest in field testers for testing and certifying twisted pair cabling for up to 10 Gigabit Ethernet deployments and will handle any cabling system whether it is a Cat 5e, 6, 6A or Class FA.
  - o Every cabling link in the installation will be tested in accordance with the Telecommunications Industry Association ANSI/TIA-1152 specifications for Level III.
  - o The installed twisted-pair horizontal links will be tested from the IDF/MDF in the telecommunications room to the telecommunication wall outlet in the work area against the “Permanent Link” performance limits specification.
  - o 100% of the installed cabling links will be tested and pass the requirements of the standards. Any failing link will be diagnosed and corrected. The corrective action will be followed with a new test to prove that the corrected link meets the performance requirements. The final and passing result of the tests for all links will be provided in the test results documentation package.

### **Testing – Fiber**

- CTS will utilize either the DSX-8000 field tester with fiber modules or the Fluke OptiFiber field tester for this project.
- The OptiFiber is a full blown OTDR for testing and certifying fiber optic horizontal and backbone cabling links
  - o Fiber cable will be tested in accordance with the Telecommunications Industry Association (TIA) standard ANSI/TIA/EIA-568-C
  - o Testing of each fiber strand will be done at both the 850nm and 1300nm wavelength and tested in both directions.

### **Labeling**

- Each work area outlet faceplate will be labeled with its own unique identifier and be computer generated for legibility and contain a clear plastic cover.
- Each port on the patch panel will be labeled with its own unique identifier to match the one at the work area and be computer generated for legibility.

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**PROVISIONS**

All OSP (outside plant cabling) are estimates only. CTS will verify the actual lengths prior to installation with true tape and provide a credit or cost impact document before the installation.

Any additional work not specified in this scope of work or any additional work request from customer will result in a CTS change order.

This proposal pricing is good for a period of 30 days unless otherwise noted.

Where material prices fluctuate, CTS reserves the right to adjust pricing if there are changes in material pricing. Written documentation from our suppliers to verify this condition can be provided.

Customer is responsible for any freight charges if the customer requests an expedited time frame.

CTS will require a project schedule showing all times the facility will be available. Including but not limited to, facility events, closures or limitations that may affect continuous work. Without a schedule, there is no way for CTS to commit to an end date for completion. Delays in the schedule will delay the completion date. Any requested overtime to improve the completion date will constitute a change order.

Any schedule changes or project delays due to work areas not being available during the scheduled time, and or any other interruptions outside of CTS control, including but not limited to delay by other trades or customer could result in additional cost to customer. Written notification is required 5 days prior to any schedule changes.

This SOW assumes normal day shift of 8 continuous working hours between 5am and 5 pm, unless otherwise specified and agreed to in writing. Any work outside of this time frame may be subject to additional shift premiums.

This SOW includes one mobilization only. Changes that required additional starts and stops may be subject to additional charges via a change order. This would include, but not limited to, storage, equipment rentals, travel expenses, and other expenses incurred.

This quotation assumes that all existing and new conduits are properly sized with pull string installed and that any new conduits, pathways, wire mold, power poles, core holes, sleeves, and floor boxes, not mentioned in the above scope of work, will be provided and installed by other vendors and will be ready prior to cable installation.

Phone Systems, Network Devices, Active Equipment are not included, unless otherwise stated in the scope of work. Any other Control Components are NOT included in this proposal as directed, unless otherwise specified. It is the assumption that the owner will provide its own system to perform the functions as needed.

Patch Cords are not included unless otherwise stated in the scope of work.

All Contracts and/or Purchase Orders will be subject to monthly progress billings.

Retention dollars are to be paid within 60 days after the completion of our original scope of work, regardless of the total job completion.

Any project valued at \$2500 or above is subject to a pre-lien.

Effective Jan 1, 2015, customer is responsible for supplying CTS with Arizona Transaction Privilege Tax Exemption Form (TPT 5000) or Prime Contractor's Certificate (TPT 5005) as applicable.

Credit card payments shall be assessed a 3.5% convenience fee.

**COSTS**



**CORPORATE TECHNOLOGY SOLUTIONS**

1971 E. 5th Street Suite 111

Tempe, Arizona 85281

(480) 377 - 0225

[www.ctscabling.com](http://www.ctscabling.com)

AZ State Contract # CTR062453

CTS State Vendor # 9000000093

**Customer Information**

**To:** City of El Mirage  
**Contact:** Vincent Rostowsky  
**Address:** 13513 N El Mirage Rd  
**City:** El Mirage  
**State/Zip:** AZ/85335

**Project Name**

City of El Mirage Public Works Building

**Base Bid**

Item	Description	Qty	Materials	Labor	Sub Contractor	Sub Total	Grand Total
Base	City of El Mirage Public Works Building	1	\$ 17,030.55	\$ 15,840.28	\$ -	\$ 32,870.83	\$ 32,870.83

**Quotation**

Quote #:	24214 Rev. 1
Date:	11/9/2023
Estimator:	Robert Corrales
Sales:	Robert Corrales

All applicable taxes must apply. Quote valid for 30 days.  
CTS is a licensed and bonded contractor.  
CTS supports a drug free workplace.  
Payment terms Net 30.

**Payment Terms: Net 30 (Monthly Project Billing Applies)**

**Material: FOB – Project Site**

Print Name: \_\_\_\_\_

Accepted by: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

P.O. # \_\_\_\_\_

Billing Address: \_\_\_\_\_  
\_\_\_\_\_