



Washoe County Regional Communications System

Washoe County Recommendations for the Truckee Meadows Dispatch Project

Statement Of Work:

Truckee Meadows Fire is looking to have REMSA provide Dispatch services for them. Washoe County Regional Communication System (WCRCS) has taken the time to gather some information regarding the project and has reached out to vendors in attempt to get high level numbers for budgetary purposes. The high level scope is as follows:

- Install redundant backhaul from REMSA to the Vida Network at Washoe County, to Parr NOC 911 Dispatch center. (microwave system versus Leased line options are up for consideration)
- Provide Security between partners by installing firewalls in each location
- REMSA has 1 T1 between Washoe County; Utilize existing connections of the 800Mhz system but increasing by 4 more T1 circuits needs to be considered.
- Install (2) Two Symphony consoles (optional cost for spare of maintenance console)
- Installation, programming, and removals costs
- Install dispatch routers and switch equipment
- Software required at core equipment to interface new consoles
- Premium warranty to extend standard warranty in conjunction with other equipment on the Washoe County system
- Project engineering effort, to include system engineering, network engineering, drafting to update site drawing and drawing to capture new consoles, etc.
- Program Management to verify work and scope are expertly executed and to ensure this project is completely integrated into the NSRS network

Contacts:

Washoe County Regional Communication System (WCRCS)

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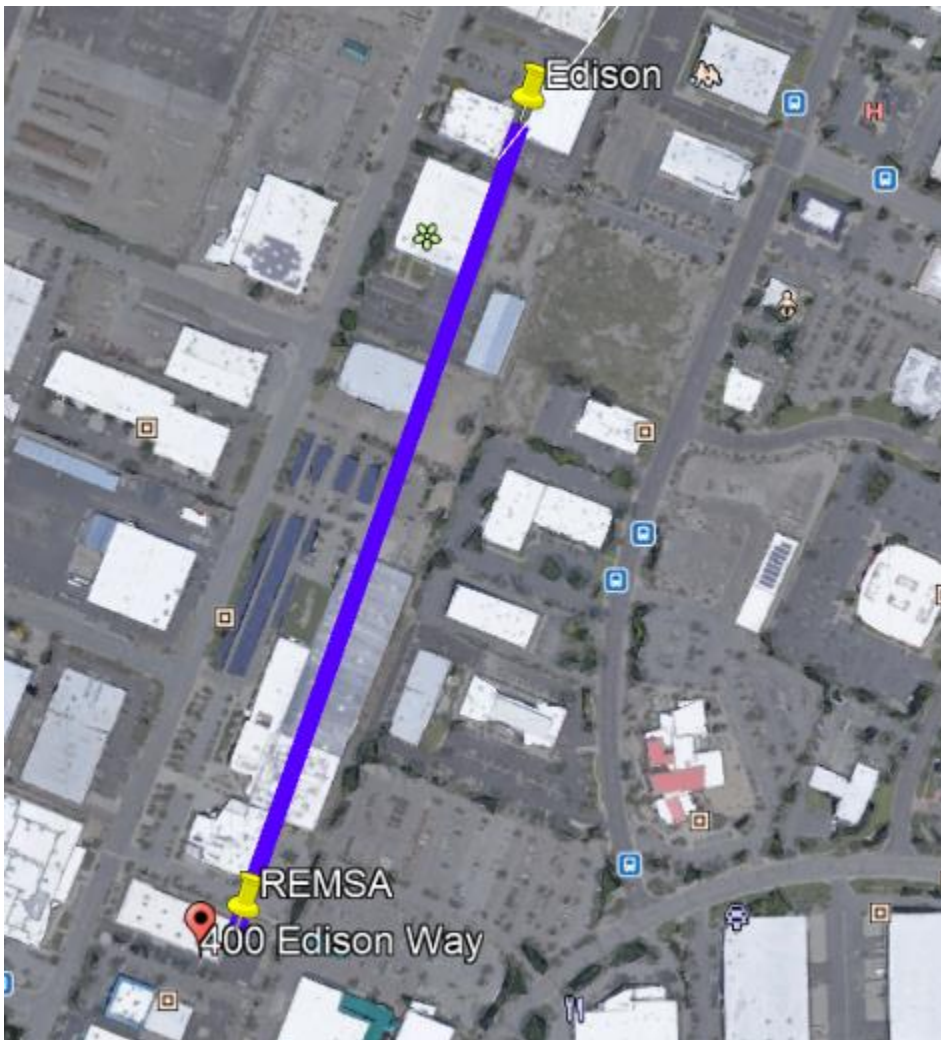


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Backhaul requirements:

Washoe county requires two diverse and redundant communication circuits for dispatch. REMSA will be asked to reach out to Vendors to provide the following infrastructure to support the dispatch function of Truckee Meadows Fire. Harris has an existing relationship with Nokia to whom has built the microwave system for the county.

Link #1: Short haul Microwave



Distance- 0.38 miles or approximately (2,006 feet)

Link #1 – Trench in Fiber

Shorthaul microwave will have limited bandwidth and frequency can take a considerable amount of time to obtain. Due to the limitations to how close the two sites are it may be cost effective to look at trenching in fiber between the two locations. Cost to include permitting, trenching, fiber, and fiber patch panels needed on both ends to make end to end connections.



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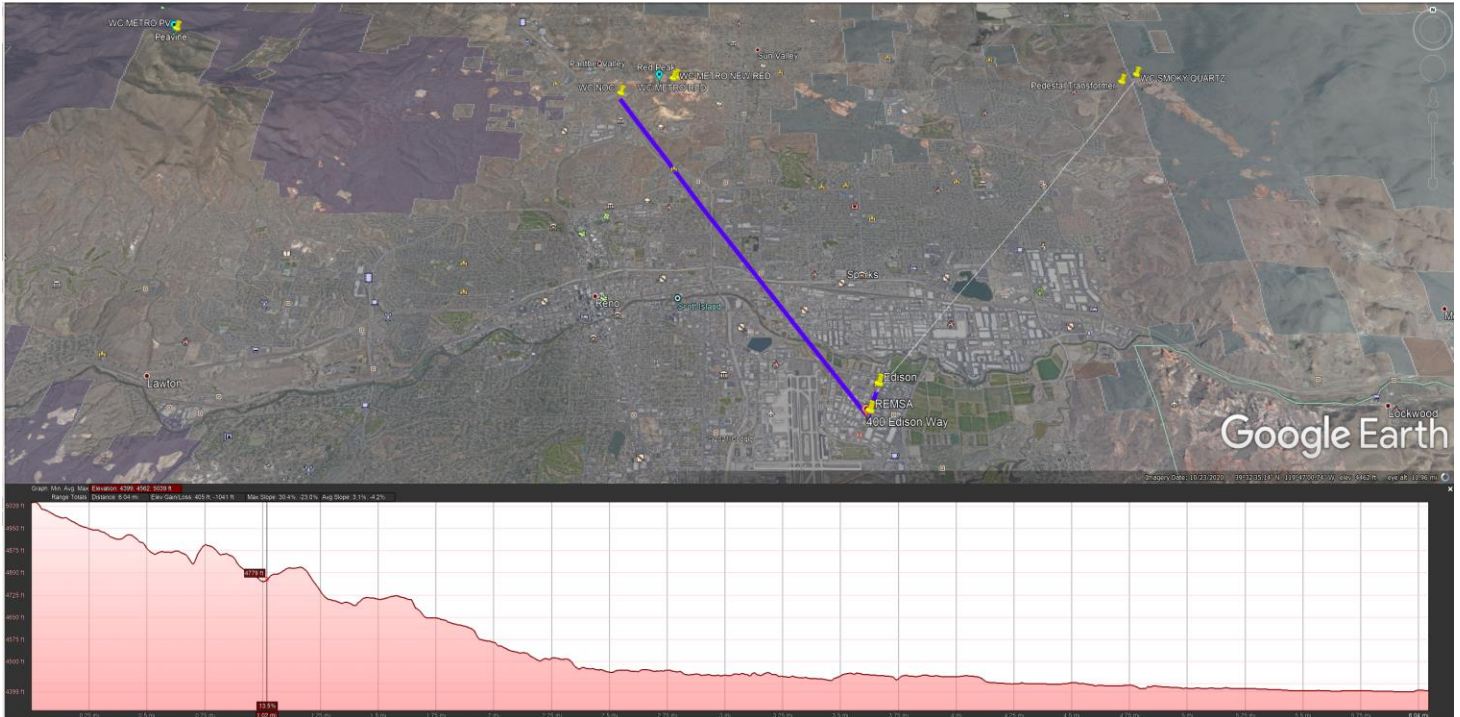
Link #2- Long haul Microwave



Distance: approximately 6 miles (good LOS or Line of Sight to microwave path)



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Link #1 & #2- Leased circuit

(5) T1 circuits will be needed for service from REMSA to Washoe County. This would be a temporary solution while either waiting for microwave or trenching fiber. Worse come to worse it would be a Permanent solution.

Infrastructure- Firewall Configuration

Consoles-

Two (2) new Symphony dispatch consoles will need to connect to the existing VIDA Premier Core in Washoe County. The following outlines the equipment, software and services needed.

- Quantity 2 next-generation Symphony dispatch consoles to be located at REMSA-Truckee Meadows Dispatch, 400 Edison Way. Each console includes: – Symphony Dispatch Platform: – Windows 8.1 operating system – Symphony application software – Remote Baton software
 - 23" HD Non-Touchscreen
 - 4 Symphony Nano speakers
 - Optical mouse –
 - 104-key USB keyboard –
 - 2 Single USB footswitch –
 - Desktop microphone –



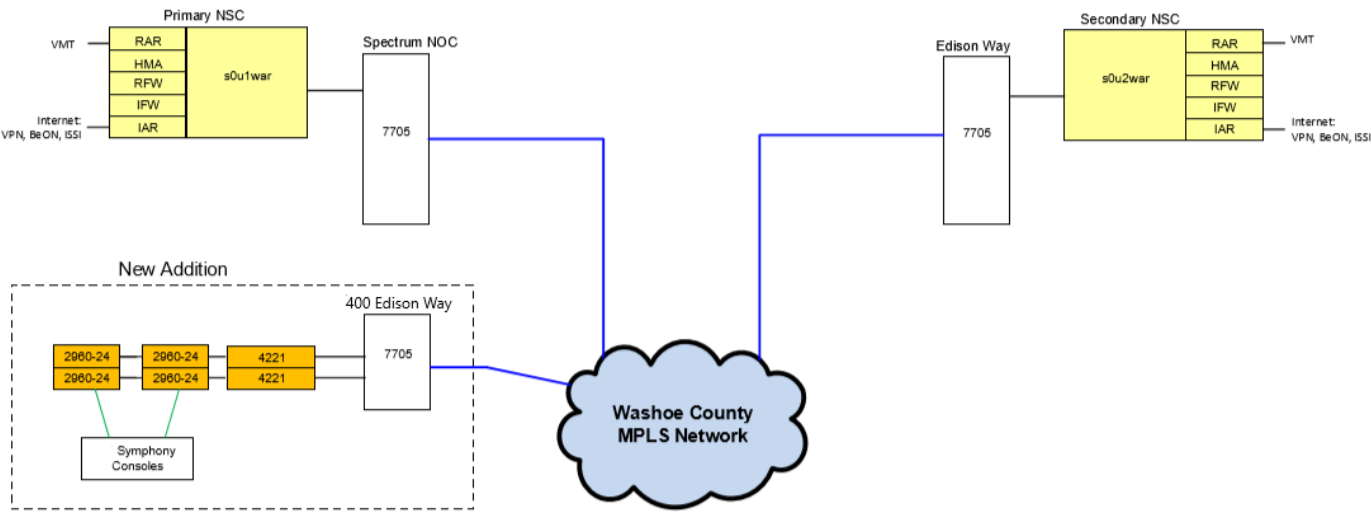
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- 2 Six-wire jack boxes –
- 2 over-the-head headset w/solid boom microphone
- Each console will be equipped with the Premier license bundle, which includes:
 - Individual Calls (I-Calls)
 - Sixteen patch definitions
 - Eight patch activations
 - Sixteen SimulSelect definitions
 - Twelve FlexPaths (talk paths)
 - Local/Remote Baton
 - Local Full Screen
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 - Support for up to four speakers
 - Four user setups
 - Sixteen workspace tabs
 - Call Director
 - Embedded web browser
 - Dynamic cross-mute
- In addition, the following feature licenses are being included for expanded functionality:
 - Conventional controls
 - Paging Capability
 - Remote aux I/O
 - Marker tone
 - P25 radio unit monitor
 - Basic SIP telephone services (4 lines)
 - Expanded SIP telephone services (4 lines)
 - AES/DES encryption
- Please include the cost of Training for REMSA and Truckee Meadows Fire team.



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Network Considerations-





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Order Options:

Item	Unit Price	QTY	Total
Consoles			
Dispatch Consoles with Windows 8 - Symphony Console w/AES Eryption, Conventional Controls, SIP Phone Plus 4 Extensions, Marker Tone, 2 spkrs, 2 footswitches, 23" Monitor, 2 Headset, and Desk Mic (1 Year Standard Warranty)	\$60,550.00	3	\$181,650.00
Dispatch Interface Equipment (Redundant Dispatch Router and Switch Equipment) to Washoe SR10A.1 Core	\$8,140.45	2	\$16,280.90
Additional Switches	\$1,365.00	0	\$0.00
Required Core Licenses for Reno Dispatch			
SUMS Security License	\$39,043.00	1	\$39,043.00
Console Licenses (12 Talkpaths per console	\$250.00	3	\$750.00
Upgrade to Windows 10 Operating System for P25			
Windows 10 Operating System Licenses	\$200.00	3	\$600.00
Routing/Switch for Console Transition to new P25 core	\$13,938.00	1	\$13,938.00
Installation, Programming and Removal of existing equipment (if applicable and at the same location) for 3 Symphony Consoles with Windows 8	\$5,500.00		\$6,000.00
Installation, Programming and Network Engineering to upgrade 2 Symphony Console to Windows 10 Operating System	\$3,225.00		\$4,000.00
Engineering (System Engineering, Network Engineering, Drafting to reflect changes to the network and memorialize additions to the members)	\$15,420.00		\$16,000.00
Project Management	\$11,220.00		\$12,000.00
3 Year Premium Warranty for Symphony Consoles	\$14,690.20		\$15,000.00
CONSOLE Grand Total			\$305,261.90
<i>Options- (Choose 1 in each section)</i>			
Microwave Link #1	\$250,000.00		\$250,000.00
Fiber Installation	\$90,000.00	11800	\$101,800.00
Leased Line services (\$150 per circuit x 5)	\$750.00	12	\$9,000.00
Microwave Link #2	\$250,000.00		\$250,000.00
Leased Circuit	\$750.00	12	\$9,000.00
WCRCs Manhours to install and configure	\$65.00	40	\$2,600.00



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Solution Choices	Total Eqt. Cost	Contingency	Total (with contingency)
Microwave solution:	\$807,861.90	\$161,572.38	\$969,434.28
Fiber & Microwave Solution:	\$659,661.90	\$131,932.38	\$791,594.28
Leased Lines	\$325,861.90	\$65,172.38	\$391,034.28

* with yearly \$18K
reoccurring

These estimates were provided prior to obtaining the final quote from L3Harris (quote attached to staff report). Radio equipment costs from the L3Harris quote will supersede these estimates. Staff has determined it will pursue the data connections through the “leased lines” option which is more cost effective than the other alternatives.