

CONTRACT COVERSHEET

NOTE: Shaded areas are for County Executive review.

*Res 576
Significant*

DEPARTMENT Public Safety Communications	CONTRACT/ADDENDUM #: 10607H																				
1. This contract, grant or addendum: <input checked="" type="checkbox"/> AWARDS <input type="checkbox"/> ACCEPTS	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%; text-align: left;">Contract</th> <th style="width: 50%; text-align: right;">Addendum</th> </tr> <tr> <td style="text-align: center;">↓</td> <td style="text-align: center;">↓</td> </tr> <tr> <td colspan="2" style="text-align: center; font-size: small;">If Addendum, please include original contract number</td> </tr> <tr> <td><input type="checkbox"/> POS</td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/> Co Lesse</td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/> Co Lessor</td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/> Intergovernmental</td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/> Purchase of Property</td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/> Property Sale</td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/> Other:</td> <td><input type="checkbox"/></td> </tr> </table>	Contract	Addendum	↓	↓	If Addendum, please include original contract number		<input type="checkbox"/> POS	<input type="checkbox"/>	<input type="checkbox"/> Co Lesse	<input type="checkbox"/>	<input type="checkbox"/> Co Lessor	<input type="checkbox"/>	<input type="checkbox"/> Intergovernmental	<input type="checkbox"/>	<input type="checkbox"/> Purchase of Property	<input type="checkbox"/>	<input type="checkbox"/> Property Sale	<input type="checkbox"/>	<input type="checkbox"/> Other:	<input type="checkbox"/>
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<input type="checkbox"/> Property Sale	<input type="checkbox"/>																				
<input type="checkbox"/> Other:	<input type="checkbox"/>																				
2. This contract is discretionary <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO																					
3. Term of Contract or Addendum: From: <u>1/31/2011</u> To: <u>11/30/2016 + 5yrs</u>																					
4. Amount of Contract or Addendum \$6,680,424.00																					
5. Purpose: Enhance DaneCom subsystems to improve user experience.																					
6. Vendor or Funding Source: Harris Corporation																					
7. MUNIS Vendor Code: 3164																					
8. Bid/RFP Number: 110100																					
9. If grant: Funds Positions? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO Will require on-going or matching funds? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO																					
10. Are funds included in the budget? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO																					
11. Account No. & Amount, Org. & Obj. <u>CPPUBSAF 58161 RADIO SYSTEM REPLACEMENT</u> Amount \$ <u>6,680,424.00</u> Account No. & Amount, Org. & Obj. _____ Amount \$ _____ Account No. & Amount, Org. & Obj. _____ Amount \$ _____																					
12. Is a resolution needed: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If "YES," please attach a copy of the Resolution. If Resolution has already been approved by the County Board, Resolution No. & date of adoption <u>2014 RES-576, not yet approved.</u>																					
13. Does Domestic Partner equal benefits requirement apply? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO																					
14. Director's Approval <i>Richard M. McVicar</i>																					

CONTRACT REVIEW/APPROVALS

Initials	Ftnt	Date In	Date Out
<i>Mg</i> Received	_____	<u>3-9-15</u>	_____
<i>CA</i> Controller	_____	_____	<u>3/9/15</u>
<i>W</i> Corporation Counsel	_____	<u>3/9/15</u>	<u>3/9/15</u>
<i>SA</i> Risk Management	_____	<u>3/9/15</u>	<u>3/9/15</u>
<i>SA</i> ADA Coordinator	_____	<u>3/9/15</u>	<u>3/9/15</u>
<i>CA</i> Purchasing Agent	_____	<u>3/9/2015</u>	<u>3/9/2015</u>
_____ County Executive	_____	_____	_____

VENDOR

Vendor Name & Address Harris Corporation (Footnotes 1 & 2)
Contact Person Paul Wilson & Phil Beeson
Phone No. 585-241-8397 & 434-455-9462
E-mail Address pwilso05@harris.com & pbeeson@harris.com

Footnotes:

1. Wilson: 1680 University Avenue Rochester, NY 14610
2. Beeson: 221 Jefferson Ridge Pkwy Lynchburg, VA 24501

Return To: Name/Title: <u>Rich McVicar, Technical Services Manager</u> Dept.: <u>Public Safety Communications</u>
Phone: <u>608-283-2911</u> Mail Address: <u>210 MLK Rm 109</u>
E-mail: <u>mcvicar@countyofdane.com</u> Madison, WI 53703-3342

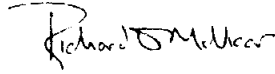
CERTIFICATION

The attached contract: *(Check as many as apply)*

- conforms to Dane County's standard Purchase of Services Agreement form in all respects
- conforms to Dane County's standard Purchase of Services Agreement form with modifications and is accompanied by a revision copy¹
- is a non-standard contract which has been reviewed or developed by corporation counsel which has not been changed since that review/development
- is a non-standard contract previously reviewed or developed by corporation counsel which has been changed since that review/development; it is accompanied by a revision copy¹
- is a non-standard contract not previously reviewed by corporation counsel; it is accompanied by a revision copy
- contains non-standard/indemnification language which has been reviewed or developed by risk management and which has not been changed since that review/development
- contains non-standard insurance/indemnification language which has been changed since review/development or which has not been previously seen by risk management; it is accompanied by a revision copy
- contains non-standard affirmative action/equal opportunity language which has been reviewed or developed by contract compliance and which has not been changed since that review/development
- contains non-standard affirmative action/equal opportunity language which has been changed since the earlier review/development by contract compliance or which has not been previously seen by contract compliance; it is accompanied by a revision copy¹

Date: 6 March 2015

Signed: _____



Telephone Number: 608-283-2911

Print Name: Rich McVicar

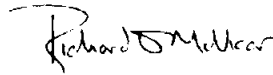
MAJOR CONTRACTS REVIEW (DCO Sect. 25.20) This review applies only to contracts which both exceed \$100,000 in disbursements or receipts and which require county board review and approval.

EXECUTIVE SUMMARY *(Attach additional pages, if needed).*

1. **Department Head** Contract is in the best interest of the County.
Describe any deviations from the standard contracting process and any changes to the standard Purchase of Services Form Agreement.

Date: 6 March 2015

Signature: _____



2. **Director of Administration** Contract is in the best interest of the County.
Comments:

Date: 3/10/15

Signature: _____



3. **Corporation Counsel** Contract is in the best interest of the County.
Comments:

Date: 3/9/15

Signature: _____



¹A revision copy is a copy of the contract which shows the changes from the standard contract or previously revised/developed contract my means of overstrikes (indicating deletions from the standard language) and underlining (showing additions to the standard language).

**AMENDMENT NO. 6
TO SYSTEM PURCHASE AGREEMENT
BETWEEN
HARRIS CORPORATION, ACTING THROUGH ITS RF COMMUNICATIONS DIVISION,
AND
THE COUNTY OF DANE, WISCONSIN**

THIS AMENDMENT NO. 6 (“Amendment”) is made and entered into this ____ day of March, 2015, by and between **THE COUNTY OF DANE, WISCONSIN** (“County”) and **HARRIS CORPORATION**, a Delaware corporation acting through its RF Communications Division (“Provider”).

Recitals:

WHEREAS, the County and Provider previously entered into that certain System Purchase Agreement dated February 7, 2011, as previously amended (collectively, the “Agreement”) for the provision of the System by Provider to the County (a radio communications system as more particularly described in the Agreement and the Statement of Work attached to the Agreement). Unless specifically defined in this Amendment, capitalized words shall have the meaning set forth in the Agreement.

WHEREAS, the original System consisted of 5 subsystems: (1) the Countywide VHF Simulcast Digital P25 Trunking Subsystem (the “P25 Subsystem”); (2) the VHF Conventional Mutual Aid Subsystem (the “Mutual Aid Subsystem”); (3) the Countywide VHF Tone and Voice Paging Subsystem (the “Paging Subsystem”); (4) the UHF Siren Control System (the “Siren Control System”); and (5) the VHF Analog Tactical Subsystem (the “Analog Tactical Subsystem”).

WHEREAS, the County and Provider have agreed to expand and modify the System including, without limitation, by making the following modifications: (1) the P25 Subsystem will be expanded from 8 Tower Sites to 11 Tower Sites; (2) the Tower Sites used in the Mutual Aid Subsystem will be changed; (3) the Paging Subsystem will be expanded with two additional Tower Sites; and (4) the Tower Sites and Hardware used in the Analog Tactical Subsystem will be changed. The installation work and testing set forth in the Statement of Work to be performed for the Siren Control System has been performed and no additional installation work and testing is to be performed. The System expansion and modification work to be performed is set forth in the expansion statement of work which consists of the documents set forth in **Exhibit A-1** attached to this Amendment (the “Expansion Statement of Work”).

NOW, THEREFORE, WITNESSETH, that for and in consideration of the mutual promises contained herein and other good and valuable consideration, the sufficiency and receipt of which is hereby acknowledged, County and Provider amend the Agreement as follows:

1. **Recitals** – The Recitals set forth above are incorporated in this Amendment by reference.
2. **Scope of Work** – Section 2 of the Agreement, Scope of Work, is amended to state that the additional work to be provided by Provider to deliver the System as expanded and modified in this Amendment is set forth in the Expansion Statement of Work. The Project Schedule, including the scheduling of installation and testing as well as possible phasing of the work, will be discussed and finalized during the Customer Design Review. If the parties mutually agree

during the Customer Design Review to convert the delivery of the System (as expanded and modified in this Amendment) into a two phase project, Provider will provide the additional labor and services to be performed by its personnel for the phasing tasks at Provider's expense. In addition, if the parties mutually agree during the Customer Design Review to convert the delivery of the System (as expanded and modified in this Amendment) into a two phase project, the payment plan in Section 6(b) will be amended to include a separate milestone payment for the installation and delivery of the Work to be provided in the first phase of the two phase project.

3. **Delivery, Title and Risk of Loss** – Section 5.A of the Agreement, Delivery, Title and Risk of Loss, is amended by inserting the following additional sentence at the end of Section 5.A:

Prior to the installation of the Hardware and the passage of title and risk of loss, Provider shall be responsible, at its expense, for the warehousing and storage of the Additional Hardware (as hereinafter defined) in a secured facility.

4. **Price** – Section 6 of the Agreement, Price, is amended to include the following language:

a. **Amended Total System Agreement Price** - The Total System Agreement Price to be paid by County to Provider for all of the Hardware and Services set forth in the Agreement (including all of the changes through Amendment 5 but not including any of the changes in this Amendment 6) is \$ 18,251,234.40 (the "Amended Total System Agreement Price").

b. **System Expansion Price** - The price for the additional Hardware and Services to be furnished, delivered and installed by Provider to deliver the System as modified and expanded in this Amendment 6 is \$6,680,424 as more particularly described in **Exhibit B-1** attached to this Amendment (the "System Expansion Price").

5. **Frequency Support** – Section 8.F of the Agreement, Frequency Support and Frequency Changes, is amended by deleting all of the language in Section 8.F except for the first sentence.

6. **Payments** - Section 9 of the Agreement, Payments, is amended as follows:

a. **Amended Total System Agreement Price Payments** – The \$18,251,234.40 Amended Total System Agreement Price includes \$2,992,498 to be paid for Software FX and maintenance services after final Acceptance of the System. The remaining portion of the Amended Total System Agreement Price is \$15,258,736.40. The final 10% balance of the Amended Total System Agreement Price, \$1,525,873.64, will be paid by County to Provider upon final Acceptance of the System as expanded and modified in this Amendment.

b. **System Expansion Price Payments** – The System Expansion Price will be paid by County to Provider using the following milestone payments:

(1) 15% will be paid by County to Provider within 60 days after this Amendment is fully signed;

- (2) 10% will be paid by County to Provider upon completion of the CDR for the System as expanded and modified in this Amendment;
- (3) 25% will be paid by County to Provider when the additional Hardware for the System (as expanded and modified in this Amendment) that is listed in **Attachment I-1**, the Expanded System Equipment List in the Expansion Statement of Work (the "Additional Hardware"), has been manufactured and delivered by Provider to Madison, WI;
- (4) 25% will be paid by County to Provider upon completion of the installation of the Additional Hardware;
- (5) 10% will be paid by County to Provider upon successful completion of the Acceptance Tests set forth in the Expansion Statement of Work; and
- (6) 15% will be paid by County to Provider upon final Acceptance of the System as expanded and modified in this Amendment.

Partial payments will be permitted, in mutually agreed upon amounts, if substantially all of the Additional Hardware has been manufactured and delivered by Provider to Dane County and/or if substantially all of the Additional Hardware has been installed by Provider.

7. **Testing and Acceptance** - Section 13 of the Agreement, Testing and Acceptance, is amended to provide that some of the Acceptance Tests for the System for the System have already been performed and completed. The Acceptance Tests that remain to be performed prior to Acceptance of the applicable portions of the System are set forth in **Attachment E-1** in the Expansion Statement of Work. Draft acceptance test plans have been provided to the County and will be reviewed and mutually agreed upon during the Customer Design Review period. Additional items to be tested may be proposed during the Customer Design Review period and, as mutually agreed upon, either incorporated into the current draft acceptance test plans or into new acceptance test plans,

8. **Coverage** – Section 15 of the Agreement, Coverage, is amended by deleting in its entirety the language in Section 15 of the Agreement and replacing it with the following:

Provider's representations and coverage guarantees describing the distance at which usable radio signals will be transmitted and received by Hardware supplied hereunder are set forth in Table 1 on Page 9 of the System Description, **Attachment A-1-1** to this Amendment which is a part of the Expansion Statement of Work. The coverage guarantees will be tested and verified using the coverage Acceptance Test Plans listed in **Exhibit A-1**.

9. **Warranty and Maintenance** – Section 16.A of the Agreement, Warranties for Hardware and Services, is amended to provide that the warranty for all of the Infrastructure Hardware shall begin upon acceptance of the applicable Subsystem and continue until 12 months from the date of final Acceptance of the entire System. Section 16.I of the Agreement is amended by inserting the following new sentence: Maintenance of the Additional Hardware items delivered under this Amendment will be provided by Provider, at Provider's expense, for the first 5 years of the term of the System Maintenance Agreement and in accordance with the provisions of the System Maintenance Agreement.

10. Interference – Section 17 of the Agreement, Interference, is deleted in its entirety and replaced with the following:

Radio system coverage and performance can be subject to degradation due to anomalous propagation and interference beyond the reasonable control of Provider. Provider cannot be responsible for degradation or disruption of Service resulting from interference caused by: (i) improper design, installation, or operation of radio systems installed or operated by others; (ii) errors in frequency coordination by APCO, AASHTO or NTIA or caused by any other unlisted frequencies; (iii) natural phenomena or (iv) other interference over which the Provider has no reasonable control. In the event of a case of degradation or disruption of Service due to interference occurring prior to final System Acceptance, Provider will provide engineering support and mitigation planning to County at Provider's expense to support County and the resolution of the interference issue. In the event of a case of degradation due to interference occurring after final System Acceptance, Provider will provide engineering support and mitigation planning to County at County's expense to support County's efforts in resolving the interference issue.

11. Change Requests – Provider has previously prepared and submitted to County Change Request Forms for Adjustment Numbers 1 through 13 ("Change Requests 1-13"). All of the materials, services and work covered by Change Requests 1-13 have already been addressed and resolved in this Amendment and other prior Agreement amendments and no other Change Requests have been prepared by Provider.

[End of Text This Page]

12. **Full Force and Effect** - Except as modified in this Amendment, all of the terms, conditions and provisions of the Agreement shall remain unchanged and in full force and effect.

IN WITNESS WHEREOF, County and Provider have executed this Amendment on the day and year written below.

COUNTY

COUNTY OF DANE, WISCONSIN

WITNESS:

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Date: _____

WITNESS:

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Date: _____

PROVIDER

HARRIS CORPORATION, acting through its RF Communications Division

WITNESS:

By: Paul C. Wilson

By: [Signature]

Name: PAUL C. WILSON

Name: John White

Title: DIRECTOR, U.S. CONTRACTS

Date: 5 MARCH 2015

EXHIBIT A-1

EXPANSION STATEMENT OF WORK

The work to be performed to complete the installation and testing of the System, as expanded and modified in this Amendment, is described in the following documents which shall be collectively known as the "Expansion Statement of Work":

Attachment A-1-1: Expanded System Description – Describes the configuration, design considerations, system highlights, and equipment features of the expanded and modified System and sub-systems.

Attachment C-1: Expanded System Project Schedule - Shows the project schedule and key milestones for the delivery, installation and testing of the System as expanded and modified in this Amendment. Final Acceptance of the System as expanded and modified in this Amendment will occur on or before November 30, 2016.

Attachment D-1: Expanded System Implementation Plan – Describes the methods and procedures the Provider will use to deliver and implement the System as expanded and modified in this Amendment. The Implementation Plan has a list of the site deliverables and tables describing the site development work remaining to be done at each Tower Site.

Attachment E-1: Expanded System Acceptance Test Plans - Describes the methods and procedures that will be used to run the remaining acceptance tests for the System and sub-systems (certain Acceptance Tests were previously performed). The tests to be performed will include the Site inspections, the remaining functional tests that demonstrate the functionality of the System as expanded and modified in this Amendment as well as the user radio features and functions and finally the remaining coverage tests that will be performed. The remaining Acceptance Tests to be performed upon completion of the installation of the Additional Hardware for the System as expanded and modified in this Amendment include:

- a. **Addendum E-1-1** - Functional testing for the P25 Subsystem and the Mutual Aid Subsystem;
- b. **Addendum E-1-2** - Coverage testing for the P25 Subsystem;
- c. **Addendum E-1-3** - Coverage testing for the Mutual Aid Subsystem;
- d. **Addendum E-1-4** - Functional and coverage testing for the Paging Subsystem;
- e. **Addendum E-1-5** - Functional testing for the Analog Tactical Subsystem; and
- f. **Addendum E-1-6** – System Reliability Test.

Attachment F-1: Expanded System Maps and Drawings – Includes the following 4 coverage maps and drawings for the expanded and modified P25 Subsystem design and the 2 coverage maps and drawings for the expanded and modified Mutual Aid Subsystem design:

P25 Subsystem:

RAPTR Version 25.3.307 (2/17/2015) – Figure 01 Portable Talk Out, 6 dB building loss

RAPTR Version 25.3.307 (2/17/2015) – Figure 02 Portable Talk Back, 6 dB building loss

RAPTR Version 25.3.307 (2/17/2015) – Figure 03 Portable Talk Out, 16 dB building loss

RAPTR Version 25.3.307 (2/17/2015) – Figure 04 Portable Talk Back, 16 dB building loss

Mutual Aid Subsystem:

RAPTR Version 26.0.310 (3/02/2015) – Figure 01 Mutual Aid PTO (Portable Talk Out) - 3 Site Design

RAPTR Version 26.0.310 (3/02/2015) – Figure 2B Mutual Aid PTB (Portable Talk Back) - 5 Site Design

Updated coverage maps and drawings for the Paging Subsystem (1 map), the Analog Tactical Subsystem (2 maps) and the Point to Point subsystem (1 map) will be provided during the Customer Design Review Period. In addition to the coverage maps, Provider will deliver a project sheet for each coverage map to County during the Customer Design Review Period (similar to the project sheets delivered in 2010) and containing project information, system parameters, site parameters and site ID information. A final set of all drawings inclusive of all red-line markings will be presented at final System Acceptance.

Attachment G-1: Expanded System Responsibility Matrix - The Responsibility Matrix includes a table of the County and Provider responsibilities to be performed to complete the delivery and installation of the System as expanded and modified in this Amendment.

Attachment I-1: Expanded System Equipment List - Includes a list of the Additional Hardware to be provided for the expanded and modified System.

Please note that all of the training required to be provided by Provider and set forth in **Attachment B**, Training, attached to the original Statement of Work has been completed except for the Dispatcher Training.

The Expansion Statement of Work supplements and amends the original Statement of Work and is intended to identify and address all of the work to be performed to complete the installation and testing of the System, as expanded and modified in this Amendment. The technical issues specifically covered by this Amendment and set forth in **Exhibit A-2** attached to this Amendment will be covered by work to be performed as part of the Expansion Statement of Work. In the event of a conflict between the Statement of Work and the Expansion Statement of Work, the terms and provisions in the Expansion Statement of Work shall supersede and take precedence over the terms and provisions set forth in the Statement of Work attached to the Agreement. The parties will work together during the Customer Design Review period to identify incomplete items from the original Agreement Statement of Work.

EXHIBIT A-2

EXPANSION STATEMENT OF WORK TECHNICAL ISSUES

The technical issues set forth below will be specifically addressed and covered by work to be performed as part of the Expansion Statement of Work:

1. **SR-10A Upgrade** – Provider shall furnish, deliver and install, at its expense, the Software for SR-10A upgrade for all Infrastructure Hardware included in the System as expanded and modified in this Amendment. Provider shall furnish, deliver and install, at the County's expense as set forth in **Exhibit B-1**, the additional Hardware and associated engineering Services needed for the SR-10A upgrade.
2. **IPCP Failover** – Provider will provide, at Provider's expense, both the SR – 10 A software and the additional Hardware needed to provide the new "hot standby" IPCP feature enhancement which performs automatic failover without human intervention.
3. **ISSI** – Provider has previously delivered and installed the System interoperability gateway Hardware that Provider is required to provide. Harris will provide the warranty set forth in Section 16.A for its ISSI gateway Hardware. If the State of Wisconsin's radio communications equipment provider delivers and installs the hardware and software needed for interoperability of the State of Wisconsin's system with the County's System before final Acceptance of the County's System, Provider will use commercially reasonable efforts to assist and finalize the implementation of the ISSI gateway between the two systems including the demonstration that the following functions and features are supported across connected systems: (a) caller ID; (b) group calls (confirmed and unconfirmed); (c) encrypted calls; (d) emergency; (e) registration/de-registration; (f) automatic group registration; (g) fault and performance traps at the network manager; and (h) real-time and historical call activity.
4. **UW Madison Backup Connectivity** – Provider will provide to the County, at Provider's expense, the UW Madison firewall (UW – ASA5505 Firewall Access for Backup NOC and VPN Access).
5. **BeOn Licenses** – Provider will provide to the County, at Provider's expense, 440 BeOn phone client licenses and 5 Windows PC client licenses.

EXHIBIT B-1
SYSTEM EXPANSION PRICE

Amendment 6 Exhibit B-1 Pricing FINAL.xlsx

Item	Price
Analog Tactical - Add repeater and convert existing at 8 sites	\$ [REDACTED]
AT DeForest	\$ [REDACTED]
AT Stoughton	\$ [REDACTED]
AT WJJO	\$ [REDACTED]
Mutual Aid Relocation	\$ [REDACTED]
DeForest P25, RF, and Antenna System	\$ [REDACTED]
DeForest Tower and Site Development	\$ [REDACTED]
Rockdale P25, RF, and Antenna System	\$ [REDACTED]
Rockdale Tower and Site Development	\$ [REDACTED]
Stoughton P25, RF, and Antenna System	\$ [REDACTED]
Stoughton Tower and Site Development	\$ [REDACTED]
WJJO P25, RF, and Antenna System	\$ [REDACTED]
WJJO Tower and Site Development	\$ [REDACTED]
Microwave Addition	\$ [REDACTED]
Paging DeForest	\$ [REDACTED]
Paging Stoughton	\$ [REDACTED]
SR10A Upgrade	\$ [REDACTED]
Symphony Console Upgrade (27 total)	\$ [REDACTED]
New Symphony Consoles Auxiliary Hardware	\$ [REDACTED]
CR 12 - WISMARC1 Equipment and Services	\$ [REDACTED]
Total System Expansion Price	\$ 6,680,424

Notes:

1. County shall have the option to purchase up to 8 new Symphony consoles at [REDACTED] per console. This option must be elected on or before the earlier of: (a) the end of the Customer Design Review ("CDR") period; or (b) June 15, 2015. Any additional amounts to be paid for the new consoles, if any, shall not be considered part of the System Expansion Price and shall be paid by County within 30 calendar days after delivery of the consoles and receipt of Provider's invoice as set forth in Section 9.C of the Agreement. The new Symphony consoles will be part of the System (as expanded and modified in this Amendment) and subject to all of the terms and provisions of the amended Agreement including, without limitation, the applicable acceptance testing and warranty provisions.
2. If the parties decide, in writing, on or before the earlier of: (a) the end of the Customer Design Review ("CDR") period; or (b) June 15, 2015, that the delivery of the System (as expanded and modified in this Amendment) will not be converted into a two phase project, Provider will provide the County with a credit of [REDACTED] that County can apply toward and reduce the amount to be paid for the purchase of the new Symphony consoles.
3. If the County elects, in writing, on or before the earlier of: (a) the end of the Customer Design Review ("CDR") period; or (b) June 15, 2015, that the County does not want either: (a) a new shelter for the Brigham Tower site; and/or (b) a new generator for the Brigham Tower site, Provider will provide the County with a credit of [REDACTED] for the shelter and/or a credit of [REDACTED] for the generator that County can apply toward and reduce the amount to be paid for the purchase of the new Symphony consoles.
4. If the County elects, in writing, on or before the earlier of: (a) the end of the Customer Design Review ("CDR") period; or (b) June 15, 2015, that the County does not want to receive up to 220 of the 440 BeOn phone client licenses from Provider, Provider will provide the County with a credit of [REDACTED] per set of 5 licenses that the County elects not to receive up to a maximum of [REDACTED]. The County can apply the credit toward and reduce the amount to be paid for the purchase of the new Symphony consoles.

AMENDMENT A-1-1
SYSTEM DESCRIPTION

Dane County Radio System Amendment 6

Attachment A-1-1: System Description

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Dispatch Subsystem	7
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Systems and Architecture

The system design has been modified for the revised project as shown in Figure 1.

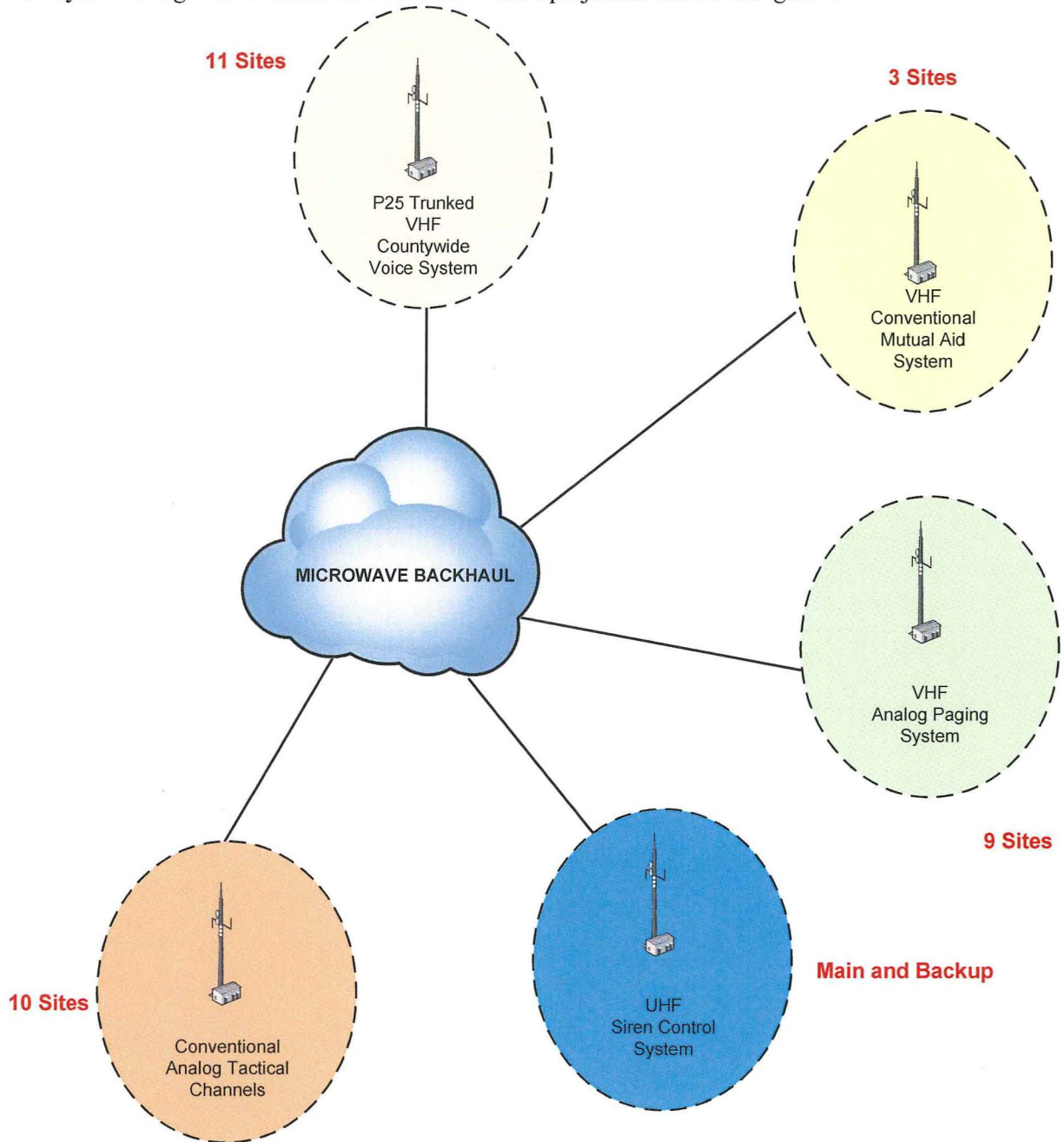


Figure 1: Dane County Interoperable Voice Radio Communications System - Revised

Network Management and Dispatch System

The Network Management system will be upgraded to the current SR10A system software release, and the functionality will be consistent with the original project, except as described in this document. The Network Switching Center is shown in Figure 2.

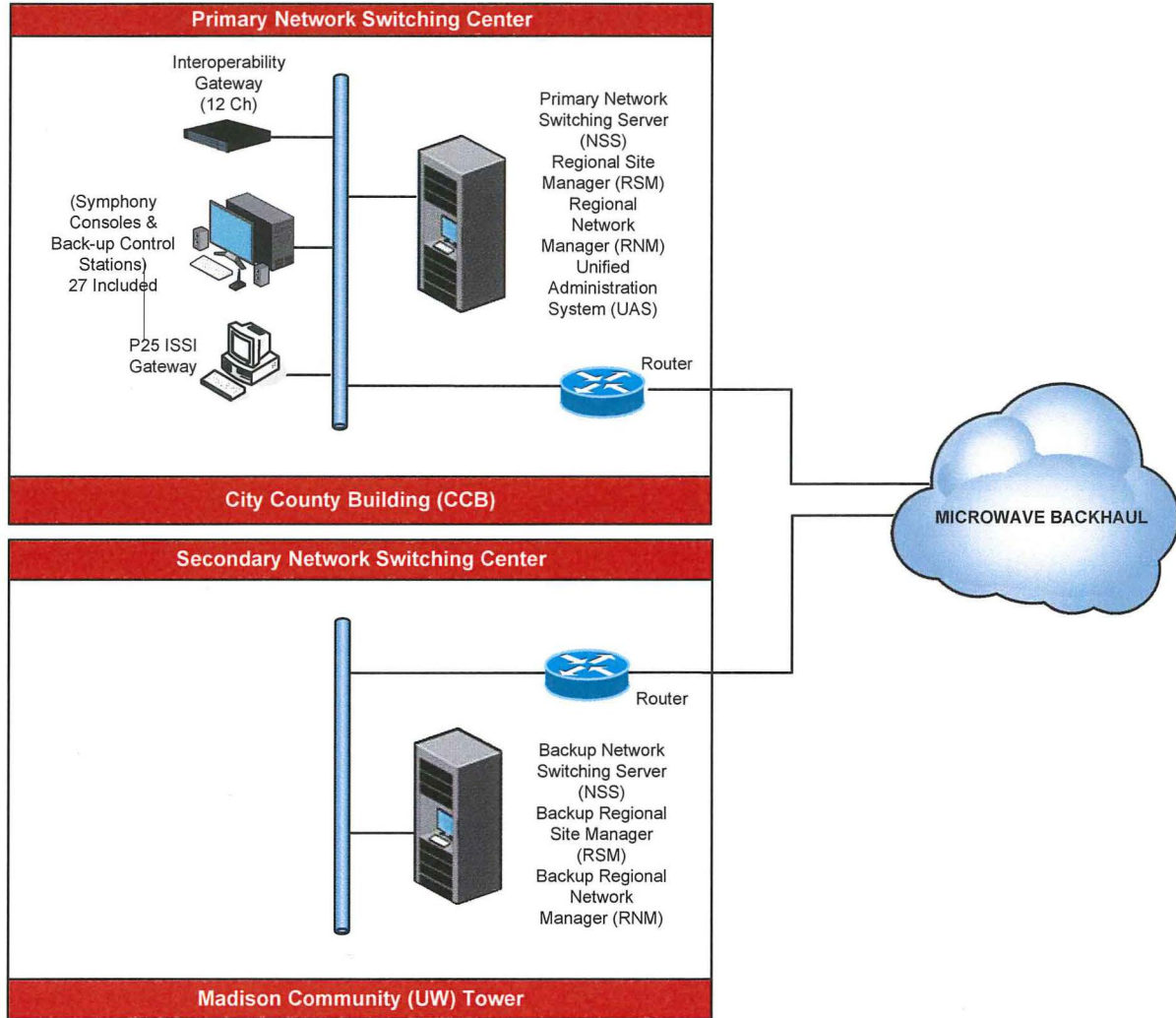


Figure 2: Dane County Network Switching Center – Revised

Digital P25 Trunking Subsystem

The P25 trunked radio system will be expanded from 8 to 11 sites. The new sites will be located at DeForest, City of Stoughton, and WJJO, and the existing Stoughton AT&T will be relocated to Rockdale. The expanded system design will maintain the countywide 95% service area coverage reliability at a delivered audio quality (DAQ) level of 3.4 for a portable radio used on-hip, in light buildings (6dB, P25 Phase 1) for system talk-in and talk-out. It will also include coverage guarantees as described in the revised coverage Acceptance Test Plan.

The design uses VHF MASTR V base stations that are provided today with P25 Phase 1 software and are upgradeable to the P25 Phase 2 TDMA mode of operation. The system block diagram in Figure 3, below, shows an overview of the VHF P25 system. The 11 VHF sites function together as a single simulcast system.

Coverage Guarantee

The original County-wide coverage guarantee is unchanged from the original contract. There is an additional coverage guarantee of 16 dB building loss (P25 Phase 1) in the identified boundaries near the areas of DeForest, Stoughton, Cambridge, and Deerfield as shown on the coverage maps provided by Harris. Grids will be tested specific to those areas for the 16 dB requirement.

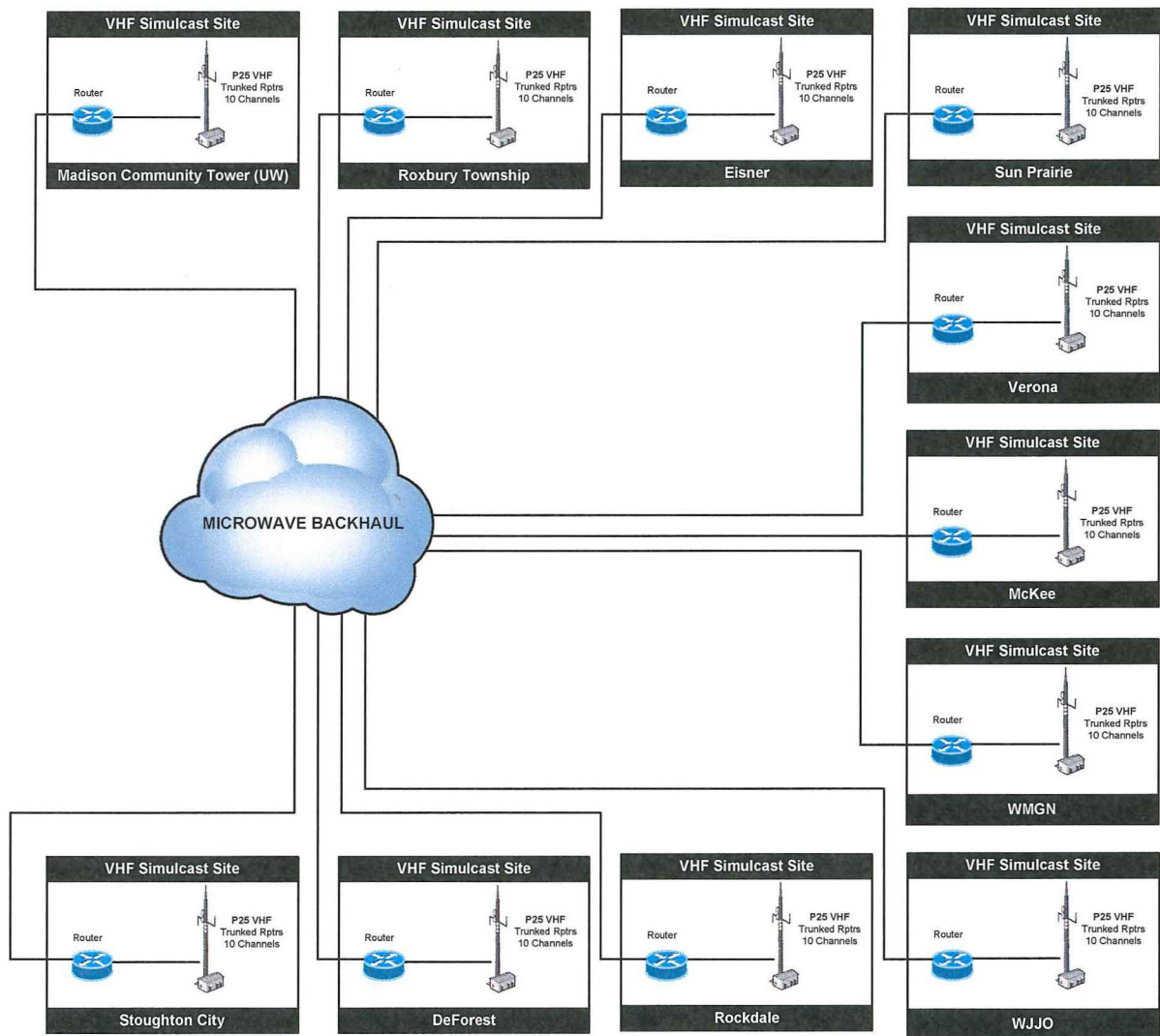


Figure 3: VHF Simulcast Digital P25 Trunking – Expanded System Block Diagram

Mutual Aid System

The revised mutual aid system includes relocation of the Roxbury site to Deerfield and the addition of a new TXRX site at Brigham. The Eisner site will become RX only and steer to the Brigham site. The Stoughton AT&T site will be relocated to Rockdale and become a RX only site steering to Deerfield.

Brigham Antenna Replacement - Two VHF antennas at 139' and 217' are scheduled for abandonment upon completion of the P25 system. Harris will provide equipment and services to replace these two antennas with two new, similar mutual aid antennas similar in size and function as the antennas to be abandoned. Use existing tower, shelter and T-1 lines for backhaul.

VHF Mutual Aid Channels

NAME	TX Freq	RX Freq	Sites
VCALL10	155.7525	155.7525	UW-Madison, Deerfield, Brigham, Eisner (RX), Stoughton City (RX)
VTAC12	154.4525	154.4525	UW-Madison, Deerfield, Brigham, Eisner (RX), Stoughton City (RX)
MARC1 & 2	151.280	151.280 / 153.845	UW-Madison, Deerfield, Brigham, Eisner (RX), Stoughton City (RX)
IFERN1	154.265	154.265	UW-Madison, Deerfield, Brigham, Eisner (RX), Stoughton City (RX)
VLAW31	155.475	155.475	UW-Madison, Deerfield, Brigham, Eisner (RX), Stoughton City (RX)
EMS-B	155.340	155.340	UW-Madison
Point to Point	155.370	155.370	Verona

Coverage Guarantee

A DAQ coverage test only will be performed since an RSSI test has practical limitations because of the shared use of the channels.

The revised Coverage Acceptance Test Plan will include 92% coverage for portable outdoor radios.

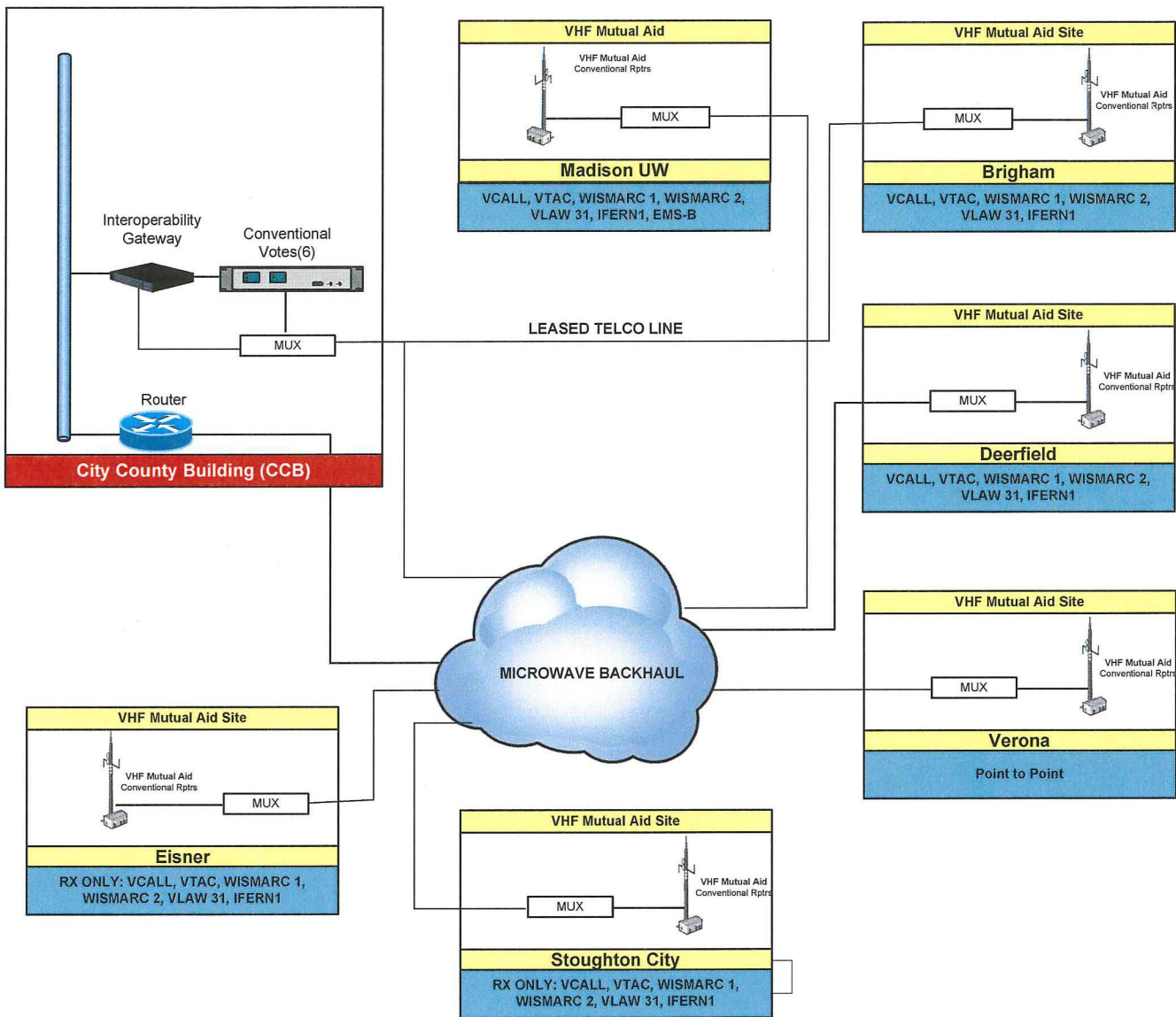


Figure 4: VHF Mutual Aid Subsystem – Revised System Block Diagram

Paging Subsystem

The paging system will be expanded with two additional sites: one at DeForest and one at Stoughton. The existing Stoughton AT&T site will be relocated to the Rockdale tower.

Coverage Guarantee

No change from original project. Harris will perform Functional Acceptance Testing on the new portions of the paging system and perform Coverage Acceptance Testing on the paging system.

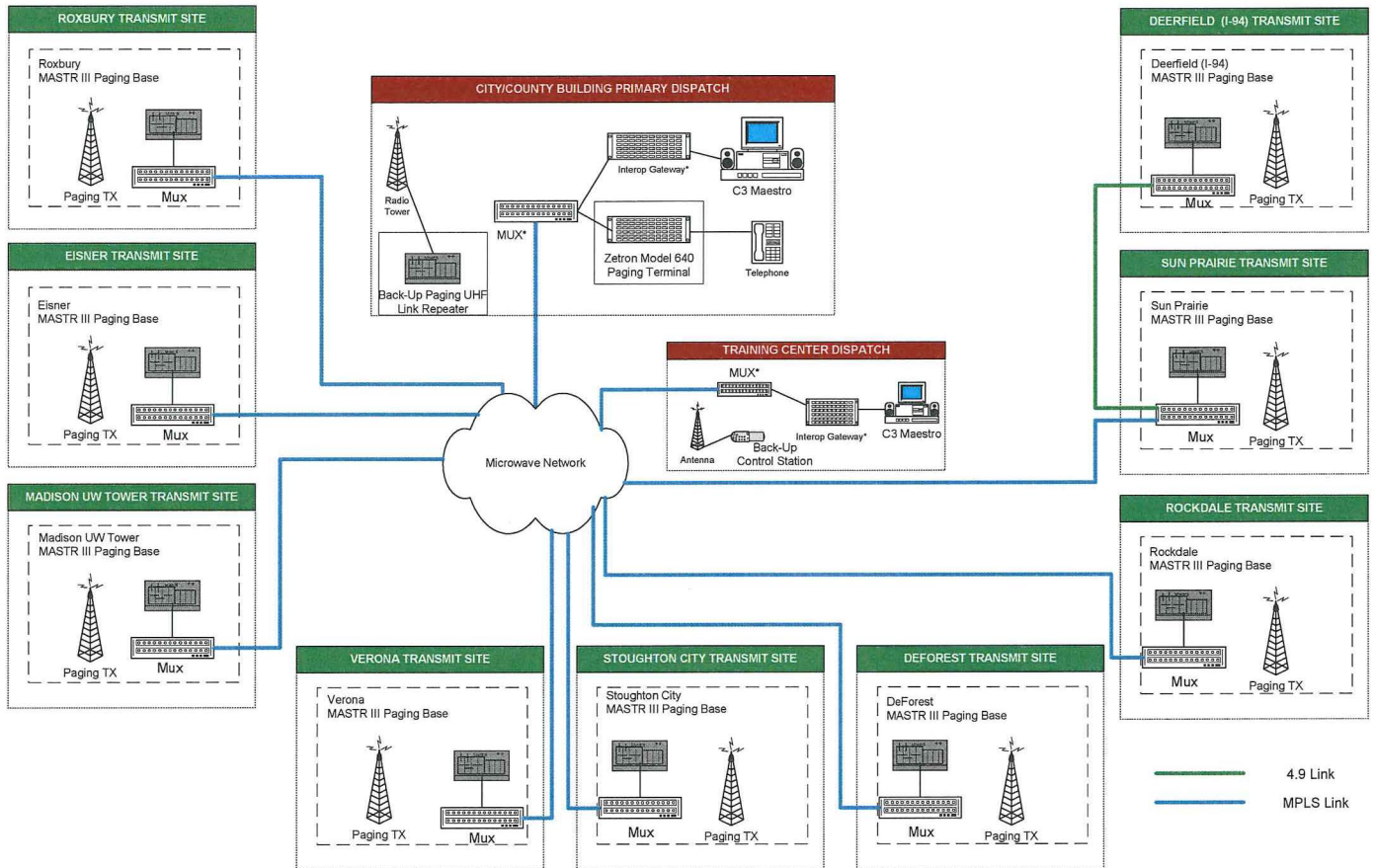


Figure 5: Countywide VHF Paging Subsystem- System Block Diagram

Radio Interconnection Subsystem for the Dane County Siren System

This portion of the original contract was completed and is not part of the revised scope.

Analog Tactical Subsystem

The analog tactical system will be modified to include the sites shown in Figure 6, and each location will be modified to include two repeated basestations. The voted receive, transmitter steered design has been expanded from the original project.

Coverage Guarantee

No change from original project. Harris will perform Functional Acceptance Testing on the new portions of the analog tactical system.

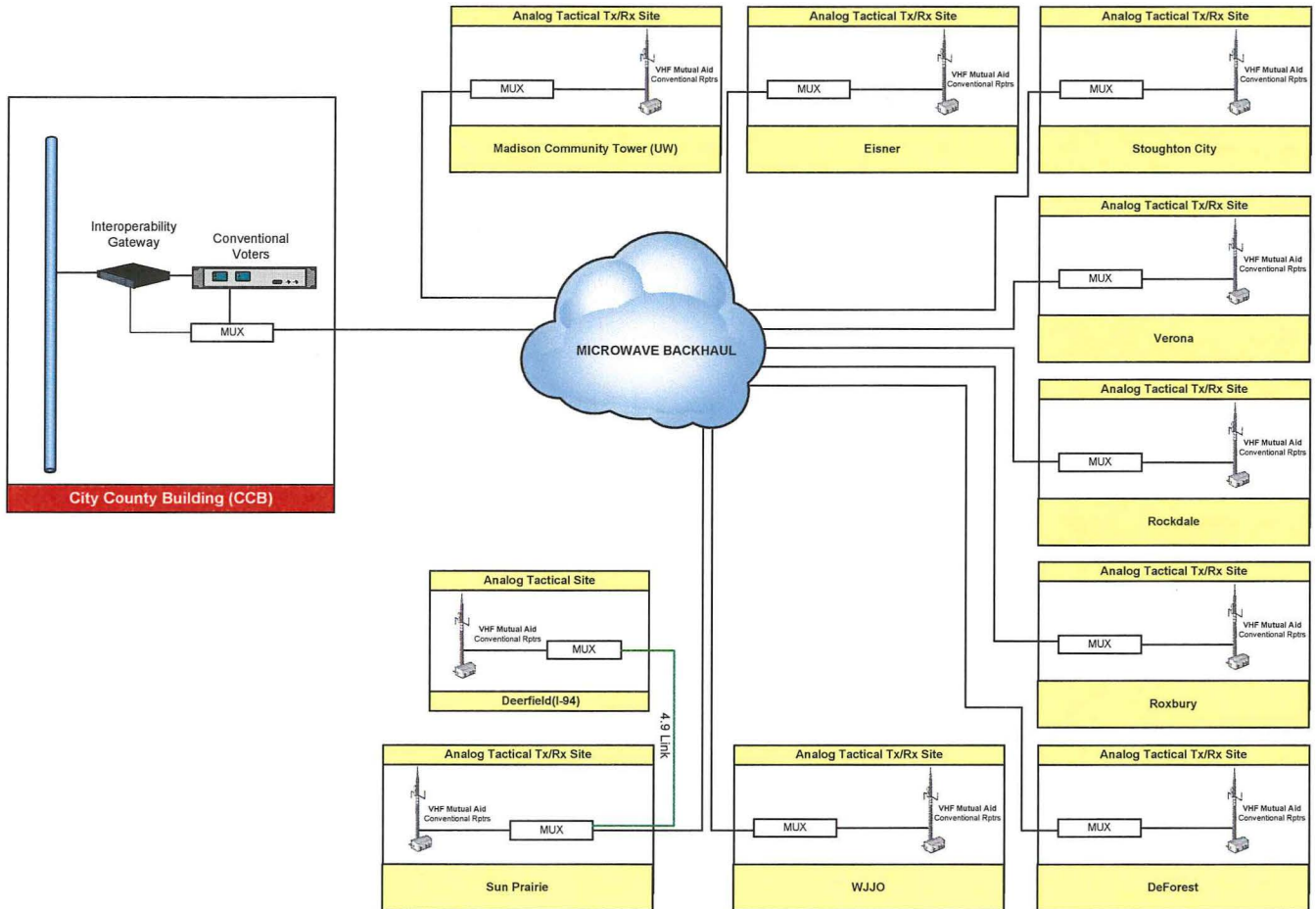


Figure 6: VHF Analog Tactical Subsystem - System Block Diagram

Dispatch Subsystem

The 27 Maestro consoles will be upgraded to Symphony consoles. Once the SR10A upgrade and other new site work has been completed, the Functional Acceptance Test will be re-performed on the Dispatch Subsystem equipment.

Zetron iRIM solution:

The Zetron iRIM equipment has been installed. Once the SR10A upgrade and other new site work has been completed, the Functional Acceptance Test will be re-performed on the Zetron iRIM solution.

Multi-viewer Display Solution

The Multi-viewer Display Solution will be connected to the City of Madison MCC7500 as part of the Symphony upgrade. Once the SR10A upgrade and other new site work has been completed, the Functional Acceptance Test will be re-performed on the Multi-viewer Display.

Coverage Compliance of Subsystems

Except as specifically provided below, the minimum coverage guarantees from the original agreement are retained. P25 testing will be in Phase 1 mode only. Phase 2 operation is available but not guaranteed. The coverage guarantees were generated with 95% reliability and detailed coverage maps showing the site locations and coverage for each subsystems as shown in the Coverage Maps. For each prediction, project sensitivity was established at [REDACTED], hip loss was [REDACTED], and head loss was [REDACTED]. Project sensitivity for paging was [REDACTED] to account for the lower antenna gain of a pager.

Table 1: Coverage Compliance of Dane County Subsystems

System	Coverage Type	Boundary	Guarantee	Status
VHF Simulcast Digital P25 Trunked Subsystem	Portable Indoor 6 dB Loss	GAOC ¹	95% DAQ3.4	To be retested
VHF Simulcast Digital P25 Trunked Subsystem	Portable Indoor 16 dB Loss	16 dB Boundaries ²	95% DAQ3.4	To be tested
VHF Mutual Aid	Portable Outdoor	GAOC ¹	92% DAQ3.4	To be tested
VHF Mutual Aid (Point to Point & EMS-B)	Control Station (PtP) Mobile (EMS-B)	GAOC ¹	95% DAQ3.4	To be tested
Analog Tactical Subsystem	Portable Indoor 6 dB Loss	Incorporated Areas of Dane County	95% DAQ3.4	Completed
VHF Paging Subsystem	Indoor 12 dB Loss	GAOC ¹	95% DAQ3.4	To be retested

¹The Geographic Area of Concern (GAOC) is defined as:

- Dane County proper
- In Columbia County - Town of Leeds: S 1/2 21-23, 24-29, 31-36
- In Columbia County - Town of Hampden: 29-33
- In Jefferson County - Town of Lake Mills: 19, W 1/2 20, SW 1/4 28, NW 1/4 29, S 1/2 39, 30-33
- In Jefferson County - Town of Oakland: 1-10, 15-22, 27-34
- In Rock County - Town of Union: 4-7, N 1/2 8
- In Green County - Town of Brooklyn: 1-18, 20-24, N 1/2 25-27
- In Green County - Town of Exeter: 1-29, 33-36

²The 16 dB Boundaries shown on the P25 coverage maps as three rectangles have the following coordinates:

- | | | |
|---------------------------|---------------------------|---------------------------|
| • DeForest / Windsor area | • Stoughton Area | • Deerfield Area |
| 43dN 17' 19" 89dW 19' 18" | 42dN 57' 07" 89dW 10' 14" | 43dN 04' 53" 89dW 01' 43" |
| 43dN 11' 35" 89dW 17' 02" | 42dN 53' 33" 89dW 10' 15" | 42dN 58' 12" 88dW 58' 44" |
| 43dN 10' 35" 89dW 21' 16" | 42dN 53' 34" 89dW 15' 31" | 42dN 56' 59" 89dW 03' 34" |
| 43dN 16' 25" 89dW 23' 40" | 42dN 57' 08" 89dW 15' 30" | 43dN 03' 37" 89dW 06' 47" |

Site Selection

Four new sites have been added to the original design:

- DeForest: new tower at State Patrol, but Harris will evaluate existing tower as option.
- Stoughton City: new tower, but Harris will evaluate existing water tank as option.
- WJJO: existing tower
- Rockdale: new tower, but Harris will evaluate existing tower as option.

One site has been removed from the original design:

- Stoughton AT&T

Traffic Calculations

No change from original project.

Frequency Analysis

The expanded system includes currently licensed frequencies, supplemented by replacement frequencies being obtained from the NTIA (highlighted below in yellow). The recommended frequency set is shown in Table 2.

Table 2: Dane County Frequency

P25 Ch #	Station TX	Station RX
1	154.82250	159.30750
2	154.83750	159.11250
3	155.52750	159.06000
4	155.18250	159.27750
5	154.97250	159.21000
6	154.12250	158.77500
7	155.24250	158.82000
8	155.16750	158.74500
9	172.55000	164.42500
10	172.58750	164.57500

Fire Gnd	Station TX	Station RX
1	171.3500	166.0250
2	172.0750	165.0500

NTIA Spare	Station TX	Station RX
1	172.1000	164.3750

Paging	Station TX
1	155.8425

Dane County Backhaul Network Map

The revised backhaul network is shown in Figure 7. The existing management system will be retained, and the links will be expanded as shown by the red and blue lines below. Functional verification tests will be performed on added and changed links, and the reliability of the entire microwave network will be validated.

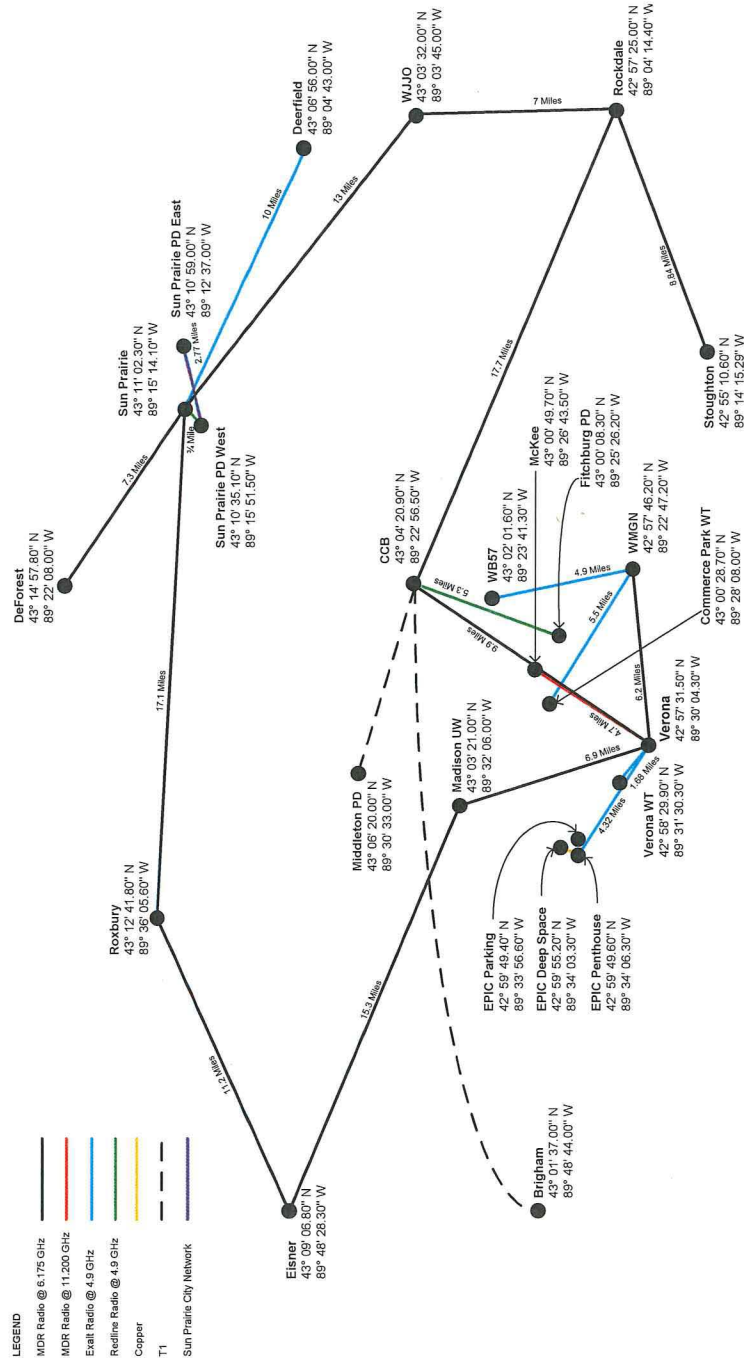


Figure 7: Dane County Backhaul Network

ATTACHMENT C-1
PROJECT SCHEDULE

Attachment C-1 Project Schedule Amend 6 v007.mpp

ID	Resource Names	Task Name	Duration	Start	Finish	Predecessors	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1		DANE COUNTY RADIO PROJECT	433 days	Mon 4/6/15	Wed 11/30/16																							
2		Customer Design Review	35 days	Mon 4/6/15	Fri 5/22/15																							
3	Dane	Notice to Proceed	0 days	Mon 4/6/15	Mon 4/6/15																							
4	Dane	Provide CDR preparation schedule	1 day	Tue 4/7/15	Tue 4/7/15																							
5	Harris	Prepare for CDR	4 wks	Mon 4/6/15	Fri 5/1/15																							
6	Harris	Present CDR	2 wks	Mon 5/4/15	Fri 5/15/15																							
7	Harris	Approve CDR	1 wk	Mon 5/18/15	Fri 5/22/15																							
8	Dane																											
9		Licensing	195 days	Mon 4/6/15	Fri 11/1/16																							
10		P25 Frequencies	195 days	Mon 4/6/15	Fri 11/1/16																							
11	Harris	Prepare License Applications	2 wks	Mon 4/6/15	Fri 4/17/15																							
12	Harris	Submit replacement frequencies to NTIA	1 wk	Mon 4/20/15	Fri 4/24/15																							
13	Dane	New frequencies available for use	0 days	Fri 1/1/16	Fri 1/1/16																							
14	Dane																											
15		Site Development	242 days	Mon 4/6/15	Tue 3/8/16																							
16		WJJO	138 days	Mon 4/6/15	Wed 10/14/15																							
17	Harris	Perform Structural Analysis	4 wks	Mon 4/6/15	Fri 5/1/15																							
18	Harris	Verify structural analysis requires no tower mods	1 day	Mon 5/4/15	Mon 5/4/15																							
19	Harris	Prepare License and Permit Applications	2 wks	Tue 5/5/15	Mon 5/18/15																							
20	Harris	Submit Applications	1 wk	Tue 5/19/15	Mon 5/25/15																							
21	Dane	Application Processing	8 wks	Tue 5/26/15	Mon 7/20/15																							
22	Dane	Notice to Proceed	0 days	Mon 7/20/15	Mon 7/20/15																							
23	Dane	Construct Foundation for Shelter	5 days	Tue 8/4/15	Mon 8/10/15																							
24	Harris	Offload and set Shelter	1 day	Fri 9/18/15	Fri 9/18/15																							
25	Harris	Install Cable Bridge	1 day	Mon 9/21/15	Mon 9/21/15																							
26	Harris	Construct Ground System around Shelter	1 wk	Mon 9/21/15	Fri 9/25/15																							
27	Harris	Construct Ground System around Shelter	1 day	Mon 9/21/15	Fri 9/25/15																							
28	Harris	Install electrical System to Shelter	3 days	Mon 9/28/15	Wed 9/30/15																							
29	Harris	Install DC Plant	1 day	Thu 10/1/15	Thu 10/1/15																							
30	Harris	Compound - Fence, Weed Barrier, Gravel, Cleanup	2 wks	Thu 10/1/15	Wed 10/14/15																							
31	Harris	Rockdale	222 days	Mon 4/6/15	Tue 2/9/16																							
32	Harris	Perform NEPA and SHPO studies	6 wks	Mon 4/6/15	Fri 5/15/15																							
33	Harris	Prepare License and Permit Applications	2 wks	Mon 5/18/15	Fri 5/29/15																							
34	Dane	Submit Applications	1 wk	Mon 6/1/15	Fri 6/5/15																							
35	Dane	Application Processing	20 wks	Mon 6/8/15	Fri 10/23/15																							
36	Dane	Notice to Proceed	0 days	Fri 10/23/15	Fri 10/23/15																							
37	Harris	Pour tower foundation	4 wks	Mon 10/26/15	Fri 11/20/15																							
38	Harris	Construct new 320' tower	10 days	Thu 12/31/15	Wed 1/13/16																							
39	Harris	Construct Foundation for Shelter	5 days	Mon 11/23/15	Fri 11/27/15																							
40	Harris	Offload and set Shelter	1 day	Thu 1/14/16	Thu 1/14/16																							
41	Harris	Install Cable Bridge	1 day	Fri 1/15/16	Fri 1/15/16																							
42	Harris	Construct Ground System around Shelter	1 wk	Fri 1/15/16	Thu 1/21/16																							
43	Harris	Install electrical System to Shelter	3 days	Fri 1/22/16	Tue 1/26/16																							
44	Harris	Install DC Plant	1 day	Wed 1/27/16	Wed 1/27/16																							
45	Harris	Compound - Fence, Weed Barrier, Gravel, Cleanup	2 wks	Wed 1/27/16	Tue 2/9/16																							
46		Stoughton City	232 days	Mon 4/6/15	Tue 2/23/16																							
47	Harris	Perform NEPA and SHPO studies	6 wks	Mon 4/6/15	Fri 5/15/15																							
48	Harris	Prepare License and Permit Applications	2 wks	Mon 5/18/15	Fri 5/29/15																							
49	Dane	Submit Applications	1 wk	Mon 6/1/15	Fri 6/5/15																							
50	Dane	Application Processing	20 wks	Mon 6/8/15	Fri 10/23/15																							
51	Dane	Notice to Proceed	0 days	Fri 10/23/15	Fri 10/23/15																							
52	Harris	Pour tower foundation	2 wks	Mon 11/23/15	Fri 12/4/15																							
53	Harris	Construct new 230' tower	10 days	Thu 1/14/16	Wed 1/27/16																							

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ID	Resource Names	Task Name	Duration	Start	Finish	Predecessors	5	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Qtr 4, 2015	Qtr 1, 2016	Qtr 2, 2016	Qtr 3, 2016	Qtr 4, 2016
54	Harris	Construct Foundation for Shelter	5 days	Mon 12/7/15	Fri 12/11/15	39,92																
55	Harris	Move Shelter from Stoughton AT&T	1 day	Thu 1/28/16	Fri 1/29/16																	
56	Harris	Install Cable Bridge	1 wk	Fri 1/29/16	Fri 2/5/16																	
57	Harris	Construct Ground System around Shelter	1 wk	Fri 1/29/16	Thu 2/4/16																	
58	Harris	Install electrical System to Shelter	3 days	Fri 2/5/16	Tue 2/9/16																	
59	Harris	Install DC Plant	1 day	Wed 2/10/16	Wed 2/10/16																	
60	Harris	Compound - Fence, Weed Barrier, Gravel, Cleanup	2 wks	Wed 2/10/16	Tue 2/23/16																	
61	Harris	DeForest	242 days	Mon 4/6/15	Tue 3/8/16																	
62	Harris	Perform NEPA and SHPO studies	6 wks	Mon 4/6/15	Fri 5/15/15																	
63	Harris	Prepare License and Permit Applications	2 wks	Mon 5/18/15	Fri 5/29/15																	
64	Dane	Submit Applications	1 wk	Mon 6/1/15	Fri 6/5/15																	
65	Dane	Application Processing	20 wks	Mon 6/8/15	Fri 10/23/15																	
66	Dane	Notice to Proceed	0 days	Fri 10/23/15	Fri 10/23/15																	
67	Harris	Pour tower foundation	2 wks	Mon 12/7/15	Fri 12/18/15																	
68	Harris	Construct new 180' tower	10 days	Mon 12/21/15	Wed 2/10/16																	
69	Harris	Construct Foundation for Shelter	5 days	Mon 12/21/15	Fri 12/25/15																	
70	Harris	Offload and set Shelter	1 day	Thu 2/11/16	Thu 2/11/16																	
71	Harris	Install Cable Bridge	1 day	Fri 2/12/16	Fri 2/12/16																	
72	Harris	Construct Ground System around Shelter	1 wk	Fri 2/12/16	Thu 2/18/16																	
73	Harris	Install electrical System to Shelter	3 days	Fri 2/19/16	Tue 2/23/16																	
74	Harris	Install DC Plant	1 day	Wed 2/24/16	Wed 2/24/16																	
75	Harris	Compound - Fence, Weed Barrier, Gravel, Cleanup	2 wks	Wed 2/24/16	Tue 3/9/16																	
76	Harris	Sun Prairie	30 days	Mon 4/6/15	Fri 5/15/15																	
77	Harris	Perform Structural Analysis	4 wks	Mon 4/6/15	Fri 5/1/15																	
78	Harris	Verify structural analysis requires no tower mods	10 days	Mon 5/4/15	Fri 5/15/15																	
79	Harris	Brigham	32 days	Mon 4/6/15	Tue 5/19/15																	
80	Dane	Apply for construction permit	4 wks	Mon 4/6/15	Fri 5/1/15																	
81	Dane	Notice to Proceed	0 days	Fri 5/1/15	Fri 5/1/15																	
82	Harris	Antenna replacement	2 days	Mon 5/4/15	Tue 5/5/15																	
83	Harris	Revise Electrical Service and Install DC Plant	10 days	Wed 5/6/15	Tue 5/19/15																	
84	Harris	Antenna Installation	116 days	Tue 9/22/15	Tue 3/1/16																	
85	Harris	WLJO (P25, AT)	10 days	Tue 9/22/15	Mon 10/5/15																	
86	Harris	Rockdale (P25, AT, Paging)	10 days	Mon 1/18/16	Fri 1/29/16																	
87	Harris	Stoughton City (P25, AT, Paging, MA RX)	12 days	Mon 2/1/16	Tue 2/16/16																	
88	Harris	DeForest (P25, AT, Paging)	10 days	Wed 2/17/16	Tue 3/1/16																	
89	Harris	Microwave Installation	31 days	Wed 3/9/16	Wed 4/20/16																	
90	Harris	Install MW antennas and equipment (Alcatel)	20 days	Wed 3/9/16	Tue 4/5/16																	
91	Harris	Verify path reliability, levels and alarms (Alcatel)	10 days	Wed 4/6/16	Tue 4/19/16																	
92	Harris	MW Sign-off	1 day	Wed 4/20/16	Wed 4/20/16																	
93	Dane	Mutual Aid Relocation	37 days	Mon 4/6/15	Tue 5/26/15																	
94	Dane	Provide leased line	10 days	Mon 5/4/15	Fri 5/15/15																	
95	Dane	Relocate Roxbury MA to Deerfield (complete)	15 days	Mon 4/6/15	Fri 4/24/15																	
96	Harris	Install Site Equipment at Brigham	5 days	Mon 5/18/15	Fri 5/22/15																	
97	Harris	Apply Power, set levels and parameters	1 day	Mon 5/25/15	Mon 5/25/15																	
98	Harris	Site Commissioning	1 day	Tue 5/26/15	Tue 5/26/15																	
99	Harris	System Installation	274 days	Mon 5/25/15	Thu 6/9/16																	
100	Harris	Order Equipment and Redesign Network	4 wks	Mon 5/25/15	Fri 6/19/15																	
101	Harris	Assemble and Stage Equipment in Lynchburg	8 wks	Mon 6/22/15	Fri 8/14/15																	
102	Harris	Deliver and Prepare Physically for Upgrade	20 days	Mon 8/17/15	Fri 9/11/15																	



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ID	Resource Names	Task Name	Duration	Start	Finish	Predecessors	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
107	Harris	NSC Upgrade	11 days	Mon 9/14/15	Mon 9/28/15																								
108	Harris	Install Secondary Network Switching Center	5 days	Mon 9/14/15	Fri 9/18/15 106																								
109	Harris	Install Primary Network Switching Center	1 day	Mon 9/21/15	Fri 9/25/15 108																								
110	Harris	Cutover to SR10A	6 days	Thu 4/21/16	Mon 9/28/15 109																								
111	Harris	Rockdale	3 days	Thu 4/21/16	Thu 4/28/16																								
112	Harris	Make existing connections at new site	2 days	Thu 4/21/16	Mon 4/25/16 94, 14, 106																								
113	Harris	Apply Power, set levels and parameters	1 day	Thu 4/28/16	Wed 4/27/16 112																								
114	Harris,Dan	Site Commissioning	11 days	Fri 4/29/16	Thu 4/28/16 113																								
115	Harris	WLJO	5 days	Fri 4/29/16	Fri 5/13/16																								
116	Harris	Install Site Equipment	5 days	Fri 4/29/16	Thu 5/5/16 114																								
117	Harris	Apply Power, set levels and parameters	1 day	Fri 5/6/16	Thu 5/12/16 116																								
118	Harris,Dan	Site Commissioning	11 days	Fri 5/13/16	Fri 5/13/16 117																								
119	Harris	Stoughton City	5 days	Mon 5/16/16	Mon 5/30/16																								
120	Harris	Install Site Equipment	5 days	Mon 5/16/16	Fri 5/20/16 118																								
121	Harris	Apply Power, set levels and parameters	1 day	Mon 5/23/16	Fri 5/27/16 120																								
122	Harris,Dan	Site Commissioning	8 days	Tue 5/31/16	Mon 5/30/16 121																								
123	Harris	DeForest	5 days	Tue 5/31/16	Thu 6/9/16																								
124	Harris	Install Site Equipment	2 days	Tue 5/31/16	Mon 6/6/16 122																								
125	Harris	Apply Power, set levels and parameters	1 day	Tue 6/7/16	Wed 6/9/16 124																								
126	Harris,Dan	Site Commissioning	23 days	Thu 6/9/16	Thu 6/9/16 125																								
127	Harris	Optimization	30 days	Tue 9/29/15	Thu 8/4/16																								
128	Harris	Network Switches-Console & Analog Tactical	20 days	Tue 9/29/15	Mon 11/9/15																								
129	Harris	Verify Switch and console performance	10 days	Tue 10/27/15	Mon 10/26/15 110																								
130	Harris	Verify Interop QW and IRIM	40 days	Fri 6/10/16	Thu 8/4/16																								
131	Harris	VHF P25 Simulcast	5 days	Fri 6/10/16	Thu 6/16/16 130,126																								
132	Harris	Connect MW and verify network	5 days	Fri 6/10/16	Thu 6/23/16 132																								
133	Harris	Set all levels & parameters	10 days	Fri 6/17/16	Thu 7/7/16 133																								
134	Harris	Set simulcast timing	20 days	Fri 6/24/16	Thu 8/4/16 134																								
135	Harris	Prepare for ATP test	5 days	Fri 8/5/16	Thu 8/11/16 135																								
136	Harris	Verify Analog Tactical Performance	46 days	Fri 8/5/16	Fri 10/7/16																								
137	Harris	Acceptance Testing	45 days	Fri 8/5/16	Thu 10/6/16																								
138	Harris	Coverage Tests	20 days	Fri 8/5/16	Thu 9/1/16 135																								
139	Harris	Perform BER/RSSI testing of P25 and MA	5 days	Fri 8/5/16	Thu 9/29/16 140																								
140	Harris	Perform DAQ of P25 and MA	5 days	Fri 8/5/16	Thu 10/6/16 141																								
141	Harris	Submit CATP results to Dane County	1 day	Fri 8/12/16	Thu 8/12/16 136																								
142	Harris	Functional Acceptance Tests	1 day	Fri 8/12/16	Mon 8/15/16 144																								
143	Harris	Review MW performance for each site and entire loop	1 day	Mon 8/15/16	Tue 8/16/16 145																								
144	Harris	Run Functional Test at a selected RF site.	1 day	Tue 8/16/16	Wed 8/17/16 146																								
145	Harris	Run Functional Test at Dispatch Center.	1 day	Wed 8/17/16	Thu 8/18/16 147																								
146	Harris	Run Functional Test with user equipment	0 days	Thu 8/18/16	Thu 8/18/16 148																								
147	Harris	Run functional test of AT	0 days	Thu 8/18/16	Thu 8/18/16 148																								
148	Harris	Submit Functional Test Results to County	0 days	Fri 9/23/16	Fri 9/23/16 151SF-2 wks																								
149	Harris	Submit Final Drawing Set to County	1 day	Fri 10/7/16	Fri 10/7/16 142,148																								
150	Dane	Dane County Approves ATP test results and Drawing Set	60 days	Thu 4/14/16	Thu 7/7/16 156SF-60 days																								
151	Dane	Radio Programming	5 days	Thu 9/29/16	Thu 10/6/16																								
152	Dane	Training	5 days	Thu 9/29/16	Thu 10/6/16																								
153	Dane	Dispatch Training (4 hour sessions at back-up Dispatch)	5 days	Thu 9/29/16	Thu 10/6/16																								
154	Harris	30-Day Burn-in	35 days	Mon 10/10/16	Sun 11/27/16																								
155	Harris	Test Group Setup with live legacy traffic	15 days	Mon 10/10/16	Fri 10/28/16 151																								



Attachment C-1 Project Schedule Amend 6 v007.mpp

ID	Resource	Task Name	Duration	Start	Finish	Predecessors	Qtr 1, 2015	Qtr 2, 2015	Qtr 3, 2015	Qtr 4, 2015	Qtr 1, 2016	Qtr 2, 2016	Qtr 3, 2016	Qtr 4, 2016
160	Dane	Burn In Execution	30 days	Fri 10/28/16	Sun 11/27/16	159								
161	Dane	Burn In Acceptance	0 days	Sun 11/27/16	Sun 11/27/16	160								
162														
163		Cutover	2 days	Mon 11/28/16	Tue 11/29/16									
164	Dane	Notify and prepare departments	1 day	Mon 11/28/16	Mon 11/28/16	161								
165	Dane	Cutover to new system.	1 day	Tue 11/29/16	Tue 11/29/16	164								
166														
167		Final Acceptance	1 day	Tue 11/29/16	Wed 11/30/16									
168	Harris	Submit Final Documentation	0 days	Tue 11/29/16	Tue 11/29/16	165								
169	Dane	Final System Acceptance	1 day	Wed 11/30/16	Wed 11/30/16	168								
170		Warranty Begins	0 days	Wed 11/30/16	Wed 11/30/16	169								

ATTACHMENT D-1
IMPLEMENTATION PLAN

Dane County Radio System Amendment 6

Attachment D-1: Implementation Plan

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Project Team

Harris has assigned the following people to execute the system expansion:

Paul Crowe	Project Manager (lead)
Dave Helfrich	Project Manager
Daniel McCoy	System Engineer (lead)
Mike Voiland	System Engineer
Craig Fitzsimmons	Site Manager (lead)
James Aycock	Site Manager
Ross Bolton	Regional Service Manager
Frank Ober	Training Manager

Implementation Plan

The following implementation plan describes the actions and deliverables for the System as amended. The project schedule shall be Attachment C-1, Project Schedule, attached to Amendment 6 of the Contract.

Infrastructure System Design

Site Surveys

The Harris Project Manager and the Dane County PM will arrange for site assessments to collect further data about each individual site to help prepare for the Customer Design Review. The System Engineer will use the site results to prepare documents for each site detailing the antenna positioning plan, shelter floor plan, rack drawings, power requirements, AC/DC connectivity, and BTUs generated from the new equipment that will be presented at the Customer Design Review.

Noise floor measurements at existing sites were gathered in 2013 and 2014. Harris will review the applicability of that data and supplement it with additional measurements from the new sites, as well as possible new measurements from the existing sites. In addition, the channels identified in the frequency plan will be tested for co-channel interferers at locations throughout the County. The information will be summarized and reviewed with the County.

Customer Design Review (CDR)

There will be no additional Kick-off Meeting nor Preliminary Design Review as part of the expanded system implementation plan.

In preparation for the Customer Design Review (CDR), Harris will accumulate information obtained from the customer meetings, the site surveys and the amendment process.

Documentation and detailed drawings associated with the expansion design will be delivered to Dane County as part of the CDR package.

Harris will provide the following documents to the Dane County team for its review and approval:

- System Block Diagrams

- Antenna Network Diagrams
- Equipment List
- Site Frequency Plan, including results of site monitoring
- Structural Analyses
- Site plot drawings
- Tower-antenna placement drawings
- Shelter Floor Plan Drawings
- Rack Elevation Drawings
- Power and HVAC Loads
- Project Schedule, updated per project changes during the CDR period
- Transition Plan, including determination of a phased cutover and paging
- System configuration settings
- Preliminary interference report
- Revised coverage plots for paging and analog tactical subsystems
- Brigham final channel selection: decision on adding Analog Tactical
- Microwave/Backhaul design
- Review and agree upon the Acceptance Test Plans, including, but not limited to, tests for the ISSI, iRIM, and Multiviewer equipment.
- Review the original Statement of Work for incomplete items.

Manufacturing

Order Processing and Manufacturing

Following the final design approval, Harris will proceed to load equipment into the Harris SAP system for procurement of material and manufacturing. Orders will be placed with the Harris factory to manufacture the radio base stations and other elements of the system while vendor/subcontractor items will be ordered as well. Factory specifications will define the test for each individual rack of equipment.

Site Development

Site Material Procurement

After written approval of the Customer Design Review by Dane County, Harris will place orders on the subcontractors that will perform the site development plus order the vendor materials required for the sites. Shipments will be coordinated with the vendors and based on the project schedule to ensure availability of parts and materials which are needed on site.

Site Development List by Site

The following is a table of the sites that are part of the Harris design.

Systems installed at each site

Site #	Site Name	P25	Mutual Aid	Point to Point	EMS-B	Siren Control	Paging	Analog Tactical
1	CCB							
2	Stoughton City		RX					
3	Sun Prairie (AT)							
4	Roxbury							
5	Eisner		RX					
6	UW Broadcast		TXRX					
7	Verona							
8	Deerfield		TXRX					
9	Brigham		TXRX					
10	WMGN							
11	McKee							
12	DeForest							
13	Rockdale							
14	WJJO							

The following is a description of the site development needs for each site, pending final configuration at CDR. It defines changes to existing facilities and new site development work.

DeForest	Description
	The DeForest Site will be a VHF trunked simulcast site plus paging, fireground and a new MW spur.
Tower	Construct new tower
Shelter	Furnish and install a new 12' X 26' Concrete Shelter
Generator	Furnish and install a new 45-KW propane Generator
DC Power	Furnish and install a -48V DC power plant to supply the RF Eqpt & MW equipment.
Compound	New compound
Grounding	New ground system
MW hop to	Sun Prairie

WJJO	Description
	The WJJO Site will be a VHF trunked simulcast site plus fireground and new MW links.
Tower	Existing Tower
Shelter	Furnish and install a new 12' X 26' Concrete Shelter
Generator	Furnish and install a new 45-KW propane Generator
DC Power	Furnish and install a -48V DC power plant to supply the RF Eqpt & MW equipment.
Compound	Expand existing compound
Grounding	Expand ground system
MW hop to	Sun Prairie and Rockdale

Stoughton City	Description
	The Stoughton Site will be a VHF trunked simulcast site plus paging, fireground and new MW links.
Tower	Construct new tower
Shelter	Furnish and install a new 12' X 26' Concrete Shelter
Generator	Furnish and install a new 45-KW propane Generator
DC Power	Furnish and install a -48V DC power plant to supply the RF Eqpt & MW equipment.
Compound	New compound
Grounding	New ground system
MW hop to	CCB and Rockdale

Rockdale	Description
	The Rockdale Site will be a VHF trunked simulcast site plus paging, fireground and new MW links.
Tower	Construct new tower
Shelter	Relocate existing 12' X 26' Concrete Shelter from the Stoughton AT&T site.
Generator	Relocate the existing 45-KW propane Generator from the Stoughton AT&T site.
DC Power	Relocate the existing -48V DC power plant from the Stoughton AT&T site.
Compound	New compound
Grounding	New ground system
MW hop to	WJJO and Stoughton

Brigham	Description
	The Brigham Site will be a VHF mutual aid site.
Tower	Existing tower
Shelter	Furnish and install a new 12' X 26' Concrete Shelter
Generator	Furnish and install a new 45-KW propane Generator
DC Power	Furnish and install a -48V DC 480A power plant to supply the RF Eqpt & MW equipment.
Compound	Existing compound
Grounding	Existing ground system
MW hop to	Leased line only

Installation

Site installation work will begin in coordination with the completion of the site development and the equipment delivery schedule, as follows:

- Microwave system
 - Install the expanded microwave system to the following sites:
 - Rockdale
 - Stoughton City
 - WJJO
 - DeForest
- Paging System
 - Install new simulcast paging transmitters at the following sites:
 - DeForest
 - Rockdale
 - Stoughton City (move from Stoughton AT&T)
 - Connect Paging systems to microwave network.
- Conventional Mutual Aid
 - Install new VHF conventional Mutual Aid channels at Brigham.
 - Relocate VHF conventional Mutual Aid channels from Roxbury to Eisner.
- VHF P25 Simulcast Trunking System
 - Install the 10 channel VHF P25 simulcast system at the following sites:
 - DeForest
 - Rockdale
 - WJJO
 - Stoughton City (relocated from Stoughton AT&T)
- P25 System Network Switches, Dispatch and System Management
 - Install Primary NSS at the CCB building.
 - Install the backup NSS at Madison-UW.
- Analog Tactical
 - Install two new Analog Tactical channels at:
 - DeForest
 - Rockdale
 - WJJO
 - Install new second Analog Tactical channel at:
 - Stoughton City
 - Deerfield
 - Eisner
 - UW Broadcast
 - Roxbury
 - Verona

- Sun Prairie
- Dispatch Locations
 - Upgrade 27 consoles from MaestroIP to Symphony:
 - Primary Dispatch at CCB building
 - Upgrade 21 consoles at CCB Primary Dispatch.
 - Upgrade 6 consoles at CCB Training Center.

System Optimization

Once each of the backbone system installations is complete, Harris will optimize each of the system as follows:

- Prepare all sites for Site inspections
- Verify microwave backhaul system is:
 - Operational
 - Passes BER test
 - Alarm system is operational
- Paging
 - Verify simulcast paging system is operational
 - Set paging simulcast delay parameters
 - Verify network connectivity
 - Verify simulcast paging system is ready for functional test
 - Set levels on back-up link system
 - Current paging system is carrying live traffic, so changes will be made on the live system.
- Conventional Mutual Aid
 - Set all levels on Mutual Aid repeaters
 - Verify voting and TX selection operation
 - Verify network multiplex connectivity back to Network Switches and dispatch.
- Fireground (Analog Tactical)
 - Set all levels on all repeaters
 - Verify voting and TX selection operation
 - Verify network multiplex connectivity back to Network Switches and dispatch
- Verify Console operation VHF P25 Simulcast trunk system
 - Verify network connectivity
 - Set levels, verify proper operation
 - Verify simulcast timing is set at simulcast control points

-
- Verify simulcast system alarms are operating properly
 - Verify dispatch operations
 - Prepare all sites for applicable Acceptance Testing
 - Set and verify all levels and parameters at the Network Switching Centers
 - Verify that the dispatch centers are operating and ready for testing
 - Verify IP addresses are set as established in the IP-plan
 - Record levels and parameters
 - Enter and verify cross-connect information to drawings making red-line corrections to the final drawing package

Dane County will coordinate any required down time or testing time, with reasonable consideration to impact on live operations.

Acceptance Testing

Acceptance tests to be performed as shown in the corresponding Acceptance Test Plans.

Transition

Harris and Dane County will jointly develop a transition plan that will describe the activities required to migrate the users from the legacy system to the new P25 system and associated subsystems.

ATTACHMENT E-1

EXPANDED SYSTEM ACCEPTANCE TEST PLANS

To be reviewed, finalized and mutually agreed upon during the Customer Design Review Period.

ATTACHMENT F-1

COVERAGE MAPS

Coverage Maps Redacted

ATTACHMENT G-1
RESPONSIBILITY MATRIX

Attachment G-1: Responsibility Matrix

The table below identifies the responsibilities of both Harris and Dane County for the expanded system design. The following matrix will clarify roles and responsibilities for both the County and Provider as defined in the purchase agreement.

Table A - Responsibility Matrix

	General Project Tasks	Harris	Dane County	Comments
1	Provide adequate staffing to support the project and its schedule.		X	
2	Provide adequate staffing to support the project and its schedule.	X		
3	Provide that all existing County equipment (towers, shelters, generators) and facilities to be used in the design will be in good working condition for use on this project.		X	For this expansion amendment, Rockdale and Brigham are the only additional County sites.
4	Existing County towers to have adequate cable ladders for securing cables.		X	For this expansion amendment, Rockdale and Brigham are the only existing County towers.
5	Perform tower analysis on DeForest, Stoughton City, Rockdale, and WJJO towers. Tower standards to be used for evaluation are TIA RS-222, using the revision currently adopted by the local jurisdiction .	X		
6	For any tower that fails the tower analysis study will be identified and reported to the County. Harris will: <ul style="list-style-type: none"> a. Obtain quote to strengthen the tower if possible. b. Provide a quote for a new replacement tower. c. Help the County look for a new site. 	X		
7	Present mounting design, installation and site development plan, County to approve.	X		

	General Project Tasks	Harris	Dane County	Comments
8	Obtain permission for the Harris team to have access to the County Sites and any other sites that are part of the final design.		X	
9	Obtain permission for any site improvements and work as proposed and approved in the Customer Design Review.		X	
10	Develop site plans for each site where improvements are to be made. Drawings will be created that will be used as part of the Customer Design Review, and the drawings will also be used to prepare the necessary construction permit applications.	X		Harris to support permitting process by attending meetings, and/or public hearings, as requested.
11	Submit permitting documents.		X	If there are problems in obtaining the necessary permits, Harris to revise the construction drawings and applications as needed, in accordance with Task 10, and County to resubmit.
12	Recommend VHF frequency plan.	X		Harris will complete and provide an intermodulation analysis as part of the recommendation.
13	Approve VHF frequency plan as described in Attachment A-1, System Description, and direct Harris to prepare frequency licensing forms.		X	
14	Prepare frequency licensing forms.	X		Harris will support frequency coordination meetings in Wisconsin as required.
15	Review and sign forms and submit FCC, NTIA, and/or Regional Coordinator, with appropriate fees.		X	
16	Interference: by Harris products. Research any interference caused by its products and either repair or replace at its discretion to resolve the issue.	X		

	General Project Tasks	Harris	Dane County	Comments
17	Interference caused by others. 3rd party interference will be the County's and the interferer's responsibility to resolve, per Clause 17 of the Purchase Agreement.		X	
17-A	Interference caused by others. Prior to final acceptance, Harris will provide a reasonable amount of technical and engineering support, at Harris expense, to help determine the source of any potential interference and the best technical solution. Harris will recommend filters or materials to be purchased by the County at its option.	X		

	CDR	Harris	Dane County	Comments
18	Site Surveys	X		Harris team to visit those sites where additional information is required to complete the final design and documents for the CDR, including grounding evaluation.
19	Site Surveys		X	As requested, Dane County to accompany Harris on the site surveys and arrange for any required expert or knowledgeable individuals to participate. County to provide additional details or items that may have changed from earlier surveys.
20	Microwave Path Survey	X		Alcatel will conduct path sightings to verify all paths are un-obstructed. Results to be presented at CDR unless a path problem should arise, then immediate discussions will take place.

	CDR	Harris	Dane County	Comments
21	<p><u>CDR</u> Present design to Dane County for its review and approval. Including, but not limited to:</p> <ul style="list-style-type: none"> • P25 Simulcast Expansion • Mutual Aid Relocation • Paging Expansion • Analog Tactical Expansion • Microwave Expansion 	X		Harris to present the information and drawings as described in the Project Implementation plan Attachment D-1.
22	Develop a revised project schedule that will be the basis for the project rolling forward	X		Project schedule will be updated each month and presented to the customer.
23	Participate in all review meetings, providing valuable feedback and information for the proposed work.		X	
24	Review all material presented.		X	
25	Approve the Customer Design Review		X	Signifies Design Approval and the go ahead to order material, submit for permits and to start site development.

	Microwave System	Harris	Dane County	Comments
26	Provide expanded County microwave links.	X		Alcatel to prepare microwave frequency coordination and submittal. Dane to sign and submit licensing documents, if required.

Site Project Tasks				
	General Site Development Issues	Harris	Dane County	Comments
27	Provide authorization for Harris to use the existing towers and install the new antenna loads, and provide shelter space or compound space per the final design.		X	
28	Arrange for electric power (within 50 feet of new shelter) and pay for monthly electric usage		X	New Power connections for sites getting new shelters will be 240V AC 200A

29	Provide sites that are free of contaminated or hazardous material.		X	If any contaminated or hazardous material is found, Harris will stop work, and notify the County. County will resolve or ask Harris for a quote.
30	Provide adequate access to each site, such that large vehicles (cranes, concrete trucks & tractor trailers) can deliver material and services as needed		X	County to resolve any access issues or approve required change order as required.
31	Provide sites that have soil conditions that are suitable for the site development work planned. Harris has not provided for any drilling, blasting or removal of excessive rock, large material or excess water.		X	If such conditions are found, Harris will seek appropriate change order from the County for the un-foreseen issue. County to resolve or approve required change order as required
32	Site Grounding Install new "Ground Systems" at all new sites getting new shelters.	X		Harris will use its "Site Grounding and Lightning Protection" procedures for all grounding work.
33	Provide adequate ground systems on all existing County towers.		X	Existing tower ground will be connected to new shelter ground in at least two locations at sites getting new shelters. Harris will make connection, but expects suitable tower ground to be present for the connection.
34	Provide a site ground that measures 5-ohms at each site getting a new shelter. The soil at each site must be conducive for the construction of a site ground system that will measure out to be 5 ohms or less. If the soil conditions are not conducive to obtaining the desired ground system, Harris will provide a report and a plan for the most cost effective ground system for that site.	X		County to review report and accept recommended ground system design, or approve purchase of special grounding material to maximize the ground system at the site.
35	Site Acquisition and Lease Site Cost		X	County to pay all lease cost for non-County sites
	Stoughton City	Harris	Dane County	Comments
36	Install LMR & MW systems as per design	X		
37	Site Development. Develop site improvements as described in the Implementation Plan.	X		
	DeForest	Harris	Dane County	Comments



38	Install LMR & MW systems as per design	X		
39	Site Development Develop site improvements as described in the Implementation Plan.	X		
Rockdale		Harris	Dane County	Comments
40	Install LMR & MW systems as per design	X		Relocated from Stoughton AT&T
41	Site Development Develop site improvements as described in the Implementation Plan.	X		
WJJO		Harris	Dane County	Comments
42	Install LMR & MW systems as per design	X		
43	Site Development Develop site improvements as described in the Implementation Plan.	X		
44	Obtain lease with tower owner and shelter location		X	Sign lease for site allowing Harris to begin work at the site.
Sun Prairie		Harris	Dane County	Comments
45	Install MW per design	X		
46	Obtain tower structural analysis	X		Use of site requires a new microwave dish. Harris to provide price of remediation to County, if required.
Brigham		Harris	Dane County	Comments
47	Install mutual aid system per design shown in CDR.	X		Harris is responsible for the antenna replacement plan without reinforcing or modifying the tower.
48	Site Development Develop site improvements as described in the Implementation Plan.	X		
Network Control & Dispatch		Harris	Dane County	Comments
49	City/County Building (CCB) Upgrade primary switch to SR10A as described in the CDR.	X		

50	UW Madison Upgrade secondary switch to SR10A as described in the CDR.	X		
	Testing Project Tasks	Harris	Dane County	Comments
51	Conduct Site inspections as defined in ATP document	X		Harris to develop punch-list of all issues, resolve/develop plan, and provide status report.
52	Provide people to participate in site inspections.		X	
53	Conduct Functional ATPs as described in the System Description, Attachment A-1 and defined in the Acceptance Test Plans, included in the Attachment E-1 addenda.	X		
54	Provide people to participate in Functional testing		X	ATP defines test set up and procedures.
55	Sign-off completion of Functional ATP for the systems tested.		X	
56	Provide the drivers, vehicles and equipment for taking automated test measurements.	X		
57	Conduct coverage ATP of the P25 system and Mutual Aid systems, as described in the System Description, Attachment A-1 and defined in the Acceptance Test Plans, included in the Attachment E-1 addenda.	X		
58	Prepare coverage ATP reports.	X		
59	Review and sign-off coverage ATP Reports.		X	
	Cutover Project Tasks	Harris	Dane County	Comments
60	Develop infrastructure cutover plan.	X		
61	Develop user operational cutover plan.		X	Dane County to coordinate with Harris for timing.
	Document Project Tasks	Harris	Dane County	Comments
62	Provide system "As-Built" documentation.	X		PDF format
63	Provide site equipment floor plan drawings.	X		PDF format

64	Provide site equipment rack drawings.	X		PDF format
65	Provide tower antenna layout drawings.	X		PDF format
66	Provide equipment technical manuals.	X		PDF format
67	Provide Customer Design Review Documentation.	X		PDF format
68	Provide system block drawings.	X		PDF format

ATTACHMENT I-1

EQUIPMENT LIST

Site Deliverable Equipment List by Site

The following is a high-level and preliminary list of the equipment to be installed at each site/location. Harris shall prepare and deliver a complete and final Equipment List by the conclusion of the Customer Design Review. Subsequent changes will be made to the Equipment List as necessary and as agreed to by the Parties.

City County Building	New Virtual Network Switching Server 27 Symphony Consoles
UW Madison Tower	New Virtual Network Switching Server
DeForest State Police	<ul style="list-style-type: none"> • Ten (10) MASTR V Series Base Stations – P25 System • One (1) MASTR III Base Station – Paging System • Two (2) MASTR III Based Stations – Analog Tactical System • One (1) Network Sentry • One (1) Cisco Switch • One (1) Cisco Router • One (1) GPS MUX • RF Combiners, RX Multicouplers • Associated Cabling, Racks, and Hardware • (2) TX Antennas – P25 • (1) TX Antenna – Paging • (1) TX Antenna – Analog Tactical • (1) RX Antenna – P25 • (1) RX Antenna – Analog Tactical
Stoughton City	<p><u>Relocated Equipment:</u></p> <ul style="list-style-type: none"> • Ten (10) MASTR V Series Base Stations – P25 System • One (1) MASTR III Base Station – Paging System • Two (2) MASTR III Based Stations – Analog Tactical System • Six (6) MASTR III Base Stations – Mutual Aid System • One (1) Network Sentry • One (1) Cisco Switch • One (1) Cisco Router • One (1) GPS MUX • RF Combiners, RX Multicouplers • Associated Cabling, Racks, and Hardware



	<p><u>New Equipment:</u></p> <ul style="list-style-type: none"> • (2) TX Antennas – P25 • (1) TX Antenna – Paging • (1) TX Antenna – Analog Tactical • (1) RX Antenna – P25 • (1) RX Antenna – Analog Tactical and Mutual Aid
Rockdale	<ul style="list-style-type: none"> • Ten (10) MASTR V Series Base Stations – P25 System • One (1) MASTR III Base Station – Paging System • Two (2) MASTR III Based Stations – Analog Tactical System • One (1) Network Sentry • One (1) Cisco Switch • One (1) Cisco Router • One (1) GPS MUX • RF Combiners, RX Multicouplers • Associated Cabling, Racks, and Hardware • (2) TX Antennas – P25 • (1) TX Antenna – Paging • (1) TX Antenna – Analog Tactical • (1) RX Antenna – P25 • (1) RX Antenna – Analog Tactical
WJJO	<ul style="list-style-type: none"> • Ten (10) MASTR V Series Base Stations – P25 System • Two (2) MASTR III Based Stations – Analog Tactical System • One (1) Network Sentry • One (1) Cisco Switch • One (1) Cisco Router • One (1) GPS MUX • RF Combiners, RX Multicouplers • Associated Cabling, Racks, and Hardware • (2) TX Antennas – P25 • (1) TX Antenna – Analog Tactical • (1) RX Antenna – P25 • (1) RX Antenna – Analog Tactical
Brigham	<ul style="list-style-type: none"> • Six (6) MASTR III Base Stations – Mutual Aid System • One (1) Network Sentry • One (1) Cisco Switch • One (1) Cisco Router • One (1) MUX pair (to link CCB)



	<ul style="list-style-type: none">• RF Combiners, RX Multicouplers• Associated Cabling, Racks, and Hardware• (1) TX Antenna – Mutual Aid• (1) RX Antenna – Mutual Aid
Microwave Equipment	<p><u>New microwave radios, dish antennas, and associated cabling and hardware at the following sites:</u></p> <ul style="list-style-type: none">• DeForest• Sun Prairie• WJJO• Rockdale• Stoughton City• CCB (MW radio to match new link to Stoughton City)