

Clarendon Hills and Westmont South Central and South East Project

<u>Qty</u>	<u>Description</u>	<u>Price</u>	<u>Total</u>
1	SOUTH EAST VHF 3 Site Simulcast, Included 3 Transmitters, 3 Receivers, 1 Voter, Simulcast Controller, GPS Sync, Racks, and Installation, Battery Back Up Ready.	\$132,605.00	\$132,605.00
1	SOUTH CENTRAL VHF 3 Site Simulcast, Included 3 Transmitters, 3 Receivers and 1 additional receive only site. REUSING EXISTING CUSTOMER VOTER, Simulcast Controller, GPS Sync, Racks, and Installation, Battery Back Up Ready.	\$117,258.00	\$117,258.00
-2	Remove spare Transmitters	\$5,805.00	-\$11,610.00
1	CTI - Voter Control and Monitoring for 635 (Assumes CTI exists for the existing downers voter)	\$6,900.00	\$6,900.00

Oak Brook Hills

1	Install 1 DB224 with 7/8 line to new Equipment for all VHF TX. Includes 1- DB224 Antennas 100' 7/8 Line, Weather Proof Kits, Poly Phaser, Hoist Grip, Mount and Clamps, Antenna Labor, Connectors and Antenna Jumper to Equipment.	\$4,500.00	\$4,500.00
1	Install 1 DB224 with 7/8 line to new Equipment for all VHF RX. Includes 1- DB224 Antennas 100' 7/8 Line, Weather Proof Kits, Poly Phaser, Hoist Grip, Mount and Clamps, Antenna Labor, Connectors and Antenna Jumper to Equipment.	\$4,500.00	\$4,500.00
1	Tait Receiver for SE	\$5,420.00	\$5,420.00
1	Install Dual GPS antennas for Simulcast System	\$1,500.00	\$1,500.00
1	VHF Receive Multi Coupler	\$3,500.00	\$3,500.00
-1	50% Split of Antenna, Receiver Chassie, and Multicoupler with DuComm for Site.	\$7,210.00	-\$7,210.00

DOWNERS VOC

1	Install 1 DB224 with 7/8 line to new Equipment for TX of SC. Includes 1-DB224 Antenna 300' 7/8 Line, Weather Proof Kits, Poly Phaser, Hoist Grip, Mount and Clamps, Antenna Labor, Connectors and Antenna Jumper to Equipment.	\$6,500.00	\$6,500.00
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1	Install 1 DB224 with 7/8 line to new Equipment for all VHF RX. Includes 1- DB224 Antennas 300' 7/8 Line, Weather Proof Kits, Poly Phaser, Hoist Grip, Mount and Clamps, Antenna Labor, Connectors and Antenna Jumper to Equipment.	\$5,000.00	\$5,000.00
1	Install Dual GPS antennas for Simulcast System	\$3,000.00	\$3,000.00
1	VHF Receive Multi Coupler	\$3,500.00	\$3,500.00
1	Tower Loading Study - Price to be confirmed from 3rd Party Vendor	\$3,900.00	\$3,900.00

63rd Street Water Tower

1	Install 1 DB224 with 7/8 line to new Equipment for all VHF RX. Includes 1- DB224 Antennas 100' 7/8 Line, Weather Proof Kits, Poly Phaser, Hoist Grip, Mount and Clamps, Antenna Labor, Connectors and Antenna Jumper to Equipment.	\$4,500.00	\$4,500.00
1	Use existing VHF Receive antenna		\$0.00
1	VHF Receive Multi Coupler	\$3,500.00	\$3,500.00
1	Tower Loading Study - Price to be confirmed from 3rd Party Vendor	\$3,900.00	\$3,900.00
1	Install Dual GPS Antennas for Simulcast Sysytem	\$2,000.00	\$2,000.00

I55 and Cass Tower

1	Install 1 DB224 with 7/8 line to new Equipment for TX of SC and SE. Includes 1-Dual DB224 Antenna 200' 7/8 Line, Weather Proof Kits, Poly Phaser, Hoist Grip, Mount and Clamps, Antenna Labor, Connectors and Antenna Jumper to Equipment.	\$6,000.00	\$6,000.00
1	Install Dual GPS Antennas for Simulcast Sysytem	\$2,000.00	\$2,000.00
1	VHF Receive Multi Coupler	\$3,500.00	\$3,500.00

CH Water Tower

1	Install 1 Dual DB222 with 7/8 line to new Equipment for TX of SC and SE. Includes 1-Dual DB222 Antenna 400' 7/8 Line, Weather Proof Kits, Poly Phaser, Hoist Grip, Mount and Clamps, Antenna Labor, Connectors and Antenna Jumper to Equipment.	\$6,000.00	\$6,000.00
1	Tower Loading Study - Price to be confirmed from 3rd Party Vendor	\$3,900.00	\$3,900.00
1	VHF Receive Multi Coupler	\$3,500.00	\$3,500.00
1	Install Dual GPS Antennas for Simulcast Sysytem	\$2,000.00	\$2,000.00

Microwave System Installed

This is for 4 Hops of Microwave System. This will Provide T1/Analog lines for the Simulcast and voting system as well as Ethernet back bone for data.

1 DGVOG to 63rd WT	\$30,000.00	\$30,000.00
1 Oak Brook Hills to CH WT	\$30,000.00	\$30,000.00
1 CHWT to 63rd	\$30,000.00	\$30,000.00
1 Oak Brook Hills to DGVOG	\$30,000.00	\$30,000.00
4 MIKROTIK Routers for Network Ring Management	\$850.00	\$3,400.00
4 Microwave Licensing	\$1,500.00	\$6,000.00

Harris T1 Muxes for breaking T1 down to Analog Circuits

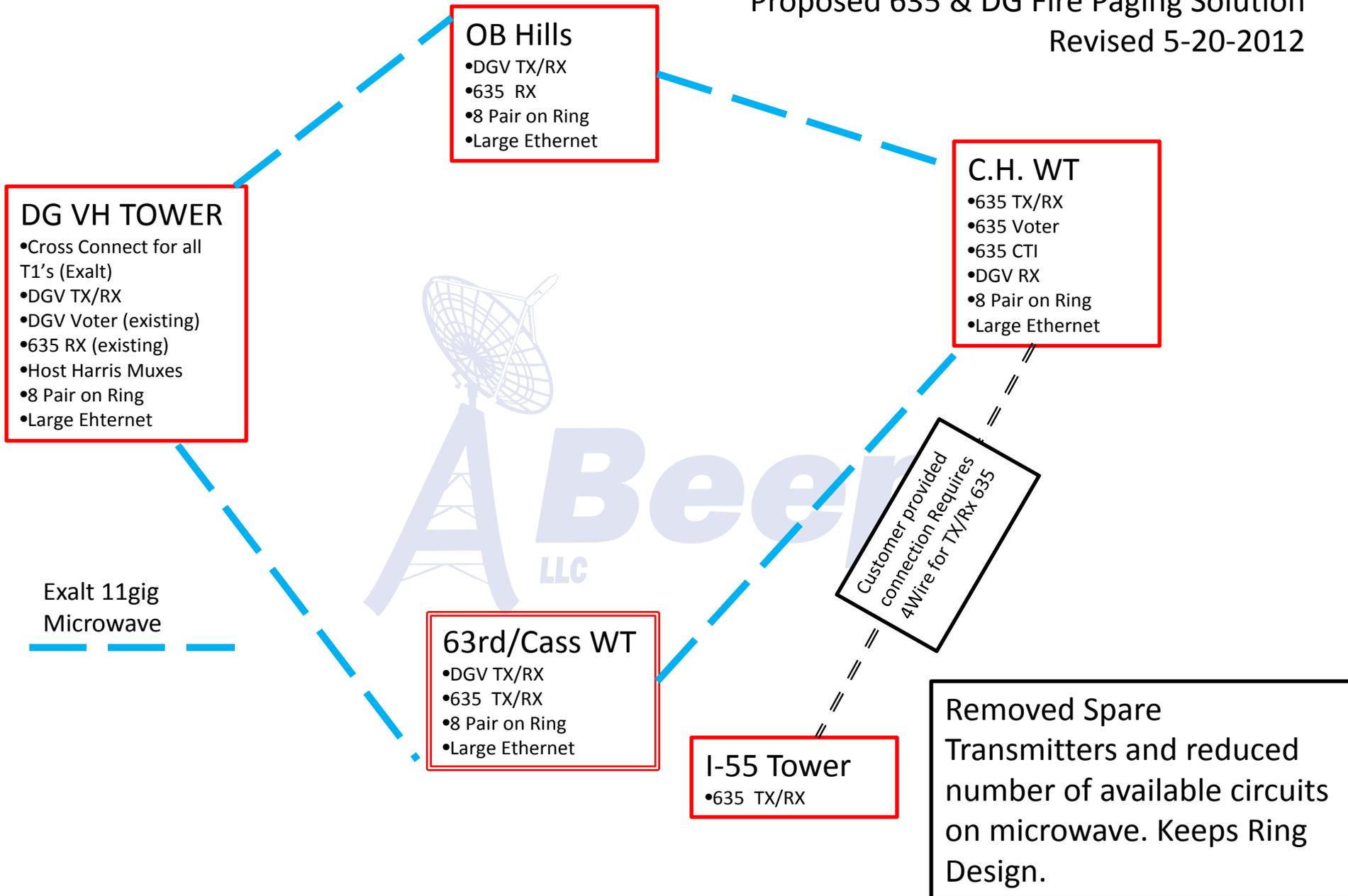
Harris Intraplex ACS163-ACC (standard T1 shelf) Includes common module and 115VAC power.			
6	Includes Install and all needed 4 Wire Cards. Required for redundancy in Ring module. Includes hot standby for T1 Switching.	\$12,000.00	\$72,000.00
-1	Reduce to 8 4wire per site	\$8,500.00	-\$8,500.00
1	Racks, Punch Blocks, Cabling, Labor at all Punch Down Location.	\$17,000.00	\$17,000.00

Total Project \$529,963.00



Proposed 635 & DG Fire Paging Solution

Revised 5-20-2012



June 29, 2012

To: Village of Clarendon Hills and
Village of Westmont
Chief Brian Leahy
Deputy Chief Jim Connolly

From: John K. Sullivan
Account Manager

Re: Proposal Agreement

SYSTEM DESIGN:

Based on the information provided as well as conversations with your administration, and our RF design processes we have developed the following system design.

South Central System Design

We recommend locating three transmitters using Tait QS2 Simulcast Technology for the talk-out of the repeaters at the following locations: Oak Brook Hills Site, Downers Grove VOC, and Westmont 63rd Street Water Tower. These sites provide good system coverage in your communities for paging and portable radios. In the design review it has been determined that the existing Downers Grove Fire Channel (South Central) has a back up voter in place. Assuming this voter is in proper working order and can provide the proper connectivity to the Tait QS2 system this voter will be reused for the build of the new system. An additional receive only receiver will be added to the Clarendon Hills Water Tower for this channel. All 3 QS2 Transmit Sites will have receivers as well. Additional cards may required to be added to the existing voter to accommodate this receive expansion to cover the Westmont area with the South Central channel. All final equipment needs will be determined at the Customer Requirements Specification (CRS) meeting and a final CRS document will be created. This document will become the road map for the project and will kick the project off. The sites above will require Antenna, Line, Transmitter/Receiver, Voter, and UPS equipment. All site access and permissions will be the responsibility of the customer. All permitting, licensing, and utilities will be the responsibility of the customer. Pricing to perform tower and structural loading is a best estimate and will need to be confirmed after final loading is submitted to engineers and reviewed.



"Confidential"
Updated May 20, 2012

South East System Design

We recommend locating three transmitters using Tait QS2 Simulcast Technology for the talk-out of the repeaters at the following locations: Clarendon Hills Water Tower, Westmont 63rd Street Water Tower and Cass/I-55 Communications Tower. These sites will provide good system coverage in your communities for paging and portable radios. In the design review it has been determined that the existing 635 (South East) Channel does ***NOT*** have a back up voter in place thus a new voter will be included to start the build of the system. All 3 QS2 Transmit Sites will have receivers as well. All existing receivers will be reused in the system (Including the existing receiver at the VOC). All final equipment needs will be determined at the Customer Requirements Specification (CRS) meeting and a final CRS document will be created. This document will become the road map for the project and will kick the project off. The sites above will require Antenna, Line, Transmitter/Receiver, Voter, and UPS equipment. All site access and permissions will be the responsibility of the customer. All permitting, licensing, and utilities will be the responsibility of the customer. Pricing to perform tower and structural loading is a best estimate and will need to be confirmed after final loading is submitted to engineers and reviewed.

System Connectivity: At minimum a 4 wire RTNC type circuit will be required from each site back to the VOC location. This will be provided in the below microwave portion of the proposal.

Microwave Proposal

We are recommending the build of a Microwave Ring using 11gig licensed Microwave Radio providing multiple T1's and up to 100mbps of Ethernet. The ring concept will provide for additional redundancy to each site in the event one link is down. With the use of Harris Multiplexers (Mux's) we will break down a T1 to **8** Circuits at each of the sites. The Harris Mux will also be used to provide the redundancy between sites as it allows for two T1's and can switch between them. In addition Mikrotik routers will be provided at each microwave site to create an Ethernet ring for monitoring the sites and future Ethernet requirements. Building this ring will be the most stable network for the simulcast system as well as be a great foundation for future needs. Future needs may include console connectivity, PSAP to PSAP connectivity and phone line reduction. An example of phone line reduction could be existing lines running from 2 locations that may be able to be redirected to one of the microwave sites resulting in a lower monthly cost. The four sites for the microwave proposed would be Downers VOC, Westmont 63rd Street Water Tower, Clarendon Hills Water Tower, and Oak Brook Hills.



Implementation: A Beep will fully prepare and stage the systems in or shop prior to delivery and installation. The systems can be visited and demonstrated in staging if so desired. During the staging process antennas will be installed and connectivity between the sites will be established. Once staging is completed we will begin the installation of the radio systems at the sites. A Beep is not responsible for any permits or fees.

Terms: Payment terms as follows: 30% with Order, 30% Upon Staging, 30% Equipment Delivered to Sites, 10% Upon Final Acceptance.

Invoicing: A Beep will coordinate invoices based on the above schedule to the individual agencies listed below for their share of the project as indicated by the percentages listed by each agency.

Village of Clarendon Hills - 41%
 With Order:
 Village of Westmont -41%
 Tri- State Fire Protection District- 18%

Upon acceptance of this proposal Each Agency above should submit a Purchase Order to A Beep in their respective amounts and A Beep will submit Invoices. Upon receipt of payment all parts ordering will begin and an implementation schedule based on vendor shipping information will be established. Any included FCC licensing and coordination will be started immediately upon receipt of the Purchase Orders. Tower Crew Work will be scheduled based on availability of tower related equipment and may be preformed ahead of system staging to prepare the sites.

Total Project \$529,963.00

PO Schedule	Down	Staging	Delivery	Acceptance	Total
	\$158,988.90	\$158,988.90	\$158,988.90	\$52,996.30	\$529,963.00
Clarendon Hills 41%	\$65,185.45	\$65,185.45	\$65,185.45	\$21,728.48	\$217,284.83
Westmont 41%	\$65,185.45	\$65,185.45	\$65,185.45	\$21,728.48	\$217,284.83
Tri-State 18%	\$28,618.00	\$28,618.00	\$28,618.00	\$9,539.33	\$95,393.34
	\$158,988.90	\$158,988.90	\$158,988.90	\$52,996.30	\$529,963.00



Village of Westmont, Village of Clarendon Hills, Tri-State Fire Protection District

General Terms and Conditions

1. **A Beep, LLC** hereby proposes to furnish all labor, materials and services as quoted to provide the **Communications Upgrade**. All work will be performed in a workmanlike manner in accordance with the attached Proposal.

2. **Hold Harmless Clause:** A Beep, LLC agrees to indemnify, save harmless and defend The Village of Westmont, Village of Clarendon Hills, and the Tri-State Fire Protection District, its agents, servants, employees, and each of them against and hold it and them harmless from any and all lawsuits, claims, demands, liabilities, losses, and expenses; including court costs and attorney's fees for or on account of any injury to any person, or any death at any time resulting from such injury, or any damage to property, which may arise or which may be alleged to have arisen out of, or in connection with, the work covered by this project. The foregoing indemnity shall apply except if such injury is caused directly by the willful and wanton conduct of The Village of Westmont, Village of Clarendon Hills, and the Tri-State Fire Protection District, its agents, servants, or employees or any other person indemnified hereafter.

3. **Insurance:** A Beep, LLC will obtain for the Contract term and any extension of it, insurance issued a company or companies qualified to do business in the State of Illinois and provide The Village of Westmont, Village of Clarendon Hills, and the Tri-State Fire Protection District with evidence of said insurance. Insurance in the following types and amounts is necessary:
 - Workers' Compensation Insurance covering all liability of the offer or arising under the Workers' Compensation Act and the Workers' Occupational Disease Act.
 - Comprehensive General (Public) Liability in a broad form, to include coverage for the following where exposure exists:
 - Premises/Operations, Independent Contractors
 - Products/Completed Operations, Personal Injury and
 - Contractual Liability, limits of liability not less than:
 - \$1,000,000 each occurrence
 - \$2,000,000 general aggregate

4. **Assignment:** A Beep, LLC may not assign any award made without prior written consent from The Village of Westmont, Village of Clarendon Hills, and the Tri-State Fire Protection District.

5. **Responsibility and Default:** A Beep, LLC shall be required to assume responsibility for all items listed in the proposal.
6. **Terms:** Payment terms as follows: 30% with Order, 30% Upon Staging, 30% Equipment Delivered to Sites, 10% Upon Final Acceptance.
7. **Invoicing:** A Beep will coordinate invoices based on the above schedule to the individual agencies listed below for their share of the project as indicated by the percentages listed by each agency.
 - Village of Clarendon Hills - 41%
 - Village of Westmont -41%
 - Tri- State Fire Protection District- 18%

IN WITNESS WHEREOF, this INSTRUMENT is executed in several counterparts, each one of which shall be deemed and original, this, the _____ day of _____, 20__.

Signature: _____

Name: _____ Title: _____

A Beep, LLC
 452 N. Chicago Street
 Joliet, IL 60432

Signature: _____

Name: _____ Title: _____

Village of Westmont

Signature: _____

Name: _____ Title: _____

Village of Clarendon hills

Signature: _____

Name: _____ Title: _____

Tri-State Fire Protection District