



# State of New York County of Broome Government Offices

## Office of Emergency Services

Jason T. Garnar, County Executive · Michael A. Ponticiello, Director

### MEMORANDUM

To: Public Safety & Emergency Services Committee

From: Michael A. Ponticiello

Date: March 8, 2021

Re: Public Safety Radio System Update

#### Overview

As I noted in January the project was delayed by COVID-19 in 2020 significantly. Since my last report I am happy to report we have made some headway. We have won our court case to bring power to the Laurel Lake site, thanks to Mr. Behnke. Our construction contractor has been making great progress on the last remaining sites. Public works has started construction on the second to last road.

The concerns related to system cutover still remain and are too far out to identify if we will make the key deadlines to cutover in fall of 2021 or sprint of 2022. Where we anticipated launching the system at some point in 2021 that is now looking like it will be 2022. We anticipate missing key deadlines related to system acceptance before fall of 2021. In particular we are concerned about testing the system before the leaves are off the trees. Testing is required to be completed with leaves on because of RF penetration and behavior.

#### Physical Infrastructure

Work is progressing on the physical sites for the radio upgrade project. Please see the attached Site Development Checklist. We are currently building: Lisle, Maine, and Windsor. Kirkwood and Deposit will be released as soon as possible.

#### *Sites:*

We are in process of procuring via property acquisition or lease agreement the following sites to build out the system:

- Lisle (Town of Lisle): Construction underway – estimated completion end of March.
- Maine (Town of Maine): Construction underway – estimated completion early April.
- Kirkwood (Town of Kirkwood): DPW has approval to start road construction and site clearing. Will be released to tower construction company as soon as possible.
- Ely Park (City of Binghamton): Complete
- Nabinger (Colesville): Complete
- Sanford (Town of Sanford): Complete
- Deposit (Town of Sanford): County attorney working on lease agreement with property owner.

- Laurel Lake (Town of Sanford): Construction complete – Eminent domain process completed, related to NYSEG to connect power. Site commissioning to be completed as soon as site is energized.
- Windsor (Town of Windsor): Construction underway – estimated completion mid-April.

All 16 sites are ready for electrical work by DPW to power the Motorola equipment at each site. It is anticipated to be completed in the first quarter of 2021.



*Lisle Foundation Concrete Pour*

#### *Requests for Proposals*

- Construction - The last construction RFP has been awarded to Patriot Towers out of Scottsville NY. This covers the five remaining tower sites. We have released for construction Maine, Windsor, & Lisle. Kirkwood will be released shortly.
- Steel Lattice Towers and Shelters – Delivery to each site is scheduled by the contractor. Significant delays in tower and shelter procurement have delayed the project. From our understanding these delays are based on raw material availability to the vendor. In the last month we have also been notified by the vendor they are requesting Broome County compensate them for the increase in steel costs on the last two tower sites. We are in negotiations on this.
- Generators (cooperative purchase) – delivery of 5 remaining generators in mid-March.

### *Road Construction*

The highway department has been an instrumental partner in constructing the roads to each of these sites. The road at the Kirkwood has been released to DPW and expected to start the week of 3/15. The deposit road will be released for construction as soon as possible.

### Microwave

Aviat has been contracted to install microwave connectivity to the nine new towers. Purchase Order has been issued. Engineering work is underway. This process will take approximately 3-4 months.

We expect to receive the equipment this week for the Public Safety to Ely Park connection. This will be installed within the next month.

### Motorola Contract

- Frequency licenses are now complete.
- System design is finalized.
- OES staff have been designing preliminary talk path profiles for the end user – initial discussions have started on talk path design.
- Motorola Lease agreement has been signed.
- First shipment of Motorola infrastructure equipment has been received and distributed to the tower sites.

We have been diligently meeting with all agencies that we dispatch for (approximately 55) and validating their subscriber unit numbers. This entails reviewing mobiles, portables, and control stations. While we based our initial allocation on a formula that doesn't cover the nuances of each individual department. We anticipate finalizing our approximately 4000 subscriber unit order with Motorola in April.

We anticipate Motorola starting to install infrastructure equipment in late Spring 2021.

### 911 Center Related Upgrades

In preparation for the new radio system we will be upgrading infrastructure in the 911 center to make it compatible with the new system.

Vesta 911 Phone upgrade is now scheduled to be completed in Q3 of 2021.

Similarly, our 911 log recorder is being replaced to allow for digital frequencies to be recorded. This project is currently underway, physical hardware has been installed, software configuration is in progress.

Zetron (radio console) upgrade was able to be completed in 2020.

### Other

We have begun the process of quoting fiber connectivity to Onondaga County to interface with their radio core.

A Master Site Agreement with Onondaga is currently under review and will be brought to the legislature in the next several months.

MOU's with neighboring county's for use of their microwave systems should be expected in the next few months.



# Project Status Report

**Client Name: Broome County Office of  
Emergency Services**

**Project Name: Emergency Communications  
Project – Phase 2**

**Client Contact: Mike Ponticiello, Director  
cc: Chuck Rogers, Project Mgr.**

**C&S Project Number: 157.027.003**

**Period: February 2021**

## **Significant activities underway or completed this period:**

### General:

- ✓ Provided a Project Status Report for January 2021 and an updated Site Development Checklist
- ✓ Introductory phone conversation on 2/1/2021 with Aviat's new Project Manager Crain Stevens
- ✓ Provided agendas and conducted bi-weekly conference calls with Aviat
- ✓ Provided agendas and conducted bi-weekly conference calls with Motorola
- ✓ Provided agendas and conducted weekly conference calls with Patriot Towers
- ✓ Participated in a Zoom meeting 2/2/2021 with Motorola and Tyler to discuss the efforts needed to interface the P25 system to the Tyler New World CAD system (GPS location, Emergency Button, Fire/EMS Unit Status Buttons). A follow-up Zoom meeting was scheduled for 3/4/2021 then subsequently rescheduled for 3/11/2021.

### Building Permits (Kirkwood & Deposit sites):

- ✓ Submitted revised Kirkwood construction drawings with revised access road layout to Hulbert Engineering on 2/15/2021 for Building Permit re-review

### Ely Park:

- ✓ Motorola (United Radio) moved the FNE from the warehouse to this site
- ✓ No other activity

### Nabinger Hill Road:

- ✓ Motorola (United Radio) moved the FNE from the warehouse to this site
- ✓ The County has asked Aviat to prioritize the new MW hop to this site so the County can commission a Fire/EMS paging transmitter at Nabinger as soon as possible

### Laurel Lake:

- ✓ On 2/19/21, received word from the County Attorney that the judge has granted the County's motion to take the NYSEG easement under eminent domain.
- ✓ NYSEG utility power access easement issue remains unresolved. County moving forward with eminent domain.
- ✓ Mid-State's final grading and misc. closeout work delayed until power is available at this site
- ✓ Generator start-up/commissioning and shelter manufacture commissioning delayed until power is available at this site

## Project Status Report

### Sanford:

- ✓ No activity

### Lisle:

- ✓ Tower foundation concrete placement was completed on 2/1/2021
- ✓ Shelter foundation, generator pad, and propane tank pad concrete placement completed on 2/19/2021
- ✓ Sabre delivered the site tower material
- ✓ Patriot assembled tower sections on the ground in preparation to erect the tower. Tower will be assembled when a crane is onsite for shelter delivery.

### Maine

- ✓ Tower foundation concrete placement was completed on 2/17/2021
- ✓ Local residents have been expressing their displeasure to the contractor and C&S when onsite. The County Sheriff has been called to speak with the local residents.
- ✓ The County requested a cost proposal from NYSEG to install overhead power lines to the entrance of the tower site access road

### Windsor:

- ✓ Patriot Towers mobilized to the site to begin construction

### Kirkwood:

- ✓ Submitted revised Kirkwood construction drawings with revised access road layout to Hulbert Engineering on 2/15/2021 for Building Permit re-review
- ✓ C&S's subcontractor (Shumaker) surveyed the site to stake out the revised access road centerline and tree clearing limits on 2/19/2021
- ✓ Awaiting revised Building Permit

### Deposit:

- ✓ County is continuing to work with the property owner to finalize the parcel lease
- ✓ C&S's subcontractor (Shumaker) surveyed the site to stake out the access road centerline and tree clearing limits on 2/18/2021
- ✓ C&S's subcontractor (Shumaker) provided a cost proposal to prepare the Metes & Bounds report needed to finalize the site lease
- ✓ Incorporated County review comments into the Deposit construction drawings. This included a slight adjustment in the tower location needed to avoid microwave path interference with a proposed turbine windfarm. Once final C&S review is complete, the drawings and SWPPP will be submitted to Hulbert Engineering for Code Review
- ✓ Prelim copy of the revised construction drawings was sent to Patriot Towers for pricing of the access road work

## Project Status Report

- ✓ The County advised on 2/25/2021 that the County DPW will be constructing the Deposit site access road and performing the required weekly SWPPP inspections and documentation. C&S requested that copies of the weekly reports be forwarded to C&S as the Engineer of Record.

### Ingraham:

- ✓ Completed the SEQR Short Environmental Assessment Form – Part 1 (SEAF-Part 1)
- ✓ Awaiting approval from the FAA and FCC on the proposed tower height extension
- ✓ The County published the Public Notice required by the FCC on 2/3/2021
- ✓ Provided review comments on Verizon’s draft tower extension construction drawings on 2/22/2021

### Sabre:

- ✓ Sabre advised that they are experiencing factory production delays on the equipment shelters due to COVID impacts. Broome County’s shelter deliveries are delayed.
- ✓ Sabre requested a change order for a cost increase due to higher steel costs on the Maine and Deposit lattice towers. County reviewing contractual terms. Need to resolve and get these final two towers scheduled for production.

### Cummins:

- ✓ The County is coordinating the delivery of the site generators with Cummins with expected delivery on 3/8/2021.

### Patriot Towers

- ✓ Weekly conference calls with Patriot Towers to review site construction issues and progress on 2/3, 2/10, 2/17 and 2/24/2021
- ✓ Reviewed, approved and returned project shop drawing submittals from Patriot
- ✓ Site construction in progress at Lisle, Maine, and Windsor
- ✓ Patriot is working to revise their lattice tower erection schedules as needed to coincide with Sabre’s delayed shelter deliveries. This is to allow both activities to occur with only one crane mobilization at each site.
- ✓ Patriot is working to revise their schedules as needed to accommodate code inspections by Hulbert Engineering

### Motorola:

- ✓ Motorola advised that their Project Manager (Manuel Lauren) is being reassigned to another project
- ✓ Conducted a “Meet & Greet” Zoom meeting on 2/5/2021 with Motorola’s newly assigned Project Manager (John Starks) who will be replacing Manuel Lauren
- ✓ C&S provided a detailed listing of Motorola’s open items to help bring the new PM up to date
- ✓ Motorola advised on 2/22/2021 that John Starks is now being reassigned to another project. They have assigned Dan Ralph as their latest Project Manager.
- ✓ Progress calls were held with Motorola on 2/10 and 2/24/2021

## Project Status Report

- ✓ Relocation of FNE from the County warehouse to the available sites was partially completed in February by United Radio (instead of TuWay). Sites delivered so far include Andrews, Ely Park, Kopernik, Nabinger, Old State Road, Pease Hill, and Union. Deliveries at Ingraham and Sanford were delay by snow conditions.
- ✓ County is continuing to work with user agencies to develop a revised subscriber plan that falls within the County's budget

### Aviat Microwave:

- ✓ Began holding bi-weekly conference calls with Aviat on Wednesdays at 1:30 PM. Calls were held on 2/10 and 2/24/2021.
- ✓ The County issued a Purchase Order to Aviat on 2/26/2021 to proceed with the Phase 2 portion of the project

### Tyler:

- ✓ Zoom meeting 2/2/2021 with Motorola and Tyler to discuss the efforts needed to interface the P25 system to the Tyler New World CAD system (GPS location, Emergency Button, Fire/EMS Unit Status Buttons). A follow-up Zoom meeting was scheduled for 3/4/2021 then subsequently rescheduled for 3/11/2021.

### Talkgroup/Fleetmap Planning:

- ✓ No activity

### Zetron Dispatch CSSI Console Upgrades:

- ✓ Zetron will return at a later date to install the P25/trunking upgrades

### **Next period's expected activities:**

- ✓ Continue bi-weekly progress calls with Aviat
- ✓ Continue bi-weekly progress calls with Motorola
- ✓ Continue weekly construction progress calls with Patriot Towers
- ✓ Motorola to bring their 2<sup>nd</sup> new Project Manager up to speed on the Broome County project
- ✓ Motorola to provide detailed list of equipment not yet delivered
- ✓ Motorola to provide credit Change Order to update documentation to current design configuration
- ✓ Motorola and County to follow up on proposed microwave path from Broome County to Onondaga County through Cortland, Tompkins and Cayuga counties. Remaining site visits to be scheduled.
- ✓ Motorola to provide updated coverage maps.
- ✓ Motorola to forward their report on the microwave site visits in Cortland, Tompkins, and Cayuga counties
- ✓ Motorola to provide a proposal to support the County's plan to build a new Command Post/Communications vehicle



## Project Status Report

- ✓ Motorola to add a CCGW to the system design for permanently patching the VHF paging channel to a talkgroup. Motorola also to provide an estimate of impact on communications in the East cell if paging is added as a talkgroup.
- ✓ County and Sabre to resolve a cost issue on the remaining two lattice towers and release the towers for production
- ✓ Follow-up Zoom meeting with Tyler and Motorola is scheduled on 3/11/2021. Motorola to provide update on API prior to this meeting.
- ✓ Aviat to provide plan and schedule for the replacement of routers at all the operation tower sites
- ✓ Aviat to add the most recent sides to ProVision
- ✓ Aviat to provide a plan and schedule for the Phase 2 project
- ✓ NYSEG – C&S to continue follow up with NYSEG on utility power installation schedules for Lisle, Maine, Kirkwood, Deposit, and Windsor
- ✓ Ingraham – County to initiate SEQR process for the proposed lattice tower height extension from 195' to 220' to accommodate the addition of a Verizon cellular antenna system
- ✓ Kirkwood - C&S to issue updated construction drawings to Patriot Towers
- ✓ Kirkwood – County to complete construction of site access road
- ✓ Deposit - County to finalize lease of site with property owner
- ✓ Deposit - C&S to forward Deposit site drawings and SWPPP to Hulbert Engineering for Building Permit/Code Review
- ✓ Deposit – County to make plans to follow the SWPPP design during access road construction including required weekly inspections
- ✓ Deposit – County to issue Building Permit
- ✓ Deposit - County to complete construction of site access road
- ✓ Deposit – County to document SWPPP compliance during construction
- ✓ Laurel Lake - Shelter manufacturer inspection and commissioning at Laurel Lake delayed until NYSEG utility power is available.
- ✓ Laurel Lake - Generator manufacturer start-up and load test at Laurel Lake delayed NYSEG utility power is available.
- ✓ Resume talkgroup planning to incorporate feedback from CNYICC
- ✓ CNYICC – County to execute agreement for sharing of the Motorola core located at Onondaga County 911
- ✓ County to finalize plans for a fiber data connection to the Motorola core located at the Onondaga County 911 Center in Syracuse



## Project Status Report

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### **Other important project information:**

- ✓ None at this time

### **Information/direction needed from client:**

- ✓ None at this time



## Broome County Emergency Communications Project - Phase 2 Site Development Checklist



Task	Site Number -->	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 20	Site 17	Site 18	Site 19	
	Site Name -->	Nabinger Road	Sanford	Ely Park	Laurel Lake	Maine	Lisle	Kirkwood	Deposit	Windsor	Tuscarora (Legacy Tower) MW & Legacy LMR Only	PSF Tower Site	Primary PSAP (Console Integration)	Backup PSAP (Console Integration)	Overall System
	Tower Height -->	340'	300'	195'	199'	195'	195'	195'	195'	195'	198'	190'	N/A	N/A	
	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed
<b>PROPERTY ACQUISITION:</b>															
Site Selection	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete					
Site Walk	9/11/2018	1/17/19 & 2/22/19	3/28/18, 4/30/18, 7/24/18 & 11/28/18	4/5/2019	4/5/19, 4/12/19, 6/26/19 & 9/22/19	4/15/2019	4/5/2019	1/17/19, 2/22/19 & 4/29/19	4/29/19 & 6/4/19						
Site Plan Concept Drawing	10/12/2018	1/24/19 Lower, 1/24/19 Upper & 2/26/19	4/9/2018 & 12/13/18	4/11/2019 & 5/2/19	4/16/19, 7/1/19 & 12/3/19	4/11/2019 & 9/30/19	4/11/2019	1/23/2019, 2/26/19, 4/18/19 & 5/2/19	4/30/2019 & 6/5/19						
Property Acquisition (private owner sites)	Complete	Complete	Complete	Complete	N/A	Complete	6/26/2020	In Process (Locked down)	Complete						
Property Purchase	N/A	N/A	N/A	N/A	Purchase offer accepted May 2020. PURCHASE COMPLETE 9/25/2020	N/A	N/A	N/A	N/A	N/A					
CAUD Approval (City of Binghamton)	N/A	N/A	Complete	N/A	N/A	N/A	N/A	N/A	N/A	N/A					
Property Lease Application and Negotiations Commercial Tower Lease Company sites)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A					
County 911 Address Assitgned	331 Nabinger Hill Road, Nineveh, NY 13813	678 Marsh Pond Road, Deposit, NY 13746	63 Ridge Road, Binghamton, NY 13905	542 Laurel Lake Road, Deposit, NY 13746	<del>Miller Road, Endicott, NY 13760</del> 46 Town Rd, Maine NY 13802 (Maine #3)	104 Costello Road Lisle, NY 13797	205 Kutalek Road Kirkwood, NY 13795	445 Shaver Hill Road Deposit, NY 13754	541 Cresson Hill Road, Windsor, NY 13865	2380 E. Bosket Road, Windsor, NY 13865	153 Lt. VanWinkle Drive, Binghamton, NY 13905				
<b>SITE SURVEYS:</b>															
Site Survey	1/3/2019	3/18/2019	5/14/2018	5/7/2019	5/28/2020	7/11/2019.	7/12/2019	Quote requested 9/27/2019. Revised quote requested 4/4/2020. Survey Completed 11/12/2020.	11/22/2019						
Site Stakeout - Clearing Limits & Access Road (unbudgeted)	Complete	4/30/2019	Complete	Complete	9/22/2020	11/12/2019	6/24/2020								
Site Stakeout - Tower and Fence	10/23/2019	11/12/2019	10/23/2019	10/23/2019	1/6/2021	1/6/2021	Pending easement on adjacent property		1/6/2021						
Survey Form 1A or 2C Issued															
Property Boundary Survey (unbudgeted)							7/30/2020								
Metes & Bounds Survey (unbudgeted)							7/30/2020								
<b>GEOTECH:</b>															
Soil Boring	1/17/2019	Complete	Complete	Complete	Complete	7/26/2019	7/31/2019 Repeated at new location on 9/28/2020	12/9/2019	12/13/2019						
Geotech Report	1/25/2019	6/5/2019	6/1/2018	6/5/2019	6/10/2020	8/14/2019	8/15/2019 Repeated for new location 10/14/2020	12/24/2019	12/24/2019						
<b>MICROWAVE PATHS:</b>															
Microwave Analytical (Paper) Path Profile by Aviat	Complete	Complete	Complete	Complete	Complete Need to repeat Path Blocked to Lisle. Go to Popple instead. Complete	Complete. Update: Need survey to Popple. Complete.	Complete	Complete	Complete	Complete	Complete THIS SITE ELIMINATED FROM P25 LMR SYSTEM	Complete (to Ely Park)			
Microwave Physical Path & Site Surveys by Aviat	Feb 2019 (Nabinger to Sanford) May 2019 (Nabinger to Hawkins)	Feb 2019 (Nabinger to Sanford)	Feb 2019 (Ely to Old State; Ely to NYS office Bldg) New path survey to PSF: Completed Week of July 28 2020. Complete.	Completed Week of July 28 2020. Report received 8/13/2020. Revised report received 8/25/2020.	Completed Week of July 28 2020. Report received 8/13/2020. Revised report received 8/25/2020.	Completed Week of July 28 2020. Report received 8/13/2020. Revised report received 8/25/2020.	Completed Week of July 28 2020. Report received 8/13/2020. Revised report received 8/25/2020.	Completed Week of July 28 2020. Report received 8/13/2020. Revised report received 8/25/2020.	Completed Week of July 28 2020. Report received 8/13/2020. Revised report received 8/25/2020.	Completed Week of July 28 2020. Report received 8/13/2020. Revised report received 8/25/2020.		Completed Week of July 28 2020. Report received 8/13/2020. Revised report received 8/25/2020.			
Aviat Confirms Required Dish Heights	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete		Complete			
Aviat Procurement Contract Approved by County	Aviat proposal approved by County Leg January 2021. PO#52157 issued 2/25/2021.	Aviat proposal approved by County Leg January 2021. PO#52157 issued 2/25/2021.		Aviat proposal approved by County Leg January 2021. PO#52157 issued 2/25/2021.	Aviat proposal approved by County Leg January 2021. PO#52157 issued 2/25/2021.	Aviat proposal approved by County Leg January 2021. PO#52157 issued 2/25/2021.	Aviat proposal approved by County Leg January 2021. PO#52157 issued 2/25/2021.	Aviat proposal approved by County Leg January 2021. PO#52157 issued 2/25/2021.	Aviat proposal approved by County Leg January 2021. PO#52157 issued 2/25/2021.	Aviat proposal approved by County Leg January 2021. PO#52157 issued 2/25/2021.		Aviat proposal approved by County Leg January 2021. PO#52157 issued 2/25/2021.			



## Broome County Emergency Communications Project - Phase 2 Site Development Checklist



Site Number -->	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 20	Site 17	Site 18	Site 19	
Site Name -->	Nabinger Road	Sanford	Ely Park	Laurel Lake	Maine	Lisle	Kirkwood	Deposit	Windsor	Tuscarora (Legacy Tower) MW & Legacy LMR Only	PSF Tower Site	Primary PSAP (Console Integration)	Backup PSAP (Console Integration)	Overall System
Tower Height -->	340'	300'	195'	199'	195'	195'	195'	195'	195'	198'	190'	N/A	N/A	
Task	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed
Aviat contract wording finalized and PO Issued	2/25/2021	2/25/2021	Change Order approved 12/29/2020. PO Issued Jan 2021.	2/25/2021	2/25/2021	2/25/2021	2/25/2021	2/25/2021	2/25/2021		Change Order approved 12/29/2020. PO Issued Jan 2021.			
PCN's Complete for MW Frequencies														
FCC License Issued for MW Path														
<b>TOWER STRUCTURAL ANALYSIS:</b>														
Structural Analysis of Existing Tower	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	July 2019 requested T-Mobile to provide				
Structural Reinforcement of Existing Tower (if required)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Cancelled. Site not to be used for P25 or MW loop.				
<b>ARCHAEOLOGICAL/CULTURAL/NEPA:</b>														
Cultural Resource Survey	Complete	3/14/2019	Complete	Complete	6/12/2020	2/10/2020	2/5/2020	11/20/2020	2/12/2020					
Cultural Resource Report	12/7/2017	3/25/2019	6/8/2018	5/6/2019	6/23/2020	2/14/2020	2/21/2020	12/4/2020	2/27/2020					
FCC Form 620	Complete	Complete	Complete	5/6/2019	6/30/2020	3/9/2020	3/9/2020	12/7/2020	3/9/2020					
SHPO Concurrence	12/14/2018	5/9/2019	7/19/2018	6/5/2019	7/15/2020	3/13/2020	3/13/2020	12/10/2020	3/13/2020					
Indian Tribe Consultations	1/21/2019	Complete	Complete	Complete	10/5/2020 Email 10/6/2020 US Mail	Complete	Complete	12/15/2020 Email 12/16/2020 US Mail	Complete					
NEPA Checklist	2/21/2019	8/20/2019	3/6/2019	8/20/2019	11/24/2020	8/27/2020	8/27/2020	1/27/2020	8/27/2020					
<b>NYSEG POWER:</b>														
C&S Submittal to NYSEG	Complete	Complete	Complete	Complete	6/17/2020	Complete	Complete	6/17/2020	Complete					
Power Utility Site Survey Walk	Complete	Complete	Complete	Partially Complete	5/22/2020	5/14/2020	Complete	Complete	Complete					
NYSEG Service Notification Number	10300545197	10300576340	10300492964	10300581969	10300684086	10300660704	10300660706	10300684088	10300611324					
NYSEG Work Order Number	801000237591	801000254691	801000256974	801000254656										
Power Utility Easements Approved by Property Owner	Complete	Complete	7/7/2020	Eminent Domain approved by court on 3/2/2021										
Payment Issued to NYSEG	Complete	Complete	9/2/2020					Complete						
NYSEG Construction Complete	7/9/2020	Complete	Complete											
UL 3rd Party Inspection	Complete	Complete	Complete											
NYSEG Meter Installed/Energized	7/9/2020	Complete	10/14/2020											
<b>FCC Tower Registration (if required)</b>														
FCC TOWAIR Analysis	Tower >200'	Tower >200'	3/15/2018	6/21/2019	7/2/2019	6/21/2019	6/21/2019	1/23/2019	6/12/2020	Existing Tower				
FCC Tower Submittal	1/10/2019	2/4/2019 (1st site abandoned). Resubmitted 3/29/2019	Not Required	Not Required	Not Required	Not Required	Not Required	Not Required	Not Required					
Legal Notice Publication	2/13/2019	4/2/2019	Not Required	Not Required	Not Required	Not Required	Not Required	Not Required	Not Required					
FCC Issues ASR #	3/29/2019	5/22/2019	Not Required	Not Required	Not Required	Not Required	Not Required	Not Required	Not Required					
FCC ASR #	1309779	1310495	Not Required	Not Required	Not Required	Not Required	Not Required	Not Required	Not Required					
FCC Notice of Construction Complete	6/1/2020	6/3/2020	Not Required	Not Required	Not Required	Not Required	Not Required	Not Required	Not Required					
<b>FAA Tower Registration (if required)</b>														
FAA Tower Submittal	1/10/2019	2/1/2019 (site abandoned) Resubmitted new location 3/29/2019	N/A	N/A	<del>7/2/2019 1st location</del> 2nd location submitted 2/28/2020 Maine #3 submitted	N/A	N/A	N/A	N/A					
FAA Issues Determination of No Hazzard to Air Navigation	3/27/2019 2019-AEA-589-OE	4/30/2019 2019-AEA-3725-OE	N/A	N/A	<del>2020 2nd location</del> 3rd location in review 4/6/2020 2019-AEA-14839-OE	N/A	N/A	N/A	N/A					
FAA Form 7460-2 Submitted when tower construction reaches full height	3/17/2020	6/2/2020	Not Required	Not Required	Not Required	Not Required	Not Required	Not Required	Not Required					
<b>SEQR:</b>														
SEQR FEAF Part 1 Completed	Complete	Complete	Complete	Complete	5/11/2020	3/17/2020	3/17/2020	5/11/2020	3/17/2020					
SEQR - Lead Agency Intent Letters Mailed	1/25/2019	4/11/2019	11/8/2019	5/31/2019	Complete	3/17/2020	3/17/2020	Complete	3/17/2020					
SEQR - 30-Day Public Comment Period Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete					
Local Planning Board Approval (if required)	N/A	N/A	Complete (CAUD)	N/A	N/A	N/A	N/A	N/A	N/A					



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Site Name -->	Nabinger Road	Sanford	Ely Park	Laurel Lake	Maine	Lisle	Kirkwood	Deposit	Windsor	Tuscarora (Legacy Tower) MW & Legacy LMR Only	PSF Tower Site	Primary PSAP (Console Integration)	Backup PSAP (Console Integration)	Overall System
Tower Height -->	340'	300'	195'	199'	195'	195'	195'	195'	195'	198'	190'	N/A	N/A	
Task	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed
Local Zoning Board Approval (if required)	N/A	N/A	Complete (CAUD)	N/A	N/A	N/A	N/A	N/A	N/A					
SEQR - Lead Agency Declaration by Board	Complete	Complete	Complete	Complete	6/18/2020	Complete	Complete	6/18/2020	Complete					
DEC Concurrence	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete					
SEQR - FEAF Parts 2 & 3 Completed	Complete	Complete	Complete	7/11/2019	Complete	5/26/2020	5/26/2020	Complete	5/26/2020					
SEQR - Submit Negative Declaration to Public Safety Committee for Approval	Complete	5/7/2019	Complete	Complete	Complete	Complete	Complete	Complete	Complete					
SEQR - Board Approval of Negative Declaration	3/21/2019	6/20/2019	Complete	Complete	9/17/2020	6/18/2020	6/18/2020	9/17/2020	6/18/2020					
<b>EQUIPMENT PROCUREMENT:</b>														
Equipment Bid Documents (Tower, Shelter, Generator, Propane Tank)	5/22/2019	5/22/2019	5/22/2019	5/22/2019	5/22/2019	5/22/2019	5/22/2019	5/22/2019	5/22/2019					
Equipment Bidding (Tower, Shelter)	Completed	Completed	Completed	Completed	Completed	Completed	Completed	Completed	Completed					
Equipment Procurement Contract Award (Tower)	Delivered	Delivered	Delivered	Delivered	Released for production Nov. 2020	Released for production Nov. 2020	Need to resolve Sabre cost increase request	Need to resolve Sabre cost increase request	Released for production Nov. 2020					
Equipment Procurement Contract Award (Shelter)	Delivered 3/11/20	Delivered	Delivered 4/13/20	Delivered 3/10/20	Released for production Nov. 2020	Released for production	Released for production	Released for production	Released for production					
Equipment Procurement Contract Award (Generator)	Delivered to Wayne Street warehouse. Moved to site by Mid-State. Cummins Model: C50 N6 S/N: L190695478	Delivered to Wayne Street warehouse. Moved to site by Mid-State. Cummins Model: C50 N6 S/N: L190695477	Delivered to Wayne Street warehouse. Moved to site by Mid-State. Cummins Model: C50 N6 S/N: L190695475	Delivered to Wayne Street warehouse. Moved to site by Mid-State. Cummins Model: C50 N6 S/N: L190695476	Released for production	Released for production	Released for production	Released for production	Released for production					
<b>SITE ACCESS ROAD CONSTRUCTION:</b>														
Access Road Tree Clearing	Complete	Complete	Complete	Complete	Complete	Complete	To be scheduled by County DPW	To be scheduled by County DPW following Bldg permit being issued	Complete					
Access Road Completed by County DPW	Complete	Complete	Complete	Complete	Complete	Complete			Complete					
<b>SITE CONSTRUCTION:</b>														
Site Construction Drawings	Complete	Complete	Complete	Complete	Multiple drafts completed for review. Finalized 9/23/2020.	Multiple drafts completed for review. Finalized 9/23/2020.	Multiple drafts completed for review. Finalized 9/23/2020.	Multiple drafts completed for review. Finalized 9/23/2020.	Multiple drafts completed for review. Finalized 9/23/2020.					
Add improved lightning protection to Construction Drawings					9/22/2020	9/22/2020	9/22/2020	9/22/2020	9/22/2020					
Site Construction Bid Documents	Complete	Complete	Complete	Complete	Multiple drafts completed for review. Finalized 10/9/2020.	Multiple drafts completed for review. Finalized 10/9/2020.	Multiple drafts completed for review. Finalized 10/9/2020.	Multiple drafts completed for review. Finalized 10/9/2020.	Multiple drafts completed for review. Finalized 10/9/2020.					
Shellder Rack Layout Design/Drawing (Initial Rollout)														
Shellder Rack Layout Design/Drawing (Future Motorola Core)														
Shellder HVAC Load Calculations														
Installation of County IT Equipment and UPS														
Site Construction Bidding	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete					
Recommendation of Award Letter	Complete	Complete	Complete	Complete	11/6/2020	11/6/2020	11/6/2020	11/6/2020	11/6/2020					
Notice of Intent to Award Construction Contract	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete					
Contractor Insurance Forms Received	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete					
Site Construction Contract Award	Complete	Complete	Complete	Complete	12/30/2020	12/30/2020	12/30/2020	12/30/2020	12/30/2020					
Pre-Bid Code Review Submitted						5/21/2020			5/21/2020					
Pre-Bid Code Review Approved						6/12/2020			6/12/2020					
SWPPP Design Complete (Disturbance > 1 acre)								In final review						
Building Permit Application Sunmittal	Submitted 9/10/2019	Submitted 9/10/2019	Submitted 9/10/2019	Submitted 9/10/2019	Submitted 10/22/2020.	Submitted 5/21/2020	Submitted 10/22/2020.		Submitted 5/21/2020					



## Broome County Emergency Communications Project - Phase 2 Site Development Checklist



Task	Site Number -->	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 20	Site 17	Site 18	Site 19	
	Site Name -->	Nabinger Road	Sanford	Ely Park	Laurel Lake	Maine	Lisle	Kirkwood	Deposit	Windsor	Tuscarora (Legacy Tower) MW & Legacy LMR Only	PSF Tower Site	Primary PSAP (Console Integration)	Backup PSAP (Console Integration)	Overall System
	Tower Height -->	340'	300'	195'	199'	195'	195'	195'	195'	195'	195'	190'	N/A	N/A	
	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed
Revised Building Permit Application Sunmittal								Submitted 2/15/2021							
Access Road Waiver from Fire Dept.			2/20/2020			5/7/2020	3/3/2020	2/20/2020	5/7/2020	2/13/2020					
Revised Access Road Waiver from Fire Dept.								2/4/2021							
Building Permit Issued	12/27/2019	12/27/2019	3/5/2020	12/27/2019	12/30/2020	6/12/2020		12/30/2020		6/12/2020					
Revised Building Permit Issued (for revised access road routing)								3/1/2021 revised permit not needed							
Site Construction Kick-Off Meeting	10/8/2019	10/8/2019	10/8/2019	10/8/2019	12/7/2020	12/7/2020		12/7/2020	12/7/2020	12/7/2020					
Site Construction Progress Meetings.	Wednesdays at 2 PM with Mid-State. Ended 9/9/2020.	Wednesdays at 2 PM with Mid-State. Ended 9/9/2020.	Wednesdays at 2 PM with Mid-State. Ended 9/9/2020.	Wednesdays at 2 PM with Mid-State. Ended 9/9/2020.	Wednesdays at 2 PM with Patriot Towers.	Wednesdays at 2 PM with Patriot Towers.	Wednesdays at 2 PM with Patriot Towers.	Wednesdays at 2 PM with Patriot Towers.	Wednesdays at 2 PM with Patriot Towers.	Wednesdays at 2 PM with Patriot Towers.					
Site Construction Start Date	1/13/2020	4/1/2020	March 2020	Feb 2020	Feb 2021	Jan 2021				Feb. 2021					
Code Enforcement Inspections during Construction	Complete	Complete	Complete	Complete	In progress Feb 2021	In progress Jan 2021				In progress Mar 2021					
Tower Stacking Complete	3/17/2020	6/2/2020	4/8/2020	3/5/2020											
Tower Obstruction Light Operational	3/17/2020 - Temp battery light 7/15/2020 - Permanent Light	6/2/2020 - Temp battery light 7/16/2020 - Permanent Light	Not Required	Not Required	Not Required	Not Required	Not Required	Not Required	Not Required	Not Required					
Shelter Start-Up/Commissioning by Shelter Manufacturer	1/29/2021	1/29/2021	1/29/2021	Awaiting utility power											
Generator Start-Up and Load Test by Generator Manufacturer	9/8/2020	9/8/2020	10/20/2020	Awaiting utility power											
Site Construction Final Inspection; Punch List	7/30/2020; 8/3/2020	7/30/2020; 8/3/2020	7/30/2020;	7/30/2020; 8/3/2020											
Site Construction Complete															
Legacy Tower Demo Complete															
<b>AVIAT MICROWAVE:</b>															
Aviat Equipment Delivered															
Aviat Dish(es) Installed on Tower															
Aviat Racks Installed in Shelter															
Aviat Microwave Path(s) Commissioned															
Aviat MW System Commissioned															
MW Final Inspection & Punch List															
MW Punch List Items Corrected															
County Final Acceptance of Microwave System															
<b>SUBSCRIBER UNITS:</b>															
Request for Motorola to schedule demonstration of various models															12/4/2019
Demonstration of various subscriber units by Motorola															3/5/2020
Final Subscriber Model Numbers and Quantities Approved by County															In Progress. Working to revise list to reduce costs.
Initial Draft of Talkgroup/Channel Plan															In Progress (ongoing)
Agency Reviews/Input on Talkgroup/Channel Plan															
Talkgroup/Channel Plan Finalized															
Codeplugs Developed for Each Agency															
Portable Radios Programmed															
Mobile Radios Programmed															
Mobile Radios Installed in Vehicles															
<b>SIMPLEX/NON-TRUNKED FREQUENCIES</b>															
Select FCC Licensing Vendor															3/30/2020
Issue Contract to Vendor (Copper City)															6/1/2020
Kickoff Meeting with Copper City															6/19/2020
Frequencies Identified															8/3/2020
APCO Coordination															Submitted 8/3/2020. Completed 9/28/2020



## Broome County Emergency Communications Project - Phase 2 Site Development Checklist



Task	Site Number -->	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 20	Site 17	Site 18	Site 19	Overall System
	Site Name -->	Nabinger Road	Sanford	Ely Park	Laurel Lake	Maine	Lisle	Kirkwood	Deposit	Windsor	Tuscarora (Legacy Tower) MW & Legacy LMR Only	PSF Tower Site	Primary PSAP (Console Integration)	Backup PSAP (Console Integration)	
	Tower Height -->	340'	300'	195'	199'	195'	195'	195'	195'	195'	198'	190'	N/A	N/A	
	Date Completed														
5-Day Inter-Service Review															Submitted 9/28/2020 - Completed 10/7/2020
Applications Submitted to FCC															10/7/2020 File # 0009253712
FCC Licenses Issued															10/8/2020 WRJQ426
Final Frequency Assignments for each Off-Network Channel															
<b>NICE DATA LOGGING RECORDERS</b>															
Determine if recording from P25 or from Console															9/17/2020- Will be from Zetron Consoles
Final Vendor Selection (Eventide vs. NICE) - <b>NICE Selected</b>															County selected NICE - 9/30/2020
Resolve additional software requirements															
Contract finalized/approved															
Design Finalized															
Installation at Primary PSAP															
Installation at Backup PSAP															
Cutover to Trunked System - Primary PSAP															
Cutover to Trunked System - Backup PSAP															
<b>ZETRON</b>															
Console Upgrade Order Placed															Complete
Zetron Equipment Delivery															Complete
Console Upgrades Scheduled															Rescheduled for Dec. 2020
Console Upgrades Complete - Primary PSAP															Dec. 2020
Console Upgrades Complete - Backup PSAP															Dec. 2020
P25 Interface Complete - Primary PSAP															
P25 Interface Complete - Backup PSAP															
<b>CNYICC MOTOROLA CORE</b>															
MOU In place for sharing CNYICC Core for initial rollout															
Cortland County MW link complete to Onondaga County															Not funded as of Sept. 2020
Cortland County Upgrade of Motorola M2 Core. Needed for use of DSR in Broome County.															Not funded as of Sept. 2020
Tompkins - Cayuga MW Connection to Core Finalized															Need to schedule site visits
Motorola - Provide fiber data link minimum requirements															8/12/2020
Fiber Connection from Broome to Onondaga P.O. Issued by County															
Fiber Connection from Broome to Onondaga Installed & Operational															
MW Link Site Visits (Cortland, Tompkins, Cayuga counties)															
MW Link Configuration (Cortland, Tompkins, Cayuga counties)															
MW Link Operational (Cortland, Tompkins, Cayuga counties)															
CNYICC Funding in place for 2nd Core located in Broome County															Not funded as of Sept. 2020
Motorola contracted to supply 2nd Core															Not funded as of Sept. 2020
Motorola Installs and configures 2nd Core															Not funded as of Sept. 2020
<b>LEGACY SITE ANTENNA RELOCATIONS</b>															



## Broome County Emergency Communications Project - Phase 2 Site Development Checklist



Task	Site Number -->	Site 1	Site 2	Site 3	Site 4	Site 5	Site 6	Site 7	Site 8	Site 9	Site 20	Site 17	Site 18	Site 19		
	Site Name -->	Nabinger Road	Sanford	Ely Park	Laurel Lake	Maine	Lisle	Kirkwood	Deposit	Windsor	Tuscarora (Legacy Tower) MW & Legacy LMR Only	PSF Tower Site	Primary PSAP (Console Integration)	Backup PSAP (Console Integration)	Overall System	
	Tower Height -->	340'	300'	195'	199'	195'	195'	195'	195'	195'	195'	198'	190'	N/A	N/A	
	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed
Antenna Relocations Completed by County to make room for Motorola Antennas																County requested quotes Nov 2020
<b>MOTOROLA</b>																
Motorola Equipment & Services Lease Executed																8/31/2020
Motorola Proposal for CNYICC Shared Core																In review by CNYICC. Grant funding is a concern.
Motorola Contract Revised via Change Order for CNYICC Shared Core																Draft Motorola Change Order received 3/3/2021. In review.
FCC License Issued for Trunked Sites - East Cell (and Part 22 Agreements Complete)	6/15/2020	6/15/2020	6/15/2020	6/15/2020	6/15/2020	6/15/2020	6/15/2020	6/15/2020	6/15/2020	6/15/2020						
FCC License Issued for Trunked Sites - West Cell (and Part 22 Agreements Complete)	6/15/2020	6/15/2020	6/15/2020	6/15/2020	6/15/2020	6/15/2020	6/15/2020	6/15/2020	6/15/2020	6/15/2020						
Extend FCC FB8 Construction Buildout Deadline to 2021 (multiple channels and sites)																July 2020
FCC License Issued for VCALL/VTAC's																
FCC License Issued for UCALL/UTAC's																
FCC License Issued for 8CALL/8TAC's																
Detailed Cutover Plan and Repurposed Frequency Cutover Plan Developed																
Install Juniper equipment at Onondaga County 911 Center																Dec. 2020
Equipment Staging/Factory Acceptance Test (Virtual due to COVID travel restrictions)																12/17/2020
FNE Equipment delivered to Broome County Warehouse																Dec 2020
FNE Equipment Delivered to Site	2/23/2021	Delayed by snow	2/23/2021													
Legacy Antennas Relocated (if required)																
Antennas Installed on Tower																
Equipment Racks Installed in Shelter																
Dispatch Consoles Configured & Operational																
Core Configuration with Cortland County																
Core Configuration with Onondaga County																
Individual Site Optimization by Motorola ST's																
Overall System Optimization by Motorola ST's																
System Coverage Acceptance Testing																
Radio System Final Inspection & Punch List																
Radio System Punch List Items Corrected																
County Final Acceptance of Radio System																





## Broome County Emergency Communications Project - Phase 2

### Site Development Checklist

#### Older Sites



Site Number -->	10	11	12	13	14	15	16	
Site Name -->	Andrews	Hawkins Hill	Ingraham Hill	Kopernik	Old State Road	Pease Hill	Union	Overall System
Tower Height -->	195	195	195' --> 220'	195	195'	195'	195'	
Task	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed	Date Completed
<b>AVIAT MICROWAVE:</b>								
Aviat Equipment Delivered								
Aviat Dish(es) Installed on Tower								
Aviat Racks Installed in Shelter								
Aviat Microwave Path(s) Commissioned								
Aviat MW System Commissioned								
MW Final Inspection & Punch List								
MW Punch List Items Corrected								
<b>MOTOROLA</b>								
FNE Equipment Delivered to Site	2/23/2021	2/23/2021	Delayed by snow	2/23/2021	2/23/2021	2/23/2021	2/23/2021	
Legacy Antennas Relocated by County (if required)								
Antennas Installed on Tower								
Equipment Racks Installed in Shelter								
Individual Site Optimization by Motorola ST's								
Radio System Final Inspection & Punch List								
Radio System Punch List Items Corrected								
<b>VERIZON - Tower Extension from 195' to 220'</b>								
<b>FCC Tower Registration</b>								
FCC TOWAIR Analysis			REQUIRED (Tower > 200')					
FCC Tower Submittal			1/25/2021					
Legal Notice Publication			2/3/2021					
FCC Issues ASR #								
FCC ASR #								
FCC Notice of Construction Complete								
<b>FAA Tower Registration</b>								
FAA Tower Submittal			1/25/2021					
FAA Issues Determination of No Hazzard to Air Navigation								
FAA Form 7460-2 Submitted when tower constructionreaches full height								
<b>SEQR:</b>								
SEQR FEAF Part 1 Completed			2/19/2021					
SEQR - Lead Agency Intent Letters Mailed								
SEQR - 30-Day Public Comment Period Complete								
Local Planning Board Approval (if required)								
Local Zoning Board Approval (if required)								
SEQR - Lead Agency Declaration by Board								
DEC Concurrence								
SEQR - FEAF Parts 2 & 3 Completed								
SEQR - Submit Negative Declaration to Public Safety Committee for Approval								
SEQR - Board Appoval of Negative Declaraton								
<b>CONSTRUCTION</b>								
Tower Height Extension Complete								
Tower Obstruction Light Operational								
County's Legacy Antennas Relocated								
Verizon Equipment Installed								