PLANNING BOARD
TOWN OF OAK BLUFFS

P.O. Box 1327
Oak Bluffs, MA 02557
Ph. 508-693-3554

SPECIAL PERMIT APPLICATION

Applicant's Name: Town of Oak Bluffs Fire - EMS
Mailing Address: PO Box 2131
Telephone: 508-693-5380
©wner's Name: Town of Oak Bluffs

Applicant is: (owner) agent tenant licensee prospective purchaser
(Circle one and if not owner, include letter from owner giving right to apply on owner's behalf.)

Application is submitted under section(s) 8.3.2 3.2.2 of the Zoning-By-Laws

Location of Property: Street Name and Address: 347 County Rd Highway Barn
Map/Parcel No.: 29/156 Zoning District ____

Description of Project: Radio Communication Tower (see attached)

Nature of Relief Requested: Improve Public Safety Communication

(Attachments): Map ✓ Site Plan ✓ Building Plan ____ Filing Fee ____ Other ____
(See applicable section of the Zoning Bylaws & Rules & Regulations for Special Permits for particular requirements.)

I hereby request a special permit as described above:

Signed: Joe Rose
Title: CHIEF
Date: 5-23-18

APPLICANT MUST HAVE THE BUILDING/ZONING INSPECTOR REVIEW AND SIGN THIS APPLICATION PRIOR TO SUBMITTING IT TO THE PLANNING BOARD

Reviewed by the Building/Zoning Inspector ____
Applicable Section of the Zoning Bylaw(s) 8.3.2
Date: 5/31/18

Form Revised 01/12/07

Commonwealth of Massachusetts
Town of Oak Bluffs
Office of the Planning Board

REQUEST FOR SPECIAL PERMIT APPLICATION

5/23, 2018

PLEASE PRINT

Map 29 Lot 156

Street Address 347 County Rd.

Applicant Town of Oak Bluffs Fire - EMS

Property Owner Town of Oak Bluffs

Applying for a Special Permit under Sect(s) 8.3 3.2.2 of the O.B. Zoning Bylaw. I have included in this application all relevant plans and materials required by the attached instructions.

To The Planning Board:

The undersigned hereby petitions the Planning Board grant a Special Permit or take any action pertaining thereto of the current Zoning Bylaws of Oak Bluffs at the address located at

347 County Rd.

In the following respect(s):

Permission for Radio Tower

State briefly the reasons for this application.

Improve Public Safety Communication

Petitioner [signature]

Agent

Mailing Address PO Box 2131
Oak Bluffs Ma 02557

Email jrose@oakbluffsma.gov

Phone 508-693-5380

APPLICATION FOR SITE PLAN REVIEW BEFORE THE OAK BLUFFS PLANNING BOARD

(Section 10.4 of the Oak Bluffs Zoning By-laws)

Date: _____

Applicant's Name Town of Oak Bluffs Fire - EMS

Applicant's Mailing Address PO Box 2131

Applicant's Telephone 508 693 5380

Applicant's E-mail jrose@oakbluffsma.gov

Owner's Name Town of Oak Bluffs

Owner's Mailing Address PO Box 2131

Owner's Telephone 508.693.5380

Owner's E-mail jrose@oakbluffsma.gov

Applicant is (circle one): owner agent tenant licensee prospective purchaser other

Location of Property:

Address 347 County Rd Highway Barn

Map/Parcel 29/156 Zoning District _____

Overlay Districts/DCPCs _____

Description of Project: (you may attach additional sheets if needed)

140 Foot Radio Communication Tower

Additional Review Required: (i.e. Development of Regional Impact from the MVC, Special Permit, Variance, etc.)

Minor Site Plan:

A minor site plan is defined in 10.4.7 as applications for permits to build, alter or expand any non-residential building, structure or use in any district where such construction will exceed a total gross floor area of 500 square feet but not exceed a total gross floor area of 2000 square feet, or will not generate the need for more than 10 parking spaces.

Does this project qualify as a minor site plan?(circle one) **Y / N**

Site Plan Review Trigger(s):

- ☐ Construction, exterior alteration or exterior expansion of, or change of use within, a municipal, institutional, commercial, industrial or multi-family structure involving more than 500 square feet.
- ☐ Construction or expansion of a parking lot for a municipal, institutional, commercial, industrial, or multi-family structure or purpose.
- ☐ Grading or clearing more than ten percent of a lot, or 5,000 square feet, whichever is smaller, except for the following: landscaping on a lot with an existing structure or a proposed single or two family dwelling; clearing necessary for percolation and other site tests, work incidental to agricultural activity, work in conjunction with an approved subdivision plan, or work pursuant to an earth removal permit.
- ☐ Other (i.e. DCPC requirement, etc.)_____

Payment:

- ☐ Check to The Town of Oak Bluffs for $275

Distribution of Submission: (see Oak Bluffs Zoning By-Law section 10.4 for complete description of requirements)

- ☐ Five Copies of the Site Plan delivered to the Planning Board
- ☐ Digital Copy of Site Plan e-mailed to planningboard@oakbluffsma.gov (Assistant will distribute)

OR

- ☐ Eight Copies of the Site Plan HAVE BEEN DISTRIBUTED BY APPLICANT to:

	DEPARTMENT	INITIALS
☐	Wastewater	_____
☐	Water District	_____
☐	Board of Health	_____
☐	Highway Department	_____
☐	Police Chief	_____
☐	Fire Chief	_____
☐	Building Commissioner	_____
☐	Conservation Commission	_____

Contents of Plan:

- ☐ Five separate plans, 24"x36", minimum scale 1"=20' (1"=80' if minor site plan), prepared by a Registered Professional Engineer, Registered Land Surveyor, Architect, or Landscape Architect as appropriate.
- ☐ Site Layout containing boundaries of the lot(s) in proposed development, proposed structures, drives, parking, fences, walls, walks, outdoor lighting, loading facilities, and areas for snow storage after plowing. First page includes:
  - ☐ locus plan at 1"=100" showing 1000 feet from project
- ☐ Topography and drainage plan showing existing and proposed final topography at two-foot intervals and plans for handling storm water drainage (If Minor Site Plan then topological plan may depict topographical contours at intervals available on maps provided by the USGS)
- ☐ Utility and landscaping plan showing:
  - ☐ all facilities for refuse and sewerage disposal or storage of all wastes
  - ☐ the location of all hydrants, fire alarm and firefighting facilities on and adjacent to the site
  - ☐ all proposed recreational facilities and open space areas
  - ☐ all wetlands including flood plain areas
- ☐ Architectural Plan including:
  - ☐ Ground Floor Plan
  - ☐ Architectural Elevations of all proposed buildings
  - ☐ Color Rendering
- ☐ Landscaping plan showing:
  - ☐ Limits of work
  - ☐ Existing tree lines
  - ☐ All proposed landscape features and improvements including:
    - ☐ Screening
    - ☐ Planting areas with size and type of stock for each shrub or tree
    - ☐ Proposed erosion control measures
- ☐ Written Statement indicating:
  - ☐ Estimated time required to complete proposed project and any phases
  - ☐ Detailed estimate of costs of all planned site improvements
- ☐ Written Summary of contemplated projects indicating, where appropriate:
  - ☐ Number of dwelling units to be built
  - ☐ Acreage in residential use
  - ☐ Evidence of compliance with parking and off-street loading requirements
  - ☐ Forms of ownership contemplated for the property
  - ☐ Summary of the provisions of any ownership or maintenance
  - ☐ Identification of all land that will become common or public land

- ☐ Other evidence necessary to indicate compliance with Oak Bluffs Zoning By-law
- ☐ Drainage Calculations by a Registered Professional Engineer
- ☐ Drainage Design conforms with Town's Subdivision Regulations
- ☐ Additional narrative assessments (as may be required by Planning Board) of on site and off site impacts of the proposed project on:
  - ☐ Traffic
  - ☐ Drainage
  - ☐ Noise
  - ☐ Other environmental factors
- ☐ Certification that the proposal is fully compliant with the provisions, if applicable, of the Americans with Disabilities Act and the Massachusetts Architectural Barriers Board

Waiver of Technical Compliance Written Request

The Planning Board may, at their discretion, waive any of the technical requirements of Section 10.4.5 where the project involves relatively simple development plans or constitutes a minor site plan. Please Note, **if the Board refuses a waiver request, the application may be denied or approval delayed by a minimum of two weeks.**

Written Request for Waiver may be attached to this application or provided below:

_____

_____

_____

_____

_____

_____

Additional Comments for Planning Board:

_____

_____

_____

_____

Authorization:

- ☐ Applicant is owner OR Letter from owner giving applicant authority to apply for site plan review and act on their behalf

I hereby request a site plan review as described above:

Signed_____

Title_____

Date_____

MVPSCS

Oak Bluffs Tower Project

FY2019 Proposal

MOTOROLA

ROBERT W OGDEN
SHERIFF
COMM. OF MASSACHUSETTS
2017
DUKES COUNTY

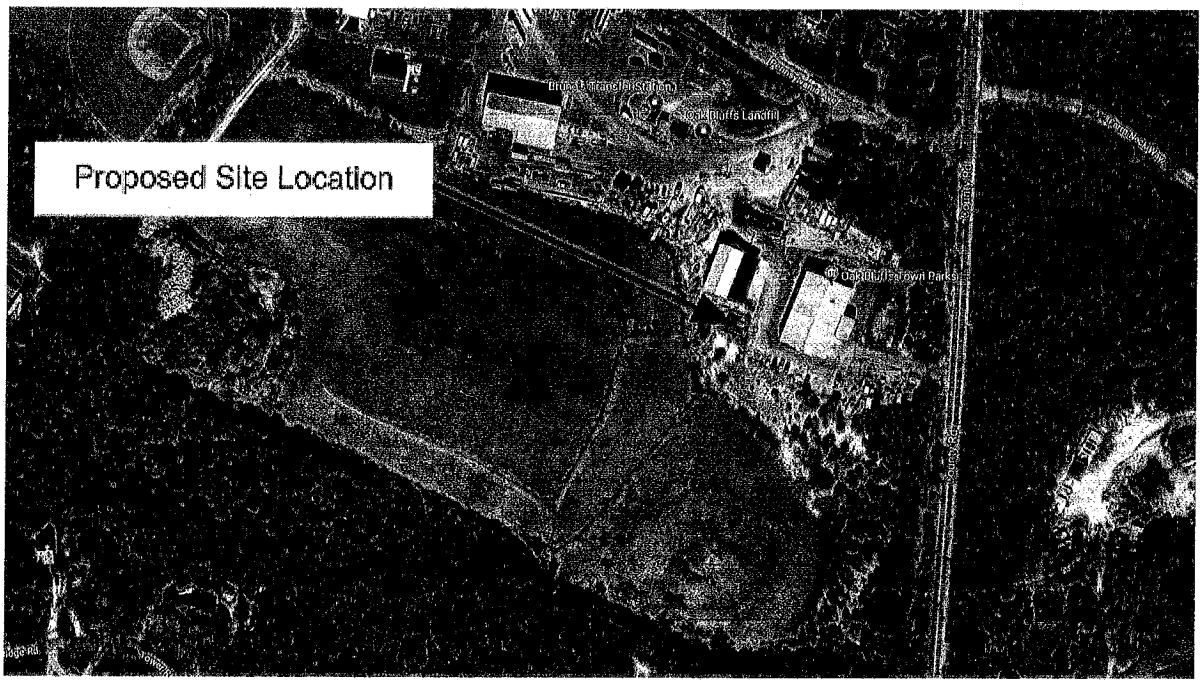
Dukes County Sheriff's Office
MVPSCS

(Martha's Vineyard Public Safety Communications System)

Proposed Tower Development at Oak Bluffs Highway Site

(Prepared by Motorola Solutions and Dukes County Sheriff's Office)

The Dukes County Sheriff's Office, Oak Bluffs Fire/EMS and Oak Bluffs Police are seeking your support for an alternate location for radio equipment currently housed at the OB Water Tower. Due to increased commercial equipment loading, access issues, transmission coverage issues and geographic location, the Oak Bluffs Water Tower is no longer a viable location. A new site has been identified and can fully serve the needs of the Town's Public Safety Agencies. This proposed site is essential to providing reliable emergency communications for the People of the town of Oak Bluffs. Please reference the attached incident reports from 2017-2018 regarding these issues and the need to further develop a dedicated public safety communications tower.



Motorola Job Scope

Existing Oak Bluffs Highway barn. Proposed 140' Self Supported Tower, consisting of a 50' x 50' compound, 12' x 10' MSB shelter, with 35KW outdoor generator with 1000 gal LP fuel tank. Site to be situated near open space in rear of building.

Site Scope Summary

- Engineering services for site drawings and regulatory approvals – Included
- Site acquisition services – Not included
- Zoning Services – Included
- New fenced compound/expansion size – 50-foot x 50-foot
- Clearing type – Light
- New power run – 100 feet, Electrical service type – Underground, 200-amp-120/240-volt, single-phase
- New shelter size – 12-foot x 10-foot.
- New fuel tank size – 1000 gallons- Type – Propane above-ground
- New generator size – 35 kW, Type – Outdoor
- New tower to be used for antennas – 140-foot self-supported tower
- New tower foundation size – 35 cubic yard, Type – Pier and pad

Motorola Responsibilities:

- **Site Zoning**
  - Coordinate zoning and permitting of the new tower site such that it is in full compliance with applicable jurisdictional requirements.

- **Site Engineering**
  - Prepare site construction drawings showing the layout of various new and existing site components.
  - Conduct site walks to collect pertinent information from the sites (e.g., location of Telco, power, existing facilities, etc).
  - Perform a boundary and topographic survey for the property on which the communication site is located or will be located.
  - Prepare a lease exhibit and sketch of the site to communicate to the property owner the proposed lease space and planned development at the particular site location.
  - Prepare zoning drawings that can be used to describe the proposed site installation in sufficient detail.

- Prepare record drawings of the site showing the as-built information.
- Conduct floodplain analysis of the site location.
- Conduct utility investigation and coordinate with local utility company for power hook up.
- Perform construction staking around the site to establish reference points for proposed construction.
- Perform NEPA Threshold Screening, including limited literature and records. Search and brief reporting, as necessary to identify sensitive natural and cultural features referenced in 47 CFR Chapter 1, subsection 1.1307 that may potentially be impacted by the proposed construction activity. This does not include the additional field investigations to document site conditions if it is determined that the proposed communication facility "may have a significant environmental impact" and thus require additional documentation, submittals, or work. Regional Environmental Review (RER) report submittals if required by FEMA have not been included. Perform Cultural Resource study as needed to identify sensitive historical and archaeological monuments that might be impacted by proposed construction.
- Perform a ASTM E 1527-05 certified Phase I Environmental Site Assessment (ESA), to identify obvious and reasonably likely on-site and/or off-site potential sources of contamination that might pose a potential risk of leasing and building on a piece of property, and whether further environmental investigations are warranted. This study does not include Phase II assessments, risk/cost evaluations, and permitting assistance that may be required if risk factors are indicated.
- Conduct up to 40-foot deep soil boring test at tower location and prepare geotechnical report of soil conditions at locations of the tower foundation. Grouting of boring holes or access by Automatic Traction Vehicle (ATV) - mounted rig is not included.
- Conduct construction inspection of foundation steel prior to pour, materials testing of concrete and field density tests of backfill to ensure quality construction.
- Check tower erection for plumbness, linearity and alignment after installation.
- Perform inspection of the site and the work performed by the Contractor to document that the site is built in accordance with the "Site Plans" and document any deviations or violations.
- Prepare, submit and track application for local permit fees (zoning, electrical, building etc.), prepare FAA filings and procure information necessary for filing.
- Perform four point soil resistivity testing at the time of site visit.
- Third Party Utility Markout.
- FAA/ASR filing and approvals.

- **Site Preparation**
  - Obtain the permits such as electrical, building, and construction permits, and coordinate any inspections with local authorities that may be needed to complete site development work.
  - Provide one-time mobilization costs for the construction crews. Any remobilization due to interruptions/delays that are out of Motorola's control will result in additional costs.
  - Perform light clearing of brush, grubbing and disposal of vegetation and shrub growth in the site compound area and a 20-foot path around it (8100 square feet).
  - Grade the site compound and 10-foot path around it to provide a level, solid, undisturbed surface for installation of site components (not to exceed 4900 square feet).
  - Supply and install gravel surfacing to a depth of 6 inches, including herbicide treatment and geotextile fabric installation within the fenced in site compound area, and a 3-foot path around it (not to exceed 3136 square feet).
  - Supply and install 16 guard posts.
  - Provide silt fence around the compound to control soil erosion (not to exceed 200 linear feet).
  - Supply and install 8-foot high chain-link fencing with a ten-foot wide gate around the shelter compound (not to exceed 200 linear feet).
  - Perform site touch up (fertilize, seed and straw) disturbed areas not covered with gravel after completion of construction work. Landscaping, decorative fencing or any other aesthetic improvement that may be required by local jurisdictions has not been included and will be handled through a negotiated contract change notice.

    Site Components Installation
  - Construct 1 reinforced concrete foundation necessary for a 12-foot x 10-foot shelter.
  - Construct 1 concrete slab for 1000 gallon above-ground Liquid Propane (LP) fuel tank at 3000 psi with reinforcing steel necessary for foundations.
  - Construct 1 foundation for the 35 kW generator with reinforcing steel necessary for foundations.
  - Supply and install 1 prefabricated concrete shelter 12-foot x 10-foot.
  - Supply and install 1 1000-gallon Liquid Propane (LP) fuel tank(s), fill it with fuel and connect it to the generator.
  - Supply and install fuel tank monitors on the tanks to monitor low fuel in tanks and run alarm wiring to the building located within 50 feet of the tank.
  - Supply and install 1 120/240-volt, 200-amp, single-phase meter pedestal and hookup for electrical service by the local utility.

- Provide all trenching, conduit, and cabling necessary for underground hookup of power to the shelter from nearby utility termination located within 100 cable feet of the shelter.
- Supply and install a perimeter grounding system around the compound and shelter. The ground system is to tie to the fence and all new metal structures within the compound to meet current Motorola R56 standards.
- Conduct 1 three-point ground resistance test of the site. Should any improvements to grounding system be necessary after ground testing, the cost of such improvements shall be the responsibility of Dukes County Sheriff's.
- Supply and install 1 freestanding 24-inch-wide cable/ice bridge from the tower to the shelter (up to 20 linear feet).

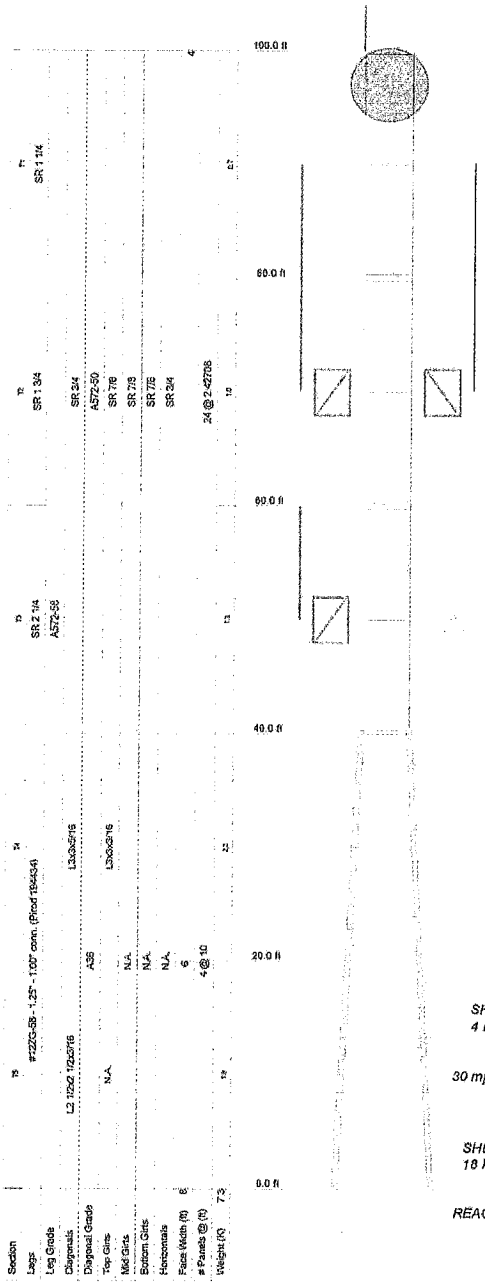
- **Tower Work**
  - Construct pier and pad type tower foundations including excavation, rebar and concrete (not to exceed 35 cubic yards).
  - Erect new 140-foot self-supported tower.
  - Supply and install grounding for the towerbase for self-supported towers Antenna and Transmission Line Installation
  - Install 2 antennas for the RF system.
  - Install 2 4-foot microwave dishes.
  - Install up to 220 linear feet of 7/8-inch transmission line.
  - Install up to 240 linear feet of EW90 waveguide for microwave dishes.
  - Perform sweep tests on transmission lines.
  - Perform alignment of each of 2 microwave paths to ensure that the microwave dishes are optimally positioned.
  - Provide and install attachment hardware for supporting transmission lines on the antenna support structure every three feet.
  - Supply and install 1 ground buss bar at the bottom of the antenna support structure for grounding RF cables before they make horizontal transition.

- **Existing Facility Improvement Work**
  - Supply and install 2 40-amp breakers in the distribution panel and wire to outlets located on an average within 35 cable feet.

- **Miscellaneous Work**
  - Provide materials and labor to terminated DC plant conductors and install DC plant.
  - Provide removal of spoils excavated during tower foundation installation
  - Provide structural fill for backfill of tower foundation.

Dukes County Sheriff's Office
MVPSCS
(Martha's Vineyard Public Safety Communications System)

This is an example layout of what the tower would compose of:



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
1/2" x 4' lightning rod	100	SC331-SF2LDF	70
PAD6-W59BC w/ Radome	100	6' Pivot Side Arm (50" pipe)	70
PAD6-W59BC w/ Radome (50% additional loading)	100	SD314-HF3P2LDF (50% additional loading)	50
SC331-SF2LDF	70	6' Pivot Side Arm (50" pipe) (50% additional loading)	50
6' Pivot Side Arm (50" pipe)	70	SD314-HF3P2LDF	50
SC331-SF2LDF (50% additional loading)	70	6' Pivot Side Arm (50" pipe)	50
6' Pivot Side Arm (50" pipe) (50% additional loading)	70	(3) Anti-climb	6
SC331-SF2LDF (50% additional loading)	70	(3) Anti-climb	6
6' Pivot Side Arm (50" pipe) (50% additional loading)	70		

ALL REACTIONS ARE FACTORED

MAX. CORNER REACTIONS AT BASE:
DOWN: 130 K
UPLIFT: -130 K
SHEAR: 14 K

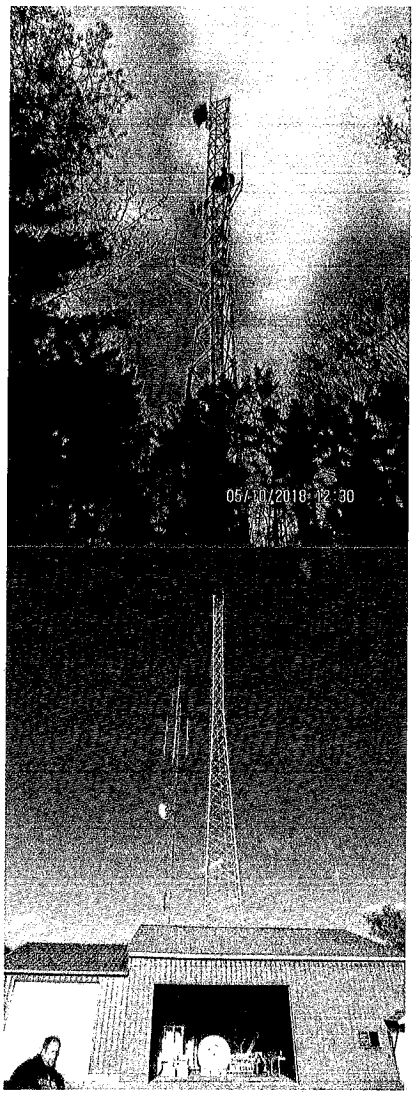
AXIAL
57 K

SHEAR *MOMENT*
4 K *232 kip-ft*

TORQUE 1 kip-ft
30 mph WIND - 0.7500 in ICE
AXIAL
11 K

SHEAR *MOMENT*
18 K *919 kip-ft*

TORQUE 8 kip-ft
REACTIONS - 90 mph WIND



MVPSCS INCIDENT REPORT

Completed 3/20/2018

Date/Time	3/14/2018 1018
Admin #	18000054
Cad #	
Completed by	Deputy West (128)

Summary:

On March 13th 2018 at 0849 hours I received a call from Deputy Gould who requested I respond to the communications center to confirm faults on all channels in Oak Bluffs and West Tisbury sites. Upon arrival at the communications center I was able to confirm this and made contact with Dep. Gould who walked me through the process of restarting the voters for 860,229,252. I advised Major Schofield that I would be attempting to restart the voters and during that time they would lose use of the channel for upwards of 90 seconds. After determining this did not resolve the issue I contacted Deputy Gould to ask how he would like me to proceed. Deputy Gould requested I respond down to the Oak Bluffs water tower site to check the generator. I met with an Oak Bluffs Water Department worker who unlocked the premises for me. I observed that the generator was not running and there was no power supply at the site. I advised Deputy Gould of my findings and at that time we decided to proceed with our pre-incident plan for the loss of the Oak Bluffs site. Fire Chief Rose was on a call in the area, I advised him of the situation and how we planned to proceed until power could be restored. I provided the communications center with the same findings and solution and cleared the area at approximately 1130 hrs.

At 1400 hrs on the same date I received a call from Deputy Gould advising me there is now a fault at the Edgartown water tower site and request I respond to communications center to confirm this. Once I had confirmed the faults I responded to the Edgartown fire station to meet with Chief Schaeffer in order to access the site. Deputy Chief Kelly was at the station to provide access. Upon arrival I found the power to this site to be out and the backup battery for all radio equipment had no voltage. At this time there is no alternative power source for this site. I advised Deputy Gould of these findings, we determined the Oak Bluffs site to be the priority as Edgartown's Church site was still functioning. When preparing to leave the Edgartown fire station I discovered the Sheriff's office tahoe I had been assigned had a failure in the break system causing the vehicle to have no brakes and need repair. I was able to get the tahoe to the house of corrections parking lot and arrange for Deputy Vieira to give me a ride to my personal vehicle located in Vineyard Haven. Once there I returned to the communications center to check on the generator and discuss with Major Schofield and Sheriff Ogden my findings and how we

were going to proceed until power could be restored. Eversource was notified of priority sites and I cleared the communications at approximately 1900 hrs.

Thursday March 15th 2018 I met with Deputy Gould and we both went to the peaked hill site to check on the function of all systems there, upon entering the location we found all equipment to be functioning properly. Deputy Gould and myself both observed a small amount of water damage and standing water on the floor along the outside wall of the "A" side of the building. Deputy Gould and I also checked the propane tank that provides fuel for the generator on site and found it to be approximately 50% full at this time. Deputy Gould advised site management company General Dynamics of all findings upon exit of location.

Resolution:

Addendum 3-18-18 (Deputy Gould 106)

Backup generators are available for long term loss of power (24 Hours plus). Switching the power source to an external generator will result in approximately 25 minutes of downtime per channel for each site. Under these potential circumstances Fire, Police, and EMS would be unable to communicate or receive calls for approximately 2-3 hours. In turn, it is necessary to harden our sites by installing UPS (Universal Power Supplies or battery backups), generators, and an independent data communication network (IE Point to Point Wireless data links). Notably, the MVPSCS network needs to have a backup communications system consisting of standby channels that can be turned on at any time that we lose operation of our normal network. This would result in minimal down-time of the network in the worst of circumstances.

Continuing maintenance, along with further engineering and development is necessary for this mission critical network. Without immediate action to remedy the downfalls in the Martha's Vineyard Public Safety Communications System, there is a high probability for the loss of life and property.