

# Annual Report for 2019

---

## Division of Statewide Emergency Telecommunications

Annual Report for 2019 .....	1
Division of Statewide Emergency Telecommunications .....	1
Introduction and Executive Summary.....	2
Enhanced 9-1-1 Commission.....	5
Enhanced 9-1-1 Commission Meeting Schedule .....	6
NG 911 replacement of the Enhanced 9-1-1 Telecommunications System .....	7
Public Safety Data Network (PSDN) .....	7
CT Alert Emergency Notification System .....	7
Regionalization.....	8
GIS Mapping Report.....	9
Frequency Coordination 2018 .....	9
Telecommunicator Training and Certification .....	10
9-1-1 Surcharge.....	10
Public Safety Answering Point Training Fund .....	10
9-1-1 Call Counts .....	11
Connecticut Telecommunications System.....	11
Appendix A – BUDGET 2018.....	12
Appendix B – CALL COUNT REPORT .....	13

# Division of Statewide Emergency Telecommunications

---

---



STATE OF CONNECTICUT

DEPARTMENT OF EMERGENCY SERVICES & PUBLIC PROTECTION  
OFFICE OF THE COMMISSIONER

## Introduction and Executive Summary

To the Honorable Members of the General Assembly:

In compliance with Section 28-29b of the Connecticut General Statutes, the Division of Statewide Emergency Telecommunications (DSET) of the Department of Emergency Services and Public Protection hereby submits the annual report concerning Enhanced 9-1-1 emergency telephone service to the General Assembly of the State of Connecticut.

The Division of Statewide Emergency Telecommunications provides for statewide Enhanced 9-1-1 (E911) planning and implementation, public safety telecommunicator training and certification, public safety frequency coordination, funding for regional emergency communication centers, funding for cities with population greater than 40,000, public safety answering points (PSAPs), grant assistance for capital expenses for PSAPs and financial assistance for coordinated medical emergency direction (CMED). DSET provides all state and local public safety agencies with street centerline and street address information (geographic information systems or GIS) for emergency response purposes. DSET also provides chairmanship and plan development for the six New England states 700MHz, 800MHz and 4.9MHz planning committees. The Connecticut Telecommunications System (CTS) is also under the purview of DSET and is responsible for land mobile radio and other inter-operable communications for State Police as well as municipalities, federal and other state agencies.

This report details the activities relating to Statewide Emergency Telecommunications service during the calendar year 2019 and the activities anticipated for the ensuing year.

**Replacement of the Enhanced 9-1-1 System** – An Internet Protocol (IP) based 9-1-1 system known as Next Generation 9-1-1 (NG911) has replaced the legacy Enhanced 9-1-1 system that had been in place for more than sixteen years. The new NG911 system has the capability to process text, images and video along with the emergency call, as that technology becomes available and is cost effective to implement. NG911 is transported over the Public Safety Data Network. Implementation of the NG911 call handling platform at all Connecticut Public Safety Answering Points was completed in 2017. Text-to-911 service was deployed in 2018.

**Connecticut Public Safety Data Network** –The PSDN is an ultra-high speed, flexible fiber optic data network that is serving as the base transport infrastructure and interconnectivity pathway for public safety-related applications and services throughout the State. Its primary purpose is to provide the required connectivity for the NG911 system. Additionally, the network provides a single connectivity source to allow for the integration of systems, applications and

# Division of Statewide Emergency Telecommunications

---

currently disparate networks so that vital information and resources can easily be shared amongst the various public safety entities throughout the state. The installation of the fiber and the required network equipment is now complete at every PSAP in the state. During 2010, Connecticut was successful in leveraging our PSDN investment as the match to obtain an additional \$93.8 Million in federal funds from the Broadband Technologies Opportunities Program (BTOP). This federal grant program provided funding to extend the PSDN to over 400 additional public safety sites at Fire Departments and Police Departments throughout the state, as well as providing connections to extend the Connecticut Education Network. The grant portion of the network was completed by September, 2013, meeting all federal requirements. In addition to supporting NG911 service over the network, it also is the platform for more than 100 working public safety applications in use by municipalities and other state agencies.

**Emergency Notification** –The CT Alert Emergency Notification System utilizes the 9-1-1 database and a citizen opt-in database in order to provide emergency notification services to our citizens. It is used to warn citizens of significant events which would impact their safety and the safety of those around them. The system can be used by State officials for large-scale notifications and for local incident notifications managed by the local PSAP. During 2019, 108 CT Alerts were broadcast to the public, contacting over 1.5 million citizens. Over 178,000 Connecticut residents have opted in to CT Alert.

**Mapping** – Maintaining maps is an ongoing process and DSET utilizes a Geographic Information System (GIS) Coordinator and a GIS Technician to handle the increasing demands for mapping information and updates. NG911 utilizes the GIS map as a basic building block for service delivery, thereby increasing DSET’s in-house responsibility for 9-1-1 database provisioning and maintenance.

**9-1-1 Calls** – During the calendar year 2019, Connecticut’s 105 public safety answering points and four State Police Secondary Answering Points processed a total of 1,994,151 9-1-1 calls, a decrease of 8.2% from the total 9-1-1 calls made in 2018.

- The number of 9-1-1 calls received from wireless telephones was 1,611,171 a decrease of 6.6% from wireless calls received in 2018. Wireless 9-1-1 calls made up 80.8% of all the 9-1-1 calls in Connecticut in 2019.
- The number of 9-1-1 calls received from conventional wire-line telephones was 240,280, a decrease of 23% from wireline calls received in 2018. Wireline calls comprised 12% of all 9-1-1 calls in 2019.
- The number of 9-1-1 calls received from Voice of Internet Protocol (VoIP) telephones was 136,808, an increase of 2% over VoIP calls received in 2018. VoIP calls were 6.9% of all 9-1-1 calls in 2019.
- The number of text-to-911 calls was 5,902, representing .3% of total 911 calls in 2019.

**9-1-1 Surcharge** – Every telephone customer pays a monthly surcharge on their telephone bill to provide for funding the costs of 9-1-1 services. The Department of Energy and Environmental Protection, Public Utilities Regulatory Authority (PURA) sets the surcharge based upon cost and usage data provided by DSET. PURA set the current rate at .58 for 2019, which is enabling DSET to continue to fund its various programs, grants and subsidies, as well as replacement of the obsolete E911 system.

**Budget** – The estimated “Statewide Enhanced 9-1-1 Program” operating budget for FY 2020 is \$30,257,392. The budget is found in Appendix A.

**Funding** – DSET funding provides for the following PSAP initiatives:

- **Training:** Each PSAP is eligible for reimbursement of training costs at the rate of 10 cents per capita to provide training for certified telecommunicators and supervisors.
- **Funded Entities:** In 2019, 21 municipal PSAPs, seven regional emergency telecommunication centers and nine multi-town PSAPs were eligible to receive funding from DSET. Funding is based on the calculation of the funding formula in accordance with the Regulations of Connecticut.

## Division of Statewide Emergency Telecommunications

---

- Capital Expense Grants: Funded cities and regional centers may use up to fifty percent of their funding for capital expenses. Additionally, a capital expenditure account was created based on 12.5 percent of the total funding, which allows funded cities and regional centers to apply for capital expenditures from the fund, if matched dollar per dollar by local funds.
- Capital expenditure grants totaling \$197,897 were used to improve and upgrade emergency telecommunications equipment, software and radio systems. To date, grants were awarded in FY20 to four regional emergency communication centers and three funded municipalities.
- State Police Funding: Approximately 20% of all 9-1-1 calls received by Connecticut PSAPs are answered by the Connecticut State Police (CSP). To support that level of effort, CSP is provided \$1 per 9-1-1 call. Total funding for FY20 was \$426,687.
- CMED Funding: CMED (Coordinated Medical Emergency Direction) is funded at .30 per capita to give fiscal relief to towns and cities.

**Connecticut Telecommunications System** - DSET also oversees the Connecticut Telecommunications System (CTS) which provides land mobile radio and other inter-operable communications for the State Police as well as municipalities, Federal and other state agencies, with over 15,000 radios in use. CTS manages and maintains the microwave transport system for the statewide radio network as well as the 33 state owned and 32 leased or shared tower facilities including licensing, contracts, security and structural requirements. CTS responsibility includes the Network Control Center which operates on a 24/7/365 basis.

DSET/CTS has begun sharing the new Land Mobile Radio system (LMR) with municipalities saving potentially millions of dollars compared to towns purchasing their own radio systems. By joining the state system, towns and other public safety entities save significant costs on a mission critical radio system, gain interoperability with statewide users of the system and potentially enhance the coverage area for users in their area. In 2019, the towns of Stonington, Groton and Coventry have joined the state LMR system. Several other towns are in the implementation phase and MOU's have been signed or are in process for over forty other municipal or other public safety organizations.

I look forward to discussing the contents of this report with you.

Sincerely,

Commissioner

## Enhanced 9-1-1 Commission

The Governor, in accordance with Connecticut General Statutes Section 28-29a, appoints the Enhanced 9-1-1 Commission to advise the Commissioner of the Department of Emergency Services and Public Protection with respect to Enhanced 9-1-1 activities.

The members of the Enhanced 9-1-1 Commission in 2019 were:

Chairman John Elsesser, representing the Council of Small Towns

Brandon Robertson, representing Connecticut Conference of Municipalities

Alfred Dudek Jr., representing the Municipal Fire Chiefs

Robert Guthrie, representing Volunteer Fire Service

Jeffrey Morrisette, representing the State Fire Administrator

Donald Richardson, representing Wireless Services

Raffaella Coler, representing Department of Public Health, Division of Emergency Medical Services

Stavros Mellekas, representing the Department of Emergency Services and Public Protection, Connecticut State Police

William Hackett, representing the Division of Emergency Management and Homeland Security

Representing the Municipal Police Chiefs, Vacant

Joanne Miles, represent E9-1-1 Public Safety Answering Point Managers

Tammy Wright, representing E9-1-1 Public Safety Answering Point Telecommunicators

Michele Etzel, representing the Public

## Enhanced 9-1-1 Commission Meeting Schedule

All Enhanced 9-1-1 Commission Meetings are held quarterly on Fridays at:

Department of Emergency Services and Public Protection

Second Floor, Room 245  
1111 Country Club Road  
Middletown, CT 06457

Enhanced 9-1-1 Commission meetings were held in 2019 on the following dates:

January 4, 2019  
April 5, 2019  
July 12, 2019  
October 4, 2019

Enhanced 9-1-1 Commission meetings dates scheduled for 2020 are as follows:

January 3, 2020  
April 3, 2020  
July 10, 2020  
October 2, 2020

Meetings are open to the public. Minutes of the Enhanced 9-1-1 Commission meetings are posted on the Division of Statewide Emergency Telecommunications (DSET) website at: <http://www.ct.gov/despp>

## **NG 911 replacement of the Enhanced 9-1-1 Telecommunications System**

DSET has replaced Connecticut's aging E9-1-1 system. The legacy system and equipment were no longer manufactured and the software was unsupported. The legacy E9-1-1 system was replaced by a Next Generation 9-1-1 (NG911) platform. The NG911 system is currently receiving calls from traditional networks and Text-to-911, and it will eventually become capable of processing emergency calls that include pictures, video and data from telematics and automatic crash notification systems.

NG911 software and hardware has been deployed in 109 PSAPs statewide. Over 2,050 telecommunicators and public safety personnel have been trained on the new system. Public education initiatives were developed and included input from stakeholders to address the new Text-to-911 service. Installation of the call handling component at all Connecticut Public Safety Answering Points was completed in 2017, with Text-to-911 service deployed in August 2018.

## **Public Safety Data Network (PSDN)**

The PSDN is an ultra-high speed and flexible fiber optic data network that serves as a base transport infrastructure and interconnectivity pathway for public safety related applications and services throughout the State. Its primary purpose is to provide the connectivity for NG911 services. Additionally, the network provides connectivity to allow for the integration of systems and applications so that vital information and resources can easily be shared among various public safety entities throughout the State.

Phase One of the PSDN encompasses connections to the following locations: 109 PSAPs, Department of Emergency Services and Public Protection (DESPP) Headquarters, DESPP Rocky Hill, DESPP Meriden campus, and Bureau of Enterprise Systems and Technology/DAS in East Hartford, via a fiber optic network. The network provides the connectivity needed for optimal 9-1-1 services, deliver greater reliability and speed, enable improved interoperability (including radio interoperability), and reduce costs to the State for the delivery of criminal justice information system services such as Connecticut On-Line Law Enforcement Communication Teleprocessing and National Crime Information Center. Phase Two extends the network to another 403 public safety sites using the Federal Broadband Technology Opportunities Grant (BTOP) awarded in 2012.

Governance is required to manage the connections, expectations, service level and costs related to other public safety organizations taking advantage of the PSDN. In order to manage that process, the PSDN Governance Board has been created to review and approve applications for use as well as setting policy. The Board is coordinated by DSET. An on-line application process has been implemented. As of 2019, over 160 applications for use of the PSDN have been submitted with over 100 working public safety applications in use by municipalities and other state agencies.

## **CT Alert Emergency Notification System**

The CT Alert Emergency Notification System allows public safety officials to help protect lives and property by providing critical information to residents during emergencies and dangerous situations. The system is managed by the Department of Emergency Services and Public Protection and is part of a comprehensive program to ensure public safety in Connecticut.

CT Alert has two main components:

## Division of Statewide Emergency Telecommunications

---

- A geo-notification function allows for alerts to be sent to the public in any geographic area in the state. The system provides powerful map-based GIS capabilities enabling users to quickly target residents in affected geographic areas that could include part of a town, an entire town or towns, or a large area of the state.
- A public safety employee notification function which allows public safety agencies to send messages to improve the coordination of emergency response personnel.

The system is available for use by a number of state agencies and most of the 9-1-1 PSAPs in the state. Six PSAPs have elected not to use CT Alert, but will continue to rely on their existing systems for local alerting. CT Alert utilizes the NG911 database for geo-notifications to the public for life-threatening emergencies. The NG911 data includes only traditional wire-line telephone numbers in the state. A Citizen Opt-In Registration Web Page (CTAlert.gov) is available to the public that allows for communication pathways not included in the 9-1-1 database such as mobile phones / smart phones, VoIP landlines, email, short message service (SMS), and instant messaging to be included in the CT Alert system. Individuals can specify the contact path order for multiple communication devices and the system will cycle through each and every communication device until messages are delivered and confirmed. At the end of 2019 more than 178,000 households have registered their communication pathways via the Citizen Opt-In Web Page or through the community engagement portals.

The Opt-In web page also allows the public to list up to three additional locations in the state that they wish to also receive alerts. These locations could be where their children go to school or where other family members may reside.

In 2019 one hundred and eight (108) CT Alert broadcasts were made to the public, contacting over 1.5 million citizens. The types of alerts broadcast included weather information including severe weather warnings, downed power lines, missing persons and criminal activities.

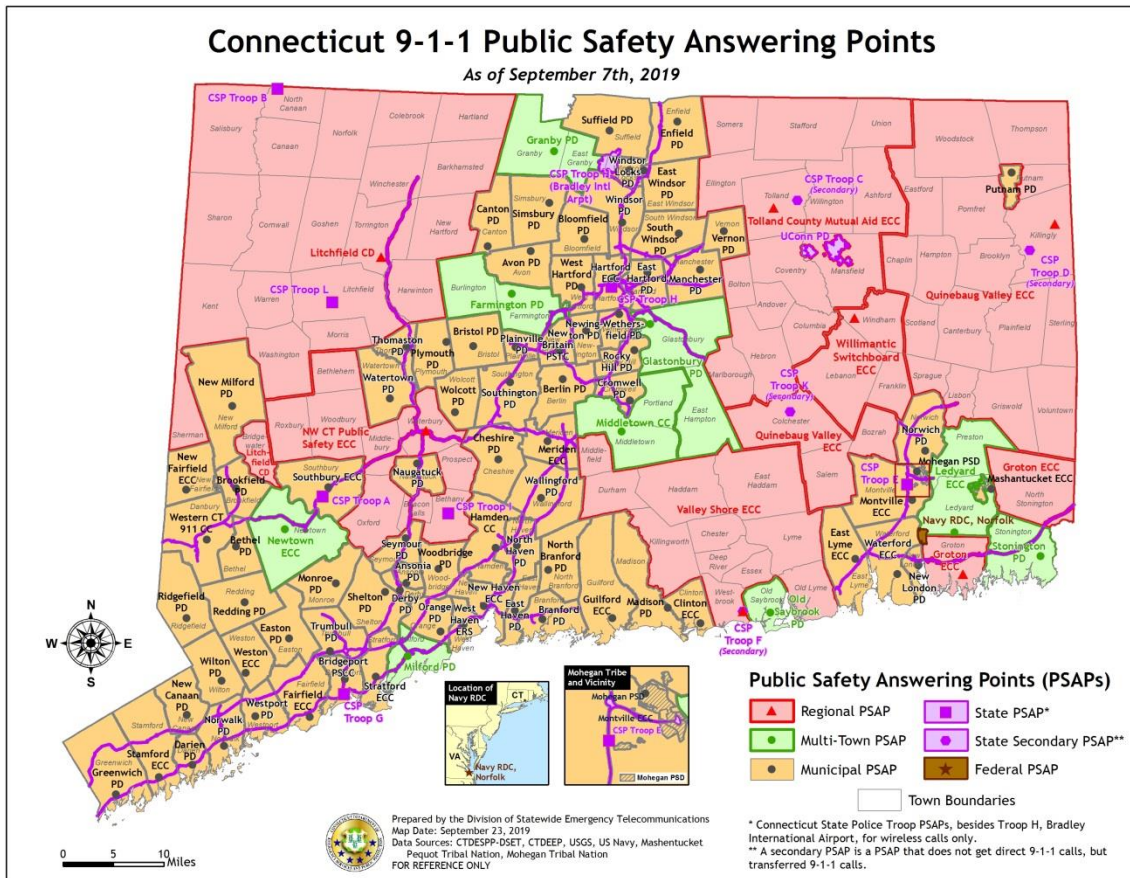
### Regionalization

There were 109 Public Safety Answering Points (PSAPs) beginning 2019, serving the 169 town and cities of Connecticut. The cost of equipping these PSAPs with hardware, software and technology is the State's responsibility. It has long been a goal of DSET and the Enhanced 9-1-1 Commission to reduce the number of stand-alone PSAPs by encouraging consolidation with the interest of improving public and first responder safety.. To achieve this goal DSET has funded many studies requested by local governments to consider mergers of dispatch and 9-1-1 centers. DSET also provides a number of financial incentives, such as funding to relocate telephone and radio equipment, as well as to design and plan new communication centers, for the purpose of consolidation. In 2019, the Town of Winchester consolidated its dispatch functions with Litchfield County Dispatch (LCD). In 2020, it is anticipated that the Town of Plymouth will move its dispatch function to LCD as well. The towns of Westport and Fairfield are also planning to merge dispatch operations in 2020.

In 2019, DSET submitted proposed regulations designed to provide a more equitable distribution of funds to eligible PSAPs and further incent consolidation. These proposed regulations have been submitted to the Office of Policy and Management for approval prior to consideration in the regulation review process.



## DSET GIS/Mapping Report



### 9-1-1 GIS Metrics

**Street Centerline Updating** – DSET continues to collect and process street and address updates that have been provided by the towns and PSAPs. DSET has verified the street names of 229,682 street segments, updated the address ranges of 12,318 street segments, and updated the location of 101,827 street segments since taking over the updating process from Tele Atlas. These updates help improve the locating of and dispatch of emergency services to 9-1-1 callers.

**Address Points added to NG 9-1-1 system** – DSET has added GIS building and tax parcel center address points (total of 1,127,319, as of December 31<sup>st</sup>, 2019) for many of Connecticut’s municipalities to the new NG911 system. This new GIS dataset will be used in conjunction with the GIS street centerline to further improve call location accuracy.

**ALI Geocoding Results** –DSET continues to increase the number of 9-1-1 ALI address records that can be mapped, or geocoded, in the 9-1-1 system. As of December 31<sup>st</sup>, 2019, the percentage of mapped ALI records has reached 99.16% using the street centerline data and 99.43% using a combination of address point and street centerline data. This is up from 99.10% and 99.41%, respectively in 2018.

**Call volume maps** DSET has created PSAP-based 9-1-1 call volume maps to complement the 2019 call volume data. The five-map set consists of total call volume, wireline call volume, wireless call volume, VoIP (Voice over Internet Protocol) call volume, and Text to 9-1-1 call volume. All five maps will be available on the DSET website here: <https://portal.ct.gov/DESPP/Division-of-Statewide-Emergency-Telecommunications/911-In-Connecticut/9-1-1-Statistical-Reports>

# Division of Statewide Emergency Telecommunications

---

## Frequency Coordination

The Region 19 current 700MHz plan allows distribution of 700 MHz general use frequency spectrum. The Committee is the clearing house for the 700MHz “State Licensed” channels used in New England. Applications for other public safety entities are provided from the CAPRAD County, on a first come first serve basis, when spectrum is exhausted, the reserve channel pool will be allocated. It requires all New England Public Safety services, compliance with written procedures, coordinating and sharing resources and eliminating duplicate facilities. In 2019 it received several applications from New England States, the Connecticut Department of Emergency Services and Public Protection and local Connecticut municipalities. The Region 19 800MHz Committee received multiple applications for system modifications in 2019 from several New England States and Connecticut municipalities as well.

## Telecommunicator Training and Certification

In 2019 nine certification classes were held, 146 telecommunicators were trained and certified in 9-1-1 emergency telecommunications. In addition, 215 telecommunicators were recertified. NG 911 equipment training was provided to 167 telecommunicators. Classes were presented at the Connecticut training facility by instructors from AT&T and Intrado Corporation.

## 9-1-1 Surcharge

Every telephone customer with wireline, wireless or voice over internet protocol (VoIP) pays a monthly surcharge on their telephone bill to underwrite the cost of 9-1-1 services to the state. Telephone companies collect these fees and remit them to DSET monthly. The Department of Energy and Environmental Protection, Public Utility Regulatory Authority (PURA) establishes the surcharge based on the E9-1-1 budget requirements, determined by the Department of Emergency Services and Public Safety.

In accordance with the Regulations of Connecticut State Agencies Section 28-24-10, DSET submitted its operating budget for E9-1-1 services to PURA. The budget requirements resulted in setting the surcharge at \$0.58 per month for a single telephone line.

## Public Safety Answering Point Training Fund

The Division of Statewide Emergency Telecommunications provides a training subsidy to public safety answering points. The intent of the funding is to provide opportunities to telecommunicators to attend various training and conferences for professional development.

At the time of this report, 26 of the state’s public safety answering points had utilized this funding in fiscal year 2019. Total reimbursements for this period have exceeded \$65,538.

Training includes attendance at conferences, memberships to professional organizations and training on public safety related topics such as crisis intervention, quality assurance and stress management. DSET strongly encourages utilization of these funds and opportunities. PSAPs are regularly reminded of the availability of funds and advised of training opportunities when appropriate.

## Emergency Medical Dispatch

Sec. 28-25b of Connecticut General Statutes requires that each PSAP provide or arrange for emergency medical dispatch (EMD) to be provided by certified personnel. Using approved medical protocols, 9-1-1 callers can be given instructions

---

---

## Division of Statewide Emergency Telecommunications

---

---

on how to help the patient until medical services arrive. For fiscal year 2019, total reimbursements for EMD training and materials were \$27,700.

DSET will continue to stress the importance of quality improvement and reviewing of EMD calls to ensure the highest degree of professionalism and service to 9-1-1 callers.

### 9-1-1 Call Counts

During the calendar year 2019, Connecticut's 105 public safety answering points and four State Police Secondary Answering Points processed a total of 1,994,151 9-1-1 calls, a decrease of 8.2% over the total 9-1-1 calls made in 2018.

- The number of 9-1-1 calls received from wireless telephones was 1,611,171, a decrease of 6.6% over wireless calls received in 2018. Wireless 9-1-1 calls made up 80.8% of all the 9-1-1 calls in Connecticut in 2019.
- The number of 9-1-1 calls received from conventional wire-line telephones was 240,280, a decrease of 23% over wireline calls received in 2018. Wireline calls comprised 12% of all 9-1-1 calls in 2019.
- The number of 9-1-1 calls received from Voice of Internet Protocol (VoIP) telephones was 136,808, an increase of 2% over VoIP calls received in 2018. VoIP calls were 6.9% of all 9-1-1 calls in 2019.
- The number of Text-to-911 calls was 5,902, representing .3% of total 9-1-1 calls in 2019.

### Connecticut Telecommunications System

DSET also oversees the Connecticut Telecommunications System (CTS) which provides land mobile radio and other inter-operable communications for the State Police as well as municipalities, Federal and other state agencies, with over 15,000 radios in use. CTS manages and maintains the microwave transport system for the statewide radio network as well as the 33 state owned and 32 leased or shared tower facilities including licensing, contracts, security and structural requirements. CTS responsibility includes the Network Control Center which operates on a 24/7/365 basis.

In addition to the daily 24/7/365 support of the statewide radio system, DSET is near completion of a statewide upgrade of the system. This \$64.5 million, 4 year project, replaces end of life equipment with the latest IP-based architecture technology increasing much needed capacity and adding features in order to enhance radio communications for first responders and other public safety entities in Connecticut. This is an extremely complex deployment involving multiple vendors and partners, stringent project management control, effective contract compliance, managing radio licensing requirements, negotiating tower agreements, tower structural analysis and strict fiscal management. During the next round of improvements to the statewide radio system, commonly referred to as Phase IV, DSET/CTS will be enhancing both coverage and capacity in year 2020 and beyond.

DSET/CTS has begun sharing the new Land Mobile Radio system (LMR) with municipalities saving potentially millions of dollars compared to towns purchasing their own radio systems. By joining the state system, towns and other public safety entities save significant costs on a mission critical radio system, gain interoperability with statewide users of the system and potentially enhance the coverage area for users in their area. In 2019, the towns of Stonington, Groton and Coventry have joined the state LMR system. Several other towns are in the implementation phase and MOU's have been signed or are in process for over forty other municipal or other public safety organizations.

**Appendix A - BUDGET 2018**

**Appendix B - CALL COUNT REPORT**