



**SAI Group**  
12 Industrial Way  
Salem, NH 03079  
603-421-0470

June 23, 2023

Melanie A. Bachman  
Executive Director  
Connecticut Siting Council  
10 Franklin Square  
New Britain, CT 06051

**Notice of Exempt Modification – New Cingular Wireless PCS, LLC (AT&T)**  
**74 High Street, Milford, CT - Oyster Festival 2023**  
**N 41.220417**  
**W 73.058889**

Dear Ms. Bachman:

AT&T intends to install a temporary cellular communications facility for service during the 2023 Milford Oyster Fest. Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies § 16-50j-73, of construction that constitutes an exempt modification under R.C.S.A. § 16-50j-72(d). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Mayor Richard M. Smith and David Sulkis, City Planner for the City of Milford as well as to the property owner.

AT&T operates under licenses issued by the Federal Communications Commission (FCC) to provide mobile communications service in New Haven County, which includes the area to be served by AT&T's proposed temporary installation. The proposed temporary facility would be installed on property owned by Southern New England Telephone (Frontier Communications).

**Proposed Temporary Facility**

The proposed temporary cell site meets the criteria set forth in R.C.S.A § 16-50j-72(d) for temporary cellular service for events of statewide significance. The site is necessary to provide additional system capacity to accommodate increased communication needs during Oyster Fest 2023. This facility may include B2, B5, B17, B14, B29, B30, B66 & n77 hardware that is 4G(LTE) and/or 5GNR capable through remote software configuration and either or both services may be turned on or off at various times.

The Milford Oyster Fest will be held in the area of Milford Harbor on August 19, 2023.

The temporary cell site will be located at 74 High Street in Milford on property owned by Frontier Communications. An e-mail from Frontier Communications authorizing AT&T's use of the property for this purpose is attached. Electric power will be provided by a portable PowerPro 45kVA "whisper" generator. AT&T's equipment will be deployed to the property on or around August 3<sup>rd</sup>. The site will begin on-air operations on August 16<sup>th</sup> and be removed on or around August 23<sup>rd</sup>.

AT&T's temporary cell site will consist of radio equipment installed in a fully self-contained vehicle referred to as a Super COLT (Cell on Light Truck). The COLT carries three integrated pneumatic masts, two of which can be extended to a height of 38 ft above ground level, while the third can be extended to a height of 59 ft above ground level. Guy lines will stabilize and support the antenna masts when extended. The proposed temporary cell site will not increase noise levels by six decibels or more.

The COLT will be fitted with two (2) CCI MBA10-6F-BU-H3 antenna at 60 feet, two (2) Ericsson AIR6449 B77D antennas at 55 feet and (3) Kathrein 840-10520 antennas at 40 feet above ground level.

### **Power Density Calculations**

AT&T's temporary cell site will not result in a total radio frequency electromagnetic radiation power density, measured at six feet above ground level at the temporary tower location, at or above State or Federal standards. Please see attached Radio Frequency Emissions Report. The report shows that AT&T's temporary transmissions from the temporary cell site will result in a maximum cumulative percent of MPE that is calculated to be 39.41% of the FCC limit for general population / uncontrolled environments.

### **Conclusion**

For the foregoing reasons, AT&T respectfully requests that the Council acknowledge AT&T's Notice of Exempt Modification for the temporary cell site to be operated during the 2023 Milford Oyster Fest pursuant to R.C.S.A. § 16-50j-72(d).

Please feel free to call me at (860) 670-9068 with any questions regarding this Notice. Thank you for your consideration in this matter.

Sincerely,

*Mark Roberts*

Mark Roberts  
Consultant for SAI  
Mark.Roberts@QCDevelopment.net

### **Attachments**

cc: Mayor Richard M. Smith – Elected Official  
David Sulkis – Milford City Planner  
SNET / Frontier Communications – Property Owner



Property Information

|                   |                                 |
|-------------------|---------------------------------|
| Property Location | 74 HIGH ST                      |
| Owner             | SOUTHERN NEW ENGLAND TEL        |
| Co-Owner          | C/O FRONTIER COMMUNICATIONS     |
| Mailing Address   | PO BOX 2629<br>ADDISON TX 75001 |
| Land Use          | 316I COMM WHSE MDL-96           |
| Land Class        | C                               |
| Zoning Code       | R7.5                            |
| Census Tract      |                                 |

|                  |                 |
|------------------|-----------------|
| Neighborhood     | II              |
| Acreage          | 0.49            |
| Utilities        |                 |
| Lot Setting/Desc | UNKNOWN UNKNOWN |
| Book / Page      | 00294/3320      |
| Fire District    | 4               |

Primary Construction Details

|                   |               |
|-------------------|---------------|
| Year Built        | 1930          |
| Building Desc.    | COMM WHSE     |
| Building Style    | Warehouse     |
| Building Grade    | AVERAGE       |
| Stories           | 2             |
| Occupancy         | 1.00          |
| Exterior Walls    | Brick/Masonry |
| Exterior Walls 2  | NA            |
| Roof Style        | Flat          |
| Roof Cover        | Tar & Gravel  |
| Interior Walls    | Minim/Masonry |
| Interior Walls 2  | NA            |
| Interior Floors 1 | Vinyl/Asphalt |
| Interior Floors 2 | NA            |

|                  |                |
|------------------|----------------|
| Heating Fuel     | Gas            |
| Heating Type     | Forced Air-Duc |
| AC Type          | Central        |
| Bedrooms         | 0              |
| Full Bathrooms   | 0              |
| Half Bathrooms   | 0              |
| Extra Fixtures   | 0              |
| Total Rooms      |                |
| Bath Style       | NA             |
| Kitchen Style    | NA             |
| Fin Bsmt Area    |                |
| Fin Bsmt Quality |                |
| Bsmt Gar         |                |
| Fireplaces       | 0              |

(\*Industrial / Commercial Details)

|                    |               |
|--------------------|---------------|
| Building Use       | Industrial    |
| Building Condition | 2             |
| Sprinkler %        | NA            |
| Heat / AC          | HEAT/AC SPLIT |
| Frame Type         | STEEL         |
| Baths / Plumbing   | AVERAGE       |
| Ceiling / Wall     | CEIL & WALLS  |
| Rooms / Prtns      | AVERAGE       |
| Wall Height        | 14.00         |
| First Floor Use    | NA            |
| Foundation         | NA            |

Photo



Sketch







**MAP DISCLAIMER - NOTICE OF LIABILITY**

This map is for assessment purposes only. It is not for legal description or conveyances. All information is subject to verification by any user. The City of Milford and its mapping contractors assume no legal responsibility for the information contained herein.

Approximate Scale: 1 inch = 50 feet



**From:** [Mackerdichian, Celine](#)  
**To:** [Mark Roberts](#)  
**Subject:** Milford, CT - Oyster Festival  
**Date:** Thursday, June 22, 2023 8:34:11 PM

---

Dear Mark,

This email authorizes AT&T Wireless and/or its authorized agent to file for all necessary federal state or local permits and approvals for the proposed temporary wireless telecommunications facility located at 74 High Street, Milford, CT for the Milford Oyster Festival 2023.

Best,

**Celine Mackerdichian, MCR**  
*Director*  
*Global Corporate Services*

*FRONTIER REAL ESTATE SERVICES*

**NEWMARK**  
515 S Flower Street, Suite 3510  
Los Angeles, CA 90071  
m 818.235.7247  
[celine.mackerdichian@nmrk.com](mailto:celine.mackerdichian@nmrk.com)

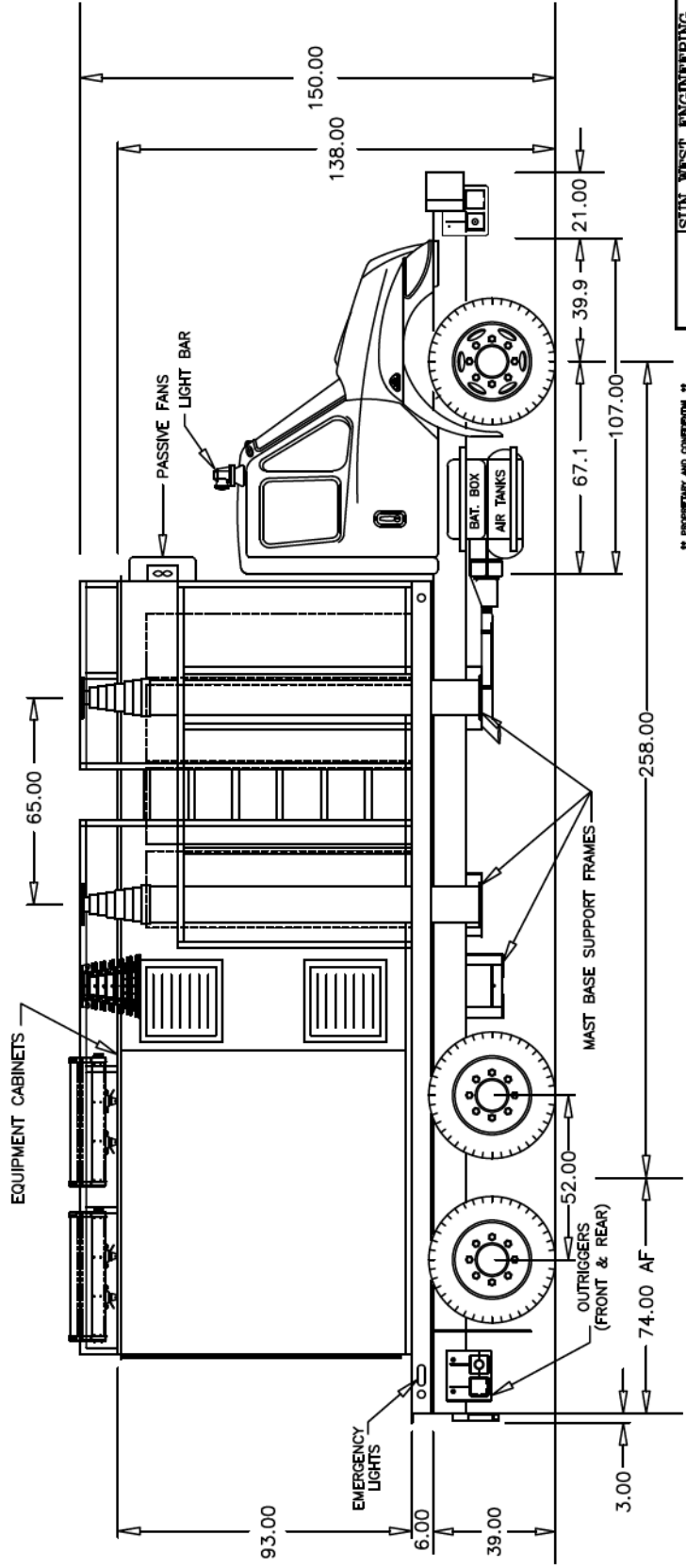
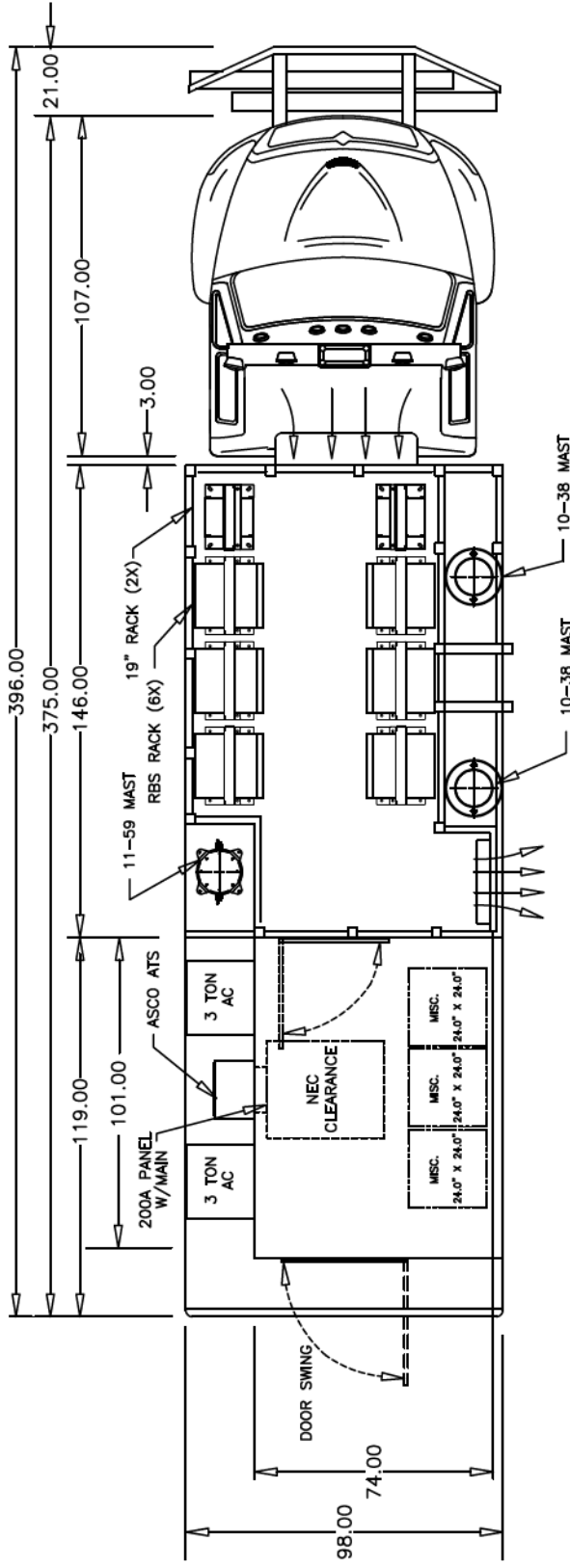
[nmrk.com](http://nmrk.com)  
[LinkedIn](#) | [Twitter](#) | [Facebook](#) | [Instagram](#)

RE License #01904487  
Corporate RE License #1355491

NOTICE: This e-mail message and any attachments are intended solely for the use of the intended recipient, and may contain information that is confidential, privileged and exempt from disclosure under applicable law. If you are not the intended recipient, you are not permitted to read, disclose, reproduce, distribute, use or take any action in reliance upon this message and any attachments, and we request that you promptly notify the sender and immediately delete this message and any attachments as well as any copies thereof. Delivery of this message to an unintended recipient is not intended to waive any right or privilege. Newmark is neither qualified nor authorized to give legal or tax advice, and any such advice should be obtained from an appropriate, qualified professional advisor of your own choosing.



Example of an AT&T COLT  
(Masts in Stowed Position)



ALL DIMENSIONS AND CONVERSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.  
 COMPANY © 2008 SUN WEST ENGINEERING, INC.  
 THE SOCIAL CONTENTS VALUE SERVICES AND  
 OTHER PROPRIETARY AND CONFIDENTIAL  
 INFORMATION OF SUN WEST ENGINEERING, INC.  
 IS HEREBY PROTECTED BY PATENT AND  
 TRADEMARK RIGHTS. ALL RIGHTS ARE RESERVED.  
 WITHOUT LIMITATION THE COMPANY AND OTHER  
 INFORMATION HEREIN ARE THE SOLE AND EXCLUSIVE  
 PROPERTY OF SUN WEST ENGINEERING, INC.  
 ANY REPRODUCTION, DISSEMINATION, OR USE OF ANY  
 PORTION OF THIS DOCUMENT WITHOUT THE PRIOR  
 WRITTEN PERMISSION OF SUN WEST ENGINEERING, INC.  
 IS STRICTLY PROHIBITED. THE USER SHALL BE  
 PROSECUTED TO THE FULLEST EXTENT OF THE LAW.

|   |                    |
|---|--------------------|
| <b>SUN WEST ENGINEERING, INC.</b>       |                    |
| 200A TRUCK CHASSIS W/ EQUIPMENT CABINET |                    |
| INTERNATIONAL (MODEL 4300)              |                    |
| TRUCK CHASSIS W/ EQUIPMENT CABINET      |                    |
| PLT SCALE: 3000=1                       | SHEET: 1 of 1      |
| DRAWN BY: 2527M                         | DATE DRAWN: 3-3-16 |
| REVISED: 3-18-16                        | DWG. No. SW-543R3  |

# COLT Specifications



# PowerPro™ Mobile Generators

## Specifications

|                                      | PowerPro 25   | PowerPro 40                          | PowerPro 45  | PowerPro 65                             | PowerPro 125   | PowerPro 150       |
|--------------------------------------|---|--------------------------------------|--|---|--|--------------------|
| Model                                | SDG25S-8E1  | SDG40S-8B1                           | SDG45S-8E1   | SDG65S-8C1                              | SDG125S-8B1  | SDG150S-8B1        |
| <b>GENERATOR SPECIFICATIONS</b>      |   |                                      |  |   |  |                    |
| Generator Type                       | Airman  | Taiyo                                | Airman   | Airman                                  | Taiyo  | Taiyo              |
| Armature Connection                  | Star with Neutral/Zig Zag                           |                                      |  |   |  |                    |
| No. of Poles                         | 4-Pole  |                                      |  |   |  |                    |
| Insulation                           | Class F   |                                      |  |   |  |                    |
| Excitation                           | Brushless with AVR                                  |                                      |  |   |  |                    |
| Voltage Regulation                   | 0.5%  |                                      |  |   |  |                    |
| Power Factor                         | 0.8   |                                      |  |   |  |                    |
| Frequency                            | 60 Hz / 50 Hz                                       |                                      |  |   |  |                    |
| Standby Power                        | 27.5 kVA / 22 kW                                    | 39 kVA / 31.2 kW                     | 48.5 kVA / 38.8 kW                                   | 67 kVA / 53.6 kW                        | 137 kVA / 110 kW   | 165 kVA / 132 kW   |
| Prime Power                          | 25 kVA / 20 kW                                      | 38 kVA / 30.4 kW                     | 45 kVA / 36 kW                                       | 63 kVA / 50 kW                          | 125 kVA / 100 kW   | 150 kVA / 120 kW   |
| Voltage Single Phase                 | 120V / 240V / 277V (Switchable)                     |                                      |  |   |  |                    |
| Voltage Three Phase                  | 208V / 240V / 416V / 480V (Switchable)              |                                      |  |   |  |                    |
| <b>AMPERAGE</b>                      |   |                                      |  |   |  |                    |
| Single Phase 120V                    | 60 Amp x 2  | 91.4 Amp x 2                         | 108 Amp x 2  | 152 Amp x 2                             | 300 Amp x 2  | 361 Amp x 2        |
| Single Phase 240V                    | 60 Amp  | 91.4 Amp                             | 108 Amp  | 152 Amp                                 | 300 Amp  | 361 Amp            |
| Three Phase 208V                     | 60 Amp  | 105.5 Amp                            | 119 Amp  | 167 Amp                                 | 328 Amp  | 394 Amp            |
| Three Phase 240V                     | 60 Amp  | 91.4 Amp                             | 108 Amp  | 152 Amp                                 | 300 Amp  | 361 Amp            |
| Three Phase 480V                     | 30 Amp  | 45.7 Amp                             | 54 Amp   | 76 Amp                                  | 150 Amp  | 180 Amp            |
| <b>ENGINE SPECIFICATIONS</b>         |   |                                      |  |   |  |                    |
| Engine Model                         | Isuzu 4LE2T   | Kubota V3300                         | Isuzu 4LE2X  | Kubota V3800                            | Isuzu 4HK1X  | Isuzu 6HK1X        |
| EPA Emission Level                   | Tier 4  | Interim Tier 4                       | Tier 4   | Interim Tier 4                          | Tier 3 Flex  | Tier 3 Flex        |
| Engine Type                          | 4-Cycle, water-cooled direct injection turbocharged | 4-Cycle, water-cooled swirl chambers | 4-Cycle, water-cooled, direct injection turbocharged | 4-Cycle, water-cooled, direct injection | 4-Cycle, water-cooled, direct injection turbocharged intercooler |                    |
| Number of Cylinders                  | 4   | 4                                    | 4  | 4                                       | 4  | 6                  |
| Output @ Rated Speed (1800 rpm)      | 33.3 HP   | 46.8 HP                              | 59.0 HP  | 89.5 HP                                 | 152.0 HP   | 190.4 HP           |
| Governor Type                        | Electronic  |                                      |  |   |  |                    |
| Integral Fuel Tank Capacity          | 51.5 gal.   | 106 gal.                             | 106 gal.   | 106 gal.                                | 198 gal.   | 215 gal.           |
| Fuel Containment                     | 110%  |                                      |  |   |  |                    |
| Lubricating Oil Capacity             | 2.7 gal. (10.4 L)                                   | 3.4 gal. (13.2 L)                    | 3.1 gal. (11.7 L)                                    | 3.5 gal. (13.2 L)                       | 5.4 gal. (20.5 L)  | 10.0 gal. (38.0 L) |
| Coolant Capacity                     | 2.7 gal. (10.4 L)                                   | 2.4 gal. (9.0 L)                     | 2.5 gal. (9.5 L)                                     | 2.9 gal. (11.0 L)                       | 5.7 gal. (21.5 L)  | 6.7 gal. (25.5 L)  |
| Battery                              | 12V x 1 12V System                                  |                                      |  |   |  | 12V x 2 24V System |
| <b>FUEL CONSUMPTION</b>              |   |                                      |  |   |  |                    |
| FULL Load                            | 1.6 gal./hr.  | 2.6 gal./hr.                         | 2.8 gal./hr.   | 3.8 gal./hr.                            | 7.2 gal./hr.   | 8.6 gal./hr.       |
| 75% Load                             | 1.3 gal./hr.  | 1.9 gal./hr.                         | 2.1 gal./hr.   | 2.9 gal./hr.                            | 5.8 gal./hr.   | 6.5 gal./hr.       |
| 50% Load                             | 1.0 gal./hr.  | 1.4 gal./hr.                         | 1.5 gal./hr.   | 2.1 gal./hr.                            | 4.0 gal./hr.   | 4.7 gal./hr.       |
| Run Time @ Full Load                 | 32.1 hr.  | 40.8 hr.                             | 37.8 hr.   | 27.8 hr.                                | 27.5 hr.   | 25.0 hr.           |
| <b>WEIGHTS AND DIMENSIONS</b>        |   |                                      |  |   |  |                    |
| LxWxH without Trailer                | 67" x 31" x 55"                                     | 82" x 39" x 61"                      | 82" x 38" x 61"                                      | 82" x 39" x 61"                         | 100" x 46" x 72"   | 126" x 46" x 72"   |
| Dry Weight                           | 1808 lb. (820 kg)                                   | 2555 lb. (1160 kg)                   | 2606 lb. (1180 kg)                                   | 2800 lb. (1270 kg)                      | 4729 lb. (2145 kg)   | 6007 lb. (2725 kg) |
| Operating Weight (Wet)               | 2205 lb. (1000 kg)                                  | 3325 lb. (1510 kg)                   | 3374 lb. (1530 kg)                                   | 3570 lb. (17060 kg)                     | 6173 lb. (2800 kg)   | 7628 lb. (3460 kg) |
| Sound Level @ 23 Feet (No/Full Load) | 63/63 dBA   | 60/61 dBA                            | 57/64 dBA  | 65/65 dBA                               | 65/67 dBA  | 68/71 dBA          |
| <b>LYNXRITE TRAILERS</b>             |   |                                      |  |   |  |                    |
| LxWxH in. *                          | 119" x 54" x 62"                                    | 144" x 70" x 73"                     | 144" x 70" x 73"                                     | 144" x 70" x 73"                        | 196" x 79" x 85"   | 196" x 79" x 85"   |
| Weight                               | 625 lb. (284 kg)                                    | 1225 lb. (556 kg)                    | 1225 lb. (556 kg)                                    | 1225 lb. (556 kg)                       | 1650 lb. (748 kg)  | 1650 lb. (748 kg)  |
| GVMR                                 | 2950 lb. (1338 kg)                                  | 5500 lb. (2494 kg)                   | 5500 lb. (2494 kg)                                   | 5500 lb. (2494 kg)                      | 9900 lb. (4491 kg)   | 9900 lb. (4491 kg) |

\* Height is calculated from ground level to the top of the generator.

Features and specifications are subject to change without notice.



C Squared Systems, LLC  
65 Dartmouth Drive  
Auburn, NH 03032  
(603) 644-2800  
[support@csquaredsystems.com](mailto:support@csquaredsystems.com)

---

## Calculated Radio Frequency Emissions Report



CT5764

74 High Street, Milford, CT 06460

---

May 17, 2023

## Table of Contents

|   |    |
|---|----|
| 1. Introduction .....   | 2  |
| 2. FCC Guidelines for Evaluating RF Radiation Exposure Limits.....                  | 2  |
| 3. RF Exposure Prediction Methods.....  | 3  |
| 4. Calculation Results .....  | 4  |
| 5. Conclusion.....  | 6  |
| 6. Statement of Certification.....  | 6  |
| Attachment A: References .....  | 7  |
| Attachment B: FCC Limits for Maximum Permissible Exposure (MPE) .....               | 8  |
| Attachment C: AT&T Mobility Antenna Model Data Sheets and Electrical Patterns ..... | 10 |

## List of Figures

|   |   |
|---|---|
| Figure 1: Graph of General Population % MPE vs. Distance.....             | 4 |
| Figure 2: Graph of FCC Limits for Maximum Permissible Exposure (MPE)..... | 9 |

## List of Tables

|  |   |
|--|---|
| Table 1: Maximum Percent of General Population Exposure Values ..... | 5 |
| Table 2: FCC Limits for Maximum Permissible Exposure .....           | 8 |

## 1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the proposed temporary deployment for Milford Oyster Festival of AT&T antenna arrays on top of the Mini Super COLT (Cell On Light Truck) at 40', 55' and 60' AGL located at 74 High Street in Milford, CT. The coordinates of Super Colt are 41° 13' 13.43" N, 73° 03' 31.87" W.

AT&T is proposing the following:

- 1) Temporarily deploy multi-band antennas on its Mini Super Colt to support its commercial LTE network and the FirstNet National Public Safety Broadband Network ("NPSBN") during the Milford Oyster Festival celebration in Milford, CT.

This report considers the planned antenna configuration for AT&T<sup>1</sup> to derive the resulting % Maximum Permissible Exposure of its proposed temporary deployment.

## 2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

In 1985, the FCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1996, the FCC updated these rules, which were further amended in August 1997 by OET Bulletin 65 Edition 97-01. These new rules include Maximum Permissible Exposure (MPE) limits for transmitters operating between 300 kHz and 100 GHz. The FCC MPE limits are based upon those recommended by the National Council on Radiation Protection and Measurements (NCRP), developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI).

The FCC general population/uncontrolled limits set the maximum exposure to which most people may be subjected. General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

Public exposure to radio frequencies is regulated and enforced in units of milliwatts per square centimeter (mW/cm<sup>2</sup>). The general population exposure limits for the various frequency ranges are defined in the attached "FCC Limits for Maximum Permissible Exposure (MPE)" in Attachment C of this report.

Higher exposure limits are permitted under the occupational/controlled exposure category, but only for persons who are exposed as a consequence of their employment and who have been made fully aware of the potential for exposure, and they must be able to exercise control over their exposure. General population/uncontrolled limits are five times more stringent than the levels that are acceptable for occupational, or radio frequency trained individuals. Attachment C contains excerpts from OET Bulletin 65 and defines the Maximum Exposure Limit.

Finally, it should be noted that the MPE limits adopted by the FCC for both general population/uncontrolled exposure and for occupational/controlled exposure incorporate a substantial margin of safety and have been established to be well below levels generally accepted as having the potential to cause adverse health effects.

---

<sup>1</sup> As referenced to AT&T's Radio Frequency Design Sheet updated 02/02/2023.

### 3. RF Exposure Prediction Methods

The emission field calculation results displayed in the following figures were generated using the following formula as outlined in FCC bulletin OET 65:

$$\text{Power Density} = \left( \frac{EIRP}{\pi \times R^2} \right) \times \text{Off Beam Loss}$$

Where:

EIRP = Effective Isotropic Radiated Power

R = Radial Distance =  $\sqrt{(H^2 + V^2)}$

H = Horizontal Distance from antenna in meters

V = Vertical Distance from radiation center of antenna in meters

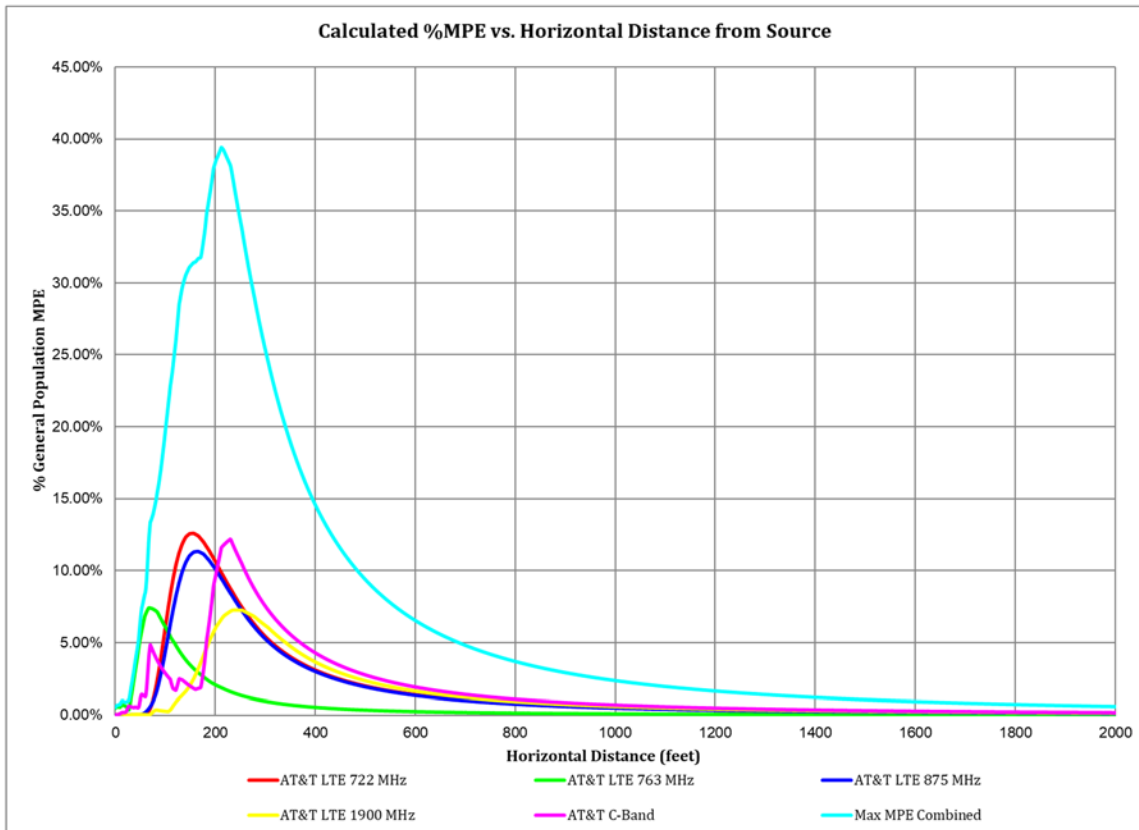
Off Beam Loss is determined by the selected antenna patterns

Ground reflection factor of 1.6

These calculations assume that the antennas are operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings, etc.) that would normally attenuate the signal are not taken into account. The calculations assume even terrain in the area of study and do not take into account actual terrain elevations which could attenuate the signal. As a result, the predicted signal levels reported below are much higher than the actual signal levels will be from the final installations.

#### 4. Calculation Results

The calculated power density results are shown in Figure 1 below. For completeness, the calculations for this analysis range from 0 feet horizontal distance (directly below the antennas) to a value of 3,000 feet horizontal distance from the site. In addition to the other worst-case scenario considerations that were previously mentioned, the power density calculations to each horizontal distance point away from the antennas was completed using a local maximum off beam antenna gain (within  $\pm 5$  degrees of the true mathematical angle) to incorporate a realistic worst-case scenario.



**Figure 1: Graph of General Population % MPE vs. Distance**

In the case of the COLT to be installed at Milford Oyster Festival, each sector is configured differently. Separate analyses were run for each sector and Sector A and C was found to produce the highest percent of MPE (39.41% of the General Population limit) is calculated to occur at a horizontal distance of 212 feet from antennas. Please note that the percent of MPE calculations close to the site take into account off beam loss, which is determined from the vertical pattern of the antennas used. Therefore, RF power density levels may increase as the distance from the site increases. At distances of approximately 1500 feet and beyond, one would now be in the main beam of the antenna pattern and off beam loss is no longer considered. Beyond this point, RF levels become calculated solely on distance from the site and the percent of MPE decreases significantly as distance from the site increases.

Table 1 below lists percent of MPE values as well as the associated parameters that were included in the calculations. The highest percent of MPE value was calculated to occur at a horizontal distance of 212 feet from the site (reference Figure 1).

As stated in Section 3, all calculations assume that the antennas are operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. In addition, a six-foot height offset was considered in this analysis to account for average human height. As a result, the predicted signal levels are significantly higher than the actual signal levels will be from the final configuration. The results presented in Figure 1 and Table 1 assume level ground elevation from the base of the tower out to the horizontal distances calculated.

| Carrier           | Number of Transmitters | Power out of Base Station Per Transmitter (Watts) | Antenna Height (Feet) | Distance to the Base of Antennas (Feet) | Power Density (mW/cm <sup>2</sup> ) | Limit (mW/cm <sup>2</sup> ) | % MPE         |
|-------------------|------------------------|---|-----------------------|---|-------------------------------------|-----------------------------|---------------|
| AT&T C-Band       | 1                      | 86.5  | 55.0                  | 212                                     | 0.115665                            | 1.000                       | 11.57%        |
| AT&T LTE 1900 MHz | 1                      | 160.0   | 60.0                  | 212                                     | 0.066146                            | 1.000                       | 6.61%         |
| AT&T LTE 722 MHz  | 1                      | 160.0   | 60.0                  | 212                                     | 0.047557                            | 0.481                       | 9.88%         |
| AT&T LTE 763 MHz  | 1                      | 160.0   | 40.0                  | 212                                     | 0.009557                            | 0.509                       | 1.88%         |
| AT&T LTE 875 MHz  | 1                      | 160.0   | 60.0                  | 212                                     | 0.055214                            | 0.583                       | 9.47%         |
| <b>Total</b>      |                        |   |                       |   |                                     |                             | <b>39.41%</b> |

**Table 1: Maximum Percent of General Population Exposure Values**

## 5. Conclusion

The above analysis verifies that RF exposure levels from the site with AT&T's proposed antenna configuration will be well below the maximum permissible levels as outlined by the FCC in the OET Bulletin 65 Ed. 97-01. Using the conservative calculation methods and parameters detailed above, the maximum cumulative percent of MPE in consideration of all transmitters is calculated to be **39.41% of the FCC limit (General Population/Uncontrolled)**. This maximum cumulative percent of MPE value is calculated to occur 212 feet away from the site.

## 6. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The calculations follow guidelines set forth in ANSI/IEEE Std. C95.3, ANSI/IEEE Std. C95.1 and FCC OET Bulletin 65 Edition 97-01.

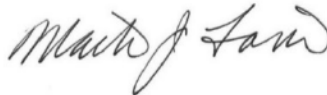


Report Prepared By:

\_\_\_\_\_  
Ram Acharya  
RF Engineer 1  
C Squared Systems, LLC

May 16, 2023

Date



Reviewed/Approved By:

\_\_\_\_\_  
Martin J. Lavin  
Senior RF Engineer  
C Squared Systems, LLC

May 17, 2023

Date



## **Attachment A: References**

OET Bulletin 65 - Edition 97-01 - August 1997 Federal Communications Commission Office of Engineering & Technology

IEEE C95.1-2005, IEEE Standard Safety Levels With Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz IEEE-SA Standards Board

IEEE C95.3-2002 (R2008), IEEE Recommended Practice for Measurements and Computations of Radio Frequency Electromagnetic Fields With Respect to Human Exposure to Such Fields, 100 kHz-300 GHz IEEE-SA Standards Board

## Attachment B: FCC Limits for Maximum Permissible Exposure (MPE)

### (A) Limits for Occupational/Controlled Exposure<sup>2</sup>

| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (E) (A/m) | Power Density (S) (mW/cm <sup>2</sup> ) | Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes) |
|-----------------------|-----------------------------------|-----------------------------------|---|---|
| 0.3-3.0               | 614                               | 1.63                              | (100)*                                  | 6   |
| 3.0-30                | 1842/f                            | 4.89/f                            | (900/f <sup>2</sup> )*                  | 6   |
| 30-300                | 61.4                              | 0.163                             | 1.0                                     | 6   |
| 300-1500              | -                                 | -                                 | f/300                                   | 6   |
| 1500-100,000          | -                                 | -                                 | 5                                       | 6   |

### (B) Limits for General Population/Uncontrolled Exposure<sup>3</sup>

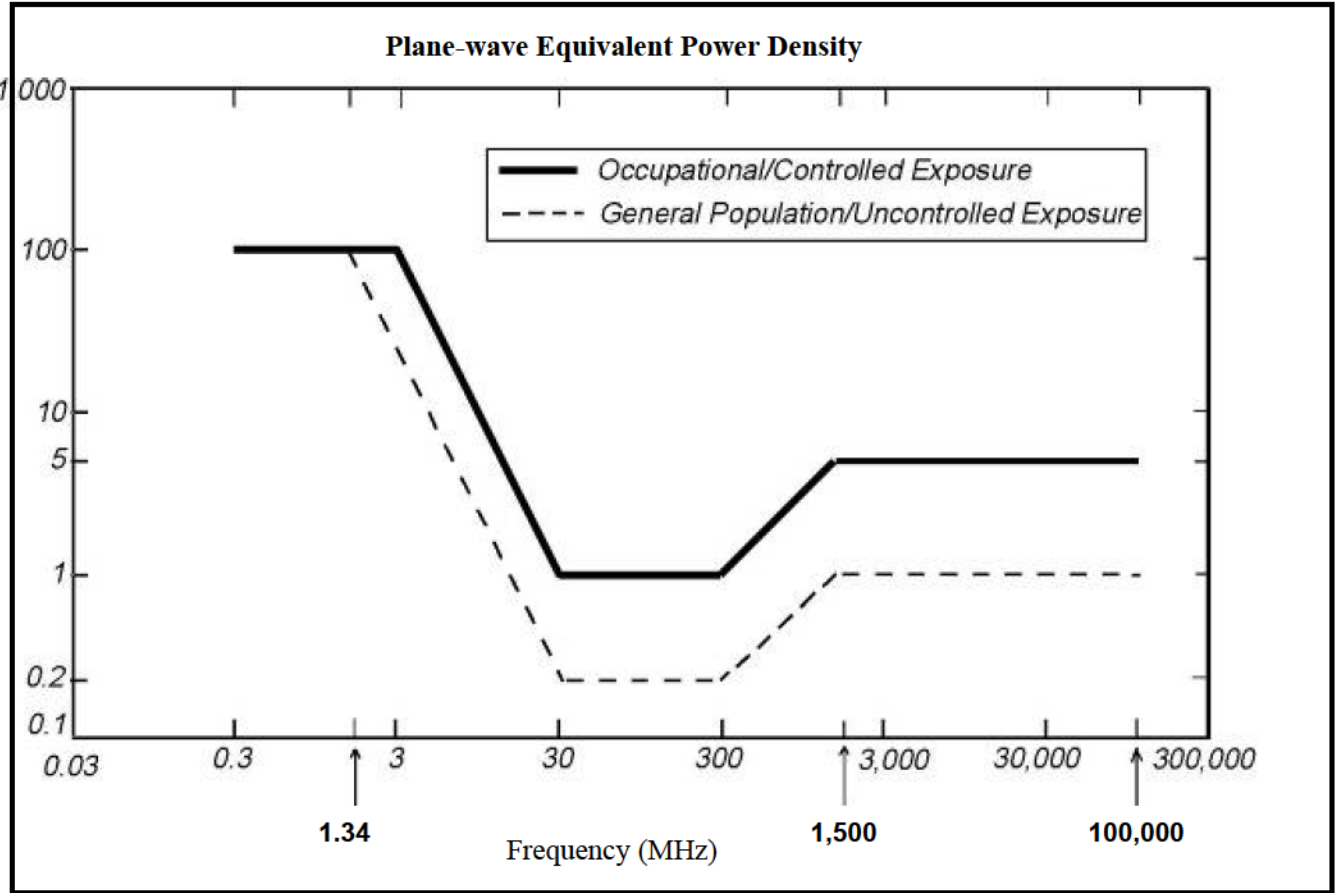
| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (E) (A/m) | Power Density (S) (mW/cm <sup>2</sup> ) | Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes) |
|-----------------------|-----------------------------------|-----------------------------------|---|---|
| 0.3-1.34              | 614                               | 1.63                              | (100)*                                  | 30  |
| 1.34-30               | 824/f                             | 2.19/f                            | (180/f <sup>2</sup> )*                  | 30  |
| 30-300                | 27.5                              | 0.073                             | 0.2                                     | 30  |
| 300-1500              | -                                 | -                                 | f/1500                                  | 30  |
| 1500-100,000          | -                                 | -                                 | 1.0                                     | 30  |

f = frequency in MHz \* Plane-wave equivalent power density

**Table 2: FCC Limits for Maximum Permissible Exposure**

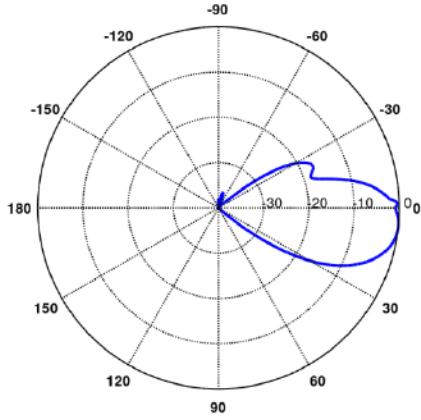
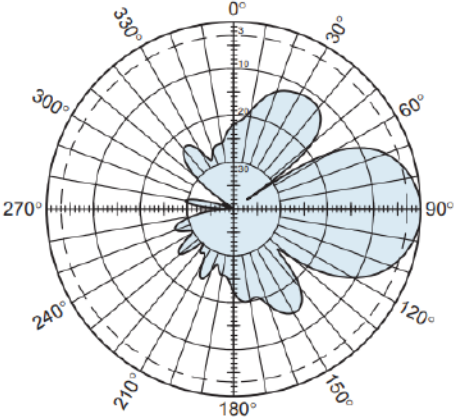
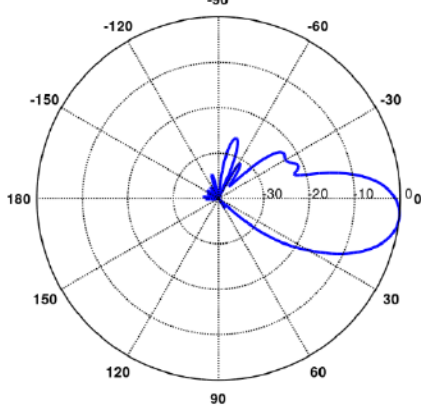
<sup>2</sup> Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

<sup>3</sup> General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.



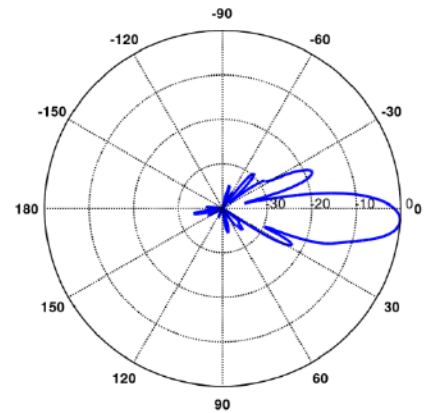
**Figure 2: Graph of FCC Limits for Maximum Permissible Exposure (MPE)**






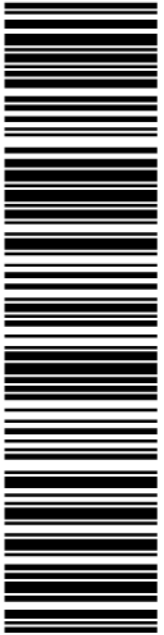

**Attachment C: AT&T Mobility Antenna Model Data Sheets and Electrical Patterns**

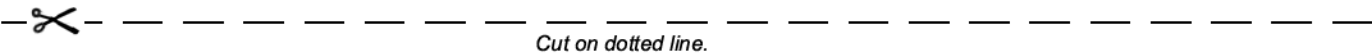
|   |  |
|---|--|
| <p><b>698-960 MHz</b></p> <p>Manufacturer: CCI<br/>         Model #: MBA10-6F-BU-H3<br/>         Frequency Band: 698-806 MHz<br/>         Gain: 19 dBi<br/>         Vertical Beamwidth: 6°<br/>         Horizontal Beamwidth: 22.2°<br/>         Polarization: Dual Linear 45°<br/>         Size L x W x D: 40.8" x 83.0" x 11.3"</p>   |    |
| <p><b>698-894 MHz</b></p> <p>Manufacturer: Katherin<br/>         Model #: 840-10520<br/>         Frequency Band: 824-894 MHz<br/>         Gain: 10.8 dBi<br/>         Vertical Beamwidth: 36°<br/>         Horizontal Beamwidth: 72°<br/>         Polarization: ±45°<br/>         Size L x W x D: 23.3" x 10.6" x 6.2"</p>              |   |
| <p><b>824-896 MHz</b></p> <p>Manufacturer: CCI<br/>         Model #: MBA10-6F-BU-H3<br/>         Frequency Band: 824-896 MHz<br/>         Gain: 19.7 dBi<br/>         Vertical Beamwidth: 6°<br/>         Horizontal Beamwidth: 19.7°<br/>         Polarization: Dual Linear 45°<br/>         Size L x W x D: 40.8" x 83.0" x 11.3"</p> |  |

**1850-1990 MHz**

Manufacturer: CCI  
Model #: MBA10-6F-BU-H3  
Frequency Band: 1850-1990 MHz  
Gain: 23.9 dBi  
Vertical Beamwidth: 4°  
Horizontal Beamwidth: 11.4°  
Polarization: Dual Linear 45°  
Size L x W x D: 40.8" x 83.0" x 11.3"



|   |  |
|---|--|
|  <b>UNITED STATES POSTAL SERVICE®</b><br><b>Click-N-Ship®</b>  |   |
|   | <small>usps.com</small> 9405 5036 9930 0565 8395 95 0096 5000 0020 6460<br><b>US POSTAGE</b><br>Flat Rate Env<br> |
| 06/23/2023<br>Mailed from 18328 986753999227839   |   |
| <b>PRIORITY MAIL®</b><br>QC DEVELOPMENT<br>5900 BALCONES DR STE 8148<br>AUSTIN TX 78731-4257<br>Expected Delivery Date: 06/26/23<br><b>0000</b>   |  MAYOR RICHARD M SMITH<br>CITY OF MILFORD<br>CC: MR DAVID SULKIS<br>70 W RIVER ST<br>MILFORD CT 06460-3317          |
| <b>USPS TRACKING #</b><br><br><b>9405 5036 9930 0565 8395 95</b> |   |
| Electronic Rate Approved #038555749   |  |



Cut on dotted line.

### Instructions

- Each Click-N-Ship® label is unique. Labels are to be used as printed and used only once. DO NOT PHOTO COPY OR ALTER LABEL.
- Place your label so it does not wrap around the edge of the package.
- Adhere your label to the package. A self-adhesive label is recommended. If tape or glue is used, DO NOT TAPE OVER BARCODE. Be sure all edges are secure.
- To mail your package with PC Postage®, you may schedule a Package Pickup online, hand to your letter carrier, take to a Post Office™, or drop in a USPS collection box.
- Mail your package on the "Ship Date" you selected when creating this label.

### Click-N-Ship® Label Record

|   |   |
|---|---|
| <b>USPS TRACKING # :</b><br><b>9405 5036 9930 0565 8395 95</b>  |   |
| Trans. #: 590617836<br>Print Date: 06/23/2023<br>Ship Date: 06/23/2023<br>Expected Delivery Date: 06/26/2023  | Priority Mail® Postage: <b>\$9.65</b><br>Total: <b>\$9.65</b> |
| <b>From:</b> QC DEVELOPMENT<br>5900 BALCONES DR STE 8148<br>AUSTIN TX 78731-4257  |   |
| <b>To:</b> MAYOR RICHARD M SMITH<br>CITY OF MILFORD<br>CC: MR DAVID SULKIS<br>70 W RIVER ST<br>MILFORD CT 06460-3317  |   |
| <small>* Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.</small> |   |



Thank you for shipping with the United States Postal Service!  
 Check the status of your shipment on the USPS Tracking® page at usps.com

Tracking Number:

Remove X

## 9405503699300565839595

Copy

Add to Informed Delivery (<https://informedelivery.usps.com/>)

### Expected Delivery by

**MONDAY**

**26** June 2023 ⓘ | by **9:00pm** ⓘ

Your item arrived at our USPS facility in SPRINGFIELD MA NETWORK DISTRIBUTION CENTER on June 24, 2023 at 9:48 am. The item is currently in transit to the destination.

Feedback

### Get More Out of USPS Tracking:

**USPS Tracking Plus®**

Delivered

Out for Delivery

Preparing for Delivery

### Moving Through Network

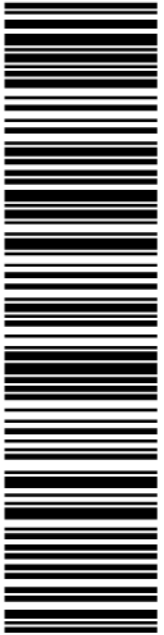
#### Arrived at USPS Regional Facility

SPRINGFIELD MA NETWORK DISTRIBUTION CENTER  
June 24, 2023, 9:48 am

#### Departed USPS Regional Facility

PHILADELPHIA PA NETWORK DISTRIBUTION CENTER  
June 24, 2023, 5:28 am


See All Tracking History



**USPS TRACKING #**

**9405 5036 9930 0565 8396 01**

Electronic Rate Approved #038555749



SOUTHERN NEW ENGLAND TELEPHONE  
C/O FRONTIER COMMUNICATIONS  
DUFF & PHELPS LLC  
PO BOX 2629  
ADDISON TX 75001-2629

**P**

USPS.com 9405 5036 9930 0565 8396 01 0096 5000 0067 5001

US POSTAGE  
Flat Rate Envoy

U.S. POSTAGE PAID  
Click-N-Ship®

Mailed from 18328 986753999226999

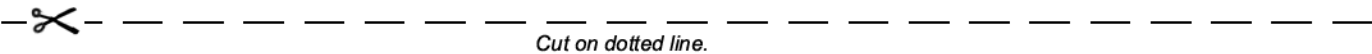
06/23/2023

**PRIORITY MAIL®**

QC DEVELOPMENT      Expected Delivery Date: 06/26/23  
5900 BALCONES DR STE 8148  
AUSTIN TX 78731-4257

B032

0000



Cut on dotted line.

### Instructions

1. Each Click-N-Ship® label is unique. Labels are to be used as printed and used only once. DO NOT PHOTO COPY OR ALTER LABEL.
2. Place your label so it does not wrap around the edge of the package.
3. Adhere your label to the package. A self-adhesive label is recommended. If tape or glue is used, DO NOT TAPE OVER BARCODE. Be sure all edges are secure.
4. To mail your package with PC Postage®, you may schedule a Package Pickup online, hand to your letter carrier, take to a Post Office™, or drop in a USPS collection box.
5. Mail your package on the "Ship Date" you selected when creating this label.

### Click-N-Ship® Label Record

**USPS TRACKING # :**  
**9405 5036 9930 0565 8396 01**

|                                    |                                       |
|------------------------------------|---------------------------------------|
| Trans. #: 590617836                | Priority Mail® Postage: <b>\$9.65</b> |
| Print Date: 06/23/2023             | Total: <b>\$9.65</b>                  |
| Ship Date: 06/23/2023              |                                       |
| Expected Delivery Date: 06/26/2023 |                                       |

**From:** QC DEVELOPMENT  
5900 BALCONES DR STE 8148  
AUSTIN TX 78731-4257

**To:** SOUTHERN NEW ENGLAND TELEPHONE  
C/O FRONTIER COMMUNICATIONS  
DUFF & PHELPS LLC  
PO BOX 2629  
ADDISON TX 75001-2629

\* Retail Pricing Priority Mail rates apply. There is no fee for USPS Tracking® service on Priority Mail service with use of this electronic rate shipping label. Refunds for unused postage paid labels can be requested online 30 days from the print date.



Tracking Number:

Remove X

## 9405503699300565839601

Copy

Add to Informed Delivery (<https://informedelivery.usps.com/>)

### Expected Delivery by

**MONDAY**

**26** June 2023 ⓘ | by **9:00pm** ⓘ

Your item arrived at our PHILADELPHIA PA NETWORK DISTRIBUTION CENTER origin facility on June 24, 2023 at 1:28 am. The item is currently in transit to the destination.

Feedback

### Get More Out of USPS Tracking:

**USPS Tracking Plus®**

Delivered

Out for Delivery

Preparing for Delivery

### In Transit from Origin Processing

**Arrived at USPS Regional Origin Facility**

PHILADELPHIA PA NETWORK DISTRIBUTION CENTER  
June 24, 2023, 1:28 am

**Accepted at USPS Origin Facility**

DINGMANS FERRY, PA 18328  
June 24, 2023, 12:13 am

**See All Tracking History**