Zoning Board of Appeals
AGENDA

Monday, November 10, 2025 - 6:30 PM

Regular Meeting
Agawam Senior Center
954 Main Street
Agawam, MA 01001

A. Zoning Board of Appeals

1) Public Hearing Cont.-Case#2035-580 Main Street-Verizon-Variance

2) Public Hearing Cont.-Case#2034-580 Main Street-Verizon-Special Permit

3) Approval of Minutes-October 27, 2025

4) Any other matter that may legally come before Zoning Board of Appeals.

October 23, 2025

VIA ELECTRONIC MAIL: *lawtonmk@gmail.com*
Isotrope, LLC
PO Box 52437
Boston, MA 02205
Attn: Michael Lawton

RE: Response to Questions Regarding EME Reports.

Dear Michael:

This letter is in response to the questions presented by Isotrope relating to the proposed wireless communications facility installation at 580 Main Street, Agawam, MA, submitted by Cellco Partnership d/b/a Verizon Wireless ("Verizon") and Diamond Communications, LLC ("Diamond" and together with Verizon, the "Co-Applicants").

Both radio frequency emissions reports show that Verizon's proposed installation is compliant with and materially below the Federal Communications Commission's emissions requirements. We have spoken with our client and the relevant consultants, and have determined that the SiteSafe RF Emissions Compliance Report dated May 13, 2025, (the "SiteSafe Report") should be relied on for this submission. InfraServices Group Wireless, LLC has been hired as the consultants to provide testimony with respect to the radio frequency emissions aspects of this proposal, and they are the consultants responsible for the SiteSafe Report. InfraServices Group Wireless, LLC is available to answer any questions you may have about the SiteSafe Report.

If you have any further questions, please feel free to contact us.

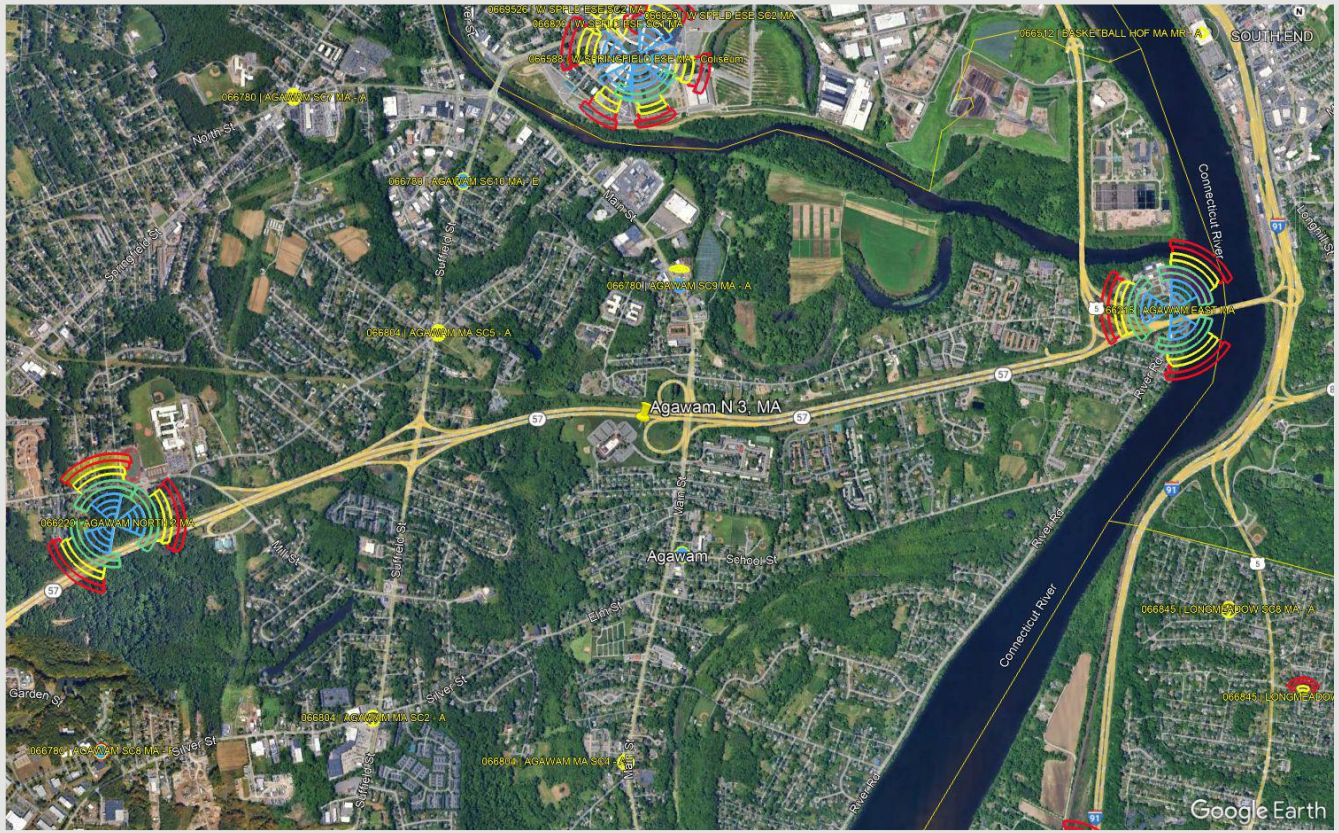
Sincerely,

Michael A. Fenton

23\0520\Special Permit\Updated Materials_10-21-25\5Ltr_Re - EME Reports.5701

Verizon Wireless Communications Facility

Engineering Necessity Case – Agawam N 3, MA



Prepared by:
Juan (Jay) F. Latorre III

October 23rd, 2025

Confidential and proprietary materials for authorized Verizon personnel and outside agencies only. Use, disclosure or distribution of this material is not permitted to any unauthorized persons or third parties except by written agreement.

Project Need Overview:

This Height Justification Report is prepared as a supplemental submission to Verizon's proposed Agawam N 3, MA site application. This document has been prepared in a response to Isotrope Wireless, consultant for the Town of Agawam in its' proceedings. The purpose of this document is to visually show the need for Verizon's proposal to build a wireless communications facility with antennas at a centerline of 110', and an overall approximate structure height of 120'.

This Height Justification Report is utilizing RF coverage predictions assuming Verizon's 700 MHz and 2100 MHz coverage layers. 700 MHz is generally assumed to be Verizons' spectrum holding capable of covering the largest geographic area reliably. 700 MHz will provide coverage similar to 850 MHz. 2100 MHz is a good representation of Verizons' mid-band spectrum holding, and will have a coverage footprint similar to 1900 MHz and 3.7 GHz. It can be assumed that as the spectrum increases in MHz, the reduction in coverage, as a result of a reduction in structure height, will have a greater impact on the reliable coverage footprint of that spectrum.

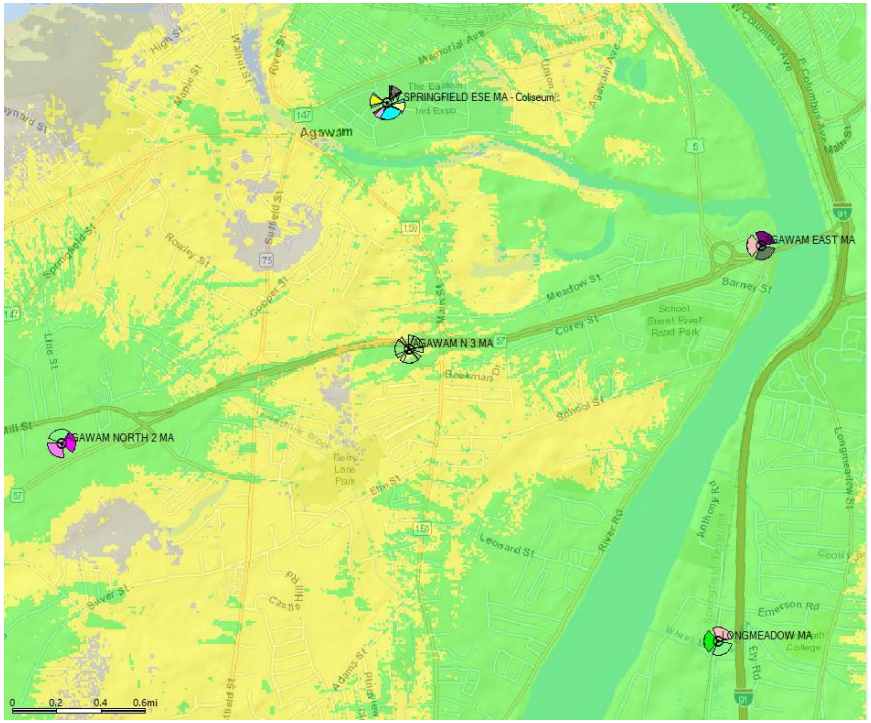
For this analysis, in addition to showing the proposed coverage from the Agawam N 3, MA site at 110', coverage plots are provided at 100', 90', and 80', to show what alternative coverage might look like if the structure was lowered in height. It should be assumed, that for every 10' that the structure is lowered in height, that both Verizon and potential co-locating service providers would lose some level of reliable coverage footprint.

The site(s) proposed in this application are necessary to achieve the technical objectives stated above. Note that there are several ways by which an applicant can establish site need. See Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment," FCC 18-133, 83 FR 51867, at ¶ 6 (October 15, 2018) (confirming that the test for establishing an effective prohibition is whether "a state or local legal requirement *materially inhibits* a provider's ability to engage in any of a *variety of activities related to its provision of a covered service*," and this test is met "not only when filling a coverage gap but *also when densifying a wireless network, introducing new services or otherwise improving service capabilities*").

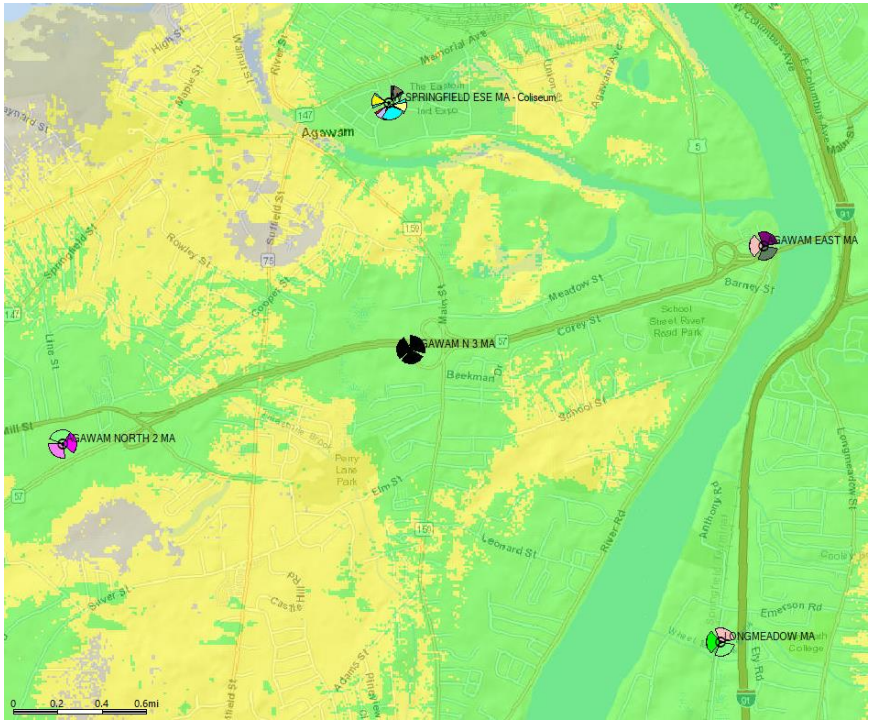
Confidential and proprietary materials for authorized Verizon personnel and outside agencies only. Use, disclosure or distribution of this material is not permitted to any unauthorized persons or third parties except by written agreement.

-105 = (Gray) On-Street Coverage
-95 = (Yellow) In-Vehicle Coverage
-85 – (Green) In-Building Coverage

Agawam N 3, MA Existing 700 MHz 4G Coverage



Agawam N 3, MA Proposed 700 MHz 4G Coverage @ 110'



The above map shows the coverage of the current network, and if the proposed cell is activated. Reliable in-building coverage is shown in green.

verizon

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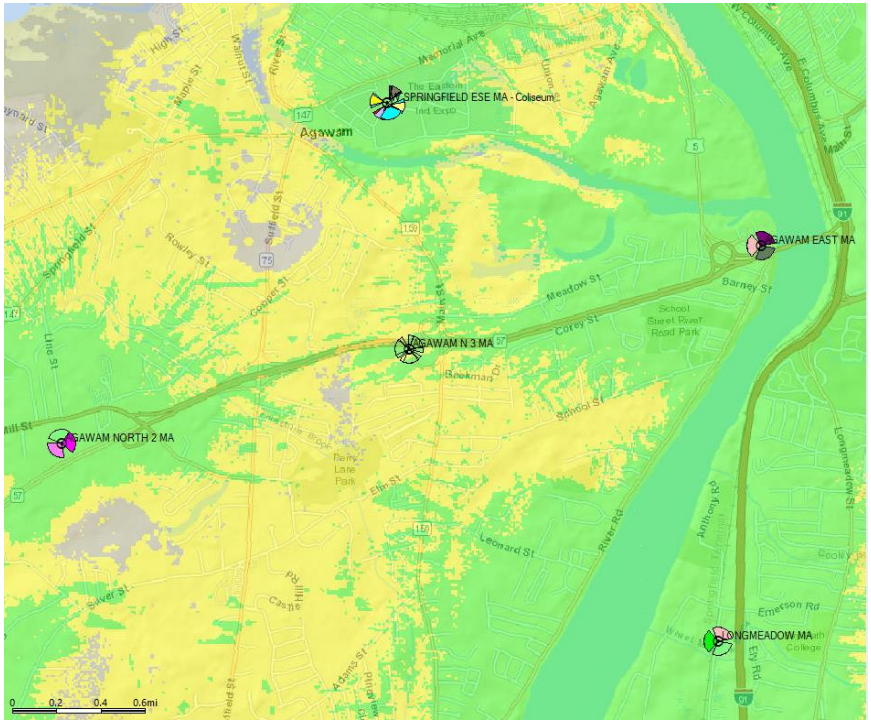
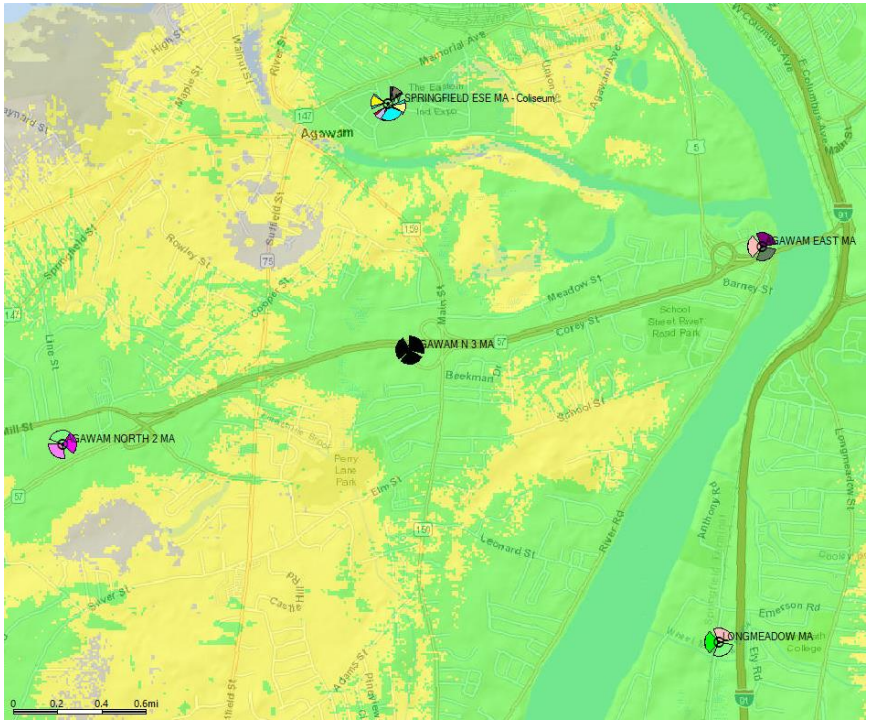


Agawam N 3, MA Proposed 700 MHz 4G Coverage @ 100'



The above map shows the coverage of the current network, and if the proposed cell is activated. Reliable in-building coverage is shown in green. At 100', there is noticeable, but minimal, reduction in in-building coverage.

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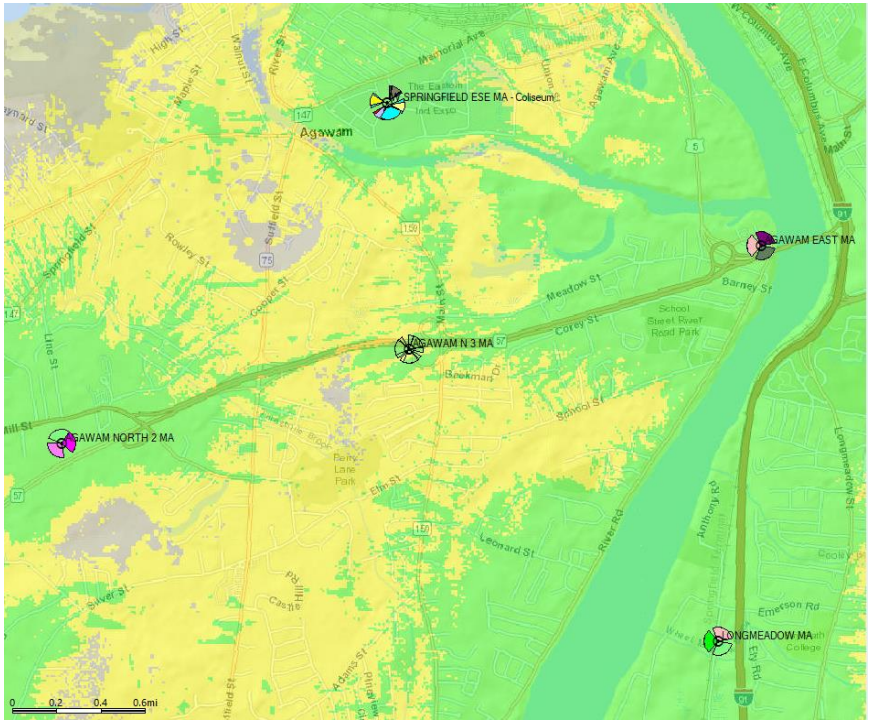
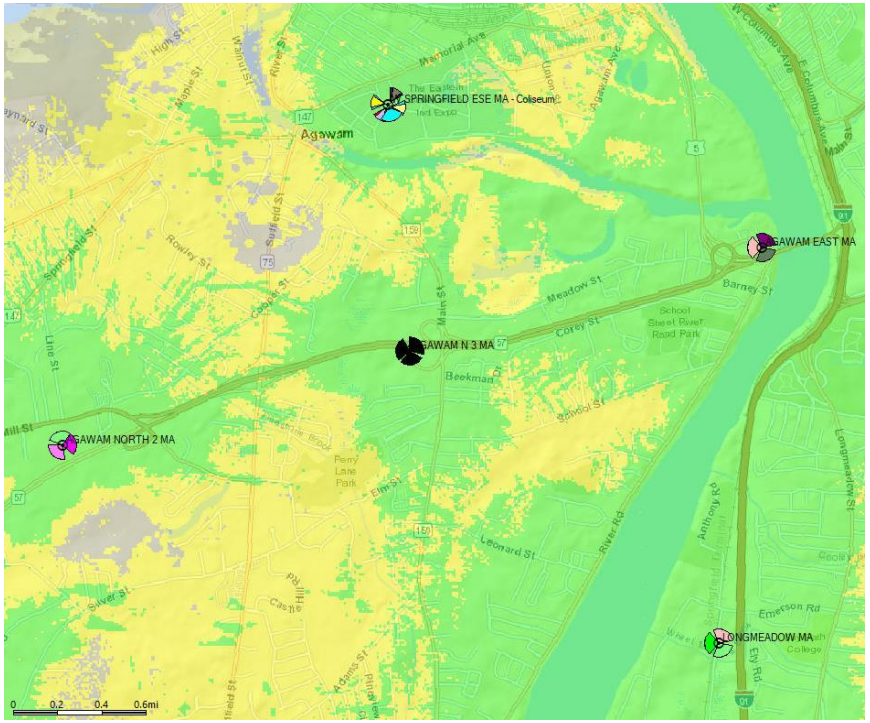


Agawam N 3, MA Proposed 700 MHz 4G Coverage @ 90'



The above map shows the coverage of the current network, and if the proposed cell is activated. Reliable in-building coverage is shown in green. At 90', there is a more noticeable, reduction in in-building coverage.

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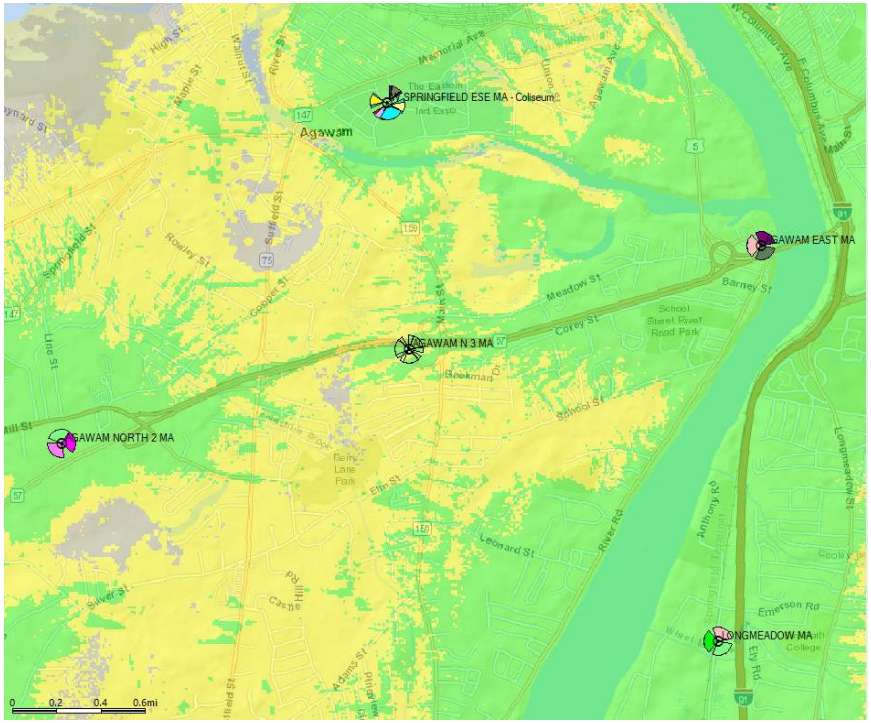
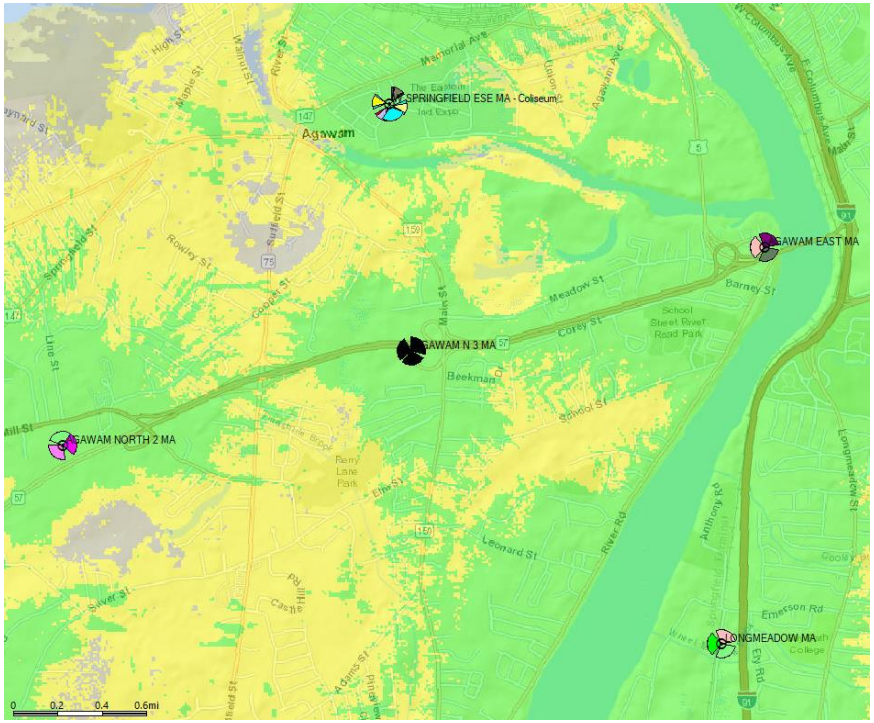


Agawam N 3, MA Proposed 700 MHz 4G Coverage @ 80'



The above map shows the coverage of the current network, and if the proposed cell is activated. Reliable in-building coverage is shown in green. At 80', there is a significant reduction in in-building coverage, as well as along Route 57, west of the proposed Agawam N 3, MA site.

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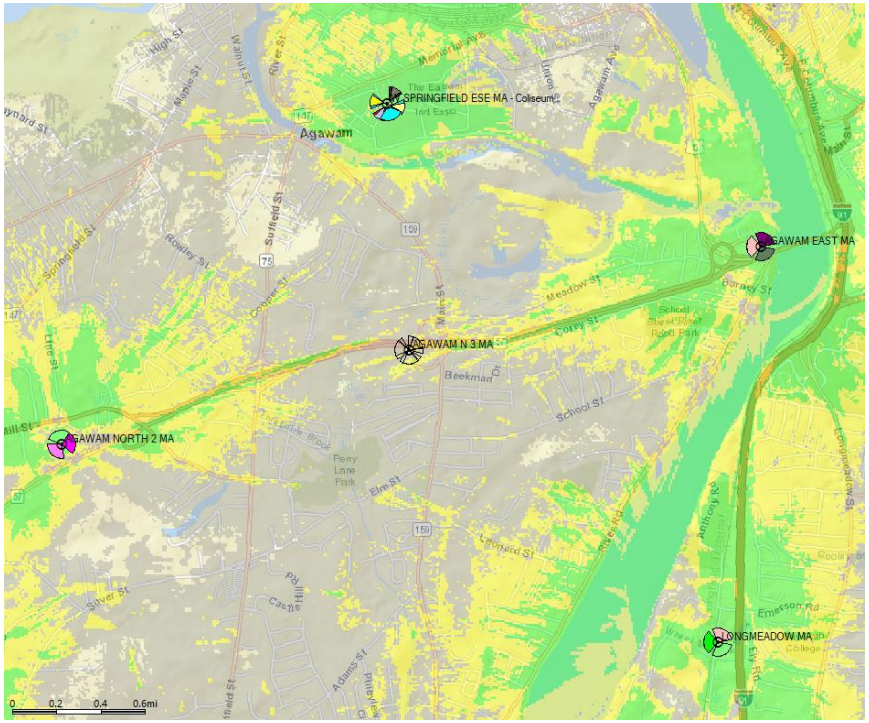
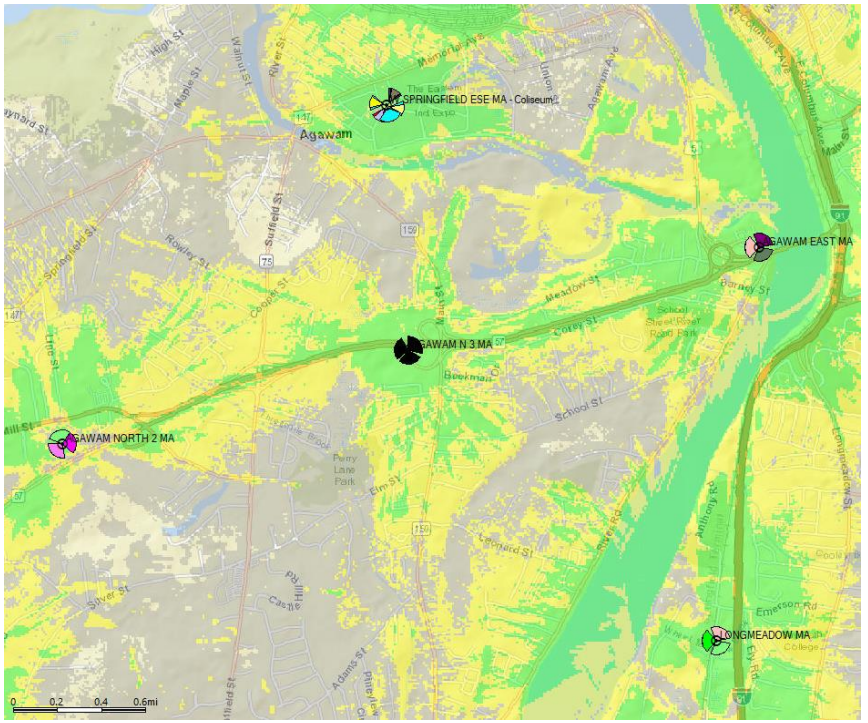
Agawam N 3, MA Existing 2100 MHz 4G Coverage



Agawam N 3, MA Proposed 2100 MHz 4G Coverage @ 110'



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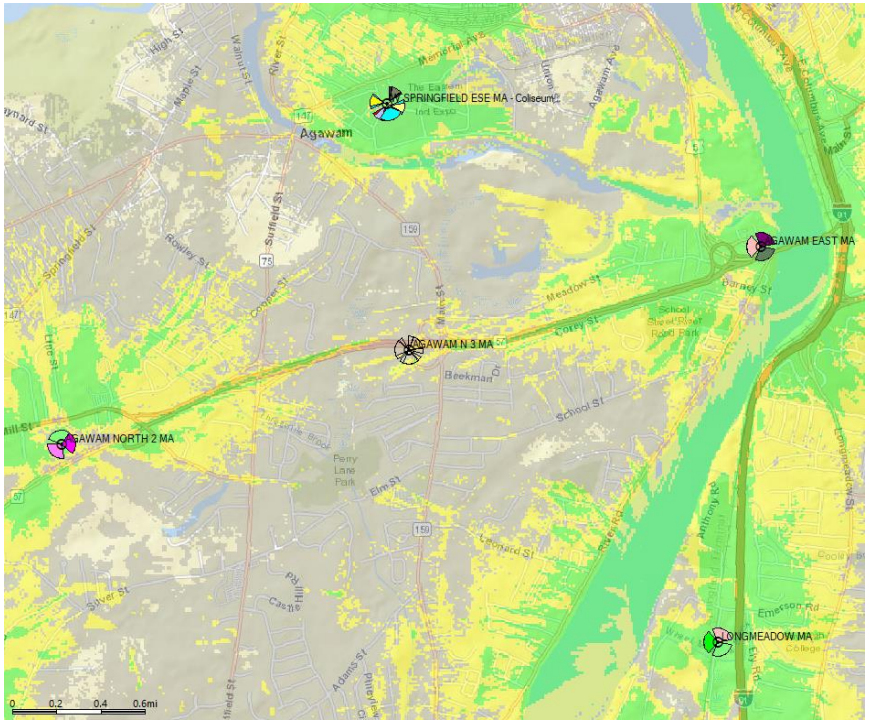
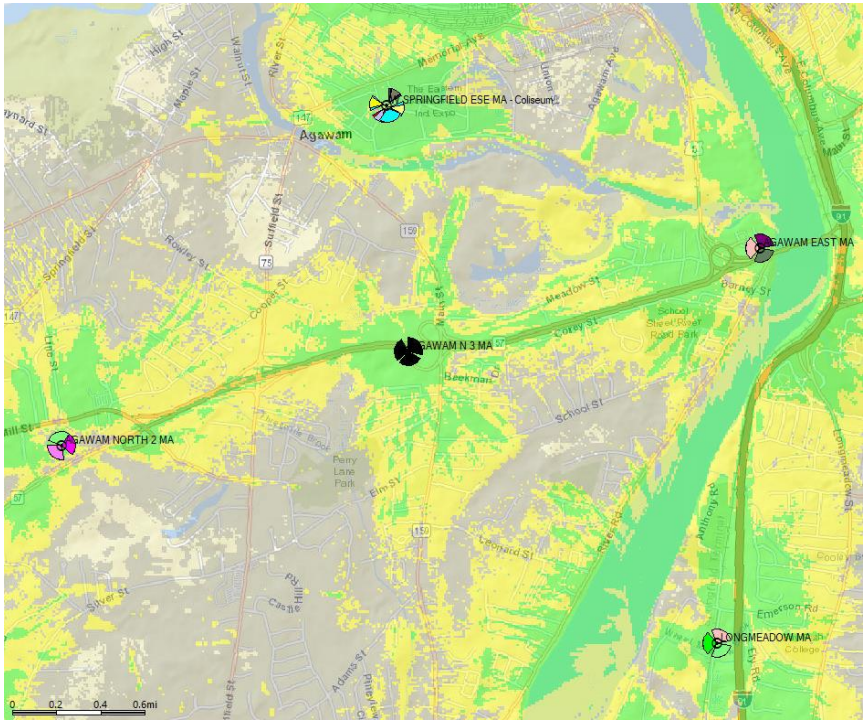
Agawam N 3, MA Existing 2100 MHz 4G Coverage



Agawam N 3, MA Proposed 2100 MHz 4G Coverage @ 100'



The above map shows the coverage of the current network, and if the proposed cell is activated. Reliable in-building coverage is shown in green. At 100', there is a sight shift in in-building coverage, and a slight reduction in in-vehicle coverage.

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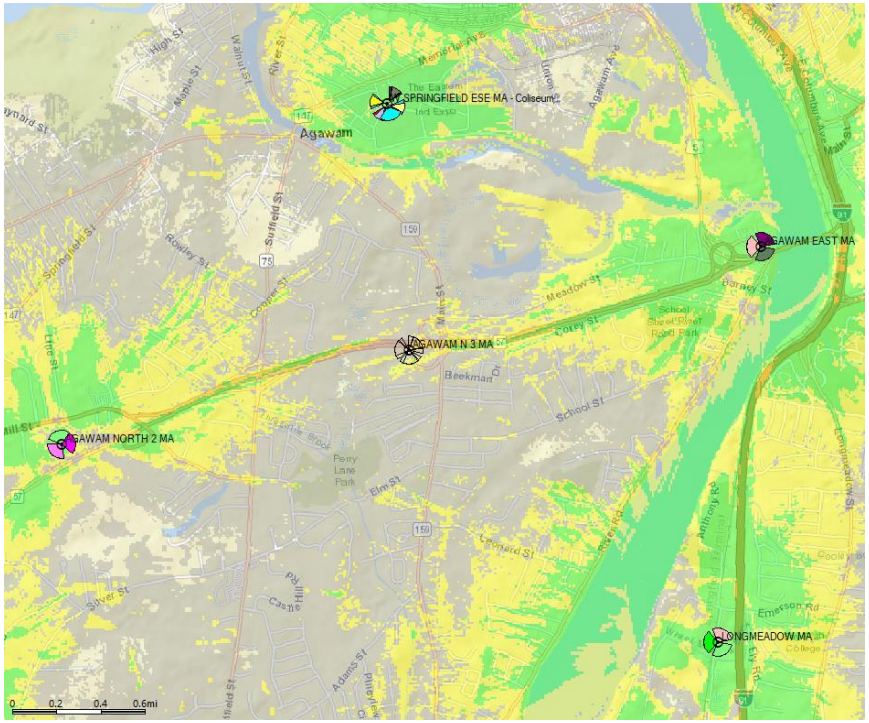
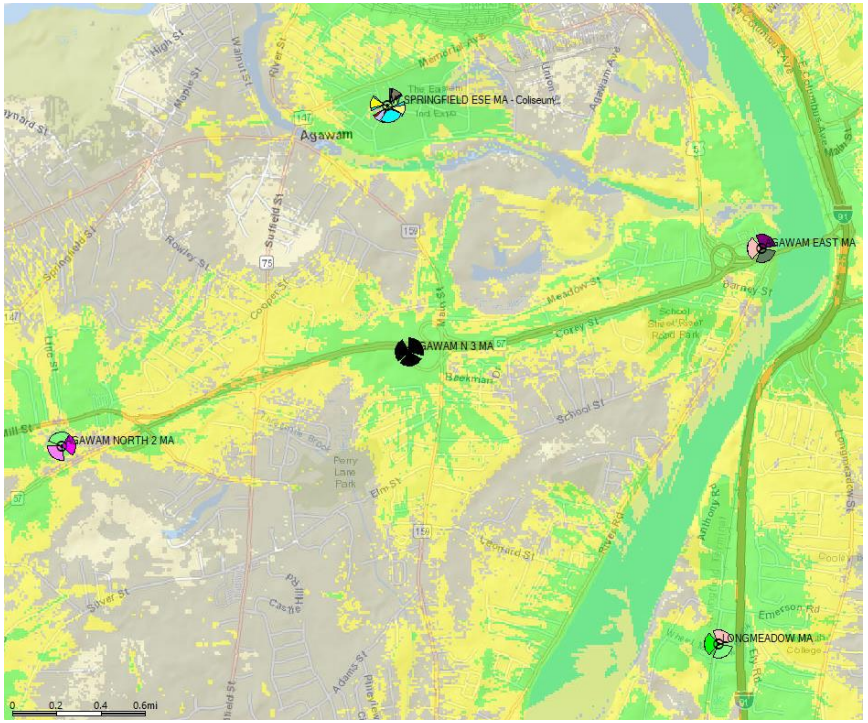
Agawam N 3, MA Existing 2100 MHz 4G Coverage



Agawam N 3, MA Proposed 2100 MHz 4G Coverage @ 90'



The above map shows the coverage of the current network, and if the proposed cell is activated. Reliable in-building coverage is shown in green. At 90', there is a sight shift in in-building coverage, and a slightly larger reduction in in-vehicle coverage.

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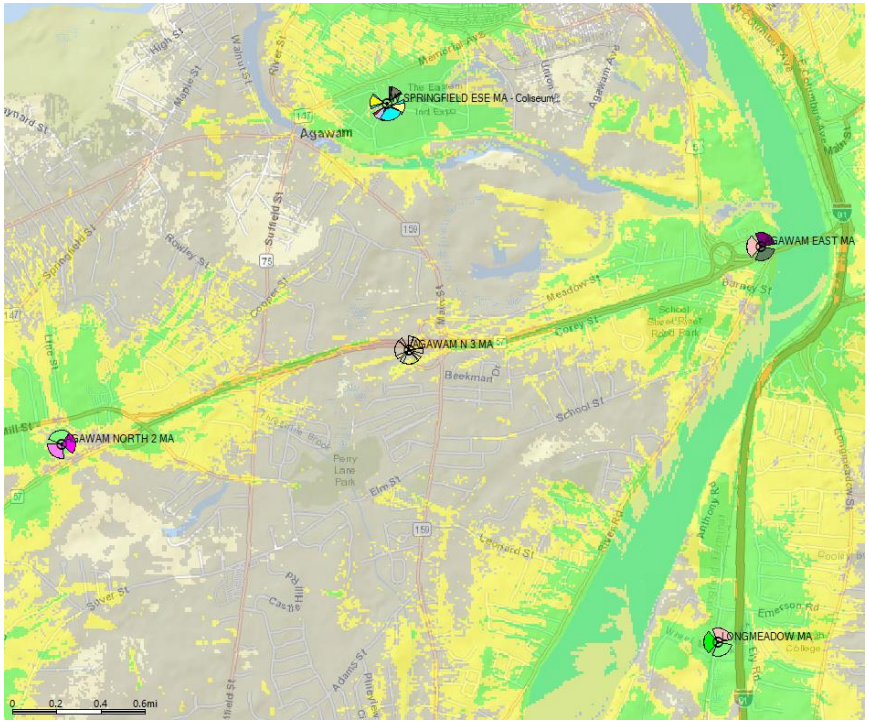
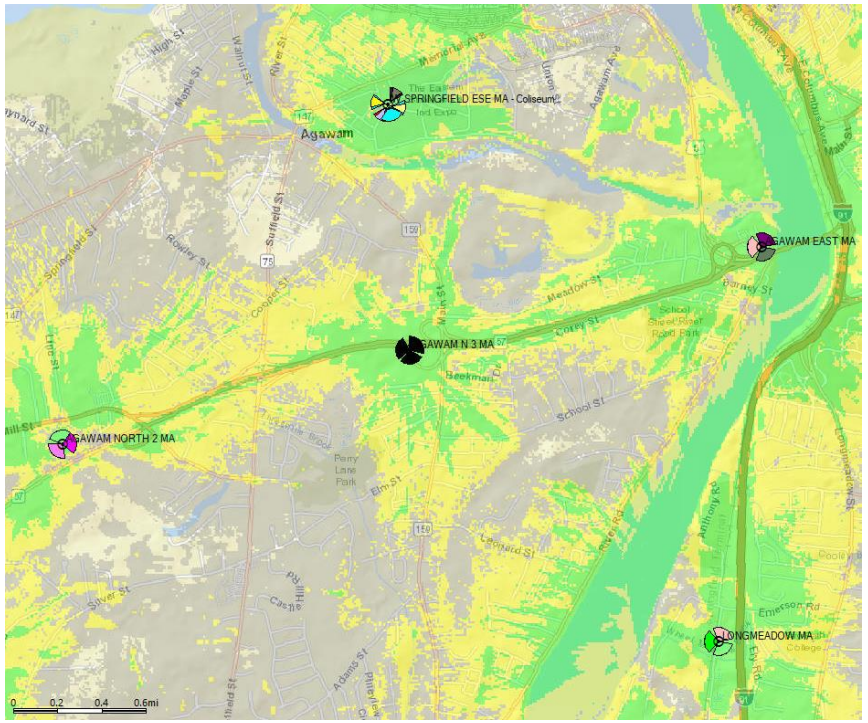


Agawam N 3, MA Proposed 2100 MHz 4G Coverage @ 80'



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Verizon is part of your community.

Because we live and work there too.

We believe technology can help solve our biggest social problems.

We're working with innovators, community leaders, non-profits, universities and our peers to address some of the unmet challenges in education, healthcare and energy management.

Learn more about our corporate social responsibility at www.verizon.com.

verizon







Diamond Communications LLC

verizon

BETHANY ASSEMBLY OF GOD

SITE ADDRESS (E-911 TBD)

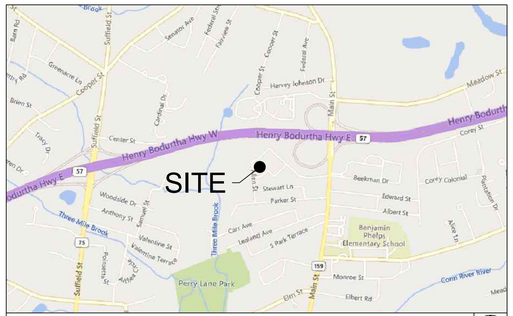
580 MAIN ST
AGAWAM, MA 01001
HAMPDEN COUNTY
LATITUDE: 42° 04' 31.29" N
LONGITUDE: 72° 37' 02.54" W
TAX/PIN #: K11_2_28
ZONING: N/A

SHEET NO.	SHEET TITLE
T1	COVER SHEET
--	SURVEY
N1	GENERAL NOTES
C0	OVERALL AERIAL PARCEL PLAN
C0.1	OVERALL PARCEL TOPO
C0.2	OVERALL PARCEL PLAN
C1	OVERALL SITE PLAN
C2	SITE PLAN
C3	EQUIPMENT RACK DETAIL - FRONT
C4	FENCE, GATE, AND COMPOUND DETAILS
C5	ACCESS ROAD DETAILS
C6	ACCESS ROAD TRUEGRID DETAILS
C7	ACCESS ROAD TRUEGRID DETAILS
C8	SITE SIGNAGE DETAILS
C9	WAVEGUIDE BRIDGE DETAILS
C10	ANTENNA AND TOWER ELEVATION DETAILS
C11	GRADING AND EROSION CONTROL PLAN
C12	SILT FENCE DETAILS

SHEET INDEX

AGAWAM POLICE DEPARTMENT
681 SPRINGFIELD ST
FEEDING HILLS, MA 01030
PHONE: (413) 786-4767
ATTN.: CUSTOMER SERVICE

AGAWAM FIRE DEPARTMENT
800 MAIN ST
AGAWAN, MA 01001
PHONE: (413) 786-2662
ATTN.: CUSTOMER SERVICE



VICINITY MAP

NORTH

DRIVING DIRECTIONS

JURISDICTION:
TOWN OF AGAWAM

STATE:
MASSACHUSETTS

TOWER TYPE:
MONOPINE TOWER

TOWER HEIGHT:
115' (120' TO HIGHEST APPURTENANCE)

NUMBER OF CARRIERS:
0 EXISTING, 1 PROPOSED

USE:
PROPOSED TELECOMMUNICATIONS TOWER AND UNMANNED EQUIPMENT

FLOOD INFO
SITE IS LOCATED WITHIN FEMA FLOOD MAP AREA 25013C0403E DATED 07/16/2013 WITHIN FLOOD ZONE X.

PROJECT SUMMARY

DEVELOPER
DIAMOND COMMUNICATIONS
120 MOUNTAIN AVE
SPRINGFIELD, NJ 07081
PHONE: (727) 773-2221
ATTN: RICH HUBER

POWER COMPANY
EVERSOURCE ENERGY
PHONE: (877) 659-6326
ATTN.: CUSTOMER SERVICE

PROPERTY OWNER
BETHANY ASSEMBLY OF GOD
580 MAIN ST
AGAWAM, MA 01001
PHONE: N/A
ATTN.: N/A

CONSULTANT
KIMLEY-HORN AND ASSOCIATES, INC.
11720 AMBER PARK DRIVE, SUITE 600
ALPHARETTA, GEORGIA 30009
PHONE: (678) 894-3618
ATTN.: CHRISTOPHER STRANGE

CONTACTS

THE TOWN OF AGAWAM PLANNING BOARD
36 MAIN ST
HAMPDEN, MA 01036
PHONE: (413) 786-0400
ATTN.: CUSTOMER SERVICE

PERMIT INFORMATION

Diamond Communications LLC

PROJECT INFORMATION:

SITE NAME:
BETHANY ASSEMBLY OF GOD
SITE No.: MA054

580 MAIN ST
AGAWAM, MA 01001
HAMPDEN COUNTY

PLANS PREPARED BY:

Kimley»Horn

11720 AMBER PARK DRIVE, SUITE 600
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM

REV: | DATE: | ISSUED FOR: | BY:

8			
7			
6			
5			
4	04/25/25	ZONING	DCC
3	04/18/25	ZONING	DCC
2	10/24/24	ZONING	DMF
1	02/14/24	ZONING	DMF
0	01/19/24	ZONING	DMF

LICENSER:

COMMONWEALTH OF MASSACHUSETTS
DANIEL C. CASEY
CIVIL
No. 57896
REGISTERED PROFESSIONAL ENGINEER
4.25.25

KHA PROJECT NUMBER:
013541034

DRAWN BY: JAR | CHECKED BY: CDS

SHEET TITLE:
COVER SHEET

SHEET NUMBER:
T1

K:\ATL_Wireless\Diamond Communications\Bethany Assembly of God - MA054\CAD\ZD\ECor-GB.dwg ---- 04/25/25 1:34 PM by: William.Bridger

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

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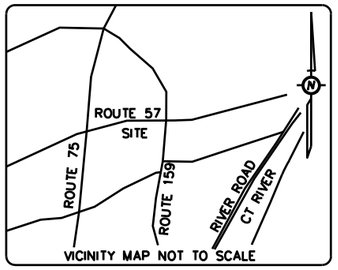


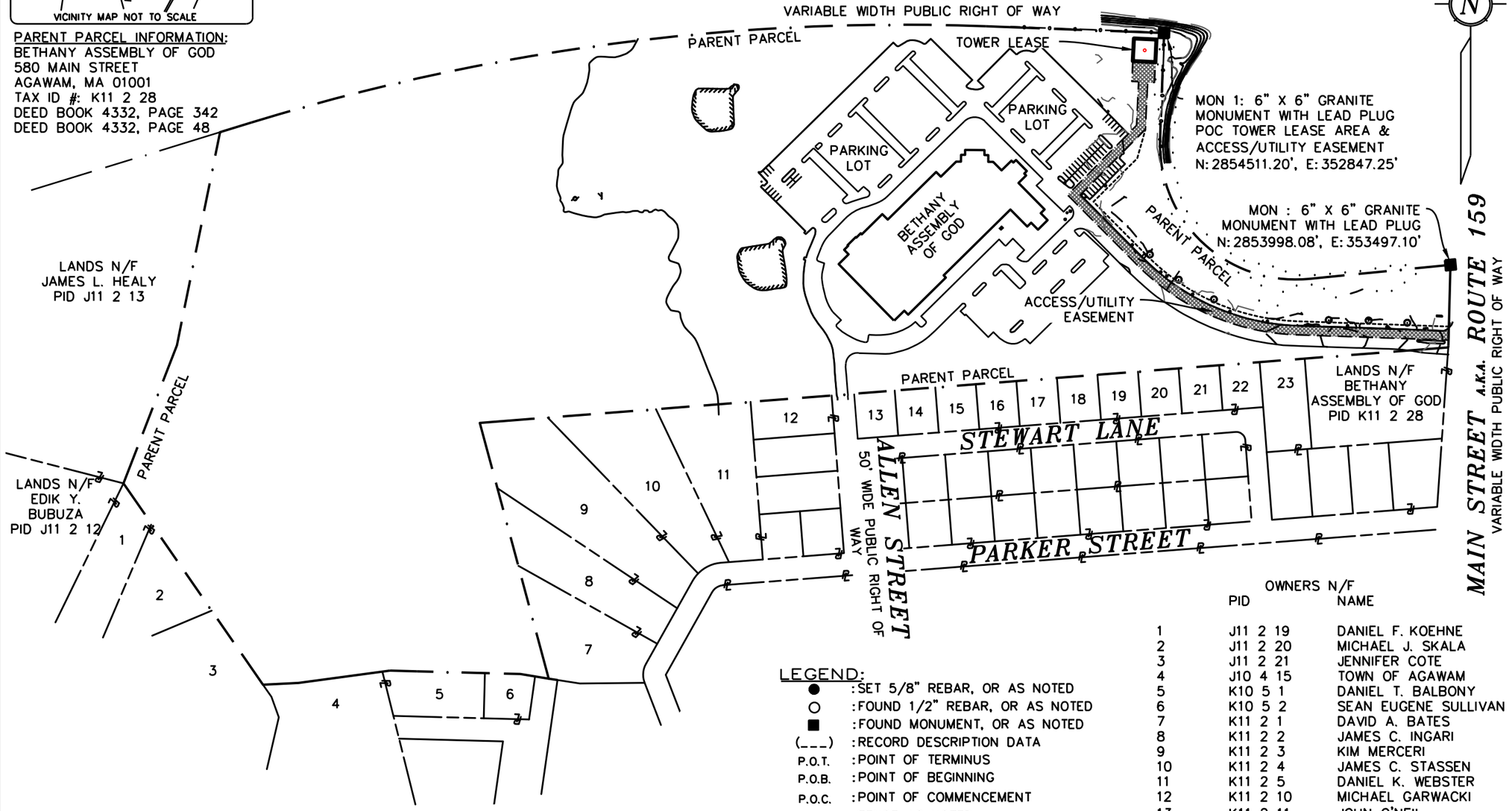
THE PARENT PARCEL IS AFFECTED BY ZONE X WHICH IS NOT A FLOOD HAZARD ZONE AS PER F.I.R.M. MAP NUMBER: 25013C0403E EFFECTIVE DATE: JULY 16, 2013.

FAA 1-A INFORMATION:
LATITUDE: 42° 04' 31.29" N ±20'
LONGITUDE: 72° 37' 02.54"" W ±20'

GROUND ELEVATION AT BASE OF PROPOSED TOWER
89.7' ±3' NAVD 1988

ZONING: (AG) – AGRICULTURAL DISTRICT

PARENT PARCEL INFORMATION:
BETHANY ASSEMBLY OF GOD
580 MAIN STREET
AGAWAM, MA 01001
TAX ID #: K11 2 28
DEED BOOK 4332, PAGE 342
DEED BOOK 4332, PAGE 48



OWNERS N/F

	PID	NAME
1	J11 2 19	DANIEL F. KOEHNE
2	J11 2 20	MICHAEL J. SKALA
3	J11 2 21	JENNIFER COTE
4	J10 4 15	TOWN OF AGAWAM
5	K10 5 1	DANIEL T. BALBONY
6	K10 5 2	SEAN EUGENE SULLIVAN
7	K11 2 1	DAVID A. BATES
8	K11 2 2	JAMES C. INGARI
9	K11 2 3	KIM MERCERI
10	K11 2 4	JAMES C. STASSEN
11	K11 2 5	DANIEL K. WEBSTER
12	K11 2 10	MICHAEL GARWACKI
13	K11 2 11	JOHN O'NEIL
14	K11 2 12	JOHN CANNEY
15	K11 2 13	TRAVIS A. LANSING
16	K11 2 14	PETER J. SHATOS
17	K11 2 15	JAIME L. BOUCHARD
18	K11 2 16	JOHN J. COUTURE
19	K11 2 17	NICOLAI DUBINEVICI
20	K11 2 18	GLORIA J. AFFLITTO
21	K11 2 19	ISUEL SANCHEZ
22	K11 2 20	JOSEPH R. SPAGNOLI
23	K11 2 21	APRIL J. GRAZIANO

LEGEND:

●	:SET 5/8" REBAR, OR AS NOTED
○	:FOUND 1/2" REBAR, OR AS NOTED
■	:FOUND MONUMENT, OR AS NOTED
(___)	:RECORD DESCRIPTION DATA
P.O.T.	:POINT OF TERMINUS
P.O.B.	:POINT OF BEGINNING
P.O.C.	:POINT OF COMMENCEMENT
—o—	:FENCE AS NOTED
—OH—	:OVER HEAD UTILITY LINES
	:WOOD UTILITY POLE
	:ELECTRIC TRANSFORMER
T	:TELCO PEDESTAL
HH	:HAND HOLE
N/A	:NOT AVAILABLE
N/F	:LANDS NOW/FORMERLY
	:FLOOD LIGHT
	:UNDERGROUND FIBER MARKER

AREA	SQUARE FEET	ACRE
PARENT PARCEL	2,200,000	50±
TOWER LEASE	2,500	0.06
ACCESS/UTILITY EASEMENT	27,111	0.62

250 0 125 250 500

BAR GRAPH 1 inch = 250 ft.

MA054 BETHANY ASSEMBLY OF GOD 8-24-2024.DWG

SHEET 1 OF 5

RAW LAND SURVEY

NAME: BETHANY ASSEMBLY OF GOD
SITES#: MA054
ADDRESS: 580 MAIN STREET
AGAWAM, MA 01001
HAMPDEN COUNTY

NATIONAL SURVEY SERVICES COORDINATION BY:

GEOLINE SURVEYING, INC.
13430 NW 104th Terrace, Suite A Alachua, FL 32615
Office:(386) 418-0500 Fax:(386) 462-9986
WWW.GEOLINEINC.COM

SURVEY WORK PERFORMED BY:

JONATHAN MURPHY
Professional Land Surveying
10505 Leafwood Place (919) 280-8189
Raleigh NC 27613 FAX 995-9616
E-MAIL : raleigh@murphygeomatics.com FIRM C-2757

SURVEYOR'S NOTES

1. BASIS OF BEARING:
STATE PLANE COORDINATE SYSTEM 1983
MAINLAND MASSACHUSETTS ZONE

2. NO SUBSURFACE INVESTIGATION WAS PERFORMED TO LOCATE UNDERGROUND UTILITIES. UTILITIES SHOWN HEREON ARE LIMITED TO AND ARE PER OBSERVED EVIDENCE ONLY.

3. THIS SURVEY DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARENT PARCEL.

4. ALL VISIBLE TELECOM EQUIPMENT AND IMPROVEMENTS ARE CONTAINED WITHIN THE DESCRIBED AREA.

5. ALL SYMBOLS SHOWN HEREON NOT DEPICTED TO SCALE.

SURVEYOR'S CERTIFICATION

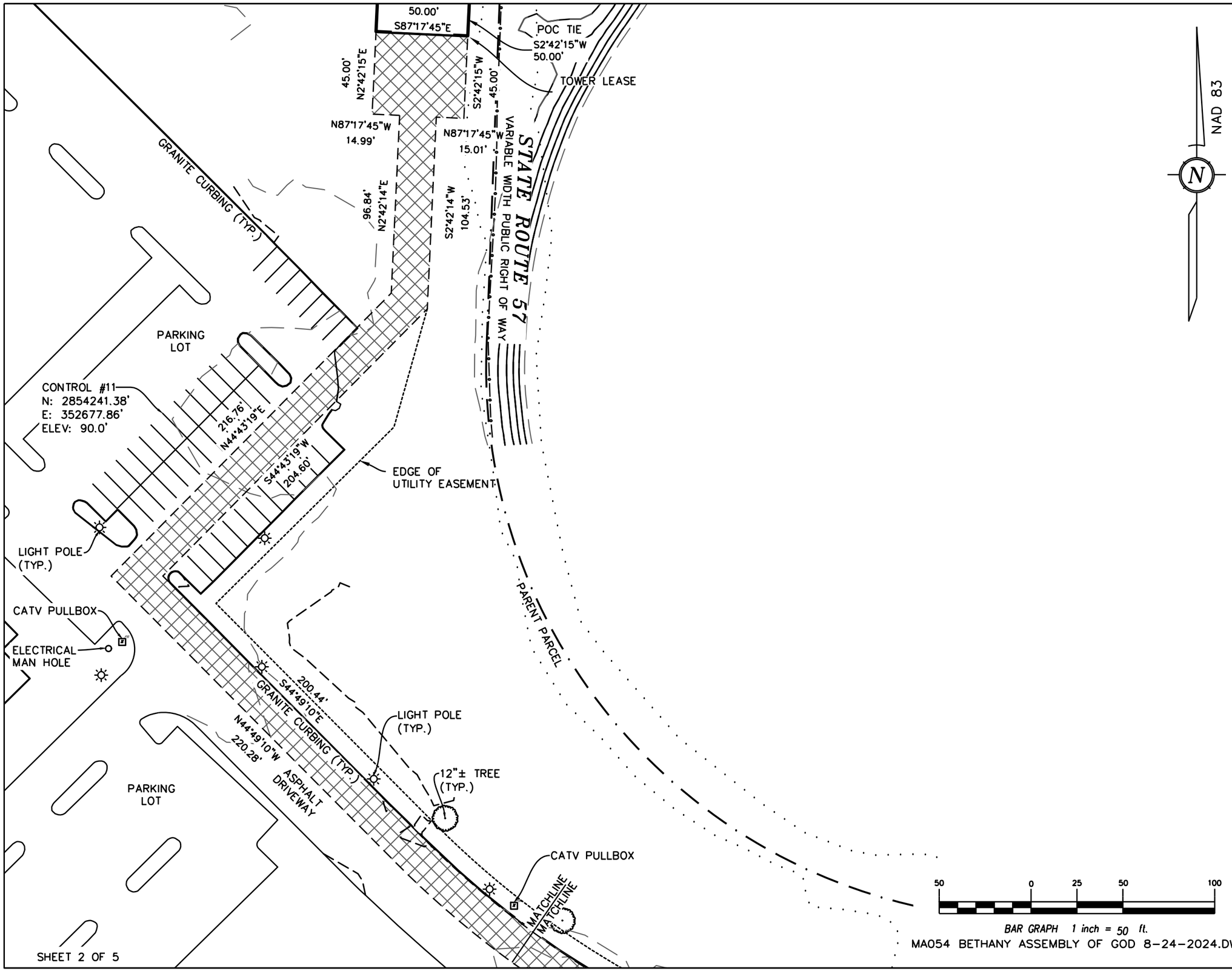
I HEREBY CERTIFY TO:
DIAMOND COMMUNICATIONS, LLC

LITTLE RIVER LAND SURVEYING

SURVEYOR
JERAMIAH J. RAITT
DATE: 10/30/2024

COMMONWEALTH OF MASSACHUSETTS
JERAMIAH RAITT
NO. 56221
REGISTERED PROFESSIONAL LAND SURVEYOR

FIELD DATE: 08/14/2023



RAW LAND SURVEY

NAME: BETHANY ASSEMBLY OF GOD
SITES#: MA054
ADDRESS: 580 MAIN STREET
AGAWAM, MA 01001
HAMPDEN COUNTY

NATIONAL SURVEY SERVICES COORDINATION BY:

GEOLINE SURVEYING, INC.
13430 NW 104th Terrace, Suite A Alachua, FL 32615
Office:(386) 418-0500 Fax:(386) 462-9986
WWW.GEOLINEINC.COM

SURVEY WORK PERFORMED BY:

JONATHAN MURPHY
Professional Land Surveying
10505 Leafwood Place (919) 280-8189
Raleigh NC 27613 FAX 995-9616
E-MAIL : raleigh@murphygeomatics.com FIRM C-2757

SURVEYOR'S NOTES

1. BASIS OF BEARING:
STATE PLANE COORDINATE SYSTEM 1983
MAINLAND MASSACHUSETTS ZONE

2. NO SUBSURFACE INVESTIGATION WAS PERFORMED TO LOCATE UNDERGROUND UTILITIES. UTILITIES SHOWN HEREON ARE LIMITED TO AND ARE PER OBSERVED EVIDENCE ONLY.

3. THIS SURVEY DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARENT PARCEL.

4. ALL VISIBLE TELECOM EQUIPMENT AND IMPROVEMENTS ARE CONTAINED WITHIN THE DESCRIBED AREA.

5. ALL SYMBOLS SHOWN HEREON NOT DEPICTED TO SCALE.

SURVEYOR'S CERTIFICATION

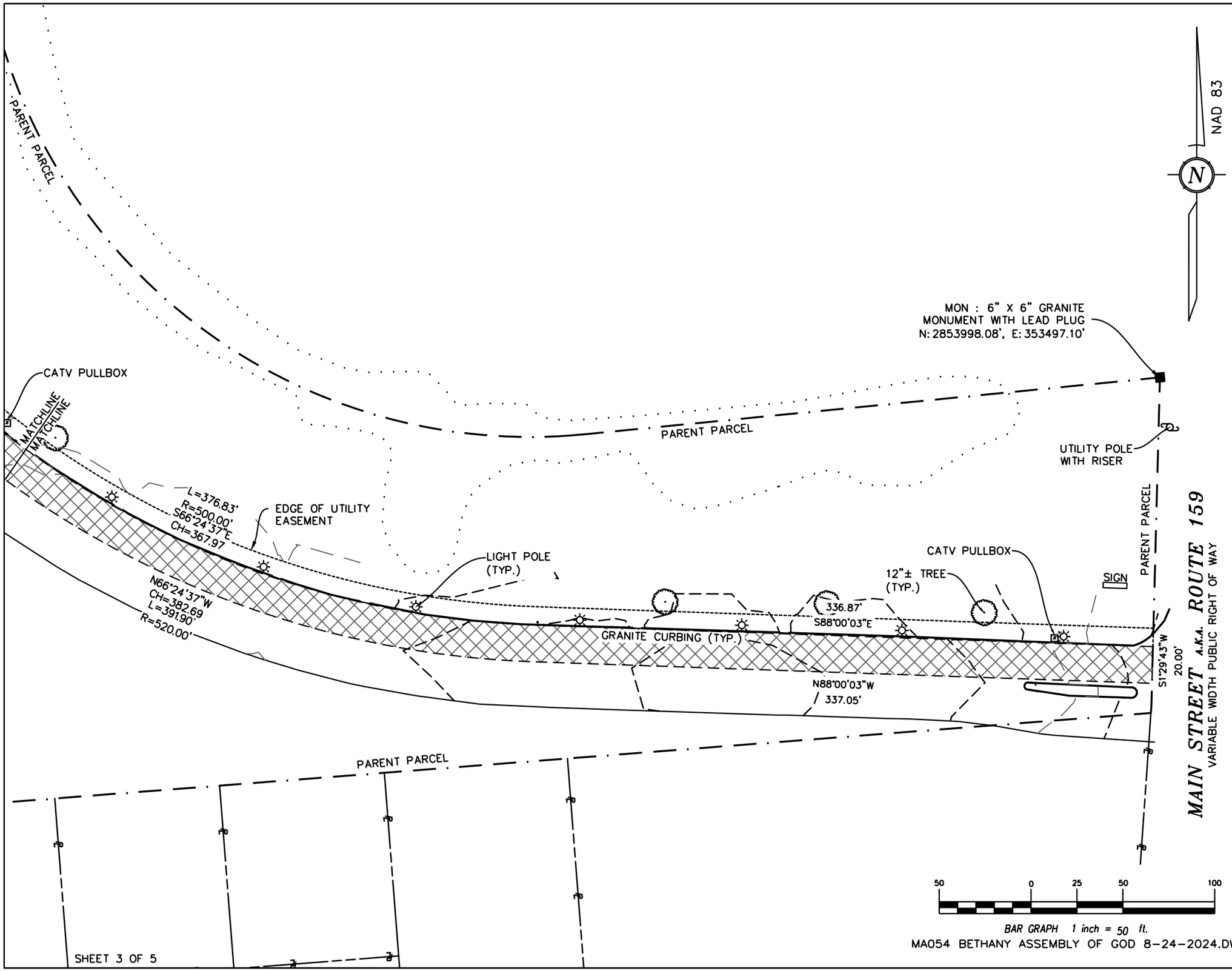
I HEREBY CERTIFY TO:
DIAMOND COMMUNICATIONS, LLC

LITTLE RIVER LAND SURVEYING

SURVEYOR
JERAMIAH J. RAITT
DATE: 10/30/2024

COMMONWEALTH OF MASSACHUSETTS
JERAMIAH RAITT
NO. 56221
REGISTERED PROFESSIONAL LAND SURVEYOR

FIELD DATE: 08/14/2023



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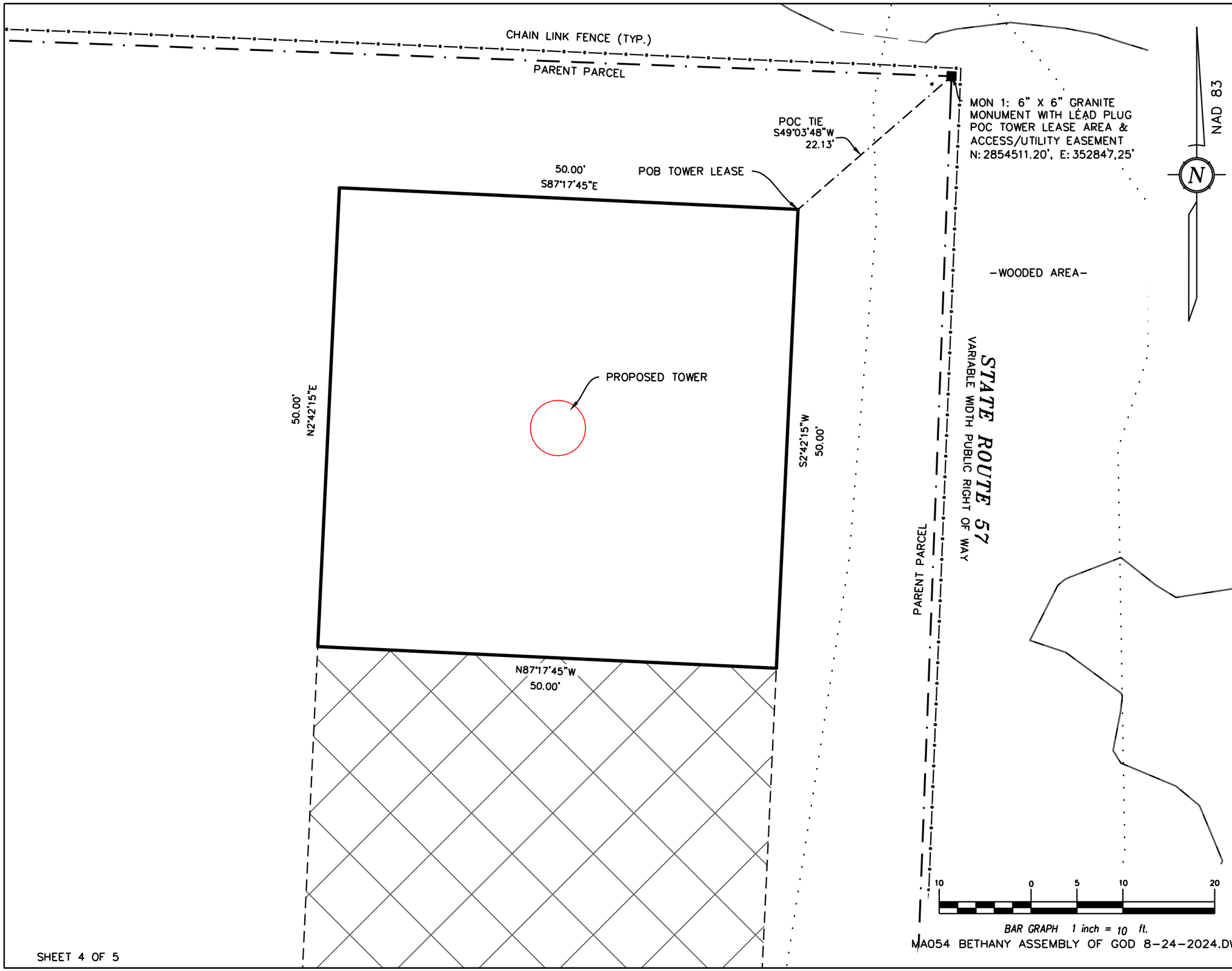

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LITTLE RIVER LAND SURVEYING

SURVEYOR
JERAMIAH J. RAITT
DATE: 10/30/2024

COMMONWEALTH OF MASSACHUSETTS
JERAMIAH RAITT
NO. 56221
REGISTERED PROFESSIONAL LAND SURVEYOR

FIELD DATE: 08/14/2023

LEGAL DESCRIPTION: PARENT PARCEL (AS PROVIDED)

EXHIBIT "A"
SITUATED IN THE COUNTY OF HAMPDEN AND STATE OF MASSACHUSETTS AND DESCRIBED AS FOLLOWS:

TRACT 1:
BEGINNING AT A POINT AT THE SOUTHWESTERLY CORNER OF LAND NOW OR FORMERLY OF THOMAS AND ANNA RUSSO IN THE TOWN OF AGAWAM, HAMPDEN COUNTY, MASSACHUSETTS
THENCE S. 85° 33' 05" W. A DISTANCE OF 1730.60 FEET ALONG A LAND COURT PLAN NO. 249648. TO A POINT;
THENCE S. 15° 04' 22" E. A DISTANCE OF 586.19 FEET ALONG SAID LAND COURT PLAN TO A BOUND; THENCE N. 80° 43' 32" W. A DISTANCE OF 63.75 FEET ALONG THE LAND NOW OR FORMERLY OF B.& M. TUCCI;
THENCE N. 88° 28' 51" W. A DISTANCE OF 288.42 FEET ALONG LAND NOW OR FORMERLY OF SAID TUCCI TO AN IRON PIN;
THENCE S. 82° 20' 08" W. A DISTANCE OF 204.25 FEET TO A POINT;
THENCE S. 87° 08' 04" W. A DISTANCE OF 78.67 FEET TO AN IRON PIN AT LAND NOW OR FORMERLY OF ONE CALABRESE;
THENCE N. 34° 42' 40" W. A DISTANCE OF 542.17 FEET ALONG THE LAND OF CALABRESE TO A POINT; THENCE N. 21° 10' 11" E. A DISTANCE OF 327.67 FEET ALONG THE LAND NOW OR FORMERLY OF ONE DELOGHIA TO A POINT;
THENCE N. 11° 27' 02" E. A DISTANCE OF 481.44 FEET ALONG THE LAND NOW OR FORMERLY OF DELOGHIA TO A POINT ON THE SOUTHERLY SIDE OF ROUTE 57;
THENCE N. 72° 55' 32" E. A DISTANCE OF 73.00 FEET TO A BOUND;
THENCE NORTHEASTERLY ON A CURVE TO THE RIGHT HAVING A RADIUS OF 4900.75 FEET AN ARC LENGTH OF 1646.79 FEET TO A POINT;
THENCE S. 87° 49' 30" E. A DISTANCE OF 394.14 FEET TO A BOUND, THE LAST THREE COURSES BEING ALONG THE SOUTHERLY SIDE OF ROUTE 57;
THENCE S. 2 ° 10' 30" W. A DISTANCE OF 234.37 FEET TO A POINT;
THENCE ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 300.00 FEET, AN ARC LENGTH OF 385.71 FEET TO AN IRON PIN, THE LAST TWO COURSES BEING ALONG THE RAMP TO ROUTE 57;
THENCE S. 4° 26' 55" E. A DISTANCE OF 198.92 FEET ALONG THE LAND NOW OR FORMERLY OF RUSSO TO THE POINT OF BEGINNING.
BEING THE PREMISES SHOWN AS LAND OF ALBERT J. AND JENNIE M. CHRISTOPHER, SAID TO CONTAIN 49.2 ACRES OF LAND, AS SHOWN ON A PLAN OF LAND PREPARED FOR BETHANY ASSEMBLY OF GOD,

TRACT 2:
BEGINNING AT A GRANITE BOUND ON THE WESTERLY SIDE OF MAIN STREET IN THE TOWN OF AGAWAM, HAMPDEN COUNTY. MASSACHUSETTS SAID GRANITE BOUND BEING THE INTERSECTION OF THE RAMP OF ROUTE 57, AND THE WESTERLY SIDELINE OF MAIN STREET AS SHOWN IN PLAN BOOK 64. PAGES 73 AND 74. HAMPDEN COUNTY REGISTRY OF DEEDS.
THENCE S. 1° 30' 40" W. A DISTANCE OF 178.84 FEET ALONG THE WESTERLY SIDE OF MAIN STREET TO AN IRON PIN;
THENCE S. 3° 59' 20" W. A DISTANCE OF 3.89 FEET ALONG THE WESTERLY SIDE OF MAIN STREET TO THE LAND OF B. SCHABOWSKI;
THENCE S. 85° 33' 05" W. A DISTANCE OF 419.00 FEET ALONG THE LAND OF SCHABOWSKI AND HAMAR TO A POINT;
THENCE N. 4° 26' 55" E. A DISTANCE OF 198.92 FEET ALONG THE LAND OF ALBERT AND JENNIE CHRISTOPHER TO THE SIDELINE OF THE RAMP TO ROUTE 57;
THENCE SOUTHEASTERLY ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 300.00 FEET, AN ARC LENGTH OF 126.40 FEET TO A GRANITE BOUND;
THENCE N. 84° 22' 10" E. A DISTANCE OF 315.00 FEET TO A GRANITE BOUND ON THE WESTERLY SIDE OF MAIN STREET AT THE POINT OF BEGINNING.

TAX ID NO: K11 2 28

DERIVATION CLAUSE
BEING THE SAME PROPERTY CONVEYED TO BETHANY ASSEMBLY OF GOD, A RELIGIOUS CORPORATION, GRANTEE, FROM ALBERT J. CHRISTOPHER AND GIOVANNA M. CHRISTOPHER, ALSO KNOWN AS JENNIE M. CHRISTOPHER, HUSBAND AND WIFE, GRANTOR BY DEED RECORDED 10/05/1976, AS BOOK 4332, PAGE 48 OF HAMPDEN COUNTY RECORDS.
AND
BEING THE SAME PROPERTY CONVEYED TO BETHANY ASSEMBLY OF GOD, A RELIGIOUS CORPORATION, GRANTEE, FROM THOMAS J. RUSSO, JR. AND ANNA M. RUSSO, GRANTOR BY DEED RECORDED 09/23/1976, AS BOOK 4327, PAGE 132 OF HAMPDEN COUNTY RECORDS.

LEGAL DESCRIPTION: TOWER LEASE (CREATED BY THIS OFFICE)
A PORTION OF ALL THAT CERTAIN PARCEL OF LAND IN THE CITY OF AGAWAM, COUNTY OF HAMPDEN, STATE OF MASSACHUSETTS, DESCRIBED IN DEED BOOK 4332, PAGES 48 AND 342, AND FURTHER DESCRIBED AS:
COMMENCING AT A 6" X 6" GRANITE MONUMENT WITH LEAD PLUG ON THE SOUTHERLY SIDE OF STATE ROUTE 57, HAVING MAINE STATE PLANE COORDINATES, MASSACHUSETTS MAINLAND ZONE, N:2854511.20', E:352847.25',
THENCE, S 49° 03' 48" W FOR A DISTANCE OF 22.13 FEET TO THE POINT OF BEGINNING;
THENCE, S 02° 42' 15" W FOR A DISTANCE OF 50.00 FEET TO A POINT;
THENCE, N 87° 17' 45" W FOR A DISTANCE OF 50.00 FEET TO A POINT;
THENCE, N 02° 42' 15" E FOR A DISTANCE OF 50.00 FEET TO A POINT;
THENCE, S 87° 17' 45" E FOR A DISTANCE OF 50.00 FEET TO THE POINT OF BEGINNING, CONTAINING 2,500 SQFT –OR– 0.06 ACRES.

LEGAL DESCRIPTION: ACCESS/UTILITY EASEMENT (CREATED BY THIS OFFICE)
A PORTION OF ALL THAT CERTAIN PARCEL OF LAND IN THE CITY OF AGAWAM, COUNTY OF HAMPDEN, STATE OF MASSACHUSETTS, DESCRIBED IN DEED BOOK 4332, PAGES 48 AND 342, AND FURTHER DESCRIBED AS:
COMMENCING AT A 6" X 6" GRANITE MONUMENT WITH LEAD PLUG ON THE WESTERLY SIDE OF MAIN STREET, ALSO KNOWN AS ROUTE 159, HAVING MAINE STATE PLANE COORDINATES, MASSACHUSETTS MAINLAND ZONE, N:2853998.08', E:353497.10'
THENCE, S 49° 03' 48" W FOR A DISTANCE OF 22.13 FEET TO A POINT ON AN EXISTING 2,500 SQFT TOWER LEASE;
THENCE, ALONG SAID LEASE, S 02° 42' 15" W FOR A DISTANCE OF 50.00 FEET TO THE POINT OF BEGINNING;
THENCE, DEPARTING SAID LEASE, S 02° 42' 15" W FOR A DISTANCE OF 45.00 FEET TO A POINT;
THENCE, N 87° 17' 45" W FOR A DISTANCE OF 15.01 FEET TO A POINT;
THENCE, S 02° 42' 14" W FOR A DISTANCE OF 104.53 FEET TO A POINT;
THENCE, S 44° 43' 19" W FOR A DISTANCE OF 204.60 FEET TO A POINT;
THENCE, S 44° 49' 10" E FOR A DISTANCE OF 200.44 FEET TO THE BEGINNING OF A CURVE,
THENCE, ALONG SAID CURVE TURNING TO THE LEFT THROUGH AN ANGLE OF 43° 10' 53.4", HAVING A RADIUS OF 500.00 FEET, AND WHOSE LONG CHORD BEARS S 66° 24' 37" E FOR A DISTANCE OF 367.97 FEET TO A POINT;
THENCE, S 88° 00' 03" E FOR A DISTANCE OF 336.87 FEET TO A POINT LYING ON THE WESTERN RIGHT OF WAY OF MAIN STREET A.K.A. ROUTE 159, A DEDICATED PUBLIC RIGHT OF WAY;
THENCE, ALONG SAID RIGHT OF WAY, S 01° 29' 43" W FOR A DISTANCE OF 20.00 FEET TO A POINT;
THENCE, DEPARTING SAID RIGHT OF WAY, N 88° 00' 03" W FOR A DISTANCE OF 337.05 FEET TO THE BEGINNING OF A CURVE,
THENCE, ALONG SAID CURVE TURNING TO THE RIGHT THROUGH AN ANGLE OF 43° 10' 53.4", HAVING A RADIUS OF 520.00 FEET, AND WHOSE LONG CHORD BEARS N 66° 24' 37" W FOR A DISTANCE OF 382.69 FEET TO A POINT;
THENCE, N 44° 49' 10" W FOR A DISTANCE OF 220.28 FEET TO A POINT;
THENCE, N 44° 43' 19" E FOR A DISTANCE OF 216.76 FEET TO A POINT;
THENCE, N 02° 42' 14" E FOR A DISTANCE OF 96.84 FEET TO A POINT;
THENCE, N 87° 17' 45" W FOR A DISTANCE OF 14.99 FEET TO A POINT;
THENCE, N 02° 42' 15" E FOR A DISTANCE OF 45.00 FEET TO A POINT ON SAID LEASE;
THENCE, ALONG SAID LEASE, S 87° 17' 45" E FOR A DISTANCE OF 50.00 FEET TO THE POINT OF BEGINNING, CONTAINING 27,111 SQFT –OR– 0.62 ACRES.

RAW LAND SURVEY

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SURVEYOR'S NOTES

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STATE PLANE COORDINATE SYSTEM 1983
MAINLAND MASSACHUSETTS ZONE

2. NO SUBSURFACE INVESTIGATION WAS PERFORMED TO LOCATE UNDERGROUND UTILITIES. UTILITIES SHOWN HEREON ARE LIMITED TO AND ARE PER OBSERVED EVIDENCE ONLY.

3. THIS SURVEY DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARENT PARCEL.

4. ALL VISIBLE TELECOM EQUIPMENT AND IMPROVEMENTS ARE CONTAINED WITHIN THE DESCRIBED AREA.

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LITTLE RIVER LAND SURVEYING

SURVEYOR
JERAMIAH J. RAITT
DATE: 10/30/2024

COMMONWEALTH OF MASSACHUSETTS
JERAMIAH RAITT
NO. 56221
REGISTERED PROFESSIONAL LAND SURVEYOR

FIELD DATE: 08/14/2023

1.00 GENERAL NOTES

1.01 ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE DRAWINGS AND SPECIFICATIONS. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE STATE, LOCAL AND NATIONAL CODES, ORDINANCES AND OR REGULATIONS APPLICABLE TO THIS PROJECT.

1.02 THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND SHALL CHECK ALL DIMENSIONS. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE PROJECT MANAGER AND/OR ENGINEER AND BE RESOLVED BEFORE PROCEEDING WITH WORK. WHERE THERE IS A CONFLICT BETWEEN DRAWING AND VERIZON SPECIFICATIONS, THE DIAMOND COMMUNICATIONS PROJECT ENGINEER SHOULD BE CONTACTED FOR CLARIFICATION.

1.03 ALL INFORMATION SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST PRESENT KNOWLEDGE, BUT WITHOUT GUARANTEE OF ACCURACY. WHERE ACTUAL CONDITIONS CONFLICT WITH THE DRAWINGS, THEY SHALL BE REPORTED TO THE PROJECT MANAGER AND/OR ENGINEER SO THAT PROPER REVISIONS MAY BE MADE. MODIFICATION OF DETAILS OF CONSTRUCTION SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE PROJECT MANAGER AND/OR ENGINEER.

1.04 CONTRACTOR SHALL REVIEW AND BE FAMILIAR WITH SITE CONDITIONS AS SHOWN ON THE ATTACHED SITE PLAN AND/OR SURVEY DRAWINGS.

1.05 WAVEGUIDE BRIDGE AND EQUIPMENT CABINETS ARE SHOWN FOR REFERENCE ONLY. REFER TO SEPARATE DRAWINGS FOR SPECIFIC INFORMATION.

1.06 ALL FINISHED GRADES SHALL SLOPE MINIMUM 1/4 IN./FT. AWAY FROM EQUIPMENT IN ALL DIRECTIONS. CONTRACTOR SHALL SLOPE SWALES AS REQUIRED ALONG EXISTING TERRAIN TO DRAIN AWAY FROM COMPOUND AND ACCESS DRIVE.

1.07 THE PROPOSED TOWER AND TOWER FOUNDATIONS WERE DESIGNED BY OTHERS. TOWER INFORMATION PROVIDED ON THESE PLANS ARE PROVIDED FOR REFERENCE PURPOSES ONLY. NOTIFY ENGINEER OR PROJECT MANAGER OF ANY CONFLICTS OR DISCREPANCIES. CONTRACTOR TO OBTAIN COPY OF TOWER DESIGN DRAWINGS, IF AVAILABLE, FROM DIAMOND COMMUNICATIONS PROJECT MANAGER TO CONFIRM COAX ROUTING AND ANTENNA MOUNT INFORMATION.

1.08 THE CONTRACTOR SHALL PROVIDE ADEQUATE EXCAVATION SLOPING, SHORING, BRACING, AND GUYS IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL SAFETY ORDINANCES.

1.09 UPON COMPLETION OF CONSTRUCTION, CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE CAUSED BY CONSTRUCTION ACTIVITIES TO THE EXISTING ACCESS ROAD AND COMPOUND GRAVEL AREAS. ANY NEW FILL MATERIALS SHALL BE COMPACTED.

1.10 THE CONTRACTOR IS HEREBY NOTIFIED THAT PRIOR TO COMMENCING CONSTRUCTION, HE IS RESPONSIBLE FOR CONTACTING THE UTILITY COMPANIES INVOLVED AND SHALL REQUEST A VERIFICATION AT THE CONSTRUCTION SITE OF THE LOCATIONS OF THEIR UNDERGROUND UTILITIES AND WHERE THEY MAY POSSIBLY CONFLICT WITH THE PLACEMENT OF IMPROVEMENTS AS SHOWN ON THESE PLANS. THE CONTRACTOR OR ANY SUBCONTRACTOR FOR THIS CONTRACT WILL BE REQUIRED TO NOTIFY "MASSACHUSETTS 811" 72 HOURS IN ADVANCE OF PERFORMING ANY WORK BY CALLING THE TOLL FREE NUMBER (888) 344-7233 (OR 811). ANY UTILITIES DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE REPAIRED BY THE CONTRACTOR, AT NO EXPENSE TO THE OWNER.

1.11 CONTRACTOR TO PROVIDE DUMPSTER AND PORTABLE TOILET FACILITY DURING CONSTRUCTION.

1.12 CONTRACTOR TO PROVIDE STYMIE LOCK OR EQUIVALENT AS APPROVED BY DIAMOND COMMUNICATIONS PROJECT MANAGER.

1.13 CONTRACTOR TO PROVIDE ANY NECESSARY SIGNAGE PER DIAMOND COMMUNICATIONS PROJECT MANAGER'S INSTRUCTIONS. SEE DETAIL ON SHEET C11.

2.00 EQUIPMENT FOUNDATION NOTES

2.01 FOUNDATIONS ARE DESIGNED FOR A PRESUMPTIVE ALLOWABLE SOIL BEARING CAPACITY OF 2,000 PSF. CONTRACTOR SHALL VERIFY SOIL CONDITIONS AND BEARING CAPACITY PRIOR TO CONSTRUCTION.

2.02 EXCAVATE A MINIMUM 18" BELOW PROPOSED EQUIPMENT FOUNDATIONS OF EXPANSIVE, ORGANIC, UNCONSOLIDATED OR OTHERWISE UNACCEPTABLE MATERIAL AND REPLACE WITH WELL-COMPACTED MATERIAL ACCEPTABLE TO VERIZON.

2.03 CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, PROTECTING, AND RELOCATING AS REQUIRED ALL SERVICE AND UTILITY LINES IN VICINITY OF THE WORK SITE. ALL EXCAVATIONS NEAR THESE LINES TO BE CARRIED OUT WITH EXTREME CAUTION. COORDINATE ALL RELOCATIONS WITH THE PROPERTY OWNER.

2.04 CONTRACTOR TO CUT/FILL EXISTING COMPOUND SUBSOIL TO PROVIDE AN AREA AS LEVEL AS POSSIBLE FOR THE EQUIPMENT FOUNDATIONS. ALL FILL AREAS ARE TO BE FILLED WITH SUITABLE MATERIALS. FILL MATERIALS ARE TO BE PLACED, COMPACTED, AND TESTED IN MAXIMUM LAYERS OF 8". COMPACTION OF ALL FILL MATERIAL SHALL ACHIEVE 95 PERCENT OF MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D 698. ALL TESTS MUST MEET THE MINIMUM SPECIFIED SOIL BEARING CAPACITY. COMPACTION TESTING IS BY THE GEOTECHNICAL TESTING COMPANY DESIGNATED FOR THE PROJECT. SCHEDULING AND COORDINATION IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. REPORTS OF ALL TESTING ARE TO BE PROMPTLY DELIVERED OR FAXED TO THE VERIZON WIRELESS PROJECT MANAGER.

2.05 CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS AND SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST REVISION TO ACI-318 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.

2.06 CONCRETE SHALL HAVE A SLUMP BETWEEN 3" AND 6".

2.07 FIBERS FOR CONCRETE SHALL BE FIBERMESH 650, 100 PERCENT VIRGIN POLYPROPYLENE FIBRILLATED FIBERS, e3 PATENTED TECHNOLOGY PATENTED TECHNOLOGY, CONTAINING NO REPROCESSED OLEFIN MATERIALS. THE FIBERS SHALL CONFORM TO ASTM C1116 TYPE III AND MANUFACTURED SPECIFICALLY FOR THE SECONDARY REINFORCEMENT OF CONCRETE.

2.08 THE FIBERS SHALL BE MANUFACTURED IN AN ISO 9001:2008 CERTIFIED MANUFACTURING FACILITY. UNLESS OTHERWISE STATED, FIBERMESH 650 MACRO-SYNTHETIC FIBERS SHALL BE ADDED TO THE CONCRETE AT THE BATCHING PLANT AT THE RECOMMENDED APPLICATION RATE OF 3 LBS/YD^3 AND MIXED FOR A SUFFICIENT TIME (MINIMUM 5 MINUTES AT FULL MIXING SPEED) TO ENSURE UNIFORM DISTRIBUTION OF THE FIBERS THROUGHOUT THE CONCRETE. FIBROUS CONCRETE REINFORCEMENT SHALL BE MANUFACTURED BY FIBERMESH, 4019 INDUSTRY DRIVE, CHATTANOOGA, TN 37416 USA, TEL: 800 621-1273, WEBSITE: WWW.FIBERMESH.COM

2.09 AT THE REQUEST OF THE VERIZON WIRELESS PROJECT MANAGER, TEST CYLINDERS SHALL BE MOLDED AND LABORATORY CURED IN ACCORDANCE WITH ASTM C31. THREE CYLINDERS SHALL BE TAKEN FOR EACH DAY'S CONCRETE PLACEMENT. CYLINDERS SHALL BE TESTED IN ACCORDANCE WITH THE LATEST REVISION TO ASTM C39.

2.10 CHAMFER ALL EXPOSED EXTERNAL CORNERS OF CONCRETE WITH ¾" x 45° CHAMFER, UNLESS OTHERWISE NOTED.

2.11 CONCRETE FORMWORK IS TO BE STRIPPED WITHIN 48 HOURS. VIBRATION OF THE CONCRETE MUST ASSURE THAT HONEYCOMBING WILL BE AT A MINIMUM. MECHANICAL VIBRATION OF ALL CONCRETE IS REQUIRED UNLESS OTHERWISE DIRECTED BY VERIZON WIRELESS' PROJECT MANAGER. ABOVE GRADE CONCRETE IS TO BE RUBBED AND PATCHED TO ASSURE SMOOTH FINISH AT TIME OF FORMS REMOVAL. CONTRACTOR SHALL PROVIDE A BROOM FINISH ON THE TOP SURFACE OF THE EQUIPMENT FOUNDATION UNLESS OTHERWISE DIRECTED BY VERIZON WIRELESS' PROJECT MANAGER.

2.121 TOPS OF CONCRETE FOUNDATION MUST BE WITHIN 0.02' OF ELEVATION REQUIRED.

2.13 TOP OF FOUNDATION FINISH TO BE LEVEL ±⅛" IN 10'.

2.14 TOP OF FOUNDATION TO HAVE MEDIUM BROOM FINISH.

2.15 CONTRACTOR SHALL REFER TO DRAWINGS OF OTHER TRADES AND VENDOR DRAWINGS FOR EMBEDDED ITEMS AND RECESSES NOT SHOWN ON THE STRUCTURAL DRAWINGS. CONTRACTOR SHALL VERIFY PLACEMENT OF EQUIPMENT AND LOCATION OF CONDUIT FOR MANUFACTURER'S AND VENDORS SPECIFICATIONS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL OPENINGS AND SLEEVES FOR PROPER DISTRIBUTION OF ALL UTILITIES.

K:\ATL_Wireless\Diamond Communications\Bethany Assembly of God - MA054\CAD\ZD\ECar-GB.dwg ---- 04/25/25 1:34 PM by: William.Bridger

Diamond Communications LLC

PROJECT INFORMATION:

SITE NAME:
BETHANY ASSEMBLY OF GOD
SITE No.: MA054

580 MAIN ST
AGAWAM, MA 01001
HAMPDEN COUNTY

PLANS PREPARED BY:

Kimley»Horn
11720 AMBER PARK DRIVE, SUITE 600
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM

REV: | DATE: | ISSUED FOR: | BY:

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7			
6			
5			
4	04/25/25	ZONING	DCC
3	04/18/25	ZONING	DCC
2	10/24/24	ZONING	DMF
1	02/14/24	ZONING	DMF
0	01/19/24	ZONING	DMF

LICENSER:

COMMONWEALTH OF MASSACHUSETTS
DANIEL C. CLASBY
CIVIL
No. 57896
REGISTERED
PROFESSIONAL ENGINEER
4.25.25

KHA PROJECT NUMBER:

013541034

DRAWN BY: JAR | CHECKED BY: CDS

SHEET TITLE:

GENERAL NOTES

SHEET NUMBER:

N1

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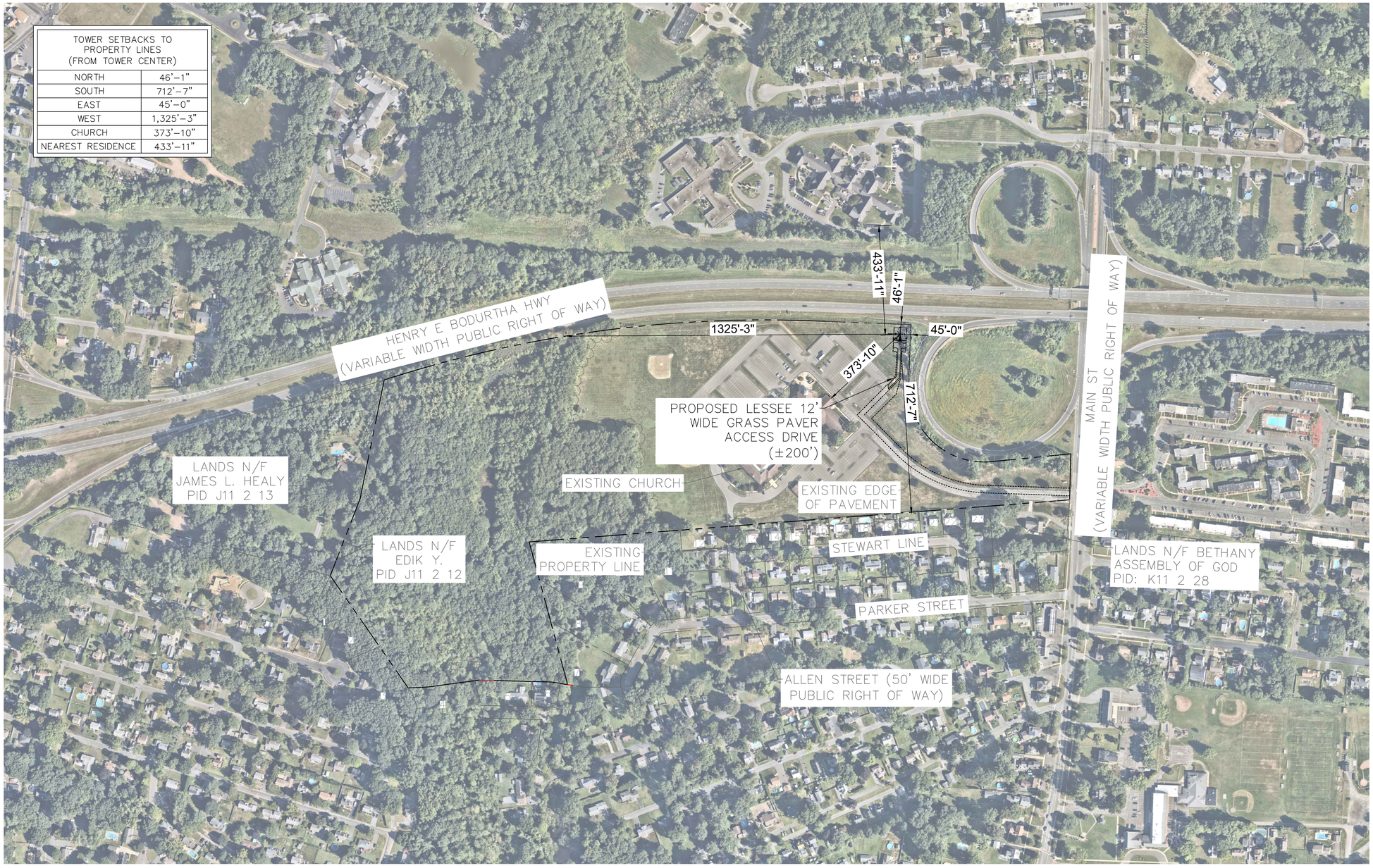
TOWER SETBACKS TO PROPERTY LINES (FROM TOWER CENTER)	
NORTH	46'–1"
SOUTH	712'–7"
EAST	45'–0"
WEST	1,325'–3"
CHURCH	373'–10"
NEAREST RESIDENCE	433'–11"



SURVEY NOTE:

1. DIAMOND COMMUNICATIONS STAFF SHALL COORDINATE WITH THE PROPERTY OWNER TO OBTAIN THE PROPER EASEMENT AGREEMENTS TO CONSTRUCT AND MAINTAIN EQUIPMENT IN AND AROUND THE TOWER COMPOUND.
2. PROPOSED COMPOUND LAYOUT BASED ON SURVEY PROVIDED BY GEOLINE SURVEYING, INC SITE VISIT ON 08/14/23.

1 / C0 OVERALL AERIAL PARCEL PLAN

SCALE: 1:200

NORTH

0 100 200 400

GRAPHIC SCALE: 1" = 200'

Diamond Communications LLC

PROJECT INFORMATION:

SITE NAME:
BETHANY ASSEMBLY OF GOD
SITE No.: MA054

580 MAIN ST
AGAWAM, MA 01001
HAMPDEN COUNTY

PLANS PREPARED BY:

Kimley»Horn

11720 AMBER PARK DRIVE, SUITE 600
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM

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0	01/19/24	ZONING	DMF

LICENSER:

COMMONWEALTH OF MASSACHUSETTS
DANIEL C. CLASBY
No. 57896
REGISTERED PROFESSIONAL ENGINEER
4.25.25

KHA PROJECT NUMBER:

013541034

DRAWN BY:	CHECKED BY:
JAR	CDS

SHEET TITLE:

OVERALL AERIAL PARCEL PLAN

SHEET NUMBER:

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1 / C0.1 OVERALL PARCEL TOPO

SCALE: 1:200

NORTH

0 100 200 400

GRAPHIC SCALE: 1" = 200'

Diamond Communications LLC

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SHEET TITLE:

OVERALL PARCEL TOPO

SHEET NUMBER:

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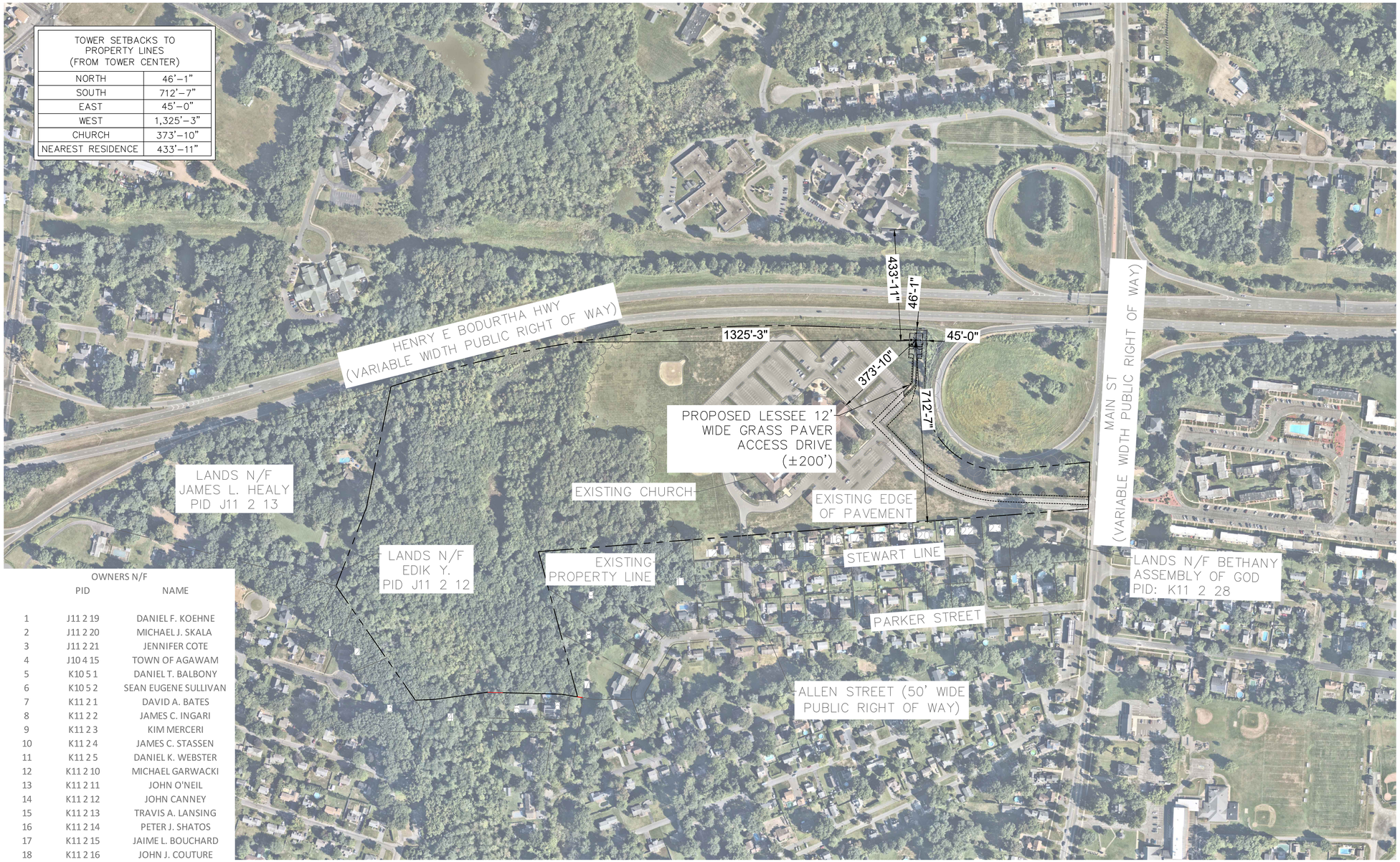

OWNERS N/F

	PID	NAME
1	J11 2 19	DANIEL F. KOEHNE
2	J11 2 20	MICHAEL J. SKALA
3	J11 2 21	JENNIFER COTE
4	J10 4 15	TOWN OF AGAWAM
5	K10 5 1	DANIEL T. BALBONY
6	K10 5 2	SEAN EUGENE SULLIVAN
7	K11 2 1	DAVID A. BATES
8	K11 2 2	JAMES C. INGARI
9	K11 2 3	KIM MERCERI
10	K11 2 4	JAMES C. STASSEN
11	K11 2 5	DANIEL K. WEBSTER
12	K11 2 10	MICHAEL GARWACKI
13	K11 2 11	JOHN O'NEIL
14	K11 2 12	JOHN CANNEY
15	K11 2 13	TRAVIS A. LANSING
16	K11 2 14	PETER J. SHATOS
17	K11 2 15	JAIME L. BOUCHARD
18	K11 2 16	JOHN J. COUTURE
19	K11 2 17	NICOLAI DUBINEVICI
20	K11 2 18	GLORIA J. AFFLITTO
21	K11 2 19	ISUEL SANCHEZ
22	K11 2 20	JOSEPH R. SPAGNOLI
23	K11 2 21	APRIL J. GRAZIANO

SURVEY NOTE:

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1 / C0.2 OVERALL PARCEL PLAN

SCALE: 1:200

NORTH

0 100 200 400

GRAPHIC SCALE: 1" = 200'

Diamond Communications LLC

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BETHANY ASSEMBLY OF GOD
SITE No.: MA054

580 MAIN ST
AGAWAM, MA 01001
HAMPDEN COUNTY

PLANS PREPARED BY:

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LICENSER:

COMMONWEALTH OF MASSACHUSETTS
DANIEL C. CLASBY
No. 57896
REGISTERED PROFESSIONAL ENGINEER
42525

KHA PROJECT NUMBER:

013541034

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JAR	CDS

SHEET TITLE:

OVERALL PARCEL PLAN

SHEET NUMBER:

C0.2

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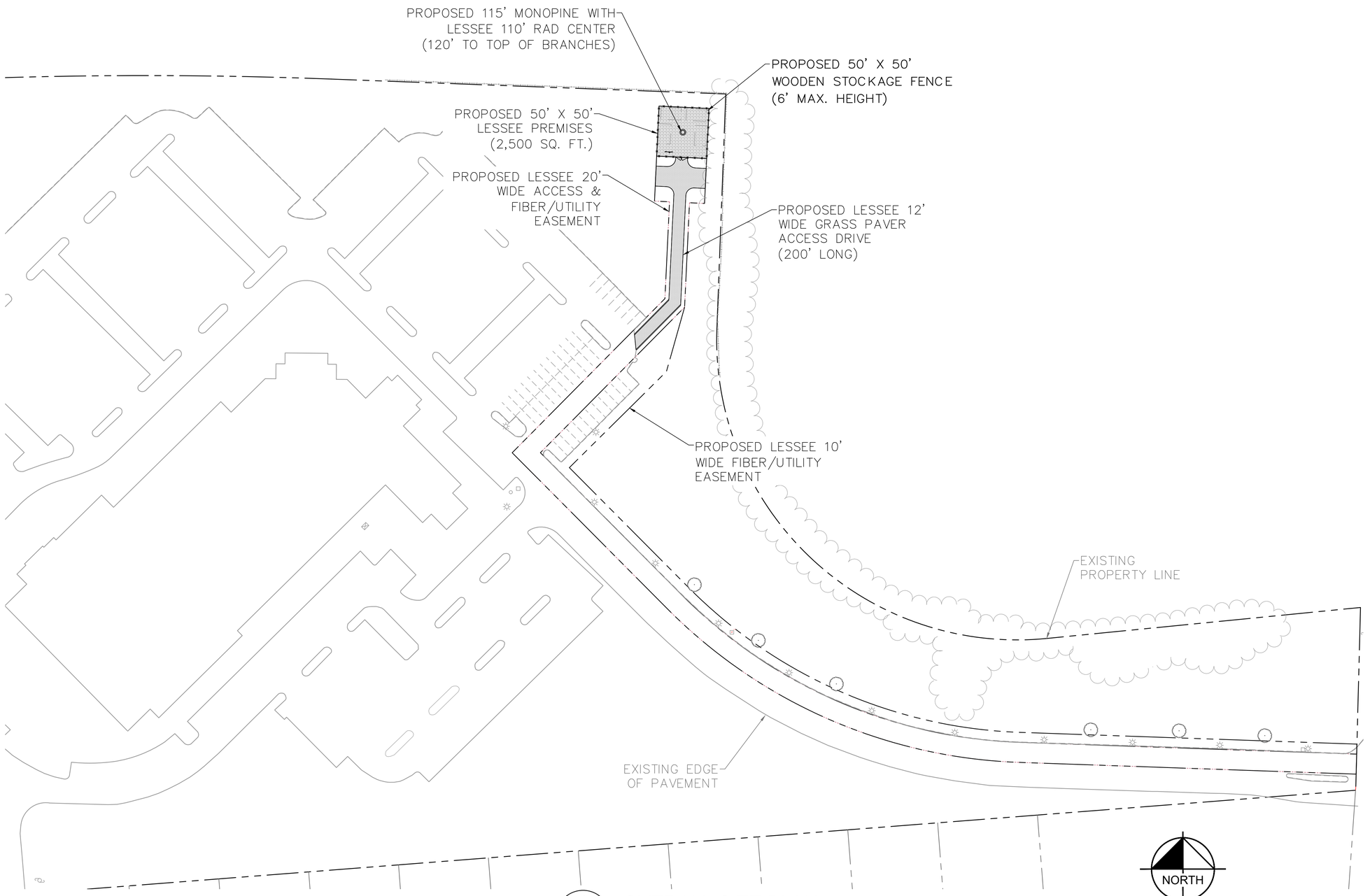

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1 / C1 **OVERALL SITE PLAN**

SCALE: 1" = 50'

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Diamond Communications LLC

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DANIEL C. CLASBY
CIVIL
NO. 57896
REGISTERED
PROFESSIONAL ENGINEER
4.25.25

KHA PROJECT NUMBER:

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SHEET TITLE:

OVERALL SITE PLAN

SHEET NUMBER:

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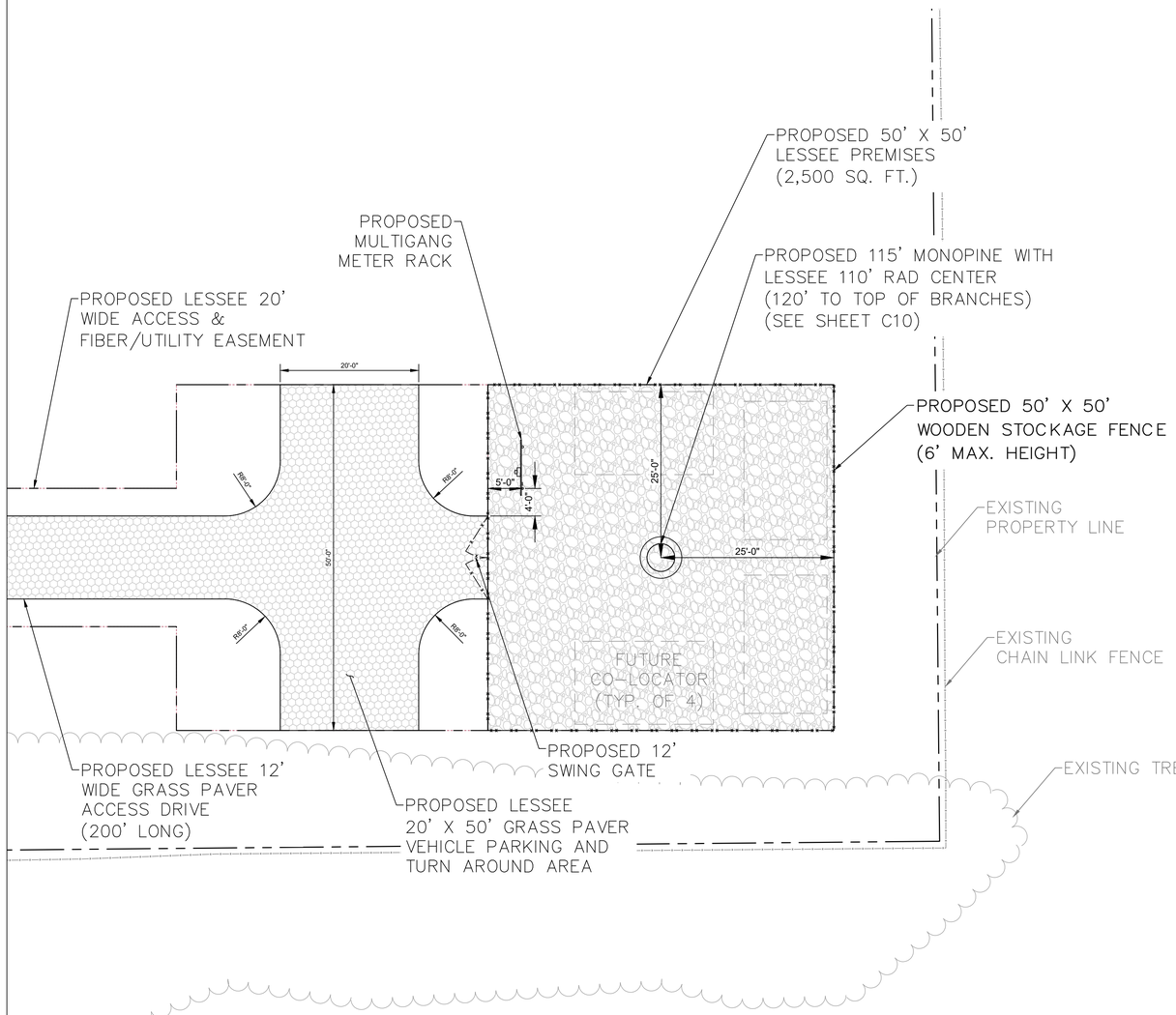
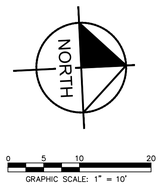


1 / C2 SITE PLAN

SCALE: 1" = 10'



SITE NOTES:

1. DIAMOND COMMUNICATIONS STAFF SHALL COORDINATE WITH THE PROPERTY OWNER AND/OR TOWER OWNER TO OBTAIN THE PROPER EASEMENT AGREEMENTS TO CONSTRUCT AND MAINTAIN EQUIPMENT IN AND AROUND THE TOWER COMPOUND.
2. PROPOSED COMPOUND LAYOUT BASED ON SURVEY PROVIDED BY GEOLINE SURVEYING, INC DATED SITE VISIT ON 08/14/23.
3. CONTRACTOR TO CONFIRM WITH DIAMOND COMMUNICATIONS CONSTRUCTION MANAGER THAT THE SHELTER/EQUIPMENT SHOWN HAS BEEN ORDERED/SCHEDULED FOR DELIVERY TO THIS SITE.
4. THE BASIS OF EQUIPMENT DESIGN INCLUDES ONE (1) RF CABINET, ONE (1) FUTURE BATTERY CABINET, AND ONE (1) FUTURE EXPANSION CABINET.
5. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND MODIFYING SCOPE OF WORK TO ACCOMMODATE ANY CHANGES IN THE EXACT EQUIPMENT PROCURED BY DIAMOND COMMUNICATIONS. COORDINATE ANY CHANGES WITH DIAMOND COMMUNICATIONS CONSTRUCTION MANAGER.
6. ROUTE COAX/FIBER UP TOWER PER STRUCTURAL ANALYSIS BY TOWER OWNER.
7. TOWER DIMENSIONS SHOWN ON THIS PLAN ARE FOR TOWER CENTER LOCATION. CONTRACTOR TO OBTAIN COPY OF TOWER ERECTION DRAWINGS FROM DIAMOND COMMUNICATIONS CONSTRUCTION MANAGER PRIOR TO DRILLING TOWER FOUNDATIONS. CASSIONS AND TOWER SHOWN ON THIS PLAN ARE ILLUSTRATIVE, SEE DESIGN DRAWING BY OTHERS. DO NOT SCALE.

LEGEND

EXISTING FENCE	
PROPOSED FENCE	
COMPACTED GRAVEL	
REINFORCED TURF/ GRASS PAVER	

Diamond Communications LLC

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SITE No.: MA054

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LICENSER:



KHA PROJECT NUMBER:

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JAR	CDS

SHEET TITLE:

SITE PLAN

SHEET NUMBER:

C2

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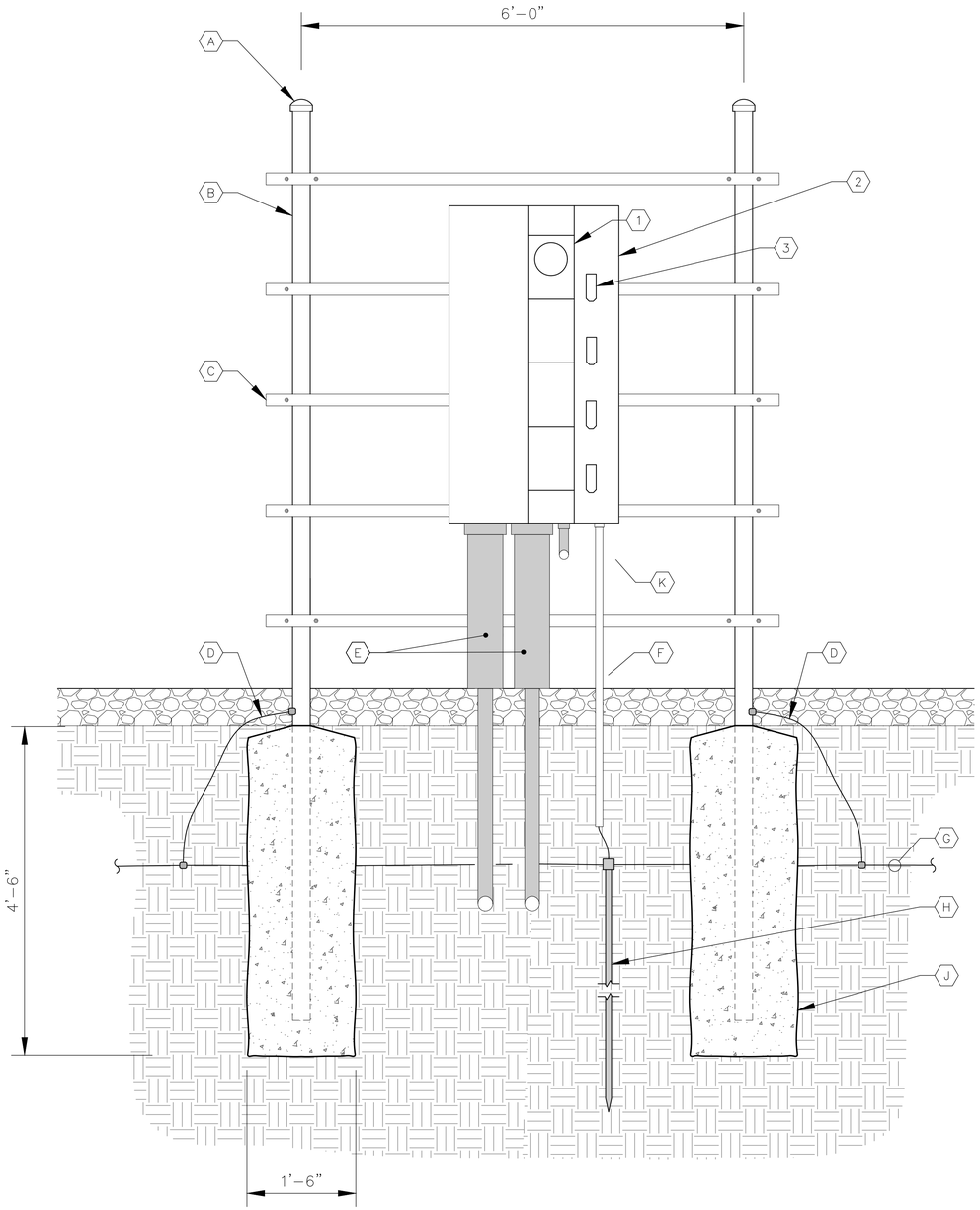

KEY NOTES - CONDUIT, CONDUCTORS, & MISC

- A — GALVANIZED RIGID STEEL CAP, TYPICAL.
- B — 3" GALVANIZED RIGID STEEL PIPE, TYPICAL.
- C — 1-5/8" x 1-5/8" GALVANIZED STEEL CHANNEL (UNISTRUT #P1000 OR APPROVED EQUIVALENT) WITH PLASTIC END CAP (UNISTRUT #P2860), TYPICAL.
- D — ONE (1) #2 AWG BARE SOLID TINNED COPPER BONDING CONDUCTOR IN ¾" PVC CONDUIT FROM H-FRAME VERTICAL PIPE TO GROUND RING, EXOTHERMIC WELD BOTH ENDS.
- E — 3" PVC CONDUIT WITH 6" EXPANSION SLEEVE FOR INCOMING SERVICE LATERALS FROM LOCAL UTILITY. SEE DETAIL 3/E7 FOR TRENCHING INFORMATION.
- F — 1" PVC WITH ONE (1) – 3/0 BARE STRANDED TINNED COPPER GROUNDING ELECTRODE CONDUCTOR (GEC) TO GROUND ROD, EXOTHERMIC WELD GEC TO GROUND ROD.
- G — GROUND RING (SEE SHEETS E6-E7).
- H — GROUND ROD, EXOTHERMIC WELD TO GROUND RING (SEE DETAIL 2/E7).
- J — CONCRETE FOUNDATION FOR H-FRAME VERTICAL PIPE. CONCRETE SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH OF 3,000 PSI.
- K — 1½" PVC POWER CONDUIT TO LGT PANEL.

KEY NOTES - ELECTRICAL EQUIPMENT

1. 200 AMP METER SOCKET IN NEMA 3R ENCLOSURE, TYPICAL OF 4.
2. FURNISH AND INSTALL SERVICE ENTRANCE RATED GANGED METER CENTER WITH FOUR (4) – 200 AMP (22KAIC), 120/240 VOLT SINGLE PHASE SERVICE POSITIONS IN NEMA 3R ENCLOSURE. COORDINATE SPECIFIC REQUIREMENTS WITH LOCAL UTILITY.
3. 200 AMP, 2 POLE (22KAIC) DISCONNECT CIRCUIT BREAKER FOR TOP METER ONLY. CONTRACTOR SHALL MOUNT THE METER CENTER SUCH THAT THE TOP CIRCUIT BREAKER IS NO MORE THAN 6' ABOVE GRADE.

1 / C3 EQUIPMENT RACK DETAILS - FRONT

NOT TO SCALE

Diamond Communications LLC

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No. 57896
REGISTERED PROFESSIONAL ENGINEER
4.25.25

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013541034

DRAWN BY: JAR CHECKED BY: CDS

SHEET TITLE:

EQUIPMENT RACK DETAIL - FRONT

SHEET NUMBER:

C3

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FENCE NOTES:

1. USE 3000–PSI CONCRETE, FULLY CONSOLIDATED AROUND THE POST.

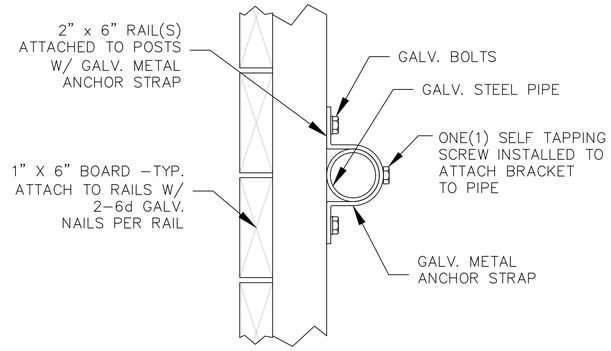
2. WHERE THE POST IS SET IN ROCK OR CONCRETE, CORE A HOLE 12" DEEP AND 1" LARGER IN DIAMETER THAN THE POST. SET THE POST AND GROUT IN PLACE USING NON–SHRINK GROUT.

3. ALL POSTS MUST BE PLUMB AND ALIGNED WITH ONE ANOTHER IN BOTH HORIZONTAL AND VERTICAL PLANES.

4. PROVIDE MIDRAILS AND BRACING AT ALL CORNER POSTS WHERE THE FENCE CHANGES DIRECTION BY MORE THAN 30 DEGREES.

5. THE GRADE OF THE SITE AND INSTALLATION OF THE FENCE SHALL PROVIDE FOR NO MORE THAN A 3" GAP BETWEEN THE BOTTOM OF THE FENCE MATERIAL AND FINISH GRADE.

6. CONTRACTOR SHALL PROVIDE HOLD OPEN DEVICES FOR ALL GATES AT THE SPECIFIED OPEN POSITIONS, DRIVEN PIPE TYPE RECEIVERS ARE NOT AUTHORIZED.



SECTION "A-A"
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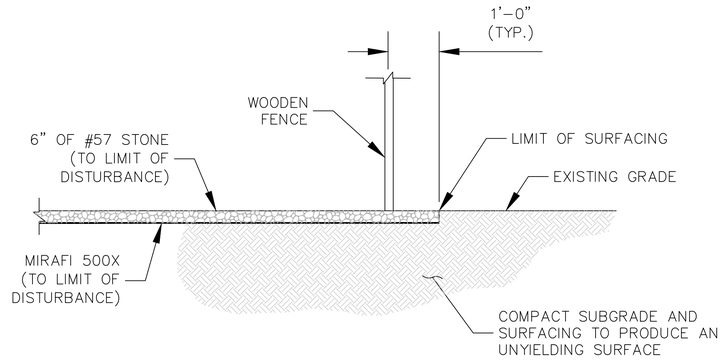
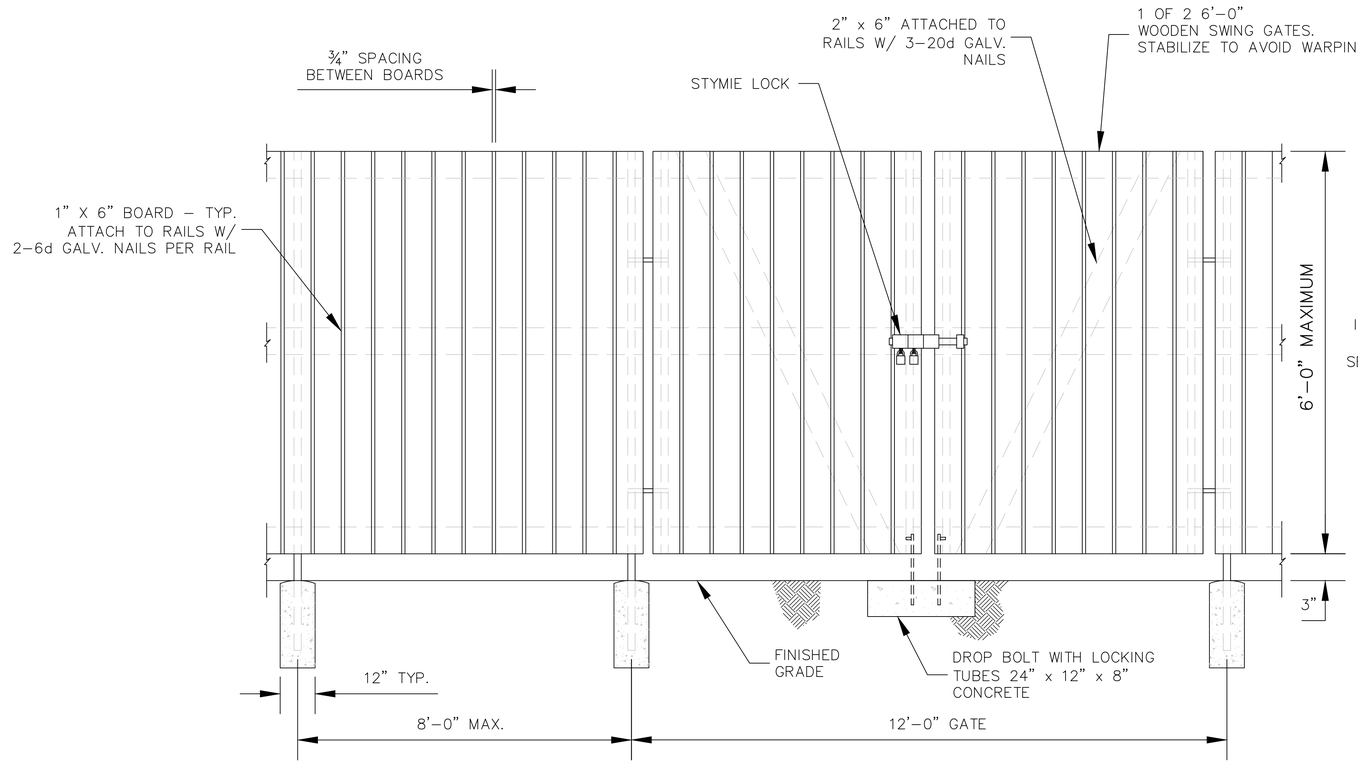
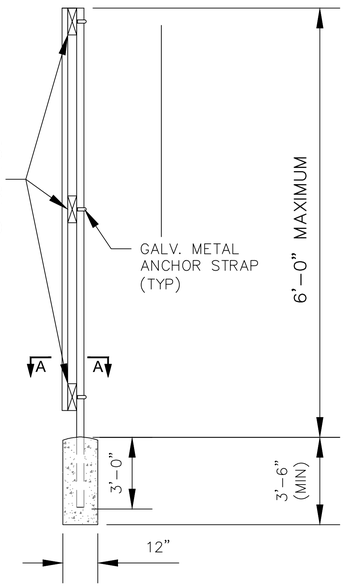


3 / C4 SITE COMPOUND SURFACE DETAIL
NOT TO SCALE



1 / C4 WOODEN FENCE AND GATE ELEVATION
NOT TO SCALE



2 / C4 SIDE ELEVATION VIEW
NOT TO SCALE

Diamond Communications LLC

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COMMONWEALTH OF MASSACHUSETTS
DANIEL C. CLASBY
CIVIL
No. 57896
REGISTERED PROFESSIONAL ENGINEER
42525

KHA PROJECT NUMBER:
013541034

DRAWN BY: JAR | CHECKED BY: CDS

SHEET TITLE:
FENCE, GATE, AND COMPOUND DETAILS

SHEET NUMBER:
C4

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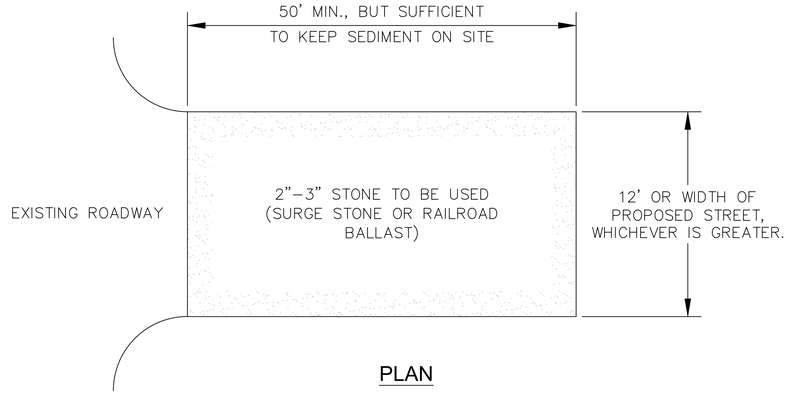
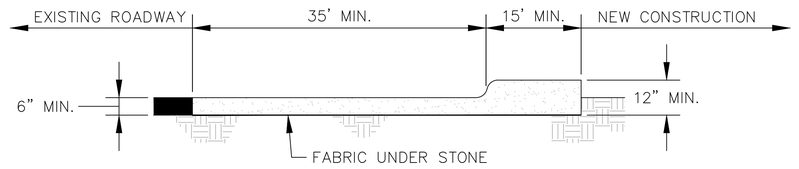


PLAN

NOTES:

1. PUT SILT FENCE OR TREE PROTECTION FENCE UP TO ENSURE CONSTRUCTION ENTRANCE IS USED.
2. IF CONSTRUCTION ON THE SITES ARE SUCH THAT THE MUD IS NOT REMOVED BY THE VEHICLE TRAVELING OVER THE STONE, THEN THE TIRES OF THE VEHICLES MUST BE WASHED BEFORE ENTERING THE PUBLIC ROAD.
3. IF A PROJECT CONTINUES TO PULL MUD AND DEBRIS ON TO THE PUBLIC ROAD, THE GOVERNING AUTHORITY WILL CLEAN THE AREA AND INVOICE THE FINANCIALLY RESPONSIBLE PERSON AS INDICATED ON THE FINANCIAL RESPONSIBILITY FORM.



CROSS SECTION

1 / C5 CONSTRUCTION ENTRANCE

NOT TO SCALE

K:\ATL_Wireless\Diamond Communications\Bethany Assembly of God - MA054\CAD\ZD\ECar-GB.dwg ---- 04/25/25 1:35 PM by: William.Bridger

Diamond Communications LLC

PROJECT INFORMATION:

SITE NAME:
BETHANY ASSEMBLY OF GOD
SITE No.: MA054

580 MAIN ST
AGAWAM, MA 01001
HAMPDEN COUNTY

PLANS PREPARED BY:

Kimley»Horn
11720 AMBER PARK DRIVE, SUITE 600
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM

REV: | DATE: | ISSUED FOR: | BY:

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3	04/18/25	ZONING	DCC
2	10/24/24	ZONING	DMF
1	02/14/24	ZONING	DMF
0	01/19/24	ZONING	DMF

LICENSER:

COMMONWEALTH OF MASSACHUSETTS
DANIEL C. CLASBY
CIVIL
No. 57896
REGISTERED PROFESSIONAL ENGINEER
4.25.25

KHA PROJECT NUMBER:

013541034

DRAWN BY: JAR | CHECKED BY: CDS

SHEET TITLE:

ACCESS ROAD DETAILS

SHEET NUMBER:

C5

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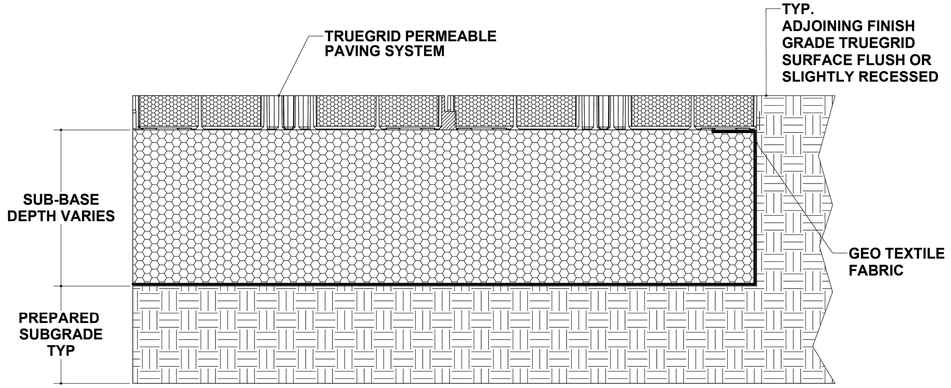
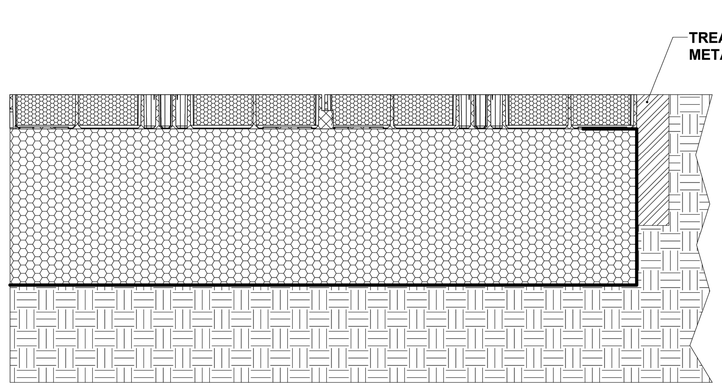
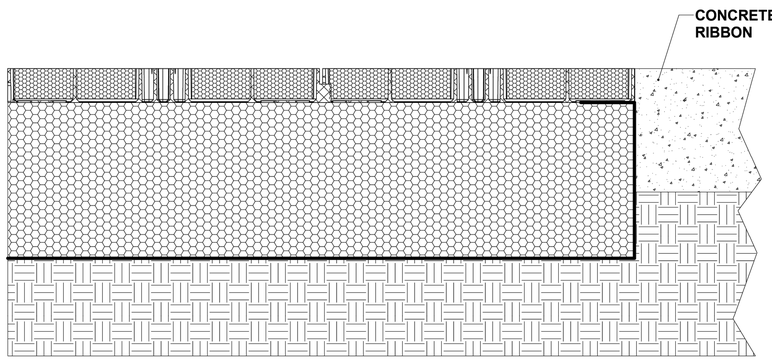


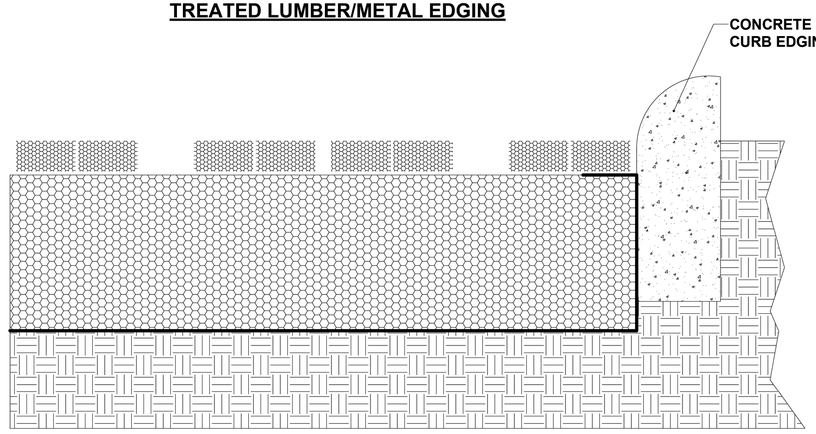
EXISTING GRADE



TREATED LUMBER/METAL EDGING



CONCRETE RIBBON EDGING OR TRANSITION TO HARDSCAPE



FOR PRICING OR ORDERING: CALL 1-855-355-GRID (4743). IN STOCK. FACTORY DIRECT.

REV	REVISION	DRAWN	CHECKED	APPROVED	DATE
03	UPDATED CONCRETE RIBBON	JT	JT	CW	6/20/2018

1-855-355-GRID (4743)

MADE IN U.S.A.

TRUEGRIDPAVER.com

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APPROVAL INFORMATION

DRAWN BY: J. Thethy	DATE: 8/22/2017	
CHECKED BY: J. Thethy	DATE: 8/22/2017	
APPROVED BY: C. White	DATE: 8/22/2017	
WEIGHT:		

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SIZE: D | DRAWING NUMBER: TG-EDGE-OPTS | REV: 03

SCALE: 1:3 | SHEET: 1 OF 1

Diamond Communications LLC

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DANIEL C. CLASBY
CIVIL
No. 57896
REGISTERED PROFESSIONAL ENGINEER
42525

KHA PROJECT NUMBER:

013541034

DRAWN BY: JAR | CHECKED BY: CDS

SHEET TITLE:

ACCESS ROAD TRUEGRID DETAILS

SHEET NUMBER:

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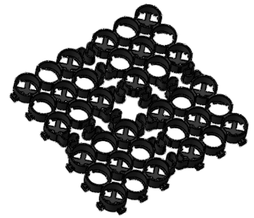
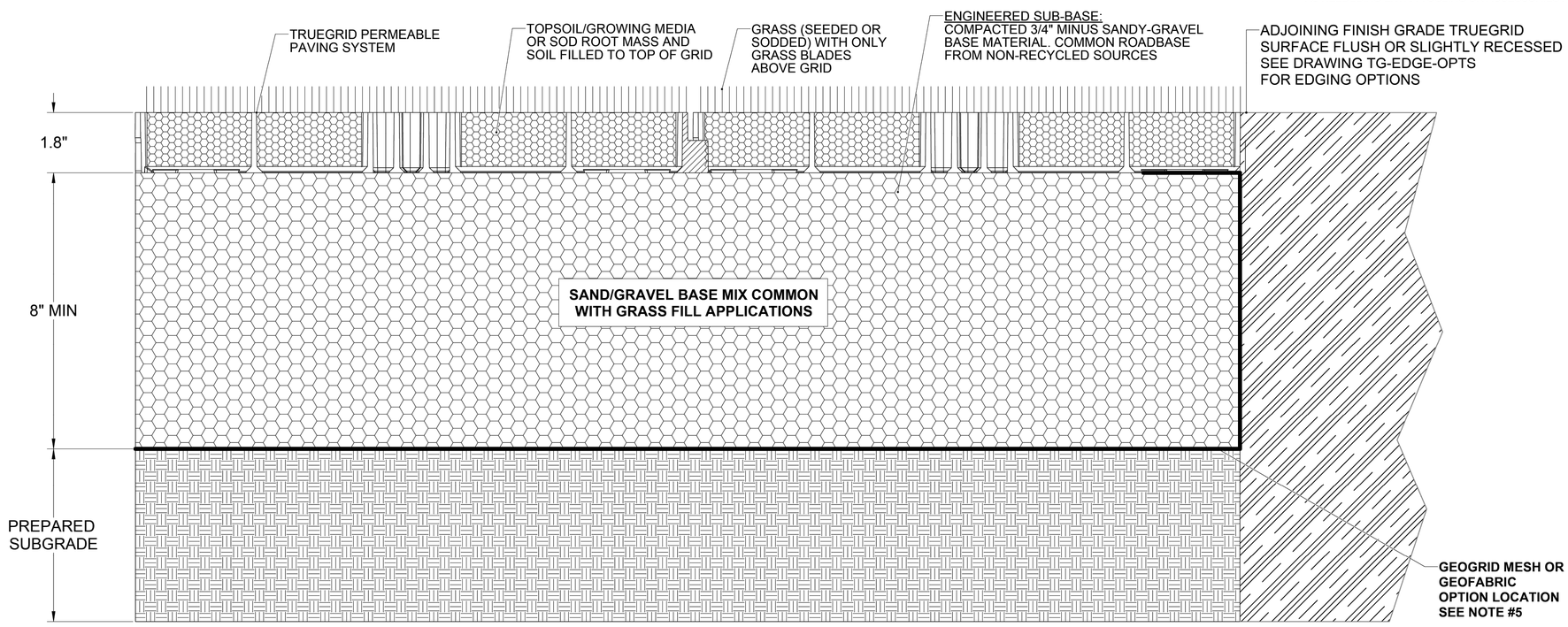
NOTES:

1. SUB-BASE DEPTH AND PREPARATION IS DEPENDENT ON SITE CONDITIONS PLUS LOADING REQUIREMENTS.
2. TRUEGRID PRO PLUS PRODUCTS ARE SUFFICIENTLY RATED FOR H-20 /HS-20 LOADING AND GREATER.
3. SEEDING METHOD: FILL SOIL/GROWING MEDIA TO TOP OF GRID. APPLY SEEDING OR HYDROSEEDING PER MANUFACTURERS' (BY OTHERS) REQUIRED APPLICATION RATES.
4. SOD INSTALLATION METHOD: FILL TOPSOIL/GROWING MEDIA HALF-WAY (~1") WITHIN TRUEGRID AND PRESS IN SOD SO THAT TOP OF GRID IS AT SOIL/ROOT LEVEL AND ONLY THE GRASS BLADES EXTEND ABOVE THE GRID.
5. GEOGRID MESH OR GEOFABRIC MAY BE REQUIRED BETWEEN SUBGRADE & SUBBASE FOR CERTAIN SOILS AND SITE SPECIFIC REQUIREMENTS.
6. NO STAKING NECESSARY WITH TRUEGRID PRO PLUS WHEN SLOPE IS BELOW 20 DEGREES. ASSESS PROJECT, AS NEEDED.
7. TRUEGRID PRO PLUS IS ADA COMPLIANT WITH PROPER FILL MATERIAL.
8. ALTERNATIVE ENGINEERED SUB-BASE MIXES CAN BE USED PROVIDED THEY PROMOTE GRASS GROWTH, HAVE ADEQUATE VOID SPACE FOR DRAINAGE, AND PROVIDE REQUIRED STRUCTURAL SUPPORT.
9. THIS CROSS SECTION IS FOR INFORMATION ONLY.



TRUEGRID BLOCK REFERENCE VIEW
PREASSEMBLED & DELIVERED IN 4' X 4' SHEET. RECONFIGURED AS NEEDED.NO EXTRA TOOLING OR ACCESSORIES REQUIRED



GRASS FILL HEAVY LOAD TRUEGRID PRO PLUS

APPLICATION:

HEAVY LOAD PARKING LOT, FIRE LANES, EQUIPMENT YARD, SERVICE ROADS.

MANUFACTURED IN NORTH AMERICA

1-855-355-GRID (4743)

REV	REVISION	DRAWN	CHECKED	APPROVED	DATE
01	UPDATED NOTES, AND FLAG NOTES	JT	JT	CW	9/3/2020

CLIENT / PROJECT

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APPROVAL INFORMATION

DRAWN BY: J. Thethy	DATE: 2/28/2020	
CHECKED BY: J. Thethy	DATE: 2/28/2020	
APPROVED BY: C. White	DATE: 2/28/2020	SIZE: D
FILE I.D.: TG-GRS-HL.sldprt		SCALE: 1:1.5

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TRUEGRID GRASS FILL INSTALLATION HEAVY LOAD

DRAWING NUMBER: TGFB-GRS-HL

REV: 01

SHEET: 1 OF 1

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Diamond Communications LLC

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580 MAIN ST
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HAMPDEN COUNTY

PLANS PREPARED BY:

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11720 AMBER PARK DRIVE, SUITE 600
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM

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013541034

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JAR	CDS

SHEET TITLE:

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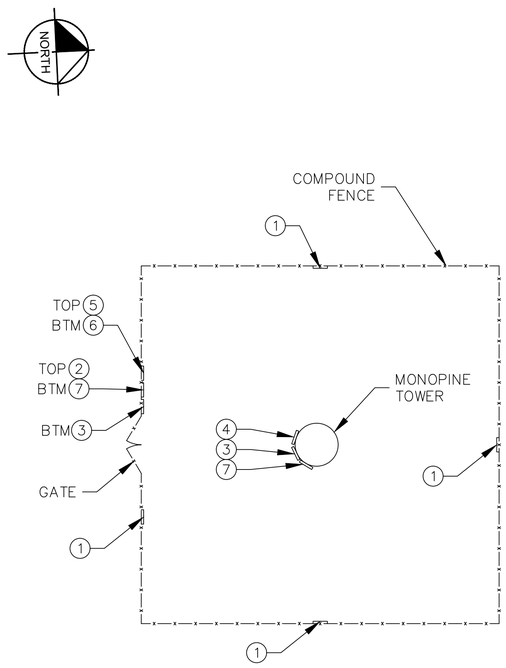


1 / C8 SIGN PLACEMENT PLAN VIEW

NOT TO SCALE



WHITE BACKGROUND w/ RED LETTERING

① NO-TRESPASSING SIGN

18" HIGH X 24" WIDE

(OPERATIONS PROVIDED)



GREEN BACKGROUND w/ WHITE LETTERING

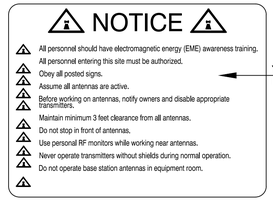
WHITE BACKGROUND w/ BLACK LETTERING

WHITE BACKGROUND w/ BLACK LETTERING

② DIAMOND COMMUNICATIONS - SITE ID SIGN

15" HIGH X 23" WIDE

(OPERATIONS PROVIDED)

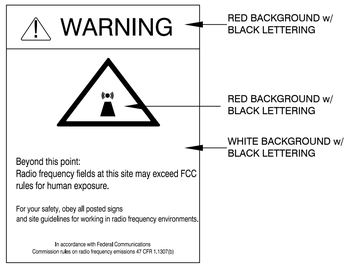


YELLOW BACKGROUND w/ BLACK LETTERING

③ NOTICE-RFE SIGN

12" HIGH X 18" WIDE

(OPERATIONS PROVIDED)



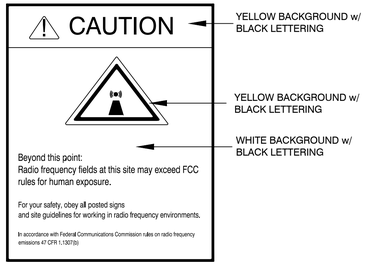
RED BACKGROUND w/ BLACK LETTERING

RED BACKGROUND w/ BLACK LETTERING

WHITE BACKGROUND w/ BLACK LETTERING

④ WARNING-RF SIGN (RED)

12" WIDE X 18" HIGH



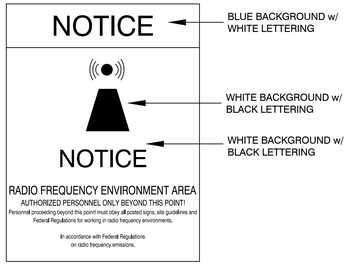
YELLOW BACKGROUND w/ BLACK LETTERING

YELLOW BACKGROUND w/ BLACK LETTERING

WHITE BACKGROUND w/ BLACK LETTERING

⑤ CAUTION-RF SIGN (YELLOW)

12" WIDE X 18" HIGH



BLUE BACKGROUND w/ WHITE LETTERING

WHITE BACKGROUND w/ BLACK LETTERING

WHITE BACKGROUND w/ BLACK LETTERING

⑥ NOTICE-RF SIGN (BLUE)

12" WIDE X 18" HIGH



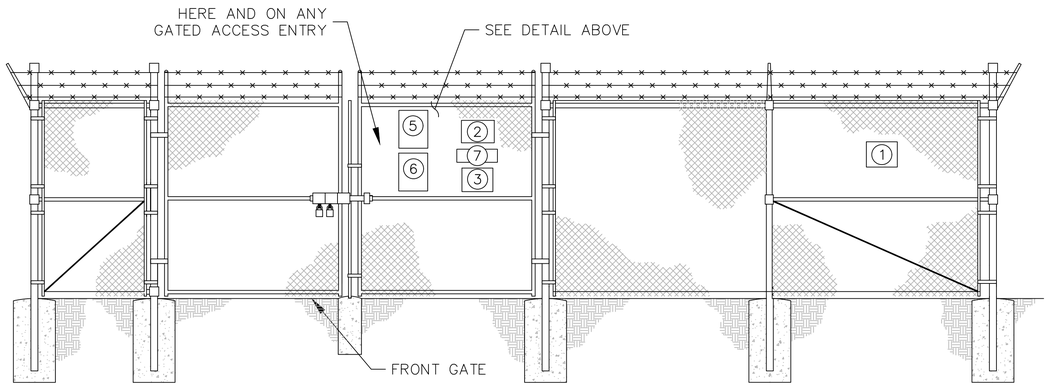
WHITE W/BLACK LETTERING

⑦ FCC REGISTRATION SIGN

20 WIDE X 4" HIGH

2 / C8 TYPICAL SIGNS AND SPECIFICATIONS

NOT TO SCALE



3 / C8 SIGN PLACEMENT FRONT GATE VIEW

NOT TO SCALE

SIGNAGE NOTES:

1. SIGNS SHALL BE FABRICATED FROM CORROSION RESISTANT PRESSED METAL, AND PAINTED WITH LONG LASTING UV RESISTANT COATINGS.
2. SIGNS (EXCEPT WHERE NOTED OTHERWISE) SHALL BE MOUNTED TO THE TOWER, GATE, AND FENCE USING A MINIMUM OF 9 GAUGE ALUMINUM WIRE, HOG RINGS (AS UTILIZED IN FENCE INSTALLATIONS) OR BRACKETS WHERE NECESSARY. BRACKETS SHALL BE OF SIMILAR METAL AS THE STRUCTURE TO AVOID GALVANIC CORROSION.

Diamond Communications LLC

PROJECT INFORMATION:

SITE NAME:
BETHANY ASSEMBLY OF GOD
SITE No.: MA054

580 MAIN ST
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PLANS PREPARED BY:

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11720 AMBER PARK DRIVE, SUITE 600
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PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM

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SITE SIGNAGE DETAILS

SHEET NUMBER:

C8

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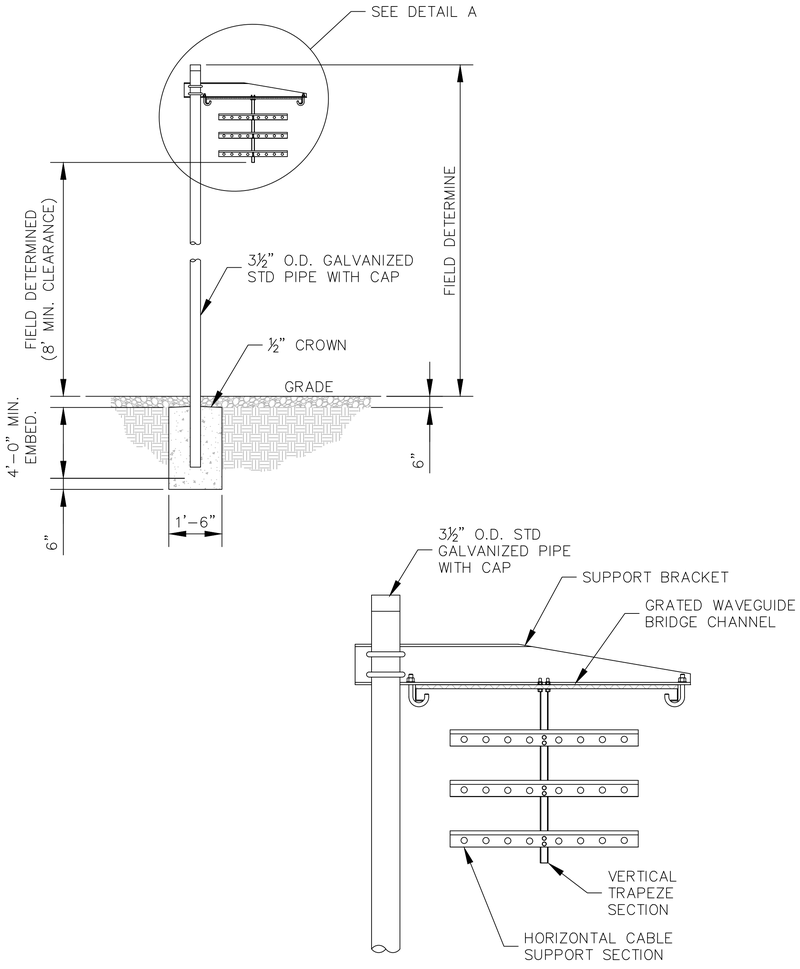
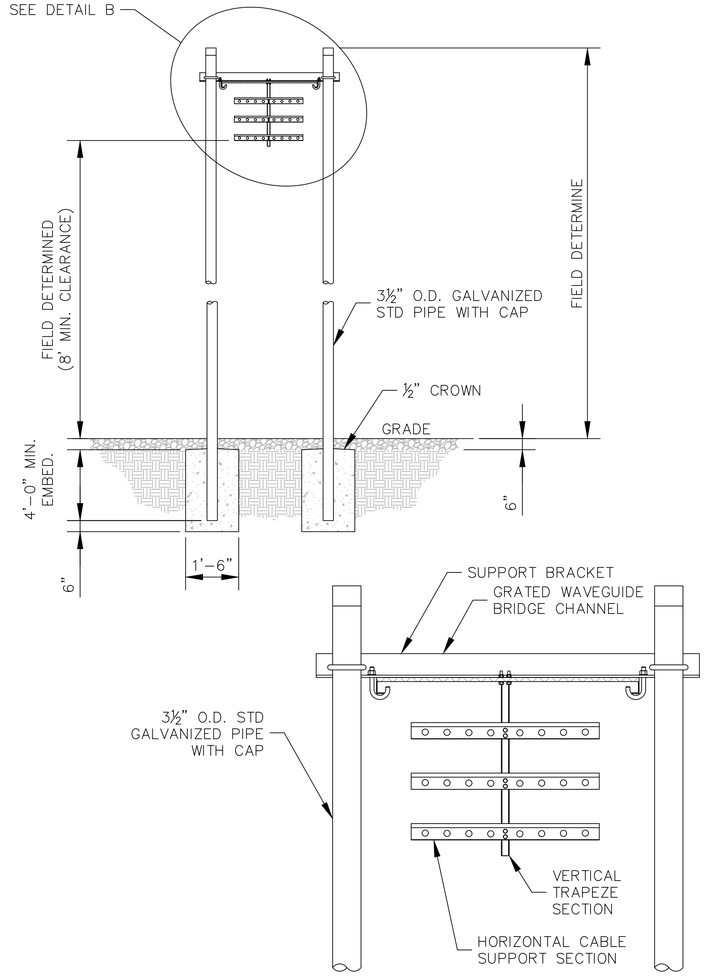


DETAIL A

ANDREW 1 POST WAVEGUIDE BRIDGE KIT (PART #: WB-K210-B15, OR APPROVED EQUIVALENT)

NOTE:

1. ALL MATERIALS FURNISHED BY CONTRACTOR UNLESS OTHERWISE NOTED.



DETAIL B

ANDREW 2 POST WAVEGUIDE BRIDGE KIT (PART #: WB-K410-B15, OR APPROVED EQUIVALENT)

NOTE:

1. ALL MATERIALS FURNISHED BY CONTRACTOR UNLESS OTHERWISE NOTED.

1/C9 WAVEGUIDE BRIDGE DETAIL

NOT TO SCALE

2/C9 WAVEGUIDE BRIDGE DETAIL (ALT DESIGN - 2 PIPE COLUMNS)

NOT TO SCALE

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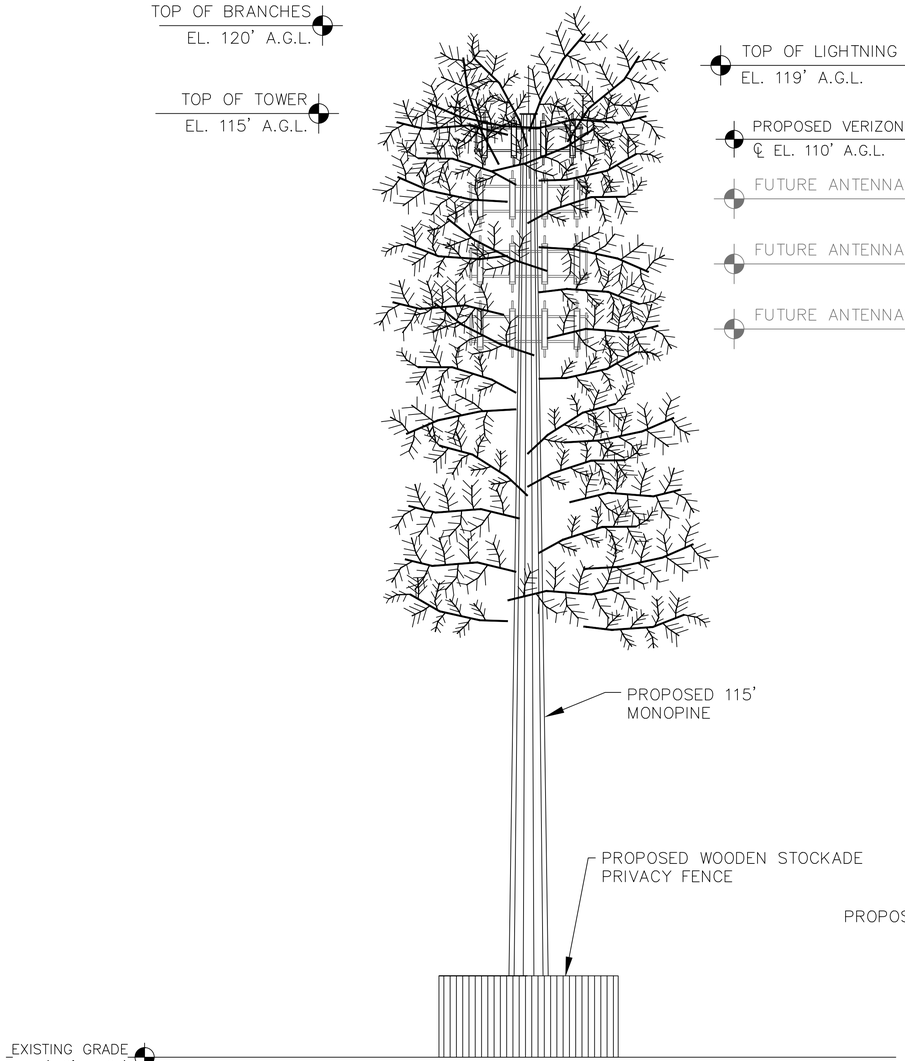
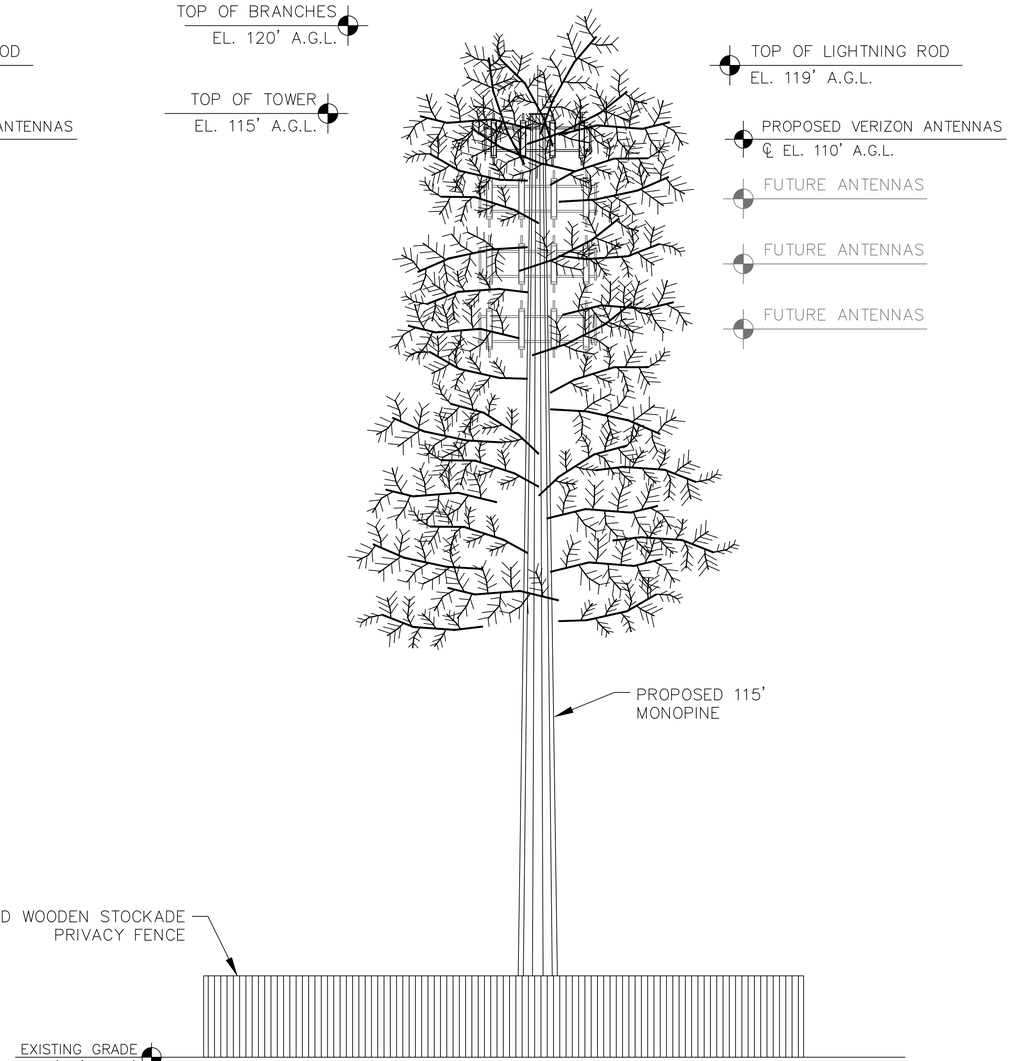


1 C10 MONOPINE TOWER ELEVATION - EAST VIEW (FACING WEST)

NOT TO SCALE



2 C10 MONOPINE TOWER ELEVATION - NORTH VIEW (FACING SOUTH)

NOT TO SCALE

NOTES:

1. ALL INFORMATION ON THIS PAGE IS PROVIDED BY DIAMOND COMMUNICATIONS AND/OR OTHERS AND IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. CONTRACTOR SHALL CONTACT THE DIAMOND COMMUNICATION CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION FOR ALL DETAILED ANTENNA, AND COAX CABLE INFORMATION.
2. REFER TO STRUCTURAL ANALYSIS BY TOWER OWNER FOR ANALYSIS OF PROPOSED TOWER.
3. IT IS UNDERSTOOD THAT KIMLEY-HORN MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED, FINDINGS, DESIGNS, RECOMMENDATIONS, SPECIFICATIONS, OPINION, OR PROFESSIONAL ADVICE RELATING TO THE STRUCTURAL ADEQUACY OF THE PROPOSED TOWER OR ATTACHMENT OF ANTENNAS OR OTHER APPURTENANCES.

NOTES:

1. ALL PROPOSED ATTACHMENTS TO TOWER BASED ON TOWER DESIGN DRAWINGS BY OTHERS (SEE GENERAL NOTE 1.07, SHEET N1).
2. THE TOWER ELEVATION SHOWN IS FOR REFERENCE ONLY.
3. COAX/FIBER CABLE LENGTHS ARE APPROXIMATE. CONTRACTOR TO VERIFY CORRECT LENGTH IN FIELD AT TIME OF CONSTRUCTION.

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KHA PROJECT NUMBER:

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DRAWN BY: JAR CHECKED BY: CDS

SHEET TITLE:

ANTENNA AND TOWER ELEVATION DETAILS

SHEET NUMBER:

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NOTE:
CURRENT DESIGN ANTICIPATES APPROXIMATELY 8,462± SQ. FT. (0.19 ACRES) OF CLEARING AND GRADING FOR THE PROPOSED PROJECT. IF ADDITIONAL CLEARING IS REQUIRED BEYOND WHAT IS SHOWN IN THE PLANS THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND/OR PROJECT MANAGER. IF DURING THE BID WALK OR CONSTRUCTION IT IS DETERMINED THAT MORE THAN (1) ACRE OF LAND IS TO BE DISTURBED FOR CONSTRUCTION AN EROSION AND SEDIMENTATION CONTROL PLAN MUST BE FILED 30 DAYS PRIOR TO CONSTRUCTION.

GRADING NOTES:
1. THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE AND PLACE, COMPACT, AND MOISTURE CONDITION ALL FILL PER THE PROJECT GEOTECHNICAL ENGINEERS SPECIFICATIONS. FILL MATERIAL SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.
2. ALL PROPOSED CONTOURS AND SPOT ELEVATIONS REFLECT FINISHED GRADES.
3. CONTRACTOR SHALL BLEND EARTHWORK SMOOTHLY TO TRANSITION BACK TO EXISTING GRADE.
4. PORTIONS OF THE SITE NOT SPECIFICALLY MENTIONED WITHIN THE GEOTECHNICAL REPORT SHALL BE COMPACTED TO 95 PERCENT OF THE MATERIALS MAXIMUM DRY DENSITY WITHIN 3 PERCENT OF OPTIMUM MOISTURE CONTENT.
5. FILL SHALL BE PLACED IN MAXIMUM 8 INCH LOOSE LIFTS.
6. UNDISTURBED AREAS WITHIN 30' INGRESS/EGRESS EASEMENT NOT NEEDED FOR UTILITY ROUTING TO BE LEFT UNDISTURBED.
7. GROUND WATER SHOULD BE REASONABLY EXPECTED. ANY DE-WATERING OR MOISTURE CONDITIONING IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHOULD BE INCLUDED IN THE CONTRACT PRICE.
8. SEED ALL DISTURBED AREAS NOT TOPPED WITH GRAVEL PER SEEDING SCHEDULE ON DETAIL ON SHEET C9.
9. MAXIMUM CUT SLOPE = 2H:1V UNLESS OTHERWISE NOTED.
10. MAXIMUM FILL SLOPE = 3H:1V UNLESS OTHERWISE NOTED.

LEGEND

EXISTING CONTOURS

PROPOSED CONTOURS

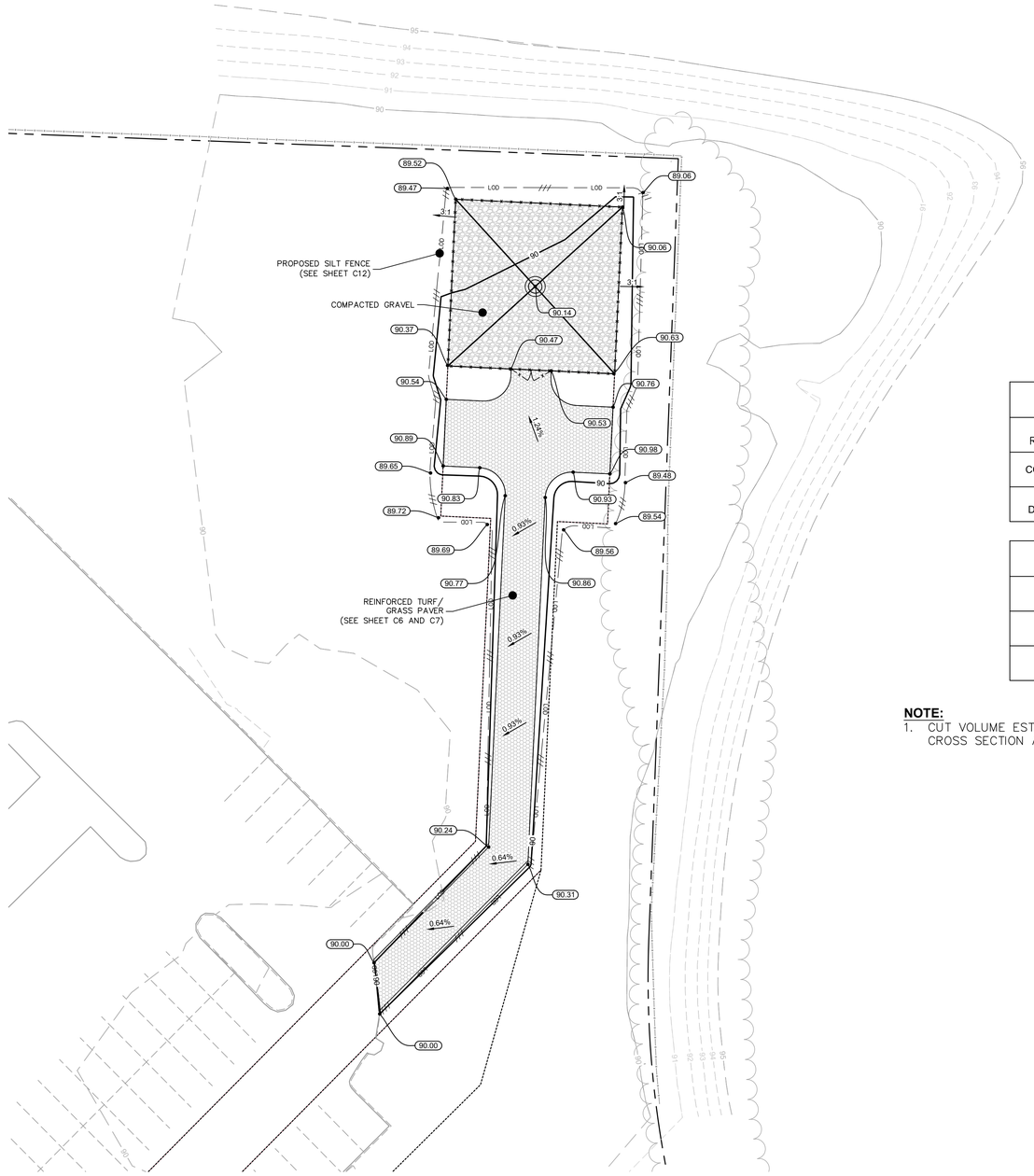
LOD/SILT FENCE — — LOD — /// — LOD — ///

EXISTING SPOT ELEVATION x XXX

PROPOSED SPOT ELEVATION ● XXX

COMPACTED GRAVEL

REINFORCED TURF/ GRASS PAVER



LAND COVER TABLE	
PERVIOUS REINFORCED TURF	3,224 SQ. FT.
COMPACTED GRAVEL	2,500 SQ. FT.
TOTAL LIMIT OF DISTURBANCE (LOD)	8,462 SQ. FT.

CUT / FILL TABLE	
CUT VOLUME:	225 CU. YD.
FILL VOLUME:	259 CU. YD.
NET VOLUME:	34 CU. YD. (FILL)

NOTE:
1. CUT VOLUME ESTIMATED BASED ON EXCAVATION REQUIRED FOR PAVER CROSS SECTION AND FOUNDATION INSTALLATIONS.

NORTH

GRAPHIC SCALE: 1" = 20'

1 / C11 GRADING AND EROSION CONTROL PLAN
SCALE: 1" = 20'

Diamond Communications LLC

PROJECT INFORMATION:

SITE NAME:
BETHANY ASSEMBLY OF GOD
SITE No.: MA054

580 MAIN ST
AGAWAM, MA 01001
HAMPDEN COUNTY

PLANS PREPARED BY:

Kimley»Horn
11720 AMBER PARK DRIVE, SUITE 600
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM

REV: DATE: ISSUED FOR: BY:

8			
7			
6			
5			
4	04/25/25	ZONING	DCC
3	04/18/25	ZONING	DCC
2	10/24/24	ZONING	DMF
1	02/14/24	ZONING	DMF
0	01/19/24	ZONING	DMF

LICENSER:

COMMONWEALTH OF MASSACHUSETTS
DANIEL C. CLASBY
CIVIL
No. 57894
REGISTERED PROFESSIONAL ENGINEER
42525

KHA PROJECT NUMBER:
013541034

DRAWN BY:	CHECKED BY:
JAR	DCC

SHEET TITLE:
GRADING AND EROSION CONTROL PLAN

SHEET NUMBER:
C11

K:\ATL_Wireless\Diamond Communications\Bethany Assembly of God - MA054\CAD\ZD\ECor-GB.dwg ---- 04/25/25 1:35 PM by: William.Bridger

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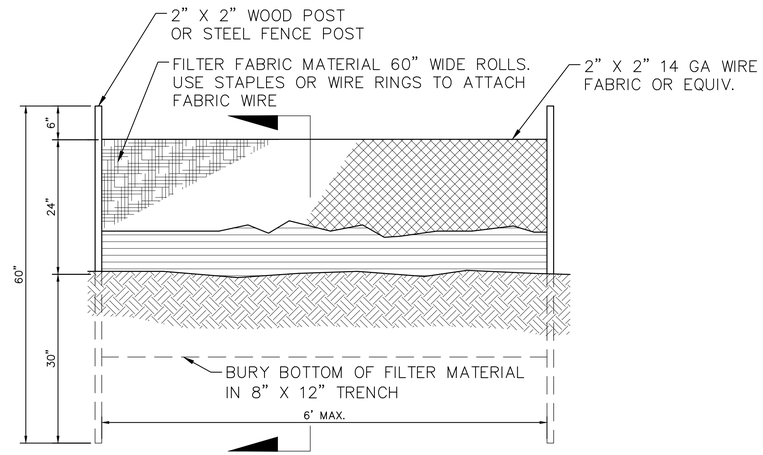
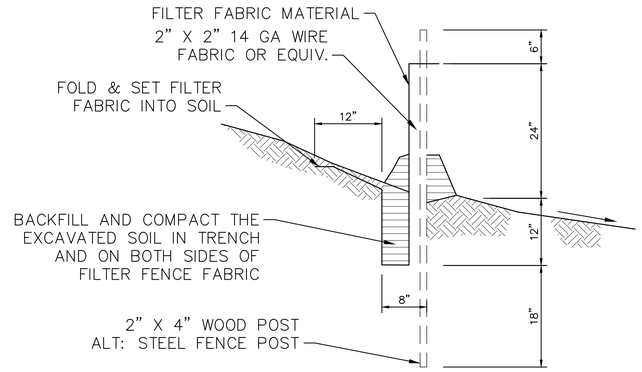


FRONT ELEVATION



SECTION A–A

NOTES:

1. CONSTRUCT SILT FENCE ALONG A LEVEL CONTOUR.
2. WHEN STANDARD STRENGTH FILTER FABRIC IS USED A WIRE MESH SUPPORT FENCE SHALL BE FASTENED TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY– DUTY WIRE STAPLES AR LEAST 1" LONG TIE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 4".
3. STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE AND 40" OF THE FABRIC SHALL EXTEND INTO THE TRENCH. WHEN EXTRA–STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED AND THE FILTER FABRIC STAPLED OR WIRED DIRECTLY TO THE POSTS.
4. FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL THEN CUT TO THE LENGTH OF THE BARRIER. WHEN JOINTS ARE NECESSARY FILTER CLOTH SHALL BE SPICED TOGETHER ONLY TO A SUPPORT POST WITH A MINIMUM 6" OVERLAP AND BOTH AND SECURELY FASTENED TO THE POST.
5. THE TRENCH SHALL BE BACKFILLED WITH IMPACTED NATIVE MATERIAL.
6. IF 85% OR MORE OF A SOIL BY WEIGHT PASSES THROUGH THE OPENINGS IN A NO. 200 SIEVE (U.S. STANDARD) FILTER FABRIC SHALL NOT BE USED.
7. FILTER FABRIC MATERIAL SHALL CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0 DEGREES FAHRENHEIT TO 120 DEGREES FAHRENHEIT.
8. SILT FENCES SHALL REMAIN IN PLACE UNTIL THE SLOPED AREA IS PERMANENTLY STABILIZED.
9. LEAVE AN UNDISTURBED OR STABILIZED AREA IMMEDIATELY DOWNSLOPE FROM THE FENCE.

1 / C12 SILT FENCE DETAILS

NOT TO SCALE

Diamond Communications LLC

PROJECT INFORMATION:

SITE NAME:
BETHANY ASSEMBLY OF GOD
SITE No.: MA054

580 MAIN ST
AGAWAM, MA 01001
HAMPDEN COUNTY

PLANS PREPARED BY:

Kimley»Horn
11720 AMBER PARK DRIVE, SUITE 600
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM

REV: | DATE: | ISSUED FOR: | BY:

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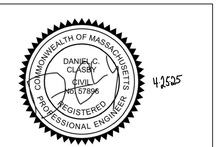
5			
4	04/25/25	ZONING	DCC
3	04/18/25	ZONING	DCC
2	10/24/24	ZONING	DMF
1	02/14/24	ZONING	DMF
0	01/19/24	ZONING	DMF

LICENSER:



KHA PROJECT NUMBER:

013541034

DRAWN BY: JAR | CHECKED BY: DCC

SHEET TITLE:

SILT FENCE DETAILS

SHEET NUMBER:

C12

K:\ATL_Wireless\Diamond Communications\Bethany Assembly of God - MA054\CAD\ZD\ECor-GB.dwg ---- 04/25/25 1:35 PM by: William.Bridger

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Town of Agawam

Building Department

1000 Suffield Street, Agawam, Massachusetts 01001

Telephone - (413) 821-0632

Kevin Duquette

Inspector of Buildings

inspections@agawam.ma.us

September 12, 2025

To: Office of Planning and Community Development:

Re: Special Permit & Variance Review Comments- 580 Main Street Agawam, MA 01001- Bethany Assembly of God- Proposed Cell Tower Project;

The Building Department no specific zoning issues or concerns at this time for the special permit and variance request for the above referenced cell tower project.

Respectfully,

Kevin Duquette

Kevin Duquette
Inspector of Buildings
Town of Agawam

BETHANY ASSEMBLY OF GOD
VARIANCE
APPLICATION INDEX

1. Variance Application
2. Variance Application Fee ($250.00)
3. Deed
4. Letter of Authorization
5. Variance Narrative
6. Legal Memorandum
7. Plans

TOWN OF AGAWAM
36 MAIN STREET
AGAWAM, MA 01001

BOARD OF APPEALS

FOR OFFICE USE ONLY

Case # _____

Filed _____

Hearing _____

Expires _____

Application to Board of Appeals for *VARIANCE* from the requirements of the Zoning By-laws.

Applicant Diamond Communications LLC & Cellco Partnership d/b/a Verizon Wireless as Co-Applicants

Address 1441 Main Street, Suite 1100, Springfield, MA 01103

Application is hereby made for a *VARIANCE* from the requirements of Section 180-97, **Paragraph** K **of Zoning Ordinance.**

Premises affected: 580 Main Street, Agawam, MA 01001
Address

Property zoned as: Agricultural District (AG)

1. Description of existing building:

a. **Size of building:** N/A **Height:** N/A **# of stories** N/A
b. **Occupancy or Use: (of each floor)** CHURCH ETC - MDL-94
c. **Date of Erection:** N/A
d. **Has there been a previous appeal, under zoning on these premises** unknown **?**

2. Description of proposed work or use:

To erect a Personal Wireless Service Facility consisting of a 115' tall monopine tower and an equipment compound to be located within the 50' x 50' leased area.

3. The principal reasons upon which I base my application are as follows:

Please see attached narrative.

Signature of owner or his authorized agent: _____
Michael A. Fenton, Esq., as Authorized Agent

Telephone #: (413) 737-1131

NOTICE: THIS APPLICATION MUST BE FILLED OUT IN INK OR TYPEWRITTEN

BOOK 4332 PAGE 48

26611

KNOW ALL MEN BY THESE PRESENTS

THAT WE, ALBERT J. CHRISTOPHER and GIOVANNA M. CHRISTOPHER, also known as Jennie M. Christopher, husband and wife, both of 170 Meadow Road, Agawam, Hampden County, Massachusetts

being xxxxxxxxx, for ONE HUNDRED FIFTY THOUSAND ($150,000)DOLLARS consideration paid grant to BETHANY ASSEMBLY OF GOD, a religious corporation established under the laws of the Commonwealth of Massachusetts and having a usual place of business at 336 Springfield Street, Springfield, Massachusetts

with quitclaim covenants

the land in the town of Agawam, Hampden County, Massachusetts, more particularly bounded and (Description and encumbrances, if any) described as follows:

BEGINNING at a point at the southwesterly cornerof land now or formerly of Thomas and Anna Russo in the Town of Agawam, Hampden County, Massachusetts

Thence S. 85° 33' 05" W.	a distance of 1730.60 feet along a land court plan no. 24964A to a point;
Thence S. 15° 04' 22" E.	a distance of 586.19 feet along said land court plan to a bound;
Thence N. 80° 43' 32" W.	a distance of 63.75 feet along the land now or formerly of B. & M. Tucci;
Thence N. 88° 28' 51" W.	a distance of 288.42 feet along land now or formerly of said Tucci to an iron pin;
Thence S. 82° 20' 08" W.	a distance of 204.25 feet to a point;
Thence S. 87° 08' 04" W.	a distance of 78.67 feet to an iron pin at land now or formerly of one Calabrese;
Thence N. 34° 42' 40" W.	a distance of 542.17 feet along the land of Calabrese to a point;
Thence N. 21° 10' 11" E.	a distance of 327.67 feet along the land now or formerly of one Deloghia to a point;
Thence N. 11° 27' 02" E.	a distance of 481.44 feet along the land now or formerly of Deloghia to a point on the southerly side of Route 57;
Thence N. 72° 55' 33" E.	a distance of 73.00 feet to a bound;
Thence Northeasterly	on a curve to the right having a radius of 4900.75 feet an arc length of 1646.79 feet to a point;
Thence S. 87° 49' 30" E.	a distance of 394.14 feet to a bound, the last three courses being along the southerly side of Route 57;
Thence S. 2 ° 10' 30" W.	a distance of 234.37 feet to a point;
Thence	along a curve to the left having a radius of 300.00 feet, an arc length of 385.71 feet to an iron pin, the last two courses being along the ramp to Route 57;

(OVER)

HAMPDEN DEEDS COMMONWEALTH OF MASSACHUSETTS EXCISE 342.00

Thence S. 4° 26' 55" E. a distance of 198.92 feet along the land now or formerly of Russo to the point of beginning.

Being the premises shown as land of ALBERT J. and JENNIE M. CHRISTOPHER, said to contain 49.2 acres of land, as shown on a Plan of Land prepared for BETHANY ASSEMBLY OF GOD, dated September 3, 1976, by Pharmer Engineering Corporation, Holyoke, Massachusetts, and recorded in Hampden County Registry of Deeds Plan Inbook 166, Pages 76 and 77.

BEING the premises conveyed to the Grantors herein by deed of Philip Nassif, et ux, dated May 2, 1955, and recorded in said Hampden County Registry of Deeds in Book 2385, Page 54.

[redacted]

[redacted]

[redacted]

Witness OUR hand and seal this 4th day of October 1976

Albert J. Christopher
ALBERT J. CHRISTOPHER

Giovanna M. Christopher
GIOVANNA M. CHRISTOPHER

The Commonwealth of Massachusetts

Hampden, ss. October 4th 1976.

Then personally appeared the above-named ALBERT J. CHRISTOPHER and GIOVANNA M. CHRISTOPHER

and acknowledged the foregoing instrument to be their free act and deed, before me

Donald Conway
Notary Public

My Commission expires November 30, 1977

RECEIVED
OCT 5 1976
AT 9:20 am AND
REC'D FROM THE ORIGINAL

BOOK 4327 PAGE 132 25535

KNOW ALL MEN BY THESE PRESENTS, that we, THOMAS J. RUSSO, JR. and ANNA M. RUSSO,

of Agawam,

Hampden County, Massachusetts,

being ~~unmarried~~, for the full consideration of ---ONE HUNDRED THOUSAND DOLLARS---($100,000)-------

paid

grant to BETHANY ASSEMBLY OF GOD, a religious corporation established under the laws of the Commonwealth of Massachusetts and having an usual place of business at 336 Springfield Street, Springfield, Massachusetts

~~&~~

with ~~[illegible]~~ QUITCLAIM ~~covenants~~ the land in Agawam, Hampden County, Massachusetts bounded and described as follows:

Beginning at a Granite Bound on the Westerly side of Main Street in the Town of Agawam, Hampden County, Massachusetts said Granite Bound being the intersection of the ramp of Route 57, and the Westerly sideline of Main Street as shown in Plan Book 64, Pages 73 and 74, Hampden County Registry of Deeds.

Thence S. 1° 30' 40" W. a distance of 178.84 feet along the Westerly side of Main Street to an iron pin; thence S. 3° 59' 20" W. a distance of 3.89 feet along the Westerly side of Main Street to the Land of B. Schabowski; thence S. 85° 33' 05" W. a distance of 419.00 feet along the land of Schabowski and Hamar to a point; thence N. 4° 26' 55" W. a distance of 198.92 feet along the land of Albert and Jennie Christopher to the sideline of the ramp to Route 57; thence Southeasterly along a curve to the left having a radius of 300.00 feet, an arc length of 126.40 feet to a Granite Bound; thence N. 84° 22' 10" E. a distance of 315.00 feet to a Granite Bound on the Westerly side of Main Street at the point of beginning.

Subject to restrictions, takings and assessments if any are in force and applicable.

BEING the premises shown as land of THOMAS J. RUSSO, JR. and ANNA M. RUSSO said to contain 1.77 acres of land, as shown on a plan of land prepared for BETHANY ASSEMBLY OF GOD, dated September 3, 1976 by Pharmer Engineering Corporation Holyoke, Massachusetts and recorded in Hampden County Registry of Deeds in Book of Plans 166, Pages 76 and 77.

BEING the same premises conveyed to the Grantor herein by deed of RUTH A. NASSIF dated February 26, 1975 and recorded in Hampden County Registry of Deeds, Book 4103 Page 238.

T. J. R. JR.

HAMPDEN 053816

COMMONWEALTH OF MASSACHUSETTS
DEEDS EXCISE
SEP 23 '76 228.00
P.B. 11035
9-23-76

Executed as a sealed instrument this 23rd day of September, 1976.

Clayton M. Fuller — Thomas J. Russo Jr.
THOMAS J. RUSSO, JR.

fry fath — Anna M. Russo
ANNA M. RUSSO

The Commonwealth of Massachusetts

Hampden, ss. September 23, 1976.

Then personally appeared the above named THOMAS J. RUSSO, JR. and ANNA M. RUSSO

and acknowledged the foregoing instrument to be their free act and deed,

Before me, Clayton M. Fuller
CLAYTON M. FULLER, Notary Public

My commission expires May 7, 1982.

RECEIVED
SEP 23 1976
AT 3:27 PM AND
REC'D FROM THE ORIGINAL

GRANTEE(S) ADDRESS:

REQUIREMENTS FOR VARIANCE

Diamond Communications LLC (“Diamond”) and Cellco Partnership d/b/a Verizon Wireless ("Verizon Wireless” and together with Diamond, the “Applicants”) are seeking a variance pursuant to M.G.L. c. 40A, § 10 for relief from Article XIV, Section 180-97K of the Agawam Zoning Ordinance (the "Ordinance") to permit Verizon Wireless to erect a 115 foot personal wireless telecommunications tower within the required setback area.

The Ordinance requires that towers be setback the greater of 260 feet or 1½ times the height of the tower from all buildings on the subject property and from every street property boundary. The tower will comply with the setback requirement from all buildings on the subject property; however, as explained below, the northern and eastern property lines of the subject property are within the 260-foot setback area.

As described below, Verizon Wireless satisfies the requirements for a variance under M.G.L. c. 40A, § 10. Additionally, as described in an accompanying memorandum, the Applicants’ request for a variance also satisfies the criteria established by the courts for the granting of variances to telecommunication companies needing such relief in order to provide adequate telecommunication services to a community. As explained in the memorandum, courts have granted variances to telecommunication companies when not all of the requirements under M.G.L. c. 40A can be met giving due consideration to the Federal Telecommunications Act of 1996 based upon the uniqueness of the requirements for erecting a tower and the directive imposed by the Federal Government under the Federal Telecommunications Act that municipalities not use zoning to preclude telecommunication companies from providing the required service to a community.

The following outlines the need for the variance and explains how the Applicants satisfy the requirements for the requested variance pursuant to M.G.L. c. 40A, § 10:

1. *Owing to circumstances relating to the soil conditions, shape or topography especially affecting such land or structure, but not affecting generally the Zoning district in which it is located.*

The topography of the subject site and the terrain dictate that the tower be located at a location short of the required setback from the northern and eastern property lines of the Property. Particularly, the parcel is developed for use as a community church and contains recreational sports fields for the community’s use and contains wetlands covering a large amount of the western portion of the Property, which means that the majority of the Property's topography is unique and necessarily inappropriate for siting a telecommunications tower. The remaining portion of the parcel, which is not developed, and which contains the wetlands, is heavily wooded and would require the Applicants to not only clear a significant portion of the existing mature trees in order to construct its tower, but also intrude within the existing wetland area. To that end, the proposed location, though not affording the full 260 foot setback from the northern and eastern property lines of the Property, is nevertheless desirable as it enables Diamond to install the tower with minimal disruption to the existing wetlands and vegetation on the Property while enabling

Verizon Wireless to fill the gap in existing wireless service coverage for the benefit of the Town and its residents.

2. *A literal enforcement of the provisions of the Ordinance would involve substantial hardship, financial or otherwise, to the petitioner or appellant.*

The proposed site, in addition to being one of the few feasible sites for the installation of the tower on the Property for the reasons described above, is at a location and elevation that enables it to "hand-off" its signal to other proximately located towers to provide "seamless" coverage to the residents of Agawam. Specifically, the prescribed location and elevation will allow for this "hand-off" to existing towers in Agawam with the least disturbance to the existing wetland areas. The inability to locate the tower at the proposed site would result in hardship to Verizon Wireless since it would otherwise be unable to provide adequate wireless service coverage to the Town which is expected by Verizon Wireless's customers and is required by the FCC under Verizon Wireless's FCC license. Another location could result in greater visual impact on the Town's residents and greater disturbance to the topography and its existing wetland areas as well as compromise the quality of Verizon Wireless's wireless service coverage in the Town. Based upon a thorough search of the area, Verizon Wireless has concluded that there are no suitable alternative sites in which Verizon Wireless can locate its antennas. Accordingly, if the Applicants were to be unable to locate at the proposed site they would be prohibited from providing the service that Verizon Wireless is required to provide to the Town of Agawam and its residents.

3. *That desired relief may be granted without substantial detriment to the public good and without nullifying or substantially derogating from the intent or purpose of the Ordinance.*

Contrary to creating a detriment to the public good, the proposed tower will create a benefit as it will allow Verizon Wireless to provide optimum wireless service coverage in Agawam in an area which currently has inadequate service and will help to greatly enhance the critical communication capabilities of the residents of the Town. The proposed site will allow Verizon Wireless to provide adequate service in Agawam with minimum adverse impacts to the neighborhood and to the Town as visibility will be limited due to the combination of the facility's relatively low height and "monopine" design. Also, the ability of Verizon Wireless to provide the necessary service to the Town will be beneficial, not detrimental, as it will permit more reliable service in matters of public safety and will allow Verizon Wireless to provide the services as mandated under the Federal Telecommunications Act.

Furthermore, according to the Ordinance, the overall purpose of the Personal Wireless Service Facilities and Towers provisions are to preserve the character and appearance of the community while simultaneously allowing adequate personal wireless services to be developed; Protect the scenic, historic, environmental and natural or man-made resources of the community; Provide standards and requirements for the regulation, placement, construction, monitoring, design, modification and removal of personal wireless service facilities and towers; Provide a procedural basis for action within a reasonable period of time for requests for authorization to place, construct, operate or modify personal wireless service facilities and towers; Preserve property values; Locate towers so that they do not have negative impacts, such as, but not limited to, visual blight, attractive nuisance, noise and falling objects, on the general safety,

welfare and quality of life of the community;
Require owners of personal wireless service facilities and towers to configure them so as to minimize and mitigate the adverse visual impact of the facilities and towers; and to require the clustering and camouflaging of personal wireless service facilities and towers. The proposed site achieves these goals and is therefore consistent and in harmony with the Ordinance. The proposed site is located within the overlay district and was chosen and designed as a "monopine" tower specifically because it will minimize visual impact to the residents of the Town while allowing Verizon Wireless to provide the increased wireless coverage which the residents of the Town are seeking. In conclusion, the fact that a portion of the tower is located in the setback, does not derogate from the Ordinance since it will not compromise the health, safety or welfare of the residents of Agawam; conversely, the tower will be a benefit to the Town making wireless service more available, convenient and reliable.

23\0520\Variance\05 - Narrative.5702

October 23, 2025

VIA ELECTRONIC MAIL: *lawtonmk@gmail.com*
Isotrope, LLC
PO Box 52437
Boston, MA 02205
Attn: Michael Lawton

RE: Response to Questions Regarding EME Reports.

Dear Michael:

This letter is in response to the questions presented by Isotrope relating to the proposed wireless communications facility installation at 580 Main Street, Agawam, MA, submitted by Cellco Partnership d/b/a Verizon Wireless ("Verizon") and Diamond Communications, LLC ("Diamond" and together with Verizon, the "Co-Applicants").

Both radio frequency emissions reports show that Verizon's proposed installation is compliant with and materially below the Federal Communications Commission's emissions requirements. We have spoken with our client and the relevant consultants, and have determined that the SiteSafe RF Emissions Compliance Report dated May 13, 2025, (the "SiteSafe Report") should be relied on for this submission. InfraServices Group Wireless, LLC has been hired as the consultants to provide testimony with respect to the radio frequency emissions aspects of this proposal, and they are the consultants responsible for the SiteSafe Report. InfraServices Group Wireless, LLC is available to answer any questions you may have about the SiteSafe Report.

If you have any further questions, please feel free to contact us.

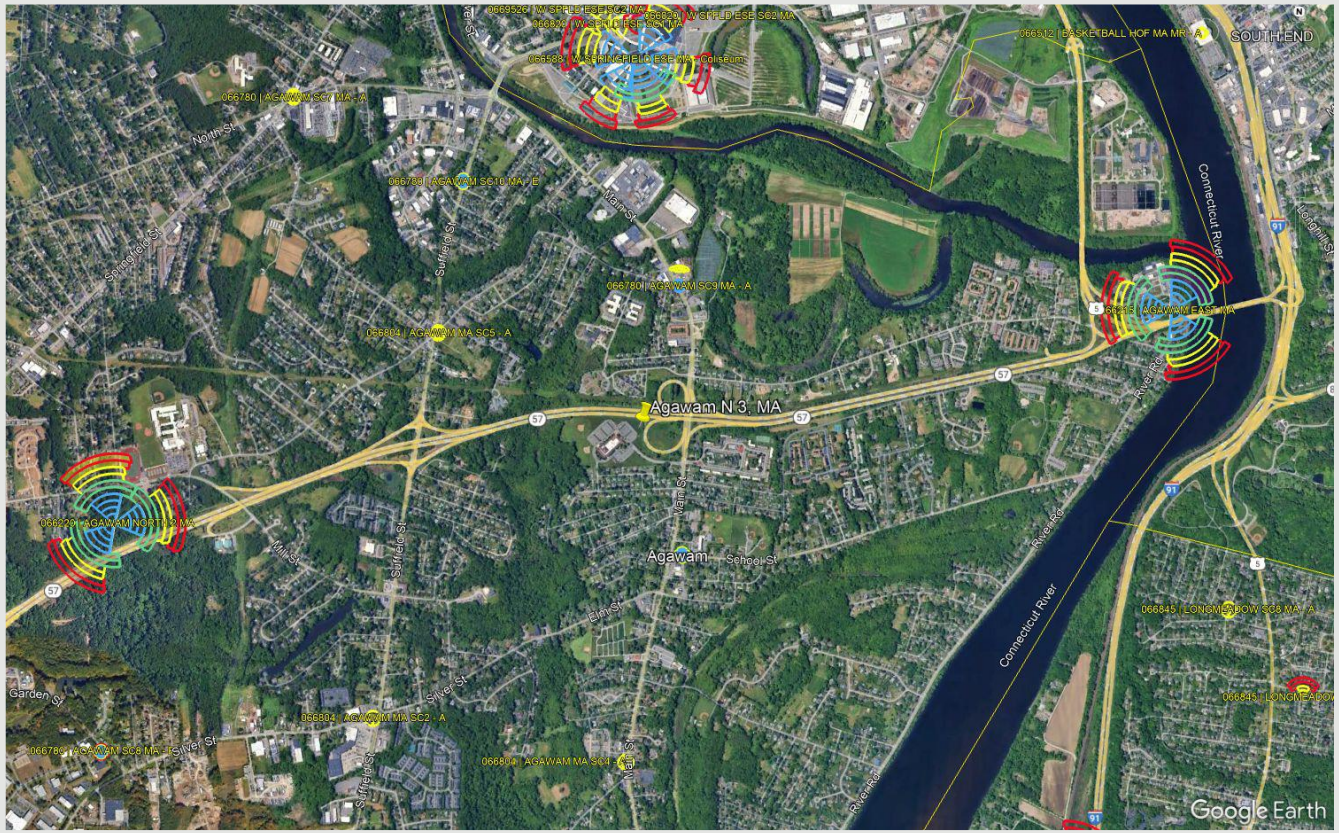
Sincerely,

Michael A. Fenton

23\0520\Special Permit\Updated Materials_10-21-25\5Ltr_Re - EME Reports.5701

Verizon Wireless Communications Facility

Engineering Necessity Case – Agawam N 3, MA



Prepared by:
Juan (Jay) F. Latorre III

October 23rd, 2025

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Project Need Overview:

This Height Justification Report is prepared as a supplemental submission to Verizon's proposed Agawam N 3, MA site application. This document has been prepared in a response to Isotrope Wireless, consultant for the Town of Agawam in its' proceedings. The purpose of this document is to visually show the need for Verizon's proposal to build a wireless communications facility with antennas at a centerline of 110', and an overall approximate structure height of 120'.

This Height Justification Report is utilizing RF coverage predictions assuming Verizon's 700 MHz and 2100 MHz coverage layers. 700 MHz is generally assumed to be Verizons' spectrum holding capable of covering the largest geographic area reliably. 700 MHz will provide coverage similar to 850 MHz. 2100 MHz is a good representation of Verizons' mid-band spectrum holding, and will have a coverage footprint similar to 1900 MHz and 3.7 GHz. It can be assumed that as the spectrum increases in MHz, the reduction in coverage, as a result of a reduction in structure height, will have a greater impact on the reliable coverage footprint of that spectrum.

For this analysis, in addition to showing the proposed coverage from the Agawam N 3, MA site at 110', coverage plots are provided at 100', 90', and 80', to show what alternative coverage might look like if the structure was lowered in height. It should be assumed, that for every 10' that the structure is lowered in height, that both Verizon and potential co-locating service providers would lose some level of reliable coverage footprint.

The site(s) proposed in this application are necessary to achieve the technical objectives stated above. Note that there are several ways by which an applicant can establish site need. See Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment," FCC 18-133, 83 FR 51867, at ¶ 6 (October 15, 2018) (confirming that the test for establishing an effective prohibition is whether "a state or local legal requirement *materially inhibits* a provider's ability to engage in any of a *variety of activities related to its provision of a covered service*," and this test is met "not only when filling a coverage gap but *also when densifying a wireless network, introducing new services or otherwise improving service capabilities*").

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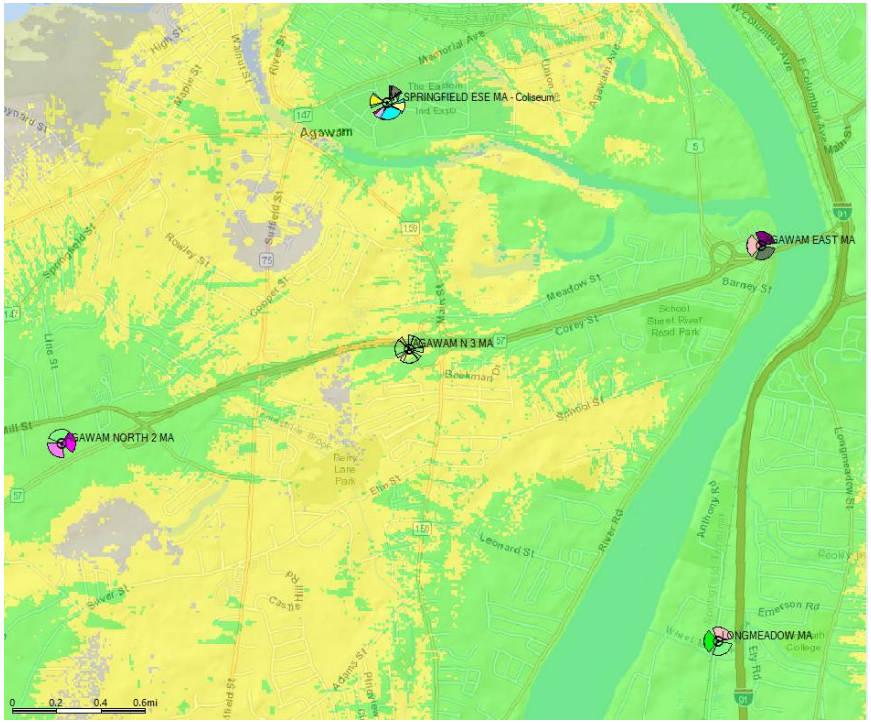
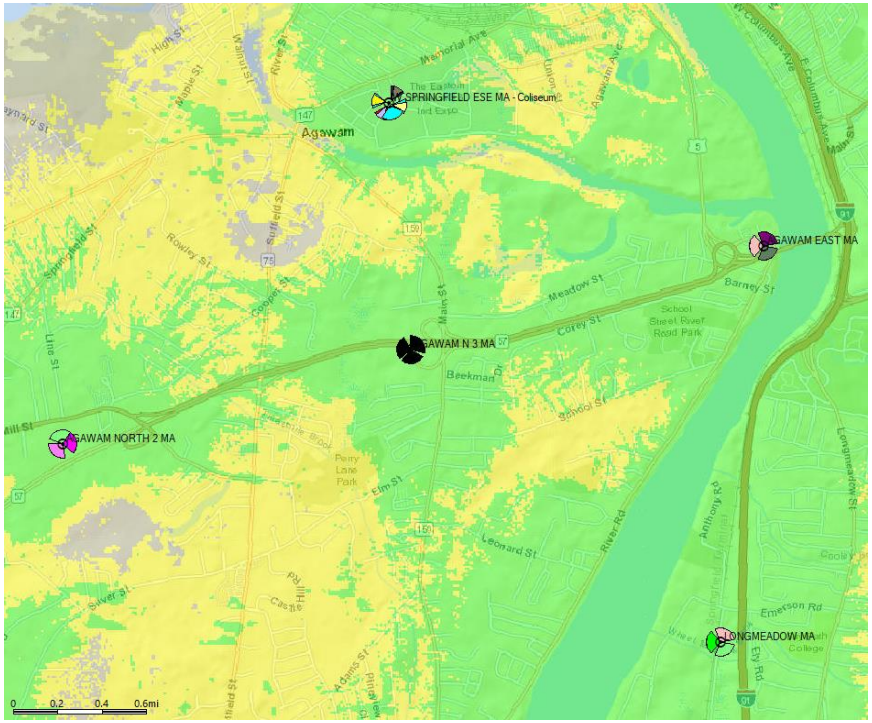
-105 = (Gray) On-Street Coverage
-95 = (Yellow) In-Vehicle Coverage
-85 – (Green) In-Building Coverage

Agawam N 3, MA Existing 700 MHz 4G Coverage



Agawam N 3, MA Proposed 700 MHz 4G Coverage @ 110'



The above map shows the coverage of the current network, and if the proposed cell is activated. Reliable in-building coverage is shown in green.

verizon

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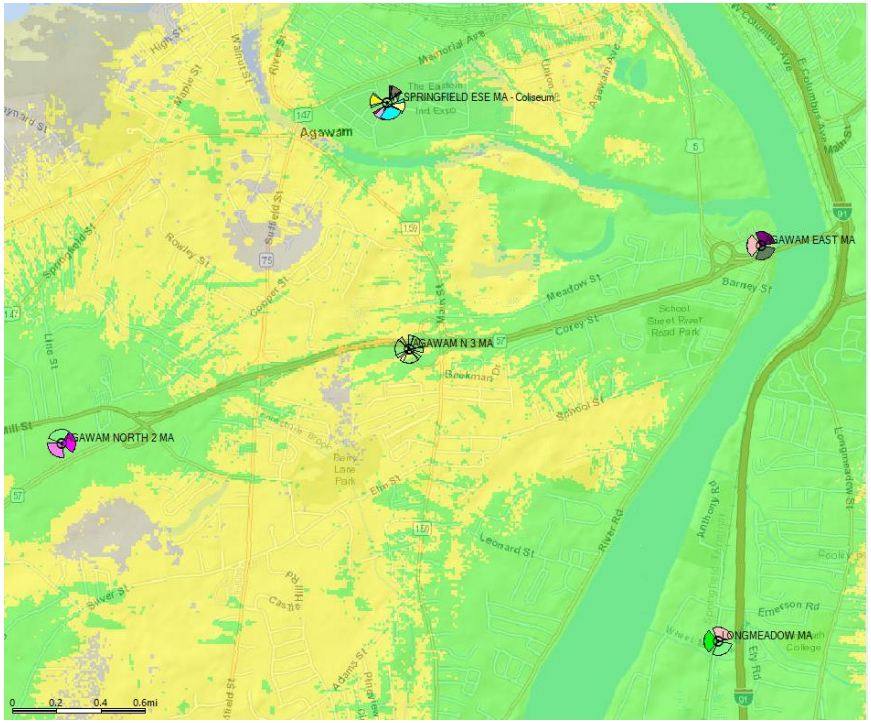
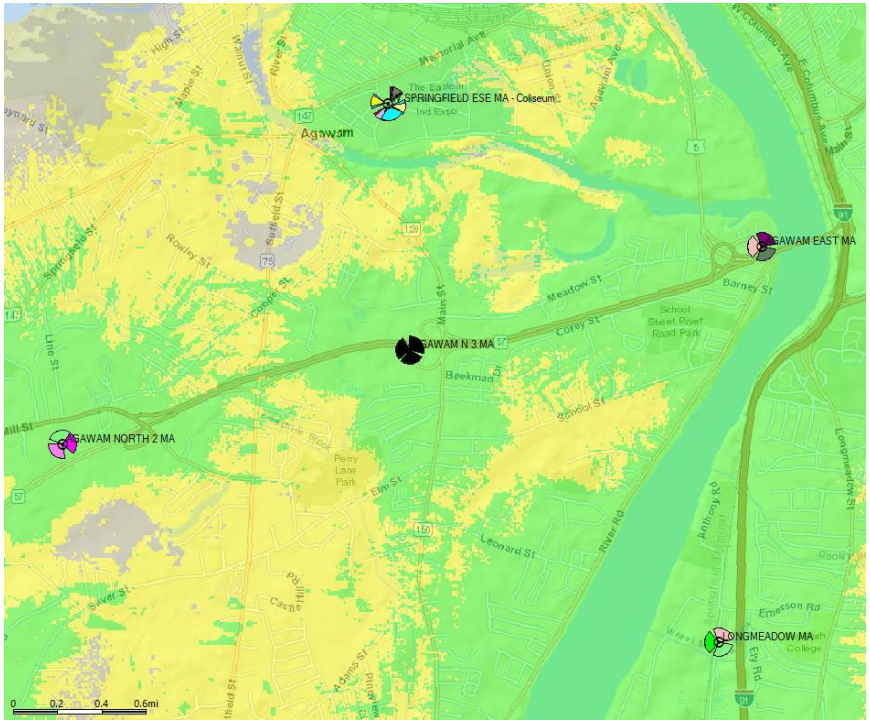
-105 = (Gray) On-Street Coverage
-95 = (Yellow) In-Vehicle Coverage
-85 – (Green) In-Building Coverage

Agawam N 3, MA Existing 700 MHz 4G Coverage



Agawam N 3, MA Proposed 700 MHz 4G Coverage @ 100'



The above map shows the coverage of the current network, and if the proposed cell is activated. Reliable in-building coverage is shown in green. At 100', there is noticeable, but minimal, reduction in in-building coverage.

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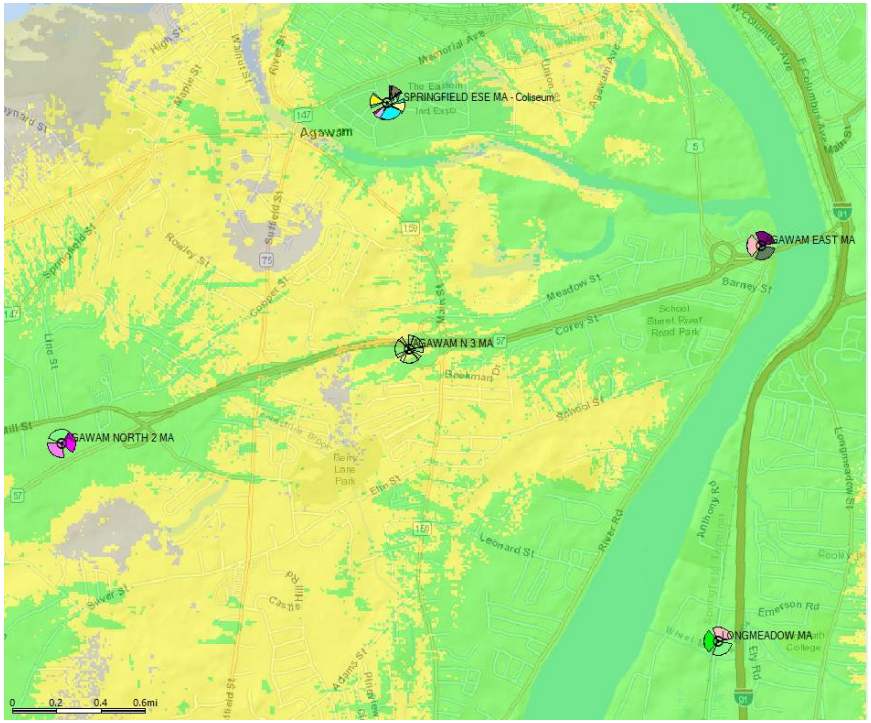
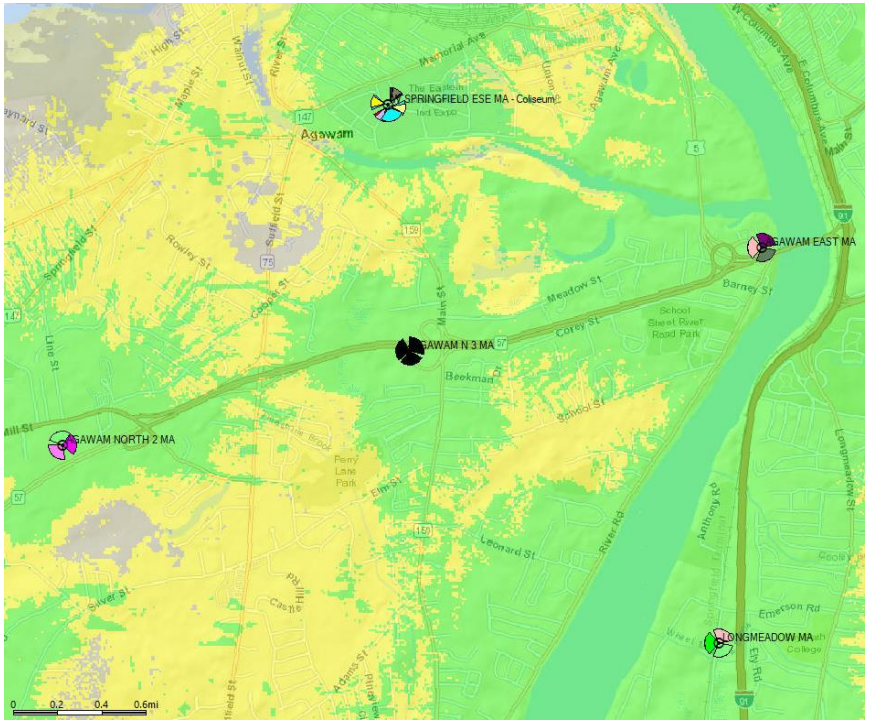
Confidential and proprietary materials for authorized Verizon personnel and outside agencies only. Use, disclosure or distribution of this material is not permitted to any unauthorized persons or third parties except by written agreement.

-105 = (Gray) On-Street Coverage
-95 = (Yellow) In-Vehicle Coverage
-85 – (Green) In-Building Coverage

Agawam N 3, MA Existing 700 MHz 4G Coverage



Agawam N 3, MA Proposed 700 MHz 4G Coverage @ 90'



The above map shows the coverage of the current network, and if the proposed cell is activated. Reliable in-building coverage is shown in green. At 90', there is a more noticeable, reduction in in-building coverage.

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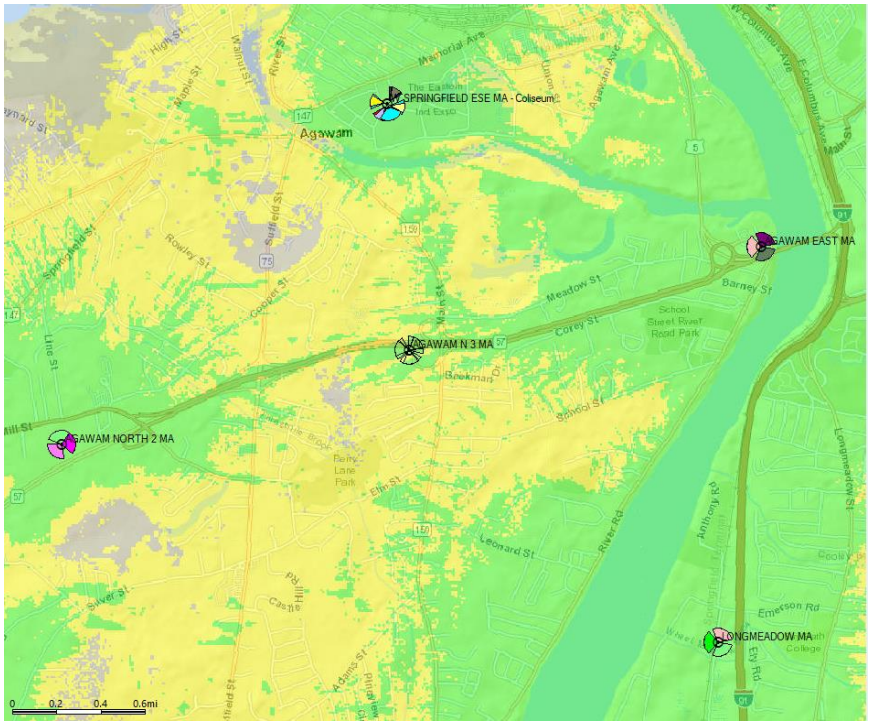
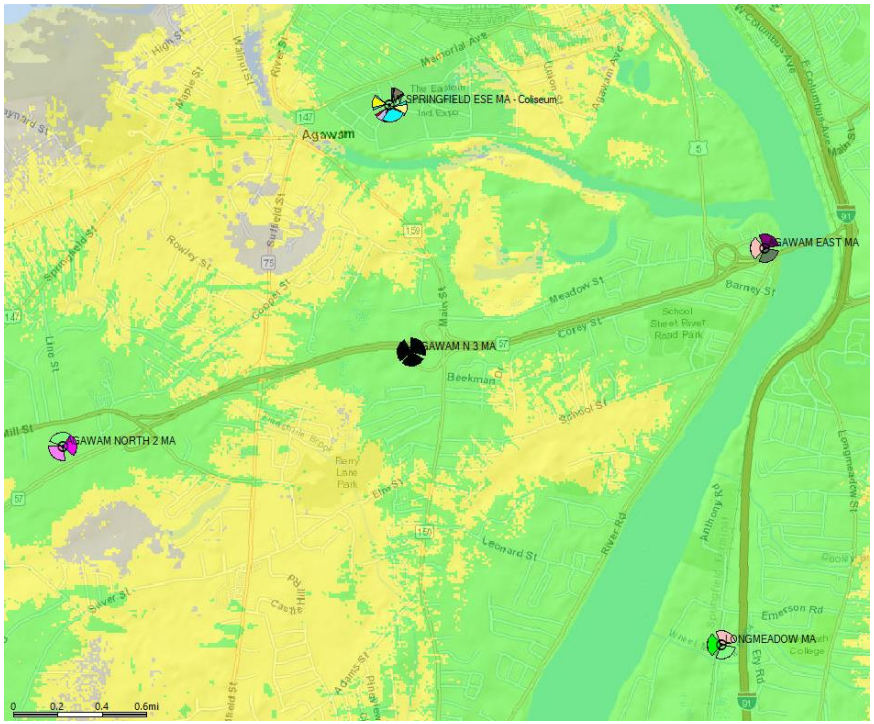
Agawam N 3, MA Existing 700 MHz 4G Coverage



Agawam N 3, MA Proposed 700 MHz 4G Coverage @ 80'



The above map shows the coverage of the current network, and if the proposed cell is activated. Reliable in-building coverage is shown in green. At 80', there is a significant reduction in in-building coverage, as well as along Route 57, west of the proposed Agawam N 3, MA site.

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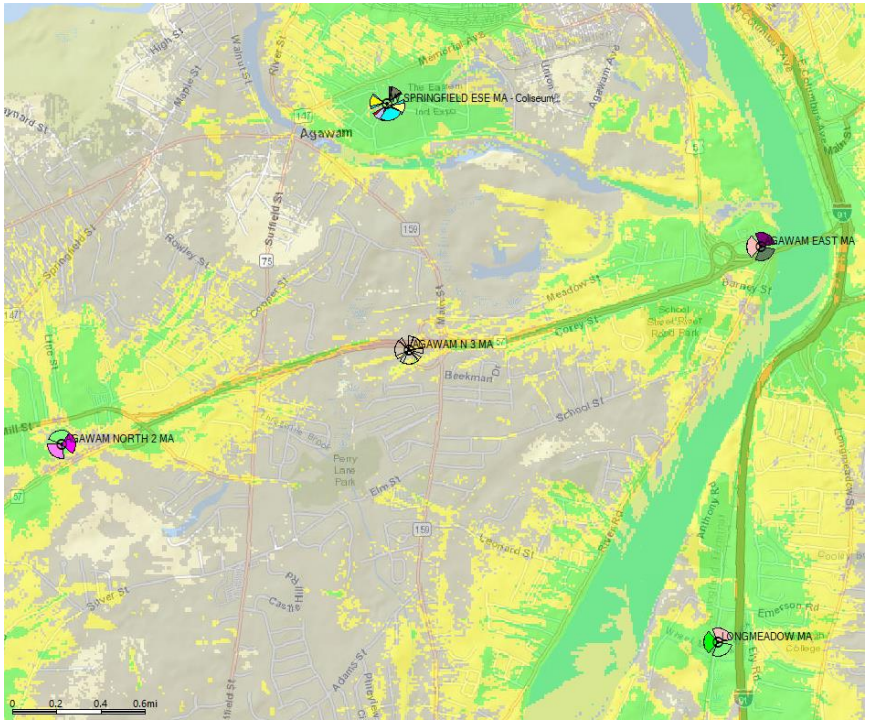
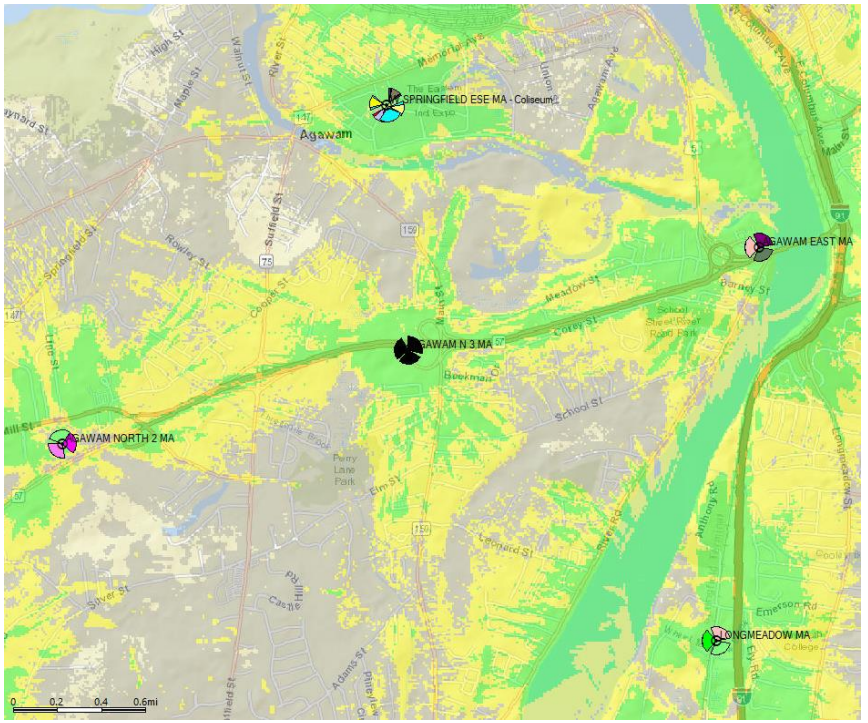
-85 – (Green) In-Building Coverage

Agawam N 3, MA Existing 2100 MHz 4G Coverage



Agawam N 3, MA Proposed 2100 MHz 4G Coverage @ 110'



The above map shows the coverage of the current network, and if the proposed cell is activated. Reliable in-building coverage is shown in green.

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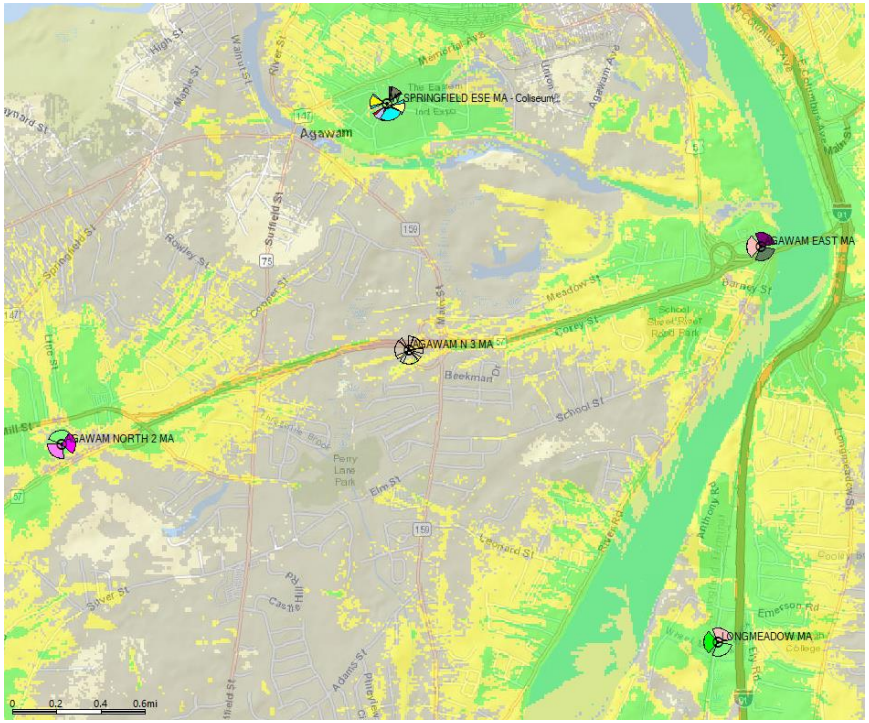
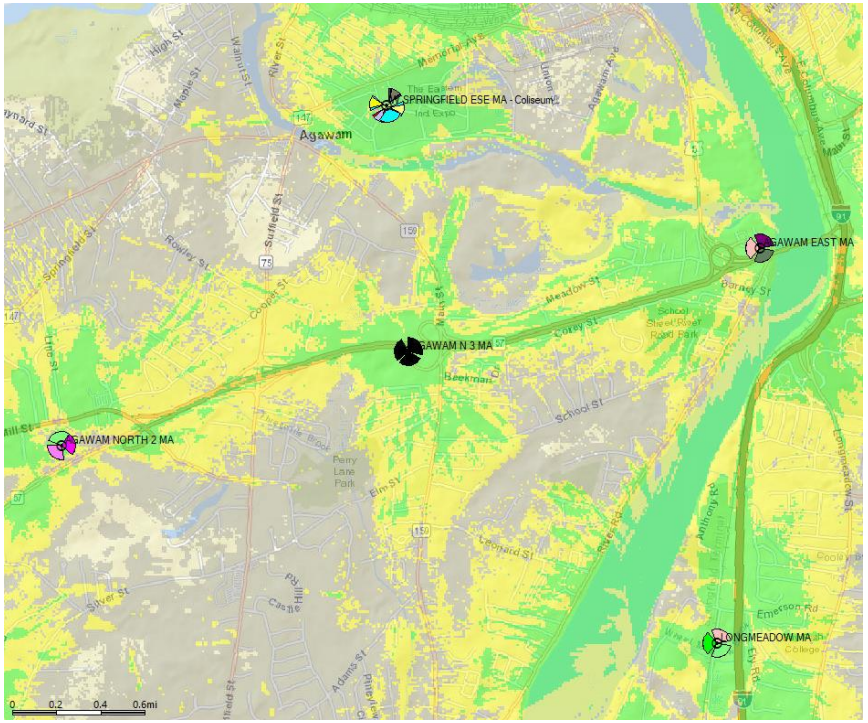
Agawam N 3, MA Existing 2100 MHz 4G Coverage



Agawam N 3, MA Proposed 2100 MHz 4G Coverage @ 100'



The above map shows the coverage of the current network, and if the proposed cell is activated. Reliable in-building coverage is shown in green. At 100', there is a sight shift in in-building coverage, and a slight reduction in in-vehicle coverage.

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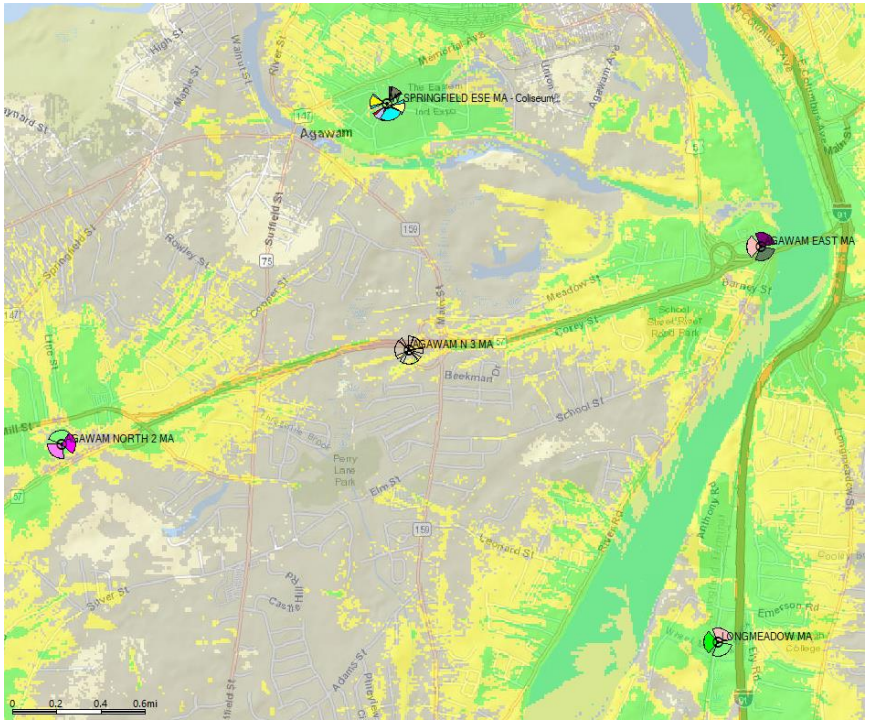
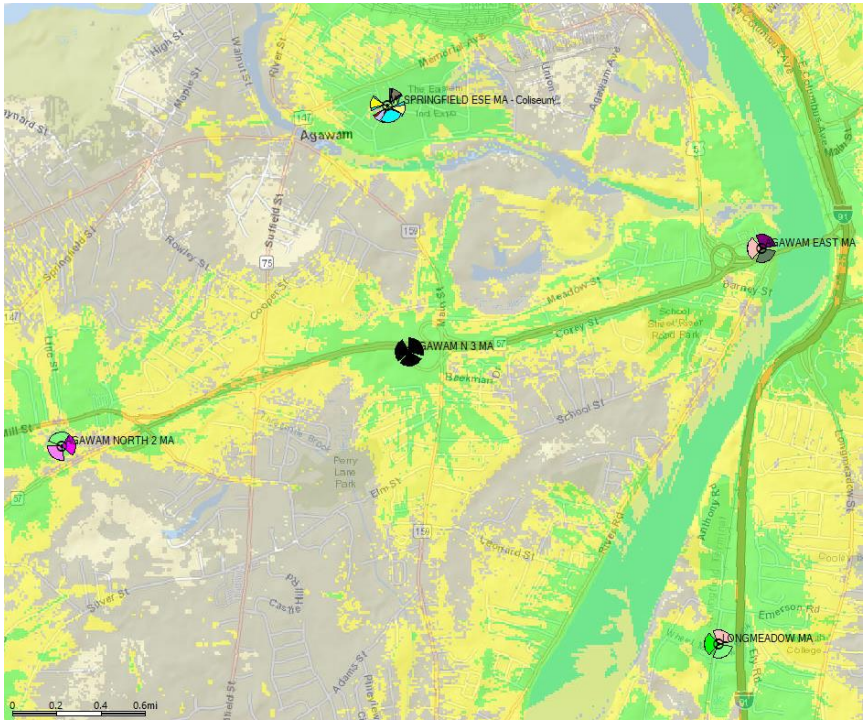
Confidential and proprietary materials for authorized Verizon personnel and outside agencies only. Use, disclosure or distribution of this material is not permitted to any unauthorized persons or third parties except by written agreement.

-105 = (Gray) On-Street Coverage
-95 = (Yellow) In-Vehicle Coverage
-85 – (Green) In-Building Coverage

Agawam N 3, MA Existing 2100 MHz 4G Coverage



Agawam N 3, MA Proposed 2100 MHz 4G Coverage @ 90'



The above map shows the coverage of the current network, and if the proposed cell is activated. Reliable in-building coverage is shown in green. At 90', there is a sight shift in in-building coverage, and a slightly larger reduction in in-vehicle coverage.

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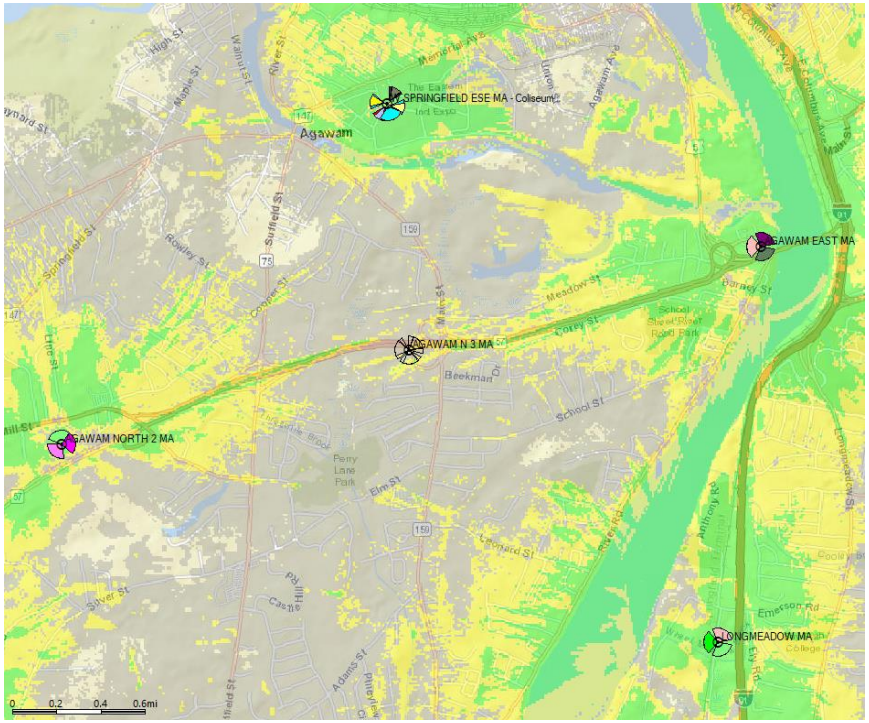
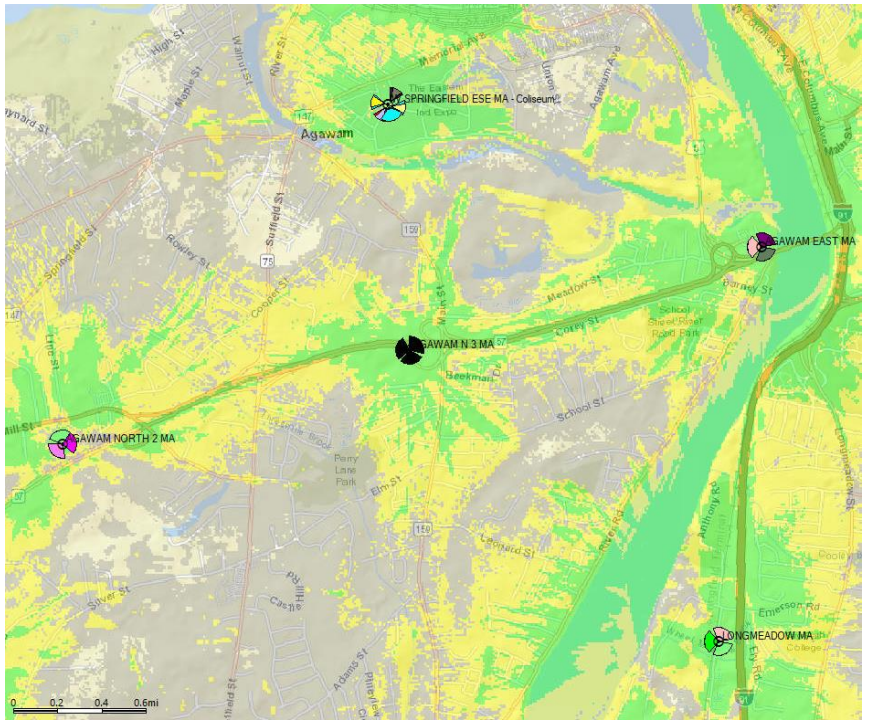


Agawam N 3, MA Proposed 2100 MHz 4G Coverage @ 80'



The above map shows the coverage of the current network, and if the proposed cell is activated. Reliable in-building coverage is shown in green. At 80', there is a sight shift in in-building coverage, and a greater reduction in in-vehicle coverage.

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Verizon is part of your community.

Because we live and work there too.

We believe technology can help solve our biggest social problems.

We're working with innovators, community leaders, non-profits, universities and our peers to address some of the unmet challenges in education, healthcare and energy management.

Learn more about our corporate social responsibility at www.verizon.com.

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Town of Agawam

Building Department

1000 Suffield Street, Agawam, Massachusetts 01001

Telephone - (413) 821-0632

Kevin Duquette

Inspector of Buildings

inspections@agawam.ma.us

September 12, 2025

To: Office of Planning and Community Development:

Re: Special Permit & Variance Review Comments- 580 Main Street Agawam, MA 01001- Bethany Assembly of God- Proposed Cell Tower Project;

The Building Department no specific zoning issues or concerns at this time for the special permit and variance request for the above referenced cell tower project.

Respectfully,

Kevin Duquette

Kevin Duquette
Inspector of Buildings
Town of Agawam

Town of Agawam
Department Of Public Works

DPW
1000 Suffield Street
Agawam, MA 01001
Phone: 413-821-0600
Fax: 413-821-0631

MEMORANDUM

To:	Planning Board
CC:	File
From:	Engineering Division
Date:	July 15, 2025
Subject:	SP 672 – Bethany Assembly of God Verizon Tower – 580 Main Street

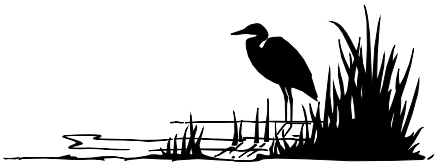
Per your request, we have reviewed the revised Site Plans titled "Diamond Communications, LLC; Verizon; Bethany Assembly of God; Plans Prepared By Kimley-Horn; 11720 Amber Park Drive, Suite 600; Alpharetta, GA 30009; Phone: 770-619-4280; WWW.KIMLEY-HORN.COM" dated April 25, 2025. Based on our review, Engineering has no comments at this time.

Engineering reserves the right to make additional comments as new information is submitted. If you have any questions, please do not hesitate to contact this division.

Sincerely,

Michael F. Albro, P.E.
Assistant Town Engineer

Ryan Rivest, E.I.T.
Civil Engineer I



TOWN OF AGAWAM, MASSACHUSETTS
CONSERVATION COMMISSION
ORDER OF CONDITIONS

DEP File #087-0706 | 248 River Road & 56 Forest Ridge Lane | Nakhabenko

1. This Order supersedes all previous Orders of Conditions issued for this work.

2. The Order of Conditions applies only to the work permitted by this Order. Any other work to be done within the area of statutory interests of Wetlands Protection shall require the filing of a new Notice of Intent or Request for Determination.

3. During the construction phase, the applicant shall be responsible for maintaining a copy of these Orders at the site. The applicant shall be responsible for compliance with the conditions of these Orders.

4. Prior to the start of construction, adequate erosion and sedimentation control measures shall be implemented, and shall be maintained throughout the entire construction phase and until the site has become stabilized with permanent vegetative cover.

5. The Commission shall be notified at least seventy-two hours prior to the start of site work (including tree cutting or clearing).

6. The Commission shall be notified when the erosion control measures are in place to enable the Commission to ensure compliance with these Orders.

7. There shall be no discharge or spillage of oil, fuel, any petroleum product or any other pollutant into any area of statutory interest.

8. At no time shall any construction materials, soils, fills, sediments, dredging or any other substances be stockpiled or stored in any area of statutory interest.

9. All work within the area of statutory interest shall be performed so as to create minimum disturbance to the existing vegetative cover and contours.

10. The construction site shall be left in a stable condition at the close of each day. Erosion and sedimentation controls shall be continuously monitored to ensure proper operation.

11. If any alteration of the wetland/resource area does occur, the Commission shall impose such measures as it finds necessary to protect and restore the areas of statutory interest.

12. Only tagged trees shall be removed. All limbs, branches, slash and deadwood shall be

removed from the areas of statutory interest.

13. Whether from on-site or off-site, any fill used in connection with this project shall be clean fill as described here:

    The fill material shall be clean coarse washed sand or other clean granular material essentially free of clay, fines, dust, organic matter, large stones, masonry, stumps, frozen clumps of earth, wood tree branches and waste material. Before the fill is put in place, all trees, brush and stumps shall be removed from the area to be filled. Topsoil, peat and other impervious materials shall be removed from all areas to be filled prior to the placement of the fill material.

14. No liquid or solid chemical lawn fertilizers, pesticides, herbicides or chemical or petroleum dust control agents shall be applied within the area of statutory interest or anywhere that the surface drainage is discharged into an area of statutory interest. Also no petroleum or liquid or solid chemical storage is permitted in any areas of statutory interest.

15. Parcels abutting or containing wetland or resource areas shall carry the following restrictions, and a covenant so noted on each deed:

    "This lot contains certain areas or abuts areas protected by Chapter 131, Section 40 of the General Laws of Massachusetts known as the Wetlands Protection Act and comes under the jurisdiction of the Agawam Conservation Commission. No cutting of trees, clearing of brush, digging, filling in with soil or debris, or the building of bridges is permitted within one hundred (100) feet of the designated wetland areas or within 200' of any designated river without specific approval granted by the Conservation Commission."

16. The Commission reserves the right to impose additional conditions on any or all portions of this work to minimize the impact of potential site erosion or noticeable degradation of water quality discharging from the site at any time.

17. This order shall apply to all successor or assignee in interest or control of the subject property. Any conveyance of interest or control in the subject property shall make reference to this order by stating that the conveyance is subject to the provisions of an Order of Conditions under the Wetlands Protection Act, M.G.L. Chapter 131, Section 40, and by giving the book and page reference in the Hampden County Registry of Deeds where this order is recorded.

18. The petitioner shall have recorded in the Hampden County Registry of Deeds an “Order of Conditions Form” provided by this Commission. The Commission will not allow work to begin until proof of recording is provided the Conservation Commission.

19. Prior to construction, the Commission shall be given notification of NHESP approval of final approved plans.

20. Mitigation plantings shall be completed in the Fall 2025 (Sept) or Spring 2026 (May)

growing season. Notify the Commission once completed so an inspection may be made. A follow-up inspection will be made one year after plantings were completed to ensure compliance.

21. Once all conditions of this Order are met, the applicant shall request a Certificate of Compliance.

K:\ATL_Wireless\Diamond Communications\Bethany Assembly of God - MA054\CAD\ZD\ECor-GB.dwg ---- 04/25/25 1:34 PM by: William.Bridger

Diamond Communications LLC

verizon

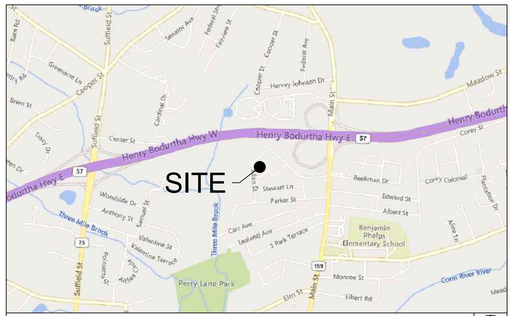
BETHANY ASSEMBLY OF GOD

SITE ADDRESS (E-911 TBD)

580 MAIN ST
AGAWAM, MA 01001
HAMPDEN COUNTY
LATITUDE: 42° 04' 31.29" N
LONGITUDE: 72° 37' 02.54" W
TAX/PIN #: K11_2_28
ZONING: N/A

AGAWAM POLICE DEPARTMENT
681 SPRINGFIELD ST
FEEDING HILLS, MA 01030
PHONE: (413) 786-4767
ATTN.: CUSTOMER SERVICE

AGAWAM FIRE DEPARTMENT
800 MAIN ST
AGAWAN, MA 01001
PHONE: (413) 786-2662
ATTN.: CUSTOMER SERVICE



VICINITY MAP

DRIVING DIRECTIONS

JURISDICTION:
TOWN OF AGAWAM

STATE:
MASSACHUSETTS

TOWER TYPE:
MONOPINE TOWER

TOWER HEIGHT:
115' (120' TO HIGHEST APPURTENANCE)

NUMBER OF CARRIERS:
0 EXISTING, 1 PROPOSED

USE:
PROPOSED TELECOMMUNICATIONS TOWER AND UNMANNED EQUIPMENT

FLOOD INFO
SITE IS LOCATED WITHIN FEMA FLOOD MAP AREA 25013C0403E DATED 07/16/2013 WITHIN FLOOD ZONE X.

PROJECT SUMMARY

DEVELOPER
DIAMOND COMMUNICATIONS
120 MOUNTAIN AVE
SPRINGFIELD, NJ 07081
PHONE: (727) 773-2221
ATTN: RICH HUBER

POWER COMPANY
EVERSOURCE ENERGY
PHONE: (877) 659-6326
ATTN.: CUSTOMER SERVICE

PROPERTY OWNER
BETHANY ASSEMBLY OF GOD
580 MAIN ST
AGAWAM, MA 01001
PHONE: N/A
ATTN.: N/A

CONSULTANT
KIMLEY-HORN AND ASSOCIATES, INC.
11720 AMBER PARK DRIVE, SUITE 600
ALPHARETTA, GEORGIA 30009
PHONE: (678) 894-3618
ATTN.: CHRISTOPHER STRANGE

CONTACTS

SHEET NO.	SHEET TITLE
T1	COVER SHEET
--	SURVEY
N1	GENERAL NOTES
C0	OVERALL AERIAL PARCEL PLAN
C0.1	OVERALL PARCEL TOPO
C0.2	OVERALL PARCEL PLAN
C1	OVERALL SITE PLAN
C2	SITE PLAN
C3	EQUIPMENT RACK DETAIL - FRONT
C4	FENCE, GATE, AND COMPOUND DETAILS
C5	ACCESS ROAD DETAILS
C6	ACCESS ROAD TRUEGRID DETAILS
C7	ACCESS ROAD TRUEGRID DETAILS
C8	SITE SIGNAGE DETAILS
C9	WAVEGUIDE BRIDGE DETAILS
C10	ANTENNA AND TOWER ELEVATION DETAILS
C11	GRADING AND EROSION CONTROL PLAN
C12	SILT FENCE DETAILS

SHEET INDEX

THE TOWN OF AGAWAM PLANNING BOARD
36 MAIN ST
HAMPDEN, MA 01036
PHONE: (413) 786-0400
ATTN.: CUSTOMER SERVICE

PERMIT INFORMATION

Diamond Communications LLC

PROJECT INFORMATION:

SITE NAME:
BETHANY ASSEMBLY OF GOD
SITE No.: MA054

580 MAIN ST
AGAWAM, MA 01001
HAMPDEN COUNTY

PLANS PREPARED BY:

Kimley»Horn
11720 AMBER PARK DRIVE, SUITE 600
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM

REV: | DATE: | ISSUED FOR: | BY:

8			
7			
6			
5			
4	04/25/25	ZONING	DCC
3	04/18/25	ZONING	DCC
2	10/24/24	ZONING	DMF
1	02/14/24	ZONING	DMF
0	01/19/24	ZONING	DMF

LICENSER:

COMMONWEALTH OF MASSACHUSETTS
DANIEL C. CASEY
CIVIL
No. 57896
REGISTERED PROFESSIONAL ENGINEER
4.25.25

KHA PROJECT NUMBER:
013541034

DRAWN BY: JAR | CHECKED BY: CDS

SHEET TITLE:
COVER SHEET

SHEET NUMBER:
T1

This document, together with the concepts and designs presented herein, as an instrument of service, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

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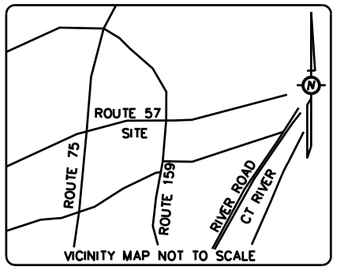


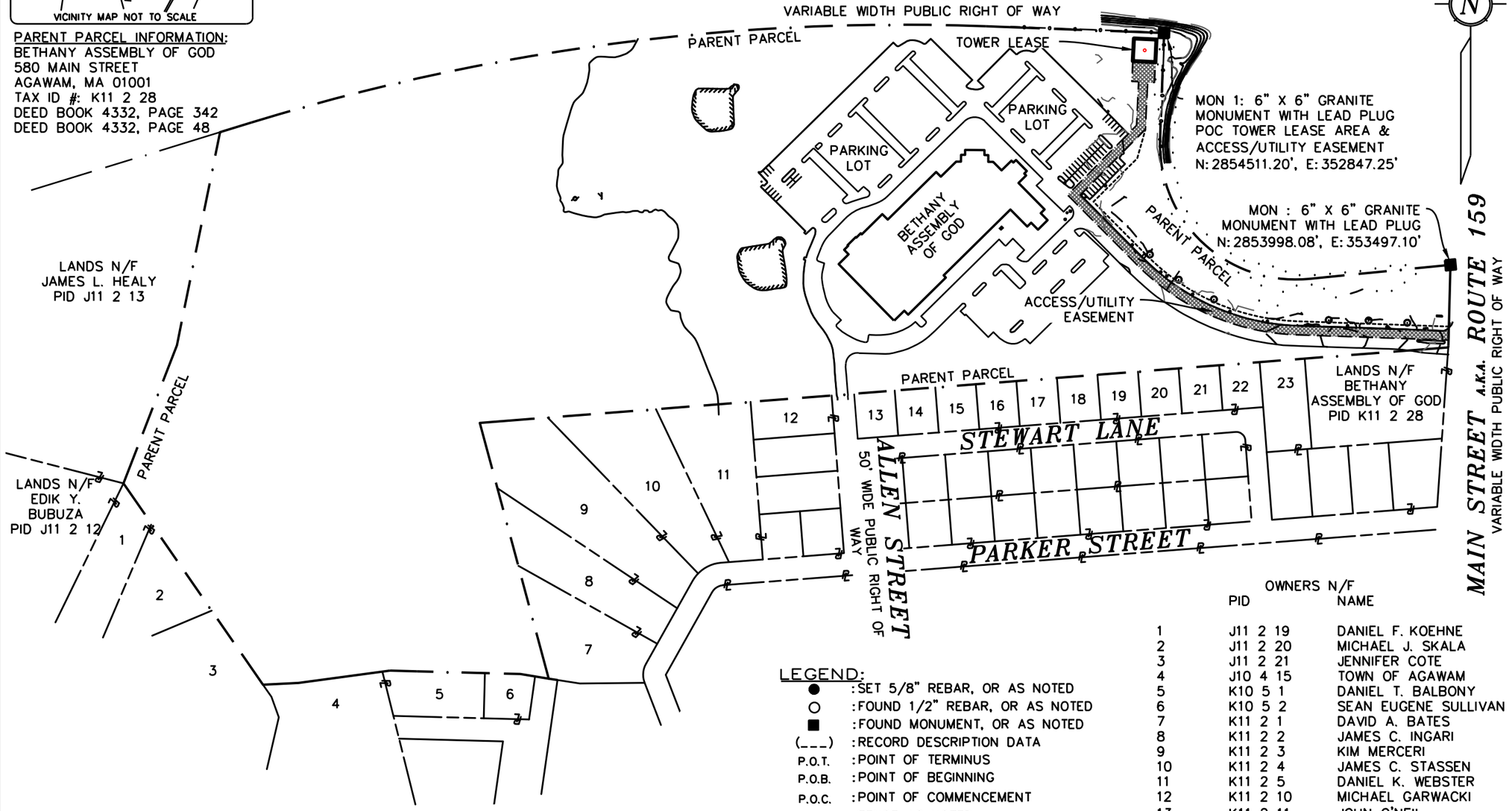
THE PARENT PARCEL IS AFFECTED BY ZONE X WHICH IS NOT A FLOOD HAZARD ZONE AS PER F.I.R.M. MAP NUMBER: 25013C0403E EFFECTIVE DATE: JULY 16, 2013.

FAA 1-A INFORMATION:
LATITUDE: 42° 04' 31.29" N ±20'
LONGITUDE: 72° 37' 02.54"" W ±20'

GROUND ELEVATION AT BASE OF PROPOSED TOWER
89.7' ±3' NAVD 1988

ZONING: (AG) – AGRICULTURAL DISTRICT

PARENT PARCEL INFORMATION:
BETHANY ASSEMBLY OF GOD
580 MAIN STREET
AGAWAM, MA 01001
TAX ID #: K11 2 28
DEED BOOK 4332, PAGE 342
DEED BOOK 4332, PAGE 48



OWNERS N/F

	PID	NAME
1	J11 2 19	DANIEL F. KOEHNE
2	J11 2 20	MICHAEL J. SKALA
3	J11 2 21	JENNIFER COTE
4	J10 4 15	TOWN OF AGAWAM
5	K10 5 1	DANIEL T. BALBONY
6	K10 5 2	SEAN EUGENE SULLIVAN
7	K11 2 1	DAVID A. BATES
8	K11 2 2	JAMES C. INGARI
9	K11 2 3	KIM MERCERI
10	K11 2 4	JAMES C. STASSEN
11	K11 2 5	DANIEL K. WEBSTER
12	K11 2 10	MICHAEL GARWACKI
13	K11 2 11	JOHN O'NEIL
14	K11 2 12	JOHN CANNEY
15	K11 2 13	TRAVIS A. LANSING
16	K11 2 14	PETER J. SHATOS
17	K11 2 15	JAIME L. BOUCHARD
18	K11 2 16	JOHN J. COUTURE
19	K11 2 17	NICOLAI DUBINEVICI
20	K11 2 18	GLORIA J. AFFLITTO
21	K11 2 19	ISUEL SANCHEZ
22	K11 2 20	JOSEPH R. SPAGNOLI
23	K11 2 21	APRIL J. GRAZIANO

LEGEND:

●	:SET 5/8" REBAR, OR AS NOTED
○	:FOUND 1/2" REBAR, OR AS NOTED
■	:FOUND MONUMENT, OR AS NOTED
(___)	:RECORD DESCRIPTION DATA
P.O.T.	:POINT OF TERMINUS
P.O.B.	:POINT OF BEGINNING
P.O.C.	:POINT OF COMMENCEMENT
—o—	:FENCE AS NOTED
—OH—	:OVER HEAD UTILITY LINES
	:WOOD UTILITY POLE
	:ELECTRIC TRANSFORMER
T	:TELCO PEDESTAL
HH	:HAND HOLE
N/A	:NOT AVAILABLE
N/F	:LANDS NOW/FORMERLY
	:FLOOD LIGHT
	:UNDERGROUND FIBER MARKER

AREA	SQUARE FEET	ACRE
PARENT PARCEL	2,200,000	50±
TOWER LEASE	2,500	0.06
ACCESS/UTILITY EASEMENT	27,111	0.62

250 0 125 250 500

BAR GRAPH 1 inch = 250 ft.

MA054 BETHANY ASSEMBLY OF GOD 8-24-2024.DWG

SHEET 1 OF 5

RAW LAND SURVEY

NAME: BETHANY ASSEMBLY OF GOD
SITES#: MA054
ADDRESS: 580 MAIN STREET
AGAWAM, MA 01001
HAMPDEN COUNTY

NATIONAL SURVEY SERVICES COORDINATION BY:

GEOLINE SURVEYING, INC.
13430 NW 104th Terrace, Suite A Alachua, FL 32615
Office:(386) 418-0500 Fax:(386) 462-9986
WWW.GEOLINEINC.COM

SURVEY WORK PERFORMED BY:

JONATHAN MURPHY
Professional Land Surveying
10505 Leafwood Place (919) 280-8189
Raleigh NC 27613 FAX 995-9616
E-MAIL : raleigh@murphygeomatics.com FIRM C-2757

SURVEYOR'S NOTES

1. BASIS OF BEARING:
STATE PLANE COORDINATE SYSTEM 1983
MAINLAND MASSACHUSETTS ZONE

2. NO SUBSURFACE INVESTIGATION WAS PERFORMED TO LOCATE UNDERGROUND UTILITIES. UTILITIES SHOWN HEREON ARE LIMITED TO AND ARE PER OBSERVED EVIDENCE ONLY.

3. THIS SURVEY DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARENT PARCEL.

4. ALL VISIBLE TELECOM EQUIPMENT AND IMPROVEMENTS ARE CONTAINED WITHIN THE DESCRIBED AREA.

5. ALL SYMBOLS SHOWN HEREON NOT DEPICTED TO SCALE.

SURVEYOR'S CERTIFICATION

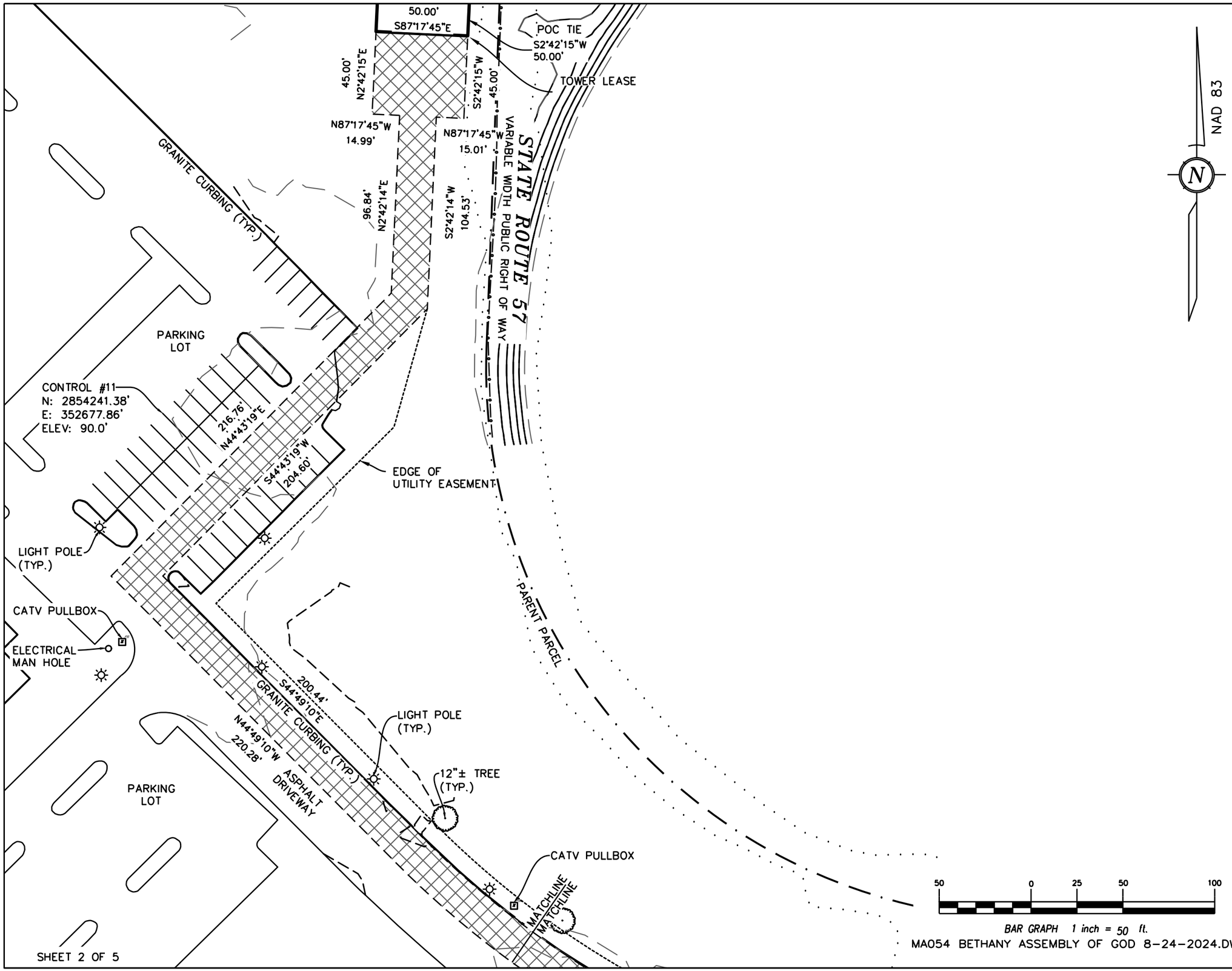
I HEREBY CERTIFY TO:
DIAMOND COMMUNICATIONS, LLC

LITTLE RIVER LAND SURVEYING

SURVEYOR
JERAMIAH J. RAITT
DATE: 10/30/2024

COMMONWEALTH OF MASSACHUSETTS
JERAMIAH RAITT
NO. 56221
REGISTERED PROFESSIONAL LAND SURVEYOR

FIELD DATE: 08/14/2023



RAW LAND SURVEY

NAME: BETHANY ASSEMBLY OF GOD
SITES#: MA054
ADDRESS: 580 MAIN STREET
AGAWAM, MA 01001
HAMPDEN COUNTY

NATIONAL SURVEY SERVICES COORDINATION BY:

GEOLINE SURVEYING, INC.
13430 NW 104th Terrace, Suite A Alachua, FL 32615
Office:(386) 418-0500 Fax:(386) 462-9986
WWW.GEOLINEINC.COM

SURVEY WORK PERFORMED BY:

JONATHAN MURPHY
Professional Land Surveying
10505 Leafwood Place (919) 280-8189
Raleigh NC 27613 FAX 995-9616
E-MAIL : raleigh@murphygeomatics.com FIRM C-2757

SURVEYOR'S NOTES

1. BASIS OF BEARING:
STATE PLANE COORDINATE SYSTEM 1983
MAINLAND MASSACHUSETTS ZONE

2. NO SUBSURFACE INVESTIGATION WAS PERFORMED TO LOCATE UNDERGROUND UTILITIES. UTILITIES SHOWN HEREON ARE LIMITED TO AND ARE PER OBSERVED EVIDENCE ONLY.

3. THIS SURVEY DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARENT PARCEL.

4. ALL VISIBLE TELECOM EQUIPMENT AND IMPROVEMENTS ARE CONTAINED WITHIN THE DESCRIBED AREA.

5. ALL SYMBOLS SHOWN HEREON NOT DEPICTED TO SCALE.

SURVEYOR'S CERTIFICATION

I HEREBY CERTIFY TO:
DIAMOND COMMUNICATIONS, LLC

LITTLE RIVER LAND SURVEYING

SURVEYOR
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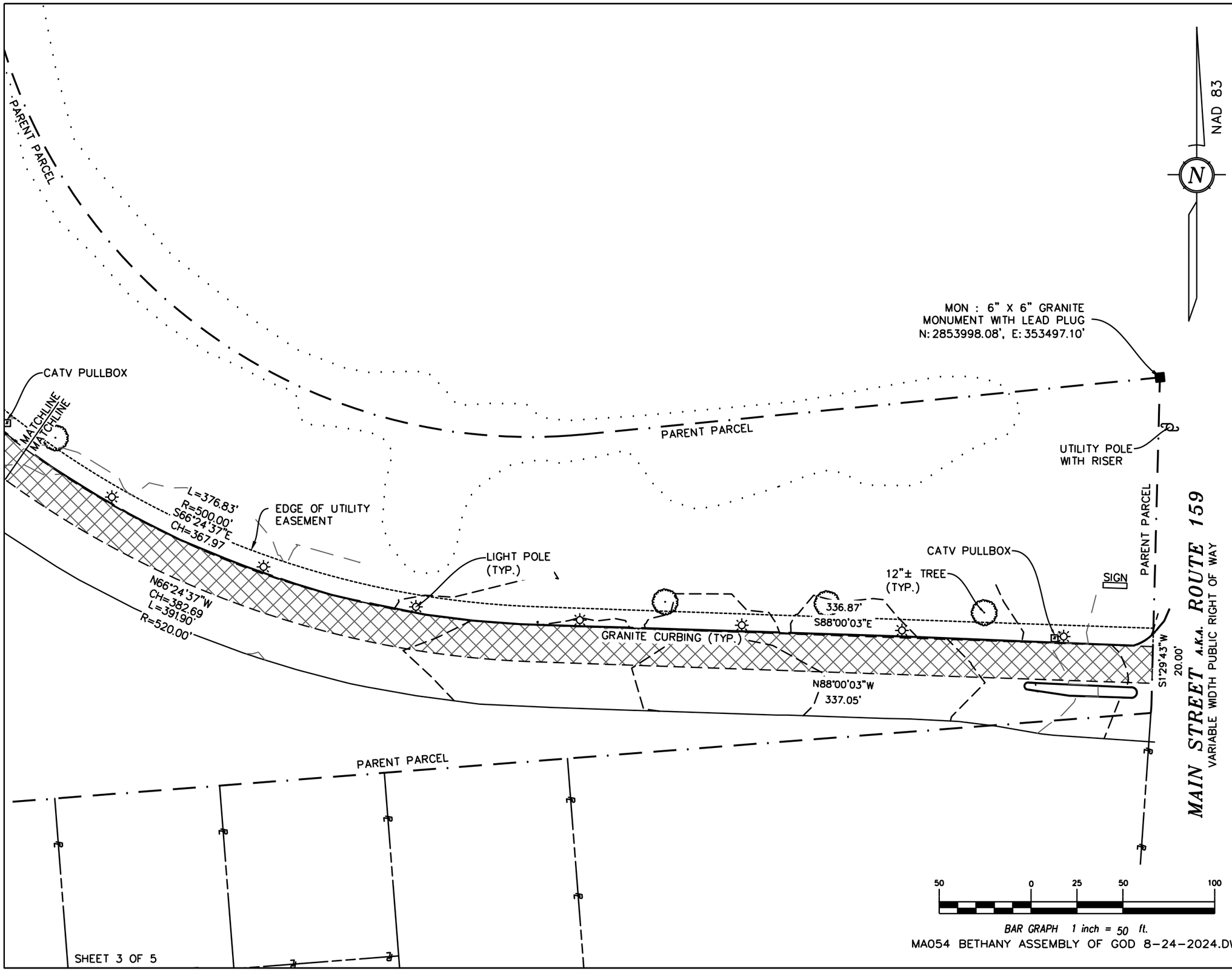

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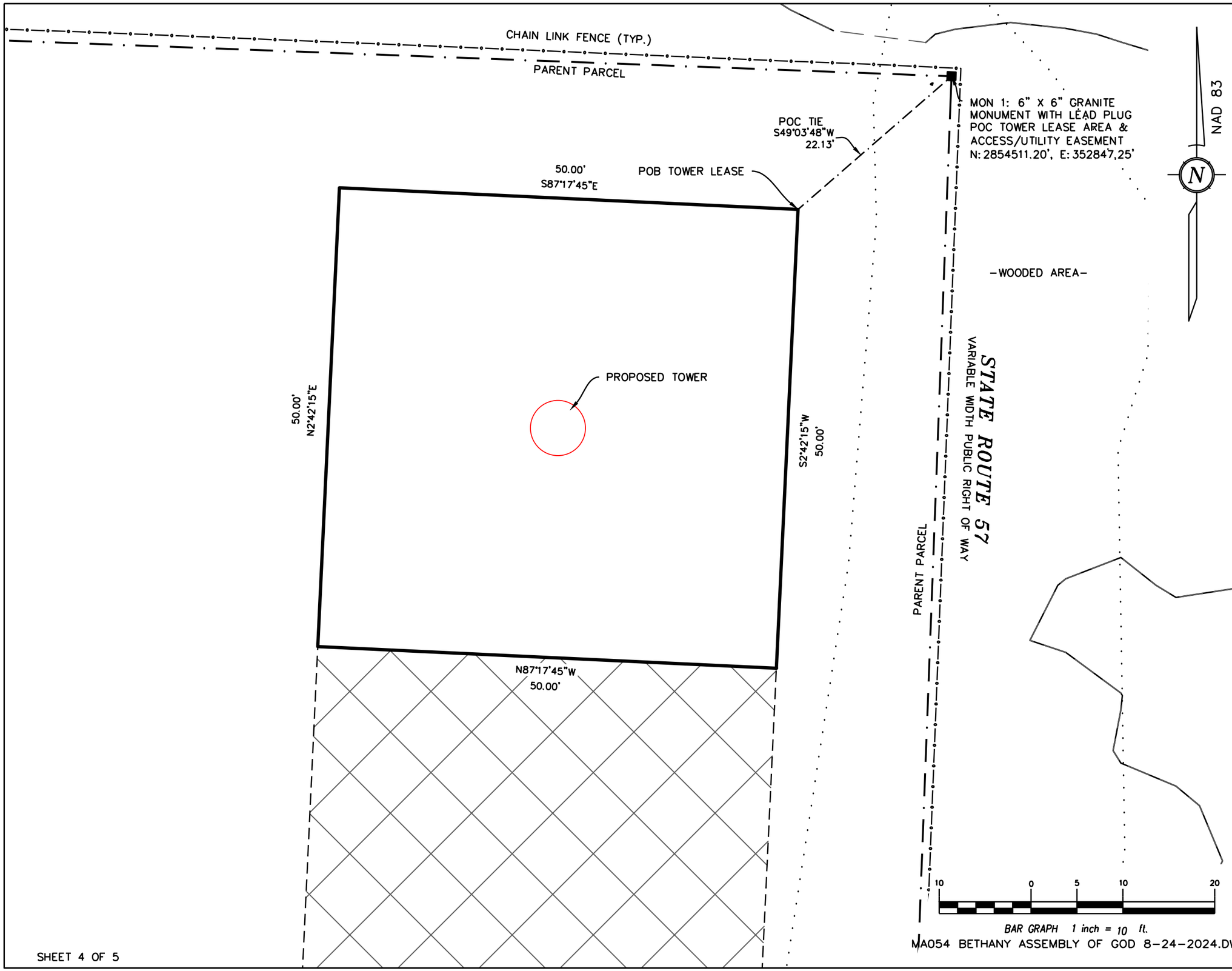

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LITTLE RIVER LAND SURVEYING

SURVEYOR
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DATE: 10/30/2024

COMMONWEALTH OF MASSACHUSETTS
JERAMIAH RAITT
NO. 56221
REGISTERED PROFESSIONAL LAND SURVEYOR

FIELD DATE: 08/14/2023

LEGAL DESCRIPTION: PARENT PARCEL (AS PROVIDED)

EXHIBIT "A"
SITUATED IN THE COUNTY OF HAMPDEN AND STATE OF MASSACHUSETTS AND DESCRIBED AS FOLLOWS:

TRACT 1:
BEGINNING AT A POINT AT THE SOUTHWESTERLY CORNER OF LAND NOW OR FORMERLY OF THOMAS AND ANNA RUSSO IN THE TOWN OF AGAWAM, HAMPDEN COUNTY, MASSACHUSETTS
THENCE S. 85° 33' 05" W. A DISTANCE OF 1730.60 FEET ALONG A LAND COURT PLAN NO. 249648. TO A POINT;
THENCE S. 15° 04' 22" E. A DISTANCE OF 586.19 FEET ALONG SAID LAND COURT PLAN TO A BOUND; THENCE N. 80° 43' 32" W. A DISTANCE OF 63.75 FEET ALONG THE LAND NOW OR FORMERLY OF B.& M. TUCCI;
THENCE N. 88° 28' 51" W. A DISTANCE OF 288.42 FEET ALONG LAND NOW OR FORMERLY OF SAID TUCCI TO AN IRON PIN;
THENCE S. 82° 20' 08" W. A DISTANCE OF 204.25 FEET TO A POINT;
THENCE S. 87° 08' 04" W. A DISTANCE OF 78.67 FEET TO AN IRON PIN AT LAND NOW OR FORMERLY OF ONE CALABRESE;
THENCE N. 34° 42' 40" W. A DISTANCE OF 542.17 FEET ALONG THE LAND OF CALABRESE TO A POINT; THENCE N. 21° 10' 11" E. A DISTANCE OF 327.67 FEET ALONG THE LAND NOW OR FORMERLY OF ONE DELOGHIA TO A POINT;
THENCE N. 11° 27' 02" E. A DISTANCE OF 481.44 FEET ALONG THE LAND NOW OR FORMERLY OF DELOGHIA TO A POINT ON THE SOUTHERLY SIDE OF ROUTE 57;
THENCE N. 72° 55' 32" E. A DISTANCE OF 73.00 FEET TO A BOUND;
THENCE NORTHEASTERLY ON A CURVE TO THE RIGHT HAVING A RADIUS OF 4900.75 FEET AN ARC LENGTH OF 1646.79 FEET TO A POINT;
THENCE S. 87° 49' 30" E. A DISTANCE OF 394.14 FEET TO A BOUND, THE LAST THREE COURSES BEING ALONG THE SOUTHERLY SIDE OF ROUTE 57;
THENCE S. 2 ° 10' 30" W. A DISTANCE OF 234.37 FEET TO A POINT;
THENCE ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 300.00 FEET, AN ARC LENGTH OF 385.71 FEET TO AN IRON PIN, THE LAST TWO COURSES BEING ALONG THE RAMP TO ROUTE 57;
THENCE S. 4° 26' 55" E. A DISTANCE OF 198.92 FEET ALONG THE LAND NOW OR FORMERLY OF RUSSO TO THE POINT OF BEGINNING.
BEING THE PREMISES SHOWN AS LAND OF ALBERT J. AND JENNIE M. CHRISTOPHER, SAID TO CONTAIN 49.2 ACRES OF LAND, AS SHOWN ON A PLAN OF LAND PREPARED FOR BETHANY ASSEMBLY OF GOD,

TRACT 2:
BEGINNING AT A GRANITE BOUND ON THE WESTERLY SIDE OF MAIN STREET IN THE TOWN OF AGAWAM, HAMPDEN COUNTY. MASSACHUSETTS SAID GRANITE BOUND BEING THE INTERSECTION OF THE RAMP OF ROUTE 57, AND THE WESTERLY SIDELINE OF MAIN STREET AS SHOWN IN PLAN BOOK 64. PAGES 73 AND 74. HAMPDEN COUNTY REGISTRY OF DEEDS.
THENCE S. 1° 30' 40" W. A DISTANCE OF 178.84 FEET ALONG THE WESTERLY SIDE OF MAIN STREET TO AN IRON PIN;
THENCE S. 3° 59' 20" W. A DISTANCE OF 3.89 FEET ALONG THE WESTERLY SIDE OF MAIN STREET TO THE LAND OF B. SCHABOWSKI;
THENCE S. 85° 33' 05" W. A DISTANCE OF 419.00 FEET ALONG THE LAND OF SCHABOWSKI AND HAMAR TO A POINT;
THENCE N. 4° 26' 55" E. A DISTANCE OF 198.92 FEET ALONG THE LAND OF ALBERT AND JENNIE CHRISTOPHER TO THE SIDELINE OF THE RAMP TO ROUTE 57;
THENCE SOUTHEASTERLY ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 300.00 FEET, AN ARC LENGTH OF 126.40 FEET TO A GRANITE BOUND;
THENCE N. 84° 22' 10" E. A DISTANCE OF 315.00 FEET TO A GRANITE BOUND ON THE WESTERLY SIDE OF MAIN STREET AT THE POINT OF BEGINNING.

TAX ID NO: K11 2 28

DERIVATION CLAUSE
BEING THE SAME PROPERTY CONVEYED TO BETHANY ASSEMBLY OF GOD, A RELIGIOUS CORPORATION, GRANTEE, FROM ALBERT J. CHRISTOPHER AND GIOVANNA M. CHRISTOPHER, ALSO KNOWN AS JENNIE M. CHRISTOPHER, HUSBAND AND WIFE, GRANTOR BY DEED RECORDED 10/05/1976, AS BOOK 4332, PAGE 48 OF HAMPDEN COUNTY RECORDS.
AND
BEING THE SAME PROPERTY CONVEYED TO BETHANY ASSEMBLY OF GOD, A RELIGIOUS CORPORATION, GRANTEE, FROM THOMAS J. RUSSO, JR. AND ANNA M. RUSSO, GRANTOR BY DEED RECORDED 09/23/1976, AS BOOK 4327, PAGE 132 OF HAMPDEN COUNTY RECORDS.

LEGAL DESCRIPTION: TOWER LEASE (CREATED BY THIS OFFICE)
A PORTION OF ALL THAT CERTAIN PARCEL OF LAND IN THE CITY OF AGAWAM, COUNTY OF HAMPDEN, STATE OF MASSACHUSETTS, DESCRIBED IN DEED BOOK 4332, PAGES 48 AND 342, AND FURTHER DESCRIBED AS:
COMMENCING AT A 6" X 6" GRANITE MONUMENT WITH LEAD PLUG ON THE SOUTHERLY SIDE OF STATE ROUTE 57, HAVING MAINE STATE PLANE COORDINATES, MASSACHUSETTS MAINLAND ZONE, N:2854511.20', E:352847.25',
THENCE, S 49° 03' 48" W FOR A DISTANCE OF 22.13 FEET TO THE POINT OF BEGINNING;
THENCE, S 02° 42' 15" W FOR A DISTANCE OF 50.00 FEET TO A POINT;
THENCE, N 87° 17' 45" W FOR A DISTANCE OF 50.00 FEET TO A POINT;
THENCE, N 02° 42' 15" E FOR A DISTANCE OF 50.00 FEET TO A POINT;
THENCE, S 87° 17' 45" E FOR A DISTANCE OF 50.00 FEET TO THE POINT OF BEGINNING, CONTAINING 2,500 SQFT –OR– 0.06 ACRES.

LEGAL DESCRIPTION: ACCESS/UTILITY EASEMENT (CREATED BY THIS OFFICE)
A PORTION OF ALL THAT CERTAIN PARCEL OF LAND IN THE CITY OF AGAWAM, COUNTY OF HAMPDEN, STATE OF MASSACHUSETTS, DESCRIBED IN DEED BOOK 4332, PAGES 48 AND 342, AND FURTHER DESCRIBED AS:
COMMENCING AT A 6" X 6" GRANITE MONUMENT WITH LEAD PLUG ON THE WESTERLY SIDE OF MAIN STREET, ALSO KNOWN AS ROUTE 159, HAVING MAINE STATE PLANE COORDINATES, MASSACHUSETTS MAINLAND ZONE, N:2853998.08', E:353497.10'
THENCE, S 49° 03' 48" W FOR A DISTANCE OF 22.13 FEET TO A POINT ON AN EXISTING 2,500 SQFT TOWER LEASE;
THENCE, ALONG SAID LEASE, S 02° 42' 15" W FOR A DISTANCE OF 50.00 FEET TO THE POINT OF BEGINNING;
THENCE, DEPARTING SAID LEASE, S 02° 42' 15" W FOR A DISTANCE OF 45.00 FEET TO A POINT;
THENCE, N 87° 17' 45" W FOR A DISTANCE OF 15.01 FEET TO A POINT;
THENCE, S 02° 42' 14" W FOR A DISTANCE OF 104.53 FEET TO A POINT;
THENCE, S 44° 43' 19" W FOR A DISTANCE OF 204.60 FEET TO A POINT;
THENCE, S 44° 49' 10" E FOR A DISTANCE OF 200.44 FEET TO THE BEGINNING OF A CURVE,
THENCE, ALONG SAID CURVE TURNING TO THE LEFT THROUGH AN ANGLE OF 43° 10' 53.4", HAVING A RADIUS OF 500.00 FEET, AND WHOSE LONG CHORD BEARS S 66° 24' 37" E FOR A DISTANCE OF 367.97 FEET TO A POINT;
THENCE, S 88° 00' 03" E FOR A DISTANCE OF 336.87 FEET TO A POINT LYING ON THE WESTERN RIGHT OF WAY OF MAIN STREET A.K.A. ROUTE 159, A DEDICATED PUBLIC RIGHT OF WAY;
THENCE, ALONG SAID RIGHT OF WAY, S 01° 29' 43" W FOR A DISTANCE OF 20.00 FEET TO A POINT;
THENCE, DEPARTING SAID RIGHT OF WAY, N 88° 00' 03" W FOR A DISTANCE OF 337.05 FEET TO THE BEGINNING OF A CURVE,
THENCE, ALONG SAID CURVE TURNING TO THE RIGHT THROUGH AN ANGLE OF 43° 10' 53.4", HAVING A RADIUS OF 520.00 FEET, AND WHOSE LONG CHORD BEARS N 66° 24' 37" W FOR A DISTANCE OF 382.69 FEET TO A POINT;
THENCE, N 44° 49' 10" W FOR A DISTANCE OF 220.28 FEET TO A POINT;
THENCE, N 44° 43' 19" E FOR A DISTANCE OF 216.76 FEET TO A POINT;
THENCE, N 02° 42' 14" E FOR A DISTANCE OF 96.84 FEET TO A POINT;
THENCE, N 87° 17' 45" W FOR A DISTANCE OF 14.99 FEET TO A POINT;
THENCE, N 02° 42' 15" E FOR A DISTANCE OF 45.00 FEET TO A POINT ON SAID LEASE;
THENCE, ALONG SAID LEASE, S 87° 17' 45" E FOR A DISTANCE OF 50.00 FEET TO THE POINT OF BEGINNING, CONTAINING 27,111 SQFT –OR– 0.62 ACRES.

RAW LAND SURVEY

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SURVEYOR'S NOTES

1. BASIS OF BEARING:
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MAINLAND MASSACHUSETTS ZONE

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1.00 GENERAL NOTES

1.01 ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE DRAWINGS AND SPECIFICATIONS. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE STATE, LOCAL AND NATIONAL CODES, ORDINANCES AND OR REGULATIONS APPLICABLE TO THIS PROJECT.

1.02 THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND SHALL CHECK ALL DIMENSIONS. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE PROJECT MANAGER AND/OR ENGINEER AND BE RESOLVED BEFORE PROCEEDING WITH WORK. WHERE THERE IS A CONFLICT BETWEEN DRAWING AND VERIZON SPECIFICATIONS, THE DIAMOND COMMUNICATIONS PROJECT ENGINEER SHOULD BE CONTACTED FOR CLARIFICATION.

1.03 ALL INFORMATION SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST PRESENT KNOWLEDGE, BUT WITHOUT GUARANTEE OF ACCURACY. WHERE ACTUAL CONDITIONS CONFLICT WITH THE DRAWINGS, THEY SHALL BE REPORTED TO THE PROJECT MANAGER AND/OR ENGINEER SO THAT PROPER REVISIONS MAY BE MADE. MODIFICATION OF DETAILS OF CONSTRUCTION SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE PROJECT MANAGER AND/OR ENGINEER.

1.04 CONTRACTOR SHALL REVIEW AND BE FAMILIAR WITH SITE CONDITIONS AS SHOWN ON THE ATTACHED SITE PLAN AND/OR SURVEY DRAWINGS.

1.05 WAVEGUIDE BRIDGE AND EQUIPMENT CABINETS ARE SHOWN FOR REFERENCE ONLY. REFER TO SEPARATE DRAWINGS FOR SPECIFIC INFORMATION.

1.06 ALL FINISHED GRADES SHALL SLOPE MINIMUM 1/4 IN./FT. AWAY FROM EQUIPMENT IN ALL DIRECTIONS. CONTRACTOR SHALL SLOPE SWALES AS REQUIRED ALONG EXISTING TERRAIN TO DRAIN AWAY FROM COMPOUND AND ACCESS DRIVE.

1.07 THE PROPOSED TOWER AND TOWER FOUNDATIONS WERE DESIGNED BY OTHERS. TOWER INFORMATION PROVIDED ON THESE PLANS ARE PROVIDED FOR REFERENCE PURPOSES ONLY. NOTIFY ENGINEER OR PROJECT MANAGER OF ANY CONFLICTS OR DISCREPANCIES. CONTRACTOR TO OBTAIN COPY OF TOWER DESIGN DRAWINGS, IF AVAILABLE, FROM DIAMOND COMMUNICATIONS PROJECT MANAGER TO CONFIRM COAX ROUTING AND ANTENNA MOUNT INFORMATION.

1.08 THE CONTRACTOR SHALL PROVIDE ADEQUATE EXCAVATION SLOPING, SHORING, BRACING, AND GUYS IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL SAFETY ORDINANCES.

1.09 UPON COMPLETION OF CONSTRUCTION, CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE CAUSED BY CONSTRUCTION ACTIVITIES TO THE EXISTING ACCESS ROAD AND COMPOUND GRAVEL AREAS. ANY NEW FILL MATERIALS SHALL BE COMPACTED.

1.10 THE CONTRACTOR IS HEREBY NOTIFIED THAT PRIOR TO COMMENCING CONSTRUCTION, HE IS RESPONSIBLE FOR CONTACTING THE UTILITY COMPANIES INVOLVED AND SHALL REQUEST A VERIFICATION AT THE CONSTRUCTION SITE OF THE LOCATIONS OF THEIR UNDERGROUND UTILITIES AND WHERE THEY MAY POSSIBLY CONFLICT WITH THE PLACEMENT OF IMPROVEMENTS AS SHOWN ON THESE PLANS. THE CONTRACTOR OR ANY SUBCONTRACTOR FOR THIS CONTRACT WILL BE REQUIRED TO NOTIFY "MASSACHUSETTS 811" 72 HOURS IN ADVANCE OF PERFORMING ANY WORK BY CALLING THE TOLL FREE NUMBER (888) 344-7233 (OR 811). ANY UTILITIES DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE REPAIRED BY THE CONTRACTOR, AT NO EXPENSE TO THE OWNER.

1.11 CONTRACTOR TO PROVIDE DUMPSTER AND PORTABLE TOILET FACILITY DURING CONSTRUCTION.

1.12 CONTRACTOR TO PROVIDE STYMIE LOCK OR EQUIVALENT AS APPROVED BY DIAMOND COMMUNICATIONS PROJECT MANAGER.

1.13 CONTRACTOR TO PROVIDE ANY NECESSARY SIGNAGE PER DIAMOND COMMUNICATIONS PROJECT MANAGER'S INSTRUCTIONS. SEE DETAIL ON SHEET C11.

2.00 EQUIPMENT FOUNDATION NOTES

2.01 FOUNDATIONS ARE DESIGNED FOR A PRESUMPTIVE ALLOWABLE SOIL BEARING CAPACITY OF 2,000 PSF. CONTRACTOR SHALL VERIFY SOIL CONDITIONS AND BEARING CAPACITY PRIOR TO CONSTRUCTION.

2.02 EXCAVATE A MINIMUM 18" BELOW PROPOSED EQUIPMENT FOUNDATIONS OF EXPANSIVE, ORGANIC, UNCONSOLIDATED OR OTHERWISE UNACCEPTABLE MATERIAL AND REPLACE WITH WELL-COMPACTED MATERIAL ACCEPTABLE TO VERIZON.

2.03 CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, PROTECTING, AND RELOCATING AS REQUIRED ALL SERVICE AND UTILITY LINES IN VICINITY OF THE WORK SITE. ALL EXCAVATIONS NEAR THESE LINES TO BE CARRIED OUT WITH EXTREME CAUTION. COORDINATE ALL RELOCATIONS WITH THE PROPERTY OWNER.

2.04 CONTRACTOR TO CUT/FILL EXISTING COMPOUND SUBSOIL TO PROVIDE AN AREA AS LEVEL AS POSSIBLE FOR THE EQUIPMENT FOUNDATIONS. ALL FILL AREAS ARE TO BE FILLED WITH SUITABLE MATERIALS. FILL MATERIALS ARE TO BE PLACED, COMPACTED, AND TESTED IN MAXIMUM LAYERS OF 8". COMPACTION OF ALL FILL MATERIAL SHALL ACHIEVE 95 PERCENT OF MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D 698. ALL TESTS MUST MEET THE MINIMUM SPECIFIED SOIL BEARING CAPACITY. COMPACTION TESTING IS BY THE GEOTECHNICAL TESTING COMPANY DESIGNATED FOR THE PROJECT. SCHEDULING AND COORDINATION IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. REPORTS OF ALL TESTING ARE TO BE PROMPTLY DELIVERED OR FAXED TO THE VERIZON WIRELESS PROJECT MANAGER.

2.05 CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS AND SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST REVISION TO ACI-318 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.

2.06 CONCRETE SHALL HAVE A SLUMP BETWEEN 3" AND 6".

2.07 FIBERS FOR CONCRETE SHALL BE FIBERMESH 650, 100 PERCENT VIRGIN POLYPROPYLENE FIBRILLATED FIBERS, e3 PATENTED TECHNOLOGY PATENTED TECHNOLOGY, CONTAINING NO REPROCESSED OLEFIN MATERIALS. THE FIBERS SHALL CONFORM TO ASTM C1116 TYPE III AND MANUFACTURED SPECIFICALLY FOR THE SECONDARY REINFORCEMENT OF CONCRETE.

2.08 THE FIBERS SHALL BE MANUFACTURED IN AN ISO 9001:2008 CERTIFIED MANUFACTURING FACILITY. UNLESS OTHERWISE STATED, FIBERMESH 650 MACRO-SYNTHETIC FIBERS SHALL BE ADDED TO THE CONCRETE AT THE BATCHING PLANT AT THE RECOMMENDED APPLICATION RATE OF 3 LBS/YD^3 AND MIXED FOR A SUFFICIENT TIME (MINIMUM 5 MINUTES AT FULL MIXING SPEED) TO ENSURE UNIFORM DISTRIBUTION OF THE FIBERS THROUGHOUT THE CONCRETE. FIBROUS CONCRETE REINFORCEMENT SHALL BE MANUFACTURED BY FIBERMESH, 4019 INDUSTRY DRIVE, CHATTANOOGA, TN 37416 USA, TEL: 800 621-1273, WEBSITE: WWW.FIBERMESH.COM

2.09 AT THE REQUEST OF THE VERIZON WIRELESS PROJECT MANAGER, TEST CYLINDERS SHALL BE MOLDED AND LABORATORY CURED IN ACCORDANCE WITH ASTM C31. THREE CYLINDERS SHALL BE TAKEN FOR EACH DAY'S CONCRETE PLACEMENT. CYLINDERS SHALL BE TESTED IN ACCORDANCE WITH THE LATEST REVISION TO ASTM C39.

2.10 CHAMFER ALL EXPOSED EXTERNAL CORNERS OF CONCRETE WITH ¾" x 45° CHAMFER, UNLESS OTHERWISE NOTED.

2.11 CONCRETE FORMWORK IS TO BE STRIPPED WITHIN 48 HOURS. VIBRATION OF THE CONCRETE MUST ASSURE THAT HONEYCOMBING WILL BE AT A MINIMUM. MECHANICAL VIBRATION OF ALL CONCRETE IS REQUIRED UNLESS OTHERWISE DIRECTED BY VERIZON WIRELESS' PROJECT MANAGER. ABOVE GRADE CONCRETE IS TO BE RUBBED AND PATCHED TO ASSURE SMOOTH FINISH AT TIME OF FORMS REMOVAL. CONTRACTOR SHALL PROVIDE A BROOM FINISH ON THE TOP SURFACE OF THE EQUIPMENT FOUNDATION UNLESS OTHERWISE DIRECTED BY VERIZON WIRELESS' PROJECT MANAGER.

2.121 TOPS OF CONCRETE FOUNDATION MUST BE WITHIN 0.02' OF ELEVATION REQUIRED.

2.13 TOP OF FOUNDATION FINISH TO BE LEVEL ±⅛" IN 10'.

2.14 TOP OF FOUNDATION TO HAVE MEDIUM BROOM FINISH.

2.15 CONTRACTOR SHALL REFER TO DRAWINGS OF OTHER TRADES AND VENDOR DRAWINGS FOR EMBEDDED ITEMS AND RECESSES NOT SHOWN ON THE STRUCTURAL DRAWINGS. CONTRACTOR SHALL VERIFY PLACEMENT OF EQUIPMENT AND LOCATION OF CONDUIT FOR MANUFACTURER'S AND VENDORS SPECIFICATIONS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL OPENINGS AND SLEEVES FOR PROPER DISTRIBUTION OF ALL UTILITIES.

K:\ATL_Wireless\Diamond Communications\Bethany Assembly of God - MA054\CAD\ZD\ECar-GB.dwg ---- 04/25/25 1:34 PM by: William.Bridger

Diamond Communications LLC

PROJECT INFORMATION:

SITE NAME:
BETHANY ASSEMBLY OF GOD
SITE No.: MA054

580 MAIN ST
AGAWAM, MA 01001
HAMPDEN COUNTY

PLANS PREPARED BY:

Kimley»Horn
11720 AMBER PARK DRIVE, SUITE 600
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM

REV: | DATE: | ISSUED FOR: | BY:

8			
7			
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4	04/25/25	ZONING	DCC
3	04/18/25	ZONING	DCC
2	10/24/24	ZONING	DMF
1	02/14/24	ZONING	DMF
0	01/19/24	ZONING	DMF

LICENSER:

COMMONWEALTH OF MASSACHUSETTS
DANIEL C. CLASBY
CIVIL
No. 57896
REGISTERED
PROFESSIONAL ENGINEER
4.25.25

KHA PROJECT NUMBER:

013541034

DRAWN BY: JAR | CHECKED BY: CDS

SHEET TITLE:

GENERAL NOTES

SHEET NUMBER:

N1

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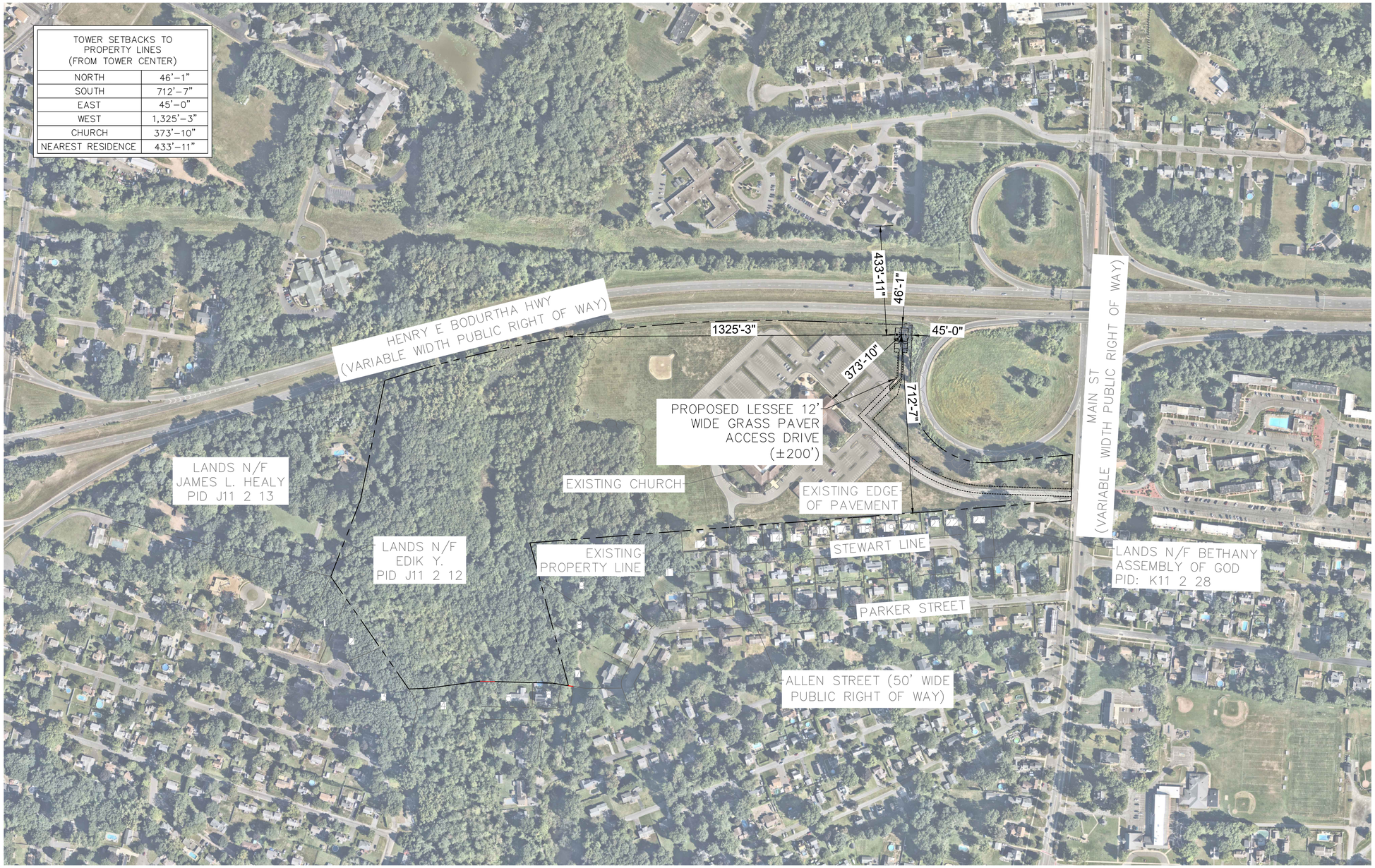
TOWER SETBACKS TO PROPERTY LINES (FROM TOWER CENTER)	
NORTH	46'–1"
SOUTH	712'–7"
EAST	45'–0"
WEST	1,325'–3"
CHURCH	373'–10"
NEAREST RESIDENCE	433'–11"



SURVEY NOTE:

1. DIAMOND COMMUNICATIONS STAFF SHALL COORDINATE WITH THE PROPERTY OWNER TO OBTAIN THE PROPER EASEMENT AGREEMENTS TO CONSTRUCT AND MAINTAIN EQUIPMENT IN AND AROUND THE TOWER COMPOUND.
2. PROPOSED COMPOUND LAYOUT BASED ON SURVEY PROVIDED BY GEOLINE SURVEYING, INC SITE VISIT ON 08/14/23.

1 / C0 OVERALL AERIAL PARCEL PLAN

SCALE: 1:200

NORTH

0 100 200 400

GRAPHIC SCALE: 1" = 200'

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Diamond Communications LLC

PROJECT INFORMATION:

SITE NAME:
BETHANY ASSEMBLY OF GOD
SITE No.: MA054

580 MAIN ST
AGAWAM, MA 01001
HAMPDEN COUNTY

PLANS PREPARED BY:

Kimley»Horn
11720 AMBER PARK DRIVE, SUITE 600
ALPHARETTA, GA 30009
PHONE: 770–619–4280
WWW.KIMLEY–HORN.COM

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LICENSER:

COMMONWEALTH OF MASSACHUSETTS
DANIEL C. CLASBY
NO. 57896
REGISTERED PROFESSIONAL ENGINEER
41525

KHA PROJECT NUMBER:

013541034

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SHEET TITLE:

OVERALL AERIAL PARCEL PLAN

SHEET NUMBER:

C0

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1 / C0.1 OVERALL PARCEL TOPO

SCALE: 1:200

NORTH

0 100 200 400

GRAPHIC SCALE: 1" = 200'

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CIVIL
No. 57896
REGISTERED PROFESSIONAL ENGINEER
4.25.25

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SHEET TITLE:

OVERALL PARCEL TOPO

SHEET NUMBER:

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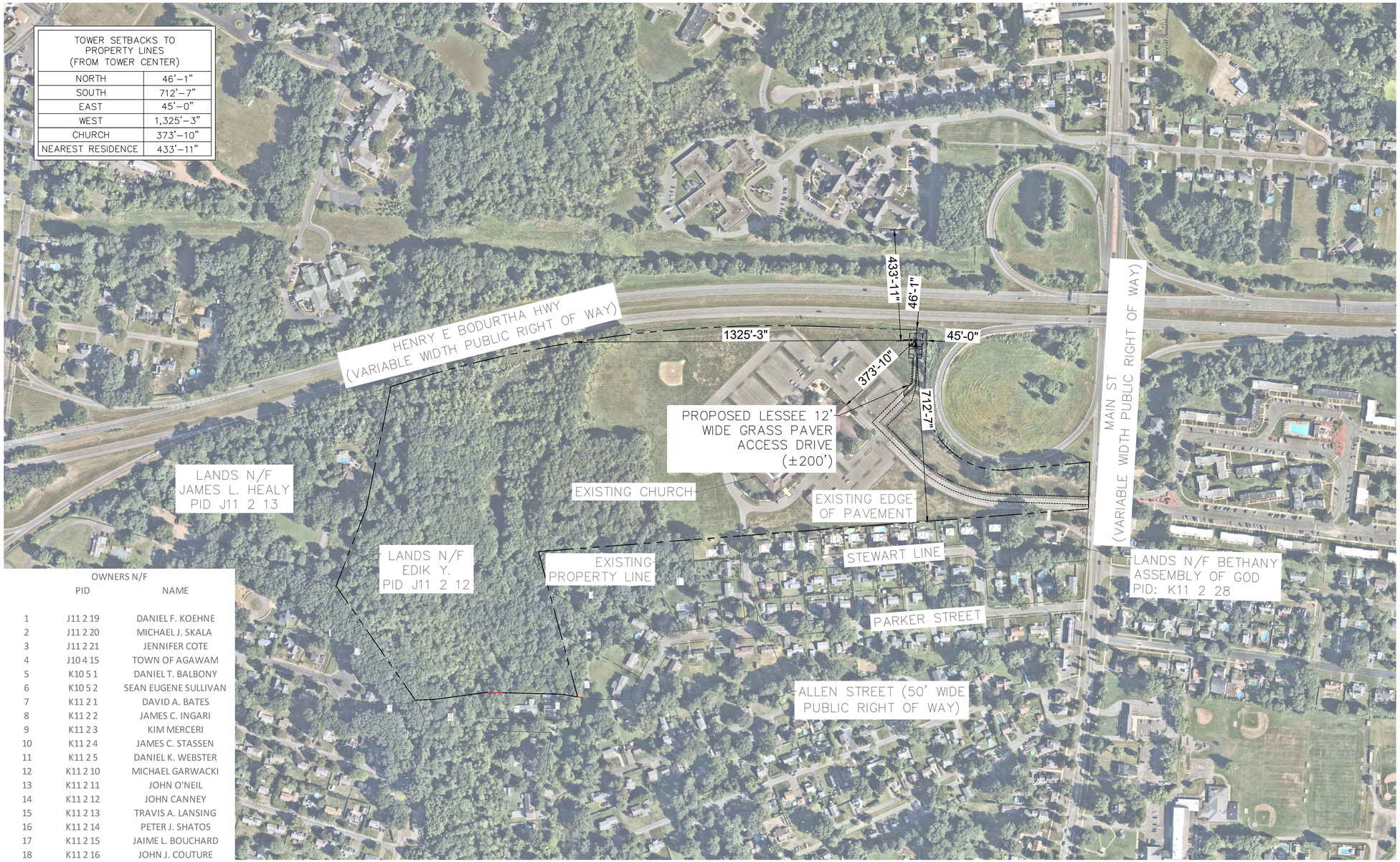

OWNERS N/F

	PID	NAME
1	J11 2 19	DANIEL F. KOEHNE
2	J11 2 20	MICHAEL J. SKALA
3	J11 2 21	JENNIFER COTE
4	J10 4 15	TOWN OF AGAWAM
5	K10 5 1	DANIEL T. BALBONY
6	K10 5 2	SEAN EUGENE SULLIVAN
7	K11 2 1	DAVID A. BATES
8	K11 2 2	JAMES C. INGARI
9	K11 2 3	KIM MERCERI
10	K11 2 4	JAMES C. STASSEN
11	K11 2 5	DANIEL K. WEBSTER
12	K11 2 10	MICHAEL GARWACKI
13	K11 2 11	JOHN O'NEIL
14	K11 2 12	JOHN CANNEY
15	K11 2 13	TRAVIS A. LANSING
16	K11 2 14	PETER J. SHATOS
17	K11 2 15	JAIME L. BOUCHARD
18	K11 2 16	JOHN J. COUTURE
19	K11 2 17	NICOLAI DUBINEVICI
20	K11 2 18	GLORIA J. AFFLITTO
21	K11 2 19	ISUEL SANCHEZ
22	K11 2 20	JOSEPH R. SPAGNOLI
23	K11 2 21	APRIL J. GRAZIANO

SURVEY NOTE:

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1 / C0.2 OVERALL PARCEL PLAN

SCALE: 1:200

NORTH

0 100 200 400

GRAPHIC SCALE: 1" = 200'

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SHEET TITLE:

OVERALL PARCEL PLAN

SHEET NUMBER:

C0.2

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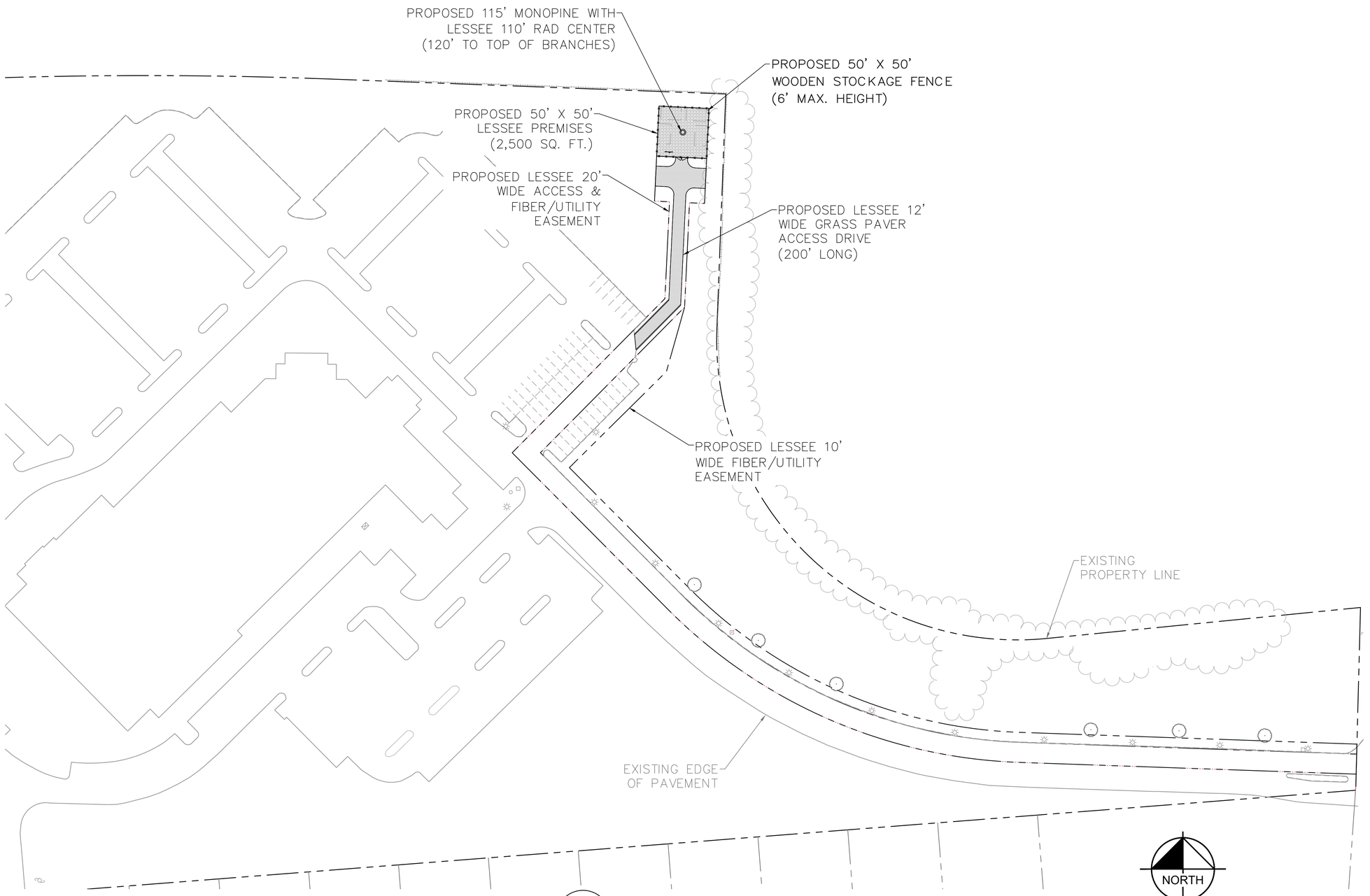

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1 / C1 **OVERALL SITE PLAN**

SCALE: 1" = 50'

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OVERALL SITE PLAN

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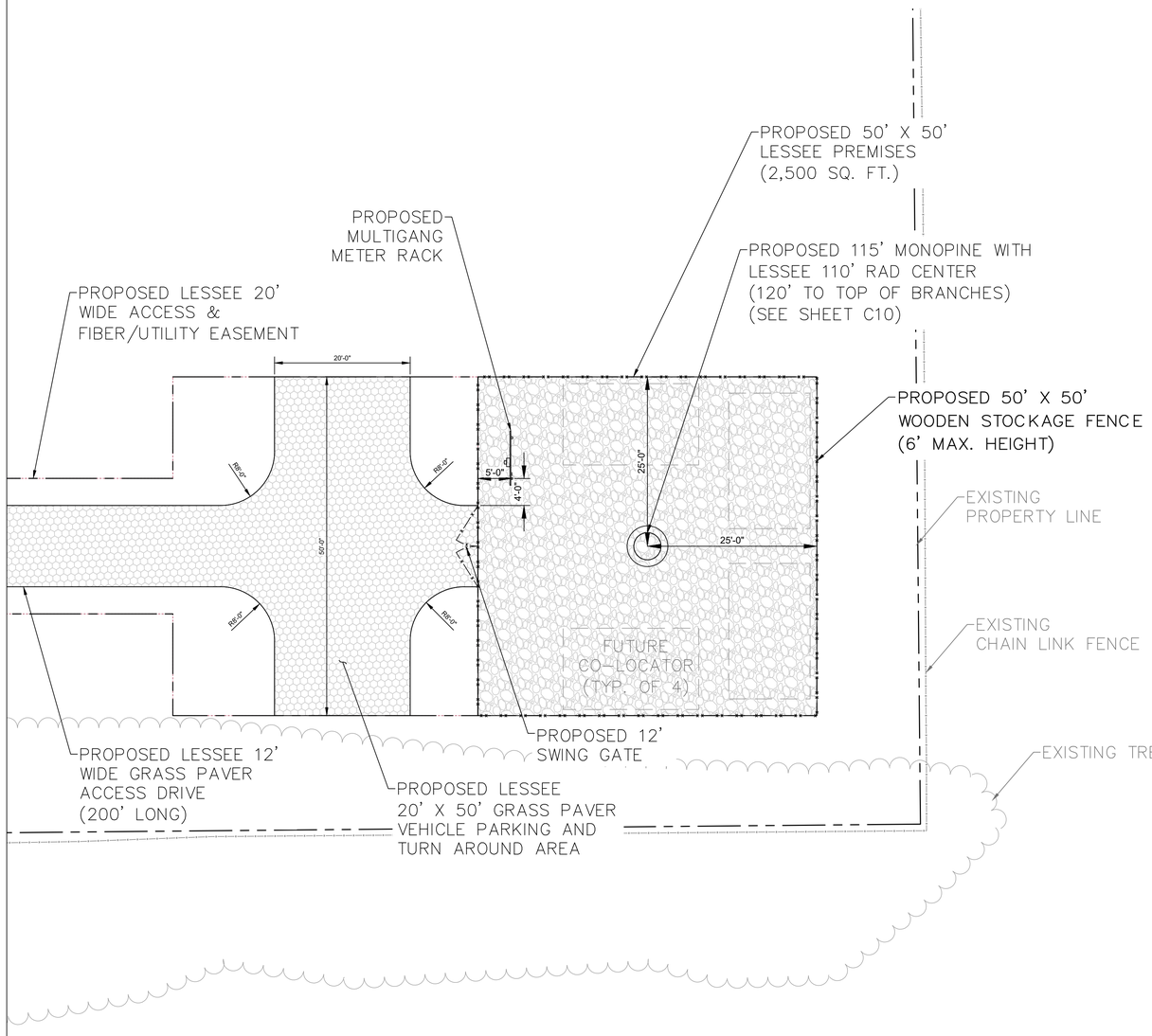
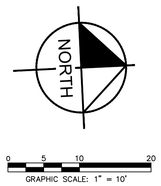


1 / C2 SITE PLAN

SCALE: 1" = 10'



SITE NOTES:

1. DIAMOND COMMUNICATIONS STAFF SHALL COORDINATE WITH THE PROPERTY OWNER AND/OR TOWER OWNER TO OBTAIN THE PROPER EASEMENT AGREEMENTS TO CONSTRUCT AND MAINTAIN EQUIPMENT IN AND AROUND THE TOWER COMPOUND.
2. PROPOSED COMPOUND LAYOUT BASED ON SURVEY PROVIDED BY GEOLINE SURVEYING, INC DATED SITE VISIT ON 08/14/23.
3. CONTRACTOR TO CONFIRM WITH DIAMOND COMMUNICATIONS CONSTRUCTION MANAGER THAT THE SHELTER/EQUIPMENT SHOWN HAS BEEN ORDERED/SCHEDULED FOR DELIVERY TO THIS SITE.
4. THE BASIS OF EQUIPMENT DESIGN INCLUDES ONE (1) RF CABINET, ONE (1) FUTURE BATTERY CABINET, AND ONE (1) FUTURE EXPANSION CABINET.
5. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND MODIFYING SCOPE OF WORK TO ACCOMMODATE ANY CHANGES IN THE EXACT EQUIPMENT PROCURED BY DIAMOND COMMUNICATIONS. COORDINATE ANY CHANGES WITH DIAMOND COMMUNICATIONS CONSTRUCTION MANAGER.
6. ROUTE COAX/FIBER UP TOWER PER STRUCTURAL ANALYSIS BY TOWER OWNER.
7. TOWER DIMENSIONS SHOWN ON THIS PLAN ARE FOR TOWER CENTER LOCATION. CONTRACTOR TO OBTAIN COPY OF TOWER ERECTION DRAWINGS FROM DIAMOND COMMUNICATIONS CONSTRUCTION MANAGER PRIOR TO DRILLING TOWER FOUNDATIONS. CASSIONS AND TOWER SHOWN ON THIS PLAN ARE ILLUSTRATIVE, SEE DESIGN DRAWING BY OTHERS. DO NOT SCALE.

LEGEND

EXISTING FENCE	
PROPOSED FENCE	
COMPACTED GRAVEL	
REINFORCED TURF/ GRASS PAVER	

Diamond Communications LLC

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SITE No.: MA054

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LICENSER:



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JAR	CDS

SHEET TITLE:
SITE PLAN

SHEET NUMBER:
C2

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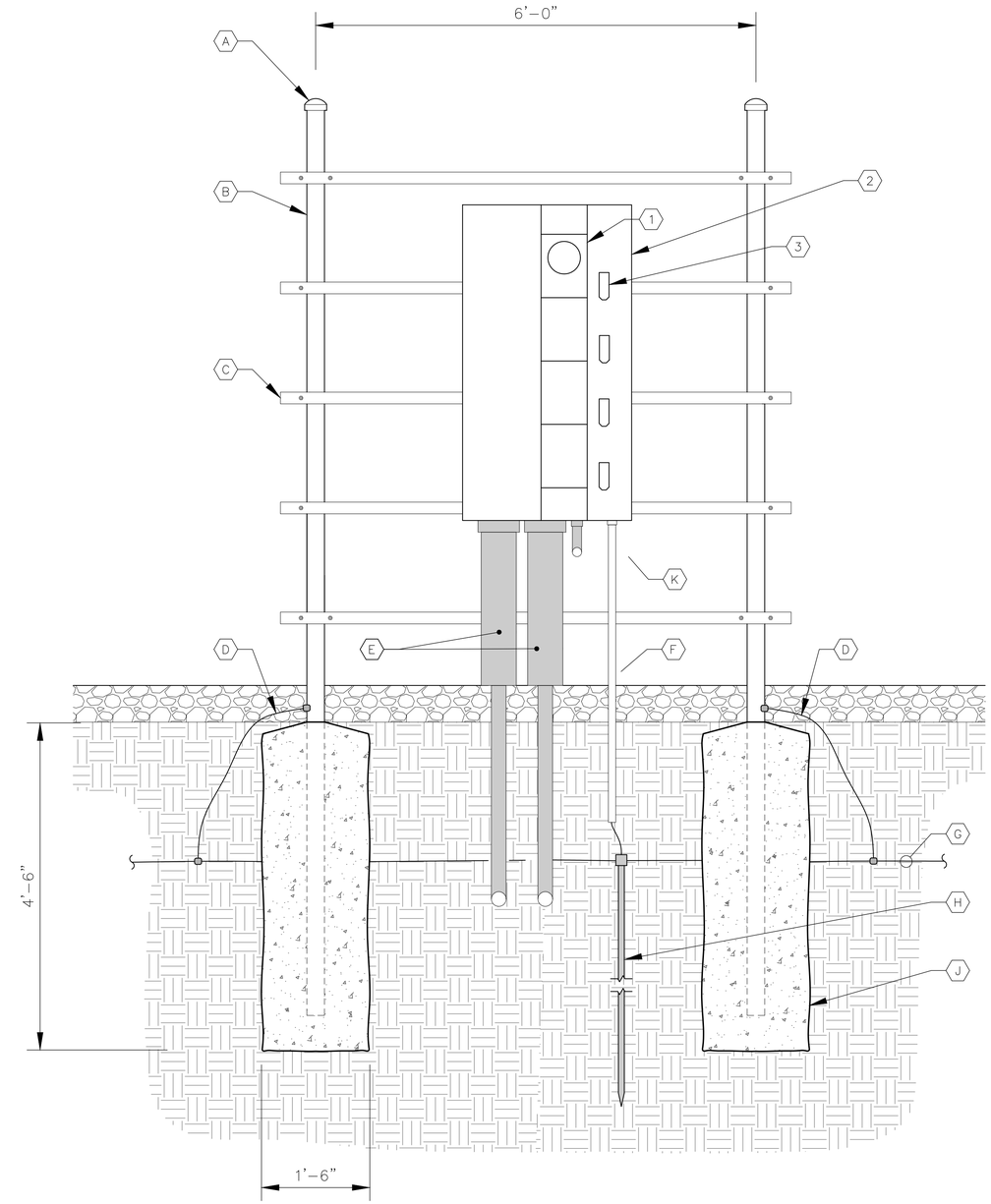

KEY NOTES - CONDUIT, CONDUCTORS, & MISC

- A — GALVANIZED RIGID STEEL CAP, TYPICAL.
- B — 3" GALVANIZED RIGID STEEL PIPE, TYPICAL.
- C — 1-5/8" x 1-5/8" GALVANIZED STEEL CHANNEL (UNISTRUT #P1000 OR APPROVED EQUIVALENT) WITH PLASTIC END CAP (UNISTRUT #P2860), TYPICAL.
- D — ONE (1) #2 AWG BARE SOLID TINNED COPPER BONDING CONDUCTOR IN ¾" PVC CONDUIT FROM H-FRAME VERTICAL PIPE TO GROUND RING, EXOTHERMIC WELD BOTH ENDS.
- E — 3" PVC CONDUIT WITH 6" EXPANSION SLEEVE FOR INCOMING SERVICE LATERALS FROM LOCAL UTILITY. SEE DETAIL 3/E7 FOR TRENCHING INFORMATION.
- F — 1" PVC WITH ONE (1) – 3/0 BARE STRANDED TINNED COPPER GROUNDING ELECTRODE CONDUCTOR (GEC) TO GROUND ROD, EXOTHERMIC WELD GEC TO GROUND ROD.
- G — GROUND RING (SEE SHEETS E6-E7).
- H — GROUND ROD, EXOTHERMIC WELD TO GROUND RING (SEE DETAIL 2/E7).
- J — CONCRETE FOUNDATION FOR H-FRAME VERTICAL PIPE. CONCRETE SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH OF 3,000 PSI.
- K — 1½" PVC POWER CONDUIT TO LGT PANEL.

KEY NOTES - ELECTRICAL EQUIPMENT

1. 200 AMP METER SOCKET IN NEMA 3R ENCLOSURE, TYPICAL OF 4.
2. FURNISH AND INSTALL SERVICE ENTRANCE RATED GANGED METER CENTER WITH FOUR (4) – 200 AMP (22KAIC), 120/240 VOLT SINGLE PHASE SERVICE POSITIONS IN NEMA 3R ENCLOSURE. COORDINATE SPECIFIC REQUIREMENTS WITH LOCAL UTILITY.
3. 200 AMP, 2 POLE (22KAIC) DISCONNECT CIRCUIT BREAKER FOR TOP METER ONLY. CONTRACTOR SHALL MOUNT THE METER CENTER SUCH THAT THE TOP CIRCUIT BREAKER IS NO MORE THAN 6' ABOVE GRADE.

1 / C3 EQUIPMENT RACK DETAILS - FRONT

NOT TO SCALE

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SHEET TITLE:

EQUIPMENT RACK DETAIL - FRONT

SHEET NUMBER:

C3

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FENCE NOTES:

1. USE 3000–PSI CONCRETE, FULLY CONSOLIDATED AROUND THE POST.

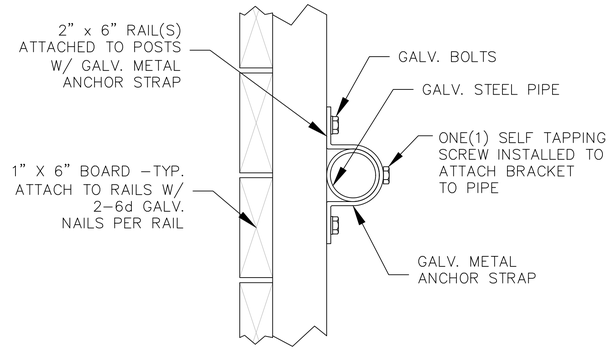
2. WHERE THE POST IS SET IN ROCK OR CONCRETE, CORE A HOLE 12" DEEP AND 1" LARGER IN DIAMETER THAN THE POST. SET THE POST AND GROUT IN PLACE USING NON–SHRINK GROUT.

3. ALL POSTS MUST BE PLUMB AND ALIGNED WITH ONE ANOTHER IN BOTH HORIZONTAL AND VERTICAL PLANES.

4. PROVIDE MIDRAILS AND BRACING AT ALL CORNER POSTS WHERE THE FENCE CHANGES DIRECTION BY MORE THAN 30 DEGREES.

5. THE GRADE OF THE SITE AND INSTALLATION OF THE FENCE SHALL PROVIDE FOR NO MORE THAN A 3" GAP BETWEEN THE BOTTOM OF THE FENCE MATERIAL AND FINISH GRADE.

6. CONTRACTOR SHALL PROVIDE HOLD OPEN DEVICES FOR ALL GATES AT THE SPECIFIED OPEN POSITIONS, DRIVEN PIPE TYPE RECEIVERS ARE NOT AUTHORIZED.



SECTION "A-A"
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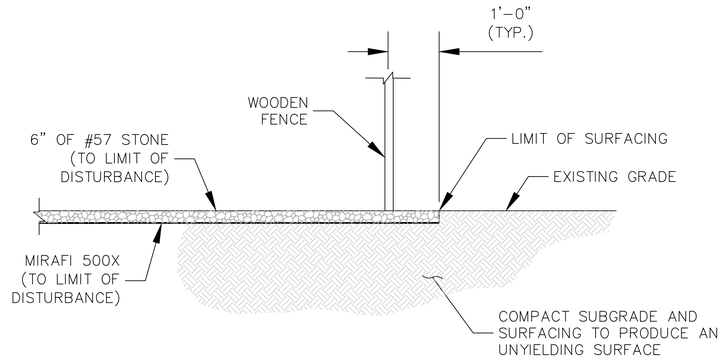
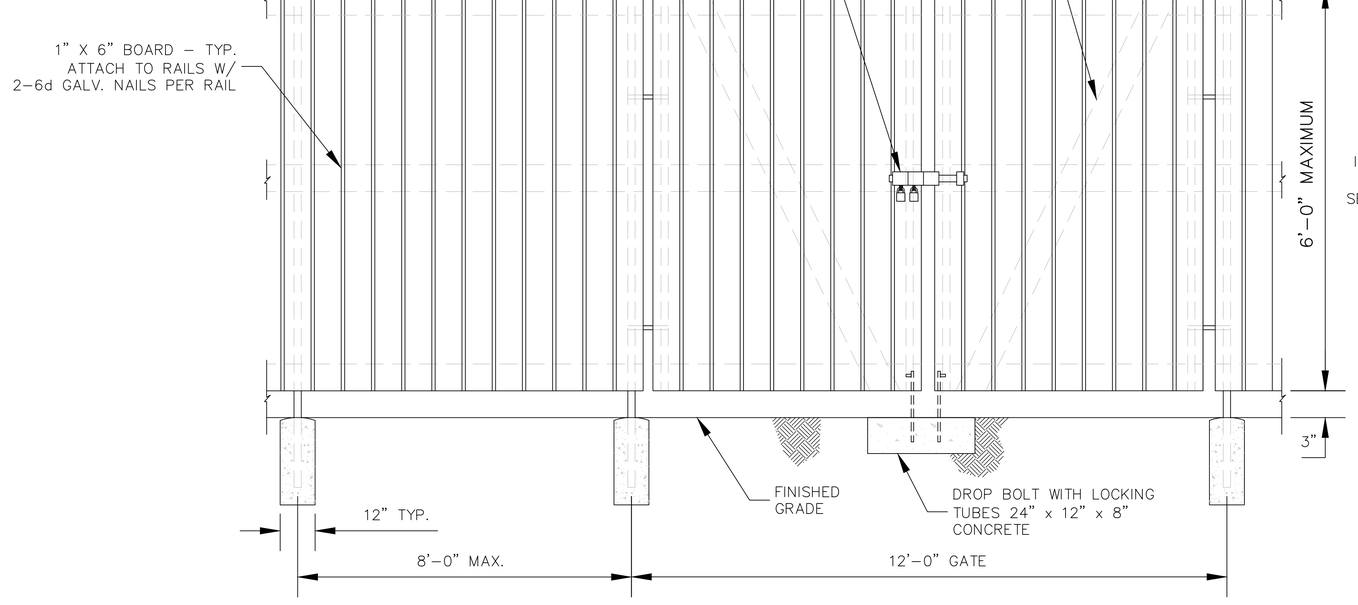
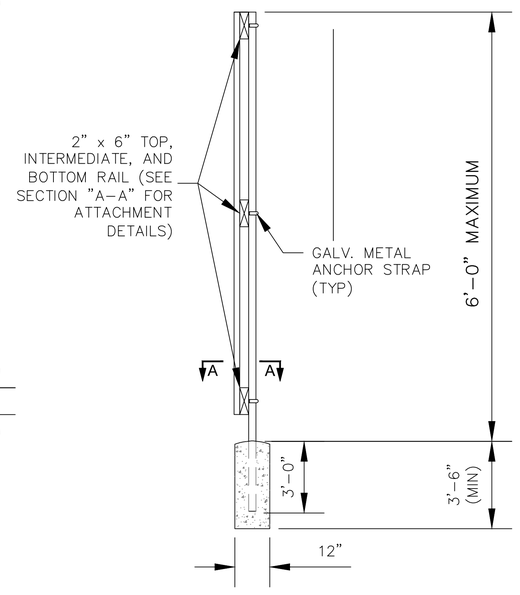


3 / C4 SITE COMPOUND SURFACE DETAIL
NOT TO SCALE



1 / C4 WOODEN FENCE AND GATE ELEVATION
NOT TO SCALE



2 / C4 SIDE ELEVATION VIEW
NOT TO SCALE

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42525

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DRAWN BY: JAR | CHECKED BY: CDS

SHEET TITLE:
FENCE, GATE, AND COMPOUND DETAILS

SHEET NUMBER:
C4

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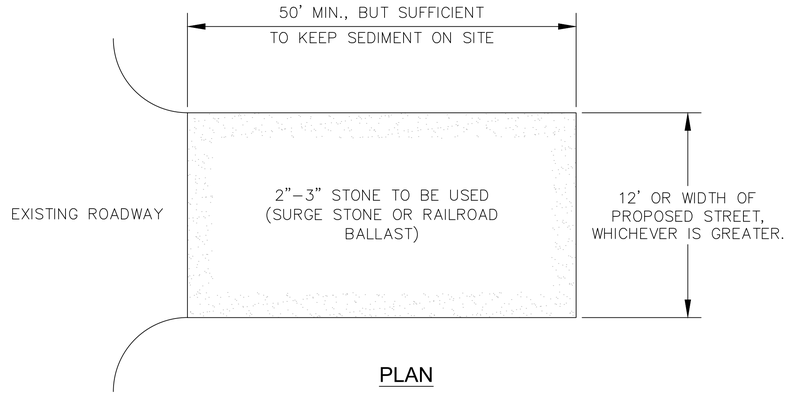
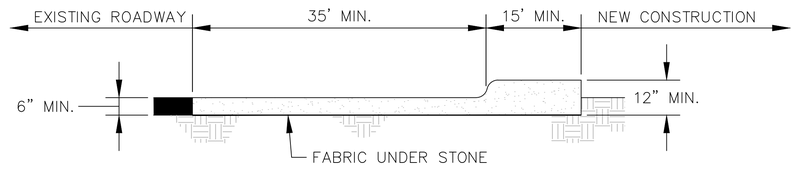


PLAN

NOTES:

1. PUT SILT FENCE OR TREE PROTECTION FENCE UP TO ENSURE CONSTRUCTION ENTRANCE IS USED.
2. IF CONSTRUCTION ON THE SITES ARE SUCH THAT THE MUD IS NOT REMOVED BY THE VEHICLE TRAVELING OVER THE STONE, THEN THE TIRES OF THE VEHICLES MUST BE WASHED BEFORE ENTERING THE PUBLIC ROAD.
3. IF A PROJECT CONTINUES TO PULL MUD AND DEBRIS ON TO THE PUBLIC ROAD, THE GOVERNING AUTHORITY WILL CLEAN THE AREA AND INVOICE THE FINANCIALLY RESPONSIBLE PERSON AS INDICATED ON THE FINANCIAL RESPONSIBILITY FORM.



CROSS SECTION

1 / C5 CONSTRUCTION ENTRANCE

NOT TO SCALE

K:\ATL_Wireless\Diamond Communications\Bethany Assembly of God - MA054\CAD\ZD\ECar-GB.dwg ---- 04/25/25 1:35 PM by: William.Bridger

Diamond Communications LLC

PROJECT INFORMATION:

SITE NAME:
BETHANY ASSEMBLY OF GOD
SITE No.: MA054

580 MAIN ST
AGAWAM, MA 01001
HAMPDEN COUNTY

PLANS PREPARED BY:

Kimley»Horn
11720 AMBER PARK DRIVE, SUITE 600
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM

REV: | DATE: | ISSUED FOR: | BY:

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4	04/25/25	ZONING	DCC
3	04/18/25	ZONING	DCC
2	10/24/24	ZONING	DMF
1	02/14/24	ZONING	DMF
0	01/19/24	ZONING	DMF

LICENSER:

COMMONWEALTH OF MASSACHUSETTS
DANIEL C. CLASBY
CIVIL
No. 57896
REGISTERED PROFESSIONAL ENGINEER
4.25.25

KHA PROJECT NUMBER:

013541034

DRAWN BY: JAR | CHECKED BY: CDS

SHEET TITLE:

ACCESS ROAD DETAILS

SHEET NUMBER:

C5

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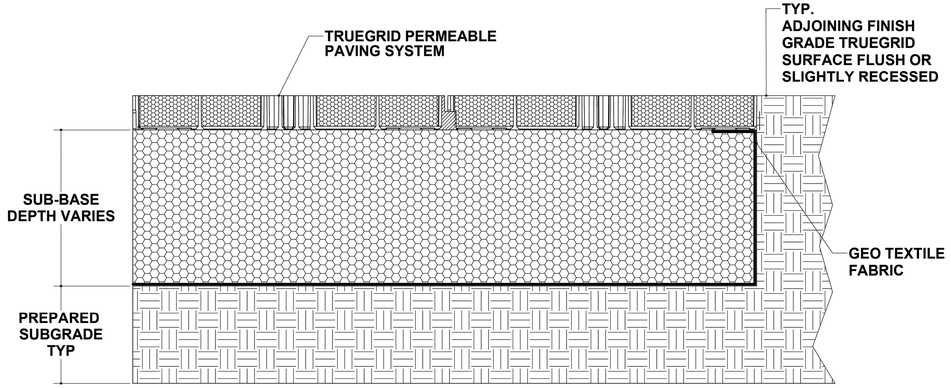
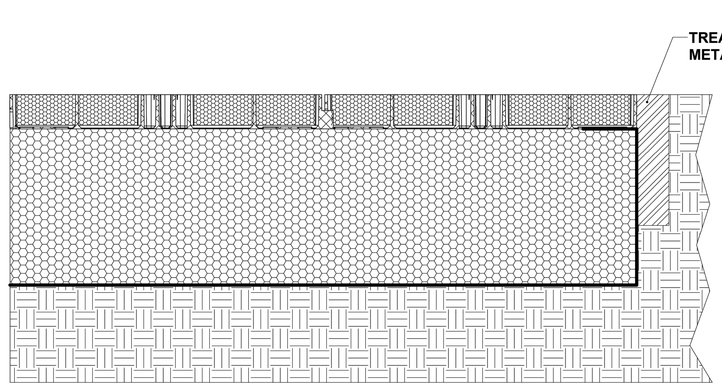
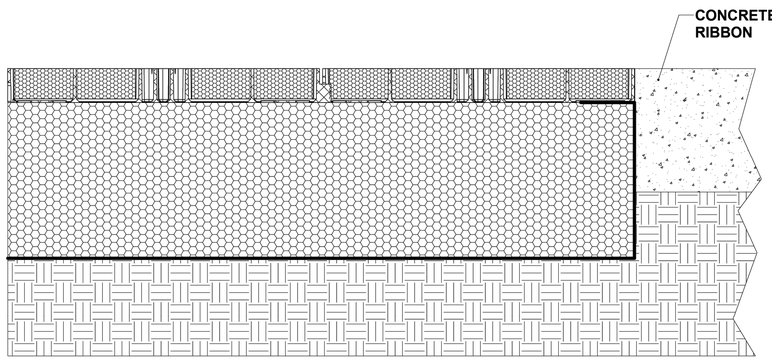


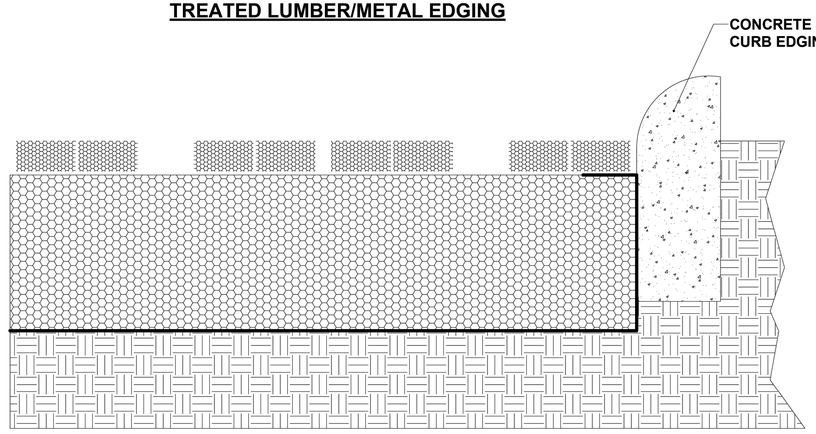
EXISTING GRADE



TREATED LUMBER/METAL EDGING



CONCRETE RIBBON EDGING OR TRANSITION TO HARDSCAPE



FOR PRICING OR ORDERING: CALL 1-855-355-GRID (4743). IN STOCK. FACTORY DIRECT.

REV	REVISION	DRAWN	CHECKED	APPROVED	DATE
03	UPDATED CONCRETE RIBBON	JT	JT	CW	6/20/2018

1-855-355-GRID (4743)

MADE IN U. S. A.

TRUEGRIDPAVER.com

CLIENT / PROJECT

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APPROVAL INFORMATION

DRAWN BY: J. Thethy	DATE: 8/22/2017	
CHECKED BY: J. Thethy	DATE: 8/22/2017	
APPROVED BY: C. White	DATE: 8/22/2017	
WEIGHT:		

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TRUEGRID EDGING OPTIONS

SIZE: D | DRAWING NUMBER: TG-EDGE-OPTS | REV: 03

SCALE: 1:3 | SHEET: 1 OF 1

Diamond Communications LLC

PROJECT INFORMATION:

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SITE No.: MA054

580 MAIN ST
AGAWAM, MA 01001
HAMPDEN COUNTY

PLANS PREPARED BY:

Kimley»Horn

11720 AMBER PARK DRIVE, SUITE 600
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PHONE: 770-619-4280
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LICENSER:

COMMONWEALTH OF MASSACHUSETTS
DANIEL C. CLASBY
CIVIL
No. 57896
REGISTERED PROFESSIONAL ENGINEER
4.25.25

KHA PROJECT NUMBER:

013541034

DRAWN BY: JAR | CHECKED BY: CDS

SHEET TITLE:

ACCESS ROAD TRUEGRID DETAILS

SHEET NUMBER:

C6

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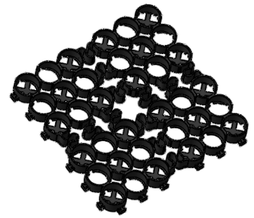
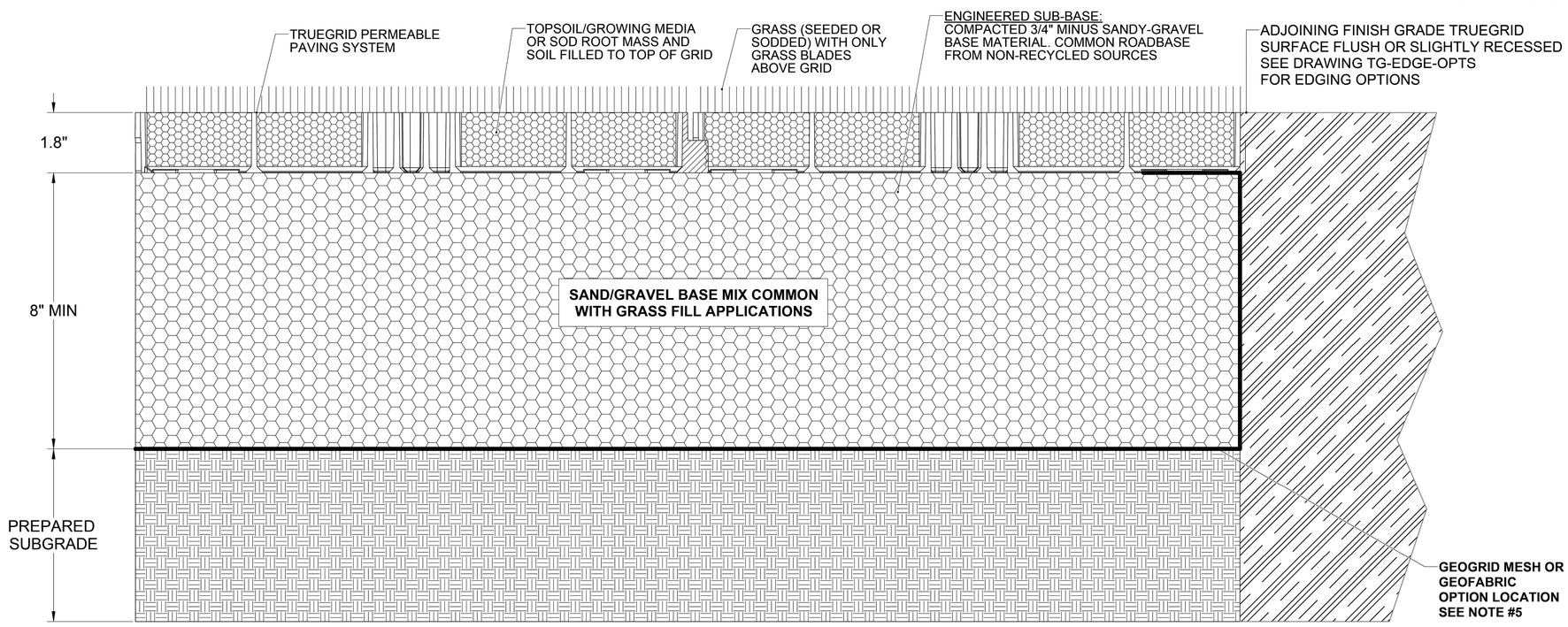
NOTES:

1. SUB-BASE DEPTH AND PREPARATION IS DEPENDENT ON SITE CONDITIONS PLUS LOADING REQUIREMENTS.
2. TRUEGRID PRO PLUS PRODUCTS ARE SUFFICIENTLY RATED FOR H-20 /HS-20 LOADING AND GREATER.
3. SEEDING METHOD: FILL SOIL/GROWING MEDIA TO TOP OF GRID. APPLY SEEDING OR HYDROSEEDING PER MANUFACTURERS' (BY OTHERS) REQUIRED APPLICATION RATES.
4. SOD INSTALLATION METHOD: FILL TOPSOIL/GROWING MEDIA HALF-WAY (~1") WITHIN TRUEGRID AND PRESS IN SOD SO THAT TOP OF GRID IS AT SOIL/ROOT LEVEL AND ONLY THE GRASS BLADES EXTEND ABOVE THE GRID.
5. GEOGRID MESH OR GEOFABRIC MAY BE REQUIRED BETWEEN SUBGRADE & SUBBASE FOR CERTAIN SOILS AND SITE SPECIFIC REQUIREMENTS.
6. NO STAKING NECESSARY WITH TRUEGRID PRO PLUS WHEN SLOPE IS BELOW 20 DEGREES. ASSESS PROJECT, AS NEEDED.
7. TRUEGRID PRO PLUS IS ADA COMPLIANT WITH PROPER FILL MATERIAL.
8. ALTERNATIVE ENGINEERED SUB-BASE MIXES CAN BE USED PROVIDED THEY PROMOTE GRASS GROWTH, HAVE ADEQUATE VOID SPACE FOR DRAINAGE, AND PROVIDE REQUIRED STRUCTURAL SUPPORT.
9. THIS CROSS SECTION IS FOR INFORMATION ONLY.



TRUEGRID BLOCK REFERENCE VIEW
PREASSEMBLED & DELIVERED IN 4' X 4' SHEET. RECONFIGURED AS NEEDED.NO EXTRA TOOLING OR ACCESSORIES REQUIRED



GRASS FILL HEAVY LOAD TRUEGRID PRO PLUS

APPLICATION:

HEAVY LOAD PARKING LOT, FIRE LANES, EQUIPMENT YARD, SERVICE ROADS.

MANUFACTURED IN NORTH AMERICA

1-855-355-GRID (4743)

REV	REVISION	DRAWN	CHECKED	APPROVED	DATE
01	UPDATED NOTES, AND FLAG NOTES	JT	JT	CW	9/3/2020

CLIENT / PROJECT

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APPROVAL INFORMATION

DRAWN BY:	J. Thethy	DATE: 2/28/2020
CHECKED BY:	J. Thethy	DATE: 2/28/2020
APPROVED BY:	C. White	DATE: 2/28/2020
FILE I.D.:	TG-GRS-HL.sldprt	

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TRUEGRID GRASS FILL INSTALLATION HEAVY LOAD

SIZE D | DRAWING NUMBER: TGFB-GRS-HL | REV 01

SCALE 1:1.5 | SHEET 1 OF 1

Diamond Communications LLC

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SITE No.: MA054

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HAMPDEN COUNTY

PLANS PREPARED BY:

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COMMONWEALTH OF MASSACHUSETTS
DANIEL C. CLASBY
CIVIL
No. 57896
REGISTERED PROFESSIONAL ENGINEER
4.25.25

KHA PROJECT NUMBER: 013541034

DRAWN BY: JAR | CHECKED BY: CDS

SHEET TITLE: ACCESS ROAD TRUEGRID DETAILS

SHEET NUMBER: C7

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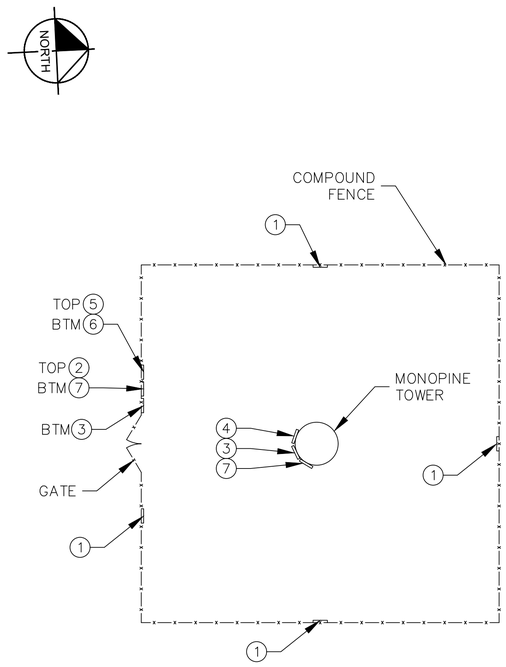


1 / C8 SIGN PLACEMENT PLAN VIEW

NOT TO SCALE



① NO-TRESPASSING SIGN

18" HIGH X 24" WIDE

(OPERATIONS PROVIDED)

② DIAMOND COMMUNICATIONS - SITE ID SIGN

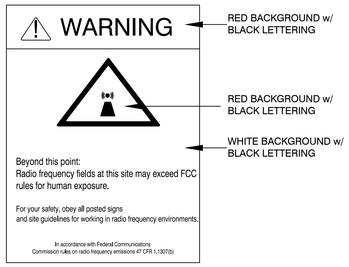
15" HIGH X 23" WIDE

(OPERATIONS PROVIDED)

③ NOTICE-RFE SIGN

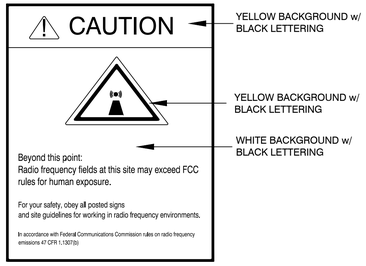
12" HIGH X 18" WIDE

(OPERATIONS PROVIDED)



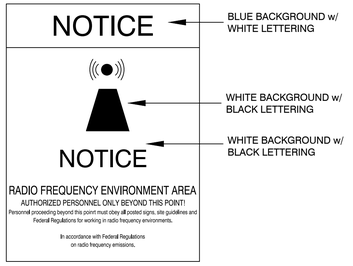
④ WARNING-RF SIGN (RED)

12" WIDE X 18" HIGH



⑤ CAUTION-RF SIGN (YELLOW)

12" WIDE X 18" HIGH



⑥ NOTICE-RF SIGN (BLUE)

12" WIDE X 18" HIGH

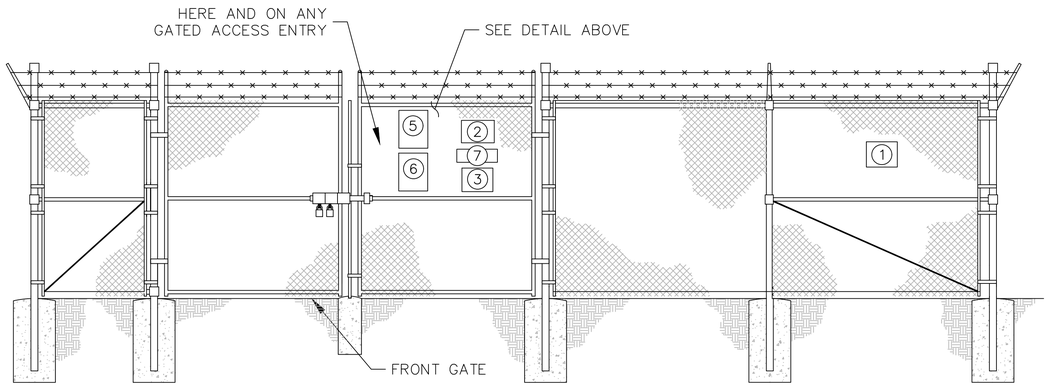


⑦ FCC REGISTRATION SIGN

20 WIDE X 4" HIGH

2 / C8 TYPICAL SIGNS AND SPECIFICATIONS

NOT TO SCALE



3 / C8 SIGN PLACEMENT FRONT GATE VIEW

NOT TO SCALE

SIGNAGE NOTES:

1. SIGNS SHALL BE FABRICATED FROM CORROSION RESISTANT PRESSED METAL, AND PAINTED WITH LONG LASTING UV RESISTANT COATINGS.
2. SIGNS (EXCEPT WHERE NOTED OTHERWISE) SHALL BE MOUNTED TO THE TOWER, GATE, AND FENCE USING A MINIMUM OF 9 GAUGE ALUMINUM WIRE, HOG RINGS (AS UTILIZED IN FENCE INSTALLATIONS) OR BRACKETS WHERE NECESSARY. BRACKETS SHALL BE OF SIMILAR METAL AS THE STRUCTURE TO AVOID GALVANIC CORROSION.

Diamond Communications LLC

PROJECT INFORMATION:

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580 MAIN ST
AGAWAM, MA 01001
HAMPDEN COUNTY

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11720 AMBER PARK DRIVE, SUITE 600
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LICENSER:



KHA PROJECT NUMBER:

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DRAWN BY: JAR | CHECKED BY: CDS

SHEET TITLE:

SITE SIGNAGE DETAILS

SHEET NUMBER:

C8

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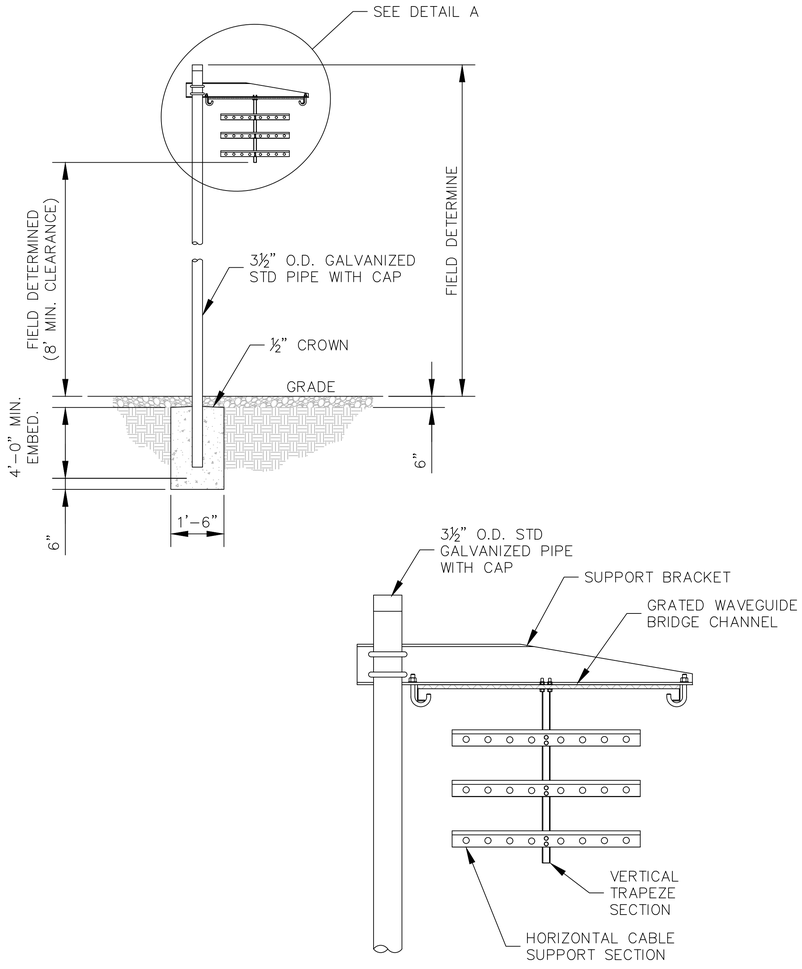
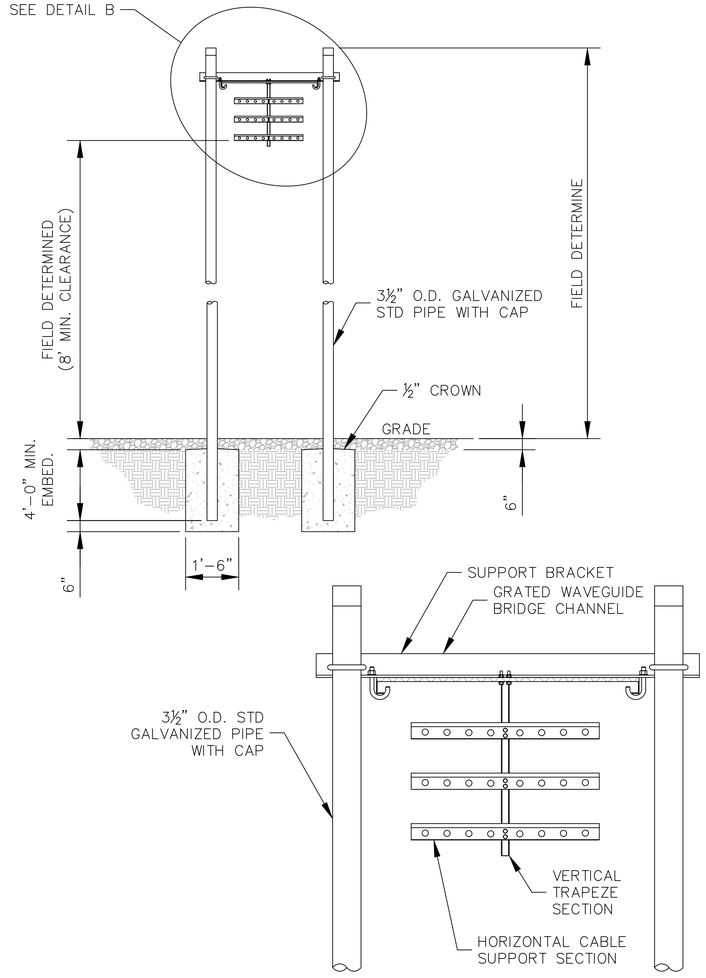


DETAIL A

ANDREW 1 POST WAVEGUIDE BRIDGE KIT (PART #: WB-K210-B15, OR APPROVED EQUIVALENT)

NOTE:

1. ALL MATERIALS FURNISHED BY CONTRACTOR UNLESS OTHERWISE NOTED.



DETAIL B

ANDREW 2 POST WAVEGUIDE BRIDGE KIT (PART #: WB-K410-B15, OR APPROVED EQUIVALENT)

NOTE:

1. ALL MATERIALS FURNISHED BY CONTRACTOR UNLESS OTHERWISE NOTED.

1/C9 WAVEGUIDE BRIDGE DETAIL

NOT TO SCALE

2/C9 WAVEGUIDE BRIDGE DETAIL (ALT DESIGN - 2 PIPE COLUMNS)

NOT TO SCALE

Diamond Communications LLC

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COMMONWEALTH OF MASSACHUSETTS
DANIEL C. CLASBY
CIVIL
No. 57896
REGISTERED PROFESSIONAL ENGINEER
42525

KHA PROJECT NUMBER:

013541034

DRAWN BY:	CHECKED BY:
JAR	CDS

SHEET TITLE:

WAVEGUIDE BRIDGE DETAILS

SHEET NUMBER:

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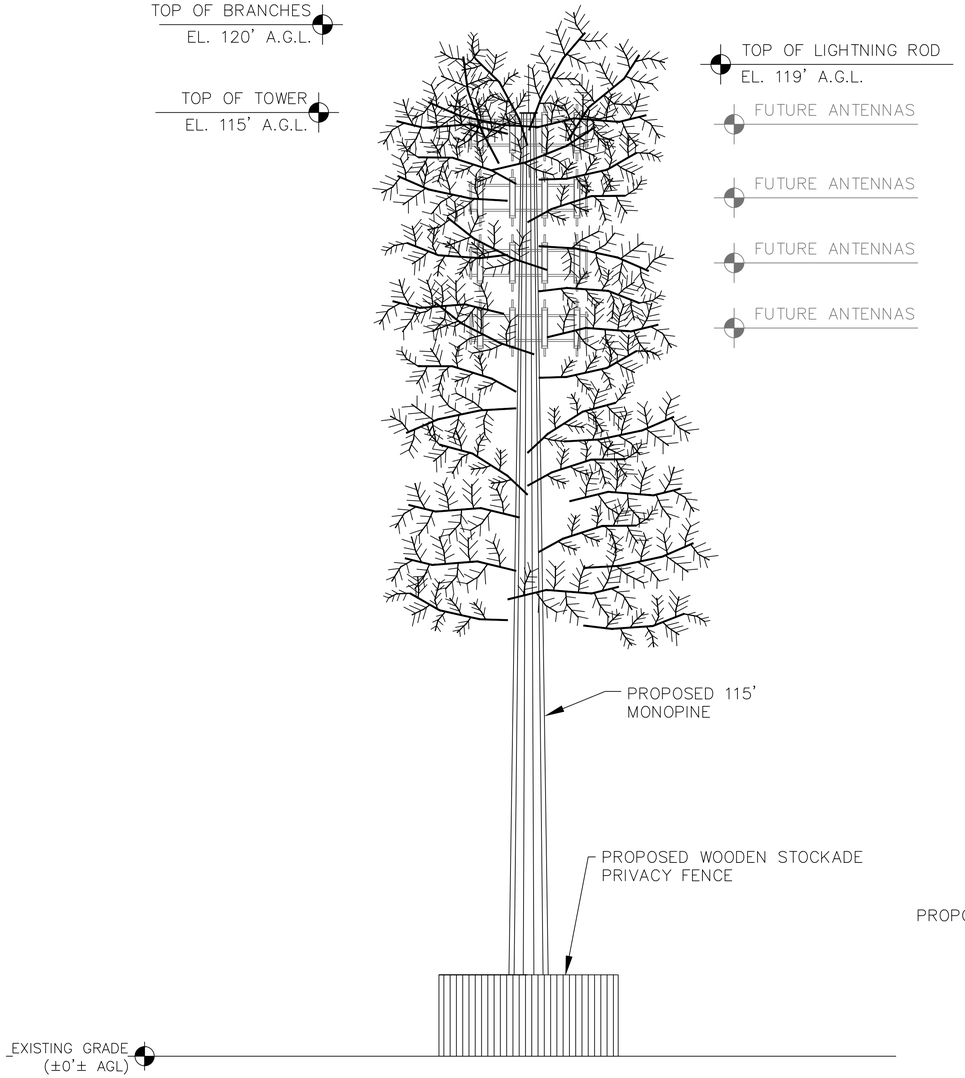
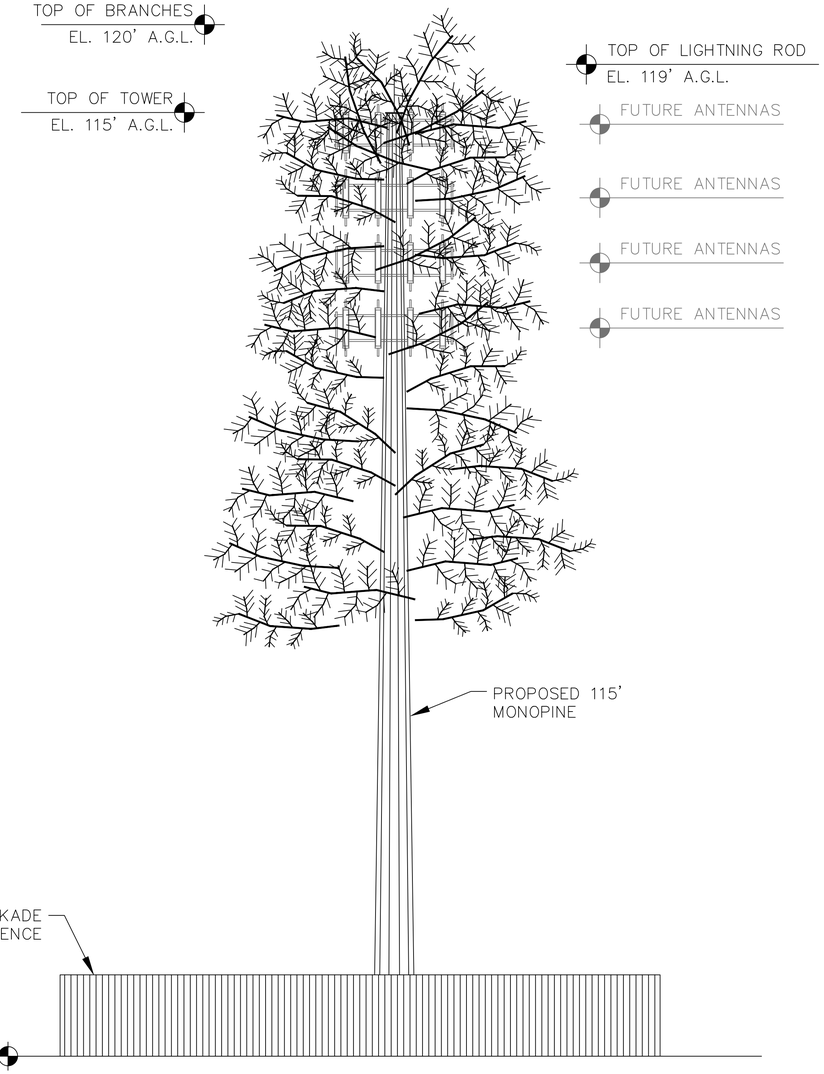


1 C10 MONOPINE TOWER ELEVATION - EAST VIEW (FACING WEST)

NOT TO SCALE



2 C10 MONOPINE TOWER ELEVATION - NORTH VIEW (FACING SOUTH)

NOT TO SCALE

NOTES:

1. ALL INFORMATION ON THIS PAGE IS PROVIDED BY DIAMOND COMMUNICATIONS AND/OR OTHERS AND IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. CONTRACTOR SHALL CONTACT THE DIAMOND COMMUNICATION CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION FOR ALL DETAILED ANTENNA, AND COAX CABLE INFORMATION.

2. REFER TO STRUCTURAL ANALYSIS BY TOWER OWNER FOR ANALYSIS OF PROPOSED TOWER.

3. IT IS UNDERSTOOD THAT KIMLEY-HORN MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED, FINDINGS, DESIGNS, RECOMMENDATIONS, SPECIFICATIONS, OPINION, OR PROFESSIONAL ADVICE RELATING TO THE STRUCTURAL ADEQUACY OF THE PROPOSED TOWER OR ATTACHMENT OF ANTENNAS OR OTHER APPURTENANCES.

NOTES:

1. ALL PROPOSED ATTACHMENTS TO TOWER BASED ON TOWER DESIGN DRAWINGS BY OTHERS (SEE GENERAL NOTE 1.07, SHEET N1).

2. THE TOWER ELEVATION SHOWN IS FOR REFERENCE ONLY.

3. COAX/FIBER CABLE LENGTHS ARE APPROXIMATE. CONTRACTOR TO VERIFY CORRECT LENGTH IN FIELD AT TIME OF CONSTRUCTION.

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KHA PROJECT NUMBER:

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DRAWN BY: JAR | CHECKED BY: CDS

SHEET TITLE:

ANTENNA AND TOWER ELEVATION DETAILS

SHEET NUMBER:

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NOTE:
CURRENT DESIGN ANTICIPATES APPROXIMATELY 8,462± SQ. FT. (0.19 ACRES) OF CLEARING AND GRADING FOR THE PROPOSED PROJECT. IF ADDITIONAL CLEARING IS REQUIRED BEYOND WHAT IS SHOWN IN THE PLANS THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND/OR PROJECT MANAGER. IF DURING THE BID WALK OR CONSTRUCTION IT IS DETERMINED THAT MORE THAN (1) ACRE OF LAND IS TO BE DISTURBED FOR CONSTRUCTION AN EROSION AND SEDIMENTATION CONTROL PLAN MUST BE FILED 30 DAYS PRIOR TO CONSTRUCTION.

GRADING NOTES:
1. THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE AND PLACE, COMPACT, AND MOISTURE CONDITION ALL FILL PER THE PROJECT GEOTECHNICAL ENGINEERS SPECIFICATIONS. FILL MATERIAL SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.
2. ALL PROPOSED CONTOURS AND SPOT ELEVATIONS REFLECT FINISHED GRADES.
3. CONTRACTOR SHALL BLEND EARTHWORK SMOOTHLY TO TRANSITION BACK TO EXISTING GRADE.
4. PORTIONS OF THE SITE NOT SPECIFICALLY MENTIONED WITHIN THE GEOTECHNICAL REPORT SHALL BE COMPACTED TO 95 PERCENT OF THE MATERIALS MAXIMUM DRY DENSITY WITHIN 3 PERCENT OF OPTIMUM MOISTURE CONTENT.
5. FILL SHALL BE PLACED IN MAXIMUM 8 INCH LOOSE LIFTS.
6. UNDISTURBED AREAS WITHIN 30' INGRESS/EGRESS EASEMENT NOT NEEDED FOR UTILITY ROUTING TO BE LEFT UNDISTURBED.
7. GROUND WATER SHOULD BE REASONABLY EXPECTED. ANY DE-WATERING OR MOISTURE CONDITIONING IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHOULD BE INCLUDED IN THE CONTRACT PRICE.
8. SEED ALL DISTURBED AREAS NOT TOPPED WITH GRAVEL PER SEEDING SCHEDULE ON DETAIL ON SHEET C9.
9. MAXIMUM CUT SLOPE = 2H:1V UNLESS OTHERWISE NOTED.
10. MAXIMUM FILL SLOPE = 3H:1V UNLESS OTHERWISE NOTED.

LEGEND

EXISTING CONTOURS

PROPOSED CONTOURS

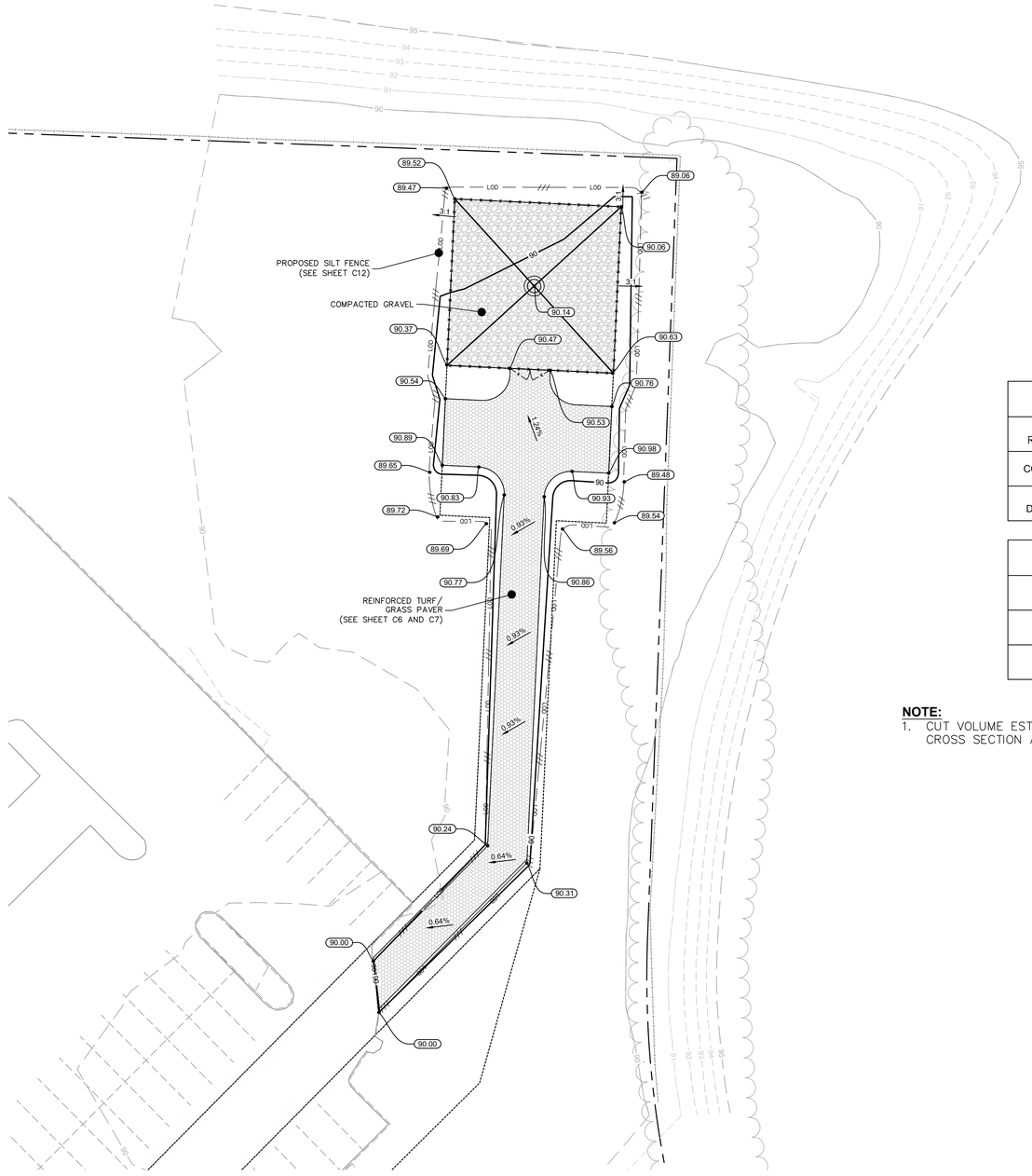
LOD/SILT FENCE — — LOD — /// — LOD — ///

EXISTING SPOT ELEVATION x XXX

PROPOSED SPOT ELEVATION ● XXX

COMPACTED GRAVEL

REINFORCED TURF/ GRASS PAVER



LAND COVER TABLE	
PERVIOUS REINFORCED TURF	3,224 SQ. FT.
COMPACTED GRAVEL	2,500 SQ. FT.
TOTAL LIMIT OF DISTURBANCE (LOD)	8,462 SQ. FT.

CUT / FILL TABLE	
CUT VOLUME:	225 CU. YD.
FILL VOLUME:	259 CU. YD.
NET VOLUME:	34 CU. YD. (FILL)

NOTE:
1. CUT VOLUME ESTIMATED BASED ON EXCAVATION REQUIRED FOR PAVER CROSS SECTION AND FOUNDATION INSTALLATIONS.

NORTH

0 10 20 40
GRAPHIC SCALE: 1" = 20'

1
C11
GRADING AND EROSION CONTROL PLAN
SCALE: 1" = 20'

Diamond Communications LLC

PROJECT INFORMATION:

SITE NAME:
BETHANY ASSEMBLY OF GOD
SITE No.: MA054

580 MAIN ST
AGAWAM, MA 01001
HAMPDEN COUNTY

PLANS PREPARED BY:

Kimley»Horn
11720 AMBER PARK DRIVE, SUITE 600
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM

REV: DATE: ISSUED FOR: BY:

8			
7			
6			
5			
4	04/25/25	ZONING	DCC
3	04/18/25	ZONING	DCC
2	10/24/24	ZONING	DMF
1	02/14/24	ZONING	DMF
0	01/19/24	ZONING	DMF

LICENSER:

COMMONWEALTH OF MASSACHUSETTS
DANIEL C. CLASBY
CIVIL
No. 57894
REGISTERED PROFESSIONAL ENGINEER
42525

KHA PROJECT NUMBER:
013541034

DRAWN BY: JAR CHECKED BY: DCC

SHEET TITLE:
GRADING AND EROSION CONTROL PLAN

SHEET NUMBER:
C11

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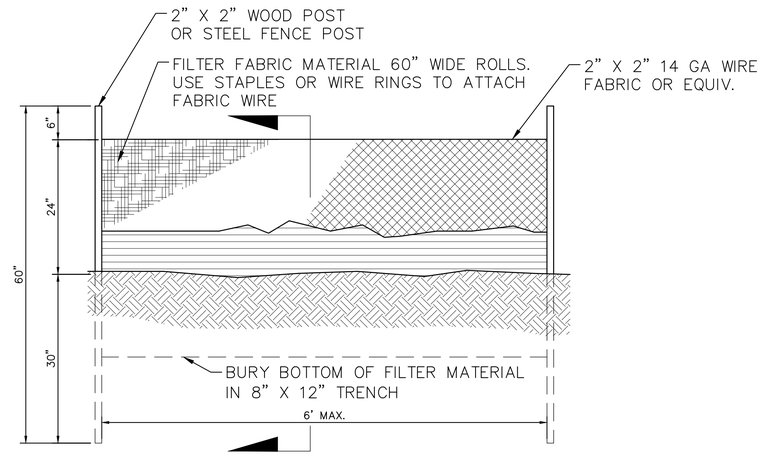
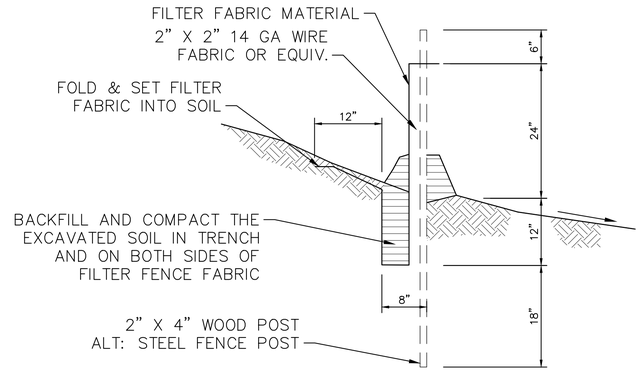


FRONT ELEVATION



SECTION A–A

NOTES:

1. CONSTRUCT SILT FENCE ALONG A LEVEL CONTOUR.
2. WHEN STANDARD STRENGTH FILTER FABRIC IS USED A WIRE MESH SUPPORT FENCE SHALL BE FASTENED TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY– DUTY WIRE STAPLES AR LEAST 1" LONG TIE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 4".
3. STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE AND 40" OF THE FABRIC SHALL EXTEND INTO THE TRENCH. WHEN EXTRA–STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED AND THE FILTER FABRIC STAPLED OR WIRED DIRECTLY TO THE POSTS.
4. FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL THEN CUT TO THE LENGTH OF THE BARRIER. WHEN JOINTS ARE NECESSARY FILTER CLOTH SHALL BE SPICED TOGETHER ONLY TO A SUPPORT POST WITH A MINIMUM 6" OVERLAP AND BOTH AND SECURELY FASTENED TO THE POST.
5. THE TRENCH SHALL BE BACKFILLED WITH IMPACTED NATIVE MATERIAL.
6. IF 85% OR MORE OF A SOIL BY WEIGHT PASSES THROUGH THE OPENINGS IN A NO. 200 SIEVE (U.S. STANDARD) FILTER FABRIC SHALL NOT BE USED.
7. FILTER FABRIC MATERIAL SHALL CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0 DEGREES FAHRENHEIT TO 120 DEGREES FAHRENHEIT.
8. SILT FENCES SHALL REMAIN IN PLACE UNTIL THE SLOPED AREA IS PERMANENTLY STABILIZED.
9. LEAVE AN UNDISTURBED OR STABILIZED AREA IMMEDIATELY DOWNSLOPE FROM THE FENCE.

1 / C12 SILT FENCE DETAILS

NOT TO SCALE

Diamond Communications LLC

PROJECT INFORMATION:

SITE NAME:
BETHANY ASSEMBLY OF GOD
SITE No.: MA054

580 MAIN ST
AGAWAM, MA 01001
HAMPDEN COUNTY

PLANS PREPARED BY:

Kimley»Horn
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ALPHARETTA, GA 30009
PHONE: 770-619-4280
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LICENSER:

COMMONWEALTH OF MASSACHUSETTS
DANIEL C. CLASBY
CIVIL
No. 57896
REGISTERED PROFESSIONAL ENGINEER
4.25.25

KHA PROJECT NUMBER:

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DRAWN BY: JAR | CHECKED BY: DCC

SHEET TITLE:

SILT FENCE DETAILS

SHEET NUMBER:

C12

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Town of Agawam

Building Department

1000 Suffield Street, Agawam, Massachusetts 01001

Telephone - (413) 821-0632

Kevin Duquette

Inspector of Buildings

inspections@agawam.ma.us

May 23, 2025

To: Office of Planning and Community Development:

Re: Site Plan Review Comments- 580 Main Street Agawam, MA 01001- Bethany Assembly of God- Proposed Cell Tower Project;

The Building Department has the following comments for the proposed cell tower project located on the property referenced above:

- Project will require a special permit by the Z.B.A- #180-94-B.
- Proposed fence height of 8’ will require a variance- #180-97-H.
- Proposed base location does not meet the required setbacks from the property lines, variance required- #180-96-K.

Respectfully,

Kevin Duquette

Kevin Duquette
Inspector of Buildings
Town of Agawam

June 20, 2025

Town of Agawam
Zoning Board of Appeals
Agawam Town Hall
36 Main Street
Agawam, MA 01001

Re: Diamond Communications, LLC & Cellco Partnership d/b/a Verizon Wireless Proposed Wireless Communications Installation at 580 Main Street.

Dear Chairwoman Prouty,

Please be advised that this office represents Diamond Communications, LLC and Cellco Partnership d/b/a Verizon Wireless (collectively, the "Applicants") regarding a Special Permit and Variance Application for the property commonly known at 580 Main Street (the "Application")

Please note there is a hearing scheduled on August 11, 2025 (the "Hearing Date") regarding the Application. Under Section 180-95 of the Agawam Zoning By-laws, the Zoning Board of Appeals (the "ZBA") has the authority to hire an independent consultant to review the Application. Please accept this correspondence as the Applicants' authorization for the ZBA to hire Isotrope, LLC prior to the Hearing Date. The Applicants agree to cover the cost of the review up to $5,000.00.

Please let me know if you have any questions.

Very truly yours,

Michael A. Fenton

MAF/lkm

23\0520\5ZBA.5003

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Diamond Communications LLC

verizon

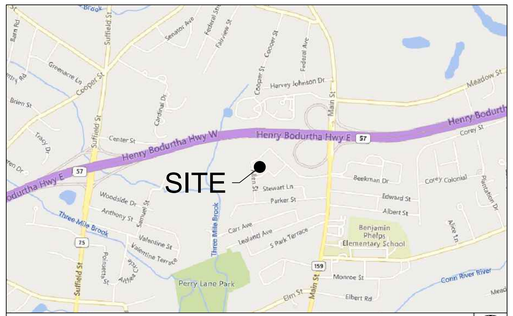
BETHANY ASSEMBLY OF GOD

SITE ADDRESS (E-911 TBD)

580 MAIN ST
AGAWAM, MA 01001
HAMPDEN COUNTY
LATITUDE: 42° 04' 31.29" N
LONGITUDE: 72° 37' 02.54" W
TAX/PIN #: K11_2_28
ZONING: N/A

AGAWAM POLICE DEPARTMENT
681 SPRINGFIELD ST
FEEDING HILLS, MA 01030
PHONE: (413) 786-4767
ATTN.: CUSTOMER SERVICE

AGAWAM FIRE DEPARTMENT
800 MAIN ST
AGAWAN, MA 01001
PHONE: (413) 786-2662
ATTN.: CUSTOMER SERVICE



VICINITY MAP

NORTH

DRIVING DIRECTIONS

JURISDICTION:
TOWN OF AGAWAM

STATE:
MASSACHUSETTS

TOWER TYPE:
MONOPINE TOWER

TOWER HEIGHT:
115' (120' TO HIGHEST APPURTENANCE)

NUMBER OF CARRIERS:
0 EXISTING, 1 PROPOSED

USE:
PROPOSED TELECOMMUNICATIONS TOWER AND UNMANNED EQUIPMENT

FLOOD INFO
SITE IS LOCATED WITHIN FEMA FLOOD MAP AREA 25013C0403E DATED 07/16/2013 WITHIN FLOOD ZONE X.

PROJECT SUMMARY

DEVELOPER
DIAMOND COMMUNICATIONS
120 MOUNTAIN AVE
SPRINGFIELD, NJ 07081
PHONE: (727) 773-2221
ATTN: RICH HUBER

POWER COMPANY
EVERSOURCE ENERGY
PHONE: (877) 659-6326
ATTN.: CUSTOMER SERVICE

PROPERTY OWNER
BETHANY ASSEMBLY OF GOD
580 MAIN ST
AGAWAM, MA 01001
PHONE: N/A
ATTN.: N/A

CONSULTANT
KIMLEY-HORN AND ASSOCIATES, INC.
11720 AMBER PARK DRIVE, SUITE 600
ALPHARETTA, GEORGIA 30009
PHONE: (678) 894-3618
ATTN.: CHRISTOPHER STRANGE

CONTACTS

SHEET NO.	SHEET TITLE
T1	COVER SHEET
--	SURVEY
N1	GENERAL NOTES
C0	OVERALL AERIAL PARCEL PLAN
C0.1	OVERALL PARCEL TOPO
C0.2	OVERALL PARCEL PLAN
C1	OVERALL SITE PLAN
C2	SITE PLAN
C3	EQUIPMENT RACK DETAIL - FRONT
C4	FENCE, GATE, AND COMPOUND DETAILS
C5	ACCESS ROAD DETAILS
C6	ACCESS ROAD TRUEGRID DETAILS
C7	ACCESS ROAD TRUEGRID DETAILS
C8	SITE SIGNAGE DETAILS
C9	WAVEGUIDE BRIDGE DETAILS
C10	ANTENNA AND TOWER ELEVATION DETAILS
C11	GRADING AND EROSION CONTROL PLAN
C12	SILT FENCE DETAILS

SHEET INDEX

THE TOWN OF AGAWAM PLANNING BOARD
36 MAIN ST
HAMPDEN, MA 01036
PHONE: (413) 786-0400
ATTN.: CUSTOMER SERVICE

PERMIT INFORMATION

Diamond Communications LLC

PROJECT INFORMATION:

SITE NAME:
BETHANY ASSEMBLY OF GOD
SITE No.: MA054

580 MAIN ST
AGAWAM, MA 01001
HAMPDEN COUNTY

PLANS PREPARED BY:

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LICENSER:

COMMONWEALTH OF MASSACHUSETTS
DANIEL C. CASEY
CIVIL
No. 57896
REGISTERED PROFESSIONAL ENGINEER
4.25.25

KHA PROJECT NUMBER:
013541034

DRAWN BY: JAR | CHECKED BY: CDS

SHEET TITLE:
COVER SHEET

SHEET NUMBER:
T1

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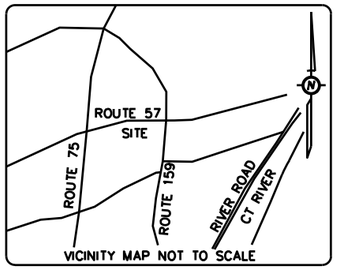


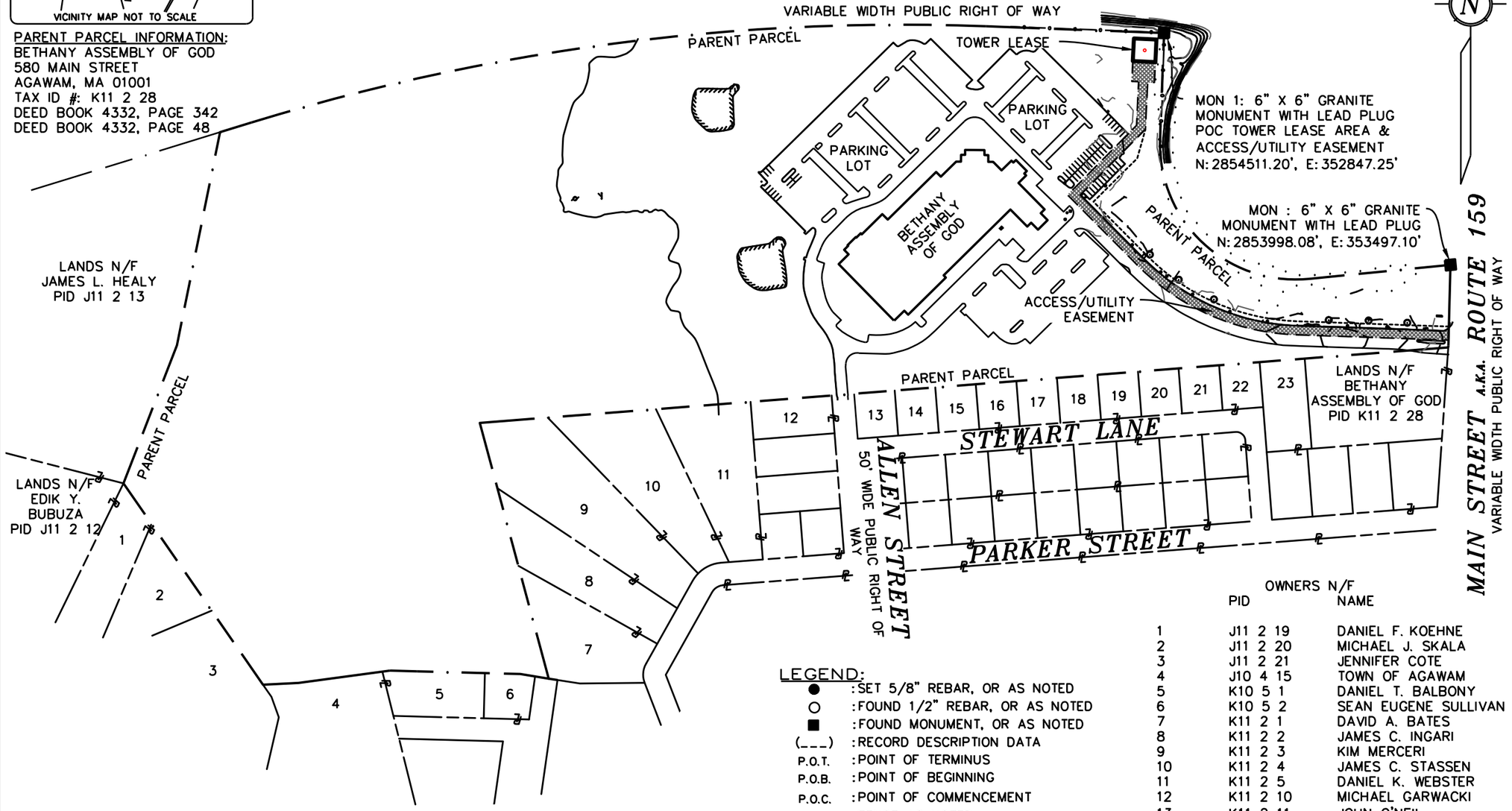
THE PARENT PARCEL IS AFFECTED BY ZONE X WHICH IS NOT A FLOOD HAZARD ZONE AS PER F.I.R.M. MAP NUMBER: 25013C0403E EFFECTIVE DATE: JULY 16, 2013.

FAA 1-A INFORMATION:
LATITUDE: 42° 04' 31.29" N ±20'
LONGITUDE: 72° 37' 02.54"" W ±20'

GROUND ELEVATION AT BASE OF PROPOSED TOWER
89.7' ±3' NAVD 1988

ZONING: (AG) – AGRICULTURAL DISTRICT

PARENT PARCEL INFORMATION:
BETHANY ASSEMBLY OF GOD
580 MAIN STREET
AGAWAM, MA 01001
TAX ID #: K11 2 28
DEED BOOK 4332, PAGE 342
DEED BOOK 4332, PAGE 48



OWNERS N/F

	PID	NAME
1	J11 2 19	DANIEL F. KOEHNE
2	J11 2 20	MICHAEL J. SKALA
3	J11 2 21	JENNIFER COTE
4	J10 4 15	TOWN OF AGAWAM
5	K10 5 1	DANIEL T. BALBONY
6	K10 5 2	SEAN EUGENE SULLIVAN
7	K11 2 1	DAVID A. BATES
8	K11 2 2	JAMES C. INGARI
9	K11 2 3	KIM MERCERI
10	K11 2 4	JAMES C. STASSEN
11	K11 2 5	DANIEL K. WEBSTER
12	K11 2 10	MICHAEL GARWACKI
13	K11 2 11	JOHN O'NEIL
14	K11 2 12	JOHN CANNEY
15	K11 2 13	TRAVIS A. LANSING
16	K11 2 14	PETER J. SHATOS
17	K11 2 15	JAIME L. BOUCHARD
18	K11 2 16	JOHN J. COUTURE
19	K11 2 17	NICOLAI DUBINEVICI
20	K11 2 18	GLORIA J. AFFLITTO
21	K11 2 19	ISUEL SANCHEZ
22	K11 2 20	JOSEPH R. SPAGNOLI
23	K11 2 21	APRIL J. GRAZIANO

LEGEND:

●	:SET 5/8" REBAR, OR AS NOTED
○	:FOUND 1/2" REBAR, OR AS NOTED
■	:FOUND MONUMENT, OR AS NOTED
(___)	:RECORD DESCRIPTION DATA
P.O.T.	:POINT OF TERMINUS
P.O.B.	:POINT OF BEGINNING
P.O.C.	:POINT OF COMMENCEMENT
—o—	:FENCE AS NOTED
—OH—	:OVER HEAD UTILITY LINES
	:WOOD UTILITY POLE
	:ELECTRIC TRANSFORMER
T	:TELCO PEDESTAL
HH	:HAND HOLE
N/A	:NOT AVAILABLE
N/F	:LANDS NOW/FORMERLY
	:FLOOD LIGHT
	:UNDERGROUND FIBER MARKER

AREA	SQUARE FEET	ACRE
PARENT PARCEL	2,200,000	50±
TOWER LEASE	2,500	0.06
ACCESS/UTILITY EASEMENT	27,111	0.62

250 0 125 250 500

BAR GRAPH 1 inch = 250 ft.

MA054 BETHANY ASSEMBLY OF GOD 8-24-2024.DWG

SHEET 1 OF 5

RAW LAND SURVEY

NAME: BETHANY ASSEMBLY OF GOD
SITES#: MA054
ADDRESS: 580 MAIN STREET
AGAWAM, MA 01001
HAMPDEN COUNTY

NATIONAL SURVEY SERVICES COORDINATION BY:

GEOLINE SURVEYING, INC.
13430 NW 104th Terrace, Suite A Alachua, FL 32615
Office:(386) 418-0500 Fax:(386) 462-9986
WWW.GEOLINEINC.COM

SURVEY WORK PERFORMED BY:

JONATHAN MURPHY
Professional Land Surveying
10505 Leafwood Place (919) 280-8189
Raleigh NC 27613 FAX 995-9616
E-MAIL : raleigh@murphygeomatics.com FIRM C-2757

SURVEYOR'S NOTES

1. BASIS OF BEARING:
STATE PLANE COORDINATE SYSTEM 1983
MAINLAND MASSACHUSETTS ZONE

2. NO SUBSURFACE INVESTIGATION WAS PERFORMED TO LOCATE UNDERGROUND UTILITIES. UTILITIES SHOWN HEREON ARE LIMITED TO AND ARE PER OBSERVED EVIDENCE ONLY.

3. THIS SURVEY DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARENT PARCEL.

4. ALL VISIBLE TELECOM EQUIPMENT AND IMPROVEMENTS ARE CONTAINED WITHIN THE DESCRIBED AREA.

5. ALL SYMBOLS SHOWN HEREON NOT DEPICTED TO SCALE.

SURVEYOR'S CERTIFICATION

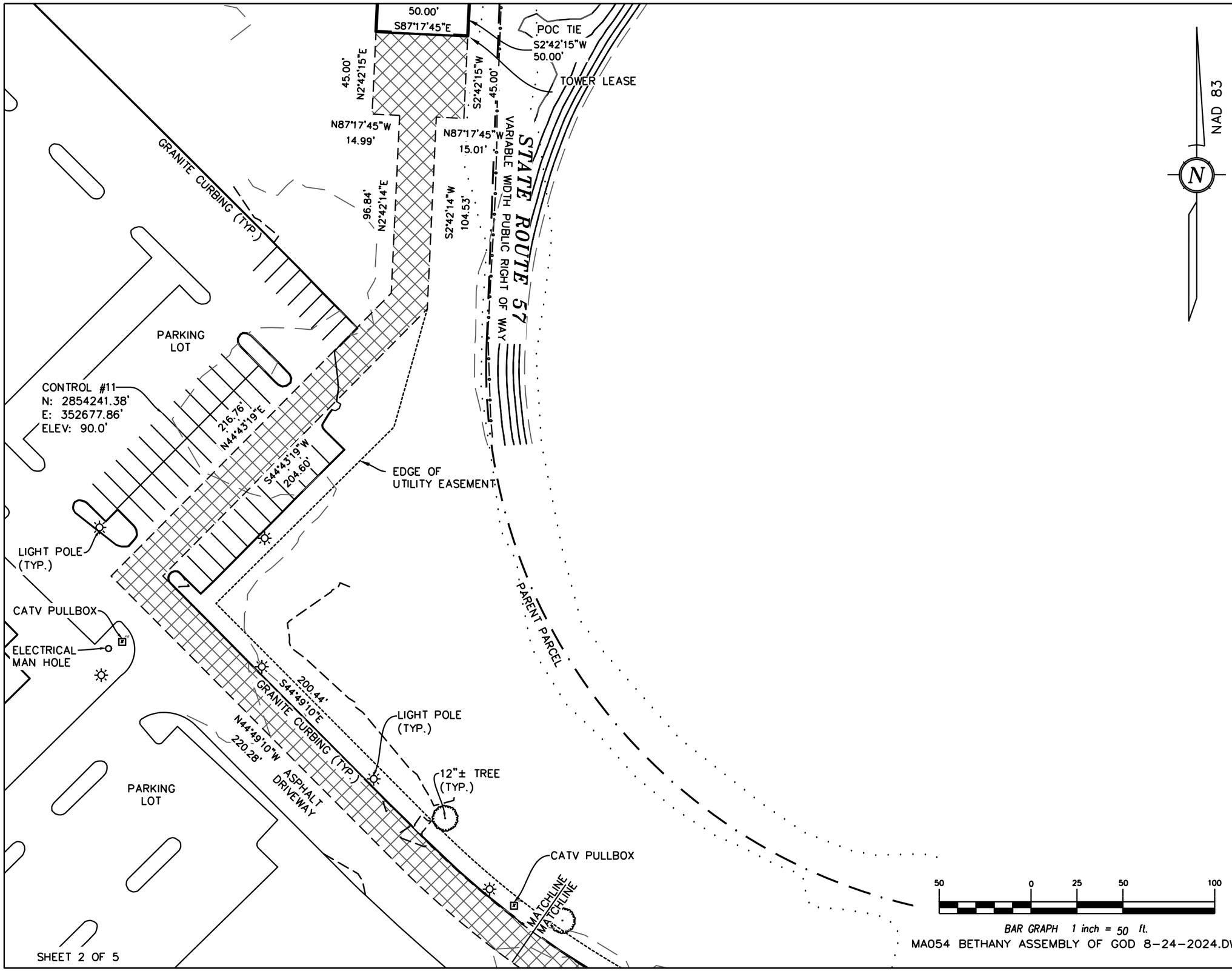
I HEREBY CERTIFY TO:
DIAMOND COMMUNICATIONS, LLC

LITTLE RIVER LAND SURVEYING

SURVEYOR
JERAMIAH J. RAITT
DATE: 10/30/2024

COMMONWEALTH OF MASSACHUSETTS
JERAMIAH RAITT
NO. 56221
REGISTERED PROFESSIONAL LAND SURVEYOR

FIELD DATE: 08/14/2023



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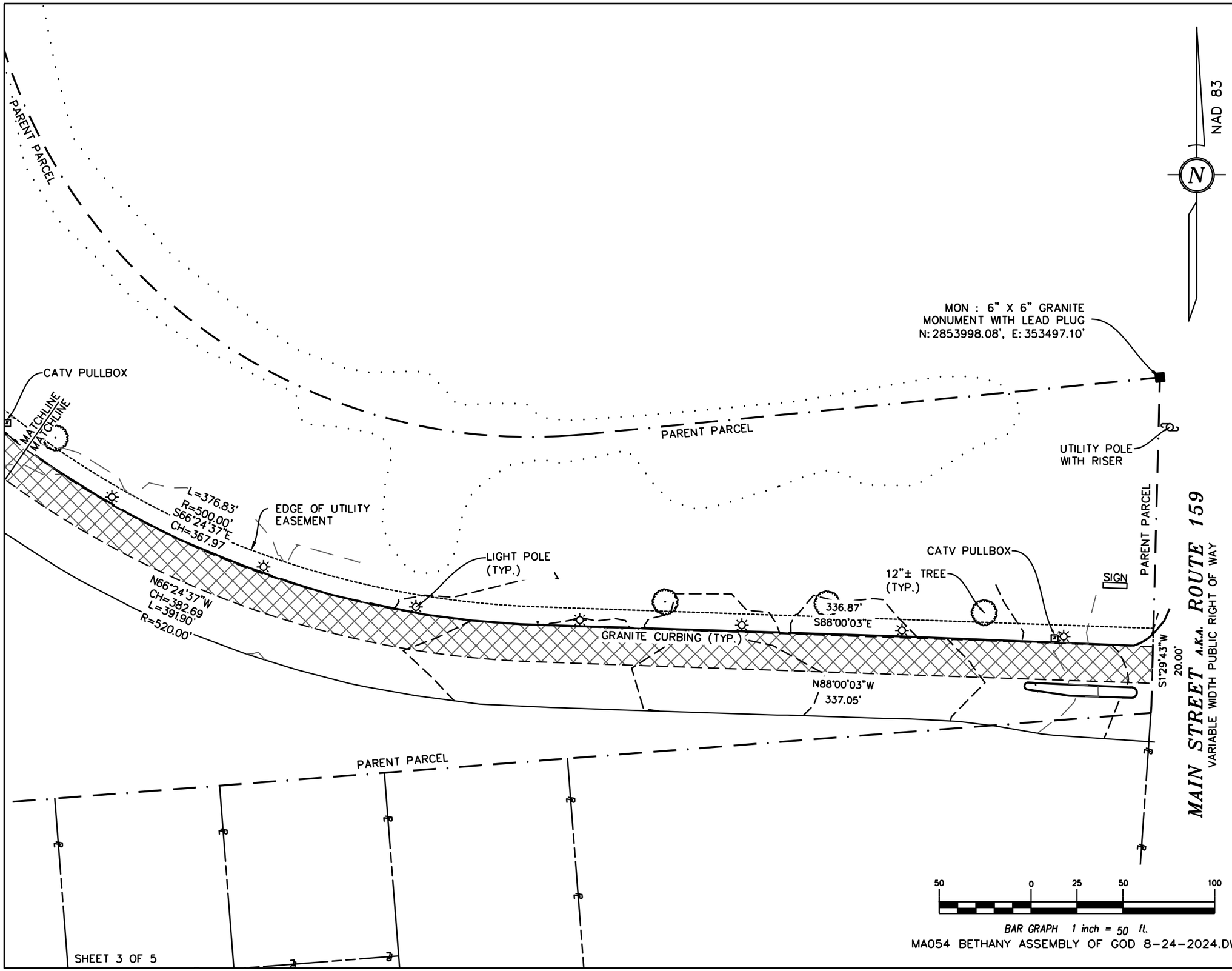

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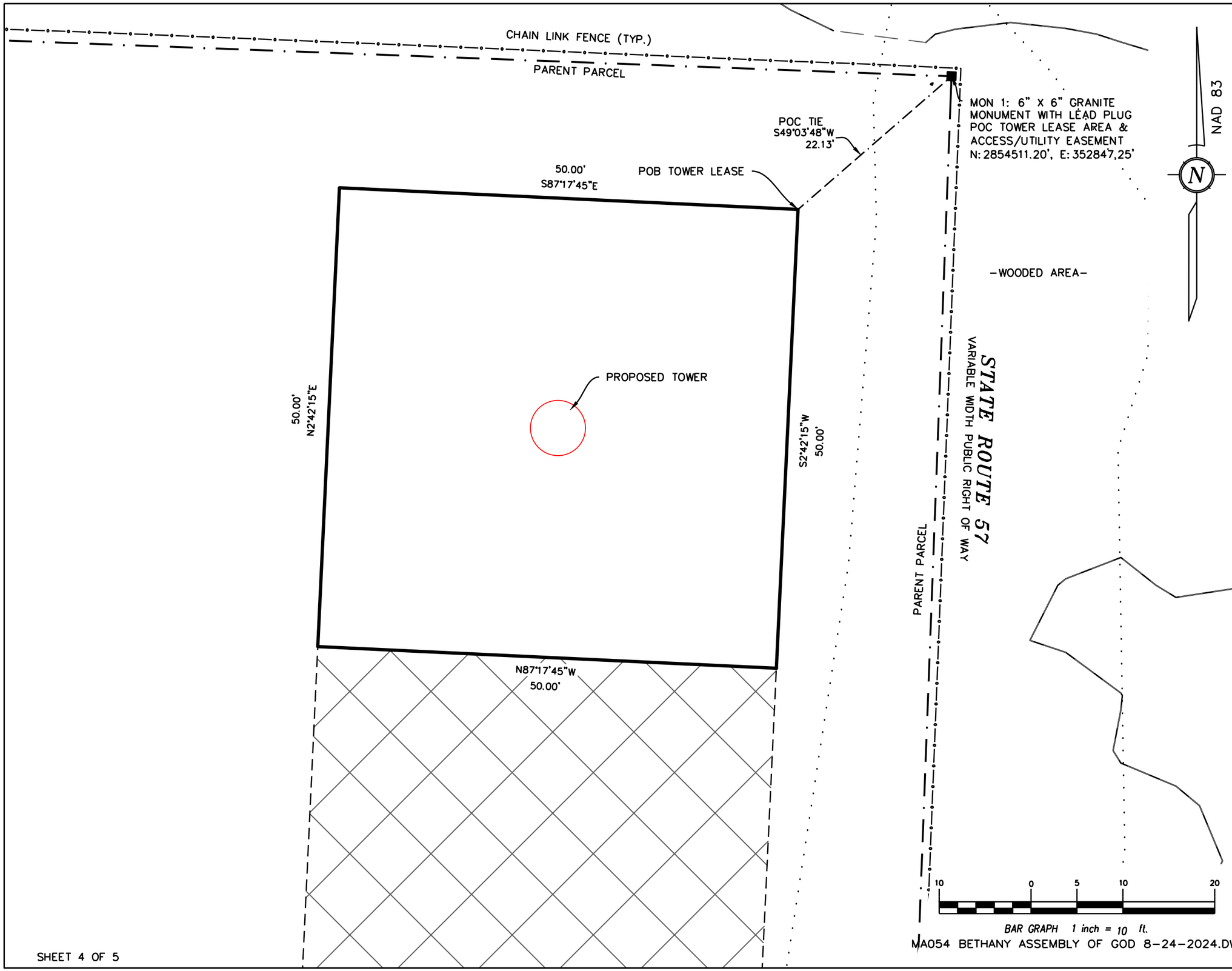

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DIAMOND COMMUNICATIONS, LLC

LITTLE RIVER LAND SURVEYING

SURVEYOR
JERAMIAH J. RAITT
DATE: 10/30/2024

COMMONWEALTH OF MASSACHUSETTS
JERAMIAH RAITT
NO. 56221
REGISTERED PROFESSIONAL LAND SURVEYOR

FIELD DATE: 08/14/2023

LEGAL DESCRIPTION: PARENT PARCEL (AS PROVIDED)

EXHIBIT "A"
SITUATED IN THE COUNTY OF HAMPDEN AND STATE OF MASSACHUSETTS AND DESCRIBED AS FOLLOWS:

TRACT 1:
BEGINNING AT A POINT AT THE SOUTHWESTERLY CORNER OF LAND NOW OR FORMERLY OF THOMAS AND ANNA RUSSO IN THE TOWN OF AGAWAM, HAMPDEN COUNTY, MASSACHUSETTS
THENCE S. 85° 33' 05" W. A DISTANCE OF 1730.60 FEET ALONG A LAND COURT PLAN NO. 249648. TO A POINT;
THENCE S. 15° 04' 22" E. A DISTANCE OF 586.19 FEET ALONG SAID LAND COURT PLAN TO A BOUND; THENCE N. 80° 43' 32" W. A DISTANCE OF 63.75 FEET ALONG THE LAND NOW OR FORMERLY OF B.& M. TUCCI;
THENCE N. 88° 28' 51" W. A DISTANCE OF 288.42 FEET ALONG LAND NOW OR FORMERLY OF SAID TUCCI TO AN IRON PIN;
THENCE S. 82° 20' 08" W. A DISTANCE OF 204.25 FEET TO A POINT;
THENCE S. 87° 08' 04" W. A DISTANCE OF 78.67 FEET TO AN IRON PIN AT LAND NOW OR FORMERLY OF ONE CALABRESE;
THENCE N. 34° 42' 40" W. A DISTANCE OF 542.17 FEET ALONG THE LAND OF CALABRESE TO A POINT; THENCE N. 21° 10' 11" E. A DISTANCE OF 327.67 FEET ALONG THE LAND NOW OR FORMERLY OF ONE DELOGHIA TO A POINT;
THENCE N. 11° 27' 02" E. A DISTANCE OF 481.44 FEET ALONG THE LAND NOW OR FORMERLY OF DELOGHIA TO A POINT ON THE SOUTHERLY SIDE OF ROUTE 57;
THENCE N. 72° 55' 32" E. A DISTANCE OF 73.00 FEET TO A BOUND;
THENCE NORTHEASTERLY ON A CURVE TO THE RIGHT HAVING A RADIUS OF 4900.75 FEET AN ARC LENGTH OF 1646.79 FEET TO A POINT;
THENCE S. 87° 49' 30" E. A DISTANCE OF 394.14 FEET TO A BOUND, THE LAST THREE COURSES BEING ALONG THE SOUTHERLY SIDE OF ROUTE 57;
THENCE S. 2 ° 10' 30" W. A DISTANCE OF 234.37 FEET TO A POINT;
THENCE ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 300.00 FEET, AN ARC LENGTH OF 385.71 FEET TO AN IRON PIN, THE LAST TWO COURSES BEING ALONG THE RAMP TO ROUTE 57;
THENCE S. 4° 26' 55" E. A DISTANCE OF 198.92 FEET ALONG THE LAND NOW OR FORMERLY OF RUSSO TO THE POINT OF BEGINNING.
BEING THE PREMISES SHOWN AS LAND OF ALBERT J. AND JENNIE M. CHRISTOPHER, SAID TO CONTAIN 49.2 ACRES OF LAND, AS SHOWN ON A PLAN OF LAND PREPARED FOR BETHANY ASSEMBLY OF GOD,

TRACT 2:
BEGINNING AT A GRANITE BOUND ON THE WESTERLY SIDE OF MAIN STREET IN THE TOWN OF AGAWAM, HAMPDEN COUNTY. MASSACHUSETTS SAID GRANITE BOUND BEING THE INTERSECTION OF THE RAMP OF ROUTE 57, AND THE WESTERLY SIDELINE OF MAIN STREET AS SHOWN IN PLAN BOOK 64. PAGES 73 AND 74. HAMPDEN COUNTY REGISTRY OF DEEDS.
THENCE S. 1° 30' 40" W. A DISTANCE OF 178.84 FEET ALONG THE WESTERLY SIDE OF MAIN STREET TO AN IRON PIN;
THENCE S. 3° 59' 20" W. A DISTANCE OF 3.89 FEET ALONG THE WESTERLY SIDE OF MAIN STREET TO THE LAND OF B. SCHABOWSKI;
THENCE S. 85° 33' 05" W. A DISTANCE OF 419.00 FEET ALONG THE LAND OF SCHABOWSKI AND HAMAR TO A POINT;
THENCE N. 4° 26' 55" E. A DISTANCE OF 198.92 FEET ALONG THE LAND OF ALBERT AND JENNIE CHRISTOPHER TO THE SIDELINE OF THE RAMP TO ROUTE 57;
THENCE SOUTHEASTERLY ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 300.00 FEET, AN ARC LENGTH OF 126.40 FEET TO A GRANITE BOUND;
THENCE N. 84° 22' 10" E. A DISTANCE OF 315.00 FEET TO A GRANITE BOUND ON THE WESTERLY SIDE OF MAIN STREET AT THE POINT OF BEGINNING.

TAX ID NO: K11 2 28

DERIVATION CLAUSE
BEING THE SAME PROPERTY CONVEYED TO BETHANY ASSEMBLY OF GOD, A RELIGIOUS CORPORATION, GRANTEE, FROM ALBERT J. CHRISTOPHER AND GIOVANNA M. CHRISTOPHER, ALSO KNOWN AS JENNIE M. CHRISTOPHER, HUSBAND AND WIFE, GRANTOR BY DEED RECORDED 10/05/1976, AS BOOK 4332, PAGE 48 OF HAMPDEN COUNTY RECORDS.
AND
BEING THE SAME PROPERTY CONVEYED TO BETHANY ASSEMBLY OF GOD, A RELIGIOUS CORPORATION, GRANTEE, FROM THOMAS J. RUSSO, JR. AND ANNA M. RUSSO, GRANTOR BY DEED RECORDED 09/23/1976, AS BOOK 4327, PAGE 132 OF HAMPDEN COUNTY RECORDS.

LEGAL DESCRIPTION: TOWER LEASE (CREATED BY THIS OFFICE)
A PORTION OF ALL THAT CERTAIN PARCEL OF LAND IN THE CITY OF AGAWAM, COUNTY OF HAMPDEN, STATE OF MASSACHUSETTS, DESCRIBED IN DEED BOOK 4332, PAGES 48 AND 342, AND FURTHER DESCRIBED AS:
COMMENCING AT A 6" X 6" GRANITE MONUMENT WITH LEAD PLUG ON THE SOUTHERLY SIDE OF STATE ROUTE 57, HAVING MAINE STATE PLANE COORDINATES, MASSACHUSETTS MAINLAND ZONE, N:2854511.20', E:352847.25',
THENCE, S 49° 03' 48" W FOR A DISTANCE OF 22.13 FEET TO THE POINT OF BEGINNING;
THENCE, S 02° 42' 15" W FOR A DISTANCE OF 50.00 FEET TO A POINT;
THENCE, N 87° 17' 45" W FOR A DISTANCE OF 50.00 FEET TO A POINT;
THENCE, N 02° 42' 15" E FOR A DISTANCE OF 50.00 FEET TO A POINT;
THENCE, S 87° 17' 45" E FOR A DISTANCE OF 50.00 FEET TO THE POINT OF BEGINNING, CONTAINING 2,500 SQFT –OR– 0.06 ACRES.

LEGAL DESCRIPTION: ACCESS/UTILITY EASEMENT (CREATED BY THIS OFFICE)
A PORTION OF ALL THAT CERTAIN PARCEL OF LAND IN THE CITY OF AGAWAM, COUNTY OF HAMPDEN, STATE OF MASSACHUSETTS, DESCRIBED IN DEED BOOK 4332, PAGES 48 AND 342, AND FURTHER DESCRIBED AS:
COMMENCING AT A 6" X 6" GRANITE MONUMENT WITH LEAD PLUG ON THE WESTERLY SIDE OF MAIN STREET, ALSO KNOWN AS ROUTE 159, HAVING MAINE STATE PLANE COORDINATES, MASSACHUSETTS MAINLAND ZONE, N:2853998.08', E:353497.10'
THENCE, S 49° 03' 48" W FOR A DISTANCE OF 22.13 FEET TO A POINT ON AN EXISTING 2,500 SQFT TOWER LEASE;
THENCE, ALONG SAID LEASE, S 02° 42' 15" W FOR A DISTANCE OF 50.00 FEET TO THE POINT OF BEGINNING;
THENCE, DEPARTING SAID LEASE, S 02° 42' 15" W FOR A DISTANCE OF 45.00 FEET TO A POINT;
THENCE, N 87° 17' 45" W FOR A DISTANCE OF 15.01 FEET TO A POINT;
THENCE, S 02° 42' 14" W FOR A DISTANCE OF 104.53 FEET TO A POINT;
THENCE, S 44° 43' 19" W FOR A DISTANCE OF 204.60 FEET TO A POINT;
THENCE, S 44° 49' 10" E FOR A DISTANCE OF 200.44 FEET TO THE BEGINNING OF A CURVE,
THENCE, ALONG SAID CURVE TURNING TO THE LEFT THROUGH AN ANGLE OF 43° 10' 53.4", HAVING A RADIUS OF 500.00 FEET, AND WHOSE LONG CHORD BEARS S 66° 24' 37" E FOR A DISTANCE OF 367.97 FEET TO A POINT;
THENCE, S 88° 00' 03" E FOR A DISTANCE OF 336.87 FEET TO A POINT LYING ON THE WESTERN RIGHT OF WAY OF MAIN STREET A.K.A. ROUTE 159, A DEDICATED PUBLIC RIGHT OF WAY;
THENCE, ALONG SAID RIGHT OF WAY, S 01° 29' 43" W FOR A DISTANCE OF 20.00 FEET TO A POINT;
THENCE, DEPARTING SAID RIGHT OF WAY, N 88° 00' 03" W FOR A DISTANCE OF 337.05 FEET TO THE BEGINNING OF A CURVE,
THENCE, ALONG SAID CURVE TURNING TO THE RIGHT THROUGH AN ANGLE OF 43° 10' 53.4", HAVING A RADIUS OF 520.00 FEET, AND WHOSE LONG CHORD BEARS N 66° 24' 37" W FOR A DISTANCE OF 382.69 FEET TO A POINT;
THENCE, N 44° 49' 10" W FOR A DISTANCE OF 220.28 FEET TO A POINT;
THENCE, N 44° 43' 19" E FOR A DISTANCE OF 216.76 FEET TO A POINT;
THENCE, N 02° 42' 14" E FOR A DISTANCE OF 96.84 FEET TO A POINT;
THENCE, N 87° 17' 45" W FOR A DISTANCE OF 14.99 FEET TO A POINT;
THENCE, N 02° 42' 15" E FOR A DISTANCE OF 45.00 FEET TO A POINT ON SAID LEASE;
THENCE, ALONG SAID LEASE, S 87° 17' 45" E FOR A DISTANCE OF 50.00 FEET TO THE POINT OF BEGINNING, CONTAINING 27,111 SQFT –OR– 0.62 ACRES.

RAW LAND SURVEY

NAME: BETHANY ASSEMBLY OF GOD
SITES#: MA054
ADDRESS: 580 MAIN STREET
AGAWAM, MA 01001
HAMPDEN COUNTY

NATIONAL SURVEY SERVICES COORDINATION BY:

GEOLINE SURVEYING, INC.
13430 NW 104th Terrace, Suite A Alachua, FL 32615
Office:(386) 418-0500 Fax:(386) 462-9986
WWW.GEOLINEINC.COM

SURVEY WORK PERFORMED BY:

JONATHAN MURPHY
Professional Land Surveying
10505 Leafwood Place (919) 280-8189
Raleigh NC 27613 FAX 995-9616
E-MAIL : raleigh@murphygeomatics.com FIRM C-2757

SURVEYOR'S NOTES

1. BASIS OF BEARING:
STATE PLANE COORDINATE SYSTEM 1983
MAINLAND MASSACHUSETTS ZONE

2. NO SUBSURFACE INVESTIGATION WAS PERFORMED TO LOCATE UNDERGROUND UTILITIES. UTILITIES SHOWN HEREON ARE LIMITED TO AND ARE PER OBSERVED EVIDENCE ONLY.

3. THIS SURVEY DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARENT PARCEL.

4. ALL VISIBLE TELECOM EQUIPMENT AND IMPROVEMENTS ARE CONTAINED WITHIN THE DESCRIBED AREA.

5. ALL SYMBOLS SHOWN HEREON NOT DEPICTED TO SCALE.

SURVEYOR'S CERTIFICATION

I HEREBY CERTIFY TO:
DIAMOND COMMUNICATIONS, LLC

LITTLE RIVER LAND SURVEYING

SURVEYOR
JERAMIAH J. RAITT
DATE: 10/30/2024

COMMONWEALTH OF MASSACHUSETTS
JERAMIAH RAITT
NO. 56221
REGISTERED PROFESSIONAL LAND SURVEYOR

FIELD DATE: 08/14/2023

1.00 GENERAL NOTES

1.01 ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE DRAWINGS AND SPECIFICATIONS. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE STATE, LOCAL AND NATIONAL CODES, ORDINANCES AND OR REGULATIONS APPLICABLE TO THIS PROJECT.

1.02 THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND SHALL CHECK ALL DIMENSIONS. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE PROJECT MANAGER AND/OR ENGINEER AND BE RESOLVED BEFORE PROCEEDING WITH WORK. WHERE THERE IS A CONFLICT BETWEEN DRAWING AND VERIZON SPECIFICATIONS, THE DIAMOND COMMUNICATIONS PROJECT ENGINEER SHOULD BE CONTACTED FOR CLARIFICATION.

1.03 ALL INFORMATION SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST PRESENT KNOWLEDGE, BUT WITHOUT GUARANTEE OF ACCURACY. WHERE ACTUAL CONDITIONS CONFLICT WITH THE DRAWINGS, THEY SHALL BE REPORTED TO THE PROJECT MANAGER AND/OR ENGINEER SO THAT PROPER REVISIONS MAY BE MADE. MODIFICATION OF DETAILS OF CONSTRUCTION SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE PROJECT MANAGER AND/OR ENGINEER.

1.04 CONTRACTOR SHALL REVIEW AND BE FAMILIAR WITH SITE CONDITIONS AS SHOWN ON THE ATTACHED SITE PLAN AND/OR SURVEY DRAWINGS.

1.05 WAVEGUIDE BRIDGE AND EQUIPMENT CABINETS ARE SHOWN FOR REFERENCE ONLY. REFER TO SEPARATE DRAWINGS FOR SPECIFIC INFORMATION.

1.06 ALL FINISHED GRADES SHALL SLOPE MINIMUM 1/4 IN./FT. AWAY FROM EQUIPMENT IN ALL DIRECTIONS. CONTRACTOR SHALL SLOPE SWALES AS REQUIRED ALONG EXISTING TERRAIN TO DRAIN AWAY FROM COMPOUND AND ACCESS DRIVE.

1.07 THE PROPOSED TOWER AND TOWER FOUNDATIONS WERE DESIGNED BY OTHERS. TOWER INFORMATION PROVIDED ON THESE PLANS ARE PROVIDED FOR REFERENCE PURPOSES ONLY. NOTIFY ENGINEER OR PROJECT MANAGER OF ANY CONFLICTS OR DISCREPANCIES. CONTRACTOR TO OBTAIN COPY OF TOWER DESIGN DRAWINGS, IF AVAILABLE, FROM DIAMOND COMMUNICATIONS PROJECT MANAGER TO CONFIRM COAX ROUTING AND ANTENNA MOUNT INFORMATION.

1.08 THE CONTRACTOR SHALL PROVIDE ADEQUATE EXCAVATION SLOPING, SHORING, BRACING, AND GUYS IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL SAFETY ORDINANCES.

1.09 UPON COMPLETION OF CONSTRUCTION, CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE CAUSED BY CONSTRUCTION ACTIVITIES TO THE EXISTING ACCESS ROAD AND COMPOUND GRAVEL AREAS. ANY NEW FILL MATERIALS SHALL BE COMPACTED.

1.10 THE CONTRACTOR IS HEREBY NOTIFIED THAT PRIOR TO COMMENCING CONSTRUCTION, HE IS RESPONSIBLE FOR CONTACTING THE UTILITY COMPANIES INVOLVED AND SHALL REQUEST A VERIFICATION AT THE CONSTRUCTION SITE OF THE LOCATIONS OF THEIR UNDERGROUND UTILITIES AND WHERE THEY MAY POSSIBLY CONFLICT WITH THE PLACEMENT OF IMPROVEMENTS AS SHOWN ON THESE PLANS. THE CONTRACTOR OR ANY SUBCONTRACTOR FOR THIS CONTRACT WILL BE REQUIRED TO NOTIFY "MASSACHUSETTS 811" 72 HOURS IN ADVANCE OF PERFORMING ANY WORK BY CALLING THE TOLL FREE NUMBER (888) 344-7233 (OR 811). ANY UTILITIES DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE REPAIRED BY THE CONTRACTOR, AT NO EXPENSE TO THE OWNER.

1.11 CONTRACTOR TO PROVIDE DUMPSTER AND PORTABLE TOILET FACILITY DURING CONSTRUCTION.

1.12 CONTRACTOR TO PROVIDE STYMIE LOCK OR EQUIVALENT AS APPROVED BY DIAMOND COMMUNICATIONS PROJECT MANAGER.

1.13 CONTRACTOR TO PROVIDE ANY NECESSARY SIGNAGE PER DIAMOND COMMUNICATIONS PROJECT MANAGER'S INSTRUCTIONS. SEE DETAIL ON SHEET C11.

2.00 EQUIPMENT FOUNDATION NOTES

2.01 FOUNDATIONS ARE DESIGNED FOR A PRESUMPTIVE ALLOWABLE SOIL BEARING CAPACITY OF 2,000 PSF. CONTRACTOR SHALL VERIFY SOIL CONDITIONS AND BEARING CAPACITY PRIOR TO CONSTRUCTION.

2.02 EXCAVATE A MINIMUM 18" BELOW PROPOSED EQUIPMENT FOUNDATIONS OF EXPANSIVE, ORGANIC, UNCONSOLIDATED OR OTHERWISE UNACCEPTABLE MATERIAL AND REPLACE WITH WELL-COMPACTED MATERIAL ACCEPTABLE TO VERIZON.

2.03 CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, PROTECTING, AND RELOCATING AS REQUIRED ALL SERVICE AND UTILITY LINES IN VICINITY OF THE WORK SITE. ALL EXCAVATIONS NEAR THESE LINES TO BE CARRIED OUT WITH EXTREME CAUTION. COORDINATE ALL RELOCATIONS WITH THE PROPERTY OWNER.

2.04 CONTRACTOR TO CUT/FILL EXISTING COMPOUND SUBSOIL TO PROVIDE AN AREA AS LEVEL AS POSSIBLE FOR THE EQUIPMENT FOUNDATIONS. ALL FILL AREAS ARE TO BE FILLED WITH SUITABLE MATERIALS. FILL MATERIALS ARE TO BE PLACED, COMPACTED, AND TESTED IN MAXIMUM LAYERS OF 8". COMPACTION OF ALL FILL MATERIAL SHALL ACHIEVE 95 PERCENT OF MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D 698. ALL TESTS MUST MEET THE MINIMUM SPECIFIED SOIL BEARING CAPACITY. COMPACTION TESTING IS BY THE GEOTECHNICAL TESTING COMPANY DESIGNATED FOR THE PROJECT. SCHEDULING AND COORDINATION IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. REPORTS OF ALL TESTING ARE TO BE PROMPTLY DELIVERED OR FAXED TO THE VERIZON WIRELESS PROJECT MANAGER.

2.05 CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS AND SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST REVISION TO ACI-318 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.

2.06 CONCRETE SHALL HAVE A SLUMP BETWEEN 3" AND 6".

2.07 FIBERS FOR CONCRETE SHALL BE FIBERMESH 650, 100 PERCENT VIRGIN POLYPROPYLENE FIBRILLATED FIBERS, e3 PATENTED TECHNOLOGY PATENTED TECHNOLOGY, CONTAINING NO REPROCESSED OLEFIN MATERIALS. THE FIBERS SHALL CONFORM TO ASTM C1116 TYPE III AND MANUFACTURED SPECIFICALLY FOR THE SECONDARY REINFORCEMENT OF CONCRETE.

2.08 THE FIBERS SHALL BE MANUFACTURED IN AN ISO 9001:2008 CERTIFIED MANUFACTURING FACILITY. UNLESS OTHERWISE STATED, FIBERMESH 650 MACRO-SYNTHETIC FIBERS SHALL BE ADDED TO THE CONCRETE AT THE BATCHING PLANT AT THE RECOMMENDED APPLICATION RATE OF 3 LBS/YD^3 AND MIXED FOR A SUFFICIENT TIME (MINIMUM 5 MINUTES AT FULL MIXING SPEED) TO ENSURE UNIFORM DISTRIBUTION OF THE FIBERS THROUGHOUT THE CONCRETE. FIBROUS CONCRETE REINFORCEMENT SHALL BE MANUFACTURED BY FIBERMESH, 4019 INDUSTRY DRIVE, CHATTANOOGA, TN 37416 USA, TEL: 800 621-1273, WEBSITE: WWW.FIBERMESH.COM

2.09 AT THE REQUEST OF THE VERIZON WIRELESS PROJECT MANAGER, TEST CYLINDERS SHALL BE MOLDED AND LABORATORY CURED IN ACCORDANCE WITH ASTM C31. THREE CYLINDERS SHALL BE TAKEN FOR EACH DAY'S CONCRETE PLACEMENT. CYLINDERS SHALL BE TESTED IN ACCORDANCE WITH THE LATEST REVISION TO ASTM C39.

2.10 CHAMFER ALL EXPOSED EXTERNAL CORNERS OF CONCRETE WITH ¾" x 45° CHAMFER, UNLESS OTHERWISE NOTED.

2.11 CONCRETE FORMWORK IS TO BE STRIPPED WITHIN 48 HOURS. VIBRATION OF THE CONCRETE MUST ASSURE THAT HONEYCOMBING WILL BE AT A MINIMUM. MECHANICAL VIBRATION OF ALL CONCRETE IS REQUIRED UNLESS OTHERWISE DIRECTED BY VERIZON WIRELESS' PROJECT MANAGER. ABOVE GRADE CONCRETE IS TO BE RUBBED AND PATCHED TO ASSURE SMOOTH FINISH AT TIME OF FORMS REMOVAL. CONTRACTOR SHALL PROVIDE A BROOM FINISH ON THE TOP SURFACE OF THE EQUIPMENT FOUNDATION UNLESS OTHERWISE DIRECTED BY VERIZON WIRELESS' PROJECT MANAGER.

2.121 TOPS OF CONCRETE FOUNDATION MUST BE WITHIN 0.02' OF ELEVATION REQUIRED.

2.13 TOP OF FOUNDATION FINISH TO BE LEVEL ±⅛" IN 10'.

2.14 TOP OF FOUNDATION TO HAVE MEDIUM BROOM FINISH.

2.15 CONTRACTOR SHALL REFER TO DRAWINGS OF OTHER TRADES AND VENDOR DRAWINGS FOR EMBEDDED ITEMS AND RECESSES NOT SHOWN ON THE STRUCTURAL DRAWINGS. CONTRACTOR SHALL VERIFY PLACEMENT OF EQUIPMENT AND LOCATION OF CONDUIT FOR MANUFACTURER'S AND VENDORS SPECIFICATIONS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL OPENINGS AND SLEEVES FOR PROPER DISTRIBUTION OF ALL UTILITIES.

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Diamond Communications LLC

PROJECT INFORMATION:

SITE NAME:
BETHANY ASSEMBLY OF GOD
SITE No.: MA054

580 MAIN ST
AGAWAM, MA 01001
HAMPDEN COUNTY

PLANS PREPARED BY:

Kimley»Horn
11720 AMBER PARK DRIVE, SUITE 600
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM

REV: | DATE: | ISSUED FOR: | BY:

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2	10/24/24	ZONING	DMF
1	02/14/24	ZONING	DMF
0	01/19/24	ZONING	DMF

LICENSER:

COMMONWEALTH OF MASSACHUSETTS
DANIEL C. CLASBY
CIVIL
No. 37896
REGISTERED
PROFESSIONAL ENGINEER
4.25.25

KHA PROJECT NUMBER:

013541034

DRAWN BY: JAR | CHECKED BY: CDS

SHEET TITLE:

GENERAL NOTES

SHEET NUMBER:

N1

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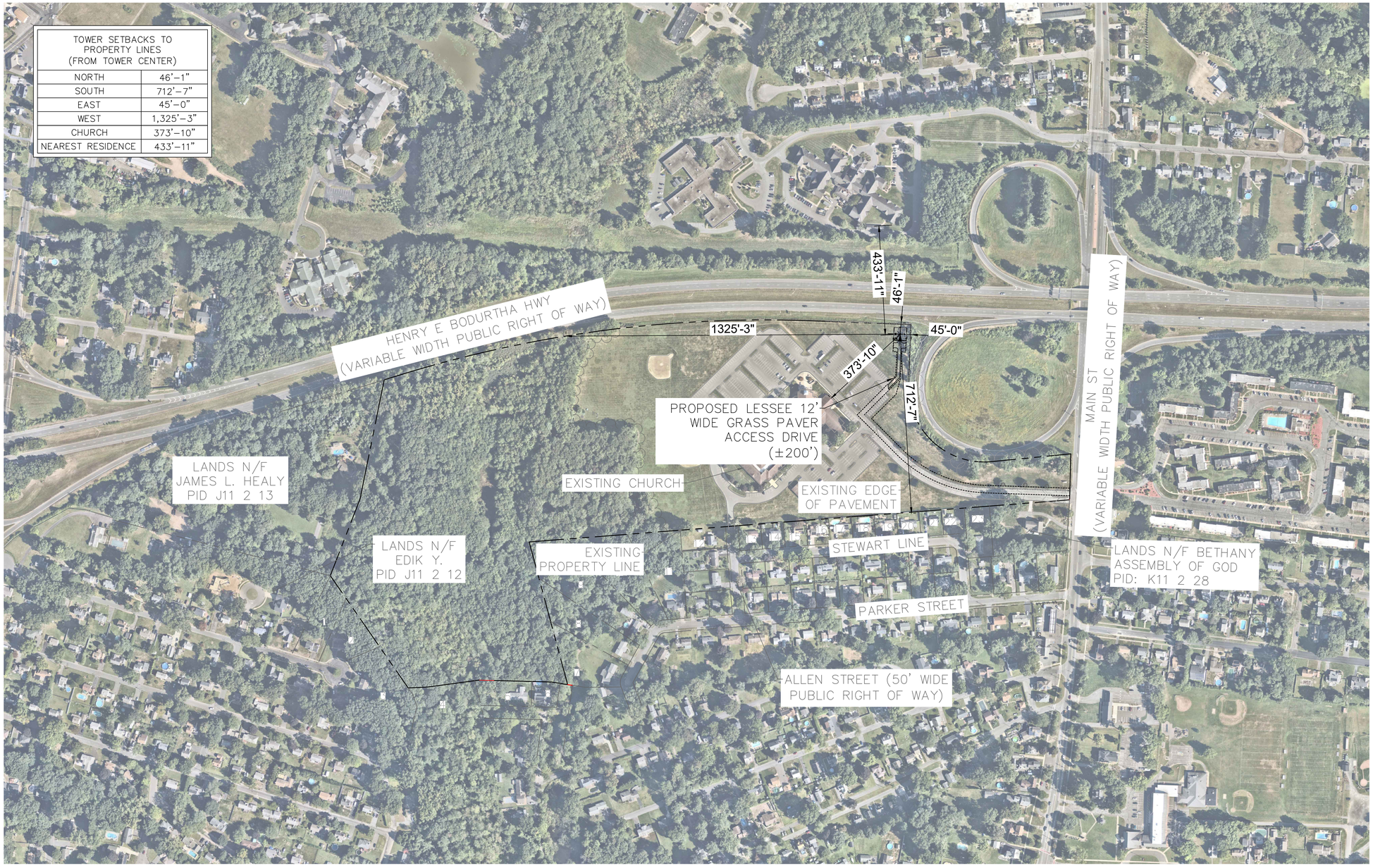
TOWER SETBACKS TO PROPERTY LINES (FROM TOWER CENTER)	
NORTH	46'–1"
SOUTH	712'–7"
EAST	45'–0"
WEST	1,325'–3"
CHURCH	373'–10"
NEAREST RESIDENCE	433'–11"



SURVEY NOTE:

1. DIAMOND COMMUNICATIONS STAFF SHALL COORDINATE WITH THE PROPERTY OWNER TO OBTAIN THE PROPER EASEMENT AGREEMENTS TO CONSTRUCT AND MAINTAIN EQUIPMENT IN AND AROUND THE TOWER COMPOUND.
2. PROPOSED COMPOUND LAYOUT BASED ON SURVEY PROVIDED BY GEOLINE SURVEYING, INC SITE VISIT ON 08/14/23.

1 / C0 OVERALL AERIAL PARCEL PLAN

SCALE: 1:200

NORTH

0 100 200 400

GRAPHIC SCALE: 1" = 200'

Diamond Communications LLC

PROJECT INFORMATION:

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SITE No.: MA054

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HAMPDEN COUNTY

PLANS PREPARED BY:

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LICENSER:

COMMONWEALTH OF MASSACHUSETTS
DANIEL C. CLASBY
No. 57896
REGISTERED PROFESSIONAL ENGINEER
4.25.25

KHA PROJECT NUMBER:

013541034

DRAWN BY:	CHECKED BY:
JAR	CDS

SHEET TITLE:

OVERALL AERIAL PARCEL PLAN

SHEET NUMBER:

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NEAREST RESIDENCE	433'–11"



NORTH

0 100 200 400
GRAPHIC SCALE: 1" = 200'

SURVEY NOTE:

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1 / C0.1 OVERALL PARCEL TOPO

SCALE: 1:200

Diamond Communications LLC

PROJECT INFORMATION:

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BETHANY ASSEMBLY OF GOD
SITE No.: MA054

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AGAWAM, MA 01001
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KHA PROJECT NUMBER:

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DRAWN BY: JAR | CHECKED BY: CDS

SHEET TITLE:

OVERALL PARCEL TOPO

SHEET NUMBER:

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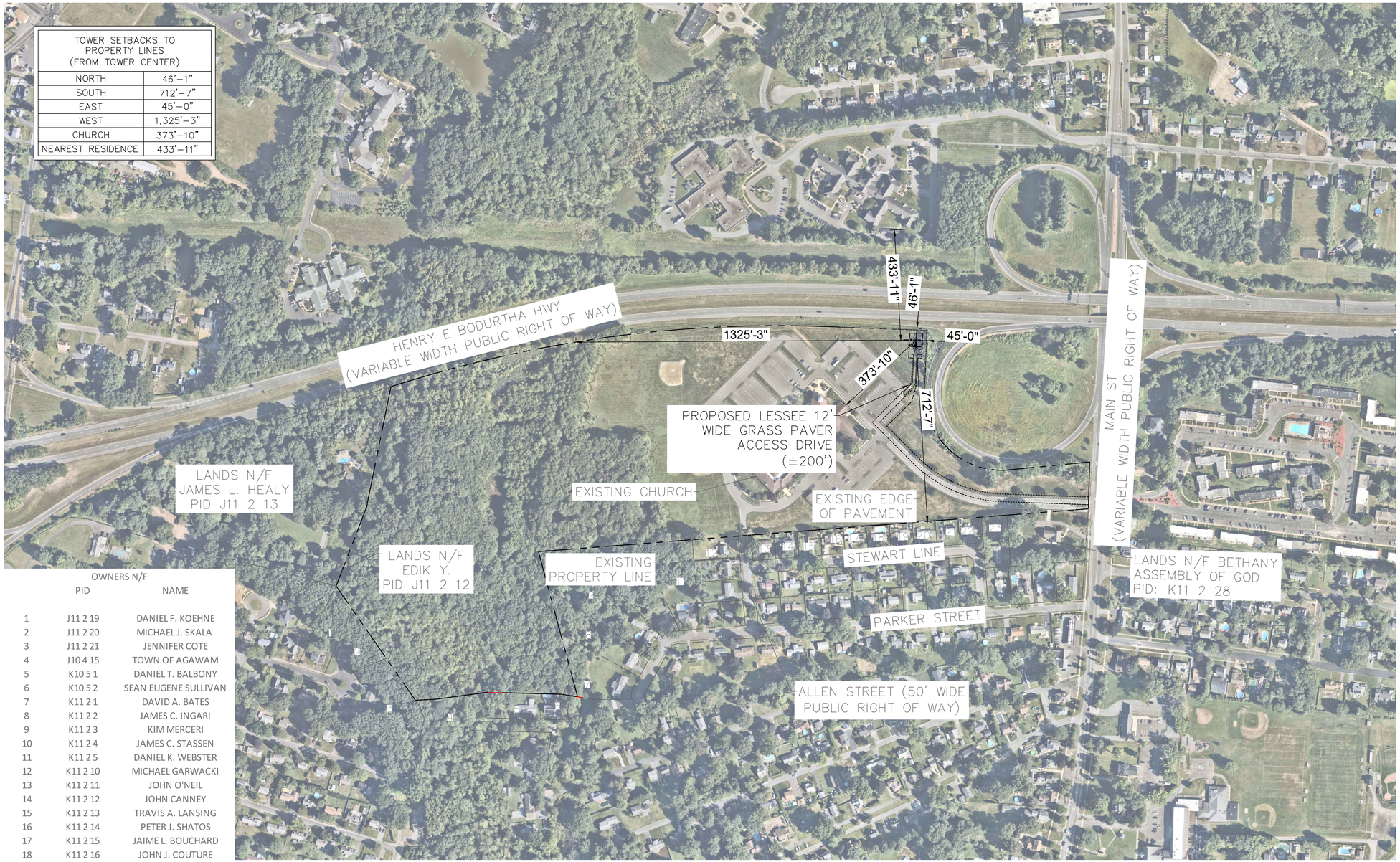

OWNERS N/F

	PID	NAME
1	J11 2 19	DANIEL F. KOEHNE
2	J11 2 20	MICHAEL J. SKALA
3	J11 2 21	JENNIFER COTE
4	J10 4 15	TOWN OF AGAWAM
5	K10 5 1	DANIEL T. BALBONY
6	K10 5 2	SEAN EUGENE SULLIVAN
7	K11 2 1	DAVID A. BATES
8	K11 2 2	JAMES C. INGARI
9	K11 2 3	KIM MERCERI
10	K11 2 4	JAMES C. STASSEN
11	K11 2 5	DANIEL K. WEBSTER
12	K11 2 10	MICHAEL GARWACKI
13	K11 2 11	JOHN O'NEIL
14	K11 2 12	JOHN CANNEY
15	K11 2 13	TRAVIS A. LANSING
16	K11 2 14	PETER J. SHATOS
17	K11 2 15	JAIME L. BOUCHARD
18	K11 2 16	JOHN J. COUTURE
19	K11 2 17	NICOLAI DUBINEVICI
20	K11 2 18	GLORIA J. AFFLITTO
21	K11 2 19	ISUEL SANCHEZ
22	K11 2 20	JOSEPH R. SPAGNOLI
23	K11 2 21	APRIL J. GRAZIANO

SURVEY NOTE:

1. DIAMOND COMMUNICATIONS STAFF SHALL COORDINATE WITH THE PROPERTY OWNER TO OBTAIN THE PROPER EASEMENT AGREEMENTS TO CONSTRUCT AND MAINTAIN EQUIPMENT IN AND AROUND THE TOWER COMPOUND.
2. PROPOSED COMPOUND LAYOUT BASED ON SURVEY PROVIDED BY GEOLINE SURVEYING, INC SITE VISIT ON 08/14/23.

1 / C0.2 OVERALL PARCEL PLAN

SCALE: 1:200

NORTH

0 100 200 400

GRAPHIC SCALE: 1" = 200'

Diamond Communications LLC

PROJECT INFORMATION:

SITE NAME:
BETHANY ASSEMBLY OF GOD
SITE No.: MA054

580 MAIN ST
AGAWAM, MA 01001
HAMPDEN COUNTY

PLANS PREPARED BY:

Kimley»Horn

11720 AMBER PARK DRIVE, SUITE 600
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM

REV:	DATE:	ISSUED FOR:	BY:
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4	04/25/25	ZONING	DCC
3	04/18/25	ZONING	DCC
2	10/24/24	ZONING	DMF
1	02/14/24	ZONING	DMF
0	01/19/24	ZONING	DMF

LICENSER:

COMMONWEALTH OF MASSACHUSETTS
DANIEL C. CLASBY
No. 57896
REGISTERED PROFESSIONAL ENGINEER
41525

KHA PROJECT NUMBER:

013541034

DRAWN BY:	CHECKED BY:
JAR	CDS

SHEET TITLE:

OVERALL PARCEL PLAN

SHEET NUMBER:

C0.2

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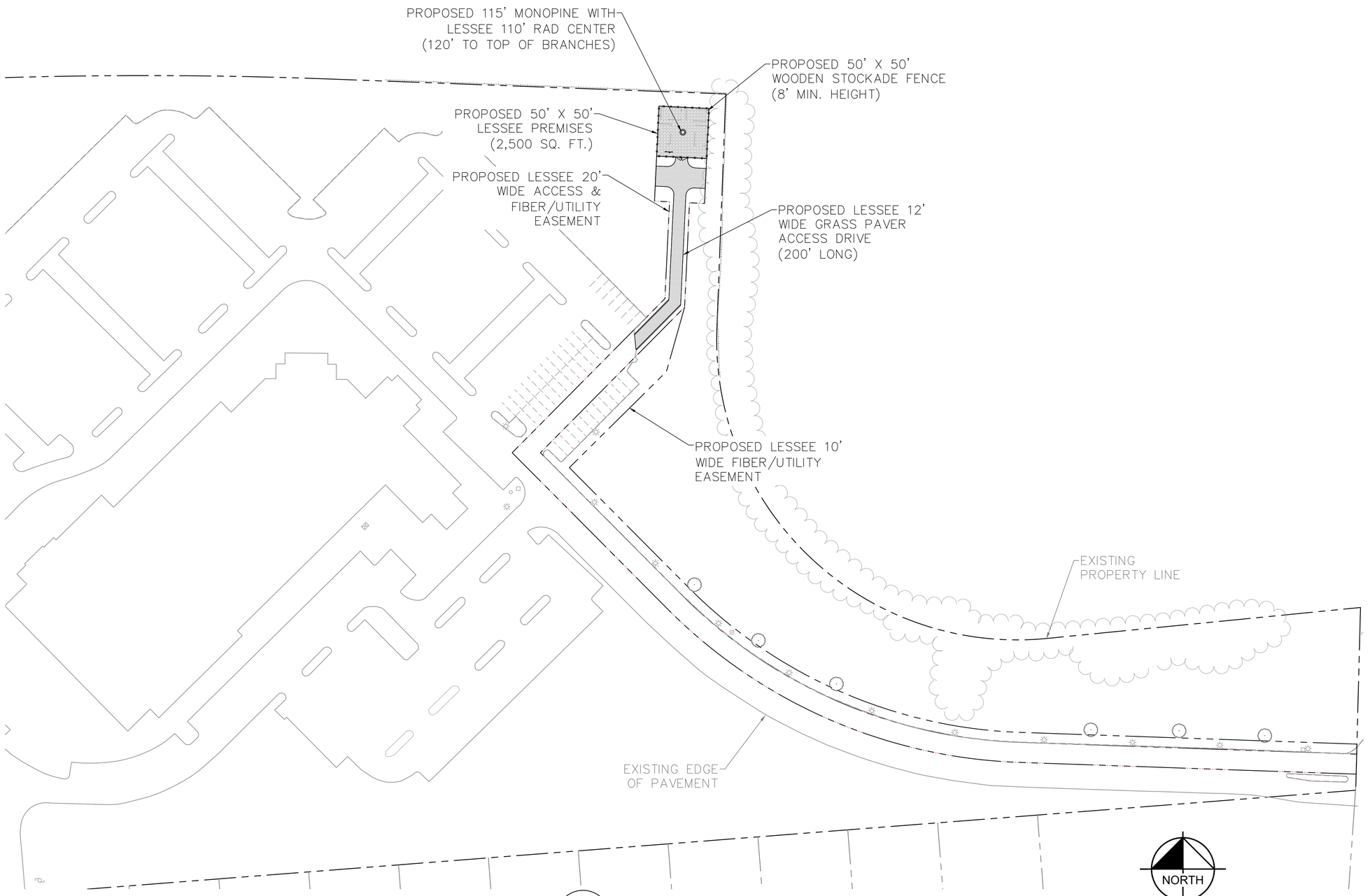

SURVEY NOTE:

1. DIAMOND COMMUNICATIONS STAFF SHALL COORDINATE WITH THE PROPERTY OWNER TO OBTAIN THE PROPER EASEMENT AGREEMENTS TO CONSTRUCT AND MAINTAIN EQUIPMENT IN AND AROUND THE TOWER COMPOUND.
2. PROPOSED COMPOUND LAYOUT BASED ON SURVEY PROVIDED BY GEOLINE SURVEYING, INC SITE VISIT ON 08/14/23.

1 / C1 OVERALL SITE PLAN

SCALE: 1" = 50'

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REGISTERED PROFESSIONAL ENGINEER
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SHEET TITLE:

OVERALL SITE PLAN

SHEET NUMBER:

C1

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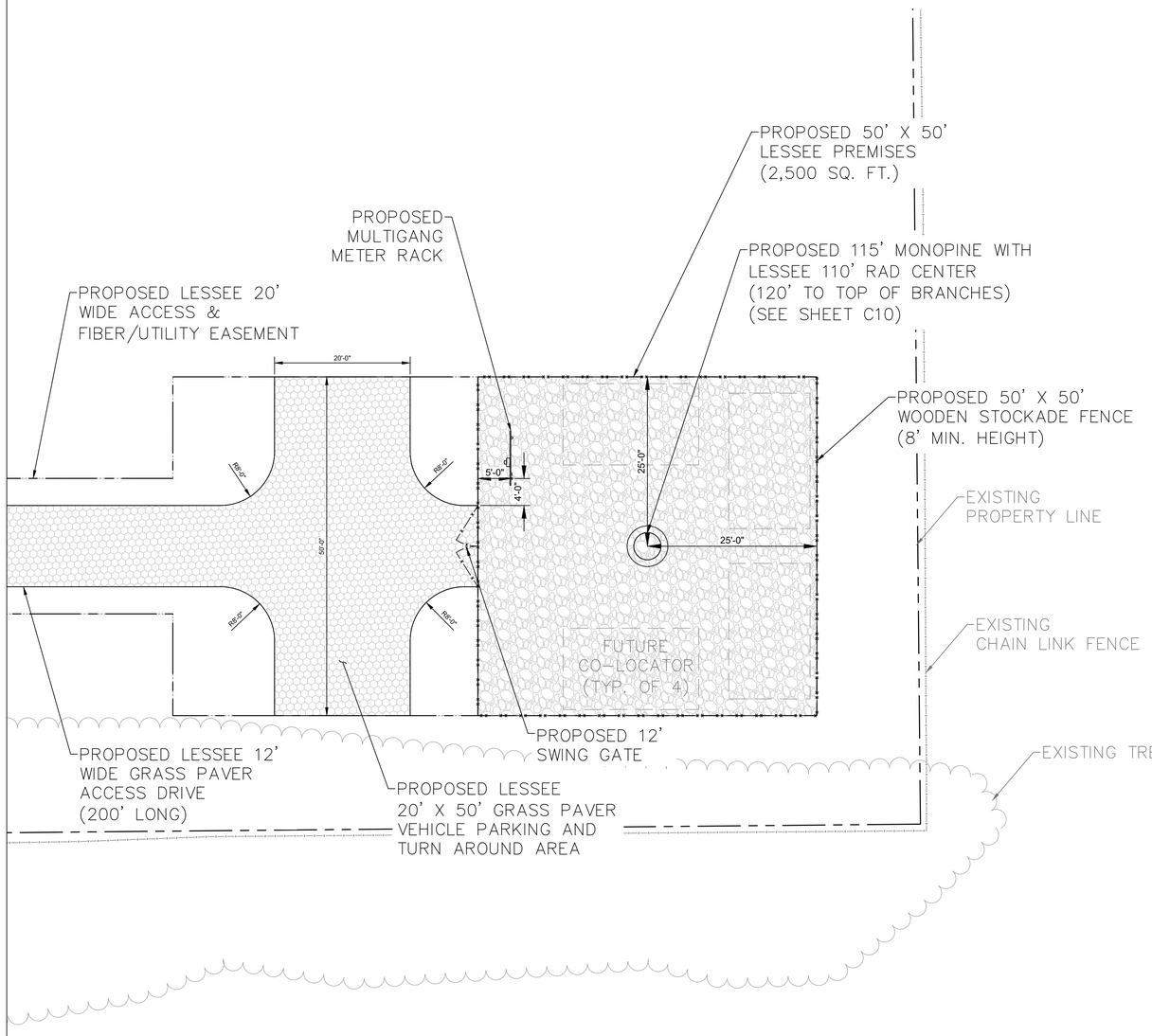

1 / C2 SITE PLAN

SCALE: 1" = 10'

NORTH

0 5 10 20

GRAPHIC SCALE: 1" = 10'

SITE NOTES:

1. DIAMOND COMMUNICATIONS STAFF SHALL COORDINATE WITH THE PROPERTY OWNER AND/OR TOWER OWNER TO OBTAIN THE PROPER EASEMENT AGREEMENTS TO CONSTRUCT AND MAINTAIN EQUIPMENT IN AND AROUND THE TOWER COMPOUND.
2. PROPOSED COMPOUND LAYOUT BASED ON SURVEY PROVIDED BY GEOLINE SURVEYING, INC DATED SITE VISIT ON 08/14/23.
3. CONTRACTOR TO CONFIRM WITH DIAMOND COMMUNICATIONS CONSTRUCTION MANAGER THAT THE SHELTER/EQUIPMENT SHOWN HAS BEEN ORDERED/SCHEDULED FOR DELIVERY TO THIS SITE.
4. THE BASIS OF EQUIPMENT DESIGN INCLUDES ONE (1) RF CABINET, ONE (1) FUTURE BATTERY CABINET, AND ONE (1) FUTURE EXPANSION CABINET.
5. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND MODIFYING SCOPE OF WORK TO ACCOMMODATE ANY CHANGES IN THE EXACT EQUIPMENT PROCURED BY DIAMOND COMMUNICATIONS. COORDINATE ANY CHANGES WITH DIAMOND COMMUNICATIONS CONSTRUCTION MANAGER.
6. ROUTE COAX/FIBER UP TOWER PER STRUCTURAL ANALYSIS BY TOWER OWNER.
7. TOWER DIMENSIONS SHOWN ON THIS PLAN ARE FOR TOWER CENTER LOCATION. CONTRACTOR TO OBTAIN COPY OF TOWER ERECTION DRAWINGS FROM DIAMOND COMMUNICATIONS CONSTRUCTION MANAGER PRIOR TO DRILLING TOWER FOUNDATIONS. CASSIONS AND TOWER SHOWN ON THIS PLAN ARE ILLUSTRATIVE, SEE DESIGN DRAWING BY OTHERS. DO NOT SCALE.

LEGEND

EXISTING FENCE	
PROPOSED FENCE	
COMPACTED GRAVEL	
REINFORCED TURF/ GRASS PAVER	

Diamond Communications LLC

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KHA PROJECT NUMBER:

013541034

DRAWN BY: JAR | CHECKED BY: CDS

SHEET TITLE:

SITE PLAN

SHEET NUMBER:

C2

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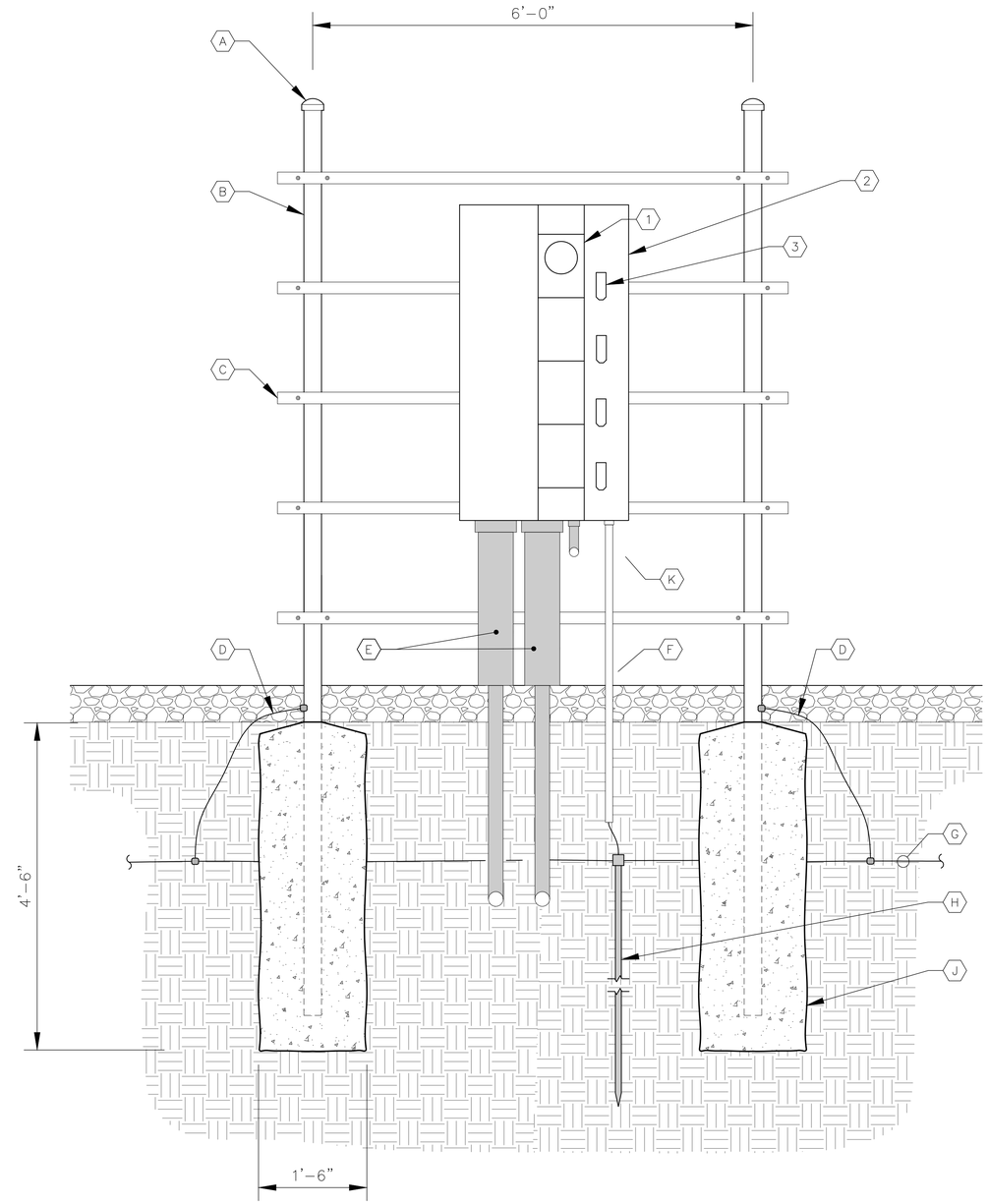

KEY NOTES - CONDUIT, CONDUCTORS, & MISC

- A — GALVANIZED RIGID STEEL CAP, TYPICAL.
- B — 3" GALVANIZED RIGID STEEL PIPE, TYPICAL.
- C — 1-5/8" x 1-5/8" GALVANIZED STEEL CHANNEL (UNISTRUT #P1000 OR APPROVED EQUIVALENT) WITH PLASTIC END CAP (UNISTRUT #P2860), TYPICAL.
- D — ONE (1) #2 AWG BARE SOLID TINNED COPPER BONDING CONDUCTOR IN ¾" PVC CONDUIT FROM H-FRAME VERTICAL PIPE TO GROUND RING, EXOTHERMIC WELD BOTH ENDS.
- E — 3" PVC CONDUIT WITH 6" EXPANSION SLEEVE FOR INCOMING SERVICE LATERALS FROM LOCAL UTILITY. SEE DETAIL 3/E7 FOR TRENCHING INFORMATION.
- F — 1" PVC WITH ONE (1) – 3/0 BARE STRANDED TINNED COPPER GROUNDING ELECTRODE CONDUCTOR (GEC) TO GROUND ROD, EXOTHERMIC WELD GEC TO GROUND ROD.
- G — GROUND RING (SEE SHEETS E6-E7).
- H — GROUND ROD, EXOTHERMIC WELD TO GROUND RING (SEE DETAIL 2/E7).
- J — CONCRETE FOUNDATION FOR H-FRAME VERTICAL PIPE. CONCRETE SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH OF 3,000 PSI.
- K — 1½" PVC POWER CONDUIT TO LGT PANEL.

KEY NOTES - ELECTRICAL EQUIPMENT

1. 200 AMP METER SOCKET IN NEMA 3R ENCLOSURE, TYPICAL OF 4.
2. FURNISH AND INSTALL SERVICE ENTRANCE RATED GANGED METER CENTER WITH FOUR (4) – 200 AMP (22KAIC), 120/240 VOLT SINGLE PHASE SERVICE POSITIONS IN NEMA 3R ENCLOSURE. COORDINATE SPECIFIC REQUIREMENTS WITH LOCAL UTILITY.
3. 200 AMP, 2 POLE (22KAIC) DISCONNECT CIRCUIT BREAKER FOR TOP METER ONLY. CONTRACTOR SHALL MOUNT THE METER CENTER SUCH THAT THE TOP CIRCUIT BREAKER IS NO MORE THAN 6' ABOVE GRADE.

1 / C3 EQUIPMENT RACK DETAILS - FRONT

NOT TO SCALE

Diamond Communications LLC

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LICENSER:

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DANIEL C. CLASBY
No. 57896
REGISTERED PROFESSIONAL ENGINEER
4.25.25

KHA PROJECT NUMBER:

013541034

DRAWN BY: JAR CHECKED BY: CDS

SHEET TITLE:

EQUIPMENT RACK DETAIL - FRONT

SHEET NUMBER:

C3

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FENCE NOTES:

1. USE 3000–PSI CONCRETE, FULLY CONSOLIDATED AROUND THE POST.

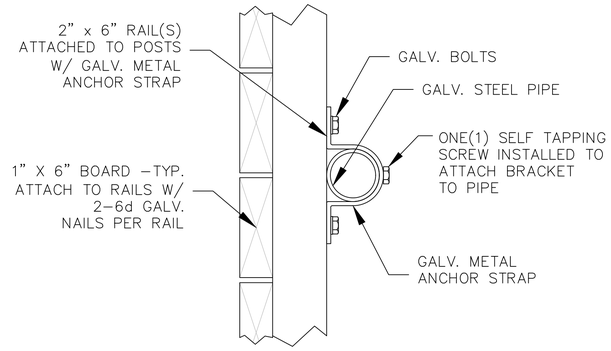
2. WHERE THE POST IS SET IN ROCK OR CONCRETE, CORE A HOLE 12" DEEP AND 1" LARGER IN DIAMETER THAN THE POST. SET THE POST AND GROUT IN PLACE USING NON–SHRINK GROUT.

3. ALL POSTS MUST BE PLUMB AND ALIGNED WITH ONE ANOTHER IN BOTH HORIZONTAL AND VERTICAL PLANES.

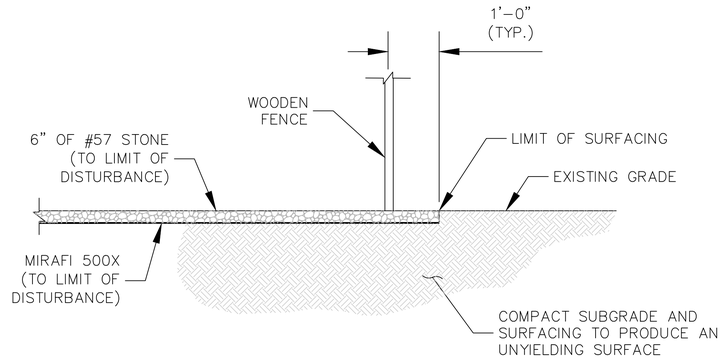
4. PROVIDE MIDRAILS AND BRACING AT ALL CORNER POSTS WHERE THE FENCE CHANGES DIRECTION BY MORE THAN 30 DEGREES.

5. THE GRADE OF THE SITE AND INSTALLATION OF THE FENCE SHALL PROVIDE FOR NO MORE THAN A 3" GAP BETWEEN THE BOTTOM OF THE FENCE MATERIAL AND FINISH GRADE.

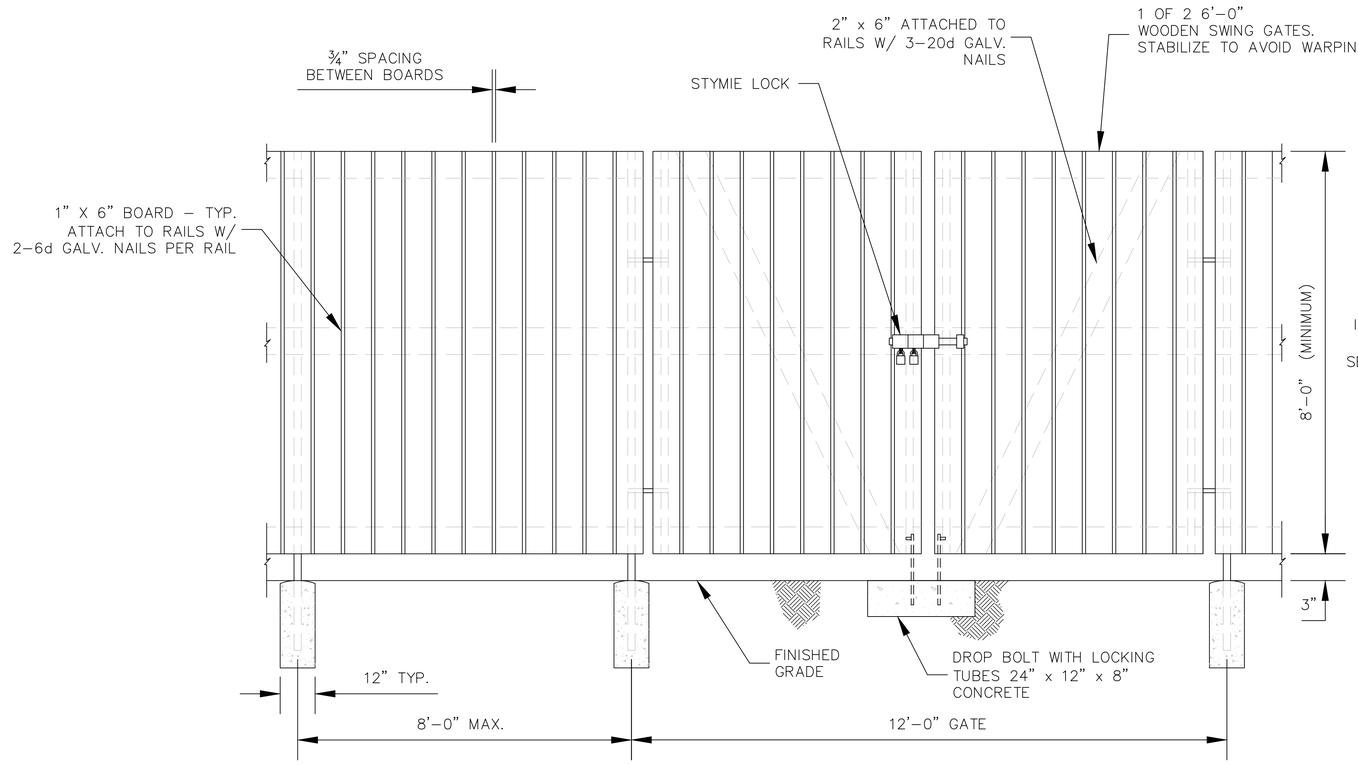
6. CONTRACTOR SHALL PROVIDE HOLD OPEN DEVICES FOR ALL GATES AT THE SPECIFIED OPEN POSITIONS, DRIVEN PIPE TYPE RECEIVERS ARE NOT AUTHORIZED.



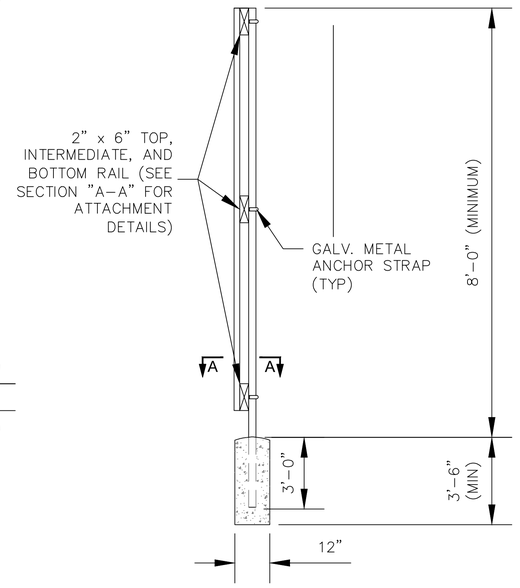
SECTION "A-A"
NOT TO SCALE



3 / C4 SITE COMPOUND SURFACE DETAIL
NOT TO SCALE



1 / C4 WOODEN FENCE AND GATE ELEVATION
NOT TO SCALE



2 / C4 SIDE ELEVATION VIEW
NOT TO SCALE

Diamond Communications LLC

PROJECT INFORMATION:

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BETHANY ASSEMBLY OF GOD
SITE No.: MA054

580 MAIN ST
AGAWAM, MA 01001
HAMPDEN COUNTY

PLANS PREPARED BY:

Kimley»Horn
11720 AMBER PARK DRIVE, SUITE 600
ALPHARETTA, GA 30009
PHONE: 770–619–4280
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LICENSER:

COMMONWEALTH OF MASSACHUSETTS
DANIEL C. CLASBY
CIVIL
No. 57896
REGISTERED PROFESSIONAL ENGINEER
42525

KHA PROJECT NUMBER:
013541034

DRAWN BY: JAR | CHECKED BY: CDS

SHEET TITLE:
FENCE, GATE, AND COMPOUND DETAILS

SHEET NUMBER:
C4

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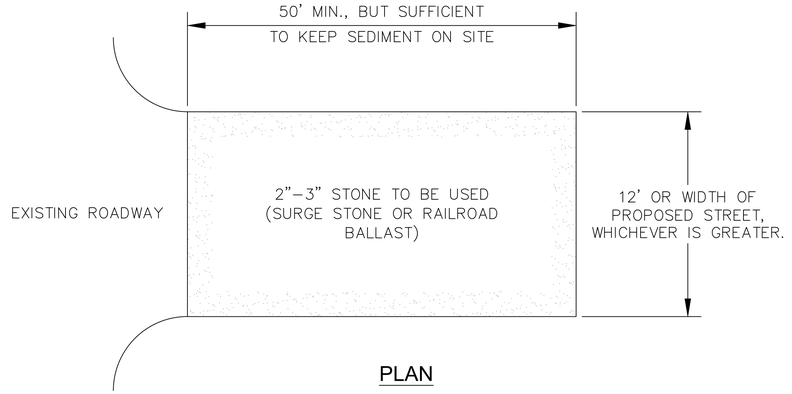
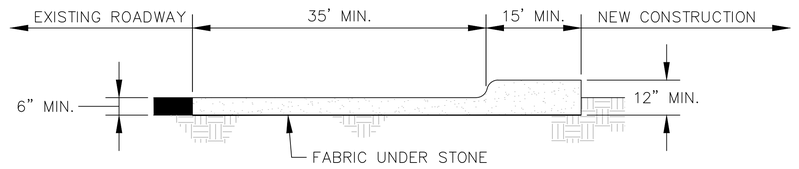


PLAN

NOTES:

1. PUT SILT FENCE OR TREE PROTECTION FENCE UP TO ENSURE CONSTRUCTION ENTRANCE IS USED.
2. IF CONSTRUCTION ON THE SITES ARE SUCH THAT THE MUD IS NOT REMOVED BY THE VEHICLE TRAVELING OVER THE STONE, THEN THE TIRES OF THE VEHICLES MUST BE WASHED BEFORE ENTERING THE PUBLIC ROAD.
3. IF A PROJECT CONTINUES TO PULL MUD AND DEBRIS ON TO THE PUBLIC ROAD, THE GOVERNING AUTHORITY WILL CLEAN THE AREA AND INVOICE THE FINANCIALLY RESPONSIBLE PERSON AS INDICATED ON THE FINANCIAL RESPONSIBILITY FORM.



CROSS SECTION

1 / C5 CONSTRUCTION ENTRANCE

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REGISTERED PROFESSIONAL ENGINEER
4.25.25

KHA PROJECT NUMBER:

013541034

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SHEET TITLE:

ACCESS ROAD DETAILS

SHEET NUMBER:

C5

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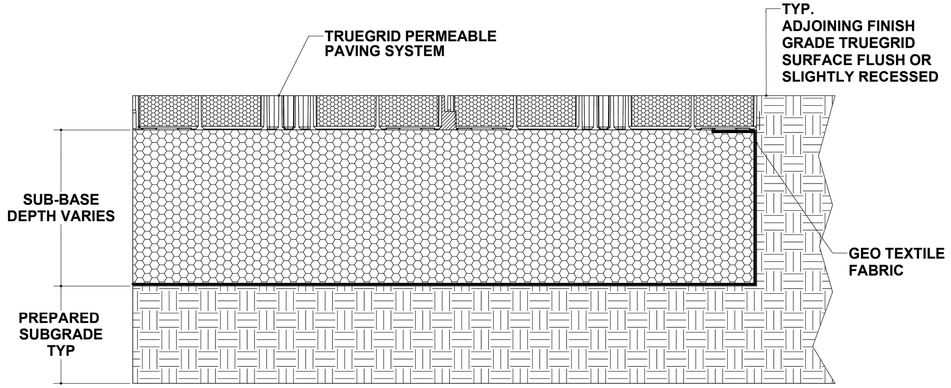
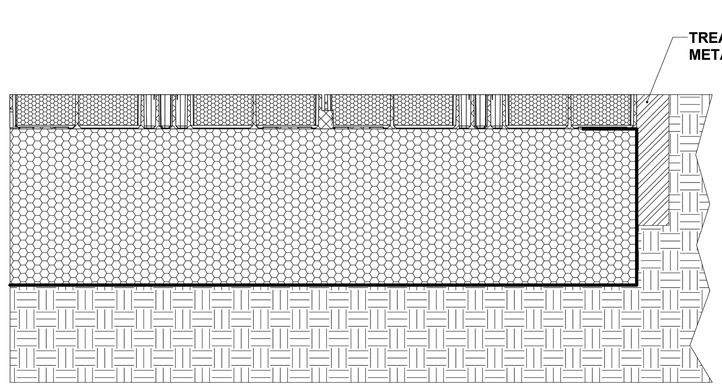
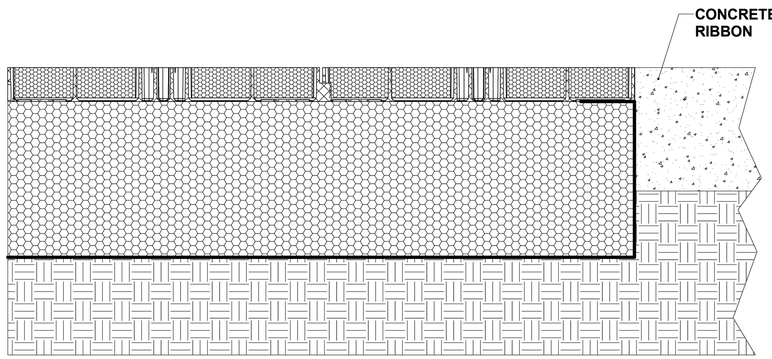


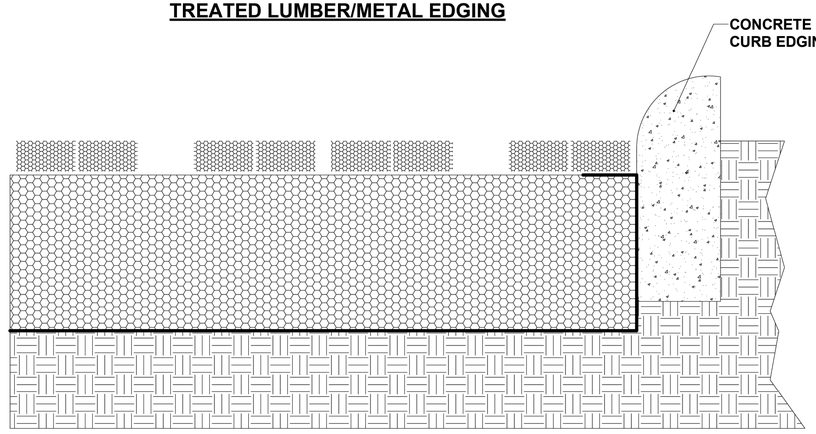
EXISTING GRADE



TREATED LUMBER/METAL EDGING



CONCRETE RIBBON EDGING OR TRANSITION TO HARDSCAPE



CONCRETE CURB EDGING

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03	UPDATED CONCRETE RIBBON	JT	JT	CW	6/20/2018

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CHECKED BY: J. Thethy	DATE: 8/22/2017	
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Diamond Communications LLC

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SHEET TITLE:

ACCESS ROAD TRUEGRID DETAILS

SHEET NUMBER:

C6

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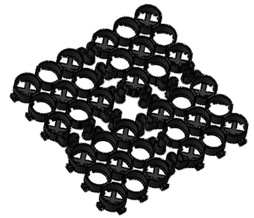
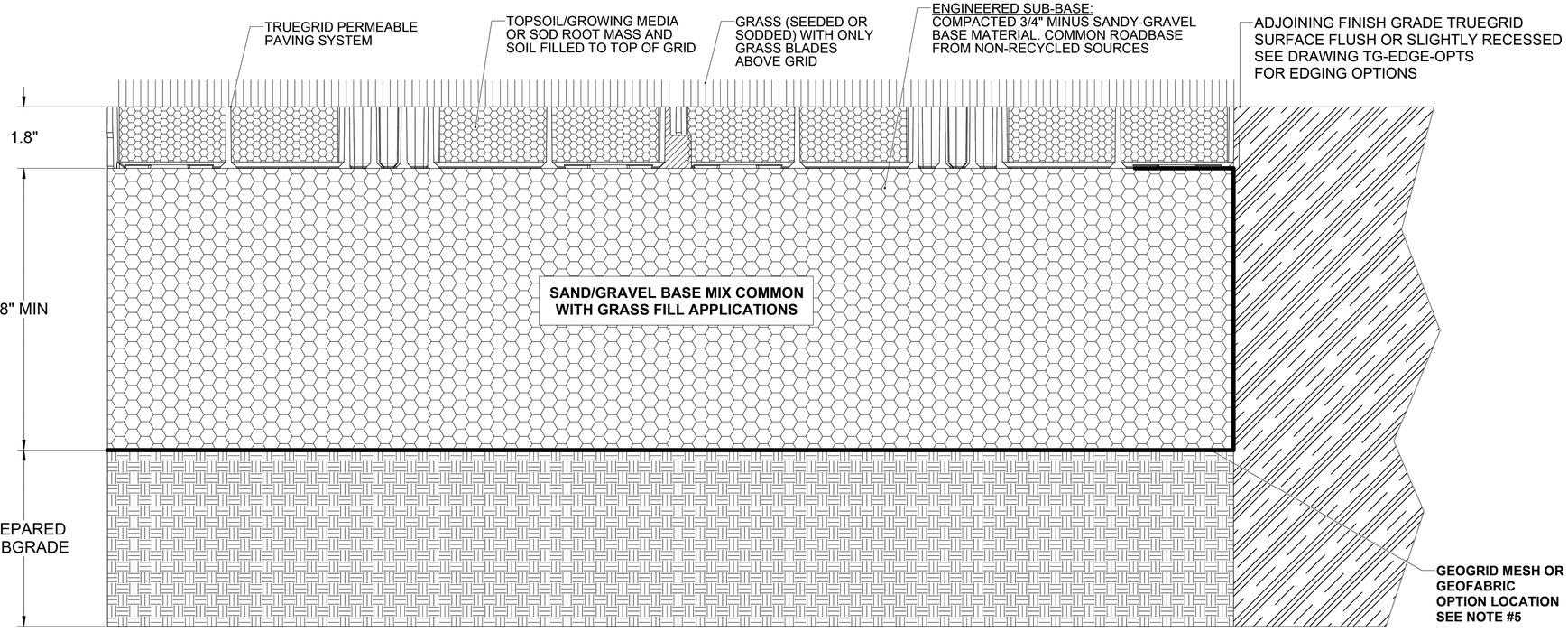
NOTES:

1. SUB-BASE DEPTH AND PREPARATION IS DEPENDENT ON SITE CONDITIONS PLUS LOADING REQUIREMENTS.
2. TRUEGRID PRO PLUS PRODUCTS ARE SUFFICIENTLY RATED FOR H-20 /HS-20 LOADING AND GREATER.
3. SEEDING METHOD: FILL SOIL/GROWING MEDIA TO TOP OF GRID. APPLY SEEDING OR HYDROSEEDING PER MANUFACTURERS' (BY OTHERS) REQUIRED APPLICATION RATES.
4. SOD INSTALLATION METHOD: FILL TOPSOIL/GROWING MEDIA HALF-WAY (~1") WITHIN TRUEGRID AND PRESS IN SOD SO THAT TOP OF GRID IS AT SOIL/ROOT LEVEL AND ONLY THE GRASS BLADES EXTEND ABOVE THE GRID.
5. GEOGRID MESH OR GEOFABRIC MAY BE REQUIRED BETWEEN SUBGRADE & SUBBASE FOR CERTAIN SOILS AND SITE SPECIFIC REQUIREMENTS.
6. NO STAKING NECESSARY WITH TRUEGRID PRO PLUS WHEN SLOPE IS BELOW 20 DEGREES. ASSESS PROJECT, AS NEEDED.
7. TRUEGRID PRO PLUS IS ADA COMPLIANT WITH PROPER FILL MATERIAL.
8. ALTERNATIVE ENGINEERED SUB-BASE MIXES CAN BE USED PROVIDED THEY PROMOTE GRASS GROWTH, HAVE ADEQUATE VOID SPACE FOR DRAINAGE, AND PROVIDE REQUIRED STRUCTURAL SUPPORT.
9. THIS CROSS SECTION IS FOR INFORMATION ONLY.



TRUEGRID BLOCK REFERENCE VIEW
PREASSEMBLED & DELIVERED IN 4' X 4' SHEET. RECONFIGURED AS NEEDED.NO EXTRA TOOLING OR ACCESSORIES REQUIRED



GRASS FILL HEAVY LOAD TRUEGRID PRO PLUS

APPLICATION:

HEAVY LOAD PARKING LOT, FIRE LANES, EQUIPMENT YARD, SERVICE ROADS.

MANUFACTURED IN NORTH AMERICA

1-855-355-GRID (4743)

REV	REVISION	DRAWN	CHECKED	APPROVED	DATE
01	UPDATED NOTES, AND FLAG NOTES	JT	JT	CW	9/3/2020

CLIENT / PROJECT

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES

PROPRIETARY DESIGN RIGHTS NOTICE: THIS DESIGN WAS ORIGINATED BY AND IS THE EXCLUSIVE PROPERTY OF TRUEGRID. IT IS DISCLOSED IN CONFIDENCE WITH THEUNDERSTANDING THAT NO REPRODUCTIONOR OTHER USE OF THE INFORMATION ISAUTHORIZED WITHOUT SPECIFIC AGREEMENT IN WRITING BY TRUEGRID.

DO NOT SCALE DRAWING

APPROVAL INFORMATION

DRAWN BY: J. Thethy	DATE: 2/28/2020	
CHECKED BY: J. Thethy	DATE: 2/28/2020	
APPROVED BY: C. White	DATE: 2/28/2020	SIZE: D
FILE I.D.: TG-GRS-HL.sldprt	SCALE: 1:1.5	SHEET: 1 OF 1

TRUEGRID® True to your project. True to the environment.

TRUEGRID GRASS FILL INSTALLATION HEAVY LOAD

DRAWING NUMBER: TGFB-GRS-HL REV: 01

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Diamond Communications LLC

PROJECT INFORMATION:

SITE NAME:
BETHANY ASSEMBLY OF GOD
SITE No.: MA054

580 MAIN ST
AGAWAM, MA 01001
HAMPDEN COUNTY

PLANS PREPARED BY:

Kimley»Horn
11720 AMBER PARK DRIVE, SUITE 600
ALPHARETTA, GA 30009
PHONE: 770-619-4280
WWW.KIMLEY-HORN.COM

REV: DATE: ISSUED FOR: BY:

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LICENSER:



KHA PROJECT NUMBER:

013541034

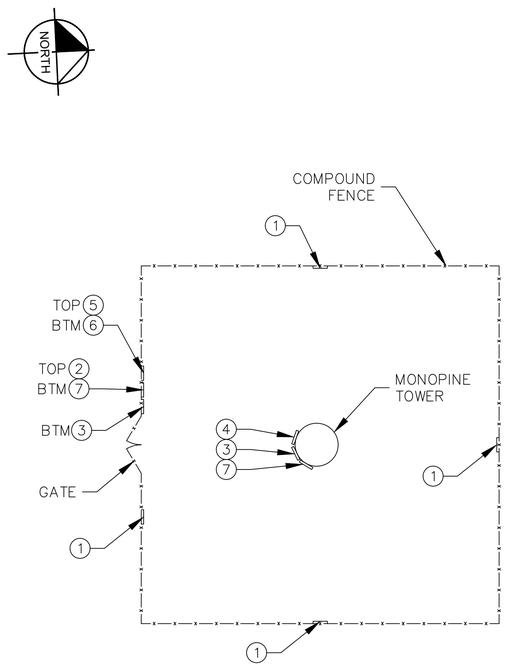
DRAWN BY: JAR CHECKED BY: CDS

SHEET TITLE:

ACCESS ROAD TRUEGRID DETAILS

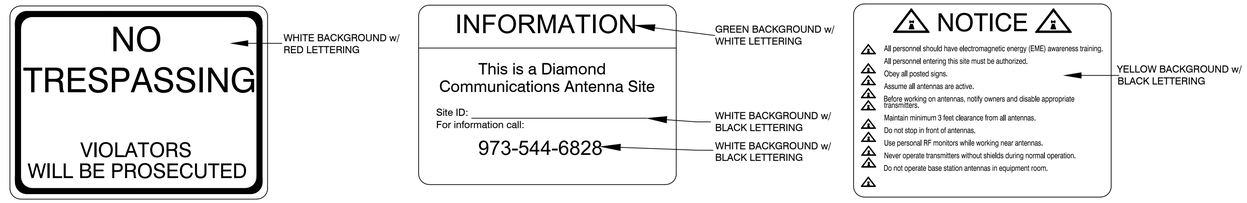
SHEET NUMBER:

C7



1 SIGN PLACEMENT PLAN VIEW
C8

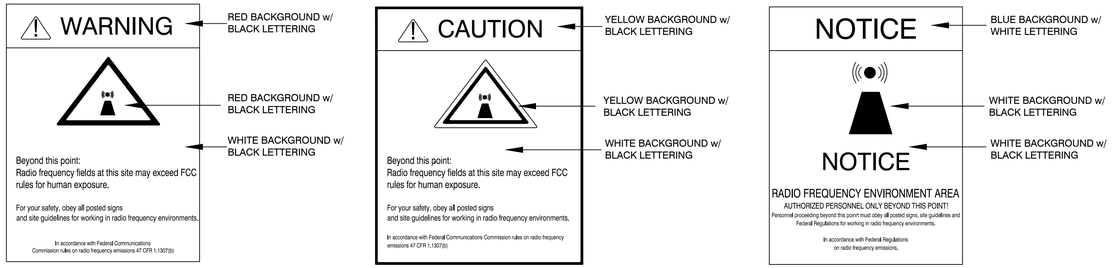
NOT TO SCALE



1 NO-TRESPASSING SIGN
18" HIGH X 24" WIDE
(OPERATIONS PROVIDED)

2 DIAMOND COMMUNICATIONS - SITE ID SIGN
15" HIGH X 23" WIDE
(OPERATIONS PROVIDED)

3 NOTICE-RFE SIGN
12" HIGH X 18" WIDE
(OPERATIONS PROVIDED)



4 WARNING-RF SIGN (RED)
12" WIDE X 18" HIGH

5 CAUTION-RF SIGN (YELLOW)
12" WIDE X 18" HIGH

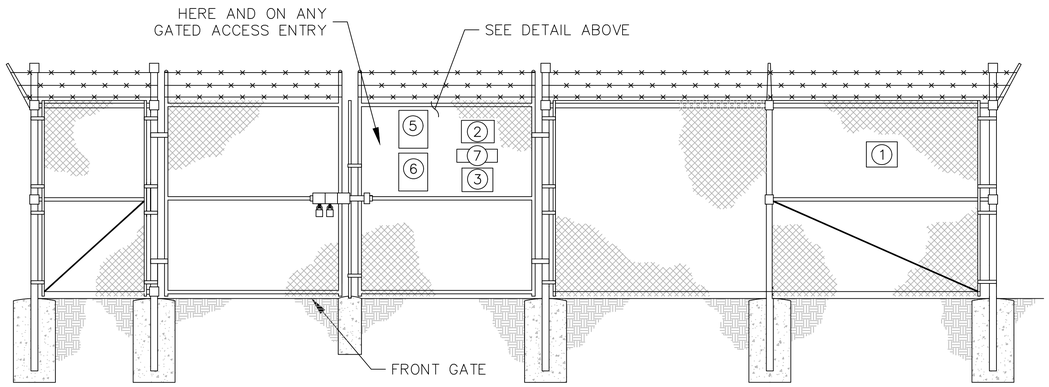
6 NOTICE-RF SIGN (BLUE)
12" WIDE X 18" HIGH



7 FCC REGISTRATION SIGN
20 WIDE X 4" HIGH

2 TYPICAL SIGNS AND SPECIFICATIONS
C8

NOT TO SCALE



3 SIGN PLACEMENT FRONT GATE VIEW
C8

NOT TO SCALE

SIGNAGE NOTES:
1. SIGNS SHALL BE FABRICATED FROM CORROSION RESISTANT PRESSED METAL, AND PAINTED WITH LONG LASTING UV RESISTANT COATINGS.
2. SIGNS (EXCEPT WHERE NOTED OTHERWISE) SHALL BE MOUNTED TO THE TOWER, GATE, AND FENCE USING A MINIMUM OF 9 GAUGE ALUMINUM WIRE, HOG RINGS (AS UTILIZED IN FENCE INSTALLATIONS) OR BRACKETS WHERE NECESSARY. BRACKETS SHALL BE OF SIMILAR METAL AS THE STRUCTURE TO AVOID GALVANIC CORROSION.

Diamond Communications LLC

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SITE No.: MA054

580 MAIN ST
AGAWAM, MA 01001
HAMPDEN COUNTY

PLANS PREPARED BY:

Kimley»Horn
11720 AMBER PARK DRIVE, SUITE 600
ALPHARETTA, GA 30009
PHONE: 770-619-4280
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SHEET TITLE:
SITE SIGNAGE DETAILS

SHEET NUMBER:
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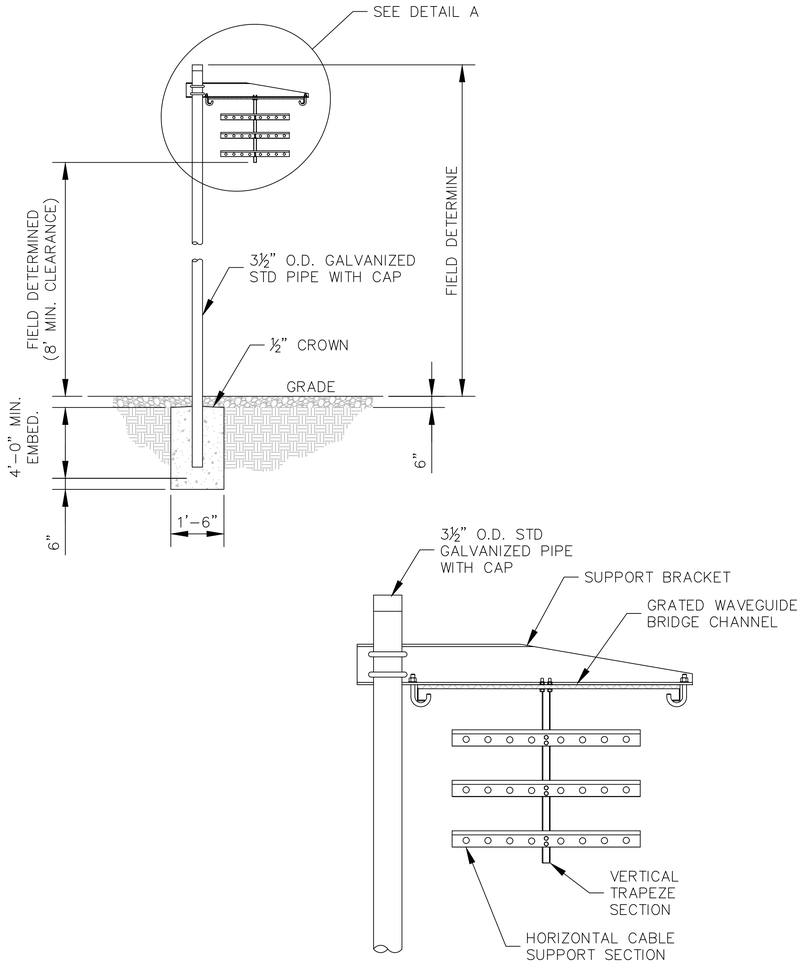
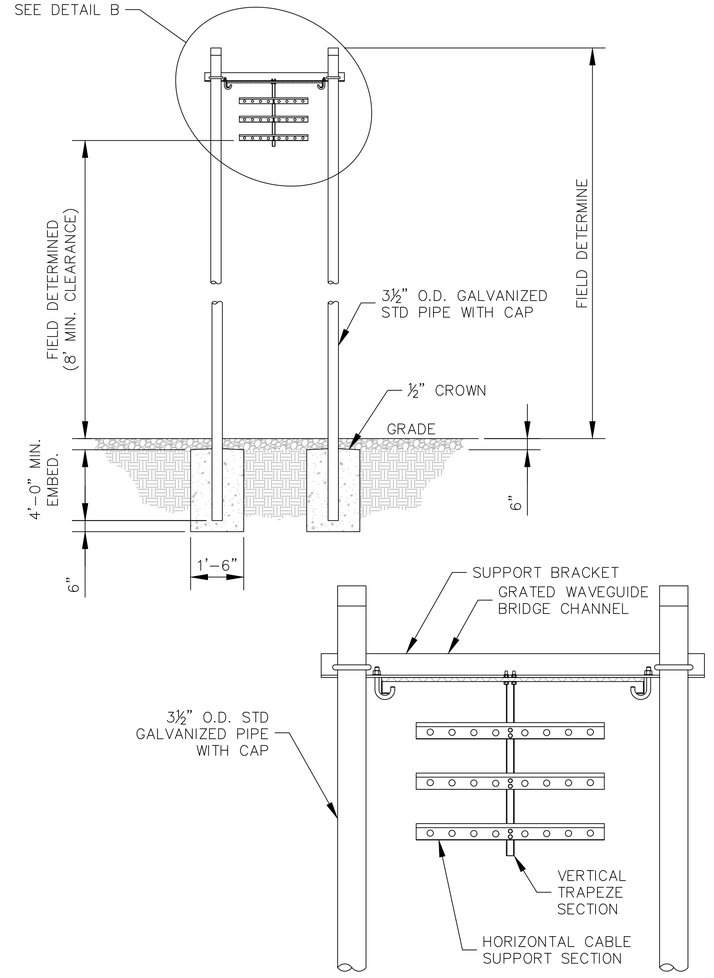


DETAIL A

ANDREW 1 POST WAVEGUIDE BRIDGE KIT (PART #: WB-K210-B15, OR APPROVED EQUIVALENT)

NOTE:

1. ALL MATERIALS FURNISHED BY CONTRACTOR UNLESS OTHERWISE NOTED.



DETAIL B

ANDREW 2 POST WAVEGUIDE BRIDGE KIT (PART #: WB-K410-B15, OR APPROVED EQUIVALENT)

NOTE:

1. ALL MATERIALS FURNISHED BY CONTRACTOR UNLESS OTHERWISE NOTED.

1/C9 WAVEGUIDE BRIDGE DETAIL

NOT TO SCALE

2/C9 WAVEGUIDE BRIDGE DETAIL (ALT DESIGN - 2 PIPE COLUMNS)

NOT TO SCALE

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Diamond Communications LLC

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SITE No.: MA054

580 MAIN ST
AGAWAM, MA 01001
HAMPDEN COUNTY

PLANS PREPARED BY:

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PHONE: 770-619-4280
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LICENSER:

COMMONWEALTH OF MASSACHUSETTS
DANIEL C. CLASBY
CIVIL
No. 57896
REGISTERED PROFESSIONAL ENGINEER
42525

KHA PROJECT NUMBER:

013541034

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SHEET TITLE:

WAVEGUIDE BRIDGE DETAILS

SHEET NUMBER:

C9

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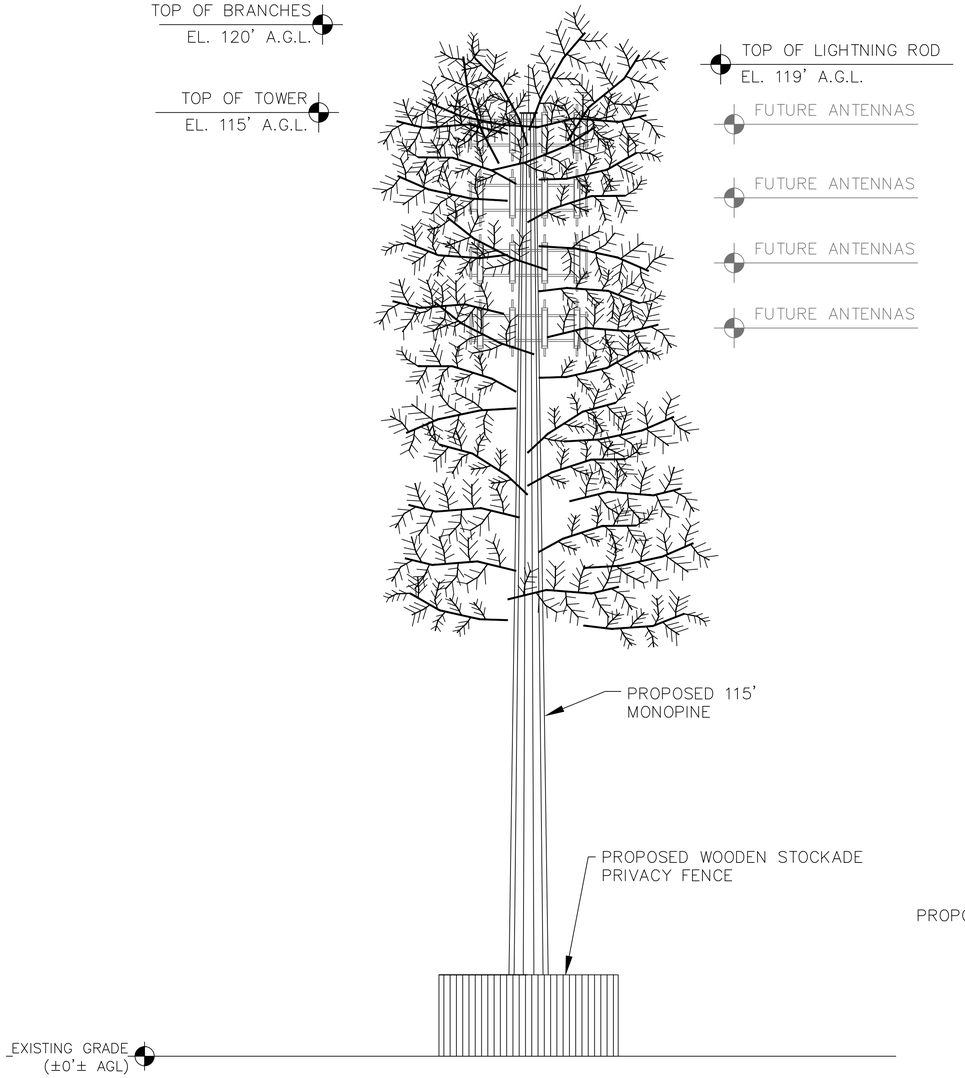
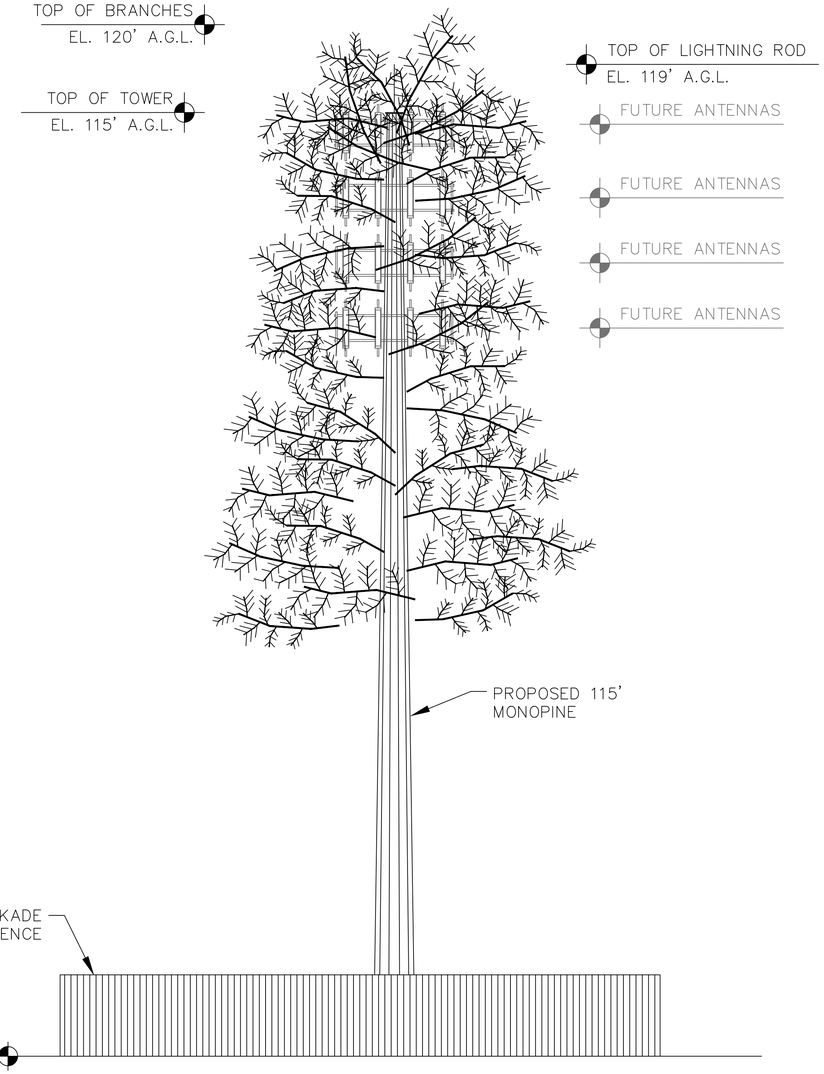


1 / C10 MONOPINE TOWER ELEVATION - EAST VIEW (FACING WEST)

NOT TO SCALE



2 / C10 MONOPINE TOWER ELEVATION - NORTH VIEW (FACING SOUTH)

NOT TO SCALE

NOTES:

1. ALL INFORMATION ON THIS PAGE IS PROVIDED BY DIAMOND COMMUNICATIONS AND/OR OTHERS AND IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. CONTRACTOR SHALL CONTACT THE DIAMOND COMMUNICATION CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION FOR ALL DETAILED ANTENNA, AND COAX CABLE INFORMATION.

2. REFER TO STRUCTURAL ANALYSIS BY TOWER OWNER FOR ANALYSIS OF PROPOSED TOWER.

3. IT IS UNDERSTOOD THAT KIMLEY-HORN MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED, FINDINGS, DESIGNS, RECOMMENDATIONS, SPECIFICATIONS, OPINION, OR PROFESSIONAL ADVICE RELATING TO THE STRUCTURAL ADEQUACY OF THE PROPOSED TOWER OR ATTACHMENT OF ANTENNAS OR OTHER APPURTENANCES.

NOTES:

1. ALL PROPOSED ATTACHMENTS TO TOWER BASED ON TOWER DESIGN DRAWINGS BY OTHERS (SEE GENERAL NOTE 1.07, SHEET N1).

2. THE TOWER ELEVATION SHOWN IS FOR REFERENCE ONLY.

3. COAX/FIBER CABLE LENGTHS ARE APPROXIMATE. CONTRACTOR TO VERIFY CORRECT LENGTH IN FIELD AT TIME OF CONSTRUCTION.

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SITE No.: MA054

580 MAIN ST
AGAWAM, MA 01001
HAMPDEN COUNTY

PLANS PREPARED BY:

Kimley»Horn
11720 AMBER PARK DRIVE, SUITE 600
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PHONE: 770-619-4280
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KHA PROJECT NUMBER:

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JAR	CDS

SHEET TITLE:

ANTENNA AND TOWER ELEVATION DETAILS

SHEET NUMBER:

C10

NOTE:
CURRENT DESIGN ANTICIPATES APPROXIMATELY 8,462± SQ. FT. (0.19 ACRES) OF CLEARING AND GRADING FOR THE PROPOSED PROJECT. IF ADDITIONAL CLEARING IS REQUIRED BEYOND WHAT IS SHOWN IN THE PLANS THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND/OR PROJECT MANAGER. IF DURING THE BID WALK OR CONSTRUCTION IT IS DETERMINED THAT MORE THAN (1) ACRE OF LAND IS TO BE DISTURBED FOR CONSTRUCTION AN EROSION AND SEDIMENTATION CONTROL PLAN MUST BE FILED 30 DAYS PRIOR TO CONSTRUCTION.

GRADING NOTES:
1. THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE AND PLACE, COMPACT, AND MOISTURE CONDITION ALL FILL PER THE PROJECT GEOTECHNICAL ENGINEERS SPECIFICATIONS. FILL MATERIAL SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.
2. ALL PROPOSED CONTOURS AND SPOT ELEVATIONS REFLECT FINISHED GRADES.
3. CONTRACTOR SHALL BLEND EARTHWORK SMOOTHLY TO TRANSITION BACK TO EXISTING GRADE.
4. PORTIONS OF THE SITE NOT SPECIFICALLY MENTIONED WITHIN THE GEOTECHNICAL REPORT SHALL BE COMPACTED TO 95 PERCENT OF THE MATERIALS MAXIMUM DRY DENSITY WITHIN 3 PERCENT OF OPTIMUM MOISTURE CONTENT.
5. FILL SHALL BE PLACED IN MAXIMUM 8 INCH LOOSE LIFTS.
6. UNDISTURBED AREAS WITHIN 30' INGRESS/EGRESS EASEMENT NOT NEEDED FOR UTILITY ROUTING TO BE LEFT UNDISTURBED.
7. GROUND WATER SHOULD BE REASONABLY EXPECTED. ANY DE-WATERING OR MOISTURE CONDITIONING IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHOULD BE INCLUDED IN THE CONTRACT PRICE.
8. SEED ALL DISTURBED AREAS NOT TOPPED WITH GRAVEL PER SEEDING SCHEDULE ON DETAIL ON SHEET C9.
9. MAXIMUM CUT SLOPE = 2H:1V UNLESS OTHERWISE NOTED.
10. MAXIMUM FILL SLOPE = 3H:1V UNLESS OTHERWISE NOTED.

LEGEND

EXISTING CONTOURS

PROPOSED CONTOURS

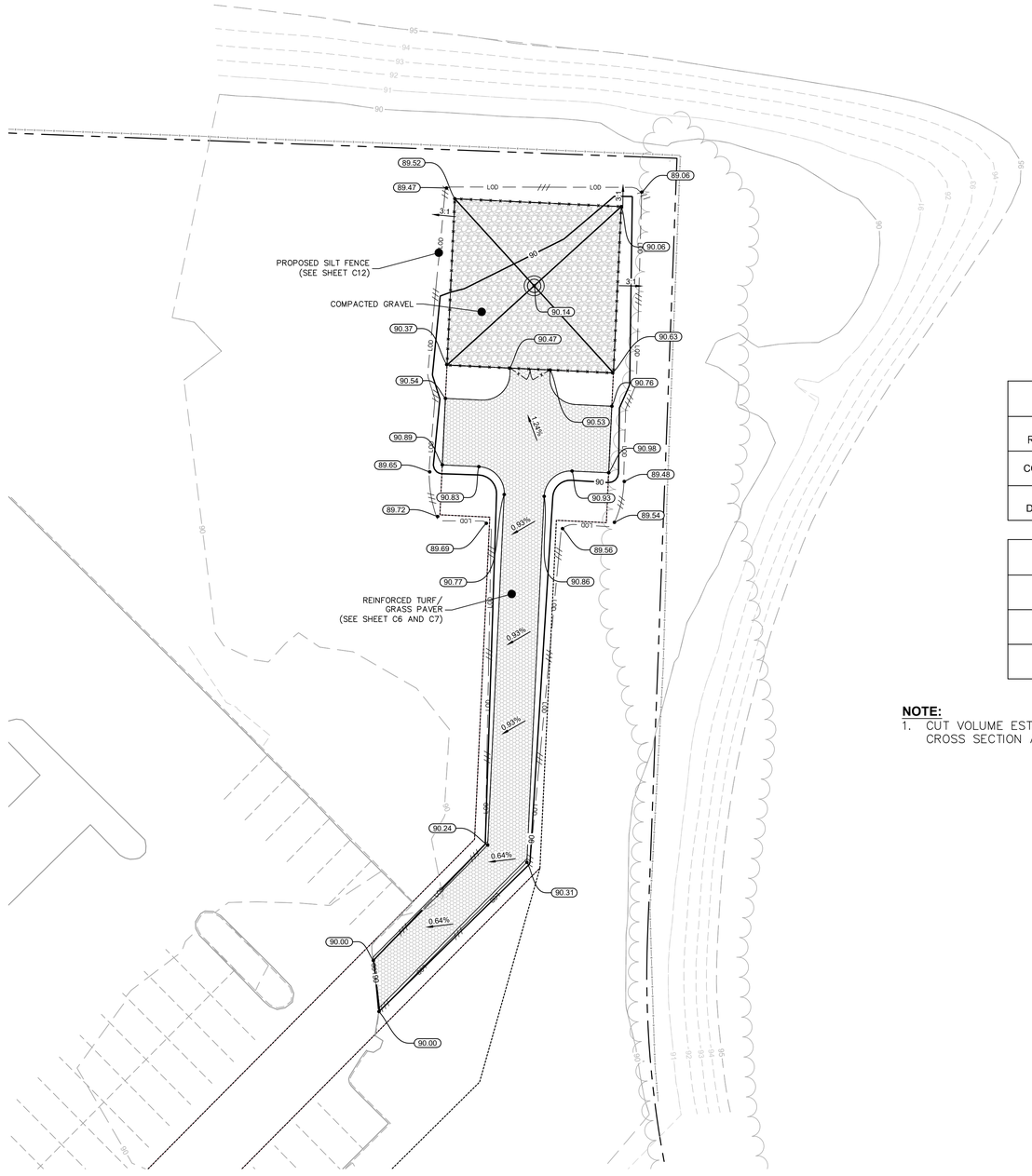
LOD/SILT FENCE — — LOD — /// — LOD — ///

EXISTING SPOT ELEVATION x XXX

PROPOSED SPOT ELEVATION ● XXX

COMPACTED GRAVEL

REINFORCED TURF/ GRASS PAVER



LAND COVER TABLE	
PERVIOUS REINFORCED TURF	3,224 SQ. FT.
COMPACTED GRAVEL	2,500 SQ. FT.
TOTAL LIMIT OF DISTURBANCE (LOD)	8,462 SQ. FT.

CUT / FILL TABLE	
CUT VOLUME:	225 CU. YD.
FILL VOLUME:	259 CU. YD.
NET VOLUME:	34 CU. YD. (FILL)

NOTE:
1. CUT VOLUME ESTIMATED BASED ON EXCAVATION REQUIRED FOR PAVER CROSS SECTION AND FOUNDATION INSTALLATIONS.

NORTH

GRAPHIC SCALE: 1" = 20'

1 / C11 GRADING AND EROSION CONTROL PLAN
SCALE: 1" = 20'

Diamond Communications LLC

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SITE No.: MA054

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AGAWAM, MA 01001
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COMMONWEALTH OF MASSACHUSETTS
DANIEL C. CLASBY
CIVIL
No. 57894
REGISTERED PROFESSIONAL ENGINEER
42525

KHA PROJECT NUMBER:
013541034

DRAWN BY:	CHECKED BY:
JAR	DCC

SHEET TITLE:
GRADING AND EROSION CONTROL PLAN

SHEET NUMBER:
C11

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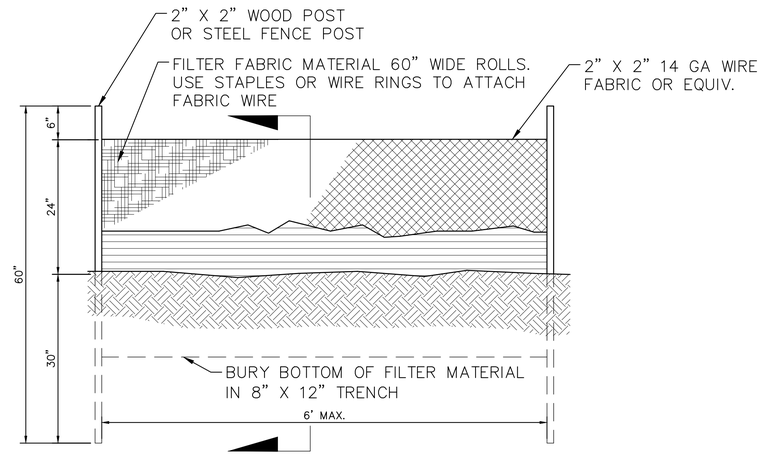
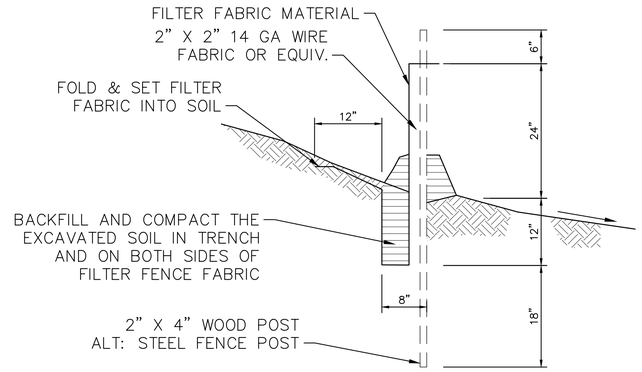


FRONT ELEVATION



SECTION A–A

NOTES:

1. CONSTRUCT SILT FENCE ALONG A LEVEL CONTOUR.
2. WHEN STANDARD STRENGTH FILTER FABRIC IS USED A WIRE MESH SUPPORT FENCE SHALL BE FASTENED TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY– DUTY WIRE STAPLES AR LEAST 1" LONG TIE WIRES OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 4".
3. STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE AND 40" OF THE FABRIC SHALL EXTEND INTO THE TRENCH. WHEN EXTRA–STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED AND THE FILTER FABRIC STAPLED OR WIRED DIRECTLY TO THE POSTS.
4. FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL THEN CUT TO THE LENGTH OF THE BARRIER. WHEN JOINTS ARE NECESSARY FILTER CLOTH SHALL BE SPICED TOGETHER ONLY TO A SUPPORT POST WITH A MINIMUM 6" OVERLAP AND BOTH AND SECURELY FASTENED TO THE POST.
5. THE TRENCH SHALL BE BACKFILLED WITH IMPACTED NATIVE MATERIAL.
6. IF 85% OR MORE OF A SOIL BY WEIGHT PASSES THROUGH THE OPENINGS IN A NO. 200 SIEVE (U.S. STANDARD) FILTER FABRIC SHALL NOT BE USED.
7. FILTER FABRIC MATERIAL SHALL CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0 DEGREES FAHRENHEIT TO 120 DEGREES FAHRENHEIT.
8. SILT FENCES SHALL REMAIN IN PLACE UNTIL THE SLOPED AREA IS PERMANENTLY STABILIZED.
9. LEAVE AN UNDISTURBED OR STABILIZED AREA IMMEDIATELY DOWNSLOPE FROM THE FENCE.

1 / C12 SILT FENCE DETAILS

NOT TO SCALE

Diamond Communications LLC

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LICENSER:

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DANIEL C. CASEY
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REGISTERED
PROFESSIONAL ENGINEER
4.25.25

KHA PROJECT NUMBER:

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DRAWN BY: JAR | CHECKED BY: DCC

SHEET TITLE:

SILT FENCE DETAILS

SHEET NUMBER:

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Bethany Assembly of God MA054 Site Simulation Map



Diamond
Communications LLC

BETHANY ASSEMBLY OF GOD
MA054

580 Main Street, Agawam, MA 01001

120ft. MONOPINE SIMULATION

View #1 from Meadow Street
approximately 870ft. north of site



Diamond
Communications LLC

BETHANY ASSEMBLY OF GOD

MA054

580 Main Street, Agawam, MA 01001

120ft. MONOPINE SIMULATION

View #2 from Harvey Johnson Drive approx. 1,180ft. north-northeast of site



Diamond
Communications LLC

BETHANY ASSEMBLY OF GOD

MA054

580 Main Street, Agawam, MA 01001

120ft. MONOPINE SIMULATION

View #3 from Main Street
approx. 1,440ft. north-northeast of site



Diamond
Communications LLC

BETHANY ASSEMBLY OF GOD

MA054

580 Main Street, Agawam, MA 01001

120ft. MONOPINE SIMULATION

View #4 from Meadow Street
approximately 1,275ft. northeast of site





Diamond
Communications LLC

BETHANY ASSEMBLY OF GOD

MA054

580 Main Street, Agawam, MA 01001

120ft. MONOPINE SIMULATION

View #5 from Main Street
approximately 915ft. northeast of site

Existing View


Diamond
Communications LLC
BETHANY ASSEMBLY OF GOD
MA054
580 Main Street, Agawam, MA 01001
120ft. MONOPINE
SIMULATION
View #6 from Highway 57
approximately 1,550ft. east of site
Existing View


Diamond
Communications LLC
BETHANY ASSEMBLY OF GOD
MA054
580 Main Street, Agawam, MA 01001
120ft. MONOPINE
SIMULATION
View #7 from Main Street
approx. 830ft. east-southeast of site
Existing View


Diamond
Communications LLC
BETHANY ASSEMBLY OF GOD
MA054
580 Main Street, Agawam, MA 01001
120ft. MONOPINE
SIMULATION
View #8 from Beekman Drive
approx. 1,120ft. east-southeast of site
Existing View

Diamond
Communications LLC

BETHANY ASSEMBLY OF GOD
MA054

580 Main Street, Agawam, MA 01001

120ft. MONOPINE SIMULATION

View #9 from Edward Street
approximately 1,240ft. southeast of site





Diamond
Communications LLC

BETHANY ASSEMBLY OF GOD

MA054

580 Main Street, Agawam, MA 01001

120ft. MONOPINE SIMULATION

View #10 from Parker Street
approx. 1,100ft. south-southeast of site



Diamond
Communications LLC

BETHANY ASSEMBLY OF GOD
MA054

580 Main Street, Agawam, MA 01001

120ft. MONOPINE SIMULATION

View #11 from Stewart Lane
approximately 830ft. south of site

Existing View


Diamond
Communications LLC
BETHANY ASSEMBLY OF GOD
MA054
580 Main Street, Agawam, MA 01001
120ft. MONOPINE
SIMULATION
View #12 from Stewart Lane
approx. 860ft. south-southwest of site
Existing View

Diamond
Communications LLC

BETHANY ASSEMBLY OF GOD

MA054

580 Main Street, Agawam, MA 01001

120ft. MONOPINE SIMULATION

View #13 from Allen Street
approximately 1,140ft. southwest of site




Diamond
Communications LLC
BETHANY ASSEMBLY OF GOD
MA054
580 Main Street, Agawam, MA 01001
120ft. MONOPINE
NOT VISIBLE
View #14 from Woodside Drive
approx. 2,660ft. west-southwest of site


Diamond
Communications LLC
BETHANY ASSEMBLY OF GOD
MA054
580 Main Street, Agawam, MA 01001
120ft. MONOPINE
SIMULATION
View #15 from Highway 57
approximately 990ft. west of site
Existing View



Diamond
Communications LLC

BETHANY ASSEMBLY OF GOD
MA054
580 Main Street, Agawam, MA 01001
120ft. MONOPINE SIMULATION
View #16 from Meadow Street
approximately 1,020ft. northwest of site

Existing View



Diamond
Communications LLC

BETHANY ASSEMBLY OF GOD

MA054

580 Main Street, Agawam, MA 01001

120ft. MONOPINE SIMULATION

View #17 from Harvey Johnson Drive
approx. 1,040ft. north-northwest of site

CBRS Clip-on Antenna for 4T4R RU

SAMSUNG

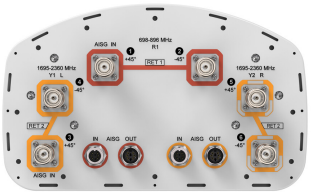




Item		Specification
Frequency range (MHz)		3,550~3,700
Polarization		Dual, Slant ±45°
Impedance (Ω)		50Ω
Return loss		< 1.5:1(14 dB)
Port to Port Isolation (dB)		> 25
Gain(dBi)		12.5 ±0.5
Horizontal 3dB beam width (°)		65 ±5
Vertical 3dB beam width (°)		17 ±3
Fixed Electrical Tilt (°)		8 ±2°
Front to back ratio (dB) 180° ±30°		≥ 25
Cross polar ratio	dB@ Boresight	> 18
	dB@ ±30°	> 10
	dB@ ±60°	> 8
Max Power/Port(Watt)		200
PIM		<-145 dBc @ 2x5Watts
Size (WHD)		220 x 303.5 x 37 mm, (8.7 x 12 x 1.5 inch)
Volume		Less than 2.5L
Weight (W/o Solar Shield & finger guard)		3.3 lb (1.5kg)
Operating Temperature		-40℃ (-40℉) ~ 55℃ (131℉)
Dust and water ingress		IP55
RF Connector (Bottom side)		2.2-5 Male

* Notes :
1. Fixed Electrical Tilt angle is the angle between the antenna mechanical boresight and the half-power beam axis in the elevation cut.
2. Specifications maybe not applicable if enclosure(or shroud) is added, Need make further analysis based on specific scenario

NHH-65C-R2B



6-port sector antenna, 2x 698–896 and 4x 1695–2360 MHz, 65° HPBW, 2x RET. Both high bands share the same electrical tilt.

- Interleaved dipole technology providing for attractive, low wind load mechanical package
- Internal SBT on low and high band allow remote RET control from the radio over the RF jumper cable
- Separate RS-485 RET input/output for low and high band
- One RET for low band and one RET for both high bands to ensure same tilt level for 4x Rx or 4x MIMO

General Specifications

Antenna Type	Sector
Band	Multiband
Color	Light Gray (RAL 7035)
Grounding Type	RF connector body grounded to reflector and mounting bracket
Performance Note	Outdoor usage | Wind loading figures are validated by wind tunnel measurements described in white paper WP-112534-EN
Radome Material	Fiberglass, UV resistant
Radiator Material	Copper | Low loss circuit board
Reflector Material	Aluminum
RF Connector Interface	4.3-10 Female
RF Connector Location	Bottom
RF Connector Quantity, high band	4
RF Connector Quantity, low band	2
RF Connector Quantity, total	6

Remote Electrical Tilt (RET) Information

RET Interface	8-pin DIN Female | 8-pin DIN Male
RET Interface, quantity	2 female | 2 male
Input Voltage	10–30 Vdc
Internal Bias Tee	Port 1 | Port 3
Internal RET	High band (1) | Low band (1)
Power Consumption, idle state, maximum	2 W
Power Consumption, normal conditions, maximum	13 W

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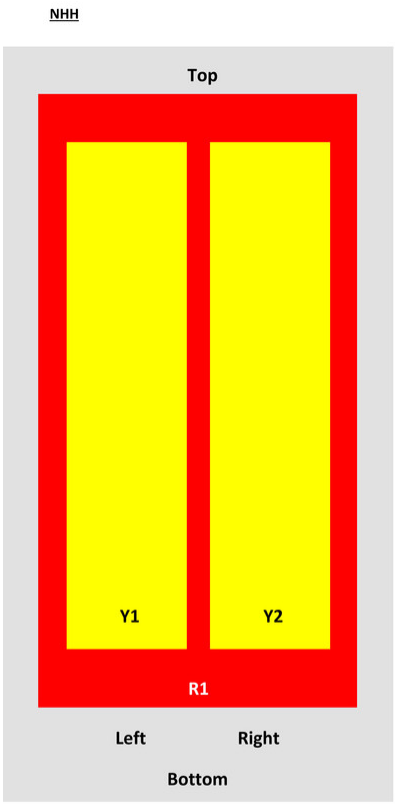
NHH-65C-R2B

Protocol	3GPP/AISG 2.0 (Single RET)

Dimensions

Width	301 mm | 11.85 in
Depth	180 mm | 7.087 in
Length	2438 mm | 95.984 in
Net Weight, without mounting kit	23.4 kg | 51.588 lb

Array Layout



Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID
R1	698-896	1-2	1	ANxxxxxxxxxxxxxxx1
Y1	1695-2360	3-4	2	ANxxxxxxxxxxxxxxx2
Y2	1695-2360	5-6		

View from the front of the antenna

(Sizes of colored boxes are not true depictions of array sizes)

Logo Image

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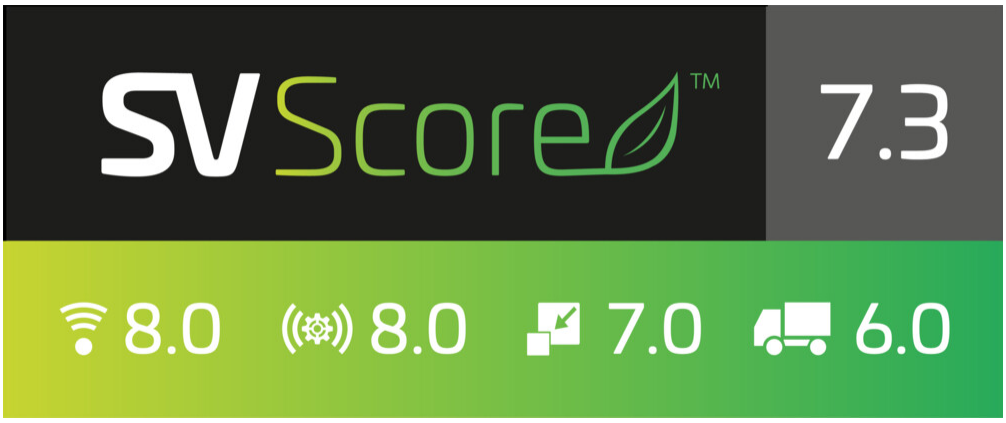

Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	1695 – 2360 MHz | 698 – 896 MHz
Polarization	±45°
Total Input Power, maximum	900 W @ 50 °C

Electrical Specifications

Frequency Band, MHz	**698–806**	**806–896**	**1695–1880**	**1850–1990**	**1920–2200**	**2300–2360**
Gain, dBi	16	16.1	17.3	17.7	18.3	18.2
Beamwidth, Horizontal, degrees	65	62	74	66	62	59
Beamwidth, Vertical, degrees	9	7.9	5.6	5.2	4.9	4.5
Beam Tilt, degrees	0–11	0–11	0–7	0–7	0–7	0–7
USLS (First Lobe), dB	21	18	19	20	22	18
Front-to-Back Ratio at 180°, dB	35	31	33	29	29	30
Isolation, Cross Polarization, dB	25	25	25	25	25	25
Isolation, Inter-band, dB	30	30	30	30	30	30
VSWR | Return loss, dB	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153	-153
Input Power per Port, maximum, watts	400	400	350	350	350	300

Electrical Specifications, BASTA

Frequency Band, MHz	**698–806**	**806–896**	**1695–1880**	**1850–1990**	**1920–2200**	**2300–2360**

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Gain by all Beam Tilts, average, dBi	15.8	15.9	16.9	17.5	18	17.9
Gain by all Beam Tilts Tolerance, dB	±0.4	±0.4	±0.4	±0.3	±0.6	±0.4
Gain by Beam Tilt, average, dBi	0 ° | 15.9 5 ° | 15.9 11 ° | 15.5	0 ° | 15.8 5 ° | 16.0 11 ° | 15.7	0 ° | 16.9 4 ° | 17.0 7 ° | 16.9	0 ° | 17.4 4 ° | 17.5 7 ° | 17.4	0 ° | 17.9 4 ° | 18.0 7 ° | 18.0	0 ° | 17.8 4 ° | 17.9 7 ° | 17.9
Beamwidth, Horizontal Tolerance, degrees	±1.2	±1.6	±5.3	±3.4	±6	±3.1
Beamwidth, Vertical Tolerance, degrees	±0.6	±0.4	±0.3	±0.2	±0.2	±0.2
USLS, beampeak to 20° above beampeak, dB	15	14	17	16	17	15
Front-to-Back Total Power at 180° ± 30°, dB	25.6	23.8	28	25	25	24
CPR at Boresight, dB	18	26	20	25	20	17
CPR at Sector, dB	15	9	11	10	8	2

Mechanical Specifications

Effective Projective Area (EPA), frontal	0.37 m² | 3.983 ft²
Effective Projective Area (EPA), lateral	0.31 m² | 3.337 ft²
Mechanical Tilt Range	0°–12°
Wind Loading @ Velocity, frontal	393.0 N @ 150 km/h (88.3 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	330.0 N @ 150 km/h (74.2 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	757.0 N @ 150 km/h (170.2 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	398.0 N @ 150 km/h (89.5 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h (150 mph)

Packaging and Weights

Width, packed	380 mm | 14.961 in
Depth, packed	295 mm | 11.614 in
Length, packed	2571 mm | 101.221 in
Weight, gross	35.9 kg | 79.146 lb

Regulatory Compliance/Certifications

Agency	Classification
CHINA-ROHS	Above maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system

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NHH-65C-R2B

ROHS	Compliant/Exempted
UK-ROHS	Compliant/Exempted

Included Products

BSAMNT-3	–	Wide Profile Antenna Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor top bracket set and one bottom bracket set.

* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance

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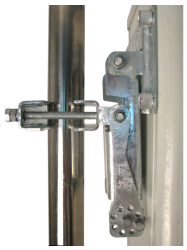
BSAMNT-3



Wide Profile Antenna Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor top bracket set and one bottom bracket set.

Product Classification

Product Type	Downtilt mounting kit

General Specifications

Application	Outdoor
Color	Silver

Dimensions

Compatible Diameter, maximum	115 mm | 4.528 in
Compatible Diameter, minimum	60 mm | 2.362 in
Weight, net	6.2 kg | 13.669 lb

Material Specifications

Material Type	Galvanized steel

Packaging and Weights

Included	Brackets | Hardware
Packaging quantity	1
Weight, gross	6.4 kg | 14.11 lb

Regulatory Compliance/Certifications

Agency	Classification
CE	Compliant with the relevant CE product directives
CHINA-ROHS	Below maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
REACH-SVHC	Compliant as per SVHC revision on www.commscope.com/ProductCompliance
ROHS	Compliant
UK-ROHS	Compliant

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BSAMNT-3

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Specifications

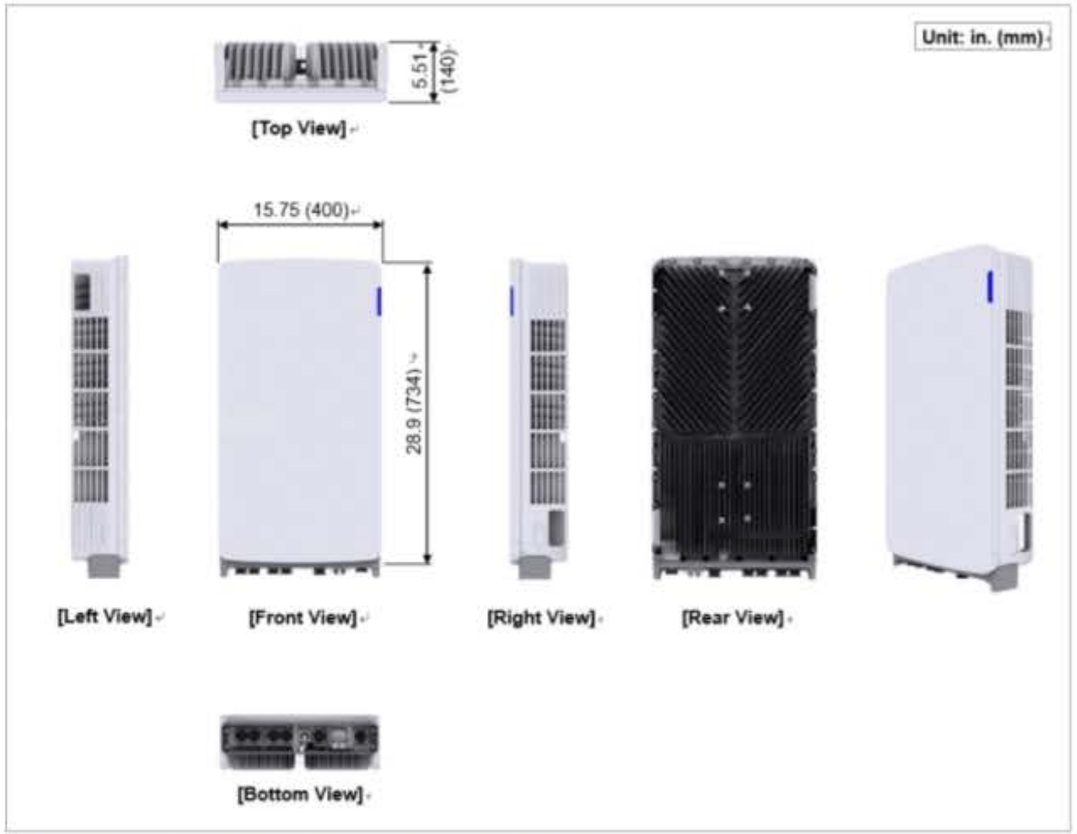
◆ C-band Verizon MMU Gen.2 (MT6413)

Table 1. Specification

Item		MT6413-77A
Air Technology		NR
Duplex		TDD
OFR		3,700 to 3,980 MHz
IBW		200 MHz
OBW		200 MHz
Carrier Configuration	Ch. BW	NR 20/40/60/80/100 MHz
	# of carriers (per unit)	2CC
TRX Path Configuration		64T64R
Antenna Configuration		2V16H 192 AE (6 x 1 sub-array)
Conductive Power		320 W
MIMO Capacity		DL 16L, UL 16RX (8L)
Function Split		Opt. 7-2x
Optic Interface		20 km, 25 Gbps × 4 ports
Input Voltage		-48 V DC (-36 to -58 V DC)
Power Consumption [a]		• 882 W @ 40 % room temp • 1,260 W @ 100 % room temp • 1,299 W @ 100 % all temp
Volume / Dimension (W x H x D)		41.1 L / 15.75 x 28.9 x 5.51 in. (400 x 734 x 140 mm)
Weight		57.32 lb (26 kg) or less (without a Bracket)
Operating Temperature [b]		-104 °F to +131 °F (-40 °C to +55 °C), (without solar load)
Cooling Scheme		Natural Convection
Installation		Pole, Wall
Operating Humidity [b]		5 to 100 % RH (non-condensing, not to exceed 30 g/m³ absolute humidity)
Altitude		Telcordia GR-63-CORE, Issue 5, Section 4.1.3
Noise		Telcordia GR-487-CORE, Issue 5, Section 3.34 (45 dBA)
Ingress Protection Rating		IEC 60529 (IP65)
Salt Fog / Salt Spray		Telcordia GR-487-CORE, Issue 5, Section 3.40.1
Wind Resistance		Telcordia GR-487-CORE, Issue 5, Section 3.36
Earthquake		Telcordia GR-63-CORE, Issue 5, Section 4.4.1 (Zone 4)
Vibration		Telcordia GR-63-CORE, Issue 5, Section 4.4.4 / 4.4.5
EMC		FCC Title 47 CFR Part 15 Subpart B
Safety		UL 62368-1
RF		FCC Title 47, CFR Part 27

[a] These values is predictive from simulation. Measurement data can be changed by +/- 10% when development is completed.

Figure 2. MMU View



1) Height dimension is smaller than Gen.1
It occur to New bracket code for Gen.2 MMU.
Gen.1 Bracket cannot be installed at Gen.2 because of the distance between Upper bracket and Lower bracket.

2) The Eye bolt is removed.
We can use the Bracket for hoisting instead of the eye bolt.

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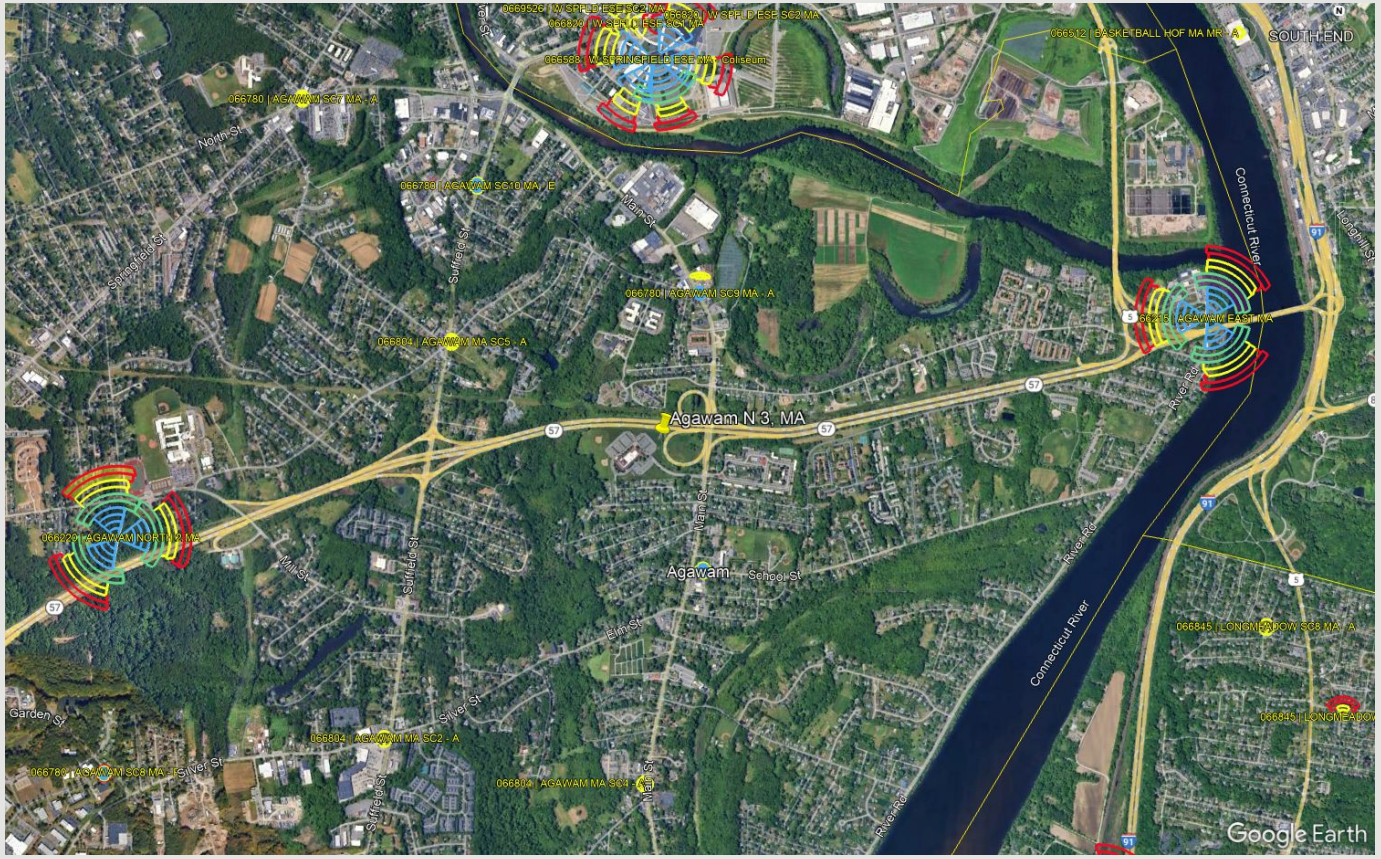
Verizon Wireless Communications Facility

Engineering Necessity Case – Agawam N 3, MA



Prepared by:
Kip DiVito
2024
Updated 2025

verizon

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Project Need Overview:

This Radio Frequency (RF) report is being provided for Verizon's proposed Agawam N 3, MA site. The proposed site will consist of a 38x17 ft leased area with ground based equipment, 115 ft monopine tower, and necessary RF equipment mounted at 110 ft Above Ground Level (AGL). The proposed location has been found through a site acquisition process with RF consultation. This location has been found acceptable to provide better coverage to the area along Route 57 and to the residents to the south along Route 159.

The proposed Agawam N 3, MA site is intended to extend the reliable coverage and capacity in the town of Agawam. A gap in coverage is experienced by the inability to adequately transmit or receive calls, or by interrupted or disconnected calls. The lack of capacity is due to the lack of wireless resources in the town of Agawam, compounded by the growing demand in wireless services. Recent research shows that the proposed facility will bring better, more reliable service to the town along Route 57 and to the residents surrounding the intersection of Route 57 & 159. Because wireless communication is used with increasing frequency to report crimes, accidents, fires, medical emergencies and other threats to people or property, eliminating the gap in coverage and increasing the network capacity at this location is essential to public health, safety, and welfare. Verizon Wireless has conducted RF tests in the area demonstrating the existing lack in coverage and inadequate capacity to sustain reliable in-building service. Submitted in this necessity case are propagation studies depicting simulated radio frequency coverage in the area of the proposed location both before and after the proposed site is constructed and activated.

Included in the following pages is information on common terms, educational resources on common topics, best network design practices, and coverage maps. These have been shared to shed light on how Verizon has come to determine that the proposed site will provide the coverage and capacity needed to extend Verizon's reliable coverage in the town of Agawam.

The site(s) proposed in this application are necessary to achieve the technical objectives stated above. Note that there are several ways by which an applicant can establish site need. See Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment," FCC 18-133, 83 FR 51867, at ¶ 6 (October 15, 2018) (confirming that the test for establishing an effective prohibition is whether "a state or local legal requirement *materially inhibits* a provider's ability to engage in any of a *variety of activities related to its provision of a covered service*," and this test is met "not only when filling a coverage gap but *also when densifying a wireless network, introducing new services or otherwise improving service capabilities*").

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Introduction:

Coverage and/or capacity deficiencies are the two main drivers that prompt the need for a new wireless communications facility (WCF). Most WCF provide a mixture of both capacity and coverage for the benefit of the end user.

Coverage describes the existence or lack of wireless service in an area. The request for improved service often comes from our customers or emergency services personnel that have no service or poor service. Coverage used to refer to the ability to make or place a call in vehicles, however, as usage patterns have shifted, coverage is now determined based on whether or not sufficient WCF exist to provide a reliable signal inside of buildings and residential areas, as well. Historically, when wireless was still in its infancy, coverage was the primary means to measure the effectiveness of the network in a given area.

Capacity is the metric used to determine if sufficient wireless resources exist and is now the primary means to measure how a community's wireless needs are being addressed. "Five bars" no longer means guaranteed coverage and capacity because each WCF has a limited amount of resources to handle voice calls, data connections and data volume. When these limits are reached and the WCF becomes overloaded (meaning there is more demand than signal to service it), the user experience quickly degrades preventing customers from making/receiving calls or getting applications to run. A WCF short on capacity could also make internet connections time out or delay information to emergency response personnel.

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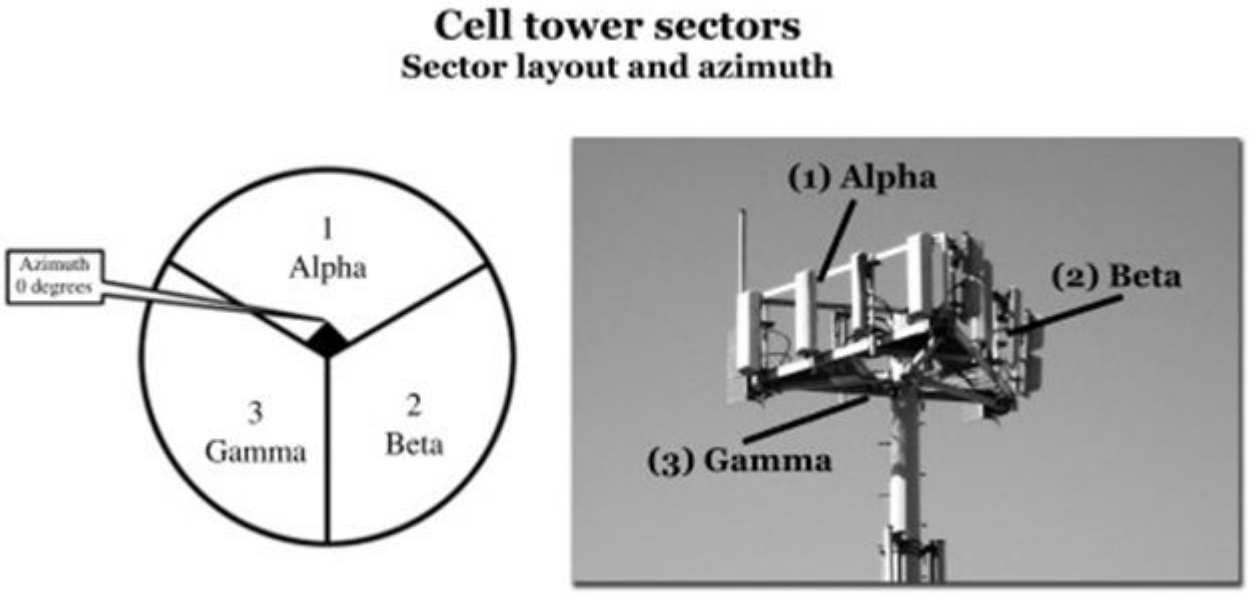
Introduction:

Sectors provide both Coverage and Capacity from a WCF towards a designed geographic area. Individual sectors are mounted near the top of a WCF and include radio equipment such as antennas, remote radio heads, and coaxial cables. Individual Sectors are typically labeled using the Greek alphabet, and each sector has an azimuth associated with it which defines the orientation of that sectors antennas. The proposed three sector facility has azimuths of 50(Alpha), 170 (Beta) & 280 (Gamma).



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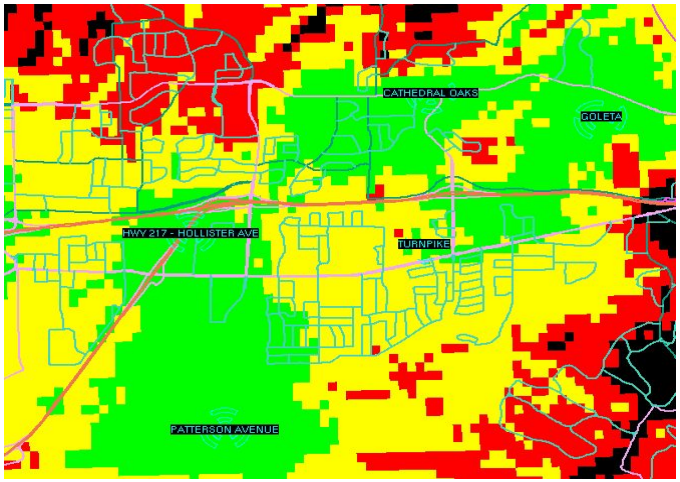
Explanation of Wireless Coverage



Coverage is best shown via coverage maps. RF engineers use tools that take into account terrain, vegetation, building types, and WCF specifics to model the existing coverage and prediction what we expect to see with the addition of a proposed WCF.

Coverage also changes depending on which frequencies are used. Most phones today use 4G at 700 MHz or 850 MHz spectrum which are considered low frequencies. Low frequencies can travel further distances than then the higher 1900 MHz and 2100 MHz frequencies now being employed due to increased capacity demands. Operating at higher frequencies makes it necessary for carriers to install substantially more wireless facilities to achieve the same coverage as one tower operating on the lower frequencies.

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Explanation of Wireless Capacity



Capacity is the amount of resources that a WCF has to service customer demand. Verizon utilizes sophisticated programs and customer feedback to monitor current usage trends and to forecast future needs. Because it takes an average of 2-3 years to complete a WCF, we have to start the process of adding a new WCF several years in advance of when the WCF will be needed.

Location, Location, Location. A good capacity WCF needs to be in the center of a user population which insures that traffic is evenly distributed around the WCF. A typical WCF is configured into three sectors (like a pie cut into three pieces), with each slice (sector) having 33% of the WCF resources. If one sector is under-utilized, it's resources can not necessarily be diverted to another sector. Therefore, optimal performance is only obtained when all three sectors have an even traffic distribution.

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Wireless Data Growth

Each year Verizon sees large increases in how much data its customers need. As the resolution of the pictures we send increases, the quality of the video we watch improves and the complexity of the applications grow, we commonly see tremendous growth year-over-year. 57% of American homes are wireless only. (CDC's 2018 Wireless Substitution: Early Release of Estimates From the National Health Interview Survey, July-December, 2018)

Machine to Machine communications will also increase the data burden on wireless networks, as over the next five (5) years more and more services that improve our safety and make our lives easier will be available over the wireless infrastructure , such as:

- Cars that notify 911 when an airbag deploys.
- "Driverless" cars needing traffic data and maps to reach your destination as quickly as possible.
- Medical monitors that will alert us should a loved one neglect taking their prescription drugs.
- Home alarms that notify you when your child arrives home from school.
- Smart street lights that notify the town when they are not working.
- town garbage cans that let people know when they need to be emptied.
- Tracking watches will aid in finding lost Alzheimer patients.

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Radio Emission Safety...

A common question received is “Are the radio emissions safe?”

Verizon goes to great effort to ensure that all of its projects meet the standards established by the FCC to ensure safety of the public and its employees. The links below are to three reputable organizations that have performed extensive reviews of the science available on this subject and have good educational articles on the results of their research.

World Health Organization
http://www.who.int/peh-emf/about/WhatisEMF/en/index1.html

American Cancer Society
http://www.cancer.org/cancer/cancercauses/othercarcinogens/athome/wireless facilityular-phone-towers

FCC Radio Frequency Safety
https://www.fcc.gov/general/radio-frequency-safety-0

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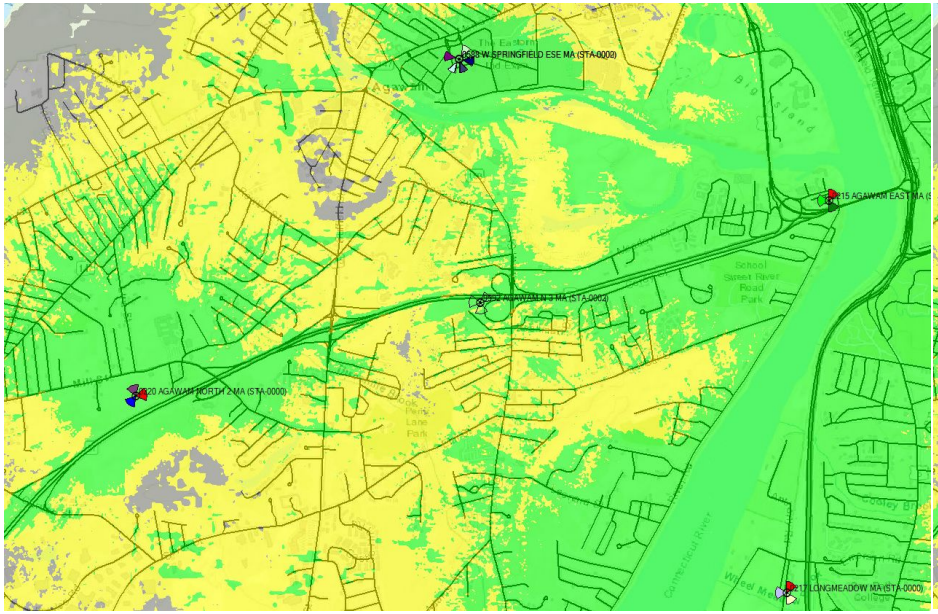
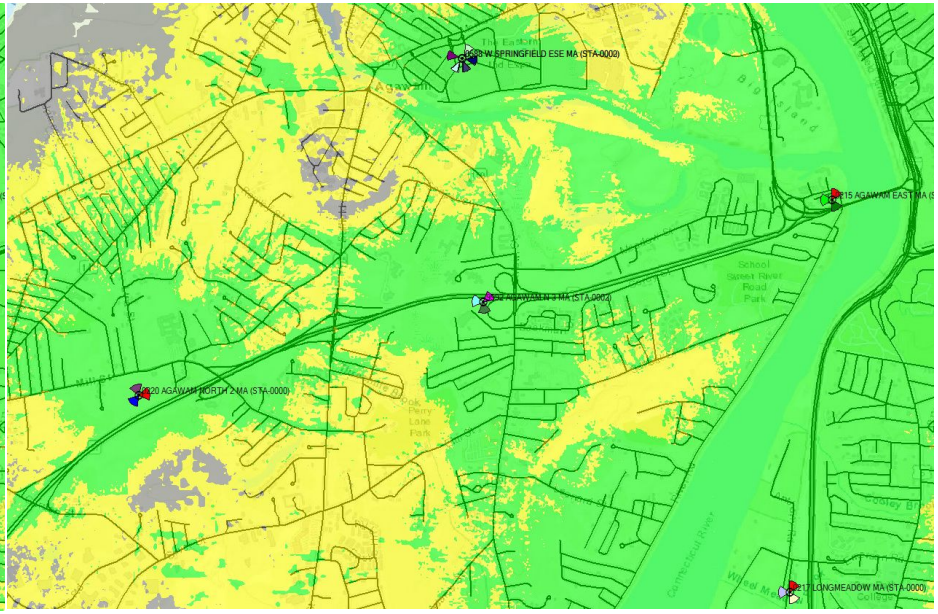
Coverage @ 700 MHz:

-105 = (Gray) On-Street Coverage
-95 = (Yellow) In-Vehicle Coverage
-85 = (Green) In-Building Coverage

Agawam N 3, MA Existing 700 MHz 4G Coverage



Agawam N 3, MA Proposed 700 MHz 4G Coverage



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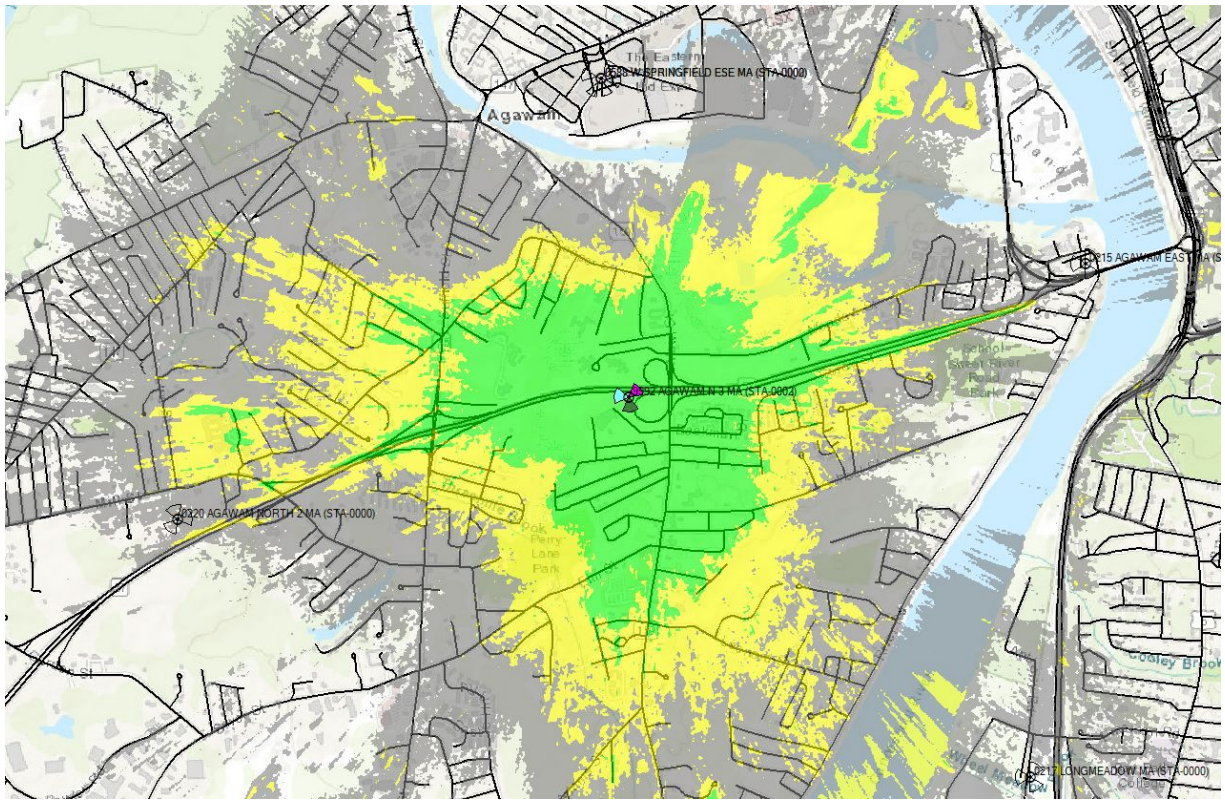
verizon
Confidential and proprietary Materials for authorized Verizon personnel and outside agencies only. Use, disclosure or distribution of this material is not permitted to any unauthorized persons or third parties except by written agreement.

Coverage @ 700 MHz:

-105 = (Gray) On-Street Coverage
-95 = (Yellow) In-Vehicle Coverage
-85 = (Green) In-Building Coverage

Agawam N 3, MA Proposed 700 MHz 4G Coverage



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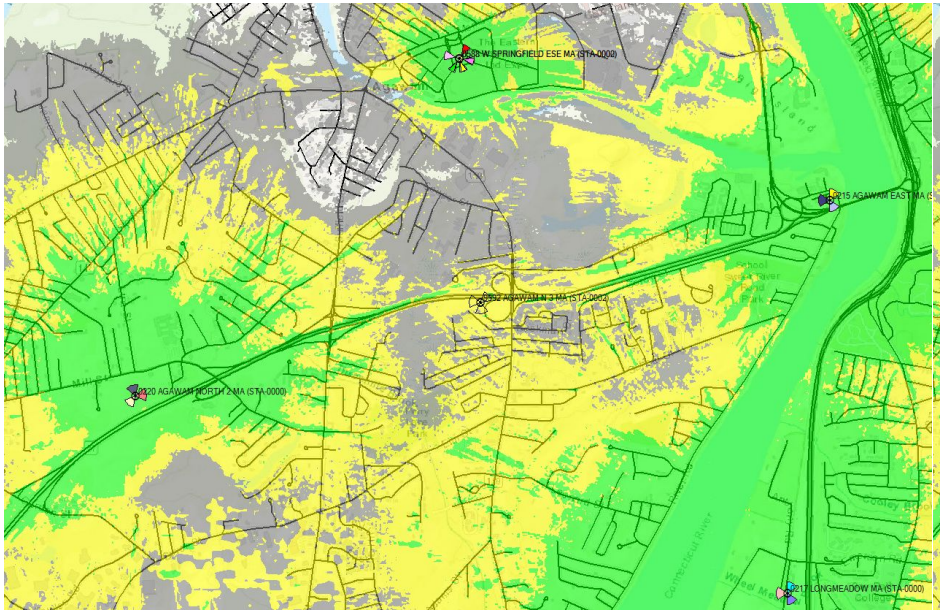
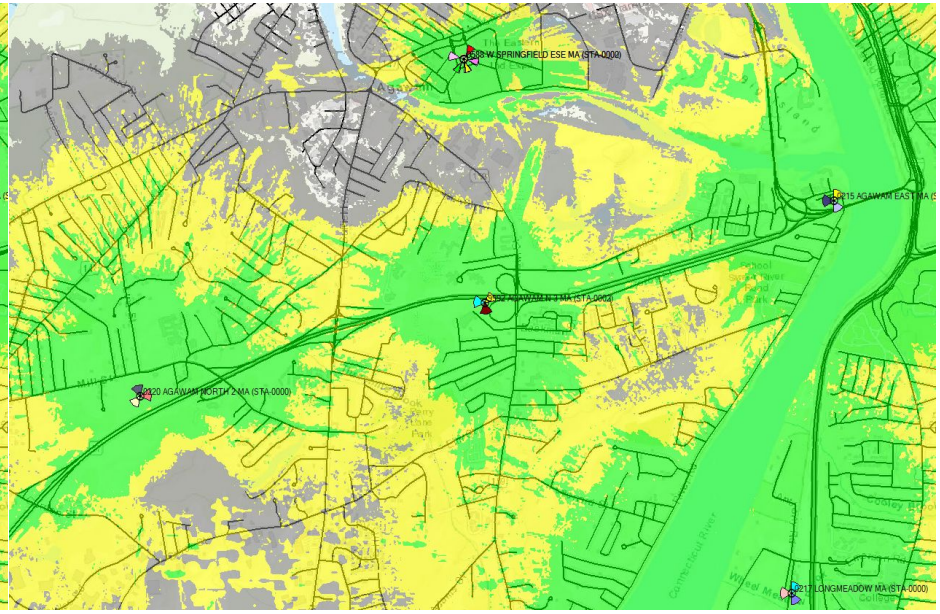
Coverage @ 850 MHz:

-105 = (Gray) On-Street Coverage
-95 = (Yellow) In-Vehicle Coverage
-85 = (Green) In-Building Coverage

Agawam N 3, MA Existing 850 MHz 4G Coverage



Agawam N 3, MA Proposed 850 MHz 4G Coverage



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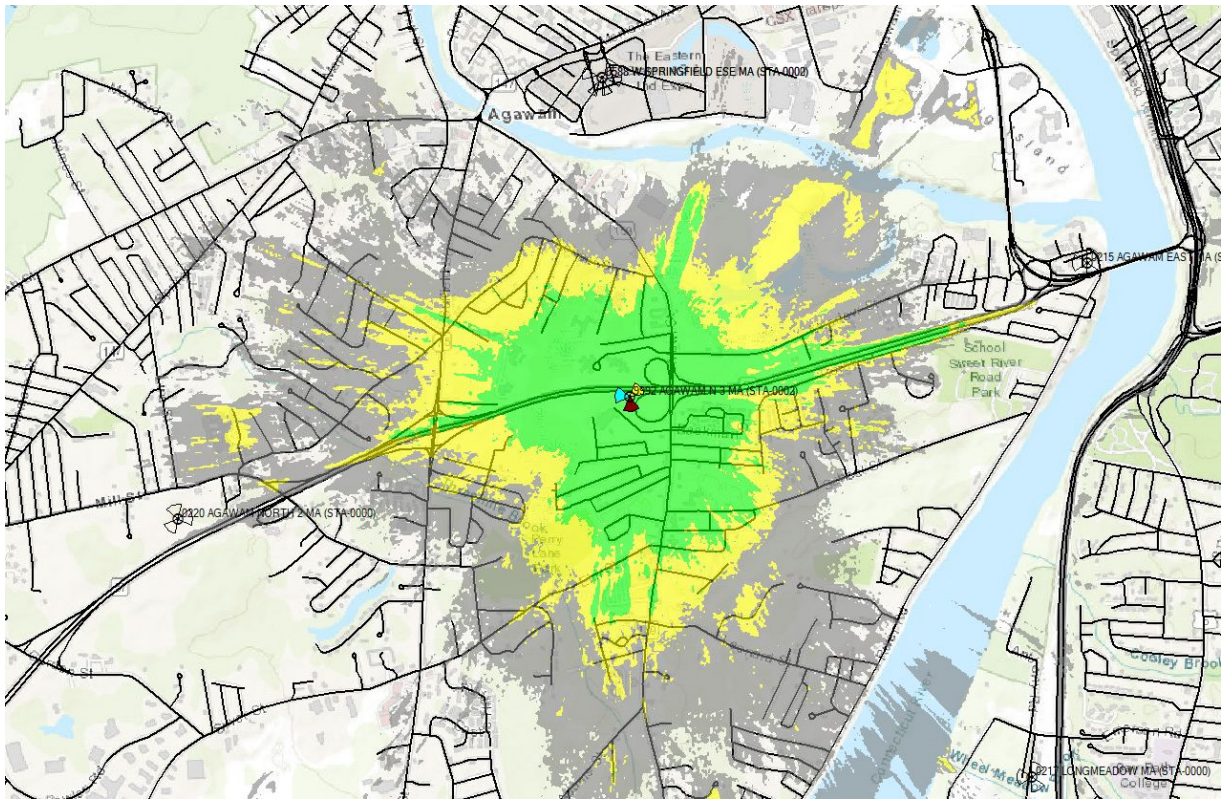
Agawam N 3, MA Proposed 850 MHz 4G Coverage



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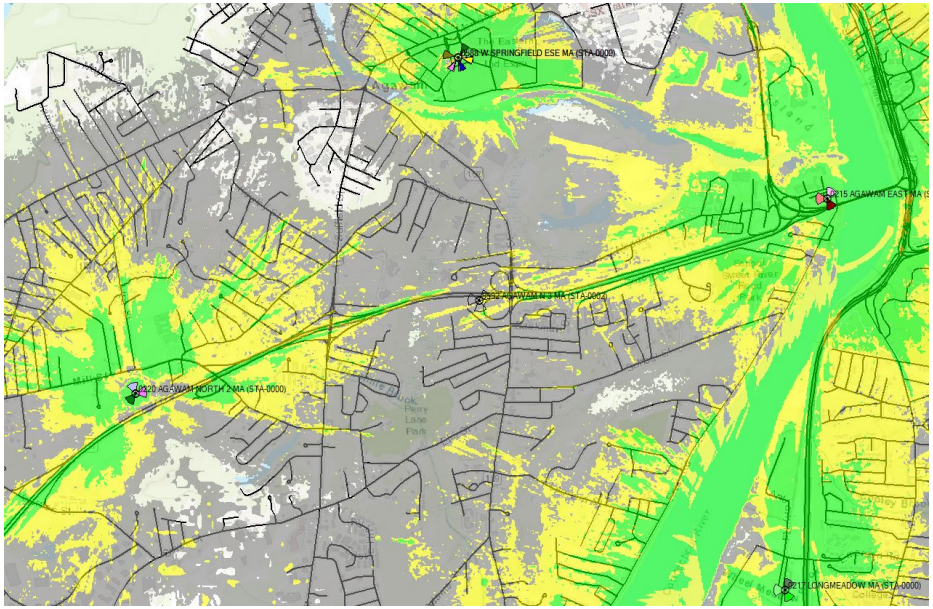
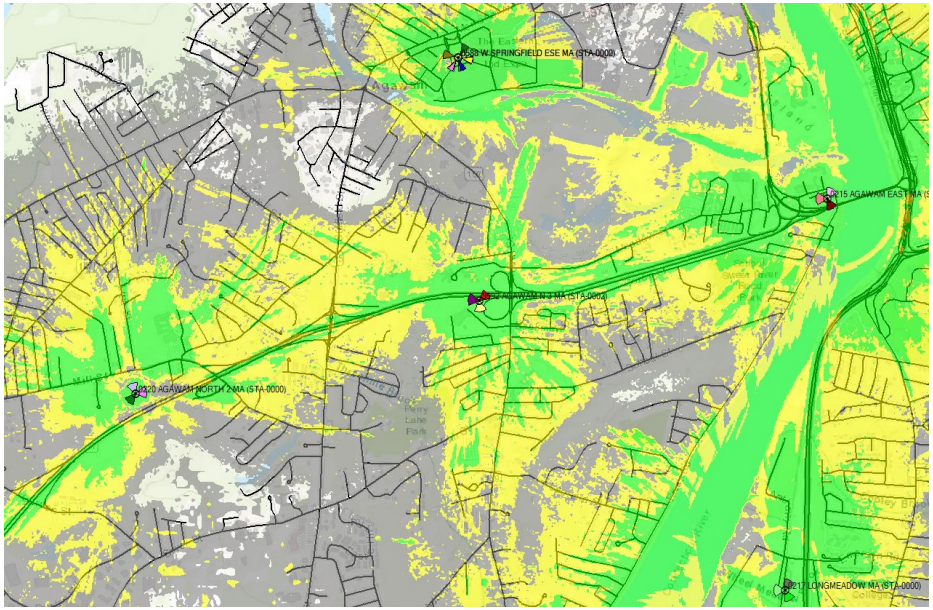
Coverage @ 2100 MHz:

-105 = (Gray) On-Street Coverage
-95 = (Yellow) In-Vehicle Coverage
-85 = (Green) In-Building Coverage

Agawam N 3, MA Existing 2100 MHz 4G Coverage



Agawam N 3, MA Proposed 2100 MHz 4G Coverage



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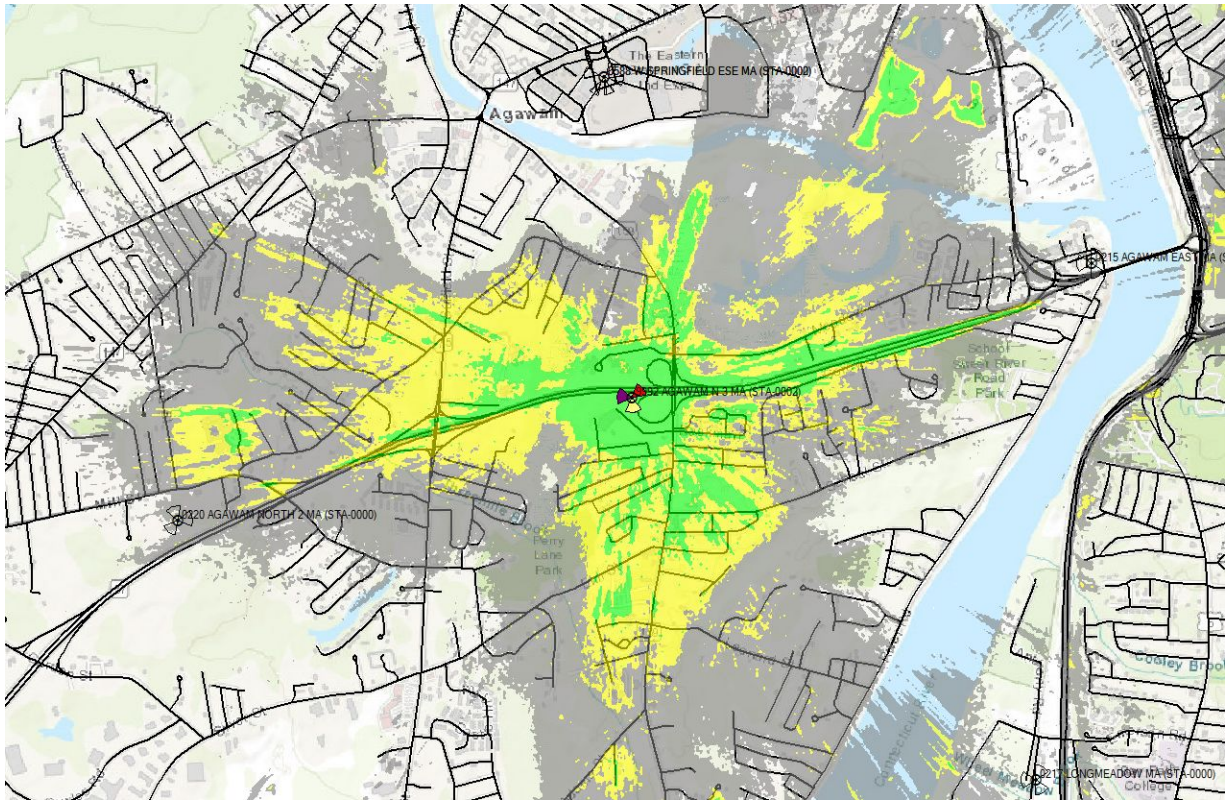

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Coverage @ 1900 MHz:

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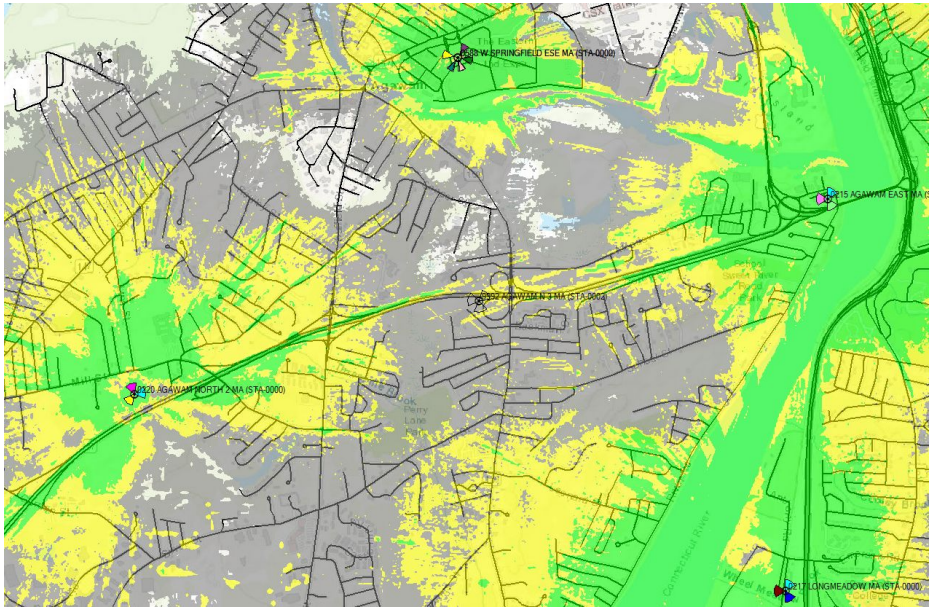
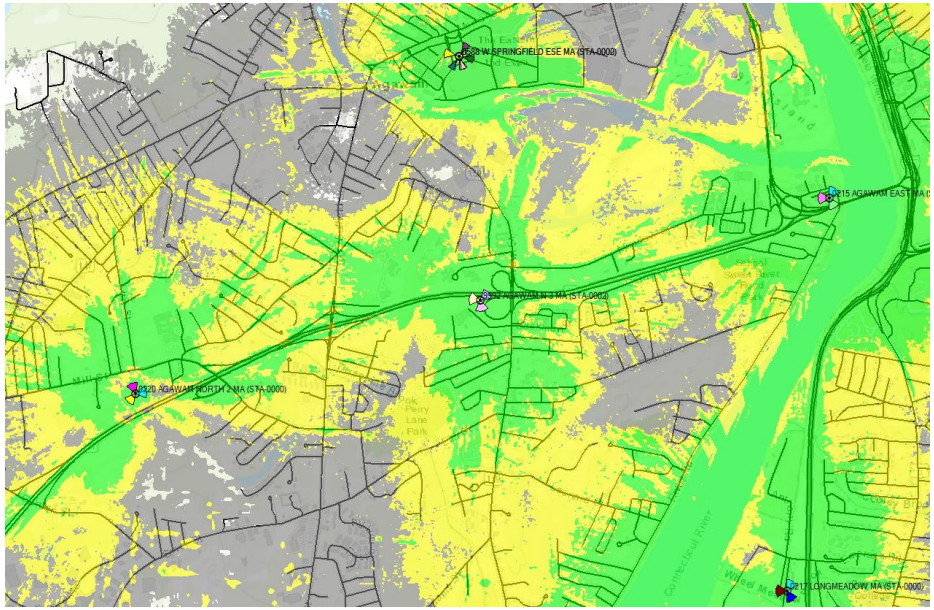
-95 = (Yellow) In-Vehicle Coverage
-85 = (Green) In-Building Coverage

Agawam N 3, MA Existing 1900 MHz 4G Coverage



Agawam N 3, MA Proposed 1900 MHz 4G Coverage



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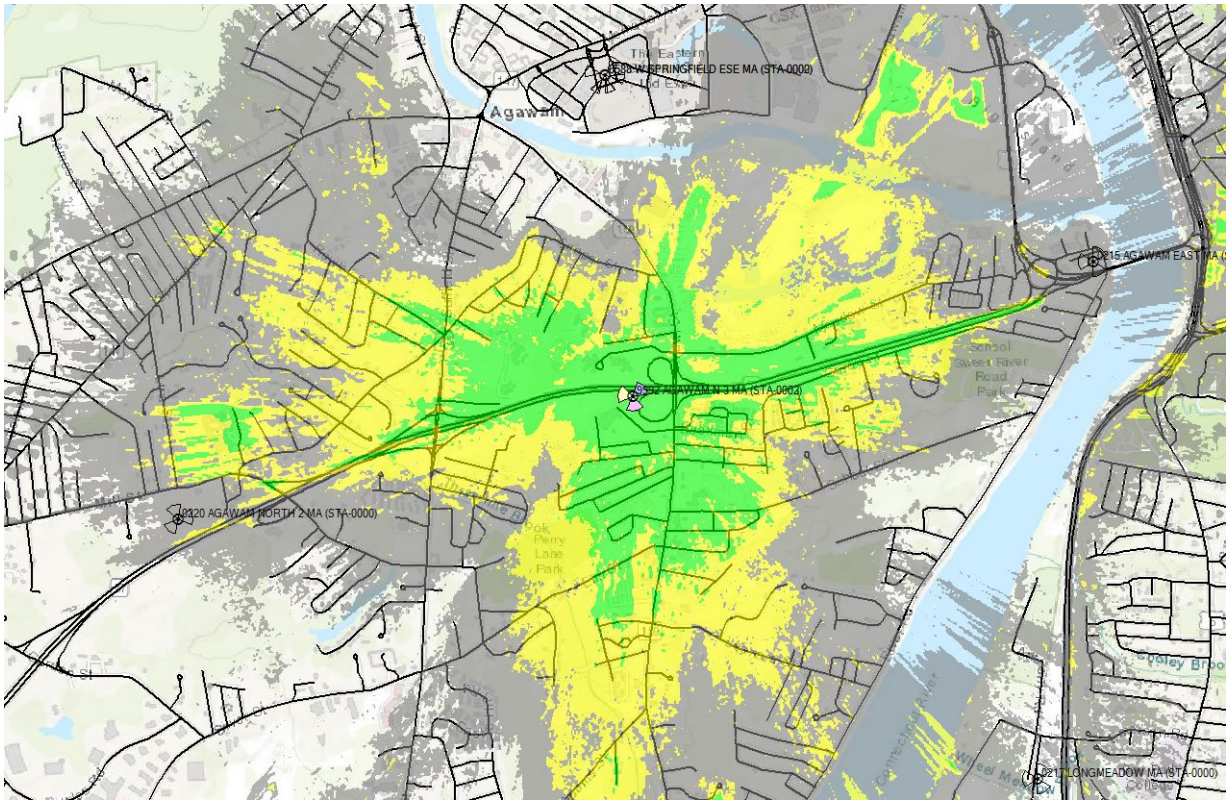
Agawam N 3, MA Proposed 1900 MHz 4G Coverage



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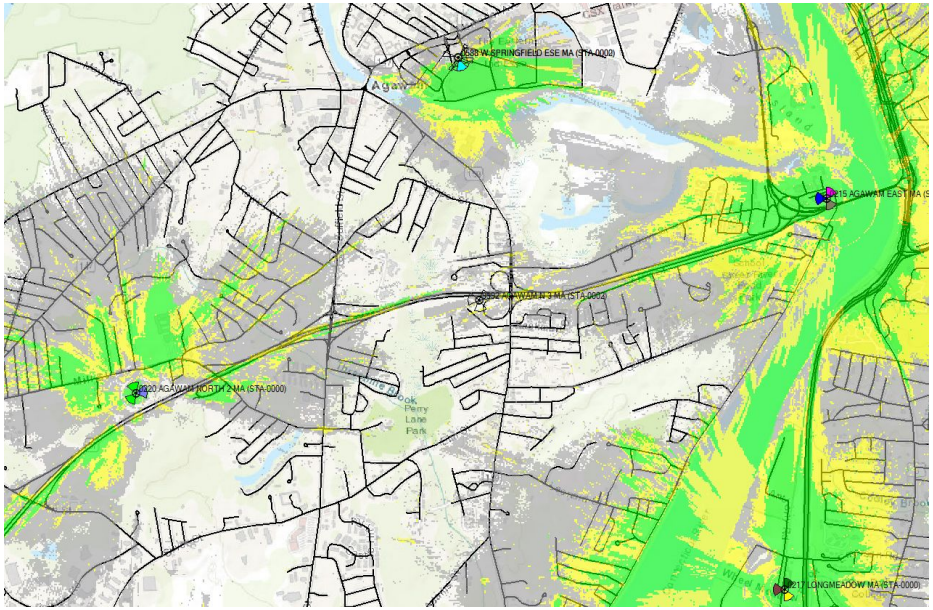
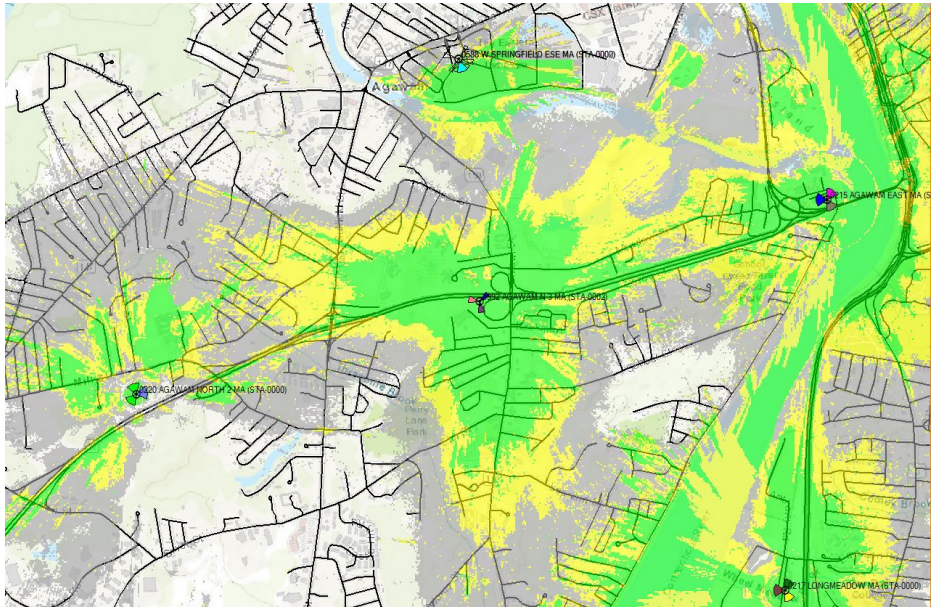
Coverage @ 3800 MHz:

-105 = (Gray) On-Street Coverage
-95 = (Yellow) In-Vehicle Coverage
-85 = (Green) In-Building Coverage

Agawam N 3, MA Existing 3800 MHz 4G Coverage



Agawam N 3, MA Proposed 3800 MHz 4G Coverage



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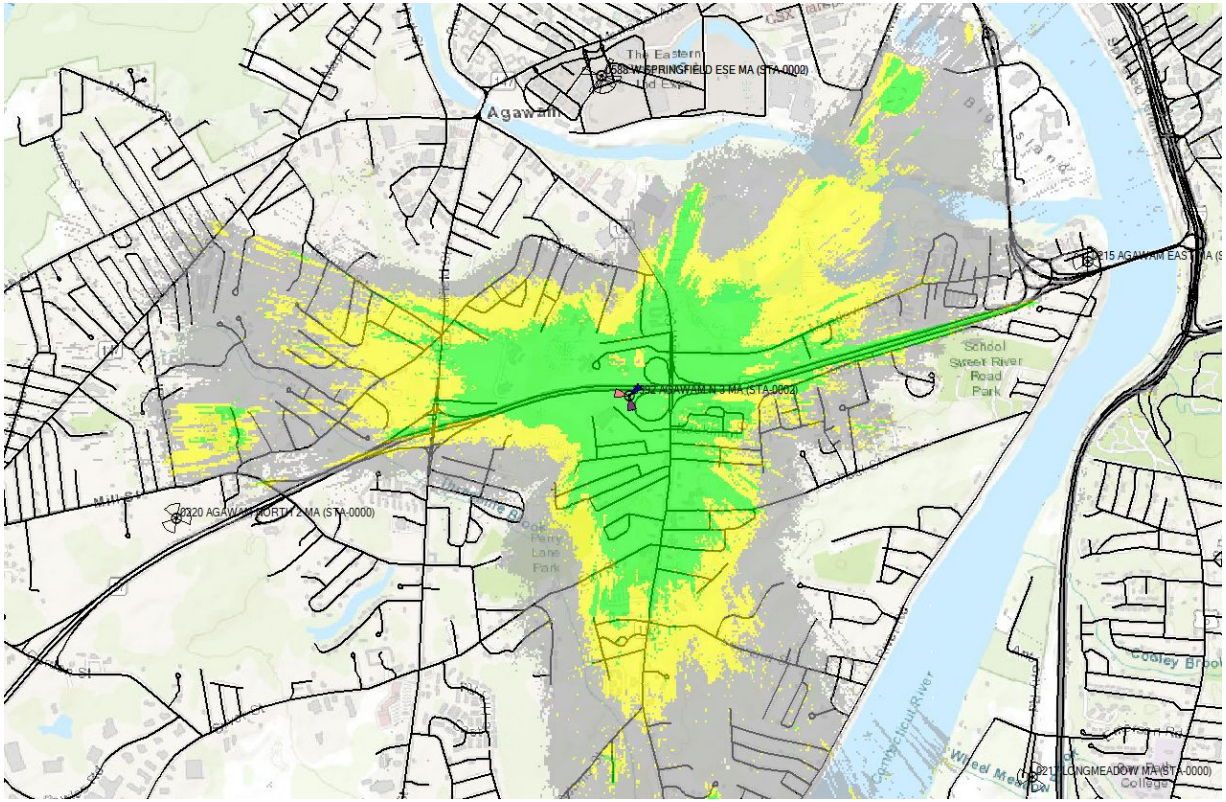
Agawam N 3, MA Proposed 3800 MHz 4G Coverage



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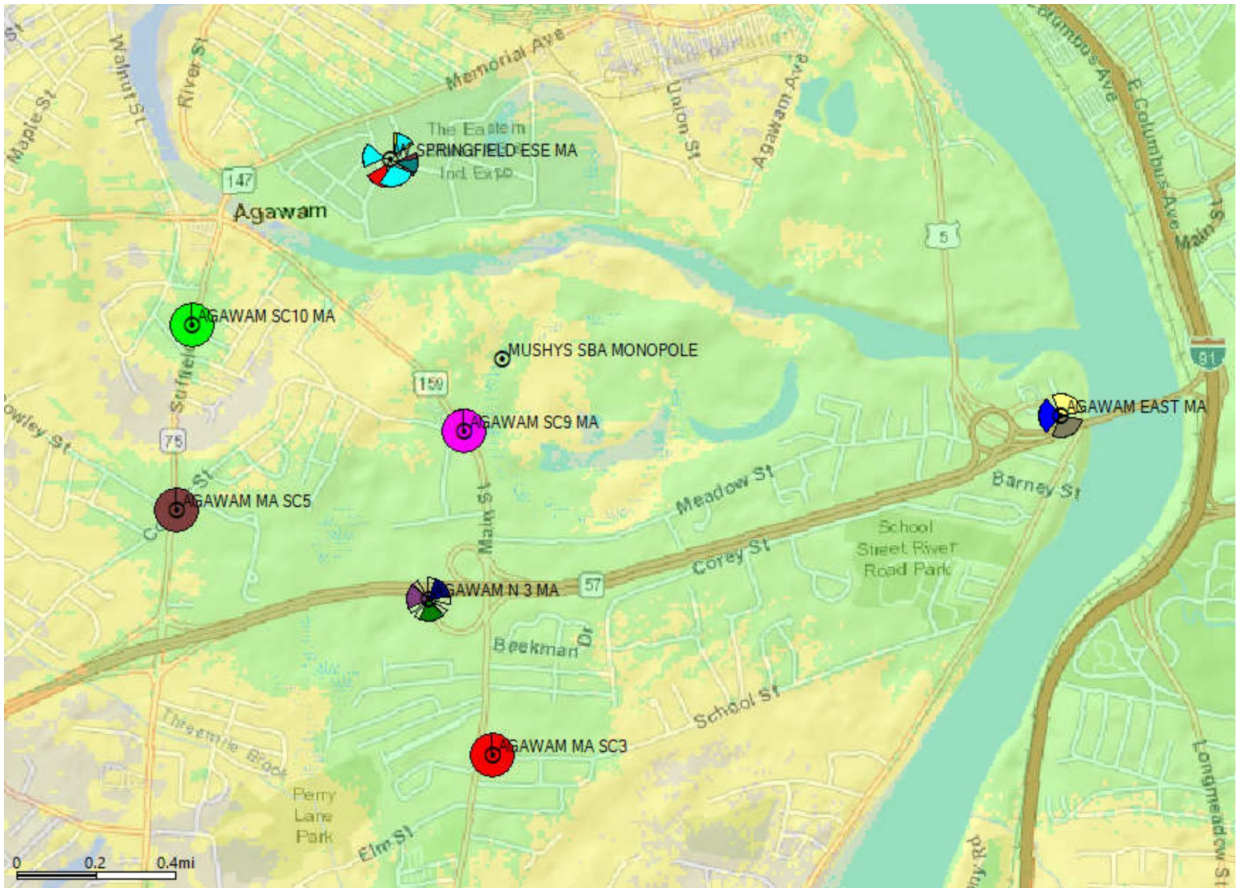
SBA Monopole Facility

-105 = (Gray) On-Street Coverage
-95 = (Yellow) In-Vehicle Coverage
-85 = (Green) In-Building Coverage

The Mushy's SBA Monopole is only 0.57 Miles from Verizon's existing facility on top of the Colosseum at the Eastern States Exposition. Additionally, Verizon has an existing Small Cell asset that is only 0.2 miles away from the Mushy's SBA Monopole.

Simply stated, the Mushy's SBA Monopole is too close to (2) different existing Verizon assets. Verizon needs to reasonably separate our facilities so that we don't have unnecessary overlap of our coverage and capacity. Unnecessary overlap, or too much duplicative coverage, results in interference and the wasting of RF capacity resources.



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Because we live and work there too.

We believe technology can help solve our biggest social problems.

We're working with innovators, community leaders, non-profits, universities and our peers to address some of the unmet challenges in education, healthcare and energy management.

Learn more about our corporate social responsibility at www.verizon.com.

verizon







Thank you.

APPRAISAL

580 Main Street
Agawam, MA 01001



Prepared For

Mr. Michael Fenton
Shatz, Schwartz and Fentin
1441 Main Street, Suite 1100
Springfield, MA 01103

Effective Date of Valuation

May 14, 2025

May 17, 2025

Mr. Michael Fenton
Shatz, Schwartz and Fentin
1441 Main Street, Suite 1100
Springfield, MA 01103

Re: Appraisal
Bethany Assembly of God
580 Main Street, Agawam, MA, 01001
Bennett Franklin Appraisal Report # BF12346
Shatz, Schwartz and Fentin Job ID: MA054

Dear Mr. Fenton:

At your request, for the benefit of Shatz, Schwartz and Fentin (the client) I have inspected the property located at 580 Main Street, Agawam, MA, 01001. The entire property contains approximately 50.40 acres of land. The subject property is a 2500 square foot portion of a larger site (50+/- acres) that is improved with a few buildings, parking area, ball fields, etc. that are utilized as Bethany Assembly of God. The subject site is grassed unimproved land.

The subject property was inspected and photographed on May 14, 2025. The proposed site and improvements are expected to be completed as of Spring 2026 following the granting of all necessary permits and construction. The purpose of our inspection and the accompanying analysis is to provide our opinion of the prospective diminution of the 'as completed' market value of neighboring properties attributable to the construction of the new wireless communication facility as of Spring 2026 based on market conditions as of May 14, 2025. The intended use of the appraisal is for business purposes. The intended users of the report are Shatz, Schwartz and Fentin/client and / or its affiliates and / or the Agawam Zoning Board of Appeals.

The analysis and conclusions within this Appraisal are based upon field research, data collected from market participants and public records. The scope of this assignment includes the most applicable method of valuation. It is our determination that this appraisal does not result in a misleading or confusing report. It is understood that the client is aware of the scope of this appraisal and is familiar with the subject property and/or the subject property type.

The accompanying report has been made in accordance with the minimum standards set forth in Title XI of the Financial Institutions Reform, Recovery Act (FIRREA) as amended and the Uniform Standards of Professional Appraisal Practice. Included in the report is a description and analysis of the real estate, all pertinent data, valuation methodology, supporting relevant exhibits, and addenda to the report.

As a result of our inspection, market research and analysis of the subject property and the properties abutting the subject, and subject to the definitions, certifications and limiting conditions as set forth in this Summary Appraisal Report, it is our opinion that there is **NO DIMINUTION** of the market value of abutting properties from the prospective development of the proposed wireless telecommunications facility anticipated to be "As Completed" as of Spring 2026.

In other words the proposed wireless telecommunications facility will have no adverse financial effect on the properties in the neighborhood whether they are abutting the subject site or not.

Thank you for contacting us for this assignment. If you have any questions concerning our valuation and analysis we may be reached at (413) 526-0800.



Jerome Franklin, MAI
MA- Certified General Real Estate
Appraiser License #5219,
Expires November 9, 2025

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Summary of Property Details

Location:	580 Main Street, Agawam, Hampden County, MA, 01001
Ownership:	Bethany Assembly of God
Legal Description:	book 4332 page 48
Property Rights Appraised:	Fee Simple
Value Appraised	Market Value
Date of Report:	May 17, 2025
Date of "As Is" Valuation:	May 14, 2025
Land Area:	50.40 Acres / 42.20 acres useable
Zoning:	Agricultural
Improvements:	The subject property is a 2500 square foot portion of a larger site (50+/- acres) that is improved with a few buildings, parking area, ball fields, etc. that are utilized as Bethany Assembly of God.

Description of the Appraisal
This valuation is an Appraisal, which can be used by financial institutions and individuals subject to Title XI of the Financial Institutions Reform Recovery Act (FIRREA) and the Uniform Standards of Professional Appraisal Practice (USPAP). This is an Appraisal Report as defined by Uniform Standards of Professional Appraisal Practice under Standards Rule 2-2(a). This format provides a summary or description of the appraisal process, subject and market data and valuation analyses. In consideration of the subject property type and the client's knowledge of the subject's market area it is our determination that this Appraisal is appropriate.

Purpose of the Appraisal
The purpose of our inspection and the accompanying analysis is to provide our opinion of the prospective diminution of the 'as completed' market value of neighboring properties attributable to the construction of the new wireless communication facility as of Spring 2026 based on market conditions as of May 14, 2025.

Intended Use and Intended User
The intended use of the appraisal is for business purposes. The intended users of the report are Shatz, Schwartz and Fentin/client and / or its affiliates and / or the Agawam Zoning Board of Appeals.

Competency Statement
Based on our knowledge of the subject property and the real estate market that it competes within, we have the knowledge and experience to complete this assignment in accordance with the competency rule in the Uniform Standards of Professional Appraisal Practice (USPAP).

Contingent and Limiting Conditions
We assume no responsibility for matters legal in nature, nor do we render any opinion as to the title, which is assumed to be marketable.

Any sketches, plats, maps, or other exhibits in this report are included to assist the reader in visualizing the property and we assume no responsibility for their accuracy. We have made no survey of the property.

We are not required to give testimony or appear in court because of having made this appraisal report, with reference to the property in question, unless arrangements have been previously made thereof in writing.

We assume that there are no hidden or unapparent conditions of the property, subsoil or structures which would render it more or less valuable. We assume no responsibility for such conditions or for engineering which might be required to discover such factors.

We have assumed that the subject site will or has met all acceptable standards with regard to any existing Federal or State hazardous waste material laws.

Information, estimates and opinions furnished to us and contained in this report were obtained from sources considered reliable and believed to be true and correct. However, no responsibility for accuracy can be assumed by us.
The distribution of the total valuation of this report between land and improvements applies only under the existing program of utilization. The separate valuation for land and improvements must not be used in conjunction with any other appraisal and are invalid if so used.

The Americans With Disabilities Act of 1990 requires, in some instances, retrofitting of buildings to maximize accessibility by persons with disabilities. Assumptions regarding cost of compliance by the owner (s) with this civil rights act, which became effective on January 26, 1992, have not been made in arriving at the opinion of value set forth herein. Please contact the undersigned in this regard if such additional work will be required for present purposes.

Neither all nor any part of the contents of this report, or copy thereof, shall be used for any purpose by anyone but the client without the previous written consent of the appraiser and the client; nor shall it be conveyed by anyone including the client, to the public through advertising, public relations, news, sales, or other media without the written consent and approval of the author, particularly as to valuation conclusions, the identity of the appraiser, or a firm with which he is connected.

We have complied with the appraisal standards as promulgated by the Uniform Standards of Professional Appraisal Practice adopted by the Appraisal Standards Board of the Appraisal Foundation.

We who were involved in this assignment worked in tandem and have experience in the valuation of properties similar to the subject and are competent in the valuation of such properties.

We certify that we are appropriately licensed or certified to appraise the subject property in the State in which it is located.

Certification Statement

I certify that, to the best of my knowledge and belief:

- The statements of fact contained in this report are true and correct.
- The reported analyses, opinions and conclusions are limited only by the reported assumptions and limiting conditions, and are my personal, impartial, and unbiased professional analyses, opinions and conclusions.
- I have no present or prospective future interest in the property that is the subject of this report, and have no personal interest with respect to the parties involved.
- I have no bias with respect to the property that is the subject of this report, or to the parties involved with this assignment.
- My engagement in this assignment was not contingent upon developing or reporting predetermined results.
- My compensation for completing this assignment is not contingent upon the development or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value estimate, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
- My analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the Uniform Standards of Professional Appraisal Practice (USPAP).
- No one provided significant real property appraisal assistance to the person(s) signing this certification.
- I certify sufficient competence to appraise this property through education and experience, in addition to the internal resources of the appraisal firm.
- No photographs have been altered in this report.
- I have not performed any prior services regarding the subject within the previous three years of the engagement date.
- Jerome Franklin certifies that, to the best of my knowledge and belief, the reported analyses, opinions and conclusions were developed, and this report has been prepared, in conformity with the requirements of the Code of Professional Ethics and the Standards of Professional Appraisal Practice of the Appraisal Institute. Jerome Franklin certifies that the use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.
- Jerome Franklin has made an inspection of the subject property.



Jerome Franklin
MA- Certified General Real Estate
Appraiser License #5219,
Expires November 9, 2025

Qualifications of Jerome Franklin

Education
Bentley College - MBA, 1992
Western New England College - BSBA, 1989
MAI, Member of the Appraisal Institute
Appraisal Institute courses attended and successfully completed
Real Estate Appraisal Principles & Real Estate Appraisal Procedures
Basic Income Capitalization & Advanced Income Capitalization
Uniform Standards of Professional Appraisal Practice
Advanced Highest & Best Use and Market Analysis - 520
Advanced Sales Comparison and Cost Approaches – 530
Report Writing and Valuation Analysis – 540
Advanced Applications - 550
Quantitative Analysis
Numerous seminars regarding valuing green buildings, subdivision analysis, self storage facilities, eminent domain and condemnation, hotel/motel, golf courses and country clubs, etc.

Business Experience
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Independent Real Estate Appraiser / Consultant / Broker, Springfield, MA
Crowley Real Estate Appraisers, Inc. Springfield, MA, Real Estate Appraiser
United States Navy, Electrical Technician

Licenses
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Connecticut Certified General Real Estate Appraiser License #894
Massachusetts Licensed Real Estate Broker #9018019
New York Certified General Real Estate Appraiser License #46000046409
Vermont Certified General Real Estate Appraiser License #080.0095482

Current and Past Memberships
MAI, Member of the Appraisal Institute
Member National Council of Housing Market Analysts (NCHMA)
Member of the Greater Springfield Board of Realtors
Member of the Massachusetts Board of Realtors and National Association of Realtors
Springfield Planning Board (Chairman)
Springfield Taxicab Commission
Better Homes of Springfield, Board of Directors
Western Massachusetts Council, Boy Scouts of America, - Executive Board

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Springfield Taxicab Commission
Better Homes of Springfield, Board of Directors
Western Massachusetts Council, Boy Scouts of America, - Executive Board

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Scope of Work

Report Type:	This is an Appraisal Report as defined by Uniform Standards of Professional Appraisal Practice under Standards Rule 2-2(a). This format provides a summary or description of the appraisal process, subject and market data and valuation analyses.
Property Identification:	The subject has been identified by the legal description and the assessors' parcel number.
Inspection:	An inspection of the subject property has been made, and photographs taken.
Information Sources:	The following description is based on my property inspection, [assessment records, property deeds, associated legal documents, survey data, etc.] research of local assessor's offices, planning departments, collectors offices, regional data sources, conversations with brokers, managers, investors and owners familiar with similar properties as well as information provided by the property owner and/or representatives of the property owner. I have conducted research of property characteristics of the subject (site and improvements). I have researched if there are adverse site and property conditions. I have reviewed income and expense information when and if provided. I have reviewed lease agreements when and if provided. I have reviewed agreements for sale when and if provided.
Market Area and Analysis of Market Conditions:	A complete analysis of market conditions has been made. I maintain and have access to comprehensive databases for this market area and have reviewed the market for sales and listings relevant to this analysis.
Highest and Best Use Analysis:	An 'as vacant' and 'as improved' highest and best use analysis for the subject has been made. Physically possible, legally permissible and financially feasible uses were considered, and the maximally productive use was concluded.
Type of Value:	Market Value
<u>Valuation Analyses</u>	
Cost Approach:	A cost approach was applied as there is adequate data to develop a land value and the depreciation accrued to the improvements can be reasonably measured.
Sales Comparison Approach:	A sales approach was applied as there is adequate data to develop a value estimate and this approach reflects market behavior for this property type.
Income Approach:	An income approach was not applied as the subject is not an income producing property and this approach does not reflect market behavior for this property type.
Hypothetical Conditions:	• There are no hypothetical conditions for this appraisal.

Extraordinary Assumptions:	• Our determination of diminution of value is predicated based on the extraordinary assumption that the proposed improvements are approved, permitted and constructed as stated to us. There are no other extraordinary assumptions or limiting conditions.
Information Not Available:	• None

"As Is" Value
The "as is" value is considered to represent the value of the property in its current condition as of the effective date of the appraisal. It represents the most probable price that a proposed purchaser would pay for the subject considering all of the costs and risks inherent in its future ownership.

Prospective "As Completed" Value
The prospective "as completed" value is a forecast of value expected to occur at a specified future date. It is most frequently utilized in the connection with real estate projects that are proposed, under construction, under conversion to a new use, or that have otherwise not achieved sellout or a stabilized level of long-term occupancy at the time the appraisal report was written. Our prospective "as completed" analysis is based on the market conditions as of the writing of this report and we cannot be held responsible for unforeseeable events that alter market conditions prior to or after the effective date of the appraisal. This appraisal addresses the prospective "as completed" market values following the proposed construction of the wireless communication facility.

Extraordinary Assumption Definition
"An assumption, directly related to a specific assignment, which, if found to be false, could alter the appraiser's opinions or conclusions."[1]

This appraisal makes an extra ordinary assumption that the described construction will be completed in accordance with the supplied specifications/budget as of the prospective date of value. It is assumed that no significant changes in economic conditions will occur between the effective date of the appraisal and the prospective date. If these extra ordinary assumptions prove not to be true, the appraisal opinions could potentially be affected.

Effective Date of the Appraisal Report
The subject property was inspected and photographed on May 14, 2025. We have been asked to appraise the prospective diminution of the "as completed" market value of the abutting properties to the subject following completion of proposed wireless telecommunications facility. The property is anticipated to have construction completed by Spring 2026. Thus, the effective date of any prospective diminution of the "as completed" valuation is Spring 2026 based on market conditions as of May 14, 2025.

[1] The Dictionary of Real Estate Appraisal, Fourth Edition, 2002, Pg. 106

Personal Property

The opinion of value provided in this report concerns the real estate only and does not include the valuation of any other personal property such as furniture, licenses or goodwill of the owner or the tenants.

Identification of the Real Estate

The property which is the subject of this appraisal report is located at 580 Main Street, Agawam, Hampden County, MA, 01001. The property is also noted at the Agawam Assessors Office as parcels K11-2-28.

Property Rights Appraised

The subject property and abutting properties are owner occupied. Thus, the fee simple interest has been appraised. A **Fee Simple** interest is defined[2] as:

> Absolute ownership unencumbered by any other interest or estate, subject only to the limitations imposed by the governmental powers of taxation, eminent domain, police power, and escheat.

Definition of Market Value

"the most probable price which a property should bring in a competitive and open market under all conditions requisite to a fair sale, the buyer and seller each acting prudently and knowledgeably, and assuming the price is not affected by undue stimulus. Implicit in this definition are the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

(1) buyer and seller are typically motivated;
(2) both parties are well informed or well advised, and acting in what they consider their own best interest;
(3) a reasonable time is allowed for exposure in the open market;
(4) payment is made in terms of cash in U.S. dollars or in terms of financial arrangements comparable thereto; and
(5) the price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale."[3]

Ownership of Property / Sales History

Bethany Assembly of God is the ownership of the subject property. The property was reportedly purchased via two deeds. To my knowledge, there have been no other transfers of the subject property in the last three years. The subject property is not listed for sale and is not under agreement for sale.

There are typical utility and municipal easements that cross the frontage of the subject property. There are no known adverse encumbrances or easements that would restrict the use or appeal of the property and no encroachments were identified. Please reference Limiting Conditions and Assumptions. Our research unveiled the deed mentioned above which is considered adequate for

[2] Appraisal Institute, The Dictionary of Real Estate Appraisal, 4th ed. (Chicago: Appraisal Institute, 2002).

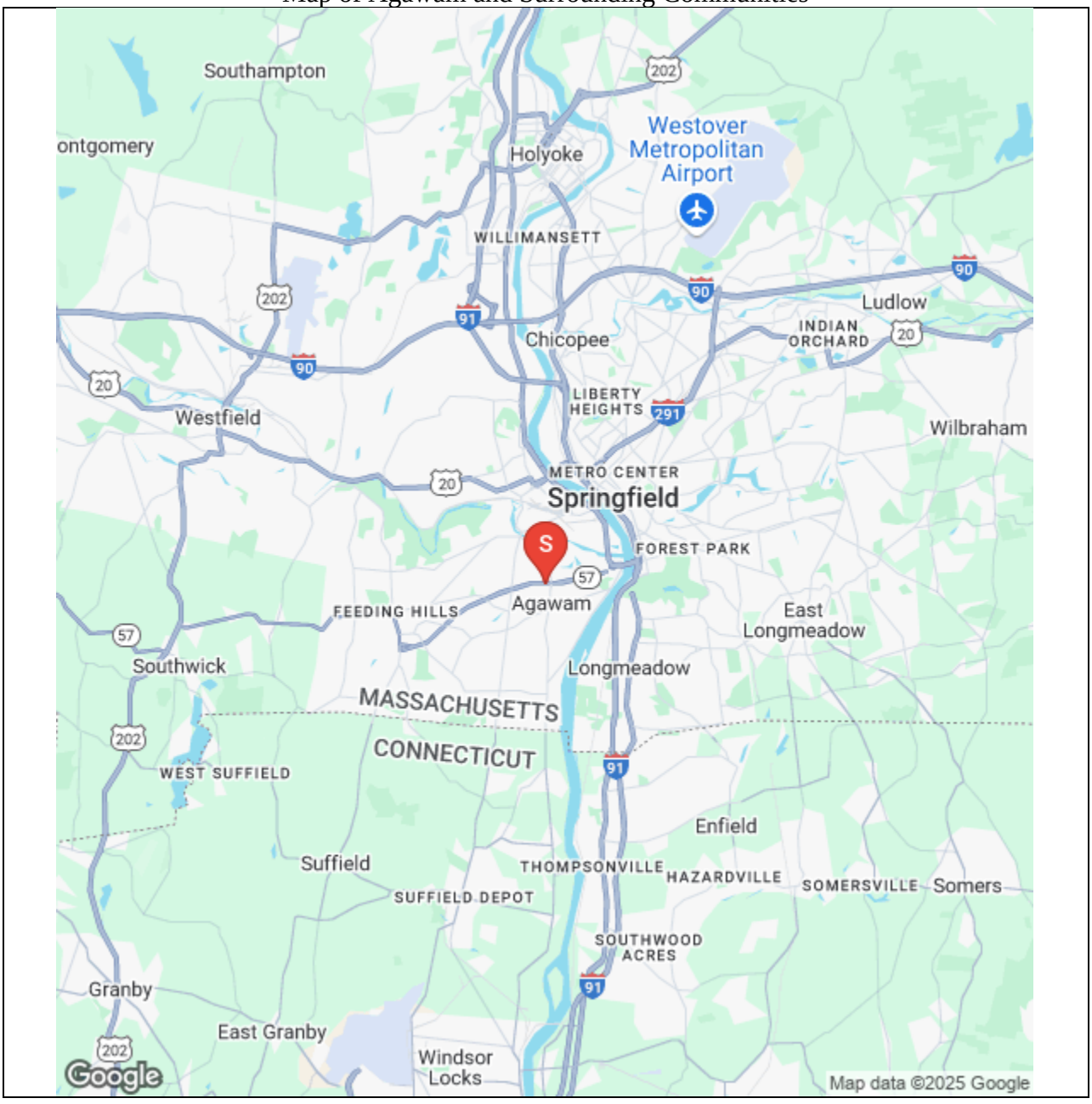
[3] Interagency Appraisal and Evaluation Guidelines, Office of the Comptroller of the Currency, Treasury (OCC); Board of Governors of the Federal Reserve System (FRB); Federal Deposit Insurance Corporation (FDIC); Office of Thrift Supervision, Treasury (OTS); and National Credit Union Administration (NCUA), Federal Register / Vol. 75, No. 237 / Friday, December 10, 2010

the purposes of this appraisal report. Further title analysis is beyond the scope of this appraisal and we recommend that a complete title search be conducted by a qualified individual. A copy of the deeds which we believe reflect the transfer of the subject to the current ownership are in the addendum.

Agawam Analysis

Agawam is located in Western Massachusetts on the westerly side of the Connecticut River across from the City of Springfield. Agawam is also bordered by the communities of West Springfield to the north, Agawam and Westfield to the west and by the State of Connecticut to the south. Agawam is accessible from the north via Route 5 and from the east via Route 91, the area's major north/south highway.

Map of Agawam and Surrounding Communities

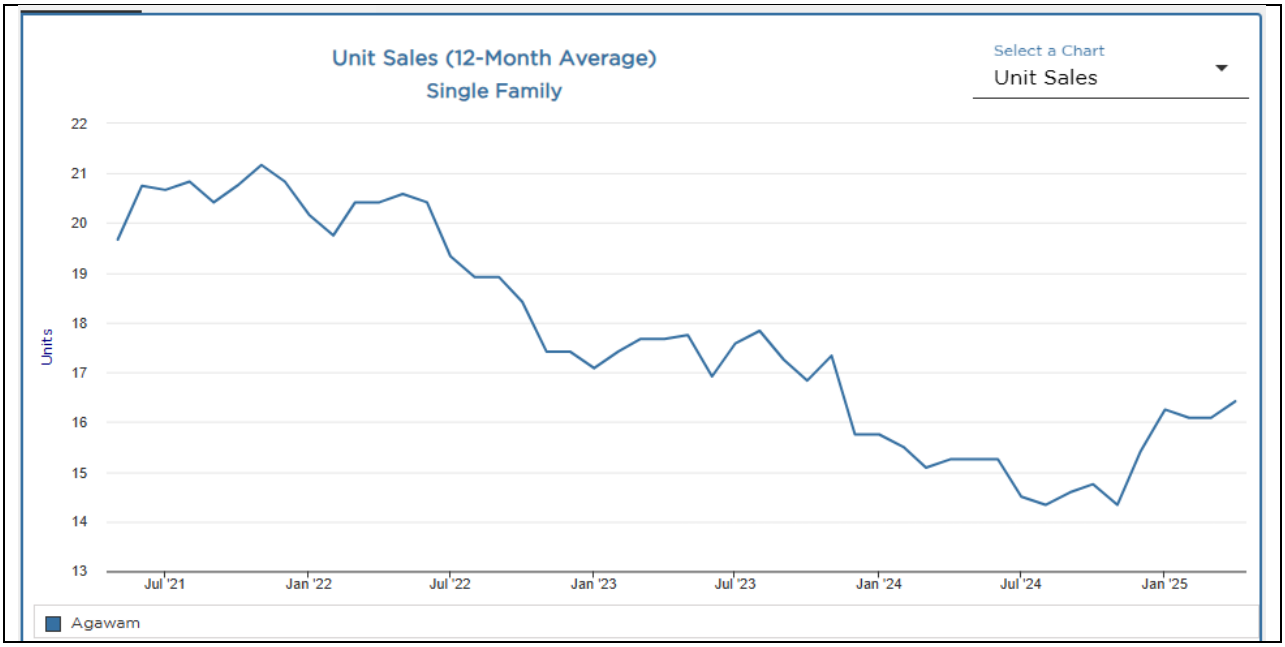


The city is bisected by several secondary highways, which include Routes 57, 159, 75 and 147, which provide good access to major highways and centers of employment. Agawam also has easy accessibility to Bradley International Airport via Route 75.

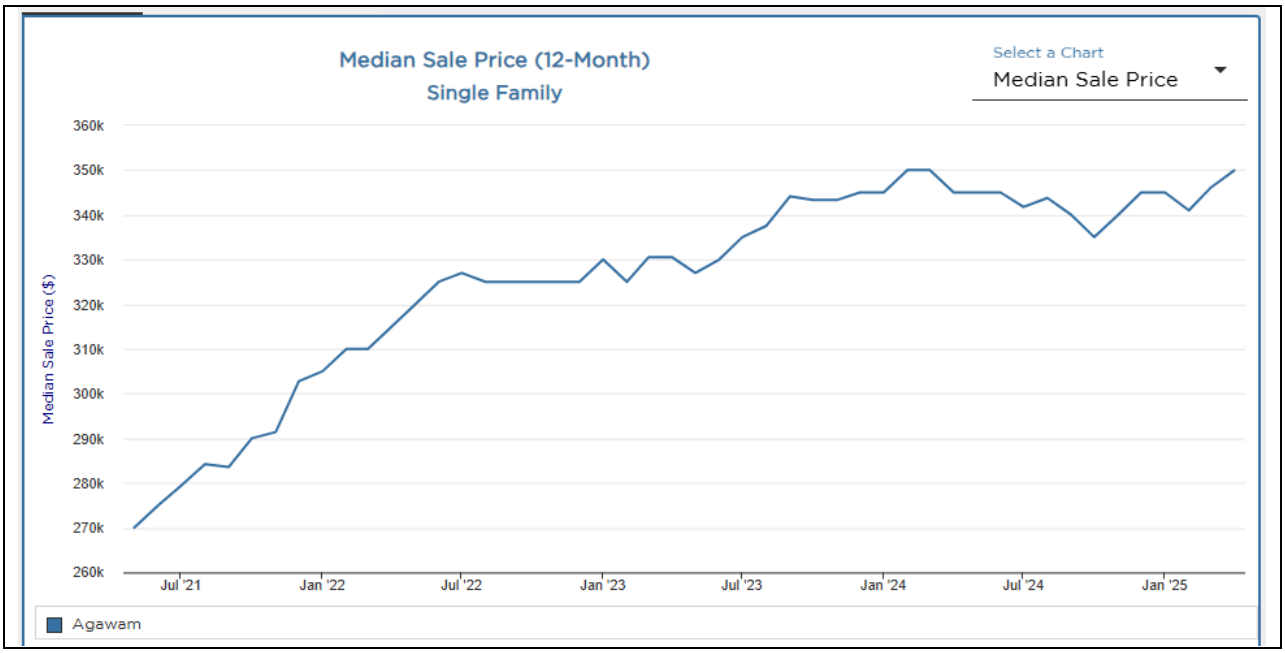
According to US Census Bureau Statistics, as of July 1, 2024, Agawam had a population estimate of 28,749, which is virtually unchanged from the 2010 Census population estimate of 28,438. Despite the relatively flat population change over the past 10+/- years, there has been a decent amount of new residential construction in Agawam over the past five years; information from the SOCDS Building Permits Database indicate that between 8 and 27 new single family home building permits have been issued between the start of 2018 and through the end of 2022 (90 total / 18 annual average); in addition to the single family home construction, there have been 14 new housing units permitted for development in seven two-family / duplex multi-unit housing structures over the same five year span. In 2023-2024 there were 33 & 9 new single family homes permitted for development and a 62 & 18 unit multi-family development permitted for construction.

The average median household income (2019-2023) in Agawam is $82,359 according to the US Census Bureau; the average median household income for Hampden County was reported at $66,619 as of the same time period. Although it is developing an economic base, Agawam has historically been a bedroom community with property values geared toward the middle to upper end of the suburban market. Over the past 48 months there has been a decline in the number of home sales which is shown in the following tables obtained from Raveis.com. In addition the median sale price and median sale price per square foot have significantly increased over the last 48 months which is also shown in the following tables.

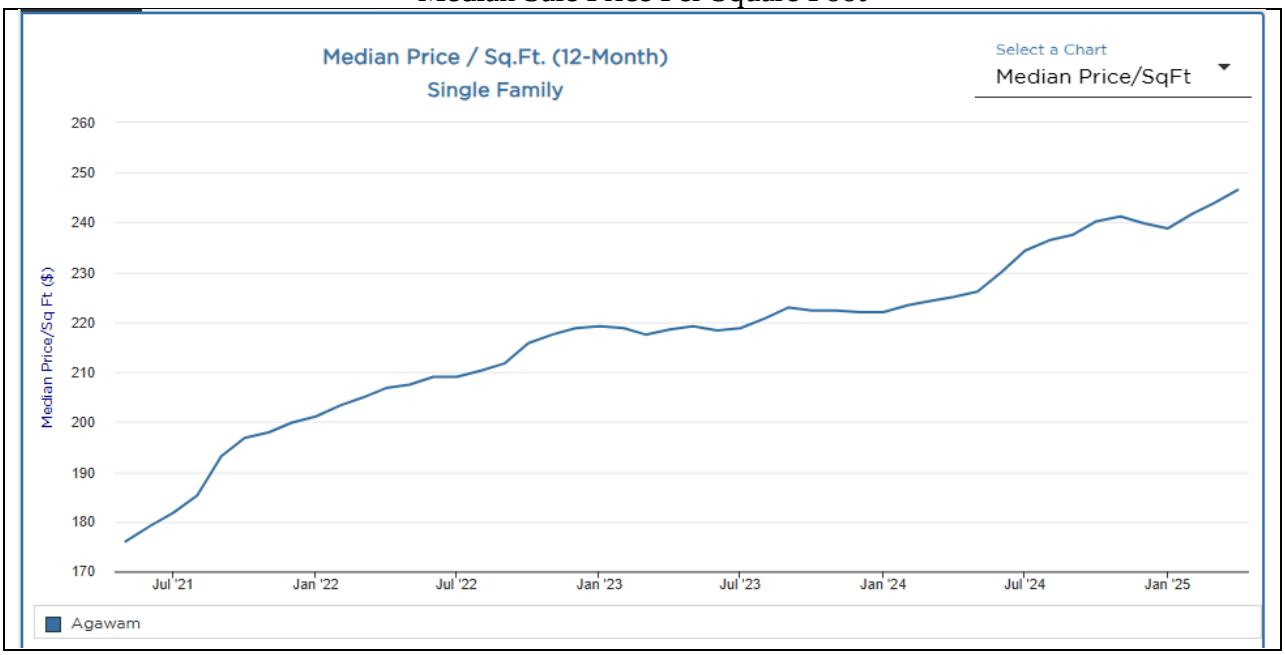
Number of Home sales



Median Sale Price



Median Sale Price Per Square Foot



Although there are some professional office, service provider, light industrial, and retail establishments in Town that provide employment opportunities for residents, the US Census Bureau statistics indicate that during the average commute time for Agawam residents to their place of employment is approximately 22 minutes; many of the employment opportunities for Agawam's residents are located in nearby communities such as Springfield, MA and Enfield, CT, and in other more heavily developed employment centers in the region (i.e. Hartford, CT). However, means of employment can be found in Agawam among its numerous retailer and service provider businesses and within the Agawam Regional Industrial Park and various other

industrial subdivisions. The City has seen a good deal of growth in the last few years, in the form of small service-related areas as Agawam has an ample supply of small retail centers, office buildings and restaurants. According to the Massachusetts Department of Economic Research statistics 5.2% of Agawam's labor force was unemployed as of March 2025. This figure compares to the Hampden County unemployment rate of 6.0%, and a State rate of 5.0% for the same time period indicating that Agawam is performing at an unemployment level that is a bit lower than the surrounding area and that indicated by the Commonwealth as a whole.

Route 57, which is a direct connector to Interstate Route 91, was extended westerly into Agawam and now terminates at Route 187. In addition, further extension of Route 57 to the Town of Agawam is planned, but this has been the case for many years with no action taken. This planned extension had an approval date of December 1994 and it is undetermined exactly when this phase of construction will start and finish. The largest employer in Agawam is Six Flags New England, which is reportedly the largest amusement park in New England.

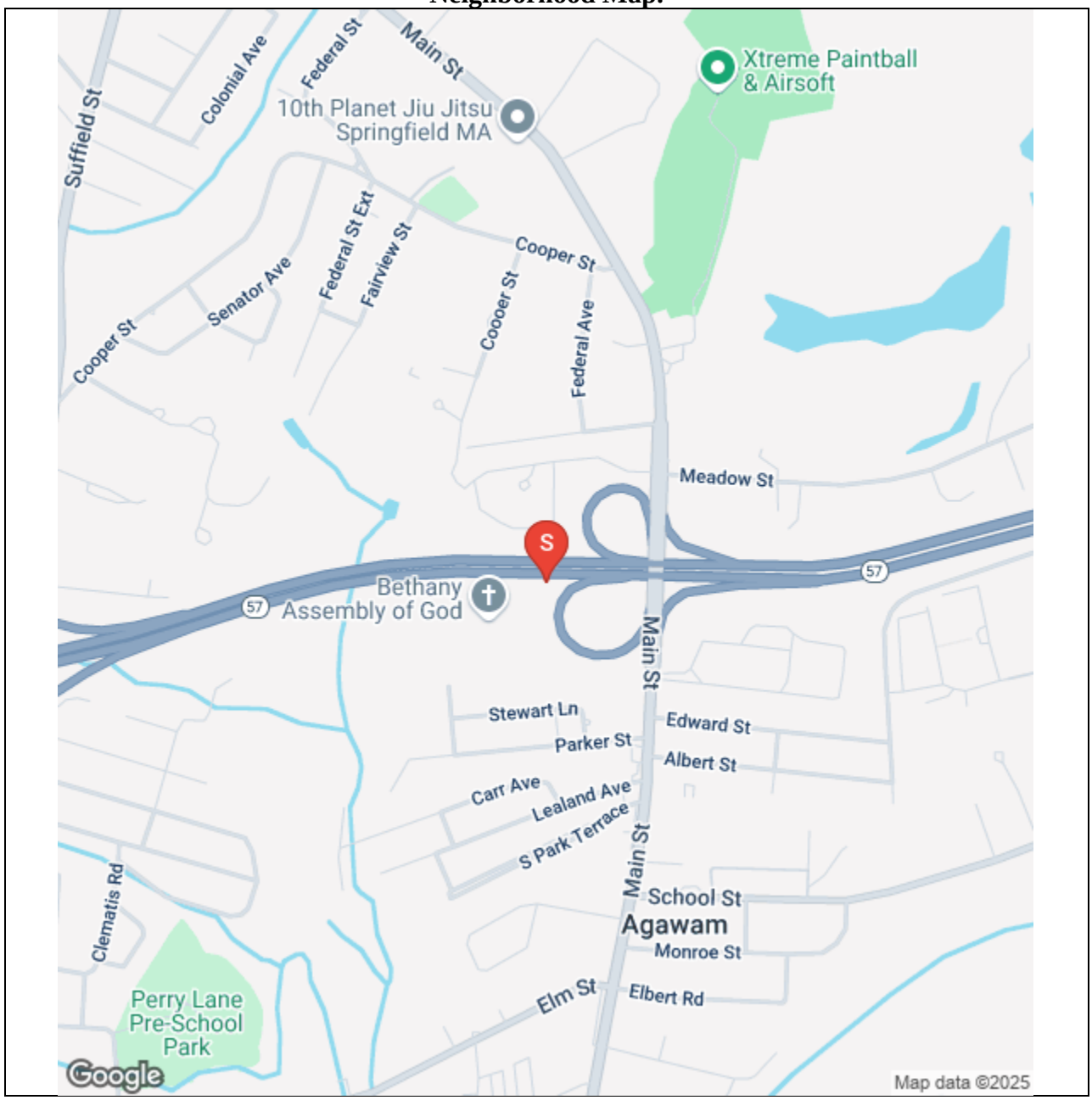
Although the majority of the major retail shopping destinations are located in the nearby Towns of West Springfield (Memorial Drive and Riverdale Street) and at the Holyoke Mall, there are a few retail / commercial use areas in the Town of Agawam. These areas, which are located along Suffield Street south of SR 57, at the intersection of SR 57 and SR 147 in the Feeding Hills section of Town and at the intersection of SR 147 and SR 57 (Suffield Street) in the O'Brien's Corner Section of Town, are improved with a mix of local, regional and national uses.

There are on-going plans for improving Agawam through land management and economic development. We feel that with Agawam's accessibility and desirable quality of life issues, the Town will continue to remain a desirable residential community with continuing development in the future like there has been in the recent past. Any new significant commercial / retail developments will likely occur along the primary roadways in Town (Suffield Street, Main Street, Springfield Street, etc.); the potential for new industrial development is somewhat tempered by the lack of appropriately zoned developable land. Overall, we anticipate Agawam to remain a desirable community with anticipated growth similar to the recent past.

The Subject Neighborhood Analysis

The subject property is located on Main Street (SR 159) in the south central area of Agawam, MA. This area is a mix of single family homes with residential condominium projects and institutional and local commercial uses mixed in. The subject property is situated in the area of Main Street and State Route 57 both of which provide access throughout Agawam and to neighboring communities. The subject property is considered to have good accessibility and visibility.

Neighborhood Map.



The subject location is a moderate to heavily developed area. Properties in the neighborhood are considered to be in average to excellent condition.

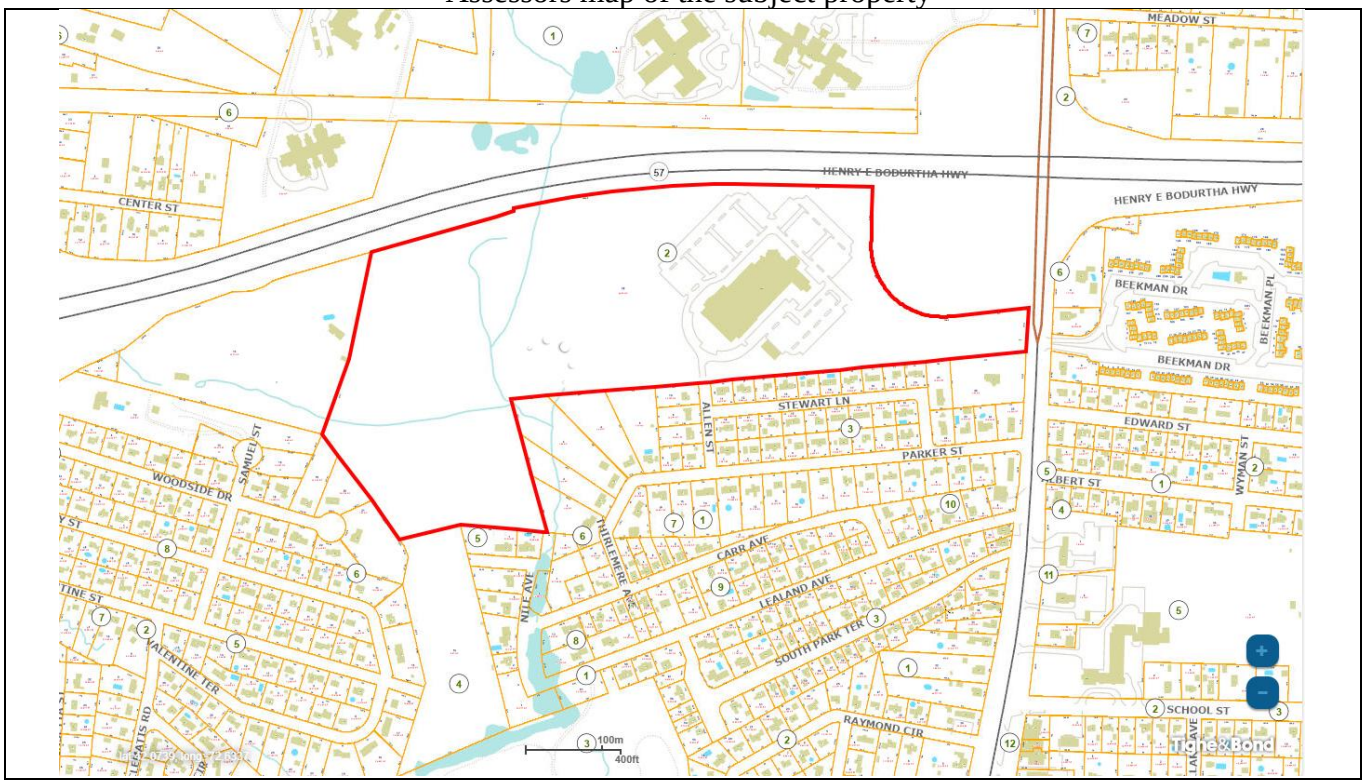
After a review of the neighborhood characteristics and the existing property uses in the area, it is our opinion that the subject neighborhood will remain an area conducive to residential and institutional use properties.

Site Description

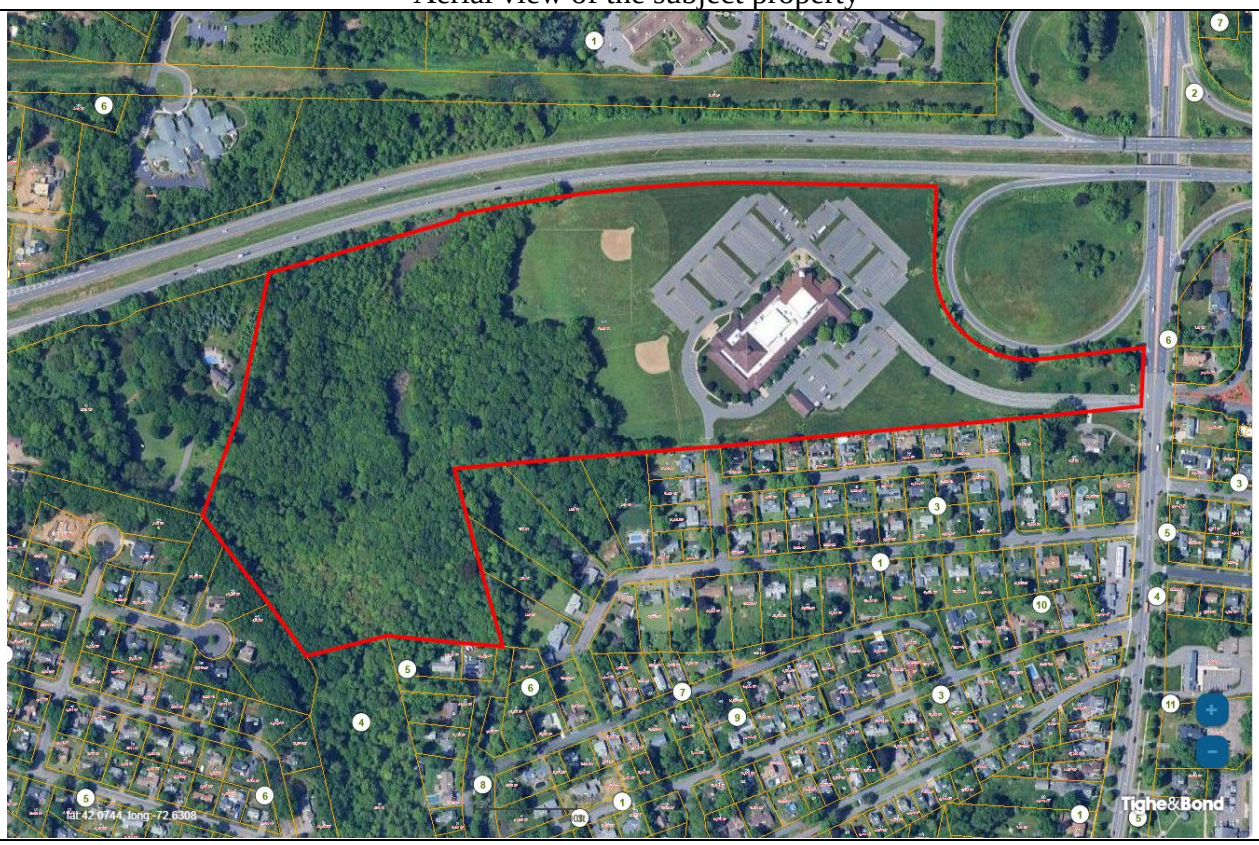
SITE	
Location:	The subject property is located on Main Street (SR 159) in the south central area of Agawam, MA. This area is a mix of single family homes with residential condominium projects and institutional and local commercial uses mixed in.
Current Use of the Property:	Institutional
Site Size:	50.40 acres; 2,195,424 square feet
Shape:	The site is irregularly shaped.
Street Access:	The subject property has good access due to its proximity to main roadways.
Street Frontage:	Main Street - 183+/- feet. The subject is not a corner lot.
Rail Access:	The site does not have rail access.
Visibility:	Considered having Very Good visibility, as the subject site is located on a lightly / moderately traveled roadway in a residential and agricultural use area.
Topography:	The site has a level throughout and at the site near the proposed wireless communication facility.
Soil Conditions:	The soil conditions observed at the subject appear to be typical of the region and adequate to support development.
Utilities:	Electricity: Public Sewer: Public Water: Public Natural Gas: Public Underground Utilities: The site is serviced by underground utilities. Adequacy: The subject's utilities are typical and adequate for the market area.
Site Improvements:	• Street lighting: Yes • Sidewalks: Yes • Curb & Gutter: Yes • The subject site is grassed unimproved land.
Wetlands/Watershed:	No wetlands were observed during our site inspection.
Environmental Issues:	During my inspection I did not identify any potential environmental problems with the property. I have not been provided with any soil tests or environmental studies of the land and improvements. There

	are no known adverse environmental conditions on the subject and I have assumed that the subject property meets all acceptable standards with regard to State and Federal Laws. An inability to meet acceptable environmental standards will likely impact the value and marketability of the subject property. Please reference Limiting Conditions and Assumptions.
Encumbrance / Easements:	There are typical utility and municipal easements that cross the frontage of the subject property. There are no known adverse encumbrances or easements that would restrict the use or appeal of the property and no encroachments were identified. Please reference Limiting Conditions and Assumptions.
Site Comments:	The site has average utility due to the configuration, topography and frontage.

Assessors map of the subject property

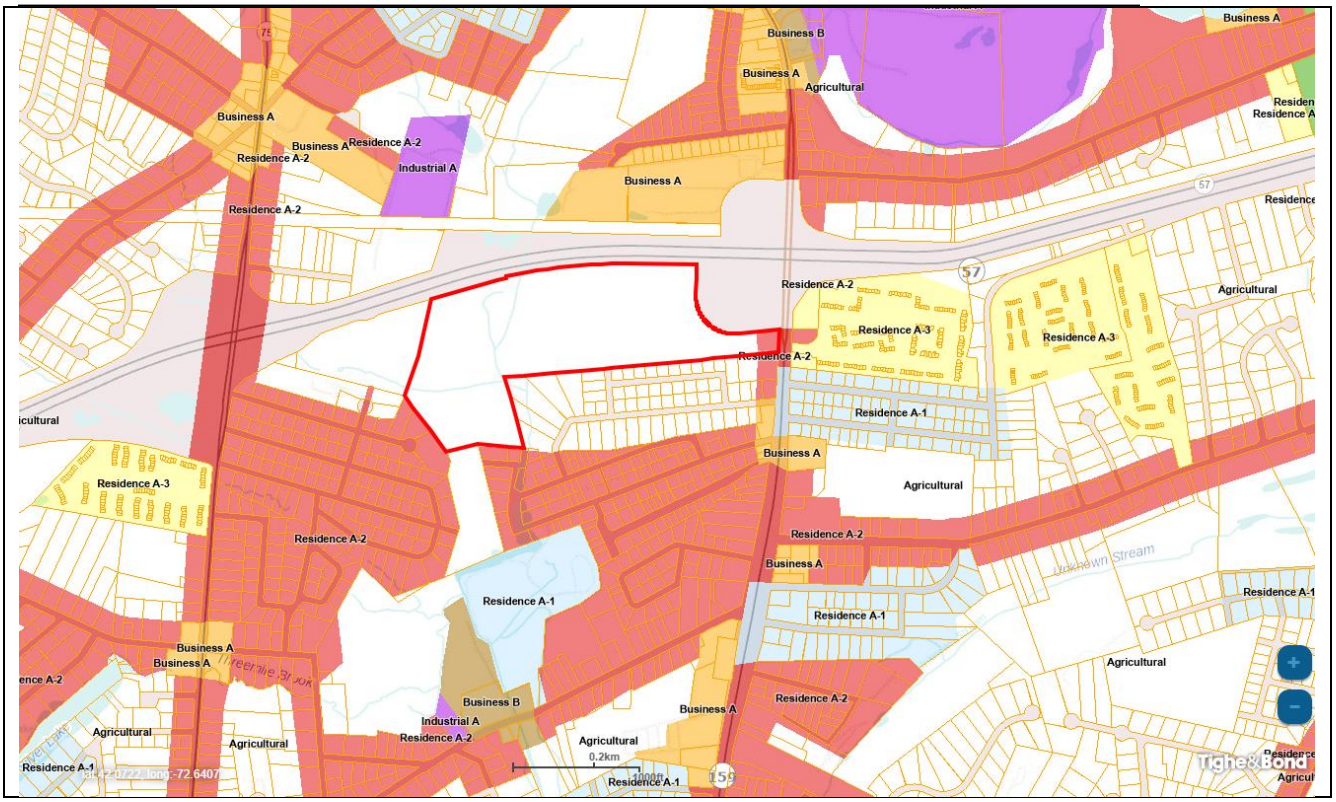


Aerial view of the subject property



Zoning and Conformity

Zoning Summary	
Zoning Authority	Agawam
Zoning Code	Agricultural
Zoning Description	Farms, stables and single family homes, religious, educational, child care, cemetery, municipal facilities, government buildings, playgrounds, recreation & community centers, etc., are permitted in this zone.
Current Use Legally Conforming	The existing subject use is a legal and conforming use.
Minimum Land Area	20000 SF
Minimum Frontage	120 FT
Set Back Distance	35 FT
Side Yard Distance	15 FT
Rear Yard Distance	20 FT
Building Height	35 FT
Zoning Comments	The proposed wireless communication facility will require permits from Agawam, MA. A copy of the appropriate portion of the zoning map follows.



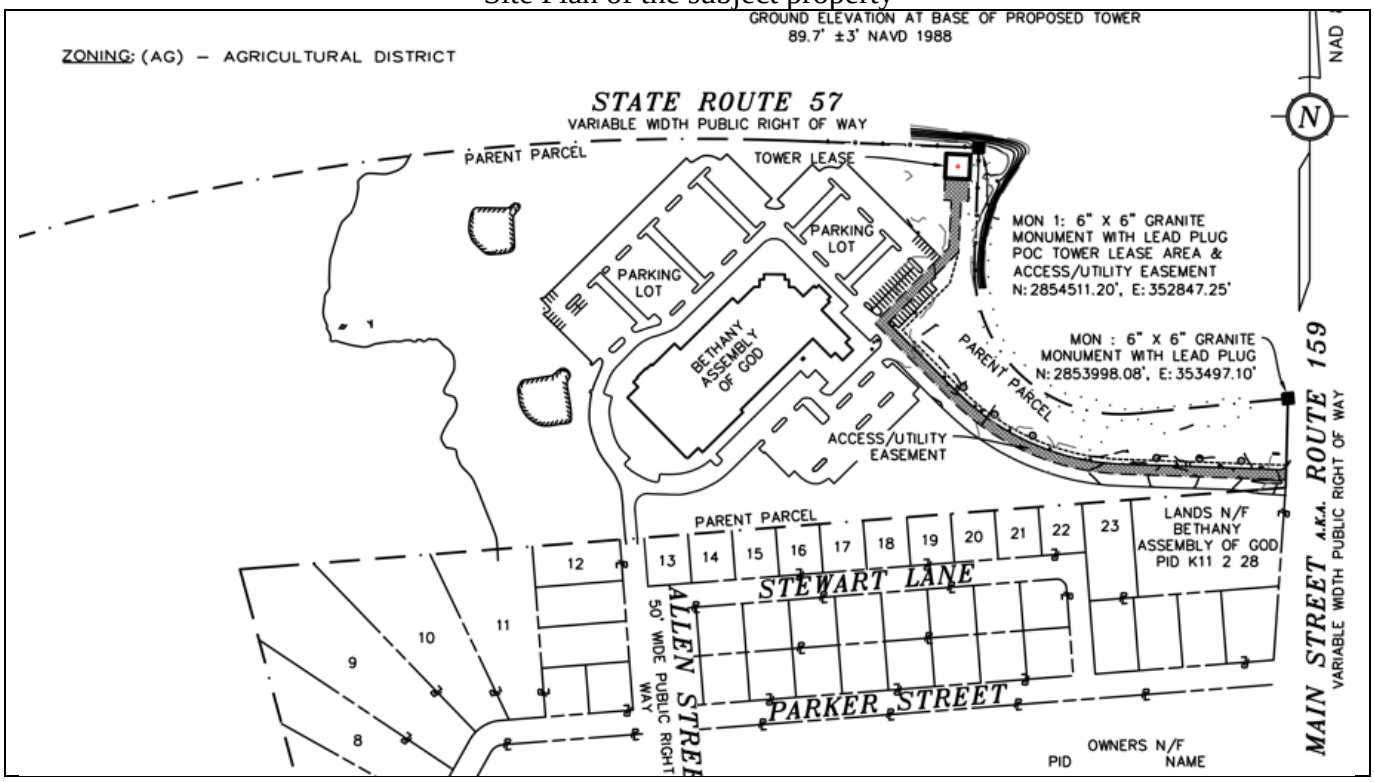
Improvements Description

Improvements Description - Institutional use site / Monopole	
Property Information	Institutional use site / Monopole

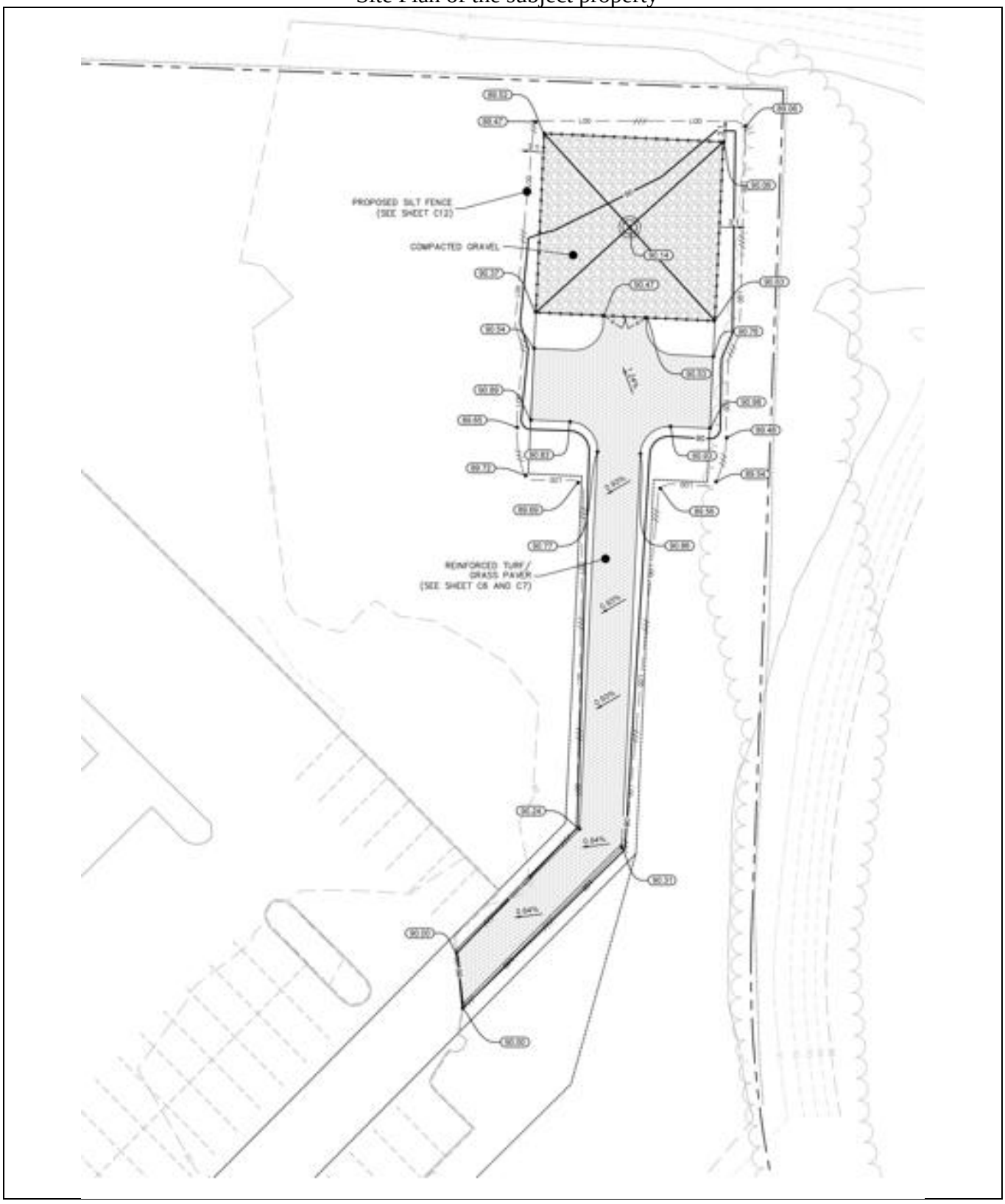
PARKING	
Parking Type and Number of Spaces:	Type: Gravel open surface parking Spaces: 5+/- Condition: Average

OVERALL PROPERTY ANALYSIS	
Capital Improvements:	There is a proposal to improve the site with a 115 foot tall monopole (with green branches to simulate a pine tree) for use as a wireless communication tower. There will be a 50 x 50 foot chain link (8 foot high) fenced in wooden stockage fence enclosure with crushed stone. Within the enclosure will be designated areas for up to 4 carriers and their equipment. Potential carrier equipment may include masonry shelters that contain radio equipment and associated machinery, and back up generators. Access to the site will be via a 12 foot wide grass paver driveway.

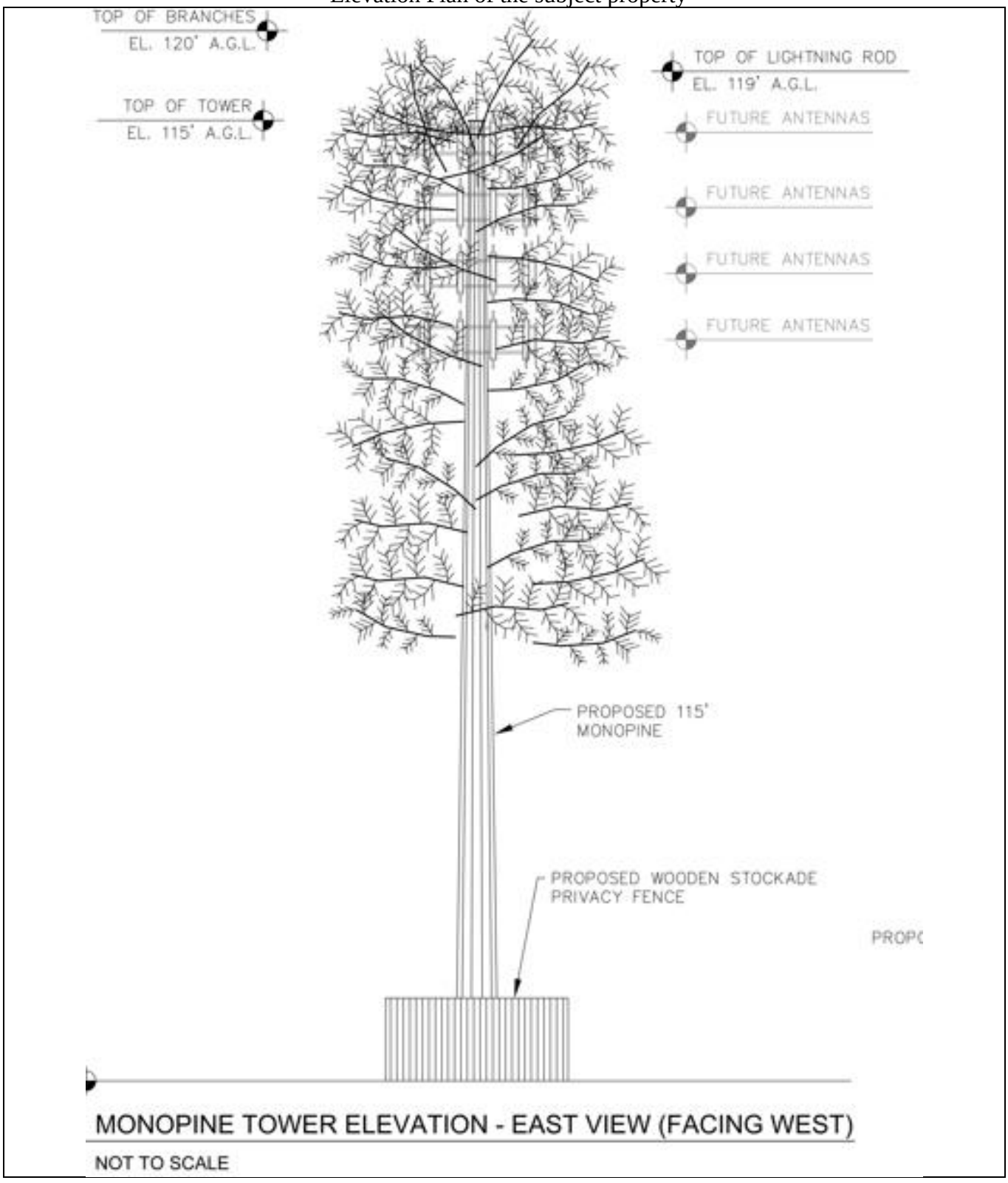
Site Plan of the subject property



Site Plan of the subject property



Elevation Plan of the subject property



Assessment and Taxes

Taxing Authority	Agawam
Assessment Year	2025

Real Estate Assessment and Taxes						
Tax ID	**Land**	**Improvements**	**Other**	**Total Assessment**	**City Rate**	**Taxes**
K11-2-28	$692,500	$4,561,800	$0	$5,254,300	$14.64	$76,923

Comments

There have been nominal changes to the tax rate and assessments in the recent past. The subject is operated as a non-profit and no taxes are levied on the property.

Highest and Best Use

Highest and best use may be defined as"
the reasonably probable and legal use of vacant land or improved property, which is physically possible, appropriately supported, financially feasible, and that results in the highest value.

1. **Legally Permissible:** What uses are permitted by zoning and other legal restrictions?
2. **Physically Possible:** To what use is the site physically adaptable?
3. **Financially Feasible:** Which possible and permissible use will produce any net return to the owner of the site?
4. **Maximally Productive.** Among the feasible uses which use will produce the highest net return, (i.e., the highest present worth)?

Highest and Best Use of the Site

Considering the land as vacant, its size, configuration, location, there are a few development options for the site, most all of which would be residential uses. The neighborhood of the subject includes a mix of single family homes, residential condominiums and scattered institutional and commercial uses. Based on the zoning the subject property could be subdivided into a single family subdivision. Research of the market for data relating to vacant land uses reveals that sites similar to the subject's characteristics for use in a residential capacity will demand values at the middle to high end of the market range for all types of properties.

Highest and Best Use as Improved

Therefore, the HBU as improved is for continued institutional use and wireless communication facility.

Market Analysis

The neighboring residential area to the subject site has adequate accessibility and visibility and desirable locations for a residential use. Agawam has experienced declining home sales with steadily increasing home prices and prices per square foot as shown in a prior section of this report. Clearly there is demand for homes and we have found the average marketing times for homes is at the low end of the historical averages.

Exposure Period and Marketing Time

Our opinion of the impact on value for property in the overall vicinity of the proposed cell tower is based on a number of factors that include its location and visibility. Our opinion assumes that

any property would have been exposed to the market for an approximately 3-6 months period and is based upon market conditions and sales data which occurred prior to the effective date of this report.

Properties that are offered at unreasonable pricing levels in any community will most likely remain on the market for extended periods of time. Based on our understanding of the market and our due diligence effort, it is our opinion that if the properties in the vicinity of the proposed cell tower were offered for sale the marketing period would be approximately 3-6 months.

Valuation Analysis

There are a number of wireless communication towers in Agawam. We have conducted research of sales of residential properties/single family homes located within the vicinity of these individual towers. This effort is to determine if there is any diminution in value of properties nearby or with views of these towers in order to provide an opinion of the reasonable likelihood of impact/lack of impact respecting homes nearby or with a view of the proposed wireless telecommunications facility. Due to seasonal tree foliage the subject tower is mostly be hidden from view of close by residential streets/homes as well as distant locations due to topography, but it is visible from other areas of the neighborhood.

With the existing tower's visibility in the months of July and August, we must assume that the winter uncovers a larger skyline presence for these towers. Our due diligence effort concerning these telecommunications facilities involved research of nearby home sales, listings, current pending sales to determine it these towers have a measurable effect on house values within its visibility zone. While, we believe unsubstantiated, some individuals speak out about health concerns due to radio waves emanating from a tower/cell site to allegedly cause illnesses. These matters are primarily based on location/proximity to a tower site in spite of the fact that the tower/antennas may or may not be visible. As such, in fear of individual or family health, some homeowners might not want to buy a home nearby a telecommunications tower even if not visible.

We have researched single family residential sales and listing activities during the last four years near the existing towers in Agawam to uncover if there are value differences due to the towers. We have outlined two sets of sales of homes on the following pages.

Sales Comparison Approach - A

Comparable 1



Transaction			
ID	15049	**Date**	12/20/2024
Address	60 Anvil Street	**Price**	$531,000
City	Agawam	**Price Per SF**	$224.62
State	MA	**Transaction Type**	Closed Sale
Tax ID	D11 - 05 - 06	**Financing**	Market
Grantor	Judith K Potter	**Property Rights**	Fee Simple
Grantee	Andrew Dabek	**Days on Market**	12
Legal Description	B25703, P388	**Verification**	Broker
Site			
Acres	0.5	**Topography**	Moderately Level
Land SF	20,038	**Zoning**	Agriculture
Road Frontage	148+/-	**Flood Zone**	None
Shape	Irregular	**Encumbrance or**	None
Utilities	All Utilities Available	**Environmental Issues**	None
Land Units	1		
Improvements & Financial Data			
Source For SF Area	NA	**No. of Bedrooms**	3.00
GBA	2,364	**No. of Bathrooms**	2.00
No. of Units	1	**Garage**	2 Car
Year Built	1988	**NOI**	$0
Condition	Good	**Utility**	Average

Comments

This property is located in a residential and recreational area of Agawam, MA. Anvil Street provides average access and visibility to the property. The majority of uses in the area are residential single family homes along with the Agawam Municipal Golf Course.

The site has a view of a wireless communications tower to the south during the fall through early spring. The property is considered to have average utility and be in good condition. The property was marketed with an original asking price of $529,900 and was on the market for 12+/- days prior to going under agreement for sale.

Comparable 2



Transaction			
ID	15050	**Date**	12/30/2021
Address	148 Anvil Street	**Price**	$435,000
City	Agawam	**Price Per SF**	$162.31
State	MA	**Transaction Type**	Closed Sale
Tax ID	D11 - 05 - 14	**Financing**	Market
Grantor	Thomas Smart	**Property Rights**	Fee Simple
Grantee	Edson Lopes	**Days on Market**	62
Legal Description	B24333, P287	**Verification**	Broker
Site			
Acres	0.5	**Topography**	Moderately Level
Land SF	20,909	**Zoning**	Agriculture
Road Frontage	289+/-	**Flood Zone**	None
Shape	Irregular	**Encumbrance or**	None
Utilities	All Utilities Available	**Environmental Issues**	None
Land Units	1		
Improvements & Financial Data			
Source For SF Area	NA	**No. of Bedrooms**	4.00
GBA	2,680	**No. of Bathrooms**	2.00
No. of Units	1	**Garage**	2 Car
Year Built	2003	**NOI**	$0
Condition	Average/Good	**Utility**	Average

Comments

This property is located in a residential and recreational area of Agawam, MA. Anvil Street provides average access and visibility to the property. The majority of uses in the area are residential single family homes along with the Agawam Municipal Golf Course.

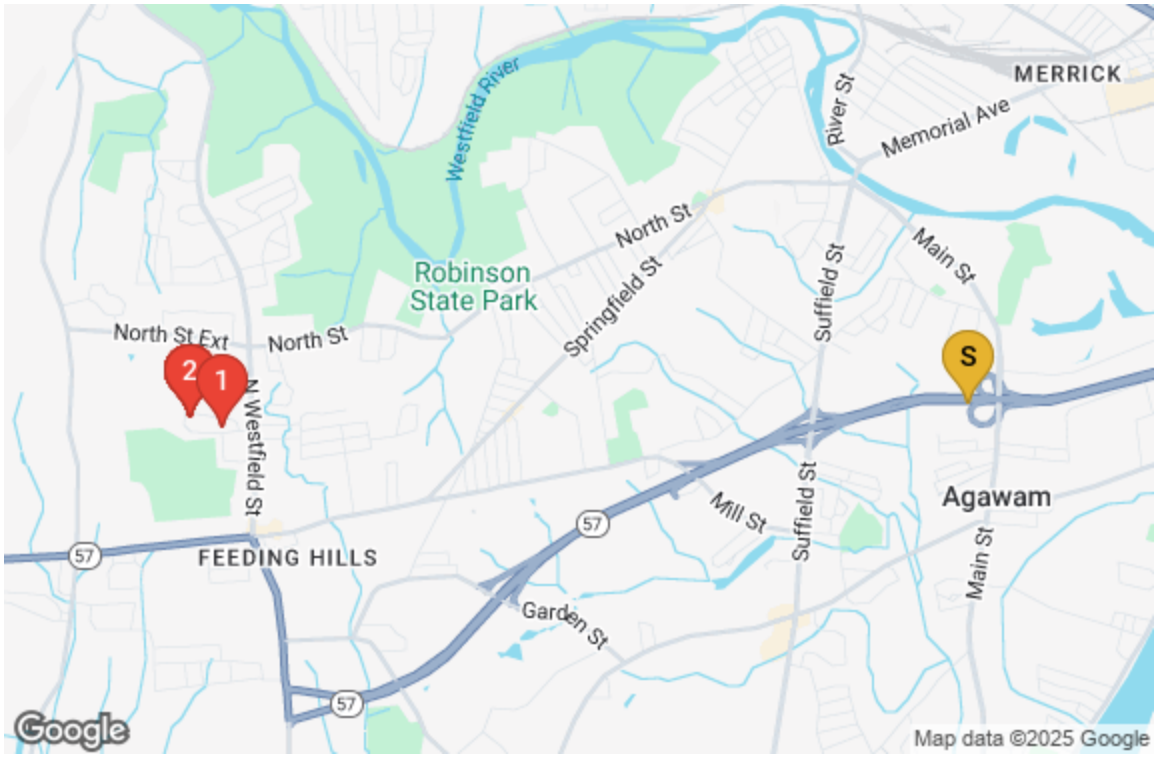
The site has a view of a wireless communications tower to the south during the fall through early spring. The property is considered to have average utility and be in good condition. The property was marketed with an original asking price of $449,900 and was on the market for 62+/- days prior to going under agreement for sale.

Analysis Grid

The previously outlined sales have been analyzed and compared to each other. The below sales comparison grid displays the comparables and the adjustments applied.

Analysis Grid	Comp 1		Comp 2	
Address	60 Anvil Street		148 Anvil Street	
City	Agawam		Agawam	
State	MA		MA	
Date	12/20/2024		12/30/2021	
Price	$531,000		$435,000	
GBA	2,364		2,680	
Price Per SF	$224.62		$162.31	
Adjustments				
Property Rights	Fee Simple	0.0%	Fee Simple	0.0%
Financing	Market	0.0%	Market	0.0%
Conditions of Sale	Typical	0.0%	Typical	0.0%
Adjusted Price/SF	**$224.62**		**$162.31**	
Market Trends Through	0.0%		20.0%	
Adjusted Price/SF	**$224.62**		**$194.78**	
Location	Average		Average	
% Adjustment	0%		0%	
$ Adjustment	$0.00		$0.00	
Condition	Good		Average/Good	
% Adjustment	0%		10.0%	
$ Adjustment	$0.00		$19.48	
GBA	2364		2680	
% Adjustment	0%		2.5%	
$ Adjustment	$0.00		$4.87	
Acres	0.46		0.48	
% Adjustment	0%		0%	
$ Adjustment	$0.00		$0.00	
Utility	Average		Average	
% Adjustment	0%		0%	
$ Adjustment	$0.00		$0.00	
Adjusted Price/SF	**$224.62**		**$219.12**	
Net Adjustments	0.0%		12.5%	
Gross Adjustments	0.0%		12.5%	

Comparables Map



Analysis of Comparable Sales

Comparable Sale 1 has a limited view of a wireless communication tower located at the Agawam Municipal Golf Course, whereas Sale 2 has no such view. The Agawam Municipal Golf Course tower was erected on June 16, 2022 and the sales occurred prior to and subsequent to the tower being installed. Sale 1 sold 36 months after Sale 2 and the market indicated a 20% increase in values over that time period based on the tables from Raveis noted in a prior section of this report, thus an adjustment to Sale 2 was provided. The two homes are considered to be in similar locations with similar land area and utility. There is a difference in condition with Sale 1 being slightly better condition after having some updates completed while Sale 2 has not had these updates. There also is a slight difference in living area with Sale 2 being larger than Sale 1, thus sale 2 was adjusted upward based on the economies of scale principle as we are appraising the homes based on a per square foot valuation. With an adjustment made for the condition and building area to Sale 2 the adjusted price per square foot of the two sales ranges from $219.12 to $224.62. This indicates no difference in value of a home with a view of a cell tower versus a home with no view of a cell tower.

Sales Comparison Approach - B

Comparable 1



Transaction			
ID	15051	**Date**	7/27/2022
Address	158 Karen Lynn Circle	**Price**	$345,000
City	Agawam	**Price Per SF**	$317.97
State	MA	**Transaction Type**	Closed Sale
Tax ID	C11 - 01 - 03	**Financing**	Market
Grantor	Tiffani Beeman	**Property Rights**	Fee Simple
Grantee	Annakay Bonner	**Days on Market**	5
Legal Description	B24657, P99	**Verification**	Broker
Site			
Acres	0.6	**Topography**	Level
Land SF	27,443	**Zoning**	Agriculture
Road Frontage	110+/-	**Flood Zone**	None
Shape	Irregular	**Encumbrance or**	None
Utilities	Some Utilities Available	**Environmental Issues**	None
Land Units	1		
Improvements & Financial Data			
Source For SF Area	NA	**No. of Bedrooms**	3.00
GBA	1,085	**No. of Bathrooms**	1.00
No. of Units	1	**Garage**	0 Car
Year Built	1975	**NOI**	$0
Condition	Good	**Utility**	Average

Comments

This property is located in a residential and recreational area of Agawam, MA. Karen Lynn Circle provides average access and visibility to the property. The majority of uses in the area are residential single family homes and agricultural land.

The site has a view of the Agawam Municipal Golf Course wireless communications tower to the east throughout the year. The property is considered to have average utility and be in good condition. this property has the majority of the basement finished space. The property was marketed with an original asking price of $289,900 and was on the market for 5+/- days prior to going under agreement for sale.

Comparable 2



Transaction			
ID	15052	**Date**	6/10/2022
Address	79 Karen Lynn Circle	**Price**	$400,000
City	Agawam	**Price Per SF**	$312.01
State	MA	**Transaction Type**	Closed Sale
Tax ID	B11 - 01 - 02	**Financing**	Market
Grantor	Donald Hayes	**Property Rights**	Fee Simple
Grantee	Claudia Hill	**Days on Market**	13
Legal Description	B24586, P284	**Verification**	Broker
Site			
Acres	0.4	**Topography**	Level
Land SF	16,553	**Zoning**	Agriculture
Road Frontage	232+/-	**Flood Zone**	None
Shape	Irregular	**Encumbrance or**	None
Utilities	Some Utilities Available	**Environmental Issues**	None
Land Units	1		
Improvements & Financial Data			
Source For SF Area	NA	**No. of Bedrooms**	3.00
GBA	1,282	**No. of Bathrooms**	2.00
No. of Units	1	**Garage**	2 Car
Year Built	1973	**NOI**	$0
Condition	Average/Good	**Utility**	Average/Good

Comments

This property is located in a residential and recreational area of Agawam, MA. Karen Lynn Circle provides average access and visibility to the property. The majority of uses in the area are residential single family homes and agricultural land.

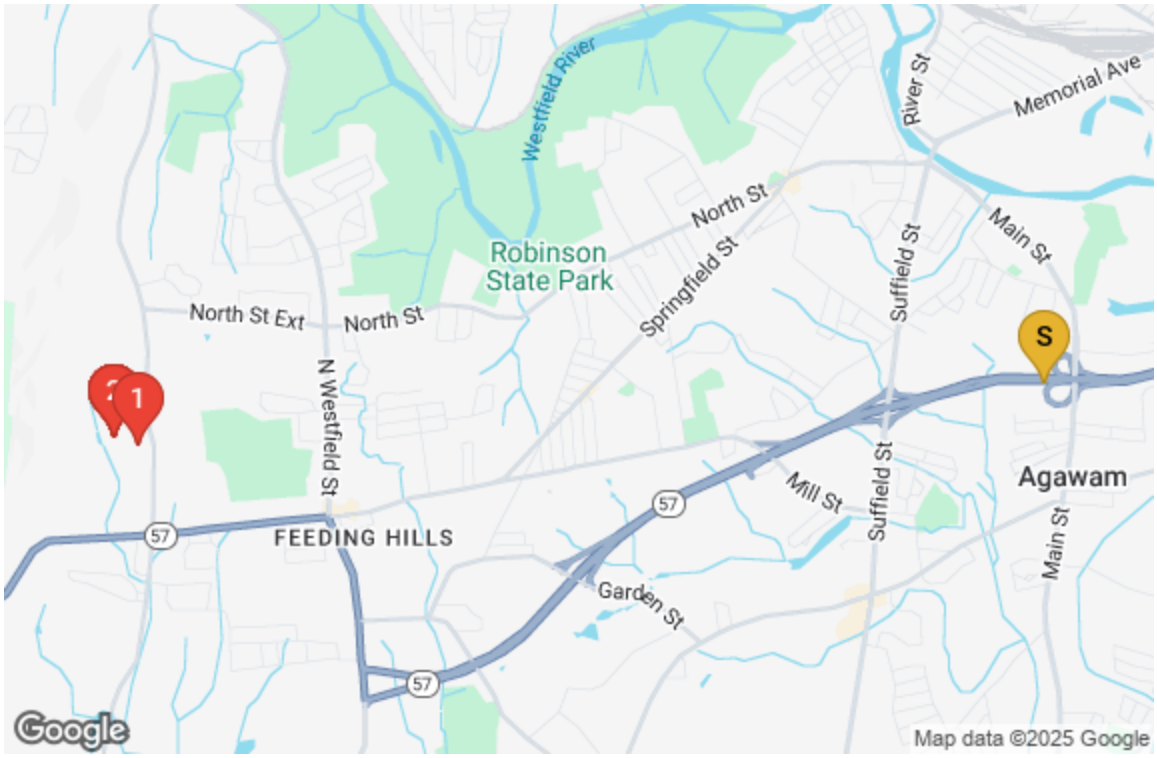
The site does not have a view of the Agawam Municipal Golf Course wireless communications tower. The property is considered to have average/good utility and be in average/good condition. this property has the majority of the basement finished space. The property was marketed with an original asking price of $349,900 and was on the market for 13+/- days prior to going under agreement for sale.

Analysis Grid

The previously outlined sales have been analyzed and compared to each other. The below sales comparison grid displays the comparables and the adjustments applied

Analysis Grid	Comp 1		Comp 2	
Address	158 Karen Lynn Circle		79 Karen Lynn Circle	
City	Agawam		Agawam	
State	MA		MA	
Date	7/27/2022		6/10/2022	
Price	$345,000		$400,000	
GBA	1,085		1,282	
Price Per SF	$317.97		$312.01	
Adjustments				
Property Rights	Fee Simple	0.0%	Fee Simple	0.0%
Financing	Market	0.0%	Market	0.0%
Conditions of Sale	Typical	0.0%	Typical	0.0%
Adjusted Price/SF	**$317.97**		**$312.01**	
Market Trends Through	0.0%		0.0%	
Adjusted Price/SF	**$317.97**		**$312.01**	
Location	Average		Average	
% Adjustment	0%		0%	
$ Adjustment	$0.00		$0.00	
Condition	Good		Average/Good	
% Adjustment	0%		10.0%	
$ Adjustment	$0.00		$31.20	
GBA	1085		1282	
% Adjustment	0%		2.5%	
$ Adjustment	$0.00		$7.80	
Acres	0.63		0.38	
% Adjustment	0%		1.0%	
$ Adjustment	$0.00		$3.12	
Utility	Average		Average/Good	
% Adjustment	0%		-10.0%	
$ Adjustment	$0.00		-$31.20	
Adjusted Price/SF	**$317.97**		**$322.93**	
Net Adjustments	0.0%		3.5%	
Gross Adjustments	0.0%		23.5%	

Comparables Map



Analysis of Comparable Sales

Comparable Sale 1 has a limited view of a wireless communication tower located at the Agawam Municipal Golf Course, whereas Sale 2 has no such view. The two sales sold within 60 days of each other thus, no date of sale adjustment was made. The two homes are considered to be in similar locations. There is a difference in condition with Sale 1 being slightly better condition after having some updates completed while Sale 2 has not had these updates. There also is a slight difference in living area with Sale 2 being larger than Sale 1, thus sale 2 was adjusted upward based on the economies of scale principle as we are appraising the homes based on a per square foot valuation. Sale 2 also has a smaller land area, thus an upward adjustment was mad. Sale 2 had greater utility as it has a 2 car garage and second bathroom. With the adjustments made to Sale 2 the adjusted price per square foot value of the two sales ranges from $317.97 to $322.93. This indicates no difference in value of a home with a view of a cell tower versus a home with no view of a cell tower.

Final Reconciliation

Diamond Communications, LLC completed a photographic documentation and simulations analysis for the proposed tower with branches at the proposed monopole tower height to simulate the visibility of the proposed tower. This was completed when there was no foliage cover. A few properties in the greater neighborhood will have the tower visible, however, the visibility will be limited due to the height of surrounding trees and the topography of the neighborhood. The majority of photos taken during the visibility study indicate no intense visibility of the proposed tower due in part to the branches to be located on the tower.

We have researched the values of properties which are near to other static developments such as water tanks, wireless communication towers, electrical transmission lines, etc. In our research we have compared properties which had views of the static facilities and were in the immediate vicinity of these static facilities. Our comparisons and analysis have found no evidence of decline in property values due to the development of the noted static projects.

Our analysis cannot dismiss the possibility that individual homes or small numbers of homes have been or could be negatively impacted, it finds that if these impacts do exist, they are either too small and/or too infrequent to result in any widespread, statistically observable impact.

In addition due to the increasing prevalence of wireless communication devices, increased usage of devices, increased applications running on wireless devices, decline in home land lines etc, many prospective home buyers look at a nearby wireless communication tower as a benefit based on their personal phone cell strength.

There are many operating wireless telecommunications facilities in Massachusetts, under development and proposed. We are familiar with many of these projects in our region and have had the opportunity to have information on many of them. The projects that we are familiar with are located in urban and rural areas. Many of the sites which are developed with a wireless telecommunications facility are surrounded by residential use properties, predominately single family homes. We have found that most abutters and residents near to these new projects are in favor of such projects as they have limited impact on the neighborhoods. Further, we have found no declines in value due to the development of these wireless telecommunications facilities.

Conclusion

As a result of our inspection, market research and analysis of the subject property and the properties abutting the subject, and subject to the definitions, certifications and limiting conditions as set forth in this Summary Appraisal Report, it is our opinion that there would be NO DIMINUTION of value of nearby/abutting properties from the development of the subject with the proposed wireless telecommunications facility.

Addenda

BOOK 4332 PAGE 48

26611

KNOW ALL MEN BY THESE PRESENTS

THAT WE, ALBERT J. CHRISTOPHER and GIOVANNA M. CHRISTOPHER, also known as Jennie M. Christopher, husband and wife, both of 170 Meadow Road, Agawam, Hampden County, Massachusetts

being xxxxxxxxx, for ONE HUNDRED FIFTY THOUSAND ($150,000)DOLLARS consideration paid grant to BETHANY ASSEMBLY OF GOD, a religious corporation established under the laws of the Commonwealth of Massachusetts and having a usual place of business at 336 Springfield Street, Springfield, Massachusetts

with ~~quitclaim~~ covenants

the land in the town of Agawam, Hampden County, Massachusetts, more particularly bounded and (Description and encumbrances, if any) described as follows:

BEGINNING at a point at the southwesterly cornerof land now or formerly of Thomas and Anna Russo in the Town of Agawam, Hampden County, Massachusetts

Thence S. 85° 33' 05" W.	a distance of 1730.60 feet along a land court plan no. 24964A to a point;
Thence S. 15° 04' 22" E.	a distance of 585.19 feet along said land court plan to a bound;
Thence N. 80° 43' 32" W.	a distance of 63.75 feet along the land now or formerly of B. & M. Tucci;
Thence N. 88° 28' 51" W.	a distance of 288.42 feet along land now or formerly of said Tucci to an iron pin;
Thence S. 82° 20' 08" W.	a distance of 204.25 feet to a point;
Thence S. 87° 08' 04" W.	a distance of 78.67 feet to an iron pin at land now or formerly of one Calabrese;
Thence N. 34° 42' 40" W.	a distance of 542.17 feet along the land of Calabrese to a point;
Thence N. 21° 10' 11" E.	a distance of 327.67 feet along the land now or formerly of one Deloghia to a point;
Thence N. 11° 27' 02" E.	a distance of 481.44 feet along the land now or formerly of Deloghia to a point on the southerly side of Route 57;
Thence N. 72° 55' 33" E.	a distance of 73.00 feet to a bound;
Thence Northeasterly	on a curve to the right having a radius of 4900.75 feet an arc length of 1646.79 feet to a point;
Thence S. 87° 49' 30" E.	a distance of 394.14 feet to a bound, the last three courses being along the southerly side of Route 57;
Thence S. 2 ° 10' 30" W.	a distance of 234.37 feet to a point;
Thence	along a curve to the left having a radius of 300.00 feet, an arc length of 385.71 feet to an iron pin, the last two courses being along the ramp to Route 57;

(OVER)

HAMPDEN SS. COMMONWEALTH OF MASSACHUSETTS DEEDS EXCISE 342.00

Thence S. 4° 26' 55" E. a distance of 198.92 feet along the land now or formerly of Russo to the point of beginning.

Being the premises shown as land of ALBERT J. and JENNIE M. CHRISTOPHER, said to contain 49.2 acres of land, as shown on a Plan of Land prepared for BETHANY ASSEMBLY OF GOD, dated September 3, 1976, by Pharmer Engineering Corporation, Holyoke, Massachusetts, and recorded in Hampden County Registry of Deeds in Book 166, Pages 76 and 77.

BEING the premises conveyed to the Grantors herein by deed of Philip Nassif, et ux, dated May 2, 1955, and recorded in said Hampden County Registry of Deeds in Book 2385, Page 54.

[redacted]

[redacted]

[redacted]

Witness our hand and seal this 4th day of October 1976

Albert J. Christopher
ALBERT J. CHRISTOPHER

Giovanna M. Christopher
GIOVANNA M. CHRISTOPHER

The Commonwealth of Massachusetts

Hampden, ss. October 4th 1976.

Then personally appeared the above-named ALBERT J. CHRISTOPHER and GIOVANNA M. CHRISTOPHER

and acknowledged the foregoing instrument to be their free act and deed, before me

Donald Conway
Notary Public

My Commission expires November 30, 1977

RECEIVED
OCT 5 1976
AT 9:20 am AND
RECD FROM THE ORIGINAL


Bethany Assembly of God MA054 Site Simulation Map
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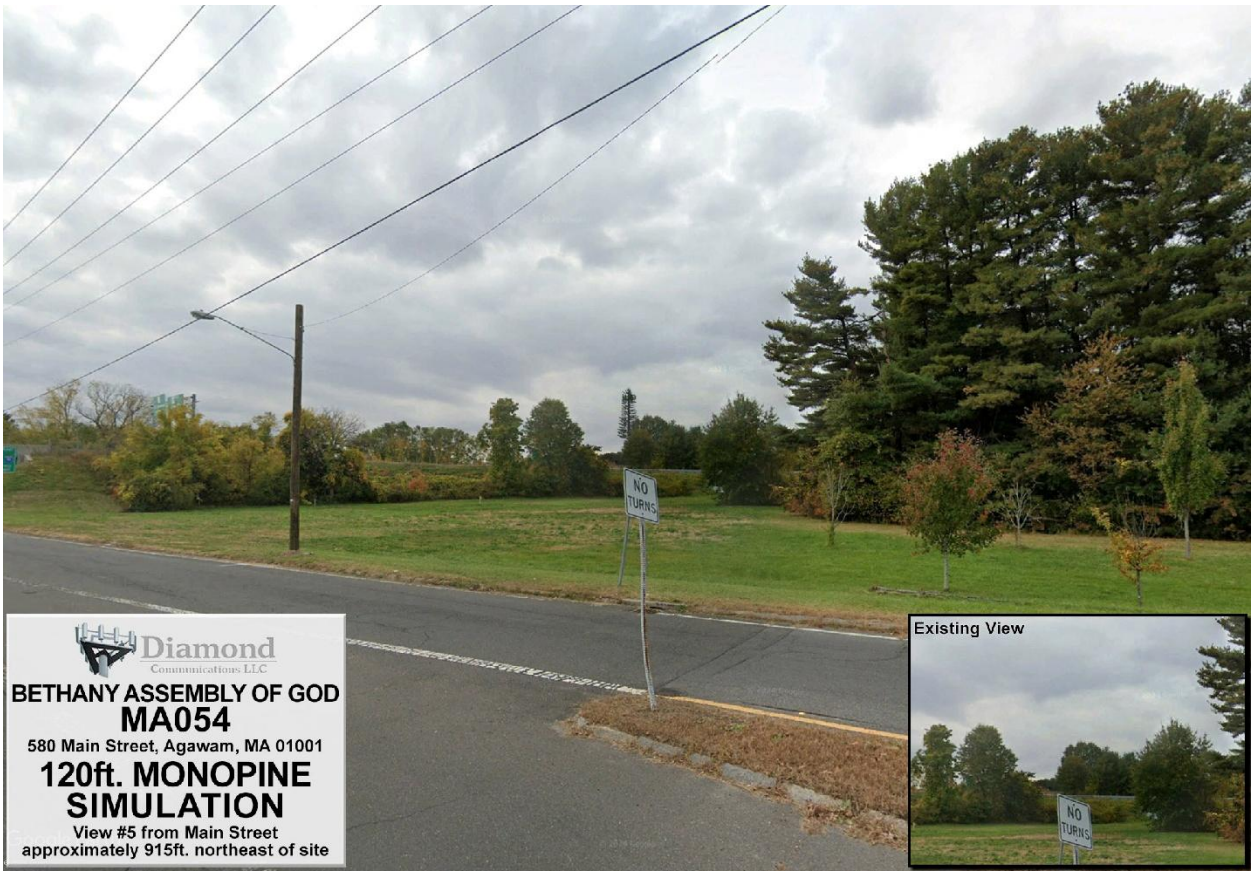
14
15
16
17
Site
Google Earth
Site
Photograph #


Diamond
Communications LLC
BETHANY ASSEMBLY OF GOD
MA054
580 Main Street, Agawam, MA 01001
120ft. MONOPINE
SIMULATION
View #1 from Meadow Street
approximately 870ft. north of site
Existing View


Diamond
Communications LLC
BETHANY ASSEMBLY OF GOD
MA054
580 Main Street, Agawam, MA 01001
120ft. MONOPINE
SIMULATION
View #2 from Harvey Johnson Drive
approx. 1,180ft. north-northeast of site
Existing View


Diamond
Communications LLC
BETHANY ASSEMBLY OF GOD
MA054
580 Main Street, Agawam, MA 01001
120ft. MONOPINE
SIMULATION
View #3 from Main Street
approx. 1,440ft. north-northeast of site
Existing view


Diamond
Communications LLC
BETHANY ASSEMBLY OF GOD
MA054
580 Main Street, Agawam, MA 01001
120ft. MONOPINE
SIMULATION
View #4 from Meadow Street
approximately 1,275ft. northeast of site
Existing View


NO TURNS
Diamond
Communications LLC
BETHANY ASSEMBLY OF GOD
MA054
580 Main Street, Agawam, MA 01001
120ft. MONOPINE
SIMULATION
View #5 from Main Street
approximately 915ft. northeast of site
Existing View
NO TURNS


Diamond
Communications LLC
BETHANY ASSEMBLY OF GOD
MA054
580 Main Street, Agawam, MA 01001
120ft. MONOPINE
SIMULATION
View #6 from Highway 57
approximately 1,550ft. east of site
Existing View


Diamond
Communications LLC
BETHANY ASSEMBLY OF GOD
MA054
580 Main Street, Agawam, MA 01001
120ft. MONOPINE
SIMULATION
View #7 from Main Street
approx. 830ft. east-southeast of site
Existing View


Diamond
Communications LLC
BETHANY ASSEMBLY OF GOD
MA054
580 Main Street, Agawam, MA 01001
120ft. MONOPINE
SIMULATION
View #8 from Beekman Drive
approx. 1,120ft. east-southeast of site
Existing View


STOP
Diamond
Communications LLC
BETHANY ASSEMBLY OF GOD
MA054
580 Main Street, Agawam, MA 01001
120ft. MONOPINE
SIMULATION
View #9 from Edward Street
approximately 1,240ft. southeast of site
Existing View


Diamond
Communications LLC
BETHANY ASSEMBLY OF GOD
MA054
580 Main Street, Agawam, MA 01001
120ft. MONOPINE
SIMULATION
View #10 from Parker Street
approx. 1,100ft. south-southeast of site
Existing View


Diamond
Communications LLC
BETHANY ASSEMBLY OF GOD
MA054
580 Main Street, Agawam, MA 01001
120ft. MONOPINE
SIMULATION
View #11 from Stewart Lane
approximately 830ft. south of site
Existing View


Diamond
Communications LLC
BETHANY ASSEMBLY OF GOD
MA054
580 Main Street, Agawam, MA 01001
120ft. MONOPINE
SIMULATION
View #12 from Stewart Lane
approx. 860ft. south-southwest of site
Existing View


Diamond
Communications LLC
BETHANY ASSEMBLY OF GOD
MA054
580 Main Street, Agawam, MA 01001
120ft. MONOPINE
SIMULATION
View #13 from Allen Street
approximately 1,140ft. southwest of site
Existing View


Diamond
Communications LLC
BETHANY ASSEMBLY OF GOD
MA054
580 Main Street, Agawam, MA 01001
120ft. MONOPINE
NOT VISIBLE
View #14 from Woodside Drive
approx. 2,660ft. west-southwest of site


Diamond
Communications LLC
BETHANY ASSEMBLY OF GOD
MA054
580 Main Street, Agawam, MA 01001
120ft. MONOPINE
SIMULATION
View #15 from Highway 57
approximately 990ft. west of site
Existing View


Diamond
Communications LLC
BETHANY ASSEMBLY OF GOD
MA054
580 Main Street, Agawam, MA 01001
120ft. MONOPINE
SIMULATION
View #16 from Meadow Street
approximately 1,020ft. northwest of site
Existing View



COMMONWEALTH OF MASSACHUSETTS

DIVISION OF OCCUPATIONAL LICENSURE

BOARD OF

REAL ESTATE APPRAISERS

ISSUES THE FOLLOWING LICENSE CERT

GEN. REAL ESTATE APPRAISER

JEROME C FRANKLIN
45 PINE GROVE CIR
E LONGMEADOW, MA 01028-1300

LICENSEE SIGNATURE

5219	11/09/2025	521469
LICENSE NUMBER	EXPIRATION DATE	SERIAL NUMBER

May 16, 2025

Ms. Donna Mele-Parolari
Diamond Communications
120 Mountain Avenue
Springfield, NJ 07081

Re: MA054 – Bethany Assembly of God
(Agawam North 3)
580 Main Street
Agawam, Hampton County, MA 01001
DEA No. 22505157

Dear Ms. Mele-Parolari,

This wetlands overview memo, prepared by Dynamic Environmental Associates, Inc. (DEA) on behalf of Diamond Communications (Diamond), has been prepared to provide a high-level overview of the wetlands related considerations surrounding the construction of a proposed wireless telecommunications facility at the potential location described below.

Property Description:

The parcel of land at 580 Main Street Agawam, Hampton County, MA 01001 also designated as Parcel ID: K11 2 28 is an approximately 51-acre parcel used as a religious facility (the "Parent Tract"). The Parent Tract is found in a suburban area and consists of the Bethany Assembly of God building, parking lots, baseball fields, roadways, wooded lands and wetlands areas.

Project Description:

The proposed project consists of the construction of a communications tower within a proposed lease area in the central portion of the above-described Parent Tract in the western corner of the existing baseball fields near the existing tree line in an area currently mowed and used as a recreational area for a fire pit. Additional proposed improvements include a proposed access road extending east from the proposed lease area through the Parent Tract to the existing parking lot and then using existing paved parking areas and roadways to Main Street to the east. The area of the above proposed project is hereafter referred to as the "Project Area".

Wetlands Delineation

A wetland delineation was conducted on November 16, 2023 for lands proximate to the proposed lease area. The 3.97-acre review area considered areas directly surrounding the proposed lease area which showed mapped wetlands to the south and west in the US Fish and Wildlife Services' online National Wetlands Inventory mapping system. At the time the delineation was completed, the proposed lease area was in a grass field which was the outfield of the northern existing baseball field. The delineation identified the presence of a Palustrine Forested wetland to the south and

west of the proposed lease area. The aforementioned lease area as well as portions of the proposed access road lie within 100' of this delineated wetland.

Wetlands Permitting & Review

The development of the proposed tower facility within 100' of a wetlands area would require approval from the Agawam Conservation Commission (ACC) under its authority from the Massachusetts Department of Environmental Protection (MassDEP) as administrators of the Massachusetts Wetlands Protection Act. This approval process would involve the completion and submission of a Request for Determination of Applicability (RDA) / Notice of Intent (NOI) to the ACC and MassDEP as well as attendance of at least one ACC meeting. Typically, a site visit with ACC members would also be required.

Preparation of the RDA / NOI would necessitate Diamond providing DEA with all engineering items - site plans, drawings, disturbance/buffer/fill calculations, stormwater report (if applicable/warranted) that would be required as part of the application. Based on recent projects, MassDEP processing of the applications and ACC review is anticipated to take a minimum of 90 days to complete and approval is not automatic nor guaranteed. Projects must demonstrate no adverse impacts to the wetlands in order to receive approval.

Development in a wetlands buffer area, even an area that has historically and currently been mowed or otherwise disturbed, can alter hydrology, potentially increasing runoff into sensitive wetlands areas and can introduce pollutants into this area. This may lead to loss of habitat or migration corridors, reduce the natural filtering ability of the buffer area and otherwise cause harm to the wetlands. It should additionally be noted that even disturbed areas may support wetland-dependent species or otherwise support essential ecological functions.

Previously disturbed areas that are not permanently disturbed may revert to wetlands conditions should mowing or related uses be discontinued which could result in the boundary of the wetland actually extending into the proposed Project Area. This should be differentiated from areas of permanent disturbance such as paved areas which are less likely to revert to wetlands.

It should additionally be noted that, based on the existing site location conditions, it is unlikely that mitigation measures would be required but the possibility cannot be ruled out.

Synopsis

Based on the above, parts of the proposed project location, including the proposed lease area are within 100' of a delineated wetland which will require ACC and MassDEP approval prior to proceeding. Such approval may or may not be granted based on the location and current status of the buffer area.

Should any additional information or clarification be required, please do not hesitate to reach out to aberezowsky@dynamicenvironmental.com or 914-310-8066.

Very truly yours,
Dynamic Environmental Associates, Inc.

David A. Jermakian
President

Adrian G. Berezowsky
Vice President


W1-15+N
W1-14
W1-WET-1PFO
W1-13
W1-UP-1
W1-12
W1-11
W1-10
W1-9
W1-8
W1-7
W1-6
W1-5
W1-4
W1-3
W1-2
W1-1+S
Google Earth
N
100 ft

DIEHLUX

- Innovative Ecology -

November 27, 2023

Mr. David Jermakian, President
Dynamic Environmental Associates, Inc.
3850 Lake St Ste C
Macon, GA 31204
(860) 919-2619
djermakian@dynamicenvironmental.com

RE: DEA - DIAMOND BETHANY ASSEMBLY OF GOD MA054 TELECOMMUNICATIONS PROJECT
TAX PARCEL ID: K11 2 28
580 MAIN STREET
TOWN OF AGAWAM, HAMPDEN COUNTY, MASSACHUSETTS
FRESHWATER WETLANDS DELINEATION & WATERCOURSE REPORTING

Dear Mr. Jermakian:

The following represents our findings, recommendations, and conclusions upon completion of the freshwater wetlands and waterbody delineation services authorized by Dynamic Environmental Associates, Inc., herein referred to as "the Client" on October 30, 2023. This service was performed to assist the Client with investigation of existing field conditions and site feasibility review for future support planning and design of the above referenced project on the approximate 3.97-acre review area located at 580 Main Street in the Town of Agawam, Hampden County, Massachusetts (Site). The proposed area of review was based on Site plans provided by the Client to DIEHLUX on September 29, 2023. A copy of the Site plans is documented in Appendix I.

A. Purpose

The purpose of this investigation was to determine the potential for regulated activities at the Site within state or federally regulated freshwater wetlands, watercourses, or water bodies, as well as any environmental permitting requirements associated with the Wetlands Protection Act, Chapter 131 of Massachusetts General Law (MGL), as well as Section 401 and 404 of the Clean Water Act. Generally, these environmental regulations pertain to the protection and preservation of wetlands, watercourses and water bodies throughout Massachusetts and/or the United States.

B. Preliminary Review

As part of the freshwater wetlands and water body field investigation service, a preliminary review of the existing site conditions was performed prior to our site visit utilizing reasonably available data and mapping obtained from the following resources:

- United States Geological Survey (USGS) Topographic Map(s);
- County GIS Map(s), if available;
- MA Department of Environmental Protection (DEP) Environmental Wetlands Mapper;
- United States Fish & Wildlife Services (USFWS) National Wetland Inventory (NWI) Map(s);
- United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Soils Map(s);
- Federal Emergency Management Agency (FEMA) Flood Map(s), If available;
- Google Earth satellite/aerial imagery; and
- Project Documents, Reports, etc. (as provided by the Client or Client representative)

Copies of these maps and associated documents are included as Appendix II.

C. Freshwater Wetlands Field Delineations

A field investigation of any upland/wetland, watercourse, or water body boundaries was completed on the Site. The field investigation was completed in accordance with the following technical manual(s) as applicable:

- Environmental Laboratory. (1987). "Corps of Engineers Wetlands Delineation Manual," Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, Miss.

- U.S. Army Corps of Engineers. 2011. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, C. V. Noble, and J. F. Berkowitz. ERDC/EL TR-12-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

- Jackson, S. D., D. J. Henson, D. Hilgeman, M. McHugh, and L. Rhodes, 2022. Massachusetts Handbook for Delineation of Bordering Vegetated Wetlands, Second Edition, Massachusetts Department of Environmental Protection, Bureau of Water Resources, Wetlands Program, Boston, Massachusetts.

D. Field Findings

The approximate 3.97-acre review area is directly south of Highway 57 and west of the intersection of Highway 57 and Main Street. The landscape within the area of review consists mainly of open athletic fields in the eastern side of the Site and forested wetland along the western and southern

border of the review area. The Site is surrounded by residential neighborhoods to the north, south and east of Site. A forested wetland complex extends west of Site. DIEHLUX observed minimal to no topographic relief within the Site with an approximate elevation change of 3 feet Site-wide. The landscape gently descends south. Our findings are consistent with the topographic map provided in Appendix I. MA DEP Wetlands/NWI (National Wetlands Inventory) Maps depict one (1) state/federally regulated freshwater wetland within Site limits. Our investigation within the review area revealed one (1) wetland.

A wetland, watercourse, and waterbody field investigation was completed on-Site by qualified wetland biologists on November 16, 2023. The weather was mostly sunny, and temperatures ranged from 50 to 55°F. As previously mentioned, DIEHLUX observed one (1) wetland (Wetland W1) within the review area.

Wetlands

Wetland W1 was discovered as a forested wetland along the western edge and southwestern corner of the review area. Wetland W1 was dominated by wetland vegetation such as red maple *(Acer rubrum)*, pin oak *(Quercus palustris)*, glossy buckthorn *(Frangula alnus)*, northern spicebush *(Lindera benzoin)*, field horsetail *(Equisetem arvense)*, and cinnamon fern *(Osmundastrum cinnamomeum)*. Hydrology was evident within Wetland W1 in the form of surface water (4 inches), hydrogen sulfide odor, water-stained leaves, sparsely vegetated concave surfaces, and microtopographic relief. Soil composition consisted mainly of mucky loam/clay exhibiting 10% redox concentrations. Wetland W1 is representative of the mapped state (WS1)/federally (PFO1E) regulated wetland on-Site. DIEHLUX confirmed that Wetland W1 continues west and south outside of the review area/Site.

Table 1:

Resource(s)	Flagging	Cover Type	Location (Lat./Long.)	Size of Resource (acres/linear feet)	Flow Regime
State/Federally Regulated Freshwater Wetland (PFO1E) MA DEP Wetland WS1 Wetland W1	W1-1+S to W1-15+N	Palustrine; Forested, Broad-Leaved Deciduous, Seasonally Flooded/Saturated	42.07467528, -72.62235282	1.33 acres	N/A

Site photographs are documented as Appendix III. Sketch maps are included as Appendix IV.

E. Conclusions & Recommendations

As part of the wetlands, watercourse, and water body investigation for this project site, we included an evaluation of Sections 401 and 404 jurisdiction and permitting applicability, as well as potential regulatory or permitting requirements under Chapter 131 of MGL.

The following outlines our conclusions and recommendations regarding wetlands and watercourse permitting requirements for this proposed project:

A. According to the MassDEP Online Map Viewer, there is one (1) mapped state-regulated wetland within Site limits classified as a wooded swamp deciduous (WS1). This is consistent with our findings as Wetland W1 represents this feature. As currently designed, further consultation with MassDEP and/or Agawam Conservation Commission via a Request for Determination of Applicability (RDA)/Notice of Intent (NOI) is anticipated in accordance with Chapter 131 of MGL for regulated activities within the associated 100-foot buffer of aforementioned wetland.

   Lastly, a Section 401 Water Quality Certification (WQC) from MassDEP will be required if the proposed project includes dredging and/or excavation within waters of the Commonwealth. Copies of MassDEP Environmental Resource maps are documented in Appendix II.

B. According to the U.S. Fish & Wildlife Service National Wetlands Inventory (NWI) Map, the Site contains one (1) federally mapped wetland. As mentioned above, this is consistent with our findings as Wetland W1 represents this feature. Based on the current design, it is unclear if there will be direct impacts (fill) placed within Wetland W1. A Copy of the NWI map is included in Appendix II.

DIEHLUX recommends the Client overlay the wetland boundary on the proposed drawing/concept plan to facilitate the review of any potential regulated activities and associated wetland permitting requirements pursuant to Chapter 131 of the MGL and Sections 401 and 404 of the Clean Water Act. Direct consultation and coordination with MassDEP and/or Agawam Conservation Commission will be required if direct impacts to identified resources and/or their 100-foot buffers are anticipated. Per our delineation of Wetland W1, the proposed design may directly impact the 100-foot buffer of the subject feature.

We appreciate the opportunity to be involved in your project and hope that you have found our services helpful. Should the project scope be updated or revised to incorporate additional areas of disturbance beyond those previously reviewed during the Site visit on November 16, 2023, DIEHLUX recommends additional evaluation of the Site or modifications. We are happy to assist with any required permit applications or follow up as necessary, should the project move forward as planned. Please contact us if you have any questions, comments, concerns, or requests for additional information.

Respectfully Submitted,



Travis Money
Senior Vice President/Manager of Ecological Services

Attachments:
Appendix I – Site Location Maps (Preliminary Site Design, Aerial, USGS Topo, Imagery, Streets Map)
Appendix II - Preliminary Site Review Data (NWI, MADEP wetlands, GE Historical Images, USDA Soils)
Appendix III – Site Photographs
Appendix IV – Wetland Sketch Map
Appendix V – USACE Data Sheets

APPENDIX I

FAA 1-A TOWER CERTIFICATION

Date: **08-30-2023**
Site Name: **BETHANY ASSEMBLY OF GOD**
BUN: **MA054**
Site Address: **580 MAIN STREET, AGAWAM, MA 01001, HAMPDEN COUNTY**

PROPOSED MONO POLE TOWER

I hereby certify that the following Latitude and Longitude values for the center of the above-referenced tower are accurate to within +/- 20 feet horizontally; and that the following tower site elevation is accurate to within +/- 3 feet vertically.

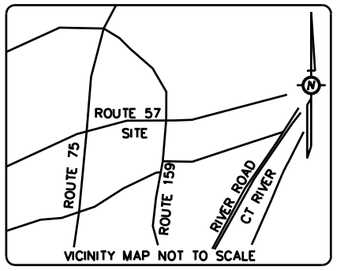
NAD 83
Latitude: 42° 04' 27.77" N. +/- 20'
Longitude: 72° 37' 18.30" W. +/- 20'

Ground elevation at base of proposed tower: 84.9' +/- 3' NAVD, 1988

Respectfully,

Jeramiah J. Raitt





THE PARENT PARCEL IS AFFECTED BY ZONE X WHICH IS NOT A FLOOD HAZARD ZONE AS PER F.I.R.M. MAP NUMBER: 25013C0403E EFFECTIVE DATE: JULY 16, 2013.

FAA 1-A INFORMATION:
LATITUDE: 42° 04' 27.77" N ±20'
LONGITUDE: 72° 37' 18.30" W ±20'

GROUND ELEVATION AT BASE OF PROPOSED TOWER
84.9' ±3' NAVD 1988

ZONING: (AG) – AGRICULTURAL DISTRICT

PARENT PARCEL INFORMATION:
BETHANY ASSEMBLY OF GOD
580 MAIN STREET
AGAWAM, MA 01001
PARCEL ID #: K11 2 28
DEED BOOK 4332, PAGE 342

LEGEND:

●	:SET 5/8" REBAR, OR AS NOTED
○	:FOUND 1/2" REBAR, OR AS NOTED
■	:FOUND MONUMENT, OR AS NOTED
(___)	:RECORD DESCRIPTION DATA
P.O.T.	:POINT OF TERMINUS
P.O.B.	:POINT OF BEGINNING
P.O.C.	:POINT OF COMMENCEMENT
—o—	:FENCE AS NOTED
—OH—	:OVER HEAD UTILITY LINES
	:WOOD UTILITY POLE
	:ELECTRIC TRANSFORMER
T	:TELCO PEDESTAL
HH	:HAND HOLE
N/A	:NOT AVAILABLE
N/F	:LANDS NOW/FORMERLY
	:FLOOD LIGHT
	:UNDERGROUND FIBER MARKER

OWNERS N/F

	PID	NAME
1	J11 2 19	DANIEL F. KOEHNE
2	J11 2 20	MICHAEL J. SKALA
3	J11 2 21	JENNIFER COTE
4	J10 4 15	TOWN OF AGAWAM
5	K10 5 1	DANIEL T. BALBONY
6	K10 5 2	SEAN EUGENE SULLIVAN
7	K11 2 1	DAVID A. BATES
8	K11 2 2	JAMES C. INGARI
9	K11 2 3	KIM MERCERI
10	K11 2 4	JAMES C. STASSEN
11	K11 2 5	DANIEL K. WEBSTER
12	K11 2 10	MICHAEL GARWACKI
13	K11 2 11	JOHN O'NEIL
14	K11 2 12	JOHN CANNEY
15	K11 2 13	TRAVIS A. LANSING
16	K11 2 14	PETER J. SHATOS
17	K11 2 15	JAIME L. BOUCHARD
18	K11 2 16	JOHN J. COUTURE
19	K11 2 17	NICOLAI DUBINEVICI
20	K11 2 18	GLORIA J. AFFLITTO
21	K11 2 19	ISUEL SANCHEZ
22	K11 2 20	JOSEPH R. SPAGNOLI
23	K11 2 21	APRIL J. GRAZIANO

AREA	SQUARE FEET	ACRE
PARENT PARCEL	2,220,804	51±
PROPOSED TOWER LEASE	2,500	0.06
PROPOSED ACCESS/ UTILITY EASEMENT	46,625	1.07
PROPOSED UTILITY EASEMENT	1,292	0.03

250 0 125 250 500

BAR GRAPH 1 inch = 250 ft.

MA054 BETHANY ASSEMBLY OF GOD.DWG

SHEET 1 OF 5

RAW LAND SURVEY

NAME: BETHANY ASSEMBLY OF GOD
SITES#: MA054
ADDRESS: 580 MAIN STREET
AGAWAM, MA 01001
HAMPDEN COUNTY

NATIONAL SURVEY SERVICES COORDINATION BY:

GEOLINE SURVEYING, INC.
13430 NW 104th Terrace, Suite A Alachua, FL 32615
Office:(386) 418-0500 Fax:(386) 462-9986
WWW.GEOLINEINC.COM

SURVEY WORK PERFORMED BY:

JONATHAN MURPHY
Professional Land Surveying
10505 Leafwood Place (919) 280-8189
Raleigh NC 27613 FAX 995-9616
E-MAIL : raleigh@murphygeomatics.com FIRM C-2757

SURVEYOR'S NOTES

1. BASIS OF BEARING:
STATE PLANE COORDINATE SYSTEM 1983
MAINLAND MASSACHUSETTS ZONE

2. NO SUBSURFACE INVESTIGATION WAS PERFORMED TO LOCATE UNDERGROUND UTILITIES. UTILITIES SHOWN HEREON ARE LIMITED TO AND ARE PER OBSERVED EVIDENCE ONLY.

3. THIS SURVEY DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARENT PARCEL.

4. ALL VISIBLE TELECOM EQUIPMENT AND IMPROVEMENTS ARE CONTAINED WITHIN THE DESCRIBED AREA.

5. ALL SYMBOLS SHOWN HEREON NOT DEPICTED TO SCALE.

SURVEYOR'S CERTIFICATION

I HEREBY CERTIFY TO:

LITTLE RIVER LAND SURVEYING

SURVEYOR
JERAMIAH J. RAITT
DATE:

FIELD DATE: 08/14/2023

RAW LAND SURVEY

NAME: BETHANY ASSEMBLY OF GOD
SITES#: MA054
ADDRESS: 580 MAIN STREET
AGAWAM, MA 01001
HAMPDEN COUNTY

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LITTLE RIVER LAND SURVEYING

SURVEYOR
JERAMIAH J. RAITT
DATE:

FIELD DATE: 08/14/2023

POB PROPOSED ACCESS/UTILITY EASEMENT

PROPOSED TOWER LEASE (SEE SHEET 4)

LIGHT POLE

PARKING LOT

GRANITE CURBING (TYP.)

BASEBALL DIAMOND

NAD 83

POT PROPOSED UTILITY EASEMENT

MON 1: 3/4" IRON PIPE
POC ALL DESCRIPTIONS
N: 2853712.56', E: 352177.97'

POB PROPOSED UTILITY EASEMENT

PARENT PARCEL

UTILITY POLE WITH RISER

ALLEN STREET
50' WIDE PUBLIC RIGHT OF WAY

PROPOSED UTILITY EASEMENT (SEE DETAIL)

MON 1: 3/4" IRON PIPE
POC ALL DESCRIPTIONS
N: 2853712.56', E: 352177.97'

MATCH LINE A
MATCH LINE A

PARENT PARCEL

50 0 25 50 100

BAR GRAPH 1 inch = 50 ft.
MA054 BETHANY ASSEMBLY OF GOD.DWG

UTILITY EASEMENT DETAIL
SCALE: 1" = 30'

SHEET 2 OF 5

RAW LAND SURVEY

NAME: BETHANY ASSEMBLY OF GOD
SITES#: MA054
ADDRESS: 580 MAIN STREET
AGAWAM, MA 01001
HAMPDEN COUNTY

NATIONAL SURVEY SERVICES COORDINATION BY:

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I HEREBY CERTIFY TO:

LITTLE RIVER LAND SURVEYING

SURVEYOR
JERAMIAH J. RAITT
DATE:

FIELD DATE: 08/14/2023

NAD 83

N

60 0 30 60 120

BAR GRAPH 1 inch = 60 ft.

MA054 BETHANY ASSEMBLY OF GOD.DWG

MATCH LINE A
MATCH LINE A

MATCH LINE B
MATCH LINE B

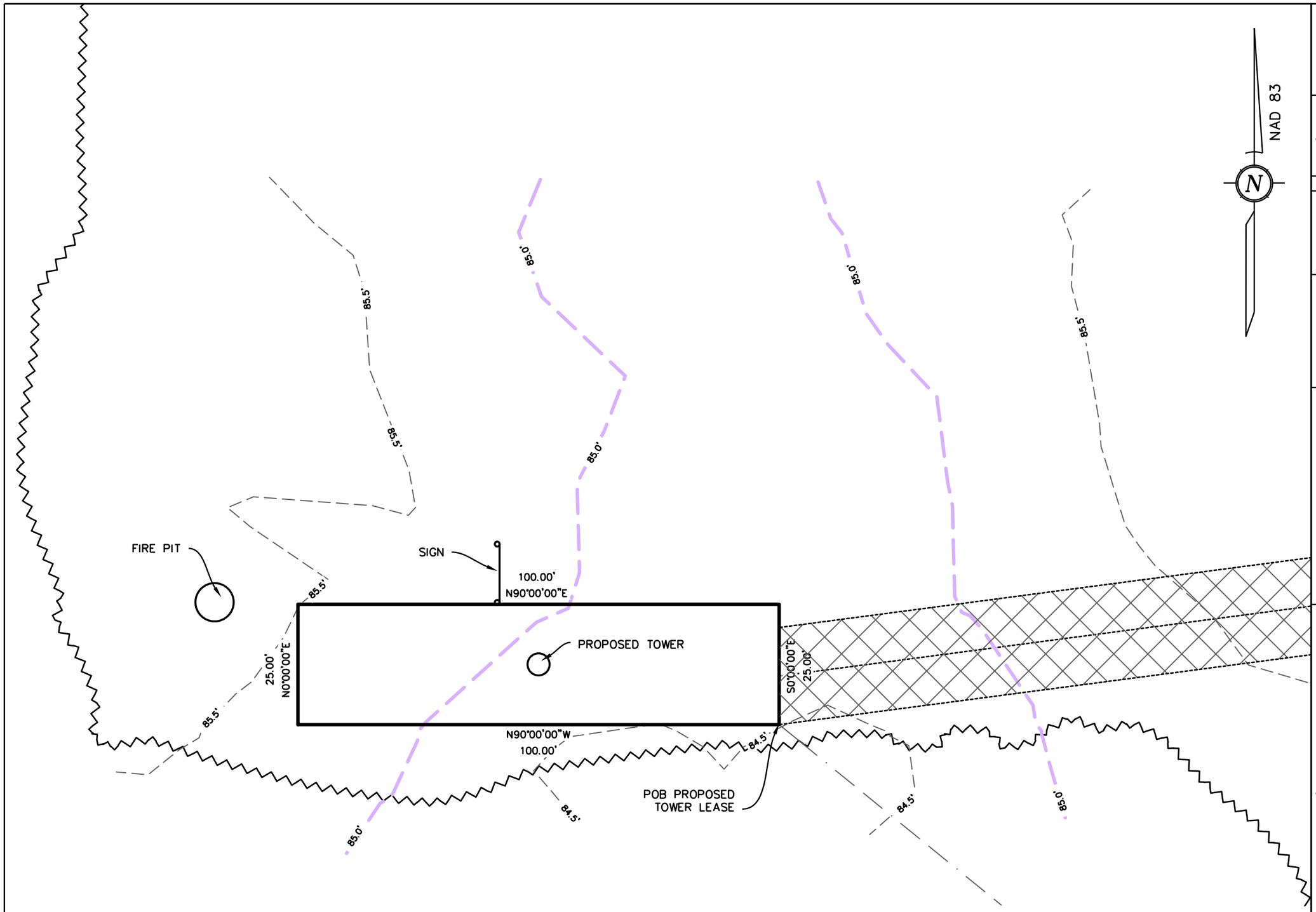
PARENT PARCEL

POT ACCESS/UTILITY EASEMENT

PARENT PARCEL

MAIN STREET A.K.A. ROUTE 159
VARIABLE WIDTH PUBLIC RIGHT OF WAY

SHEET 3 OF 5



RAW LAND SURVEY

NAME: BETHANY ASSEMBLY OF GOD
SITES#: MA054
ADDRESS: 580 MAIN STREET
AGAWAM, MA 01001
HAMPDEN COUNTY

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SURVEYOR'S CERTIFICATION

I HEREBY CERTIFY TO:

LITTLE RIVER LAND SURVEYING

SURVEYOR
JERAMIAH J. RAITT
DATE:

FIELD DATE: 08/14/2023

LEGAL DESCRIPTIONS
TO BE WRITTEN
UPON CLIENT
ADVISEMENT

TITLE REVIEW
UPON CLIENT
ADVISEMENT

RAW LAND SURVEY

NAME: BETHANY ASSEMBLY OF GOD
SITES#: MA054
ADDRESS: 580 MAIN STREET
AGAWAM, MA 01001
HAMPDEN COUNTY

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I HEREBY CERTIFY TO:

LITTLE RIVER LAND SURVEYING

SURVEYOR
JERAMIAH J. RAITT
DATE:

FIELD DATE: 08/14/2023


312-0988
087-0607
087-0591

U.S. Fish and Wildlife Service
National Wetlands Inventory

Wetlands



April 21, 2023

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

DEA-MA-Bethany Assembly of God-Aerial



11/20/2023

1:2,250

Review Area

World Imagery

Low Resolution 15m Imagery

High Resolution 60cm Imagery

High Resolution 30cm Imagery

Citations

60cm Resolution Metadata

0 0.02 0.04 0.08 mi

0 0.03 0.07 0.13 km

Maxar, Microsoft

DEA-MA-Bethany Assembly of God-USGS



11/20/2023

1:18,000

0 0.15 0.3 0.6 mi

0 0.25 0.5 1 km

Copyright:© 2013 National Geographic Society, i-cubed

DEA-MA-Bethany Assembly of God-Tax Parcel



11/22/2023

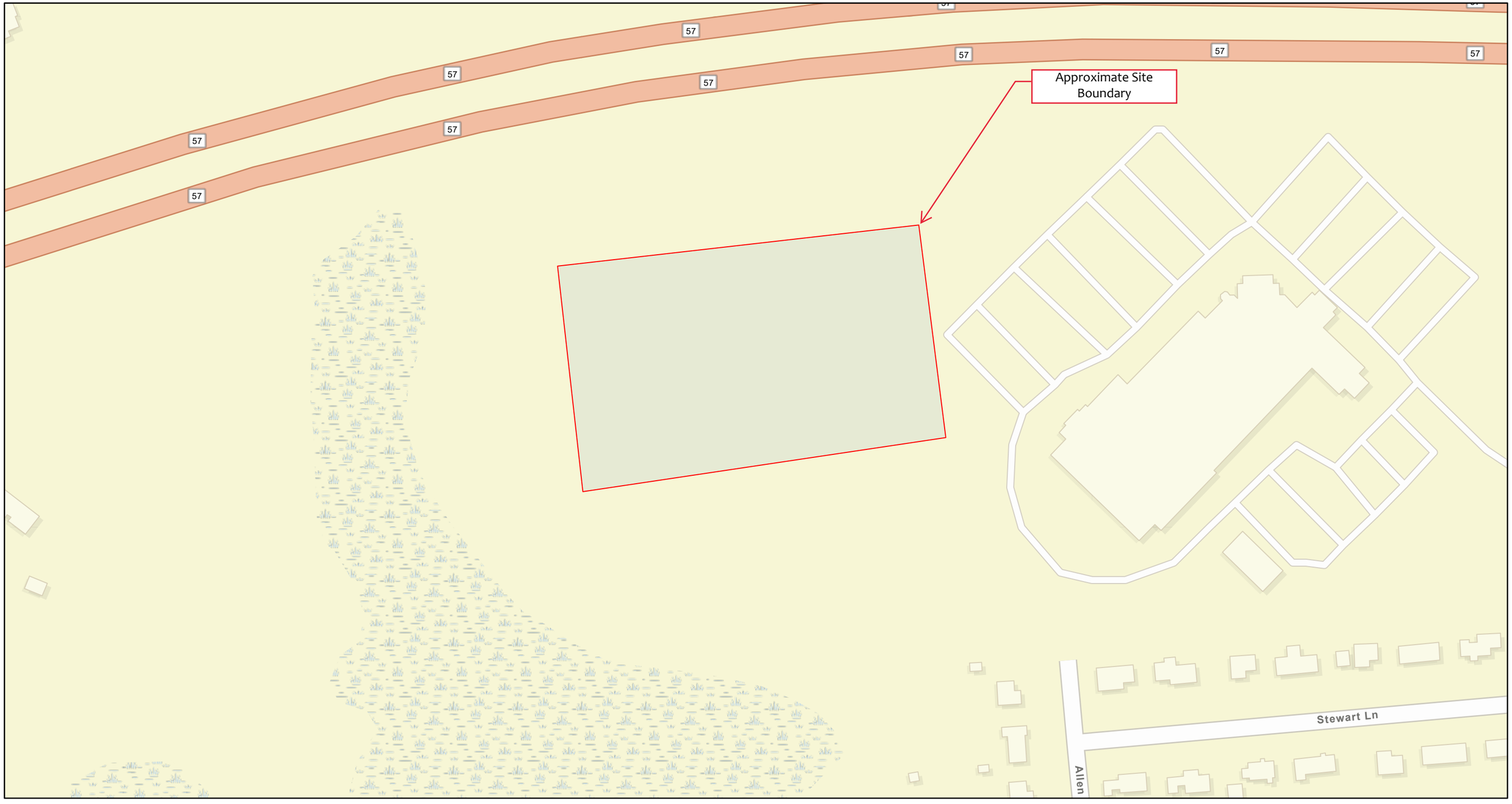
1:4,000

0 0.04 0.07 0.15 mi

0 0.05 0.1 0.2 km

Maxar

DEA-MA-Bethany Assembly of God-Streets



11/20/2023

Review Area

1:2,250

0 0.02 0.04 0.08 mi

0 0.03 0.07 0.13 km

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APPENDIX II

DEA-MA-Bethany Assembly of God-NWI



11/20/2023

1:2,250

0 0.02 0.04 0.08 mi

0 0.03 0.07 0.13 km

Review Area

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

DEP Wetlands Linear Features

- Shoreline
- Hydrologic Connection
- Mean Low Water Line
- Wetland Limit
- Closure Line

DEP Wetland Areas

- Marsh/Bog
- Wooded marsh
- Cranberry Bog
- Salt Marsh
- Open Water
- Reservoir (with PWSID)
- Tidal Flats
- Beach/Dune

World Imagery

Low Resolution 15m Imagery

High Resolution 60cm Imagery

High Resolution 30cm Imagery

Citations

60cm Resolution Metadata

Esri Community Maps Contributors, MassGIS, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, U.S. Fish and Wildlife Service, National Standards and Support Team,

DEA-MA-Bethany Assembly of God-DEP



11/20/2023

1:2,250

Review Area

DEP Wetlands Linear Features

Shoreline

Hydrologic Connection

Mean Low Water Line

Wetland Limit

Closure Line

DEP Wetland Areas

Marsh/Bog

Wooded marsh

Cranberry Bog

Salt Marsh

Open Water

Reservoir (with PWSID)

Tidal Flats

Beach/Dune

World Imagery

Low Resolution 15m Imagery

High Resolution 60cm Imagery

High Resolution 30cm Imagery

Citations

60cm Resolution Metadata

0 0.02 0.04 0.08 mi

0 0.03 0.07 0.13 km

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DEA-Bethany Assembly of God Telco

Google Earth Historical Imagery
2/2020



DEA-Bethany Assembly of God Telco

Google Earth Historical Imagery
3/2022



DEA-Bethany Assembly of God Telco

Google Earth Historical Imagery
5/2021



DEA-Bethany Assembly of God Telco

Google Earth Historical Imagery
6/2018



DEA-Bethany Assembly of God Telco

Google Earth Historical Imagery
9/2019

Approximate Site Boundary

Henry E Bodurtha Hwy

Henry E Bodurtha Hwy

Bethany Assembly of God

Stewart Ln

Allen St

Parker St

Parker St

500 ft

N

Google Earth

United States Department of Agriculture

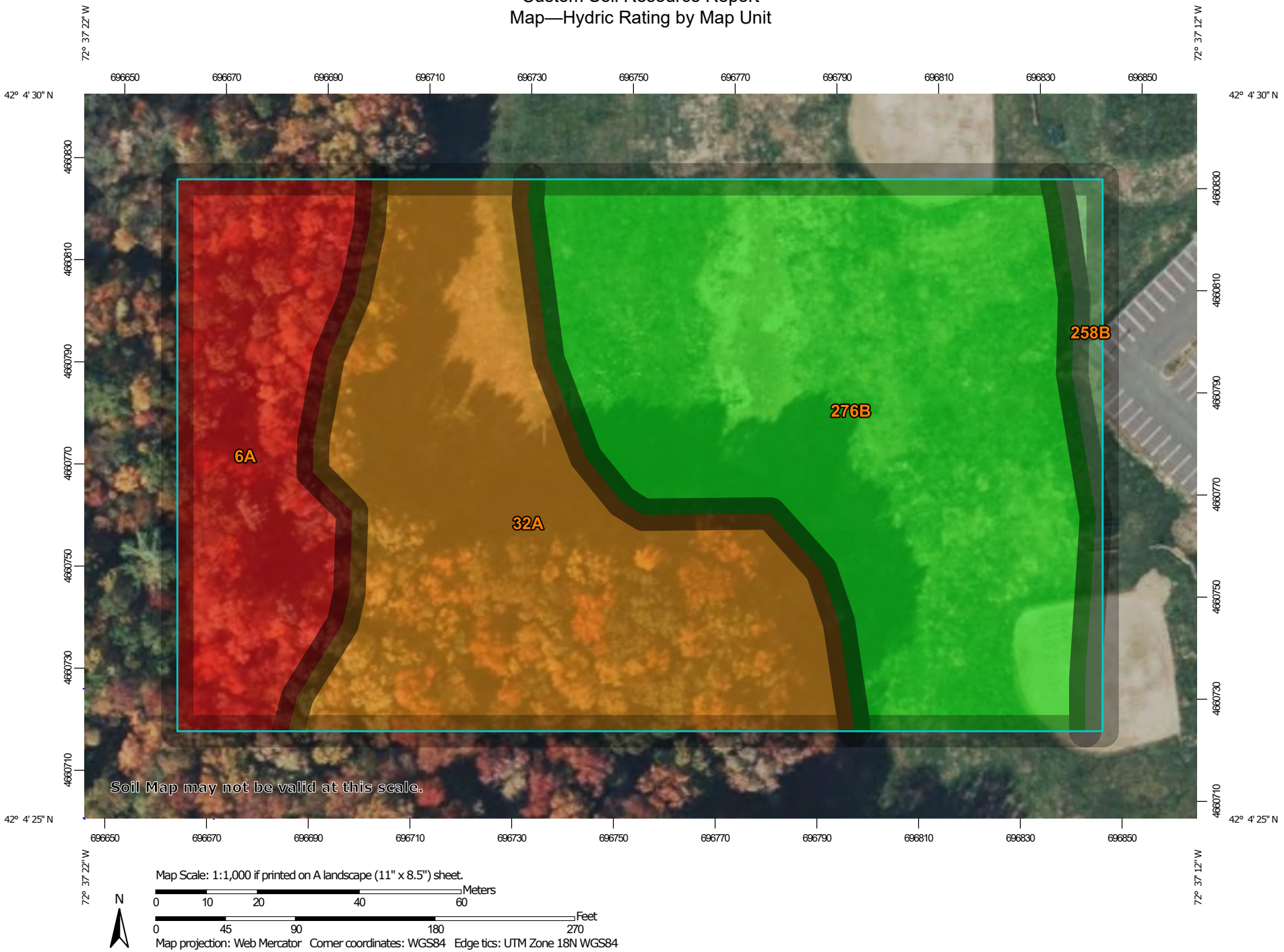
NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Hampden County, Massachusetts, Central Part




72° 37' 22" W
72° 37' 12" W
42° 4' 30" N
42° 4' 25" N
696650
696670
696690
696710
696730
696750
696770
696790
696810
696830
696850
4660830
4660810
4660790
4660770
4660750
4660730
4660710
6A
32A
276B
258B
Soil Map may not be valid at this scale.
N
Map Scale: 1:1,000 if printed on A landscape (11" x 8.5") sheet.
Meters
0 10 20 40 60
Feet
0 45 90 180 270
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Soil Rating Lines
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Soil Rating Points
- Hydric (100%)
- Hydric (66 to 99%)
- Hydric (33 to 65%)
- Hydric (1 to 32%)
- Not Hydric (0%)
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Hampden County, Massachusetts, Central Part
Survey Area Data: Version 17, Sep 10, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 15, 2020—Oct 31, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND	MAP INFORMATION
	imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Hydric Rating by Map Unit

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
6A	Scarboro mucky fine sandy loam, 0 to 3 percent slopes	100	0.8	17.3%
32A	Wareham loamy sand, 0 to 3 percent slopes	95	1.7	35.5%
258B	Amostown fine sandy loam, 0 to 6 percent slopes	10	0.1	2.4%
276B	Ninigret fine sandy loam, 0 to 3 percent slopes	0	2.2	44.9%
Totals for Area of Interest			**4.9**	**100.0%**

Rating Options—Hydric Rating by Map Unit

Aggregation Method: Percent Present

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

Soil Reports

The Soil Reports section includes various formatted tabular and narrative reports (tables) containing data for each selected soil map unit and each component of each unit. No aggregation of data has occurred as is done in reports in the Soil Properties and Qualities and Suitabilities and Limitations sections.

The reports contain soil interpretive information as well as basic soil properties and qualities. A description of each report (table) is included.

Land Classifications

This folder contains a collection of tabular reports that present a variety of soil groupings. The reports (tables) include all selected map units and components for each map unit. Land classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Hydric Soils

This table lists the map unit components that are rated as hydric soils in the survey area. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site (National Research Council, 1995; Hurt and others, 2002).

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology (Cowardin and others, 1979; U.S. Army Corps of Engineers, 1987; National Research Council, 1995; Tiner, 1985). Criteria for all of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils, under natural conditions, are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties

that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

Map units that are dominantly made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units dominantly made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The criteria for hydric soils are represented by codes in the table (for example, 2). Definitions for the codes are as follows:

1. All Histels except for Folistels, and Histosols except for Folists.
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Pachic subgroups, or Cumulic subgroups that:
    A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
    B. Show evidence that the soil meets the definition of a hydric soil;
3. Soils that are frequently ponded for long or very long duration during the growing season.
    A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
    B. Show evidence that the soil meets the definition of a hydric soil;
4. Map unit components that are frequently flooded for long duration or very long duration during the growing season that:
    A. Based on the range of characteristics for the soil series, will at least in part meet one or more Field Indicators of Hydric Soils in the United States, or
    B. Show evidence that the soil meets the definition of a hydric soil;

Hydric Condition: Food Security Act information regarding the ability to grow a commodity crop without removing woody vegetation or manipulating hydrology.

References:
Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
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Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service. U.S. Department of Agriculture Handbook 436.
Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

Report—Hydric Soils

Hydric Soils–Hampden County, Massachusetts, Central Part				
Map symbol and map unit name	**Component**	**Percent of map unit**	**Landform**	**Hydric criteria**
6A—Scarboro mucky fine sandy loam, 0 to 3 percent slopes				
	Scarboro	80	Drainageways, outwash deltas, outwash terraces, depressions	2, 3
	Swansea	10	Bogs, swamps	1, 3
	Wareham	5	Depressions	2
	Walpole	5	Deltas, depressions, outwash terraces, depressions, outwash plains	2
32A—Wareham loamy sand, 0 to 3 percent slopes				
	Wareham	80	Terraces, terraces	2
	Scarboro	10	Terraces, terraces	2
	Swansea	5	Bogs	1
258B—Amostown fine sandy loam, 0 to 6 percent slopes				
	Enosburg	10	Terraces, terraces	2

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

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Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

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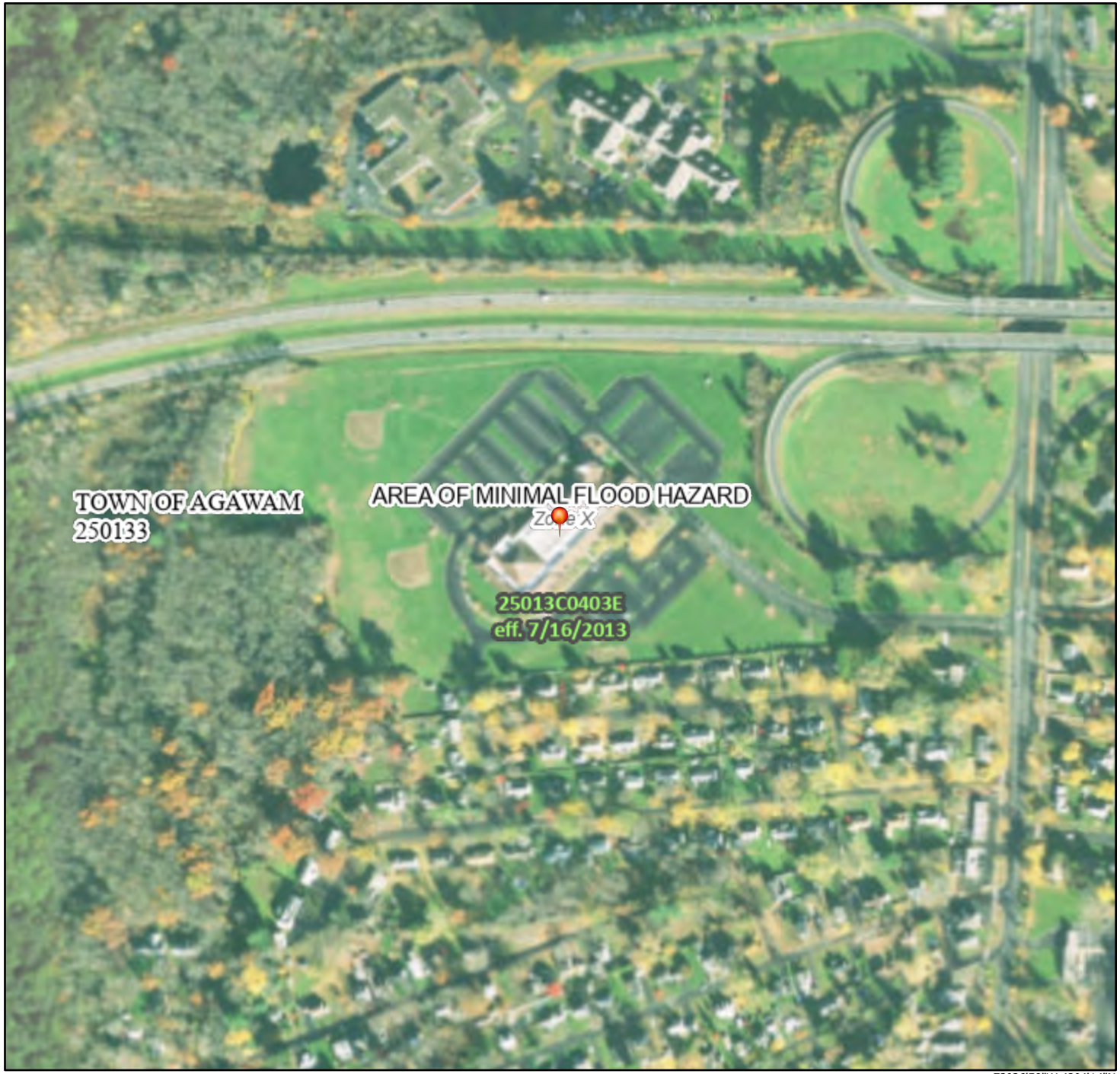
United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

National Flood Hazard Layer FIRMette

FEMA

72°37'27"W 42°4'41"N



72°36'50"W 42°4'14"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 11/20/2023 at 4:29 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

APPENDIX III

Project: DEA - Bethany Assembly of God

Region: Northcentral and Northeast



Sampling Point:

Photo 1

Overview of the review area, facing northeast.





Direction

Lat Lon from photo
42.07445556, -72.62170278

105 Elevation in feet

Photo date: Thu, Nov 16, 2023 3:17 PM EST



Sampling Point:

Photo 2

View of the upland between the wetland and the church.



Direction

Lat Lon from photo
42.07468889, -72.62206389

101 Elevation in feet

Photo date: Thu, Nov 16, 2023 3:11 PM EST



Sampling Point:

Photo 3

View of the forested wetland (Wetland W1) from the upland field.

Direction

Lat Lon from photo
42.07455833, -72.62181944

106 Elevation in feet

Photo date: Thu, Nov 16, 2023 3:17 PM EST



Sampling Point:
W1-UP-1

Photo 4

View of the the upland outside of Wetland W1.

Direction

Lat Lon from photo
42.07469167, -72.62206389

101 Elevation in feet

Photo date: Thu, Nov 16, 2023 3:11 PM EST



Sampling Point:

Photo 5

Overview of the upland field from the south.

Direction

Lat Lon from photo
42.07445833,
-72.62168889

105 Elevation in feet

Photo date: Thu, Nov 16, 2023 3:17 PM EST



Sampling Point:

Photo 6

View of the tree-line along the fringes of Wetland W1.

Direction

Lat Lon from photo
42.07469167,
-72.62206389

101 Elevation in feet

Photo date: Thu, Nov 16, 2023 3:11 PM EST



Sampling Point:

Photo 7

View of the field, facing the church.

Direction

Lat Lon from photo
42.07448333, -72.62174167

105 Elevation in feet

Photo date: Thu, Nov 16, 2023 3:17 PM EST



Sampling Point:

Photo 8

View of Wetland W1 and the wetland shrub species along its border.

Direction

Lat Lon from photo
42.07448333, -72.62174167

105 Elevation in feet

Photo date: Thu, Nov 16, 2023 3:17 PM EST



Sampling Point:

Photo 9

View of the trailhead sign within the review area.

Direction

Lat Lon from photo
42.07445833, -72.62168056

106 Elevation in feet

Photo date: Thu, Nov 16, 2023 3:17 PM EST



Sampling Point:

Photo 10

Overview of the upland field.

Direction

Lat Lon from photo
42.07453056, -72.62062778

101 Elevation in feet

Photo date: Thu, Nov 16, 2023 3:19 PM EST



Sampling Point:

Photo 11

View of the review area from the parking lot.

Direction

Lat Lon from photo
42.07452500, -72.62049167

82 Elevation in feet

Photo date: Thu, Nov 16, 2023 2:16 PM EST



Sampling Point:
W1-WET-1 PFO

Photo 12

View of wetland hydrology within Wetland W1.

Direction

Lat Lon from photo
42.07471389, -72.62237500

113 Elevation in feet

Photo date: Thu, Nov 16, 2023 3:02 PM EST



Sampling Point:
W1-WET-1 PFO

Photo 13

View of the microtopographic relief within Wetland W1.





Direction

Lat Lon from photo
42.07471111, -72.62236944

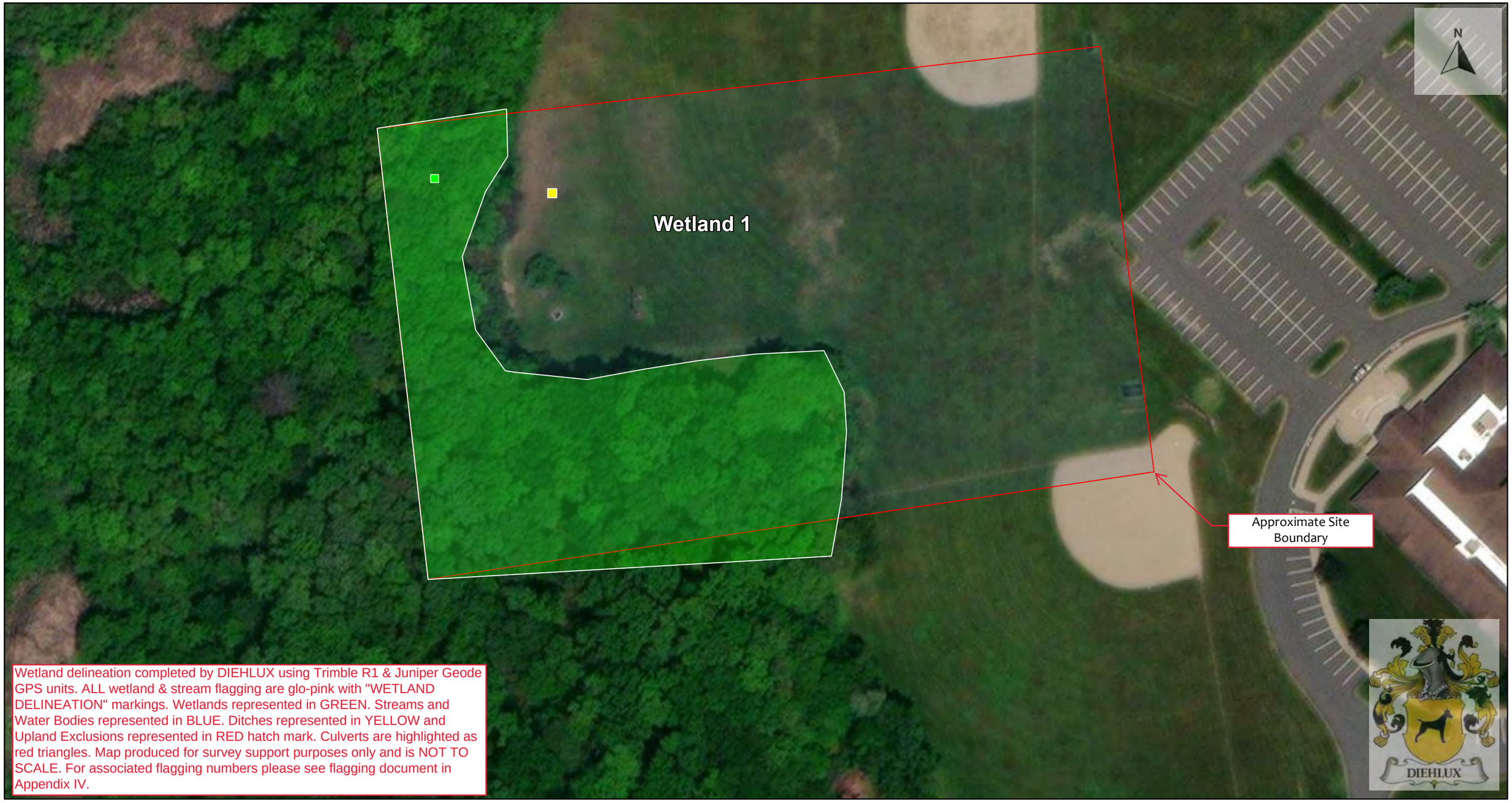
110 Elevation in feet

Photo date: Thu, Nov 16, 2023 3:02 PM EST

Generated with ecobot

APPENDIX IV

DEA-MA-Bethany Assembly of God-Sketch Map



11/20/2023

1:1,125

0 0.01 0.02 0.04 mi

0 0.01 0.03 0.06 km

Maxar, Microsoft

DIEHLUX - DEA - Bethany Assembly of God
Wetland Delineation Flagging

Latitude	Longitude	Flagging
42.07467528	-72.62203569	W1-UP-1
42.07470279	-72.62235282	W1-WET-1PFO
42.07395066	-72.62128452	W1-1+S
42.07406416	-72.62125728	W1-2
42.07419849	-72.62124384	W1-3
42.07427759	-72.6212502	W1-4
42.0743605	-72.62130447	W1-5
42.07435375	-72.6214877	W1-6
42.07434075	-72.62164244	W1-7
42.07432343	-72.62178825	W1-8
42.07430287	-72.62194173	W1-9
42.07431766	-72.6221383	W1-10
42.07440164	-72.62224145	W1-11
42.07454783	-72.62227739	W1-12
42.07467861	-72.62221449	W1-13
42.07474788	-72.62215519	W1-14
42.07484253	-72.62215838	W1-15+N

APPENDIX V

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: DEA - Bethany Assembly of God City/County: Hampden County Sampling Date: 2023-11-16

Applicant/Owner: Bethany Assembly of God State: Massachusetts Sampling Point: W1-UP-1

Investigator(s): Karson McGill, Cory Zuhlsdorf Section, Township, Range: Agawam

Landform (hillslope, terrace, etc.): Flat Local relief (concave, convex, none): None Slope (%): 0

Subregion (LRR or MLRA): R 145 Lat: 42.0746937 Long: -72.6220188 Datum: WGS 84

Soil Map Unit Name: 32A - Wareham loamy sand, 0 to 3 percent slopes NWI classification:

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** **Yes** _____ **No** _____
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	If yes, optional Wetland Site ID: _____

Remarks: (Explain alternative procedures here or in a separate report.)

This is the data form representing the upland adjacent to Wetland W1.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes _____	No ✔	Depth (inches): _____
Water Table Present?	Yes _____	No ✔	Depth (inches): _____
Saturation Present? (includes capillary fringe)	Yes _____	No ✔	Depth (inches): _____

Wetland Hydrology Present? **Yes** _____ **No** ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants. Sampling Point: W1-UP-1

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		

Sapling/Shrub Stratum (Plot size: 15 ft r)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
	0 = Total Cover		

Herb Stratum (Plot size: 5 ft r)			
1. Festuca ovina	80	✔	UPL
2. Dendrolycopodium dendroideum	10		FACU
3. Digitaria ischaemum	10		FACU
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	100 = Total Cover		

Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
	0 = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	20	x 4 =	80
UPL species	80	x 5 =	400
Column Totals:	100 (A)		480 (B)

Prevalence Index = B/A = 4.80

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

___ 2 - Dominance Test is >50%

___ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W1-UP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 8	2.5Y 4/3	100					Silt Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: Gravel/Rock

Depth (inches): 8

Hydric Soil Present? **Yes** _____ **No** ✔

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: DEA - Bethany Assembly of God City/County: Hampden County Sampling Date: 2023-11-16

Applicant/Owner: Bethany Assembly of God State: Massachusetts Sampling Point: W1-WET-1 PFO

Investigator(s): Karson McGill, Cory Zuhlsdorf Section, Township, Range: Agawam

Landform (hillslope, terrace, etc.): Backswamp Local relief (concave, convex, none): Concave Slope (%): 0

Subregion (LRR or MLRA): R 145 Lat: 42.0746755 Long: -72.6224167 Datum: WGS 84

Soil Map Unit Name: 6A - Scarboro mucky fine sandy loam, 0 to 3 percent slopes NWI classification: PFO1E

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** **Yes ✔** **No _____**
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	If yes, optional Wetland Site ID: _____

Remarks: (Explain alternative procedures here or in a separate report.)

This is the data form representing Wetland W1.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ✔ Surface Water (A1)
- ✔ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✔ Sparsely Vegetated Concave Surface (B8)
- ✔ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ✔ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Vis ble on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✔ Microtopographic Relief (D4)
- ✔ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ✔	No _____	Depth (inches): 4	
Water Table Present?	Yes ✔	No _____	Depth (inches): 4	
Saturation Present? (includes capillary fringe)	Yes ✔	No _____	Depth (inches): 1	**Wetland Hydrology Present? Yes ✔ No _____**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: W1-WET-1 PFO

Tree Stratum (Plot size: 30 ft r)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	60	✔	FAC
2. Quercus palustris	40	✔	FACW
3.			
4.			
5.			
6.			
7.			
	100	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft r)			
1. Frangula alnus	20	✔	FAC
2. Lindera benzoin	20	✔	FACW
3. Acer rubrum	10	✔	FAC
4.			
5.			
6.			
7.			
	50	= Total Cover	
Herb Stratum (Plot size: 5 ft r)			
1. Equisetum arvense	20	✔	FAC
2. Osmundastrum cinnamomeum	20	✔	FACW
3. Solidago rugosa	10		FAC
4. Frangula alnus	5		FAC
5. Onoclea sensibilis	5		FACW
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	60	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft r)			
1.			
2.			
3.			
4.			
	0	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100.00 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	85	x 2 =	170
FAC species	125	x 3 =	375
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	210 (A)		545 (B)

Prevalence Index = B/A = 2.60

Hydrophytic Vegetation Indicators:

___ 1 - Rapid Test for Hydrophytic Vegetation

✔ 2 - Dominance Test is >50%

✔ 3 - Prevalence Index is ≤3.0[1]

___ 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ✔ **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: W1-WET-1 PFO

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 20	10YR 3/2	90	5YR 4/6	10	C	PL	Silty Clay Loam	
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								
-								

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ✔ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✔ **No** _____

Remarks:

SiteSafe™
AN INFRASERVICES PRODUCT

1787 Sentry Pky W Suite 100 Blue Bell, PA 19422

703.276.1100 ● 703.276.1169 fax

info@sitesafe.com ● www.sitesafe.com

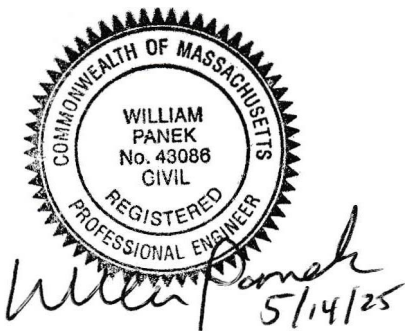
RF EMISSIONS COMPLIANCE REPORT

Diamond Towers V, LLC on behalf of Verizon Wireless

Diamond Towers Site ID:	MA054
Diamond Towers Site Name:	Bethany Assembly of God
Diamond Towres Site Address:	580 Main Street Agawam MA, 01001
Verizon Site ID:	17220386-677534
Verizon Site Name:	Bethany Assembly of God
Report generated date:	2025/05/13

Report Status:

Verizon Wireless is Compliant



Engineering Statement in Re: Electromagnetic Energy Analysis

My signature and seal on the cover of this document indicates:

That I am registered as a Professional Engineer in the jurisdiction indicated; and

That I have extensive professional experience in the wireless communications engineering industry; and

That I am an employee of InfraServices Group Wireless, LLC, in Blue Bell, Pennsylvania, at which place the staff and I provide RF compliance services to clients in the wireless communications industry; and

That I am thoroughly familiar with the Rules and Regulations of the Federal Communications Commission ("the FCC" and "the FCC Rules") both in general and specifically as they apply to the FCC's Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields; and

That I have thoroughly reviewed this Compliance Report and believe it to be true and accurate to the best of my knowledge as assembled by and attested to by Nicholas Pagano; and

That the technical information serving as the basis for this report was supplied by Diamond Towers V, LLC on behalf of Verizon Wireless (see attached Site Summary and Carrier document(s)) and that this installation involves communications and equipment, antennas associated technical equipment at a location referred to as "Bethany Assembly of God" ("the site"); and

That Verizon Wireless proposes to operate at the site with transmit antennas listed in the Equipment Installed at this Site section and with a maximum effective radiated power as specified by Verizon Wireless and shown on the worksheet, and that worst-case 100% duty cycle has been assumed; and

That this analysis has been performed with the assumption that the ground immediately surrounding the tower is primarily flat or falling; and

That at this time, the FCC requires that licensees address specific levels of radiofrequency energy to which workers or members of the public might be exposed (at §1.1310(e) of the FCC Rules); and

That such consideration of possible exposure of humans to radio-frequency radiation must utilize the standards set by the FCC, which is the Federal Agency having jurisdiction over communications facilities; and

That the FCC rules define two tiers of permissible exposure guidelines: (1) "uncontrolled environments," defined as situations in which persons may not be aware of (the "general public"), or may not be able to control their exposure to a

transmission facility; and (2) "controlled environments," which defines situations in which persons are aware of their potential for exposure; and

That this statement specifically addresses the uncontrolled environment (which is more conservative than the controlled environment) and the limit set forth in the FCC rules for operations such as Verizon Wireless' as shown on the attached antenna worksheet; and

That when applying the uncontrolled environment standards, the predicted Maximum Power Density at six feet above ground level from the proposed Verizon Wireless operation is no more than 0.98% of the maximum permissible exposure limits in any accessible area on the ground; and

That it is understood per FCC Guidelines in OET65, that regardless of the existent radio-frequency environment, only those licenses whose contributions exceed five percent of the exposure limit pertinent to their operation(s) bear any responsibility for bringing any non-compliant area(s) into compliance; and

That when applying the uncontrolled environment standards, the cumulative predicted energy density from the proposed operation is no more than 0.98% of the maximum permissible exposure in any accessible area up to six feet above the ground; and

That the calculations provided in this report are based on data provided by the client and antenna pattern data supplied by the antenna manufacturer, in accordance with FCC guidelines listed in OET 65. Horizontal and vertical antenna patterns are combined for modeling purposes to accurately reflect the energy six feet above ground level where on-axis energy refers to maximum energy six feet above the ground along the azimuth of the antenna and where area energy refers to the maximum energy anywhere six feet above the ground regardless of the antenna azimuth, accounting for cumulative energy from multiple antennas for the carrier(s) and frequency range(s) indicated; and

That the Occupational Safety and Health Administration has policies in place which address worker safety in and around communications sites, thus individual companies will be responsible for their employees' training regarding Radio Frequency Safety.

In summary, it is stated here that the proposed operation at the site would not result in exposure of the Public to excessive levels of radio-frequency energy as defined in the FCC Rules and Regulations, specifically 47 CFR 1.1307 and that Verizon Wireless' proposed operation is completely compliant.

Finally, it is stated that access to the tower should be restricted to communication industry professionals, and approved contractor personnel trained in radio-frequency safety; and that the instant analysis addresses exposure levels at six feet above ground level and does not address exposure levels on the tower, or in the immediate proximity of the antennas.

If you have any questions or comments in regard to this report, please do not hesitate to contact Sitesafe's Customer Support Department at (703) 276-1100.

Emissions on Ground level

Environmental Slice values (% of FCC OET 65 general public limit)	
This is a list of the Environmental Slices that were specified and the value it measured	
Composite Contribution	0.98%

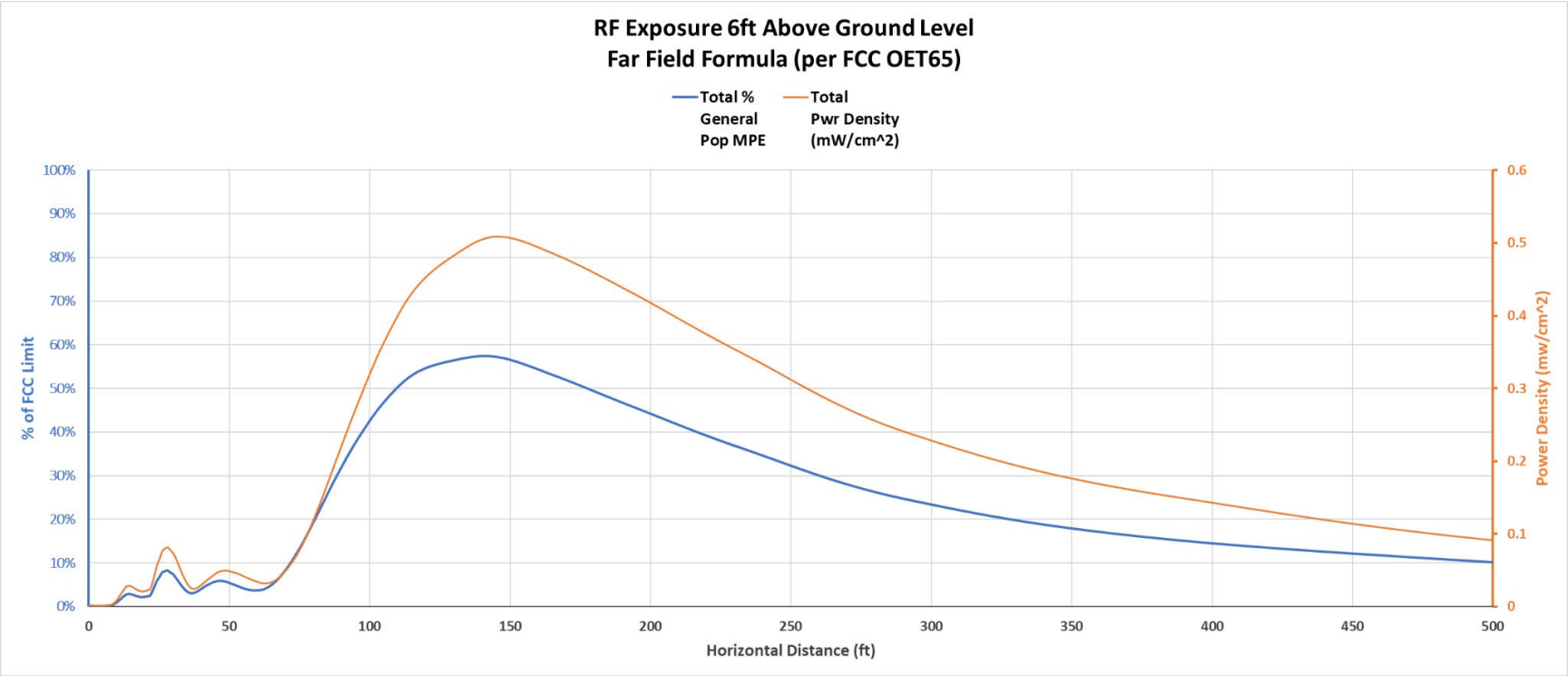
Equipment Installed at this Site

Report Ref	Owner	Type/Make/Model	h (ft)	Az (°)	System/ Frequency	Power (Watts)
1	VZW (Proposed)	Directional SAMSUNG SON_MT6413-77A_UEbeam_32port_8_2 08.19.24 VZW	110	50	5G 3700	320
2	VZW (Proposed)	Directional COMMSCOPE SON_NHH-65C-R2B	110	50	LTE 700	80
2	VZW (Proposed)	Directional COMMSCOPE SON_NHH-65C-R2B	110	50	5G 850	40
2	VZW (Proposed)	Directional COMMSCOPE SON_NHH-65C-R2B	110	50	LTE 850	40
2	VZW (Proposed)	Directional COMMSCOPE SON_NHH-65C-R2B	110	50	LTE 2100	160
3	VZW (Proposed)	Directional COMMSCOPE SON_NHH-65C-R2B	110	50	LTE 700	80
3	VZW (Proposed)	Directional COMMSCOPE SON_NHH-65C-R2B	110	50	5G 850	40
3	VZW (Proposed)	Directional COMMSCOPE SON_NHH-65C-R2B	110	50	LTE 850	40
3	VZW (Proposed)	Directional COMMSCOPE SON_NHH-65C-R2B	110	50	LTE 1900	160
4	VZW (Proposed)	Directional SAMSUNG R0440CC RT4423	110	50	CBRS 3500	20
5	VZW (Proposed)	Directional SAMSUNG SON_MT6413-77A_UEbeam_32port_8_2 08.19.24 VZW	110	170	5G 3700	320
6	VZW (Proposed)	Directional COMMSCOPE SON_NHH-65C-R2B	110	170	LTE 700	80
6	VZW (Proposed)	Directional COMMSCOPE SON_NHH-65C-R2B	110	170	5G 850	40
6	VZW (Proposed)	Directional COMMSCOPE SON_NHH-65C-R2B	110	170	LTE 850	40
6	VZW (Proposed)	Directional COMMSCOPE SON_NHH-65C-R2B	110	170	LTE 2100	160
7	VZW (Proposed)	Directional COMMSCOPE SON_NHH-65C-R2B	110	170	LTE 700	80
7	VZW (Proposed)	Directional COMMSCOPE SON_NHH-65C-R2B	110	170	5G 850	40
7	VZW (Proposed)	Directional COMMSCOPE SON_NHH-65C-R2B	110	170	LTE 850	40
7	VZW (Proposed)	Directional COMMSCOPE SON_NHH-65C-R2B	110	170	LTE 1900	160
8	VZW (Proposed)	Directional SAMSUNG R0440CC RT4423	110	170	CBRS 3500	20
9	VZW (Proposed)	Directional SAMSUNG SON_MT6413-77A_UEbeam_32port_8_2 08.19.24 VZW	110	280	5G 3700	320
10	VZW (Proposed)	Directional COMMSCOPE SON_NHH-65C-R2B	110	280	LTE 700	80
10	VZW (Proposed)	Directional COMMSCOPE SON_NHH-65C-R2B	110	280	5G 850	40
10	VZW (Proposed)	Directional COMMSCOPE SON_NHH-65C-R2B	110	280	LTE 850	40
10	VZW (Proposed)	Directional COMMSCOPE SON_NHH-65C-R2B	110	280	LTE 2100	160

Report Ref	Owner	Type/Make/Model	h (ft)	Az (°)	System/ Frequency	Power (Watts)
11	VZW (Proposed)	Directional COMMSCOPE SON_NHH-65C-R2B	110	280	LTE 700	80
11	VZW (Proposed)	Directional COMMSCOPE SON_NHH-65C-R2B	110	280	5G 850	40
11	VZW (Proposed)	Directional COMMSCOPE SON_NHH-65C-R2B	110	280	LTE 850	40
11	VZW (Proposed)	Directional COMMSCOPE SON_NHH-65C-R2B	110	280	LTE 1900	160
12	VZW (Proposed)	Directional SAMSUNG R0440CC RT4423	110	280	CBRS 3500	20

Agawam N 3, MA MPE Table

Location	Agawam N 3, MA					
Date	2/14/2024					
Band	C-Band	CBRS	AWS	PCS	850-LTE	700
Operating Frequency (MHz)	3,700	3,550	2,145	1,970	880	746
General Population MPE (mW/cm^2)	1	1	1	1	0.586666667	0.497333333
ERP Per Transmitter (Watts)	31,988	54	1,531	1,216	966	966
Number of Transmitters	2	4	4	4	4	4
Antenna Centerline (feet)	110	110	110	110	110	110
Total ERP (Watts)	63,976	217	6,124	4,864	3,864	3,864
Total ERP (dBm)	78	53	68	67	66	66
Maximum % of General Population Limit	57.3%					


RF Exposure 6ft Above Ground Level
Far Field Formula (per FCC OET65)
Total % General Pop MPE
Total Pwr Density (mW/cm^2)
% of FCC Limit
Power Density (mw/cm^2)
Horizontal Distance (ft)
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
0.6
0.5
0.4
0.3
0.2
0.1
0
0
50
100
150
200
250
300
350
400
450
500

```
                    ************************************************
                    *  Federal Airways & Airspace            *
                    *  Summary Report: New Construction         *
                    *  Antenna Structure                *
                    ************************************************

                    Airspace User: Not Identified

                    File: AGAWAM_N_3_MA

                    Location:  Agawam, MA

                    Latitude:  42°-04'-27.7"         Longitude: 72°-37'-
18.3"

                    SITE ELEVATION AMSL......84 ft.
                    STRUCTURE HEIGHT.........124 ft.
                    OVERALL HEIGHT AMSL......208 ft.

     NOTICE CRITERIA
       FAR 77.9(a): NNR (DNE 200 ft AGL)
       FAR 77.9(b): NNR (DNE Notice Slope)
       FAR 77.9(c): NNR (Not a Traverse Way)
       FAR 77.9:    NNR FAR 77.9 IFR Notice for BAF
       FAR 77.9:    NNR FAR 77.9 IFR Notice for CEF
       FAR 77.9(d): NNR (Off Airport Construction)

       NR  = Notice Required
       NNR = Notice Not Required
       PNR = Possible Notice Required (depends upon actual IFR procedure)
             For new construction review Air Navigation Facilities at
bottom
             of this report.

       Notice to the FAA is not required at the analyzed location and
height for
       slope, height or Straight-In procedures. Please review the 'Air
Navigation'
       section for notice requirements for offset IFR procedures and EMI.


     OBSTRUCTION STANDARDS
       FAR 77.17(a)(1): DNE 499 ft AGL
       FAR 77.17(a)(2): DNE - Airport Surface
       FAR 77.19(a):    DNE - Horizontal Surface
       FAR 77.19(b):    DNE - Conical Surface
       FAR 77.19(c):    DNE - Primary Surface
       FAR 77.19(d):    DNE - Approach Surface
       FAR 77.19(e):    DNE - Approach Transitional Surface
       FAR 77.19(e):    DNE - Abeam Transitional Surface

     VFR TRAFFIC PATTERN AIRSPACE FOR: BAF: WESTFIELD-BARNES RGNL
     Type: A   RD: 36903.06   RE: 261.2
       FAR 77.17(a)(1):          DNE
```

FAR 77.17(a)(2): DNE - Greater Than 5.99 NM.
VFR Horizontal Surface: DNE
VFR Conical Surface: DNE
VFR Primary Surface: DNE
VFR Approach Surface: DNE
VFR Transitional Surface: DNE

VFR TRAFFIC PATTERN AIRSPACE FOR: CEF: WESTOVER ARB/METRO
Type: A RD: 42566.32 RE: 234.1
FAR 77.17(a)(1): DNE
FAR 77.17(a)(2): DNE - Greater Than 5.99 NM.
VFR Horizontal Surface: DNE
VFR Conical Surface: DNE
VFR Primary Surface: DNE
VFR Approach Surface: DNE
VFR Transitional Surface: DNE

TERPS DEPARTURE PROCEDURE (FAA Order 8260.3, Volume 4)
FAR 77.17(a)(3) Departure Surface Criteria (40:1)
DNE Departure Surface

MINIMUM OBSTACLE CLEARANCE ALTITUDE (MOCA)
FAR 77.17(a)(4) MOCA Altitude Enroute Criteria
The Maximum Height Permitted is 1500 ft AMSL

PRIVATE LANDING FACILITIES

FACIL IDENT	TYP	NAME	BEARING To FACIL	RANGE IN NM	DELTA ARP ELEVATION	FAA IFR
MA67	HEL	TGP	190.77	2.44	+88	
No Impact to Private Landing Facility Structure is beyond notice limit by 9826 feet.						
6MA5	HEL	BAYSTATE MEDICAL CTR	15.21	2.99	+108	
No Impact to Private Landing Facility Structure is beyond notice limit by 13168 feet.						
MA95	HEL	BEAR HOLE	325.69	3.78	-27	
No Impact to Private Landing Facility Structure 27 ft below heliport.						
6MA3	HEL	SCIBELLI	261.36	4.64	-17	
No Impact to Private Landing Facility Structure 17 ft below heliport.						
1MA6	HEL	MICRON	265.84	5.5	-37	
No Impact to Private Landing Facility Structure 37 ft below heliport.						
CT27	HEL	TENNESSEE F	139.17	5.59	+31	
No Impact to Private Landing Facility						

Structure is beyond notice limit by 28965 feet.

AIR NAVIGATION ELECTRONIC FACILITIES

FAC IDNT	TYPE	AT	FREQ	VECTOR	DIST (ft)	DELTA ELEVA	ST	LOCATION	GRND ANGLE	APCH BEAR
BAF	VORTAC	R	113.0	321.27	40930	-59	MA	BARNES	-.08	
CEF	TACAN	R	114.0	29.94	51815	-32	MA	WESTOVER	-.04	
BDL	RADAR ASR	I		198.42	52168	-28	CT	BRADLEY INTL	-.03	

Alert. Object Does Not Require Notice to the FAA based upon EMI.
Maximum Not To Exceed Notice Height is: 504 ft AMSL

CTR	VOR/DME	R	115.1	311.79	118897	-1392	MA	CHESTER	-.67	
HFD	VOR/DME	R	114.9	172.72	159179	-641	CT	HARTFORD	-.23	
QHA	RADAR ARSR	Y	1320.	327.41	173397	-1945	MA	West Cummington	-.64	
ORH	RADAR WXL	Y		70.27	215831	-795	MA	WORCESTER	-.21	

5G AIRPORT SAFETY AREA
No Identified 5G conflict.

CFR Title 47, §1.30000-§1.30004
AM STUDY REQUIRED: Structure is within specified wavelength(s) of a FCC licensed AM radio station. AM Study is required for new construction or significantly modify an existing tower within the FCC mandated critical distance. Notice to the AM station is required at least 45 days prior to the start of construction. Movement Method Proof specified in §73.151(c) is required to determine if the proposed construction would have a negative impact to the AM station. Please review AM Station Report for details.

Nearest AM Station: WACM @ 2357 meters.

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02-09-2024
11:39:22

Report:
Method of Moments Analysis
of the Impact of New Site Agawam N 3, MA on
WACM (AM) 1270kHz Daytime and Nighttime Patterns

Verizon Wireless

Site: Agawam N 3, MA

March 27, 2024

Waterford Consultants, LLC
7430 New Technology Way, Suite 150
Frederick, MD 21703
703-596-1022

WATERFORD

Method of Moments Analysis
of the Impact of New Site Agawam N 3, MA on
WACM (AM) 1270kHz Daytime and Nighttime Patterns

Verizon Wireless

Analysis

Waterford Consultants performed a Method of Moments [MOM] analysis of the of the potential impact on the WACM (AM) directional daytime and nighttime patterns as a result of the proposed erection of the Agawam N 3, MA tower per the requirement in 47 CFR §1.30002(b). The analysis was performed in accordance with the procedures specified in §1.30002(c), using the methodology contained in §73.151(c).

Results

Tabulated MOM data are presented herein with ACSModel (version 1.025) results for daytime and nighttime pattern analysis attached in Appendix A and B, respectively. The MOM analysis yielded a deviation in the WACM daytime standard pattern radiation of -14.37 mV/m or -0.4 dB and in the daytime augmented pattern of -14.37 mV/m or -0.4. The deviation in the WACM nighttime standard and augmented pattern radiation is -3.059 mV/m or -0.2 dB.

Conclusion

The MOM study result indicates that no disturbances of the WACM directional daytime and nighttime patterns in excess of the limits in CFR §1.30002(b) will result from the construction of the Agawam N 3, MA structure as proposed herein. No further action is required for Verizon Wireless to achieve or maintain compliance with 47 CFR §§ 1.30000 through 1.30004 at the Agawam N 3, MA tower site.

Certification

I hereby certify that this report was prepared by me or under my direct supervision. I have reviewed this report and believe it to be both true and accurate to the best of my knowledge.



2024.03.27 05:35:01 -04'00'

WATERFORD

WACM Technical Parameters – Daytime Pattern

Frequency: 1270kHz
Power: 5.0 kW
RMS: 630.86mV/m @ 1 km
K: 460.97 mV/m @ 1 km
Q: 16.3 mV/m @ 1 km
Wavelength: 236.2 m

Hours: D
Authorization: L
NAD 83 Latitude: N 42° 05' 24.34"
NAD 83 Longitude: W 72° 36' 09.32"

CDBS Antenna Array Electrical Parameters

Tower #	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	A (deg)	B (deg)	C (deg)	D (deg)
1	1.00	0.00	0.00	0.00	100.0	0.00	0.00	0.00	0.00
2	1.00	0.00	145	85.00	100.0	0.00	0.00	0.00	0.00

Proposed Tower Technical Parameters

Site Name: Agawam N 3, MA
Tower Height: 39.01 m AGL
Distance: 2.32 km

NAD 83 Latitude: N 42° 04’ 27.60"
NAD 83 Longitude: W 72° 37' 18.60"
Bearing: 221.7 deg

CDBS Antenna Array Electrical Parameters

Tower #	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	A (deg)	B (deg)	C (deg)	D (deg)
1	1.00	0.00	0.00	0.00	100.0	0.00	0.00	0.00	0.00
2	1.00	0.00	145	85.00	100.0	0.00	0.00	0.00	0.00
3	0.00	0.00	3535.68	221.7	59.46	0.00	0.00	0.00	0.00

WATERFORD

WACM Technical Parameters – Nighttime Pattern

Frequency: 1270kHz
Power: 1.0 kW
RMS: 281.64 mV/m @ 1 km
K: 205.79 mV/m @ 1 km
Q: 10 mV/m @ 1 km
Wavelength: 236.22 m

Hours: N
Authorization: L
NAD 83 Latitude: N 42° 05' 24.34"
NAD 83 Longitude: W 72° 36' 09.32"

CDBS Antenna Array Electrical Parameters

Tower #	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	A (deg)	B (deg)	C (deg)	D (deg)
1	1.00	0.00	0.00	0.00	100.0	0.00	0.00	0.00	0.00
2	1.00	0.00	145	85.00	100.0	0.00	0.00	0.00	0.00

Proposed Tower Technical Parameters

Site Name: Agawam N 3, MA
Tower Height: 39.01 m AGL
Distance: 2.32 km

NAD 83 Latitude: N 42° 04’ 27.60"
NAD 83 Longitude: W 72° 37' 18.60"
Bearing: 221.7 deg

CDBS Antenna Array Electrical Parameters

Tower #	Field Ratio	Phase (deg)	Spacing (deg)	Orient (deg)	Height (deg)	A (deg)	B (deg)	C (deg)	D (deg)
1	1.00	0.00	0.00	0.00	100.0	0.00	0.00	0.00	0.00
2	1.00	0.00	145	85.00	100.0	0.00	0.00	0.00	0.00
3	0.00	0.00	3535.68	221.7	59.46	0.00	0.00	0.00	0.00

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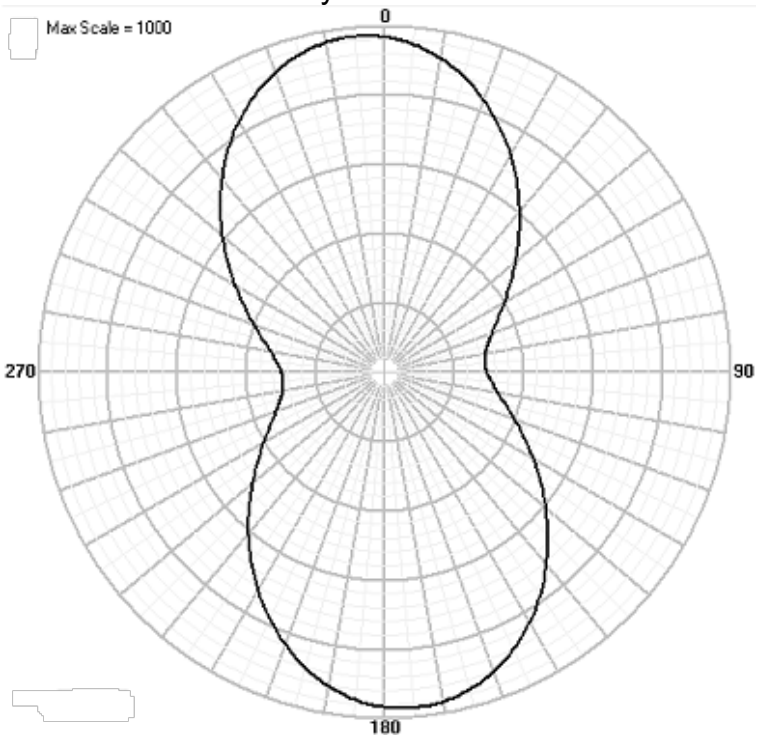
Daytime Pattern Analysis

Azimuth (deg)	Control Pattern RMS (mV/m)	Pattern with Tower RMS (mV/m)	Ratio	Theoretical Pattern RMS (mV/m)	Adjusted Theoretical Pattern RMS (mV/m)	Standard Pattern RMS (mV/m)	Difference (mV/m)	Difference (dB)	Augmented Pattern RMS (mV/m)	Difference (mV/m)	Difference (dB)
0	965.9517	965.9517	1.000	916.340	916.340	962.310	-45.970	-0.4	962.310	-45.970	-0.4
5	948.4893	948.4893	1.000	899.780	899.780	944.920	-45.140	-0.4	944.920	-45.140	-0.4
10	920.2011	920.2011	1.000	872.940	872.940	916.750	-43.810	-0.4	916.750	-43.810	-0.4
15	882.254	882.254	1.000	836.940	836.940	878.960	-42.020	-0.4	878.960	-42.020	-0.4
20	836.1731	836.1731	1.000	793.230	793.230	833.060	-39.830	-0.4	833.060	-39.830	-0.4
25	783.7479	783.7479	1.000	743.490	743.490	780.860	-37.370	-0.4	780.860	-37.370	-0.4
30	726.9288	726.9288	1.000	689.590	689.590	724.280	-34.690	-0.4	724.280	-34.690	-0.4
35	667.7241	667.7241	1.000	633.430	633.430	665.320	-31.890	-0.4	665.320	-31.890	-0.4
40	608.1057	608.1057	1.000	576.870	576.870	605.960	-29.090	-0.4	605.960	-29.090	-0.4
45	549.9308	549.9308	1.000	521.690	521.690	548.040	-26.350	-0.4	548.040	-26.350	-0.4
50	494.8824	494.8824	1.000	469.470	469.470	493.240	-23.770	-0.4	493.240	-23.770	-0.4
55	444.4318	444.4318	1.000	421.610	421.610	443.020	-21.410	-0.4	443.020	-21.410	-0.4
60	399.8196	399.8196	1.000	379.280	379.280	398.620	-19.340	-0.4	398.620	-19.340	-0.4
65	362.0541	362.0541	1.000	343.460	343.460	361.040	-17.580	-0.4	361.040	-17.580	-0.4
70	331.9221	331.9221	1.000	314.870	314.870	331.060	-16.190	-0.4	331.060	-16.190	-0.4
75	310.0056	310.0056	1.000	294.080	294.080	309.260	-15.180	-0.4	309.260	-15.180	-0.4
80	296.7023	296.7023	1.000	281.460	281.460	296.030	-14.570	-0.4	296.030	-14.570	-0.4
85	292.2427	292.2427	1.000	277.230	277.230	291.600	-14.370	-0.4	291.600	-14.370	-0.4
90	296.7023	296.7023	1.000	281.460	281.460	296.030	-14.570	-0.4	296.030	-14.570	-0.4
95	310.0056	310.0056	1.000	294.080	294.080	309.260	-15.180	-0.4	309.260	-15.180	-0.4
100	331.9221	331.9221	1.000	314.870	314.870	331.060	-16.190	-0.4	331.060	-16.190	-0.4
105	362.0541	362.0541	1.000	343.460	343.460	361.040	-17.580	-0.4	361.040	-17.580	-0.4
110	399.8196	399.8196	1.000	379.280	379.280	398.620	-19.340	-0.4	398.620	-19.340	-0.4
115	444.4318	444.4318	1.000	421.610	421.610	443.020	-21.410	-0.4	443.020	-21.410	-0.4
120	494.8824	494.8824	1.000	469.470	469.470	493.240	-23.770	-0.4	493.240	-23.770	-0.4
125	549.9308	549.9308	1.000	521.690	521.690	548.040	-26.350	-0.4	548.040	-26.350	-0.4
130	608.1057	608.1057	1.000	576.870	576.870	605.960	-29.090	-0.4	605.960	-29.090	-0.4
135	667.7241	667.7241	1.000	633.430	633.430	665.320	-31.890	-0.4	665.320	-31.890	-0.4
140	726.9288	726.9288	1.000	689.590	689.590	724.280	-34.690	-0.4	724.280	-34.690	-0.4
145	783.7479	783.7479	1.000	743.490	743.490	780.860	-37.370	-0.4	780.860	-37.370	-0.4
150	836.1731	836.1731	1.000	793.230	793.230	833.060	-39.830	-0.4	833.060	-39.830	-0.4
155	882.254	882.254	1.000	836.940	836.940	878.960	-42.020	-0.4	878.960	-42.020	-0.4
160	920.2011	920.2011	1.000	872.940	872.940	916.750	-43.810	-0.4	916.750	-43.810	-0.4
165	948.4893	948.4893	1.000	899.780	899.780	944.920	-45.140	-0.4	944.920	-45.140	-0.4
170	965.9517	965.9517	1.000	916.340	916.340	962.310	-45.970	-0.4	962.310	-45.970	-0.4
175	971.8558	971.8558	1.000	921.940	921.940	968.190	-46.250	-0.4	968.190	-46.250	-0.4
180	965.9517	965.9517	1.000	916.340	916.340	962.310	-45.970	-0.4	962.310	-45.970	-0.4
185	948.4893	948.4893	1.000	899.770	899.770	944.920	-45.150	-0.4	944.920	-45.150	-0.4
190	920.2011	920.2011	1.000	872.940	872.940	916.750	-43.810	-0.4	916.750	-43.810	-0.4
195	882.254	882.254	1.000	836.940	836.940	878.960	-42.020	-0.4	878.960	-42.020	-0.4
200	836.1731	836.1731	1.000	793.230	793.230	833.060	-39.830	-0.4	833.060	-39.830	-0.4
205	783.7479	783.7479	1.000	743.490	743.490	780.860	-37.370	-0.4	780.860	-37.370	-0.4
210	726.9288	726.9288	1.000	689.590	689.590	724.280	-34.690	-0.4	724.280	-34.690	-0.4
215	667.7241	667.7241	1.000	633.430	633.430	665.320	-31.890	-0.4	665.320	-31.890	-0.4
220	608.1057	608.1057	1.000	576.870	576.870	605.960	-29.090	-0.4	605.960	-29.090	-0.4
225	549.9308	549.9308	1.000	521.690	521.690	548.040	-26.350	-0.4	548.040	-26.350	-0.4
230	494.8824	494.8824	1.000	469.470	469.470	493.240	-23.770	-0.4	493.240	-23.770	-0.4
235	444.4318	444.4318	1.000	421.610	421.610	443.020	-21.410	-0.4	443.020	-21.410	-0.4
240	399.8196	399.8196	1.000	379.280	379.280	398.620	-19.340	-0.4	398.620	-19.340	-0.4
245	362.0541	362.0541	1.000	343.460	343.460	361.040	-17.580	-0.4	361.040	-17.580	-0.4
250	331.9221	331.9221	1.000	314.870	314.870	331.060	-16.190	-0.4	331.060	-16.190	-0.4

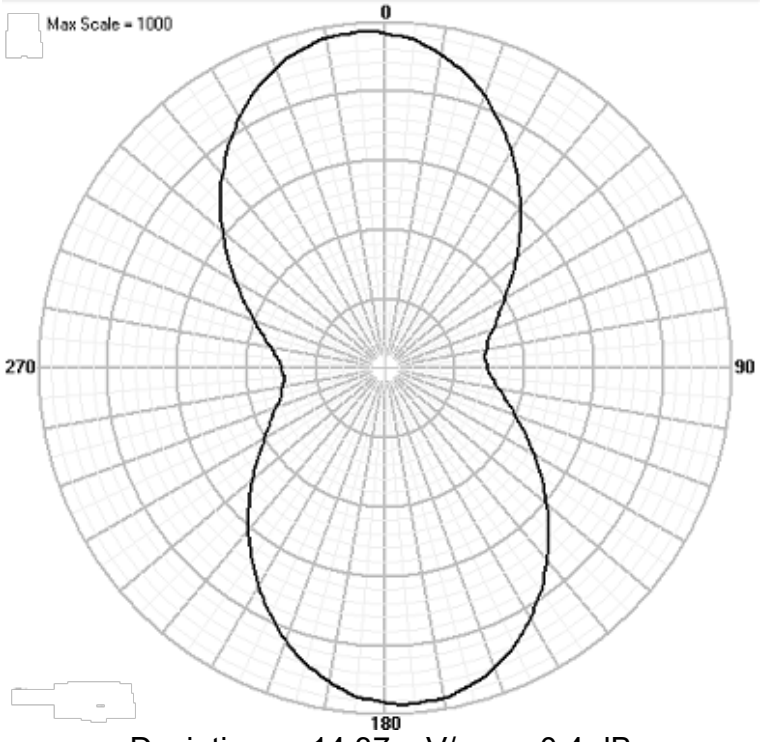


Azimuth (deg)	Control Pattern RMS (mV/m)	Pattern with Tower RMS (mV/m)	Ratio	Theoretical Pattern RMS (mV/m)	Adjusted Theoretical Pattern RMS (mV/m)	Standard Pattern RMS (mV/m)	Difference (mV/m)	Difference (dB)	Augmented Pattern RMS (mV/m)	Difference (mV/m)	Difference (dB)
255	310.0056	310.0056	1.000	294.080	294.080	309.260	-15.180	-0.4	309.260	-15.180	-0.4
260	296.7023	296.7023	1.000	281.460	281.460	296.030	-14.570	-0.4	296.030	-14.570	-0.4
265	292.2427	292.2427	1.000	277.230	277.230	291.600	-14.370	-0.4	291.600	-14.370	-0.4
270	296.7023	296.7023	1.000	281.460	281.460	296.030	-14.570	-0.4	296.030	-14.570	-0.4
275	310.0056	310.0056	1.000	294.080	294.080	309.260	-15.180	-0.4	309.260	-15.180	-0.4
280	331.9221	331.9221	1.000	314.870	314.870	331.060	-16.190	-0.4	331.060	-16.190	-0.4
285	362.0541	362.0541	1.000	343.460	343.460	361.040	-17.580	-0.4	361.040	-17.580	-0.4
290	399.8196	399.8196	1.000	379.280	379.280	398.620	-19.340	-0.4	398.620	-19.340	-0.4
295	444.4318	444.4318	1.000	421.610	421.610	443.020	-21.410	-0.4	443.020	-21.410	-0.4
300	494.8824	494.8824	1.000	469.470	469.470	493.240	-23.770	-0.4	493.240	-23.770	-0.4
305	549.9308	549.9308	1.000	521.690	521.690	548.040	-26.350	-0.4	548.040	-26.350	-0.4
310	608.1057	608.1057	1.000	576.870	576.870	605.960	-29.090	-0.4	605.960	-29.090	-0.4
315	667.7241	667.7241	1.000	633.430	633.430	665.320	-31.890	-0.4	665.320	-31.890	-0.43
320	726.9288	726.9288	1.000	689.590	689.590	724.280	-34.690	-0.4	724.280	-34.690	-0.4
325	783.7479	783.7479	1.000	743.500	743.500	780.860	-37.360	-0.4	780.860	-37.360	-0.4
330	836.1731	836.1731	1.000	793.230	793.230	833.060	-39.830	-0.4	833.060	-39.830	-0.4
335	882.254	882.254	1.000	836.940	836.940	878.960	-42.020	-0.4	878.960	-42.020	-0.4
340	920.2011	920.2011	1.000	872.940	872.940	916.750	-43.810	-0.4	916.750	-43.810	-0.4
345	948.4893	948.4893	1.000	899.780	899.780	944.920	-45.140	-0.4	944.920	-45.140	-0.4
350	965.9517	965.9517	1.000	916.340	916.340	962.310	-45.970	-0.4	962.310	-45.970	-0.4
355	971.8558	971.8558	1.000	921.940	921.940	968.190	-46.250	-0.4	968.190	-46.250	-0.4

Standard Horizontal Plane Daytime Radiation Pattern without Tower



Standard Horizontal Plane Daytime Radiation Pattern with Tower



Deviation = -14.37 mV/m or -0.4 dB

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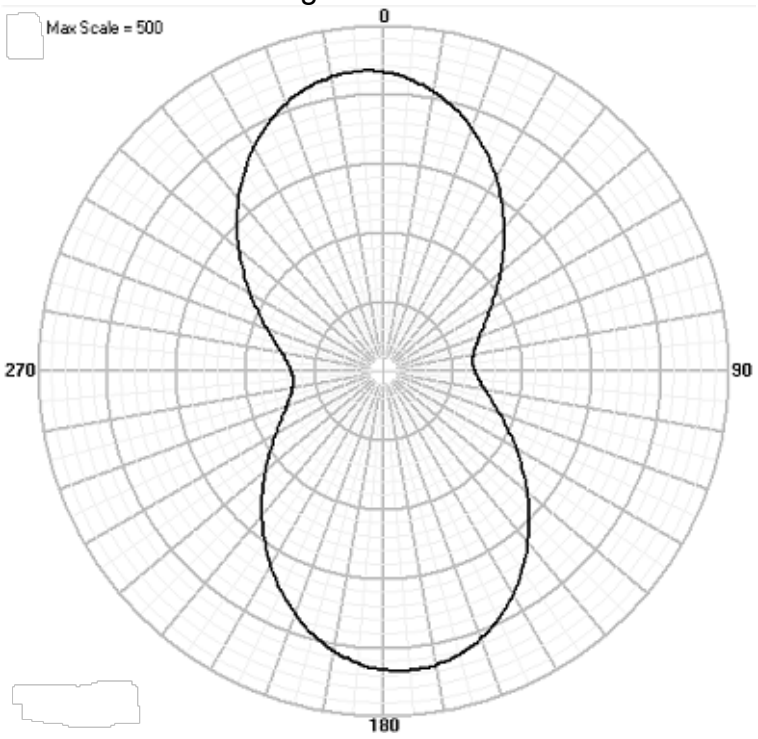
Nighttime Pattern Analysis

Azimuth (deg)	Control Pattern RMS (mV/m)	Pattern with Tower RMS (mV/m)	Ratio	Theoretical Pattern RMS (mV/m)	Adjusted Theoretical Pattern RMS (mV/m)	Standard Pattern RMS (mV/m)	Difference (mV/m)	Difference (dB)	Augmented Pattern RMS (mV/m)	Difference (mV/m)	Difference (dB)
0	29.8568	29.7635	0.997	409.090	407.812	429.670	-21.858	-0.5	429.670	-21.858	-0.5
5	13.7731	14.2755	1.036	401.690	416.342	421.910	-5.568	-0.1	421.910	-5.568	-0.1
10	7.7413	7.0553	0.911	389.710	355.176	409.330	-54.154	-1.2	409.330	-54.154	-1.2
15	26.6662	26.5439	0.995	373.640	371.926	392.470	-20.544	-0.5	392.470	-20.544	-0.5
20	35.9443	36.5662	1.017	354.130	360.257	371.980	-11.723	-0.3	371.980	-11.723	-0.3
25	30.2244	30.7275	1.017	331.920	337.445	348.680	-11.235	-0.3	348.680	-11.235	-0.3
30	6.3293	5.95	0.940	307.860	289.411	323.420	-34.009	-1.0	323.420	-34.009	-1.0
35	36.59	37.1658	1.016	282.790	287.240	297.110	-9.870	-0.3	297.110	-9.870	-0.3
40	97.1977	96.8269	0.996	257.540	256.558	270.620	-14.062	-0.5	270.620	-14.062	-0.5
45	172.3475	171.7047	0.996	232.900	232.031	244.770	-12.739	-0.5	244.770	-12.739	-0.5
50	257.5991	257.9322	1.001	209.590	209.861	220.320	-10.459	-0.4	220.320	-10.459	-0.4
55	347.7807	348.3244	1.002	188.220	188.514	197.910	-9.396	-0.4	197.910	-9.396	-0.4
60	437.5175	437.0479	0.999	169.330	169.148	178.100	-8.952	-0.4	178.100	-8.952	-0.4
65	521.6694	521.0968	0.999	153.330	153.162	161.340	-8.178	-0.5	161.340	-8.178	-0.5
70	595.6541	596.0902	1.001	140.570	140.673	147.970	-7.297	-0.4	147.970	-7.297	-0.4
75	655.6537	656.1223	1.001	131.290	131.384	138.250	-6.866	-0.4	138.250	-6.866	-0.4
80	698.7251	698.2183	0.999	125.660	125.569	132.360	-6.791	-0.5	132.360	-6.791	-0.5
85	722.8429	722.2275	0.999	123.770	123.665	130.380	-6.715	-0.5	130.380	-6.715	-0.5
90	726.9053	727.1781	1.000	125.660	125.707	132.360	-6.653	-0.4	132.360	-6.653	-0.4
95	710.729	711.3671	1.001	131.290	131.408	138.250	-6.842	-0.4	138.250	-6.842	-0.4
100	675.0478	675.0603	1.000	140.570	140.573	147.970	-7.397	-0.4	147.970	-7.397	-0.4
105	621.5172	620.8552	0.999	153.330	153.167	161.340	-8.173	-0.5	161.340	-8.173	-0.5
110	552.7158	552.0775	0.999	169.330	169.134	178.100	-8.966	-0.4	178.100	-8.966	-0.4
115	472.1203	472.0294	1.000	188.220	188.184	197.910	-9.726	-0.4	197.910	-9.726	-0.4
120	384.026	384.4663	1.001	209.590	209.830	220.320	-10.490	-0.4	220.320	-10.490	-0.4
125	293.3818	294.0439	1.002	232.900	233.426	244.770	-11.344	-0.4	244.770	-11.344	-0.4
130	205.5151	206.1212	1.003	257.540	258.300	270.620	-12.320	-0.4	270.620	-12.320	-0.4
135	125.7383	126.1684	1.003	282.790	283.757	297.110	-13.353	-0.4	297.110	-13.353	-0.4
140	58.8512	59.1163	1.005	307.860	309.247	323.420	-14.173	-0.4	323.420	-14.173	-0.4
145	8.5845	8.7785	1.023	331.920	339.421	348.680	-9.259	-0.2	348.680	-9.259	-0.2
150	22.9468	22.7889	0.993	354.130	351.693	371.980	-20.287	-0.5	371.980	-20.287	-0.5
155	35.6859	35.4283	0.993	373.640	370.943	392.470	-21.527	-0.5	392.470	-21.527	-0.5
160	31.8794	31.4484	0.986	389.710	384.441	409.330	-24.889	-0.5	409.330	-24.889	-0.5
165	16.0479	15.4257	0.961	401.690	386.116	421.910	-35.794	-0.8	421.910	-35.794	-0.8
170	5.3585	6.068	1.132	409.090	463.256	429.670	33.586	0.7	429.670	33.586	0.7
175	24.6014	25.1319	1.022	411.590	420.465	432.300	-11.835	-0.2	432.300	-11.835	-0.2
180	33.5193	33.5529	1.001	409.090	409.500	429.670	-20.170	-0.4	429.670	-20.170	-0.4
185	24.4923	23.9689	0.979	401.690	393.106	421.910	-28.804	-0.6	421.910	-28.804	-0.6
190	8.6424	9.247	1.070	389.710	416.973	409.330	7.643	0.2	409.330	7.643	0.2
195	69.8663	69.8252	0.999	373.640	373.420	392.470	-19.050	-0.4	392.470	-19.050	-0.4
200	160.5562	159.8239	0.995	354.130	352.515	371.980	-19.465	-0.5	371.980	-19.465	-0.5
205	279.4093	278.9388	0.998	331.920	331.361	348.680	-17.319	-0.4	348.680	-17.319	-0.4
210	422.704	423.1265	1.001	307.860	308.168	323.420	-15.252	-0.4	323.420	-15.252	-0.4
215	584.8236	585.2458	1.001	282.790	282.994	297.110	-14.116	-0.4	297.110	-14.116	-0.4
220	758.9363	758.3786	0.999	257.540	257.351	270.620	-13.269	-0.4	270.620	-13.269	-0.4
225	937.7114	937.0474	0.999	232.900	232.735	244.770	-12.035	-0.4	244.770	-12.035	-0.4
230	1113.967	1114.303	1.000	209.590	209.653	220.320	-10.667	-0.4	220.320	-10.667	-0.4
235	1281.175	1281.544	1.000	188.220	188.274	197.910	-9.636	-0.4	197.910	-9.636	-0.4
240	1433.785	1433.125	1.000	169.330	169.252	178.100	-8.848	-0.4	178.100	-8.848	-0.4
245	1567.361	1566.774	1.000	153.330	153.273	161.340	-8.067	-0.4	161.340	-8.067	-0.4
250	1678.578	1678.992	1.000	140.570	140.605	147.970	-7.365	-0.4	147.970	-7.365	-0.4

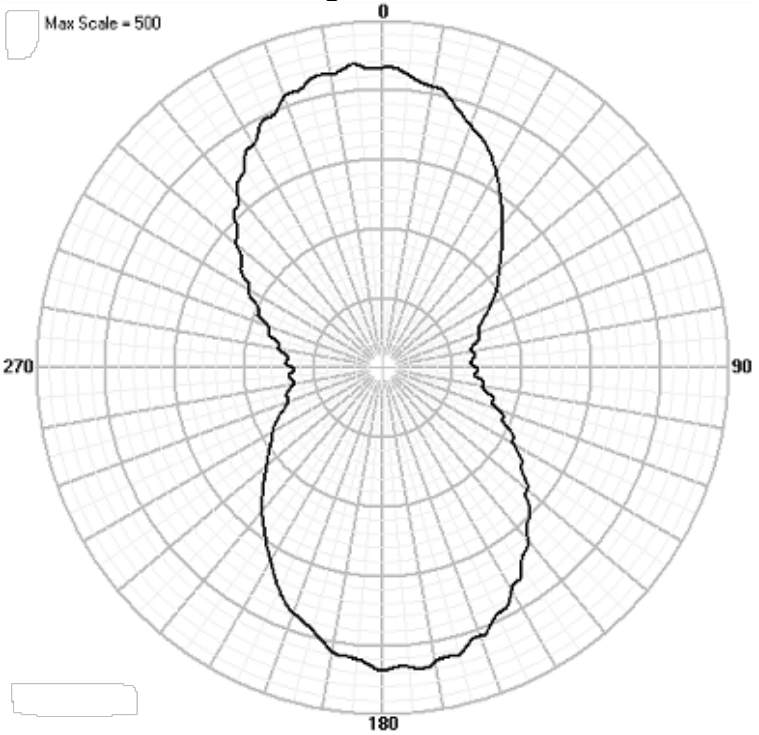


Azimuth (deg)	Control Pattern RMS (mV/m)	Pattern with Tower RMS (mV/m)	Ratio	Theoretical Pattern RMS (mV/m)	Adjusted Theoretical Pattern RMS (mV/m)	Standard Pattern RMS (mV/m)	Difference (mV/m)	Difference (dB)	Augmented Pattern RMS (mV/m)	Difference (mV/m)	Difference (dB)
255	1765.093	1765.366	1.000	131.290	131.310	138.250	-6.940	-0.4	138.250	-6.940	-0.4
260	1825.372	1824.676	1.000	125.660	125.612	132.360	-6.748	-0.5	132.360	-6.748	-0.5
265	1858.503	1857.862	1.000	123.770	123.727	130.380	-6.653	-0.5	130.380	-6.653	-0.5
270	1864.042	1864.312	1.000	125.660	125.678	132.360	-6.682	-0.4	132.360	-6.682	-0.4
275	1841.917	1842.411	1.000	131.290	131.325	138.250	-6.925	-0.4	138.250	-6.925	-0.4
280	1792.416	1792.202	1.000	140.570	140.553	147.970	-7.417	-0.4	147.970	-7.417	-0.4
285	1716.25	1715.436	1.000	153.330	153.257	161.340	-8.083	-0.4	161.340	-8.083	-0.4
290	1614.683	1614.015	1.000	169.330	169.260	178.100	-8.840	-0.4	178.100	-8.840	-0.4
295	1489.71	1489.639	1.000	188.220	188.211	197.910	-9.699	-0.4	197.910	-9.699	-0.4
300	1344.245	1344.668	1.000	209.590	209.656	220.320	-10.664	-0.4	220.320	-10.664	-0.4
305	1182.271	1182.843	1.000	232.900	233.013	244.770	-11.757	-0.4	244.770	-11.757	-0.4
310	1008.9	1009.354	1.000	257.540	257.656	270.620	-12.964	-0.4	270.620	-12.964	-0.4
315	830.2986	830.5422	1.000	282.790	282.873	297.110	-14.237	-0.4	297.110	-14.237	-0.43
320	653.4364	653.5019	1.000	307.860	307.891	323.420	-15.529	-0.4	323.420	-15.529	-0.4
325	485.656	485.6291	1.000	331.920	331.902	348.680	-16.778	-0.4	348.680	-16.778	-0.4
330	334.0731	334.0528	1.000	354.130	354.108	371.980	-17.872	-0.4	371.980	-17.872	-0.4
335	204.8767	204.9624	1.000	373.640	373.796	392.470	-18.674	-0.4	392.470	-18.674	-0.4
340	102.6206	102.8999	1.003	389.710	390.771	409.330	-18.559	-0.4	409.330	-18.559	-0.4
345	29.6233	30.135	1.017	401.690	408.629	421.910	-13.281	-0.3	421.910	-13.281	-0.3
350	14.4093	13.7515	0.954	409.090	390.415	429.670	-39.255	-0.8	429.670	-39.255	-0.8
355	32.4486	31.8961	0.983	411.590	404.582	432.300	-27.718	-0.6	432.300	-27.718	-0.6

Standard Horizontal Plane Nighttime Radiation Pattern without Tower



Standard Horizontal Plane Nighttime Radiation Pattern with Tower



Deviation = -3.059 mV/m or -0.2 dB

Appendix A: Daytime Pattern Analysis

```
                    ****************************************
                                  ACSModel
                             (MININEC 3.1 Core)
                       03-26-2024              13:51:17
                    ****************************************

WACM
Daytime FCC


Frequency = 1.270 MHz     Wavelength = 236.06300 Meters

No. of Wires: 2

Wire No. 1   Coordinates                                  End         No. of
   X            Y            Z          Radius     Connection     Segments
 0            0            0                          -1
 0            0            65.57305      0.2911        0             20

Wire No. 2   Coordinates                                  End         No. of
   X            Y            Z          Radius     Connection     Segments
 8.286849     94.71912     0                          -2
 8.286849     94.71912     65.57305      0.2911        0             20

                  **** ANTENNA GEOMETRY ****

Wire No.  1  Coordinates                                  Connection Pulse
X             Y             Z             Radius        End1 End2  No.
 0            0             0             0.2911        -1   1     1
 0            0             3.278653      0.2911        1    1     2
 0            0             6.557305      0.2911        1    1     3
 0            0             9.835958      0.2911        1    1     4
 0            0             13.11461      0.2911        1    1     5
 0            0             16.39326      0.2911        1    1     6
 0            0             19.67192      0.2911        1    1     7
 0            0             22.95057      0.2911        1    1     8
 0            0             26.22922      0.2911        1    1     9
 0            0             29.50787      0.2911        1    1     10
 0            0             32.78653      0.2911        1    1     11
 0            0             36.06518      0.2911        1    1     12
 0            0             39.34383      0.2911        1    1     13
 0            0             42.62248      0.2911        1    1     14
 0            0             45.90113      0.2911        1    1     15
 0            0             49.17979      0.2911        1    1     16
 0            0             52.45844      0.2911        1    1     17
 0            0             55.73709      0.2911        1    1     18
 0            0             59.01575      0.2911        1    1     19
 0            0             62.2944       0.2911        1    0     20

Wire No.  2  Coordinates                                  Connection Pulse
X             Y             Z             Radius        End1 End2  No.
 8.286849     94.71912      0             0.2911        -2   2     21
 8.286849     94.71912      3.278653      0.2911        2    2     22
 8.286849     94.71912      6.557305      0.2911        2    2     23
 8.286849     94.71912      9.835958      0.2911        2    2     24
 8.286849     94.71912      13.11461      0.2911        2    2     25
 8.286849     94.71912      16.39326      0.2911        2    2     26
 8.286849     94.71912      19.67192      0.2911        2    2     27
 8.286849     94.71912      22.95057      0.2911        2    2     28
 8.286849     94.71912      26.22922      0.2911        2    2     29
 8.286849     94.71912      29.50787      0.2911        2    2     30
 8.286849     94.71912      32.78653      0.2911        2    2     31
 8.286849     94.71912      36.06518      0.2911        2    2     32
 8.286849     94.71912      39.34383      0.2911        2    2     33
 8.286849     94.71912      42.62248      0.2911        2    2     34
 8.286849     94.71912      45.90113      0.2911        2    2     35
```

8.286849	94.71912	49.17979	0.2911	2	2	36
8.286849	94.71912	52.45844	0.2911	2	2	37
8.286849	94.71912	55.73709	0.2911	2	2	38
8.286849	94.71912	59.01575	0.2911	2	2	39
8.286849	94.71912	62.2944	0.2911	2	0	40

Sources: 2
Pulse No., Voltage Magnitude, Phase (Degrees): 1, 682.1, 43.5
Pulse No., Voltage Magnitude, Phase (Degrees): 21, 682.1, 43.5

Number of Loads: 0

********** SOURCE DATA **********
Pulse 1 Voltage = (494.7938, 469.5418j)
Current = (9.0145, 1.1494j)
Impedance = (60.546, 44.368j)
Power = 2500.0 Watts

Pulse 21 Voltage = (494.7938, 469.5418j)
Current = (9.0145, 1.1494j)
Impedance = (60.546, 44.368j)
Power = 2500.0 Watts

Total Power = 4999.999 Watts

********** FAR FIELD **********

Zenith Angle : Initial, Increment, Number: 90.0, 0.0, 1
Azimuth Angle: Initial, Increment, Number: 0.0, 1.0, 360

********** PATTERN DATA **********
Radial Distance = 1000 Meters
Power Level = 4999.999 Watts

Elev. Angle	Azimuth Angle	RMS E(Theta) Mag(mV/m)	Phase(Deg)
0.0	0.0	965.9517	96.3
0.0	1.0	963.3672	97.6
0.0	2.0	960.3231	98.9
0.0	3.0	956.8247	100.1
0.0	4.0	952.8779	101.4
0.0	5.0	948.4893	102.6
0.0	6.0	943.6662	103.9
0.0	7.0	938.4168	105.1
0.0	8.0	932.7497	106.3
0.0	9.0	926.6745	107.6
0.0	10.0	920.2011	108.8
0.0	11.0	913.3402	110.0
0.0	12.0	906.1030	111.2
0.0	13.0	898.5013	112.4
0.0	14.0	890.5474	113.6
0.0	15.0	882.2540	114.8
0.0	16.0	873.6344	116.0
0.0	17.0	864.7023	117.2
0.0	18.0	855.4717	118.4
0.0	19.0	845.9571	119.5
0.0	20.0	836.1731	120.7
0.0	21.0	826.1348	121.8
0.0	22.0	815.8576	122.9
0.0	23.0	805.3568	124.1
0.0	24.0	794.6483	125.2
0.0	25.0	783.7479	126.3
0.0	26.0	772.6715	127.4
0.0	27.0	761.4353	128.4
0.0	28.0	750.0553	129.5
0.0	29.0	738.5478	130.6
0.0	30.0	726.9288	131.6
0.0	31.0	715.2145	132.6

0.0	32.0	703.4210	133.7
0.0	33.0	691.5642	134.7
0.0	34.0	679.6600	135.7
0.0	35.0	667.7241	136.6
0.0	36.0	655.7720	137.6
0.0	37.0	643.8191	138.5
0.0	38.0	631.8805	139.5
0.0	39.0	619.9712	140.4
0.0	40.0	608.1057	141.3
0.0	41.0	596.2986	142.2
0.0	42.0	584.5639	143.0
0.0	43.0	572.9154	143.9
0.0	44.0	561.3666	144.7
0.0	45.0	549.9308	145.6
0.0	46.0	538.6207	146.4
0.0	47.0	527.4488	147.2
0.0	48.0	516.4274	147.9
0.0	49.0	505.5681	148.7
0.0	50.0	494.8824	149.4
0.0	51.0	484.3814	150.1
0.0	52.0	474.0757	150.8
0.0	53.0	463.9757	151.5
0.0	54.0	454.0912	152.2
0.0	55.0	444.4318	152.8
0.0	56.0	435.0067	153.4
0.0	57.0	425.8247	154.0
0.0	58.0	416.8942	154.6
0.0	59.0	408.2232	155.2
0.0	60.0	399.8196	155.7
0.0	61.0	391.6905	156.3
0.0	62.0	383.8429	156.8
0.0	63.0	376.2836	157.2
0.0	64.0	369.0187	157.7
0.0	65.0	362.0541	158.2
0.0	66.0	355.3956	158.6
0.0	67.0	349.0483	159.0
0.0	68.0	343.0173	159.4
0.0	69.0	337.3071	159.7
0.0	70.0	331.9221	160.1
0.0	71.0	326.8663	160.4
0.0	72.0	322.1434	160.7
0.0	73.0	317.7570	160.9
0.0	74.0	313.7101	161.2
0.0	75.0	310.0056	161.4
0.0	76.0	306.6462	161.6
0.0	77.0	303.6342	161.8
0.0	78.0	300.9717	162.0
0.0	79.0	298.6605	162.1
0.0	80.0	296.7023	162.2
0.0	81.0	295.0983	162.3
0.0	82.0	293.8496	162.4
0.0	83.0	292.9571	162.5
0.0	84.0	292.4213	162.5
0.0	85.0	292.2427	162.5
0.0	86.0	292.4213	162.5
0.0	87.0	292.9571	162.5
0.0	88.0	293.8496	162.4
0.0	89.0	295.0983	162.3
0.0	90.0	296.7023	162.2
0.0	91.0	298.6605	162.1
0.0	92.0	300.9717	162.0
0.0	93.0	303.6342	161.8
0.0	94.0	306.6462	161.6
0.0	95.0	310.0056	161.4
0.0	96.0	313.7101	161.2
0.0	97.0	317.7570	160.9
0.0	98.0	322.1434	160.7
0.0	99.0	326.8663	160.4
0.0	100.0	331.9221	160.1

0.0	101.0	337.3071	159.7
0.0	102.0	343.0173	159.4
0.0	103.0	349.0483	159.0
0.0	104.0	355.3956	158.6
0.0	105.0	362.0541	158.2
0.0	106.0	369.0187	157.7
0.0	107.0	376.2836	157.2
0.0	108.0	383.8429	156.8
0.0	109.0	391.6905	156.3
0.0	110.0	399.8196	155.7
0.0	111.0	408.2232	155.2
0.0	112.0	416.8942	154.6
0.0	113.0	425.8247	154.0
0.0	114.0	435.0067	153.4
0.0	115.0	444.4318	152.8
0.0	116.0	454.0912	152.2
0.0	117.0	463.9757	151.5
0.0	118.0	474.0757	150.8
0.0	119.0	484.3814	150.1
0.0	120.0	494.8824	149.4
0.0	121.0	505.5681	148.7
0.0	122.0	516.4274	147.9
0.0	123.0	527.4488	147.2
0.0	124.0	538.6207	146.4
0.0	125.0	549.9308	145.6
0.0	126.0	561.3666	144.7
0.0	127.0	572.9154	143.9
0.0	128.0	584.5639	143.0
0.0	129.0	596.2986	142.2
0.0	130.0	608.1057	141.3
0.0	131.0	619.9712	140.4
0.0	132.0	631.8805	139.5
0.0	133.0	643.8191	138.5
0.0	134.0	655.7720	137.6
0.0	135.0	667.7241	136.6
0.0	136.0	679.6600	135.7
0.0	137.0	691.5642	134.7
0.0	138.0	703.4210	133.7
0.0	139.0	715.2145	132.6
0.0	140.0	726.9288	131.6
0.0	141.0	738.5478	130.6
0.0	142.0	750.0553	129.5
0.0	143.0	761.4353	128.4
0.0	144.0	772.6715	127.4
0.0	145.0	783.7479	126.3
0.0	146.0	794.6483	125.2
0.0	147.0	805.3568	124.1
0.0	148.0	815.8576	122.9
0.0	149.0	826.1348	121.8
0.0	150.0	836.1731	120.7
0.0	151.0	845.9571	119.5
0.0	152.0	855.4717	118.4
0.0	153.0	864.7023	117.2
0.0	154.0	873.6344	116.0
0.0	155.0	882.2540	114.8
0.0	156.0	890.5474	113.6
0.0	157.0	898.5013	112.4
0.0	158.0	906.1030	111.2
0.0	159.0	913.3402	110.0
0.0	160.0	920.2011	108.8
0.0	161.0	926.6745	107.6
0.0	162.0	932.7497	106.3
0.0	163.0	938.4168	105.1
0.0	164.0	943.6662	103.9
0.0	165.0	948.4893	102.6
0.0	166.0	952.8779	101.4
0.0	167.0	956.8247	100.1
0.0	168.0	960.3231	98.9
0.0	169.0	963.3672	97.6

0.0	170.0	965.9517	96.3
0.0	171.0	968.0724	95.1
0.0	172.0	969.7255	93.8
0.0	173.0	970.9083	92.6
0.0	174.0	971.6189	91.3
0.0	175.0	971.8558	90.0
0.0	176.0	971.6189	88.8
0.0	177.0	970.9083	87.5
0.0	178.0	969.7255	86.2
0.0	179.0	968.0724	85.0
0.0	180.0	965.9517	83.7
0.0	181.0	963.3672	82.4
0.0	182.0	960.3231	81.2
0.0	183.0	956.8247	79.9
0.0	184.0	952.8779	78.7
0.0	185.0	948.4893	77.4
0.0	186.0	943.6662	76.2
0.0	187.0	938.4168	75.0
0.0	188.0	932.7497	73.7
0.0	189.0	926.6745	72.5
0.0	190.0	920.2011	71.3
0.0	191.0	913.3402	70.0
0.0	192.0	906.1030	68.8
0.0	193.0	898.5013	67.6
0.0	194.0	890.5474	66.4
0.0	195.0	882.2540	65.2
0.0	196.0	873.6344	64.0
0.0	197.0	864.7023	62.9
0.0	198.0	855.4717	61.7
0.0	199.0	845.9571	60.5
0.0	200.0	836.1731	59.4
0.0	201.0	826.1348	58.2
0.0	202.0	815.8576	57.1
0.0	203.0	805.3568	56.0
0.0	204.0	794.6483	54.9
0.0	205.0	783.7479	53.8
0.0	206.0	772.6715	52.7
0.0	207.0	761.4353	51.6
0.0	208.0	750.0553	50.5
0.0	209.0	738.5478	49.5
0.0	210.0	726.9288	48.4
0.0	211.0	715.2145	47.4
0.0	212.0	703.4210	46.4
0.0	213.0	691.5642	45.4
0.0	214.0	679.6600	44.4
0.0	215.0	667.7241	43.4
0.0	216.0	655.7720	42.5
0.0	217.0	643.8191	41.5
0.0	218.0	631.8805	40.6
0.0	219.0	619.9712	39.7
0.0	220.0	608.1057	38.8
0.0	221.0	596.2986	37.9
0.0	222.0	584.5639	37.0
0.0	223.0	572.9154	36.1
0.0	224.0	561.3666	35.3
0.0	225.0	549.9308	34.5
0.0	226.0	538.6207	33.7
0.0	227.0	527.4488	32.9
0.0	228.0	516.4274	32.1
0.0	229.0	505.5681	31.4
0.0	230.0	494.8824	30.6
0.0	231.0	484.3814	29.9
0.0	232.0	474.0757	29.2
0.0	233.0	463.9757	28.5
0.0	234.0	454.0912	27.9
0.0	235.0	444.4318	27.2
0.0	236.0	435.0067	26.6
0.0	237.0	425.8247	26.0
0.0	238.0	416.8942	25.4

0.0	239.0	408.2232	24.9
0.0	240.0	399.8196	24.3
0.0	241.0	391.6905	23.8
0.0	242.0	383.8429	23.3
0.0	243.0	376.2836	22.8
0.0	244.0	369.0187	22.3
0.0	245.0	362.0541	21.9
0.0	246.0	355.3956	21.5
0.0	247.0	349.0483	21.1
0.0	248.0	343.0173	20.7
0.0	249.0	337.3071	20.3
0.0	250.0	331.9221	20.0
0.0	251.0	326.8663	19.7
0.0	252.0	322.1434	19.4
0.0	253.0	317.7570	19.1
0.0	254.0	313.7101	18.9
0.0	255.0	310.0056	18.6
0.0	256.0	306.6462	18.4
0.0	257.0	303.6342	18.2
0.0	258.0	300.9717	18.1
0.0	259.0	298.6605	17.9
0.0	260.0	296.7023	17.8
0.0	261.0	295.0983	17.7
0.0	262.0	293.8496	17.6
0.0	263.0	292.9571	17.6
0.0	264.0	292.4213	17.5
0.0	265.0	292.2427	17.5
0.0	266.0	292.4213	17.5
0.0	267.0	292.9571	17.6
0.0	268.0	293.8496	17.6
0.0	269.0	295.0983	17.7
0.0	270.0	296.7023	17.8
0.0	271.0	298.6605	17.9
0.0	272.0	300.9717	18.1
0.0	273.0	303.6342	18.2
0.0	274.0	306.6462	18.4
0.0	275.0	310.0056	18.6
0.0	276.0	313.7101	18.9
0.0	277.0	317.7570	19.1
0.0	278.0	322.1434	19.4
0.0	279.0	326.8663	19.7
0.0	280.0	331.9221	20.0
0.0	281.0	337.3071	20.3
0.0	282.0	343.0173	20.7
0.0	283.0	349.0483	21.1
0.0	284.0	355.3956	21.5
0.0	285.0	362.0541	21.9
0.0	286.0	369.0187	22.3
0.0	287.0	376.2836	22.8
0.0	288.0	383.8429	23.3
0.0	289.0	391.6905	23.8
0.0	290.0	399.8196	24.3
0.0	291.0	408.2232	24.9
0.0	292.0	416.8942	25.4
0.0	293.0	425.8247	26.0
0.0	294.0	435.0067	26.6
0.0	295.0	444.4318	27.2
0.0	296.0	454.0912	27.9
0.0	297.0	463.9757	28.5
0.0	298.0	474.0757	29.2
0.0	299.0	484.3814	29.9
0.0	300.0	494.8824	30.6
0.0	301.0	505.5681	31.4
0.0	302.0	516.4274	32.1
0.0	303.0	527.4488	32.9
0.0	304.0	538.6207	33.7
0.0	305.0	549.9308	34.5
0.0	306.0	561.3666	35.3
0.0	307.0	572.9154	36.1

0.0	308.0	584.5639	37.0
0.0	309.0	596.2986	37.9
0.0	310.0	608.1057	38.8
0.0	311.0	619.9712	39.7
0.0	312.0	631.8805	40.6
0.0	313.0	643.8191	41.5
0.0	314.0	655.7720	42.5
0.0	315.0	667.7241	43.4
0.0	316.0	679.6600	44.4
0.0	317.0	691.5642	45.4
0.0	318.0	703.4210	46.4
0.0	319.0	715.2145	47.4
0.0	320.0	726.9288	48.4
0.0	321.0	738.5478	49.5
0.0	322.0	750.0553	50.5
0.0	323.0	761.4353	51.6
0.0	324.0	772.6715	52.7
0.0	325.0	783.7479	53.8
0.0	326.0	794.6483	54.9
0.0	327.0	805.3568	56.0
0.0	328.0	815.8576	57.1
0.0	329.0	826.1348	58.2
0.0	330.0	836.1731	59.4
0.0	331.0	845.9571	60.5
0.0	332.0	855.4717	61.7
0.0	333.0	864.7023	62.9
0.0	334.0	873.6344	64.0
0.0	335.0	882.2540	65.2
0.0	336.0	890.5474	66.4
0.0	337.0	898.5013	67.6
0.0	338.0	906.1030	68.8
0.0	339.0	913.3402	70.0
0.0	340.0	920.2011	71.3
0.0	341.0	926.6745	72.5
0.0	342.0	932.7497	73.7
0.0	343.0	938.4168	75.0
0.0	344.0	943.6662	76.2
0.0	345.0	948.4893	77.4
0.0	346.0	952.8779	78.7
0.0	347.0	956.8247	79.9
0.0	348.0	960.3231	81.2
0.0	349.0	963.3672	82.4
0.0	350.0	965.9517	83.7
0.0	351.0	968.0724	85.0
0.0	352.0	969.7255	86.2
0.0	353.0	970.9083	87.5
0.0	354.0	971.6189	88.8
0.0	355.0	971.8558	90.0
0.0	356.0	971.6189	91.3
0.0	357.0	970.9083	92.6
0.0	358.0	969.7255	93.8
0.0	359.0	968.0724	95.1

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                                  ACSModel
                             (MININEC 3.1 Core)
                       03-26-2024              14:17:34
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WACM
Daytime with tower


Frequency = 1.270 MHz     Wavelength = 236.06300 Meters

No. of Wires: 2

Wire No. 1   Coordinates                                  End         No. of
   X             Y             Z           Radius     Connection     Segments
 0             0             0                           -1
 0             0             65.57305      0.2911        0             20

Wire No. 2   Coordinates                                  End         No. of
   X             Y             Z           Radius     Connection     Segments
 8.286849      94.71912      0                           -2
 8.286849      94.71912      65.57305      0.2911        0             20

                  **** ANTENNA GEOMETRY ****

Wire No.  1  Coordinates                                  Connection Pulse
X             Y             Z             Radius        End1 End2  No.
 0             0             0             0.2911       -1   1     1
 0             0             3.278653      0.2911       1    1     2
 0             0             6.557305      0.2911       1    1     3
 0             0             9.835958      0.2911       1    1     4
 0             0             13.11461      0.2911       1    1     5
 0             0             16.39326      0.2911       1    1     6
 0             0             19.67192      0.2911       1    1     7
 0             0             22.95057      0.2911       1    1     8
 0             0             26.22922      0.2911       1    1     9
 0             0             29.50787      0.2911       1    1     10
 0             0             32.78653      0.2911       1    1     11
 0             0             36.06518      0.2911       1    1     12
 0             0             39.34383      0.2911       1    1     13
 0             0             42.62248      0.2911       1    1     14
 0             0             45.90113      0.2911       1    1     15
 0             0             49.17979      0.2911       1    1     16
 0             0             52.45844      0.2911       1    1     17
 0             0             55.73709      0.2911       1    1     18
 0             0             59.01575      0.2911       1    1     19
 0             0             62.2944       0.2911       1    0     20

Wire No.  2  Coordinates                                  Connection Pulse
X             Y             Z             Radius        End1 End2  No.
 8.286849      94.71912      0             0.2911       -2   2     21
 8.286849      94.71912      3.278653      0.2911       2    2     22
 8.286849      94.71912      6.557305      0.2911       2    2     23
 8.286849      94.71912      9.835958      0.2911       2    2     24
 8.286849      94.71912      13.11461      0.2911       2    2     25
 8.286849      94.71912      16.39326      0.2911       2    2     26
 8.286849      94.71912      19.67192      0.2911       2    2     27
 8.286849      94.71912      22.95057      0.2911       2    2     28
 8.286849      94.71912      26.22922      0.2911       2    2     29
 8.286849      94.71912      29.50787      0.2911       2    2     30
 8.286849      94.71912      32.78653      0.2911       2    2     31
 8.286849      94.71912      36.06518      0.2911       2    2     32
 8.286849      94.71912      39.34383      0.2911       2    2     33
 8.286849      94.71912      42.62248      0.2911       2    2     34
 8.286849      94.71912      45.90113      0.2911       2    2     35
 8.286849      94.71912      49.17979      0.2911       2    2     36
 8.286849      94.71912      52.45844      0.2911       2    2     37
 8.286849      94.71912      55.73709      0.2911       2    2     38
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 8.286849      94.71912      59.01575      0.2911       2    2     39
 8.286849      94.71912      62.2944       0.2911       2    0     40

Sources:  2
Pulse No., Voltage Magnitude, Phase (Degrees): 1, 682.1, 43.5
Pulse No., Voltage Magnitude, Phase (Degrees): 21, 682.1, 43.5

Number of Loads:  0

********************    SOURCE DATA     ********************
Pulse  1      Voltage = (494.7938, 469.5418j)
              Current = (9.0145, 1.1494j)
              Impedance = (60.546, 44.368j)
              Power = 2500.0 Watts

Pulse  21     Voltage = (494.7938, 469.5418j)
              Current = (9.0145, 1.1494j)
              Impedance = (60.546, 44.368j)
              Power = 2500.0 Watts

Total Power = 4999.999 Watts

********************     FAR FIELD      ********************

Zenith Angle : Initial, Increment, Number: 90.0, 0.0, 1
Azimuth Angle: Initial, Increment, Number: 0.0, 1.0, 360


********************    PATTERN DATA    ********************
              Radial Distance =  1000  Meters
              Power Level = 4999.999 Watts
                            RMS
Elev.      Azimuth   E(Theta)
Angle      Angle     Mag(mV/m)  Phase(Deg)
0.0        0.0       965.9517   96.3
0.0        1.0       963.3672   97.6
0.0        2.0       960.3231   98.9
0.0        3.0       956.8247   100.1
0.0        4.0       952.8779   101.4
0.0        5.0       948.4893   102.6
0.0        6.0       943.6662   103.9
0.0        7.0       938.4168   105.1
0.0        8.0       932.7497   106.3
0.0        9.0       926.6745   107.6
0.0        10.0      920.2011   108.8
0.0        11.0      913.3402   110.0
0.0        12.0      906.1030   111.2
0.0        13.0      898.5013   112.4
0.0        14.0      890.5474   113.6
0.0        15.0      882.2540   114.8
0.0        16.0      873.6344   116.0
0.0        17.0      864.7023   117.2
0.0        18.0      855.4717   118.4
0.0        19.0      845.9571   119.5
0.0        20.0      836.1731   120.7
0.0        21.0      826.1348   121.8
0.0        22.0      815.8576   122.9
0.0        23.0      805.3568   124.1
0.0        24.0      794.6483   125.2
0.0        25.0      783.7479   126.3
0.0        26.0      772.6715   127.4
0.0        27.0      761.4353   128.4
0.0        28.0      750.0553   129.5
0.0        29.0      738.5478   130.6
0.0        30.0      726.9288   131.6
0.0        31.0      715.2145   132.6
0.0        32.0      703.4210   133.7
0.0        33.0      691.5642   134.7
0.0        34.0      679.6600   135.7
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0.0	35.0	667.7241	136.6
0.0	36.0	655.7720	137.6
0.0	37.0	643.8191	138.5
0.0	38.0	631.8805	139.5
0.0	39.0	619.9712	140.4
0.0	40.0	608.1057	141.3
0.0	41.0	596.2986	142.2
0.0	42.0	584.5639	143.0
0.0	43.0	572.9154	143.9
0.0	44.0	561.3666	144.7
0.0	45.0	549.9308	145.6
0.0	46.0	538.6207	146.4
0.0	47.0	527.4488	147.2
0.0	48.0	516.4274	147.9
0.0	49.0	505.5681	148.7
0.0	50.0	494.8824	149.4
0.0	51.0	484.3814	150.1
0.0	52.0	474.0757	150.8
0.0	53.0	463.9757	151.5
0.0	54.0	454.0912	152.2
0.0	55.0	444.4318	152.8
0.0	56.0	435.0067	153.4
0.0	57.0	425.8247	154.0
0.0	58.0	416.8942	154.6
0.0	59.0	408.2232	155.2
0.0	60.0	399.8196	155.7
0.0	61.0	391.6905	156.3
0.0	62.0	383.8429	156.8
0.0	63.0	376.2836	157.2
0.0	64.0	369.0187	157.7
0.0	65.0	362.0541	158.2
0.0	66.0	355.3956	158.6
0.0	67.0	349.0483	159.0
0.0	68.0	343.0173	159.4
0.0	69.0	337.3071	159.7
0.0	70.0	331.9221	160.1
0.0	71.0	326.8663	160.4
0.0	72.0	322.1434	160.7
0.0	73.0	317.7570	160.9
0.0	74.0	313.7101	161.2
0.0	75.0	310.0056	161.4
0.0	76.0	306.6462	161.6
0.0	77.0	303.6342	161.8
0.0	78.0	300.9717	162.0
0.0	79.0	298.6605	162.1
0.0	80.0	296.7023	162.2
0.0	81.0	295.0983	162.3
0.0	82.0	293.8496	162.4
0.0	83.0	292.9571	162.5
0.0	84.0	292.4213	162.5
0.0	85.0	292.2427	162.5
0.0	86.0	292.4213	162.5
0.0	87.0	292.9571	162.5
0.0	88.0	293.8496	162.4
0.0	89.0	295.0983	162.3
0.0	90.0	296.7023	162.2
0.0	91.0	298.6605	162.1
0.0	92.0	300.9717	162.0
0.0	93.0	303.6342	161.8
0.0	94.0	306.6462	161.6
0.0	95.0	310.0056	161.4
0.0	96.0	313.7101	161.2
0.0	97.0	317.7570	160.9
0.0	98.0	322.1434	160.7
0.0	99.0	326.8663	160.4
0.0	100.0	331.9221	160.1
0.0	101.0	337.3071	159.7
0.0	102.0	343.0173	159.4
0.0	103.0	349.0483	159.0

0.0	104.0	355.3956	158.6
0.0	105.0	362.0541	158.2
0.0	106.0	369.0187	157.7
0.0	107.0	376.2836	157.2
0.0	108.0	383.8429	156.8
0.0	109.0	391.6905	156.3
0.0	110.0	399.8196	155.7
0.0	111.0	408.2232	155.2
0.0	112.0	416.8942	154.6
0.0	113.0	425.8247	154.0
0.0	114.0	435.0067	153.4
0.0	115.0	444.4318	152.8
0.0	116.0	454.0912	152.2
0.0	117.0	463.9757	151.5
0.0	118.0	474.0757	150.8
0.0	119.0	484.3814	150.1
0.0	120.0	494.8824	149.4
0.0	121.0	505.5681	148.7
0.0	122.0	516.4274	147.9
0.0	123.0	527.4488	147.2
0.0	124.0	538.6207	146.4
0.0	125.0	549.9308	145.6
0.0	126.0	561.3666	144.7
0.0	127.0	572.9154	143.9
0.0	128.0	584.5639	143.0
0.0	129.0	596.2986	142.2
0.0	130.0	608.1057	141.3
0.0	131.0	619.9712	140.4
0.0	132.0	631.8805	139.5
0.0	133.0	643.8191	138.5
0.0	134.0	655.7720	137.6
0.0	135.0	667.7241	136.6
0.0	136.0	679.6600	135.7
0.0	137.0	691.5642	134.7
0.0	138.0	703.4210	133.7
0.0	139.0	715.2145	132.6
0.0	140.0	726.9288	131.6
0.0	141.0	738.5478	130.6
0.0	142.0	750.0553	129.5
0.0	143.0	761.4353	128.4
0.0	144.0	772.6715	127.4
0.0	145.0	783.7479	126.3
0.0	146.0	794.6483	125.2
0.0	147.0	805.3568	124.1
0.0	148.0	815.8576	122.9
0.0	149.0	826.1348	121.8
0.0	150.0	836.1731	120.7
0.0	151.0	845.9571	119.5
0.0	152.0	855.4717	118.4
0.0	153.0	864.7023	117.2
0.0	154.0	873.6344	116.0
0.0	155.0	882.2540	114.8
0.0	156.0	890.5474	113.6
0.0	157.0	898.5013	112.4
0.0	158.0	906.1030	111.2
0.0	159.0	913.3402	110.0
0.0	160.0	920.2011	108.8
0.0	161.0	926.6745	107.6
0.0	162.0	932.7497	106.3
0.0	163.0	938.4168	105.1
0.0	164.0	943.6662	103.9
0.0	165.0	948.4893	102.6
0.0	166.0	952.8779	101.4
0.0	167.0	956.8247	100.1
0.0	168.0	960.3231	98.9
0.0	169.0	963.3672	97.6
0.0	170.0	965.9517	96.3
0.0	171.0	968.0724	95.1
0.0	172.0	969.7255	93.8

0.0	173.0	970.9083	92.6
0.0	174.0	971.6189	91.3
0.0	175.0	971.8558	90.0
0.0	176.0	971.6189	88.8
0.0	177.0	970.9083	87.5
0.0	178.0	969.7255	86.2
0.0	179.0	968.0724	85.0
0.0	180.0	965.9517	83.7
0.0	181.0	963.3672	82.4
0.0	182.0	960.3231	81.2
0.0	183.0	956.8247	79.9
0.0	184.0	952.8779	78.7
0.0	185.0	948.4893	77.4
0.0	186.0	943.6662	76.2
0.0	187.0	938.4168	75.0
0.0	188.0	932.7497	73.7
0.0	189.0	926.6745	72.5
0.0	190.0	920.2011	71.3
0.0	191.0	913.3402	70.0
0.0	192.0	906.1030	68.8
0.0	193.0	898.5013	67.6
0.0	194.0	890.5474	66.4
0.0	195.0	882.2540	65.2
0.0	196.0	873.6344	64.0
0.0	197.0	864.7023	62.9
0.0	198.0	855.4717	61.7
0.0	199.0	845.9571	60.5
0.0	200.0	836.1731	59.4
0.0	201.0	826.1348	58.2
0.0	202.0	815.8576	57.1
0.0	203.0	805.3568	56.0
0.0	204.0	794.6483	54.9
0.0	205.0	783.7479	53.8
0.0	206.0	772.6715	52.7
0.0	207.0	761.4353	51.6
0.0	208.0	750.0553	50.5
0.0	209.0	738.5478	49.5
0.0	210.0	726.9288	48.4
0.0	211.0	715.2145	47.4
0.0	212.0	703.4210	46.4
0.0	213.0	691.5642	45.4
0.0	214.0	679.6600	44.4
0.0	215.0	667.7241	43.4
0.0	216.0	655.7720	42.5
0.0	217.0	643.8191	41.5
0.0	218.0	631.8805	40.6
0.0	219.0	619.9712	39.7
0.0	220.0	608.1057	38.8
0.0	221.0	596.2986	37.9
0.0	222.0	584.5639	37.0
0.0	223.0	572.9154	36.1
0.0	224.0	561.3666	35.3
0.0	225.0	549.9308	34.5
0.0	226.0	538.6207	33.7
0.0	227.0	527.4488	32.9
0.0	228.0	516.4274	32.1
0.0	229.0	505.5681	31.4
0.0	230.0	494.8824	30.6
0.0	231.0	484.3814	29.9
0.0	232.0	474.0757	29.2
0.0	233.0	463.9757	28.5
0.0	234.0	454.0912	27.9
0.0	235.0	444.4318	27.2
0.0	236.0	435.0067	26.6
0.0	237.0	425.8247	26.0
0.0	238.0	416.8942	25.4
0.0	239.0	408.2232	24.9
0.0	240.0	399.8196	24.3
0.0	241.0	391.6905	23.8

0.0	242.0	383.8429	23.3
0.0	243.0	376.2836	22.8
0.0	244.0	369.0187	22.3
0.0	245.0	362.0541	21.9
0.0	246.0	355.3956	21.5
0.0	247.0	349.0483	21.1
0.0	248.0	343.0173	20.7
0.0	249.0	337.3071	20.3
0.0	250.0	331.9221	20.0
0.0	251.0	326.8663	19.7
0.0	252.0	322.1434	19.4
0.0	253.0	317.7570	19.1
0.0	254.0	313.7101	18.9
0.0	255.0	310.0056	18.6
0.0	256.0	306.6462	18.4
0.0	257.0	303.6342	18.2
0.0	258.0	300.9717	18.1
0.0	259.0	298.6605	17.9
0.0	260.0	296.7023	17.8
0.0	261.0	295.0983	17.7
0.0	262.0	293.8496	17.6
0.0	263.0	292.9571	17.6
0.0	264.0	292.4213	17.5
0.0	265.0	292.2427	17.5
0.0	266.0	292.4213	17.5
0.0	267.0	292.9571	17.6
0.0	268.0	293.8496	17.6
0.0	269.0	295.0983	17.7
0.0	270.0	296.7023	17.8
0.0	271.0	298.6605	17.9
0.0	272.0	300.9717	18.1
0.0	273.0	303.6342	18.2
0.0	274.0	306.6462	18.4
0.0	275.0	310.0056	18.6
0.0	276.0	313.7101	18.9
0.0	277.0	317.7570	19.1
0.0	278.0	322.1434	19.4
0.0	279.0	326.8663	19.7
0.0	280.0	331.9221	20.0
0.0	281.0	337.3071	20.3
0.0	282.0	343.0173	20.7
0.0	283.0	349.0483	21.1
0.0	284.0	355.3956	21.5
0.0	285.0	362.0541	21.9
0.0	286.0	369.0187	22.3
0.0	287.0	376.2836	22.8
0.0	288.0	383.8429	23.3
0.0	289.0	391.6905	23.8
0.0	290.0	399.8196	24.3
0.0	291.0	408.2232	24.9
0.0	292.0	416.8942	25.4
0.0	293.0	425.8247	26.0
0.0	294.0	435.0067	26.6
0.0	295.0	444.4318	27.2
0.0	296.0	454.0912	27.9
0.0	297.0	463.9757	28.5
0.0	298.0	474.0757	29.2
0.0	299.0	484.3814	29.9
0.0	300.0	494.8824	30.6
0.0	301.0	505.5681	31.4
0.0	302.0	516.4274	32.1
0.0	303.0	527.4488	32.9
0.0	304.0	538.6207	33.7
0.0	305.0	549.9308	34.5
0.0	306.0	561.3666	35.3
0.0	307.0	572.9154	36.1
0.0	308.0	584.5639	37.0
0.0	309.0	596.2986	37.9
0.0	310.0	608.1057	38.8

0.0	311.0	619.9712	39.7
0.0	312.0	631.8805	40.6
0.0	313.0	643.8191	41.5
0.0	314.0	655.7720	42.5
0.0	315.0	667.7241	43.4
0.0	316.0	679.6600	44.4
0.0	317.0	691.5642	45.4
0.0	318.0	703.4210	46.4
0.0	319.0	715.2145	47.4
0.0	320.0	726.9288	48.4
0.0	321.0	738.5478	49.5
0.0	322.0	750.0553	50.5
0.0	323.0	761.4353	51.6
0.0	324.0	772.6715	52.7
0.0	325.0	783.7479	53.8
0.0	326.0	794.6483	54.9
0.0	327.0	805.3568	56.0
0.0	328.0	815.8576	57.1
0.0	329.0	826.1348	58.2
0.0	330.0	836.1731	59.4
0.0	331.0	845.9571	60.5
0.0	332.0	855.4717	61.7
0.0	333.0	864.7023	62.9
0.0	334.0	873.6344	64.0
0.0	335.0	882.2540	65.2
0.0	336.0	890.5474	66.4
0.0	337.0	898.5013	67.6
0.0	338.0	906.1030	68.8
0.0	339.0	913.3402	70.0
0.0	340.0	920.2011	71.3
0.0	341.0	926.6745	72.5
0.0	342.0	932.7497	73.7
0.0	343.0	938.4168	75.0
0.0	344.0	943.6662	76.2
0.0	345.0	948.4893	77.4
0.0	346.0	952.8779	78.7
0.0	347.0	956.8247	79.9
0.0	348.0	960.3231	81.2
0.0	349.0	963.3672	82.4
0.0	350.0	965.9517	83.7
0.0	351.0	968.0724	85.0
0.0	352.0	969.7255	86.2
0.0	353.0	970.9083	87.5
0.0	354.0	971.6189	88.8
0.0	355.0	971.8558	90.0
0.0	356.0	971.6189	91.3
0.0	357.0	970.9083	92.6
0.0	358.0	969.7255	93.8
0.0	359.0	968.0724	95.1

Appendix B: Nighttime Pattern Analysis

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                    ****************************************
                                  ACSModel
                             (MININEC 3.1 Core)
                       03-26-2024              14:10:59
                    ****************************************

WACM
Nighttime FCC


Frequency = 1.270 MHz     Wavelength = 236.06300 Meters

No. of Wires: 2

Wire No. 1   Coordinates                                  End         No. of
   X            Y            Z          Radius     Connection     Segments
 0            0            0                          -1
 0            0            65.57305      0.2911        0             20

Wire No. 2   Coordinates                                  End         No. of
   X            Y            Z          Radius     Connection     Segments
 8.286849     94.71912     0                          -2
 8.286849     94.71912     65.57305      0.2911        0             20

                  **** ANTENNA GEOMETRY ****

Wire No.  1  Coordinates                                  Connection Pulse
X             Y             Z             Radius        End1 End2  No.
 0            0             0             0.2911        -1   1     1
 0            0             3.278653      0.2911        1    1     2
 0            0             6.557305      0.2911        1    1     3
 0            0             9.835958      0.2911        1    1     4
 0            0             13.11461      0.2911        1    1     5
 0            0             16.39326      0.2911        1    1     6
 0            0             19.67192      0.2911        1    1     7
 0            0             22.95057      0.2911        1    1     8
 0            0             26.22922      0.2911        1    1     9
 0            0             29.50787      0.2911        1    1     10
 0            0             32.78653      0.2911        1    1     11
 0            0             36.06518      0.2911        1    1     12
 0            0             39.34383      0.2911        1    1     13
 0            0             42.62248      0.2911        1    1     14
 0            0             45.90113      0.2911        1    1     15
 0            0             49.17979      0.2911        1    1     16
 0            0             52.45844      0.2911        1    1     17
 0            0             55.73709      0.2911        1    1     18
 0            0             59.01575      0.2911        1    1     19
 0            0             62.2944       0.2911        1    0     20

Wire No.  2  Coordinates                                  Connection Pulse
X             Y             Z             Radius        End1 End2  No.
 8.286849     94.71912      0             0.2911        -2   2     21
 8.286849     94.71912      3.278653      0.2911        2    2     22
 8.286849     94.71912      6.557305      0.2911        2    2     23
 8.286849     94.71912      9.835958      0.2911        2    2     24
 8.286849     94.71912      13.11461      0.2911        2    2     25
 8.286849     94.71912      16.39326      0.2911        2    2     26
 8.286849     94.71912      19.67192      0.2911        2    2     27
 8.286849     94.71912      22.95057      0.2911        2    2     28
 8.286849     94.71912      26.22922      0.2911        2    2     29
 8.286849     94.71912      29.50787      0.2911        2    2     30
 8.286849     94.71912      32.78653      0.2911        2    2     31
 8.286849     94.71912      36.06518      0.2911        2    2     32
 8.286849     94.71912      39.34383      0.2911        2    2     33
 8.286849     94.71912      42.62248      0.2911        2    2     34
 8.286849     94.71912      45.90113      0.2911        2    2     35
```

8.286849	94.71912	49.17979	0.2911	2	2	36
8.286849	94.71912	52.45844	0.2911	2	2	37
8.286849	94.71912	55.73709	0.2911	2	2	38
8.286849	94.71912	59.01575	0.2911	2	2	39
8.286849	94.71912	62.2944	0.2911	2	0	40

Sources: 2
Pulse No., Voltage Magnitude, Phase (Degrees): 1, 305.1, 43.5
Pulse No., Voltage Magnitude, Phase (Degrees): 21, 305.1, 43.5

Number of Loads: 0

********** SOURCE DATA **********
Pulse 1 Voltage = (221.2783, 209.9853j)
Current = (4.0314, 0.514j)
Impedance = (60.546, 44.368j)
Power = 500.0 Watts

Pulse 21 Voltage = (221.2783, 209.9853j)
Current = (4.0314, 0.514j)
Impedance = (60.546, 44.368j)
Power = 500.0 Watts

Total Power = 999.998 Watts

********** FAR FIELD **********

Zenith Angle : Initial, Increment, Number: 90.0, 0.0, 1
Azimuth Angle: Initial, Increment, Number: 0.0, 1.0, 360

********** PATTERN DATA **********
Radial Distance = 1000 Meters
Power Level = 999.998 Watts

Elev. Angle	Azimuth Angle	RMS E(Theta) Mag(mV/m)	Phase(Deg)
0.0	0.0	431.9864	96.3
0.0	1.0	430.8306	97.6
0.0	2.0	429.4692	98.9
0.0	3.0	427.9047	100.1
0.0	4.0	426.1396	101.4
0.0	5.0	424.1769	102.6
0.0	6.0	422.0200	103.9
0.0	7.0	419.6724	105.1
0.0	8.0	417.1380	106.3
0.0	9.0	414.4211	107.6
0.0	10.0	411.5261	108.8
0.0	11.0	408.4578	110.0
0.0	12.0	405.2213	111.2
0.0	13.0	401.8217	112.4
0.0	14.0	398.2646	113.6
0.0	15.0	394.5557	114.8
0.0	16.0	390.7009	116.0
0.0	17.0	386.7063	117.2
0.0	18.0	382.5783	118.4
0.0	19.0	378.3232	119.5
0.0	20.0	373.9477	120.7
0.0	21.0	369.4584	121.8
0.0	22.0	364.8623	122.9
0.0	23.0	360.1662	124.1
0.0	24.0	355.3772	125.2
0.0	25.0	350.5024	126.3
0.0	26.0	345.5489	127.4
0.0	27.0	340.5239	128.4
0.0	28.0	335.4347	129.5
0.0	29.0	330.2883	130.6
0.0	30.0	325.0922	131.6
0.0	31.0	319.8534	132.6

0.0	32.0	314.5792	133.7
0.0	33.0	309.2767	134.7
0.0	34.0	303.9530	135.7
0.0	35.0	298.6151	136.6
0.0	36.0	293.2699	137.6
0.0	37.0	287.9244	138.5
0.0	38.0	282.5853	139.5
0.0	39.0	277.2593	140.4
0.0	40.0	271.9529	141.3
0.0	41.0	266.6726	142.2
0.0	42.0	261.4247	143.0
0.0	43.0	256.2153	143.9
0.0	44.0	251.0506	144.7
0.0	45.0	245.9363	145.6
0.0	46.0	240.8783	146.4
0.0	47.0	235.8821	147.2
0.0	48.0	230.9532	147.9
0.0	49.0	226.0967	148.7
0.0	50.0	221.3180	149.4
0.0	51.0	216.6218	150.1
0.0	52.0	212.0129	150.8
0.0	53.0	207.4961	151.5
0.0	54.0	203.0756	152.2
0.0	55.0	198.7558	152.8
0.0	56.0	194.5408	153.4
0.0	57.0	190.4344	154.0
0.0	58.0	186.4406	154.6
0.0	59.0	182.5628	155.2
0.0	60.0	178.8046	155.7
0.0	61.0	175.1692	156.3
0.0	62.0	171.6596	156.8
0.0	63.0	168.2790	157.2
0.0	64.0	165.0300	157.7
0.0	65.0	161.9154	158.2
0.0	66.0	158.9376	158.6
0.0	67.0	156.0990	159.0
0.0	68.0	153.4019	159.4
0.0	69.0	150.8482	159.7
0.0	70.0	148.4399	160.1
0.0	71.0	146.1789	160.4
0.0	72.0	144.0668	160.7
0.0	73.0	142.1051	160.9
0.0	74.0	140.2953	161.2
0.0	75.0	138.6386	161.4
0.0	76.0	137.1362	161.6
0.0	77.0	135.7892	161.8
0.0	78.0	134.5985	162.0
0.0	79.0	133.5649	162.1
0.0	80.0	132.6892	162.2
0.0	81.0	131.9719	162.3
0.0	82.0	131.4134	162.4
0.0	83.0	131.0143	162.5
0.0	84.0	130.7747	162.5
0.0	85.0	130.6948	162.5
0.0	86.0	130.7747	162.5
0.0	87.0	131.0143	162.5
0.0	88.0	131.4134	162.4
0.0	89.0	131.9719	162.3
0.0	90.0	132.6892	162.2
0.0	91.0	133.5649	162.1
0.0	92.0	134.5985	162.0
0.0	93.0	135.7892	161.8
0.0	94.0	137.1362	161.6
0.0	95.0	138.6386	161.4
0.0	96.0	140.2953	161.2
0.0	97.0	142.1051	160.9
0.0	98.0	144.0668	160.7
0.0	99.0	146.1789	160.4
0.0	100.0	148.4399	160.1

0.0	101.0	150.8482	159.7
0.0	102.0	153.4019	159.4
0.0	103.0	156.0990	159.0
0.0	104.0	158.9376	158.6
0.0	105.0	161.9154	158.2
0.0	106.0	165.0300	157.7
0.0	107.0	168.2790	157.2
0.0	108.0	171.6596	156.8
0.0	109.0	175.1692	156.3
0.0	110.0	178.8046	155.7
0.0	111.0	182.5628	155.2
0.0	112.0	186.4406	154.6
0.0	113.0	190.4344	154.0
0.0	114.0	194.5408	153.4
0.0	115.0	198.7558	152.8
0.0	116.0	203.0756	152.2
0.0	117.0	207.4961	151.5
0.0	118.0	212.0129	150.8
0.0	119.0	216.6218	150.1
0.0	120.0	221.3180	149.4
0.0	121.0	226.0967	148.7
0.0	122.0	230.9532	147.9
0.0	123.0	235.8821	147.2
0.0	124.0	240.8783	146.4
0.0	125.0	245.9363	145.6
0.0	126.0	251.0506	144.7
0.0	127.0	256.2153	143.9
0.0	128.0	261.4247	143.0
0.0	129.0	266.6726	142.2
0.0	130.0	271.9529	141.3
0.0	131.0	277.2593	140.4
0.0	132.0	282.5853	139.5
0.0	133.0	287.9244	138.5
0.0	134.0	293.2699	137.6
0.0	135.0	298.6151	136.6
0.0	136.0	303.9530	135.7
0.0	137.0	309.2767	134.7
0.0	138.0	314.5792	133.7
0.0	139.0	319.8534	132.6
0.0	140.0	325.0922	131.6
0.0	141.0	330.2883	130.6
0.0	142.0	335.4347	129.5
0.0	143.0	340.5239	128.4
0.0	144.0	345.5489	127.4
0.0	145.0	350.5024	126.3
0.0	146.0	355.3772	125.2
0.0	147.0	360.1662	124.1
0.0	148.0	364.8623	122.9
0.0	149.0	369.4584	121.8
0.0	150.0	373.9477	120.7
0.0	151.0	378.3232	119.5
0.0	152.0	382.5783	118.4
0.0	153.0	386.7063	117.2
0.0	154.0	390.7009	116.0
0.0	155.0	394.5557	114.8
0.0	156.0	398.2646	113.6
0.0	157.0	401.8217	112.4
0.0	158.0	405.2213	111.2
0.0	159.0	408.4578	110.0
0.0	160.0	411.5261	108.8
0.0	161.0	414.4211	107.6
0.0	162.0	417.1380	106.3
0.0	163.0	419.6724	105.1
0.0	164.0	422.0200	103.9
0.0	165.0	424.1769	102.6
0.0	166.0	426.1396	101.4
0.0	167.0	427.9047	100.1
0.0	168.0	429.4692	98.9
0.0	169.0	430.8306	97.6

0.0	170.0	431.9864	96.3
0.0	171.0	432.9348	95.1
0.0	172.0	433.6741	93.8
0.0	173.0	434.2031	92.6
0.0	174.0	434.5208	91.3
0.0	175.0	434.6268	90.0
0.0	176.0	434.5208	88.8
0.0	177.0	434.2031	87.5
0.0	178.0	433.6741	86.2
0.0	179.0	432.9348	85.0
0.0	180.0	431.9864	83.7
0.0	181.0	430.8306	82.4
0.0	182.0	429.4692	81.2
0.0	183.0	427.9047	79.9
0.0	184.0	426.1396	78.7
0.0	185.0	424.1769	77.4
0.0	186.0	422.0200	76.2
0.0	187.0	419.6724	75.0
0.0	188.0	417.1380	73.7
0.0	189.0	414.4211	72.5
0.0	190.0	411.5261	71.3
0.0	191.0	408.4578	70.0
0.0	192.0	405.2213	68.8
0.0	193.0	401.8217	67.6
0.0	194.0	398.2646	66.4
0.0	195.0	394.5557	65.2
0.0	196.0	390.7009	64.0
0.0	197.0	386.7063	62.9
0.0	198.0	382.5783	61.7
0.0	199.0	378.3232	60.5
0.0	200.0	373.9477	59.4
0.0	201.0	369.4584	58.2
0.0	202.0	364.8623	57.1
0.0	203.0	360.1662	56.0
0.0	204.0	355.3772	54.9
0.0	205.0	350.5024	53.8
0.0	206.0	345.5489	52.7
0.0	207.0	340.5239	51.6
0.0	208.0	335.4347	50.5
0.0	209.0	330.2883	49.5
0.0	210.0	325.0922	48.4
0.0	211.0	319.8534	47.4
0.0	212.0	314.5792	46.4
0.0	213.0	309.2767	45.4
0.0	214.0	303.9530	44.4
0.0	215.0	298.6151	43.4
0.0	216.0	293.2699	42.5
0.0	217.0	287.9244	41.5
0.0	218.0	282.5853	40.6
0.0	219.0	277.2593	39.7
0.0	220.0	271.9529	38.8
0.0	221.0	266.6726	37.9
0.0	222.0	261.4247	37.0
0.0	223.0	256.2153	36.1
0.0	224.0	251.0506	35.3
0.0	225.0	245.9363	34.5
0.0	226.0	240.8783	33.7
0.0	227.0	235.8821	32.9
0.0	228.0	230.9532	32.1
0.0	229.0	226.0967	31.4
0.0	230.0	221.3180	30.6
0.0	231.0	216.6218	29.9
0.0	232.0	212.0129	29.2
0.0	233.0	207.4961	28.5
0.0	234.0	203.0756	27.9
0.0	235.0	198.7558	27.2
0.0	236.0	194.5408	26.6
0.0	237.0	190.4344	26.0
0.0	238.0	186.4406	25.4

0.0	239.0	182.5628	24.9
0.0	240.0	178.8046	24.3
0.0	241.0	175.1692	23.8
0.0	242.0	171.6596	23.3
0.0	243.0	168.2790	22.8
0.0	244.0	165.0300	22.3
0.0	245.0	161.9154	21.9
0.0	246.0	158.9376	21.5
0.0	247.0	156.0990	21.1
0.0	248.0	153.4019	20.7
0.0	249.0	150.8482	20.3
0.0	250.0	148.4399	20.0
0.0	251.0	146.1789	19.7
0.0	252.0	144.0668	19.4
0.0	253.0	142.1051	19.1
0.0	254.0	140.2953	18.9
0.0	255.0	138.6386	18.6
0.0	256.0	137.1362	18.4
0.0	257.0	135.7892	18.2
0.0	258.0	134.5985	18.1
0.0	259.0	133.5649	17.9
0.0	260.0	132.6892	17.8
0.0	261.0	131.9719	17.7
0.0	262.0	131.4134	17.6
0.0	263.0	131.0143	17.6
0.0	264.0	130.7747	17.5
0.0	265.0	130.6948	17.5
0.0	266.0	130.7747	17.5
0.0	267.0	131.0143	17.6
0.0	268.0	131.4134	17.6
0.0	269.0	131.9719	17.7
0.0	270.0	132.6892	17.8
0.0	271.0	133.5649	17.9
0.0	272.0	134.5985	18.1
0.0	273.0	135.7892	18.2
0.0	274.0	137.1362	18.4
0.0	275.0	138.6386	18.6
0.0	276.0	140.2953	18.9
0.0	277.0	142.1051	19.1
0.0	278.0	144.0668	19.4
0.0	279.0	146.1789	19.7
0.0	280.0	148.4399	20.0
0.0	281.0	150.8482	20.3
0.0	282.0	153.4019	20.7
0.0	283.0	156.0990	21.1
0.0	284.0	158.9376	21.5
0.0	285.0	161.9154	21.9
0.0	286.0	165.0300	22.3
0.0	287.0	168.2790	22.8
0.0	288.0	171.6596	23.3
0.0	289.0	175.1692	23.8
0.0	290.0	178.8046	24.3
0.0	291.0	182.5628	24.9
0.0	292.0	186.4406	25.4
0.0	293.0	190.4344	26.0
0.0	294.0	194.5408	26.6
0.0	295.0	198.7558	27.2
0.0	296.0	203.0756	27.9
0.0	297.0	207.4961	28.5
0.0	298.0	212.0129	29.2
0.0	299.0	216.6218	29.9
0.0	300.0	221.3180	30.6
0.0	301.0	226.0967	31.4
0.0	302.0	230.9532	32.1
0.0	303.0	235.8821	32.9
0.0	304.0	240.8783	33.7
0.0	305.0	245.9363	34.5
0.0	306.0	251.0506	35.3
0.0	307.0	256.2153	36.1

0.0	308.0	261.4247	37.0
0.0	309.0	266.6726	37.9
0.0	310.0	271.9529	38.8
0.0	311.0	277.2593	39.7
0.0	312.0	282.5853	40.6
0.0	313.0	287.9244	41.5
0.0	314.0	293.2699	42.5
0.0	315.0	298.6151	43.4
0.0	316.0	303.9530	44.4
0.0	317.0	309.2767	45.4
0.0	318.0	314.5792	46.4
0.0	319.0	319.8534	47.4
0.0	320.0	325.0922	48.4
0.0	321.0	330.2883	49.5
0.0	322.0	335.4347	50.5
0.0	323.0	340.5239	51.6
0.0	324.0	345.5489	52.7
0.0	325.0	350.5024	53.8
0.0	326.0	355.3772	54.9
0.0	327.0	360.1662	56.0
0.0	328.0	364.8623	57.1
0.0	329.0	369.4584	58.2
0.0	330.0	373.9477	59.4
0.0	331.0	378.3232	60.5
0.0	332.0	382.5783	61.7
0.0	333.0	386.7063	62.9
0.0	334.0	390.7009	64.0
0.0	335.0	394.5557	65.2
0.0	336.0	398.2646	66.4
0.0	337.0	401.8217	67.6
0.0	338.0	405.2213	68.8
0.0	339.0	408.4578	70.0
0.0	340.0	411.5261	71.3
0.0	341.0	414.4211	72.5
0.0	342.0	417.1380	73.7
0.0	343.0	419.6724	75.0
0.0	344.0	422.0200	76.2
0.0	345.0	424.1769	77.4
0.0	346.0	426.1396	78.7
0.0	347.0	427.9047	79.9
0.0	348.0	429.4692	81.2
0.0	349.0	430.8306	82.4
0.0	350.0	431.9864	83.7
0.0	351.0	432.9348	85.0
0.0	352.0	433.6741	86.2
0.0	353.0	434.2031	87.5
0.0	354.0	434.5208	88.8
0.0	355.0	434.6268	90.0
0.0	356.0	434.5208	91.3
0.0	357.0	434.2031	92.6
0.0	358.0	433.6741	93.8
0.0	359.0	432.9348	95.1

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*****************************************
                ACSModel
            (MININEC 3.1 Core)
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WACM
Nighttime with Tower

Frequency = 1.270 MHz Wavelength = 236.06300 Meters

No. of Wires: 3

Wire No. 1	Coordinates			End	No. of
X	Y	Z	Radius	Connection	Segments
0	0	0		-1	
0	0	65.57305	0.2911	0	20

Wire No. 2	Coordinates			End	No. of
X	Y	Z	Radius	Connection	Segments
8.286849	94.71912	0		-2	
8.286849	94.71912	65.57305	0.2911	0	20

Wire No. 3	Coordinates			End	No. of
X	Y	Z	Radius	Connection	Segments
-1731.046	-1542.306	0		-3	
-1731.046	-1542.306	65.57305	0.2911	0	20

**** ANTENNA GEOMETRY ****

Wire No. 1	Coordinates			Connection		Pulse
X	Y	Z	Radius	End1	End2	No.
0	0	0	0.2911	-1	1	1
0	0	3.278653	0.2911	1	1	2
0	0	6.557305	0.2911	1	1	3
0	0	9.835958	0.2911	1	1	4
0	0	13.11461	0.2911	1	1	5
0	0	16.39326	0.2911	1	1	6
0	0	19.67192	0.2911	1	1	7
0	0	22.95057	0.2911	1	1	8
0	0	26.22922	0.2911	1	1	9
0	0	29.50787	0.2911	1	1	10
0	0	32.78653	0.2911	1	1	11
0	0	36.06518	0.2911	1	1	12
0	0	39.34383	0.2911	1	1	13
0	0	42.62248	0.2911	1	1	14
0	0	45.90113	0.2911	1	1	15
0	0	49.17979	0.2911	1	1	16
0	0	52.45844	0.2911	1	1	17
0	0	55.73709	0.2911	1	1	18
0	0	59.01575	0.2911	1	1	19
0	0	62.2944	0.2911	1	0	20

Wire No. 2	Coordinates			Connection		Pulse
X	Y	Z	Radius	End1	End2	No.
8.286849	94.71912	0	0.2911	-2	2	21
8.286849	94.71912	3.278653	0.2911	2	2	22
8.286849	94.71912	6.557305	0.2911	2	2	23
8.286849	94.71912	9.835958	0.2911	2	2	24
8.286849	94.71912	13.11461	0.2911	2	2	25
8.286849	94.71912	16.39326	0.2911	2	2	26
8.286849	94.71912	19.67192	0.2911	2	2	27
8.286849	94.71912	22.95057	0.2911	2	2	28
8.286849	94.71912	26.22922	0.2911	2	2	29
8.286849	94.71912	29.50787	0.2911	2	2	30
8.286849	94.71912	32.78653	0.2911	2	2	31
8.286849	94.71912	36.06518	0.2911	2	2	32
8.286849	94.71912	39.34383	0.2911	2	2	33

8.286849	94.71912	42.62248	0.2911	2	2	34
8.286849	94.71912	45.90113	0.2911	2	2	35
8.286849	94.71912	49.17979	0.2911	2	2	36
8.286849	94.71912	52.45844	0.2911	2	2	37
8.286849	94.71912	55.73709	0.2911	2	2	38
8.286849	94.71912	59.01575	0.2911	2	2	39
8.286849	94.71912	62.2944	0.2911	2	0	40

Wire No. 3 Coordinates

X	Y	Z	Radius	Connection End1	End2	Pulse No.
-1731.046	-1542.306	0	0.2911	-3	3	41
-1731.046	-1542.306	3.278653	0.2911	3	3	42
-1731.046	-1542.306	6.557305	0.2911	3	3	43
-1731.046	-1542.306	9.835958	0.2911	3	3	44
-1731.046	-1542.306	13.11461	0.2911	3	3	45
-1731.046	-1542.306	16.39326	0.2911	3	3	46
-1731.046	-1542.306	19.67192	0.2911	3	3	47
-1731.046	-1542.306	22.95057	0.2911	3	3	48
-1731.046	-1542.306	26.22922	0.2911	3	3	49
-1731.046	-1542.306	29.50787	0.2911	3	3	50
-1731.046	-1542.306	32.78653	0.2911	3	3	51
-1731.046	-1542.306	36.06518	0.2911	3	3	52
-1731.046	-1542.306	39.34383	0.2911	3	3	53
-1731.046	-1542.306	42.62248	0.2911	3	3	54
-1731.046	-1542.306	45.90113	0.2911	3	3	55
-1731.046	-1542.306	49.17979	0.2911	3	3	56
-1731.046	-1542.306	52.45844	0.2911	3	3	57
-1731.046	-1542.306	55.73709	0.2911	3	3	58
-1731.046	-1542.306	59.01575	0.2911	3	3	59
-1731.046	-1542.306	62.2944	0.2911	3	0	60

Sources: 2
Pulse No., Voltage Magnitude, Phase (Degrees): 1, 305.1, 43.5
Pulse No., Voltage Magnitude, Phase (Degrees): 21, 305.1, 43.5

Number of Loads: 0

********** SOURCE DATA **********
Pulse 1 Voltage = (221.2783, 209.9853j)
Current = (4.0305, 0.515j)
Impedance = (60.57, 44.359j)
Power = 500.0 Watts

Pulse 21 Voltage = (221.2783, 209.9853j)
Current = (4.032, 0.5147j)
Impedance = (60.542, 44.351j)
Power = 500.14 Watts

Total Power = 1000.140 Watts

********** FAR FIELD **********

Zenith Angle : Initial, Increment, Number: 90.0, 0.0, 1
Azimuth Angle: Initial, Increment, Number: 0.0, 1.0, 360

********** PATTERN DATA **********
Radial Distance = 1000 Meters
Power Level = 1000.281 Watts

Elev. Angle	Azimuth Angle	E(Theta) RMS Mag(mV/m)	Phase(Deg)
0.0	0.0	431.5033	96.9
0.0	1.0	433.0031	98.0
0.0	2.0	433.1816	99.0
0.0	3.0	431.3737	99.9
0.0	4.0	427.7916	100.9
0.0	5.0	423.3217	102.1
0.0	6.0	419.0694	103.5

0.0	7.0	415.8724	105.1
0.0	8.0	413.9901	106.6
0.0	9.0	413.0798	108.1
0.0	10.0	412.4219	109.3
0.0	11.0	411.2429	110.4
0.0	12.0	408.9846	111.3
0.0	13.0	405.4390	112.3
0.0	14.0	400.7447	113.2
0.0	15.0	395.2883	114.3
0.0	16.0	389.5604	115.5
0.0	17.0	384.0154	116.8
0.0	18.0	378.9697	118.2
0.0	19.0	374.5548	119.6
0.0	20.0	370.7269	121.0
0.0	21.0	367.3157	122.3
0.0	22.0	364.0888	123.5
0.0	23.0	360.8127	124.7
0.0	24.0	357.2957	125.7
0.0	25.0	353.4098	126.7
0.0	26.0	349.0946	127.6
0.0	27.0	344.3481	128.5
0.0	28.0	339.2120	129.4
0.0	29.0	333.7546	130.3
0.0	30.0	328.0558	131.2
0.0	31.0	322.1955	132.1
0.0	32.0	316.2454	133.0
0.0	33.0	310.2649	134.0
0.0	34.0	304.2996	135.0
0.0	35.0	298.3819	135.9
0.0	36.0	292.5330	136.9
0.0	37.0	286.7657	137.8
0.0	38.0	281.0863	138.8
0.0	39.0	275.4976	139.7
0.0	40.0	270.0011	140.6
0.0	41.0	264.5977	141.5
0.0	42.0	259.2896	142.4
0.0	43.0	254.0810	143.2
0.0	44.0	248.9778	144.0
0.0	45.0	243.9882	144.8
0.0	46.0	239.1222	145.6
0.0	47.0	234.3906	146.3
0.0	48.0	229.8042	147.0
0.0	49.0	225.3720	147.8
0.0	50.0	221.0992	148.5
0.0	51.0	216.9846	149.2
0.0	52.0	213.0184	149.9
0.0	53.0	209.1793	150.6
0.0	54.0	205.4329	151.3
0.0	55.0	201.7312	152.1
0.0	56.0	198.0140	153.0
0.0	57.0	194.2139	153.9
0.0	58.0	190.2631	154.8
0.0	59.0	186.1054	155.7
0.0	60.0	181.7104	156.6
0.0	61.0	177.0896	157.4
0.0	62.0	172.3113	158.0
0.0	63.0	167.5109	158.6
0.0	64.0	162.8890	158.8
0.0	65.0	158.6918	158.9
0.0	66.0	155.1669	158.8
0.0	67.0	152.4995	158.6
0.0	68.0	150.7403	158.4
0.0	69.0	149.7556	158.4
0.0	70.0	149.2240	158.6
0.0	71.0	148.6949	159.3
0.0	72.0	147.6959	160.2
0.0	73.0	145.8656	161.3
0.0	74.0	143.0799	162.3
0.0	75.0	139.5431	163.0

0.0	76.0	135.8024	163.2
0.0	77.0	132.6388	162.8
0.0	78.0	130.8014	162.0
0.0	79.0	130.6499	161.1
0.0	80.0	131.9010	160.7
0.0	81.0	133.6839	160.9
0.0	82.0	134.9048	161.8
0.0	83.0	134.7241	162.9
0.0	84.0	132.9503	163.9
0.0	85.0	130.2211	164.2
0.0	86.0	127.8489	163.6
0.0	87.0	127.2255	162.4
0.0	88.0	128.9479	161.2
0.0	89.0	132.3028	160.7
0.0	90.0	135.6437	161.2
0.0	91.0	137.3836	162.3
0.0	92.0	136.9261	163.3
0.0	93.0	135.1010	163.4
0.0	94.0	133.8557	162.5
0.0	95.0	135.0634	160.9
0.0	96.0	139.0261	159.8
0.0	97.0	144.0860	159.7
0.0	98.0	147.8669	160.5
0.0	99.0	148.9952	161.4
0.0	100.0	148.1095	161.6
0.0	101.0	147.6023	160.5
0.0	102.0	149.9077	158.8
0.0	103.0	155.3085	157.6
0.0	104.0	161.5320	157.6
0.0	105.0	165.7274	158.4
0.0	106.0	166.8217	158.9
0.0	107.0	166.4650	158.4
0.0	108.0	167.8689	156.9
0.0	109.0	172.9315	155.3
0.0	110.0	180.2248	154.6
0.0	111.0	186.3354	155.0
0.0	112.0	189.0648	155.5
0.0	113.0	189.4161	155.2
0.0	114.0	190.8641	153.8
0.0	115.0	196.1002	152.0
0.0	116.0	204.1211	151.2
0.0	117.0	211.2141	151.3
0.0	118.0	214.7176	151.6
0.0	119.0	215.5873	151.1
0.0	120.0	217.6099	149.7
0.0	121.0	223.6213	148.0
0.0	122.0	232.3286	147.1
0.0	123.0	239.6876	147.1
0.0	124.0	243.1724	147.1
0.0	125.0	244.3136	146.4
0.0	126.0	247.2537	144.8
0.0	127.0	254.3688	143.2
0.0	128.0	263.5330	142.4
0.0	129.0	270.4992	142.3
0.0	130.0	273.4419	142.1
0.0	131.0	274.8209	141.0
0.0	132.0	278.8858	139.3
0.0	133.0	287.0229	137.8
0.0	134.0	296.1540	137.1
0.0	135.0	302.2098	136.9
0.0	136.0	304.4361	136.4
0.0	137.0	306.1420	135.1
0.0	138.0	311.2421	133.3
0.0	139.0	319.9373	132.0
0.0	140.0	328.5153	131.3
0.0	141.0	333.4549	131.0
0.0	142.0	335.0353	130.2
0.0	143.0	336.9977	128.7
0.0	144.0	342.6443	127.0

0.0	145.0	351.2779	125.7
0.0	146.0	359.0362	125.0
0.0	147.0	362.9962	124.5
0.0	148.0	364.0180	123.5
0.0	149.0	365.8159	122.0
0.0	150.0	371.2057	120.3
0.0	151.0	379.2250	119.0
0.0	152.0	386.2398	118.2
0.0	153.0	389.6125	117.6
0.0	154.0	390.1018	116.6
0.0	155.0	391.0440	115.0
0.0	156.0	395.1735	113.3
0.0	157.0	402.0292	111.9
0.0	158.0	408.5309	111.0
0.0	159.0	411.9257	110.3
0.0	160.0	412.1330	109.3
0.0	161.0	411.6671	107.9
0.0	162.0	413.4131	106.2
0.0	163.0	418.1348	104.6
0.0	164.0	423.9276	103.4
0.0	165.0	427.9832	102.6
0.0	166.0	428.8644	101.7
0.0	167.0	427.4742	100.6
0.0	168.0	426.2406	99.1
0.0	169.0	427.2354	97.4
0.0	170.0	430.6466	95.9
0.0	171.0	434.7767	94.7
0.0	172.0	437.4132	93.7
0.0	173.0	437.3543	92.9
0.0	174.0	435.0677	91.8
0.0	175.0	432.2581	90.4
0.0	176.0	430.7315	88.8
0.0	177.0	431.2818	87.2
0.0	178.0	433.3002	85.7
0.0	179.0	435.2808	84.6
0.0	180.0	435.7639	83.6
0.0	181.0	434.0857	82.7
0.0	182.0	430.6046	81.7
0.0	183.0	426.4133	80.4
0.0	184.0	422.7558	78.9
0.0	185.0	420.4426	77.3
0.0	186.0	419.5365	75.8
0.0	187.0	419.4243	74.4
0.0	188.0	419.1728	73.3
0.0	189.0	417.9448	72.3
0.0	190.0	415.2868	71.4
0.0	191.0	411.2181	70.4
0.0	192.0	406.1471	69.4
0.0	193.0	400.6858	68.1
0.0	194.0	395.4390	66.8
0.0	195.0	390.8339	65.4
0.0	196.0	387.0331	63.9
0.0	197.0	383.9408	62.5
0.0	198.0	381.2796	61.2
0.0	199.0	378.6965	60.0
0.0	200.0	375.8605	58.9
0.0	201.0	372.5276	57.9
0.0	202.0	368.5678	57.0
0.0	203.0	363.9615	56.1
0.0	204.0	358.7757	55.2
0.0	205.0	353.1327	54.2
0.0	206.0	347.1783	53.3
0.0	207.0	341.0562	52.2
0.0	208.0	334.8899	51.2
0.0	209.0	328.7729	50.1
0.0	210.0	322.7666	49.0
0.0	211.0	316.9024	47.8
0.0	212.0	311.1876	46.7
0.0	213.0	305.6124	45.6

0.0	214.0	300.1567	44.5
0.0	215.0	294.7953	43.4
0.0	216.0	289.5028	42.3
0.0	217.0	284.2563	41.3
0.0	218.0	279.0367	40.3
0.0	219.0	273.8298	39.3
0.0	220.0	268.6259	38.4
0.0	221.0	263.4200	37.4
0.0	222.0	258.2108	36.5
0.0	223.0	253.0011	35.7
0.0	224.0	247.7968	34.8
0.0	225.0	242.6074	34.0
0.0	226.0	237.4460	33.3
0.0	227.0	232.3299	32.5
0.0	228.0	227.2807	31.9
0.0	229.0	222.3248	31.2
0.0	230.0	217.4932	30.6
0.0	231.0	212.8211	30.0
0.0	232.0	208.3459	29.5
0.0	233.0	204.1045	29.0
0.0	234.0	200.1289	28.6
0.0	235.0	196.4398	28.1
0.0	236.0	193.0404	27.6
0.0	237.0	189.9088	27.1
0.0	238.0	186.9933	26.6
0.0	239.0	184.2095	25.9
0.0	240.0	181.4447	25.2
0.0	241.0	178.5674	24.3
0.0	242.0	175.4450	23.4
0.0	243.0	171.9691	22.5
0.0	244.0	168.0840	21.5
0.0	245.0	163.8174	20.7
0.0	246.0	159.3037	20.1
0.0	247.0	154.7911	19.7
0.0	248.0	150.6203	19.7
0.0	249.0	147.1607	19.9
0.0	250.0	144.7081	20.3
0.0	251.0	143.3665	20.7
0.0	252.0	142.9659	20.8
0.0	253.0	143.0676	20.6
0.0	254.0	143.0701	19.9
0.0	255.0	142.3860	18.9
0.0	256.0	140.6352	17.8
0.0	257.0	137.8065	16.9
0.0	258.0	134.3385	16.4
0.0	259.0	131.0601	16.6
0.0	260.0	128.9289	17.5
0.0	261.0	128.5885	18.5
0.0	262.0	129.9612	19.2
0.0	263.0	132.1917	19.1
0.0	264.0	134.0337	18.4
0.0	265.0	134.4441	17.2
0.0	266.0	133.0945	16.2
0.0	267.0	130.6206	15.9
0.0	268.0	128.4611	16.5
0.0	269.0	128.1614	17.9
0.0	270.0	130.3475	19.1
0.0	271.0	134.1590	19.5
0.0	272.0	137.7563	18.9
0.0	273.0	139.4954	17.8
0.0	274.0	138.9459	17.0
0.0	275.0	137.2670	17.1
0.0	276.0	136.6640	18.3
0.0	277.0	138.8806	19.9
0.0	278.0	143.6823	20.9
0.0	279.0	148.9203	20.7
0.0	280.0	152.2133	19.8
0.0	281.0	152.7147	19.1
0.0	282.0	151.8225	19.4

0.0	283.0	152.3385	20.8
0.0	284.0	156.1992	22.4
0.0	285.0	162.5635	23.2
0.0	286.0	168.4927	22.9
0.0	287.0	171.5439	22.1
0.0	288.0	171.8178	22.0
0.0	289.0	172.0309	23.1
0.0	290.0	175.2856	24.8
0.0	291.0	182.0016	26.0
0.0	292.0	189.3566	26.2
0.0	293.0	194.0548	25.6
0.0	294.0	195.3855	25.5
0.0	295.0	195.9608	26.5
0.0	296.0	199.4201	28.2
0.0	297.0	206.6849	29.6
0.0	298.0	214.8534	29.9
0.0	299.0	220.2391	29.6
0.0	300.0	222.0297	29.7
0.0	301.0	223.1378	30.7
0.0	302.0	227.4196	32.5
0.0	303.0	235.5137	33.8
0.0	304.0	244.0481	34.2
0.0	305.0	249.3117	34.1
0.0	306.0	251.0647	34.4
0.0	307.0	252.8298	35.7
0.0	308.0	258.2941	37.5
0.0	309.0	267.1830	38.7
0.0	310.0	275.5400	39.0
0.0	311.0	280.0860	39.1
0.0	312.0	281.6112	39.8
0.0	313.0	284.1896	41.3
0.0	314.0	290.8455	43.0
0.0	315.0	300.1244	44.1
0.0	316.0	307.7607	44.5
0.0	317.0	311.3176	44.8
0.0	318.0	312.6631	45.8
0.0	319.0	316.0368	47.4
0.0	320.0	323.4871	49.1
0.0	321.0	332.5956	50.0
0.0	322.0	339.2124	50.4
0.0	323.0	341.8245	51.0
0.0	324.0	343.0107	52.2
0.0	325.0	346.7856	53.9
0.0	326.0	354.3586	55.5
0.0	327.0	362.8797	56.4
0.0	328.0	368.5493	57.0
0.0	329.0	370.4258	57.7
0.0	330.0	371.2329	59.0
0.0	331.0	374.6413	60.7
0.0	332.0	381.5715	62.3
0.0	333.0	389.3383	63.3
0.0	334.0	394.4490	63.9
0.0	335.0	395.8997	64.7
0.0	336.0	395.9614	66.0
0.0	337.0	398.0210	67.7
0.0	338.0	403.4142	69.3
0.0	339.0	410.2557	70.5
0.0	340.0	415.3310	71.3
0.0	341.0	416.9565	72.1
0.0	342.0	416.2668	73.2
0.0	343.0	416.1467	74.8
0.0	344.0	418.7777	76.5
0.0	345.0	423.8466	78.0
0.0	346.0	428.9596	79.0
0.0	347.0	431.6894	79.9
0.0	348.0	431.3824	80.8
0.0	349.0	429.4855	82.0
0.0	350.0	428.3869	83.5
0.0	351.0	429.6575	85.2

0.0	352.0	432.9808	86.7
0.0	353.0	436.5305	87.9
0.0	354.0	438.3371	88.8
0.0	355.0	437.5372	89.7
0.0	356.0	434.7734	90.8
0.0	357.0	431.6843	92.2
0.0	358.0	429.8783	93.8
0.0	359.0	430.0106	95.4

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Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Call Sign	File Number
WQJQ689	
Radio Service	
WU - 700 MHz Upper Band (Block C)	

FCC Registration Number (FRN): 0003290673

Grant Date	Effective Date	Expiration Date	Print Date
09-11-2019	07-15-2020	06-13-2029	

Market Number	Channel Block	Sub-Market Designator
REA001	C	0

Market Name
Northeast

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date
06-13-2013	06-13-2019		

Waivers/Conditions:

If the facilities authorized herein are used to provide broadcast operations, whether exclusively or in combination with other services, the licensee must seek renewal of the license either within eight years from the commencement of the broadcast service or within the term of the license had the broadcast service not been provided, whichever period is shorter in length. See 47 CFR §27.13(b).

This authorization is conditioned upon compliance with section 27.16 of the Commission's rules

Conditions:
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

FCC 601-MB
October 2017

Reference Copy

Licensee Name: CELLCO PARTNERSHIP

Call Sign: WQJQ689 **File Number:** **Print Date:**

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status

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Federal Communications Commission
Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Call Sign	File Number
KNKA331	0007969805
Radio Service CL - Cellular	
Market Numer CMA063	**Channel Block** A
Sub-Market Designator 0	

FCC Registration Number (FRN): 0003290673

Market Name
Springfield-Chicopee-Holyoke,

Grant Date	Effective Date	Expiration Date	Five Yr Build-Out Date	Print Date
02-02-2018	02-02-2018	01-22-2028		02-03-2018

Site Information:

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
1	42-08-32.3 N	072-20-53.3 W	289.6	48.8	

Address: 111 HOVEY ROAD
City: MONSON **County:** HAMPDEN **State:** MA **Construction Deadline:**

Antenna: 7
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	202.100	122.400	127.300	78.300	72.700	197.200	248.300	202.300
Transmitting ERP (watts)	15.000	18.450	5.840	0.900	0.100	0.100	0.400	3.360

Antenna: 8
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	202.100	122.400	127.300	78.300	72.700	197.200	248.300	202.300
Transmitting ERP (watts)	0.920	10.280	40.400	49.290	35.420	7.050	0.310	0.230

Antenna: 9
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	202.100	122.400	127.300	78.300	72.700	197.200	248.300	202.300
Transmitting ERP (watts)	1.020	0.100	0.100	0.100	0.520	1.590	1.350	1.740

Conditions:
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKA331 **File Number:** 0007969805 **Print Date:** 02-03-2018

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
2	42-05-03.3 N	072-42-15.3 W	198.4	52.7	

Address: (Agawam) 591 Northwest St.

City: AGAWAM **County:** HAMPDEN **State:** MA **Construction Deadline:**

Antenna: 4

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	164.900	191.800	199.600	206.000	184.800	149.200	74.000	151.000
Transmitting ERP (watts)	43.300	41.640	12.040	0.590	0.590	0.590	0.590	6.890

Antenna: 5

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	164.900	191.800	199.600	206.000	184.800	149.200	74.000	151.000
Transmitting ERP (watts)	0.590	0.590	19.080	45.650	36.390	4.190	0.590	0.590

Antenna: 6

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	164.900	191.800	199.600	206.000	184.800	149.200	74.000	151.000
Transmitting ERP (watts)	0.930	0.470	0.470	0.470	2.090	44.640	45.760	48.530

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
4	42-13-23.3 N	072-58-06.3 W	452.6	85.3	1205083

Address: (Blandford site) Chester Road

City: BLANDFORD **County:** HAMPDEN **State:** MA **Construction Deadline:**

Antenna: 5

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	171.200	258.000	244.700	206.300	135.300	92.500	42.400	83.400
Transmitting ERP (watts)	85.540	62.640	65.090	5.000	0.630	0.630	1.750	37.360

Antenna: 6

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	171.200	258.000	244.700	206.300	135.300	92.500	42.400	83.400
Transmitting ERP (watts)	0.720	5.720	86.650	280.390	217.650	44.440	1.510	0.720

Antenna: 7

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	171.200	258.000	244.700	206.300	135.300	92.500	42.300	83.400
Transmitting ERP (watts)	16.510	0.720	0.870	0.990	16.900	143.800	314.600	154.080

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Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKA331 **File Number:** 0007969805 **Print Date:** 02-03-2018

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
5	42-09-27.3 N	072-10-15.3 W	295.1	58.5	

Address: WARREN 0.5 MI. NE OF DEVILS LANE AND BROOKFIELD ROAD
City: WARREN **County:** WORCESTER **State:** MA **Construction Deadline:**

Antenna: 2
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	84.100	127.800	115.500	144.400	99.900	87.300	162.000	151.800
Transmitting ERP (watts)	0.500	0.210	0.740	12.300	64.570	107.150	58.880	7.760

Antenna: 3
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	84.100	127.800	115.500	144.400	99.900	87.300	162.000	151.800
Transmitting ERP (watts)	1.440	7.410	36.700	67.710	32.000	7.230	1.230	0.450

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
9	42-02-57.3 N	072-30-29.3 W	119.2	39.9	

Address: (East Longmeadow site) 339 Prospect Street
City: East Longmeadow **County:** HAMPDEN **State:** MA **Construction Deadline:** 11-28-2013

Antenna: 1
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	87.800	40.200	-12.200	18.100	88.800	115.300	111.100	114.500
Transmitting ERP (watts)	88.610	43.310	5.460	0.810	0.810	0.810	3.450	28.610

Antenna: 2
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	87.800	40.200	-12.200	18.100	88.800	115.300	111.100	114.500
Transmitting ERP (watts)	3.500	54.180	231.130	82.010	5.540	0.820	0.820	0.820

Antenna: 3
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	87.800	40.200	-12.200	18.100	88.800	115.300	111.100	114.500
Transmitting ERP (watts)	0.830	0.830	1.630	30.310	200.250	120.660	13.850	0.830

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
11	42-23-15.0 N	072-24-12.0 W	368.8	73.1	1006324

Address: (Pelham 2) 320 Daniel Shays Highway
City: Pelham **County:** HAMPSHIRE **State:** MA **Construction Deadline:** 04-18-2014

Antenna: 1
Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	121.200	228.100	241.600	235.900	228.600	282.100	338.300	206.500
Transmitting ERP (watts)	468.370	158.700	0.930	0.930	0.930	0.930	8.920	245.800

Reference Copy

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNKA331 **File Number:** 0007969805 **Print Date:** 02-03-2018

Location	Latitude	Longitude	Ground Elevation (meters)	Structure Hgt to Tip (meters)	Antenna Structure Registration No.
11	42-23-15.0 N	072-24-12.0 W	368.8	73.1	1006324

Address: (Pelham 2) 320 Daniel Shays Highway

City: Pelham **County:** HAMPSHIRE **State:** MA **Construction Deadline:** 04-18-2014

Antenna: 2

Maximum Transmitting ERP in Watts: 140.820

Azimuth(from true north)	0	45	90	135	180	225	270	315
Antenna Height AAT (meters)	121.200	228.100	241.600	235.900	228.600	282.100	338.300	206.500
Transmitting ERP (watts)	1.000	1.130	5.710	58.950	301.100	106.740	6.120	1.000

Control Points:

Control Pt. No. 2

Address: 500 W Dove Rd.

City: Southlake **County:** TARRANT **State:** TX **Telephone Number:** (800)264-6620

Waivers/Conditions:

NONE

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Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Call Sign	File Number
WQGA906	
Radio Service AW - AWS (1710-1755 MHz and 2110-2155 MHz)	

FCC Registration Number (FRN): 0003290673

Grant Date	Effective Date	Expiration Date	Print Date
11-29-2006	11-01-2016	11-29-2021	

Market Number	Channel Block	Sub-Market Designator
BEA010	B	15

Market Name
New York-No. New Jer.-Long Isl

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This authorization is conditioned upon the licensee, prior to initiating operations from any base or fixed station, making reasonable efforts to coordinate frequency usage with known co-channel and adjacent channel incumbent federal users operating in the 1710-1755 MHz band whose facilities could be affected by the proposed operations. See, e.g., FCC and NTIA Coordination Procedures in the 1710-1755 MHz Band, Public Notice, FCC 06-50, WTB Docket No. 02-353, rel. April 20, 2006.

Conditions:
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

FCC 601-MB
October 2017

Licensee Name: CELLCO PARTNERSHIP

Call Sign: WQGA906 **File Number:** **Print Date:**

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status

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Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Call Sign	File Number
WQTY765	
Radio Service AW - AWS (1710-1755 MHz and 2110-2155 MHz)	

FCC Registration Number (FRN): 0003290673

Grant Date	Effective Date	Expiration Date	Print Date
03-12-2014	11-01-2016	11-29-2021	

Market Number	Channel Block	Sub-Market Designator
BEA010	C	10

Market Name
New York-No. New Jer.-Long Isl

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date

Waivers/Conditions:

This authorization is conditioned upon the licensee, prior to initiating operations from any base or fixed station, making reasonable efforts to coordinate frequency usage with known co-channel and adjacent channel incumbent federal users operating in the 1710-1755 MHz band whose facilities could be affected by the proposed operations. See, e.g., FCC and NTIA Coordination Procedures in the 1710-1755 MHz Band, Public Notice, FCC 06-50, WTB Docket No. 02-353, rel. April 20, 2006.

Conditions:
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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FCC 601-MB
October 2017

Reference Copy

Licensee Name: CELLCO PARTNERSHIP

Call Sign: WQTY765 **File Number:** **Print Date:**

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status

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Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: AIRTOUCH CELLULAR

ATTN: REGULATORY
AIRTOUCH CELLULAR
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Call Sign	File Number
KNLH212	0007717096
Radio Service CW - PCS Broadband	

FCC Registration Number (FRN): 0006146468

Grant Date	Effective Date	Expiration Date	Print Date
06-02-2017	06-02-2017	06-27-2027	06-06-2017

Market Number	Channel Block	Sub-Market Designator
BTA427	E	0

Market Name
Springfield-Holyoke, MA

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date
06-27-2002			

Waivers/Conditions:

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

Grant of the request to update licensee name is conditioned on it not reflecting an assignment or transfer of control (see Rule 1.948); if an assignment or transfer occurred without proper notification or FCC approval, the grant is void and the station is licensed under the prior name.

Conditions:
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

This license may not authorize operation throughout the entire geographic area or spectrum identified on the hardcopy version. To view the specific geographic area and spectrum authorized by this license, refer to the Spectrum and Market Area information under the Market Tab of the license record in the Universal Licensing System (ULS). To view the license record, go to the ULS homepage at http://wireless.fcc.gov/uls/index.htm?job=home and select "License Search". Follow the instructions on how to search for license information.

FCC 601-MB
October 2017

Reference Copy

Licensee Name: AIRTOUCH CELLULAR

Call Sign: KNLH212 **File Number:** 0007717096 **Print Date:** 06-06-2017

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status

Reference Copy

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This is not an official FCC license. It is a record of public information contained in the FCC's licensing database on the date that this reference copy was generated. In cases where FCC rules require the presentation, posting, or display of an FCC license, this document may not be used in place of an official FCC license.

Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Call Sign	File Number
KNLH273	0007716978
Radio Service CW - PCS Broadband	

FCC Registration Number (FRN): 0003290673

Grant Date	Effective Date	Expiration Date	Print Date
06-02-2017	06-02-2017	06-27-2027	06-06-2017

Market Number	Channel Block	Sub-Market Designator
BTA427	F	0

Market Name
Springfield-Holyoke, MA

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date
06-27-2002			

Waivers/Conditions:

This authorization is subject to the condition that, in the event that systems using the same frequencies as granted herein are authorized in an adjacent foreign territory (Canada/United States), future coordination of any base station transmitters within 72 km (45 miles) of the United States/Canada border shall be required to eliminate any harmful interference to operations in the adjacent foreign territory and to ensure continuance of equal access to the frequencies by both countries.

This authorization is conditioned upon the full and timely payment of all monies due pursuant to Sections 1.2110 and 24.716 of the Commission's Rules and the terms of the Commission's installment plan as set forth in the Note and Security Agreement executed by the licensee. Failure to comply with this condition will result in the automatic cancellation of this authorization.

Conditions:
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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FCC 601-MB
October 2017

Licensee Name: CELLCO PARTNERSHIP

Call Sign: KNLH273 **File Number:** 0007716978 **Print Date:** 06-06-2017

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status

Reference Copy

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Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Call Sign	File Number
WRNF322	
Radio Service PM - 3.7 GHz Service	

FCC Registration Number (FRN): 0003290673

Grant Date	Effective Date	Expiration Date	Print Date
07-23-2021	07-23-2021	07-23-2036	

Market Number	Channel Block	Sub-Market Designator
PEA069	A1	0

Market Name
Springfield, MA

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date
07-23-2029	07-23-2033		

Waivers/Conditions:

Operation for this combination license grants both interim and final rights for this PEA and is not impacted by the relocation process pursuant to 47 CFR ? 27.1412(g).

License is conditioned on compliance with all applicable FCC rules and regulations, including licensee making payments required by 47 C.F.R. §§ 27.1401- 27.1424 as described in FCC 20-22. See FCC 20-22, paras. 178-331.

Conditions:
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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Reference Copy

Licensee Name: CELLCO PARTNERSHIP

Call Sign: WRNF322 **File Number:** **Print Date:**

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status

Reference Copy

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Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Call Sign	File Number
WRNF323	
Radio Service PM - 3.7 GHz Service	

FCC Registration Number (FRN): 0003290673

Grant Date	Effective Date	Expiration Date	Print Date
07-23-2021	07-23-2021	07-23-2036	

Market Number	Channel Block	Sub-Market Designator
PEA069	A2	0

Market Name
Springfield, MA

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date
07-23-2029	07-23-2033		

Waivers/Conditions:

Operation for this combination license grants both interim and final rights for this PEA and is not impacted by the relocation process pursuant to 47 CFR ? 27.1412(g).

License is conditioned on compliance with all applicable FCC rules and regulations, including licensee making payments required by 47 C.F.R. §§ 27.1401- 27.1424 as described in FCC 20-22. See FCC 20-22, paras. 178-331.

Conditions:
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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Reference Copy

Licensee Name: CELLCO PARTNERSHIP

Call Sign: WRNF323 **File Number:** **Print Date:**

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status

Reference Copy

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Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Call Sign	File Number
WRNF324	
Radio Service PM - 3.7 GHz Service	

FCC Registration Number (FRN): 0003290673

Grant Date	Effective Date	Expiration Date	Print Date
07-23-2021	07-23-2021	07-23-2036	

Market Number	Channel Block	Sub-Market Designator
PEA069	A3	0

Market Name
Springfield, MA

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date
07-23-2029	07-23-2033		

Waivers/Conditions:

Operation for this combination license grants both interim and final rights for this PEA and is not impacted by the relocation process pursuant to 47 CFR ? 27.1412(g).

License is conditioned on compliance with all applicable FCC rules and regulations, including licensee making payments required by 47 C.F.R. §§ 27.1401- 27.1424 as described in FCC 20-22. See FCC 20-22, paras. 178-331.

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Reference Copy

Licensee Name: CELLCO PARTNERSHIP

Call Sign: WRNF324 **File Number:** **Print Date:**

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status

Reference Copy

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Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Call Sign	File Number
WRNF325	
Radio Service PM - 3.7 GHz Service	

FCC Registration Number (FRN): 0003290673

Grant Date	Effective Date	Expiration Date	Print Date
07-23-2021	07-23-2021	07-23-2036	

Market Number	Channel Block	Sub-Market Designator
PEA069	A4	0

Market Name
Springfield, MA

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date
07-23-2029	07-23-2033		

Waivers/Conditions:

This final license provides authorization during the full 15-year license term. Operation under this final license may begin on the earlier of (1) 12/5/2025 or (2) the date that the certification for accelerated relocation for this PEA is validated by the FCC pursuant to 47 CFR § 27.1412(g).

License is conditioned on compliance with all applicable FCC rules and regulations, including licensee making payments required by 47 C.F.R. §§ 27.1401- 27.1424 as described in FCC 20-22. See FCC 20-22, paras. 178-331.

Conditions:
Pursuant to §309(h) of the Communications Act of 1934, as amended, 47 U.S.C. §309(h), this license is subject to the following conditions: This license shall not vest in the licensee any right to operate the station nor any right in the use of the frequencies designated in the license beyond the term thereof nor in any other manner than authorized herein. Neither the license nor the right granted thereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934, as amended. See 47 U.S.C. § 310(d). This license is subject in terms to the right of use or control conferred by §706 of the Communications Act of 1934, as amended. See 47 U.S.C. §606.

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Reference Copy

Licensee Name: CELLCO PARTNERSHIP

Call Sign: WRNF325 **File Number:** **Print Date:**

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status

Reference Copy

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Federal Communications Commission

Wireless Telecommunications Bureau

RADIO STATION AUTHORIZATION

LICENSEE: CELLCO PARTNERSHIP

ATTN: REGULATORY
CELLCO PARTNERSHIP
5055 NORTH POINT PKWY, NP2NE NETWORK ENGINEERING
ALPHARETTA, GA 30022

Call Sign	File Number
WRNF326	
Radio Service PM - 3.7 GHz Service	

FCC Registration Number (FRN): 0003290673

Grant Date	Effective Date	Expiration Date	Print Date
07-23-2021	07-23-2021	07-23-2036	

Market Number	Channel Block	Sub-Market Designator
PEA069	A5	0

Market Name
Springfield, MA

1st Build-out Date	2nd Build-out Date	3rd Build-out Date	4th Build-out Date
07-23-2029	07-23-2033		

Waivers/Conditions:

This final license provides authorization during the full 15-year license term. Operation under this final license may begin on the earlier of (1) 12/5/2025 or (2) the date that the certification for accelerated relocation for this PEA is validated by the FCC pursuant to 47 CFR § 27.1412(g).

License is conditioned on compliance with all applicable FCC rules and regulations, including licensee making payments required by 47 C.F.R. §§ 27.1401- 27.1424 as described in FCC 20-22. See FCC 20-22, paras. 178-331.

Conditions:
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Reference Copy

Licensee Name: CELLCO PARTNERSHIP

Call Sign: WRNF326 **File Number:** **Print Date:**

700 MHz Relicensed Area Information:

Market	Market Name	Buildout Deadline	Buildout Notification	Status

Reference Copy

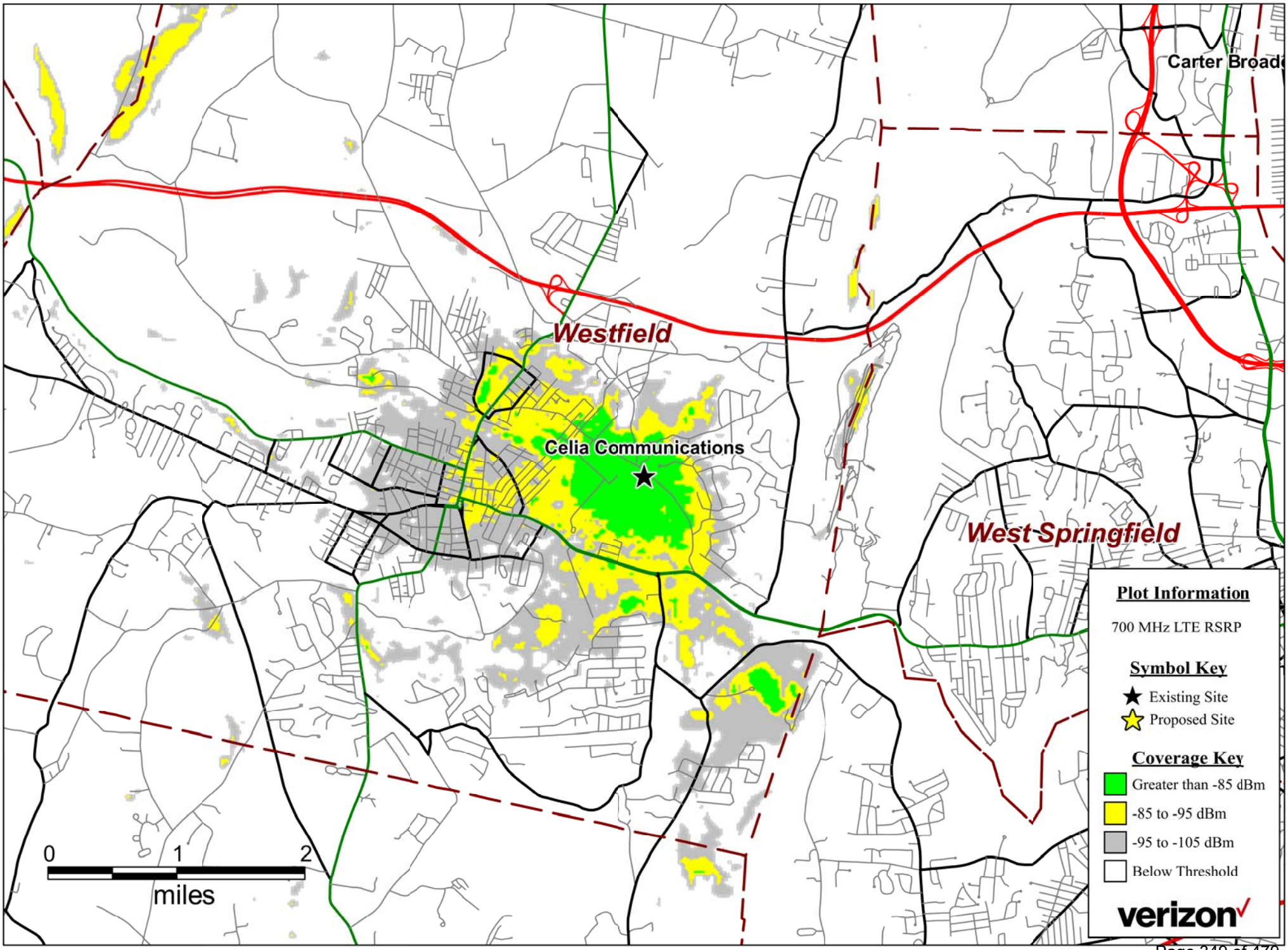
verizon

AGAWAM N 3, MA

Repeater Feasibility:

The possible use of repeaters to provide reliable coverage for the Agawam N 3, MA location was also considered. While this may be a viable option, the donor and re-radiator antennas will still need placement. This would necessitate the need for some sort of tower or pole for mounting with considerable height to achieve adequate signaling. It also does not provide for any additional capacity in the serving area. Another site will be required once the donor cell approaches maximum capacity. This would entail the construction of yet another tower. The closest cell is located in W Springfield at 1305 Memorial Ave, approximately 1.2 miles away. This facility is not a good candidate for a donor due to its' limited height, and existing demand placed upon the facility. The next closest site is located in Agawam at 491 Mill St, approximately 1.5 miles away, but has similar limitations due to existing demand. It follows that a repeater is an infeasible alternative to the proposed Agawam N 3, MA cell site.

Kip DiVito
RF Engineer
Verizon Wireless
Network – New England
20 Alexander Drive
Wallingford, CT 06492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Westfield
Celia Communications
West Springfield
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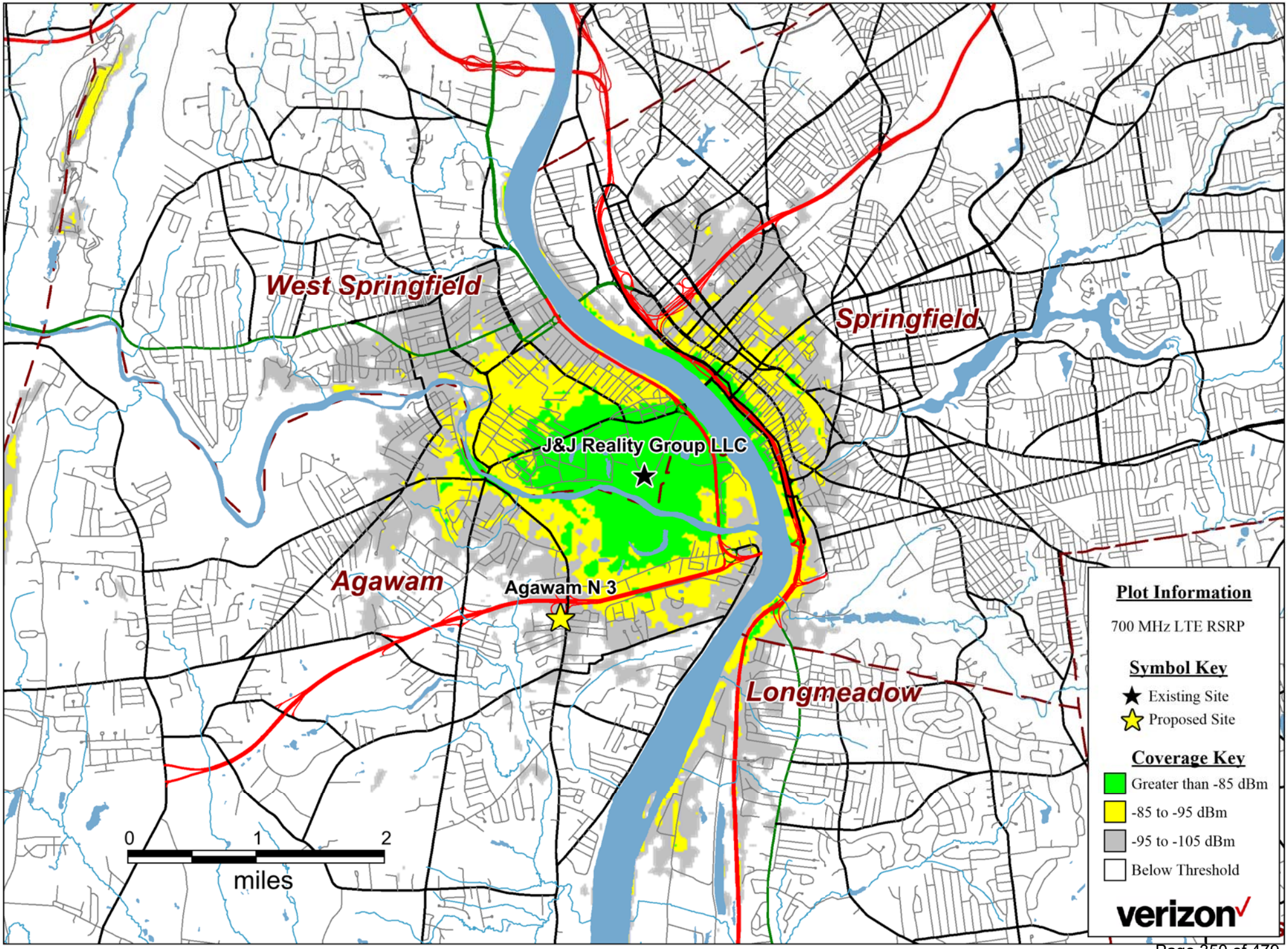
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon


West Springfield
Springfield
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Agawam
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Existing Site
Proposed Site
Coverage Key
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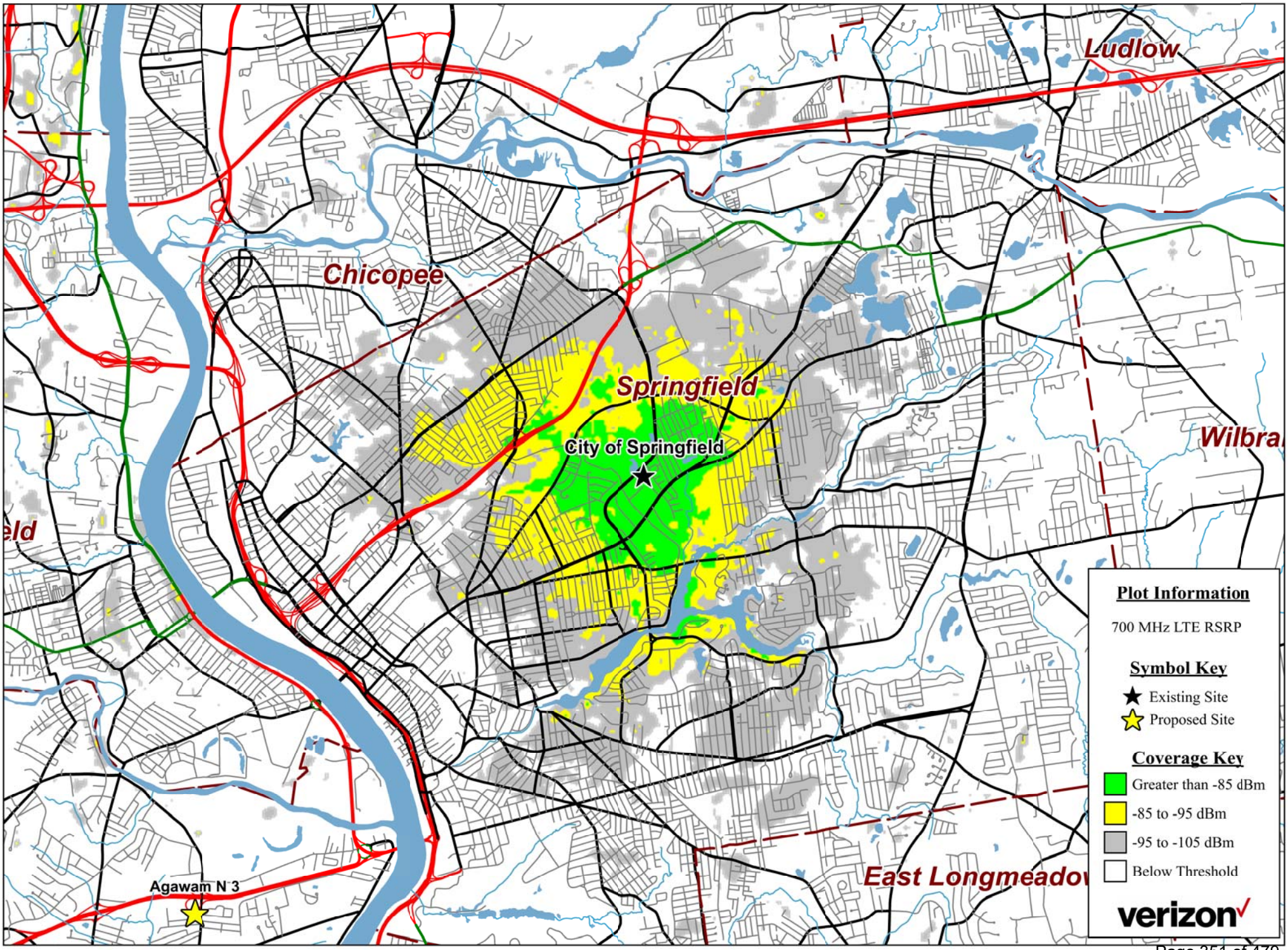
-95 to -105 dBm
Below Threshold
verizon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Chicopee
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Wilbra
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Agawam N 3
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Proposed Site
Coverage Key
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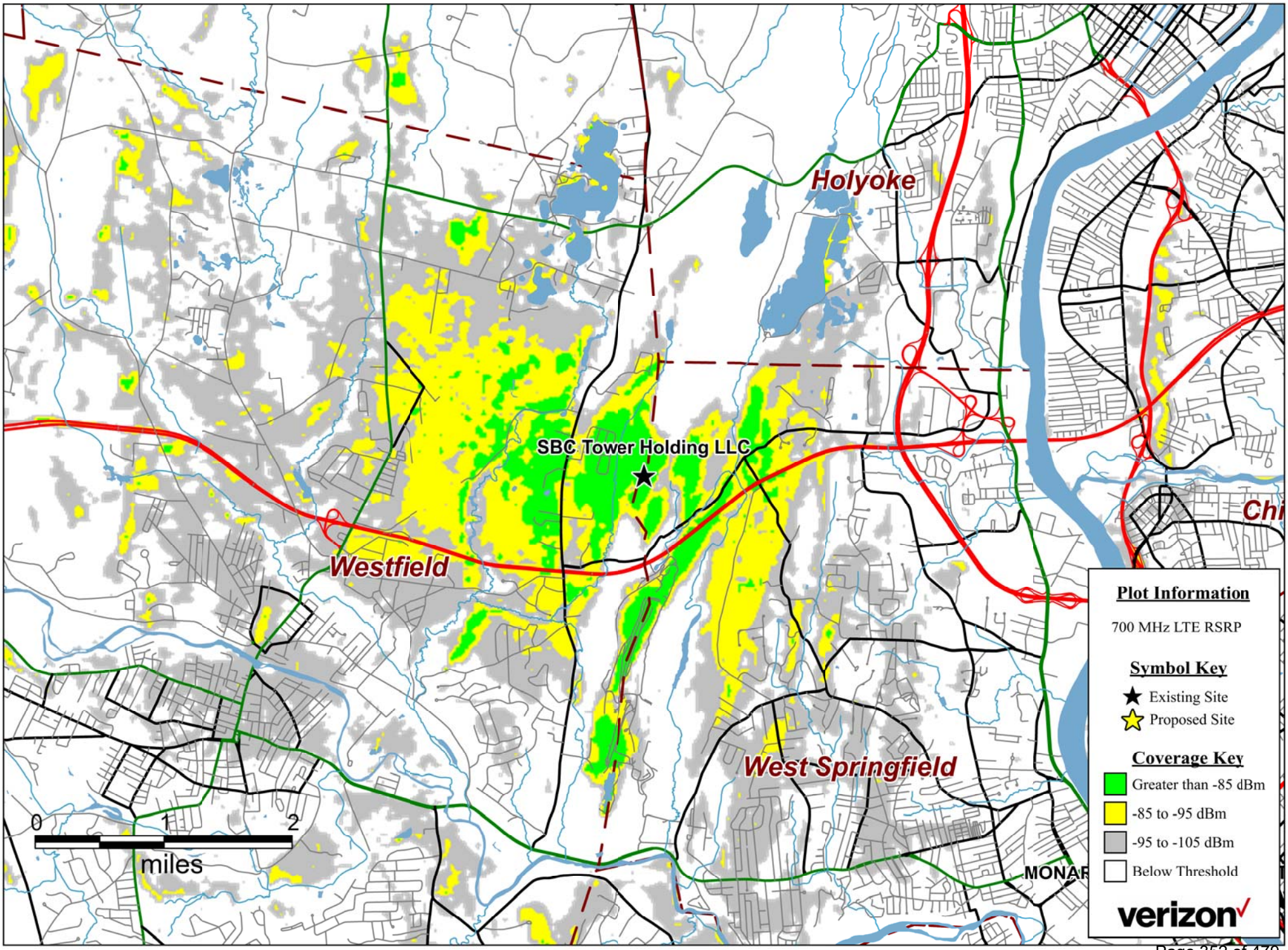
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon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SBC Tower Holding LLC
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Proposed Site
Coverage Key
Greater than -85 dBm
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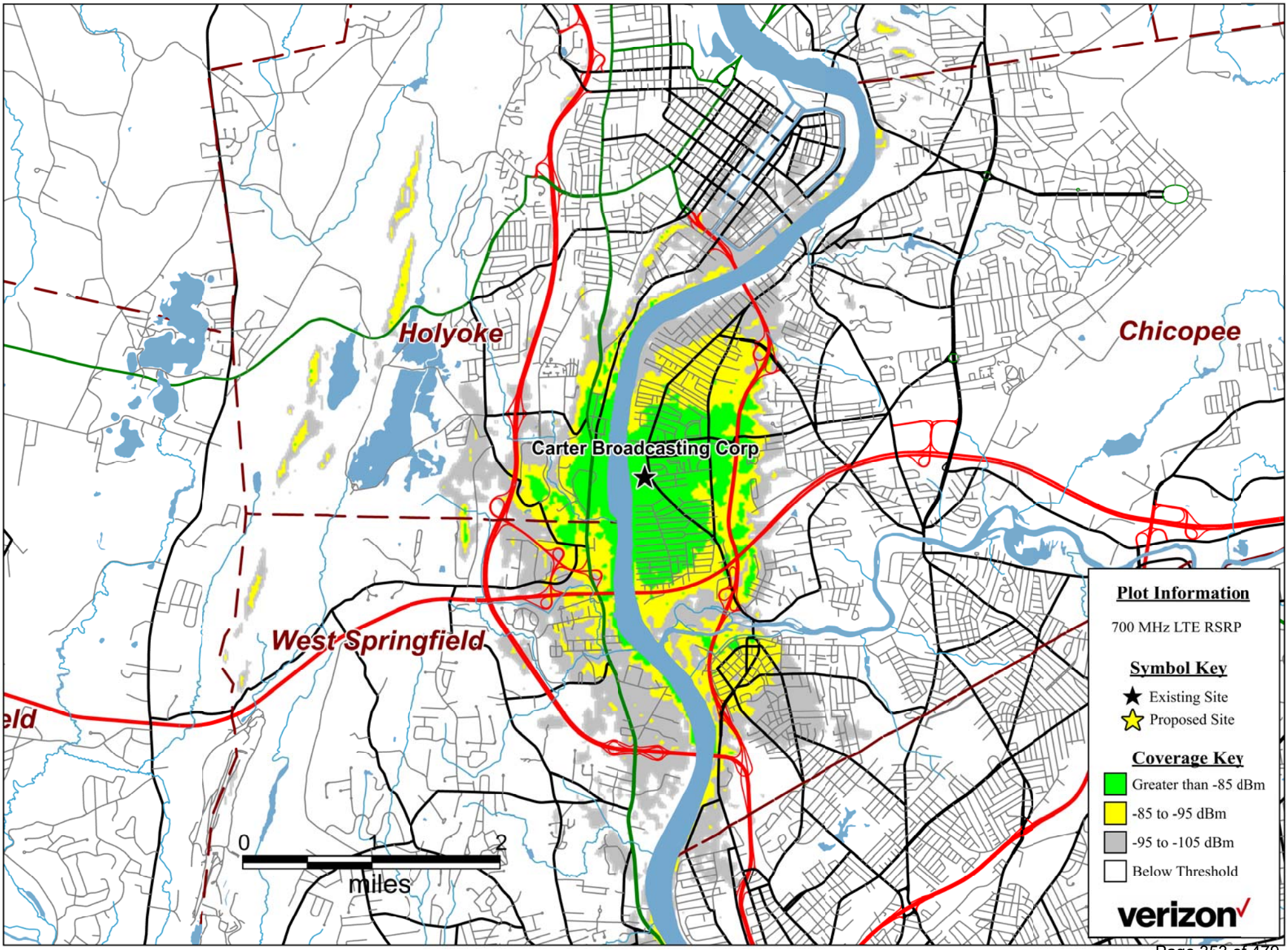
-95 to -105 dBm
Below Threshold
verizon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Chicopee
Carter Broadcasting Corp
West Springfield
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700 MHz LTE RSRP
Symbol Key
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Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
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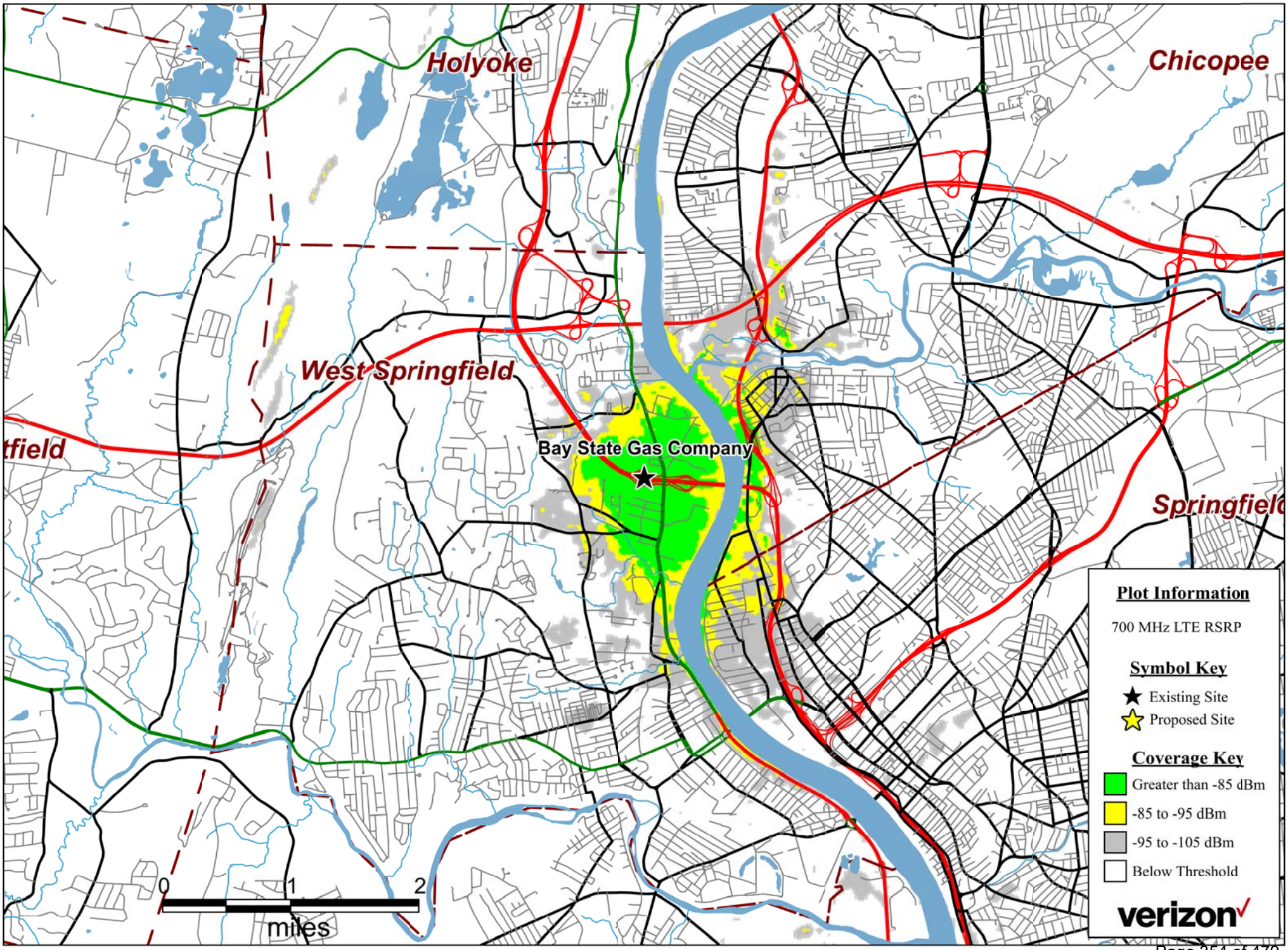
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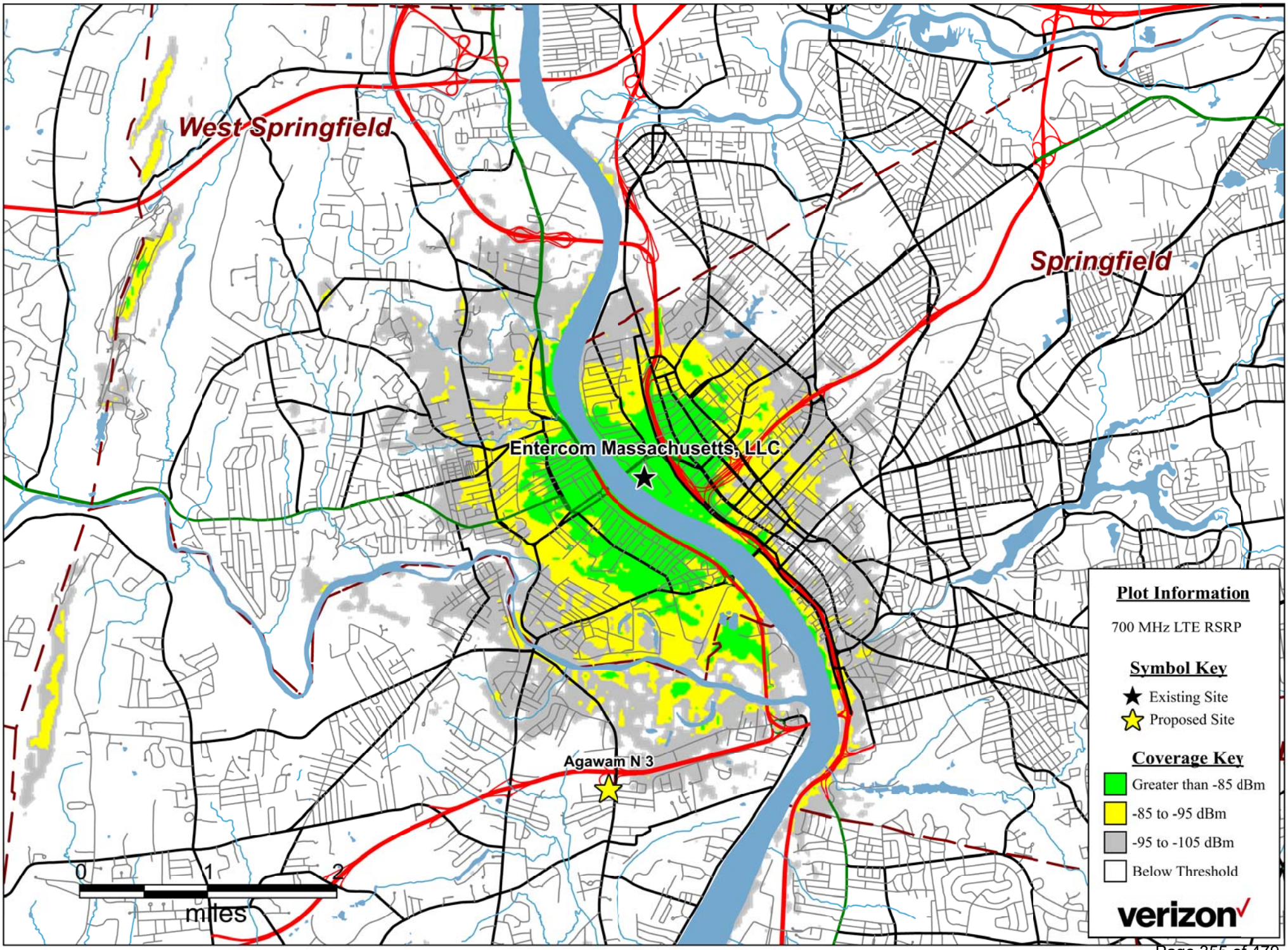
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Springfield
Entercom Massachusetts, LLC
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Coverage Key
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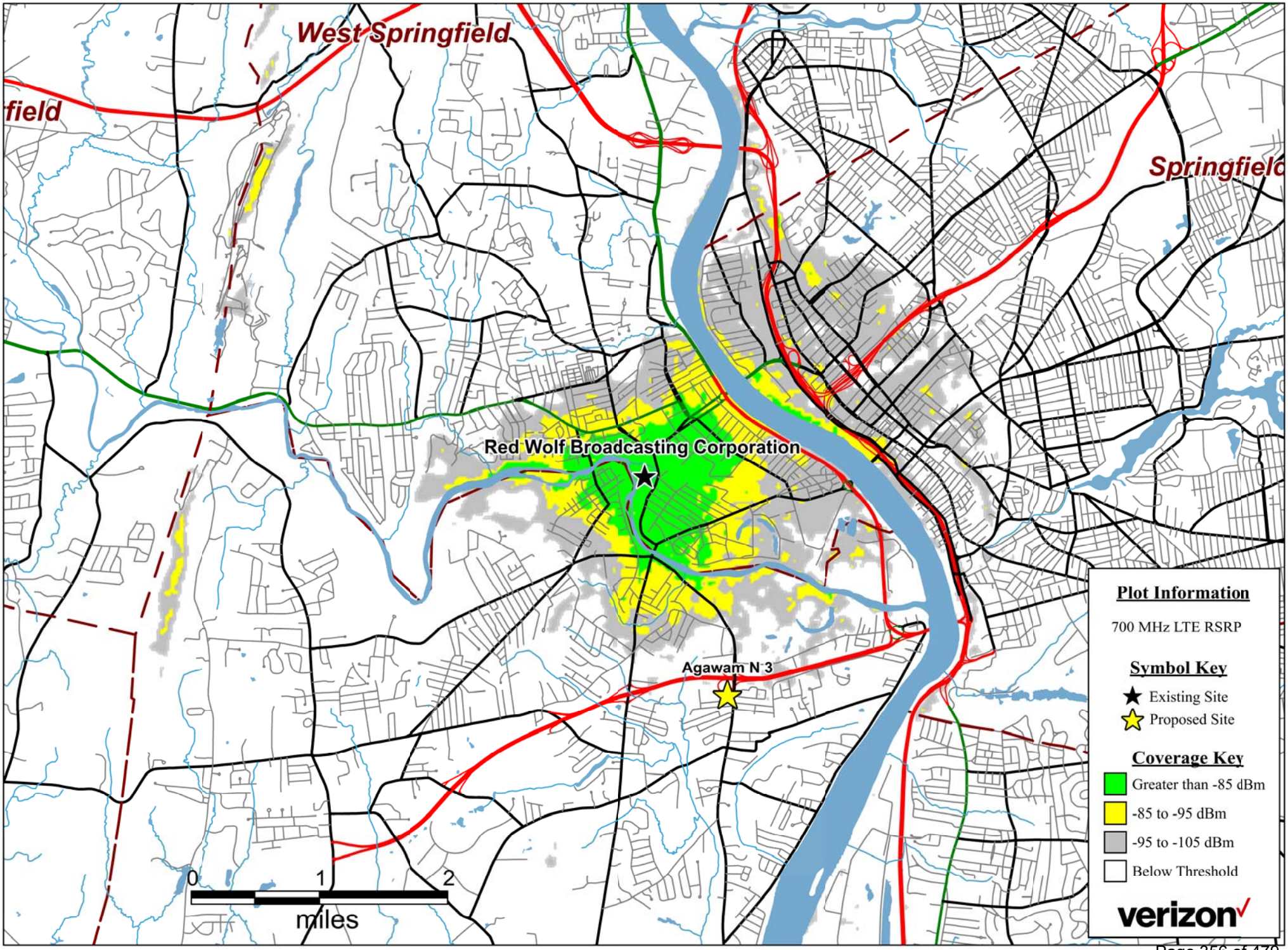
Below Threshold
verizon


West Springfield
Springfield
Red Wolf Broadcasting Corporation
Agawam N 3
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miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
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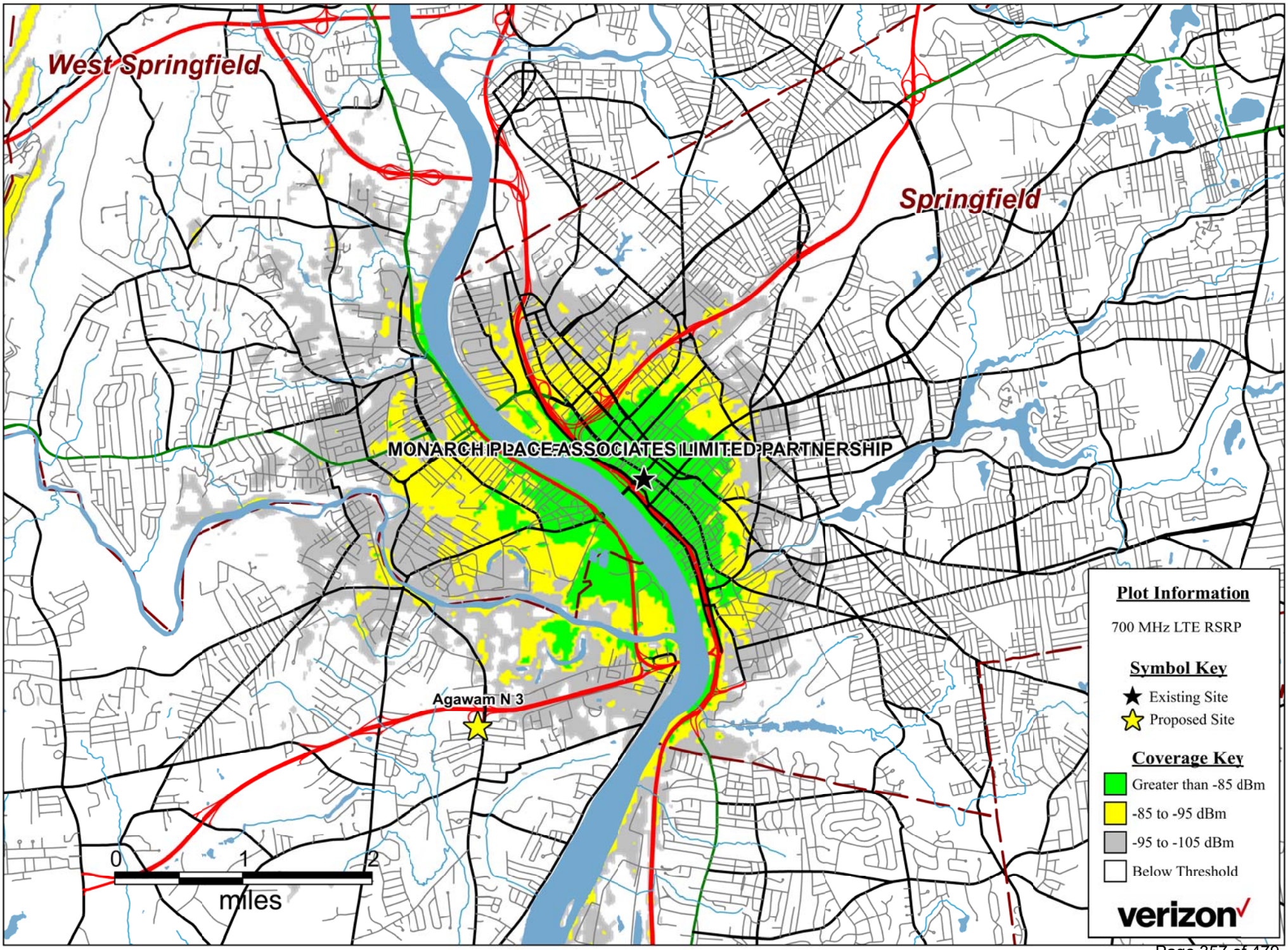
Below Threshold
verizon


West Springfield
Springfield
MONARCH PLACE ASSOCIATES LIMITED PARTNERSHIP
Agawam N 3
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Proposed Site
Coverage Key
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Below Threshold
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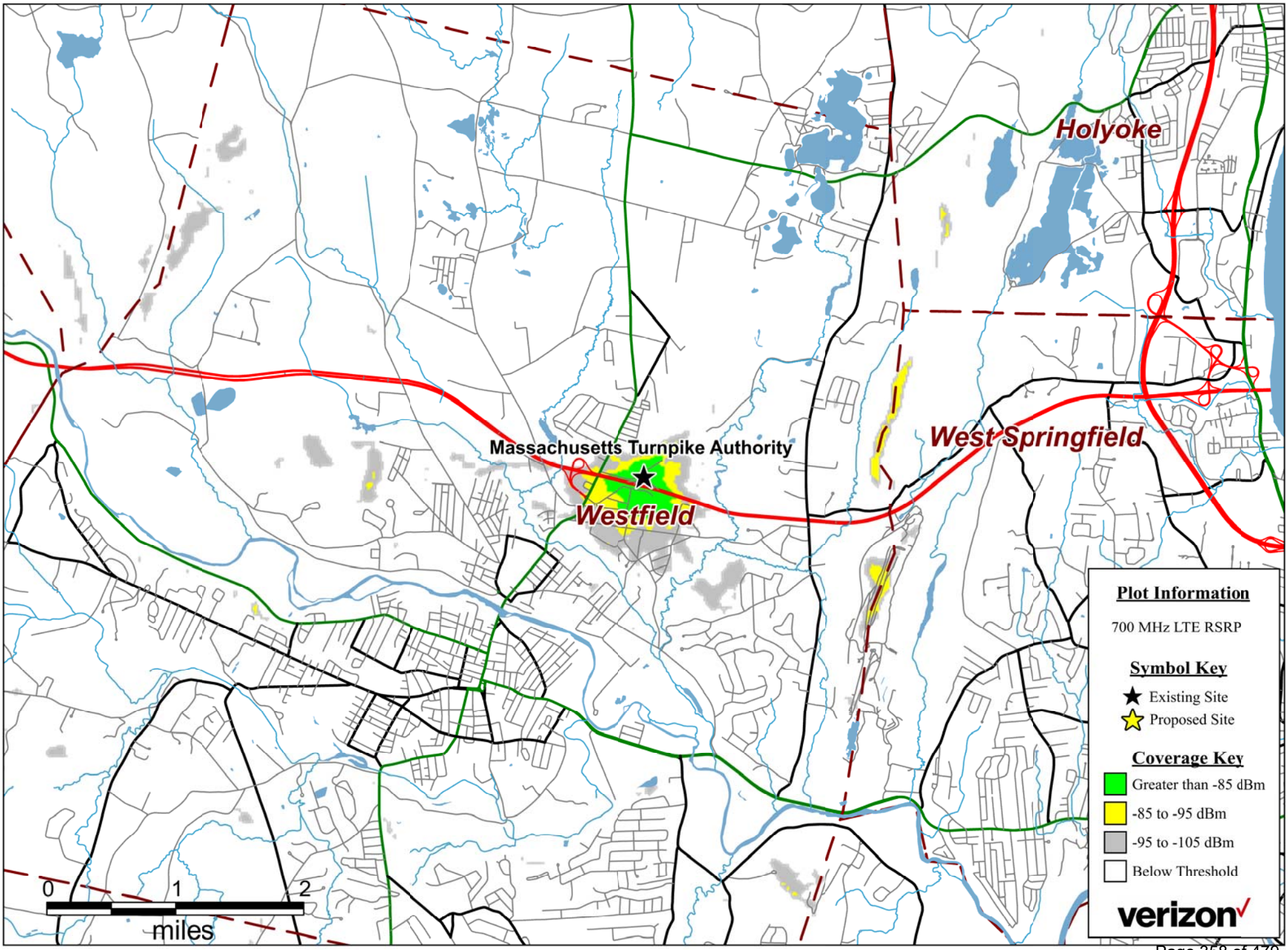
Holyoke
Massachusetts Turnpike Authority
West Springfield
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miles
Plot Information
700 MHz LTE RSRP
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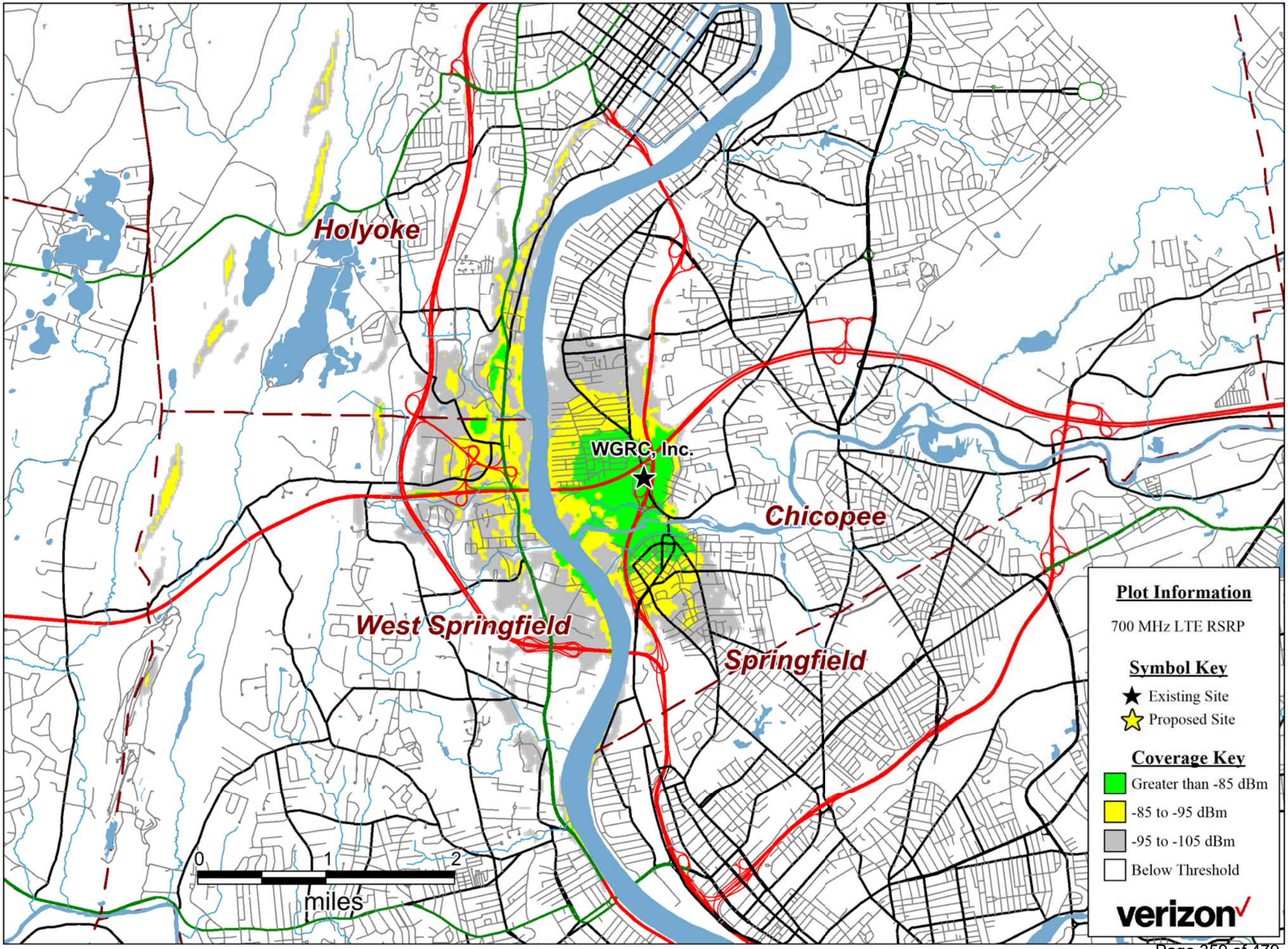
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon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WGRC, Inc.
Chicopee
West Springfield
Springfield
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miles
Plot Information
700 MHz LTE RSRP
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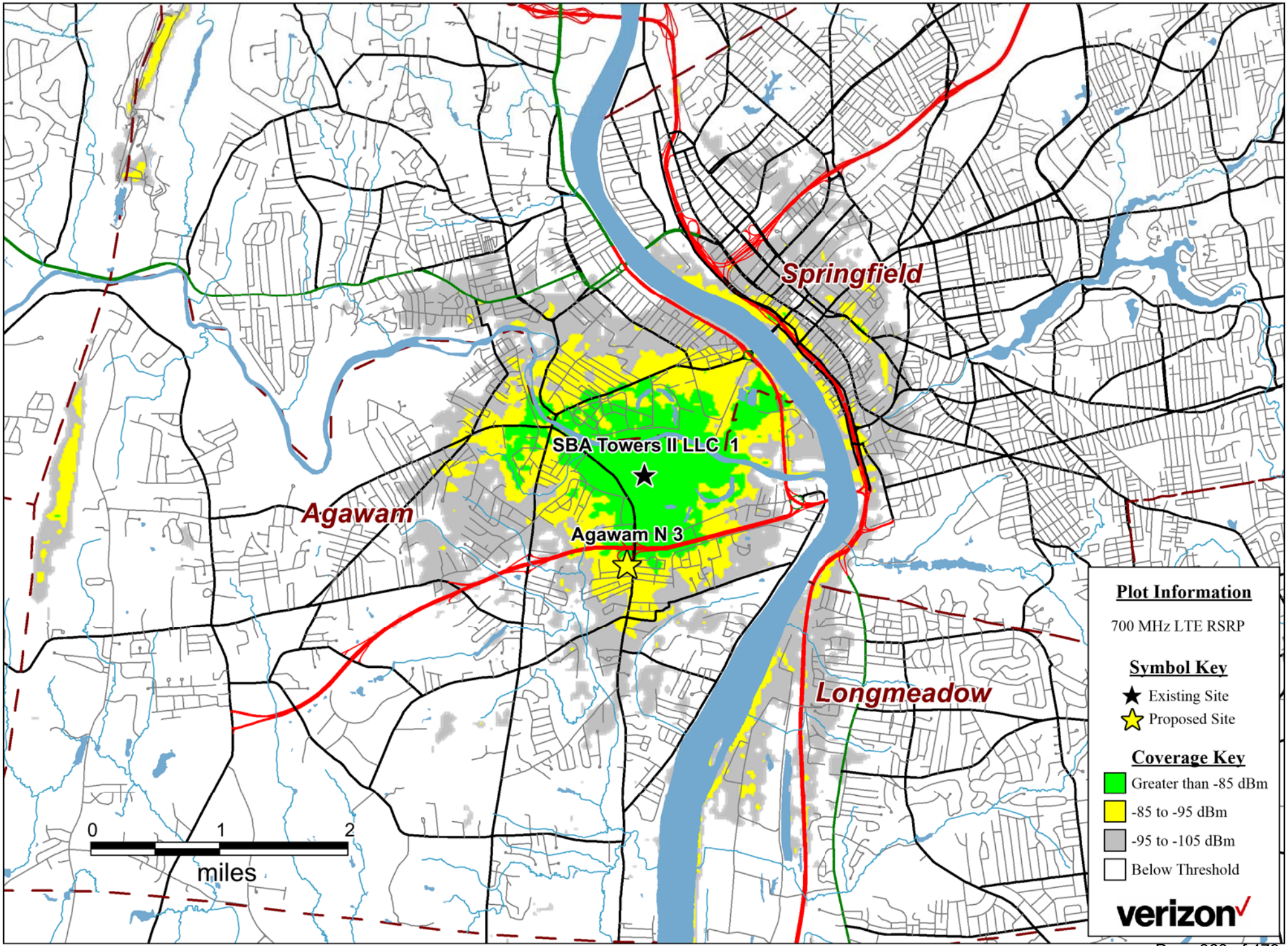
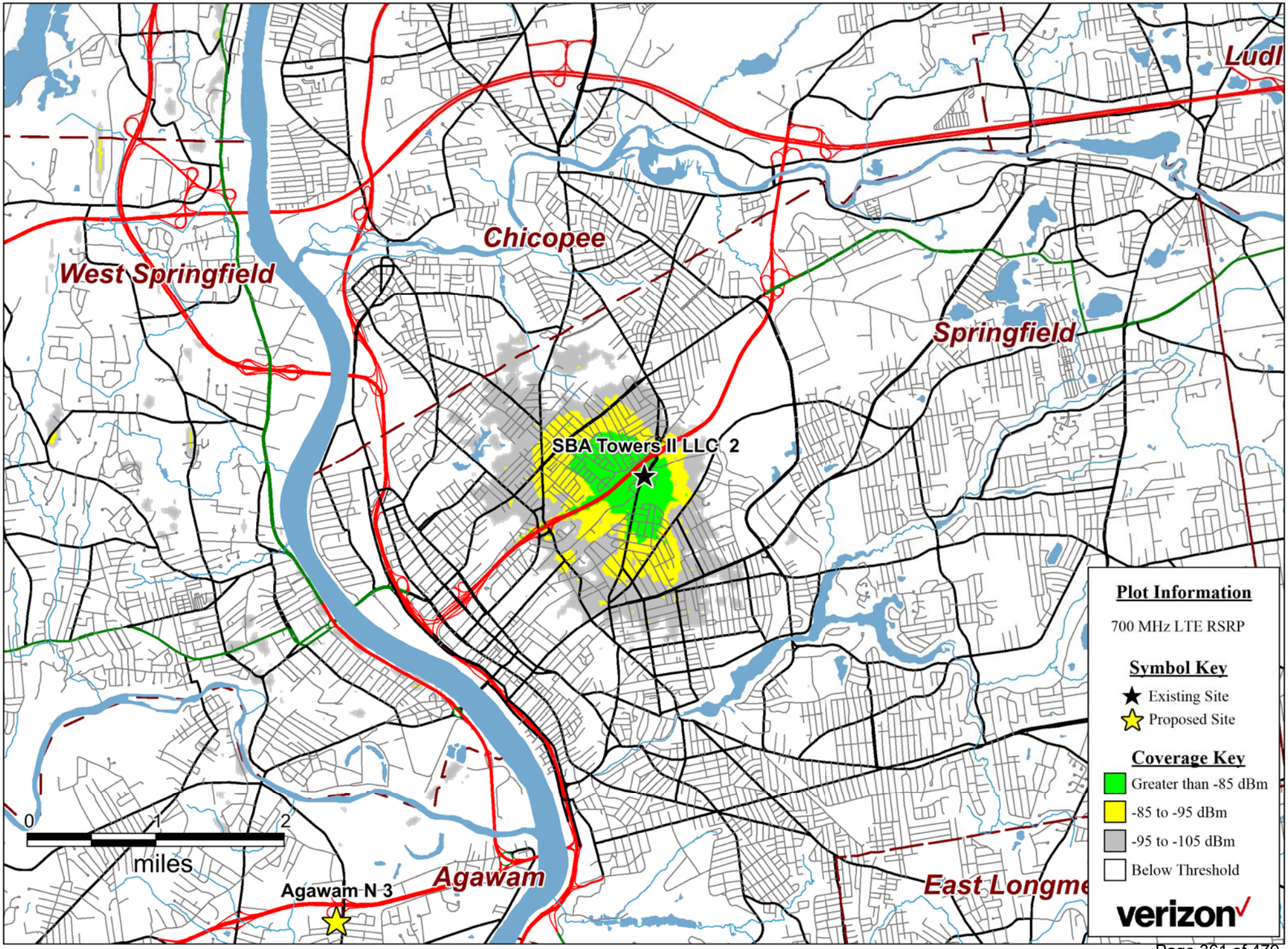
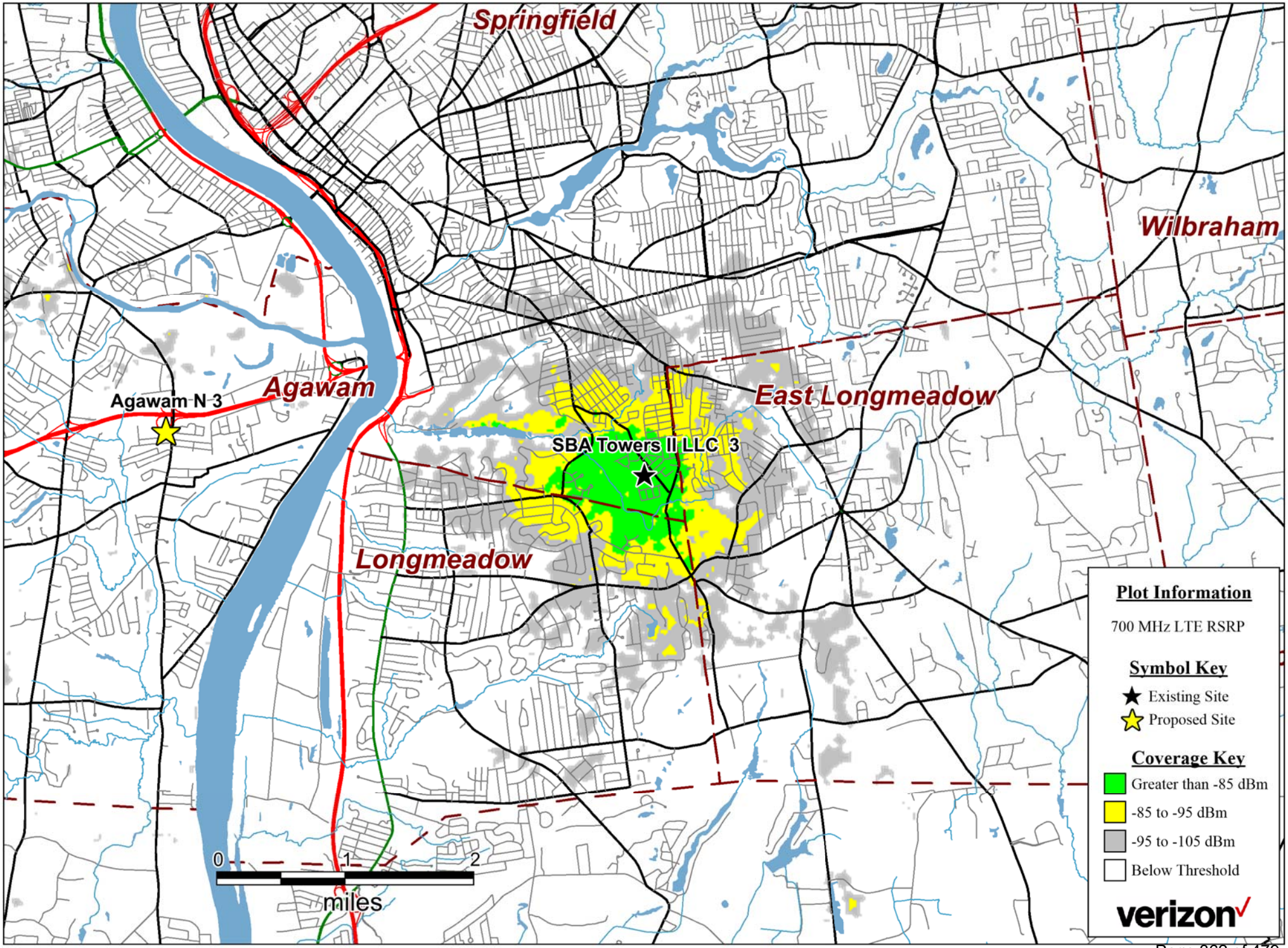
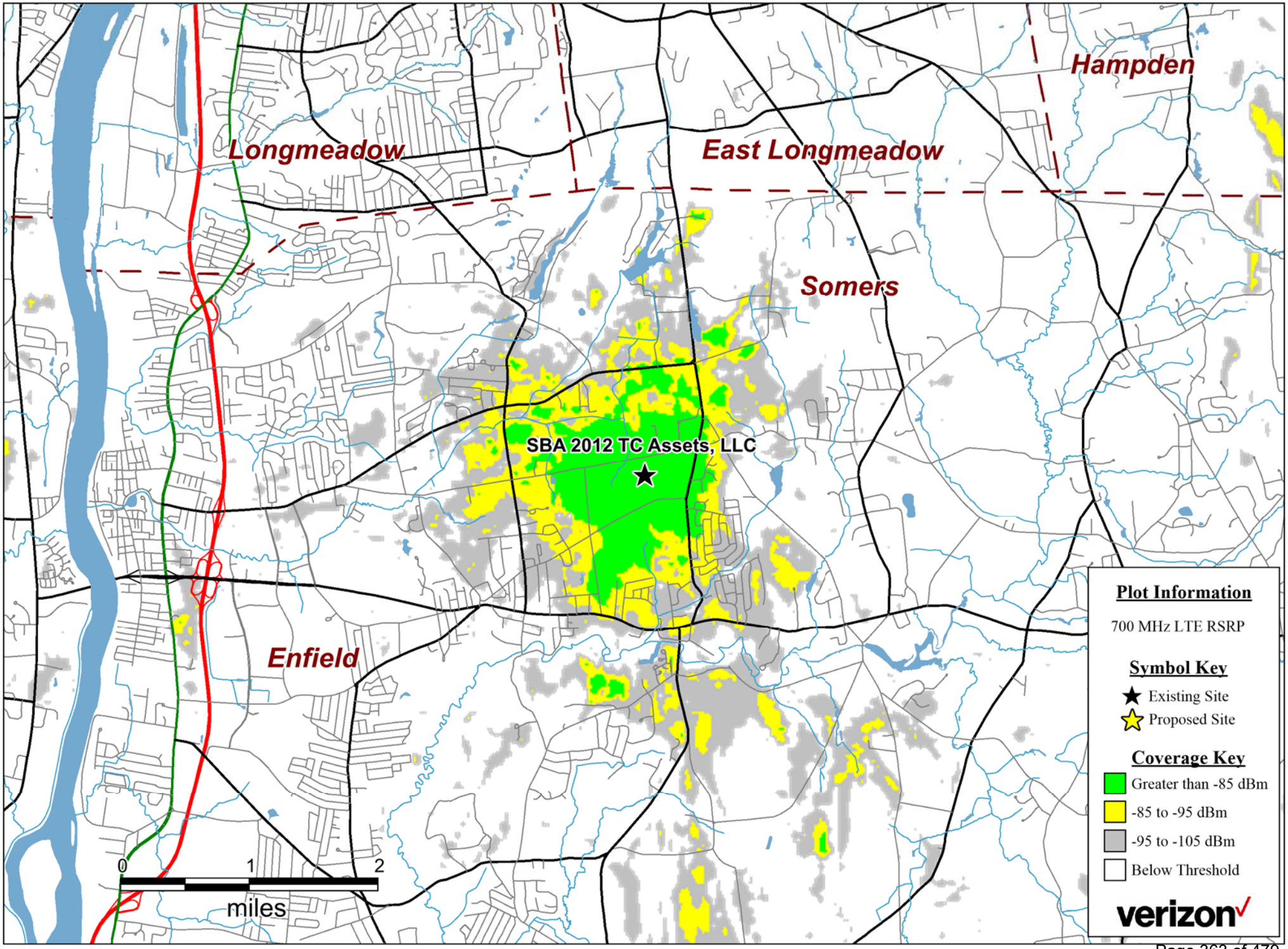
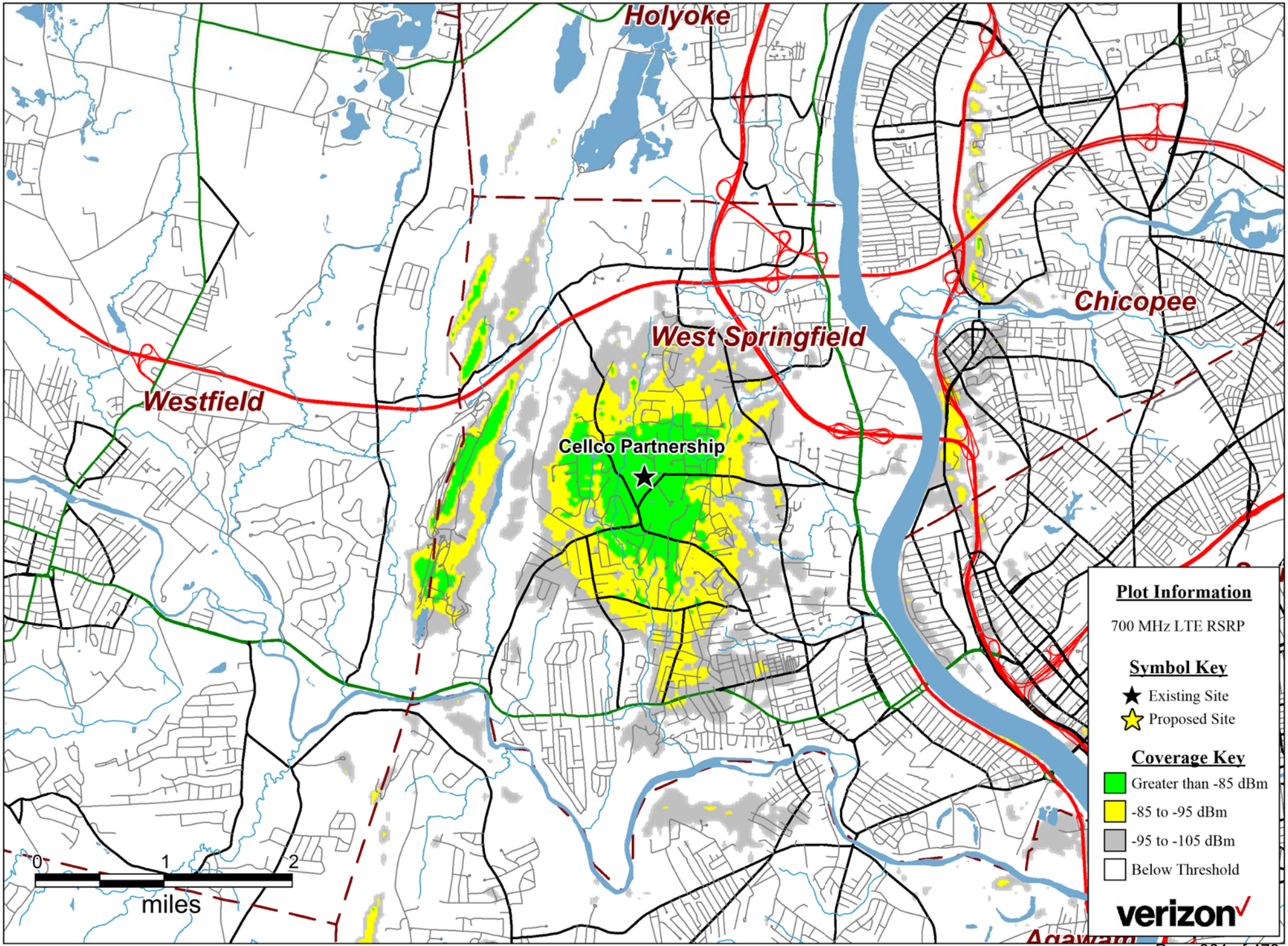
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

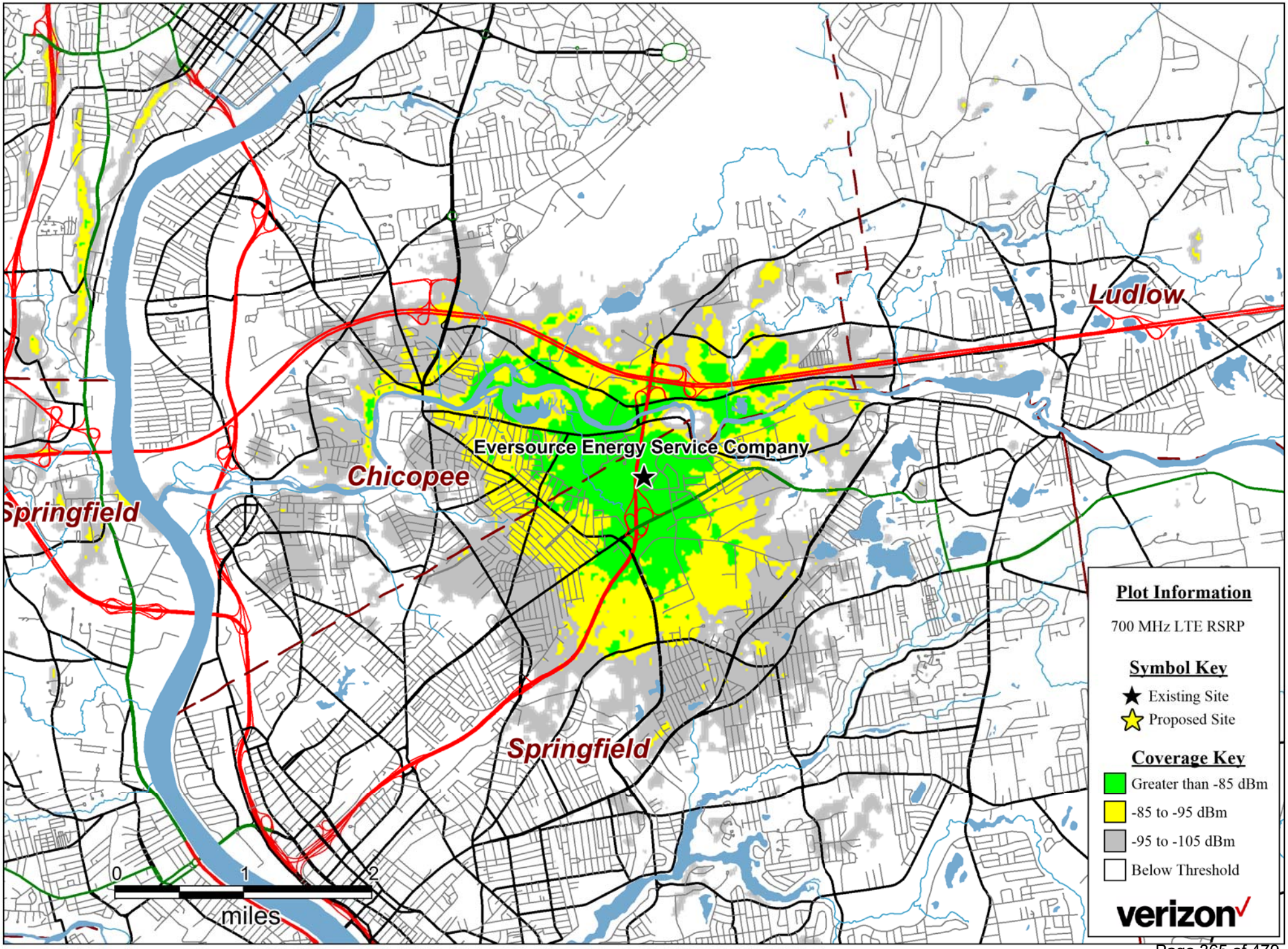

Springfield
SBA Towers II LLC /1
Agawam
Agawam N 3
Longmeadow
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

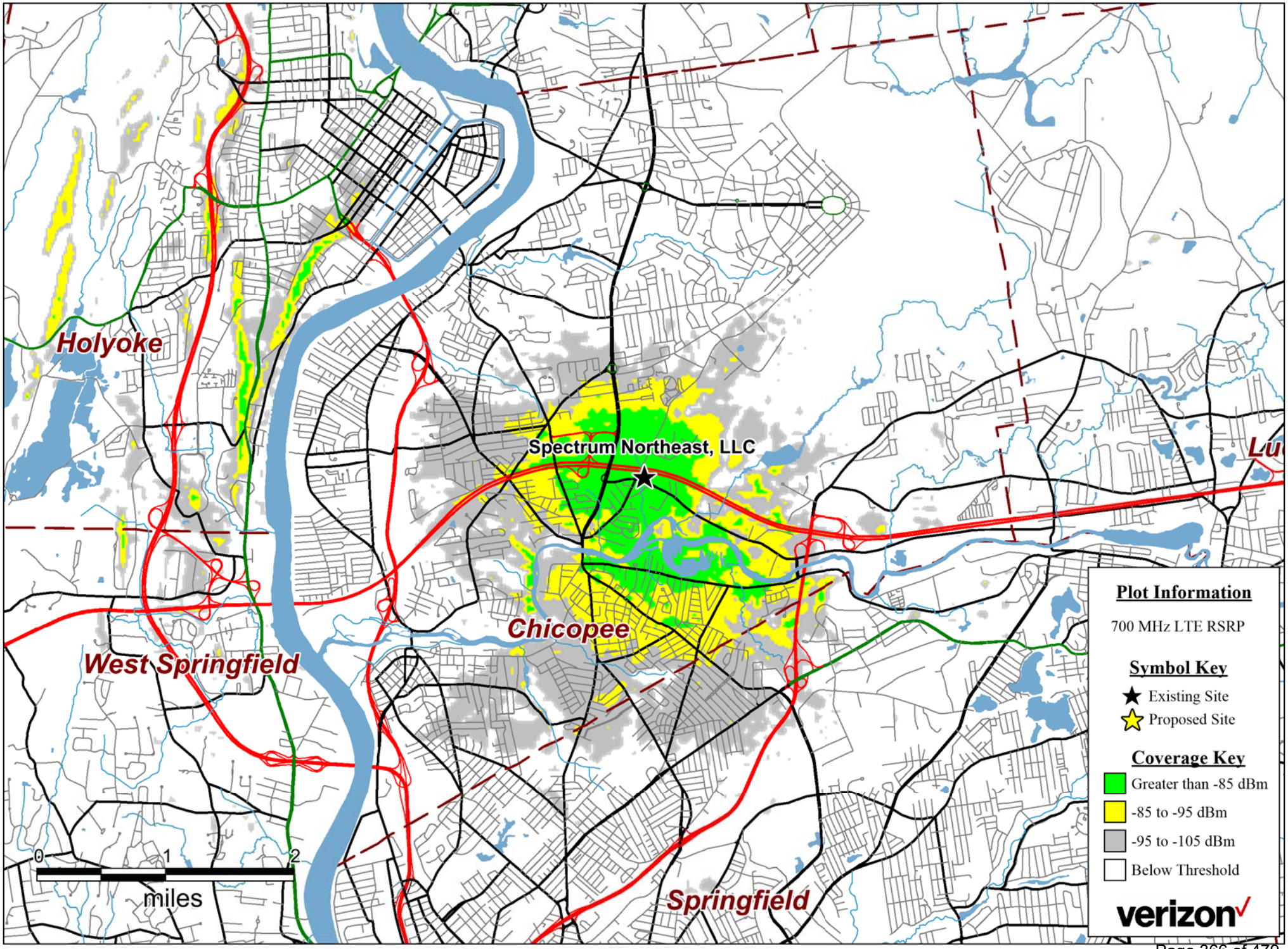

Ludl
Chicopee
West Springfield
Springfield
SBA Towers II LLC 2
Agawam N 3
Agawam
East Longme
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

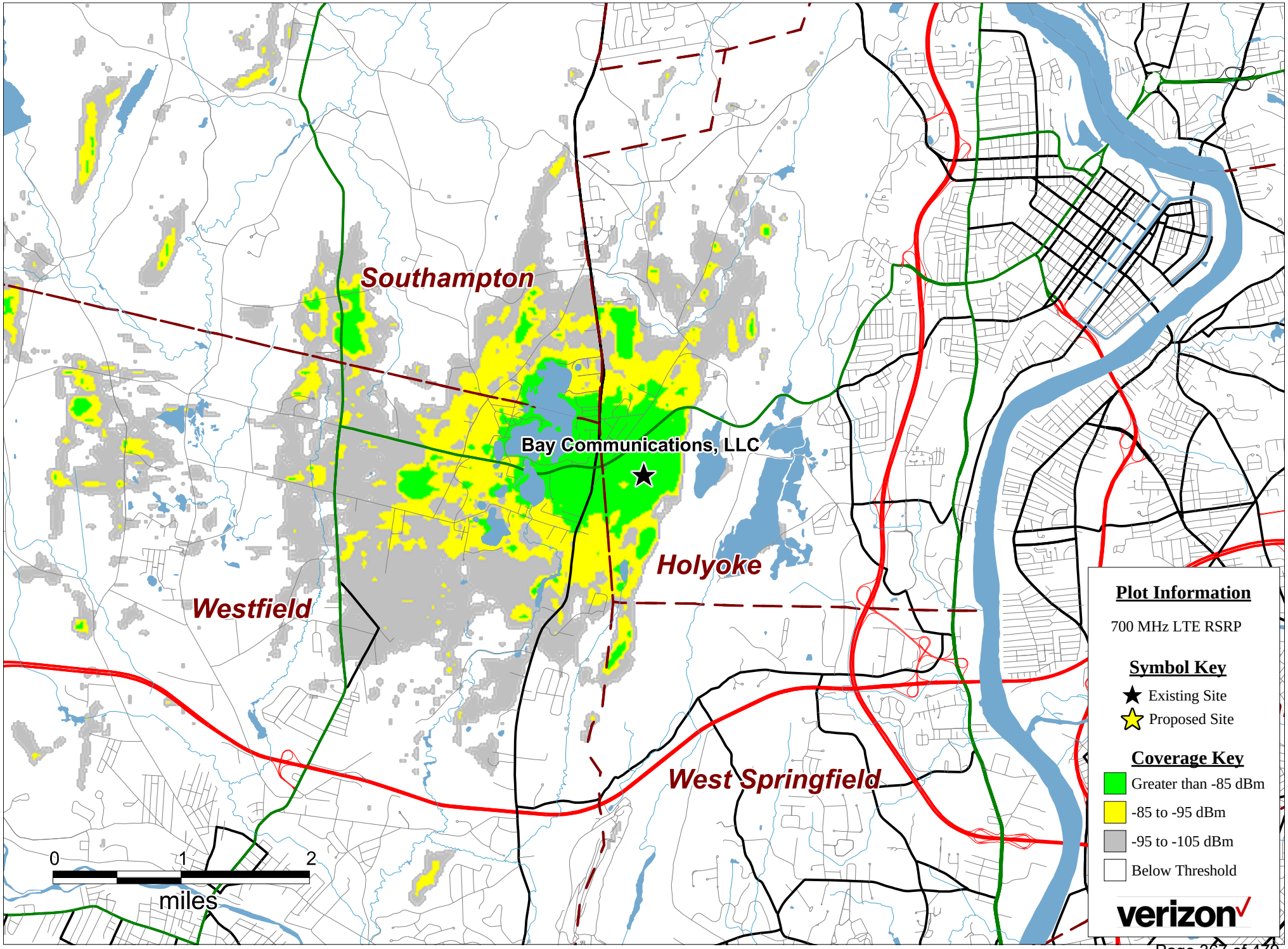

Springfield
Wilbraham
Agawam
Agawam N 3
East Longmeadow
SBA Towers II LLC 3
Longmeadow
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

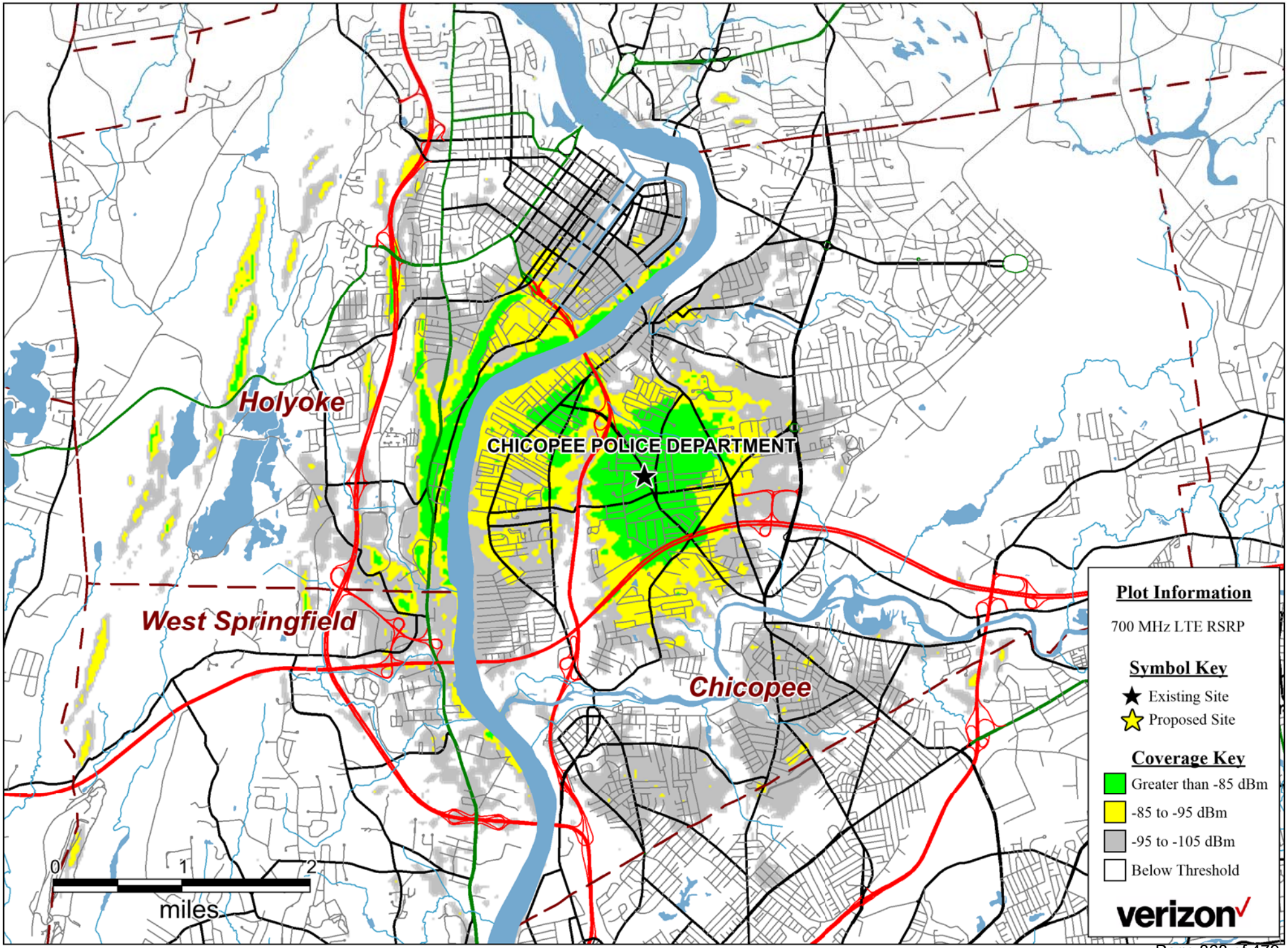

Hampden
Longmeadow
East Longmeadow
Somers
SBA 2012 TC Assets, LLC
Enfield
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

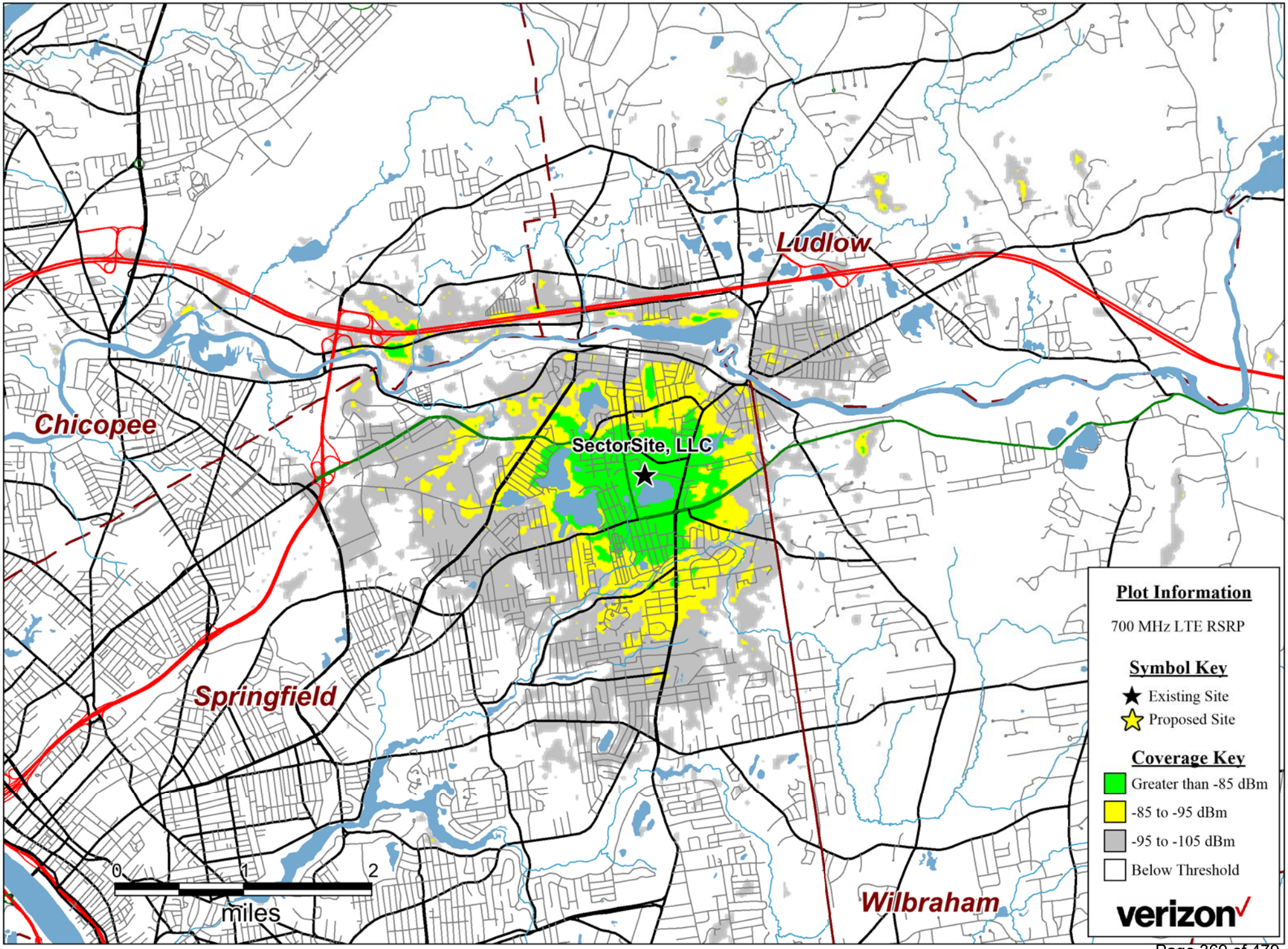

Holyoke
Chicopee
West Springfield
Westfield
Cellco Partnership
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

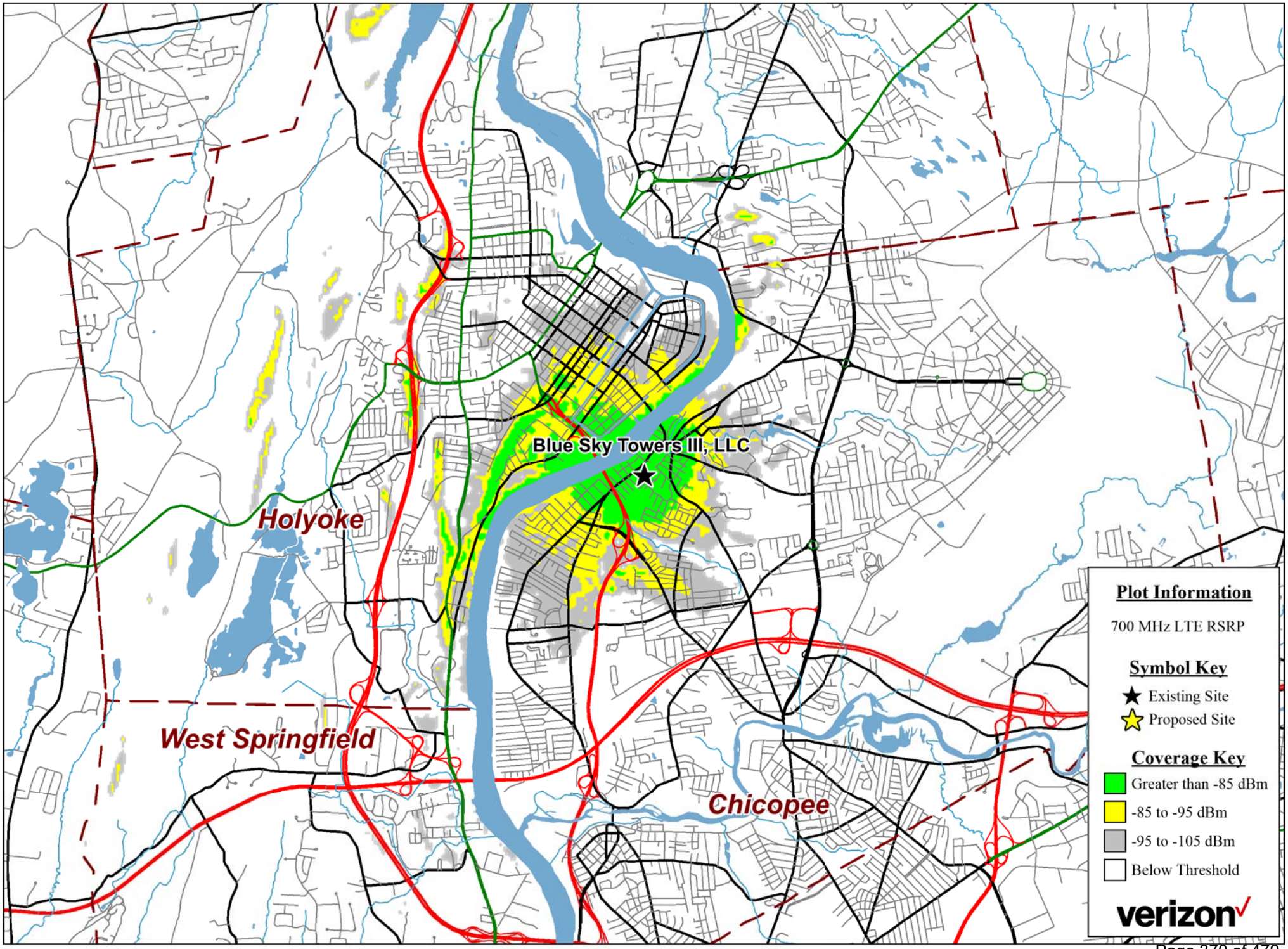

Ludlow
Eversource Energy Service Company
Chicopee
Springfield
Springfield
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

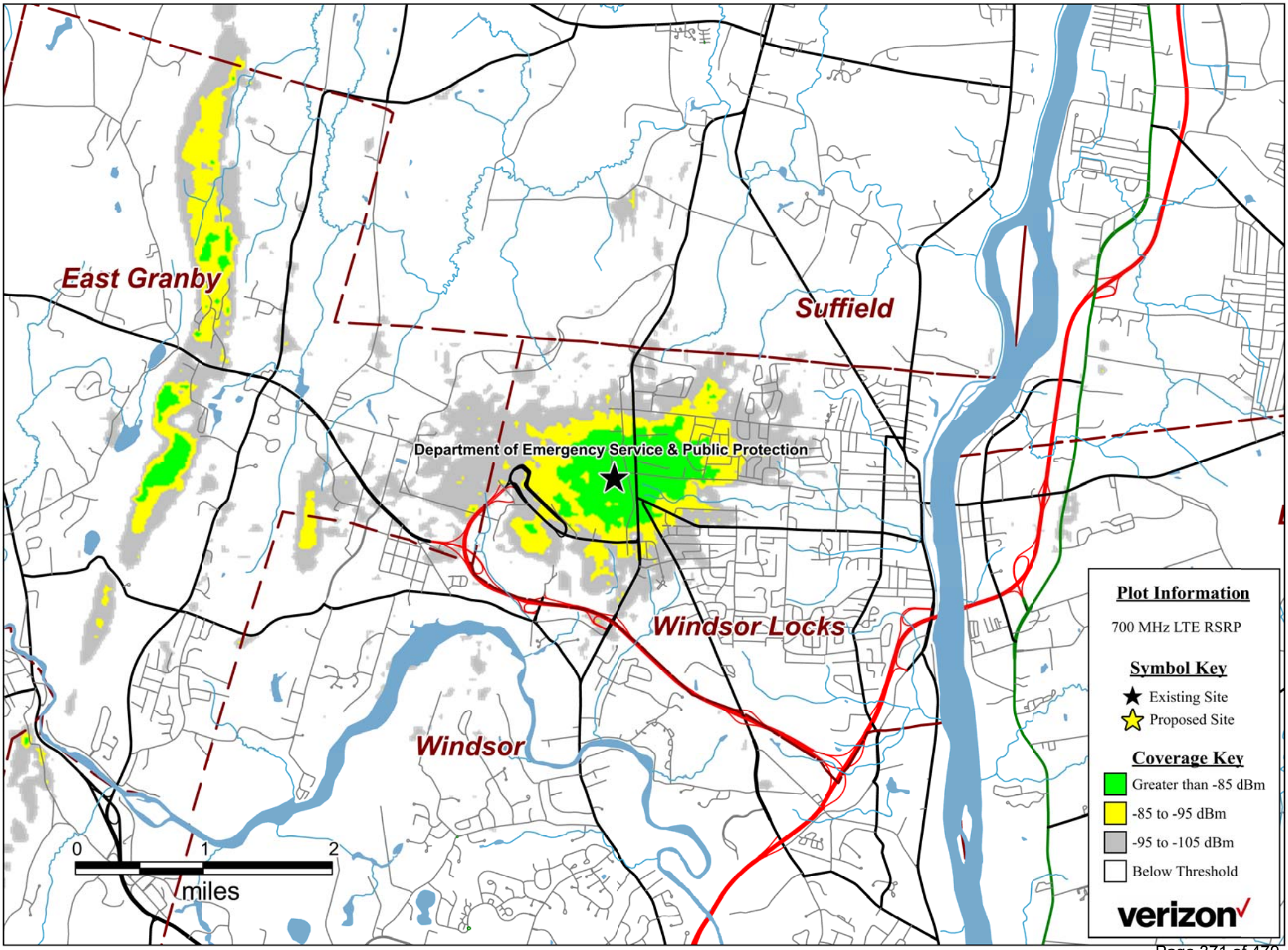

Holyoke
Spectrum Northeast, LLC
Chicopee
West Springfield
Springfield
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

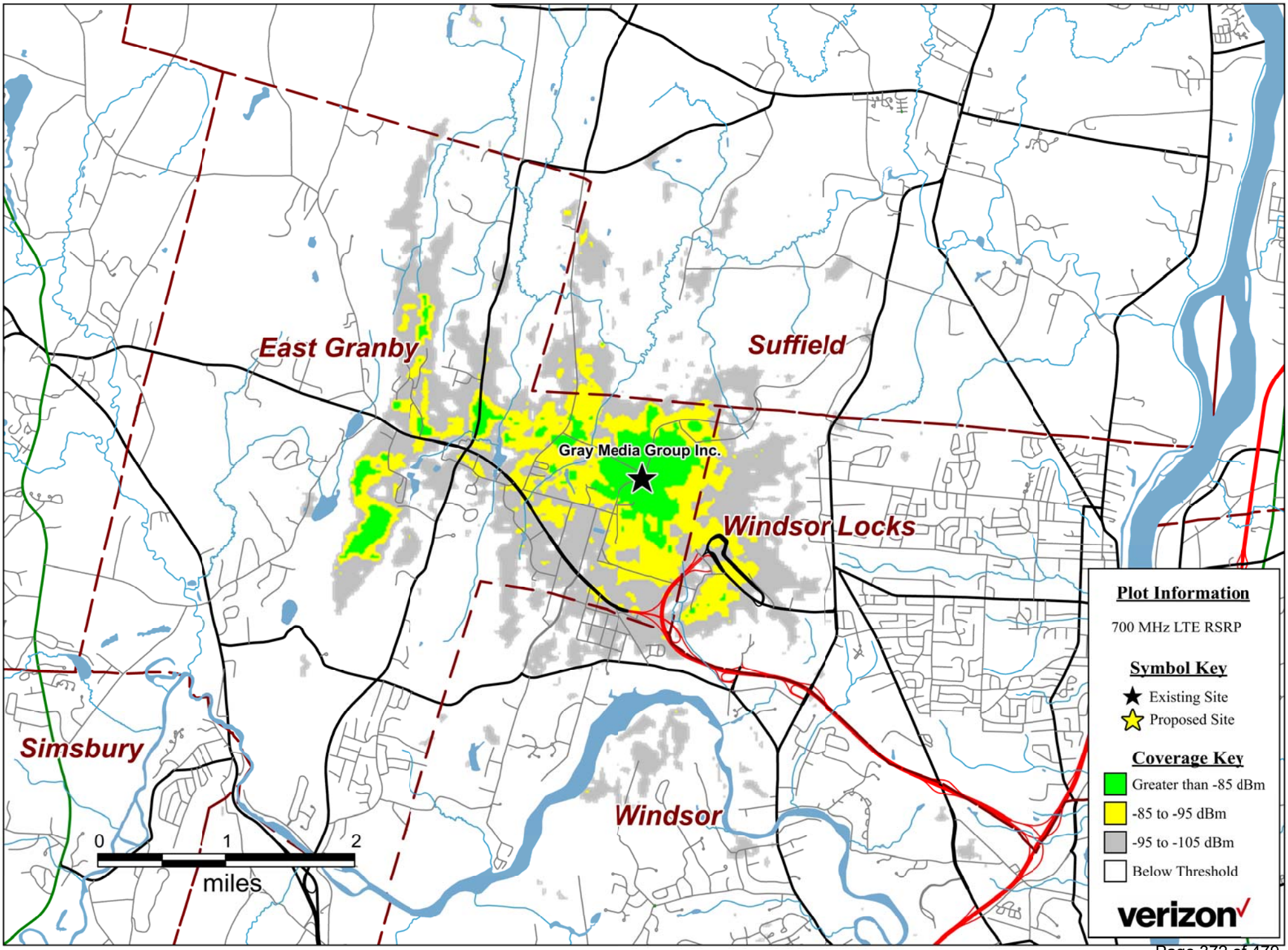

Southampton
Bay Communications, LLC
Holyoke
Westfield
West Springfield
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

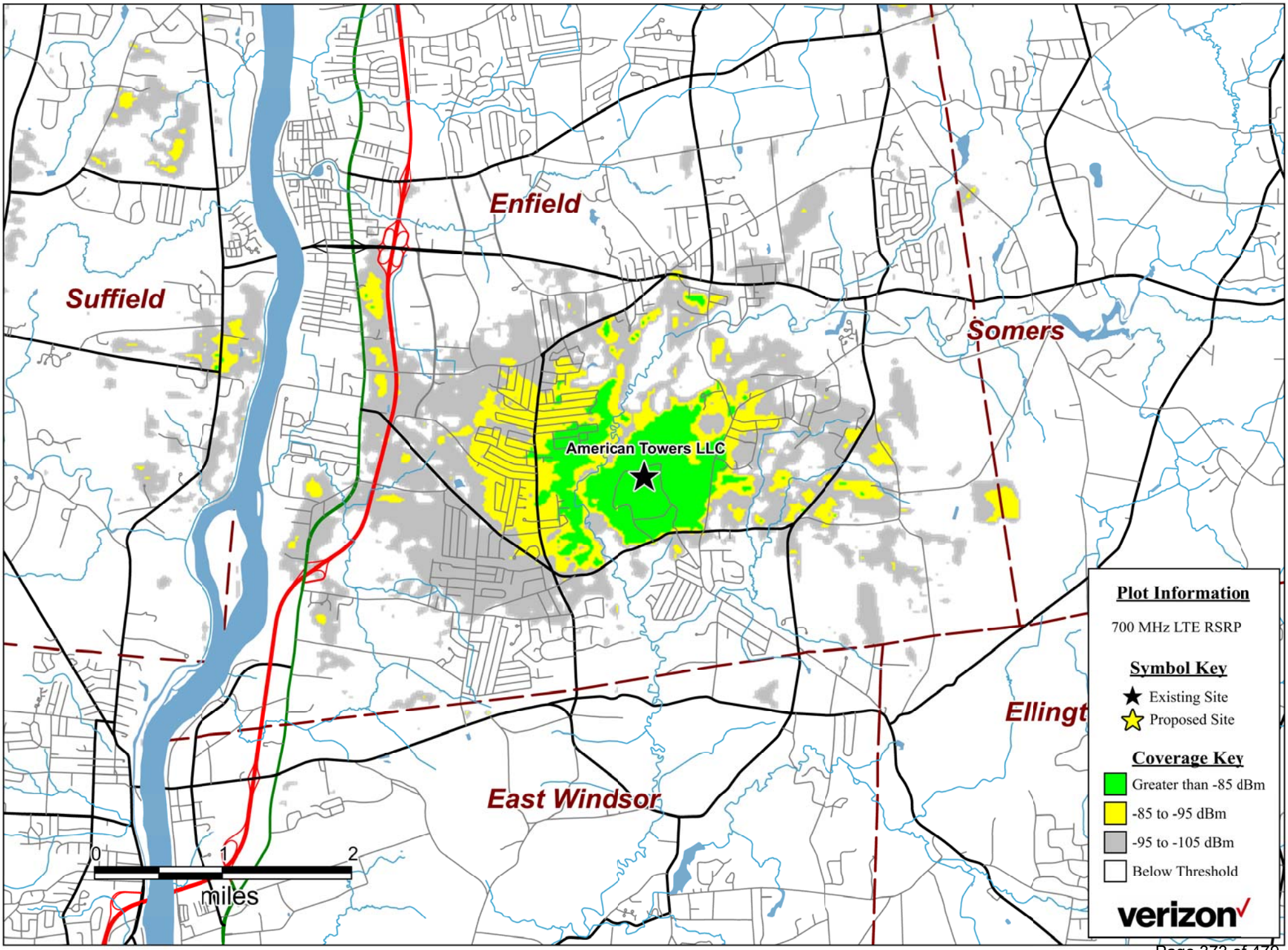

Holyoke
CHICOPEE POLICE DEPARTMENT
West Springfield
Chicopee
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

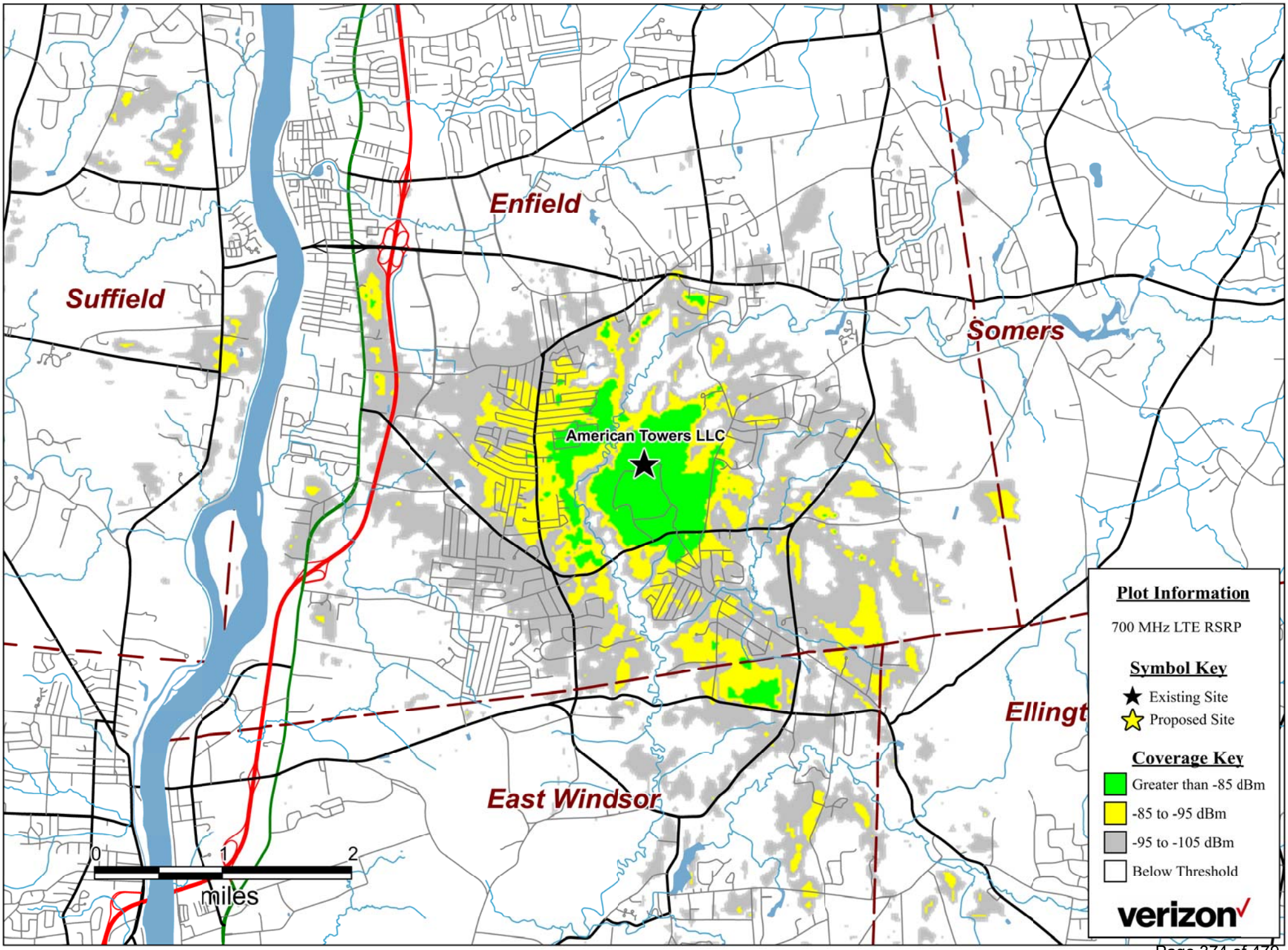

Ludlow
Chicopee
SectorSite, LLC
Springfield
Wilbraham
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon


Blue Sky Towers III, LLC
Holyoke
West Springfield
Chicopee
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon


East Granby
Suffield
Department of Emergency Service & Public Protection
Windsor Locks
Windsor
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon


East Granby
Suffield
Gray Media Group Inc.
Windsor Locks
Simsbury
Windsor
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon


Enfield
Suffield
Somers
East Windsor
Ellingt
American Towers LLC
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon


Enfield
Suffield
Somers
American Towers LLC
East Windsor
Ellingt
0
1
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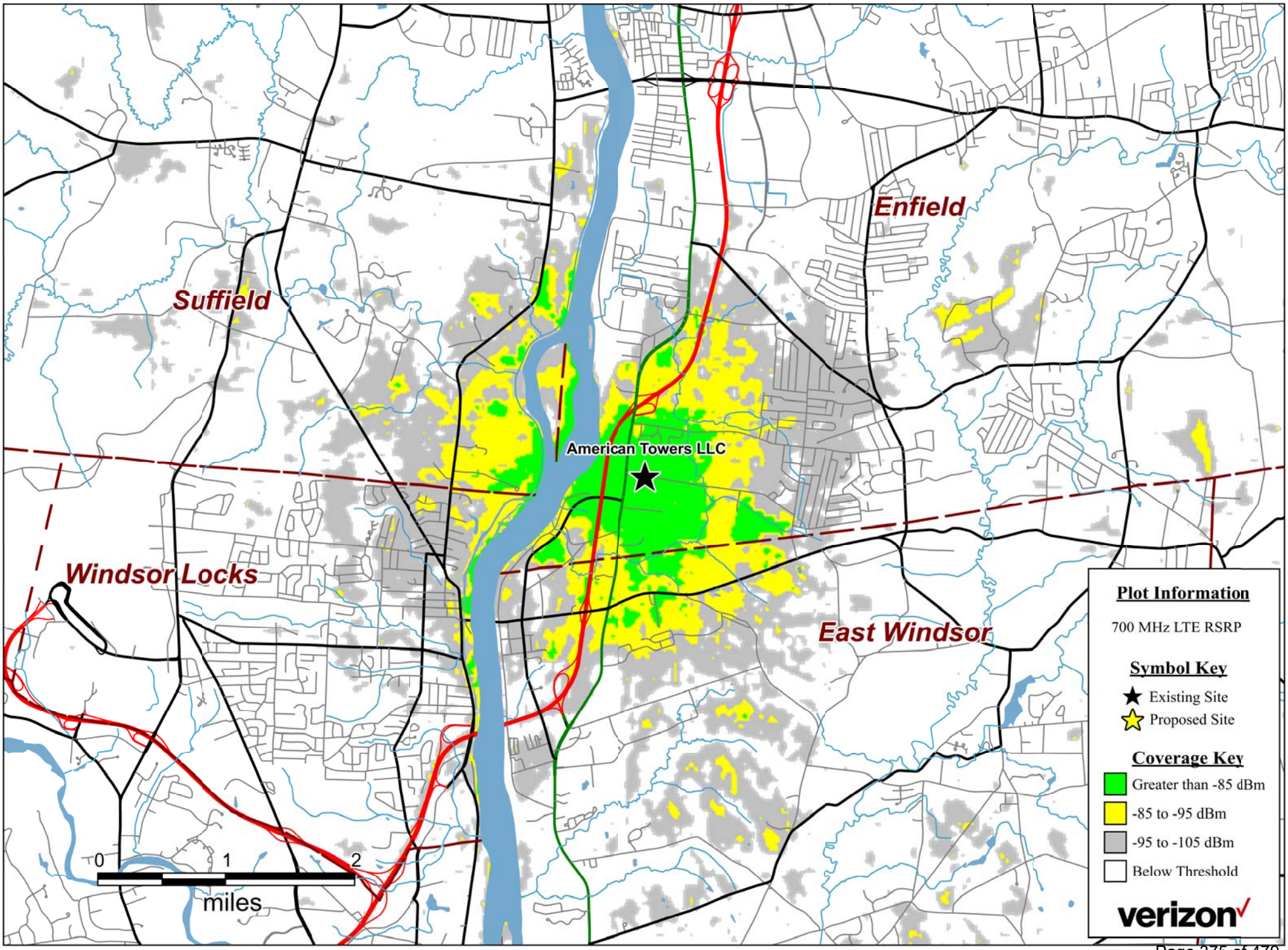
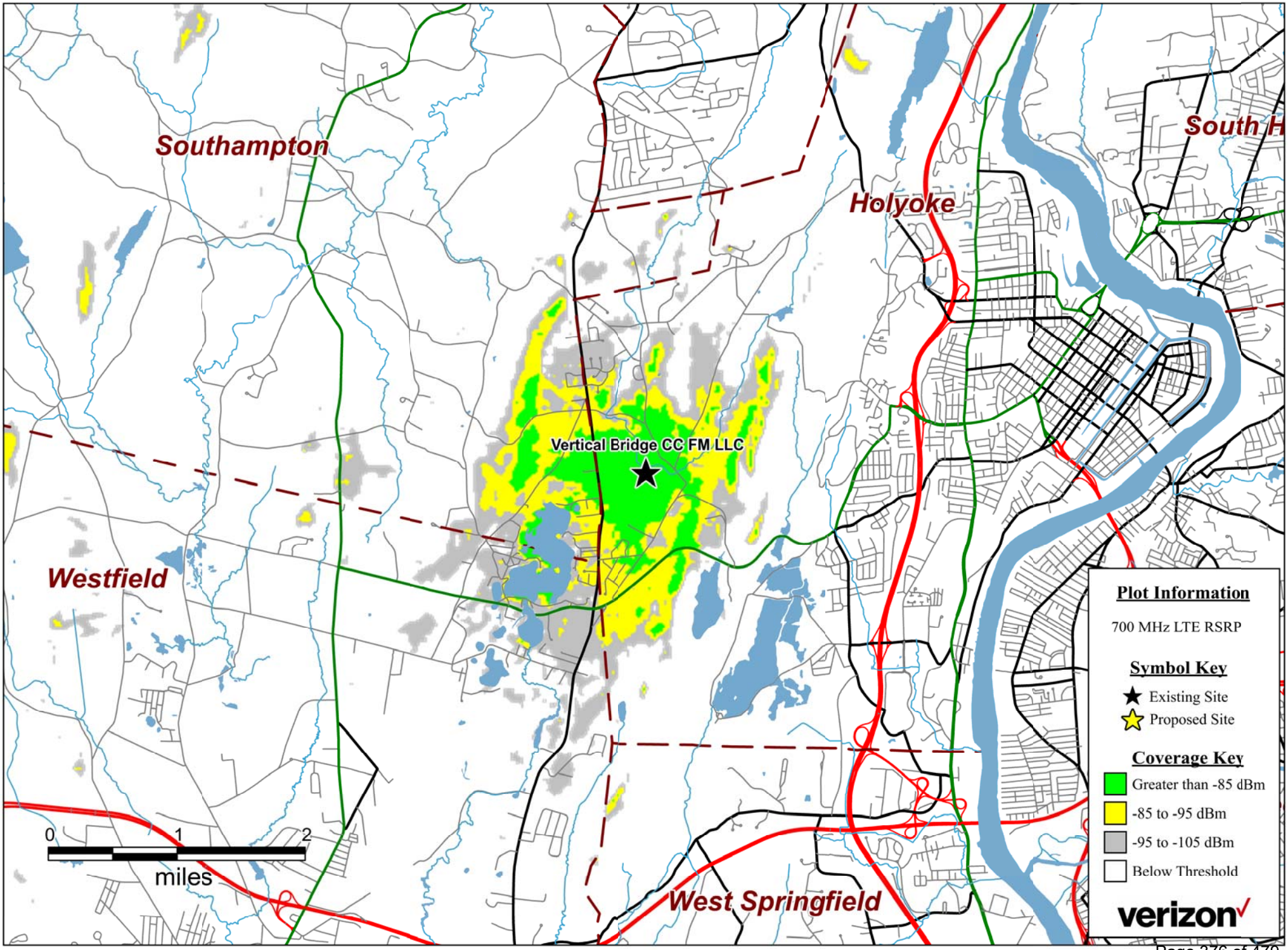
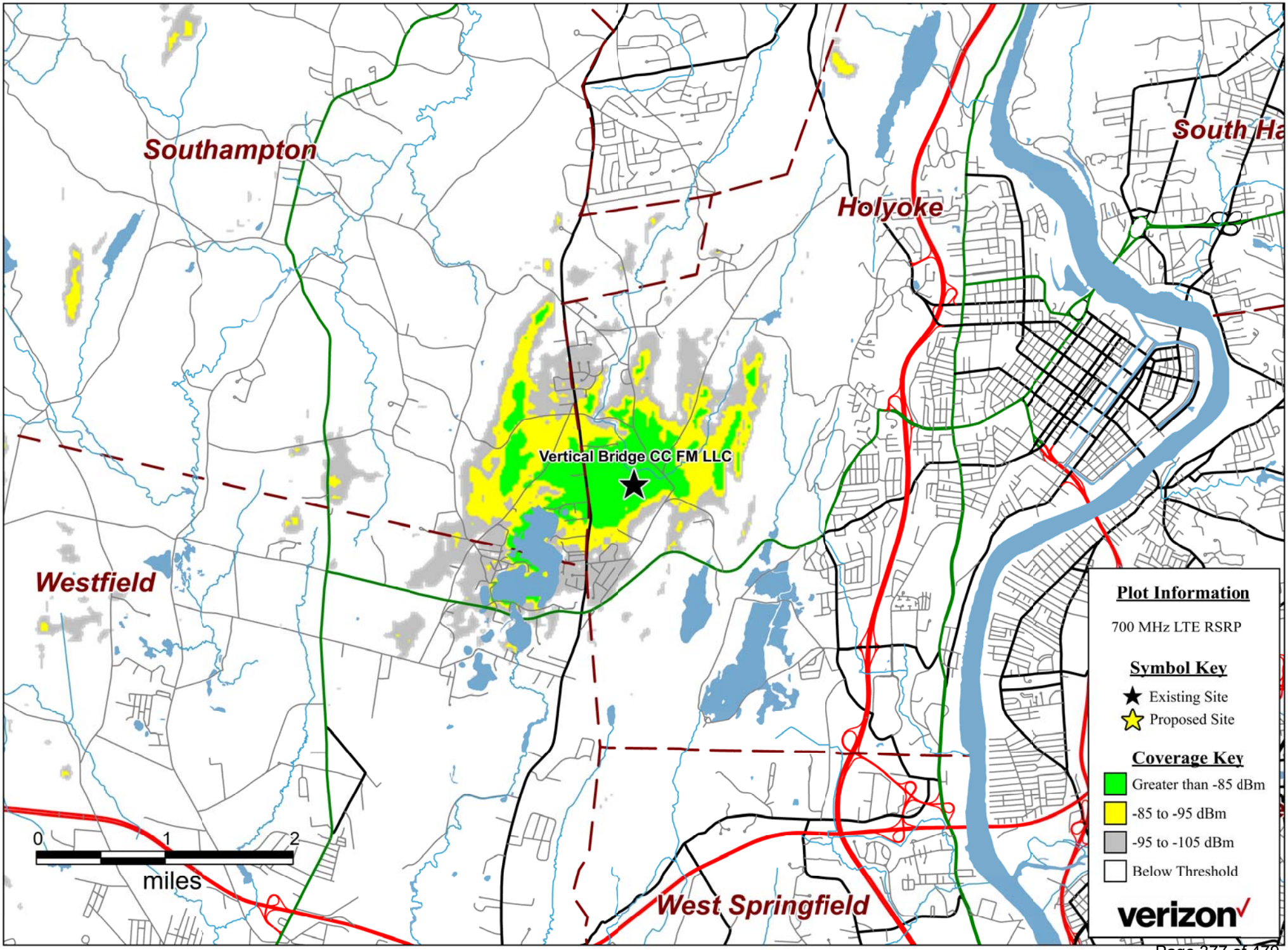
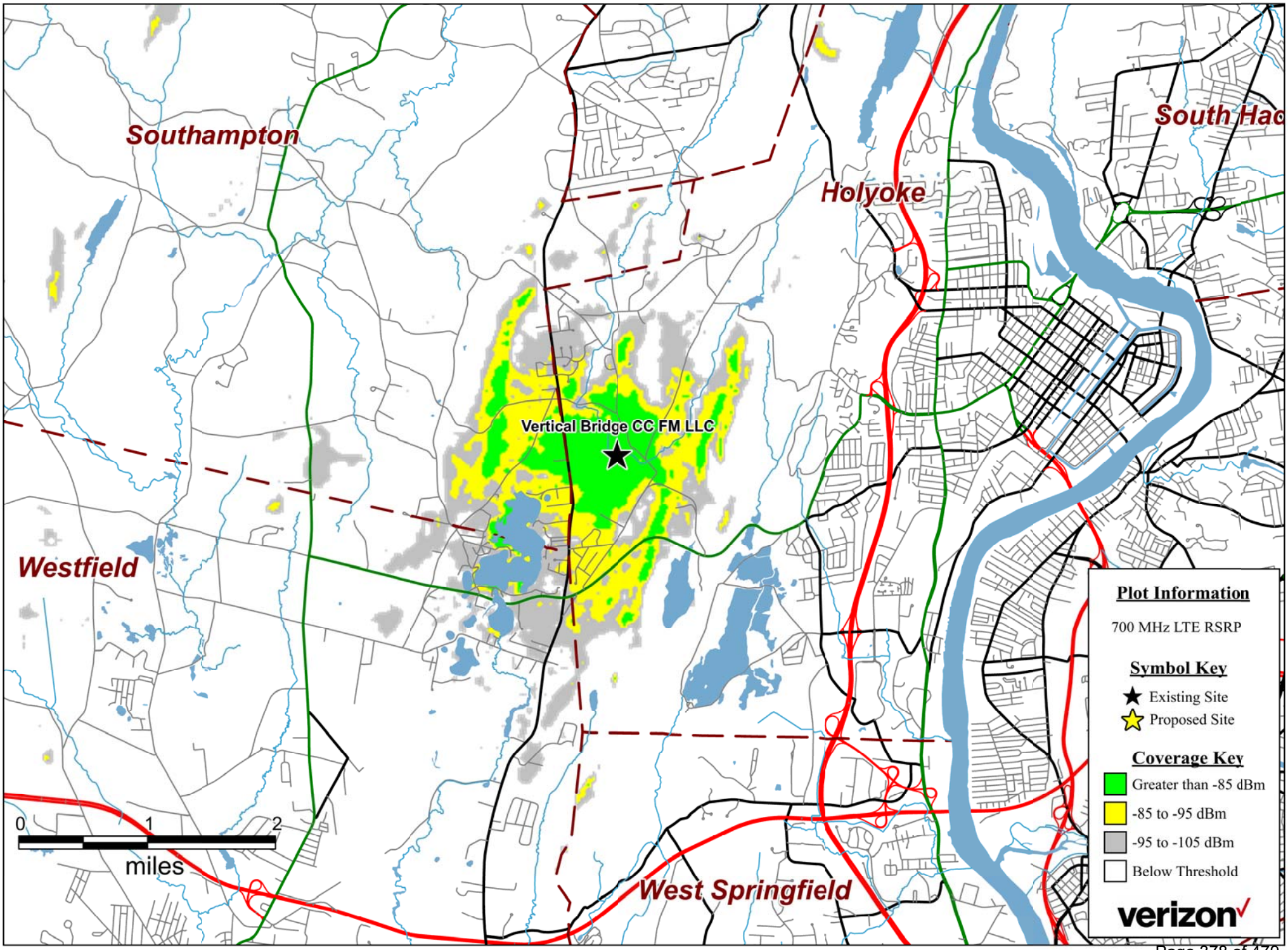
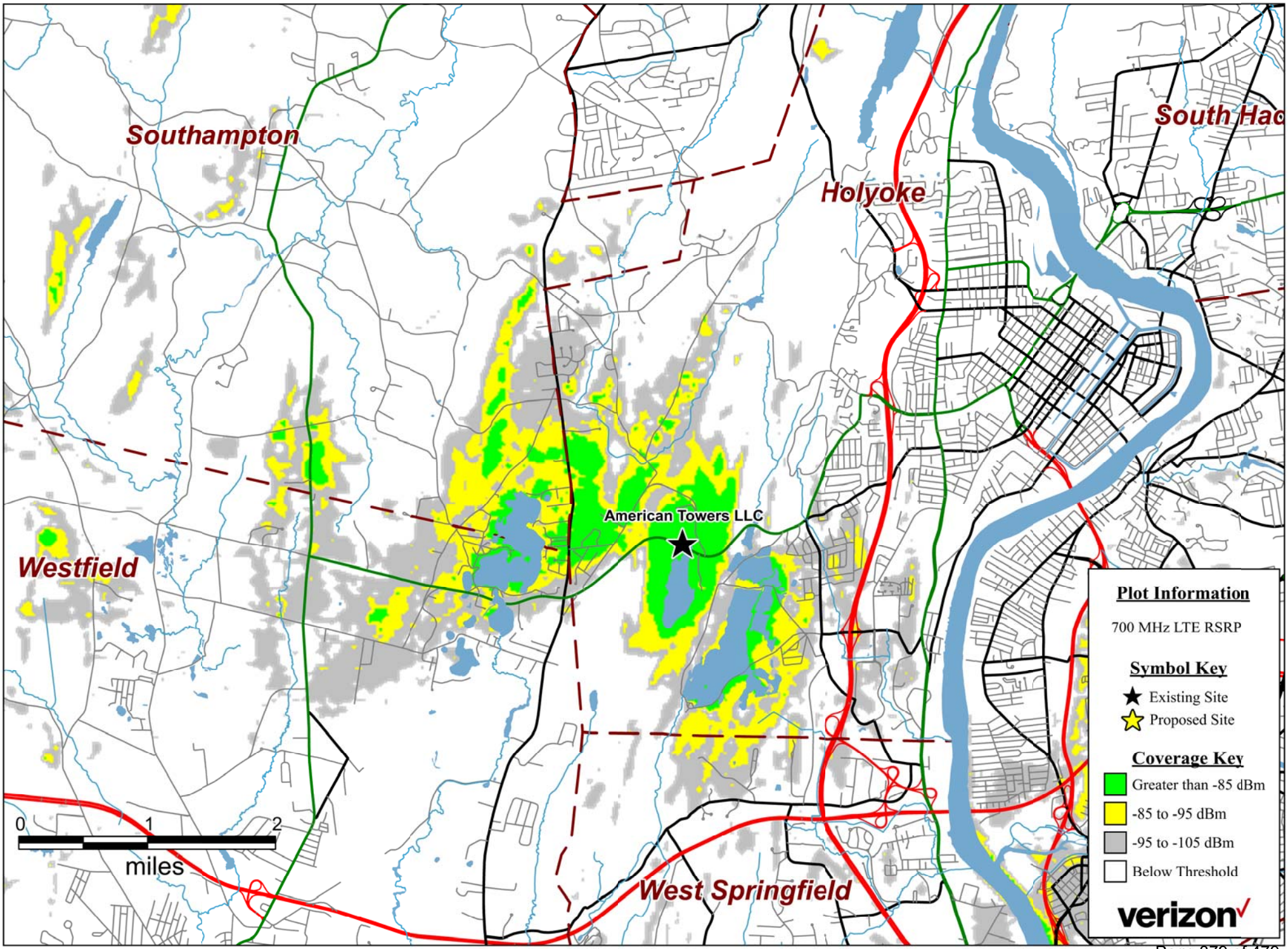
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon


Enfield
Suffield
American Towers LLC
Windsor Locks
East Windsor
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon


Southampton
Holyoke
South H
Vertical Bridge CC FM LLC
Westfield
West Springfield
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon


Southampton
Holyoke
South Ha
Vertical Bridge CC FM LLC
Westfield
West Springfield
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon


Southampton
Holyoke
South Hac
Vertical Bridge CC FM LLC
Westfield
West Springfield
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon


Southampton
Holyoke
South Hac
American Towers LLC
Westfield
West Springfield
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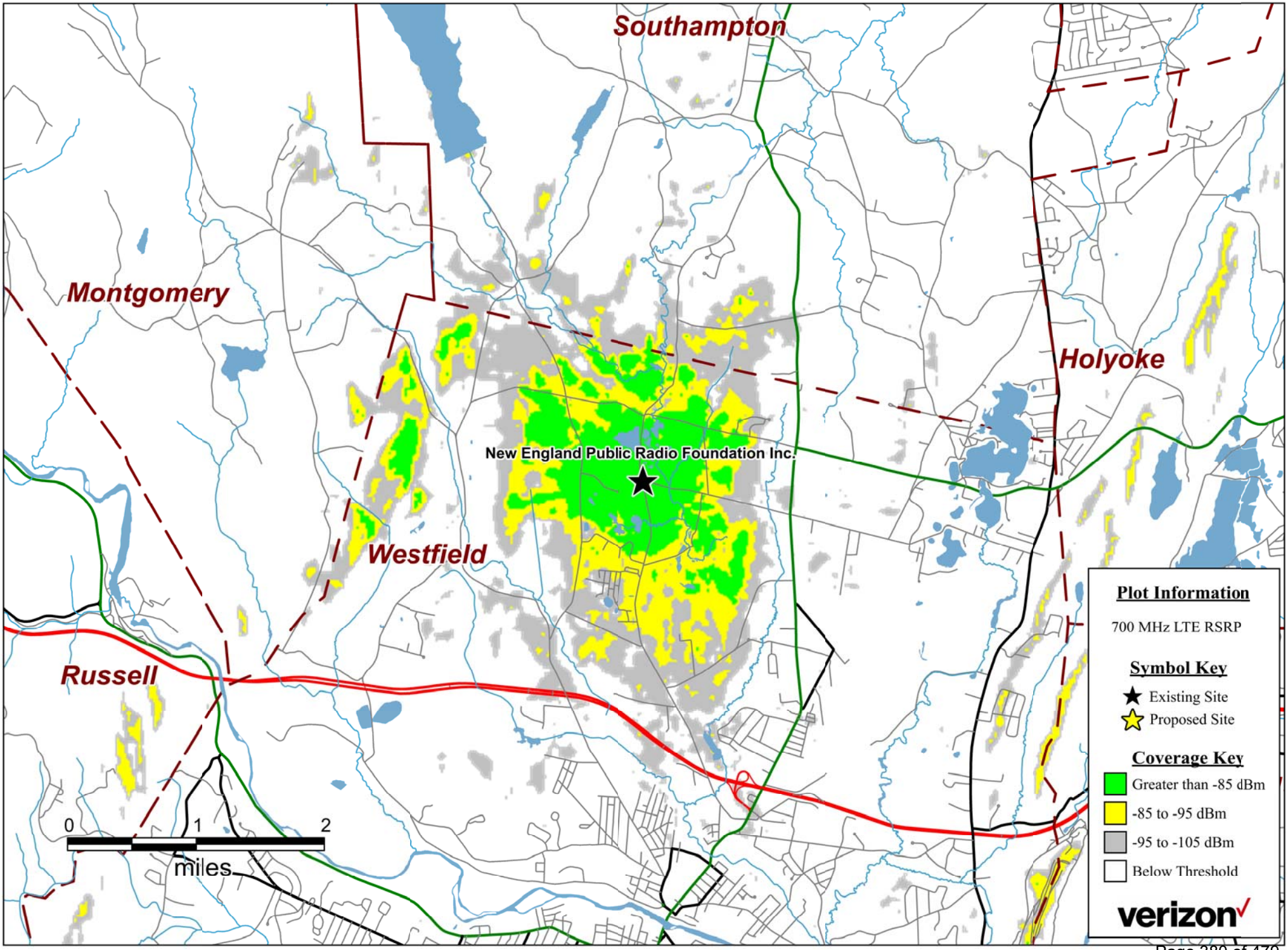
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon


Southampton
Montgomery
Holyoke
New England Public Radio Foundation Inc.
Westfield
Russell
0
1
2
miles
Plot Information
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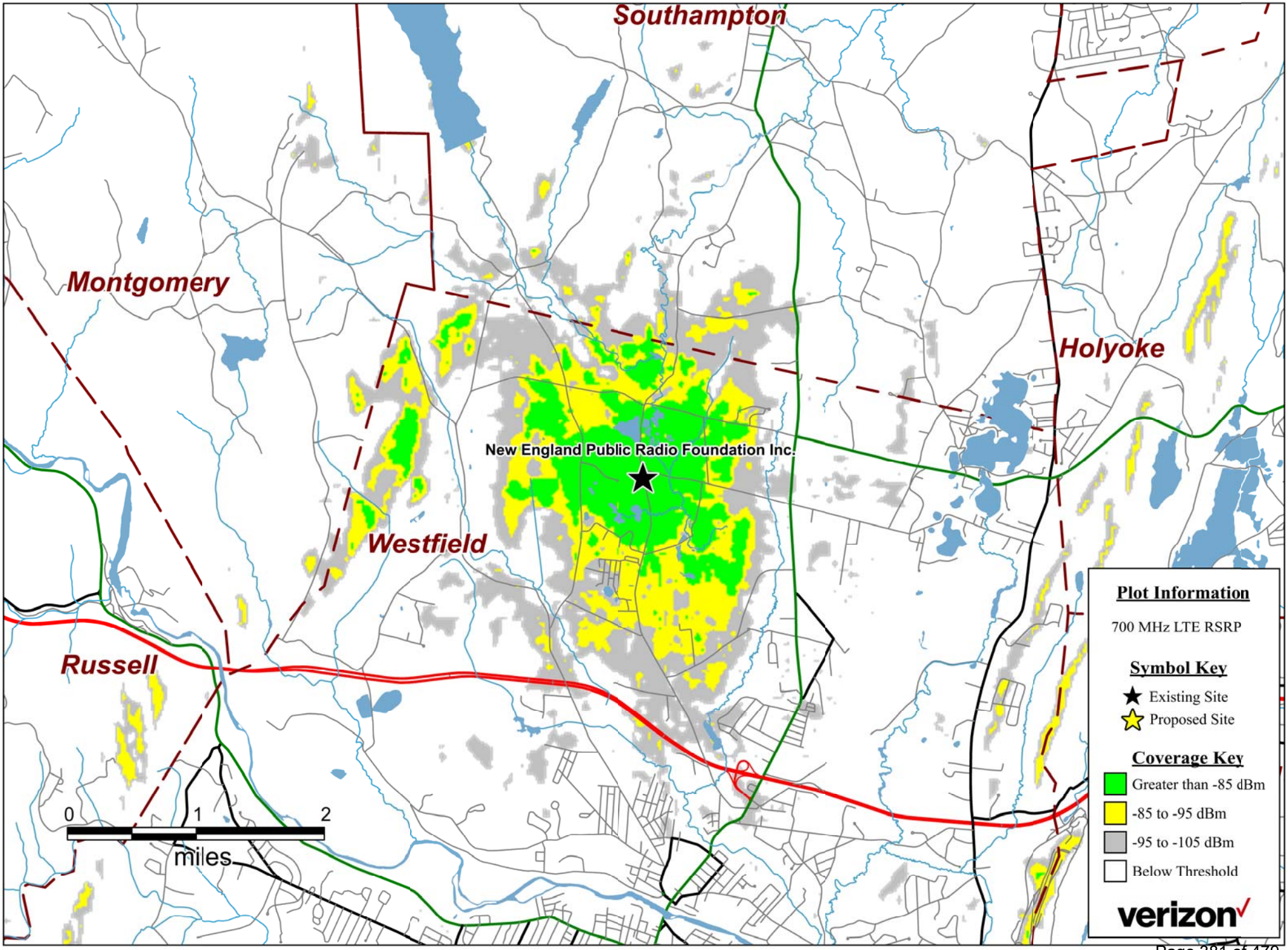
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon


Southampton
Montgomery
Holyoke
New England Public Radio Foundation Inc.
Westfield
Russell
0
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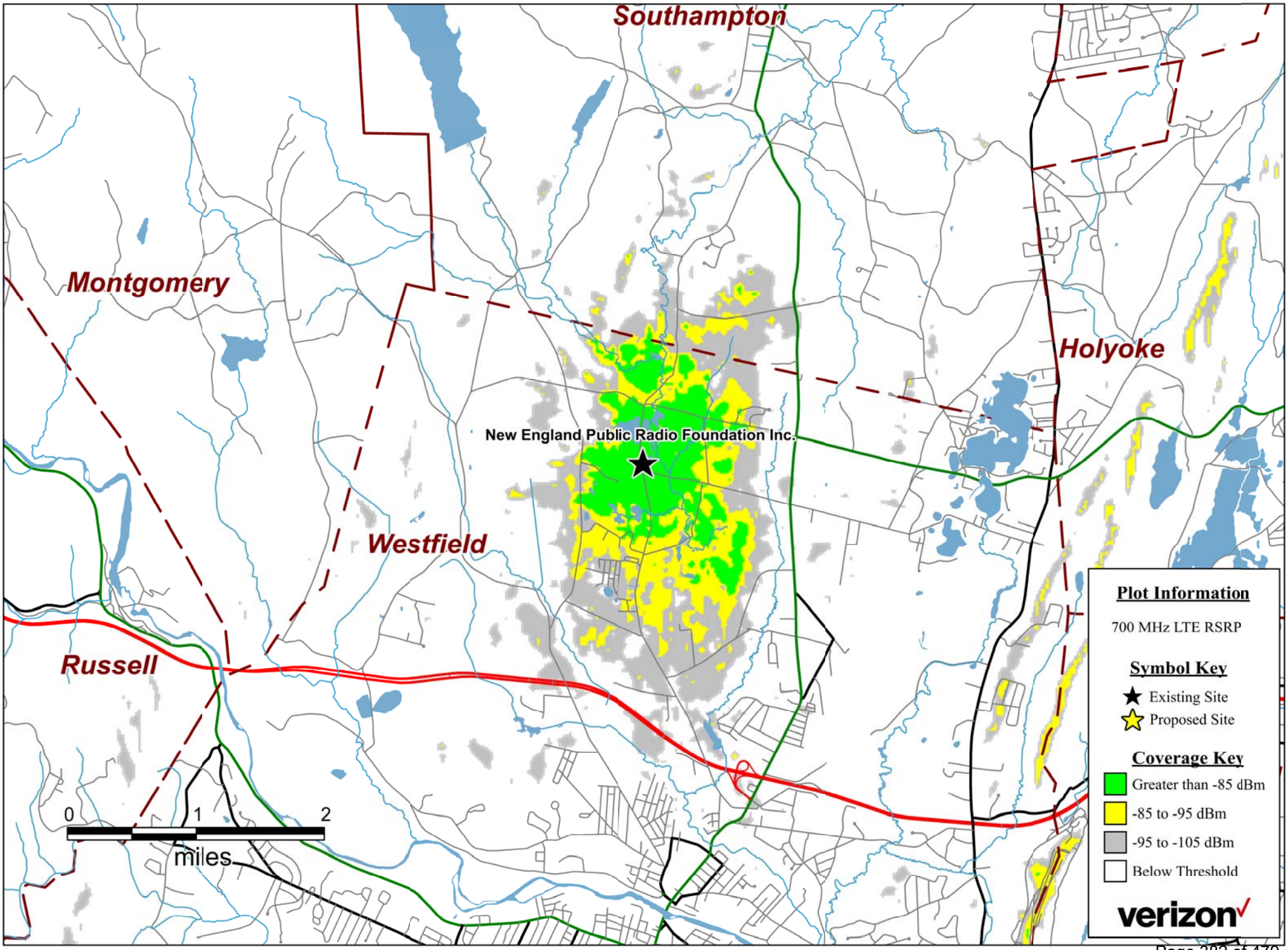
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon


Southampton
Montgomery
Holyoke
New England Public Radio Foundation Inc.
Westfield
Russell
0
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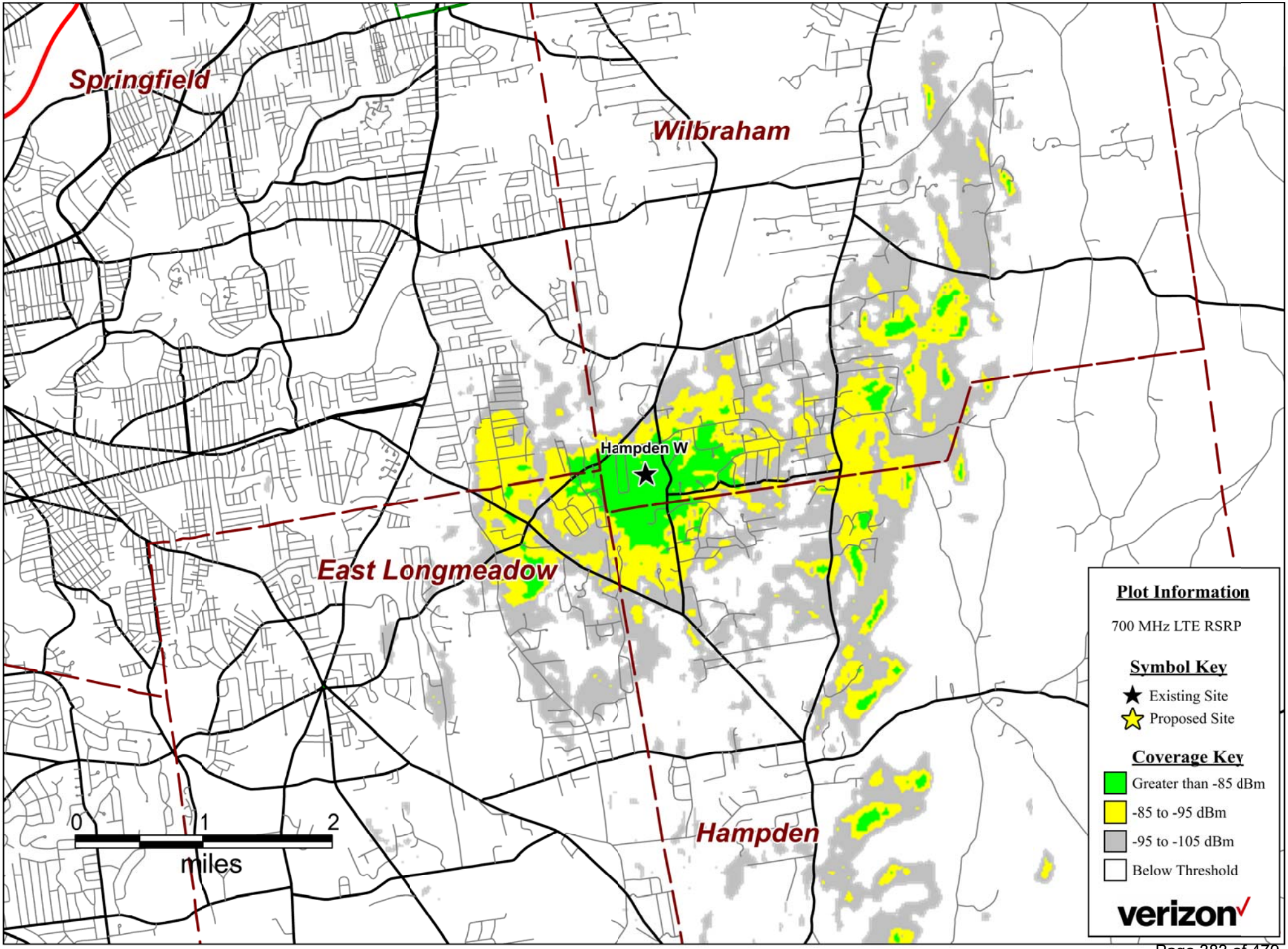
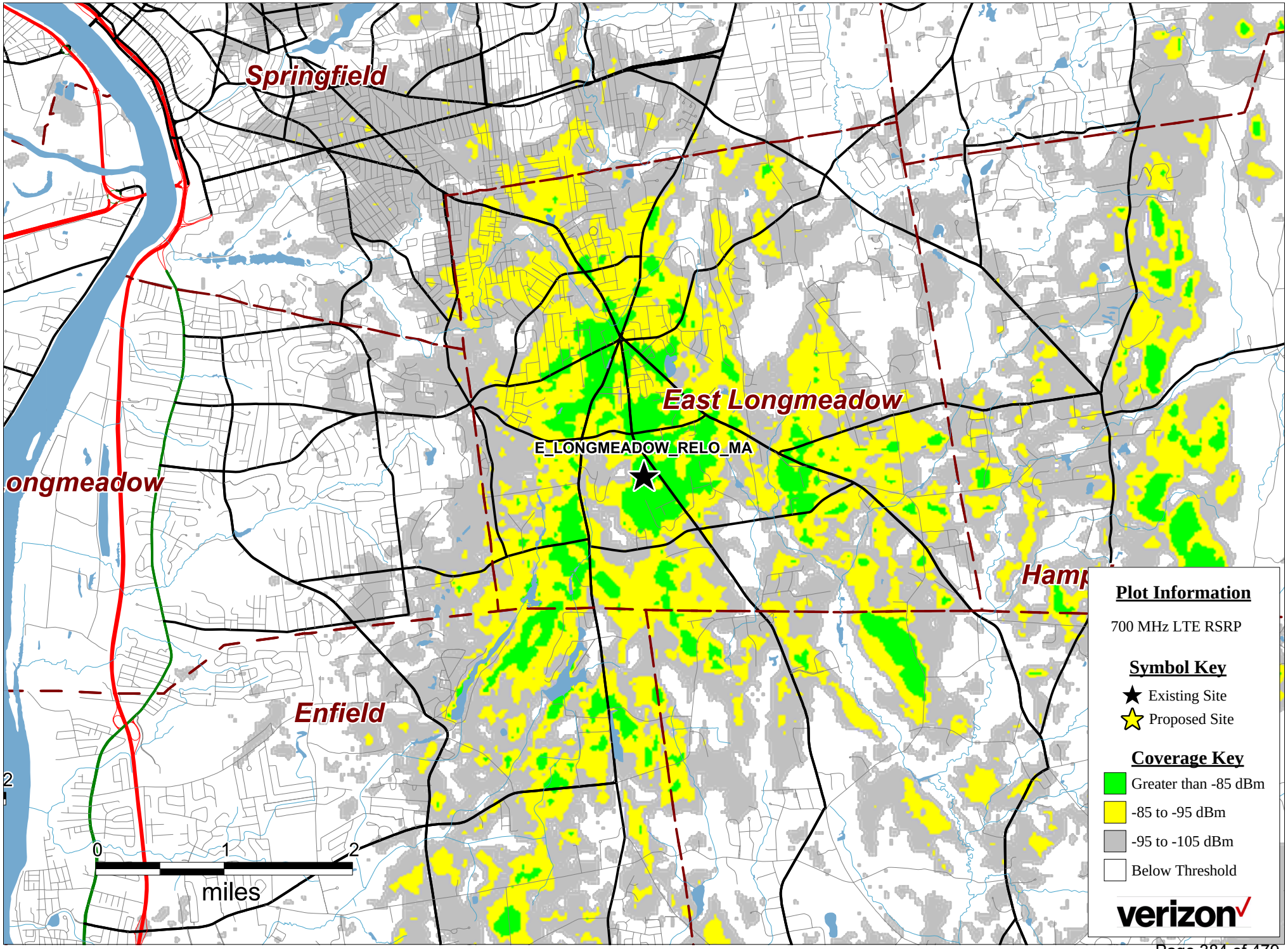
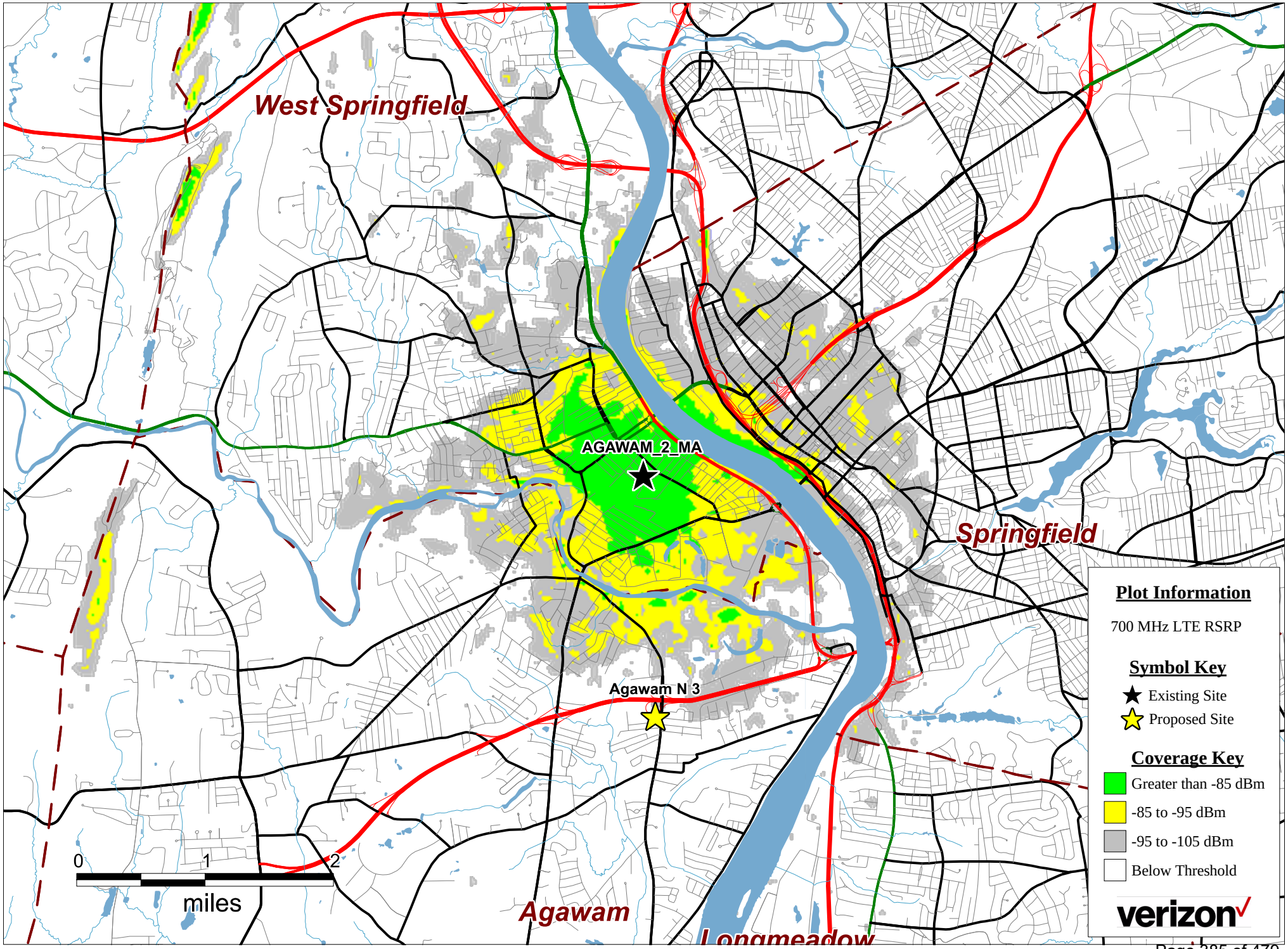
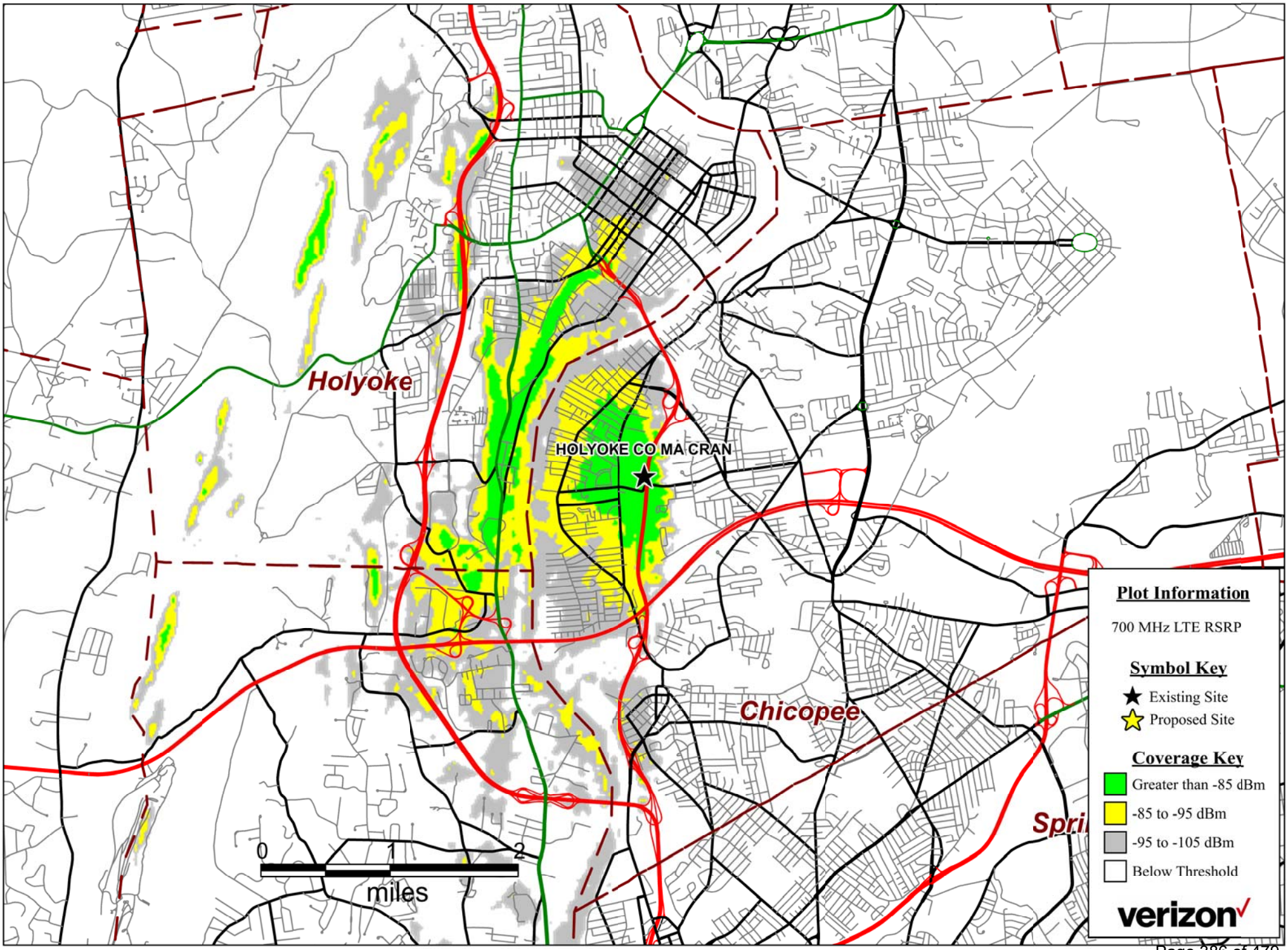
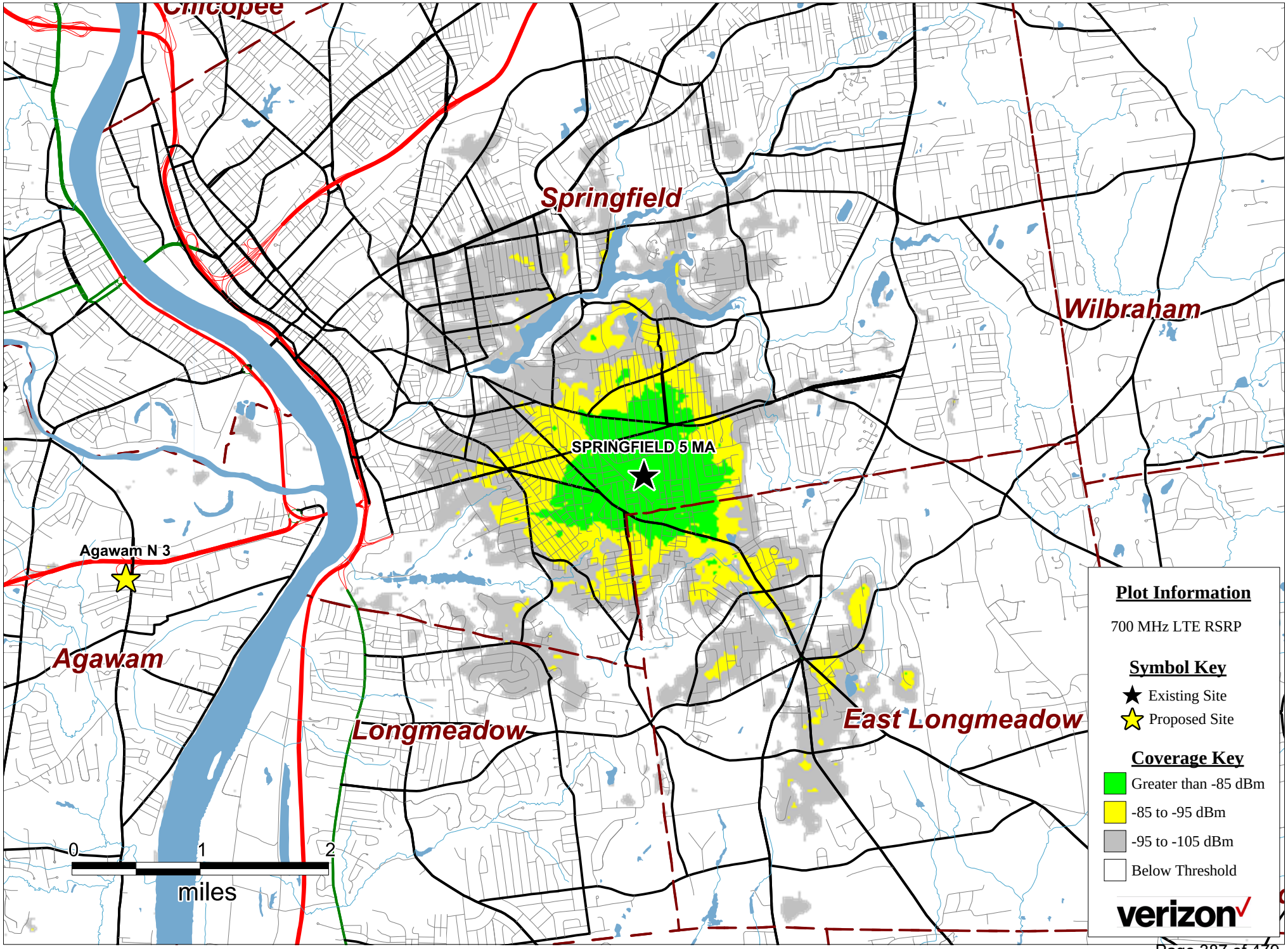
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

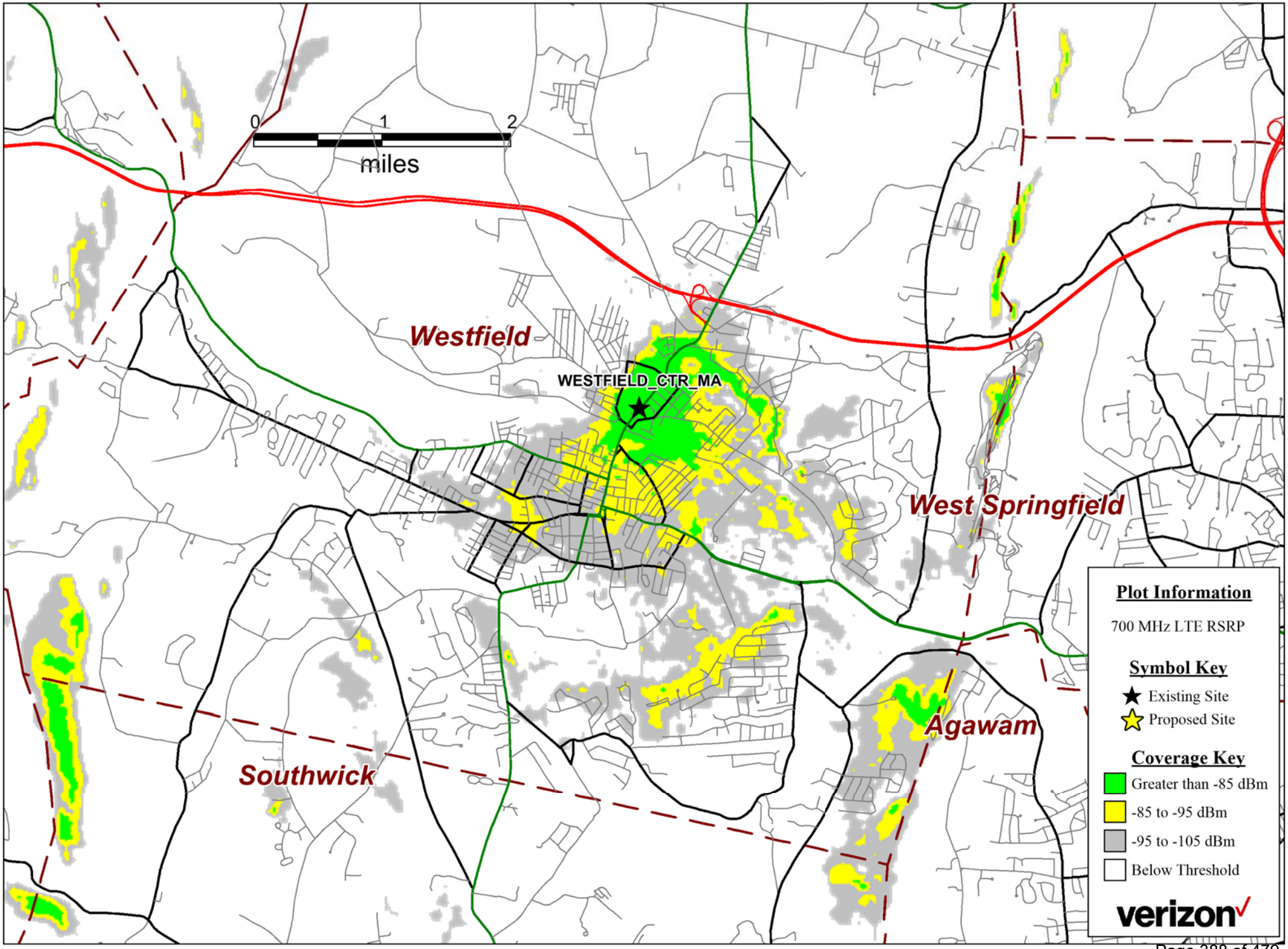

Springfield
Wilbraham
Hampden W
East Longmeadow
Hampden
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

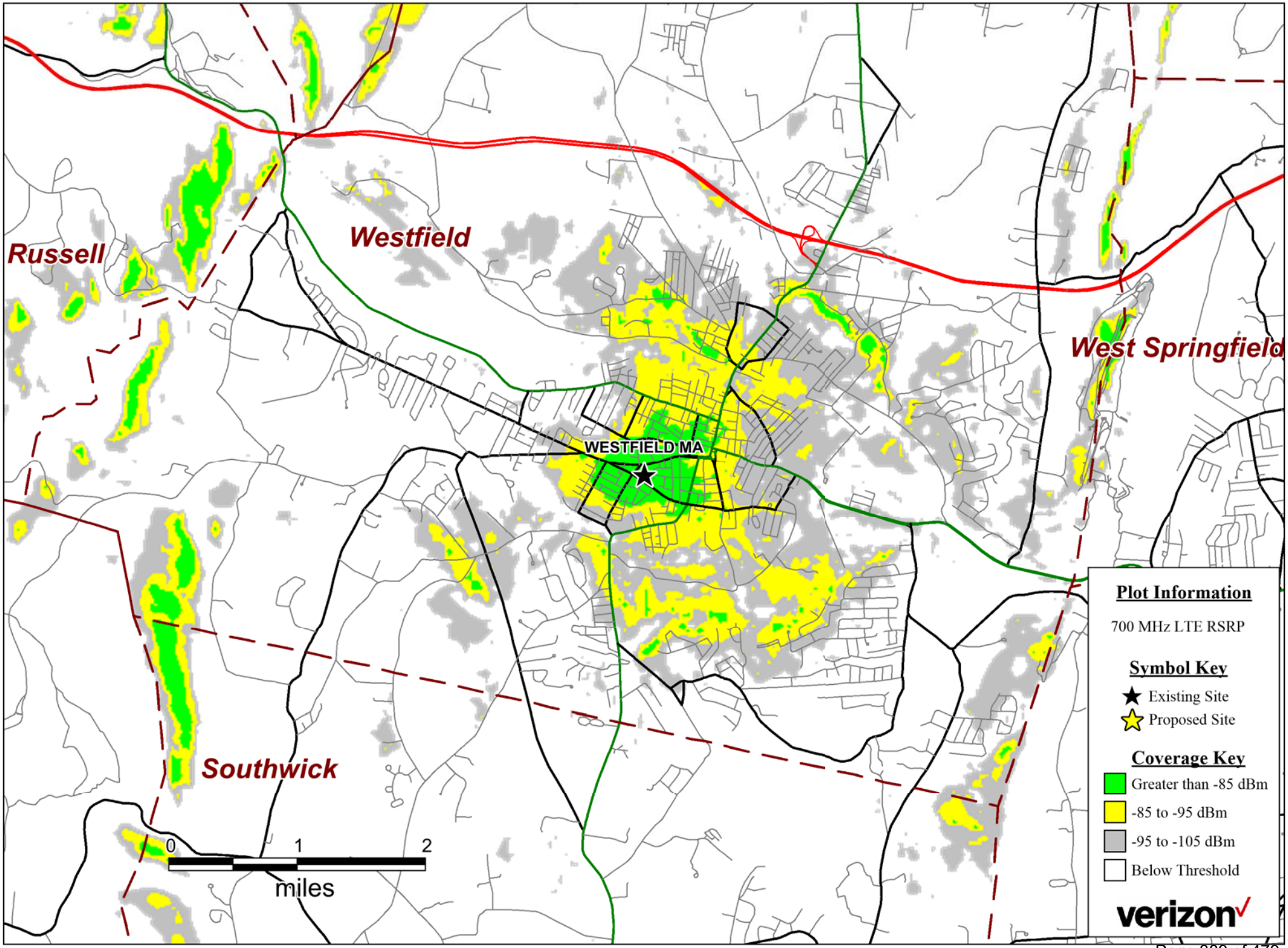

Springfield
East Longmeadow
E_LONGMEADOW_RELO_MA
ongmeadow
Enfield
Hamp
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

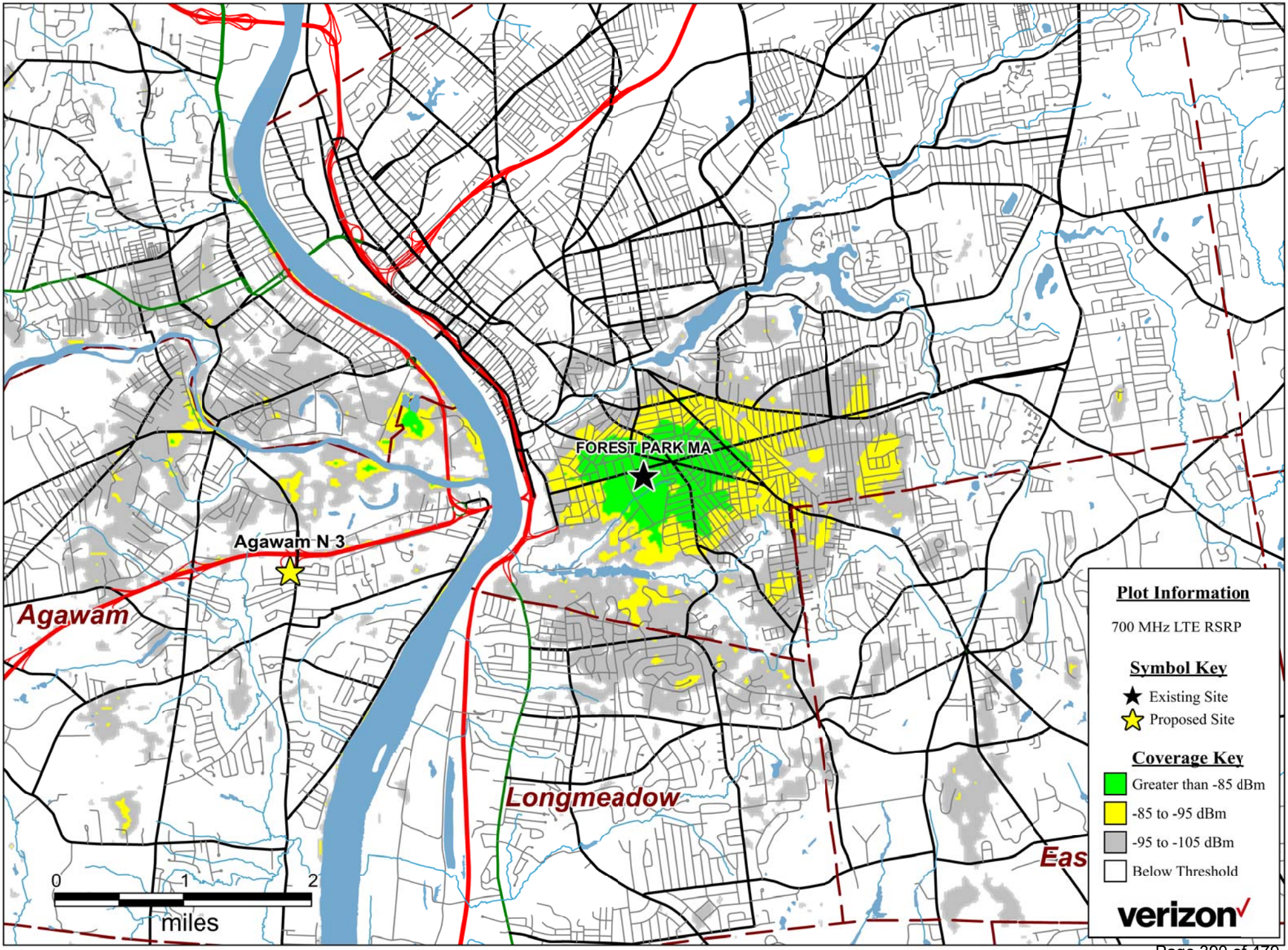

West Springfield
AGAWAM_2_MA
Springfield
Agawam N 3
Agawam
Longmeadow
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon


Holyoke
HOLYOKE CO MA CRAN
Chicopee
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon


Chicopee
Springfield
Wilbraham
SPRINGFIELD 5 MA
Agawam N 3
Agawam
Longmeadow
East Longmeadow
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon


0
1
2
miles
Westfield
WESTFIELD_CTR_MA
West Springfield
Agawam
Southwick
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon


Russell
Westfield
West Springfield
WESTFIELD MA
Southwick
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon


FOREST PARK MA
Agawam N 3
Agawam
Longmeadow
Eas
0
1
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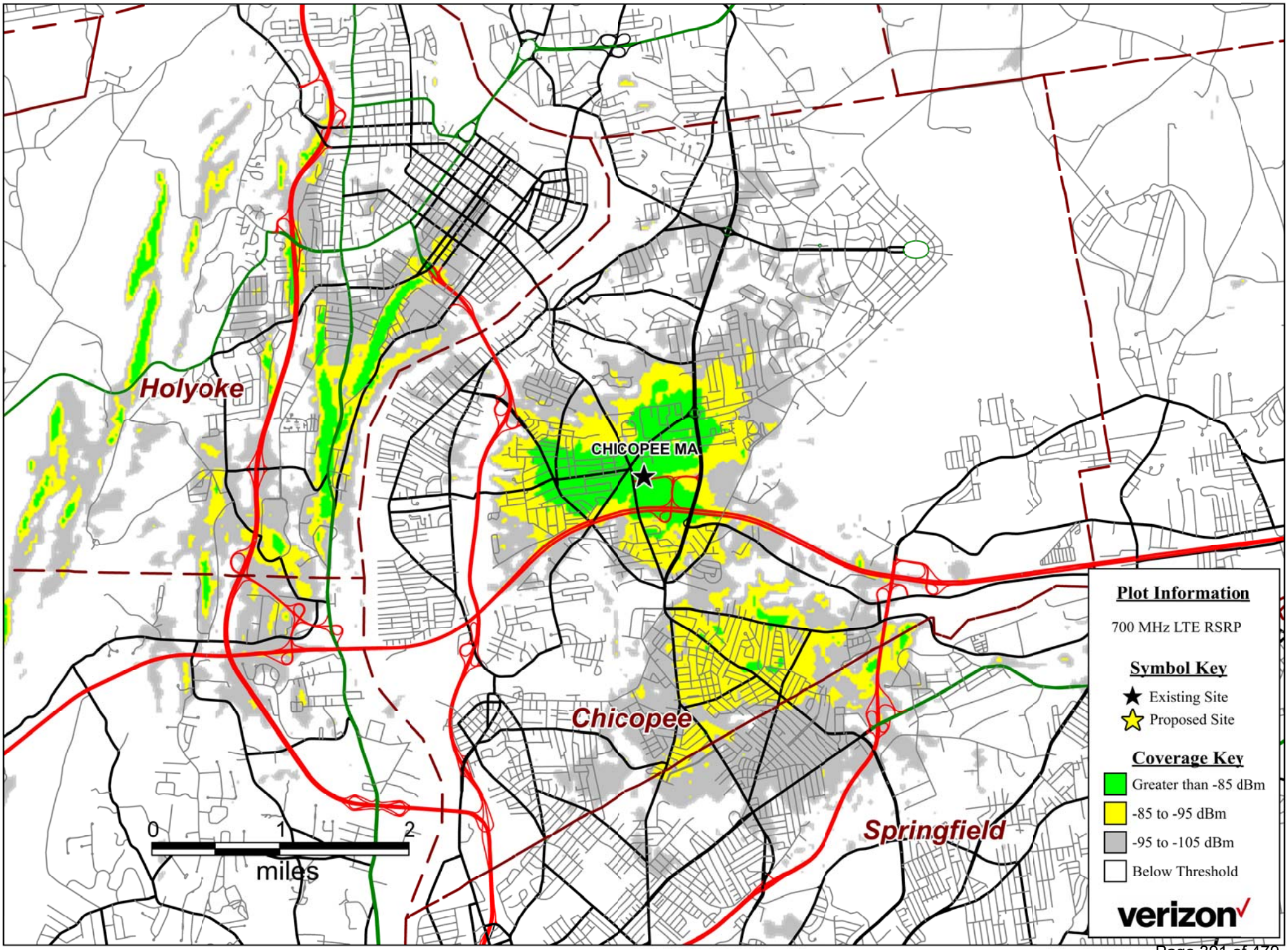
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon


Holyoke
CHICOPEE MA
Chicopee
Springfield
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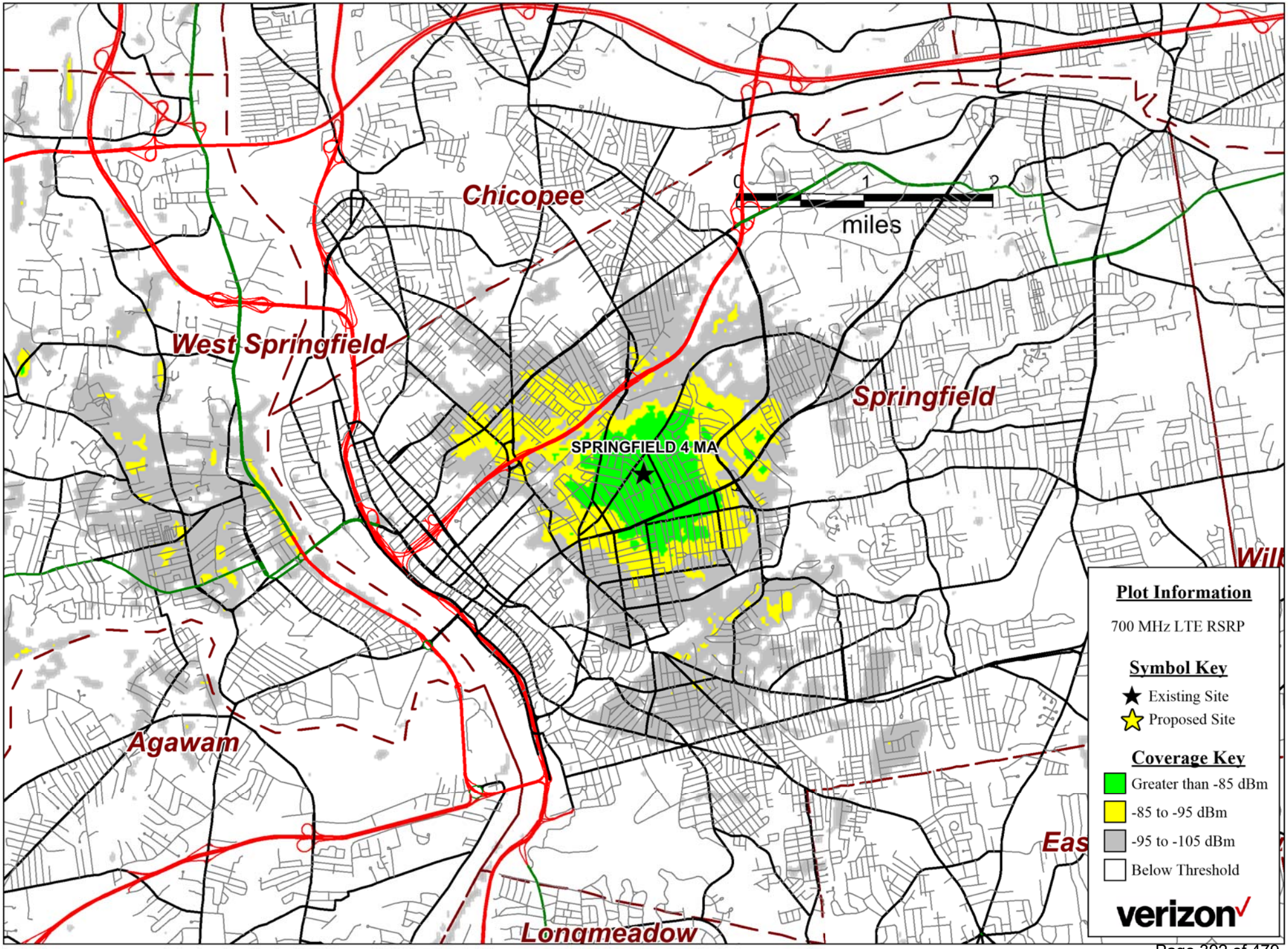
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon


Chicopee
West Springfield
Springfield
SPRINGFIELD 4 MA
Agawam
Longmeadow
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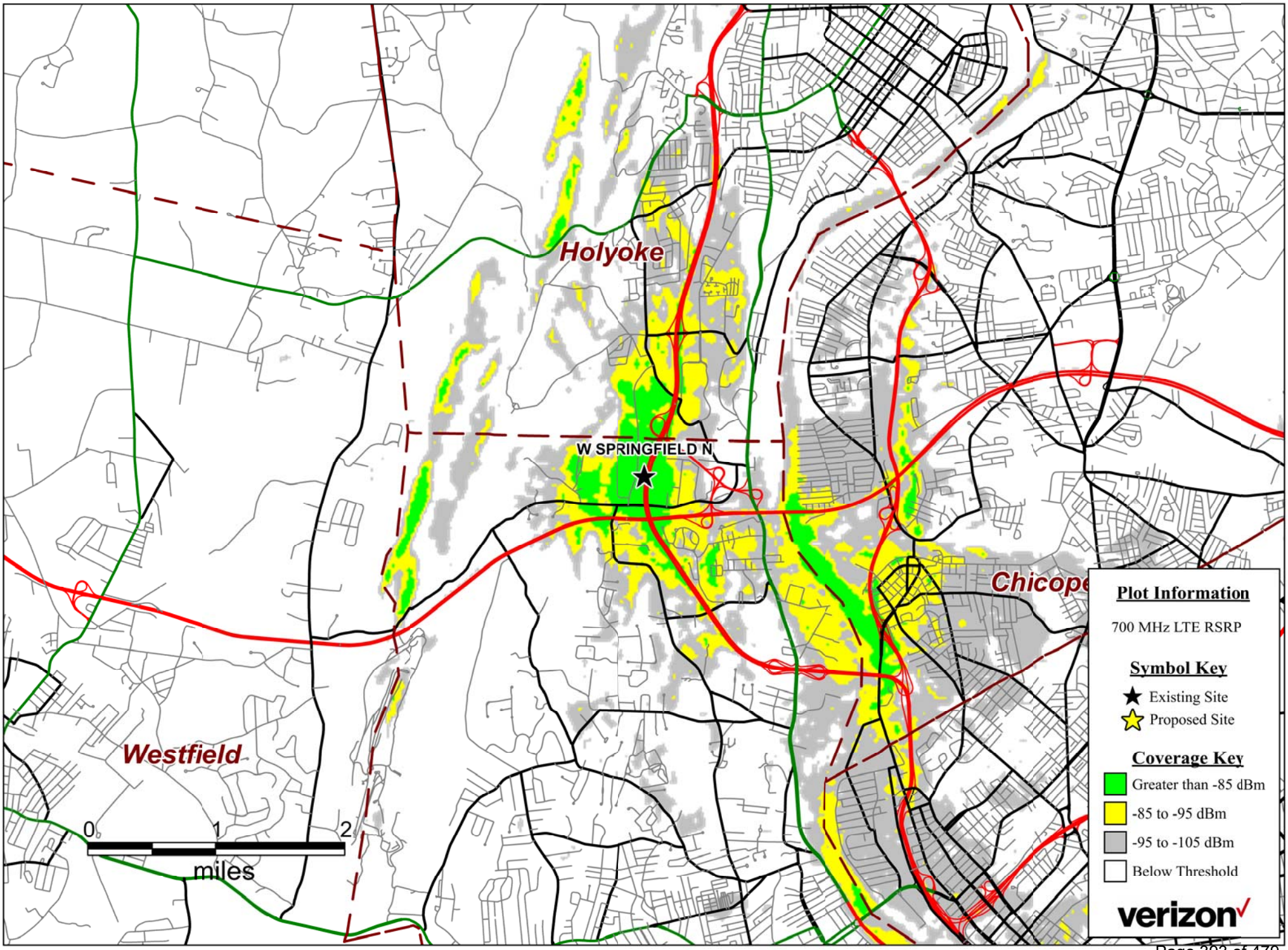
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon


Holyoke
W SPRINGFIELD N
Chicope
Westfield
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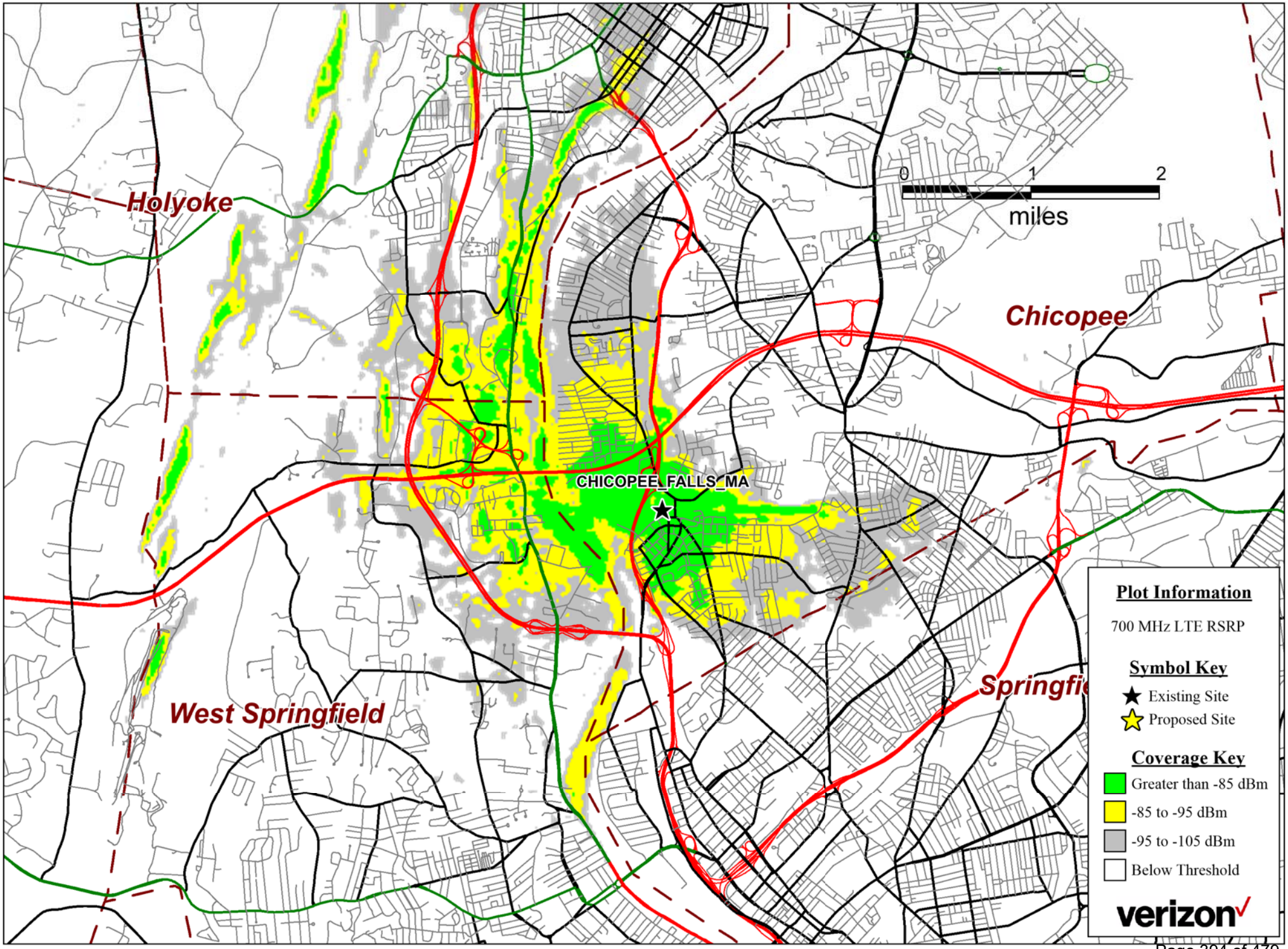
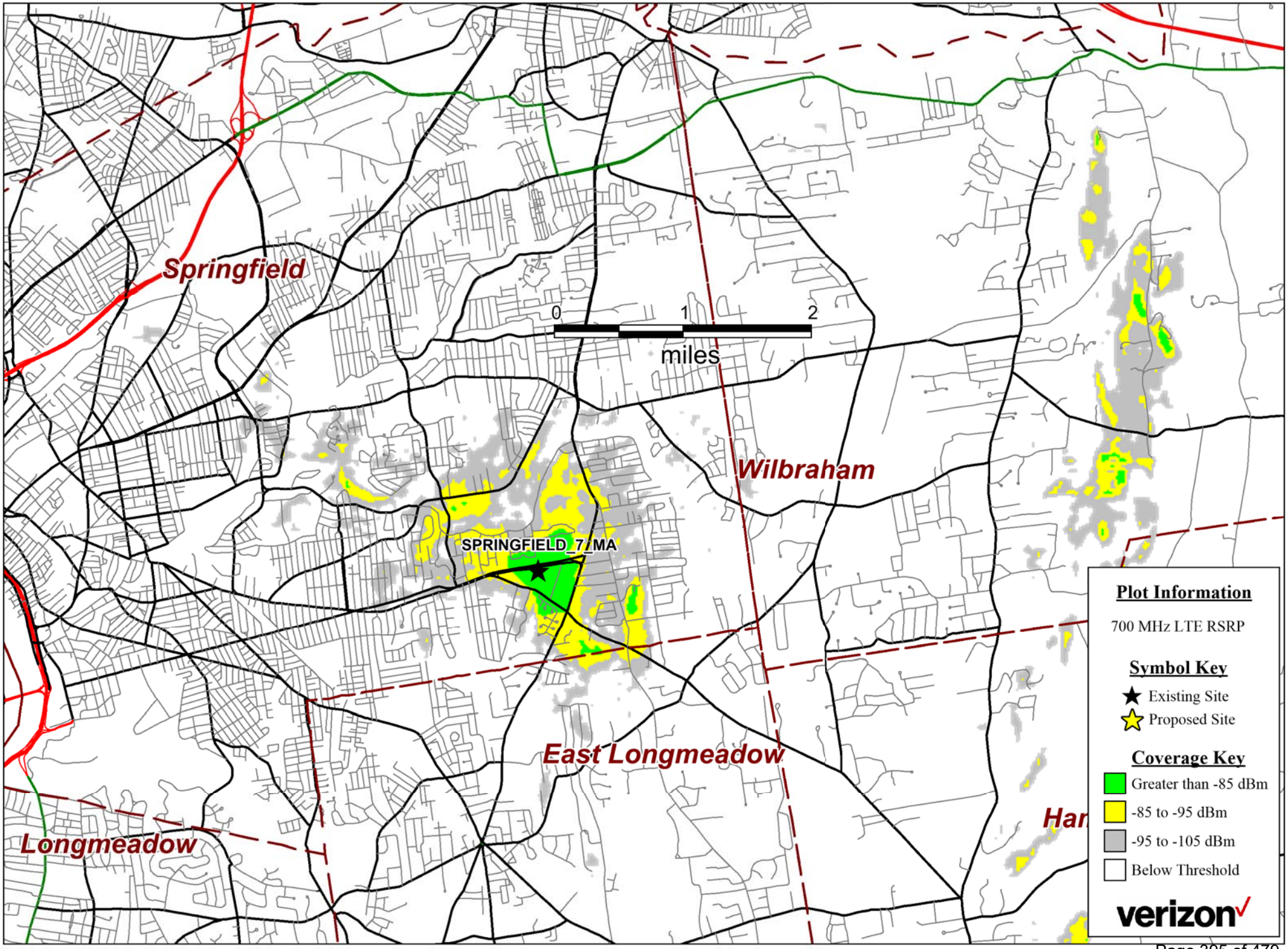
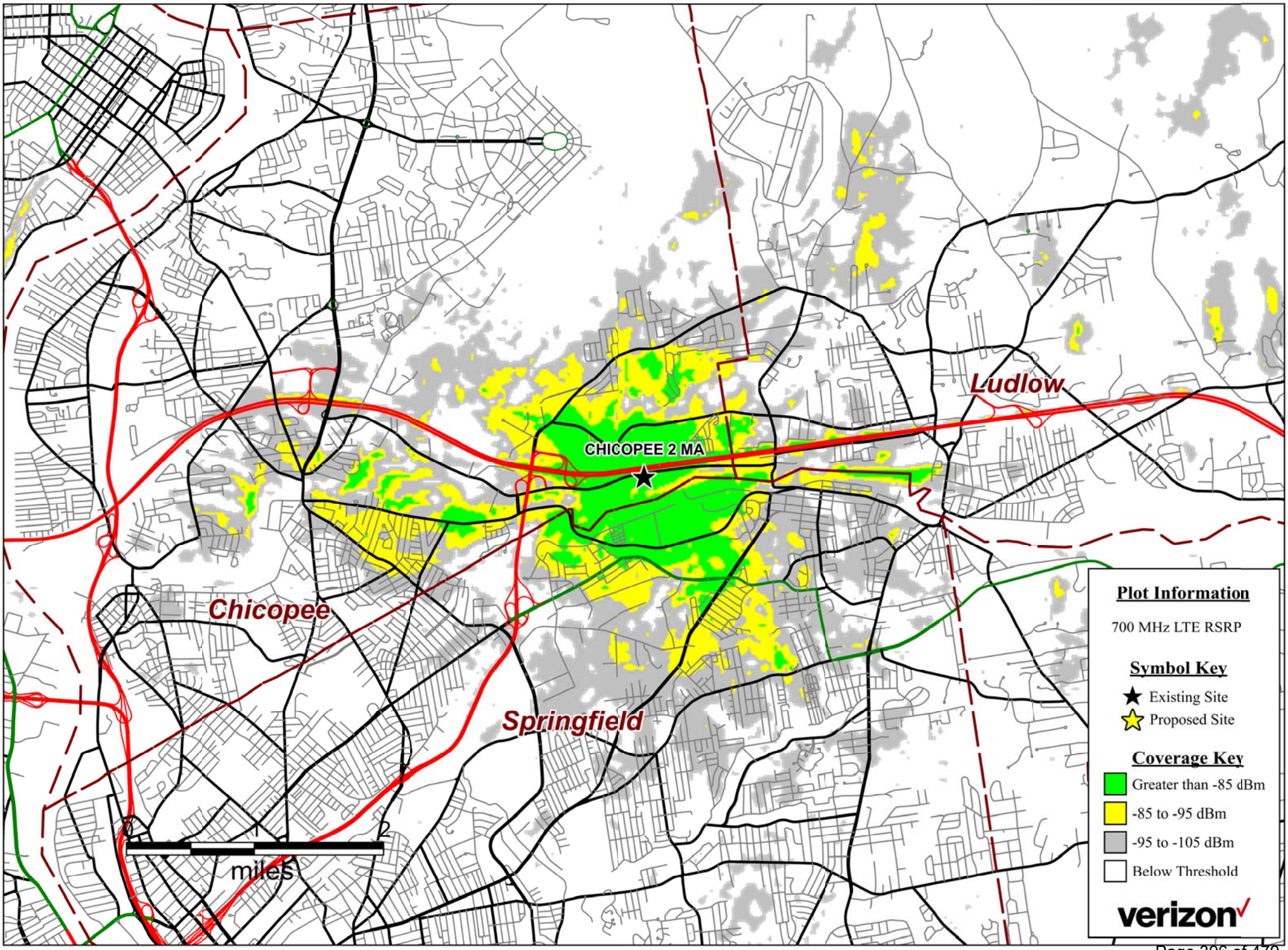
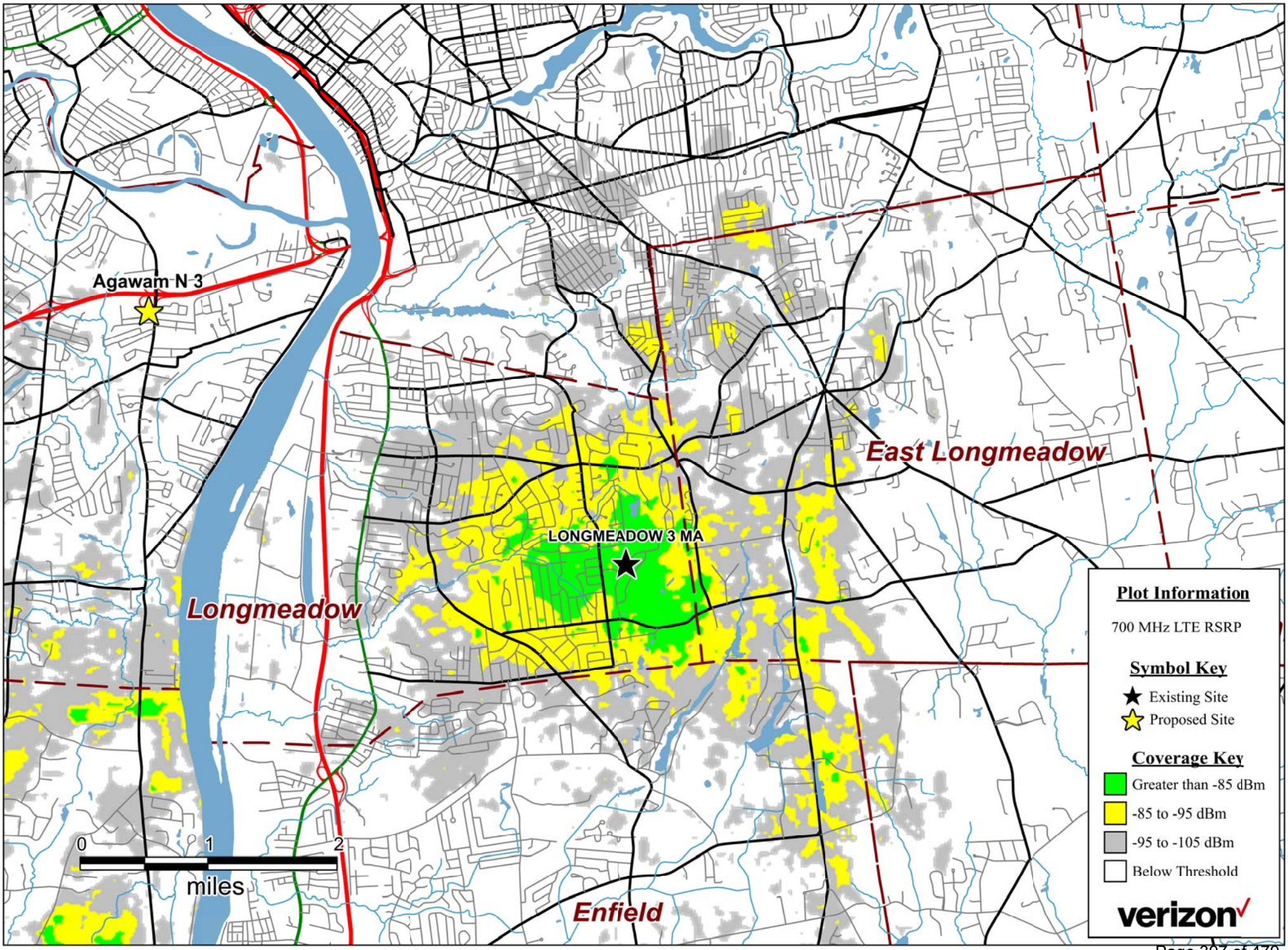
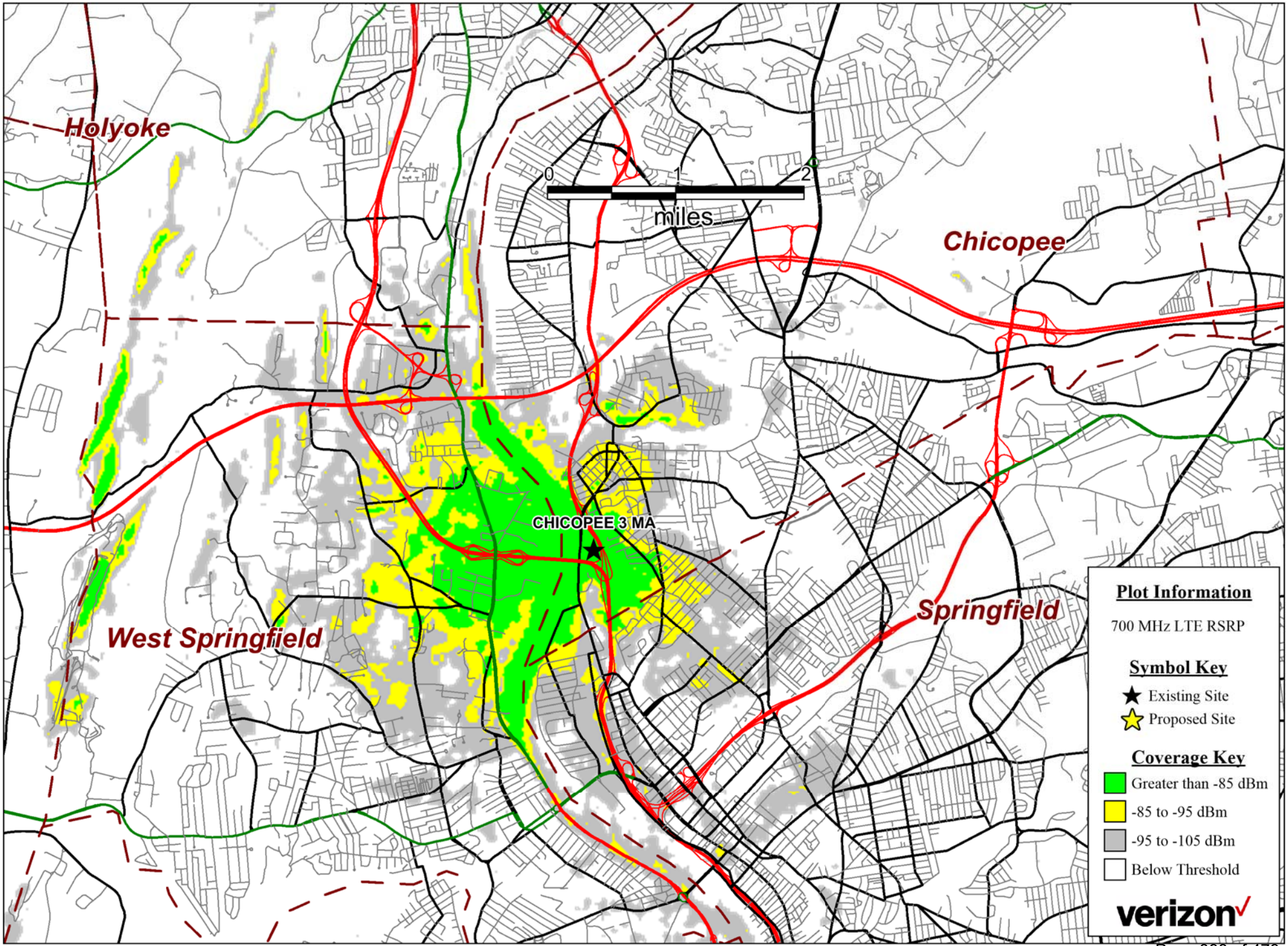
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

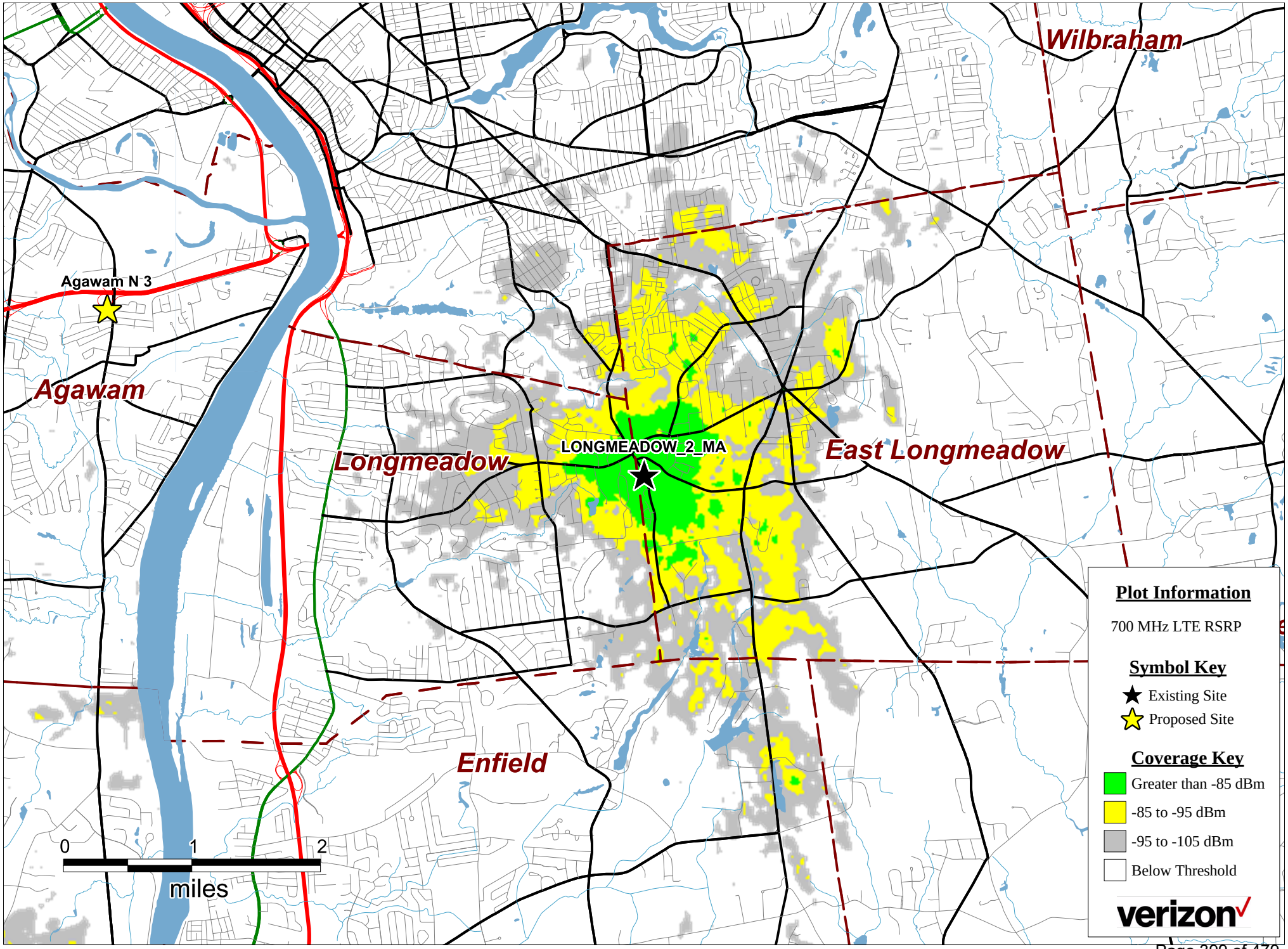

Holyoke
Chicopee
West Springfield
CHICOPEE_FALLS_MA
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

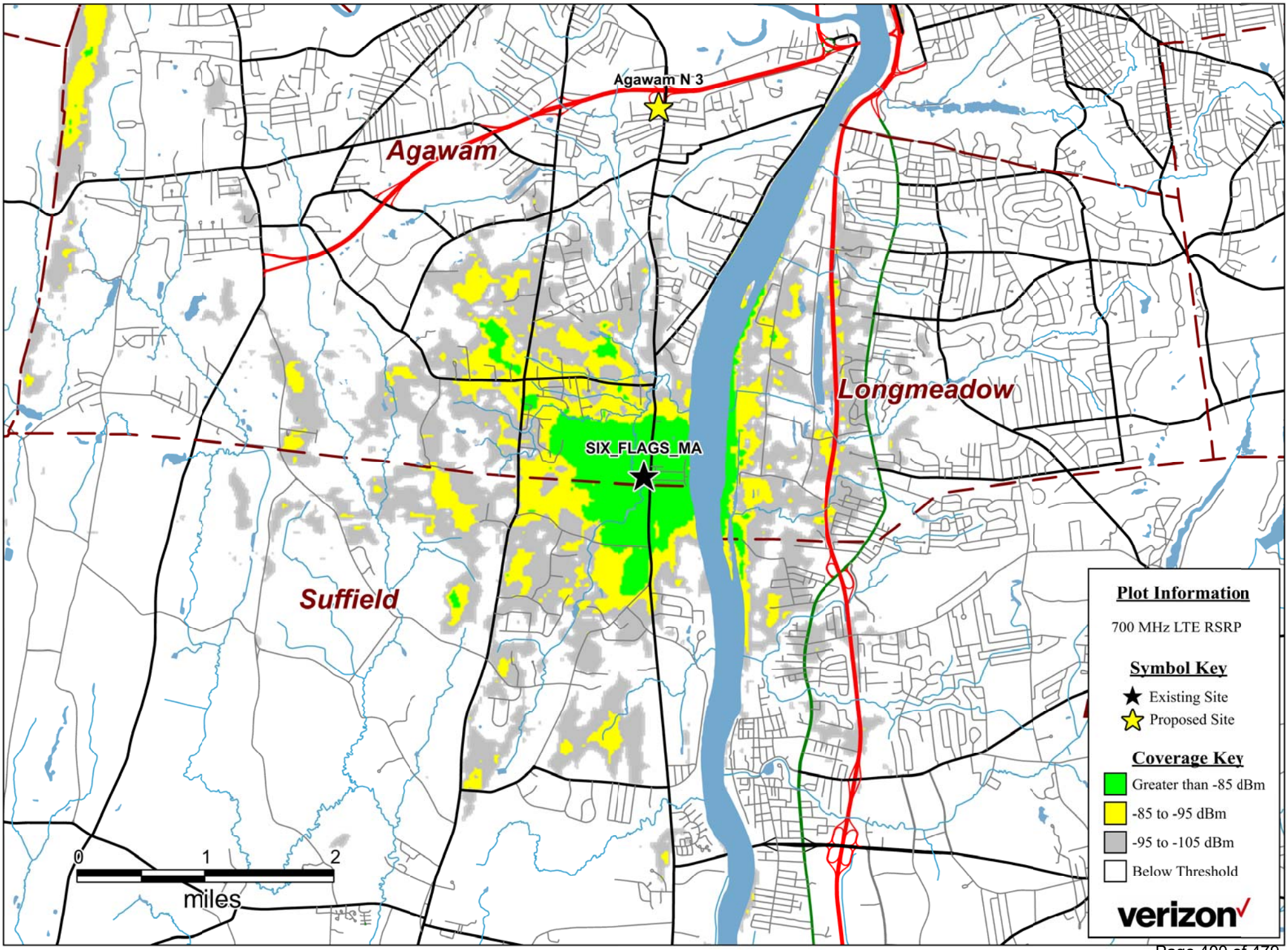

Springfield
Wilbraham
East Longmeadow
Longmeadow
SPRINGFIELD_7_MA
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

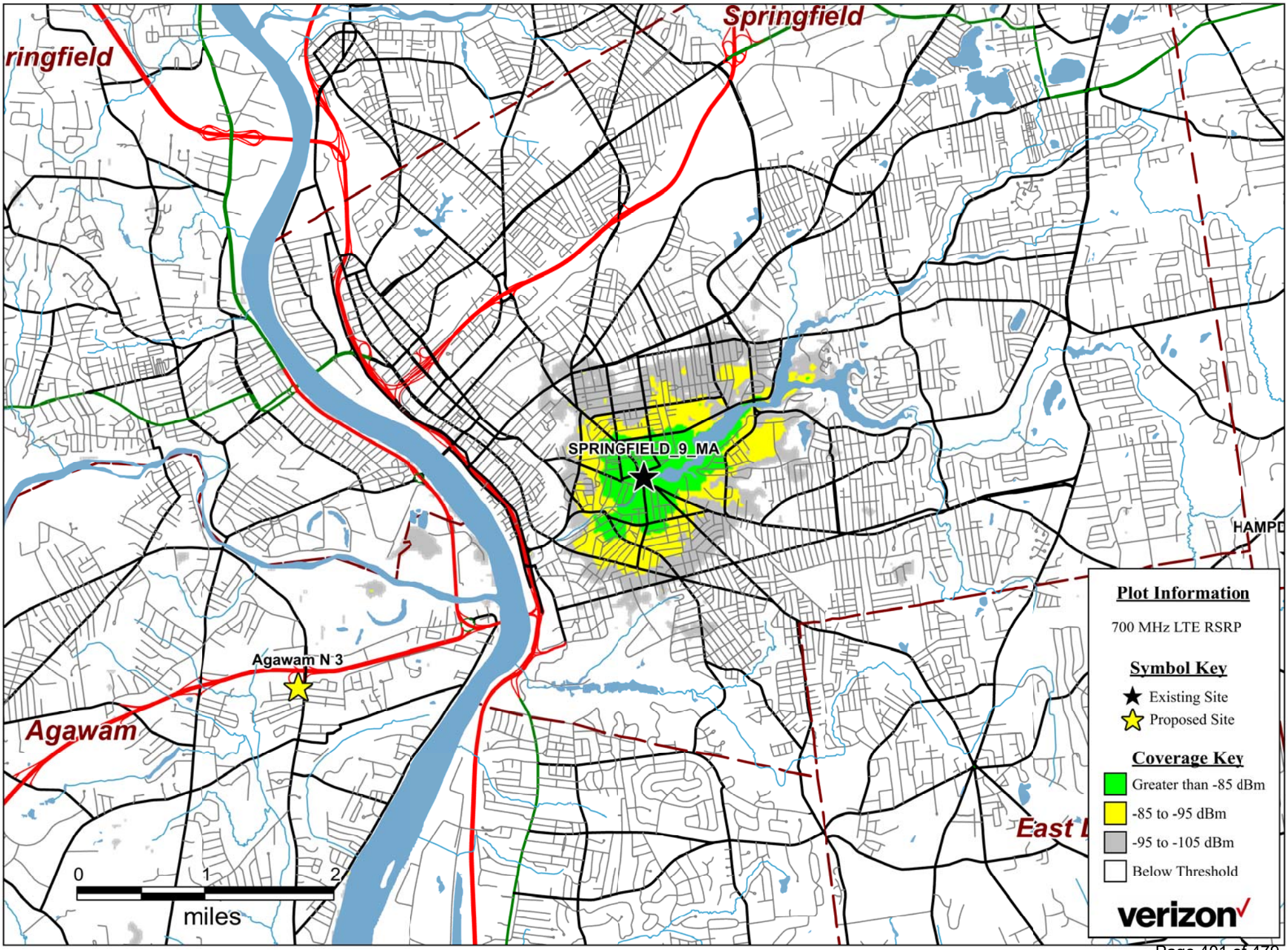

CHICOPEE 2 MA
Ludlow
Chicopee
Springfield
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

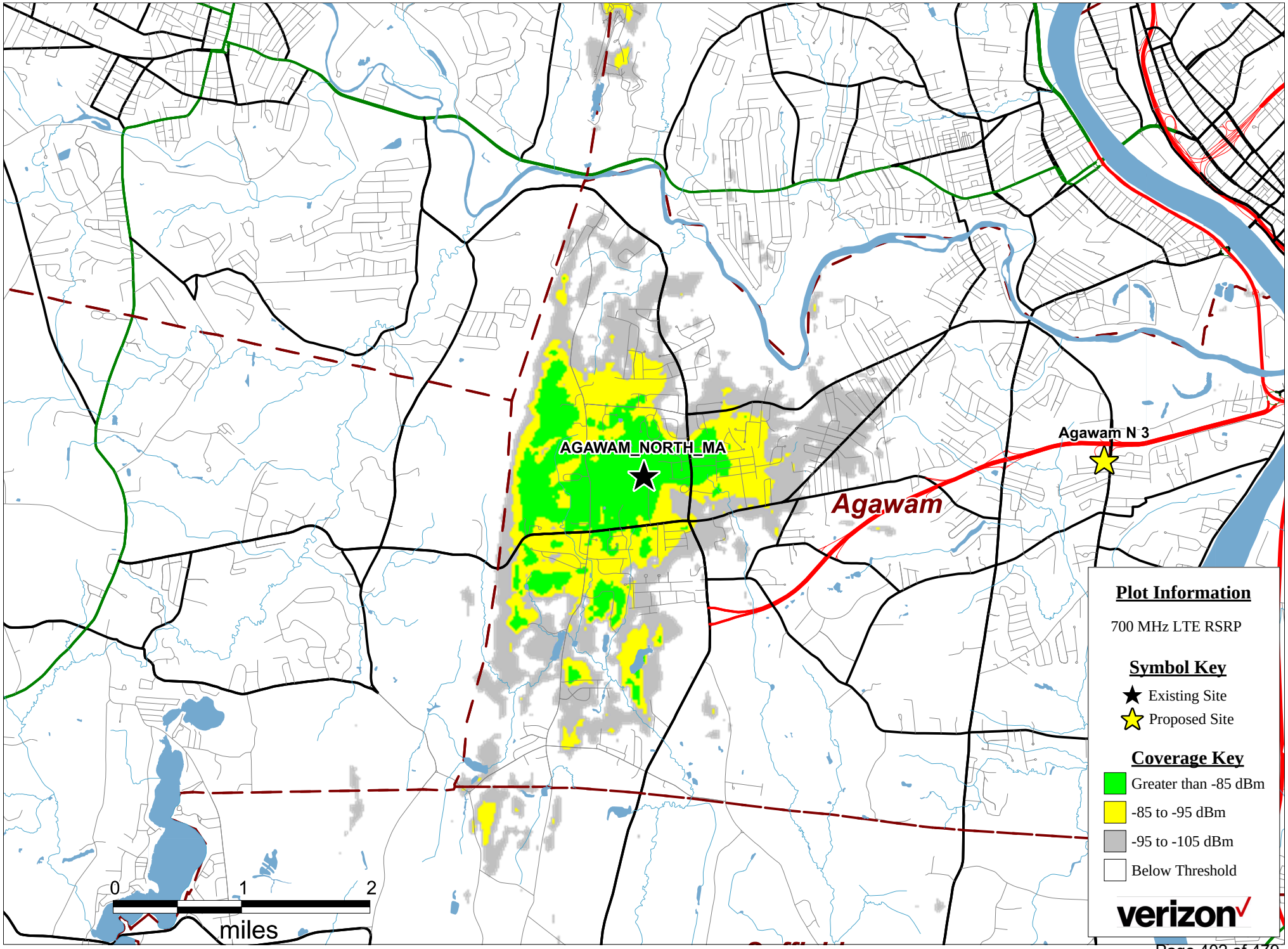

Agawam N 3
LONGMEADOW 3 MA
East Longmeadow
Longmeadow
Enfield
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

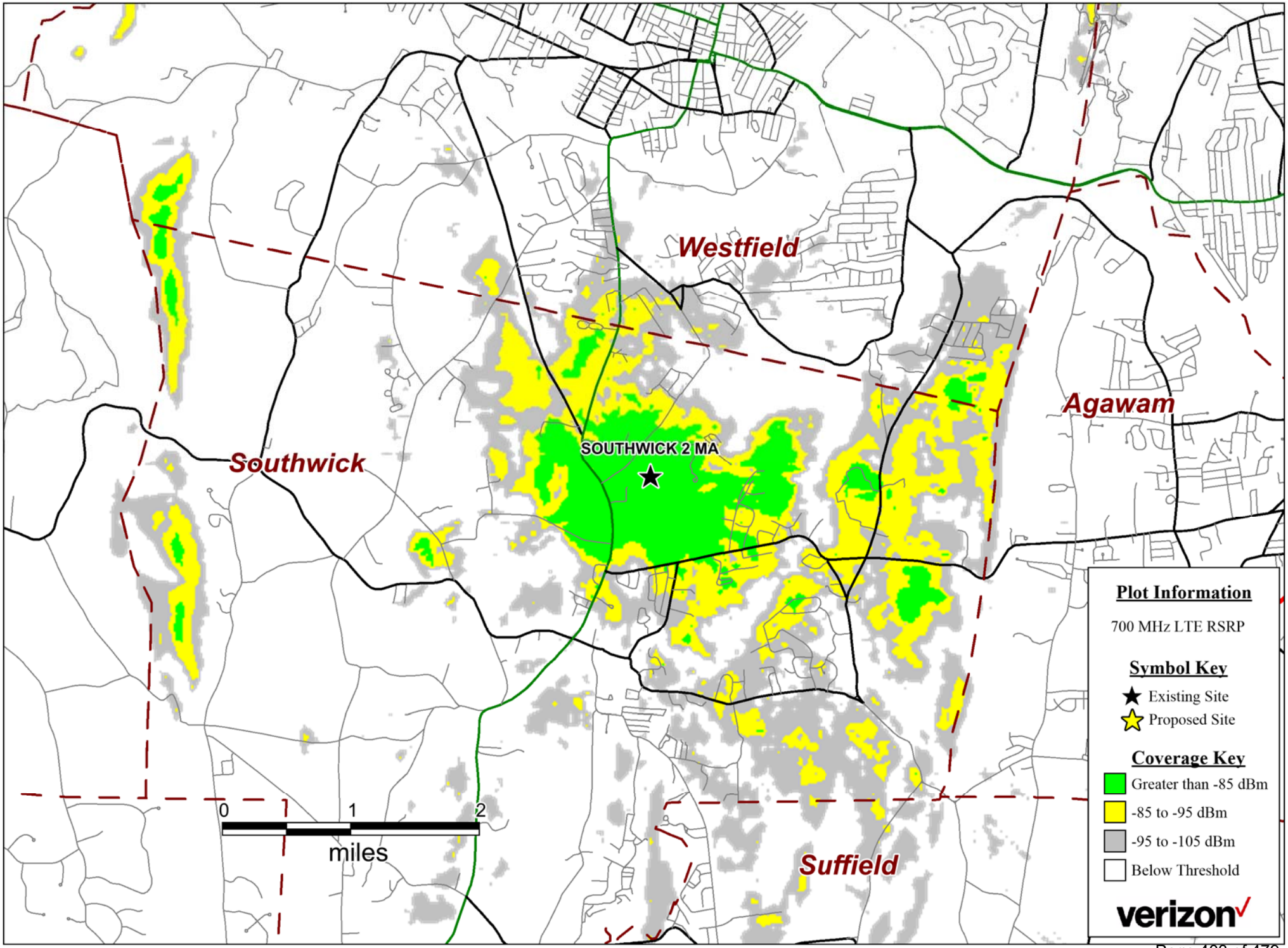

Holyoke
Chicopee
Springfield
West Springfield
CHICOPEE 3 MA
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

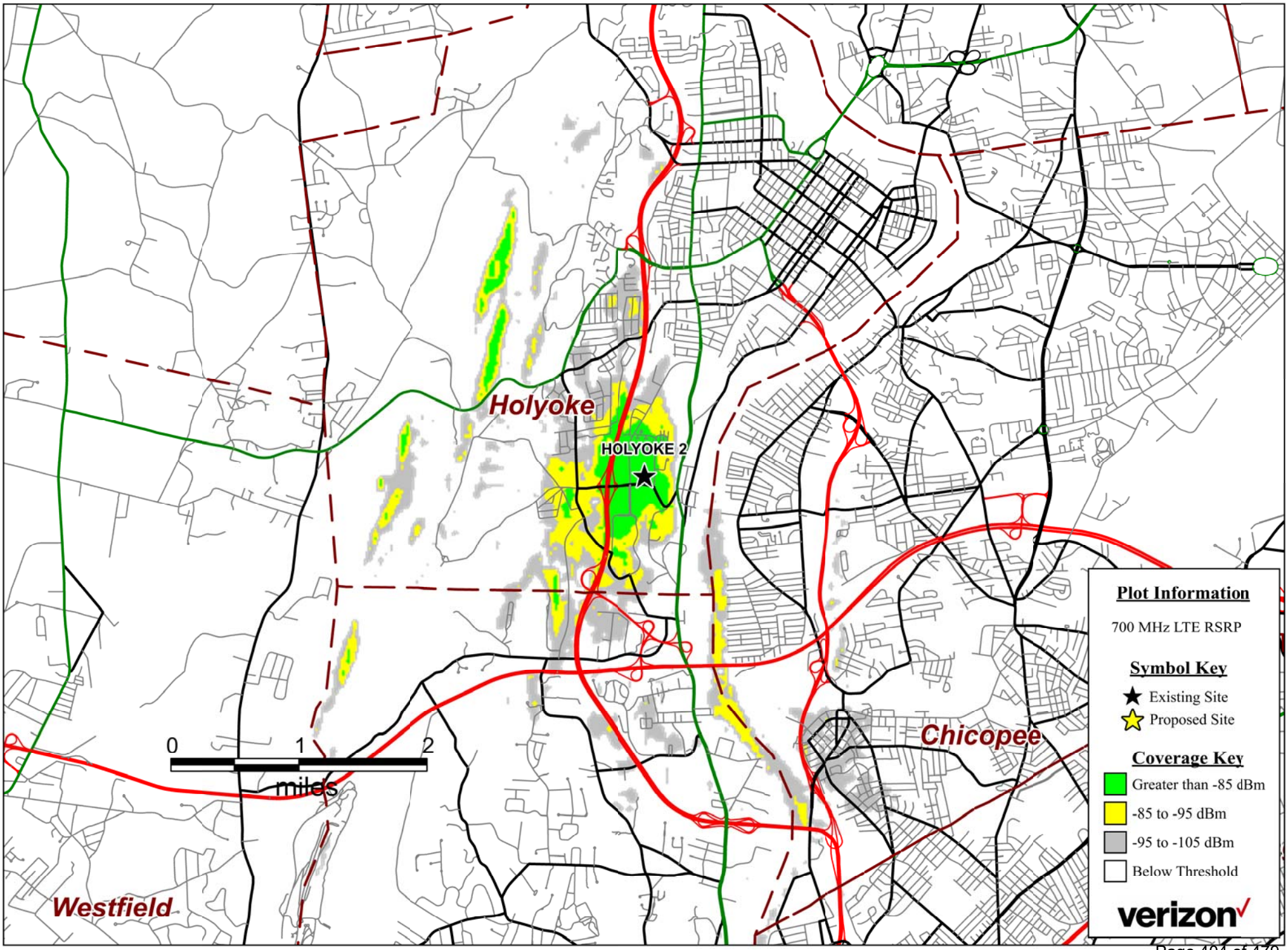

Wilbraham
Agawam N 3
Agawam
LONGMEADOW_2_MA
Longmeadow
East Longmeadow
Enfield
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

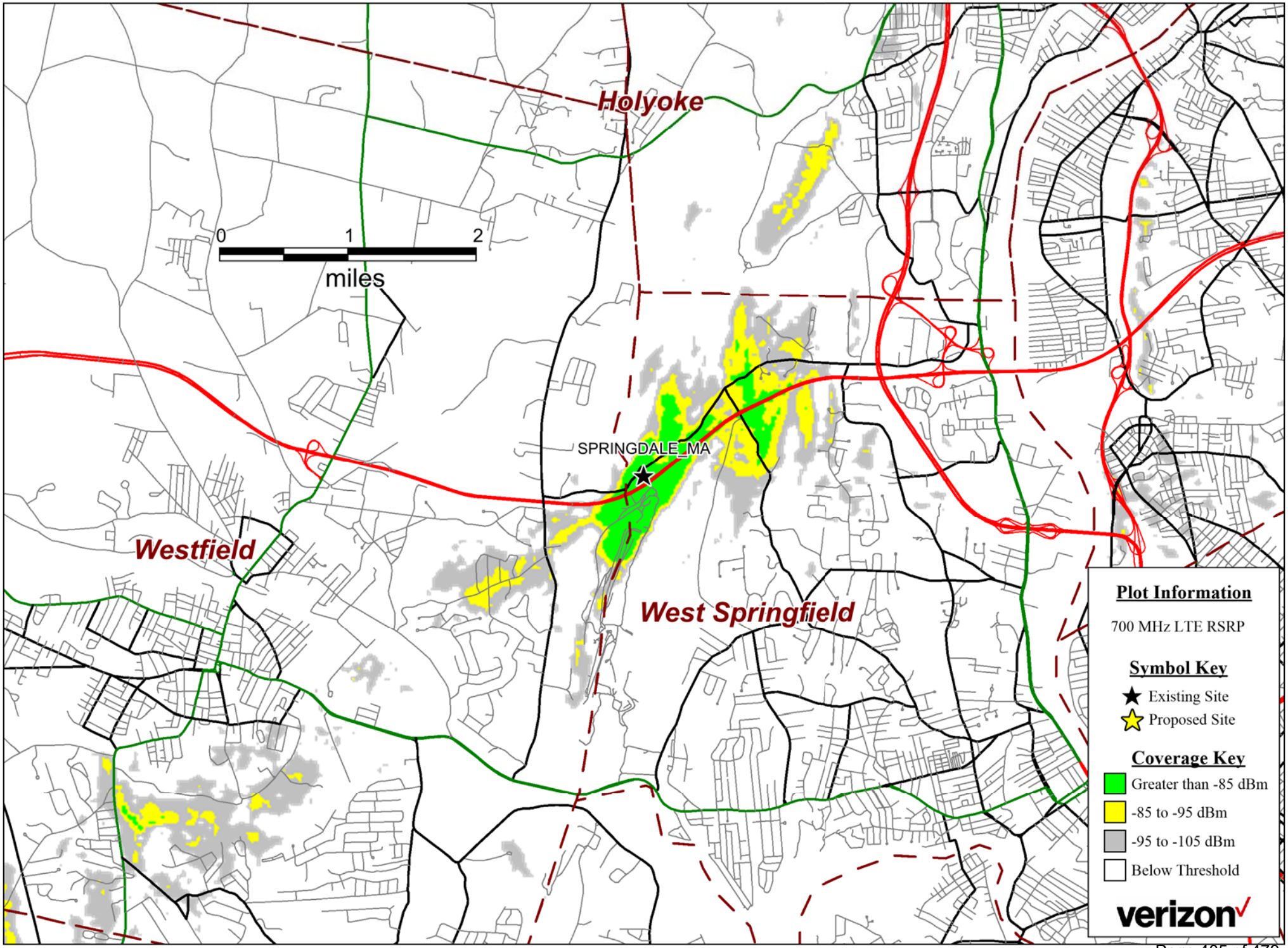

Agawam N 3
Agawam
SIX_FLAGS_MA
Longmeadow
Suffield
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

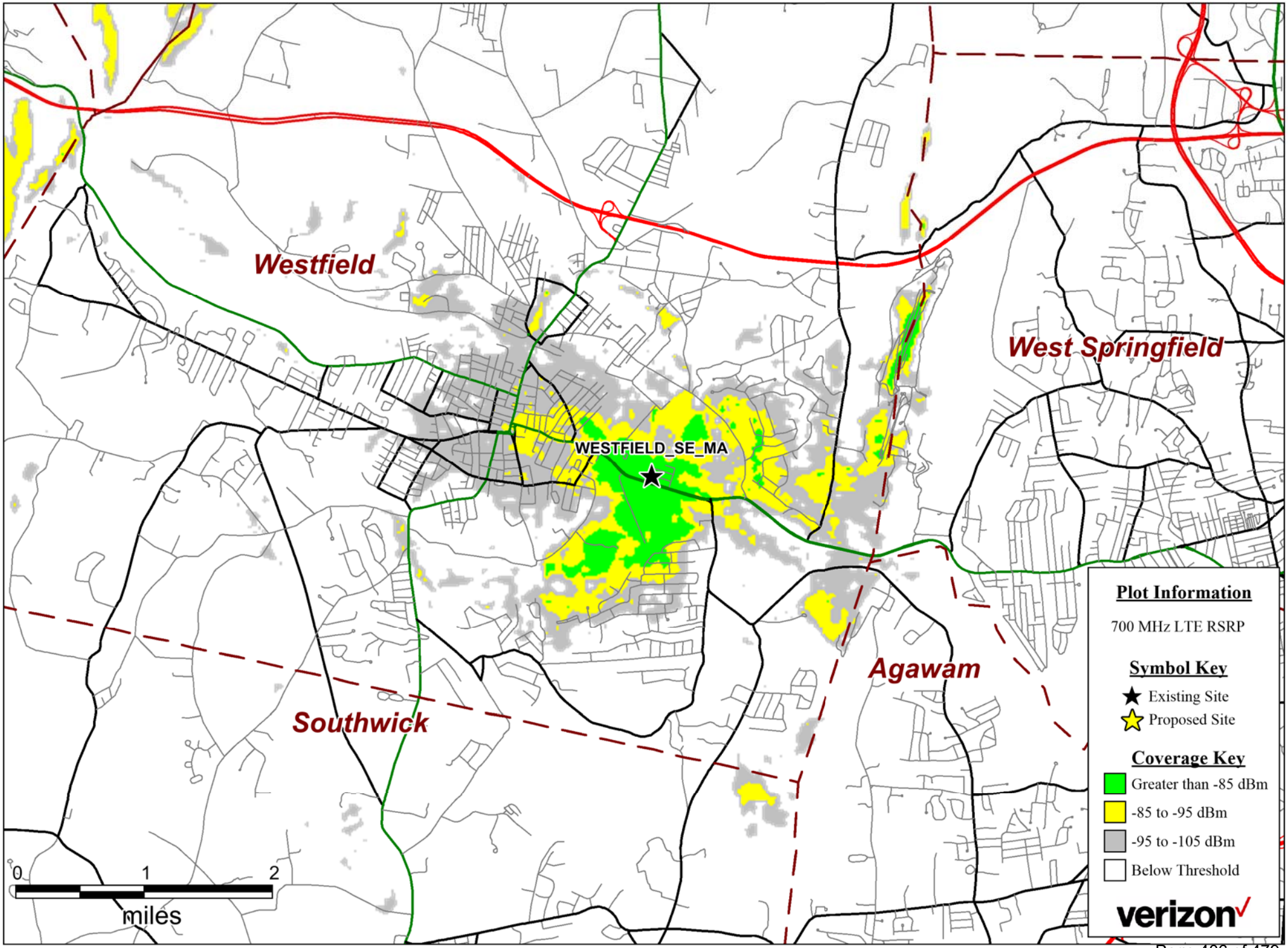

Springfield
ringfield
SPRINGFIELD_9_MA
Agawam N 3
Agawam
HAMPD
East
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

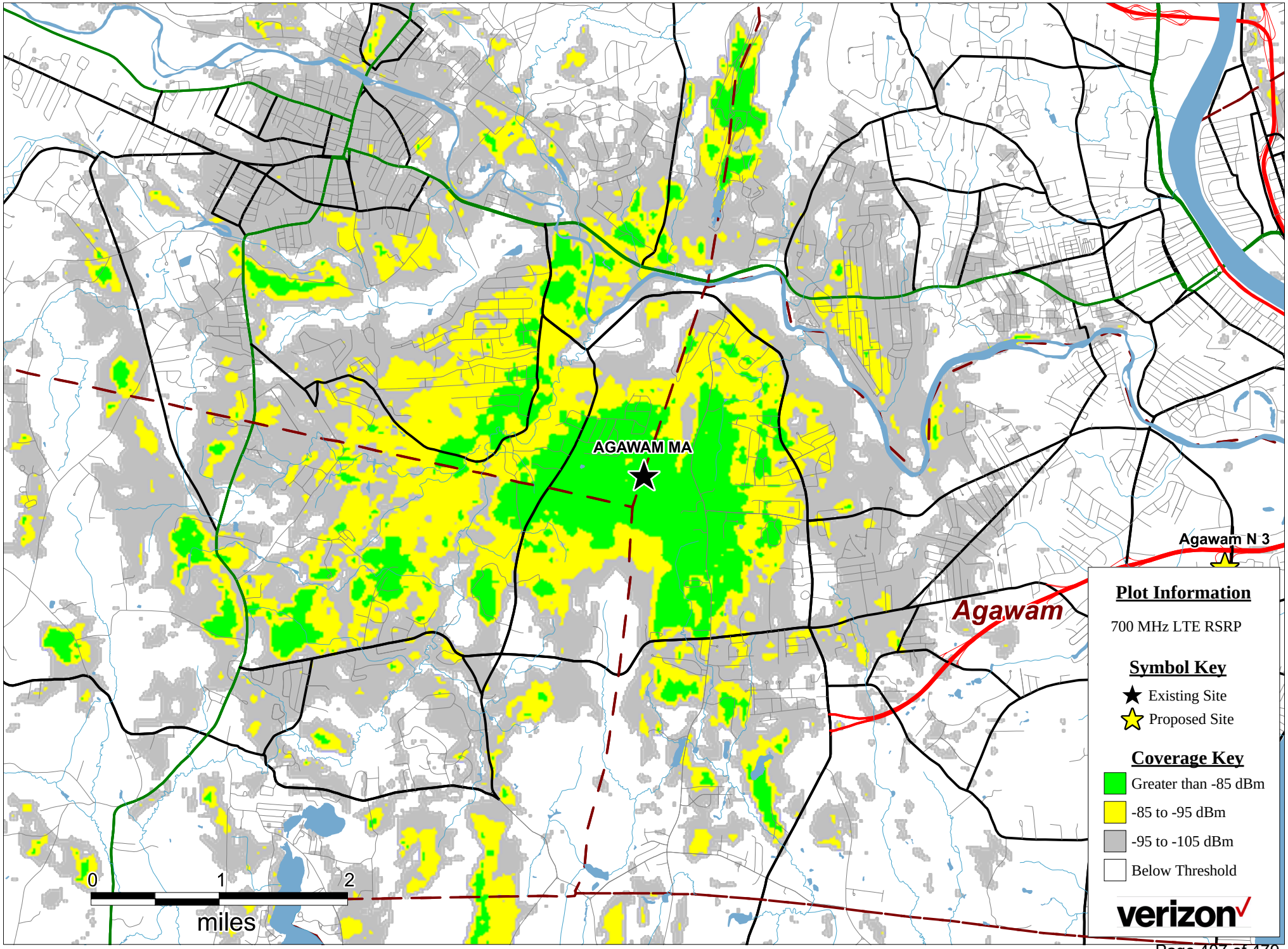

AGAWAM_NORTH_MA
Agawam N 3
Agawam
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

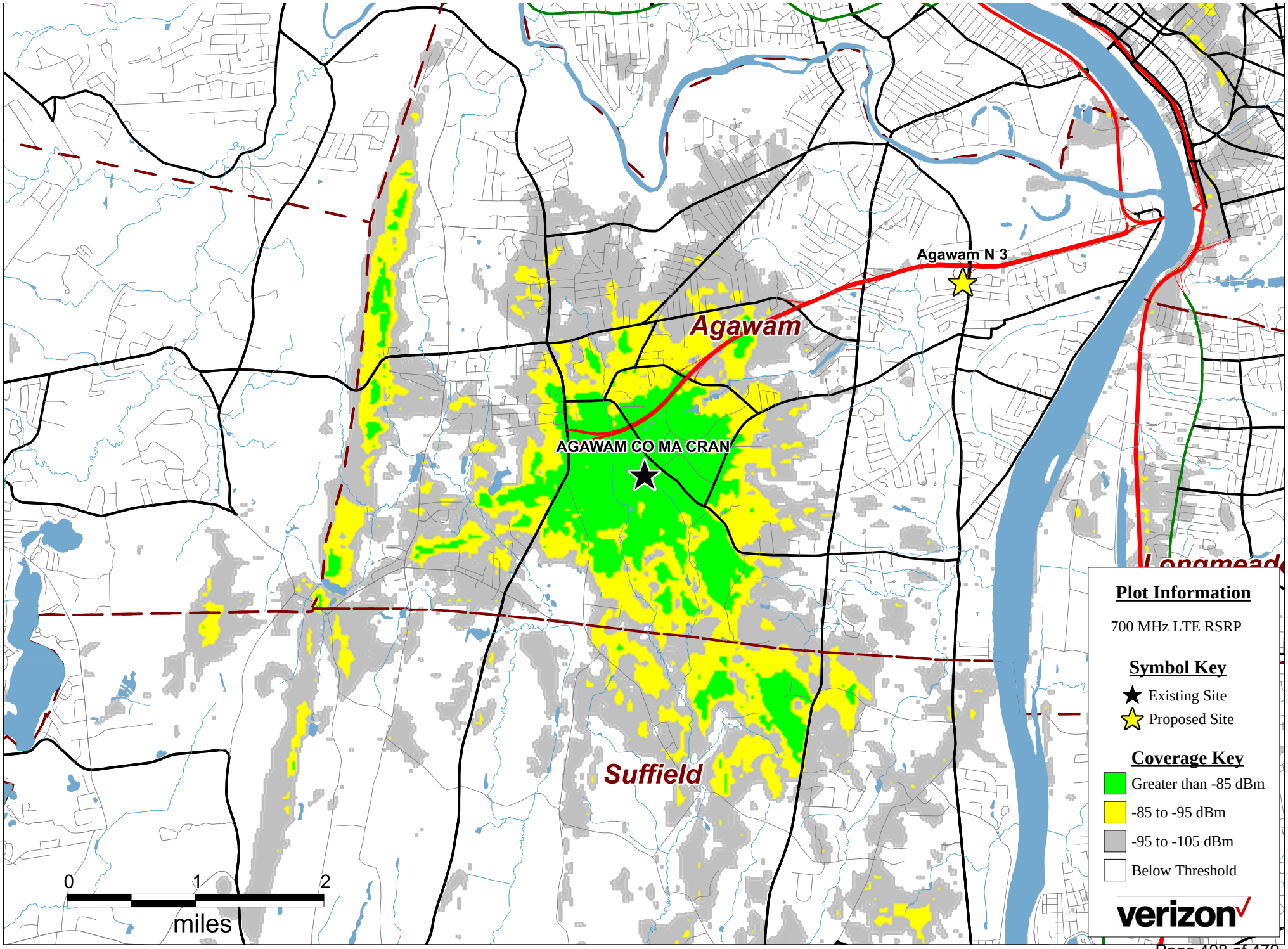

Westfield
Agawam
Southwick
SOUTHWICK 2 MA
Suffield
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

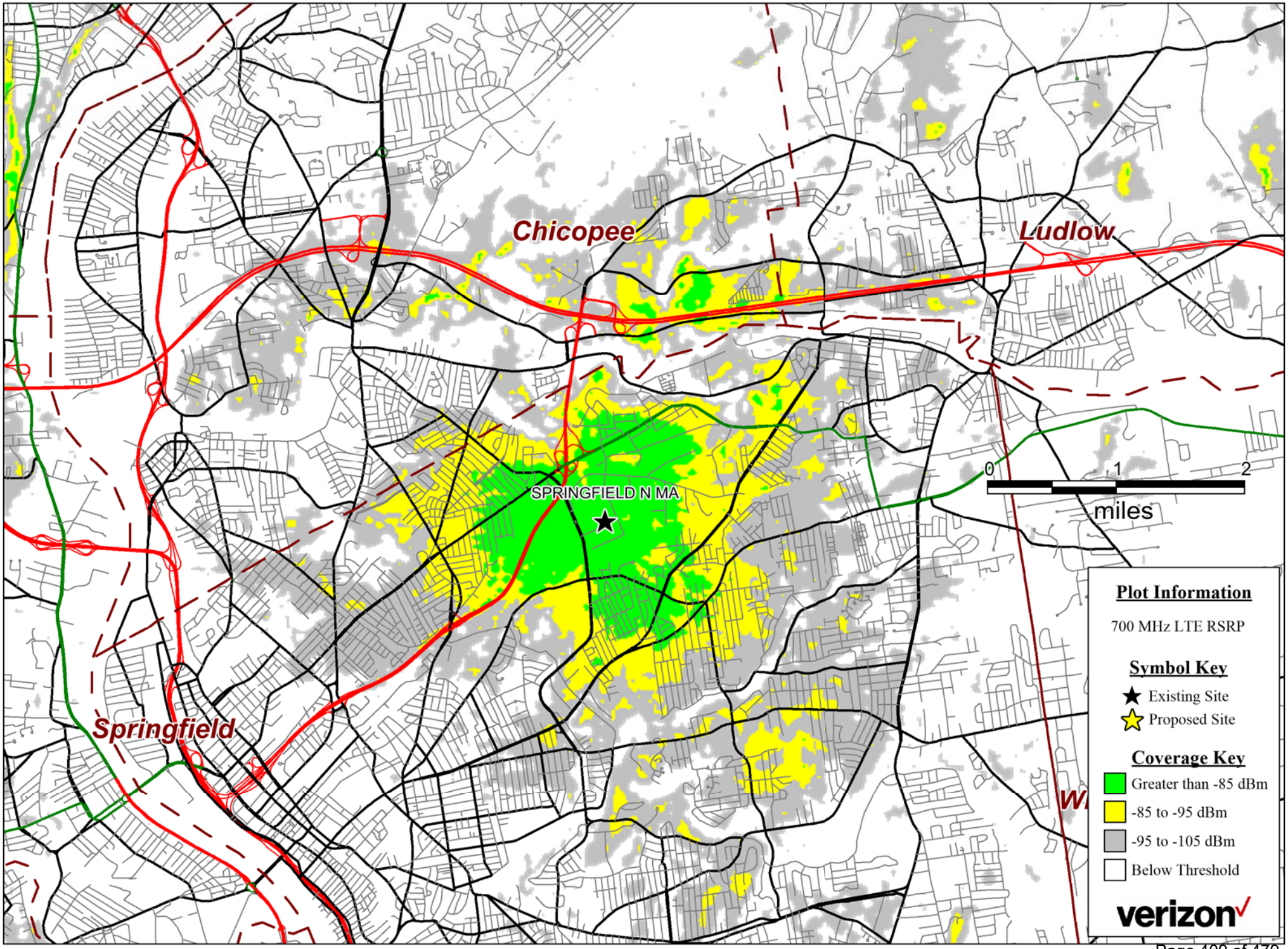

Holyoke
HOLYOKE 2
Chicopee
Westfield
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

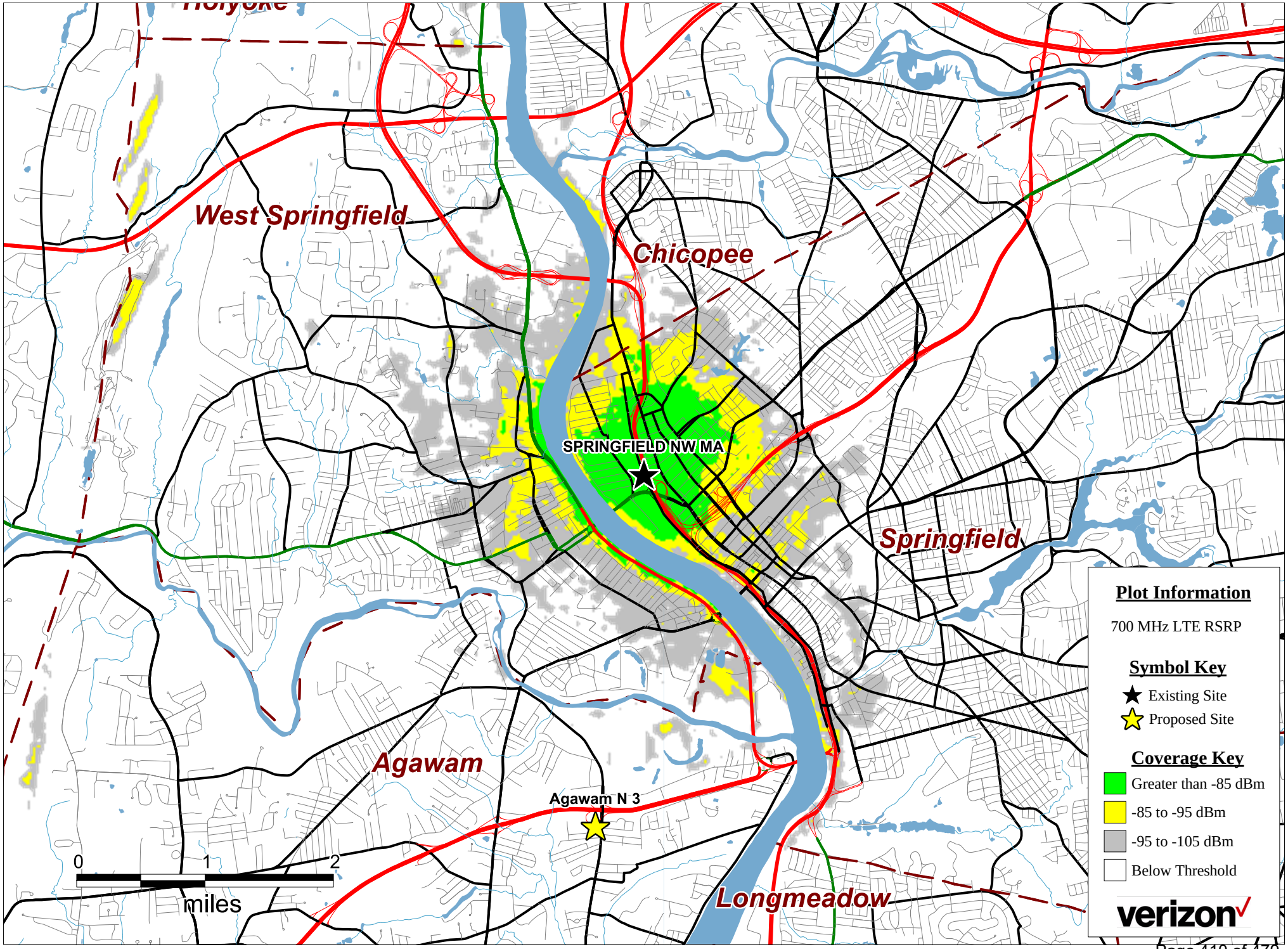

Holyoke
0
1
2
miles
SPRINGDALE_MA
Westfield
West Springfield
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

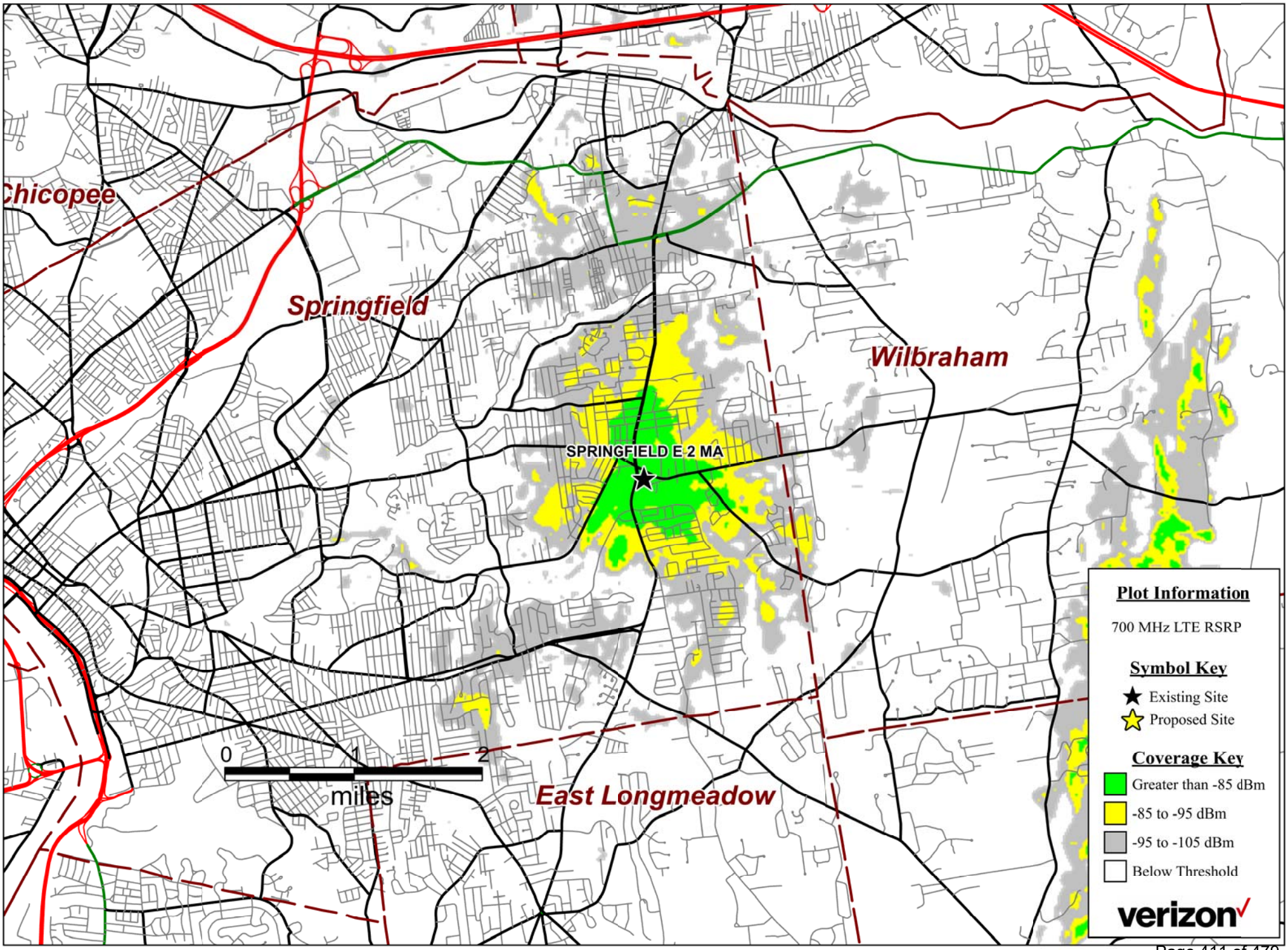

Westfield
West Springfield
WESTFIELD_SE_MA
Agawam
Southwick
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

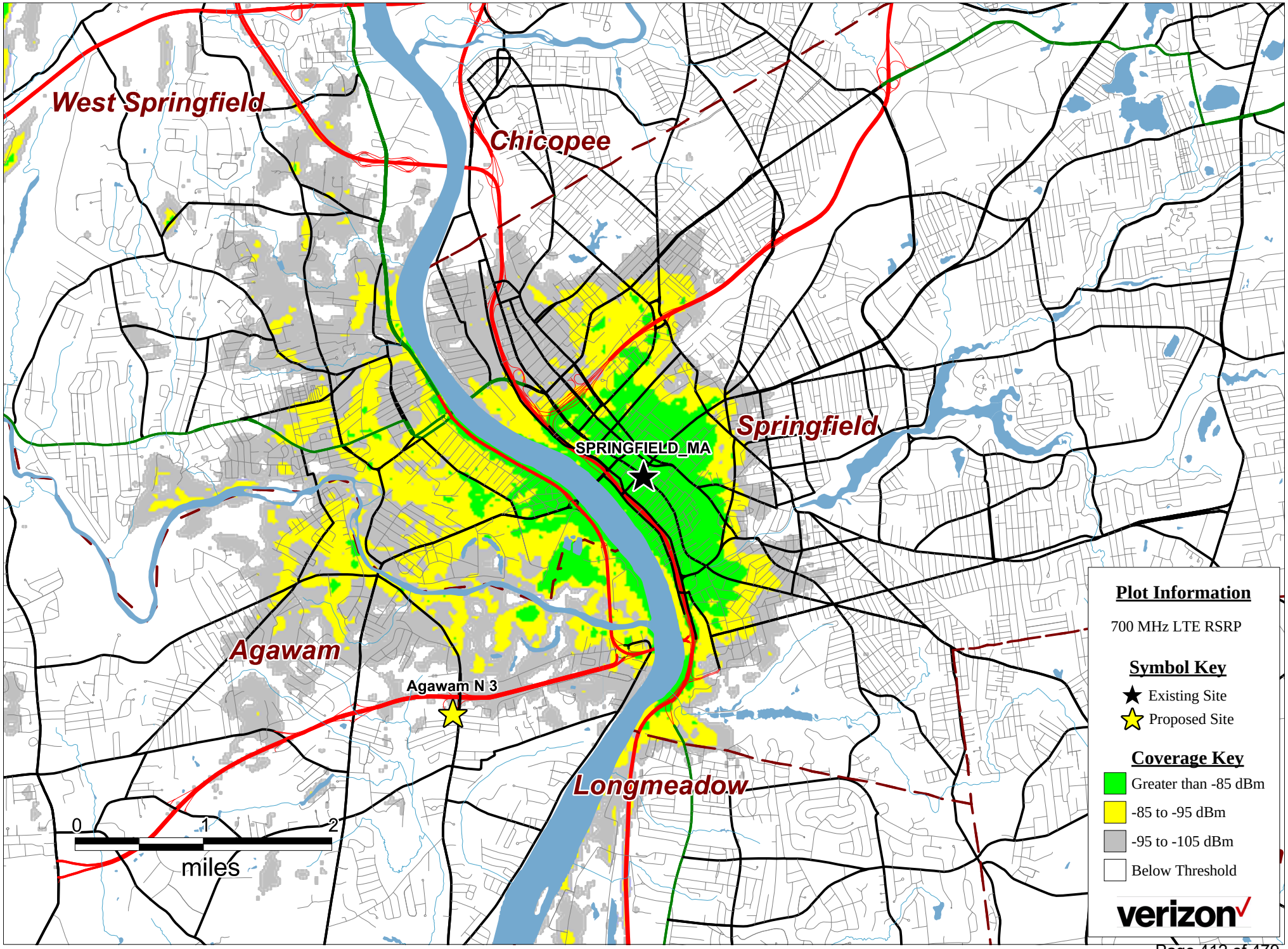

AGAWAM MA
Agawam N 3
Agawam
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

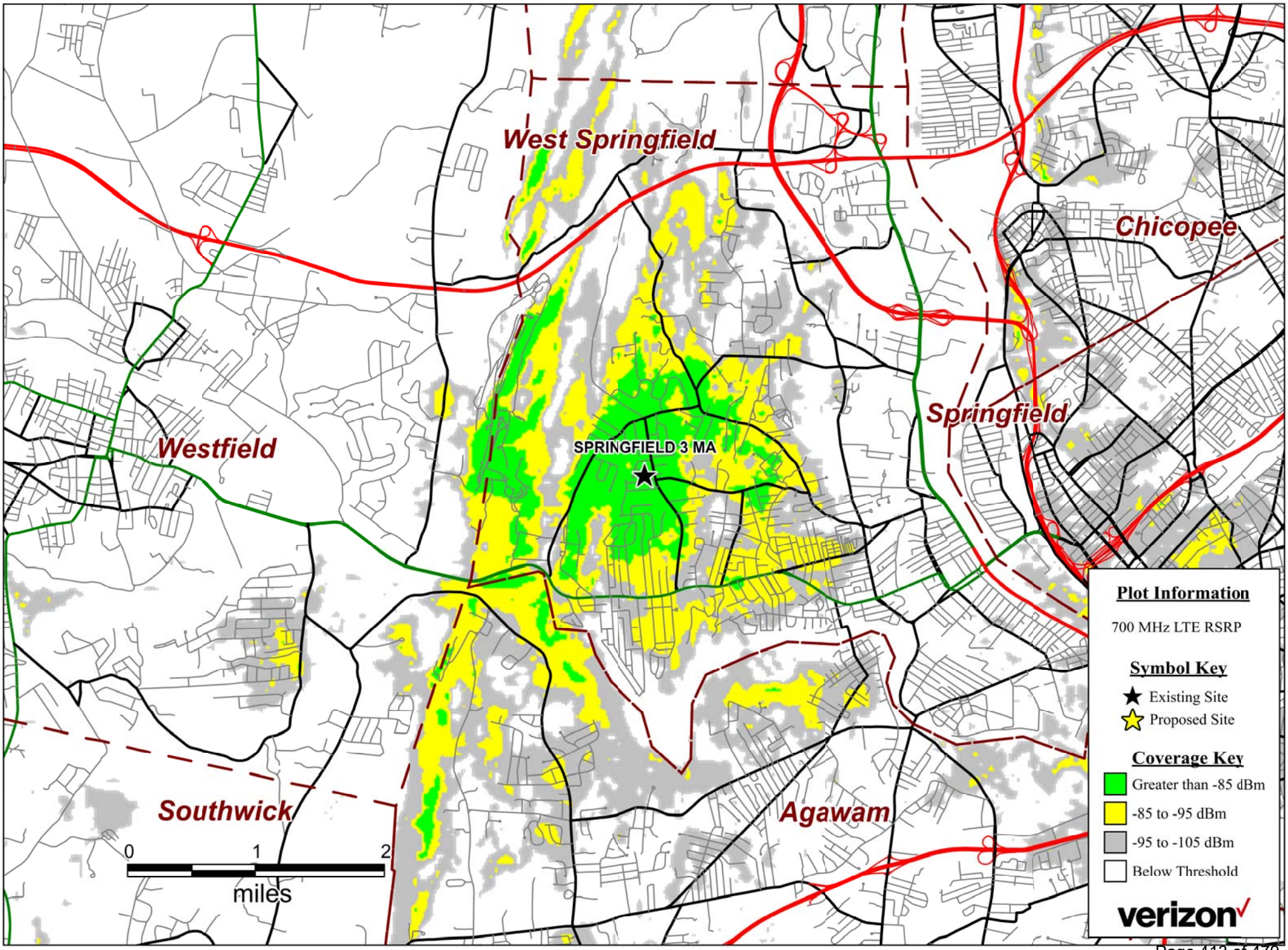

Agawam N 3
Agawam
AGAWAM CO MA CRAN
Suffield
Longmeadow
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

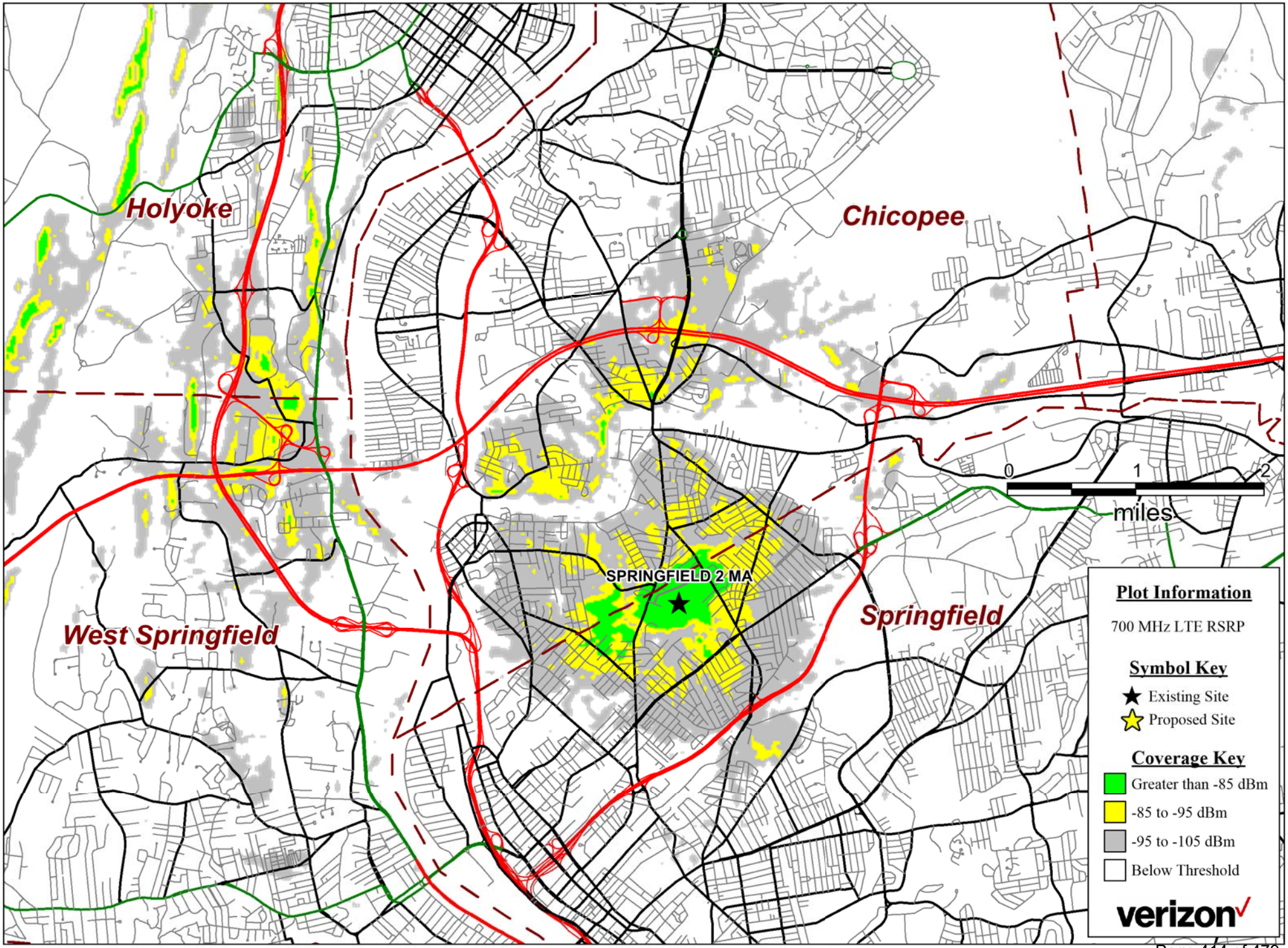

Chicopee
Ludlow
Springfield
SPRINGFIELD N MA
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

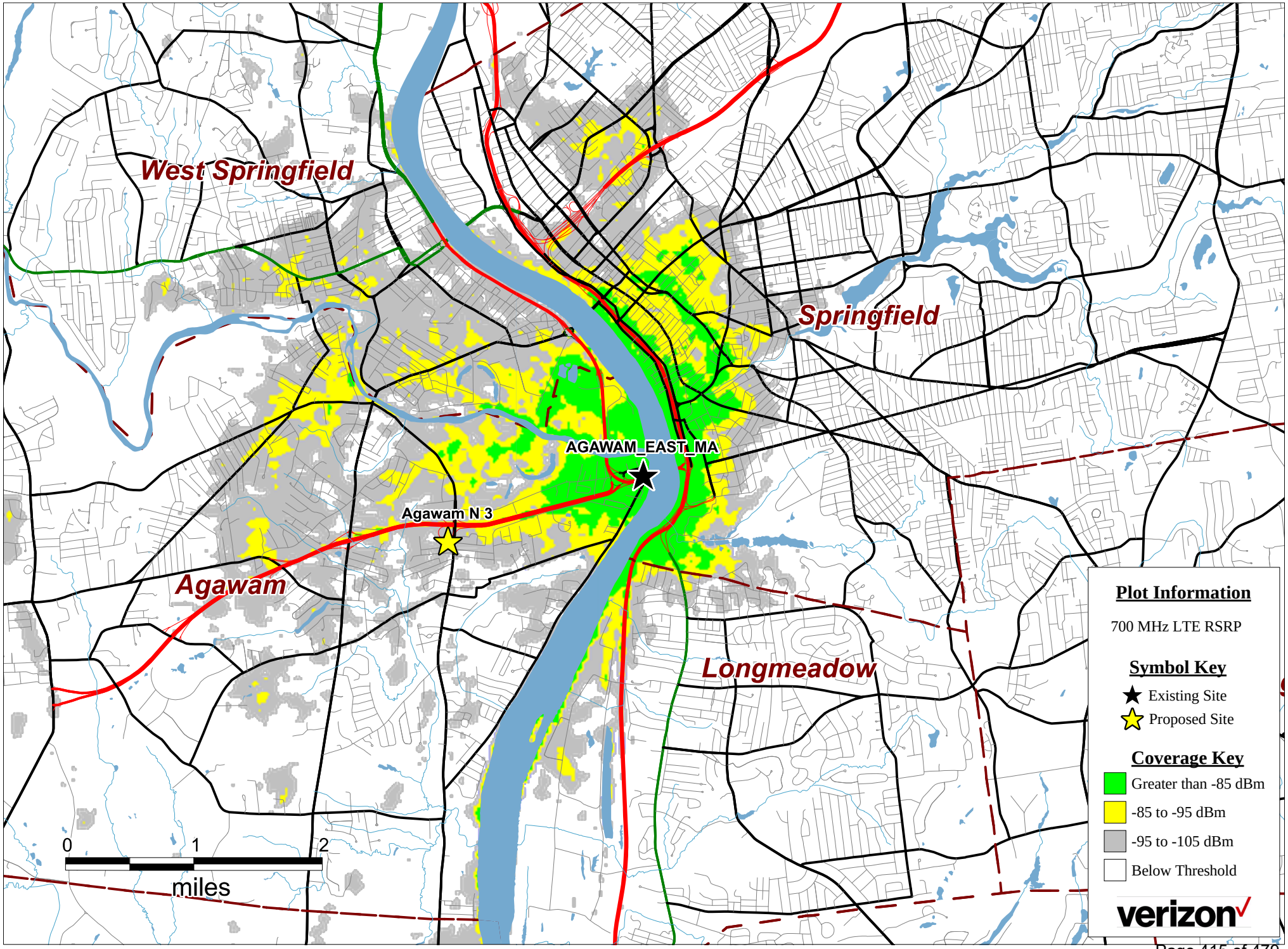

West Springfield
Chicopee
SPRINGFIELD NW MA
Springfield
Agawam
Agawam N 3
Longmeadow
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

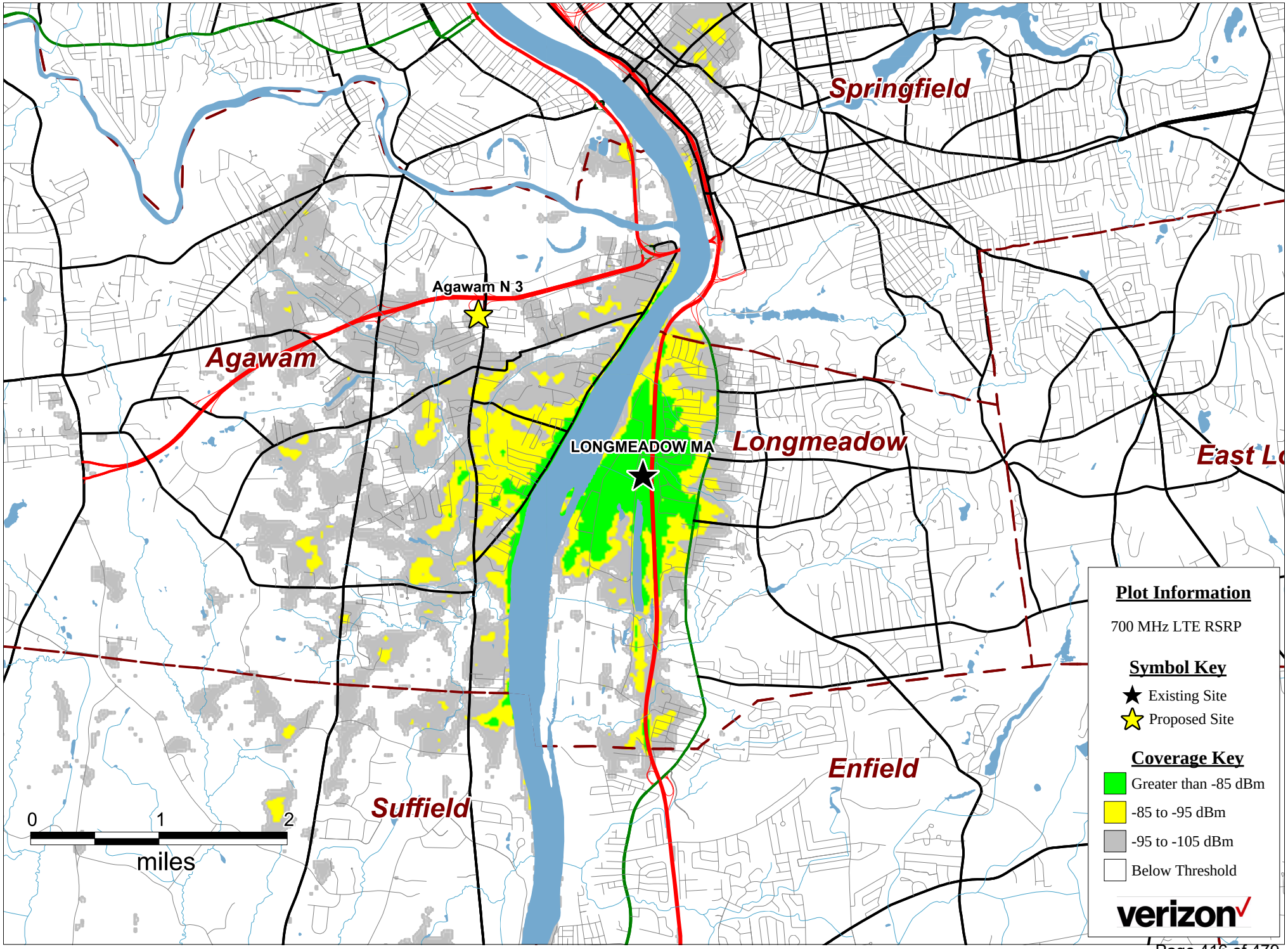

Chicopee
Springfield
Wilbraham
SPRINGFIELD E 2 MA
East Longmeadow
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

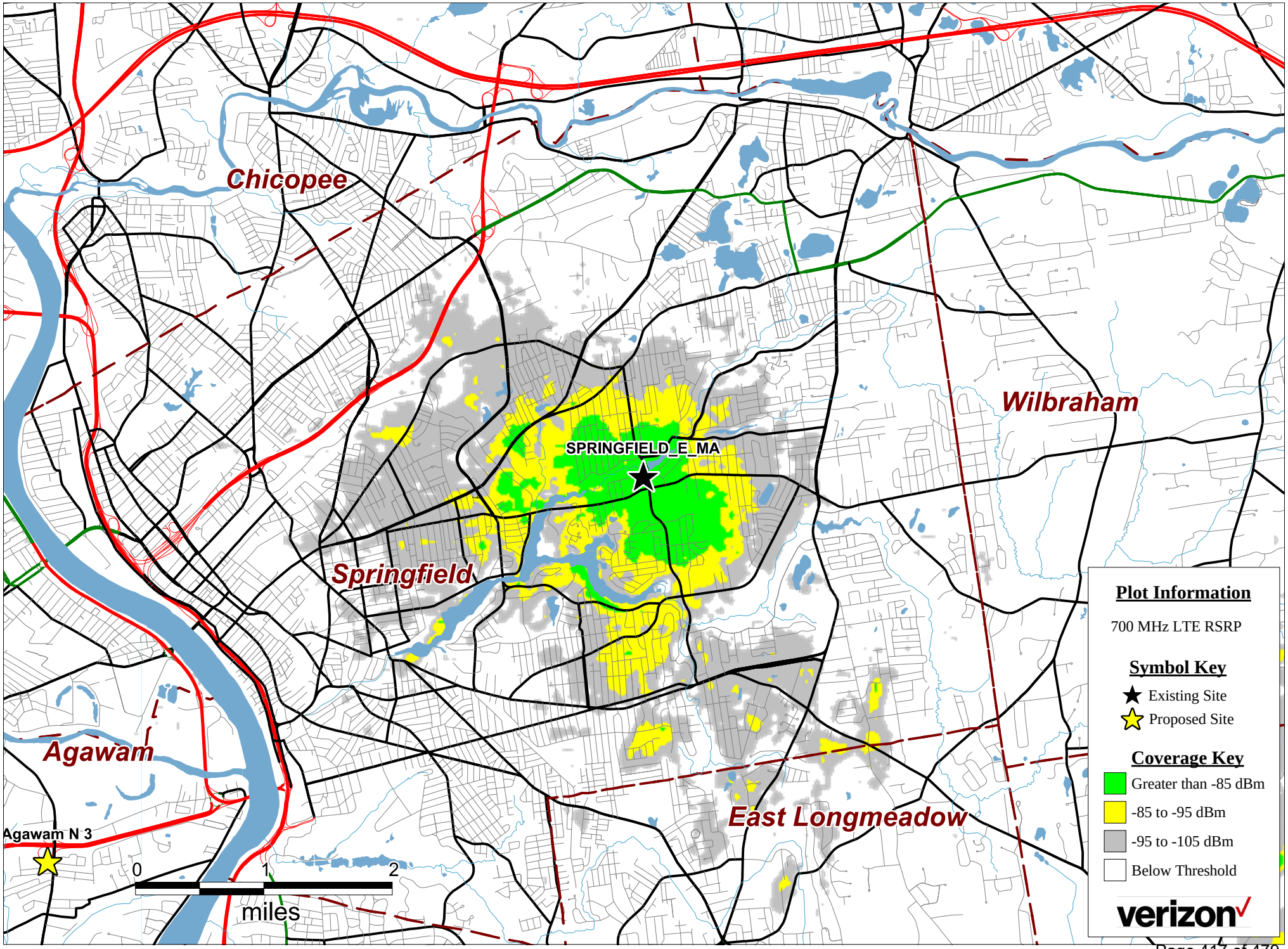

West Springfield
Chicopee
Springfield
SPRINGFIELD_MA
Agawam
Agawam N 3
Longmeadow
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

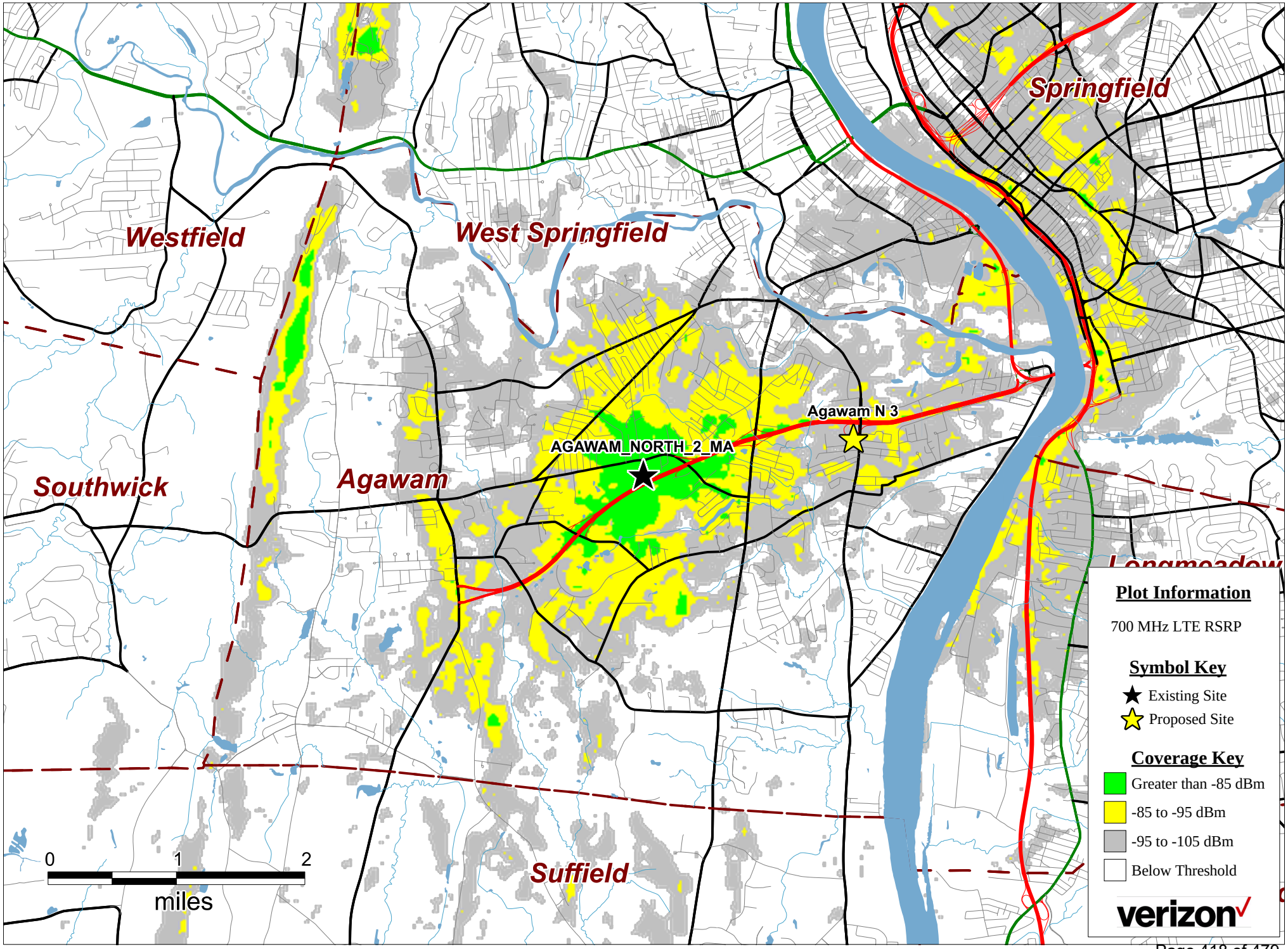

West Springfield
Chicopee
Springfield
Westfield
SPRINGFIELD 3 MA
Southwick
Agawam
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

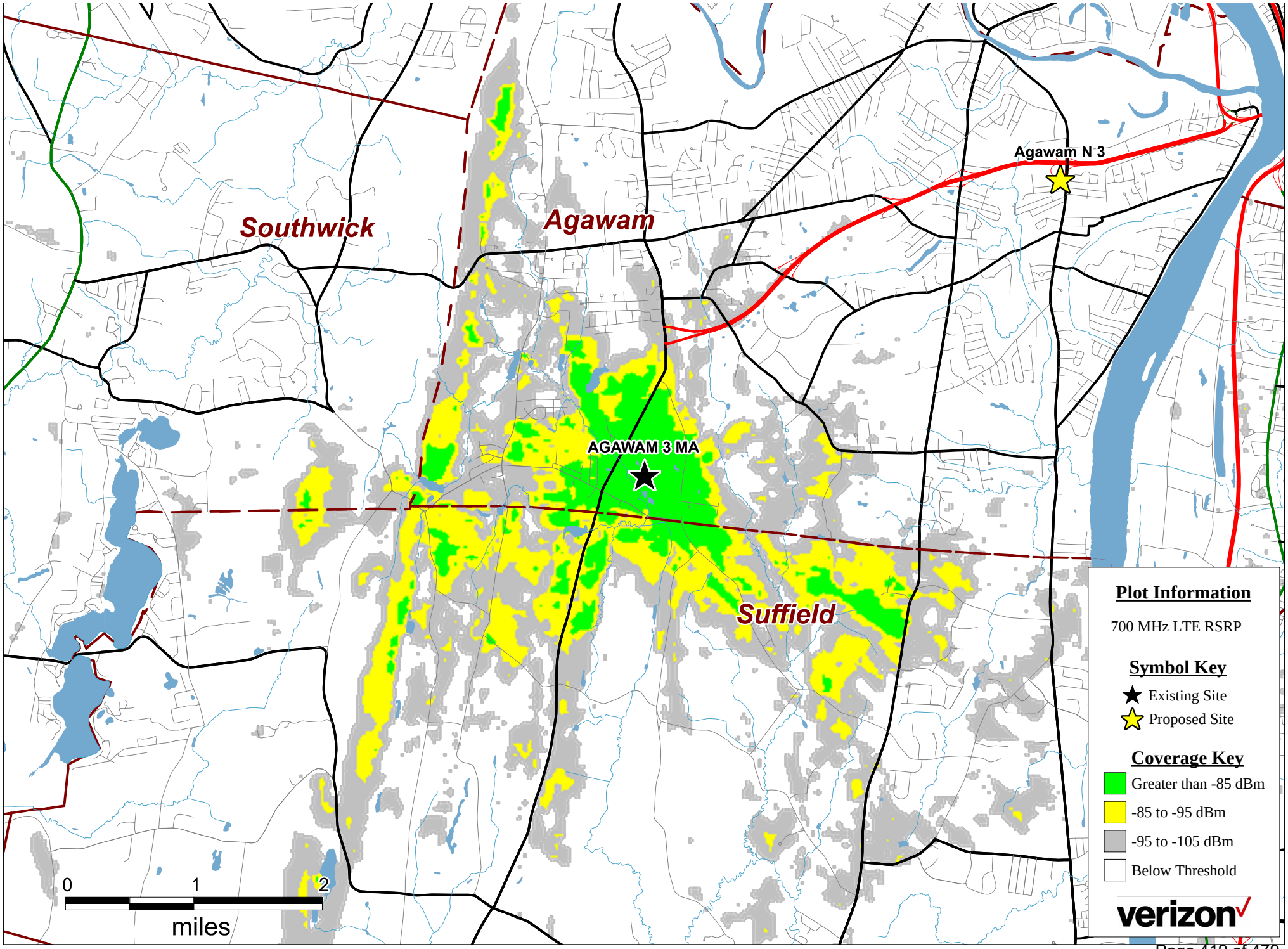

Holyoke
Chicopee
SPRINGFIELD 2 MA
West Springfield
Springfield
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

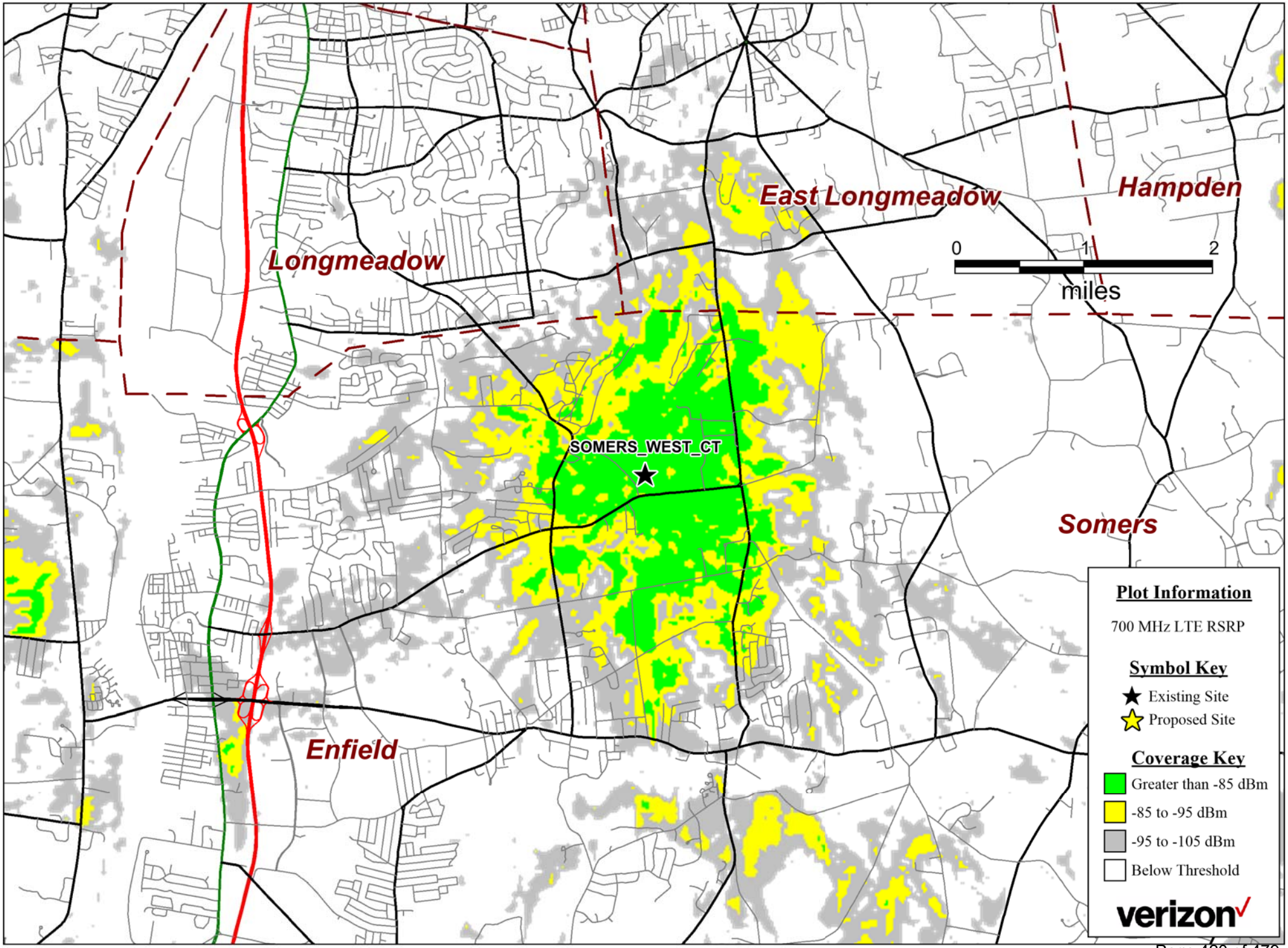

West Springfield
Springfield
AGAWAM_EAST_MA
Agawam N 3
Agawam
Longmeadow
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

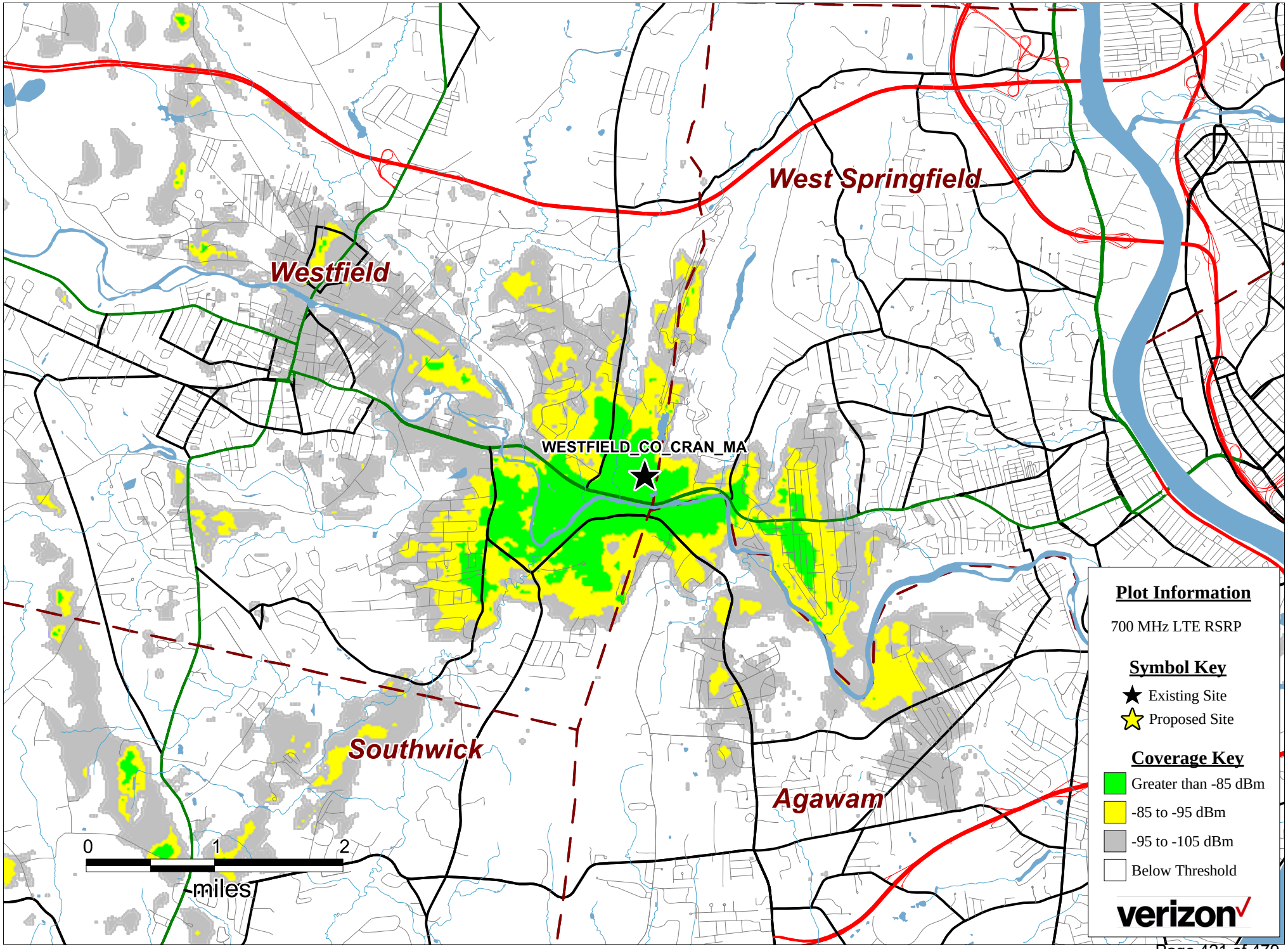

Springfield
Agawam N 3
Agawam
LONGMEADOW MA
Longmeadow
East L
Enfield
Suffield
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

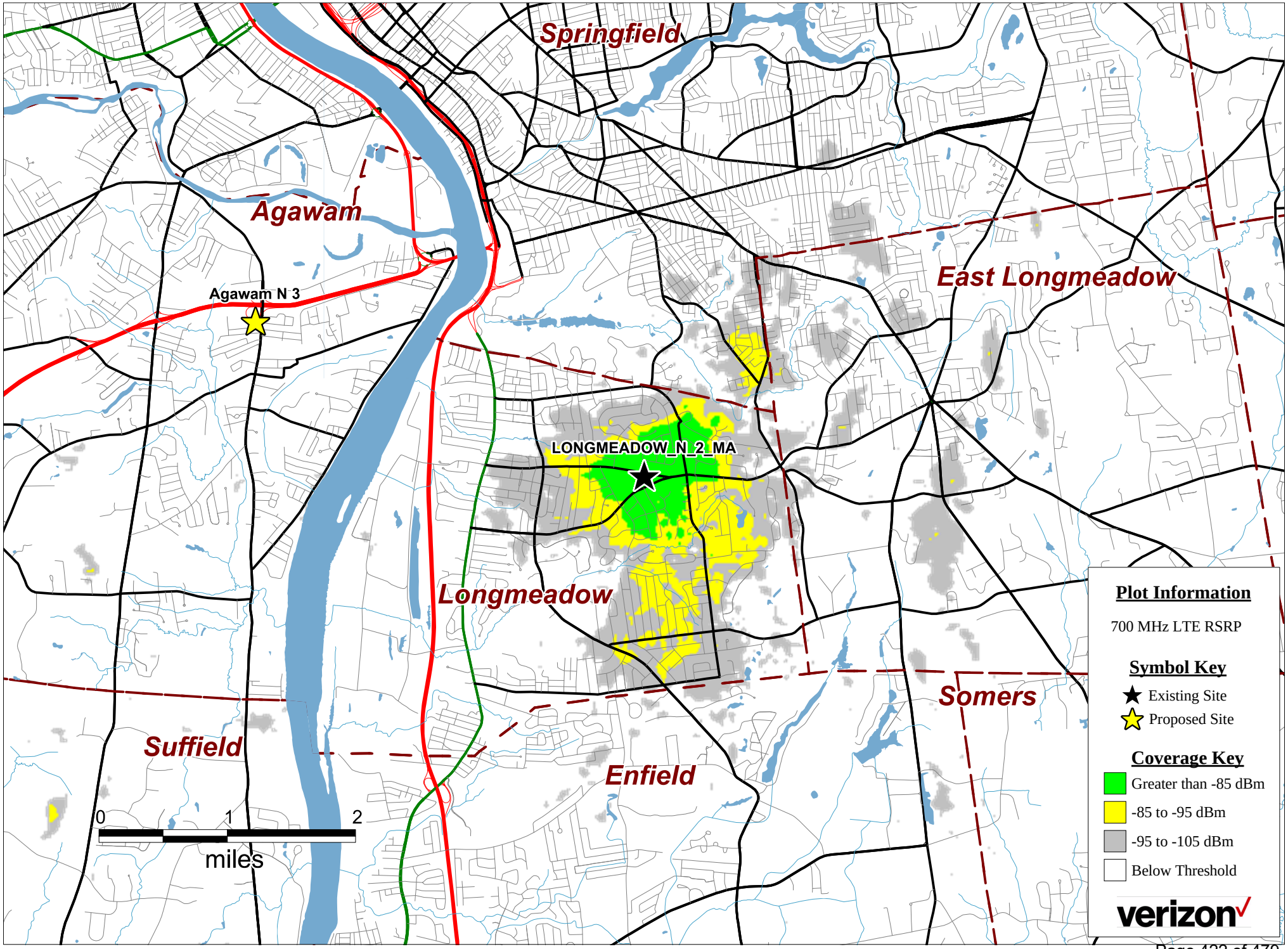

Chicopee
Wilbraham
SPRINGFIELD_E_MA
Springfield
Agawam
East Longmeadow
Agawam N 3
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

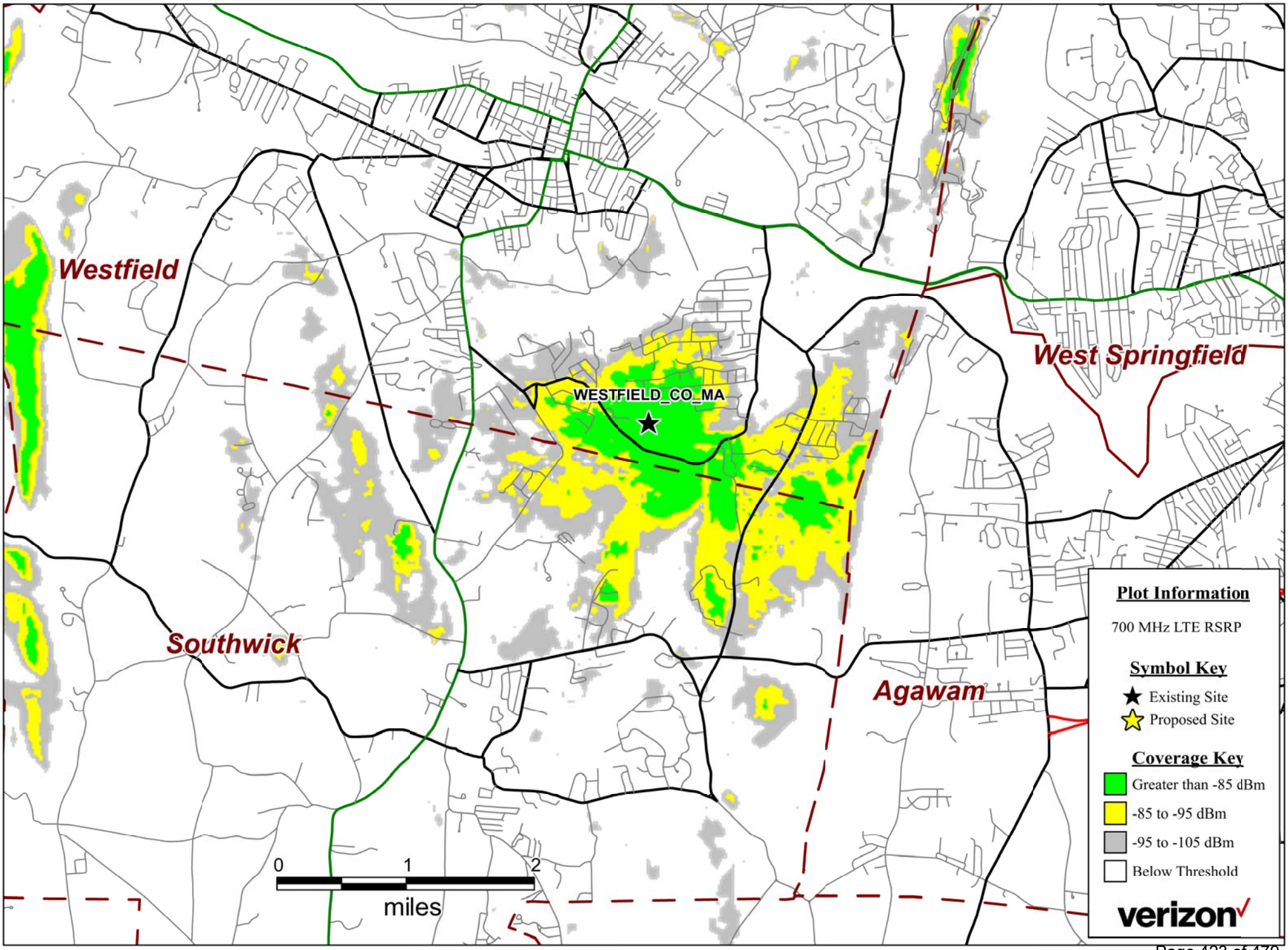

Springfield
Westfield
West Springfield
Agawam N 3
AGAWAM_NORTH_2_MA
Southwick
Agawam
Suffield
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

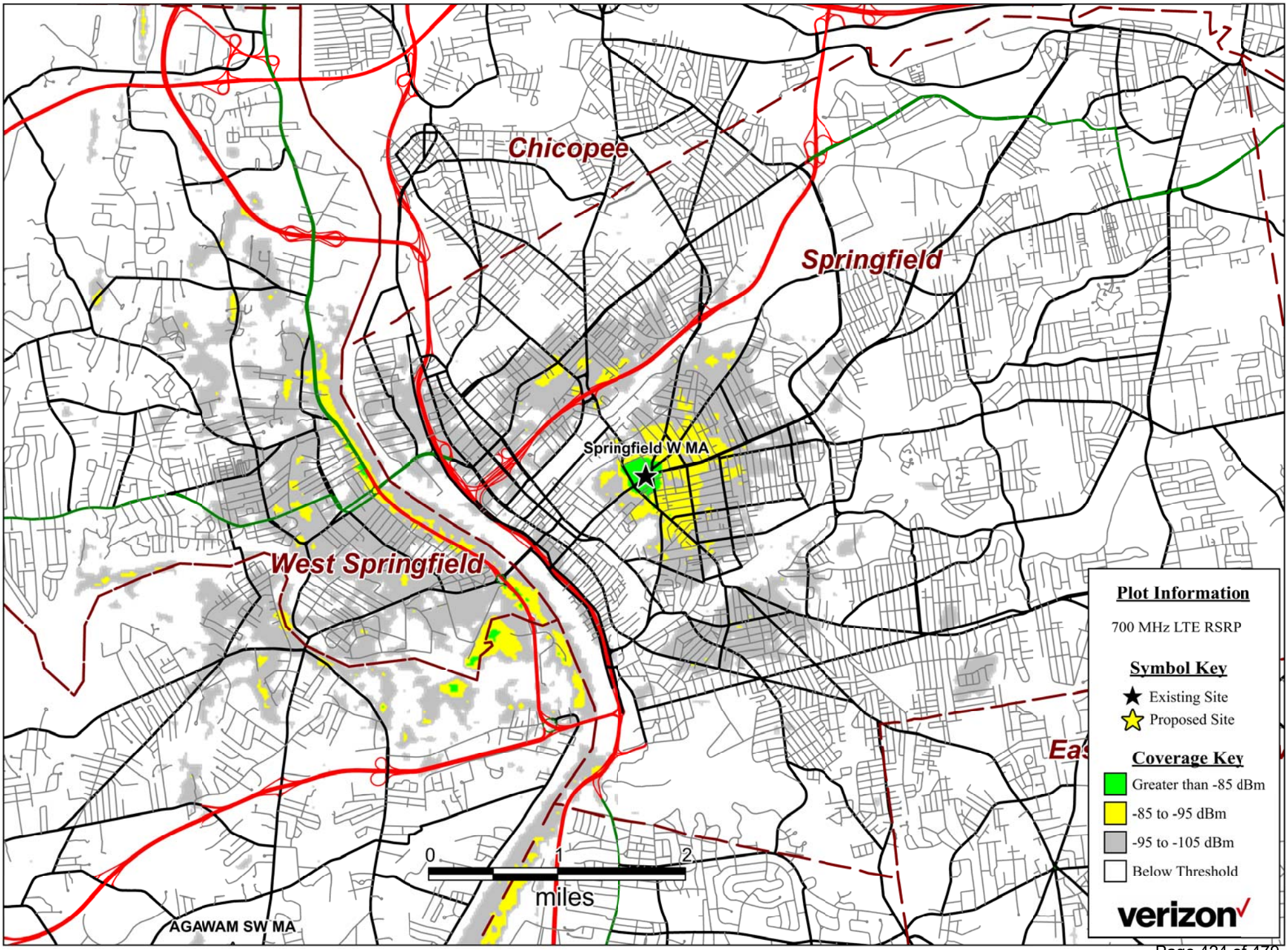

Southwick
Agawam
Suffield
Agawam N 3
AGAWAM 3 MA
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

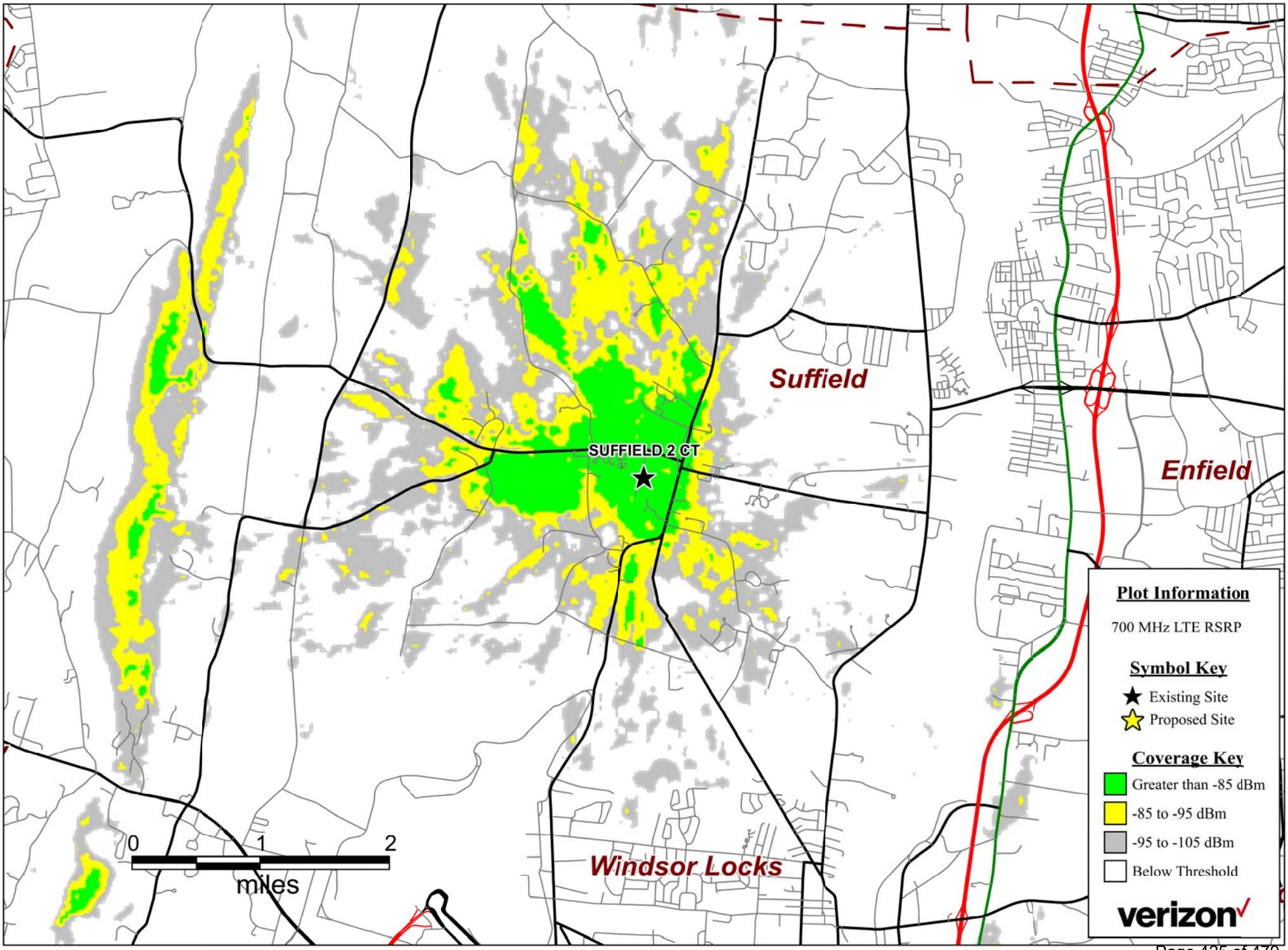

East Longmeadow
Hampden
Longmeadow
0
1
2
miles
SOMERS_WEST_CT
Somers
Enfield
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

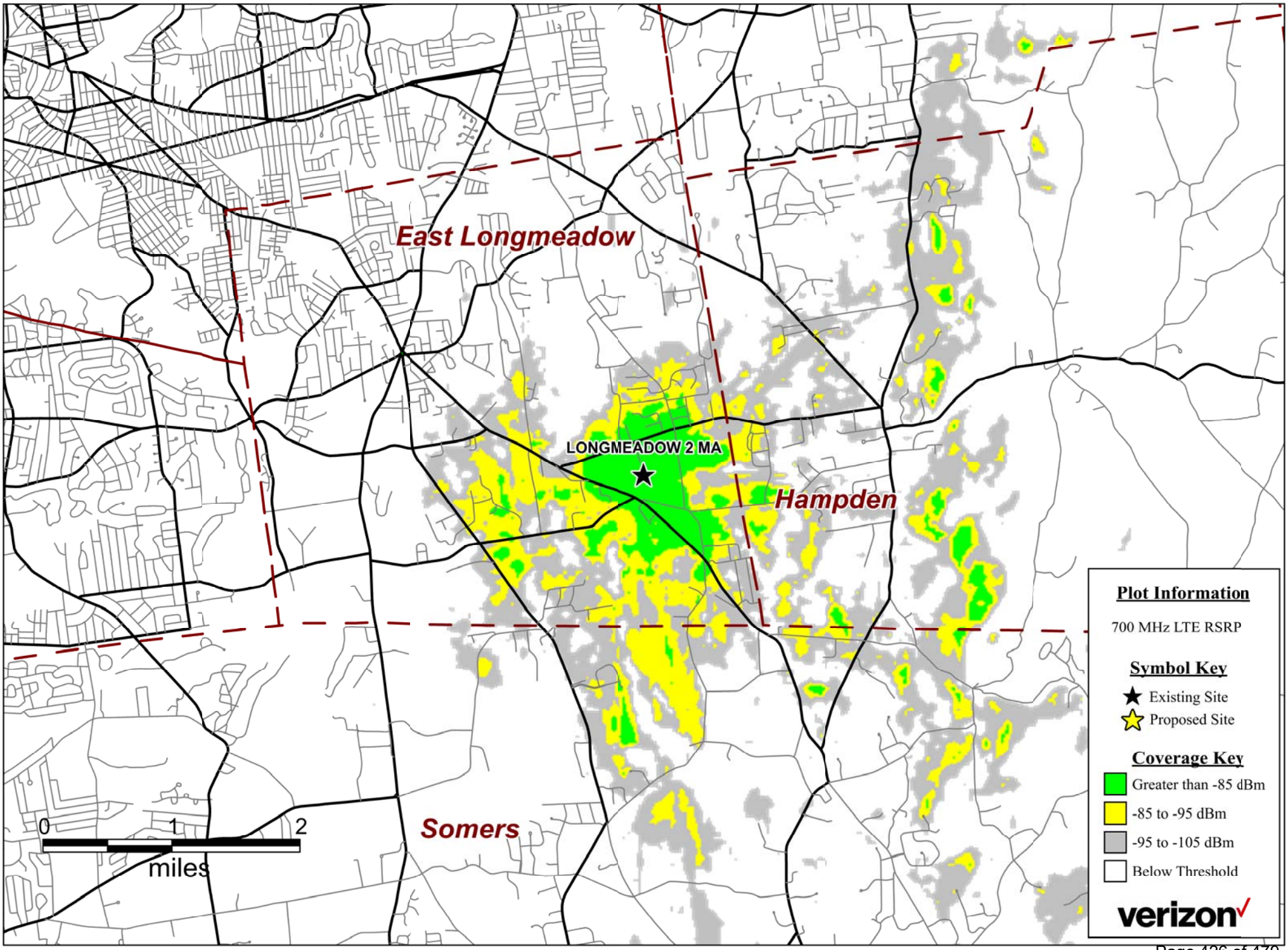

West Springfield
Westfield
WESTFIELD_CO_CRAN_MA
Southwick
Agawam
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

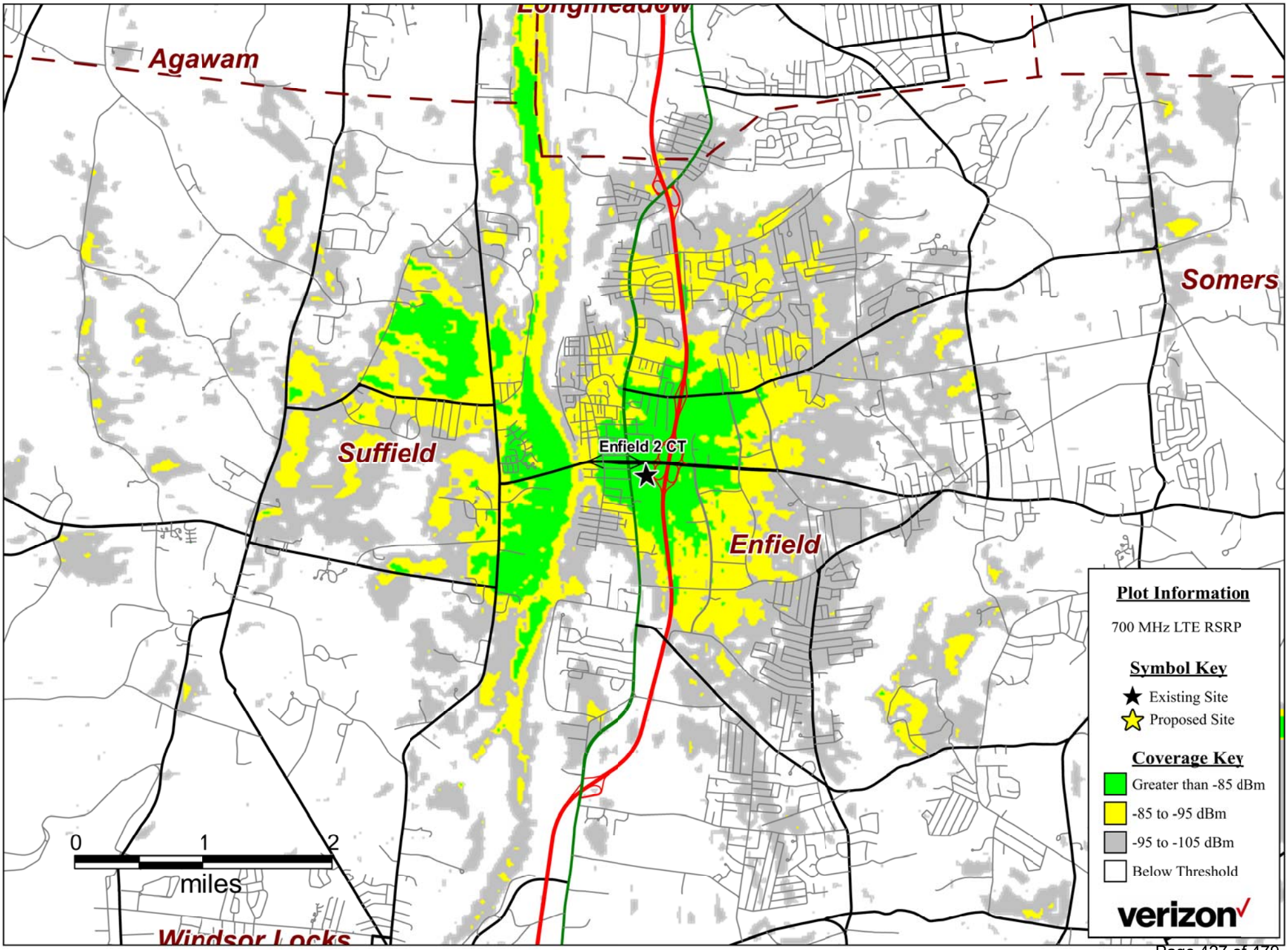

Springfield
Agawam
Agawam N 3
East Longmeadow
LONGMEADOW_N_2_MA
Longmeadow
Somers
Suffield
Enfield
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

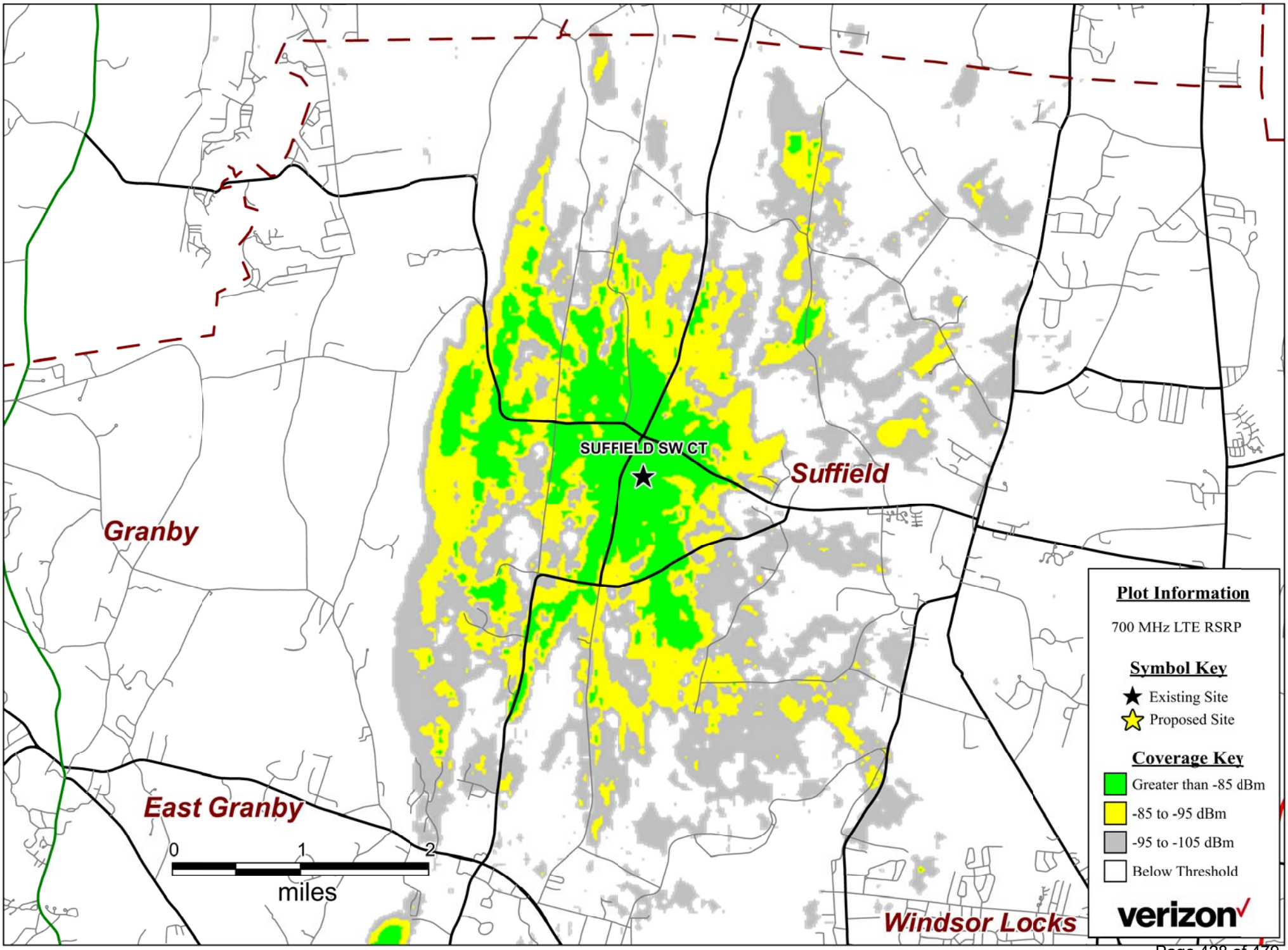

Westfield
West Springfield
WESTFIELD_CO_MA
Southwick
Agawam
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

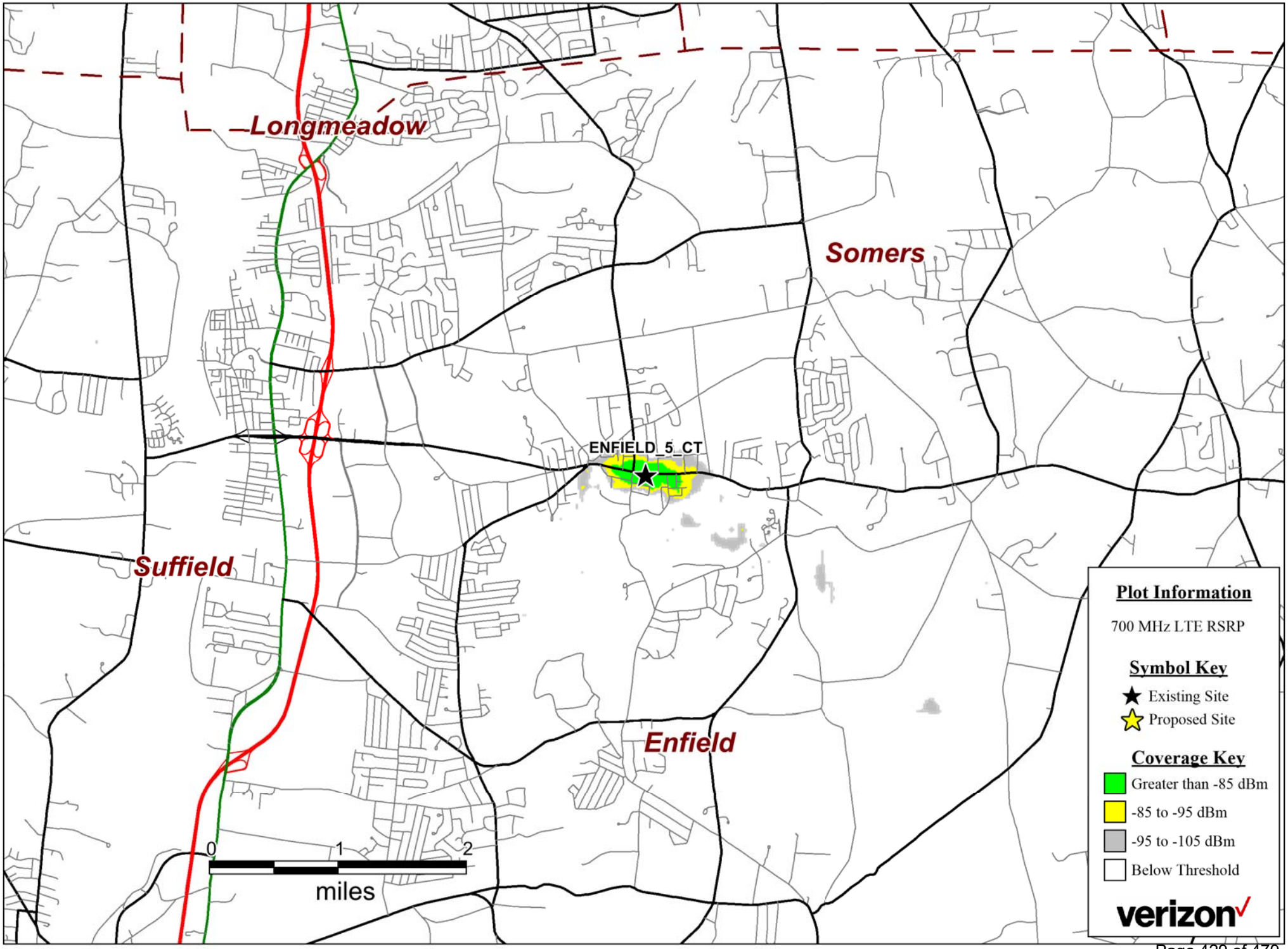

Chicopee
Springfield
Springfield W MA
West Springfield
AGAWAM SW MA
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

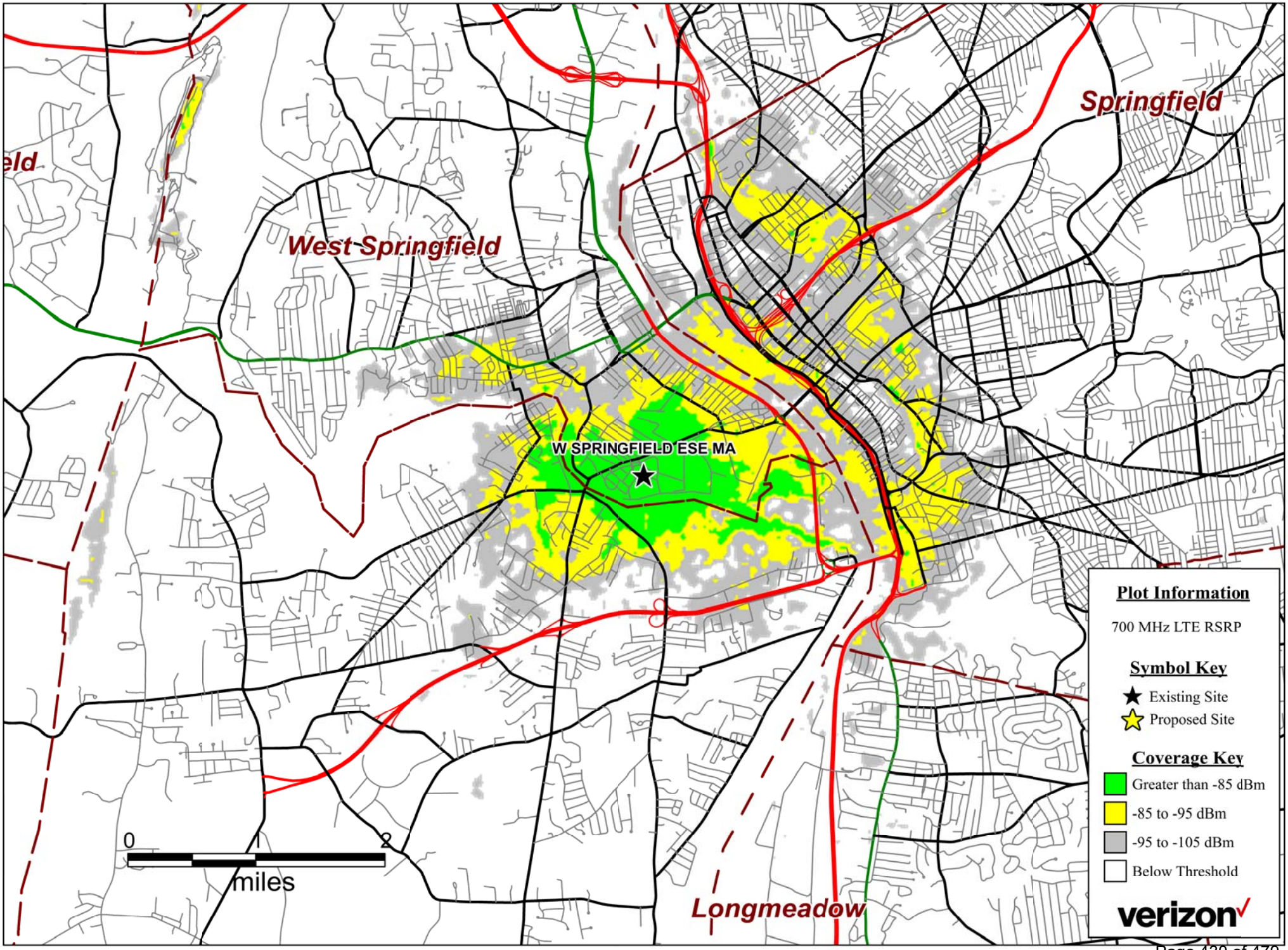

Suffield
SUFFIELD 2 CT
Enfield
Windsor Locks
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

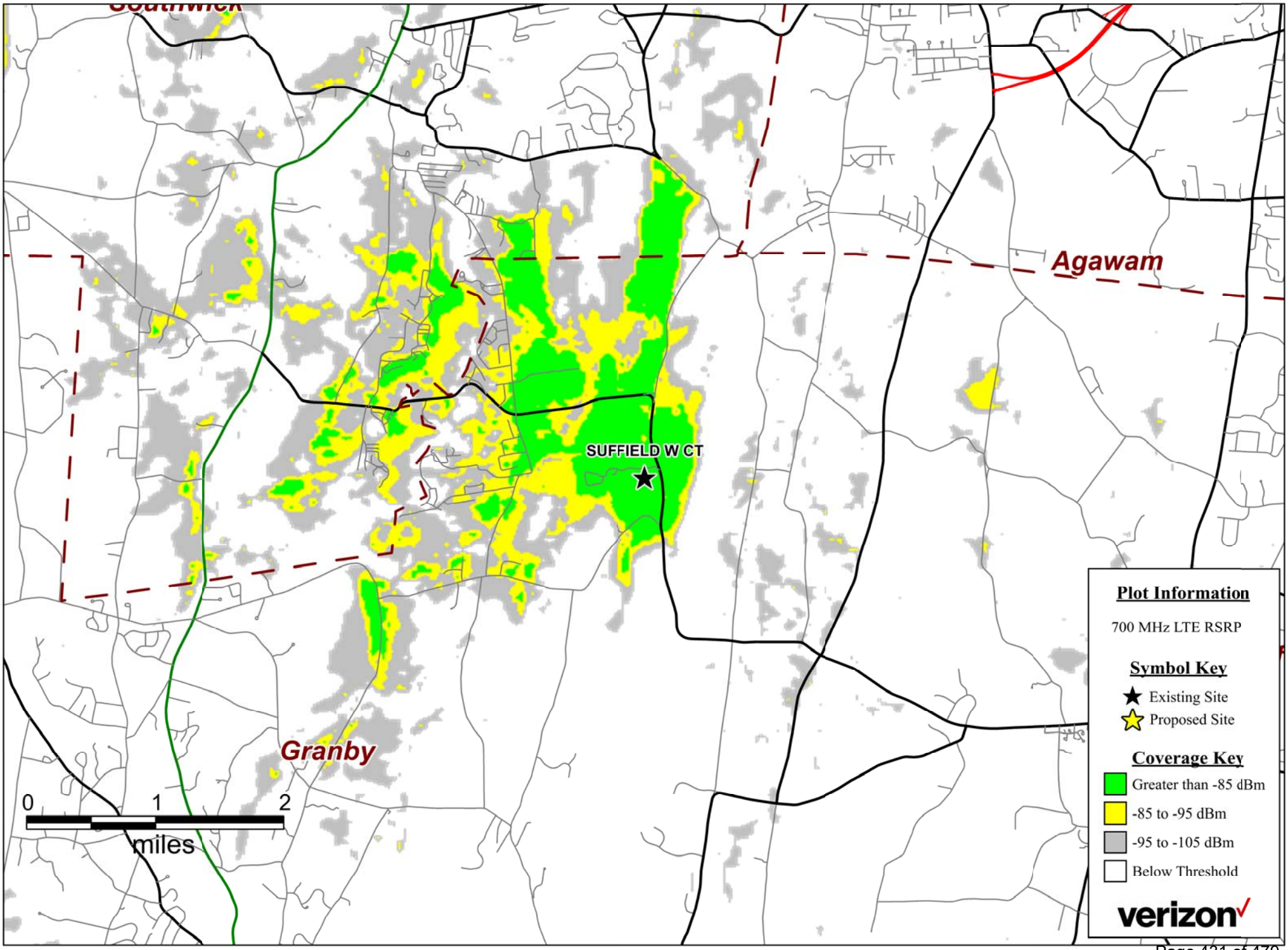

East Longmeadow
LONGMEADOW 2 MA
Hampden
Somers
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

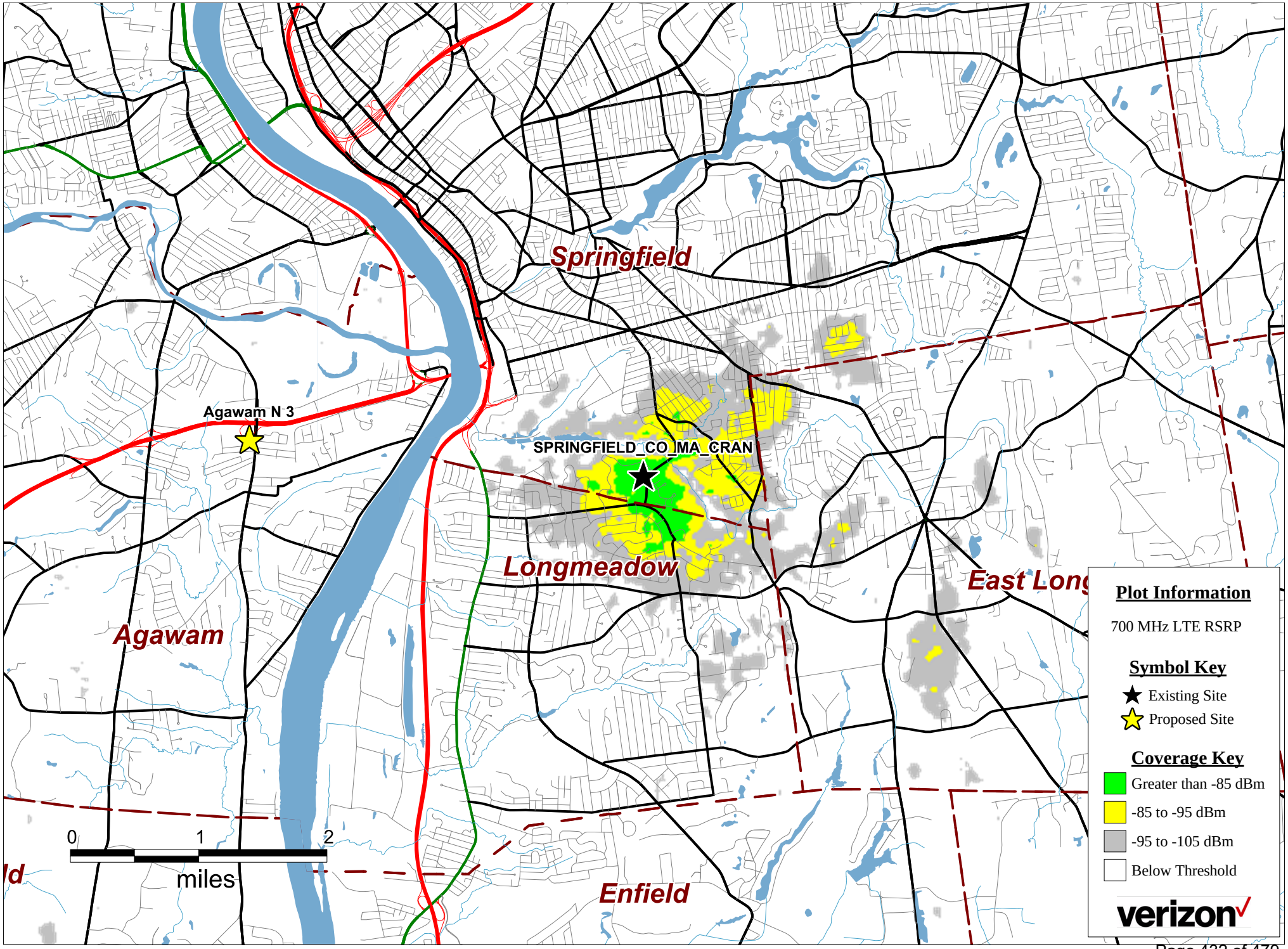

Longmeadow
Agawam
Somers
Suffield
Enfield 2 CT
Enfield
0
1
2
miles
Windsor Locks
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

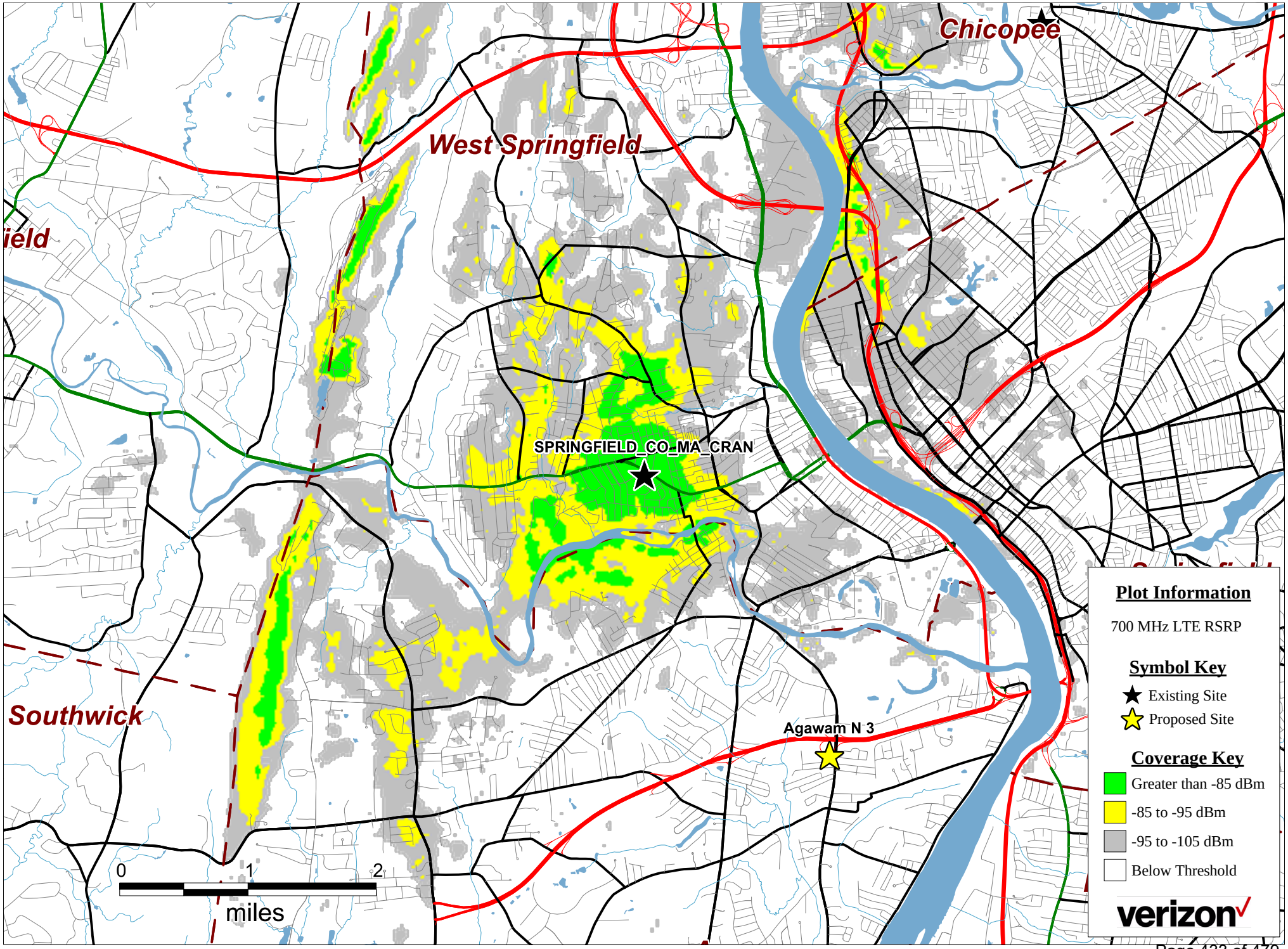

SUFFIELD SW CT
Suffield
Granby
East Granby
Windsor Locks
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

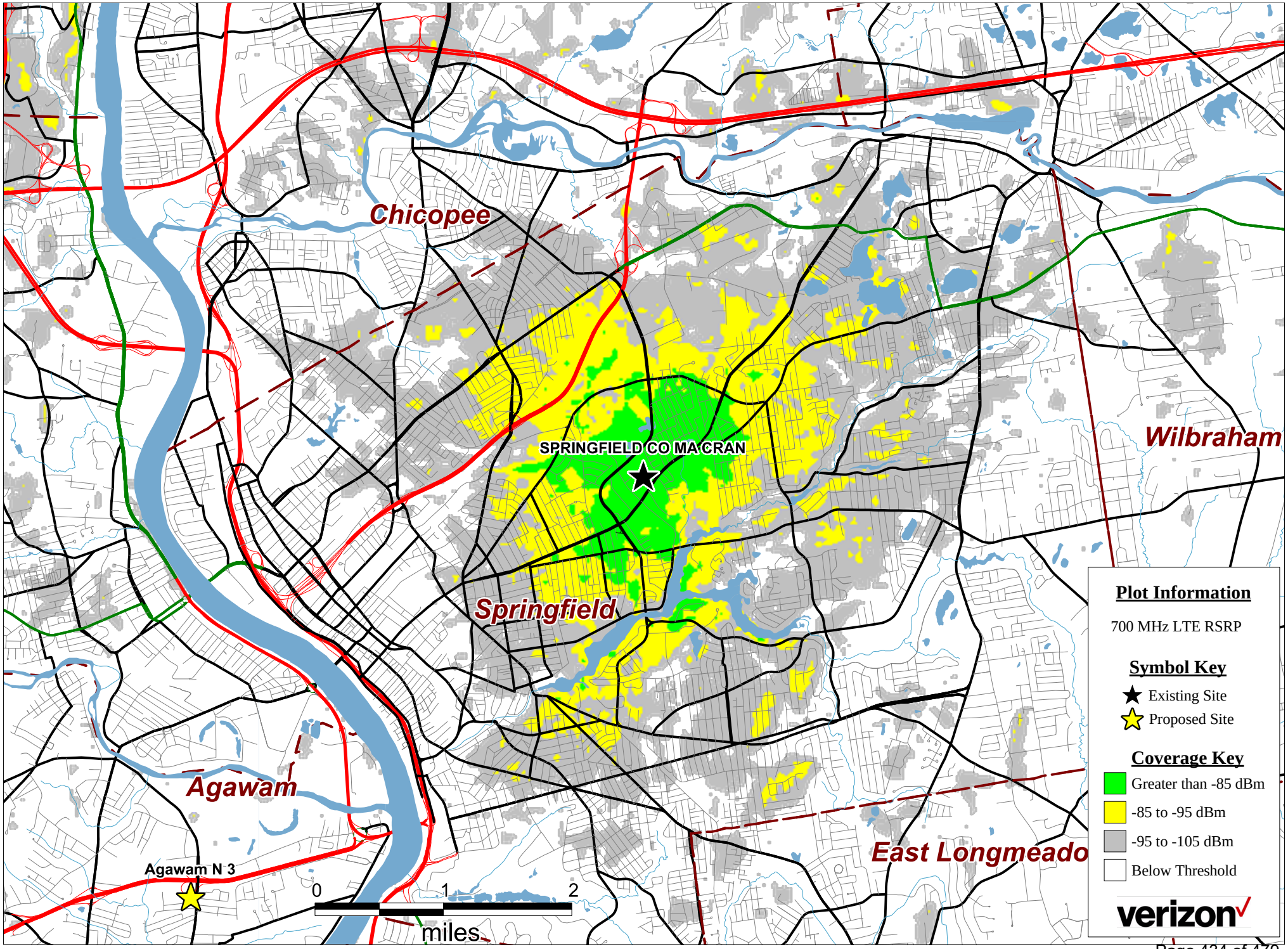

Longmeadow
Somers
ENFIELD_5_CT
Suffield
Enfield
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

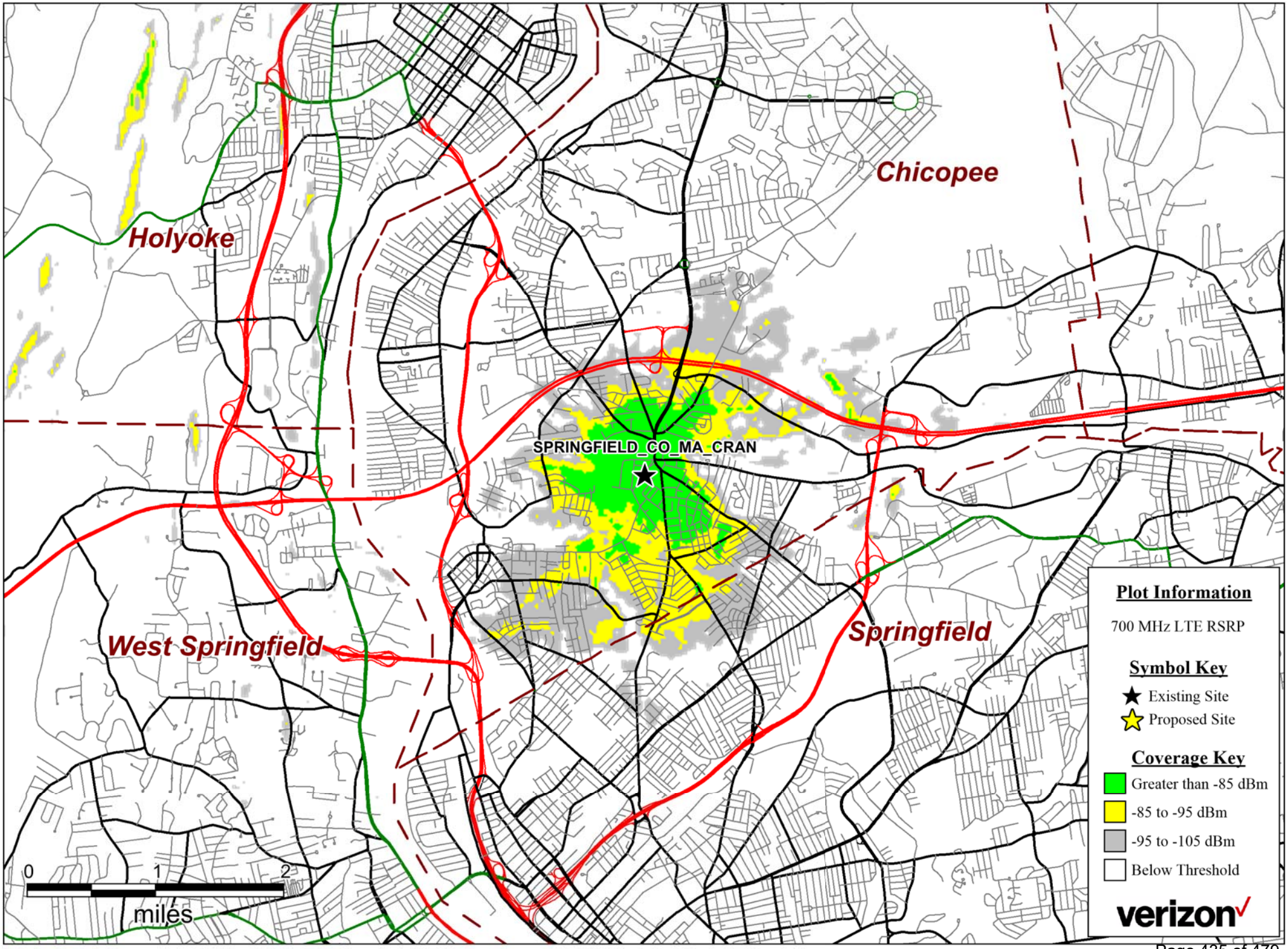

Springfield
West Springfield
W SPRINGFIELD ESE MA
Longmeadow
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

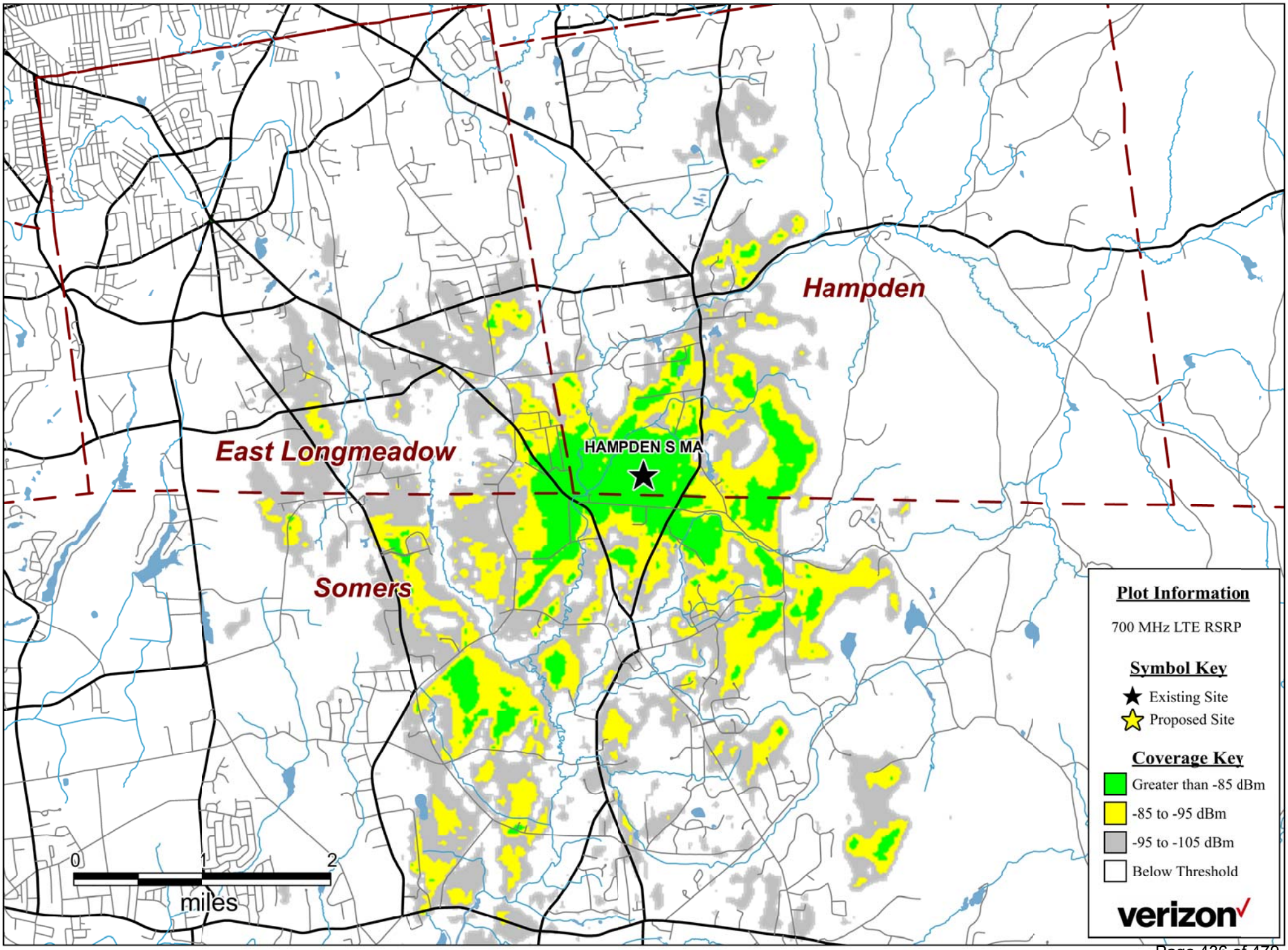

Agawam
SUFFIELD W CT
Granby
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

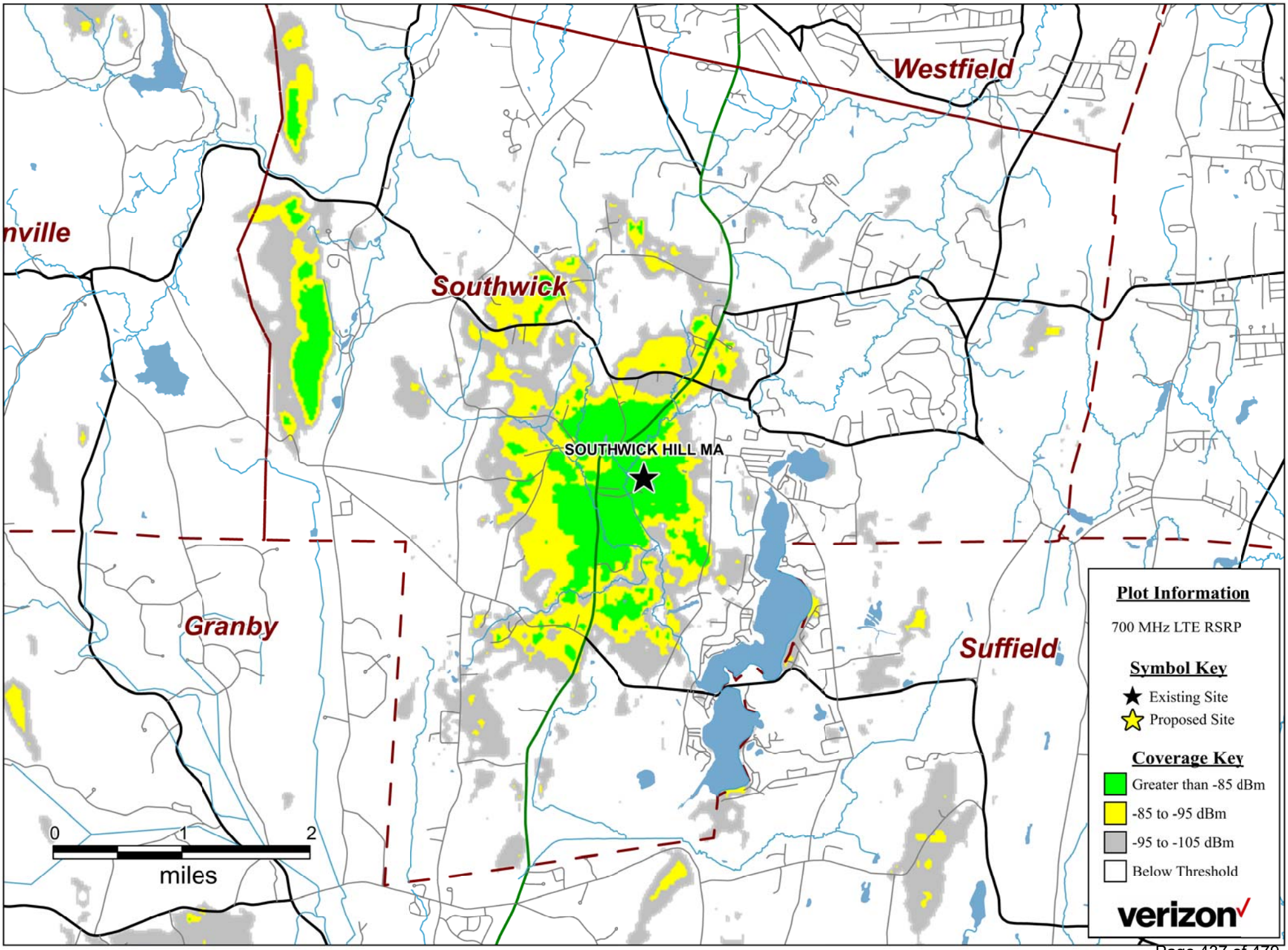

Springfield
Agawam N 3
SPRINGFIELD_CO_MA_CRAN
Longmeadow
East Long
Agawam
Enfield
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

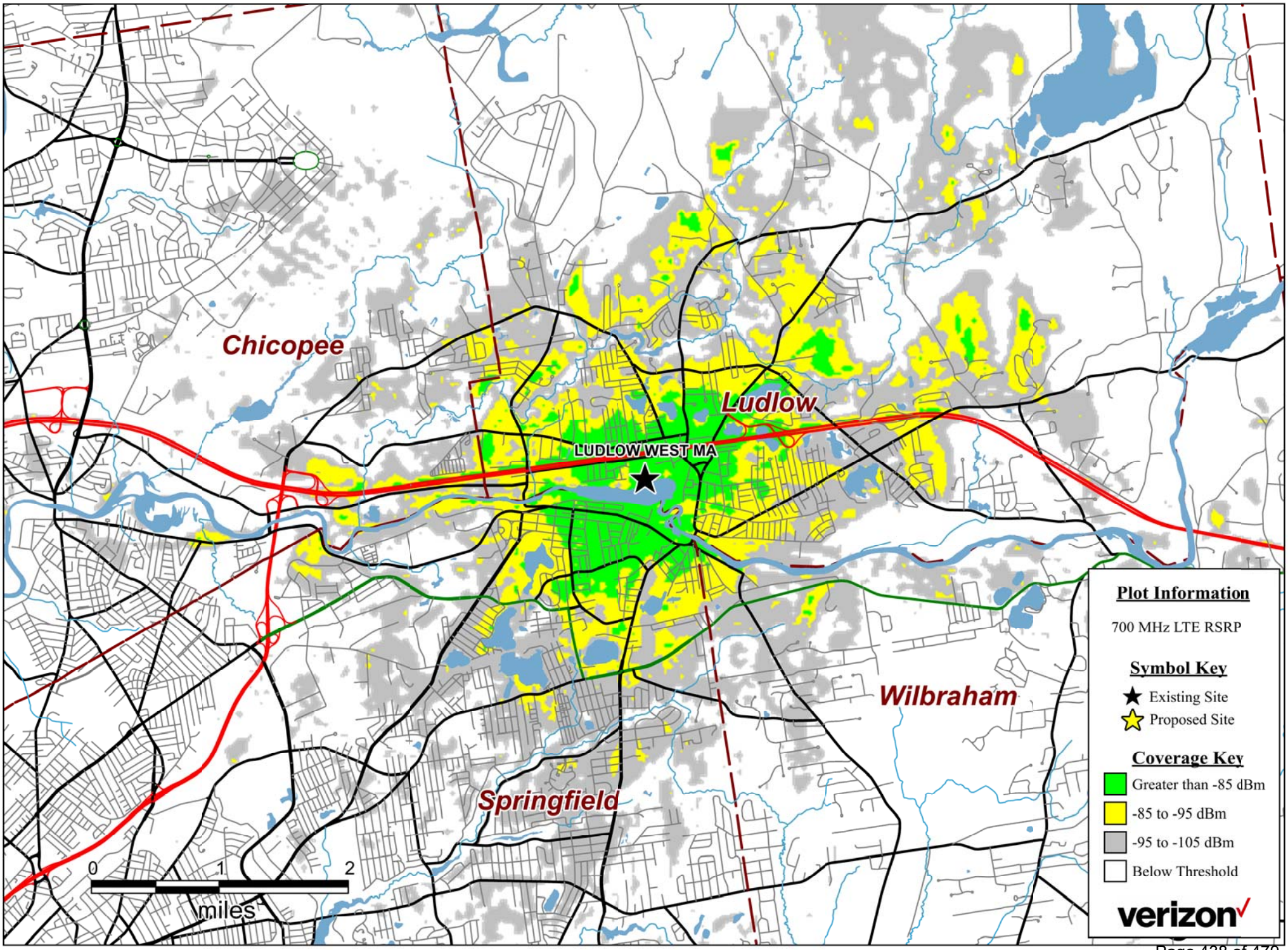

Chicopee
West Springfield
ield
SPRINGFIELD_CO_MA_CRAN
Southwick
Agawam N 3
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

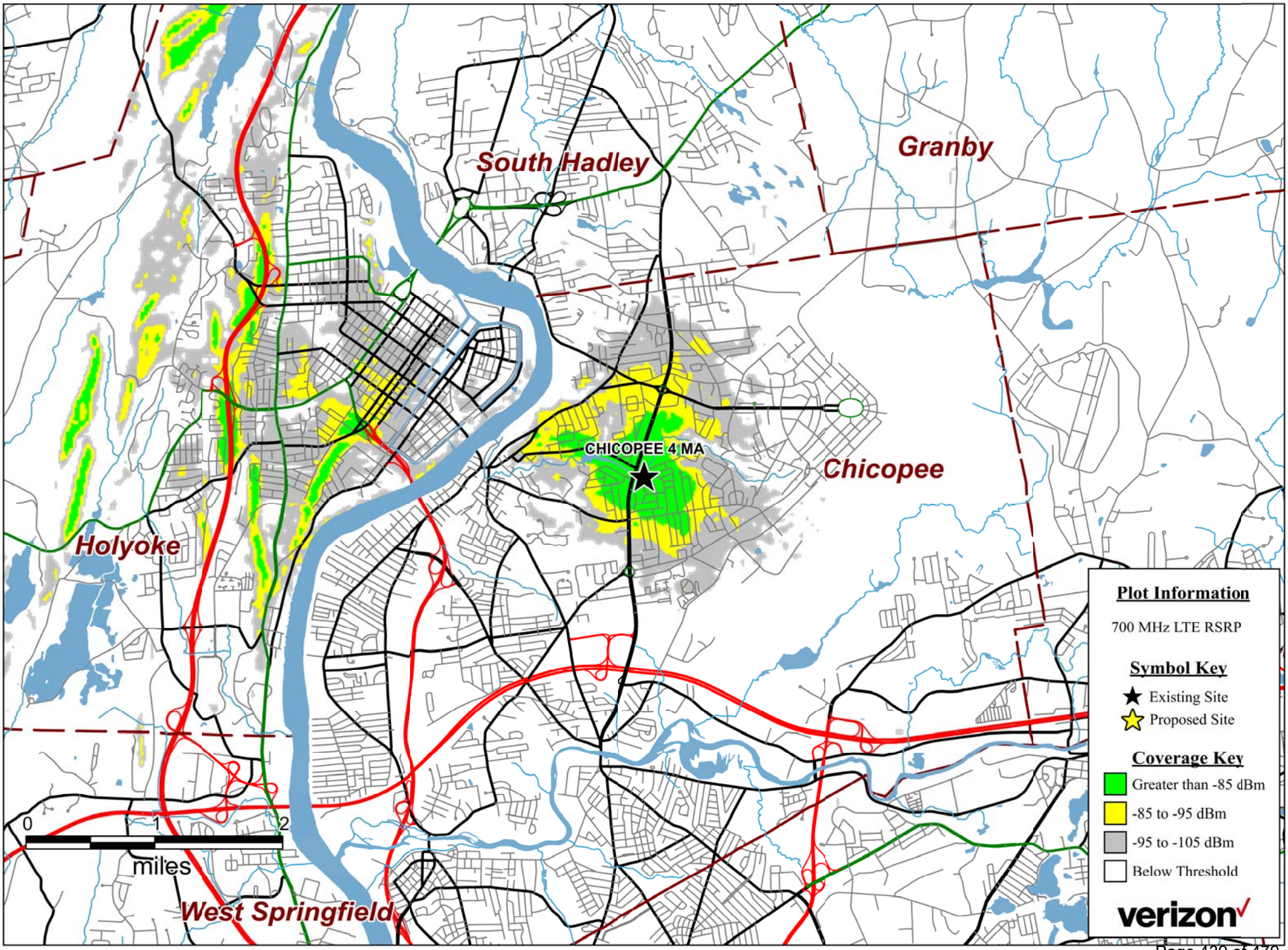

Chicopee
SPRINGFIELD CO MA CRAN
Wilbraham
Springfield
Agawam
East Longmeado
Agawam N 3
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

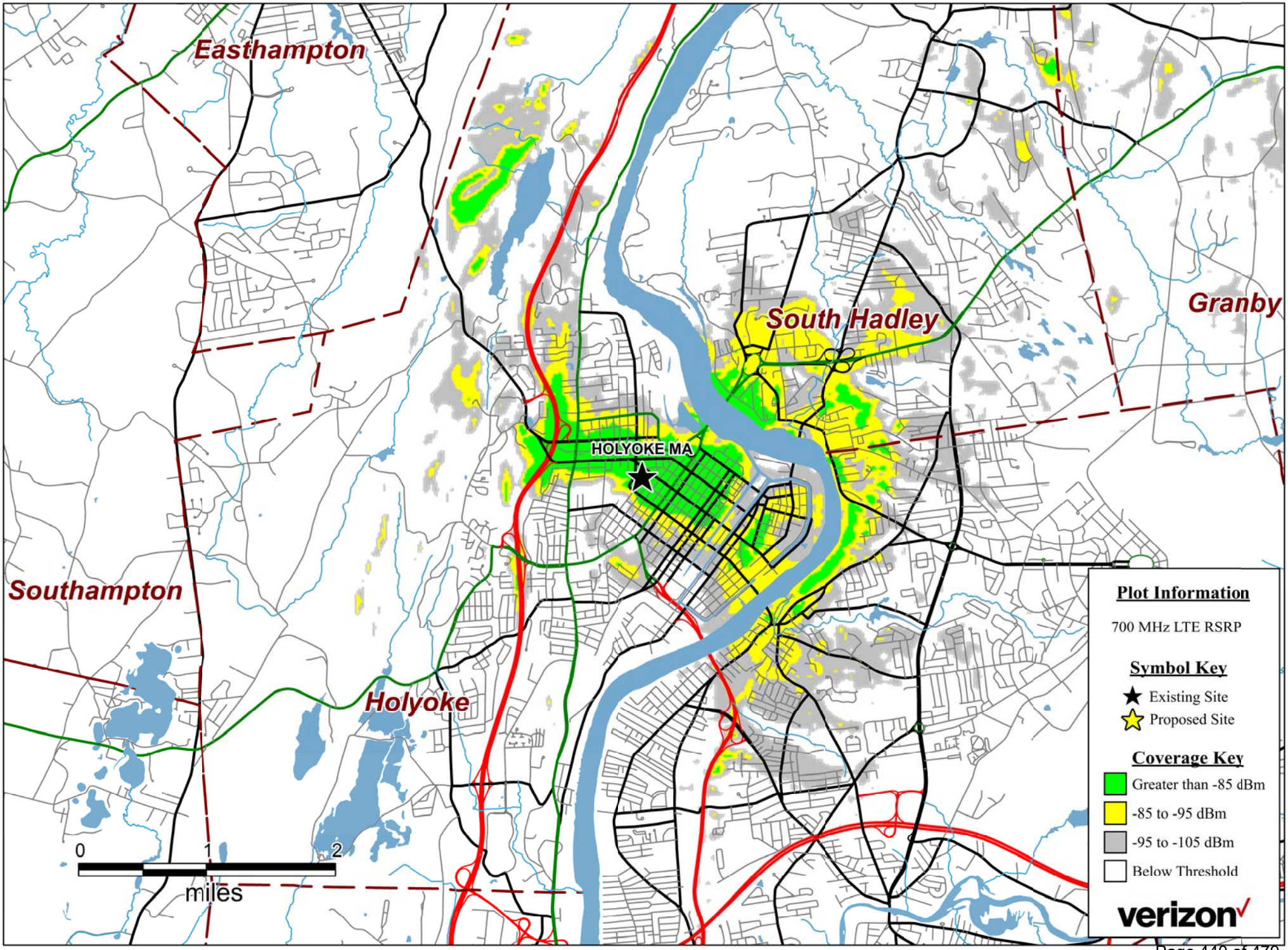

Chicopee
Holyoke
SPRINGFIELD_CO_MA_CRAN
West Springfield
Springfield
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

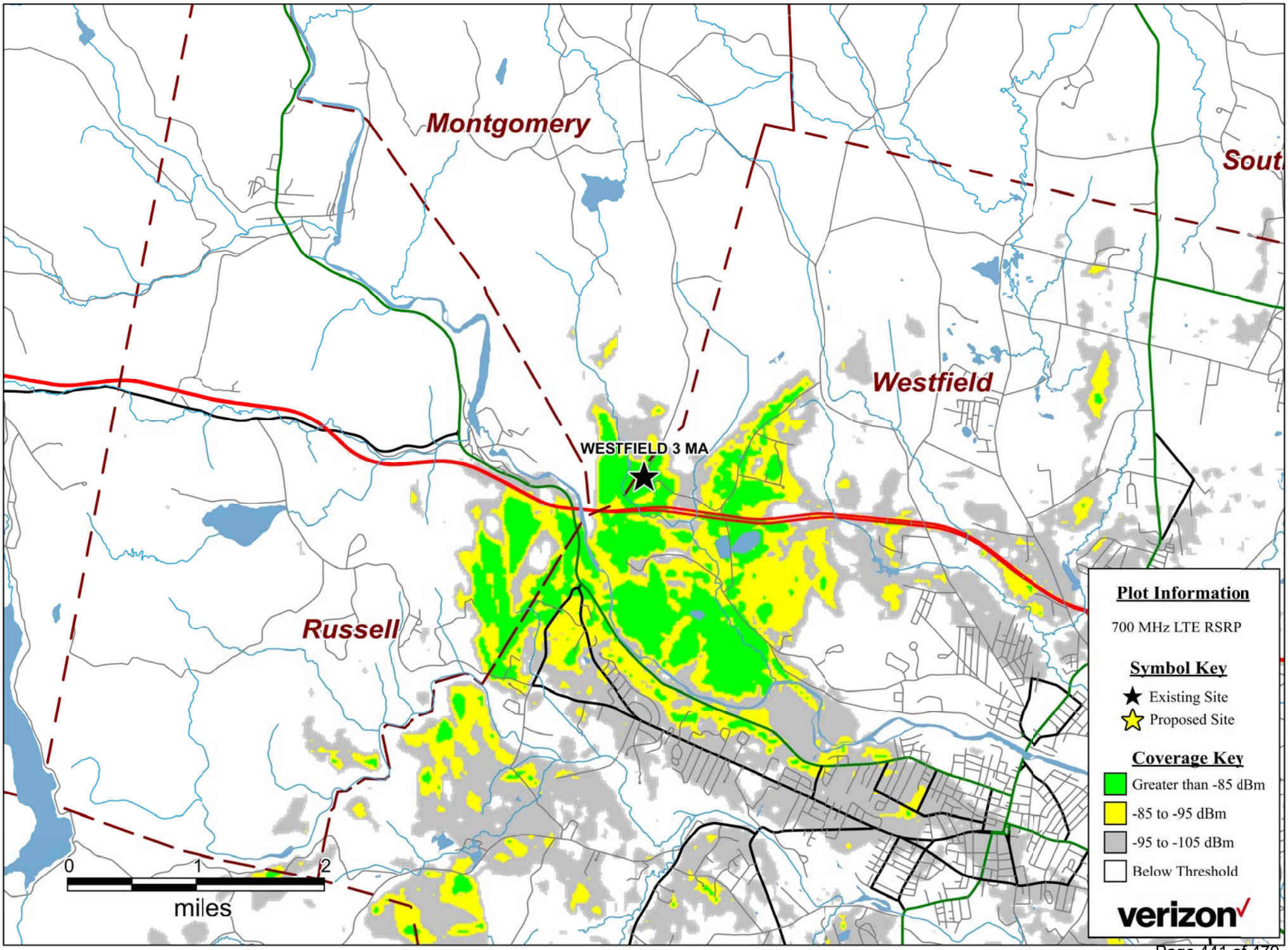

Hampden
East Longmeadow
HAMPDEN S MA
Somers
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

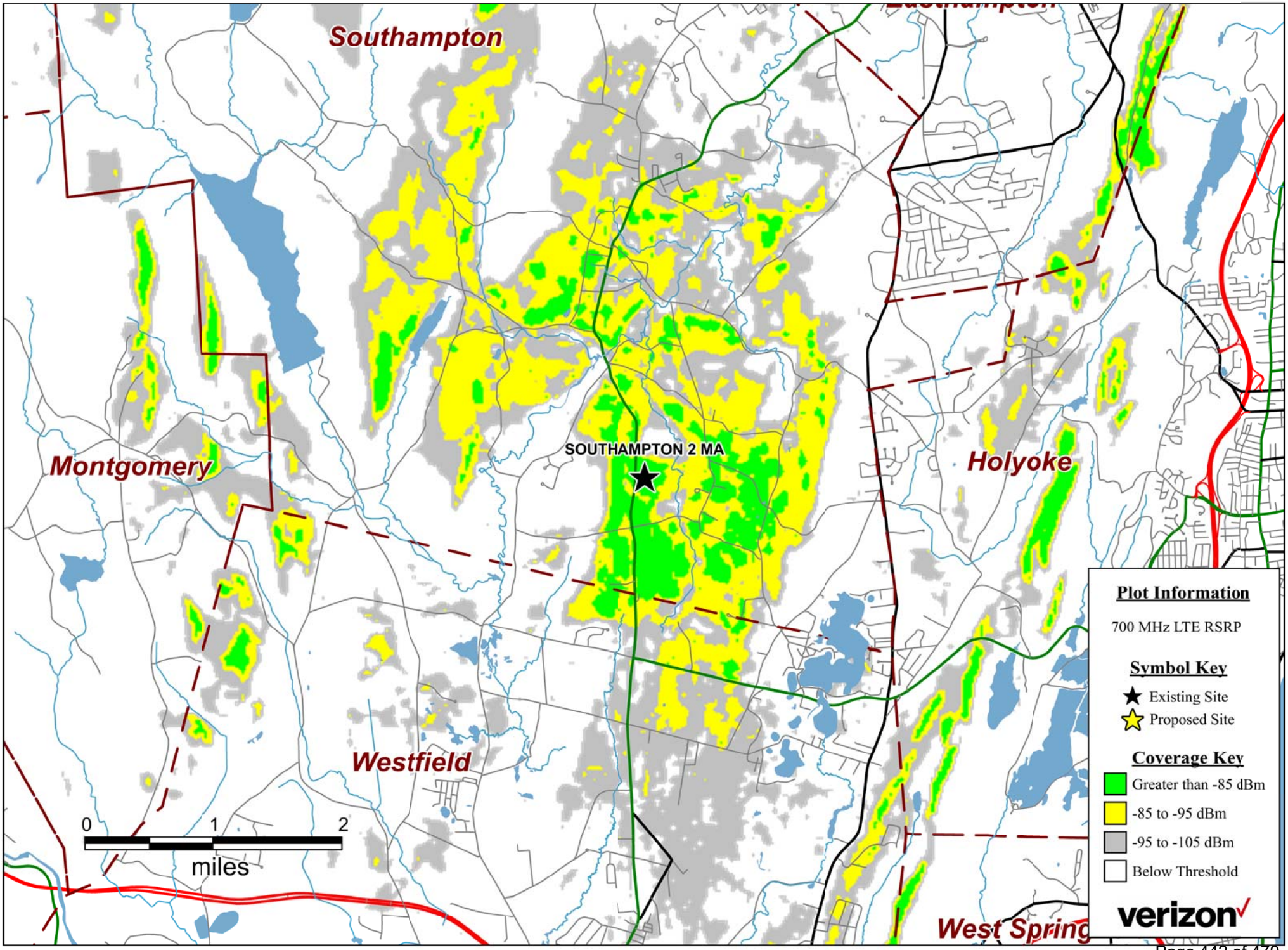

Westfield
nville
Southwick
SOUTHWICK HILL MA
Granby
Suffield
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

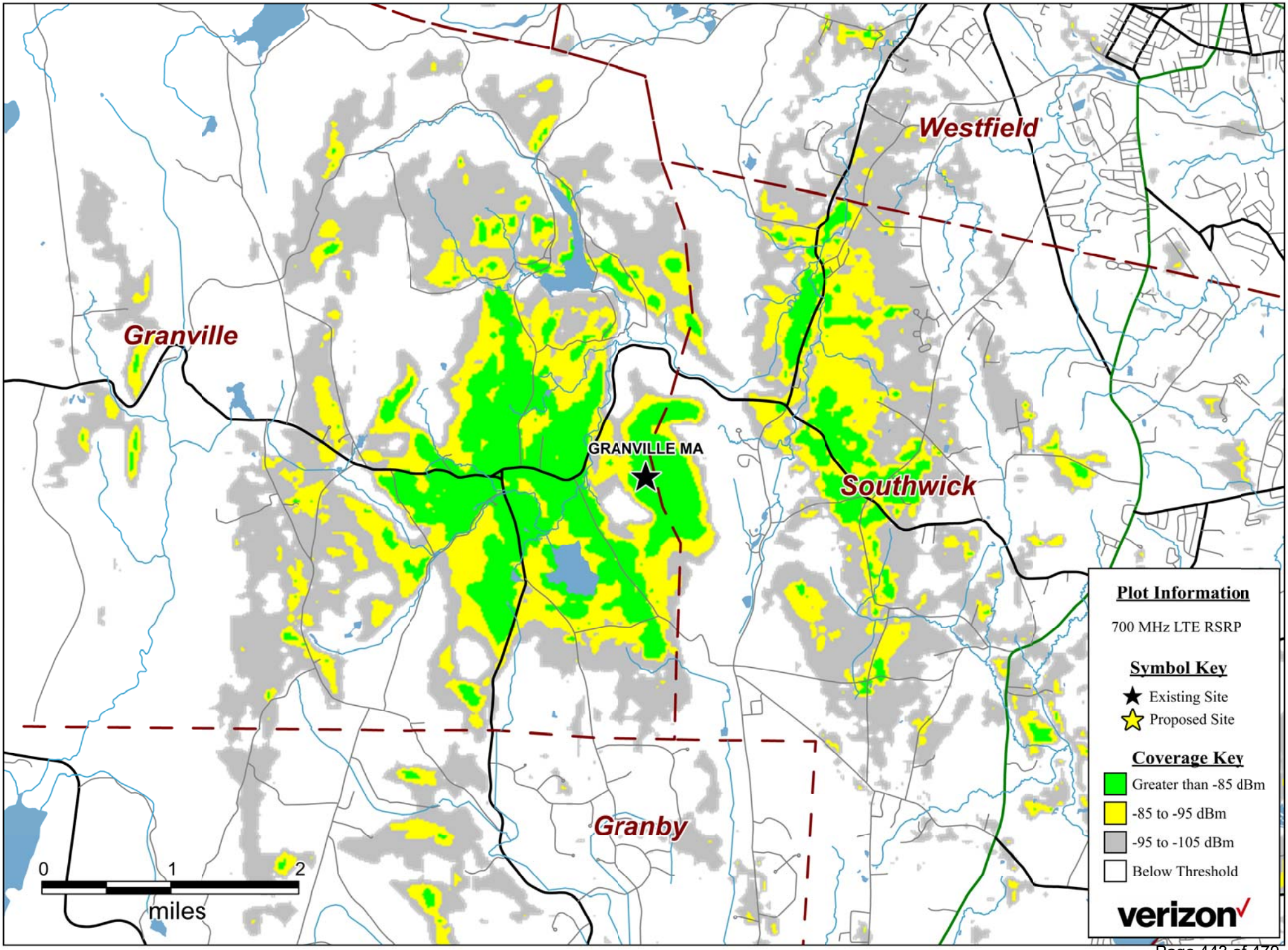

Chicopee
Ludlow
LUDLOW WEST MA
Wilbraham
Springfield
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

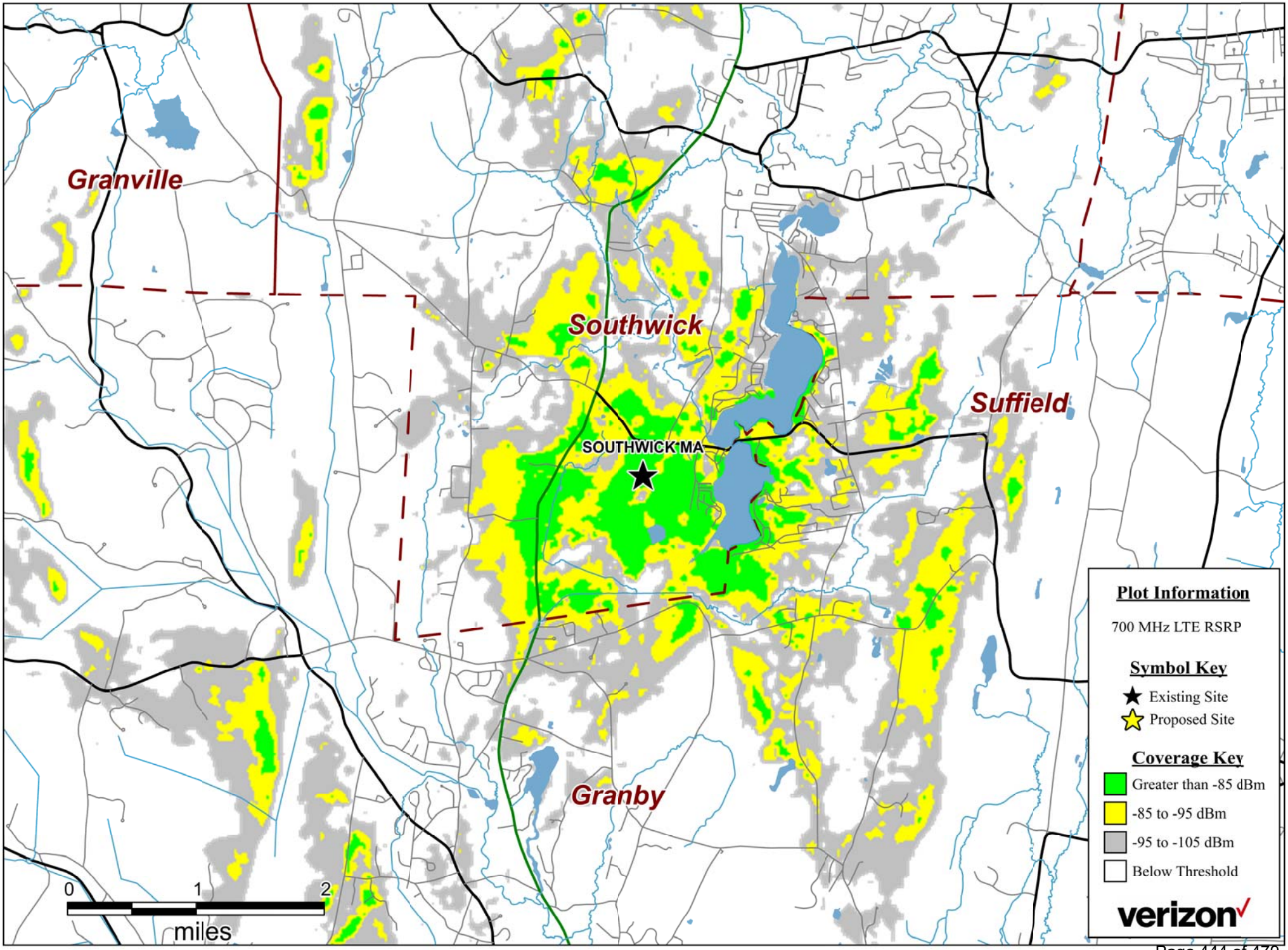

South Hadley
Granby
CHICOPEE 4 MA
Chicopee
Holyoke
West Springfield
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

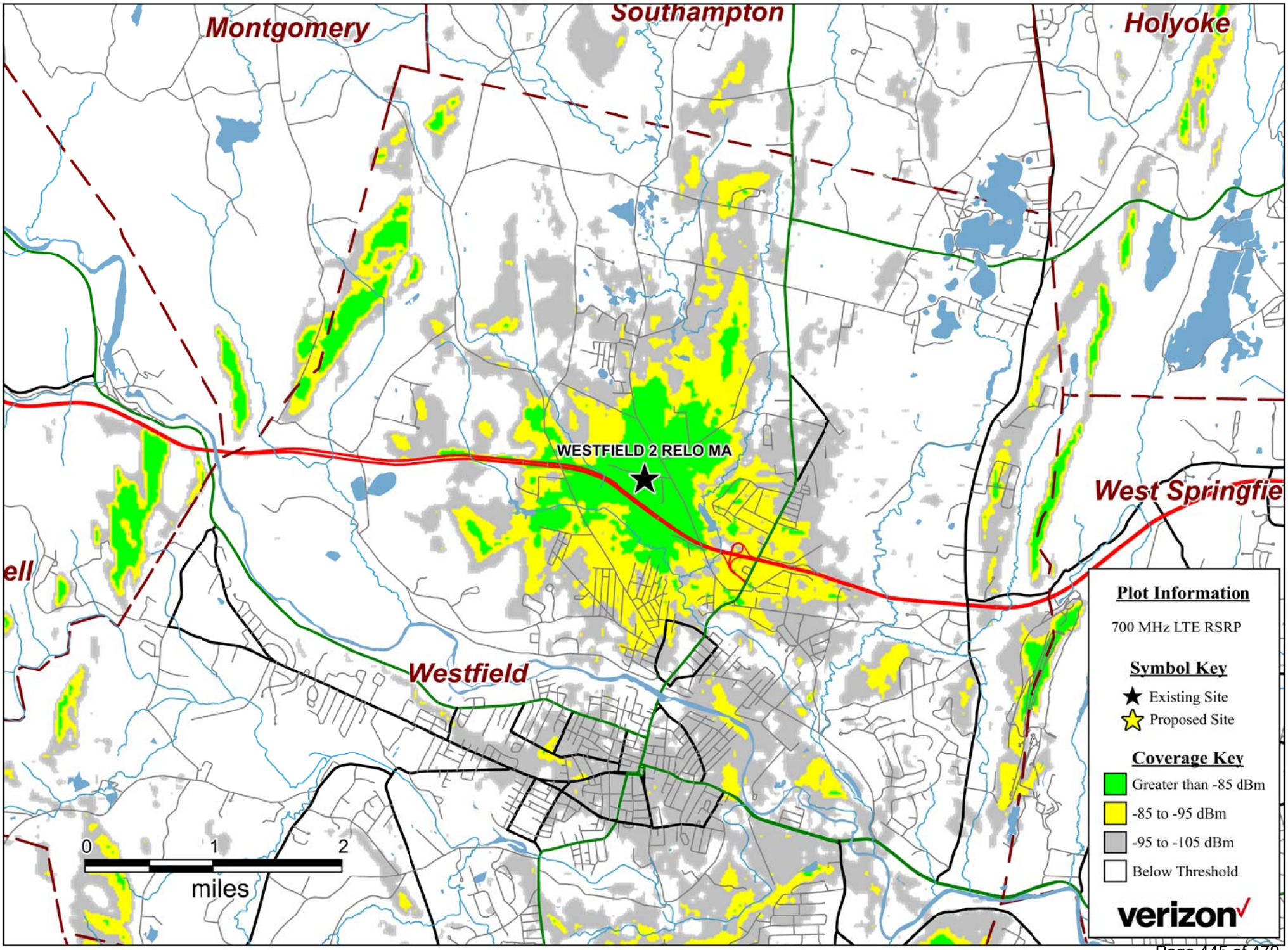

Easthampton
South Hadley
Granby
HOLYOKE MA
Southampton
Holyoke
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

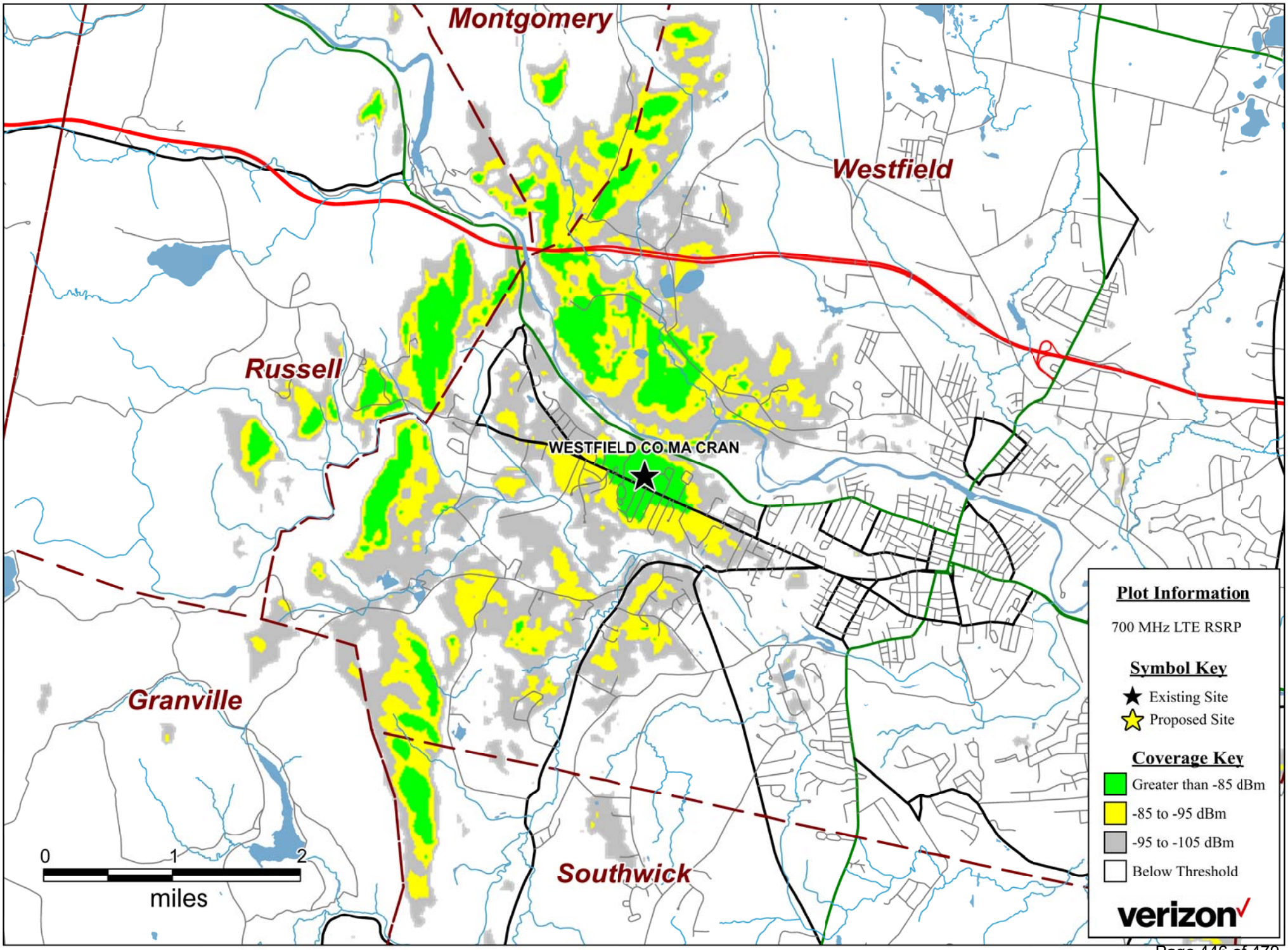

Montgomery
Westfield
Russell
WESTFIELD 3 MA
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

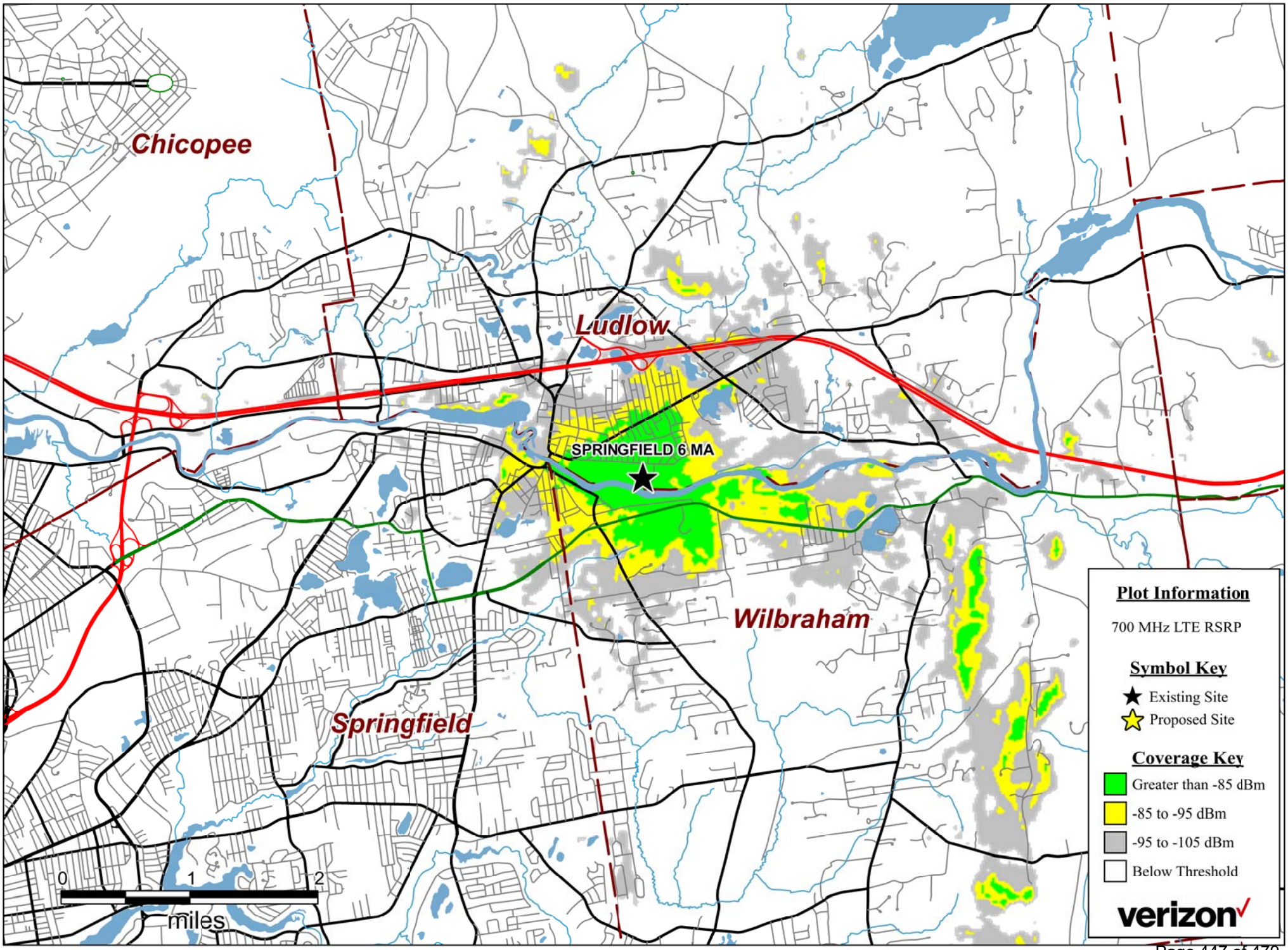

Southampton
SOUTHAMPTON 2 MA
Montgomery
Holyoke
Westfield
West Spring
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

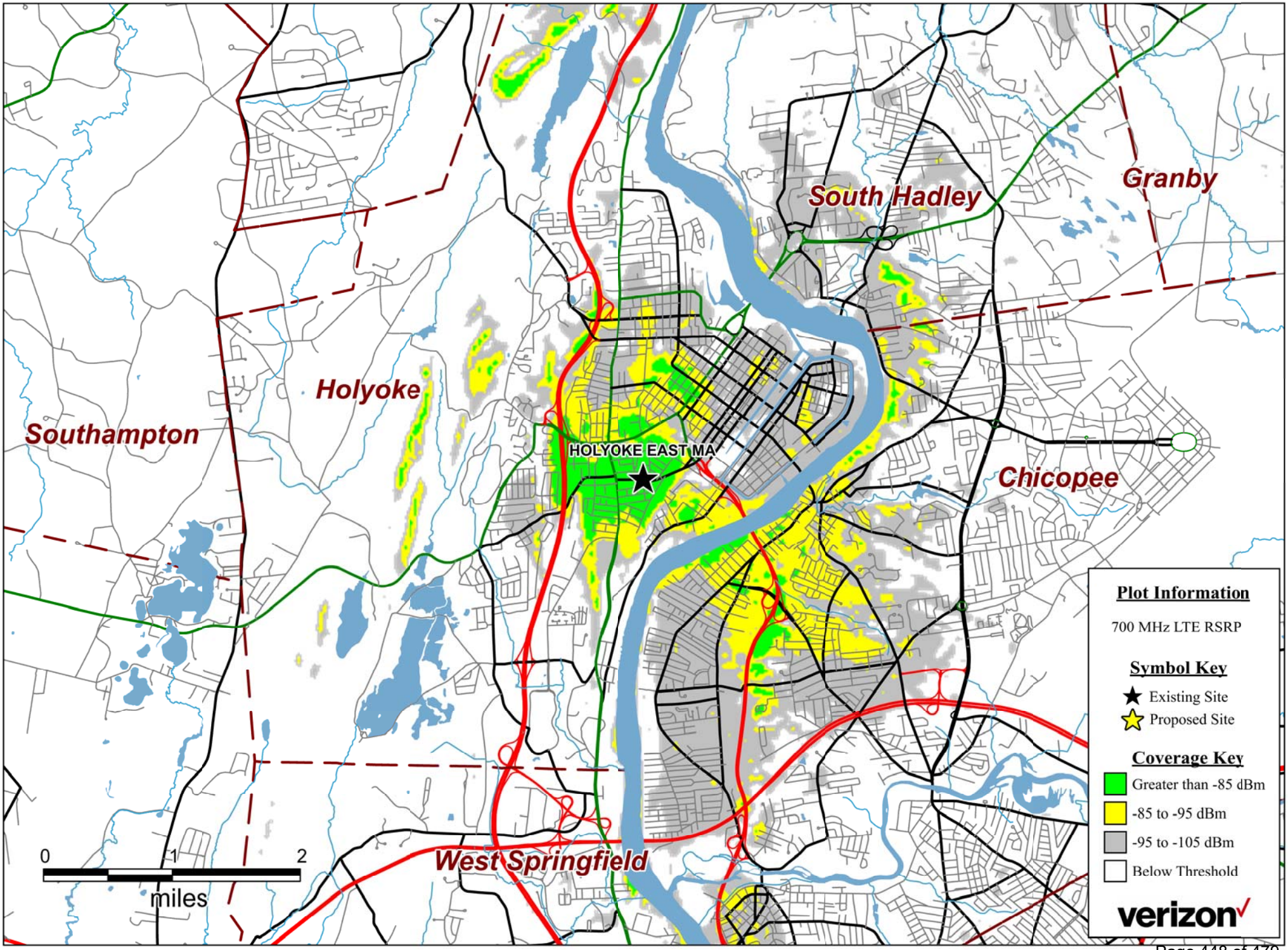

Westfield
Granville
GRANVILLE MA
Southwick
Granby
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

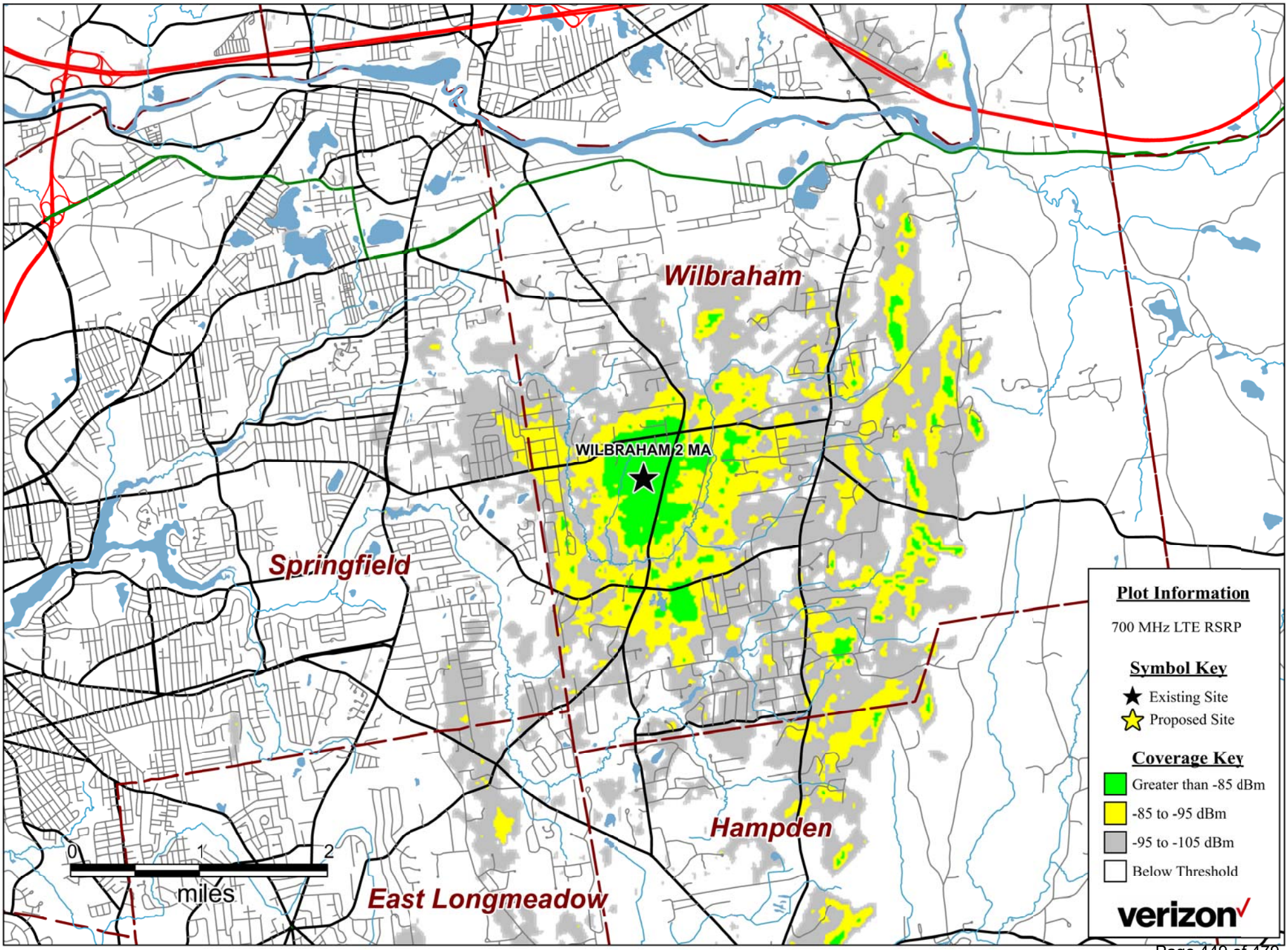

Granville
Southwick
Suffield
SOUTHWICK MA
Granby
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

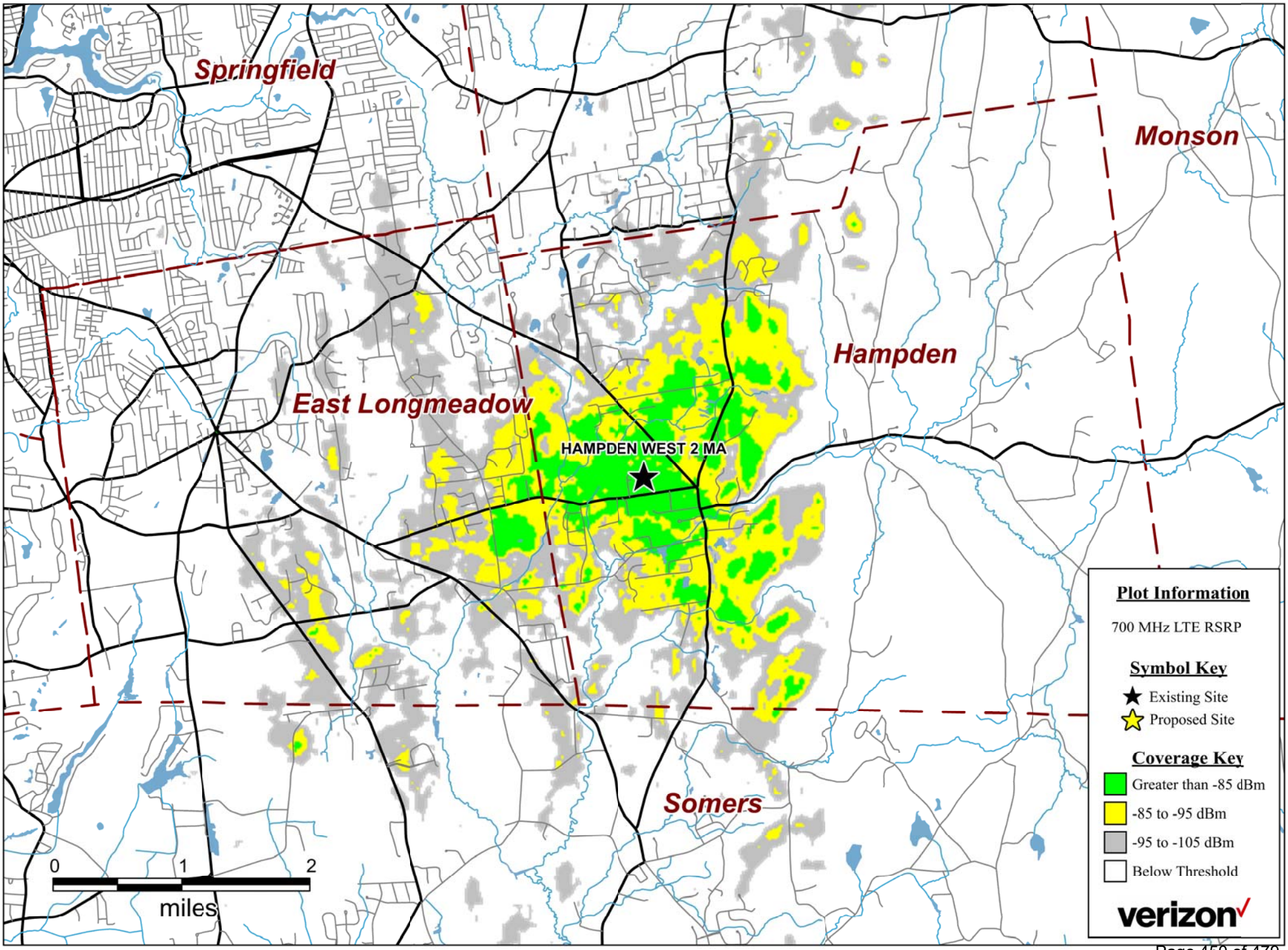

Montgomery
Southampton
Holyoke
WESTFIELD 2 RELO MA
West Springfie
ell
Westfield
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

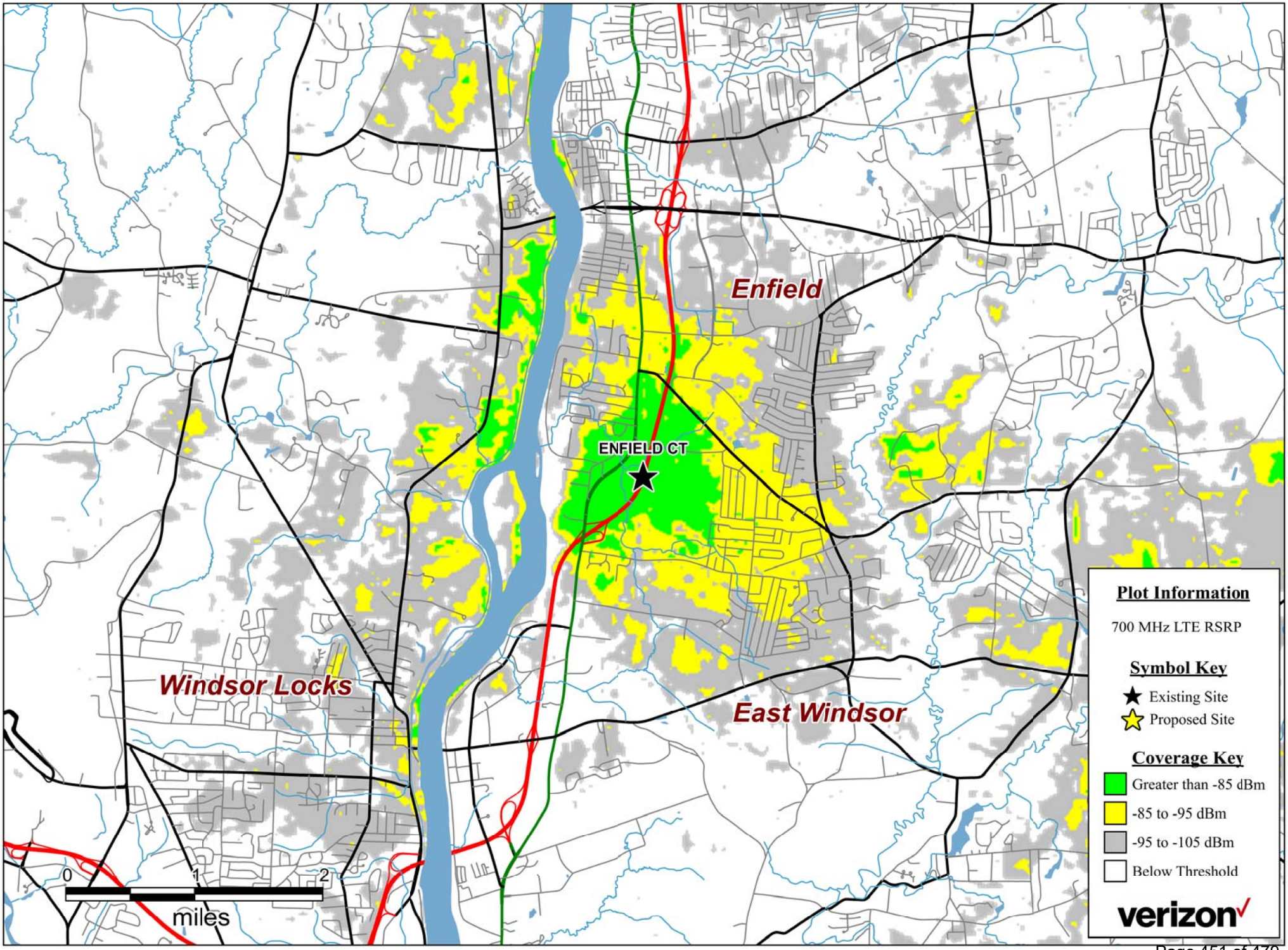

Montgomery
Westfield
Russell
WESTFIELD CO MA CRAN
Granville
Southwick
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

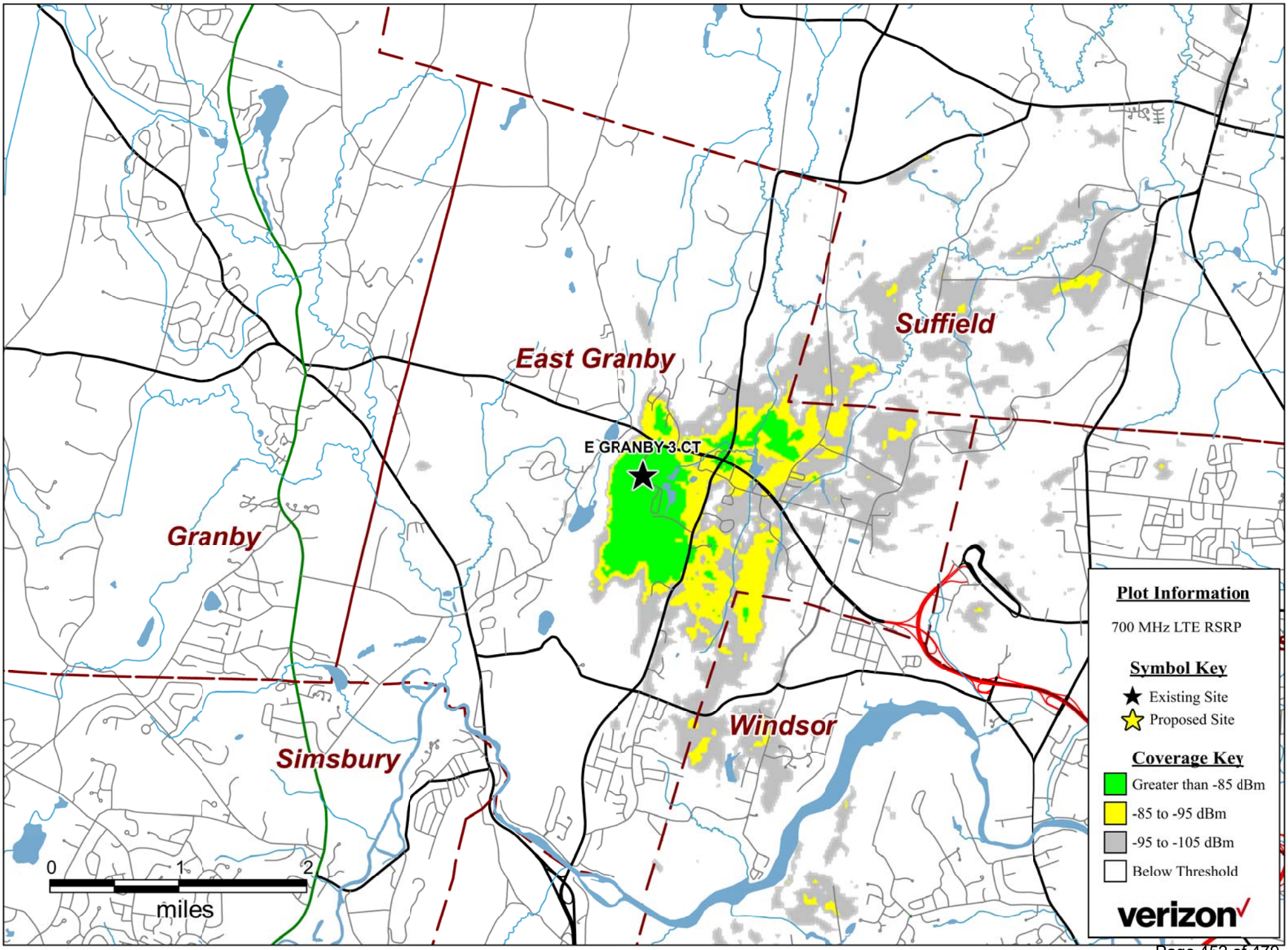

Chicopee
Ludlow
SPRINGFIELD 6 MA
Wilbraham
Springfield
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

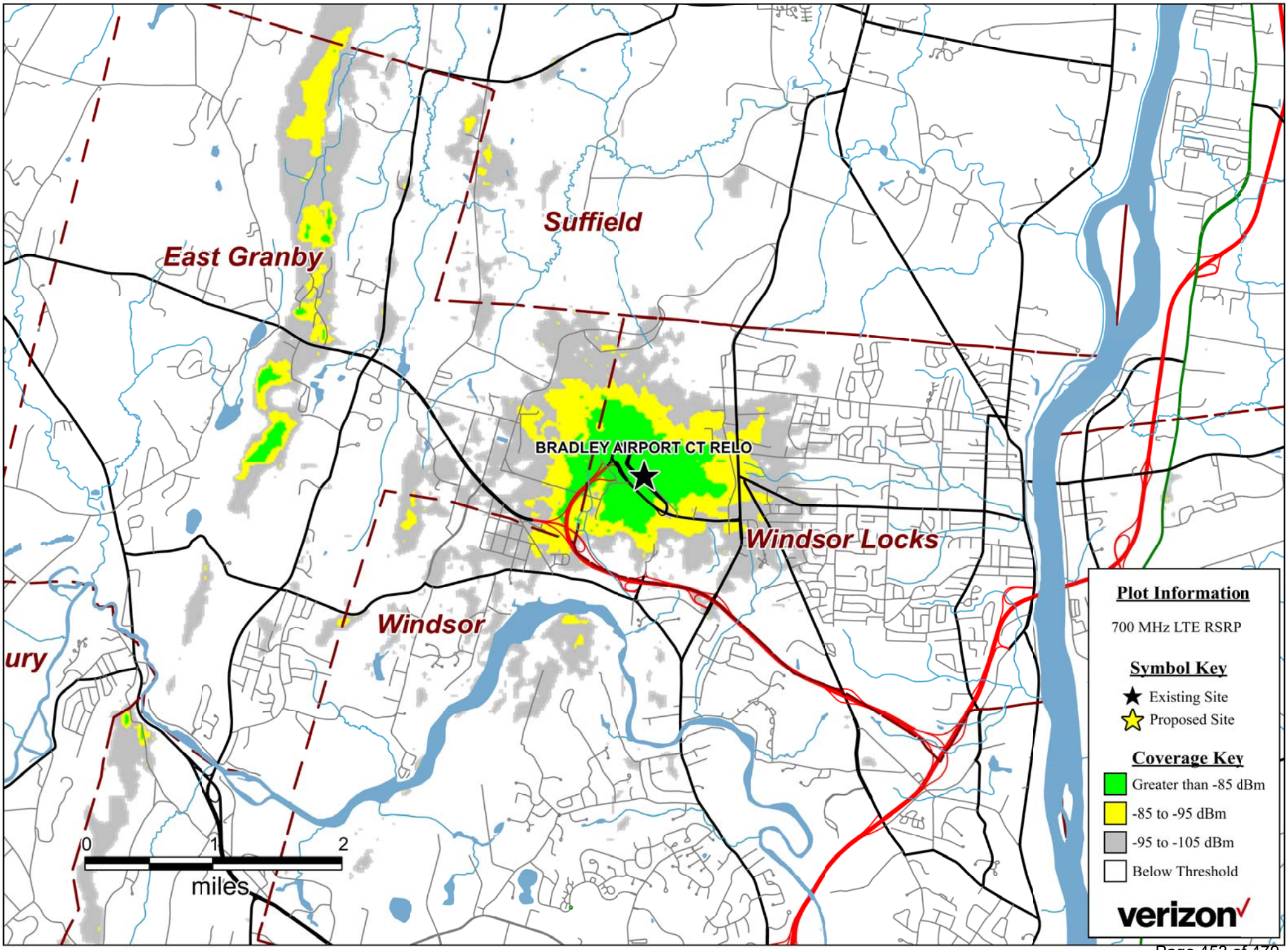

South Hadley
Granby
Holyoke
Southampton
HOLYOKE EAST MA
Chicopee
West Springfield
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

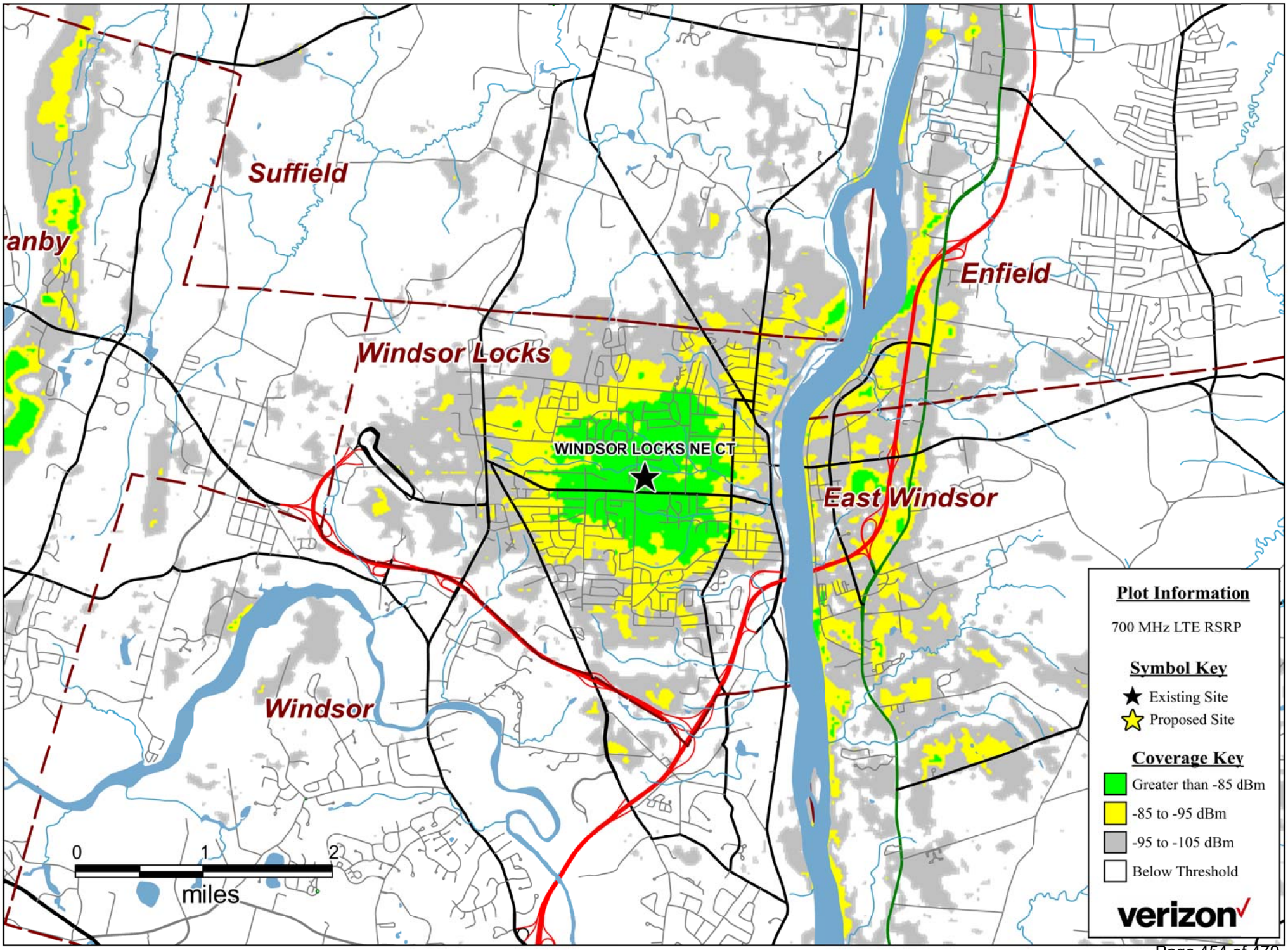

Wilbraham
WILBRAHAM 2 MA
Springfield
Hampden
East Longmeadow
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

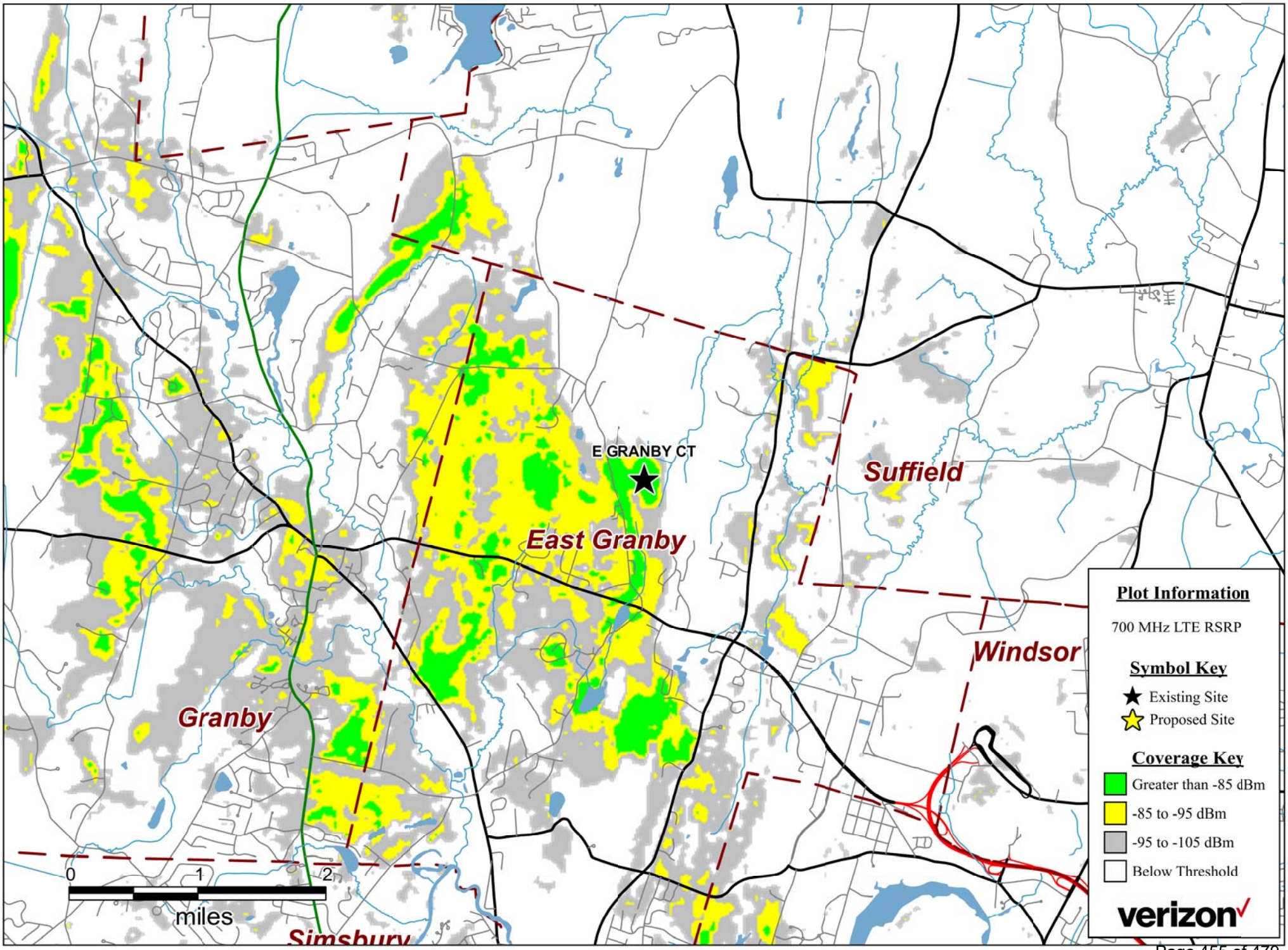

Springfield
Monson
Hampden
East Longmeadow
HAMPDEN WEST 2 MA
Somers
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

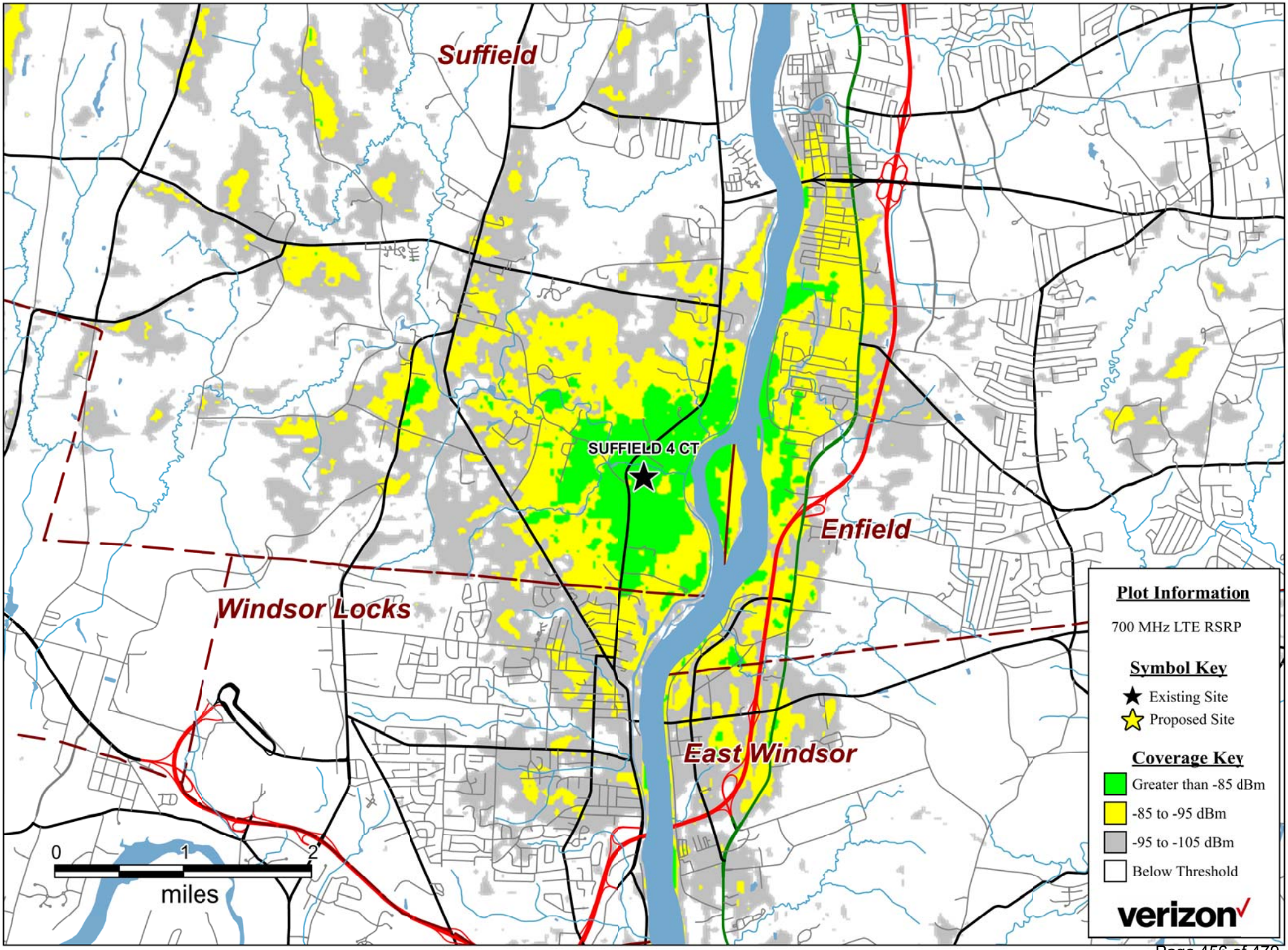

Enfield
ENFIELD CT
Windsor Locks
East Windsor
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

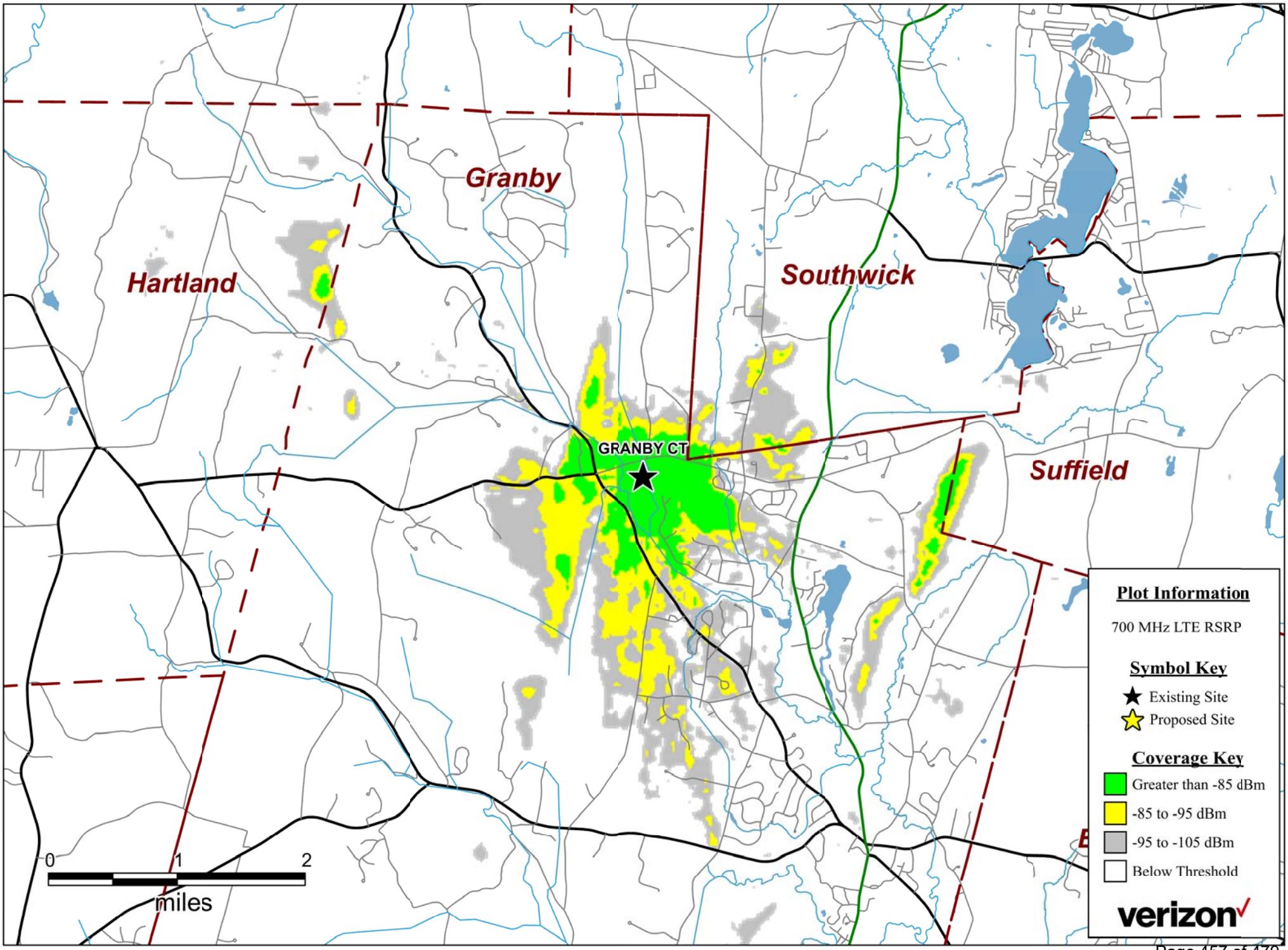

East Granby
Suffield
E GRANBY-3-CT
Granby
Windsor
Simsbury
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

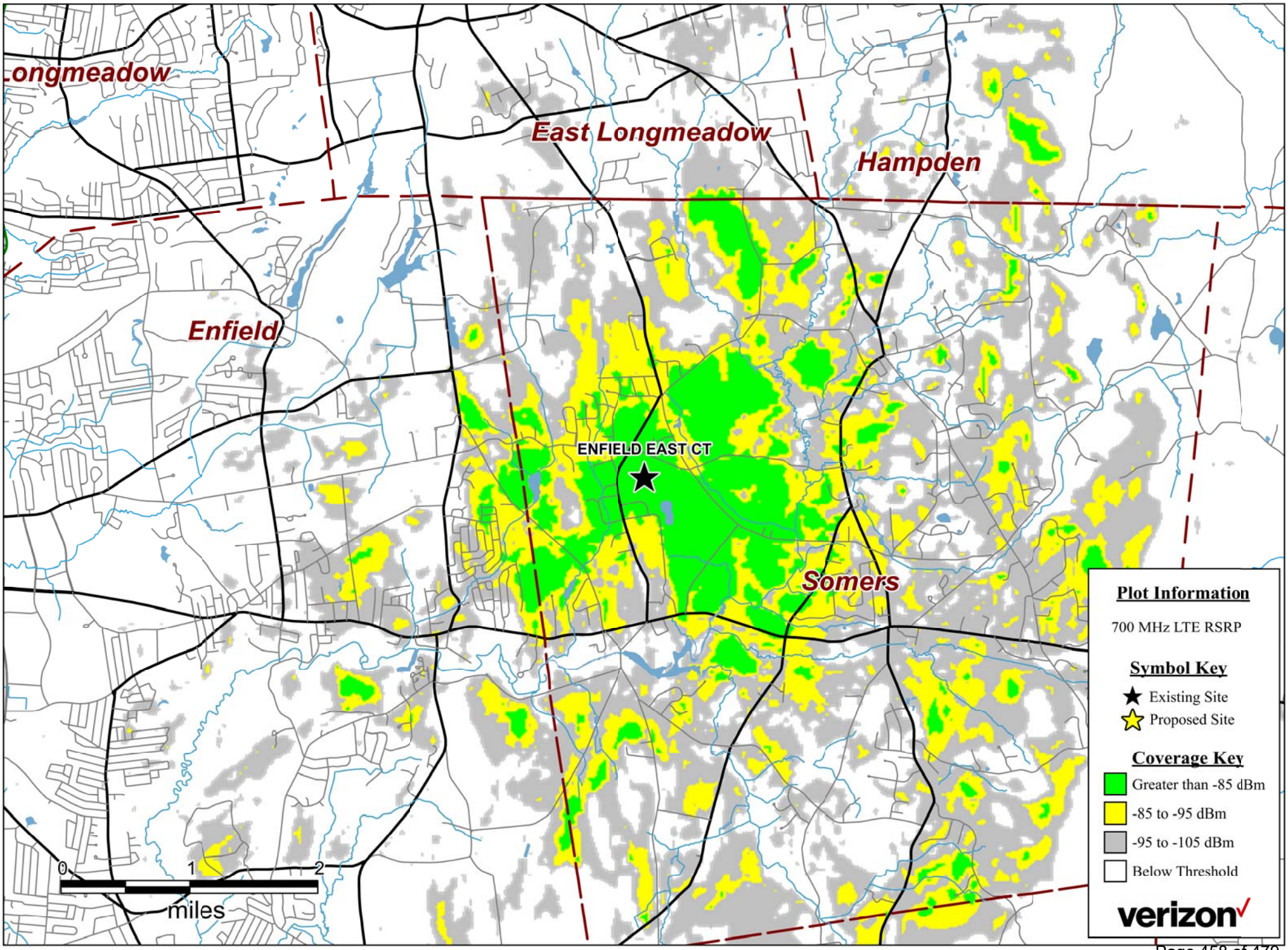

Suffield
East Granby
BRADLEY AIRPORT CT RELO
Windsor Locks
Windsor
ury
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

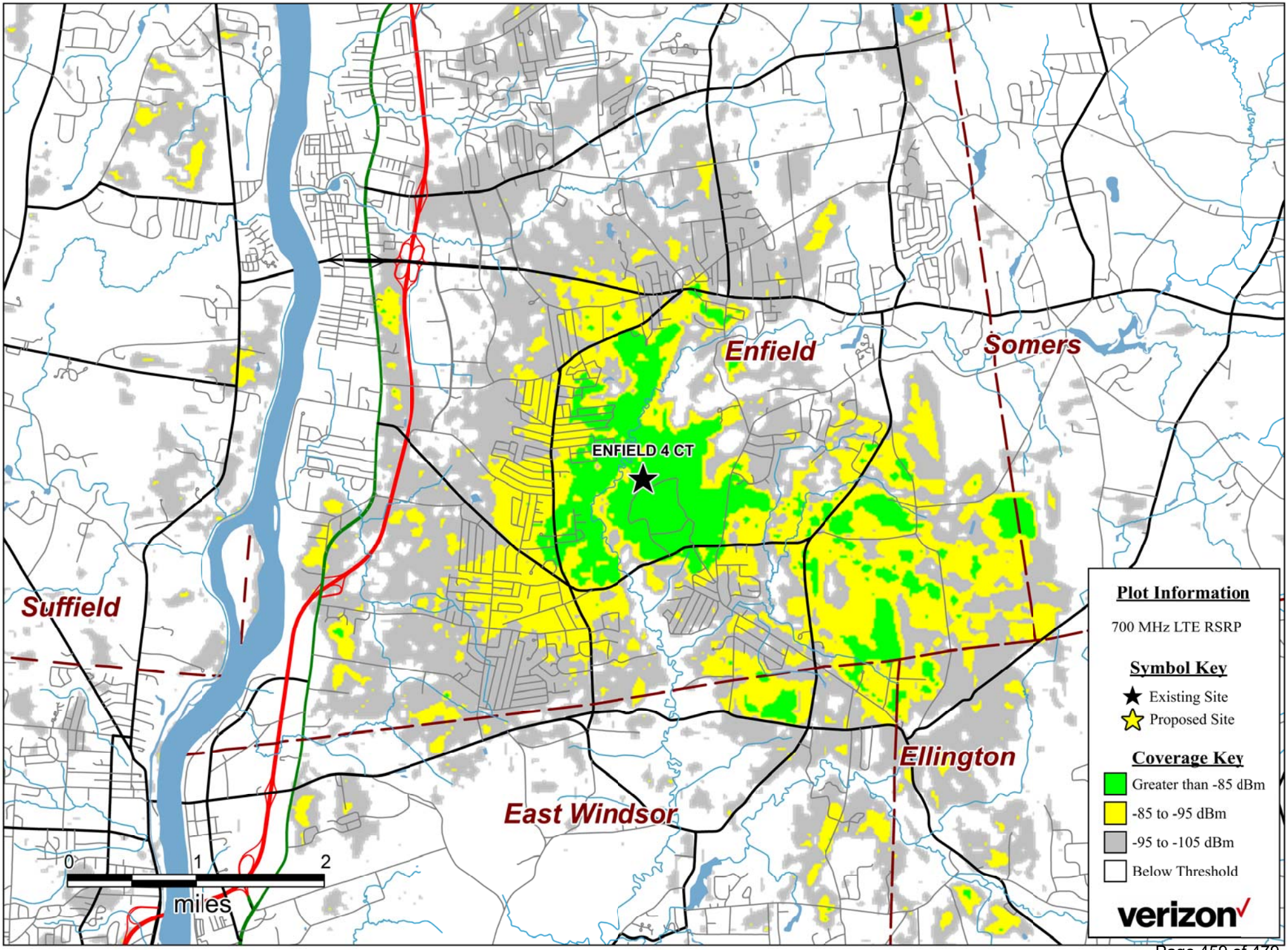

Suffield
anby
Windsor Locks
Enfield
WINDSOR LOCKS NE CT
East Windsor
Windsor
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

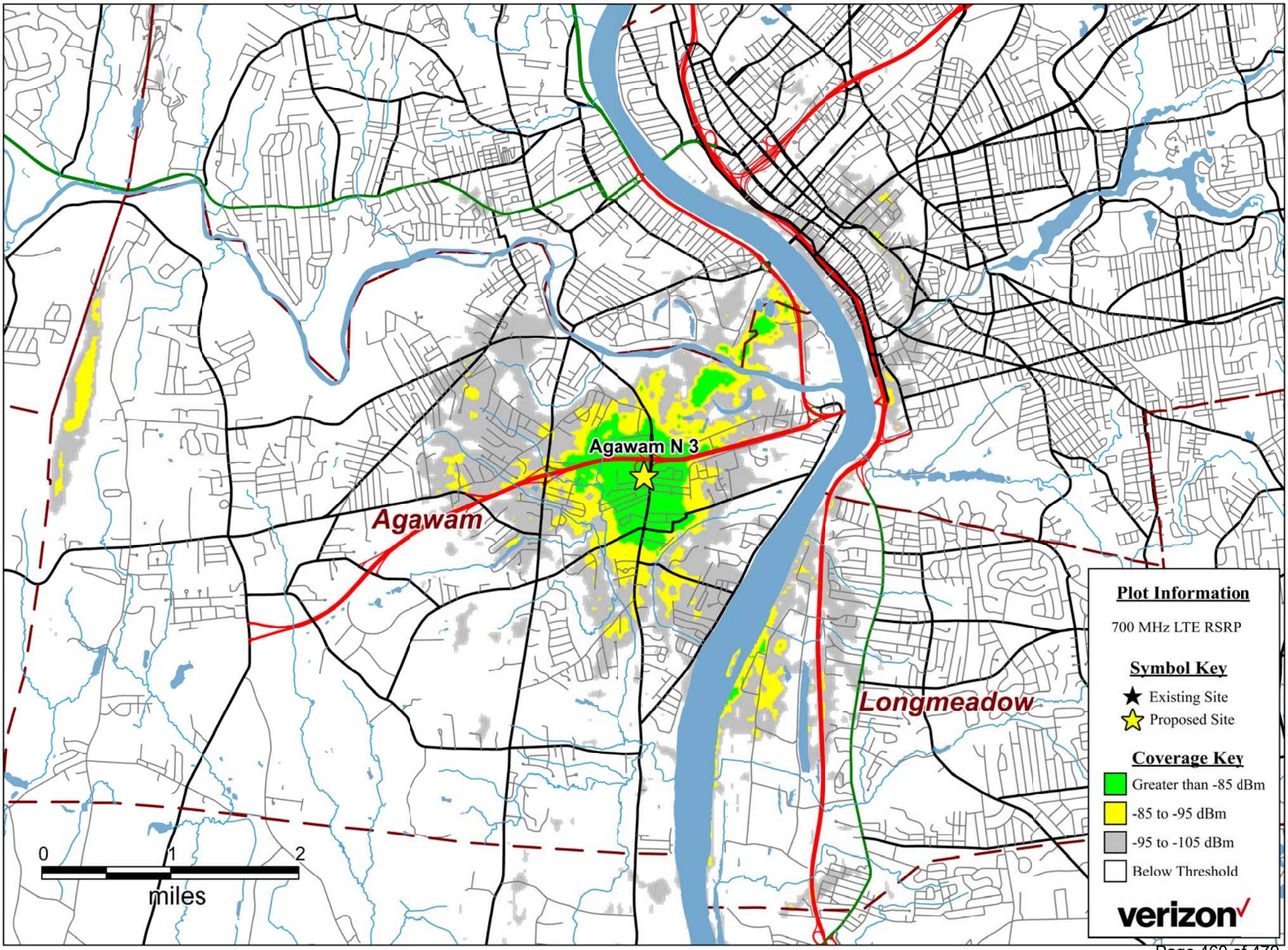

E GRANBY CT
Suffield
East Granby
Windsor
Granby
Simsbury
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon


Suffield
SUFFIELD 4 CT
Enfield
Windsor Locks
East Windsor
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon


Granby
Hartland
Southwick
Suffield
GRANBY CT
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon


ongmeadow
East Longmeadow
Hampden
Enfield
ENFIELD EAST CT
Somers
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon


Enfield
Somers
ENFIELD 4 CT
Suffield
East Windsor
Ellington
0
1
2
miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon


Agawam N 3
Agawam
Longmeadow
0
1
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miles
Plot Information
700 MHz LTE RSRP
Symbol Key
Existing Site
Proposed Site
Coverage Key
Greater than -85 dBm
-85 to -95 dBm
-95 to -105 dBm
Below Threshold
verizon

Diamond Communications Site: Bethany Assembly – MA054

Statement Regarding Alternative Facilities

Diamond Communications ("Diamond") submits this document to address alternative candidates it considered during its site selection process for Verizon Wireless ("Verizon").

Verizon is seeking to improve coverage along Main Street, Highway 57 cloverleaf and the surrounding residential area in the Town of Agawam. The proposed 115' monopine (120' top of branches) fills the existing coverage gap for Verizon as its anchor tenant at the proposed location.

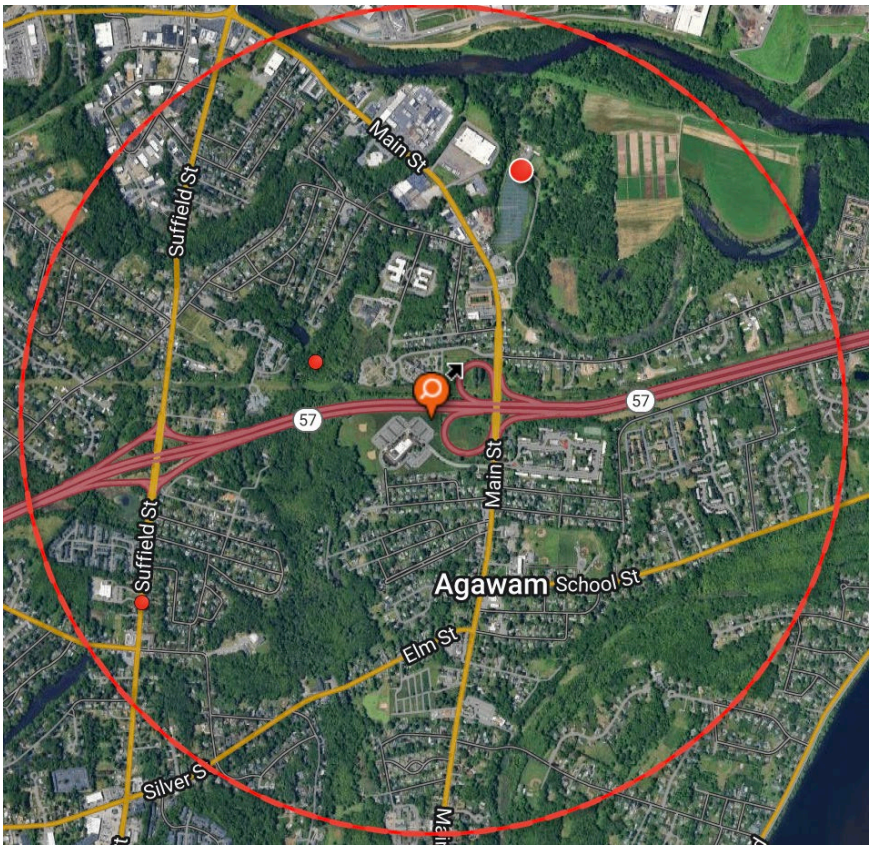
Existing Structures in the Search Ring

The search ring along the intersection of Main Street and Highway 57 has a quarter mile (0.25) mile radius. Diamond was able to confirm that there were no other existing towers, nor other objects or structures of adequate height within the specified search ring, nor within a reasonable distance outside the search ring.



Existing Structures outside of the Search Ring

Diamond then located the nearest existing tower locations as shown on the attached map in a one (1) mile radius from the proposed tower location:



This map illustrates a one (1) mile radius from the proposed tower in orange, and as shown on the map, there is one (1) existing tower or structure within that radius:

COMPETING STRUCTURES (*1 MILE RADIUS FOR URBAN, 3 MILE FOR SUBURBAN, 5 MILE FOR RURAL)					
Competing Structure (Owner)	Type (Tower, RT etc)	Height	Carriers on Tower	Coords	Dist (mi), Dir
SBA Towers II LLC	Monopole	176	1 - T-Mobile	42.084028, -72.613444	0.71 NE
			-		

For this existing structure:

- Verizon has existing coverage in the vicinity of the SBA tower, so any gap in coverage would need to be served from further south.

Raw Land Properties Considered

In addition to the current proposed location on the Bethany Assembly of God property, Diamond had also attempted to keep the proposed tower in the rear yard location next to the woods, off the playing fields, as well as directly next to Highway 57 along the western property line. Each of the considered alternative locations on the property were ruled out due to the existence of wetlands and the inability to meet the required buffer. Diamond also attempted to find any other available location to lease, including any commercial or industrial property. There are no commercial or industrial properties within a reasonable distance of the proposed tower location. The only other large property owner consists of the Beekman Place Estates to the East and Heritage Woods Senior Living Facility to the North. The Beekman Place Estates was ruled out due

to the condominium ownership of the parcel and the Heritage Woods Estates property was ruled out due to its proximity to the existing coverage and tower. Diamond was unable to lease any other property.

Conclusion

In conclusion, there are no existing towers or structures that can accommodate Verizon's coverage needs along Main Street and Highway 57. This document certifies that:

- There are no existing towers or other structures within one mile of the proposed location, other than the existing SBA tower which would not satisfy the coverage needs.
- There are no other large, raw land properties available to lease for a proposed tower that aren't subject to similar zoning and placement issues.

Diamond Towers has leased property from a willing landlord whose property will be developed in accordance with Town regulations.

I certify that the forgoing is true and correct:



Thomas Waniewski
Diamond Communications
SVP – Site Acquisition

180-96.B.(5)

Property Owner Information

Bethany Assembly of God
580 Main Street
Agawam, Massachusetts 01001

Tel: (413) 789-2930

The property owner is a Massachusetts Church Corporation formed under the laws of the Commonwealth of Massachusetts.

Contact Information

Correspondence regarding the facility should be sent to:

Contact Person: Bethany Assembly of God
580 Main Street
Agawam, Massachusetts 01001
Attn: Brad Martin, Deacon

Tel: (413) 486-1110
Email: brm@fitzgeraldpc.com

180-96.B.(3)

Applicant Information

Cellco Partnership d/b/a Verizon Wireless
20 Alexander Drive
Wallingford, CT 06492

Tel: (860) 706-4373

Cellco Partnership d/b/a Verizon Wireless is a foreign general partnership formed under the laws of the State of Delaware and registered to do business in the Commonwealth of Massachusetts.

Diamond Communications LLC
P.O. Box 619
Springfield, NJ 07081

Tel: (610) 585-6853

Diamond Communications LLC is a foreign limited liability company formed under the laws of the State of Delaware.

180-96.B.(4)

Contact Information

Correspondence regarding the facility should be sent to:

Cellco Partnership
d/b/a Verizon Wireless
Contact Person:

Michael A. Fenton, Esq.
Shatz, Schwartz and Fentin, P.C.
1441 Main Street, Suite 1100
Springfield, MA 01103
Tel: (413) 737-1131
Email: mfenton@ssfpc.com

Diamond Communications LLC
Contact Person:

Tom Waniewski
Diamond Communications LLC
P.O. Box 619
Springfield, NJ 07081
Tel: (610) 585-6853
Email: twaniewski@diamondcomm.com

With copy a copy to:

Michael A. Fenton, Esq.
Shatz, Schwartz and Fentin, P.C.
1441 Main Street, Suite 1100
Springfield, MA 01103
Tel: (413) 737-1131
Email: mfenton@ssfpc.com

23\0520\Special Permit\04 - SP Contact Info-Applicant

SPECIAL PERMIT NARRATIVE

RE:	APPLICANT:	Diamond Communications LLC & Cellco Partnership d/b/a Verizon Wireless as Co-Applicants
	PROPERTY:	580 Main Street, Agawam, MA 01001
	OWNER:	Bethany Assembly of God
	RELIEF SOUGHT:	Special Permit for the Construction of a Monopine and the Installation of a Wireless Communications Facility Pursuant to Section 180-96 of the Zoning Ordinance of the Town of Agawam (the "Ordinance")

Pursuant to M.G.L. c. 40A, § 9 and the above-referenced section of the Ordinance, Diamond Communications LLC ("Diamond") and Cellco Partnership d/b/a Verizon Wireless ("Verizon" and together with Diamond, the "Applicants") requests a special permit for the erection of a 115' tall monopine and installation of wireless communications equipment (the "Wireless Installation") on the property located at 580 Main Street, Agawam, Massachusetts 01001 (the "Property"). Diamond has negotiated a lease with the Bethany Assembly of God (the "Owner") in accordance with which the Owner has executed the Letter of Authorization submitted herewith, for the use of and access to the portion of the Property shown on the enclosed Plans.

The proposed Wireless Installation, consisting of erecting a one hundred fifteen (115') foot tall monopine which will house Verizon's equipment, including panel antennas, remote radio head (RRH) units, and other supporting equipment, as well as additional hardware and cable equipment, all to be enclosed within a 50' x 50' leased area on the Property.

The proposed Wireless Installation serves a few important purposes for the community. As the enclosed Engineering Necessity Case demonstrates, the proposed Wireless Installation will improve Verizon's wireless coverage in the Town of Agawam. In this particular location, the installation of wireless facilities is critical to serve the residents of Agawam. At present, there are several areas along Route 57 and to the south along Route 159 that have limited to no Verizon service. This lack of cellular service substantially hinders the wireless service experience for the residents and visitors of Agawam. As a result, the proposed Wireless Installation will substantially improve the general welfare and safety of the community, while simultaneously addressing the economic needs of the residents of the Town of Agawam.

Moreover, the project has been designed to minimize adverse effects to the community. For example, Diamond is willing to offer co-location opportunities to other carriers upon construction of the proposed monopole pursuant to lease agreements, effectively increasing the wireless coverage in the area while minimizing the total number of towers in the area. Additionally, Diamond is willing to offer the Town space on the proposed tower to install emergency radio equipment if the Town so wishes.

In addition to this Narrative, the Applicants submit the following in connection with its application:

1. Special Permit Application Form;
2. Special Permit Application Filing Fee;
3. Letter of Authorization;
4. Applicant Information and Contact Information;
5. Property Owner Information;
6. Statement Regarding Evaluation of Alternative Facilities;
7. Information Regarding Facility Sites in Agawam and Abutting Municipalities in which Applicant has a Legal or Equitable Interest;
8. Information Regarding Facility Sites in Agawam and Abutting Municipalities in which Applicant does not have a Legal or Equitable Interest;
9. Information Regarding Non-Feasibility of Repeaters;
10. FCC Licenses;
11. Airspace Study Indicating FAA Registration Not Required;
12. Radio Frequency Emissions Table;
13. SiteSafe RF Emissions Compliance Report;
14. Wetlands Delineation Report;
15. Environmental Engineer's Report;
16. Property Value Appraisal Report;
17. Engineering Necessity Case;
18. Antenna Specifications;
19. Photo Simulations; and
20. Plans;

The Applicants were heard before the Agawam City Council at the City Council's May 19, 2025, hearing where the City Council approved the Applicant's request for a Zone Change to have the Property added to the Wireless Telecommunications Overlay District ("WTOD"). Due to requests of the City Council during the Zone Change process, the Applicants compiled supporting information relating to the requests of the City Council as well as abutters who expressed concerns during said Zone Change process. These items are included in this submission.

The Applicants have investigated possible alternative locations for the tower on the Property and have engaged in discussions with the Owner of the Property regarding alternative locations for the tower. The Owner expressed its preference for locating the proposed tower at the current location, i.e., the northeast corner of the Property. The Applicants and Owner discussed the possibility of locating the tower in the southwest area of the Property near the outfield of the

baseball fields, however, for a number of reasons, this location was not a preferred location for either the Applicants nor the Owner.

One of the issues with locating the tower in the southwest area of the Property is the existence of wetlands, which would subject the project to development limitations in the area and would also require a significant amount of additional filings and permitting not only with the Town of Agawam, but also with other agencies including the FCC. The Applicants have included a Freshwater Wetlands Delineation & Watercourse Reporting (enclosed herewith), which shows the existing wetlands in the southwestern area of the Property along with the applicable buffer zones and the restrictions and limitations thereby imposed. To better outline some of the issues with locating the tower in this alternative location on the Property, the Applicants have also provided additional testimony from Dynamic Environmental Associates, Inc., the Environmental Engineers engaged on this project (enclosed herewith). This testimony provides, among other things, that locating the tower in this southwest location on the Property would trigger the need for the approval of the Agawam Conservation Commission under its authority from the Massachusetts Department of Environmental Protection (MassDEP) as administrators of the Massachusetts Wetlands Protection Act. This approval process requires the completion and submission of a Request for Determination of Applicability (RDA) / Notice of Intent (NOI) to the Agawam Conservation Commission and MassDEP as well as attendance of at least one Agawam Conservation Commission meeting. Furthermore, based on recent projects, MassDEP processing of such applications and Agawam Conservation Commission review is anticipated to take a minimum of ninety (90) days to complete and approval is not automatic nor guaranteed. Additionally, locating the tower in the southwest area of the Property would result in the tower being closer to abutting residences than it will be at the proposed location on the Property.

To address the concerns raised by abutters during the Zone Change process, regarding the effect of the tower on property values for the surrounding abutters, the Applicants have obtained an Appraisal Report prepared by Bennett Franklin Real Estate Services, LLC of East Longmeadow, MA, which has evaluated data concerning the value of properties surrounding other existing wireless communication installations in Agawam and has looked at the values of such properties before and after the installation of such wireless communication towers. As further detailed in the Appraisal Report (enclosed herewith), the findings support that, “there is no diminution of the market value of abutting properties from the prospective development of the proposed wireless telecommunications facility.”

To further demonstrate the critical need for the Wireless Installation, the Applicants have prepared the Engineering Necessity Case (enclosed herewith). The Engineering Necessity Case provides, among other things, evidence of the lack of suitable wireless connectivity in the surrounding area of the Property, specifically along Route 57 and to the residents to the south along Route 159. Verizon has conducted radio frequency tests in the area demonstrating the existing gap in coverage and inadequate capacity to sustain reliable in-building service. As wireless communication is used with increasing frequency to report crimes, accidents, fires, medical emergencies and other threats to people or property, eliminating the gap in coverage and increasing the network capacity at this location is essential to public health, safety, and welfare.

Consistent with the testimony provided by the Applicants, there are no parcels within a half (½) mile of the proposed location which are in the WTOD. The nearest existing wireless communications tower is located at the Mushy's Driving Range, 369 Main Street, Agawam, and the nearest parcel which is in the WTOD is the Agawam United Methodist Church located at 491 Mill Street, Agawam, and identified by Parcel ID No. H10-2-17. The materials submitted herewith provide further information as to why these sites located within the WTOD are not feasible in order to achieve the goals of the Applicants in filling the existing gap in coverage.

Throughout the Zone Change process, the City Council specifically asked about the existing wireless communications tower located at the Mushy's Driving Range and inquired as to why this would not be a suitable site for collocation. As described more fully in the Engineering Necessity Case, Verizon needs to reasonably separate its wireless facilities so there is no unnecessary overlap of coverage and capacity, as this results in interference and wasted RF capacity resources. The Mushy's Driving Range site is approximately 0.57 miles away from Verizon's existing wireless facility located atop the Colosseum at the Eastern States Exposition. Additionally, Verizon has an existing Small Cell installation which is approximately 0.2 miles away from the Mushy's Driving Range site. Therefore, given the close proximity of the Mushy's Driving Range site and Verizon's existing wireless facilities, the Mushy's Driving Range site is not a feasible location for Verizon's current coverage needs. The proposed site on the Property provides for appropriate separation between Verizon's existing wireless facilities in the area and also satisfies the coverage needs by enhancing the coverage and wireless capacity along Route 57 and Route 159, which is the ultimate goal of the Wireless Installation.

In response to the concerns raised by abutters during the Zone Change process relating to potential health effects of the Wireless Installation, the Applicants have engaged InfraServices Group, LLC to provide the attached RF Emissions Compliance Report (the "SiteSafe Report" enclosed herewith). Verizon's proposed equipment to be installed on the subject tower are compliant with the Rules and Regulations as promulgated by the Federal Communications Commission ("FCC").

The Applicants have provided the SiteSafe Report to address these concerns; however, it must be noted that pursuant to federal law, specifically, Section 704 of the Telecommunications Act of 1996 ("TCA"), local governments are restricted from denying any permits or approvals associated with wireless communications installations based on health concerns over radio frequency emissions. Therefore, although the Applicants were willing to provide such additional information, the Zoning Board of Appeals' determination may not be based upon any considerations relating to health concerns over radio frequency emissions. Any such determination made upon this basis would be a violation of Section 704 of the TCA and would constitute a wrongful prohibition of the provision of personal wireless services under the TCA.

COMPLIANCE WITH SECTION 180-99

Diamond Communications LLC and Cellco Partnership d/b/a Verizon Wireless (collectively, the "Applicant") satisfies and meets the standards for the issuance of a special permit as set forth in Article XIV Section 180-99 of the Zoning Ordinance as follows:

1. *That the applicant is proposing to locate its personal wireless service facility or tower within a Wireless Telecommunications Overlay District or other districts as provided by this article.*

The Applicant has submitted the necessary Zone Change Application and supporting materials to City Council of the Town of Agawam, and has received such approval adding the subject parcel to the Wireless Telecommunications Overlay District. Thereby, the Applicant complies with this requirement by having the proposed site located within the Wireless Telecommunications Overlay District.

2. *That the applicant is not able to use existing towers/facilities in or around the Town of Agawam, either with or without the use of repeaters, to provide adequate coverage and/or adequate capacity to the Town of Agawam.*

The Applicant has demonstrated through documentation submitted with its application, including the Statement Regarding Alternative Facilities attached hereto, and will offer oral testimony that there are no suitable existing sites which will allow for the service Verizon requires. Additionally, Verizon has established that repeaters are not appropriate nor effective in this situation.

3. *That the proposed personal wireless service facility /tower will not have an undue adverse impact on historic resources, scenic views, residential property values, natural or man-made resources.*

The Applicant has inquired with the State Historic Preservation Office and confirmed there is no adverse impact on historic resources. Additionally, there are no scenic views that would be disturbed as designated by the Town. Furthermore, the Applicant has provided a professional appraisal report demonstrating that there are no adverse impacts on property values. Lastly, the Applicant has designed the tower as a monopine, to better blend in with the surrounding community and scenery.

4. *That the applicant has agreed to implement all reasonable measures to mitigate the potential adverse impacts of the tower and facility.*

The Applicant has sited the tower in a location which will have minimal impact on the surrounding area. Also, the tower is designed for the minimal height necessary to provide service further mitigating any impact. Additionally, the Applicant is constructing an opaque fence around the "compound" for security purposes and is taking all other measures required by zoning to protect the safety and welfare of the public.

5. *That the proposal shall comply with FCC96-326 and any and all other applicable FCC regulations regarding emissions of electromagnetic radiation and that the required monitoring program is in place and shall be paid for by the applicant.*

Verizon has submitted a radio frequency report which includes a power density calculation stating that the tower, in a worst case scenario, will still operate within the required range for radio frequency emissions. Further, Verizon conducts regular testing and employs an emergency notification system in the event of equipment failure.

23\0520\Special Permit\03 - SP Narrative re Compliance.5704

Docusign Envelope ID: 70F249A4-5521-40F3-8C2A-E42F5E64E5AF

LETTER OF AUTHORIZATION

The undersigned, on behalf of Bethany Assembly of God, a Massachusetts Church Corporation, as owner of a certain parcel of land located at 580 Main Street in the Town of Agawam, Hampden County, Commonwealth of Massachusetts, having a Parcel ID K11-2-28, and further described in that certain deed recorded in the Hampden County Registry of Deeds at Book 4332, Page 48 (the "Property"); hereby authorizes Diamond Communications LLC and any of its designated agents or assigns, to apply for all necessary or appropriate municipal, state, federal and other permits necessary to accommodate the installation of a wireless telecommunications facility on the Property.

Bethany Assembly of God

Signed by:
Stephen Thee
D57080787254A0...

By: Stephen Thee
Its: President
Date: 12/18/2024

Bethany Assembly of God

Signed by:
Brad Martin
C2285089A4E24B9...

By: Brad Martin
Its: Deacon
Date: 1/2/2025

TOWN OF AGAWAM
36 MAIN STREET
AGAWAM, MA 01001

BOARD OF APPEALS

FOR OFFICE USE ONLY

Case #: _____

Filed: _____

Hearing: _____

Expires: _____

Application to Board of Appeals for SPECIAL PERMIT as provided in the Zoning and other By-laws.

Applicant Diamond Communications LLC and Cellco Partnership d/b/a Verizon Wireless as Co-Applicants

Address 1441 Main Street, Suite 1100, Springfield, MA 01103

Application is hereby made for a *SPECIAL PERMIT* as provided by Section 180-11 and 180-96 **Paragraph** _____ **of the By-law.**

Premises affected are situated on Main **Street;** _____ **feet distant from the corner of** _____ **Street and known as street number** 580.

Property is zoned as Agricultural District (AG).

Reason(s) for request of Special Permit:

To erect a Personal Wireless Service Facility consisting of a 115' tall monopine tower and an equipment compound to be located within the 50' x 50' leased area.

Signature of owner or his authorized agent: _____
By: Michael A. Fenton, authorized agent

Telephone #: (413) 737-1131

NOTICE: THIS APPLICATION MUST BE FILLED OUT IN INK OR TYPEWRITTEN

The following members attended the public meeting:

Doreen Prouty-Chair
Richard Maggi-Vice Chair
Also Mancini-Clerk
Vinny Ronghi-Alternate
Viktor Savonin-Alternate

Member Absent

Chair Prouty open the meeting at 6:00pm.

Discussion-18 Springfield Street-Shah

Chair Prouty stated R. Levesque had requested a Chapter A, Section 6 finding. John Masuck from R. Levesque Associates was present for this agenda item. He stated the client is proposing an addition under 600 sq. ft. at the rear of existing store.
Chair Prouty stated the section 6 finding was new to the Board. She stated she reached out to Pioneer Valley Planning, the Attorney General, an attorney, as well as another person who works in zoning. She stated most responses said this did not need a Section 6 finding. She stated Bob Mitchell, a planning consultant stated a Section 6 finding was not necessary only if the extension or alteration complies with the current zoning bylaw would a Chapter A, Section 6 finding then be required. Ms. Prouty stated an East Hampton Planner felt Prouty should get the Building Inspector to change his decision, and if a Variance is required to let the applicant know the difficulty of granting a Variance. She went on to the say the petitioner is wanting to put an addition on a legally non-conforming building, but the setback for the Business-A is 35ft. There is only 10ft. right now and the addition would push the setback 9ft, so there would only be a 1ft. setback for the rear side yard.
Mr. Maggi and Mr. Ronghi both verbally agreed with the decision for the petitioner to submit a Variance.

Chair Prouty called for a vote to request the petitioner to amend their application to a Variance.

Maggi-yes, Mancini-yes, Prouty yes.

Motion was made by Mr. Mancini and seconded by Mr. Maggi to take the agenda item out of order.

Prouty-yes, Mancini-yes, Maggi-yes. Ronghi-yes, Savonin-yes.

Approval of Minutes for September 22, 2025

Motion was made by Mr. Maggi and seconded by Mr. Mancini to approve the September 22, 2025 minutes as written.

Prouty-yes, Maggi-yes, Savonin-yes, Mancini-yes, Ronghi-yes.

CASE #2035—580 Main Street-Variance-Verizon

Sitting on this case:
Doreen Prouty-Chair, Richard Maggi-Vice Chair, Aldo Mancini-Clerk

Chair Prouty opened the public hearing at 6:30pm and introduced the Board members.

Ellen Freyman, with Schatz, Schwartz, & Fentin, Kelsey Kibby, Kimley Horn Engineering, and Scott Von Ryan, Diamond Communication were present for this agenda item.
Ms. Freyman stated the proposal is for a cell tower at this location. She stated the tower will be 100 ft. and will provide improved service to the surrounding area. She sated the variance is for the setback from the highway. The special permit is to allow the erecting of the tower. She stated this area has a lot of constraints, with wetlands and this area is out of the way of the activity. She stated they are mindful of the residents that abut the property and they are as far away from residence as possible. She said the requirement is 260 ft. She said the area 770 ft. from the nearest residence. She stated the hardship is that the site is very constrained and Verizon would not be able to provide required service. She stated the towers have to line up with other towers and antennas to hand off the signals for seamless coverage. She stated this proposal is not a degradation to the Town because it provides resources to the Town. She stated it does not require the Town resources and taxes will be paid to the Town. The property is unique and the impact will be minimal per Ms. Freyman. She stated the pole looks like a tree to offer more screening.

Case#2034-580 Main Street-Special Permit-Verizon

Sitting on this case:
Doreen Prouty-Chair, Richard Maggi-Vice Chair, Aldo Mancini-Clerk

Ellen Freyman, with Schatz, Schwartz, & Fentin, Kelsey Kibby, Kimley Horn Engineering, and Scott Von Ryan, Diamond Communication were present for this agenda item. Ms. Kibby stated the proposal is in the north east corner of the property. There is 45 ft. from the eastern property line and 46ft. from the northern property line. The gravel pad will be 50x50 with the monopole in the middle of the pad. The monopine is structured to look like a tree at 110ft. and there will be a 6ft tall privacy fence surrounding it.
Ms. Prouty asked how far the monopole is from the church. Mr. Ryan stated 373 ft. 10 inches.
Ms. Mancini asked how far from the highway. Mr. Ryan stated approximately 90ft.
Ms. Freyman stated they went before the City Council to have this approved for the overlay district. They went before Conservation Commission and were given a denial to place it another location on site. They did one balloon float and will perform another one will be completed on November 3, 2025. She stated the radio frequency impact reports were submitted and they are well below the required level. The Town hired a peer reviewer.
Mr. Maggi asked why there were so close to the highway. Ms. Freyman stated to be outside of the already improved areas and away from the residents. Mr. Maggi stated this could be a problem being that close to the highway. Ms. Freyman stated the towers are built to collapse on themselves.

Mr. Ryan stated the tower is 45ft. from property line and 90ft. from highway, but the intent was to keep it as far away from the residents as possible. Mr. Maggi stated if it was moved south it would still be the legal distance from the church and residence. Ms. Freyman stated a side yard Variance would still be required.
Chair Prouty, asked who would own the monopole. Ms. Freyman stated Diamond Communications will own it and Verizon will have rights. Chair Prouty stated Diamond is a construction company and does not have same privileges as a telecommunications company. Ms. Freyman stated Verizon would be a partner. Chair Prouty stated an explanation for not using Mushy's should be included in Verizon's response to the peer reviewer and presented at the next meeting.
Chair Prouty also stated the radio frequency and the peer reviewer is saving the use of Mushy's as not viable has not been shown.
Mr. Maggi asked who maintained the tower. Mr. Ryan stated Diamond Communications. Mr. Ryan stated Verizon goes in once a month for maintenance. Ms. Freyman stated this has been occurring for about 25 years. Mr. Maggi asked if Verizon abandons the tower who would take care of it. Mr. Ryan stated it would be Diamond Communications responsibility to take it down, and the window is about a year's time, but there is language in the ordinance.

Mr. Ronghi stated we are still waiting on Planning Board approval. Chair Prouty also read Conservation Commission's denial.

Chair Prouty opened the hearing for public comment.

Chair Prouty read a letter dated October 22, 2025 from a Julia Czelazewicz-200 Silver Street, North Granby stated she was opposed, as well as other parents. This will be on church property where her children and many others attend school. There is no long-term safety studies on the effects on humans, such as cancer, memory loss, oxidative stress, and DNA damage to name a few. Some districts in US have placed strict requirements of these towers. She expressed her concerns for vulnerable children. She also shared a website in the letter for the Board to look at.

Heidi Blackak-12 Parker St, stated in her research the towers have a tendency to be a conduit for lightening strikes and this is a major concern. She asked if this will this increase insurance for people in the area and if power surges kill appliances who would will be responsible. Mr. Ryan stated the tower is grounded and there is a lightening rode on top and there is a ground pad and it should dissipate into the ground.

Christina Dubinevici-46 Stewart Lane, on behalf of her parents, stated her backyard will face the tower and it is not a big space and recent studies shows the home value decreases and this is her parents' home and this home is their life savings. She also stated the cons outweigh the pros and she is against this proposal.

Julia Czelazewicz-200 Silver Street, North Granby, stated her children attend this school. She expressed her concerns stating the tower would be in close proximity to where her kids go to school. She stated in early 1990's the EPA began drafting RF radiation guidelines. EPA addressed the thermal effects and planned a second stage to address non-thermal effects, and the industry grew, lobbyists went before congress to prevent EPA from presenting this research. Then the FCC was granted sole authority to produce these results. She stated health and

environmental groups are against this as they do not consider the non-thermal effects. She stated the FCC guidelines do not take the children into consideration. Several school have banned this on school property due to the health risks. Teachers and students in California got cancer and these towers were outlawed on school property. She stated the standards are industry sponsored. She asked if the Board would want their love ones being exposed to these potential dangers. Mr. Maggi asked Ms. Czelazewicz if she had the studies. She stated that is the issue the lack of studies.

Catherine Danilcenco-61 Center Street, stated her child is one of the statistics. In July of 2018 she gave birth to a healthy baby boy. Three years went by and he stopped walking. A neurology consult he was diagnosed with a non-operable brain tumor. She stated he died at 4 years old. She stated she lives in Agawam because she wants to live someplace health conscious. She stated there is one near the high school and on River Road. She stated another tower does not need to be built where children and people are. She is against this proposal.

Vlad Grechka-1649 Suffield, stated many towns have dealt with this and made it 1,500 ft. requirement from schools. He stated there is plenty of evidence of the EMF readings once a cell tower is installed. He stated these towers produce such high radio frequency so far away. He stated this is 500 ft. from the door of the church. He said a cell phone tower is not needed and the church can use wifi to make calls if there is an issue making calls. He stated the community can live without this cell tower.

Daniel Balbony-15 Mardale Ave, stated there is wetlands in this area. He is concerned of the micro-plastics coming off the monopine pole and going into the wetlands. He wonders at what point will this be addressed.

Lidia Moshkovskiy-67 Charter Oak Drive, stated she is a member at Bethany and was not aware of the proposed tower. She stated there is Easter eggs hunts on these fields and she is concerned for the children and the possible health concerns. She is against this proposal.

Edik Bubuza-15 Woodside Drive, stated he is concerned for his kids and if his kids start attending this school he would be concerned and he is against this, as well as the wetlands and the wildlife that will be affected.

Max Loboda-45 Lango Lane, stated he has small children and they are going to start attending this school and he is concerned about the health of his children. He stated if there is 1% chance that this will affect his kids he is completely against it and asked the Board to consider if their kids or grandkids were going here would they want this risk.

Michael Danek-50 Center Street-stated with all he is hearing and reading this is not well researched. He stated there are already 2 cell towers in close proximity to this site. He also stated this could affect property values. He stated there is more negative things about this than positive and he is opposed.

Travis McNulty-31 Sheridan Rd, Enfield, stated his children attend school here and he is in agreement with the other parents and this is very alarming when children go to school here. He is opposed to this proposition.

Audience members opposed in name only:

Fatima Bubuza-1649 Suffield Street
Beth Ayotte-14 Spier Ave, Enfield
Victoria Cass-79 Spencer Street
Matt Ayotte-14 Spier Ave, Enfield
Tatyana Kirilovich-437 South West Street

Chair Prouty stated an appraiser was employed to do an evaluation for home values and as examples of prices before cell towers went up and after. Prouty stated all the home values did go up and the installation of the cell tower, did not devalue the properties.
She went on to say the lighting strikes and the micro-plastics was important. Chair Prouty stated she went to the website provided by Ms. Czelazewicz and found that short term exposure has not always show negative effects, however this is preliminary information. They recommended cell towers be 1640ft. away from schools. She stated many of the articles talked about co-locaters were dealing with telephone pole height and lower. She reached out to Shelburne and Stockbridge. She stated Stockbridge stated their setback is 1000 ft. from schools and 600 ft. from schools, but they have a lot of land and are not as constrained as some towns.

Ms. Ronghi stated this is proposed on private property and nothing stops the Town of Agawam from creating bylaws to prevent this. He stated a cellphone held to your face exposes you to greater waves than a cellphone tower at any time. Mr. Ronghi stated while the Board can sympathize but certain things cannot be part of the decision making process by law.

Chair Prouty stated state and federal government does not allow the Board to rule in terms of health, but she would like the plastic issue to be answered at the next hearing.

Chair Prouty stated this still has to go before Planning and the peer reviewer has some more information to review. The hearing will be continued to Monday, November 10, 2025. The Verizon RF consultant as well as the ZBA peer reviewer will be present at this hearing, if the Board has further questions.

Prouty-yes, Maggi-yes, Mancini-yes

Any other matter that may legally come before Zoning Board of Appeals

None

Motion was made by Mr. Maggi and seconded by Mr. Mancini to adjourn the meeting.

Prouty-yes, Maggi-yes, Savonin-yes, Mancini-yes, Ronghi-yes.

Meeting adjourned at 7:30pm.