STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

RE: APPLICATION BY T-MOBILE NORTHEAST, LLC FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR A TELECOMMUNICATIONS FACILITY AT 61-1 BUTTONBALL ROAD IN THE TOWN OF OLD LYME, CONNECTICUT

DOCKET NO. 393

Date: January 8, 2010

INTERROGATORY RESPONSES TO CONNECTICUT SITING COUNCIL FROM APPLICANT T-MOBILE NORTHEAST, LLC

The Applicant, T-Mobile Northeast, LLC ("T-Mobile"), submits the following responses to the first set of Pre-Hearing Interrogatories propounded by the Connecticut Siting Council in connection with the above-captioned Application.

1. What is T-Mobile Northeast, LLC's (T-Mobile) existing signal strength in the area that would be covered by the proposed facility?

A1 **T-Mobile's existing coverage in the area that would be covered by the proposed facility ranges from -84 down to values below -100 dBm. A large part of the target area is well below T-Mobile's minimum design threshold of -84 dBm.**

2. What is the minimum signal level T-Mobile would consider acceptable for service in the vicinity of the proposed site?

A2 **T-Mobile's minimum allowable signal strength is -84 dBm.**

3. What is the minimum signal level that T-Mobile requires in order to provide adequate in-vehicle coverage? What is the minimum signal level that T-Mobile requires in order to provide adequate in-building coverage?

A3 T-Mobile's minimum design threshold for reliable in-vehicle coverage is 84 dBm. T-Mobile's minimum design threshold for reliable in-building coverage is -76 dBm.

4. When was the search ring first initiated for a tower in this area? What is the size and shape of the search ring? Where is the center of the search ring?

A4 T-Mobile initiated a search area in this section of Old Lyme on or about July 17, 2008. The search area focused on a .2 miles radius with the center located at the intersection of Buttonball Road and the Amtrak Rail line.

5. What were the results of T-Mobile's notice to abutting property owners? Were the certificates of service returned from all those to whom notice was sent? If not, whose certificate was not returned? What other attempts were made to notify these persons? Provide a copy of all returned certificates of service.

A5 T-Mobile received return receipts from all the abutters. Copies of all returned receipts are appended hereto as Attachment A.

6. Describe the land uses surrounding the proposed tower site.

A6 The areas to the north of the proposed Facility consist of the Amtrak right-of-way and some vacant property owned by the Town of Old Lyme. The areas to the south consist of a golf course and commercial (office) uses. The areas to the east consist of the Amtrak right-of-way and a golf course. The areas to the west include single family residential use.

7. Has T-Mobile considered alternative technologies such as repeaters and/or microcells to serve the proposed coverage area? Were either found to be viable alternatives to a proposed tower?

A7 T-Mobile has considered alternate design solutions such as repeaters and micro-cells. Repeaters are ineffective in this area because of a lack of usable reliable signal in the design area that could be repeated. Second, for a repeater site to be effective it needs to be able to broadcast the repeated signal over the intended coverage objective. This would require it to overcome the same terrain obstructions as the proposed facility. Repeaters are better suited to extend an existing reliable footprint over specific terrain features such as a ridge line or a bend in a roadway where it is typically not economically practical to build a new macro-footprint site for the limited area or limited customer base in the intended area. This also requires existing structures to be available to mount the repeater antennas

on to extend the footprint. In this design scenario, T-Mobile is looking to create a new coverage footprint to a fairly significant area and the use of repeaters would not be an effective solution to this scenario.

Micro-cells would also not be a viable solution here due to the fact that T-Mobile is trying to provide initial footprint coverage to a fairly significant area. Micro-cells are better suited for very specific coverage areas such as a city block or a stretch of roadway where a small coverage gap exists or traffic needs to be off-loaded from the larger macro-cells that currently serve the area.

8. Does the total construction costs include antennas and radio equipment? Provide the estimated costs of the antennas and the estimated costs of the radio equipment.

A8 No, the construction costs do not include T-Mobile's equipment. T-Mobile's equipment would cost approximately $23,000.

9. Provide the distance and direction from the proposed site to the existing (or proposed) sites that the proposed tower would interact with. Also include the addresses, tower heights, antenna heights and tower types (e.g. monopole).

A9 A list of surrounding sites that the proposed site will interact with is appended hereto as Attachment B.

10. Are the standoff cross-arm antenna mounts essentially the same or similar to T-arm mounts? Explain.

A10 Yes, stand-off cross-arms and T-arm mounts are the same. The mounts consist of an approximate 4" x 4" tube steel arm perpendicular to the tower face with a 10' to 12' horizontal mounting pipe at its end upon which the antenna masts and antennas are mounted.

11. Would flush-mounted antennas provide the required coverage? Would such configuration result in reduced coverage and/or necessitate greater antenna height? Explain.

A11 Utilizing flush mounted antennas would still allow T-Mobile to provide the required coverage footprint from the proposed site. This design, however, would require T-Mobile to mount a second antenna 10 feet higher on the tower for its UMTS deployment.

12. Would T-Mobile only provide PCS service? Explain.

A12 T-Mobile would provide GSM and UMTS service to the objective area. In Connecticut T-Mobile has been granted licenses in the PCS frequency band to provide GSM services, as well as licenses in the AWS frequency band to provide UMTS services.

13. Provide coverage plots using the same scale provided assuming the tower is ten feet shorter than proposed and twenty feet shorter than proposed, respectively.

A13 Responsive coverage plots are appended hereto as Attachment C.

14. Provide the individual lengths of the coverage gaps (in miles) for the roads that T-Mobile seeks to provide coverage to. Describe criteria and parameters in determining the lengths of the road.

A14 In the immediate area of the proposed CTNL801A Site, T-Mobile currently has gaps in service along the listed roadways and rail lines with given distances. The criteria for determining the gap is the area where the existing coverage footprint falls below the minimum design threshold for T-Mobile of -84 dBm.

a) State Highway 156:	**3.36 miles**
b) Button Ball Road:	**1.03 miles**
c) Amtrak Rail line	**4.62 miles along the shoreline in Old Lyme/East Lyme**

15. Provide the individual lengths of coverage (in miles) that would be provided by the proposed facility on the roads that T-Mobile seeks to provide coverage to. Provide similar data assuming the tower is ten feet shorter and twenty feet shorter, respectively.

A15 The distances covered along the roadways and rail lines listed in Interrogatory No. 14 at antenna heights of 97', 87' and 77' are as follows:

Antenna Height of 97'

a) State Highway 156:	**1.69 miles**
b) Button Ball Road:	**0.99 miles**
c) Amtrak Rail line	**1.98 miles**

Antenna Height of 87'

a) State Highway 156: 1.13 miles
b) Button Ball Road: 0.97 miles
c) Amtrak Rail line 1.96 miles

Antenna Height of 77'

a) State Highway 156: 0.72 miles
b) Button Ball Road: 0.79 miles
c) Amtrak Rail line 1.74 miles

16. Provide the areas (in square miles) that would be covered by this facility assuming that the tower is the proposed height, ten feet shorter, and twenty feet shorter, respectively.

A16 Square mileage of coverage from the proposed Facility at 97', 87' and 77' is as follows:

97 feet: 3.54 square miles
87 feet: 2.98 square miles
77 feet: 1.78 square miles

17. Is T-Mobile familiar with the proposed SBA Towers II LLC facility at 14 Cross Lane, Old Lyme? If T-Mobile co-located at this facility, could it provide adequate coverage to the target area that T-Mobile seeks to cover via the 61-1 Buttonball Road tower site? Explain.

A17 T-Mobile is familiar with the SBA proposed facility on Cross Lane. This site would not provide satisfactory coverage to important portions of the CTNL801 ring objective.

18. Calculate the amounts of cut and fill required to develop the proposed tower site and access drive.

A18 The proposed Facility would require 231 cubic yards of cut and 46 cubic yards of fill for the compound, as well as 157 cubic yards of cut and 157 cubic yards of fill for the trench.

19. Would the proposed chain-link fence surrounding the compound have barbed wire?

A19 T-Mobile has proposed to install anti-climb weave fencing mesh. If required by the Council, T-Mobile could install a standard chain-link fence with barbed wire.

20. Would T-Mobile have backup power at its tower site? How would backup power be provided, e.g. battery, diesel generator, etc.? Has T-Mobile considered using a fuel cell as a backup power source for the proposed facility? Explain.

A20 T-Mobile will utilize a self-contained 48 VDC Self Back-Up Power System with sealed batteries rated at an approximate 4 to 12 hour duration. T-Mobile does not plan to use a fuel cell at the proposed Facility. T-Mobile does not have any current plans to install fuel cells at any of its existing or future sites in Connecticut.

Respectfully submitted,

T-MOBILE NORTHEAST, LLC

By: Julie D. Kohler /dr

Julie D. Kohler, Esq.
Jesse A. Langer, Esq.
Cohen and Wolf, P.C.
1115 Broad Street
Bridgeport, CT 06604
Tel. (203) 368-0211
Fax (203) 394-9901
jkohler@cohenandwolf.com
jlanger@cohenandwolf.com

CERTIFICATE OF SERVICE

I hereby certify that on this day a copy of the foregoing was delivered by regular mail, postage prepaid, to all parties and interveners of record, as follows:

N/A

Julie D. Kohler

ATTACHMENT A

2. Article Number

7160 3901 9846 3317 5018

3. Service Type **CERTIFIED MAIL**

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

1. Article Addressed to:

Ronald Swancy
59 Buttonball Road
Old Lyme, CT 06371

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly) Karen Ward

B. Date of Delivery 7-27-09

C. Signature X Karen Ward ☐ Agent ☐ Addressee

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

PS T-Mobile/Old Lyme (CTNL801)
#301056-027 (JAL:dlm)

Domestic Return Receipt

eipt

2

COHEN and WOLF P.C.
ATTORNEYS AT LAW
1115 Broad Street
P.O. Box 1821
Bridgeport, CT 06601

CERTIFIED MAIL

7160 3901 9846 3317 5025

RETURN RECEIPT REQUESTED

Hasler
07/21/2009
US POSTAGE
FIRST-CLASS MAIL
$05.54⁰
ZIP 06604
011D11610904

NMR

Black Hall Club, Inc.
47-1 Buttonball Road
Old Lyme, CT 06371

NIXIE 064 5E 1 05 07/22/09

RETURN TO SENDER
NO MAIL RECEPTACLE
UNABLE TO FORWARD

BC: 06601182121 *0644-07223-21-39

06371$1

2. Article Number

7160 3901 9846 3317 5032

3. Service Type CERTIFIED MAIL

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

1. Article Addressed to:

Black Hall Club, Inc.
P.O. Box 278
Old Lyme, CT 06371

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly) B. Handy

B. Date of Delivery 7/22/09

C. Signature
X B. Handy ☐ Agent ☐ Addressee

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

PS | T-Mobile/Old Lyme (CTNL801)
#301056-027 (JAL:dlm)

Domestic Return Receipt

eipt

COHEN and WOLF P.C.
ATTORNEYS AT LAW

1115 Broad Street
P.O. Box 1821
Bridgeport, CT 06601

CERTIFIED MAIL

7160 3901 9846 3317 5049

RETURN RECEIPT REQUESTED

Hasler
07/21/2009
POSTAGE $05.54⁰

FIRST-CLASS MAIL

ZIP 06604
011D11610904

NAME
1st Notice JUL 27 2009
2nd Notice
Returned

NMR

NO MAIL RECEPTACLE

Town of Old Lyme
71 Buttonball Road
Old Lyme, CT 06371

JUL 22 2009

1st NOTICE
2nd NOTICE
RETURNED

NMR

06371$1733 R008

2. Article Number

7160 3901 9846 3317 5056

3. Service Type **CERTIFIED MAIL**

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

1. Article Addressed to:

Town of Old Lyme
52 Lyme Street
Old Lyme, CT 06371

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly) M. Hayes-Finn

B. Date of Delivery 7/22/09

C. Signature

x M. Hayes Finn ☐ Agent ☐ Addressee

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

PS Form 3 T-Mobile/Old Lyme (CTNL801)
#301056-027 (JAL:dlm)

Domestic Return Receipt

2

2. Article Number

7160 3901 9846 3317 5063

3. Service Type **CERTIFIED MAIL**

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

1. Article Addressed to:

Armand Romeo and
Barbara Romeo
62 Buttonball Road
Old Lyme, CT 06371

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly)

B. Date of Delivery 7-23-09

C. Signature

X [signature] ☐ Agent ☒ Addressee

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

T-Mobile/Old Lyme (CTNL801)
#301056-027 (JAL:dlm)

PS Form [illegible] Domestic Return Receipt [illegible]ipt

2

COHEN and WOLF P.C.
ATTORNEYS AT LAW

1115 Broad Street
P.O. Box 1821
Bridgeport, CT 06601

CERTIFIED MAIL

7160 3901 9846 3317 5070

RETURN RECEIPT REQUESTED

Hasler
07/21/2009
US POSTAGE
FIRST-CLASS MAIL
$05.54[0]
ZIP 06604
011D11610904

UNK

National Railroad Passenger Corp.
63 Buttonball Road
Old Lyme, CT 06371

1st NOTICE
2nd NOTICE
RETURNED

JUL 22 2009

NIXIE 064 SE 1 06 07/22/09
RETURN TO SENDER
NO MAIL RECEPTACLE
UNABLE TO FORWARD
BC: 06601192121 *0644-07241-21-99

06371817550R0909921

COHEN and WOLF P.C.
ATTORNEYS AT LAW

1115 Broad Street
P.O. Box 1821
Bridgeport, CT 06601

CERTIFIED MAIL

7160 3901 9846 3317 5087

RETURN RECEIPT REQUESTED

Hasler
07/21/2009
US POSTAGE
FIRST-CLASS MAIL
$05.54[0]
ZIP 06604
011D11610904

NAME
1st Notice JUL 27 2009
2nd Notice
Returned

National Railroad Passe
711 3rd Avenue
New York, N

ANK

A
C
S
☐ INSUFFICIENT ADDRESS
■ ATTEMPTED NOT KNOWN
☐ NO SUCH NUMBER/ STREET
☐ NOT DELIVERABLE AS ADDRESSED - UNABLE TO FORWARD
☐ OTHER

RTS
RETURN TO SENDER

[redacted] CO.

2. Article Number

7160 3901 9846 3317 5094

3. Service Type **CERTIFIED MAIL**

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

1. Article Addressed to:

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly) B. Date of Delivery

7/24/09

C. Signature

☐ Agent
☐ Addressee

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

National Railroad Passenger Corp.
400 North Capital Street, N.W.
Washington, DC 20001

PS Form 3 T-Mobile/Old Lyme (CTNL801)
#301056-027 (JAL:dlm)

Domestic Return Receipt ipt

2

CERTIFIED MAIL

7160 3901 9846 3317 5100

RETURN RECEIPT REQUESTED

Hasler
07/21/2009
US POSTAGE

FIRST-CLASS MAIL
$05.54⁰

ZIP 06604
011D11610904

COHEN and WOLF P.C.
ATTORNEYS AT LAW

1115 Broad Street
P.O. Box 1821
Bridgeport, CT 06601

NAME
1st Notice JUL 27 2009
2nd Notice
Returned

National Railroad P[redacted]corp.
711 3rd Aven[redacted]
New Y[redacted]10017

A ☐ INSUFFICIENT ADDRESS
C ● ATTEMPTED NOT KNOWN
S ☐ NO SUCH NUMBER/ STREET
☐ NOT DELIVERABLE AS ADDRESSED - UNABLE TO FORWARD
☐ OTHER

RTS
RETURN TO SENDER

[redacted]

2. Article Number

7160 3901 9846 3317 5117

3. Service Type **CERTIFIED MAIL**

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

1. Article Addressed to:

National Railroad Passenger Corp.
400 North Capital Street, N.W.
Washington, DC 20001

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly) RUBY DIXON

B. Date of Delivery 7/24/09

C. Signature

☐ Agent
☐ Addressee

D. Is delivery address different from item 1?
If YES, enter delivery address below: ☐ Yes ☐ No

PS Fc T-Mobile/Old Lyme (CTNL801)
#301056-027 (JAL:dlm)

Domestic Return Receipt

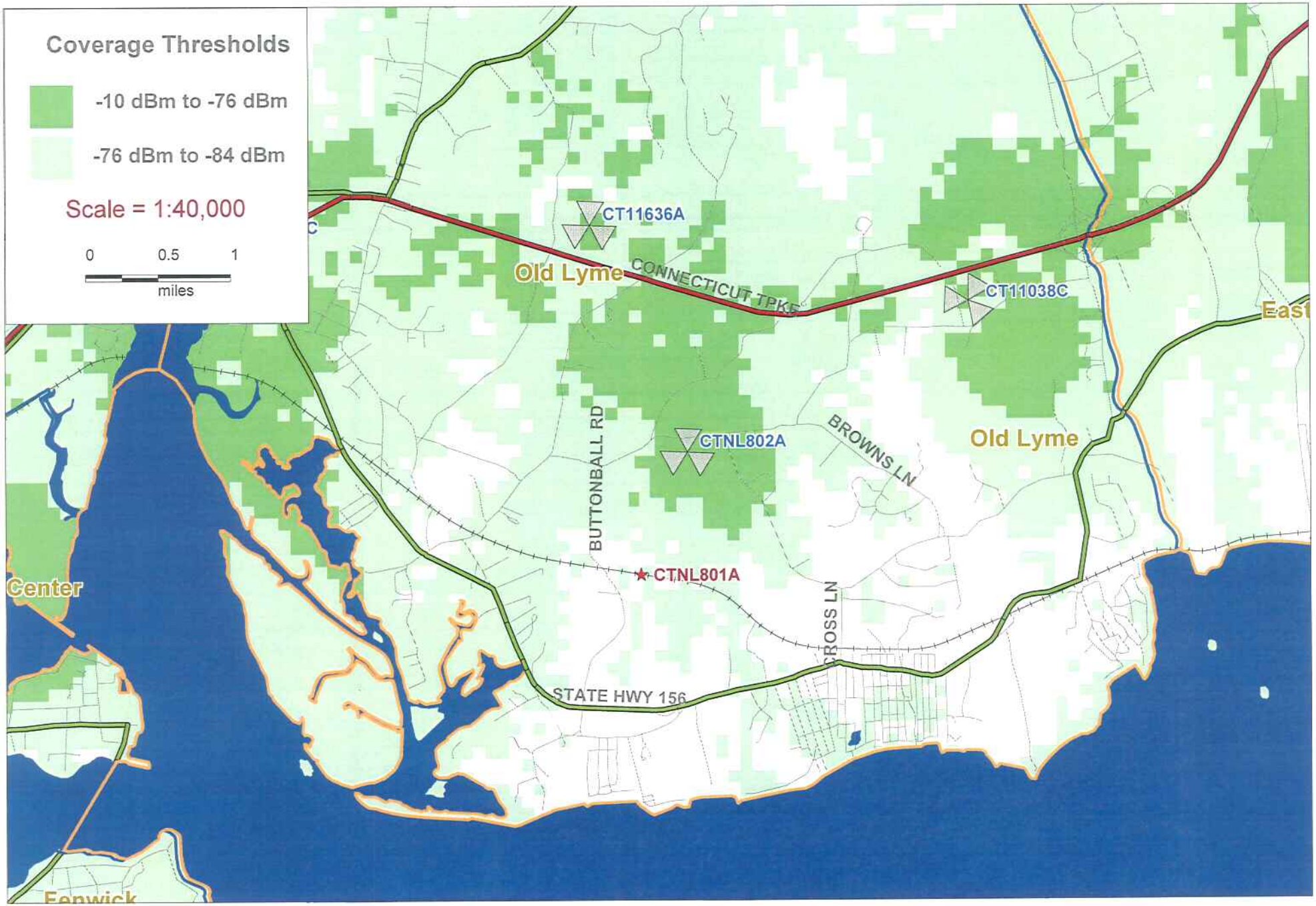
eipt

2

ATTACHMENT B

Site ID	Address	Town	Structure Type	Structure Height	Antenna Height	Distance from CTNL801	Direction From CTNH801
CTNL802A	125 Mile Creek Road	Old Lyme	Monopole	170 feet	170 feet	0.67 miles	north
CT11636A	72 Boggy Hole Road	Old Lyme	Monopole	175 feet	175 feet	1.80 miles	north
CT11038C	38 Hatchers Hill Road	Old Lyme	Monopole	190 feet	187 feet	2.20 miles	northeast
CT11327A	44 Ford Drive	Old Saybrook	Monopole	150 feet	150 feet	3.85 miles	west
CT11036C	8 Old Bridge Road	Old Lyme	Utility Pole	175 feet	181 feet	2.78 miles	northwest

ATTACHMENT C

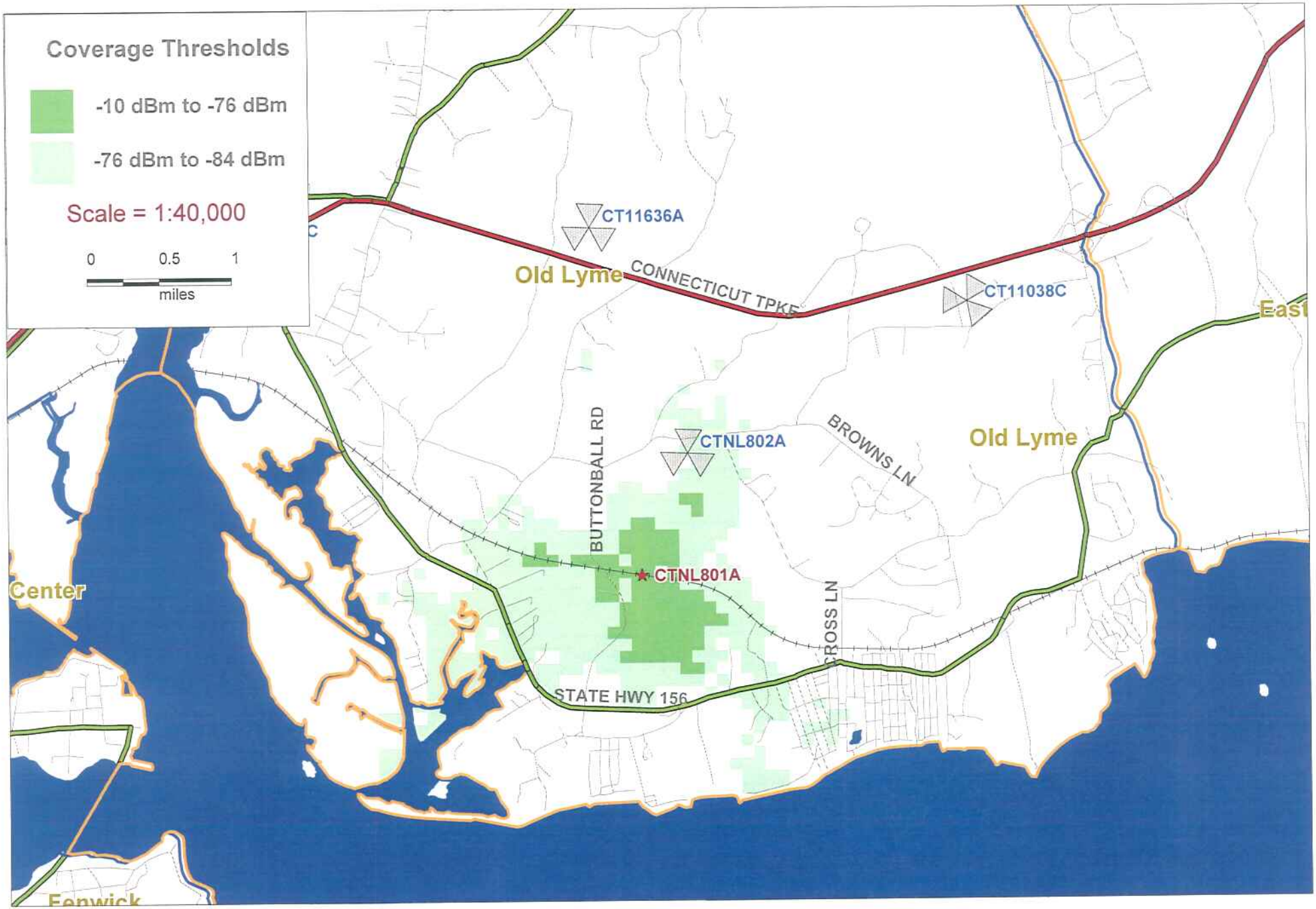


N

-T-Mobile--

Existing T-Mobile On Air Coverage

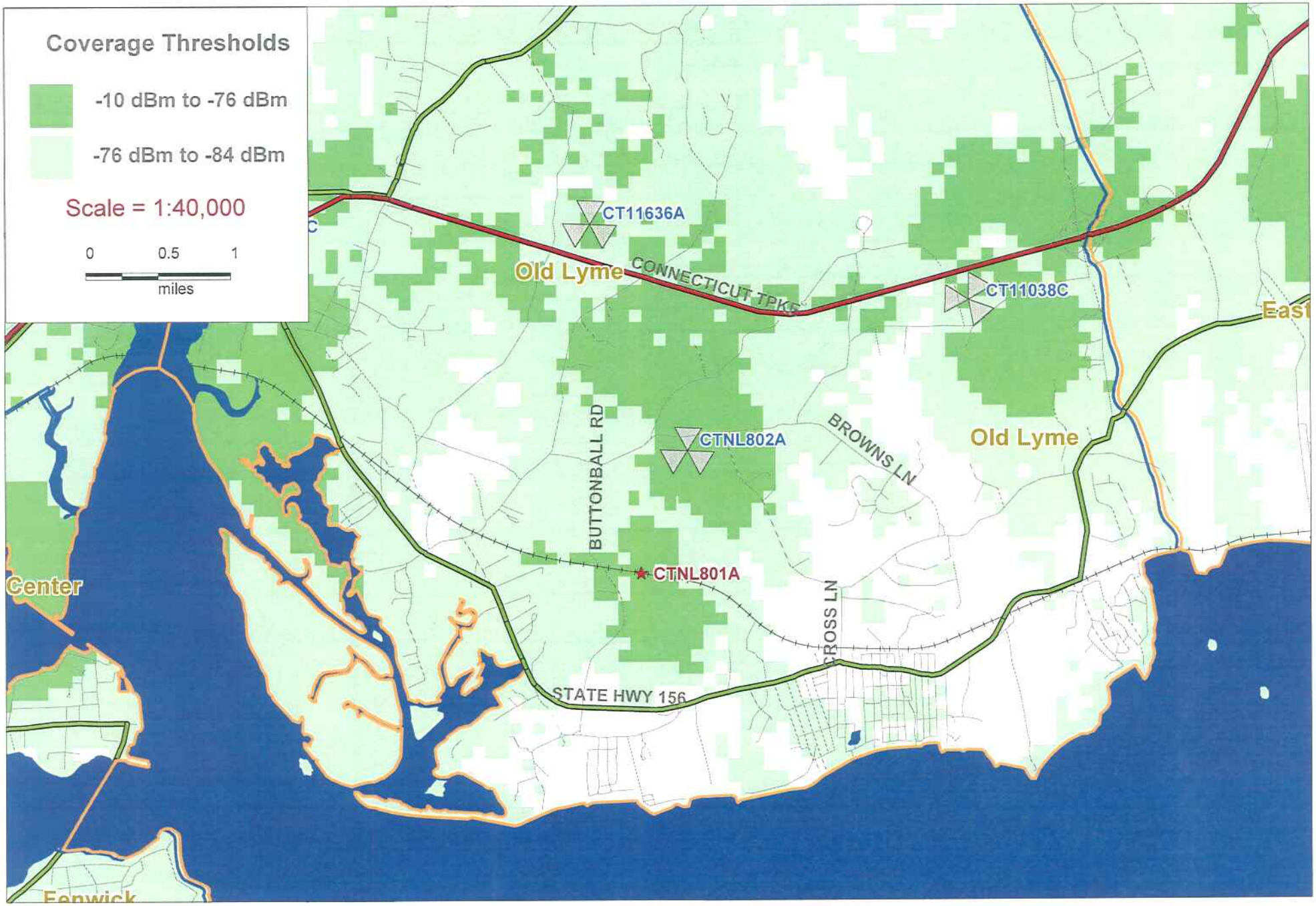
Coverage Thresholds
Dark Green - In Building Coverage
Light Green - In Vehicle Coverage



-T-Mobile--

T-Mobile Proposed CTNL801A @ 77'

Coverage Thresholds
Dark Green - In Building Coverage
Light Green - In Vehicle Coverage

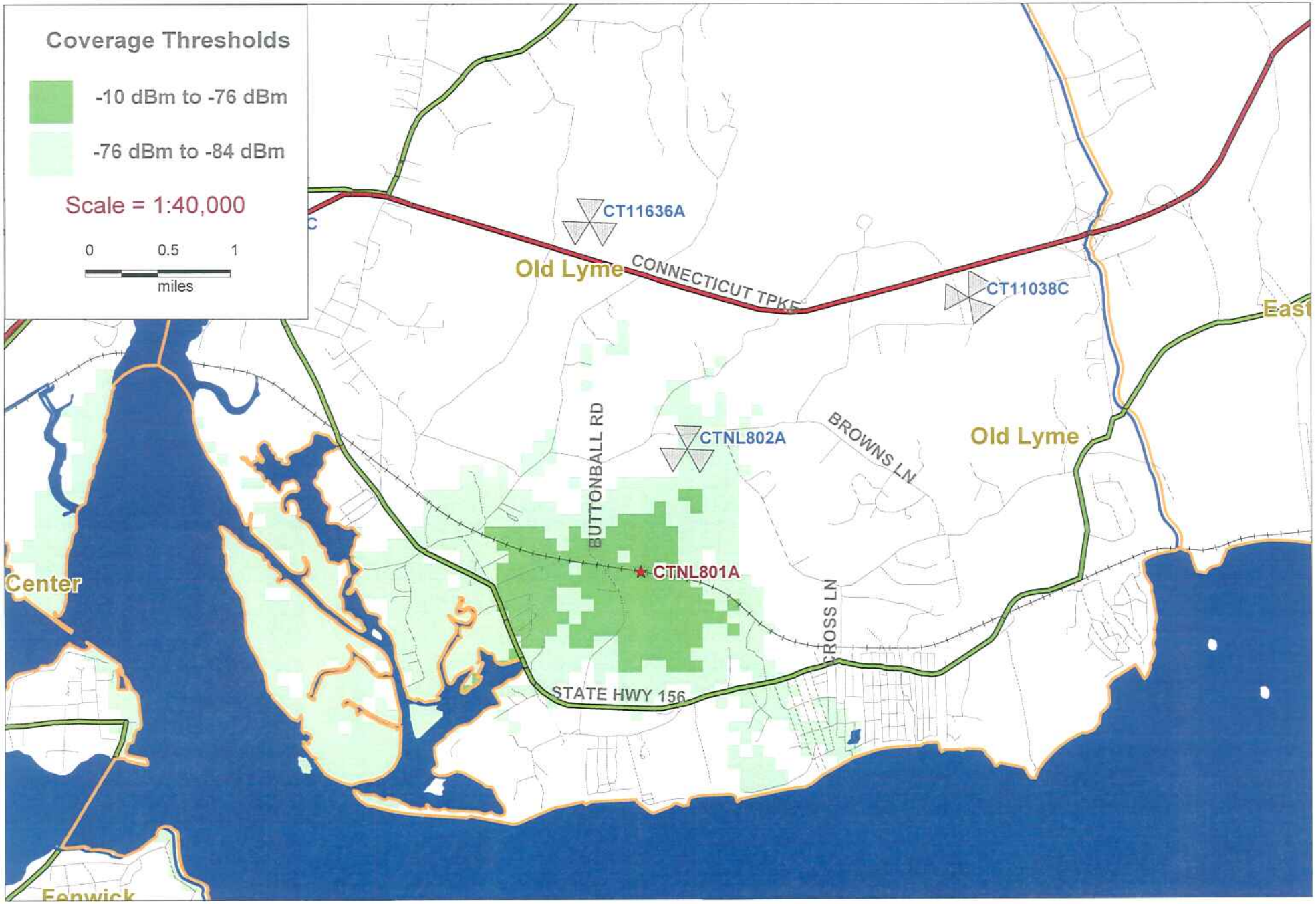


N

-T-Mobile--

Existing T-Mobile On Air Coverage
With CTNL801A @ 77'

Coverage Thresholds
Dark Green - In Building Coverage
Light Green - In Vehicle Coverage

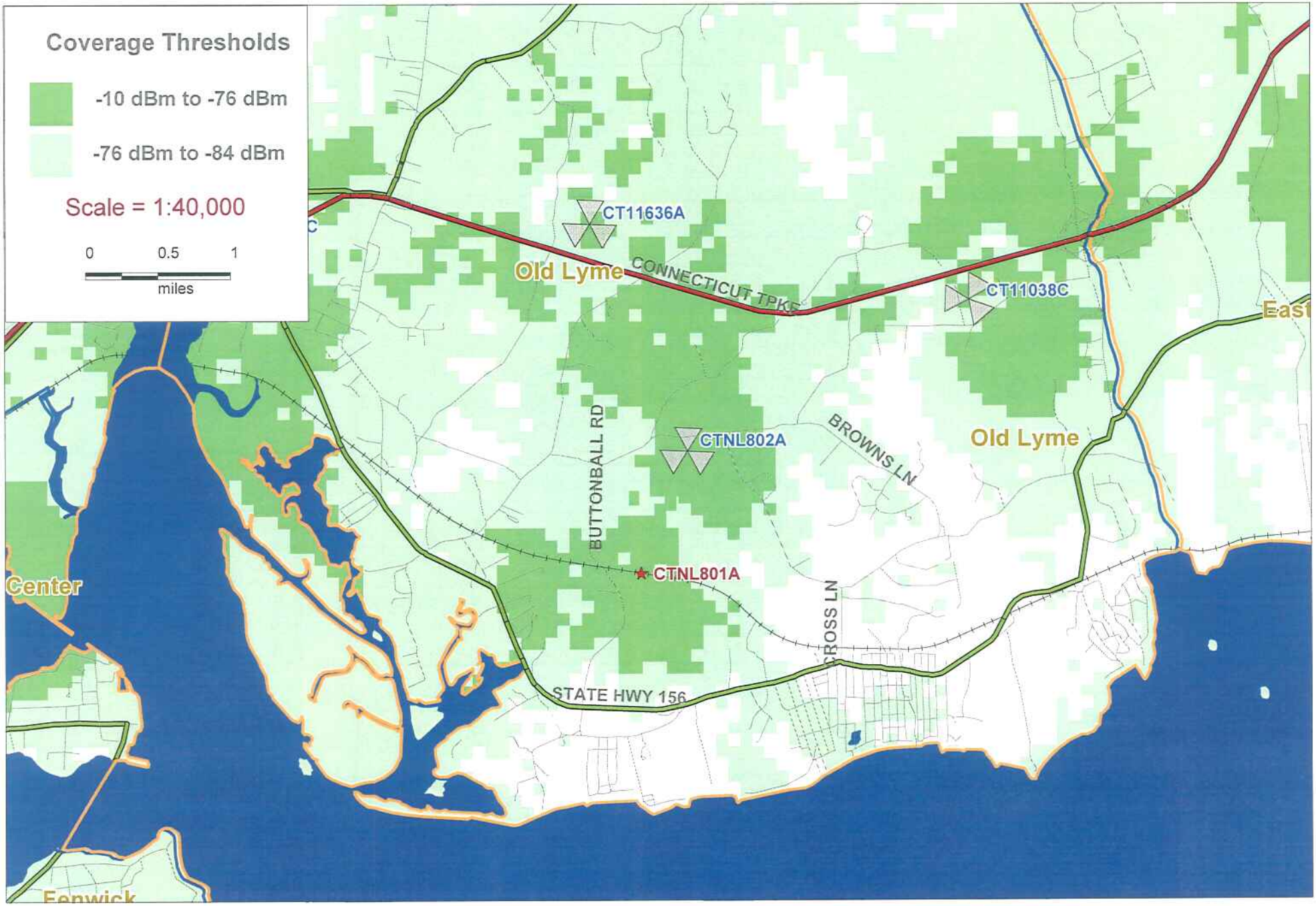


N

-T-Mobile--

T-Mobile Proposed CTNL801A @ 87'

Coverage Thresholds
Dark Green - In Building Coverage
Light Green - In Vehicle Coverage

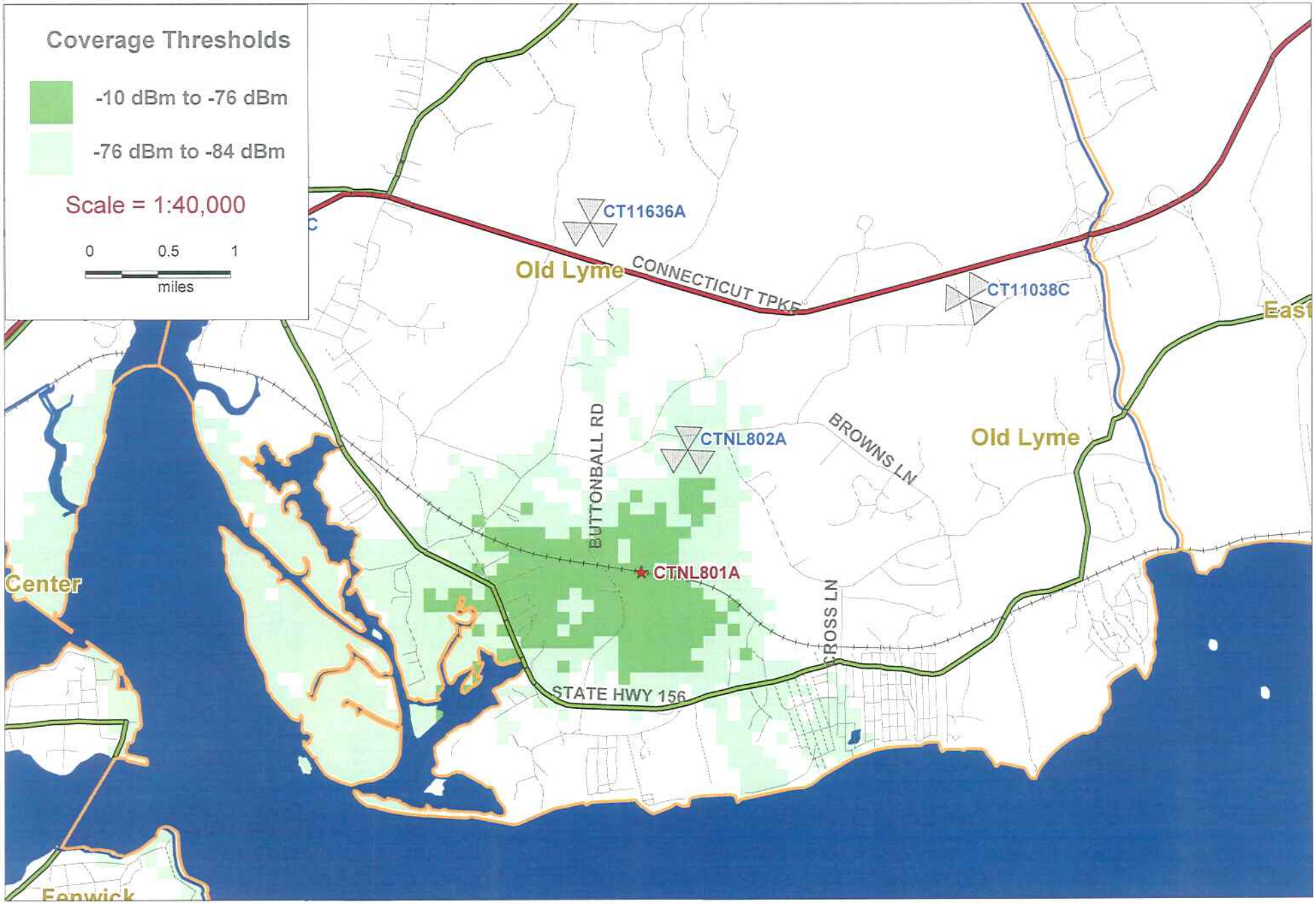


N

-T-Mobile--

Existing T-Mobile On Air Coverage
With CTNL801A @ 87'

Coverage Thresholds
Dark Green - In Building Coverage
Light Green - In Vehicle Coverage

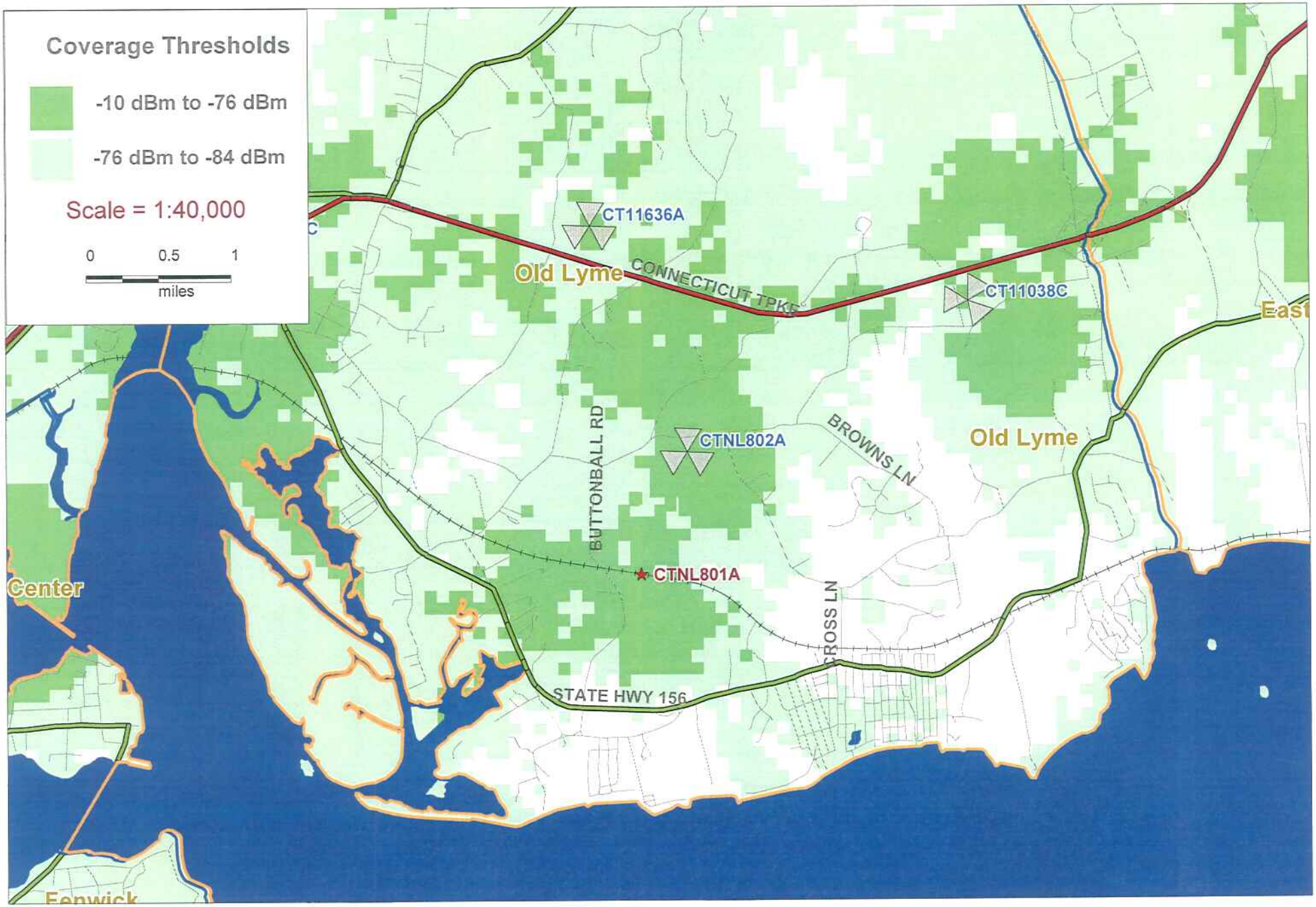


N

-T-Mobile--

T-Mobile Proposed CTNL801A @ 97'

Coverage Thresholds
Dark Green - In Building Coverage
Light Green - In Vehicle Coverage



N

-T-Mobile--

Existing T-Mobile On Air Coverage
With CTNL801A @ 97'

Coverage Thresholds
Dark Green - In Building Coverage
Light Green - In Vehicle Coverage