CITY OF SALEM, MASSACHUSETTS

Kimberley Driscoll
Mayor

Office of the Mayor

April 9, 2020

Honorable Salem City Council
Salem City Hall
Salem, Massachusetts 01970

Ladies and Gentlemen of the City Council:

I reappoint, subject to City Council confirmation, Rebecca Christie of 17 Marlborough Road to the Commission on Disabilities for a term of 3 years to expire April 13, 2023.

I recommend confirmation of her reappointment to the Commission and ask that you join me in thanking Ms. Christie for her continued dedicated service and commitment to our community.

Very truly yours,

Kimberley Driscoll
Mayor
City of Salem

CITY OF SALEM

In City Council,

Ordered:

April 9, 2020

That the sum of Twenty Thousand Dollars ($20,000.00) is hereby appropriated and transferred from the "Capital Outlay Fund 2000" to the ST CIP Health Mack Park Farm Project account for the construction of a split-farm fence, French drain and irrigation pond in accordance with the recommendation of Her Honor the Mayor.

CITY OF SALEM, MASSACHUSETTS
Kimberley Driscoll
Mayor

April 9, 2020

To the City Council
City Hall
Salem, Massachusetts

Ladies and Gentleman of the Council:

Enclosed herewith is a request to transfer twenty Thousand Dollars ($20,000.00) within the "Capital Outlay Fund 2000" to the ST CIP Health Mack Park Food Farm Project account.

This transfer is requested to be expended for the construction of a split-rail farm fence, French drain and irrigation pond that will be used as a sustainable water supple to irrigate the farm.

I recommend passage of the accompanying Order.

Very truly yours,

Kimberley Driscoll
Mayor

KIMBERLEY DRISCOLL
MAYOR

CITY OF SALEM,
MASSACHUSETTS
BOARD OF HEALTH
98 WASHINGTON STREET, 3RD FLOOR
SALEM, MA 01970
TEL. (978) 741-1800
health@salem.com

Public Health

DAVID GREENBAUM, RS
HEALTH AGENT

April 3, 2020

Mayor Kimberley Driscoll
City of Salem
93 Washington Street
Salem, MA 01970

Dear Mayor Driscoll,

The Health Department would like to request funding in the amount of $20,000 for the Mack Park Food Farm project. These funds will be needed for spring 2020 for materials and labor for the construction of a split-rail fence that will surround the perimeter of the farm, as well as a French drain and irrigation pond that will be used as a sustainable water supply to irrigate the farm.

Thank you for your consideration of this request.

Sincerely,

David Greenbaum, RS
Health Agent

Kerry Murphy, RDN
Health & Wellness Coordinator

CITY OF SALEM
ST Capital Outlay Expenditure Request Form – FY 2020

From Department: Health **Date:** 4/3/20

Department Head Name: David Greenbaum

Authorization Signature: _____

Amount: $ 20,000

Description:

Funding to be used for the Construction of the Mack Park Food Farm Project.

For Finance Department Use Only:

☐ City Council Approval Needed (Y/N)

CIP Balance: $ 1,676,513.55

Recommendation:

☒ Approved ☐ Denied

Finance Director

Org/object 20002012-58480

Processed: **Date:** _____ **By:** _____

CO # _____ **JE#** _____ **Trans #** _____

Org: _____ **Obj:** _____

CITY OF SALEM

In City Council,

Ordered:

April 9, 2020

That the sum of Ten thousand Nine Hundred Thirty-One dollars and six cents ($10,931.06) is hereby transferred from the "City Council Advertising Account" (11112-5306) to the "Elections Overtime Account" and the "Elections Part Time Salary Account" as provided below to cover early voting costs and those costs resulting from the March 3, 2020 Presidential Primary Election in accordance with the recommendation of Her Honor the Mayor.

Description	Fund		Amount
Election Overtime	11621-5131	$	7,735.64
Elections Part-Time Salary	11621-5113	$	3,195.42
		$	**10,931.06**

CITY OF SALEM, MASSACHUSETTS
Kimberley Driscoll
Mayor

April 9, 2029

To the City Council
City Hall
Salem, Massachusetts

Ladies and Gentleman of the Council:

Enclosed herewith is a request for a transfer of Ten Thousand Nine Hundred Thirty-one dollars and six cents ($10,931.06) transferred from the "City Council Advertising Account" (11112-5306) to the "Elections Overtime Account" and the "Elections Part Time Salary Account."

This transfer is requested to cover early voting costs resulting from the March 3, 2020 Presidential Primary Election.

I recommend passage of the accompanying Order.

Very truly yours,

Kimberley Driscoll
Mayor

City of Salem, Massachusetts
Office of the City Clerk

Ilene Simons
City Clerk

Room 1
City Hall

March 30, 2020

The Honorable Kimberley Driscoll
Mayor of Salem
93 Washington Street
Salem, MA 01970

Dear Mayor Driscoll:

Attached you will find three budget transfer requests. Two are from the City Council Advertising Account and one is from free cash. Since the Elections Office has been through some unusual circumstances this year and level funded from last fiscal year, certain Election's salary and expense lines need attention.

1. I am transferring $10,931.06 from City Council Advertising Account to the following two accounts:

A. 11621-5131 – Elections Overtime Account – in the amount of $7,735.64

This amount is needed to cover overtime costs for the extra hours worked during the State Mandated 5 days of Early Voting which lead to more overtime hours during that week to keep up with processing of Early Voting Ballots and Absentee Ballots and on the weekends to prepare for the March 3rd election. There was also set-up and break-down for eight polling locations for this additional election.

B. 11621-5113 – Elections Part-Time Salary Account – in the amount of $3,195.42

This amount is needed to cover the remaining fiscal year payroll for my part-time employee. He worked additional days and hours in the election office while Rochelle, Maureen and I attended nine days of court. He also worked extra hours due to early voting and preparing for the March 3rd election.

2. I am also asking for an appropriation of $8,090.00 to the Elections Poll Worker Account 11622-5309.

Due to 3 elections during Fiscal Year 2020, this money is to cover the remaining costs for paying poll workers who worked for the City on the March 3, 2020 Presidential Primary Election. As well as the additional workers added to help process Early Voting ballots at the polling locations that day. Minimum Wage also increased on January 1, 2020 which lead to increase costs to pay the worker.

If you have any further questions, please feel free to reach out to me.

Thank you for your consideration of this request.

Very truly yours,

Ilene Simons
City Clerk

CITY OF SALEM – Finance Department
Free Cash, W & S R/E, R/Res & Budget Transfer Request Form

From: City Clerk — Alice Smart — 3/25/20
Department — Department Head Authorizing Signature — Date

Budget or R/Res Transfers To: 11621-5131 (Org/Object) Desc: Elections OT Budget Amt: 5,000 Balance: —

From: 11112-5306 Desc: Council Advertising Budget Amt: 40,000 Balance: 10,931.07
(*Note - Please include letter to Mayor for Transfers from different Personnel & Non-personnel lines)

Current Balance in Receipts Reserved Fund Above (if applicable) - $ _____ Date: —

Free Cash or Retained Earnings (W/S) To: _____ (Org/Object) Desc: _____ Budget Amt: _____ Balance: _____
Raise & Appropriate
Please circle one

Amount Requested: $ 7,735.64

Reason (Be Specific) Due to March Election 5 days of Early Voting and setup + break down of polling locations for March additional O.T was paid then if there was only 2 elections

For Finance Department and Mayor's Use Only:

X Budget Transfer _____ Mayor Approval _____ City Council Approval

_____ Free Cash Appropriation – City Council Approval – Gen Fund $ _____ Free Cash Balance

_____ R/E Appropriation –Water $ _____ R/E Balance _____ R/E Appropriation Sewer $ _____ R/E Balance

_____ Receipts Reserve – City Council Approval $ _____ R/Res Fund Balance

_____ Raise & Appropriate _____ Other _____

Recommendation: ____ **Approved** _____ **Denied**

Finance Director

Completed: **Date:** _____ **By:** _____ **CO #** _____ **JE#:** _____ **Transfer #:** _____

CITY OF SALEM – Finance Department
Free Cash, W & S R/E, R/Res & Budget Transfer Request Form

From: City Clerk _____ _____ 3/25/20
Department — Department Head Authorizing Signature — Date

Budget or R/Res Transfers To: 1162 1-5113 (Org/Object) Desc: Elections Salaries P.T. Budget Amt: 13,481.00 Balance: 201.51

From: 11112-5306 Desc: Council Adv Budget Amt: 40,000 Balance: 16,931.07
(*Note - Please include letter to Mayor for Transfers from different Personnel & Non-personnel lines)

Current Balance in Receipts Reserved Fund Above (if applicable) - $_____ Date: _____

Free Cash or Retained Earnings (W/S) To: _____ (Org/Object) Desc: _____ Budget Amt: _____ Balance: _____
Raise & Appropriate
Please circle one

Amount Requested: $ 3,195.42

Reason (Be Specific) to cover remain costs for P/T E. worked extra hours during Early Voting & prepare for March Election + worked extra hours during 9 day trial to cover Room 5.

For Finance Department and Mayor's Use Only:

X Budget Transfer _____ Mayor Approval _____ City Council Approval

_____ Free Cash Appropriation – City Council Approval – Gen Fund $_____ Free Cash Balance

_____ R/E Appropriation –Water $_____ R/E Balance _____ R/E Appropriation Sewer $_____ R/E Balance

_____ Receipts Reserve – City Council Approval $_____ R/Res Fund Balance

_____ Raise & Appropriate _____ Other _____

Recommendation: ____ **Approved** ____ **Denied**

Finance Director

Completed: **Date:** _____ **By:** _____ **CO #** _____ **JE#:** _____ **Transfer #:** _____

CITY OF SALEM

In City Council,

Ordered:

April 9, 2020

That the sum of Eight Thousand Dollars Ninety dollars ($8,090.00) is hereby transferred and appropriated from the "Fund Balance Reserved for Appropriation – Free Cash" account (1-3245) to the General Fund Election Poll Worker Account to cover the cost of poll workers for the March third Presidential Primary election in accordance with the recommendation of Her Honor the Mayor.

Description	Fund		Amount
Election Poll Worker Account	11622-5309	$	8,090.00
		$	**8,090.00**

CITY OF SALEM, MASSACHUSETTS
Kimberley Driscoll
Mayor

April 9, 2020

To the City Council
City Hall
Salem, Massachusetts

Ladies and Gentlemen of the Council:

Enclosed herewith is an order for Eight Thousand and ninety dollars ($8,090.00) from the "Fund Balance Reserved for Appropriation – Free Cash" account (1-3245) to the "General Fund Election Poll Worker account 11622-5309.

This request is necessary to cover the cost of poll workers for the March 3, 2020 Presidential Primary Election.

I recommend passage of the accompanying Order.

Very truly yours,

Kimberley Driscoll
Mayor

Salem City Hall – 93 Washington Street – Salem, MA 01970-3592 Ph. 978-745-9595 Fax 978-744-9327

City of Salem, Massachusetts
Office of the City Clerk

Ilene Simons
City Clerk

Room 1
City Hall

March 30, 2020

The Honorable Kimberley Driscoll
Mayor of Salem
93 Washington Street
Salem, MA 01970

Dear Mayor Driscoll:

Attached you will find three budget transfer requests. Two are from the City Council Advertising Account and one is from free cash. Since the Elections Office has been through some unusual circumstances this year and level funded from last fiscal year, certain Election's salary and expense lines need attention.

1. I am transferring $10,931.06 from City Council Advertising Account to the following two accounts:

A. 11621-5131 – Elections Overtime Account – in the amount of $7,735.64

This amount is needed to cover overtime costs for the extra hours worked during the State Mandated 5 days of Early Voting which lead to more overtime hours during that week to keep up with processing of Early Voting Ballots and Absentee Ballots and on the weekends to prepare for the March 3rd election. There was also set-up and break-down for eight polling locations for this additional election.

B. 11621-5113 – Elections Part-Time Salary Account – in the amount of $3,195.42

This amount is needed to cover the remaining fiscal year payroll for my part-time employee. He worked additional days and hours in the election office while Rochelle, Maureen and I attended nine days of court. He also worked extra hours due to early voting and preparing for the March 3rd election.

2. I am also asking for an appropriation of $8,090.00 to the Elections Poll Worker Account 11622-5309.

Due to 3 elections during Fiscal Year 2020, this money is to cover the remaining costs for paying poll workers who worked for the City on the March 3, 2020 Presidential Primary Election. As well as the additional workers added to help process Early Voting ballots at the polling locations that day. Minimum Wage also increased on January 1, 2020 which lead to increase costs to pay the worker.

If you have any further questions, please feel free to reach out to me.

Thank you for your consideration of this request.

Very truly yours,

Ilene Simons
City Clerk

CITY OF SALEM – Finance Department
Free Cash, W & S R/E, R/Res & Budget Transfer Request Form

From: City Clerk — Department
Jane Simons — Department Head Authorizing Signature
3/25/20 — Date

Budget or R/Res Transfers To: _____ (Org/Object) Desc: _____ Budget Amt: _____ Balance: _____

From: _____ Desc: _____ Budget Amt: _____ Balance: _____

(*Note - Please include letter to Mayor for Transfers from different Personnel & Non-personnel lines)

Current Balance in Receipts Reserved Fund Above (if applicable) - $_____ Date: _____

Free Cash or Retained Earnings (W/S) Raise & Appropriate (Org/Object) Please circle one

To: 1162 2-5309 Desc: Elections - Poll workers Budget Amt: $50,000 Balance: 284.50

Amount Requested: $ 8,090.00

Reason (Be Specific) Due to three (3) elections this fiscal year, this money is to cover the remaining costs for paying poll-workers on March 3rd. Due to early voting had extra workers and also minimum wage increased on Jan. 1st 2020

For Finance Department and Mayor's Use Only:

_____ Budget Transfer _____ Mayor Approval _____ City Council Approval

X Free Cash Appropriation – City Council Approval – Gen Fund $_____ Free Cash Balance

_____ R/E Appropriation –Water $_____ R/E Balance _____ R/E Appropriation Sewer $_____ R/E Balance

_____ Receipts Reserve – City Council Approval $_____ R/Res Fund Balance

_____ Raise & Appropriate _____ Other _____

Recommendation: ____ **Approved** _____ **Denied**

Finance Director

Completed: **Date:** _____ **By:** _____ **CO #** _____ **JE#:** _____ **Transfer #:** _____

COMCAST

Comcast
David R. Flewelling
Specialist 2 Construction
9 Forbes Road, Suite 9B
Woburn, MA 01801
Cell – 617-279-7864
dave_flewelling@comcast.com

March 26,2020

Ms. Maureen Fisher
Salem Assistant City Clerk
City Hall
93 Washington Street
Salem, MA 01970

RE: 125 Essex St Salem
Grant of Location-Petition

Dear Ms. Fisher:

Enclosed please find materials supporting Comcast request for a grant of location from the Salem City Council. The work associated with the attached petition is for the purpose of installing new underground conduit . To be used to provide the Comcast service to number 125 Essex Street. For a detailed description of the work please refer to the attached construction plans.

I look forward to the opportunity to address this matter in further detail at the next Salem City Council Meeting. Should you have any questions or concerns, please feel free to contact me at (617) 279-7864.

Sincerely,

David R. Flewelling
Comcast
Specialist 2, Construction

Enclosure (4)

PETITION OF COMCAST FOR LOCACTION FOR CONDUITS, MANHOLES AND POLES

To the City Council for the City of Salem, Massachusetts:

Respectfully represents Comcast Cable Communications Management LLC., a company incorporated for the distribution of broadband services, that it desires to construct a line for such telecommunications under the public way or ways hereinafter specified.

Essex Street: Starting at the existing Comcast Manhole excavating to place (1) 4" PVC Conduit 31'+/- to provide the Comcast Service to number 125 Essex Street.

Wherefore, your petition prays that, after due notice and hearing as provided by law, the City Council may by Order grant your petitioner permission to construct, and a location for, such a line of conduits, manholes and poles with the necessary wires and cables therein, said conduits manholes and poles to be located, substantially as shown on the plan made by Dewsnap Engineering dated March 18, 2020 and filed here with, under the following public way or ways of said City of Salem.

Comcast
By: _____
David R. Flewelling
Specialist 2, Construction

Dated this March 26, 2020

City of Salem Massachusetts

Received and filed _____, 2020

_____

ORDER FOR CONDUIT & POLE LOCATION

In the City Council for the City of Salem, Massachusetts.

ORDERED:

That permission be and hereby is granted to Comcast Cable Communications Management LCC., to lay and maintain underground conduits, manholes and poles, with the wires and cables to be placed therein, under and above the surface of the following public way or ways as requested in petition of said Company dated March 26,2020

Essex Street: Starting at the existing Comcast Manhole excavating to place (1) 4" PVC Conduit 31'+/- to provide the Comcast Service to number 125 Essex Street..

Substantially as shown on plan, filed with said petition.

Also that permission be and hereby is granted said Comcast to lay and maintain underground conduits, manholes, cables and wires in the above or intersecting public ways for the purpose of making connections with such poles and buildings as it may desire for distributing purposes.

The foregoing permission is subject to the following conditions:

1. The conduits and manholes shall be of such materials and construction and all work done in such manner as to be satisfactory to the City Council or to such officers as it may appoint to the supervision of the work.
2. Said Company shall indemnify and save the City harmless against all damages, costs and expense whatsoever to which the City may be subjected in consequence of the acts or neglect of said Company, its agents or servants, or in any manner arising from the rights and privileges granted it by the City.
3. In addition said Company shall, before a public way is disturbed for the laying of its wire or conduits, execute its bond in a penal sum of One Hundred Thousand Dollars ($100,000) (reference being had to the bond already on file with said City) conditioned for the faithful performance of its duties under this permit.
4. Said Company shall comply with the requirements of existing by-laws and such as may hereafter be adopted governing the construction and maintenance of conduits and wires, so far as the same are not inconsistent with the laws of the Commonwealth.

I hereby certify that the foregoing order was adopted at a meeting of the City Council for the City of Salem, Massachusetts, held on the _____ day of _____ 2020.

(over)

_____
City Clerk

We hereby certify that on _____, 2020, at _____ o'clock M., at Salem, Massachusetts a public hearing was held on the petition of the Comcast for permission to lay and maintain underground conduits, manholes and connections, with the wires and cables to be placed therein, described in the order herewith recorded, that we mailed at least seven days before said hearing a written notice the time and place of said hearing to each of the owners of real estate determined by the last preceding assessment for taxation along the ways parts of ways upon which the Company is permitted to construct the lines said Company under said order. And that thereupon said order was duly adopted.

_____

_____

_____

_____

_____

Salem City Council; Salem, Massachusetts

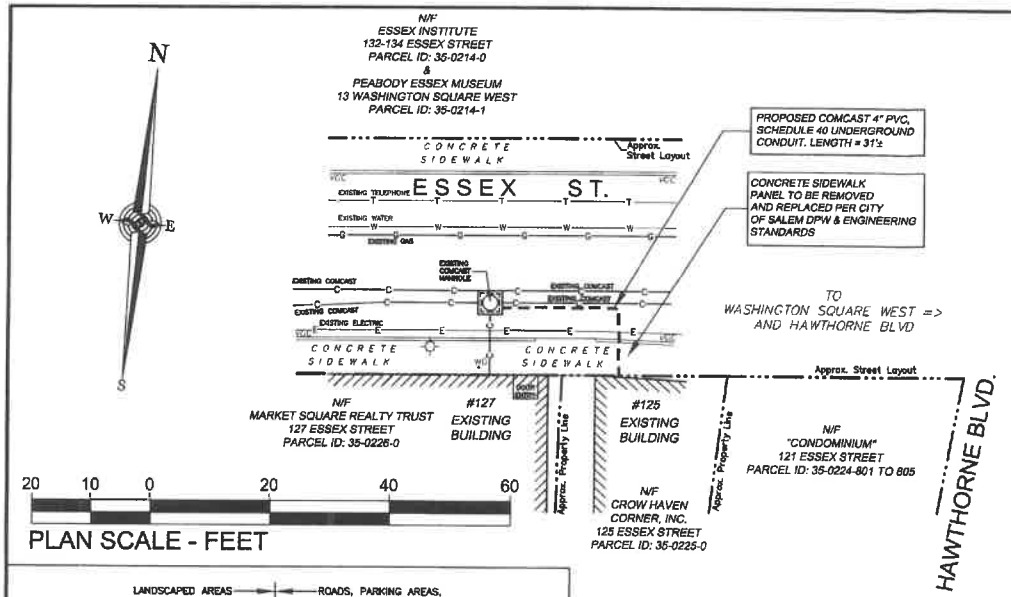
CERTIFICATE

I hereby certify that the foregoing is a true copy of a location order, and certificate of hearing with the notice adopted by the City Council for the City of Salem, Massachusetts, on the _____ day of _____ 2020, recorded with the records of location orders of said City, Book _____, Page _____. This certified copy is made under the provision of Chapter 166 of General Laws and any additions thereto or amendments thereof.

Attest:

_____

City Clerk

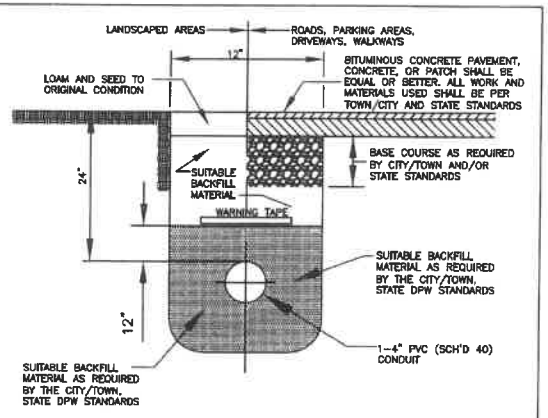


NOTES:

1. *This plan was prepared from record data on file at the City of Salem, the Essex South Registry of Deeds, and a field location tape survey performed by this office on March 16, 2020.*
2. *The locations of underground utilities as shown are based on above ground structures and record drawings, if any, provided to the Surveyor. The Locations of underground utilities/structures may vary from location hereon and are not warranted to be accurate and/or correct. Additional buried utilities/ structures may be encountered. No excavations were performed during the progress of this survey to locate buried utilities/structures.*
3. *Prior to any construction the Contractor shall notify DIG-SAFE at least 72 hours in advance at 811 (National Call Number) for verification of utilities and for field locations.*
4. *It is the responsibility of the Utility Contractor installing the Comcast underground conduit to notify those utility companies not associated with the DIG-SAFE system to verify the locations of their respective utilities. Also, the installing contractor shall be responsible for repairing or replacing any traffic signal loops damaged during the installation of the new Comcast underground conduit.*
5. *All work to be performed is the installation of a Comcast 4" PVC, Sch. 40 underground conduit to service #125 Essex Street.*
6. *All work shall conform to the approving authorities Engineering and DPW Standards.*
7. *Prior to the start of any construction, the Utility Contractor shall confirm the number of conduits and the size of the conduit(s) for this project with the Comcast project Coordinator.*
8. *Upon completion of the trench work for the day, the contractor shall backfill, compact and pave the trench and the work area shall be broom swept clean. In grassed areas the trench shall be loamed and seeded and hay mulch spread to keep the area stabilized until the grass has taken hold.*
9. *Street/Property lines are not the result of a boundary survey and are considered to be approximate.*

CONSTRUCTION NOTES:

1. *Following the Dig-Safe "mark out" and field verification of the existing underground utilities, the Proposed 4" PVC, Sch. 40 Comcast Conduit and Proposed 3'X3' manhole shall be adjusted in the field by the utility contractor to avoid being located over any existing utilities.*



GENERAL CATV TRENCH DETAIL
NOT TO SCALE

DETAIL NOTES:

1. *The details depicted are for general reference only. The final product used shall be the responsibility of the general contractor and shall be of equal or greater material than that depicted and shall conform to the Engineering/DPW Standards for the city/town where the project is located.*

GENERAL LEGEND

SMH	SEWER MANHOLE	C	COMCAST UNDERGROUND CABLE
WG	WATER GATE	OHW	OVERHEAD WIRES
DMH	DRAIN MANHOLE	G	GAS LINE
GG	GAS GATE	W	WATER LINE
EMH	ELECTRIC MANHOLE	S	SEWER LINE
UP	UTILITY POLE	E	UNDERGROUND ELECTRIC LINE
CB	CATCH BASIN	T	UNDERGROUND TELEPHONE
VGC	VERT. GRANITE CURB		PROPOSED COMCAST UNDERGROUND CONDUITS

COMMONWEALTH OF MASSACHUSETTS
FREDERICK D. DEWSNAP
No. 30318
REGISTERED LAND SURVEYOR

PROPOSED COMCAST UNDERGROUND

ESSEX COUNTY

PLAN OF LAND
IN
SALEM, MA

Prepared for: COMCAST, 9 FORBES ROAD, SUITE 9B, WOBURN, MA 01801	Prepared BY: DEWSNAP ENGINEERING ASSOC. LLP, 178 Lincoln Avenue - Saugus, MA 01906, Tel.#:(781) 233-0595
Date: MARCH 18, 2020	Scale: As Shown
Checked By: F.D.D. & P.A.D.	PROJECT LOCATION: 125 ESSEX STREET
Drawn By: P.A.D.	WARD 1, PRECINCT 1
Field By: P.A.D. & A.P.D.	
Sheet No. 1 of 2	

Salem
Abutters List

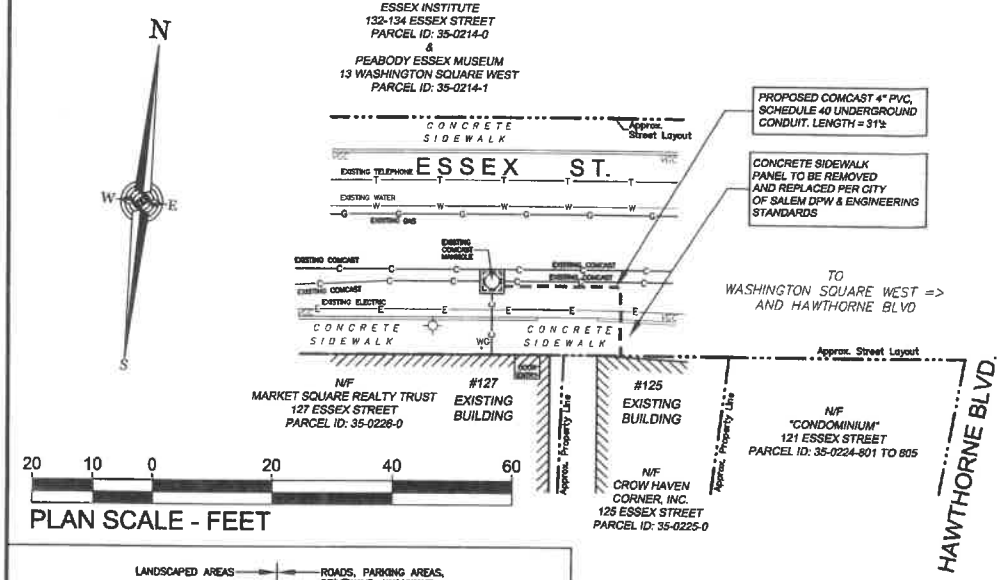
Subject Parcel ID: ***B***

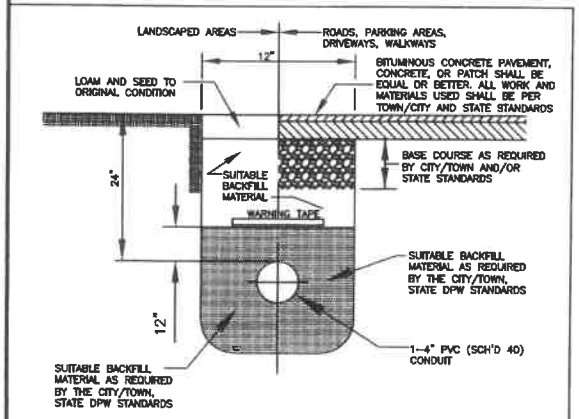
Subject Property Location:

ParcelID	Location	Owner	Co-Owner	Mailing Address	City	State	Zip
35-0214-0	132 134 ESSEX STREET	ESSEX INSTITUTE		120 ESSEX ST	SALEM	MA	01970
35-0224-801	121 ESSEX STREET U1	SALEM HERITAGE VENTURES, L	C/O ATOMIC COFFEE ROAS	107 WATER STREET	DANVERS	MA	01923
35-0224-802	121 ESSEX STREET U2	GOES KATHERINE M		2 HAWTHORNE BLVD U2	SALEM	MA	01970
35-0224-803	121 ESSEX STREET U3	SHEA MICHAEL N		2 HAWTHORNE BLVD UNIT 3	SALEM	MA	01970
35-0224-804	121 ESSEX STREET U4	2-4 HAWTHORNE LLC		4 FIELDSTONE DRIVE	WINCHESTER	MA	01890
35-0224-805	121 ESSEX STREET U5	SUMMER NORTH LAND HOLDING		45 STUART STREET U1902	BOSTON	MA	02116
35-0225-0	125 ESSEX STREET	CROW HAVEN CORNER, INC		125 ESSEX STREET	SALEM	MA	01970
35-0226-0	127 ESSEX STREET	MARKET SQUARE REALTY LLC		55 C BRACKETT PLACE	MARBLEHED	MA	01945

Parcel Count: **8**

End of Report





GENERAL CATV TRENCH DETAIL
NOT TO SCALE

DETAIL NOTES:

1. The details depicted are for general reference only. The final product used shall be the responsibility of the general contractor and shall be of equal or greater material than that depicted and shall conform to the Engineering/DPW Standards for the city/town where the project is located.

GENERAL LEGEND

○SMH	SEWER MANHOLE	C	COMCAST UNDERGROUND CABLE
○ WG	WATER GATE	OHW	OVERHEAD WIRES
○DMH	DRAIN MANHOLE	G	GAS LINE
○ GG	GAS GATE	W	WATER LINE
○EMH	ELECTRIC MANHOLE	S	SEWER LINE
UP	UTILITY POLE	E	UNDERGROUND ELECTRIC LINE
☐ CB	CATCH BASIN	T	UNDERGROUND TELEPHONE
VGC	VERT. GRANITE CURB		PROPOSED COMCAST UNDERGROUND CONDUITS

COMMONWEALTH OF MASSACHUSETTS
FREDERICK D. DEWSNAP No. 36516
REGISTERED LAND SURVEYOR

NOTES:

1. This plan was prepared from record data on file at the City of Salem, the Essex South Registry of Deeds, and a field location tape survey performed by this office on March 16, 2020.
2. The locations of underground utilities as shown are based on above ground structures and record drawings, if any, provided to the Surveyor. The Locations of underground utilities/structures may vary from location hereon and are not warranted to be accurate and/or correct. Additional buried utilities/ structures may be encountered. No excavations were performed during the progress of this survey to locate buried utilities/structures.
3. Prior to any construction the Contractor shall notify DIG-SAFE at least 72 hours in advance at 811 (National Call Number) for verification of utilities and for field locations.
4. It is the responsibility of the Utility Contractor installing the Comcast underground conduit to notify those utility companies not associated with the DIG-SAFE system to verify the locations of their respective utilities. Also, the installing contractor shall be responsible for repairing or replacing any traffic signal loops damaged during the installation of the new Comcast underground conduit.
5. All work to be performed is the installation of a Comcast 4" PVC, Sch. 40 underground conduit to service #125 Essex Street.
6. All work shall conform to the approving authorities Engineering and DPW Standards.
7. Prior to the start of any construction, the Utility Contractor shall confirm the number of conduits and the size of the conduit(s) for this project with the Comcast project Coordinator.
8. Upon completion of the trench work for the day, the contractor shall backfill, compact and pave the trench and the work area shall be broom swept clean. In grassed areas the trench shall be loamed and seeded and hay mulch spread to keep the area stabilized until the grass has taken hold.
9. Street/Property lines are not the result of a boundary survey and are considered to be approximate.

CONSTRUCTION NOTES:

1. Following the Dig-Safe "mark out" and field verification of the existing underground utilities, the Proposed 4" PVC, Sch. 40 Comcast Conduit and Proposed 3'X3' manhole shall be adjusted in the field by the utility contractor to avoid being located over any existing utilities.

PROPOSED COMCAST UNDERGROUND
ESSEX COUNTY
PLAN OF LAND
IN
SALEM, MA

Prepared for: COMCAST, 9 FORBES ROAD, SUITE 99, WOBURN, MA 01801	Prepared BY: DEWSNAP ENGINEERING ASSOC. LLP, 178 Lincoln Avenue - Saugus, MA 01906, Tel.#:(781) 233-0595
Date: MARCH 18, 2020	Scale: As Shown
Checked By: F.D.D. & P.A.D.	PROJECT LOCATION: 125 ESSEX STREET
Drawn By: P.A.D.	WARD 1, PRECINCT 1
Field By: P.A.D. & A.P.D.	
Sheet No. 1 of 2	

nationalgrid

March 26, 2020

City of Salem

To Whom It May Concern:

Enclosed please find a petition of NATIONAL GRID and VERIZON, covering joint NATIONAL GRID-VERIZON pole location(s)

If you have any questions regarding this permit please contact:

Please notify National Grid's Vincent LoGuidice of the hearing date / time at 978-725-1392 or Vincent.LoGuidice@NationalGrid.com.

If this petition meets with your approval, please return an executed copy to each of the above named Companies.

National Grid Contact: Vincent LoGuidice; 1101 Turnpike Street; North Andover, MA 01845

Very truly yours,

Robert Coulter

Name: Distribution Design Supervisor
Supervisor, Distribution Design

Enclosures

Questions contact – Elizabeth Cardarelli 978-380-8813

PETITION FOR JOINT OR IDENTICAL POLE LOCATIONS

North Andover, Massachusetts

To the City Council
Of Salem, Massachusetts

Massachusetts Electric Company d/b/a National Grid and Verizon New England, Inc requests permission to locate poles, wires, and fixtures, including the necessary sustaining and protecting fixtures, along and across the following public way:

Ferry St and Waite St - National Grid to install 2 JO Poles (1) on Ferry St and (1) on Waite St beginning at a point approximately 150 feet SE of the centerline of the intersection of Bridge St and continuing approximately 100 feet in a SE direction. National Grid to install 2 JO Poles, 1 on Ferry St and 1 on Waite St.

Location approximately as shown on plan attached

Wherefore it prays that after due notice and hearing as provided by law, it be granted a location for and permission to erect and maintain poles and wires, together with such sustaining and protecting fixtures as it may find necessary, said poles to be erected substantially in accordance with the plan filed herewith marked – Ferry St and Waite St - Salem – Massachusetts.

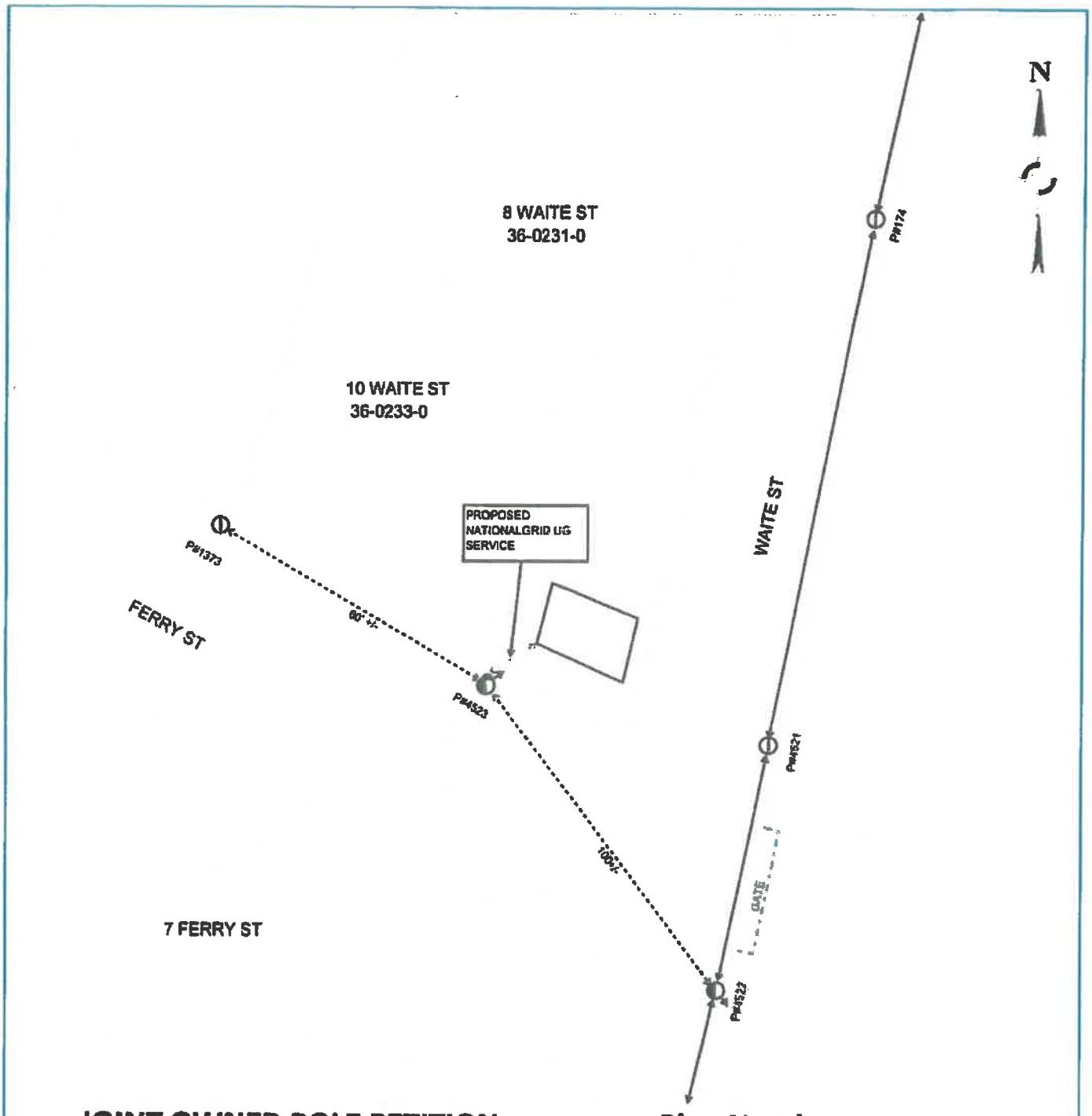
No.# 29191031 February 24, 2020

Also for permission to lay and maintain underground laterals, cables, and wires in the above or intersecting public ways for the purpose of making connections with such poles and buildings as each of said petitioners may desire for distributing purposes.

Your petitioner agrees to reserve space for one cross-arm at a suitable point on each of said poles for the fire, police, telephone, and telegraph signal wires belonging to the municipality and used by it exclusively for municipal purposes.

Massachusetts Electric Company d/b/a National Grid
BY Robert Coulter
Engineering Department

VERIZON NEW ENGLAND, INC.
BY _____
Manager / Right of Way



JOINT OWNED POLE PETITION

Plan Number 29191031

LEGEND

- EXISTING J. O. POLE LOCATIONS
- PROPOSED J. O. POLE LOCATIONS
- PROPOSED ANCHOR/GUY WIRE
- PROPOSED OVERHEAD CONDUCTORSS
- EXISTNG OVERHEAD CONDUCTORS

nationalgrid

and Verizon New England, Inc.

To The. CITY OF SALEM

For Proposed:
INSTALLATION OF 2 J O POLE LOCATIONS AND ALL APPURTENANCES

Location:
10 WAITE ST. SALEM, MA 01970

Sketch to accompany petition for:
THE INSTALLATION OF 2 J. O. POLES AND ALL APPURTENANCES

Date: FEBRUARY 10, 2020 **Drawn by:** ELIZABETH CARDARELLI

DRAWING NOT TO SCALE. DISTANCES ARE APPROXIMATE.

SALEM5C24-MA

ROUTING SLIP

Telecommunications Attachments in the Public Right of Way

Pursuant to the Code of Ordinances, Sections 12-86 through 12-200, each applicant who seeks access to the public right of way for telecommunications purposes must submit a petition and plans along with a $500 application fee to the Electrical Department. Once the City Electrician has signed off, please circulate to the Departments listed on the reverse side of this Routing Slip for signature and return it to the City Clerk's Office prior to the petition being placed on the City Council Agenda for a grant of location pursuant to MGL Chapter 166, Section 22.

Right of Way Location Requested: 201 DERBY ST. / 42.520759, 70.888482

Application Fee Received: Yes ☑ **Check No.** 6477 **Date:** 2/27/20

City Electrician Approval: John J Lucidi

BUSINESS NAME
Corporate name: VERIZON WIRELESS

d/b/a:

Address: 118 FLANDERS RD 3RD FLOOR WESTBOROUGH, MA. 01581 **Tele. #**

CONTACT: BRYAN SARCHI / AGENT W / AIROSMITH DEVELOPMENT

Street: 318 WEST AVE **Tele. #** 480-734-4970

City: SARATOGA SPRINGS **State:** NY **Zip:** 12866

Email Address: BSARCHI@AIROSMITHDEVELOPMENT.COM

Pole Ownership

✓ **To be attached to utility-owned pole** ___ **To be attached to City-owned pole**

✓ **Pole Attachment Agreement attached*** ___ **Pole Attachment Agreement to follow***

***All grants of location for telecommunications attachments to poles are conditioned upon evidence of a valid pole attachment agreement.**

Conduits

Will the attachment also require a conduit? ✓ **Yes** ___ **No**

TO ALL CITY DEPARTMENTS: By signing this slip you are only acknowledging that the applicant has made your department aware of its plans. All grants of location will be conditioned upon compliance with all departmental requirements and require a vote of the City Council after a public hearing. Please attach comments on separate sheet.

TM Daniel note his/her letter 3/11/2020
Planning Department DATE
City Hall Annex, 98 Washington Street

Please see comment letter 3/10/20
Salem Historical Commission DATE
City Hall Annex, 98 Washington Street

Nicholas B Kydd 3/30/2020
Legal Department DATE
City Hall, 93 Washington Street

please see memo 3/30/2020
Engineering Department DATE
City Hall Annex, 98 Washington Street

Matt Killeen 3/27/2020
Office of Information Technology DATE
29 Highland Avenue

RETURN ROUTING SLIP, ANY COMMENTS, PETITION, PLANS, ABUTTER LABELS, AND PROPOSED ORDER TO CITY CLERK'S OFFICE, CITY HALL, 93 WASHINGTON STREET WHEN COMPLETE SO THAT IT MAY BE PLACED ON THE COUNCIL'S AGENDA.

PETITION FOR SMALL CELL POLE ATTACHMENT

Under MGL Chapter 166, Section 22.

To the Honorable City Council of Salem, Massachusetts

Cellco Partnership d/b/a Verizon Wireless hereby respectfully requests permission to locate a small cell wireless antenna and necessary sustaining and protecting fixtures, on an existing utility pole #3502/84, located in the right of way adjacent to 201 Derby Street in the City of Salem, as more particularly shown on the plans attached hereto.

Wherefore it prays that after due notice and hearing as provided by law, it be granted permission to install and maintain a small cell wireless antenna including the necessary sustaining and protecting fixtures in accordance with the plan filed herewith marked SALEM_SC24_MA.

The following are the public ways or part of ways along which the above referred attachment may be installed thereon:

Cellco Partnership d/b/a Verizon Wireless proposes to attach equipment to an existing utility pole #3502/84, located in the right of way near the property line of 201 Derby Street with location as shown on the plan attached.

PETITIONER:

Cellco Partnership d/b/a
Verizon Wireless

By _____

Bryan Sarchi
Airosmith Development
318 West Avenue
Saratoga Springs, NY. 12866
480-734-4970

Kimberley Driscoll
Mayor

David H. Knowlton, P.E.
City Engineer/DPS Director

CITY OF SALEM

Engineering Department

98 Washington Street, 2nd floor
Salem, MA 01970
Phone: (978) 619-5673

MEMORANDUM

To: Victoria Caldwell, Assistance City Solicitor
From: Deborah L. Duhamel, PE, Assistant City Engineer
Subject: Verizon – Request for Grant of Location
Date: March 30, 2020

I have reviewed the request from Verizon Wireless for the installation of "cantenna" cell attachments and ancillary equipment to existing telephone poles at the following locations:

13 Washington Square/1 Brown Street
8 Loring Ave
389 Lafayette Street
28 Raymond Road
198 Loring Ave
201 Derby Street

Engineering requests the following conditions:

(1) Provide detailed construction schedule for all phases at each site.
(2) Provide traffic management plan for each site/phase, showing at a minimum, where equipment will be and how traffic and pedestrian travel will be maintained, if parking spots will be needed, and if a detail will be required.
(3) Coordinate with DPS (978-744-3302) prior to installing grounding rod to confirm City utilities and property services are clear of rod location.
(4) Repair any damage caused by work to the satisfaction of the City Engineer.

KIMBERLEY DRISCOLL
MAYOR

TOM DANIEL, AICP
DIRECTOR

CITY OF SALEM, MASSACHUSETTS
DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT

98 WASHINGTON STREET ♦ SALEM, MASSACHUSETTS 01970
TELE: 978-619-5685 ♦ FAX: 978-740-0404

MEMO

To: Brennan Corriston, Staff Planner and Victoria Caldwell, Assistance City Solicitor
From: Patti Kelleher, Preservation Planner PK
Date: March 10, 2020
RE: Request for Grant of Location for Cell Antenna Attachment

I have reviewed the request from Verizon Wireless for the installation of "cantenna" cell attachments and ancillary equipment to existing telephone poles on Washington Square, Loring Avenue, Lafayette Street, Raymond Road and Derby Street. As indicated on the submitted Utility Pole Photograph and Elevation drawings for each property, the "cantenna" (a 28.7" can with a 12 diameter) would extend 3' from the top of the telephone pole and would include five (5) additional attachments and a covered cable on the side of each affected telephone pole (with the lowest attachment located 8' above sidewalk). Several of these attachments are significant in size, including the Remote Radio Head Unit (RRHU), which is 15" tall x 15" wide x 10" deep. A visual survey of existing cell attachments in the city indicates that the Verizon proposal includes significantly more pieces of equipment than other attachments to City poles. I recommend that the City ask Verizon to reduce or consolidate the number of attachments and place them higher on the pole. If the number of attachments cannot be reduced or consolidated, I recommend that the attachments be placed closer to the top of the telephone pole and painted to match pole color in order to reduce the visual clutter at the pedestrian view.

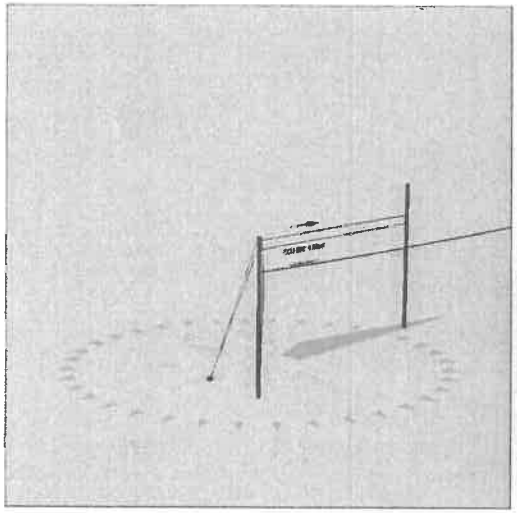
As part of the review for cell attachments, a determination must be made that the location of the attachments will not impact the city's historic resources. Therefore, I have reviewed the submitted plans and offer the following comments:

389 Lafayette Street, 8 Loring Avenue, 28 Raymond Road and 198 Loring Avenue
None of these properties are designated in a local or National Register historic district and only 8 Loring Avenue has been inventoried (SAL.4390). Therefore, I find that the proposed attachments will not impact historic resources.

201 Derby Street
While not in a local or National Register historic district, this pole is located directly adjacent to the entrance to the Derby Street Local Historic District as well at the entrance to the Salem Maritime National Park. Moving it closer to the intersection of Derby, Hawthorne Boulevard and Congress Street would be preferable but utilities in this area are buried and the only poles that exist are metal light poles.

13 Washington Square/1 Brown Street
The proposed attachment in front of 13 Washington Square/1 Brown Street is located in the Washington Square Local Historic District and the Salem Common National Register District. The building at 1 Brown Street (SAL.2459) was recently restored by the Peabody Essex Museum, which is also undertaking extensive landscape restoration on their property adjacent to this building. In addition, Brown Street is a narrow residential street and the proposed design of the installation indicates that the cantenna will be mounted onto a bracket that overhangs the street. The ancillary equipment and cable will be located on the side of the telephone pole and will add visual clutter to an historic streetscape.

Pole Num:	**3502-84_DERBY ST**	Pole Length / Class:	**30 / 5**	Code:	**NESC**	Structure Type:	**Deadend**
Aux Data 1	**Unset**	Species:	**SOUTHERN PINE**	NESC Rule:	**Rule 250B**	Status	**Guy Wires Adequate**
Aux Data 2	**Unset**	Setting Depth (ft):	**5.89**	Construction Grade:	**C**	Pole Strength Factor:	**0.85**
Aux Data 3	**Unset**	G/L Circumference (in):	**28.00**	Loading District:	**Heavy**	Transverse Wind LF:	**1.75**
Aux Data 4	**Unset**	G/L Fiber Stress (psi):	**8,000**	Ice Thickness (in):	**0.50**	Wire Tension LF:	**1.30**
Aux Data 5	**Unset**	Allowable Stress (psi):	**6,800**	Wind Speed (mph):	**39.53**	Vertical LF:	**1.90**
Aux Data 6	**Unset**	Fiber Stress Ht. Reduc:	**No**	Wind Pressure (psf):	**4.00**		
Latitude:		**0.000000 Deg**	Longitude:		**0.000000 Deg**	Elevation:	**0 Feet**



Pole Capacity Utilization (%)		Height (ft)	Wind Angle (deg)
Maximum	**43.4**	17.7	0.0
Groundline	**24.4**	0.0	82.0
Vertical	**4.1**	20.6	270.0

Pole Moments (ft-lb)		Load Angle (deg)	Wind Angle (deg)
Max Cap Util	**7,172**	180.0	0.0
Groundline	**8,687**	0.0	82.0
GL Allowable	**39,387**		

Guy System Component Summary				Load From Worst Wind Angle on Pole		Individual Maximum Load With Overload Applied	
Description	**Lead Length (ft)**	**Lead Angle (deg)**	**Height (ft)**	**Nominal Capacity (%)**	**Wind Angle (deg)**	**Max* Load Capacity (%)**	**Wind Angle (deg)**
Stub Pole	42.0	0.0		**0.0**	0.0	**0.0**	0.0
12.5M (Span/Head)			21.8	**0.0**	0.0	**0.0**	0.0
12.5M (Span/Head)			23.5	**0.0**	0.0	**0.0**	0.0
Single Helix Anchor	12.0	180.0		**14.7**	0.0	**16.2**	0.0
12.5M (Down)			21.9	**19.8**	0.0	**21.8**	0.0
12.5M (Down)			23.7	**6.3**	0.0	**7.0**	0.0
			System Capacity Summary:	**Adequate**		**Adequate**	

Groundline Load Summary - Reporting Angle Mode: Load - Reporting Angle: 0.0°

	Shear Load* (lbs)	Applied Load (%)	Bending Moment (ft-lb)	Applied Moment (%)	Pole Capacity (%)	Bending Stress (+/- psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Pole Capacity (%)
Powers	2,308	221.2	**30,156**	347.1	**76.6**	**7,072**	257	4	**7,076**	**104.1**
GuyBraces	-1,370	-131.3	**-22,465**	-258.6	**-57.0**	**-5,268**	3,960	63	**-5,205**	**-76.5**
Pole	105	10.1	**992**	11.4	**2.5**	**233**	849	14	**246**	**3.6**
Insulators	0	0.0	**4**	0.1	**0.0**	**1**	2	0	**1**	**0.0**
Pole Load	1,043	100.0	**8,687**	100.0	**22.1**	**2,037**	5,068	81	**2,118**	**31.2**
Pole Reserve Capacity			**30,700**		**77.9**	**4,763**			**4,682**	**68.8**

Load Summary by Owner - Reporting Angle Mode: Load - Reporting Angle: 0.0°

	Shear Load* (lbs)	Applied Load (%)	Bending Moment (ft-lb)	Applied Moment (%)	Pole Capacity (%)	Bending Stress (+/- psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Pole Capacity (%)
NGrid	938	89.9	**7,695**	88.6	**19.5**	**1,805**	4,219	68	**1,872**	**27.5**
Pole	105	10.1	**992**	11.4	**2.5**	**233**	849	14	**246**	**3.6**
Totals:	1,043	100.0	**8,687**	100.0	**22.1**	**2,037**	5,068	81	**2,118**	**31.2**

Detailed Load Components:

Power		Owner	Height (ft)	Horiz. Offset (in)	Cable Diameter (in)	Sag at Max Temp (ft)	Cable Weight (lbs/ft)	Lead/Span Length (ft)	Span Angle (deg)	Wire Length (ft)	Tension (lbs)	Tension Moment* (ft-lb)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Secondary	TRIPLEX 1/0 10-5	NGrid	17.70	5.64	1.0300	2.46	0.399	200.0	0.0	200.0	1,775	40,843	120	0	40,963
											Totals:	**40,843**	**120**	**0**	**40,963**

Insulator		Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Diameter (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Spool	Spool Insulator	NGrid	17.70	0.00	0.0	0.0	1.00	2.50	2.12	1	5	5
									Totals:	**1**	**5**	**5**

Guy Wire and Brace		Owner	Attach Height (ft)	End Height (ft)	Lead/Span Length (ft)	Wire Diameter (in)	Percent Solid (%)	Lead Angle (deg)	Incline Angle (deg)	Wire Weight (lbs/ft)	Rest Length (ft)	Stretch Length (in)
12.5M	Span/Head	NGrid	21.81	21.81	42.00	0.343	75.00	0.0	0.0	0.208	39.65	0.00
12.5M	Span/Head	NGrid	23.52	23.52	42.00	0.343	75.00	0.0	0.0	0.208	39.66	0.00
12.5M	Down	NGrid	21.86	0.00	12.00	0.343	100.00	180.0	61.0	0.208	28.63	0.36
12.5M	Down	NGrid	23.67	0.00	12.00	0.343	100.00	180.0	62.9	0.208	30.31	0.12

Guy Wire and Brace (Loads and Reactions)		Elastic Modulus (psi)	Rated Tensile Strength (lbs)	Guy Strength Factor	Allowable Tension (lbs)	Initial Tension (lbs)	Loaded Tension*[2] (lbs)	Maximum Tension[2] (lbs)	Applied Tension[3] (lbs)	Vertical Load (lbs)	Shear Load In Guy Dir (lbs)	Shear Load At Report Angle (lbs)	Moment at GL[3] (ft-lb)
12.5M	Span/Head	2.30e+7	12,500	0.90	11,250	700	0	0	0	0	0	0	24
12.5M	Span/Head	2.30e+7	12,500	0.90	11,250	700	0	0	0	0	0	0	26
12.5M	Down	2.30e+7	12,500	0.90	11,250	700	2,448	2,226	2,226	1,947	1,079	-1,079	-23,037
12.5M	Down	2.30e+7	12,500	0.90	11,250	700	784	713	713	635	325	-325	-7,528
									Totals:	**2,582**	**1,403**	**-1,403**	**-30,516**

Anchor/Rod Load Summary	Owner	Rod Length AGL (in)	Lead Length (ft)	Lead Angle (deg)	Strength of Assembly (lbs)	Anchor/Rod Strength Factor	Allowable Load (lbs)	Max Load[2] (lbs)	Load at Pole MCU[3] (lbs)	Max Required Capacity[2] (%)
Stub Pole	NGrid	30.00	42.00	0.0	20,000	1.00	20,000	0	0	0.0
Single Helix Anchor	NGrid	18.00	12.00	180.0	20,000	1.00	20,000	3,232	2,938	16.2

Pole Buckling

Buckling Constant	Buckling Column Height* (ft)	Buckling Section Height (% Buckling Col. Hgt.)	Buckling Section Diameter (in)	Minimum Buckling Diameter at GL (in)	Diameter at Tip (in)	Diameter at GL (in)	Modulus of Elasticity (psi)	Pole Density (pcf)	Ice Density (pcf)	Pole Tip Height (ft)	Buckling Load Capacity at Height (lbs)	Buckling Load Applied at Height (lbs)	Buckling Load Factor of Safety
0.71	20.59	34.12	8.08	4.02	6.05	8.92	2.13e+6	60.00	57.00	24.11	122,369	**1236.08**	**24.39**

verizon

2/7/202020
To: City of Salem
Transmitted via email
RE: Verizon Wireless Small Cell Sites

Dear City of Salem,

Verizon is installing additional wireless telecommunications facilities in order to meet the growing demand for Verizon Wireless service by residents, businesses, visitors, and emergency responders.

To ensure general public safety, it is important that you contact Verizon Wireless personnel at least 24 hours in advance should general maintenance need to be performed in areas of potential concern as marked on the next page of this document. This is required to comply with FCC guidelines and ensure the environment is safe for general maintenance workers who may require RF Safety & Awareness training. With notification, Verizon Wireless is able to evaluate appropriate actions needed relating to the antennas and proximity of the work location.

Thank you for your inquiry. Verizon has a process to deactivate power on small cells (regardless of whether the small cell is 4G or 5G) while work is being done on the pole (including joint use poles). The information needed to have a small cell powered down for work to occur on the pole (including contact numbers and pole identifiers) is provided at a safe distance from the small cell on the pole itself. Please contact Verizon Wireless personnel at least 24 hours in advance if you need to perform maintenance at that site. If you have any additional questions, our point of contact in that area is Luis Teves.

You also expressed concerns about the health effects of RF emissions from Verizon's network equipment. The Federal Communications Commission (FCC) has developed safety rules for human exposure to RF emissions in consultation with numerous other federal agencies, including the Environmental Protection Agency, the Food and Drug Administration, and the Occupational Safety and Health Administration. These rules can be found at 47 C.F.R § 1.1310. No matter which generation of technology we use, all Verizon equipment must comply with these safety requirements.

The FCC supported and adopted the standards after examining the RF research that scientists in the US and around the world conducted for decades. The research continues to this day, and agencies continue to monitor it. Based on that research, federal agencies have concluded that equipment that has been deployed in a manner that complies with the safety standards poses no known health risks. You can obtain further information about the safety of RF emissions from cell towers on the FCC's website, which you can access via this link: http://www.fcc.gov/oet/rfsafety/rf-faqs.html.

Thank you for reaching out to us regarding your concerns. We appreciate the chance to explain our activities regarding the wireless facility at issue. Questions related to compliance with federal regulations should be directed to VZWRFCompliance@verizonwireless.com. Please contact your local Verizon Wireless resource below if you have any additional questions.

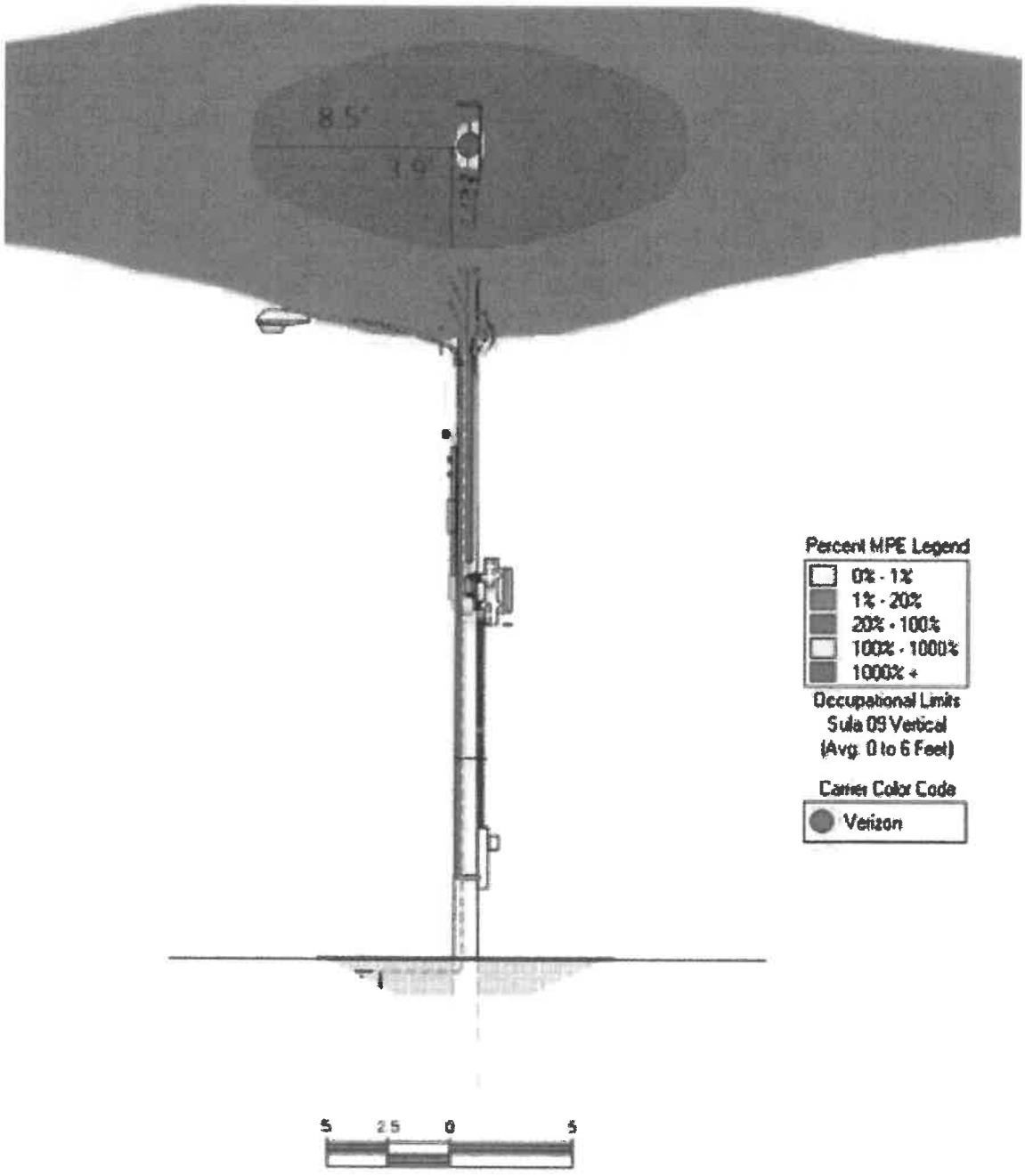
Contact Name	Contact Email	Contact Phone
Luis Teves	**Luis.Teves@VerizonWireles.com**	**508-479-3197**

Sincerely,

Michael Creamer
Sr Manager - RF Design
Verizon Wireless

Verizon Wireless (VZW) Radiofrequency (RF) Emissions Map

The following site layout represents a current snapshot in time of the predicted Verizon Wireless RF emissions from transmitting antennas on this facility. Contact Verizon Wireless should maintenance need to be performed in any non-green areas.



Color	% Occupational MPE	Instructions
	0 to 20	Safe In Relation to VZW. Contact Other Carriers Before Entering This Area
	20 to 100	Contact VZW Before Accessing This Area
	Greater Than 100	
	Greater Than 1000	

Property Owner Responsibilities (M.E.N.U)

RF exposure safety and the protection of every licensee's infrastructure are very important. Property owners and licensees have a shared responsibility in maintaining a safe and secure RF environment. Property owners can help in this significant endeavor by:

⇒ **M**aintaining all necessary wireless licensee contact information.

⇒ **E**nforcing restricted access (help maintain a Controlled Environment). **E**nsuring all building/maintenance personnel are aware that the potential for exposure exists, and follow all appropriate entry and safety procedures.

⇒ **N**otifying all licensees when any non-carrier requests access to any area with antennas **at least 24 hours in advance.**

⇒ **U**nderstanding that compliance with the FCC and OSHA can be achieved with RF Exposure levels above the applicable limit if the proper signage, physical/indicative barrier, and access restrictions are implemented. Commitment to compliance and willingness to cooperate are essential.

For General RF Safety & Awareness Questions

Verizon Wireless

E-mail: VZWRFCompliance@vzw.com

E-mail Subject: "ATTN: RF Compliance"

In The Event That Emergency Maintenance Is Required

24-Hour Network Operations Center:

1-800-264-6620

RF Safety & Awareness Training Contacts

Dtech Communications

(michelle@dtechcom.com.)

EBI Consulting

spenta@ebiconsulting.com

SiteSafe

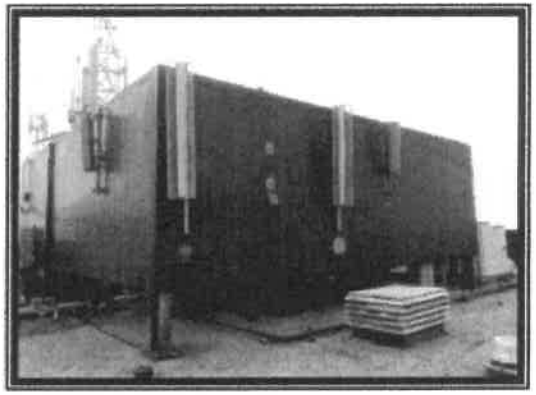
(cbagley@sitesafe.com)

Waterford Consultants

Sbaier-anderson@waterfordconsultants.com

Radio Frequency (RF) Emissions

SAFETY & AWARENESS



Federal Compliance Requirements

The Federal Communications Commission (FCC) has established safety guidelines relating to RF exposure from cell sites. The FCC developed those standards, known as Maximum Permissible Exposure (MPE) limits, in consultation with numerous other federal agencies, including the Environmental Protection Agency, the Food and Drug Administration, and the Occupational Safety and Health Administration. The standards were developed by expert scientists and engineers after extensive reviews of the scientific literature related to RF biological effects. The FCC explains that its standards incorporate prudent margins of safety. The following represents an overview of the most applicable information:

Classifications for Exposure Limits

Occupational	General Population
Persons are "exposed as a consequence of their *employment*" and are "*fully aware* of the potential for exposure and can *exercise control* over their exposure".	Any persons that "*may not be made fully aware* of the potential for exposure or *cannot exercise control* over their exposure". Those in this category do not have RF Safety & Awareness Training.

Ensuring Compliance With FCC Guidelines

Areas or portions of any transmitter site may be susceptible to high power densities that could cause personnel exposures in excess of the FCC guidelines.

Wireless Licensees are required by law to implement the following:

- **Restrict access** (lock doors/ladders)
- **Post notification signage on every access point** to increase awareness of the potential for exposure BEFORE one enters an area with antennas.
- **Place additional notification signage and visual indicators** in an area with antennas (beyond an access point) where RF exposure levels may start to exceed the FCC's limits.

Compliance Materials

Notification Signage

(Notice) RF Guidelines - Informs viewer of the basic safety guidelines for working in an RF Environment.

Information– Provides relevant contact information for any questions or requests.

(Blue) Notice - Informs viewer that beyond the sign, RF exposure levels may exceed the General Population MPE limit but will remain below the Occupational MPE limit.

(Yellow) Caution - Informs viewer that beyond the sign, RF exposure levels may exceed the General Population and Occupational MPE limit.

(Red) Warning - Informs viewer that beyond the sign, RF exposure levels may substantially exceed the General Population and Occupational MPE limit.

Indicative Barriers

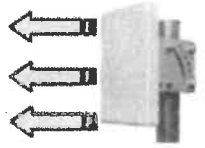
In addition to physical barriers such as locked doors or ladders, wireless licensees may also be required to place indicative barriers as a means of visually demarcating an area where RF levels are expected to exceed the FCC's limits. **Examples of Indicative Barrier Materials:** plastic chains, buckets, reflective paint or plastic cones, fiberglass fences, and poles mounted in cinderblocks.

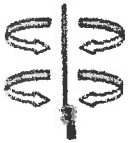
Antenna Safety

Antenna Types

Yagi - Antenna that radiates energy in one direction. RF energy has a narrow beam. **Walk behind or under this antenna.**

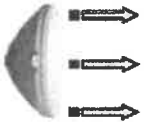
Panel - Antenna that radiates energy in one direction. RF energy beam can range from narrow to very wide. **Walk behind this antenna. Stay out of the general direction that the antenna is pointing.**





Whip - Antenna that radiates energy equally in all directions. **Maintain as much distance as possible from this antenna.**

Microwave - Antenna that radiates energy in one direction. RF energy has a narrow beam. **Walk under or behind this antenna.**



When In An Environment With Antennas:

⇒ Maintain at least a 3-foot clearance from all antennas. A 10-foot separation distance is preferred.

⇒ Never touch an antenna. Assume all are active.

⇒ Read and obey ALL signs on an access point.

⇒ Read and obey ALL signs in the environment with antennas.

⇒ Never walk past an indicative barrier without first confirming transmitter inactivity.

⇒ Never walk in front of or stand in front of an antenna whenever possible. Keep walking.

⇒ Contact all wireless licensees **at least 24 hours in advance** of scheduled maintenance.

SALEM_SC24_MA

CLUSTER: SALEM MA

UTILITY POLE #3502/84
201 DERBY STREET
SALEM, MA 01970

PRESIDING POWER COMPANY
nationalgrid

verizon
"Because Better Matters"

CHAPPELL ENGINEERING ASSOCIATES, LLC
Civil · Structural · Land Surveying
R.K. EXECUTIVE CENTRE
201 BOSTON POST ROAD WEST, SUITE 101
MARLBOROUGH, MA 01752
(508) 481-7400
www.chappellengineering.com

REVISIONS

NO.	DESCRIPTION	DATE
0	ISSUED FOR REVIEW	11/21/19

SITE NAME:
SALEM_SC24_MA
UTILITY POLE #3502/84
201 DERBY STREET
SALEM, MA 01970

DRAWING TITLE:
LOCATION PLAN/
AERIAL IMAGE

DRAWING NO:
L-1

LEASE EXHIBIT
NOT FOR CONSTRUCTION

SCALE:	DESIGNED BY: MSB	VZW LOCATION CODE:
AS SHOWN	DRAWN BY: CAP	599016
CEA PROJECT NO.:	CHECKED BY: MB	
1480.313	ORIGINAL ISSUE DATE: 11/21/19	

SITE CONTROL POINT:
CENTER OF EXISTING UTILITY POLE #3502/84
N 42.520758' (42°-31'-14.73")
W 70.888482' (70°-53'-18.54")
APPROXIMATE GROUND ELEVATION = 10'± AMSL

LOCATION PLAN/AERIAL IMAGE (1 / L-1)
SCALE: 1" = 50'
0 50' 100' 150'

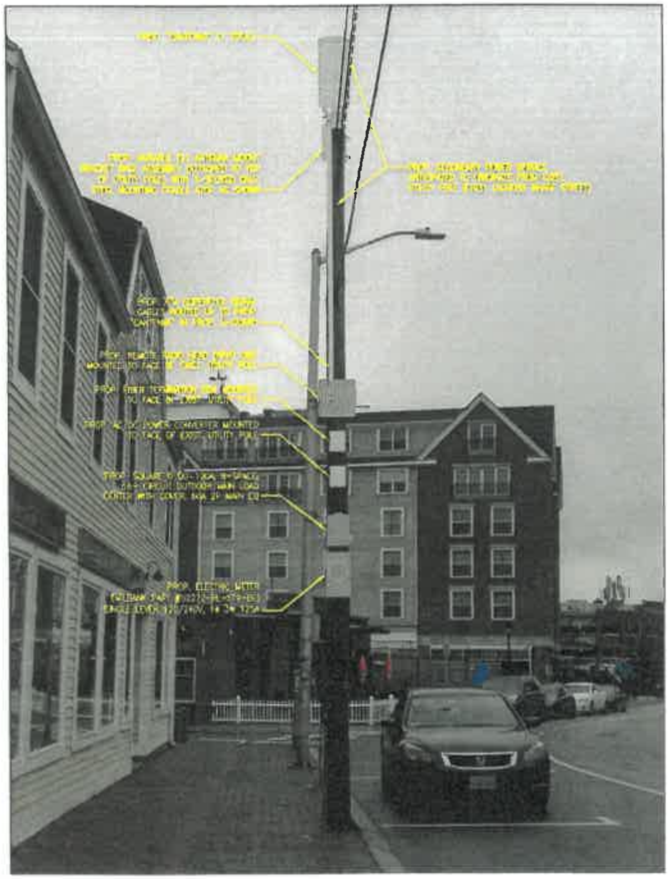
SHEET INDEX

DWG.	DESCRIPTION	REV.
L-1	LOCATION PLAN/AERIAL IMAGE	0
L-2	UTILITY POLE PHOTOGRAPH AND ELEVATION	0
L-3	ANTENNA & ANCILLARY EQUIPMENT DETAILS AND ONE-LINE DIAGRAM	0

GENERAL NOTES:

1. THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE AND ARE INTENDED TO PROVIDE GENERAL INFORMATION REGARDING THE LOCATION, SIZE AND ORIENTATION OF THE PROPOSED WIRELESS TELECOMMUNICATIONS EQUIPMENT INSTALLATION ON THE UTILITY POLE AND ARE NOT SPECIFICALLY INTENDED FOR CONSTRUCTION.
2. VERIZON WIRELESS SHALL PLACE WEATHER RESISTANT PHENOLIC PLACARDS ON UTILITY POLE AND ANCILLARY EQUIPMENT TO IDENTIFY EQUIPMENT OWNERSHIP & CONTACT INFORMATION TO BE UTILIZED IN THE CASE OF EMERGENCY.
3. AN ANALYSIS OF THE CAPACITY OF THE EXISTING UTILITY POLE TO SUPPORT THE PROPOSED LOADING HAS NOT BEEN COMPLETED BY CHAPPELL ENGINEERING ASSOCIATES, LLC. AND THUS, THESE DRAWINGS ARE SUBJECT TO CHANGE PENDING THE OUTCOME OF A STRUCTURAL ANALYSIS (TO BE PERFORMED BY OTHERS).
4. VERIZON WIRELESS' GENERAL CONTRACTOR SHALL EXTEND EFFORTS TO ENSURE THAT ALL PROPOSED EQUIPMENT MEETS THE REQUIREMENTS OF THE EXISTING UTILITY COMPANY OR COMPANIES CURRENTLY OCCUPYING THE UTILITY POLE AND THE 2017 NATIONAL ELECTRICAL SAFETY CODE.

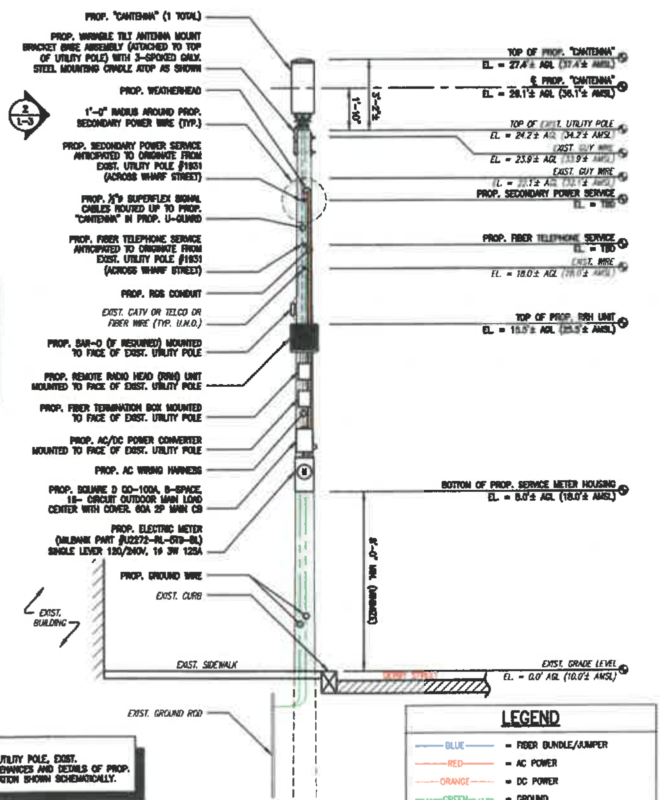
ANTENNA AND MOUNT NOTE: CONTRACTOR SHALL POSITION/ROTATE PROP. ANTENNA MOUNT/BRACKET IN SUCH A WAY SO AS TO NOT INTERFERE WITH EXIST. STREET LIGHT, PRIMARY POWER CROSSARM(S) (IF PRESENT), BRACKETS, BRACES, SECONDARY POWER SUPPORTS OR ANY OTHER MISCELLANEOUS APPURTENANCES AND RELATED SUPPORT BRACKETS ENCOUNTERED LOCATED ON THE EXIST. UTILITY POLE.



UTILITY POLE #3502/84 PHOTOGRAPH (EXISTING CONDITIONS/SCHEMATIC RENDERING) 1/L-2

SCALE: NO SCALE

EQUIPMENT AND MOUNT NOTE: CONTRACTOR SHALL POSITION/ROTATE PROP. EQUIPMENT AND ASSOCIATED MOUNTS/BRACKETS IN SUCH A WAY SO AS TO NOT INTERFERE WITH EXIST. WIRES/PANELS ETC. OR ANY OTHER MISCELLANEOUS APPURTENANCES AND RELATED SUPPORT BRACKETS ENCOUNTERED LOCATED ON THE FACE OF THE EXIST. UTILITY POLE.



NOTE: EXIST. UTILITY POLE, EXIST. APPURTENANCES AND DETAILS OF PROP. INSTALLATION SHOWN SCHEMATICALLY.

LEGEND

——BLUE——	= FIBER BUNDLE/JUMPER
——RED——	= AC POWER
——ORANGE——	= DC POWER
——GREEN——	= GROUND
– – –BLUE– – –	= 1/2"Ø SUPERFLEX SIGNAL CABLES

UTILITY POLE #3502/84 ELEVATION (PROPOSED CONDITIONS) 2/L-2

SCALE: 3/16" = 1'-0"

0 5'-4" 10'-8" 16'-0"

verizon✓ "Because Better Matters"

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Civil · Structural · Land Surveying
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(508) 481-7400
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REVISIONS

NO.	DESCRIPTION	DATE
0	ISSUED FOR REVIEW	11/21/19

SITE NAME:

SALEM_SC24_MA

UTILITY POLE #3502/84
201 DERBY STREET
SALEM, MA 01970

DRAWING TITLE:

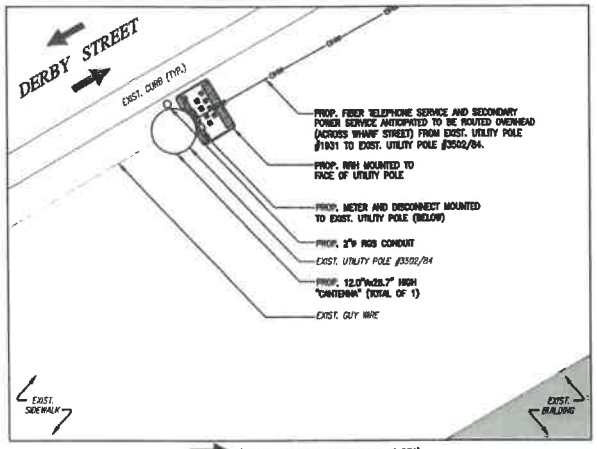
UTILITY POLE PHOTOGRAPH AND ELEVATION

DRAWING NO:

L-2

LEASE EXHIBIT
NOT FOR CONSTRUCTION

SCALE	DESIGNED BY:	NEW LOCATION CODE:
AS SHOWN	DRAWN BY: CHECKED BY:	869016
CEA PROJECT NO.: 1460.313	ORIGINAL ISSUE DATE: 11/21/19	



EQUIPMENT AND ANTENNA ORIENTATION PLAN

1 L-3

NORTH

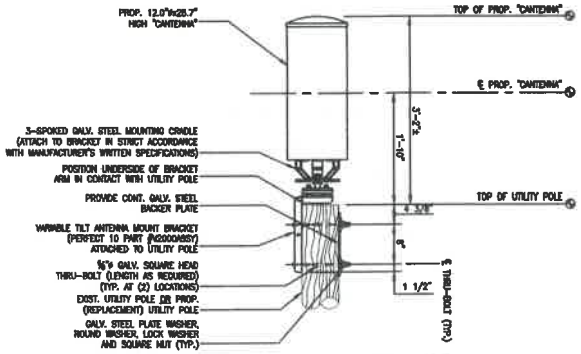
SCALE: 3/8" = 1'-0"

0 2'-8" 5'-4" 8'-0"

NOTES:
1.) CONFIRM DOWNTILT REQUIREMENTS (IF ANY) AND AZIMUTH SPECIFICATIONS WITH VERIZON WIRELESS RF ENGINEER AT TIME OF CONSTRUCTION.

2.) MOUNT SHALL BE INSTALLED IN SUCH A WAY TO ENSURE PLUMB INSTALLATION OF "CANTENNA".

3.) UTILITY POLE APPURTENANCES NOT SHOWN FOR CLARITY.



"CANTENNA" MOUNT DETAIL

2 L-3

SCALE: 1/2" = 1'-0"

SMALL CELL "CANTENNA"	
DIMENSIONS:	12.0"ø x 28.7"
WEIGHT:	28.7 LBS
QUANTITY:	TOTAL OF 1

TYPICAL "CANTENNA" SPECIFICATIONS

3 L-3

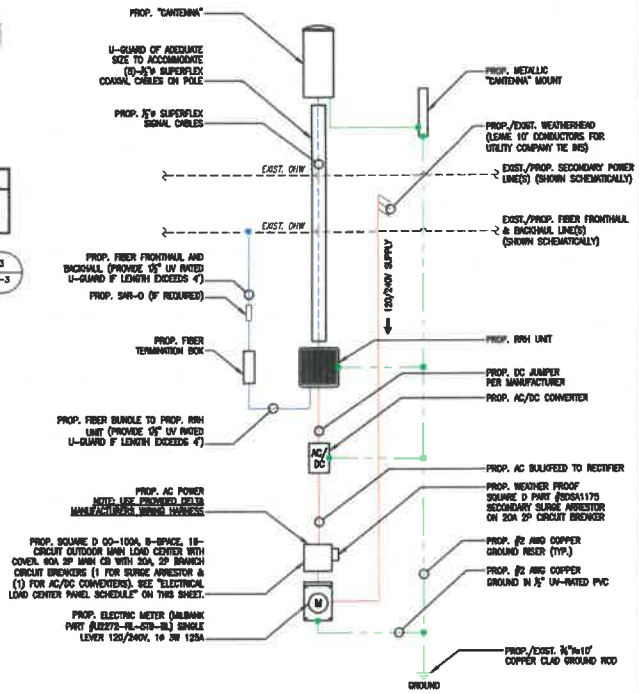
SCALE: N.T.S.

PCS-AWS (1900/2100 MHz) REMOTE RADIO HEAD UNIT	
DIMENSIONS:	15.0"H x 15.0"W x 10.0"D
WEIGHT:	84.4 LBS
QUANTITY:	TOTAL OF 1

TYPICAL REMOTE RADIO HEAD (RRH) UNIT DIMENSIONS

4 L-3

SCALE: N.T.S.



ONE-LINE DIAGRAM NOTES:
1) PROVIDE WEATHER TIGHT SEAL CONNECTORS ON ALL CONNECTIONS EACH SIDE OF ENCLOSURE HOUSING.

2) COORDINATE ANY FURTHER MISCELLANEOUS WIRING AND CONDUIT REQUIREMENTS WITH VERIZON WIRELESS AND ELECTRIC COMPANY.

LEGEND

- BLUE — FIBER BUNDLE/JUMPER
- RED — AC POWER
- ORANGE — DC POWER
- GREEN — GROUND
- BLUE — 1/2"ø SUPERFLEX SIGNAL CABLES

FIBER/ELECTRICAL ONE-LINE DIAGRAM

5 L-3

SCALE: N.T.S.

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REVISIONS

NO.	DESCRIPTION	DATE
0	ISSUED FOR REVIEW	11/21/19

SITE NAME:

SALEM_SC24_MA

UTILITY POLE #3502/84
201 DERBY STREET
SALEM, MA 01970

DRAWING TITLE:

ANTENNA & ANCILLARY EQUIPMENT DETAILS AND ONE-LINE DIAGRAM

DRAWING NO:

L-3

LEASE EXHIBIT
NOT FOR CONSTRUCTION

SCALE	DESIGNED BY: DRS	NEW LOCATION CODE:
AS SHOWN	DRAWN BY: DRS	369015
CEA PROJECT NO.:	CHECKED BY: DPC	
1460.313	ORIGINAL ISSUE DATE: 11/21/19	

SALEM_SC12_MA

ROUTING SLIP

Telecommunications Attachments in the Public Right of Way

Pursuant to the Code of Ordinances, Sections 12-86 through 12-200, each applicant who seeks access to the public right of way for telecommunications purposes must submit a petition and plans along with a $500 application fee to the Electrical Department. Once the City Electrician has signed off, please circulate to the Departments listed on the reverse side of this Routing Slip for signature and return it to the City Clerk's Office prior to the petition being placed on the City Council Agenda for a grant of location pursuant to MGL Chapter 166, Section 22.

Right of Way Location Requested: 389 LAFAYETTE STREET / 42.509520°, -70.889010

Application Fee Received: Yes [✓] **Check No.** 6477 **Date:** 2/27/20

City Electrician Approval: John J Geardi

BUSINESS NAME

Corporate name: VERIZON WIRELESS

d/b/a:

Address: 118 FLANDERS Rd. 3RD FLOOR WESTBOROUGH, MA. 01581 **Tele. #**

CONTACT: BRYAN SARCHI / AGENT W/ AIROSMITH DEVELOPMENT

Street: 318 WEST AVE **Tele. #** 480-734-4970

City: SARATOGA SPRINGS **State:** NY **Zip:** 12866

Email Address: BSARCHI@AIROSMITHDEVELOPMENT.COM

Pole Ownership

✓ **To be attached to utility-owned pole** ___ **To be attached to City-owned pole**

✓ **Pole Attachment Agreement attached*** ___ **Pole Attachment Agreement to follow***

***All grants of location for telecommunications attachments to poles are conditioned upon evidence of a valid pole attachment agreement.**

Conduits

Will the attachment also require a conduit? ✓ **Yes** ___ **No**

TO ALL CITY DEPARTMENTS: By signing this slip you are only acknowledging that the applicant has made your department aware of its plans. All grants of location will be conditioned upon compliance with all departmental requirements and require a vote of the City Council after a public hearing. Please attach comments on separate sheet.

T McDaniel note Historic letter 3/11/2020
Planning Department DATE
City Hall Annex, 98 Washington Street

please see memo 3/30/2020
Engineering Department DATE
City Hall Annex, 98 Washington Street

please see comment letter 3/10/20
Salem Historical Commission DATE
City Hall Annex, 98 Washington Street

3/27/2020
Office of Information Technology DATE
29 Highland Avenue

for Caldwell 3/30/2020
Legal Department DATE
City Hall, 93 Washington Street

RETURN ROUTING SLIP, ANY COMMENTS, PETITION, PLANS, ABUTTER LABELS, AND PROPOSED ORDER TO CITY CLERK'S OFFICE, CITY HALL, 93 WASHINGTON STREET WHEN COMPLETE SO THAT IT MAY BE PLACED ON THE COUNCIL'S AGENDA.

PETITION FOR SMALL CELL POLE ATTACHMENT

Under MGL Chapter 166, Section 22.

To the Honorable City Council of Salem, Massachusetts

Cellco Partnership d/b/a Verizon Wireless hereby respectfully requests permission to locate a small cell wireless antenna and necessary sustaining and protecting fixtures, on an existing utility pole #2512, located in the right of way adjacent to 389 Lafayette Street in the City of Salem, as more particularly shown on the plans attached hereto.

Wherefore it prays that after due notice and hearing as provided by law, it be granted permission to install and maintain a small cell wireless antenna including the necessary sustaining and protecting fixtures in accordance with the plan filed herewith marked SALEM_SC12_MA.

The following are the public ways or part of ways along which the above referred attachment may be installed thereon:

Cellco Partnership d/b/a Verizon Wireless proposes to attach equipment to an existing utility pole #2512, located in the right of way near the property line of 389 Lafayette Street with location as shown on the plan attached.

PETITIONER:

Cellco Partnership d/b/a
Verizon Wireless

By _____

Bryan Sarchi
Airosmith Development
318 West Avenue
Saratoga Springs, NY. 12866
480-734-4970

Kimberley Driscoll
Mayor

David H. Knowlton, P.E.
City Engineer/DPS Director

CITY OF SALEM

Engineering Department

98 Washington Street, 2nd floor
Salem, MA 01970
Phone: (978) 619-5673

MEMORANDUM

To: Victoria Caldwell, Assistance City Solicitor
From: Deborah L. Duhamel, PE, Assistant City Engineer
Subject: Verizon – Request for Grant of Location
Date: March 30, 2020

I have reviewed the request from Verizon Wireless for the installation of "cantenna" cell attachments and ancillary equipment to existing telephone poles at the following locations:

13 Washington Square/1 Brown Street
8 Loring Ave
389 Lafayette Street
28 Raymond Road
198 Loring Ave
201 Derby Street

Engineering requests the following conditions:

(1) Provide detailed construction schedule for all phases at each site.
(2) Provide traffic management plan for each site/phase, showing at a minimum, where equipment will be and how traffic and pedestrian travel will be maintained, if parking spots will be needed, and if a detail will be required.
(3) Coordinate with DPS (978-744-3302) prior to installing grounding rod to confirm City utilities and property services are clear of rod location.
(4) Repair any damage caused by work to the satisfaction of the City Engineer.

KIMBERLEY DRISCOLL
MAYOR

TOM DANIEL, AICP
DIRECTOR

CITY OF SALEM, MASSACHUSETTS
DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT

98 WASHINGTON STREET ♦ SALEM, MASSACHUSETTS 01970
TELE: 978-619-5685 ♦ FAX: 978-740-0404

MEMO

To: Brennan Corriston, Staff Planner and Victoria Caldwell, Assistance City Solicitor
From: Patti Kelleher, Preservation Planner PLK
Date: March 10, 2020
RE: Request for Grant of Location for Cell Antenna Attachment

I have reviewed the request from Verizon Wireless for the installation of "cantenna" cell attachments and ancillary equipment to existing telephone poles on Washington Square, Loring Avenue, Lafayette Street, Raymond Road and Derby Street. As indicated on the submitted Utility Pole Photograph and Elevation drawings for each property, the "cantenna" (a 28.7" can with a 12 diameter) would extend 3' from the top of the telephone pole and would include five (5) additional attachments and a covered cable on the side of each affected telephone pole (with the lowest attachment located 8' above sidewalk). Several of these attachments are significant in size, including the Remote Radio Head Unit (RRHU), which is 15" tall x 15" wide x 10" deep. A visual survey of existing cell attachments in the city indicates that the Verizon proposal includes significantly more pieces of equipment than other attachments to City poles. I recommend that the City ask Verizon to reduce or consolidate the number of attachments and place them higher on the pole. If the number of attachments cannot be reduced or consolidated, I recommend that the attachments be placed closer to the top of the telephone pole and painted to match pole color in order to reduce the visual clutter at the pedestrian view.

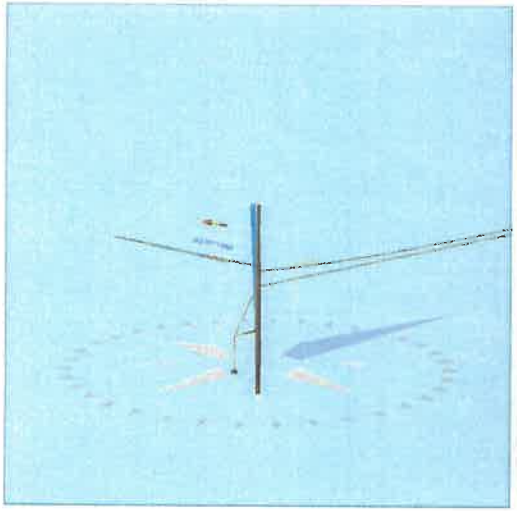
As part of the review for cell attachments, a determination must be made that the location of the attachments will not impact the city's historic resources. Therefore, I have reviewed the submitted plans and offer the following comments:

389 Lafayette Street, 8 Loring Avenue, 28 Raymond Road and 198 Loring Avenue
None of these properties are designated in a local or National Register historic district and only 8 Loring Avenue has been inventoried (SAL.4390). Therefore, I find that the proposed attachments will not impact historic resources.

201 Derby Street
While not in a local or National Register historic district, this pole is located directly adjacent to the entrance to the Derby Street Local Historic District as well at the entrance to the Salem Maritime National Park. Moving it closer to the intersection of Derby, Hawthorne Boulevard and Congress Street would be preferable but utilities in this area are buried and the only poles that exist are metal light poles.

13 Washington Square/1 Brown Street
The proposed attachment in front of 13 Washington Square/1 Brown Street is located in the Washington Square Local Historic District and the Salem Common National Register District. The building at 1 Brown Street (SAL.2459) was recently restored by the Peabody Essex Museum, which is also undertaking extensive landscape restoration on their property adjacent to this building. In addition, Brown Street is a narrow residential street and the proposed design of the installation indicates that the cantenna will be mounted onto a bracket that overhangs the street. The ancillary equipment and cable will be located on the side of the telephone pole and will add visual clutter to an historic streetscape.

Pole Num:	**2514**	Pole Length / Class:	**35 / 4**	Code:	**NESC**	Structure Type:	**Angle**
Aux Data 1	**Unset**	Species:	**SOUTHERN PINE**	NESC Rule:	**Rule 250B**	Status	**Guy Wires Adequate**
Aux Data 2	**Unset**	Setting Depth (ft):	**5.21**	Construction Grade:	**C**	Pole Strength Factor:	**0.85**
Aux Data 3	**Unset**	G/L Circumference (in):	**31.79**	Loading District:	**Heavy**	Transverse Wind LF:	**1.75**
Aux Data 4	**Unset**	G/L Fiber Stress (psi):	**8,000**	Ice Thickness (in):	**0.50**	Wire Tension LF:	**1.30**
Aux Data 5	**Unset**	Allowable Stress (psi):	**6,800**	Wind Speed (mph):	**39.53**	Vertical LF:	**1.90**
Aux Data 6	**Unset**	Fiber Stress Ht. Reduc:	**No**	Wind Pressure (psf):	**4.00**		
Latitude:		**0.000000 Deg**	Longitude:		**0.000000 Deg**	Elevation:	**0 Feet**



Pole Capacity Utilization (%)		Height (ft)	Wind Angle (deg)
Maximum	**9.2**	0.0	270.7
Groundline	**9.2**	0.0	270.7
Vertical	**0.3**	13.5	270.0

Pole Moments (ft-lb)		Load Angle (deg)	Wind Angle (deg)
Max Cap Util	**5,119**	272.9	270.7
Groundline	**5,119**	272.9	270.7
GL Allowable	**57,618**		

Guy System Component Summary				Load From Worst Wind Angle on Pole		Individual Maximum Load With Overload Applied	
Description	**Lead Length (ft)**	**Lead Angle (deg)**	**Height (ft)**	**Nominal Capacity (%)**	**Wind Angle (deg)**	**Max* Load Capacity (%)**	**Wind Angle (deg)**
Stub Pole	138.0	0.0		**0.0**	270.7	**0.4**	180.0
12.5M (Span/Head)			15.0	**0.0**	270.7	**0.7**	180.0
Single Helix Anchor	6.0	180.0		**0.6**	270.7	**2.2**	0.0
25M (Sidewalk)			15.0	**0.5**	270.7	**1.9**	0.0
Sidewalk Strut	6.0	180.0	6.8	**0.3**	270.7	**1.1**	0.0
			System Capacity Summary:	**Adequate**		**Adequate**	

Groundline Load Summary - Reporting Angle Mode: Load - Reporting Angle: 272.9°

	Shear Load* (lbs)	Applied Load (%)	Bending Moment (ft-lb)	Applied Moment (%)	Pole Capacity (%)	Bending Stress (+/- psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Pole Capacity (%)
Comms	107	33.2	1,924	37.6	3.3	229	88	1	230	3.4
GuyBraces	68	21.3	949	18.5	1.7	110	219	3	113	1.7
Pole	146	45.5	2,245	43.9	3.9	268	1,325	16	284	4.2
Insulators	0	0.0	0	0.0	0.0	0	19	0	0	0.0
Pole Load	321	100.0	5,119	100.0	8.9	607	1,651	21	628	9.2
Pole Reserve Capacity			52,499		91.1	6,193			6,172	90.8

Load Summary by Owner - Reporting Angle Mode: Load - Reporting Angle: 272.9°

	Shear Load* (lbs)	Applied Load (%)	Bending Moment (ft-lb)	Applied Moment (%)	Pole Capacity (%)	Bending Stress (+/- psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Pole Capacity (%)
Telco	55	17.0	964	18.8	1.7	115	78	1	116	1.7
Catv	52	16.2	961	18.8	1.7	115	29	0	115	1.7
NGrid	68	21.3	949	18.5	1.7	110	219	3	113	1.7
Pole	146	45.5	2,245	43.9	3.9	268	1,325	16	284	4.2
Totals:	321	100.0	5,119	100.0	8.9	607	1,651	21	628	9.2

Detailed Load Components:

Comm		Owner	Height (ft)	Horiz. Offset (in)	Cable Diameter (in)	Sag at Max Temp (ft)	Cable Weight (lbs/ft)	Lead/Span Length (ft)	Span Angle (deg)	Wire Length (ft)	Tension (lbs)	Tension Moment* (ft-lb)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Telco	Telco Drop	Telco	17.83	5.78	0.2900	2.70	0.029	138.0	0.0	138.1	40	47	2	925	974
CATV	CATV Drop	Catv	18.67	5.73	0.2370	0.60	0.026	42.0	270.0	42.0	40	969	0	0	970
											Totals:	**1,017**	**2**	**925**	**1,944**

Insulator		Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Diameter (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
J-Hook	J-Hook	Telco	17.83	0.00	0.0	0.0	5.00	1.50	0.00	0	0	0
J-Hook	J-Hook	Catv	18.67	0.00	0.0	0.0	5.00	1.50	0.00	0	0	0
									Totals:	**0**	**0**	**0**

Guy Wire and Brace		Owner	Attach Height (ft)	End Height (ft)	Lead/Span Length (ft)	Wire Diameter (in)	Percent Solid (%)	Lead Angle (deg)	Incline Angle (deg)	Wire Weight (lbs/ft)	Rest Length (ft)	Stretch Length (in)
12.5M	Span/Head	NGrid	15.02	15.02	138.00	0.343	75.00	0.0	0.0	0.208	135.25	0.00
25M	Sidewalk	NGrid	15.04	0.00	6.00	0.519	75.00	180.0	53.6	0.475	20.50	0.01

Guy Wire and Brace (Loads and Reactions)		Elastic Modulus (psi)	Rated Tensile Strength (lbs)	Guy Strength Factor	Allowable Tension (lbs)	Initial Tension (lbs)	Loaded Tension*[2] (lbs)	Maximum Tension[2] (lbs)	Applied Tension[3] (lbs)	Vertical Load (lbs)	Shear Load In Guy Dir (lbs)	Shear Load At Report Angle (lbs)	Moment at GL[3] (ft-lb)
12.5M	Span/Head	2.30e+7	12,500	0.90	11,250	700	80	73	0	0	0	0	810
25M	Sidewalk	2.30e+7	25,000	0.90	22,500	700	433	393	115	92	68	-3	149
									Totals:	92	68	-3	959

Anchor/Rod Load Summary	Owner	Rod Length AGL (in)	Lead Length (ft)	Lead Angle (deg)	Strength of Assembly (lbs)	Anchor/Rod Strength Factor	Allowable Load (lbs)	Max Load[2] (lbs)	Load at Pole MCU[3] (lbs)	Max Required Capacity[2] (%)
Stub Pole	NGrid	30.00	138.00	0.0	20,000	1.00	20,000	80	0	0.4
Single Helix Anchor	NGrid	18.00	6.00	180.0	20,000	1.00	20,000	433	115	2.2

Pole Buckling

Buckling Constant	Buckling Column Height* (ft)	Buckling Section Height (% Buckling Col. Hgt.)	Buckling Section Diameter (in)	Minimum Buckling Diameter at GL (in)	Diameter at Tip (in)	Diameter at GL (in)	Modulus of Elasticity (psi)	Pole Density (pcf)	Ice Density (pcf)	Pole Tip Height (ft)	Buckling Load Capacity at Height (lbs)	Buckling Load Applied at Height (lbs)	Buckling Load Factor of Safety
0.71	13.53	32.31	9.61	2.35	6.69	10.12	2.13e+6	60.00	57.00	29.79	568,647	**5504.42**	**333.33**

verizon

2/7/202020
To: City of Salem
Transmitted via email
RE: Verizon Wireless Small Cell Sites

Dear City of Salem,

Verizon is installing additional wireless telecommunications facilities in order to meet the growing demand for Verizon Wireless service by residents, businesses, visitors, and emergency responders.

To ensure general public safety, it is important that you contact Verizon Wireless personnel at least 24 hours in advance should general maintenance need to be performed in areas of potential concern as marked on the next page of this document. This is required to comply with FCC guidelines and ensure the environment is safe for general maintenance workers who may require RF Safety & Awareness training. With notification, Verizon Wireless is able to evaluate appropriate actions needed relating to the antennas and proximity of the work location.

Thank you for your inquiry. Verizon has a process to deactivate power on small cells (regardless of whether the small cell is 4G or 5G) while work is being done on the pole (including joint use poles). The information needed to have a small cell powered down for work to occur on the pole (including contact numbers and pole identifiers) is provided at a safe distance from the small cell on the pole itself. Please contact Verizon Wireless personnel at least 24 hours in advance if you need to perform maintenance at that site. If you have any additional questions, our point of contact in that area is Luis Teves.

You also expressed concerns about the health effects of RF emissions from Verizon's network equipment. The Federal Communications Commission (FCC) has developed safety rules for human exposure to RF emissions in consultation with numerous other federal agencies, including the Environmental Protection Agency, the Food and Drug Administration, and the Occupational Safety and Health Administration. These rules can be found at 47 C.F.R § 1.1310. No matter which generation of technology we use, all Verizon equipment must comply with these safety requirements.

The FCC supported and adopted the standards after examining the RF research that scientists in the US and around the world conducted for decades. The research continues to this day, and agencies continue to monitor it. Based on that research, federal agencies have concluded that equipment that has been deployed in a manner that complies with the safety standards poses no known health risks. You can obtain further information about the safety of RF emissions from cell towers on the FCC's website, which you can access via this link: http://www.fcc.gov/oet/rfsafety/rf-faqs.html.

Thank you for reaching out to us regarding your concerns. We appreciate the chance to explain our activities regarding the wireless facility at issue. Questions related to compliance with federal regulations should be directed to VZWRFCompliance@verizonwireless.com. Please contact your local Verizon Wireless resource below if you have any additional questions.

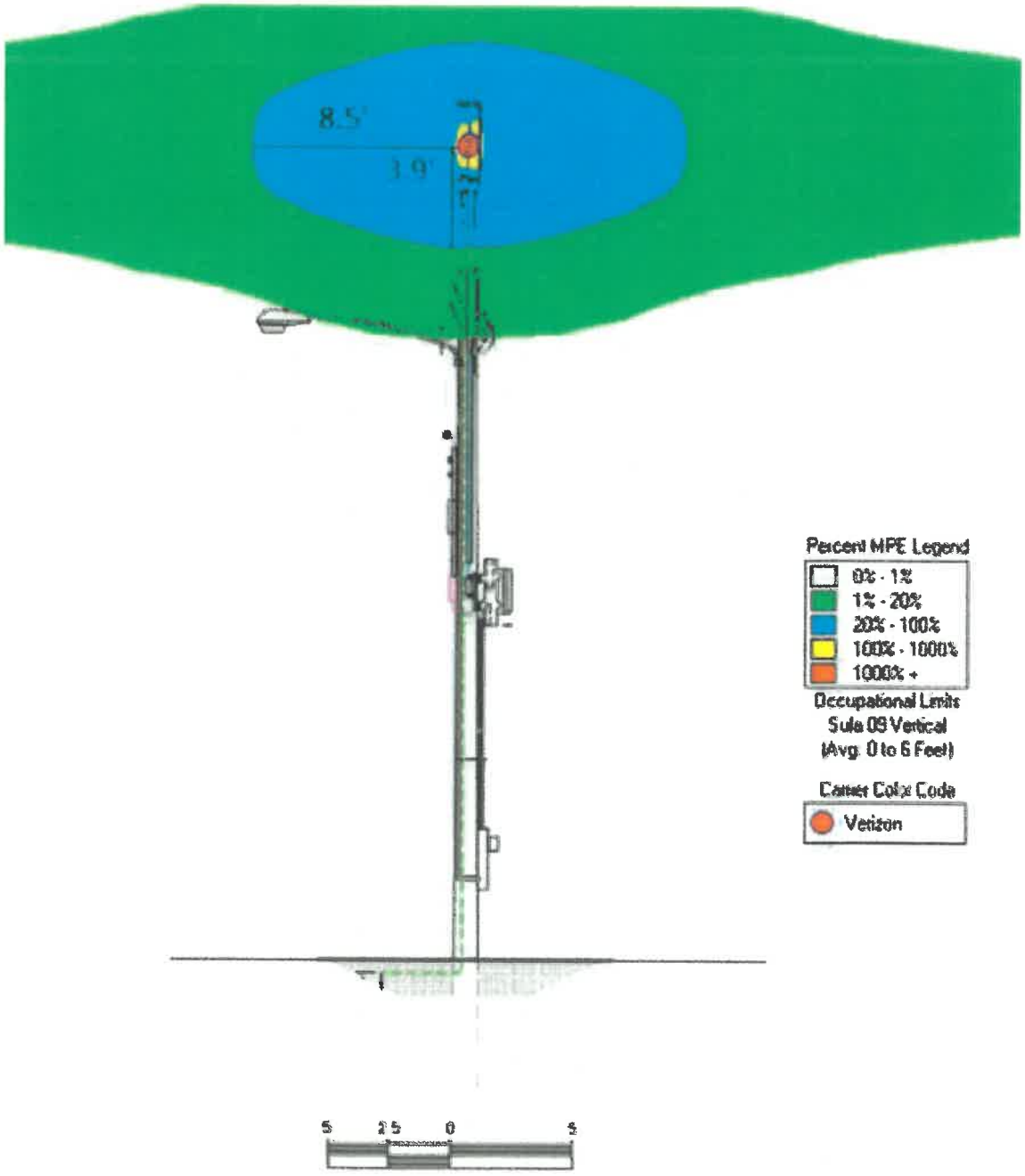
Contact Name	Contact Email	Contact Phone
Luis Teves	**Luis.Teves@VerizonWireles.com**	**508-479-3197**

Sincerely,

Michael Creamer
Sr Manager - RF Design
Verizon Wireless

Verizon Wireless (VZW) Radiofrequency (RF) Emissions Map

The following site layout represents a current snapshot in time of the predicted Verizon Wireless RF emissions from transmitting antennas on this facility. Contact Verizon Wireless should maintenance need to be performed in any non-green areas.



Color	% Occupational MPE	Instructions
	0 to 20	Safe In Relation to VZW. Contact Other Carriers Before Entering This Area
	20 to 100	Contact VZW Before Accessing This Area
	Greater Than 100	
	Greater Than 1000	

Property Owner Responsibilities (M.E.N.U)

RF exposure safety and the protection of every licensee's infrastructure are very important. Property owners and licensees have a shared responsibility in maintaining a safe and secure RF environment. Property owners can help in this significant endeavor by:

⇒ **M**aintaining all necessary wireless licensee contact information.

⇒ **E**nforcing restricted access (help maintain a Controlled Environment). **E**nsuring all building/maintenance personnel are aware that the potential for exposure exists, and follow all appropriate entry and safety procedures.

⇒ **N**otifying all licensees when any non-carrier requests access to any area with antennas **at least 24 hours in advance.**

⇒ **U**nderstanding that compliance with the FCC and OSHA can be achieved with RF Exposure levels above the applicable limit if the proper signage, physical/indicative barrier, and access restrictions are implemented. Commitment to compliance and willingness to cooperate are essential.

For General RF Safety & Awareness Questions

Verizon Wireless

E-mail: VZWRFCompliance@vzw.com

E-mail Subject: "ATTN: RF Compliance"

In The Event That Emergency Maintenance Is Required

24-Hour Network Operations Center:

1-800-264-6620

RF Safety & Awareness Training Contacts

Dtech Communications

(michelle@dtechcom.com.)

EBI Consulting

spenta@ebiconsulting.com

SiteSafe

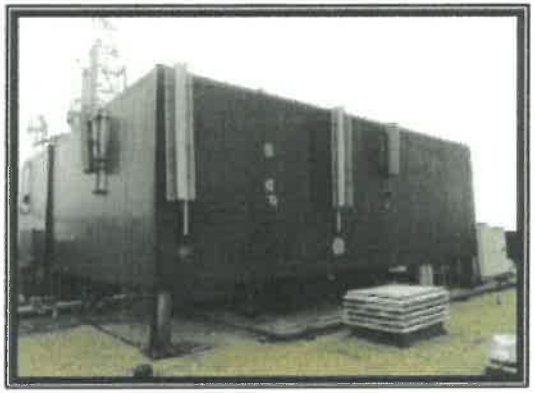
(cbagley@sitesafe.com)

Waterford Consultants

Sbaier-anderson@waterfordconsultants.com

Radio Frequency (RF) Emissions

SAFETY & AWARENESS



Federal Compliance Requirements

The Federal Communications Commission (FCC) has established safety guidelines relating to RF exposure from cell sites. The FCC developed those standards, known as Maximum Permissible Exposure (MPE) limits, in consultation with numerous other federal agencies, including the Environmental Protection Agency, the Food and Drug Administration, and the Occupational Safety and Health Administration. The standards were developed by expert scientists and engineers after extensive reviews of the scientific literature related to RF biological effects. The FCC explains that its standards incorporate prudent margins of safety. The following represents an overview of the most applicable information:

Classifications for Exposure Limits

Occupational

Persons are "exposed as a consequence of their *employment*" and are "*fully aware* of the potential for exposure and can *exercise control* over their exposure".

General Population

Any persons that "*may not be made fully aware* of the potential for exposure or *cannot exercise control* over their exposure".

Those in this category do not have RF Safety & Awareness Training.

Ensuring Compliance With FCC Guidelines

Areas or portions of any transmitter site may be susceptible to high power densities that could cause personnel exposures in excess of the FCC guidelines.

Wireless Licensees are required by law to implement the following:

- **Restrict access** (lock doors/ladders)
- **Post notification signage on every access point** to increase awareness of the potential for exposure BEFORE one enters an area with antennas.
- **Place additional notification signage and visual indicators** in an area with antennas (beyond an access point) where RF exposure levels may start to exceed the FCC's limits.

Compliance Materials

Notification Signage

(Notice) RF Guidelines - Informs viewer of the basic safety guidelines for working in an RF Environment.

Information– Provides relevant contact information for any questions or requests.

(Blue) Notice - Informs viewer that beyond the sign, RF exposure levels may exceed the General Population MPE limit but will remain below the Occupational MPE limit.

(Yellow) Caution - Informs viewer that beyond the sign, RF exposure levels may exceed the General Population and Occupational MPE limit.

(Red) Warning - Informs viewer that beyond the sign, RF exposure levels may substantially exceed the General Population and Occupational MPE limit.

Indicative Barriers

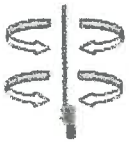
In addition to physical barriers such as locked doors or ladders, wireless licensees may also be required to place indicative barriers as a means of visually demarcating an area where RF levels are expected to exceed the FCC's limits. **Examples of Indicative Barrier Materials:** plastic chains, buckets, reflective paint or plastic cones, fiberglass fences, and poles mounted in cinderblocks.

Antenna Safety

Antenna Types

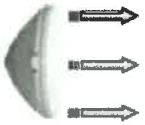
Yagi - Antenna that radiates energy in one direction. RF energy has a narrow beam. **Walk behind or under this antenna.**

Panel - Antenna that radiates energy in one direction. RF energy beam can range from narrow to very wide. **Walk behind this antenna. Stay out of the general direction that the antenna is pointing.**



Whip - Antenna that radiates energy equally in all directions. **Maintain as much distance as possible from this antenna.**

Microwave - Antenna that radiates energy in one direction. RF energy has a narrow beam. **Walk under or behind this antenna.**



When In An Environment With Antennas:

⇒ Maintain at least a 3-foot clearance from all antennas. A 10-foot separation distance is preferred.

⇒ Never touch an antenna. Assume all are active.

⇒ Read and obey ALL signs on an access point.

⇒ Read and obey ALL signs in the environment with antennas.

⇒ Never walk past an indicative barrier without first confirming transmitter inactivity.

⇒ Never walk in front of or stand in front of an antenna whenever possible. Keep walking.

⇒ Contact all wireless licensees **at least 24 hours in advance** of scheduled maintenance.

SALEM_SC12_MA

CLUSTER: SALEM MA

UTILITY POLE #2514 (N.G.)
389 LAFAYETTE STREET (MA ROUTE 114)
SALEM, MA 01970

SITE CONTROL POINT:
CENTER OF EXISTING UTILITY POLE #2514
N 42.502525° (42°-30'-09.09")
W 70.889010° (70°-53'-20.44")
APPROXIMATE GROUND ELEVATION = 40'± AMSL

LOCATION PLAN/AERIAL IMAGE (1 / L-1)
SCALE: 1" = 50'
0 50' 100' 150'

SHEET INDEX

DWG.	DESCRIPTION	REV.
L-1	LOCATION PLAN/AERIAL IMAGE	0
L-2	UTILITY POLE PHOTOGRAPH AND ELEVATION	0
L-3	ANTENNA & ANCILLARY EQUIPMENT DETAILS AND ONE-LINE DIAGRAM	0

verizon
"Because Better Matters"

CHAPPELL ENGINEERING ASSOCIATES, LLC
Civil · Structural · Land Surveying
R.K. EXECUTIVE CENTRE
201 BOSTON POST ROAD WEST, SUITE 101
MARLBOROUGH, MA 01752
(508) 481-7400
www.chappellengineering.com

REVISIONS

NO.	DESCRIPTION	DATE
0	ISSUED FOR REVIEW	10/30/19

SITE NAME:
SALEM_SC12_MA
UTILITY POLE #2514 (N.G.)
389 LAFAYETTE STREET
(MA ROUTE 114)
SALEM, MA 01970

DRAWING TITLE:
LOCATION PLAN/ AERIAL IMAGE

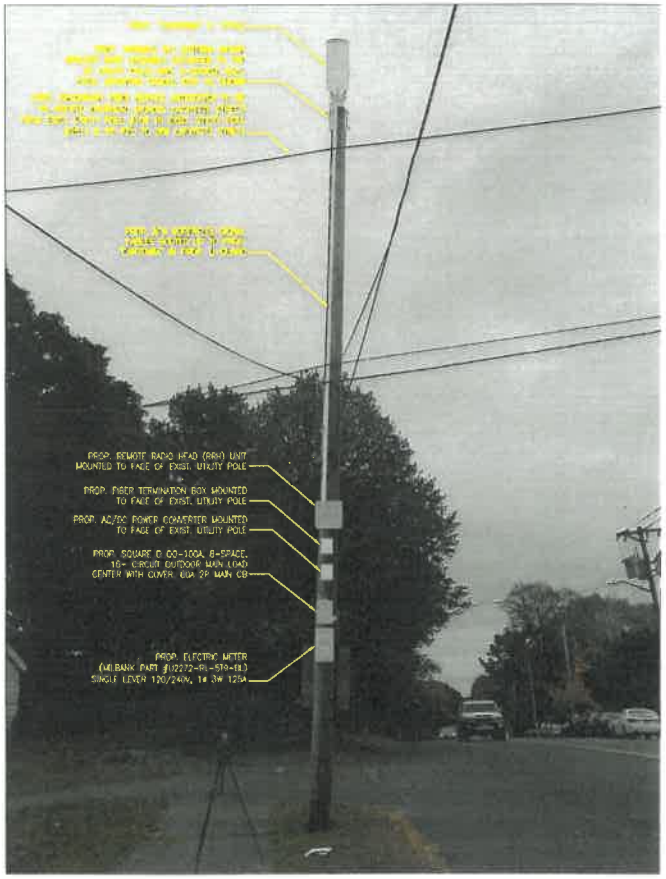
DRAWING NO:
L-1

LEASE EXHIBIT
NOT FOR CONSTRUCTION

SCALE:	DESIGNED BY: DRS	NEW LOCATION CODE:
AS SHOWN	DRAWN BY: CMC	
	CHECKED BY: DRS	368560
CER PROJECT NO.:	ORIGINAL ISSUE DATE:	
1480.309	10/30/19	

GENERAL NOTES:

1. THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE AND ARE INTENDED TO PROVIDE GENERAL INFORMATION REGARDING THE LOCATION, SIZE AND ORIENTATION OF THE PROPOSED WIRELESS TELECOMMUNICATIONS EQUIPMENT INSTALLATION ON THE UTILITY POLE AND ARE NOT SPECIFICALLY INTENDED FOR CONSTRUCTION.
2. VERIZON WIRELESS SHALL PLACE WEATHER RESISTANT PHENOLIC PLACARDS ON UTILITY POLE AND ANCILLARY EQUIPMENT TO IDENTIFY EQUIPMENT OWNERSHIP & CONTACT INFORMATION TO BE UTILIZED IN THE CASE OF EMERGENCY.
3. AN ANALYSIS OF THE CAPACITY OF THE EXISTING UTILITY POLE TO SUPPORT THE PROPOSED LOADING HAS NOT BEEN COMPLETED BY CHAPPELL ENGINEERING ASSOCIATES, LLC. AND THUS, THESE DRAWINGS ARE SUBJECT TO CHANGE PENDING THE OUTCOME OF A STRUCTURAL ANALYSIS (TO BE PERFORMED BY OTHERS).
4. VERIZON WIRELESS' GENERAL CONTRACTOR SHALL EXTEND EFFORTS TO ENSURE THAT ALL PROPOSED EQUIPMENT MEETS THE REQUIREMENTS OF THE EXISTING UTILITY COMPANY OR COMPANIES CURRENTLY OCCUPYING THE UTILITY POLE AND THE 2017 NATIONAL ELECTRICAL SAFETY CODE.

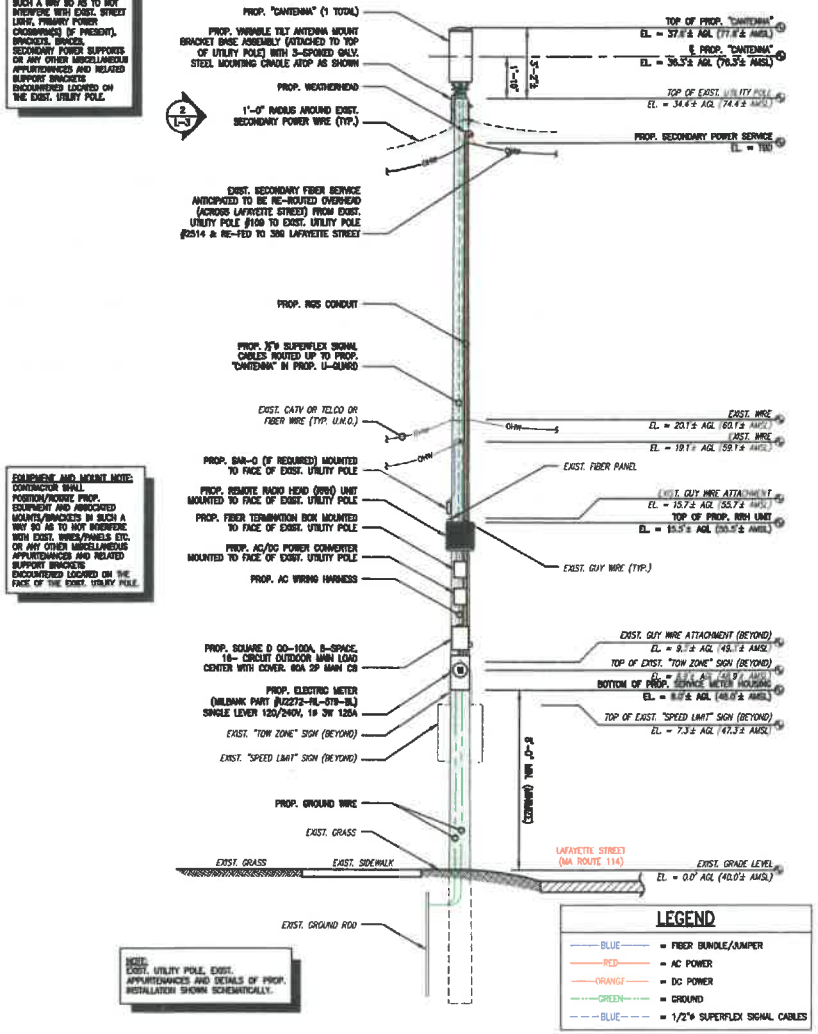


UTILITY POLE #2514 PHOTOGRAPH (EXISTING CONDITIONS/SCHEMATIC RENDERING) (1 / L-2)

SCALE: NO SCALE

ANTENNA AND MOUNT NOTE: CONTRACTOR SHALL POSITION/ROUTE PROP. ANTENNA MOUNT/BRACKET IN SUCH A WAY SO AS TO NOT INTERFERE WITH EXIST. STREET LIGHT, PRIMARY POWER CROSSARM(S) (IF PRESENT), BRACKET, BRACES, SECONDARY POWER SUPPORTS OR ANY OTHER MISCELLANEOUS APPURTENANCES AND RELATED SUPPORT BRACKETS ENCOUNTERED LOCATED ON THE EXIST. UTILITY POLE.

EQUIPMENT AND MOUNT NOTE: CONTRACTOR SHALL POSITION/ROUTE PROP. EQUIPMENT AND ASSOCIATED MOUNTS/BRACKETS IN SUCH A WAY SO AS TO NOT INTERFERE WITH EXIST. WIRES/PANELS ETC. OR ANY OTHER MISCELLANEOUS APPURTENANCES AND RELATED SUPPORT BRACKETS ENCOUNTERED LOCATED ON THE FACE OF THE EXIST. UTILITY POLE.



LEGEND

- BLUE = FIBER BUNDLE/JUMPER
- RED = AC POWER
- ORANGE = DC POWER
- GREEN = GROUND
- BLUE = 1/2"ø SUPERFLEX SIGNAL CABLES

NOTE: EXIST. UTILITY POLE, EXIST. APPURTENANCES AND DETAILS OF PROP. INSTALLATION SHOWN SCHEMATICALLY.

UTILITY POLE #2514 ELEVATION (PROPOSED CONDITIONS) (2 / L-2)

SCALE: 3/16" = 1'-0"

0 5'-4" 10'-8" 16'-0"

verizon

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MARLBOROUGH, MA 01752
(508) 481-7400
www.choppellengineering.com

REVISIONS

NO.	DESCRIPTION	DATE
0	ISSUED FOR REVIEW	10/30/19

SITE NAME:

SALEM_SC12_MA

UTILITY POLE #2514 (N.G.)
389 LAFAYETTE STREET
(MA ROUTE 114)
SALEM, MA 01970

DRAWING TITLE:

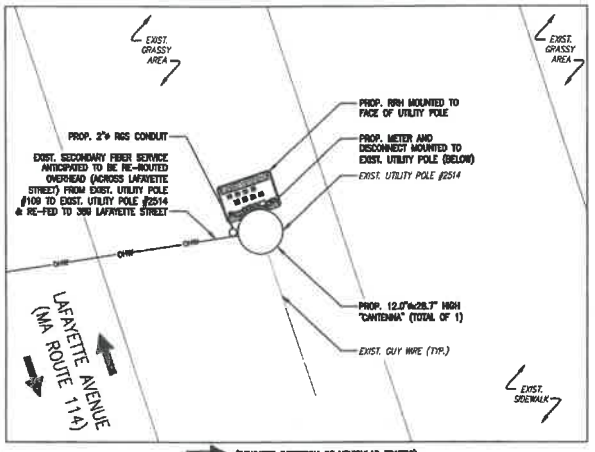
UTILITY POLE PHOTOGRAPH AND ELEVATION

DRAWING NO:

L-2

LEASE EXHIBIT
NOT FOR CONSTRUCTION

SCALE:	DESIGNED BY: DRS	NEW LOCATION CODE:
AS SHOWN	DRAWN BY: DRS	386580
	CHECKED BY: DPC	
CEA PROJECT NO.:	ORIGINAL ISSUE DATE:	
1480.309	10/30/19	



EQUIPMENT AND ANTENNA ORIENTATION PLAN

1 L-3

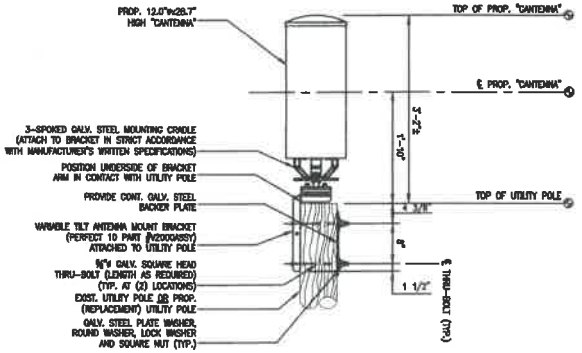
SCALE: 3/8" = 1'-0"

0 2'-8" 5'-4" 8'-0"

NOTES:
1.) CONFIRM DOWNTILT REQUIREMENTS (IF ANY) AND AZIMUTH SPECIFICATIONS WITH VERIZON WIRELESS RF ENGINEER AT TIME OF CONSTRUCTION.

2.) MOUNT SHALL BE INSTALLED IN SUCH A WAY TO ENSURE PLUMB INSTALLATION OF "CANTENNA".

3.) UTILITY POLE APPURTENANCES NOT SHOWN FOR CLARITY.



"CANTENNA" MOUNT DETAIL

2 L-3

SCALE: 1/2" = 1'-0"

SMALL CELL "CANTENNA"	
DIMENSIONS:	12.0"ø x 28.7"
WEIGHT:	28.7 LBS
QUANTITY:	TOTAL OF 1

TYPICAL "CANTENNA" SPECIFICATIONS

3 L-3

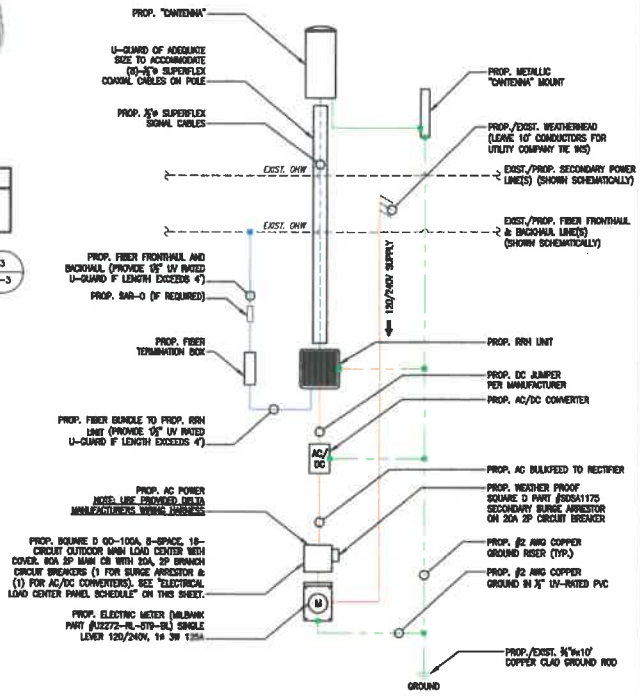
SCALE: N.T.S.

PCS-AWS (1900/2100 MHz) REMOTE RADIO HEAD UNIT	
DIMENSIONS:	15.0"H x 15.0"W x 10.0"D
WEIGHT:	84.4 LBS
QUANTITY:	TOTAL OF 1

TYPICAL REMOTE RADIO HEAD (RRH) UNIT DIMENSIONS

4 L-3

SCALE: N.T.S.



ONE-LINE DIAGRAM NOTES:
1) PROVIDE WEATHER TIGHT SEAL CONNECTORS ON ALL CONNECTIONS EACH SIDE OF ENCLOSURE HOUSING.

2) COORDINATE ANY FURTHER MISCELLANEOUS WIRING AND CONDUIT REQUIREMENTS WITH VERIZON WIRELESS AND ELECTRIC COMPANY.

LEGEND

- BLUE = FIBER BUNDLE/JUMPER
- RED = AC POWER
- ORANGE = DC POWER
- GREEN = GROUND
- BLUE = 1/2"ø SUPERFLEX SIGNAL CABLES

FIBER/ELECTRICAL ONE-LINE DIAGRAM

5 L-3

SCALE: N.T.S.

verizon

* Because Better Matters *

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(508) 481-7400
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REVISIONS

NO.	DESCRIPTION	DATE
0	ISSUED FOR REVIEW	10/30/19

SITE NAME:

SALEM_SC12_MA

UTILITY POLE #2514 (N.G.)
389 LAFAYETTE STREET
(MA ROUTE 114)
SALEM, MA 01970

DRAWING TITLE:

ANTENNA & ANCILLARY EQUIPMENT DETAILS AND ONE-LINE DIAGRAM

DRAWING NO:

L-3

LEASE EXHIBIT
NOT FOR CONSTRUCTION

SCALE:	DESIGNED BY: GRS	NEW LOCATION CODE:
AS SHOWN	DRAWN BY: CAC	
	CHECKED BY: GRS	388580
CEA PROJECT NO.:	ORIGINAL ISSUE DATE:	
1460.308	10/30/19	

SALEM-SCH_MA

ROUTING SLIP

Telecommunications Attachments in the Public Right of Way

Pursuant to the Code of Ordinances, Sections 12-86 through 12-200, each applicant who seeks access to the public right of way for telecommunications purposes must submit a petition and plans along with a $500 application fee to the Electrical Department. Once the City Electrician has signed off, please circulate to the Departments listed on the reverse side of this Routing Slip for signature and return it to the City Clerk's Office prior to the petition being placed on the City Council Agenda for a grant of location pursuant to MGL Chapter 166, Section 22.

Right of Way Location Requested: 8 LORING AVE / 42.504814', 70.891310'

Application Fee Received: Yes ✓ **Check No.** 6477 **Date:** 2/27/20

City Electrician Approval: John J Lisi

BUSINESS NAME

Corporate name: VERIZON WIRELESS

d/b/a:

Address: 118 FLANDERS Rd. 3RD FLOOR WESTBOROUGH, MA. 01581 **Tele. #**

CONTACT: BRYAN SARCHI / AGENT w/ AIROSMITH DEVELOPMENT

Street: 318 WEST AVE **Tele. #** 480-734-4970

City: SARATOGA SPRINGS **State:** NY **Zip:** 12866

Email Address: BSARCHI@AIROSMITHDEVELOPMENT.COM

Pole Ownership

✓ **To be attached to utility-owned pole** ___ **To be attached to City-owned pole**

✓ **Pole Attachment Agreement attached*** ___ **Pole Attachment Agreement to follow***

***All grants of location for telecommunications attachments to poles are conditioned upon evidence of a valid pole attachment agreement.**

Conduits

Will the attachment also require a conduit? ✓ **Yes** ___ **No**

TO ALL CITY DEPARTMENTS: By signing this slip you are only acknowledging that the applicant has made your department aware of its plans. All grants of location will be conditioned upon compliance with all departmental requirements and require a vote of the City Council after a public hearing. Please attach comments on separate sheet.

note this Cover Letter 3/11/2020
Planning Department DATE
City Hall Annex, 98 Washington Street

Please see comment letter 3/10/20
Salem Historical Commission DATE
City Hall Annex, 98 Washington Street

3/30/2020
Legal Department DATE
City Hall, 93 Washington Street

Please see memo 3/30/2020
Engineering Department DATE
City Hall Annex, 98 Washington Street

3/27/2020
Office of Information Technology DATE
29 Highland Avenue

RETURN ROUTING SLIP, ANY COMMENTS, PETITION, PLANS, ABUTTER LABELS, AND PROPOSED ORDER TO CITY CLERK'S OFFICE, CITY HALL, 93 WASHINGTON STREET WHEN COMPLETE SO THAT IT MAY BE PLACED ON THE COUNCIL'S AGENDA.

PETITION FOR SMALL CELL POLE ATTACHMENT

Under MGL Chapter 166, Section 22.

To the Honorable City Council of Salem, Massachusetts

Cellco Partnership d/b/a Verizon Wireless hereby respectfully requests permission to locate a small cell wireless antenna and necessary sustaining and protecting fixtures, on an existing utility pole #3308-1, located in the right of way adjacent to 8 Loring Avenue in the City of Salem, as more particularly shown on the plans attached hereto.

Wherefore it prays that after due notice and hearing as provided by law, it be granted permission to install and maintain a small cell wireless antenna including the necessary sustaining and protecting fixtures in accordance with the plan filed herewith marked SALEM_SC11_MA.

The following are the public ways or part of ways along which the above referred attachment may be installed thereon:

Cellco Partnership d/b/a Verizon Wireless proposes to attach equipment to an existing utility pole #3308-1, located in the right of way near the property line of 8 Loring Avenue with location as shown on the plan attached.

PETITIONER:

Cellco Partnership d/b/a
Verizon Wireless

By _____

Bryan Sarchi
Airosmith Development
318 West Avenue
Saratoga Springs, NY. 12866
480-734-4970

Kimberley Driscoll
Mayor

David H. Knowlton, P.E.
City Engineer/DPS Director

CITY OF SALEM

Engineering Department

98 Washington Street, 2nd floor
Salem, MA 01970
Phone: (978) 619-5673

MEMORANDUM

To: Victoria Caldwell, Assistance City Solicitor
From: Deborah L. Duhamel, PE, Assistant City Engineer
Subject: Verizon – Request for Grant of Location
Date: March 30, 2020

I have reviewed the request from Verizon Wireless for the installation of "cantenna" cell attachments and ancillary equipment to existing telephone poles at the following locations:

13 Washington Square/1 Brown Street
8 Loring Ave
389 Lafayette Street
28 Raymond Road
198 Loring Ave
201 Derby Street

Engineering requests the following conditions:

(1) Provide detailed construction schedule for all phases at each site.
(2) Provide traffic management plan for each site/phase, showing at a minimum, where equipment will be and how traffic and pedestrian travel will be maintained, if parking spots will be needed, and if a detail will be required.
(3) Coordinate with DPS (978-744-3302) prior to installing grounding rod to confirm City utilities and property services are clear of rod location.
(4) Repair any damage caused by work to the satisfaction of the City Engineer.

KIMBERLEY DRISCOLL
MAYOR

TOM DANIEL, AICP
DIRECTOR

CITY OF SALEM, MASSACHUSETTS
DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT

98 WASHINGTON STREET ♦ SALEM, MASSACHUSETTS 01970
TELE: 978-619-5685 ♦ FAX: 978-740-0404

MEMO

To: Brennan Corriston, Staff Planner and Victoria Caldwell, Assistance City Solicitor
From: Patti Kelleher, Preservation Planner PK
Date: March 10, 2020
RE: Request for Grant of Location for Cell Antenna Attachment

I have reviewed the request from Verizon Wireless for the installation of "cantenna" cell attachments and ancillary equipment to existing telephone poles on Washington Square, Loring Avenue, Lafayette Street, Raymond Road and Derby Street. As indicated on the submitted Utility Pole Photograph and Elevation drawings for each property, the "cantenna" (a 28.7" can with a 12 diameter) would extend 3' from the top of the telephone pole and would include five (5) additional attachments and a covered cable on the side of each affected telephone pole (with the lowest attachment located 8' above sidewalk). Several of these attachments are significant in size, including the Remote Radio Head Unit (RRHU), which is 15" tall x 15" wide x 10" deep. A visual survey of existing cell attachments in the city indicates that the Verizon proposal includes significantly more pieces of equipment than other attachments to City poles. I recommend that the City ask Verizon to reduce or consolidate the number of attachments and place them higher on the pole. If the number of attachments cannot be reduced or consolidated, I recommend that the attachments be placed closer to the top of the telephone pole and painted to match pole color in order to reduce the visual clutter at the pedestrian view.

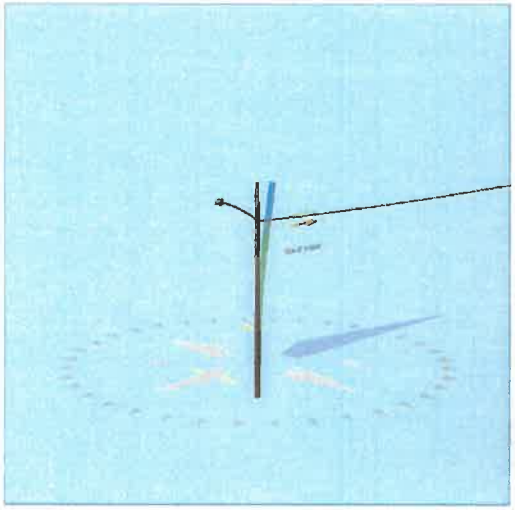
As part of the review for cell attachments, a determination must be made that the location of the attachments will not impact the city's historic resources. Therefore, I have reviewed the submitted plans and offer the following comments:

389 Lafayette Street, 8 Loring Avenue, 28 Raymond Road and 198 Loring Avenue
None of these properties are designated in a local or National Register historic district and only 8 Loring Avenue has been inventoried (SAL.4390). Therefore, I find that the proposed attachments will not impact historic resources.

201 Derby Street
While not in a local or National Register historic district, this pole is located directly adjacent to the entrance to the Derby Street Local Historic District as well at the entrance to the Salem Maritime National Park. Moving it closer to the intersection of Derby, Hawthorne Boulevard and Congress Street would be preferable but utilities in this area are buried and the only poles that exist are metal light poles.

13 Washington Square/1 Brown Street
The proposed attachment in front of 13 Washington Square/1 Brown Street is located in the Washington Square Local Historic District and the Salem Common National Register District. The building at 1 Brown Street (SAL.2459) was recently restored by the Peabody Essex Museum, which is also undertaking extensive landscape restoration on their property adjacent to this building. In addition, Brown Street is a narrow residential street and the proposed design of the installation indicates that the cantenna will be mounted onto a bracket that overhangs the street. The ancillary equipment and cable will be located on the side of the telephone pole and will add visual clutter to an historic streetscape.

Pole Num:	3308-1	Pole Length / Class:	40 / 3	Code:	NESC	Structure Type:	Deadend
Aux Data 1	Unset	Species:	SOUTHERN PINE	NESC Rule:	Rule 250B	Status	Unguyed
Aux Data 2	Unset	Setting Depth (ft):	6.20	Construction Grade:	C	Pole Strength Factor:	0.85
Aux Data 3	Unset	G/L Circumference (in):	38.00	Loading District:	Heavy	Transverse Wind LF:	1.75
Aux Data 4	Unset	G/L Fiber Stress (psi):	8,000	Ice Thickness (in):	0.50	Wire Tension LF:	1.30
Aux Data 5	Unset	Allowable Stress (psi):	6,800	Wind Speed (mph):	39.53	Vertical LF:	1.90
Aux Data 6	Unset	Fiber Stress Ht. Reduc:	No	Wind Pressure (psf):	4.00		
Latitude:	0.000000 Deg	Longitude:	0.000000 Deg			Elevation:	0 Feet



Pole Capacity Utilization (%)		Height (ft)	Wind Angle (deg)
Maximum	33.9	0.0	0.0
Groundline	33.9	0.0	0.0
Vertical	2.6	16.7	0.0

Pole Moments (ft-lb)		Load Angle (deg)	Wind Angle (deg)
Max Cap Util	33,055	0.2	0.0
Groundline	33,055	0.2	0.0
GL Allowable	98,453		

Groundline Load Summary - Reporting Angle Mode: Load - Reporting Angle: 0.2°

	Shear Load* (lbs)	Applied Load (%)	Bending Moment (ft-lb)	Applied Moment (%)	Pole Capacity (%)	Bending Stress (+/- psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Pole Capacity (%)
Powers	1,112	83.8	30,003	90.8	30.5	2,070	201	2	2,071	30.5
Pole	191	14.4	3,270	9.9	3.3	226	2,021	18	243	3.6
Streetlights	24	1.8	-226	-0.7	-0.2	-16	142	1	-14	-0.2
Insulators	0	0.0	7	0.0	0.0	1	2	0	0	0.0
Pole Load	1,327	100.0	33,055	100.0	33.6	2,280	2,367	21	2,301	33.8
Pole Reserve Capacity			65,398		66.4	4,520			4,499	66.2

Load Summary by Owner - Reporting Angle Mode: Load - Reporting Angle: 0.2°

	Shear Load* (lbs)	Applied Load (%)	Bending Moment (ft-lb)	Applied Moment (%)	Pole Capacity (%)	Bending Stress (+/- psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Pole Capacity (%)
NGrid	1,112	83.8	**30,010**	90.8	**30.5**	**2,070**	203	2	**2,072**	**30.5**
Pole	191	14.4	**3,270**	9.9	**3.3**	**226**	2,021	18	**243**	**3.6**
Municipal	24	1.8	**-226**	-0.7	**-0.2**	**-16**	142	1	**-14**	**-0.2**
Totals:	1,327	100.0	**33,055**	100.0	**33.6**	**2,280**	2,367	21	**2,301**	**33.8**

Detailed Load Components:

Power		Owner	Height (ft)	Horiz. Offset (in)	Cable Diameter (in)	Sag at Max Temp (ft)	Cable Weight (lbs/ft)	Lead/Span Length (ft)	Span Angle (deg)	Wire Length (ft)	Tension (lbs)	Tension Moment* (ft-lb)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Secondary	TRIPLEX 2 AWG	NGrid	26.96	6.33	0.8060	2.68	0.248	200.0	0.0	200.0	855	29,965	0	0	29,966
											Totals:	**29,965**	**0**	**0**	**29,966**

Streetlight		Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Height (in)	Unit Depth (in)	Unit Diameter (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
General	Streetlight - 8 ft. Arm	Municipal	27.23	4.06	180.0	180.0	75.00	48.00	20.00	3.00	96.00	-871	646	-225
											Totals:	**-871**	**646**	**-225**

Insulator		Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Diameter (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Spool	Spool Insulator	NGrid	26.96	0.00	90.0	0.0	1.00	2.50	2.12	0	7	7
									Totals:	**0**	**7**	**7**

Pole Buckling

Buckling Constant	Buckling Column Height* (ft)	Buckling Section Height (% Buckling Col. Hgt.)	Buckling Section Diameter (in)	Minimum Buckling Diameter at GL (in)	Diameter at Tip (in)	Diameter at GL (in)	Modulus of Elasticity (psi)	Pole Density (pcf)	Ice Density (pcf)	Pole Tip Height (ft)	Buckling Load Capacity at Height (lbs)	Buckling Load Applied at Height (lbs)	Buckling Load Factor of Safety
2.00	16.70	32.93	11.32	4.88	7.32	12.10	2.13e+6	60.00	57.00	33.80	89,629	**910.25**	**38.46**

verizon

2/7/202020
To: City of Salem
Transmitted via email
RE: Verizon Wireless Small Cell Sites

Dear City of Salem,

Verizon is installing additional wireless telecommunications facilities in order to meet the growing demand for Verizon Wireless service by residents, businesses, visitors, and emergency responders.

To ensure general public safety, it is important that you contact Verizon Wireless personnel at least 24 hours in advance should general maintenance need to be performed in areas of potential concern as marked on the next page of this document. This is required to comply with FCC guidelines and ensure the environment is safe for general maintenance workers who may require RF Safety & Awareness training. With notification, Verizon Wireless is able to evaluate appropriate actions needed relating to the antennas and proximity of the work location.

Thank you for your inquiry. Verizon has a process to deactivate power on small cells (regardless of whether the small cell is 4G or 5G) while work is being done on the pole (including joint use poles). The information needed to have a small cell powered down for work to occur on the pole (including contact numbers and pole identifiers) is provided at a safe distance from the small cell on the pole itself. Please contact Verizon Wireless personnel at least 24 hours in advance if you need to perform maintenance at that site. If you have any additional questions, our point of contact in that area is Luis Teves.

You also expressed concerns about the health effects of RF emissions from Verizon's network equipment. The Federal Communications Commission (FCC) has developed safety rules for human exposure to RF emissions in consultation with numerous other federal agencies, including the Environmental Protection Agency, the Food and Drug Administration, and the Occupational Safety and Health Administration. These rules can be found at 47 C.F.R § 1.1310. No matter which generation of technology we use, all Verizon equipment must comply with these safety requirements.

The FCC supported and adopted the standards after examining the RF research that scientists in the US and around the world conducted for decades. The research continues to this day, and agencies continue to monitor it. Based on that research, federal agencies have concluded that equipment that has been deployed in a manner that complies with the safety standards poses no known health risks. You can obtain further information about the safety of RF emissions from cell towers on the FCC's website, which you can access via this link: http://www.fcc.gov/oet/rfsafety/rf-faqs.html.

Thank you for reaching out to us regarding your concerns. We appreciate the chance to explain our activities regarding the wireless facility at issue. Questions related to compliance with federal regulations should be directed to VZWRFCompliance@verizonwireless.com. Please contact your local Verizon Wireless resource below if you have any additional questions.

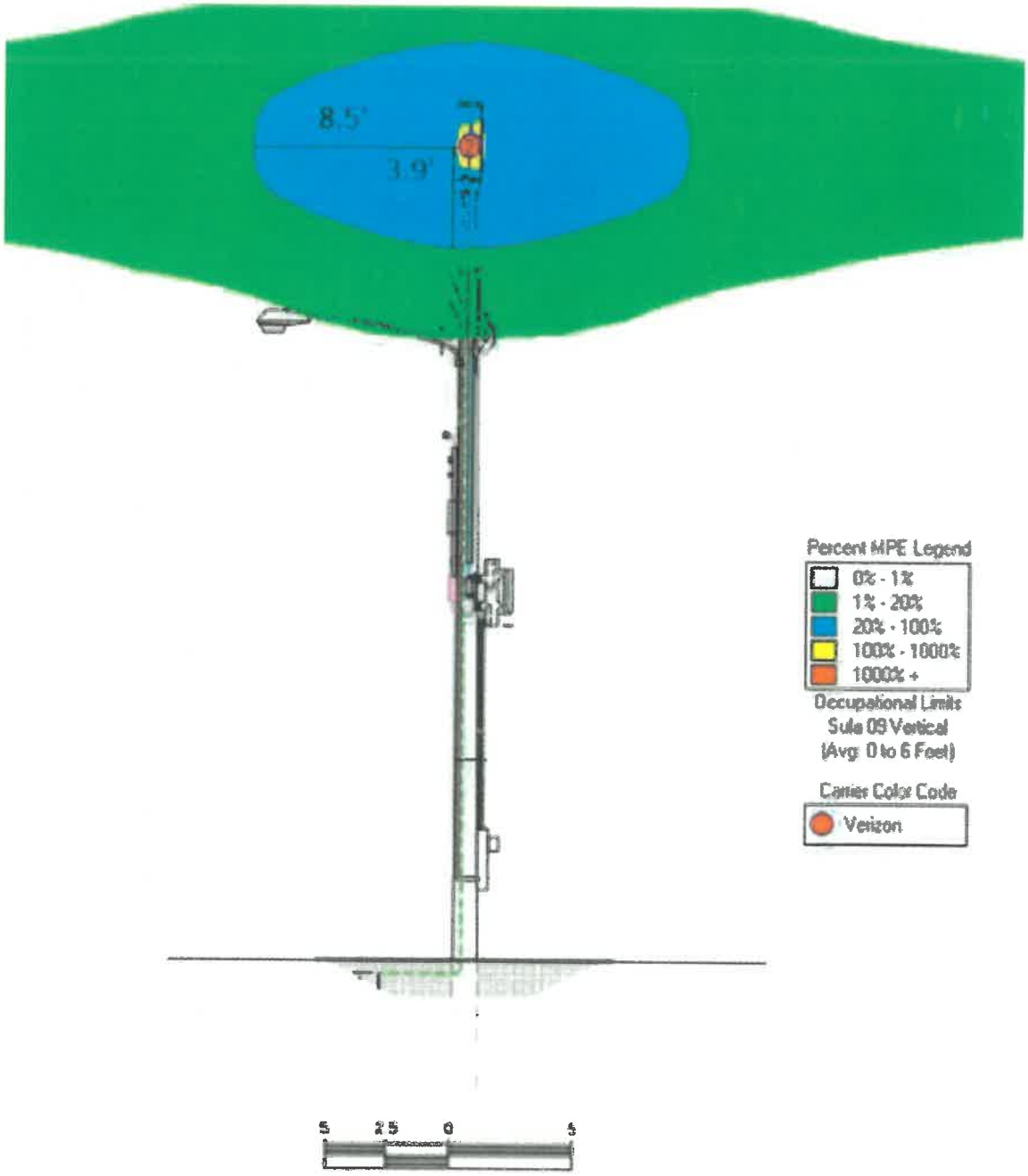
Contact Name	Contact Email	Contact Phone
Luis Teves	**Luis.Teves@VerizonWireles.com**	**508-479-3197**

Sincerely,

Michael Creamer
Sr Manager - RF Design
Verizon Wireless

Verizon Wireless (VZW) Radiofrequency (RF) Emissions Map

The following site layout represents a current snapshot in time of the predicted Verizon Wireless RF emissions from transmitting antennas on this facility. Contact Verizon Wireless should maintenance need to be performed in any non-green areas.



Color	% Occupational MPE	Instructions
	0 to 20	Safe In Relation to VZW. Contact Other Carriers Before Entering This Area
	20 to 100	Contact VZW Before Accessing This Area
	Greater Than 100	
	Greater Than 1000	

Property Owner Responsibilities (M.E.N.U)

RF exposure safety and the protection of every licensee's infrastructure are very important. Property owners and licensees have a shared responsibility in maintaining a safe and secure RF environment. Property owners can help in this significant endeavor by:

⇒ **M**aintaining all necessary wireless licensee contact information.

⇒ **E**nforcing restricted access (help maintain a Controlled Environment). **E**nsuring all building/maintenance personnel are aware that the potential for exposure exists, and follow all appropriate entry and safety procedures.

⇒ **N**otifying all licensees when any non-carrier requests access to any area with antennas **at least 24 hours in advance.**

⇒ **U**nderstanding that compliance with the FCC and OSHA can be achieved with RF Exposure levels above the applicable limit if the proper signage, physical/indicative barrier, and access restrictions are implemented. Commitment to compliance and willingness to cooperate are essential.

For General RF Safety & Awareness Questions
Verizon Wireless
E-mail: VZWRFCompliance@vzw.com
E-mail Subject: "ATTN: RF Compliance"

In The Event That Emergency Maintenance Is Required
24-Hour Network Operations Center:
1-800-264-6620

RF Safety & Awareness Training Contacts

Dtech Communications
(michelle@dtechcom.com.)

EBI Consulting
spenta@ebiconsulting.com

SiteSafe
(cbagley@sitesafe.com)

Waterford Consultants
Sbaier-anderson@waterfordconsultants.com

Radio Frequency (RF) Emissions

SAFETY & AWARENESS

Federal Compliance Requirements

The Federal Communications Commission (FCC) has established safety guidelines relating to RF exposure from cell sites. The FCC developed those standards, known as Maximum Permissible Exposure (MPE) limits, in consultation with numerous other federal agencies, including the Environmental Protection Agency, the Food and Drug Administration, and the Occupational Safety and Health Administration. The standards were developed by expert scientists and engineers after extensive reviews of the scientific literature related to RF biological effects. The FCC explains that its standards incorporate prudent margins of safety. The following represents an overview of the most applicable information:

Classifications for Exposure Limits

Occupational	General Population
Persons are "exposed as a consequence of their *employment*" and are "*fully aware* of the potential for exposure and can *exercise control* over their exposure".	Any persons that "*may not be made fully aware* of the potential for exposure or *cannot exercise control* over their exposure". Those in this category do not have RF Safety & Awareness Training.

Ensuring Compliance With FCC Guidelines

Areas or portions of any transmitter site may be susceptible to high power densities that could cause personnel exposures in excess of the FCC guidelines.

Wireless Licensees are required by law to implement the following:

- **Restrict access** (lock doors/ladders)
- **Post notification signage on every access point** to increase awareness of the potential for exposure BEFORE one enters an area with antennas.
- **Place additional notification signage and visual indicators** in an area with antennas (beyond an access point) where RF exposure levels may start to exceed the FCC's limits.

Compliance Materials

Notification Signage

(Notice) RF Guidelines - Informs viewer of the basic safety guidelines for working in an RF Environment.

Information - Provides relevant contact information for any questions or requests.

(Blue) Notice - Informs viewer that beyond the sign, RF exposure levels may exceed the General Population MPE limit but will remain below the Occupational MPE limit.

(Yellow) Caution - Informs viewer that beyond the sign, RF exposure levels may exceed the General Population and Occupational MPE limit.

(Red) Warning - Informs viewer that beyond the sign, RF exposure levels may substantially exceed the General Population and Occupational MPE limit.

Indicative Barriers

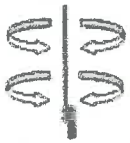
In addition to physical barriers such as locked doors or ladders, wireless licensees may also be required to place indicative barriers as a means of visually demarcating an area where RF levels are expected to exceed the FCC's limits. **Examples of Indicative Barrier Materials:** plastic chains, buckets, reflective paint or plastic cones, fiberglass fences, and poles mounted in cinderblocks.

Antenna Safety

Antenna Types

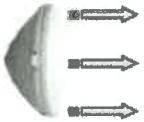
Yagi - Antenna that radiates energy in one direction. RF energy has a narrow beam. **Walk behind or under this antenna.**

Panel - Antenna that radiates energy in one direction. RF energy beam can range from narrow to very wide. **Walk behind this antenna. Stay out of the general direction that the antenna is pointing.**



Whip - Antenna that radiates energy equally in all directions. **Maintain as much distance as possible from this antenna.**

Microwave - Antenna that radiates energy in one direction. RF energy has a narrow beam. **Walk under or behind this antenna.**



When In An Environment With Antennas:

⇒ Maintain at least a 3-foot clearance from all antennas. A 10-foot separation distance is preferred.

⇒ Never touch an antenna. Assume all are active.

⇒ Read and obey ALL signs on an access point.

⇒ Read and obey ALL signs in the environment with antennas.

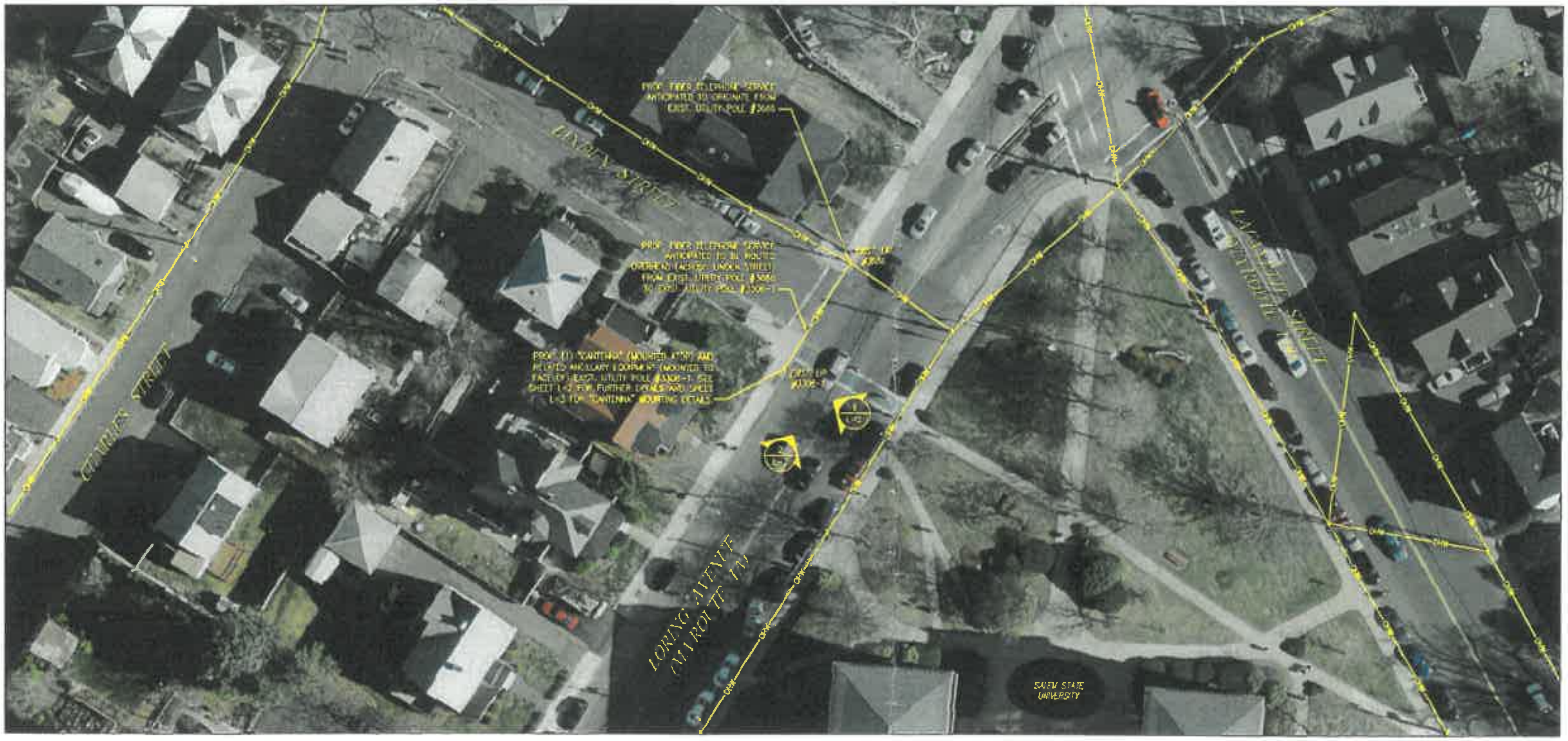
⇒ Never walk past an indicative barrier without first confirming transmitter inactivity.

⇒ Never walk in front of or stand in front of an antenna whenever possible. Keep walking.

⇒ Contact all wireless licensees **at least 24 hours in advance** of scheduled maintenance.

SALEM_SC11_MA
CLUSTER: SALEM MA

UTILITY POLE #3308-1 (N.G.)
8 LORING AVENUE (MA ROUTE 1A)
SALEM, MA 01970



SITE CONTROL POINT:
CENTER OF EXISTING UTILITY POLE #3308-1
N 42.504814° (42°-30'-17.33")
W 70.891310° (70°-53'-28.72")
APPROXIMATE GROUND ELEVATION – 40'± AMSL

LOCATION PLAN/AERIAL IMAGE (1 / L-1)
SCALE: 1" = 50'
0 50' 100' 150'

SHEET INDEX

DWG.	DESCRIPTION	REV.
L-1	LOCATION PLAN/AERIAL IMAGE	0
L-2	UTILITY POLE PHOTOGRAPH AND ELEVATION	0
L-3	ANTENNA & ANCILLARY EQUIPMENT DETAILS AND ONE-LINE DIAGRAM	0

verizon
"Because Better Matters"

CHAPPELL ENGINEERING ASSOCIATES, LLC
Civil · Structural · Land Surveying
R.K. EXECUTIVE CENTRE
201 BOSTON POST ROAD WEST, SUITE 101
MARLBOROUGH, MA 01752
(508) 481-7400
www.chappellengineering.com

REVISIONS

NO.	DESCRIPTION	DATE
0	ISSUED FOR REVIEW	10/30/19

SITE NAME:
SALEM_SC11_MA
UTILITY POLE #3308-1 (N.G.)
8 LORING AVENUE
(MA ROUTE 1A)
SALEM, MA 01970

DRAWING TITLE:
LOCATION PLAN/
AERIAL IMAGE

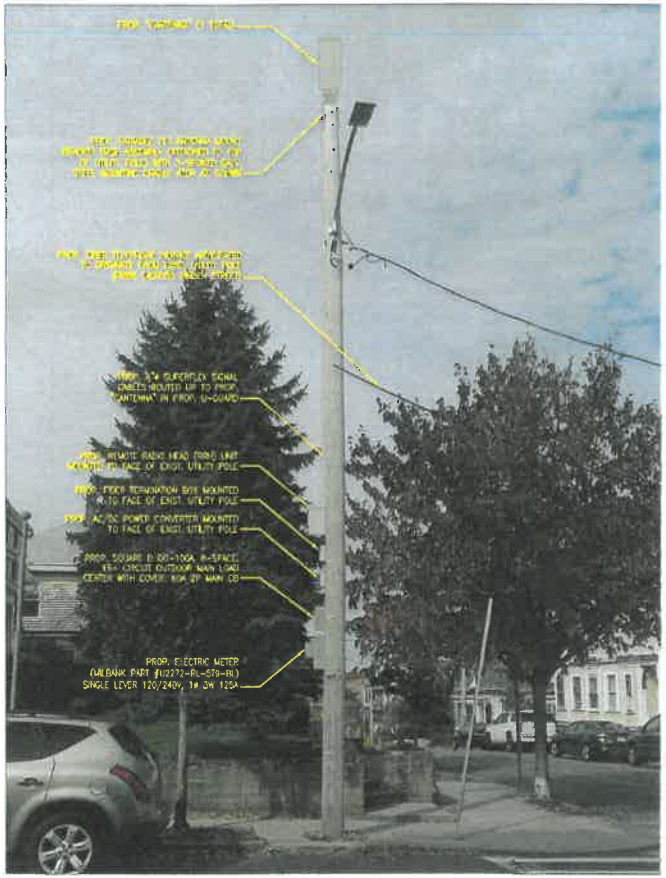
DRAWING NO:
L-1

LEASE EXHIBIT
NOT FOR CONSTRUCTION

SCALE: AS SHOWN
CEA PROJECT NO: 1480.308
ORIGINAL ISSUE DATE: 10/30/19
NEW LOCATION CODE: 586011

GENERAL NOTES:

1. THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE AND ARE INTENDED TO PROVIDE GENERAL INFORMATION REGARDING THE LOCATION, SIZE AND ORIENTATION OF THE PROPOSED WIRELESS TELECOMMUNICATIONS EQUIPMENT INSTALLATION ON THE UTILITY POLE AND ARE NOT SPECIFICALLY INTENDED FOR CONSTRUCTION.
2. VERIZON WIRELESS SHALL PLACE WEATHER RESISTANT PHENOLIC PLACARDS ON UTILITY POLE AND ANCILLARY EQUIPMENT TO IDENTIFY EQUIPMENT OWNERSHIP & CONTACT INFORMATION TO BE UTILIZED IN THE CASE OF EMERGENCY.
3. AN ANALYSIS OF THE CAPACITY OF THE EXISTING UTILITY POLE TO SUPPORT THE PROPOSED LOADING HAS NOT BEEN COMPLETED BY CHAPPELL ENGINEERING ASSOCIATES, LLC. AND THUS, THESE DRAWINGS ARE SUBJECT TO CHANGE PENDING THE OUTCOME OF A STRUCTURAL ANALYSIS (TO BE PERFORMED BY OTHERS).
4. VERIZON WIRELESS' GENERAL CONTRACTOR SHALL EXTEND EFFORTS TO ENSURE THAT ALL PROPOSED EQUIPMENT MEETS THE REQUIREMENTS OF THE EXISTING UTILITY COMPANY OR COMPANIES CURRENTLY OCCUPYING THE UTILITY POLE AND THE 2017 NATIONAL ELECTRICAL SAFETY CODE.

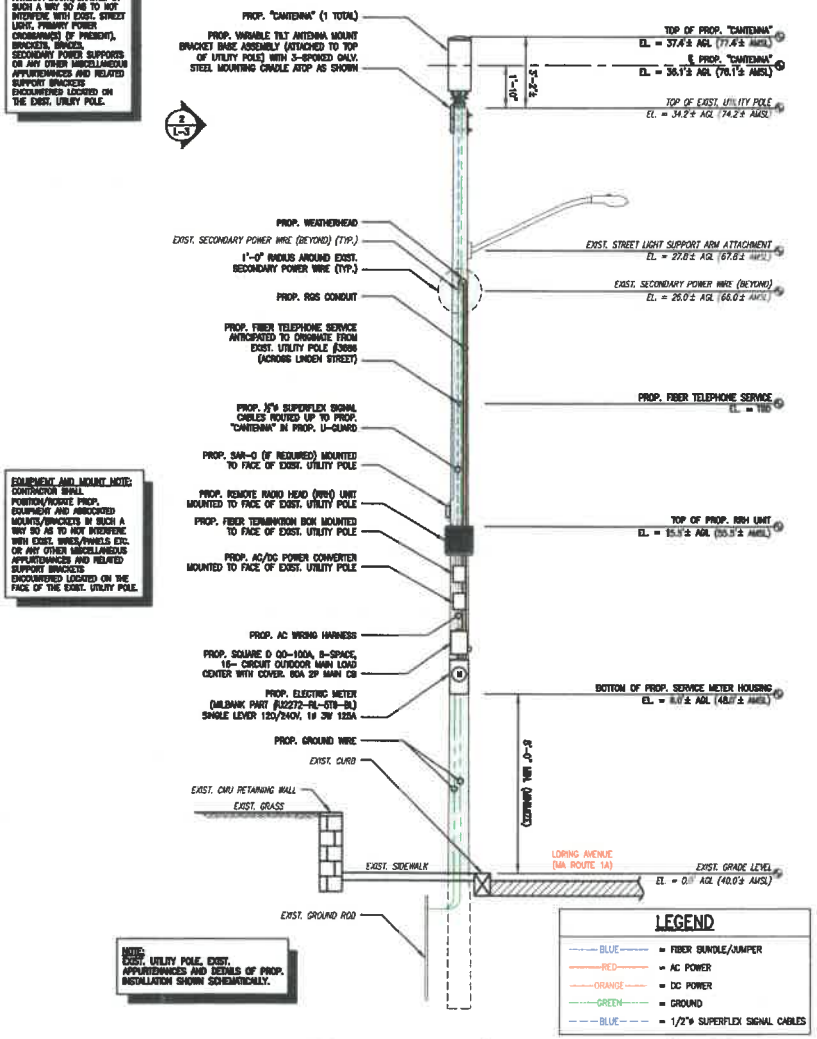


UTILITY POLE #3308-1 PHOTOGRAPH (EXISTING CONDITIONS/SCHEMATIC RENDERING) 1 L-2

SCALE: NO SCALE

ANTENNA AND MOUNT NOTE: CONTRACTOR SHALL POSITION/MOUNT PROP. ANTENNA MOUNT/BRACKET IN SUCH A WAY SO AS TO NOT INTERFERE WITH EXIST. STREET LIGHT, PRIMARY POWER CROSSBARM(S) (IF PRESENT), BRACKETS, BRACES, SECONDARY POWER SUPPORTS OR ANY OTHER MISCELLANEOUS APPURTENANCES AND RELATED SUPPORT BRACKETS ENCOUNTERED LOCATED ON THE EXIST. UTILITY POLE.

EQUIPMENT AND MOUNT NOTE: CONTRACTOR SHALL POSITION/MOUNT PROP. EQUIPMENT AND ASSOCIATED MOUNTS/BRACKETS IN SUCH A WAY SO AS TO NOT INTERFERE WITH EXIST. WIRES/PANELS ETC. OR ANY OTHER MISCELLANEOUS APPURTENANCES AND RELATED SUPPORT BRACKETS ENCOUNTERED LOCATED ON THE FACE OF THE EXIST. UTILITY POLE.



UTILITY POLE #3308-1 ELEVATION (PROPOSED CONDITIONS) 2 L-2

SCALE: 3/16" = 1'-0"

0 5'-4" 10'-8" 16'-0"

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REVISIONS

NO.	DESCRIPTION	DATE
0	ISSUED FOR REVIEW	10/30/19

SITE NAME:

SALEM_SC11_MA

UTILITY POLE #3308-1 (N.G.)
8 LORING AVENUE
(MA ROUTE 1A)
SALEM, MA 01970

DRAWING TITLE:

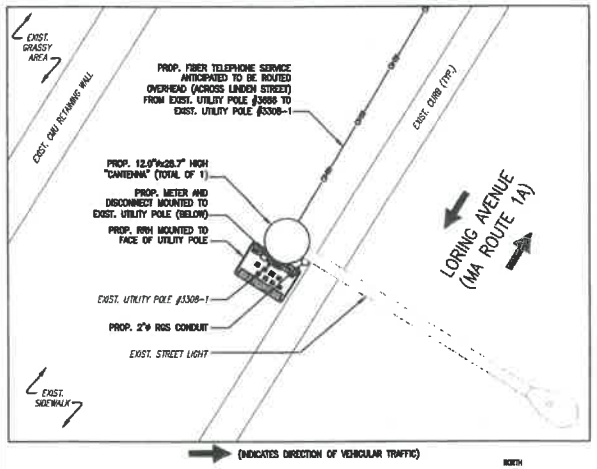
UTILITY POLE PHOTOGRAPH AND ELEVATION

DRAWING NO:

L-2

LEASE EXHIBIT
NOT FOR CONSTRUCTION

SCALE:	DESIGNED BH GRL	NEW LOCATION
AS SHOWN	DRAWN BY: CMC	
	CHECKED BY: DMS	388011
CEA PROJECT NO.:	ORIGINAL ISSUE DATE:	
1480.308	10/30/19	



EQUIPMENT AND ANTENNA ORIENTATION PLAN

1 L-3

SCALE: 3/8" = 1'-0"

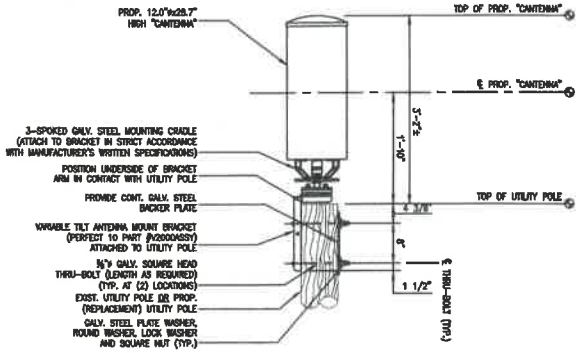
0 2'-8" 5'-4" 8'-0"

NORTH

NOTES:
1.) CONFIRM DOWNTILT REQUIREMENTS (IF ANY) AND AZIMUTH SPECIFICATIONS WITH VERIZON WIRELESS RF ENGINEER AT TIME OF CONSTRUCTION.

2.) MOUNT SHALL BE INSTALLED IN SUCH A WAY TO ENSURE PLUMB INSTALLATION OF "CANTENNA".

3.) UTILITY POLE APPURTENANCES NOT SHOWN FOR CLARITY.



"CANTENNA" MOUNT DETAIL

2 L-3

SCALE: 1/2" = 1'-0"

SMALL CELL "CANTENNA"	
DIMENSIONS:	12.0"ø x 28.7"
WEIGHT:	26.7 LBS
QUANTITY:	TOTAL OF 1

TYPICAL "CANTENNA" SPECIFICATIONS

3 L-3

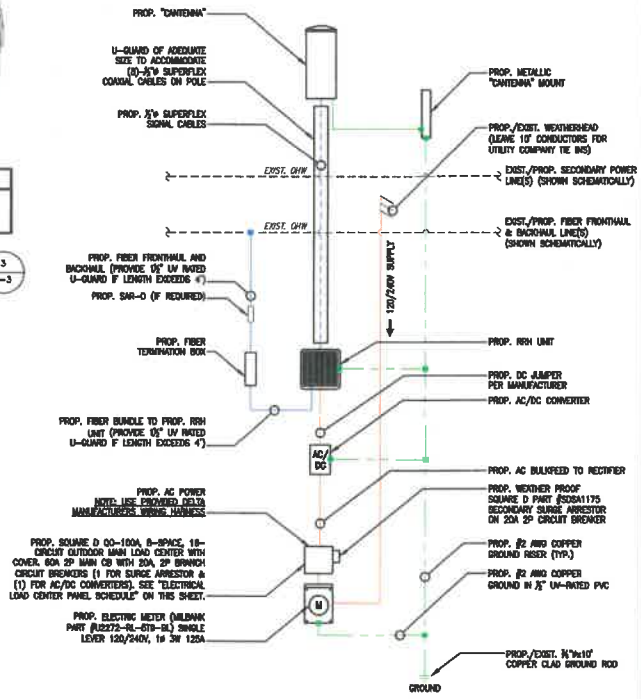
SCALE: N.T.S.

PCS-AWS (1900/2100 MHz) REMOTE RADIO HEAD UNIT	
DIMENSIONS:	15.0"H x 15.0"W x 10.0"D
WEIGHT:	84.4 LBS
QUANTITY:	TOTAL OF 1

TYPICAL REMOTE RADIO HEAD (RRH) UNIT DIMENSIONS

4 L-3

SCALE: N.T.S.



ONE-LINE DIAGRAM NOTES:
1) PROVIDE WEATHER TIGHT SEAL CONNECTORS ON ALL CONNECTIONS EACH SIDE OF ENCLOSURE HOUSING.

2) COORDINATE ANY FURTHER MISCELLANEOUS WIRING AND CONDUIT REQUIREMENTS WITH VERIZON WIRELESS AND ELECTRIC COMPANY.

LEGEND

- BLUE = FIBER BUNDLE/JUMPER
- RED = AC POWER
- ORANGE = DC POWER
- GREEN = GROUND
- BLUE = 1/2"ø SUPERFLEX SIGNAL CABLES

FIBER/ELECTRICAL ONE-LINE DIAGRAM

5 L-3

SCALE: N.T.S.

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REVISIONS		
NO.	DESCRIPTION	DATE
0	ISSUED FOR REVIEW	10/30/19

SITE NAME:

SALEM_SC11_MA

UTILITY POLE #3308-1 (N.G.)
8 LORING AVENUE
(MA ROUTE 1A)
SALEM, MA 01970

DRAWING TITLE:

ANTENNA & ANCILLARY EQUIPMENT DETAILS AND ONE-LINE DIAGRAM

DRAWING NO:

L-3

LEASE EXHIBIT
NOT FOR CONSTRUCTION

SCALE:	DESIGNED (BY) SRB	NEW LOCATION CODE
AS SHOWN	DRAWN (BY) CMD	
	CHECKED (BY) SRB	
CEA PROJECT NO.:	ORIGINAL ISSUE DATE:	368011
1480.308	10/30/19	

SALEM_SC15_MA

ROUTING SLIP

Telecommunications Attachments in the Public Right of Way

Pursuant to the Code of Ordinances, Sections 12-86 through 12-200, each applicant who seeks access to the public right of way for telecommunications purposes must submit a petition and plans along with a $500 application fee to the Electrical Department. Once the City Electrician has signed off, please circulate to the Departments listed on the reverse side of this Routing Slip for signature and return it to the City Clerk's Office prior to the petition being placed on the City Council Agenda for a grant of location pursuant to MGL Chapter 166, Section 22.

Right of Way Location Requested: 198 LORING AVE / 42.495641, -70.895167

Application Fee Received: Yes ☑ **Check No.** 6422 **Date:** 2/27/20

City Electrician Approval: John J Gerardi

BUSINESS NAME

Corporate name: VERIZON WIRELESS

d/b/a:

Address: 118 FLANDERS RD. 3RD FLOOR WESTBOROUGH, MA. 01581 **Tele. #**

CONTACT: BRYAN SARCHI / AGENT W/ AIROSMITH DEVELOPMENT

Street: 318 WEST AVE **Tele. #** 480-734-9970

City: SARATOGA SPRINGS **State:** NY **Zip:** 12866

Email Address: BSARCHI@AIROSMITHDEVELOPMENT.COM

Pole Ownership

☑ **To be attached to utility-owned pole** ___ **To be attached to City-owned pole**

☑ **Pole Attachment Agreement attached*** ___ **Pole Attachment Agreement to follow***

***All grants of location for telecommunications attachments to poles are conditioned upon evidence of a valid pole attachment agreement.**

Conduits

Will the attachment also require a conduit? ☑ **Yes** ___ **No**

TO ALL CITY DEPARTMENTS: By signing this slip you are only acknowledging that the applicant has made your department aware of its plans. All grants of location will be conditioned upon compliance with all departmental requirements and require a vote of the City Council after a public hearing. Please attach comments on separate sheet.

JM Daniel note his cover letter 3/11/2020
Planning Department DATE
City Hall Annex, 98 Washington Street

Please see comment letter 3/10/20
Salem Historical Commission DATE
City Hall Annex, 98 Washington Street

Victor J. Lerner 3/30/2020
Legal Department DATE
City Hall, 93 Washington Street

See attached memo.
3/30/2020
Engineering Department DATE
City Hall Annex, 98 Washington Street

3/27/2020
Office of Information Technology DATE
29 Highland Avenue

RETURN ROUTING SLIP, ANY COMMENTS, PETITION, PLANS, ABUTTER LABELS, AND PROPOSED ORDER TO CITY CLERK'S OFFICE, CITY HALL, 93 WASHINGTON STREET WHEN COMPLETE SO THAT IT MAY BE PLACED ON THE COUNCIL'S AGENDA.

PETITION FOR SMALL CELL POLE ATTACHMENT

Under MGL Chapter 166, Section 22.

To the Honorable City Council of Salem, Massachusetts

Cellco Partnership d/b/a Verizon Wireless hereby respectfully requests permission to locate a small cell wireless antenna and necessary sustaining and protecting fixtures, on an existing utility pole #4064-84, located in the right of way adjacent to 198 Loring Avenue in the City of Salem, as more particularly shown on the plans attached hereto.

Wherefore it prays that after due notice and hearing as provided by law, it be granted permission to install and maintain a small cell wireless antenna including the necessary sustaining and protecting fixtures in accordance with the plan filed herewith marked SALEM_SC15_MA.

The following are the public ways or part of ways along which the above referred attachment may be installed thereon:

Cellco Partnership d/b/a Verizon Wireless proposes to attach equipment to an existing utility pole #4064-84, located in the right of way near the property line of 198 Loring Avenue with location as shown on the plan attached.

PETITIONER:

Cellco Partnership d/b/a
Verizon Wireless

By _____

Bryan Sarchi
Airosmith Development
318 West Avenue
Saratoga Springs, NY. 12866
480-734-4970

Kimberley Driscoll
Mayor

David H. Knowlton, P.E.
City Engineer/DPS Director

CITY OF SALEM

Engineering Department

98 Washington Street, 2nd floor
Salem, MA 01970
Phone: (978) 619-5673

MEMORANDUM

To: Victoria Caldwell, Assistance City Solicitor
From: Deborah L. Duhamel, PE, Assistant City Engineer
Subject: Verizon – Request for Grant of Location
Date: March 30, 2020

I have reviewed the request from Verizon Wireless for the installation of "cantenna" cell attachments and ancillary equipment to existing telephone poles at the following locations:

13 Washington Square/1 Brown Street
8 Loring Ave
389 Lafayette Street
28 Raymond Road
198 Loring Ave
201 Derby Street

Engineering requests the following conditions:

(1) Provide detailed construction schedule for all phases at each site.
(2) Provide traffic management plan for each site/phase, showing at a minimum, where equipment will be and how traffic and pedestrian travel will be maintained, if parking spots will be needed, and if a detail will be required.
(3) Coordinate with DPS (978-744-3302) prior to installing grounding rod to confirm City utilities and property services are clear of rod location.
(4) Repair any damage caused by work to the satisfaction of the City Engineer.

KIMBERLEY DRISCOLL
MAYOR

TOM DANIEL, AICP
DIRECTOR

CITY OF SALEM, MASSACHUSETTS
DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT

98 WASHINGTON STREET ♦ SALEM, MASSACHUSETTS 01970
TELE: 978-619-5685 ♦ FAX: 978-740-0404

MEMO

To: Brennan Corriston, Staff Planner and Victoria Caldwell, Assistance City Solicitor
From: Patti Kelleher, Preservation Planner PK
Date: March 10, 2020
RE: Request for Grant of Location for Cell Antenna Attachment

I have reviewed the request from Verizon Wireless for the installation of "cantenna" cell attachments and ancillary equipment to existing telephone poles on Washington Square, Loring Avenue, Lafayette Street, Raymond Road and Derby Street. As indicated on the submitted Utility Pole Photograph and Elevation drawings for each property, the "cantenna" (a 28.7" can with a 12 diameter) would extend 3' from the top of the telephone pole and would include five (5) additional attachments and a covered cable on the side of each affected telephone pole (with the lowest attachment located 8' above sidewalk). Several of these attachments are significant in size, including the Remote Radio Head Unit (RRHU), which is 15" tall x 15" wide x 10" deep. A visual survey of existing cell attachments in the city indicates that the Verizon proposal includes significantly more pieces of equipment than other attachments to City poles. I recommend that the City ask Verizon to reduce or consolidate the number of attachments and place them higher on the pole. If the number of attachments cannot be reduced or consolidated, I recommend that the attachments be placed closer to the top of the telephone pole and painted to match pole color in order to reduce the visual clutter at the pedestrian view.

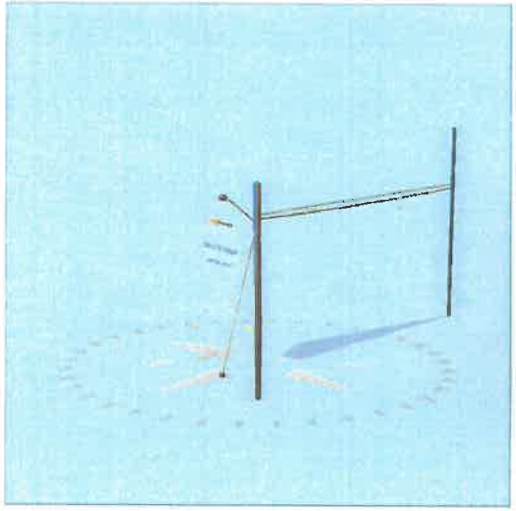
As part of the review for cell attachments, a determination must be made that the location of the attachments will not impact the city's historic resources. Therefore, I have reviewed the submitted plans and offer the following comments:

389 Lafayette Street, 8 Loring Avenue, 28 Raymond Road and 198 Loring Avenue
None of these properties are designated in a local or National Register historic district and only 8 Loring Avenue has been inventoried (SAL.4390). Therefore, I find that the proposed attachments will not impact historic resources.

201 Derby Street
While not in a local or National Register historic district, this pole is located directly adjacent to the entrance to the Derby Street Local Historic District as well at the entrance to the Salem Maritime National Park. Moving it closer to the intersection of Derby, Hawthorne Boulevard and Congress Street would be preferable but utilities in this area are buried and the only poles that exist are metal light poles.

13 Washington Square/1 Brown Street
The proposed attachment in front of 13 Washington Square/1 Brown Street is located in the Washington Square Local Historic District and the Salem Common National Register District. The building at 1 Brown Street (SAL.2459) was recently restored by the Peabody Essex Museum, which is also undertaking extensive landscape restoration on their property adjacent to this building. In addition, Brown Street is a narrow residential street and the proposed design of the installation indicates that the cantenna will be mounted onto a bracket that overhangs the street. The ancillary equipment and cable will be located on the side of the telephone pole and will add visual clutter to an historic streetscape.

Pole Num:	**4064**	Pole Length / Class:	**40 / 1**	Code:	**NESC**	Structure Type:	**Deadend**
Aux Data 1	**Unset**	Species:	**SOUTHERN PINE**	NESC Rule:	**Rule 250B**	Status	**Guy Wires Adequate**
Aux Data 2	**Unset**	Setting Depth (ft):	**6.22**	Construction Grade:	**C**	Pole Strength Factor:	**0.85**
Aux Data 3	**Unset**	G/L Circumference (in):	**40.91**	Loading District:	**Heavy**	Transverse Wind LF:	**1.75**
Aux Data 4	**Unset**	G/L Fiber Stress (psi):	**8,000**	Ice Thickness (in):	**0.50**	Wire Tension LF:	**1.30**
Aux Data 5	**Unset**	Allowable Stress (psi):	**6,800**	Wind Speed (mph):	**39.53**	Vertical LF:	**1.90**
Aux Data 6	**Unset**	Fiber Stress Ht. Reduc:	**No**	Wind Pressure (psf):	**4.00**		
Latitude:		**0.000000 Deg**	Longitude:		**0.000000 Deg**	Elevation:	**0 Feet**



Pole Capacity Utilization (%)		Height (ft)	Wind Angle (deg)
Maximum	**7.1**	0.0	278.6
Groundline	**7.1**	0.0	278.6
Vertical	**0.9**	21.7	270.0

Pole Moments (ft-lb)		Load Angle (deg)	Wind Angle (deg)
Max Cap Util	**8,019**	301.8	278.6
Groundline	**8,019**	301.8	278.6
GL Allowable	**122,826**		

Guy System Component Summary				Load From Worst Wind Angle on Pole		Individual Maximum Load With Overload Applied	
Description	**Lead Length (ft)**	**Lead Angle (deg)**	**Height (ft)**	**Nominal Capacity (%)**	**Wind Angle (deg)**	**Max* Load Capacity (%)**	**Wind Angle (deg)**
Single Helix Anchor	9.0	180.0		**8.6**	278.6	**10.9**	0.0
12.5M (Down)			26.6	**15.3**	278.6	**19.4**	0.0
Stub Pole	57.0	0.0		**0.0**	278.6	**0.0**	0.0
12.5M (Span/Head)			28.1	**0.0**	278.6	**0.0**	0.0
			System Capacity Summary:	**Adequate**		**Adequate**	

Groundline Load Summary - Reporting Angle Mode: Load - Reporting Angle: 301.8°

	Shear Load* (lbs)	Applied Load (%)	Bending Moment (ft-lb)	Applied Moment (%)	Pole Capacity (%)	Bending Stress (+/- psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Pole Capacity (%)
Powers	406	108.7	**9,685**	120.8	**7.9**	**616**	49	0	**617**	**9.1**
GuyBraces	-250	-66.9	**-5,757**	-71.8	**-4.7**	**-366**	2,497	19	**-348**	**-5.1**
Pole	196	52.3	**2,941**	36.7	**2.4**	**187**	2,487	19	**206**	**3.0**
Streetlights	22	5.8	**1,145**	14.3	**0.9**	**73**	142	1	**74**	**1.1**
Insulators	0	0.1	**5**	0.1	**0.0**	**0**	2	0	**0**	**0.0**
Pole Load	374	100.0	**8,019**	100.0	**6.5**	**510**	5,177	39	**549**	**8.1**
Pole Reserve Capacity			**114,807**		**93.5**	**6,290**			**6,251**	**91.9**

Load Summary by Owner - Reporting Angle Mode: Load - Reporting Angle: 301.8°

	Shear Load* (lbs)	Applied Load (%)	Bending Moment (ft-lb)	Applied Moment (%)	Pole Capacity (%)	Bending Stress (+/- psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Pole Capacity (%)
NGrid	156	41.8	**3,933**	49.1	**3.2**	**250**	2,548	19	**269**	**4.0**
Pole	196	52.3	**2,941**	36.7	**2.4**	**187**	2,487	19	**206**	**3.0**
Municipal	22	5.8	**1,145**	14.3	**0.9**	**73**	142	1	**74**	**1.1**
Totals:	374	100.0	**8,019**	100.0	**6.5**	**510**	5,177	39	**549**	**8.1**

Detailed Load Components:

Power		Owner	Height (ft)	Horiz. Offset (in)	Cable Diameter (in)	Sag at Max Temp (ft)	Cable Weight (lbs/ft)	Lead/Span Length (ft)	Span Angle (deg)	Wire Length (ft)	Tension (lbs)	Tension Moment* (ft-lb)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Secondary	TRIPLEX 4 AWG	NGrid	27.47	6.96	0.6800	0.63	0.164	57.0	0.0	57.0	558	10,514	-24	644	11,135
											Totals:	**10,514**	**-24**	**644**	**11,135**

Streetlight		Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Height (in)	Unit Depth (in)	Unit Diameter (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
General	Streetlight - 8 ft. Arm	Municipal	26.22	4.79	270.0	270.0	75.00	48.00	20.00	3.00	96.00	745	571	1,317
											Totals:	**745**	**571**	**1,317**

Insulator		Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Diameter (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Spool	Spool Insulator	NGrid	27.47	0.00	90.0	0.0	1.00	2.50	2.12	-1	7	6
									Totals:	**-1**	**7**	**6**

Guy Wire and Brace		Owner	Attach Height (ft)	End Height (ft)	Lead/Span Length (ft)	Wire Diameter (in)	Percent Solid (%)	Lead Angle (deg)	Incline Angle (deg)	Wire Weight (lbs/ft)	Rest Length (ft)	Stretch Length (in)
12.5M	Down	NGrid	26.59	0.00	9.00	0.343	100.00	180.0	71.0	0.208	32.42	0.32
12.5M	Span/Head	NGrid	28.10	28.10	57.00	0.343	75.00	0.0	0.0	0.208	54.45	0.00

Guy Wire and Brace (Loads and Reactions)		Elastic Modulus (psi)	Rated Tensile Strength (lbs)	Guy Strength Factor	Allowable Tension (lbs)	Initial Tension (lbs)	Loaded Tension*[2] (lbs)	Maximum Tension[2] (lbs)	Applied Tension[3] (lbs)	Vertical Load (lbs)	Shear Load In Guy Dir (lbs)	Shear Load At Report Angle (lbs)	Moment at GL[3] (ft-lb)
12.5M	Down	2.30e+7	12,500	0.90	11,250	700	2,180	1,982	1,723	1,630	561	-296	-7,161
12.5M	Span/Head	2.30e+7	12,500	0.90	11,250	700	0	0	0	0	0	0	543
									Totals:	**1,630**	**561**	**-296**	**-6,618**

Anchor/Rod Load Summary	Owner	Rod Length AGL (in)	Lead Length (ft)	Lead Angle (deg)	Strength of Assembly (lbs)	Anchor/Rod Strength Factor	Allowable Load (lbs)	Max Load[2] (lbs)	Load at Pole MCU[3] (lbs)	Max Required Capacity[2] (%)
Single Helix Anchor	NGrid	18.00	9.00	180.0	20,000	1.00	20,000	2,180	1,723	10.9
Stub Pole	NGrid	30.00	57.00	0.0	20,000	1.00	20,000	0	0	0.0

Pole Buckling

Buckling Constant	Buckling Column Height* (ft)	Buckling Section Height (% Buckling Col. Hgt.)	Buckling Section Diameter (in)	Minimum Buckling Diameter at GL (in)	Diameter at Tip (in)	Diameter at GL (in)	Modulus of Elasticity (psi)	Pole Density (pcf)	Ice Density (pcf)	Pole Tip Height (ft)	Buckling Load Capacity at Height (lbs)	Buckling Load Applied at Height (lbs)	Buckling Load Factor of Safety
0.71	21.68	33.27	12.08	4.05	8.60	13.03	2.13e+6	60.00	57.00	33.78	550,960	**5752.67**	**111.11**

verizon

2/7/202020
To: City of Salem
Transmitted via email
RE: Verizon Wireless Small Cell Sites

Dear City of Salem,

Verizon is installing additional wireless telecommunications facilities in order to meet the growing demand for Verizon Wireless service by residents, businesses, visitors, and emergency responders.

To ensure general public safety, it is important that you contact Verizon Wireless personnel at least 24 hours in advance should general maintenance need to be performed in areas of potential concern as marked on the next page of this document. This is required to comply with FCC guidelines and ensure the environment is safe for general maintenance workers who may require RF Safety & Awareness training. With notification, Verizon Wireless is able to evaluate appropriate actions needed relating to the antennas and proximity of the work location.

Thank you for your inquiry. Verizon has a process to deactivate power on small cells (regardless of whether the small cell is 4G or 5G) while work is being done on the pole (including joint use poles). The information needed to have a small cell powered down for work to occur on the pole (including contact numbers and pole identifiers) is provided at a safe distance from the small cell on the pole itself. Please contact Verizon Wireless personnel at least 24 hours in advance if you need to perform maintenance at that site. If you have any additional questions, our point of contact in that area is Luis Teves.

You also expressed concerns about the health effects of RF emissions from Verizon's network equipment. The Federal Communications Commission (FCC) has developed safety rules for human exposure to RF emissions in consultation with numerous other federal agencies, including the Environmental Protection Agency, the Food and Drug Administration, and the Occupational Safety and Health Administration. These rules can be found at 47 C.F.R § 1.1310. No matter which generation of technology we use, all Verizon equipment must comply with these safety requirements.

The FCC supported and adopted the standards after examining the RF research that scientists in the US and around the world conducted for decades. The research continues to this day, and agencies continue to monitor it. Based on that research, federal agencies have concluded that equipment that has been deployed in a manner that complies with the safety standards poses no known health risks. You can obtain further information about the safety of RF emissions from cell towers on the FCC's website, which you can access via this link: http://www.fcc.gov/oet/rfsafety/rf-faqs.html.

Thank you for reaching out to us regarding your concerns. We appreciate the chance to explain our activities regarding the wireless facility at issue. Questions related to compliance with federal regulations should be directed to VZWRFCompliance@verizonwireless.com. Please contact your local Verizon Wireless resource below if you have any additional questions.

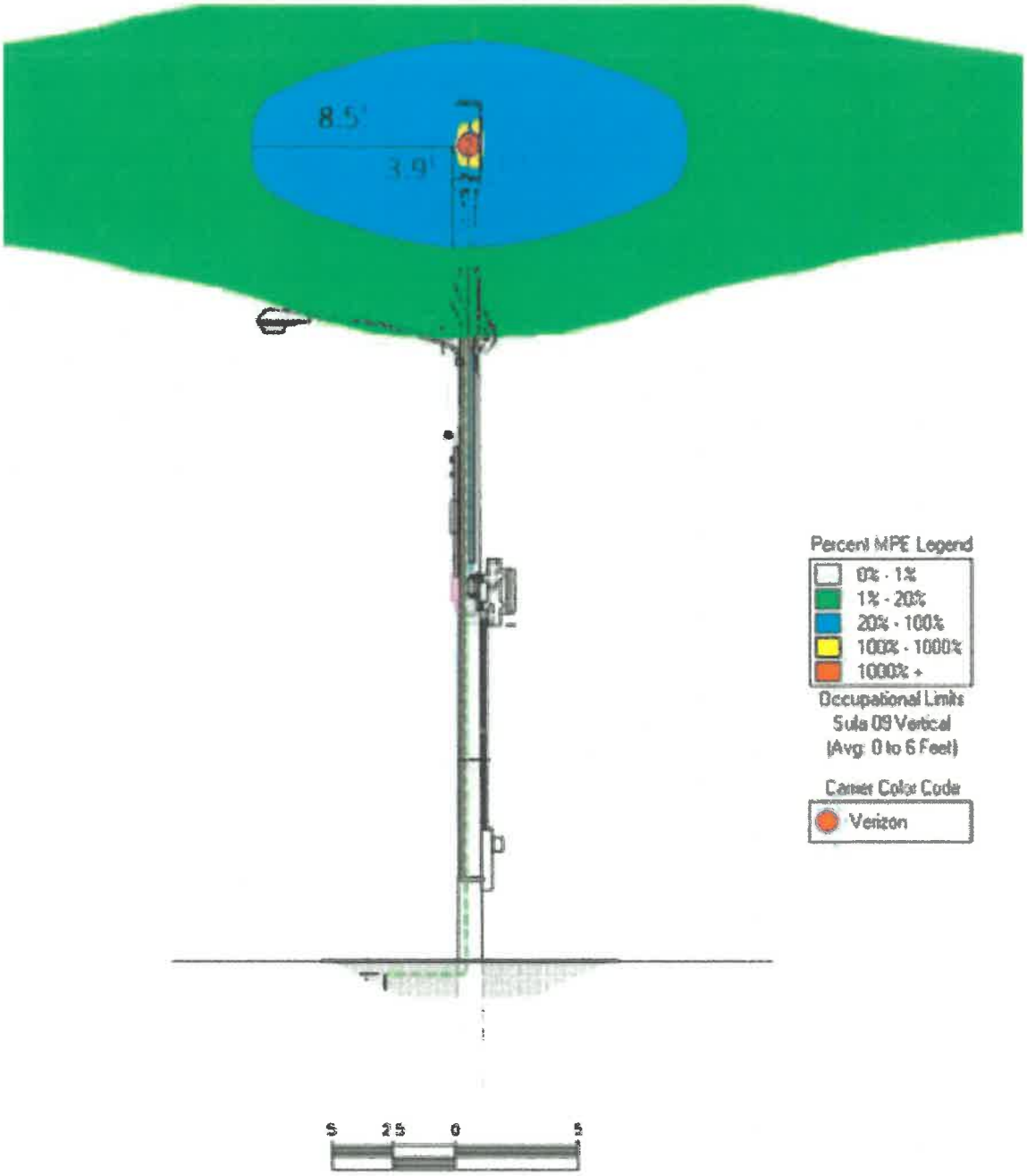
Contact Name	Contact Email	Contact Phone
Luis Teves	Luis.Teves@VerizonWireles.com	508-479-3197

Sincerely,

Michael Creamer
Sr Manager - RF Design
Verizon Wireless

Verizon Wireless (VZW) Radiofrequency (RF) Emissions Map

The following site layout represents a current snapshot in time of the predicted Verizon Wireless RF emissions from transmitting antennas on this facility. Contact Verizon Wireless should maintenance need to be performed in any non-green areas.



Color	% Occupational MPE	Instructions
	0 to 20	Safe In Relation to VZW. Contact Other Carriers Before Entering This Area
	20 to 100	Contact VZW Before Accessing This Area
	Greater Than 100	
	Greater Than 1000	

Property Owner Responsibilities (M.E.N.U)

RF exposure safety and the protection of every licensee's infrastructure are very important. Property owners and licensees have a shared responsibility in maintaining a safe and secure RF environment. Property owners can help in this significant endeavor by:

⇒ **M**aintaining all necessary wireless licensee contact information.

⇒ **E**nforcing restricted access (help maintain a Controlled Environment). **E**nsuring all building/maintenance personnel are aware that the potential for exposure exists, and follow all appropriate entry and safety procedures.

⇒ **N**otifying all licensees when any non-carrier requests access to any area with antennas **at least 24 hours in advance.**

⇒ **U**nderstanding that compliance with the FCC and OSHA can be achieved with RF Exposure levels above the applicable limit if the proper signage, physical/indicative barrier, and access restrictions are implemented. Commitment to compliance and willingness to cooperate are essential.

For General RF Safety & Awareness Questions

Verizon Wireless

E-mail: VZWRFCompliance@vzw.com

E-mail Subject: "ATTN: RF Compliance"

In The Event That Emergency Maintenance Is Required

24-Hour Network Operations Center:

1-800-264-6620

RF Safety & Awareness Training Contacts

Dtech Communications

(michelle@dtechcom.com.)

EBI Consulting

spenta@ebiconsulting.com

SiteSafe

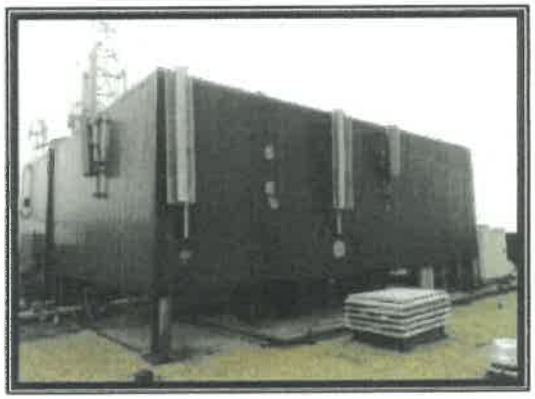
(cbagley@sitesafe.com)

Waterford Consultants

Sbaier-anderson@waterfordconsultants.com

Radio Frequency (RF) Emissions

SAFETY & AWARENESS



Federal Compliance Requirements

The Federal Communications Commission (FCC) has established safety guidelines relating to RF exposure from cell sites. The FCC developed those standards, known as Maximum Permissible Exposure (MPE) limits, in consultation with numerous other federal agencies, including the Environmental Protection Agency, the Food and Drug Administration, and the Occupational Safety and Health Administration. The standards were developed by expert scientists and engineers after extensive reviews of the scientific literature related to RF biological effects. The FCC explains that its standards incorporate prudent margins of safety. The following represents an overview of the most applicable information:

Classifications for Exposure Limits

Occupational
Persons are "exposed as a consequence of their *employment*" and are "*fully aware* of the potential for exposure and can *exercise control* over their exposure".

General Population
Any persons that "*may not be made fully aware* of the potential for exposure or *cannot exercise control* over their exposure".

Those in this category do not have RF Safety & Awareness Training.

Ensuring Compliance With FCC Guidelines

Areas or portions of any transmitter site may be susceptible to high power densities that could cause personnel exposures in excess of the FCC guidelines.

Wireless Licensees are required by law to implement the following:

- **Restrict access** (lock doors/ladders)
- **Post notification signage on every access point** to increase awareness of the potential for exposure BEFORE one enters an area with antennas.
- **Place additional notification signage and visual indicators** in an area with antennas (beyond an access point) where RF exposure levels may start to exceed the FCC's limits.

Compliance Materials

Notification Signage

(Notice) RF Guidelines - Informs viewer of the basic safety guidelines for working in an RF Environment.

Information– Provides relevant contact information for any questions or requests.

(Blue) Notice - Informs viewer that beyond the sign, RF exposure levels may exceed the General Population MPE limit but will remain below the Occupational MPE limit.

(Yellow) Caution - Informs viewer that beyond the sign, RF exposure levels may exceed the General Population and Occupational MPE limit.

(Red) Warning - Informs viewer that beyond the sign, RF exposure levels may substantially exceed the General Population and Occupational MPE limit.

Indicative Barriers

In addition to physical barriers such as locked doors or ladders, wireless licensees may also be required to place indicative barriers as a means of visually demarcating an area where RF levels are expected to exceed the FCC's limits. **Examples of Indicative Barrier Materials:** plastic chains, buckets, reflective paint or plastic cones, fiberglass fences, and poles mounted in cinderblocks.

Antenna Safety

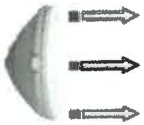
Antenna Types

Yagi - Antenna that radiates energy in one direction. RF energy has a narrow beam. **Walk behind or under this antenna.**

Panel - Antenna that radiates energy in one direction. RF energy beam can range from narrow to very wide. **Walk behind this antenna. Stay out of the general direction that the antenna is pointing.**

Whip – Antenna that radiates energy equally in all directions. **Maintain as much distance as possible from this antenna.**

Microwave - Antenna that radiates energy in one direction. RF energy has a narrow beam. **Walk under or behind this antenna.**



When In An Environment With Antennas:

⇒ Maintain at least a 3-foot clearance from all antennas. A 10-foot separation distance is preferred.

⇒ Never touch an antenna. Assume all are active.

⇒ Read and obey ALL signs on an access point.

⇒ Read and obey ALL signs in the environment with antennas.

⇒ Never walk past an indicative barrier without first confirming transmitter inactivity.

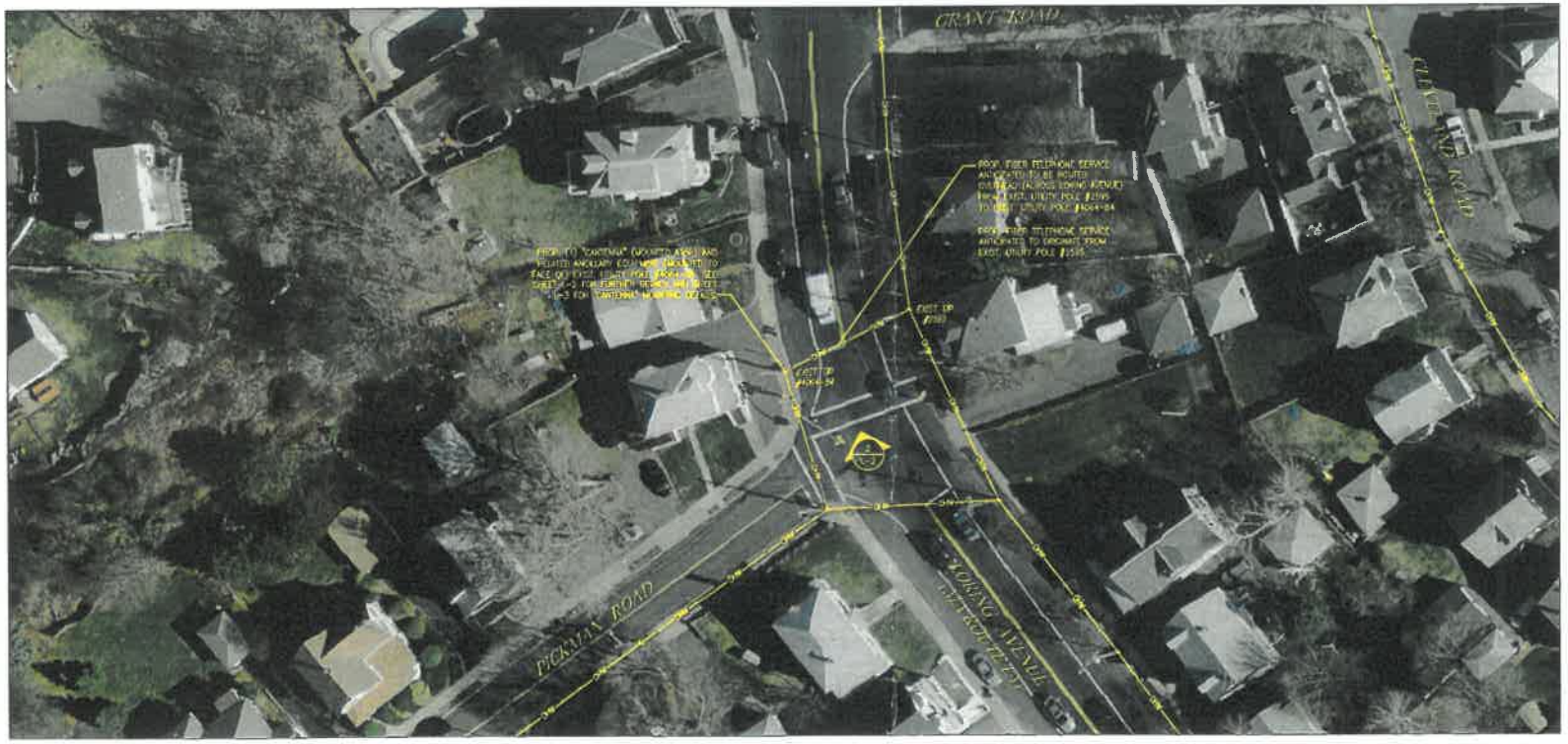
⇒ Never walk in front of or stand in front of an antenna whenever possible. Keep walking.

⇒ Contact all wireless licensees **at least 24 hours in advance** of scheduled maintenance.

SALEM_SC15_MA

CLUSTER: SALEM MA

UTILITY POLE #4064-84 (N.G.)
198 LORING AVENUE (MA ROUTE 1A)
SALEM, MA 01970



SITE CONTROL POINT:
CENTER OF EXISTING UTILITY POLE #4064-84
N 42.495641° (42°-29'-44.31")
W 70.895167° (70°-53'-42.60")
APPROXIMATE GROUND ELEVATION = 19'± AMSL

LOCATION PLAN/AERIAL IMAGE (1 / L-1)
SCALE: 1" = 50'
0 50' 100' 150'

SHEET INDEX

DWG.	DESCRIPTION	REV.
L-1	LOCATION PLAN/AERIAL IMAGE	0
L-2	UTILITY POLE PHOTOGRAPH AND ELEVATION	0
L-3	ANTENNA & ANCILLARY EQUIPMENT DETAILS AND ONE-LINE DIAGRAM	0

verizon
Because Better Matters

CHAPPELL ENGINEERING ASSOCIATES, LLC
Civil · Structural · Land Surveying
R.K. EXECUTIVE CENTRE
201 BOSTON POST ROAD WEST, SUITE 101
MARLBOROUGH, MA 01752
(508) 481-7400
www.chappellengineering.com

REVISIONS

NO.	DESCRIPTION	DATE
0	ISSUED FOR REVIEW	10/30/19

SITE NAME:
SALEM_SC15_MA
UTILITY POLE #4064-84 (N.G.)
198 LORING AVENUE
(MA ROUTE 1A)
SALEM, MA 01970

DRAWING TITLE:
LOCATION PLAN/ AERIAL IMAGE

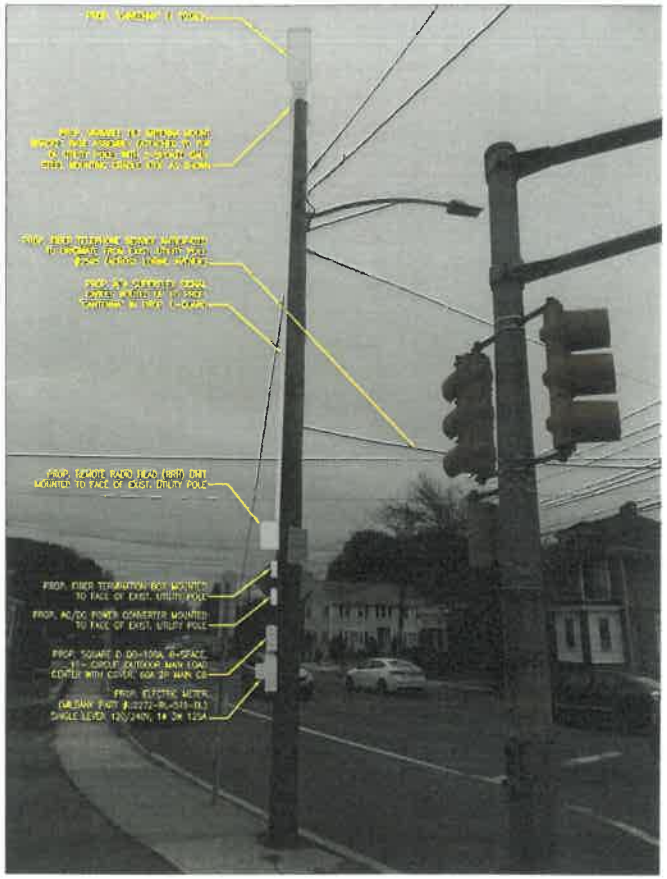
DRAWING NO:
L-1

LEASE EXHIBIT
NOT FOR CONSTRUCTION

SCALE:	DESIGNED BY:	VZW LOCATION CODE:
AS SHOWN	DRAWN BY:	3004453
CEA PROJECT NO.	ORIGINAL ISSUE DATE:	
1460.311	10/30/19	

GENERAL NOTES:

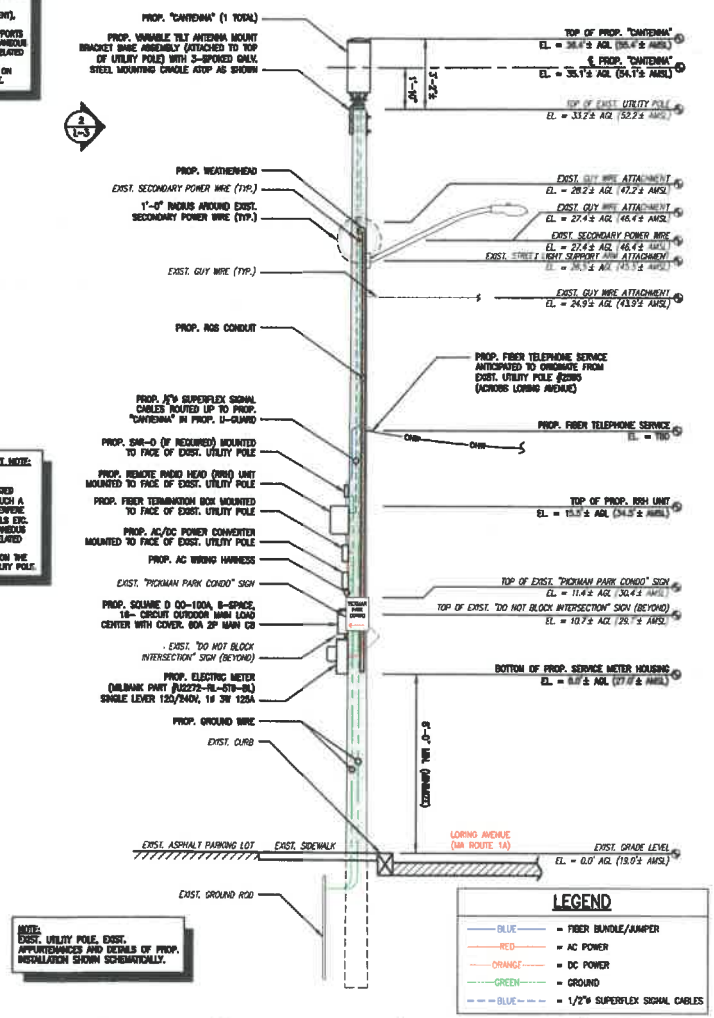
1. THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE AND ARE INTENDED TO PROVIDE GENERAL INFORMATION REGARDING THE LOCATION, SIZE AND ORIENTATION OF THE PROPOSED WIRELESS TELECOMMUNICATIONS EQUIPMENT INSTALLATION ON THE UTILITY POLE AND ARE NOT SPECIFICALLY INTENDED FOR CONSTRUCTION.
2. VERIZON WIRELESS SHALL PLACE WEATHER RESISTANT PHENOLIC PLACARDS ON UTILITY POLE AND ANCILLARY EQUIPMENT TO IDENTIFY EQUIPMENT OWNERSHIP & CONTACT INFORMATION TO BE UTILIZED IN THE CASE OF EMERGENCY.
3. AN ANALYSIS OF THE CAPACITY OF THE EXISTING UTILITY POLE TO SUPPORT THE PROPOSED LOADING HAS NOT BEEN COMPLETED BY CHAPPELL ENGINEERING ASSOCIATES, LLC. AND THUS, THESE DRAWINGS ARE SUBJECT TO CHANGE PENDING THE OUTCOME OF A STRUCTURAL ANALYSIS (TO BE PERFORMED BY OTHERS).
4. VERIZON WIRELESS' GENERAL CONTRACTOR SHALL EXTEND EFFORTS TO ENSURE THAT ALL PROPOSED EQUIPMENT MEETS THE REQUIREMENTS OF THE EXISTING UTILITY COMPANY OR COMPANIES CURRENTLY OCCUPYING THE UTILITY POLE AND THE 2017 NATIONAL ELECTRICAL SAFETY CODE.



UTILITY POLE #4064-84 PHOTOGRAPH (EXISTING CONDITIONS/SCHEMATIC RENDERING) (1 / L-2)
SCALE: NO SCALE

ANTENNA AND MOUNT NOTE:
CONTRACTOR SHALL POSITION/ROUTE PROP. ANTENNA MOUNT/BRACKET IN SUCH A WAY SO AS TO NOT INTERFERE WITH EXIST. STREET LIGHT, PRIMARY POWER CROSSARM(S) (IF PRESENT), BRACKETS, BRACES, SECONDARY POWER SUPPORTS OR ANY OTHER MISCELLANEOUS APPURTENANCES AND RELATED SUPPORT BRACKETS ENCOUNTERED LOCATED ON THE EXIST. UTILITY POLE.

EQUIPMENT AND MOUNT NOTE:
CONTRACTOR SHALL POSITION/LOCATE PROP. EQUIPMENT AND ASSOCIATED MOUNTS/BRACKETS IN SUCH A WAY SO AS TO NOT INTERFERE WITH EXIST. WIRES/PANELS ETC. OR ANY OTHER MISCELLANEOUS APPURTENANCES AND RELATED SUPPORT BRACKETS ENCOUNTERED LOCATED ON THE FACE OF THE EXIST. UTILITY POLE.



NOTE:
EXIST. UTILITY POLE, EXIST. APPURTENANCES AND DETAILS OF PROP. INSTALLATION SHOWN SCHEMATICALLY.

LEGEND

- BLUE = FIBER BUNDLE/JUMPER
- RED = AC POWER
- ORANGE = DC POWER
- GREEN = GROUND
- BLUE = 1/2"ø SUPERFLEX SIGNAL CABLES

UTILITY POLE #4064-84 ELEVATION (PROPOSED CONDITIONS) (2 / L-2)
SCALE: 3/16" = 1'-0"
0 5'-4" 10'-8" 16'-0"

verizon
"Because Better Matters"

CHAPPELL ENGINEERING ASSOCIATES, LLC
Civil · Structural · Land Surveying
R.K. EXECUTIVE CENTRE
201 BOSTON POST ROAD WEST, SUITE 101
MARLBOROUGH, MA 01752
(508) 481-7400
www.chappellengineering.com

REVISIONS

NO.	DESCRIPTION	DATE
0	ISSUED FOR REVIEW	10/30/19

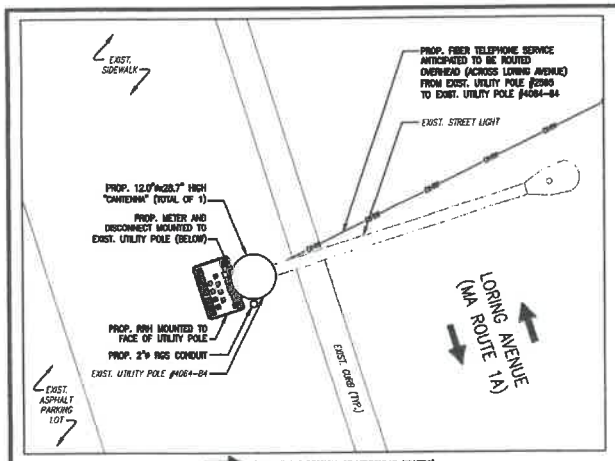
SITE NAME:
SALEM_SC15_MA
UTILITY POLE #4064-84 (N.G.)
198 LORING AVENUE
(MA ROUTE 1A)
SALEM, MA 01970

DRAWING TITLE:
UTILITY POLE PHOTOGRAPH AND ELEVATION

DRAWING NO:
L-2

LEASE EXHIBIT
NOT FOR CONSTRUCTION

SCALE	DESIGNED BY: BRE	NEW LOCATION CODE:
AS SHOWN	DRAWN BY: CMC	389483
CEA PROJECT NO.: 1480.311	CHECKED BY: BRE	
	ORIGINAL ISSUE DATE: 10/30/19	



EQUIPMENT AND ANTENNA ORIENTATION PLAN

1 L-3

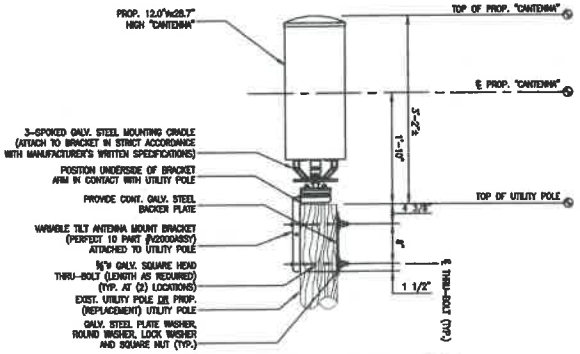
SCALE: 3/8" = 1'-0"

0 2'-8" 5'-4" 8'-0"

NOTES:
1.) CONFIRM DOWNTILT REQUIREMENTS (IF ANY) AND AZIMUTH SPECIFICATIONS WITH VERIZON WIRELESS RF ENGINEER AT TIME OF CONSTRUCTION.

2.) MOUNT SHALL BE INSTALLED IN SUCH A WAY TO ENSURE PLUMB INSTALLATION OF "CANTENNA".

3.) UTILITY POLE APPURTENANCES NOT SHOWN FOR CLARITY.



"CANTENNA" MOUNT DETAIL

2 L-3

SCALE: 1/2" = 1'-0"

SMALL CELL "CANTENNA"	
DIMENSIONS:	12.0"ø x 28.7"
WEIGHT:	25.7 LBS
QUANTITY:	TOTAL OF 1

TYPICAL "CANTENNA" SPECIFICATIONS

3 L-3

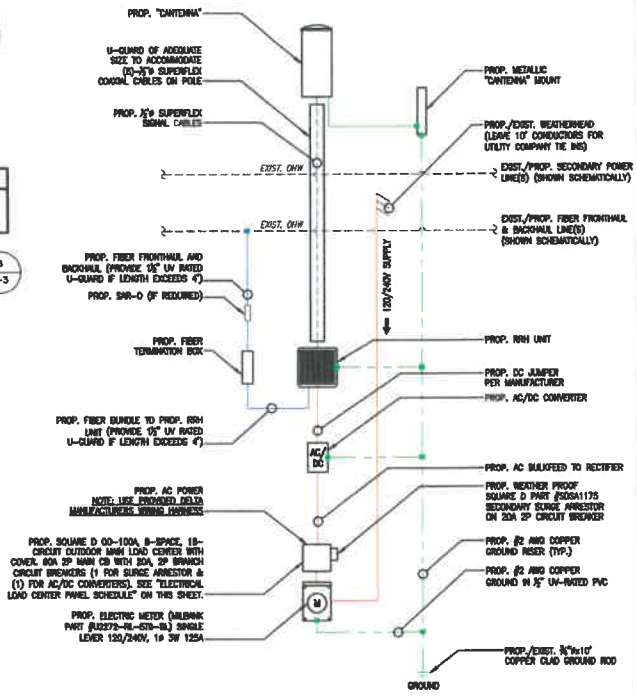
SCALE: N.T.S.

PCS-AWS (1900/2100 MHz) REMOTE RADIO HEAD UNIT	
DIMENSIONS:	15.0"H x 15.0"W x 10.0"D
WEIGHT:	84.4 LBS
QUANTITY:	TOTAL OF 1

TYPICAL REMOTE RADIO HEAD (RRH) UNIT DIMENSIONS

4 L-3

SCALE: N.T.S.



ONE-LINE DIAGRAM NOTES:
1) PROVIDE WEATHER TIGHT SEAL CONNECTORS ON ALL CONNECTIONS EACH SIDE OF ENCLOSURE HOUSING.

2) COORDINATE ANY FURTHER MISCELLANEOUS WIRING AND CONDUIT REQUIREMENTS WITH VERIZON WIRELESS AND ELECTRIC COMPANY.

LEGEND

- BLUE — = FIBER BUNDLE/JUMPER
- RED — = AC POWER
- ORANGE — = DC POWER
- GREEN — = GROUND
- BLUE — = 1/2"ø SUPERFLEX SIGNAL CABLES

FIBER/ELECTRICAL ONE-LINE DIAGRAM

5 L-3

SCALE: N.T.S.

verizon

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MARLBOROUGH, MA 01752
(508) 481-7400
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REVISIONS

NO.	DESCRIPTION	DATE
0	ISSUED FOR REVIEW	10/30/18

SITE NAME:

SALEM_SC15_MA

UTILITY POLE #4084-84 (N.G.)
196 LORING AVENUE
(MA ROUTE 1A)
SALEM, MA 01970

DRAWING TITLE:

ANTENNA & ANCILLARY EQUIPMENT DETAILS AND ONE-LINE DIAGRAM

DRAWING NO:

L-3

LEASE EXHIBIT
NOT FOR CONSTRUCTION

SCALE:	DESIGNED BY: CPG	VZW LOCATION CODE:
AS SHOWN	DRAWN BY: DMC	566453
CEA PROJECT NO.:	CHECKED BY: CPG	
1480.311	ORIGINAL ISSUE DATE: 10/30/18	

SMRH_SCB_MA

ROUTING SLIP

Telecommunications Attachments in the Public Right of Way

Pursuant to the Code of Ordinances, Sections 12-86 through 12-200, each applicant who seeks access to the public right of way for telecommunications purposes must submit a petition and plans along with a $500 application fee to the Electrical Department. Once the City Electrician has signed off, please circulate to the Departments listed on the reverse side of this Routing Slip for signature and return it to the City Clerk's Office prior to the petition being placed on the City Council Agenda for a grant of location pursuant to MGL Chapter 166, Section 22.

Right of Way Location Requested: 28 Raymond Rd. /42.499903°, 70.892019°

Application Fee Received: Yes [✓] **Check No.** 6477 **Date:** 2/27/20

City Electrician Approval: John J. Geraldi

BUSINESS NAME

Corporate name: VERIZON WIRELESS

d/b/a:

Address: 118 FLANDERS RD 3RD FLOOR, WESTBOROUGH, MA. 01581 **Tele. #**

CONTACT: BRYAN SARCHI / AGENT W/ AIROSMITH DEVELOPMENT

Street: 38 WEST AVE **Tele. #** 480-734-4970

City: SARATOGA SPRINGS **State:** NY **Zip:** 12866

Email Address: BSARCHI@AIROSMITHDEVELOPMENT.COM

Pole Ownership

✓ **To be attached to utility-owned pole** ___ **To be attached to City-owned pole**

✓ **Pole Attachment Agreement attached*** ___ **Pole Attachment Agreement to follow***

***All grants of location for telecommunications attachments to poles are conditioned upon evidence of a valid pole attachment agreement.**

Conduits

Will the attachment also require a conduit? ✓ **Yes** ___ **No**

TO ALL CITY DEPARTMENTS: By signing this slip you are only acknowledging that the applicant has made your department aware of its plans. All grants of location will be conditioned upon compliance with all departmental requirements and require a vote of the City Council after a public hearing. Please attach comments on separate sheet.

Daniel vote this letter 3/11/2020
Planning Department — DATE
City Hall Annex, 98 Washington Street

Deb Dirk. Voice Please see memo 3/30/2020
Engineering Department — DATE
City Hall Annex, 98 Washington Street

please see comment letter 3/10/20
Salem Historical Commission — DATE
City Hall Annex, 98 Washington Street

Matt K. 5/27/2020
Office of Information Technology — DATE
29 Highland Avenue

Nicholas Bramhall 3/30/2020
Legal Department — DATE
City Hall, 93 Washington Street

RETURN ROUTING SLIP, ANY COMMENTS, PETITION, PLANS, ABUTTER LABELS, AND PROPOSED ORDER TO CITY CLERK'S OFFICE, CITY HALL, 93 WASHINGTON STREET WHEN COMPLETE SO THAT IT MAY BE PLACED ON THE COUNCIL'S AGENDA.

PETITION FOR SMALL CELL POLE ATTACHMENT

Under MGL Chapter 166, Section 22.

To the Honorable City Council of Salem, Massachusetts

Cellco Partnership d/b/a Verizon Wireless hereby respectfully requests permission to locate a small cell wireless antenna and necessary sustaining and protecting fixtures, on an existing utility pole #3412, located in the right of way adjacent to 28 Raymond Road in the City of Salem, as more particularly shown on the plans attached hereto.

Wherefore it prays that after due notice and hearing as provided by law, it be granted permission to install and maintain a small cell wireless antenna including the necessary sustaining and protecting fixtures in accordance with the plan filed herewith marked SALEM_SC13_MA.

The following are the public ways or part of ways along which the above referred attachment may be installed thereon:

Cellco Partnership d/b/a Verizon Wireless proposes to attach equipment to an existing utility pole #3412, located in the right of way near the property line of 28 Raymond Road with location as shown on the plan attached.

PETITIONER:

Cellco Partnership d/b/a
Verizon Wireless

By _____

Bryan Sarchi
Airosmith Development
318 West Avenue
Saratoga Springs, NY. 12866
480-734-4970

Kimberley Driscoll
Mayor

David H. Knowlton, P.E.
City Engineer/DPS Director

CITY OF SALEM

Engineering Department

98 Washington Street, 2nd floor
Salem, MA 01970
Phone: (978) 619-5673

MEMORANDUM

To: Victoria Caldwell, Assistance City Solicitor
From: Deborah L. Duhamel, PE, Assistant City Engineer
Subject: Verizon – Request for Grant of Location
Date: March 30, 2020

I have reviewed the request from Verizon Wireless for the installation of "cantenna" cell attachments and ancillary equipment to existing telephone poles at the following locations:

13 Washington Square/1 Brown Street
8 Loring Ave
389 Lafayette Street
28 Raymond Road
198 Loring Ave
201 Derby Street

Engineering requests the following conditions:

(1) Provide detailed construction schedule for all phases at each site.
(2) Provide traffic management plan for each site/phase, showing at a minimum, where equipment will be and how traffic and pedestrian travel will be maintained, if parking spots will be needed, and if a detail will be required.
(3) Coordinate with DPS (978-744-3302) prior to installing grounding rod to confirm City utilities and property services are clear of rod location.
(4) Repair any damage caused by work to the satisfaction of the City Engineer.

KIMBERLEY DRISCOLL
MAYOR

TOM DANIEL, AICP
DIRECTOR

CITY OF SALEM, MASSACHUSETTS
DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT

98 WASHINGTON STREET ♦ SALEM, MASSACHUSETTS 01970
TELE: 978-619-5685 ♦ FAX: 978-740-0404

MEMO

To: Brennan Corriston, Staff Planner and Victoria Caldwell, Assistance City Solicitor
From: Patti Kelleher, Preservation Planner PK
Date: March 10, 2020
RE: Request for Grant of Location for Cell Antenna Attachment

I have reviewed the request from Verizon Wireless for the installation of "cantenna" cell attachments and ancillary equipment to existing telephone poles on Washington Square, Loring Avenue, Lafayette Street, Raymond Road and Derby Street. As indicated on the submitted Utility Pole Photograph and Elevation drawings for each property, the "cantenna" (a 28.7" can with a 12 diameter) would extend 3' from the top of the telephone pole and would include five (5) additional attachments and a covered cable on the side of each affected telephone pole (with the lowest attachment located 8' above sidewalk). Several of these attachments are significant in size, including the Remote Radio Head Unit (RRHU), which is 15" tall x 15" wide x 10" deep. A visual survey of existing cell attachments in the city indicates that the Verizon proposal includes significantly more pieces of equipment than other attachments to City poles. I recommend that the City ask Verizon to reduce or consolidate the number of attachments and place them higher on the pole. If the number of attachments cannot be reduced or consolidated, I recommend that the attachments be placed closer to the top of the telephone pole and painted to match pole color in order to reduce the visual clutter at the pedestrian view.

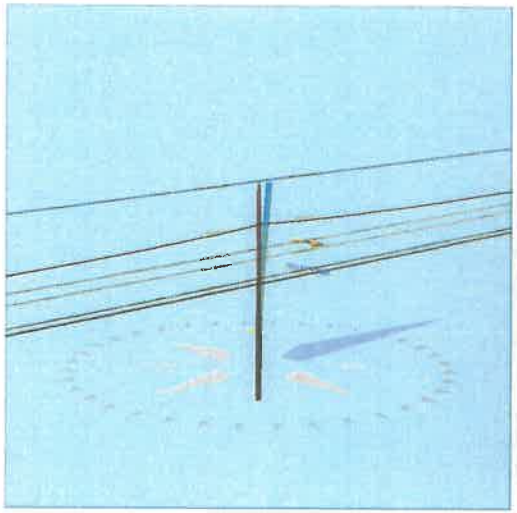
As part of the review for cell attachments, a determination must be made that the location of the attachments will not impact the city's historic resources. Therefore, I have reviewed the submitted plans and offer the following comments:

389 Lafayette Street, 8 Loring Avenue, 28 Raymond Road and 198 Loring Avenue
None of these properties are designated in a local or National Register historic district and only 8 Loring Avenue has been inventoried (SAL.4390). Therefore, I find that the proposed attachments will not impact historic resources.

201 Derby Street
While not in a local or National Register historic district, this pole is located directly adjacent to the entrance to the Derby Street Local Historic District as well at the entrance to the Salem Maritime National Park. Moving it closer to the intersection of Derby, Hawthorne Boulevard and Congress Street would be preferable but utilities in this area are buried and the only poles that exist are metal light poles.

13 Washington Square/1 Brown Street
The proposed attachment in front of 13 Washington Square/1 Brown Street is located in the Washington Square Local Historic District and the Salem Common National Register District. The building at 1 Brown Street (SAL.2459) was recently restored by the Peabody Essex Museum, which is also undertaking extensive landscape restoration on their property adjacent to this building. In addition, Brown Street is a narrow residential street and the proposed design of the installation indicates that the cantenna will be mounted onto a bracket that overhangs the street. The ancillary equipment and cable will be located on the side of the telephone pole and will add visual clutter to an historic streetscape.

Pole Num:	**3412**	Pole Length / Class:	**40 / 3**	Code:	**NESC**	Structure Type:	**Unguyed Tangent**
Aux Data 1	**Unset**	Species:	**SOUTHERN PINE**	NESC Rule:	**Rule 250B**	Status	**Unguyed**
Aux Data 2	**Unset**	Setting Depth (ft):	**6.11**	Construction Grade:	**C**	Pole Strength Factor:	**0.85**
Aux Data 3	**Unset**	G/L Circumference (in):	**38.00**	Loading District:	**Heavy**	Transverse Wind LF:	**1.75**
Aux Data 4	**Unset**	G/L Fiber Stress (psi):	**8,000**	Ice Thickness (in):	**0.50**	Wire Tension LF:	**1.00**
Aux Data 5	**Unset**	Allowable Stress (psi):	**6,800**	Wind Speed (mph):	**39.53**	Vertical LF:	**1.90**
Aux Data 6	**Unset**	Fiber Stress Ht. Reduc:	**No**	Wind Pressure (psf):	**4.00**		
Latitude:		**0.000000 Deg**	Longitude:		**0.000000 Deg**	Elevation:	**0 Feet**



Pole Capacity Utilization (%)		Height (ft)	Wind Angle (deg)
Maximum	**23.8**	0.0	90.0
Groundline	**23.8**	0.0	90.0
Vertical	**5.5**	18.6	90.0

Pole Moments (ft-lb)		Load Angle (deg)	Wind Angle (deg)
Max Cap Util	**22,973**	90.1	90.0
Groundline	**22,973**	90.1	90.0
GL Allowable	**98,453**		

Groundline Load Summary - Reporting Angle Mode: Load - Reporting Angle: 90.1°

	Shear Load* (lbs)	Applied Load (%)	Bending Moment (ft-lb)	Applied Moment (%)	Pole Capacity (%)	Bending Stress (+/- psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Pole Capacity (%)
Powers	318	31.3	**9,454**	41.2	**9.6**	**651**	641	6	**657**	**9.7**
Comms	507	49.8	**10,152**	44.2	**10.3**	**699**	1,142	10	**709**	**10.4**
Pole	192	18.8	**3,292**	14.3	**3.3**	**227**	2,026	18	**244**	**3.6**
Insulators	2	0.2	**75**	0.3	**0.1**	**5**	51	0	**6**	**0.1**
Pole Load	1,019	100.0	**22,973**	100.0	**23.3**	**1,583**	3,860	34	**1,616**	**23.8**
Pole Reserve Capacity			**75,480**		**76.7**	**5,217**			**5,184**	**76.2**

Load Summary by Owner - Reporting Angle Mode: Load - Reporting Angle: 90.1°

	Shear Load* (lbs)	Applied Load (%)	Bending Moment (ft-lb)	Applied Moment (%)	Pole Capacity (%)	Bending Stress (+/- psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Pole Capacity (%)
NGrid	320	31.4	**9,506**	41.4	**9.7**	**655**	654	6	**661**	**9.7**
Fiber	218	21.4	**4,931**	21.5	**5.0**	**340**	380	3	**343**	**5.0**
Catv	120	11.8	**2,174**	9.5	**2.2**	**150**	215	2	**152**	**2.2**
Telco	169	16.6	**3,048**	13.3	**3.1**	**210**	547	5	**215**	**3.2**
Pole	192	18.8	**3,292**	14.3	**3.3**	**227**	2,026	18	**244**	**3.6**
Communication	0	0.0	**23**	0.1	**0.0**	**2**	38	0	**2**	**0.0**
Totals:	1,019	100.0	**22,973**	100.0	**23.3**	**1,583**	3,860	34	**1,616**	**23.8**

Detailed Load Components:

Power		Owner	Height (ft)	Horiz. Offset (in)	Cable Diameter (in)	Sag at Max Temp (ft)	Cable Weight (lbs/ft)	Lead/Span Length (ft)	Span Angle (deg)	Wire Length (ft)	Tension (lbs)	Tension Moment* (ft-lb)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Primary	AAAC 123.3 KCM AZUSA	NGrid	34.52	3.66	0.3980	0.20	0.115	100.0	0.0	100.0	1,281	-82	0	1,408	1,326
Primary	AAAC 123.3 KCM AZUSA	NGrid	34.52	3.66	0.3980	0.20	0.115	100.0	180.0	100.0	1,281	82	0	1,408	1,490
Secondary	TRIPLEX 1/0 10-5	NGrid	26.77	6.41	1.0300	2.98	0.399	200.0	0.0	200.1	1,065	-53	137	3,170	3,254
Secondary	TRIPLEX 1/0 10-5	NGrid	26.77	6.41	1.0300	2.98	0.399	200.0	180.0	200.1	1,065	53	137	3,170	3,359
											Totals:	**0**	**274**	**9,155**	**9,430**

Comm		Owner	Height (ft)	Horiz. Offset (in)	Cable Diameter (in)	Sag at Max Temp (ft)	Cable Weight (lbs/ft)	Lead/Span Length (ft)	Span Angle (deg)	Wire Length (ft)	Tension (lbs)	Tension Moment* (ft-lb)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Overlashed Bundle	6.6M Strand .75 Fiber	Fiber	22.42	6.97	0.2500	0.14	0.121	100.0	180.0	100.0	1,663	69	32	975	1,076
Fiber	Fiber	Fiber	22.38	6.97	0.7500		0.035	100.0	180.0	100.0			27	321	348
Overlashed Bundle	6.6M Strand .75 Fiber	Fiber	22.42	6.97	0.2500	0.14	0.121	100.0	0.0	100.0	1,663	-69	32	975	939
Fiber	Fiber	Fiber	22.38	6.97	0.7500		0.035	100.0	0.0	100.0			27	321	348
Overlashed Bundle	6.6M Strand .5 Fiber	Fiber	20.60	7.10	0.2500	0.13	0.121	100.0	180.0	100.0	1,663	63	29	826	918
Fiber	Fiber	Fiber	20.57	7.10	0.5000		0.023	100.0	180.0	100.0			23	225	248
Overlashed Bundle	6.6M Strand .5 Fiber	Fiber	20.60	7.10	0.2500	0.13	0.121	100.0	0.0	100.0	1,663	-63	29	826	791
Fiber	Fiber	Fiber	20.57	7.10	0.5000		0.023	100.0	0.0	100.0			23	225	248
Overlashed Bundle	6.6M Strand .75 Catv	Catv	16.94	7.35	0.2500	0.15	0.121	100.0	0.0	100.0	1,663	-52	35	756	740
CATV	CATV .75	Catv	16.90	7.35	0.8200		0.038	100.0	0.0	100.0			30	262	292
Overlashed Bundle	6.6M Strand .75 Catv	Catv	16.94	7.35	0.2500	0.15	0.121	100.0	180.0	100.0	1,663	52	35	756	844
CATV	CATV .75	Catv	16.90	7.35	0.8200		0.038	100.0	180.0	100.0			30	262	292
Overlashed Bundle	10M STRAND	Telco	16.03	7.42	0.3060	0.81	0.165	100.0	0.0	100.0	2,500	-74	53	910	889

Telco	Telco 1.25	Telco	15.96	7.42	1.7500		1.225	100.0	0.0	100.0			116	441	556
Overlashed Bundle	10M STRAND	Telco	16.03	7.42	0.3060	0.81	0.165	100.0	180.0	100.0	2,500	74	53	910	1,038
Telco	Telco 1.25	Telco	15.96	7.42	1.7500		1.225	100.0	180.0	100.0			116	441	556
											Totals:	0	692	9,434	10,126

Insulator		Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Diameter (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Pin	Pin 7.5	NGrid	33.89	0.00	180.0	0.0	6.00	3.50	7.50	0	44	44
Spool	Spool Insulator	NGrid	26.77	0.00	90.0	0.0	1.00	2.50	2.12	1	7	8
Bolt	Three Bolt	Communication	22.42	0.00	90.0	0.0	5.00	3.00	0.00	6	0	6
Bolt	Three Bolt	Communication	20.60	0.00	90.0	0.0	5.00	3.00	0.00	6	0	6
Bolt	Three Bolt	Communication	16.94	0.00	90.0	0.0	5.00	3.00	0.00	6	0	6
Bolt	Three Bolt	Communication	16.03	0.00	90.0	0.0	5.00	3.00	0.00	6	0	6
									Totals:	24	51	74

Pole Buckling

Buckling Constant	Buckling Column Height* (ft)	Buckling Section Height (% Buckling Col. Hgt.)	Buckling Section Diameter (in)	Minimum Buckling Diameter at GL (in)	Diameter at Tip (in)	Diameter at GL (in)	Modulus of Elasticity (psi)	Pole Density (pcf)	Ice Density (pcf)	Pole Tip Height (ft)	Buckling Load Capacity at Height (lbs)	Buckling Load Applied at Height (lbs)	Buckling Load Factor of Safety
2.00	18.61	33.25	11.22	5.87	7.32	12.10	2.13e+6	60.00	57.00	33.89	69,784	**701.84**	**18.18**

verizon

2/7/202020
To: City of Salem
Transmitted via email
RE: Verizon Wireless Small Cell Sites

Dear City of Salem,

Verizon is installing additional wireless telecommunications facilities in order to meet the growing demand for Verizon Wireless service by residents, businesses, visitors, and emergency responders.

To ensure general public safety, it is important that you contact Verizon Wireless personnel at least 24 hours in advance should general maintenance need to be performed in areas of potential concern as marked on the next page of this document. This is required to comply with FCC guidelines and ensure the environment is safe for general maintenance workers who may require RF Safety & Awareness training. With notification, Verizon Wireless is able to evaluate appropriate actions needed relating to the antennas and proximity of the work location.

Thank you for your inquiry. Verizon has a process to deactivate power on small cells (regardless of whether the small cell is 4G or 5G) while work is being done on the pole (including joint use poles). The information needed to have a small cell powered down for work to occur on the pole (including contact numbers and pole identifiers) is provided at a safe distance from the small cell on the pole itself. Please contact Verizon Wireless personnel at least 24 hours in advance if you need to perform maintenance at that site. If you have any additional questions, our point of contact in that area is Luis Teves.

You also expressed concerns about the health effects of RF emissions from Verizon's network equipment. The Federal Communications Commission (FCC) has developed safety rules for human exposure to RF emissions in consultation with numerous other federal agencies, including the Environmental Protection Agency, the Food and Drug Administration, and the Occupational Safety and Health Administration. These rules can be found at 47 C.F.R § 1.1310. No matter which generation of technology we use, all Verizon equipment must comply with these safety requirements.

The FCC supported and adopted the standards after examining the RF research that scientists in the US and around the world conducted for decades. The research continues to this day, and agencies continue to monitor it. Based on that research, federal agencies have concluded that equipment that has been deployed in a manner that complies with the safety standards poses no known health risks. You can obtain further information about the safety of RF emissions from cell towers on the FCC's website, which you can access via this link: http://www.fcc.gov/oet/rfsafety/rf-faqs.html.

Thank you for reaching out to us regarding your concerns. We appreciate the chance to explain our activities regarding the wireless facility at issue. Questions related to compliance with federal regulations should be directed to VZWRFCompliance@verizonwireless.com. Please contact your local Verizon Wireless resource below if you have any additional questions.

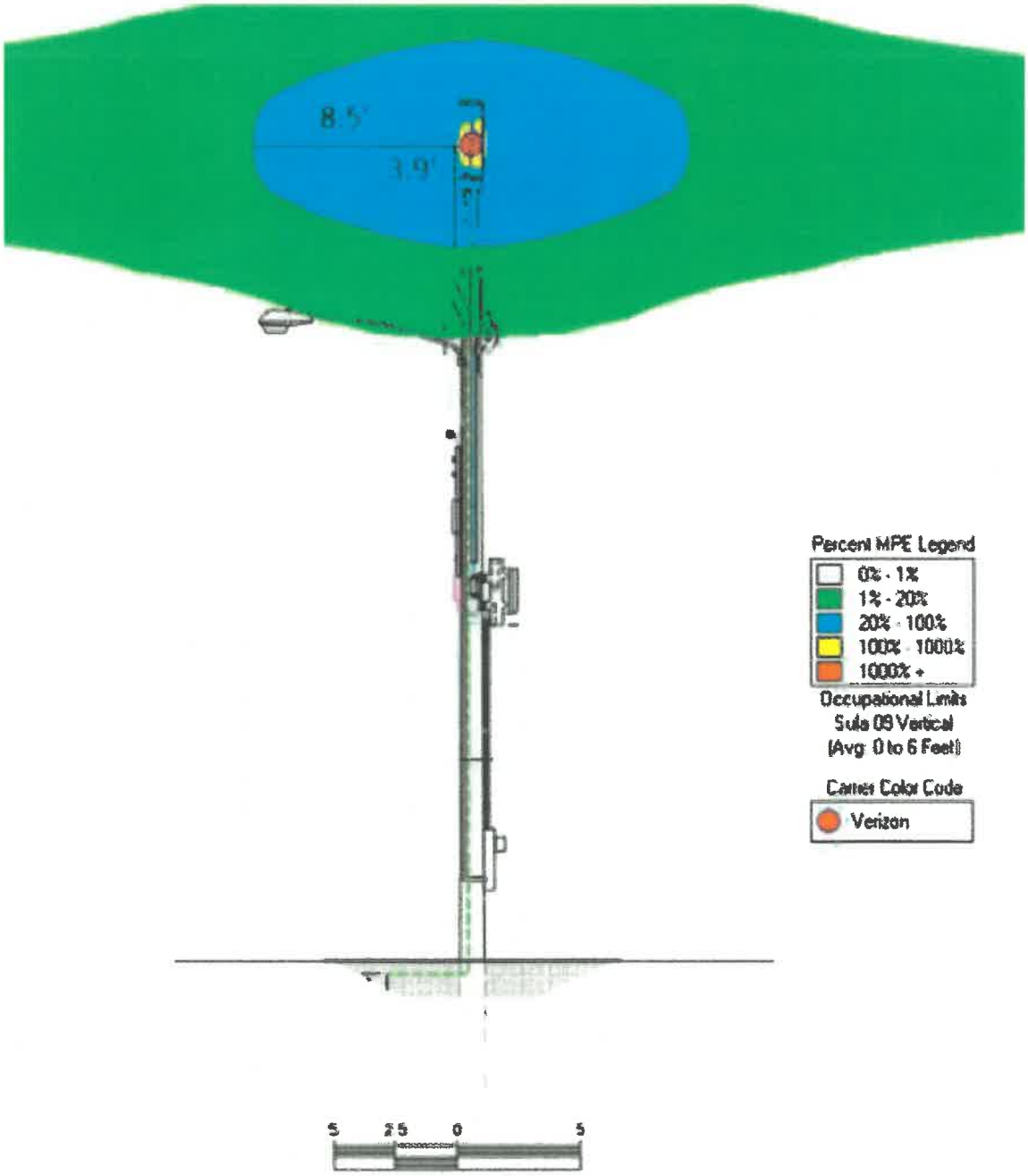
Contact Name	Contact Email	Contact Phone
Luis Teves	**Luis.Teves@VerizonWireles.com**	**508-479-3197**

Sincerely,

Michael Creamer
Sr Manager - RF Design
Verizon Wireless

Verizon Wireless (VZW) Radiofrequency (RF) Emissions Map

The following site layout represents a current snapshot in time of the predicted Verizon Wireless RF emissions from transmitting antennas on this facility. Contact Verizon Wireless should maintenance need to be performed in any non-green areas.



Color	% Occupational MPE	Instructions
	0 to 20	Safe In Relation to VZW. Contact Other Carriers Before Entering This Area
	20 to 100	Contact VZW Before Accessing This Area
	Greater Than 100	
	Greater Than 1000	

Property Owner Responsibilities (M.E.N.U)

RF exposure safety and the protection of every licensee's infrastructure are very important. Property owners and licensees have a shared responsibility in maintaining a safe and secure RF environment. Property owners can help in this significant endeavor by:

⇒ **M**aintaining all necessary wireless licensee contact information.

⇒ **E**nforcing restricted access (help maintain a Controlled Environment). **E**nsuring all building/maintenance personnel are aware that the potential for exposure exists, and follow all appropriate entry and safety procedures.

⇒ **N**otifying all licensees when any non-carrier requests access to any area with antennas **at least 24 hours in advance.**

⇒ **U**nderstanding that compliance with the FCC and OSHA can be achieved with RF Exposure levels above the applicable limit if the proper signage, physical/indicative barrier, and access restrictions are implemented. Commitment to compliance and willingness to cooperate are essential.

For General RF Safety & Awareness Questions

Verizon Wireless

E-mail: VZWRFCompliance@vzw.com

E-mail Subject: "ATTN: RF Compliance"

In The Event That Emergency Maintenance Is Required

24-Hour Network Operations Center:

1-800-264-6620

RF Safety & Awareness Training Contacts

Dtech Communications

(michelle@dtechcom.com.)

EBI Consulting

spenta@ebiconsulting.com

SiteSafe

(cbagley@sitesafe.com)

Waterford Consultants

Sbaier-anderson@waterfordconsultants.com

Radio Frequency (RF) Emissions

SAFETY & AWARENESS

Federal Compliance Requirements

The Federal Communications Commission (FCC) has established safety guidelines relating to RF exposure from cell sites. The FCC developed those standards, known as Maximum Permissible Exposure (MPE) limits, in consultation with numerous other federal agencies, including the Environmental Protection Agency, the Food and Drug Administration, and the Occupational Safety and Health Administration. The standards were developed by expert scientists and engineers after extensive reviews of the scientific literature related to RF biological effects. The FCC explains that its standards incorporate prudent margins of safety. The following represents an overview of the most applicable information:

Classifications for Exposure Limits

Occupational	General Population
Persons are "exposed as a consequence of their *employment*" and are "*fully aware* of the potential for exposure and can *exercise control* over their exposure".	Any persons that "*may not be made fully aware* of the potential for exposure or *cannot exercise control* over their exposure". Those in this category do not have RF Safety & Awareness Training.

Ensuring Compliance With FCC Guidelines

Areas or portions of any transmitter site may be susceptible to high power densities that could cause personnel exposures in excess of the FCC guidelines.

Wireless Licensees are required by law to implement the following:

- **Restrict access** (lock doors/ladders)
- **Post notification signage on every access point** to increase awareness of the potential for exposure BEFORE one enters an area with antennas.
- **Place additional notification signage and visual indicators** in an area with antennas (beyond an access point) where RF exposure levels may start to exceed the FCC's limits.

Compliance Materials

Notification Signage

(Notice) RF Guidelines - Informs viewer of the basic safety guidelines for working in an RF Environment.

Information– Provides relevant contact information for any questions or requests.

(Blue) Notice - Informs viewer that beyond the sign, RF exposure levels may exceed the General Population MPE limit but will remain below the Occupational MPE limit.

(Yellow) Caution - Informs viewer that beyond the sign, RF exposure levels may exceed the General Population and Occupational MPE limit.

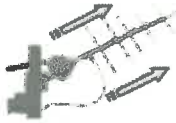
(Red) Warning - Informs viewer that beyond the sign, RF exposure levels may substantially exceed the General Population and Occupational MPE limit.

Indicative Barriers

In addition to physical barriers such as locked doors or ladders, wireless licensees may also be required to place indicative barriers as a means of visually demarcating an area where RF levels are expected to exceed the FCC's limits. **Examples of Indicative Barrier Materials:** plastic chains, buckets, reflective paint or plastic cones, fiberglass fences, and poles mounted in cinderblocks.

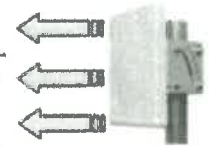
Antenna Safety

Antenna Types



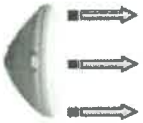
Yagi - Antenna that radiates energy in one direction. RF energy has a narrow beam. **Walk behind or under this antenna.**

Panel - Antenna that radiates energy in one direction. RF energy beam can range from narrow to very wide. **Walk behind this antenna. Stay out of the general direction that the antenna is pointing.**



Whip - Antenna that radiates energy equally in all directions. **Maintain as much distance as possible from this antenna.**

Microwave - Antenna that radiates energy in one direction. RF energy has a narrow beam. **Walk under or behind this antenna.**



When In An Environment With Antennas:

⇒ Maintain at least a 3-foot clearance from all antennas. A 10-foot separation distance is preferred.

⇒ Never touch an antenna. Assume all are active.

⇒ Read and obey ALL signs on an access point.

⇒ Read and obey ALL signs in the environment with antennas.

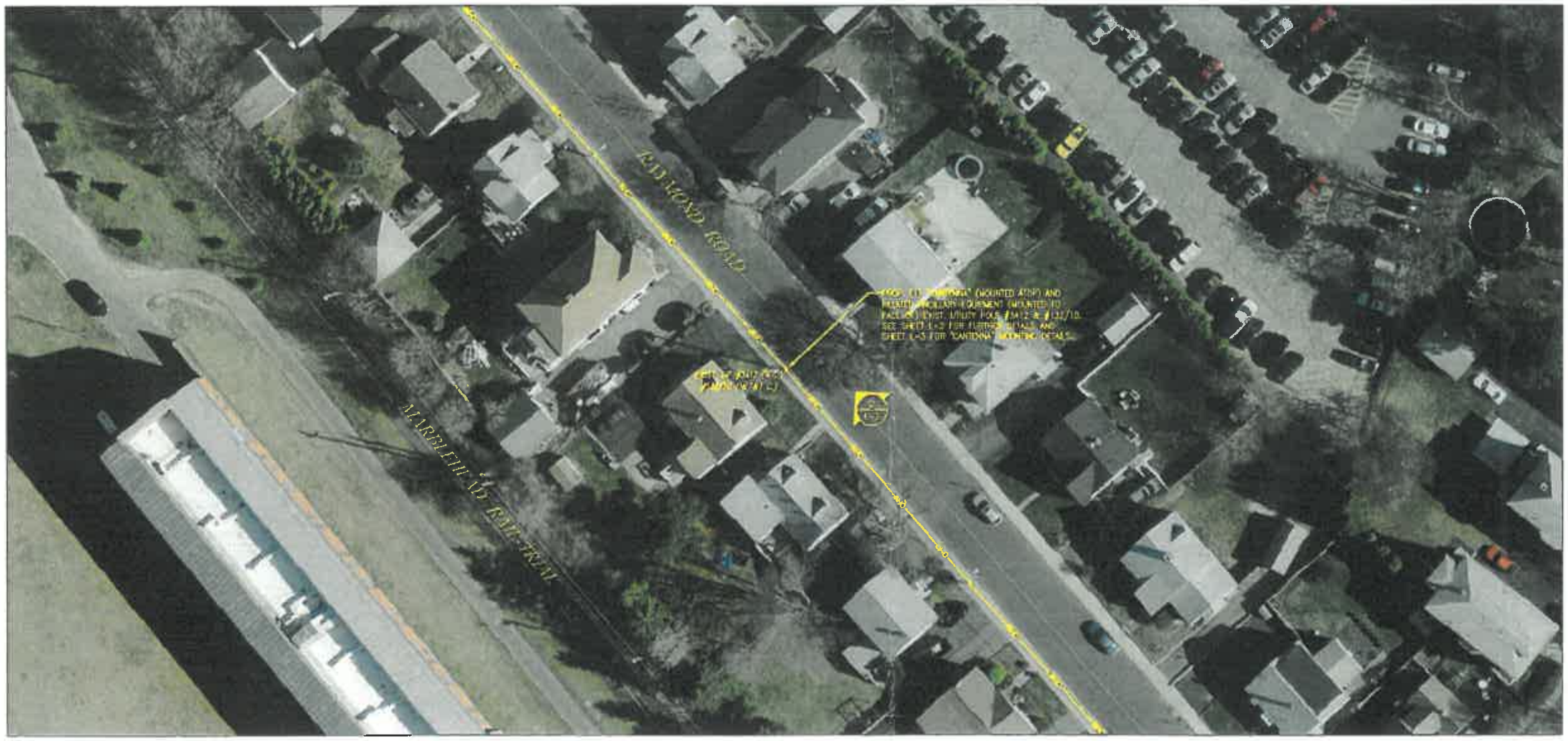
⇒ Never walk past an indicative barrier without first confirming transmitter inactivity.

⇒ Never walk in front of or stand in front of an antenna whenever possible. Keep walking.

⇒ Contact all wireless licensees **at least 24 hours in advance** of scheduled maintenance.

SALEM_SC13_MA
CLUSTER: SALEM MA

UTILITY POLE #3412 (N.G.)/ #132/10 (NET&T C.)
28 RAYMOND ROAD
SALEM, MA 01970



SITE CONTROL POINT:
CENTER OF EXISTING UTILITY POLE #3412 (N.G.)/ #132/10 (NET&T C.)
N 42.499903° (42°-29'-59.65")
W 70.892019° (70°-53'-31.27")
APPROXIMATE GROUND ELEVATION = 13'± AMSL

LOCATION PLAN/AERIAL IMAGE (1 / L-1)
SCALE: 1" = 50'
0 50' 100' 150'

SHEET INDEX

DWG.	DESCRIPTION	REV.
L-1	LOCATION PLAN/AERIAL IMAGE	0
L-2	UTILITY POLE PHOTOGRAPH AND ELEVATION	0
L-3	ANTENNA & ANCILLARY EQUIPMENT DETAILS AND ONE-LINE DIAGRAM	0

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CHAPPELL ENGINEERING ASSOCIATES, LLC
Civil · Structural · Land Surveying
R.K. EXECUTIVE CENTRE
201 BOSTON POST ROAD WEST, SUITE 101
MARLBOROUGH, MA 01752
(508) 481-7400
www.chappellengineering.com

REVISIONS

NO.	DESCRIPTION	DATE
0	ISSUED FOR REVIEW	10/30/19

SITE NAME:
SALEM_SC13_MA
UTILITY POLE #3412 (N.G.)/ #132/10 (NET&T C.)
28 RAYMOND ROAD
SALEM, MA 01970

DRAWING TITLE:
LOCATION PLAN/ AERIAL IMAGE

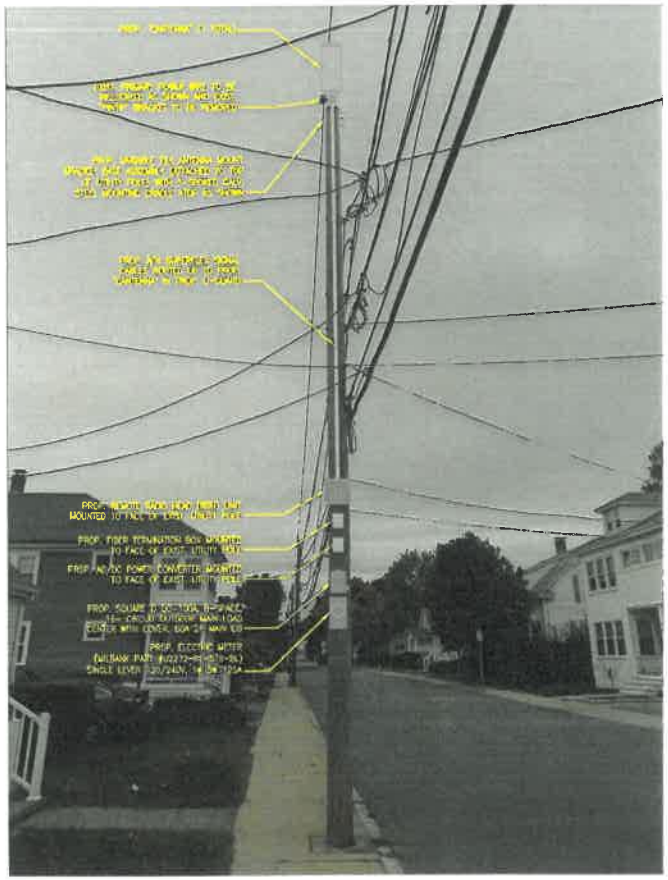
DRAWING NO:
L-1

LEASE EXHIBIT
NOT FOR CONSTRUCTION

SCALE:	DESIGNED BY:	NEW LOCATION CODE:
AS SHOWN		596551
CEA PROJECT NO.: 1460.310	ORIGINAL ISSUE DATE: 10/30/19	

GENERAL NOTES:

1. THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE AND ARE INTENDED TO PROVIDE GENERAL INFORMATION REGARDING THE LOCATION, SIZE AND ORIENTATION OF THE PROPOSED WIRELESS TELECOMMUNICATIONS EQUIPMENT INSTALLATION ON THE UTILITY POLE AND ARE NOT SPECIFICALLY INTENDED FOR CONSTRUCTION.
2. VERIZON WIRELESS SHALL PLACE WEATHER RESISTANT PHENOLIC PLACARDS ON UTILITY POLE AND ANCILLARY EQUIPMENT TO IDENTIFY EQUIPMENT OWNERSHIP & CONTACT INFORMATION TO BE UTILIZED IN THE CASE OF EMERGENCY.
3. AN ANALYSIS OF THE CAPACITY OF THE EXISTING UTILITY POLE TO SUPPORT THE PROPOSED LOADING HAS NOT BEEN COMPLETED BY CHAPPELL ENGINEERING ASSOCIATES, LLC. AND THUS, THESE DRAWINGS ARE SUBJECT TO CHANGE PENDING THE OUTCOME OF A STRUCTURAL ANALYSIS (TO BE PERFORMED BY OTHERS).
4. VERIZON WIRELESS' GENERAL CONTRACTOR SHALL EXTEND EFFORTS TO ENSURE THAT ALL PROPOSED EQUIPMENT MEETS THE REQUIREMENTS OF THE EXISTING UTILITY COMPANY OR COMPANIES CURRENTLY OCCUPYING THE UTILITY POLE AND THE 2017 NATIONAL ELECTRICAL SAFETY CODE.

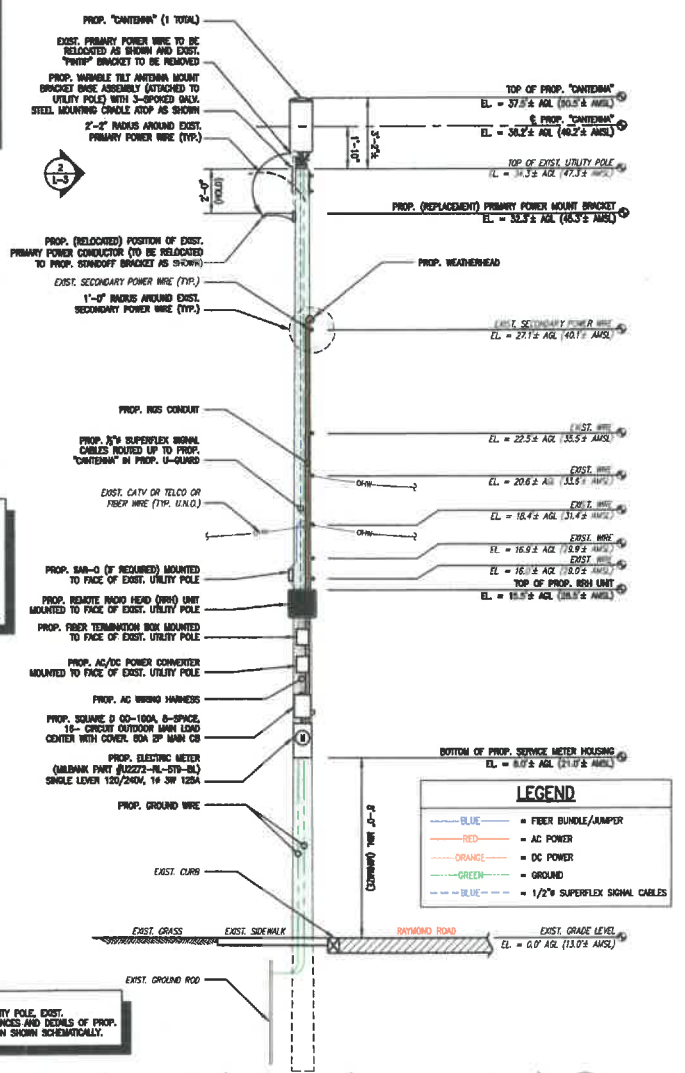


UTILITY POLE #3412 & #132/10 PHOTOGRAPH (EXISTING CONDITIONS/SCHEMATIC RENDERING) (1 L-2)

SCALE: NO SCALE

ANTENNA AND MOUNT NOTE: CONTRACTOR SHALL POSITION/RELOCATE PROP. ANTENNA MOUNT/BRACKET IN SUCH A WAY SO AS TO NOT INTERFERE WITH EXIST. STREET LIGHT, PRIMARY POWER CROSSWARMS (IF PRESENT), BRACKETS, BRACES, SECONDARY POWER SUPPORTS OR ANY OTHER MISCELLANEOUS APPURTENANCES AND RELATED SUPPORT BRACKETS ENCOUNTERED LOCATED ON THE EXIST. UTILITY POLE.

EQUIPMENT AND MOUNT NOTE: CONTRACTOR SHALL POSITION/RELOCATE PROP. EQUIPMENT AND ASSOCIATED MOUNTS/BRACKETS IN SUCH A WAY SO AS TO NOT INTERFERE WITH EXIST. WIRES/PANELS ETC. OR ANY OTHER MISCELLANEOUS APPURTENANCES AND RELATED SUPPORT BRACKETS ENCOUNTERED LOCATED ON THE FACE OF THE EXIST. UTILITY POLE.



NOTE: EXIST. UTILITY POLE, EXIST. APPURTENANCES AND DETAILS OF PROP. INSTALLATION SHOWN SCHEMATICALLY.

UTILITY POLE #3412 & #132/10 ELEVATION (PROPOSED CONDITIONS) (2 L-2)

SCALE: 3/16" = 1'-0"

0 5'-4" 10'-8" 16'-0"

verizon

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(508) 481-7400
www.chappellengineering.com

REVISIONS

NO.	DESCRIPTION	DATE
0	ISSUED FOR REVIEW	10/30/19

SITE NAME:

SALEM_SC13_MA

UTILITY POLE #3412 (N.G.)/ #132/10 (NET&T C.)
28 RAYMOND ROAD
SALEM, MA 01970

DRAWING TITLE:

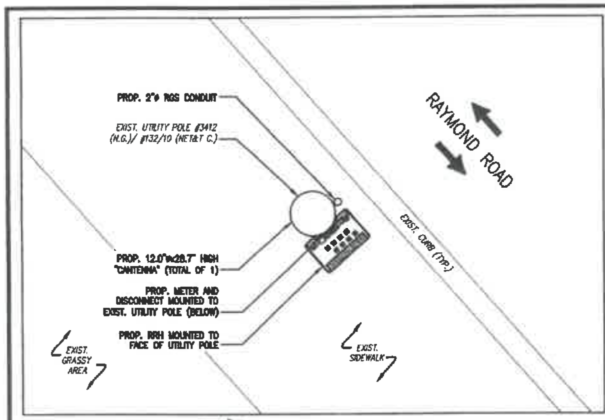
UTILITY POLE PHOTOGRAPH AND ELEVATION

DRAWING NO:

L-2

LEASE EXHIBIT
NOT FOR CONSTRUCTION

SCALE	DESIGNED BY: DRS	NEW LOCATION CODE:
AS SHOWN	DRAWN BY: MAM	388581
CEA PROJECT NO:	CHECKED BY: DRS	
1460.310	ORIGINAL ISSUE DATE: 10/30/19	



(INDICATES DIRECTION OF VEHICULAR TRAFFIC)

EQUIPMENT AND ANTENNA ORIENTATION PLAN (1 / L-3)

SCALE: 3/8" = 1'-0"

0 2'-8" 5'-4" 8'-0"

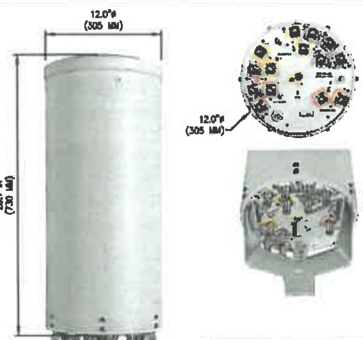
NORTH

NOTES:

1.) CONFIRM DOWNTILT REQUIREMENTS (IF ANY) AND AZIMUTH SPECIFICATIONS WITH VERIZON WIRELESS RF ENGINEER AT TIME OF CONSTRUCTION.

2.) MOUNT SHALL BE INSTALLED IN SUCH A WAY TO ENSURE PLUMB INSTALLATION OF "CANTENNA".

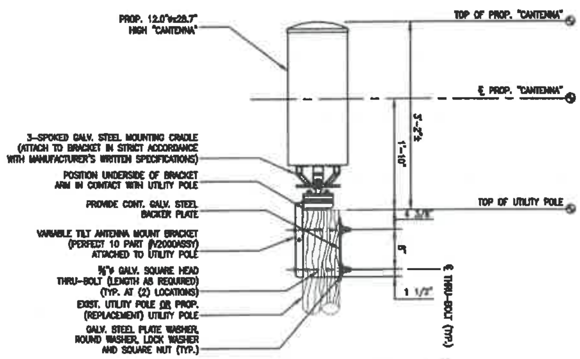
3.) UTILITY POLE APPURTENANCES NOT SHOWN FOR CLARITY.



SMALL CELL "CANTENNA"	
DIMENSIONS:	12.0"Ø x 28.7"
WEIGHT:	28.7 LBS
QUANTITY:	TOTAL OF 1

TYPICAL "CANTENNA" SPECIFICATIONS (3 / L-3)

SCALE: N.T.S.



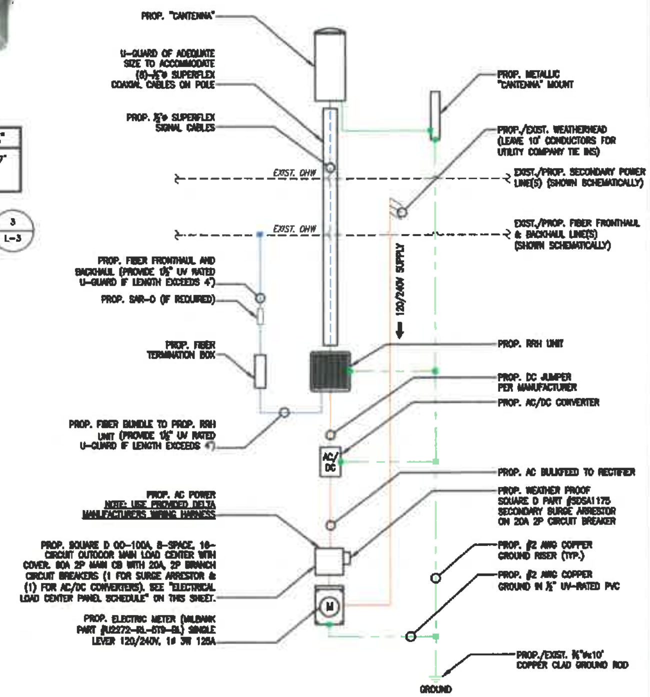
"CANTENNA" MOUNT DETAIL (2 / L-3)

SCALE: 1/2" = 1'-0"

PCS-AWS (1900/2100 MHz) REMOTE RADIO HEAD UNIT	
DIMENSIONS:	15.0"H x 15.0"W x 10.0"D
WEIGHT:	84.4 LBS
QUANTITY:	TOTAL OF 1

TYPICAL REMOTE RADIO HEAD (RRH) UNIT DIMENSIONS (4 / L-3)

SCALE: N.T.S.



ONE-LINE DIAGRAM NOTES:

1) PROVIDE WEATHER TIGHT SEAL CONNECTORS ON ALL CONNECTIONS EACH SIDE OF ENCLOSURE HOUSING.

2) COORDINATE ANY FURTHER MISCELLANEOUS WIRING AND CONDUIT REQUIREMENTS WITH VERIZON WIRELESS AND ELECTRIC COMPANY.

LEGEND

BLUE	FIBER BUNDLE/JUMPER
RED	AC POWER
ORANGE	DC POWER
GREEN	GROUND
BLUE (dashed)	1/2"Ø SUPERFLEX SIGNAL CABLES

FIBER/ELECTRICAL ONE-LINE DIAGRAM (5 / L-3)

SCALE: N.T.S.

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REVISIONS		
NO.	DESCRIPTION	DATE
0	ISSUED FOR REVIEW	10/30/19

SITE NAME:

SALEM_SC13_MA

UTILITY POLE #3412 (N.G.)/ #132/10 (NET&T C.)
28 RAYMOND ROAD
SALEM, MA 01970

DRAWING TITLE:

ANTENNA & ANCILLARY EQUIPMENT DETAILS AND ONE-LINE DIAGRAM

DRAWING NO:

L-3

LEASE EXHIBIT
NOT FOR CONSTRUCTION

SCALE:	DESIGNED BY: URS	NEW LOCATION CODE:
AS SHOWN	DRAWN BY: MAM	368081
CEA PROJECT NO.: 1480.310	CHECKED BY: GRS; ORIGINAL ISSUE DATE: 10/30/19	

SALEM_SC26_MA

ROUTING SLIP

Telecommunications Attachments in the Public Right of Way

Pursuant to the Code of Ordinances, Sections 12-86 through 12-200, each applicant who seeks access to the public right of way for telecommunications purposes must submit a petition and plans along with a $500 application fee to the Electrical Department. Once the City Electrician has signed off, please circulate to the Departments listed on the reverse side of this Routing Slip for signature and return it to the City Clerk's Office prior to the petition being placed on the City Council Agenda for a grant of location pursuant to MGL Chapter 166, Section 22.

Right of Way Location Requested: 13 WASHINGTON SQ aka/1 BROWN ST. / 42.523283, -70.891235

Application Fee Received: Yes [✓] **Check No.** 6477 **Date:** 2/27/20

City Electrician Approval: John J Ricardi

BUSINESS NAME

Corporate name: VERIZON WIRELESS

d/b/a:

Address: 116 FLANDERS Rd 3rd FLOOR WESTBOROUGH, MA 01581 **Tele. #**

CONTACT: BRYAN SARCHI / AGENT w/ AIROSMITH DEVELOPMENT

Street: 318 WEST AVE **Tele. #** 480-734-9970

City: SARATOGA SPRINGS **State:** NY **Zip:** 12866

Email Address: BSARCHI@AIROSMITHDEVELOPMENT.COM

Pole Ownership

✓ **To be attached to utility-owned pole** ___ **To be attached to City-owned pole**

✓ **Pole Attachment Agreement attached*** ___ **Pole Attachment Agreement to follow***

***All grants of location for telecommunications attachments to poles are conditioned upon evidence of a valid pole attachment agreement.**

Conduits

Will the attachment also require a conduit? ✓ **Yes** ___ **No**

TO ALL CITY DEPARTMENTS: By signing this slip you are only acknowledging that the applicant has made your department aware of its plans. All grants of location will be conditioned upon compliance with all departmental requirements and require a vote of the City Council after a public hearing. Please attach comments on separate sheet.

note this cover letter 3/11/2020
Planning Department DATE
City Hall Annex, 98 Washington Street

please see memo 3/30/2020
Engineering Department DATE
City Hall Annex, 98 Washington Street

please see comment letter 3/10/20
Salem Historical Commission DATE
City Hall Annex, 98 Washington Street

3/27/2020
Office of Information Technology DATE
29 Highland Avenue

3/30/2020
Legal Department DATE
City Hall, 93 Washington Street

RETURN ROUTING SLIP, ANY COMMENTS, PETITION, PLANS, ABUTTER LABELS, AND PROPOSED ORDER TO CITY CLERK'S OFFICE, CITY HALL, 93 WASHINGTON STREET WHEN COMPLETE SO THAT IT MAY BE PLACED ON THE COUNCIL'S AGENDA.

PETITION FOR SMALL CELL POLE ATTACHMENT

Under MGL Chapter 166, Section 22.

To the Honorable City Council of Salem, Massachusetts

Cellco Partnership d/b/a Verizon Wireless hereby respectfully requests permission to locate a small cell wireless antenna and necessary sustaining and protecting fixtures, on an existing utility pole #4916, located in the right of way adjacent to 1 Brown Street in the City of Salem, as more particularly shown on the plans attached hereto.

Wherefore it prays that after due notice and hearing as provided by law, it be granted permission to install and maintain a small cell wireless antenna including the necessary sustaining and protecting fixtures in accordance with the plan filed herewith marked SALEM_SC26_MA.

The following are the public ways or part of ways along which the above referred attachment may be installed thereon:

Cellco Partnership d/b/a Verizon Wireless proposes to attach equipment to an existing utility pole #4916, located in the right of way near the property line of 1 Brown Street with location as shown on the plan attached.

PETITIONER:

Cellco Partnership d/b/a
Verizon Wireless

By _____

Bryan Sarchi
Airosmith Development
318 West Avenue
Saratoga Springs, NY. 12866
480-734-4970

Kimberley Driscoll
Mayor

David H. Knowlton, P.E.
City Engineer/DPS Director

CITY OF SALEM

Engineering Department

98 Washington Street, 2nd floor
Salem, MA 01970
Phone: (978) 619-5673

MEMORANDUM

To: Victoria Caldwell, Assistance City Solicitor
From: Deborah L. Duhamel, PE, Assistant City Engineer
Subject: Verizon – Request for Grant of Location
Date: March 30, 2020

I have reviewed the request from Verizon Wireless for the installation of "cantenna" cell attachments and ancillary equipment to existing telephone poles at the following locations:

13 Washington Square/1 Brown Street
8 Loring Ave
389 Lafayette Street
28 Raymond Road
198 Loring Ave
201 Derby Street

Engineering requests the following conditions:

(1) Provide detailed construction schedule for all phases at each site.
(2) Provide traffic management plan for each site/phase, showing at a minimum, where equipment will be and how traffic and pedestrian travel will be maintained, if parking spots will be needed, and if a detail will be required.
(3) Coordinate with DPS (978-744-3302) prior to installing grounding rod to confirm City utilities and property services are clear of rod location.
(4) Repair any damage caused by work to the satisfaction of the City Engineer.

KIMBERLEY DRISCOLL
MAYOR

TOM DANIEL, AICP
DIRECTOR

CITY OF SALEM, MASSACHUSETTS
DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT

98 WASHINGTON STREET ♦ SALEM, MASSACHUSETTS 01970
TELE: 978-619-5685 ♦ FAX: 978-740-0404

MEMO

To: Brennan Corriston, Staff Planner and Victoria Caldwell, Assistance City Solicitor
From: Patti Kelleher, Preservation Planner PK
Date: March 10, 2020
RE: Request for Grant of Location for Cell Antenna Attachment

I have reviewed the request from Verizon Wireless for the installation of "cantenna" cell attachments and ancillary equipment to existing telephone poles on Washington Square, Loring Avenue, Lafayette Street, Raymond Road and Derby Street. As indicated on the submitted Utility Pole Photograph and Elevation drawings for each property, the "cantenna" (a 28.7" can with a 12 diameter) would extend 3' from the top of the telephone pole and would include five (5) additional attachments and a covered cable on the side of each affected telephone pole (with the lowest attachment located 8' above sidewalk). Several of these attachments are significant in size, including the Remote Radio Head Unit (RRHU), which is 15" tall x 15" wide x 10" deep. A visual survey of existing cell attachments in the city indicates that the Verizon proposal includes significantly more pieces of equipment than other attachments to City poles. I recommend that the City ask Verizon to reduce or consolidate the number of attachments and place them higher on the pole. If the number of attachments cannot be reduced or consolidated, I recommend that the attachments be placed closer to the top of the telephone pole and painted to match pole color in order to reduce the visual clutter at the pedestrian view.

As part of the review for cell attachments, a determination must be made that the location of the attachments will not impact the city's historic resources. Therefore, I have reviewed the submitted plans and offer the following comments:

389 Lafayette Street, 8 Loring Avenue, 28 Raymond Road and 198 Loring Avenue
None of these properties are designated in a local or National Register historic district and only 8 Loring Avenue has been inventoried (SAL.4390). Therefore, I find that the proposed attachments will not impact historic resources.

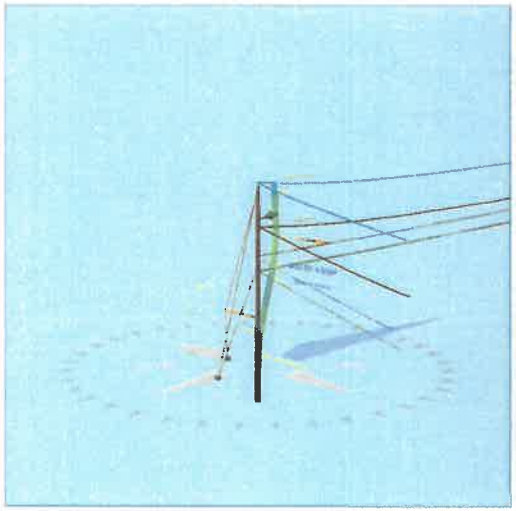
201 Derby Street
While not in a local or National Register historic district, this pole is located directly adjacent to the entrance to the Derby Street Local Historic District as well at the entrance to the Salem Maritime National Park. Moving it closer to the intersection of Derby, Hawthorne Boulevard and Congress Street would be preferable but utilities in this area are buried and the only poles that exist are metal light poles.

13 Washington Square/1 Brown Street
The proposed attachment in front of 13 Washington Square/1 Brown Street is located in the Washington Square Local Historic District and the Salem Common National Register District. The building at 1 Brown Street (SAL.2459) was recently restored by the Peabody Essex Museum, which is also undertaking extensive landscape restoration on their property adjacent to this building. In addition, Brown Street is a narrow residential street and the proposed design of the installation indicates that the cantenna will be mounted onto a bracket that overhangs the street. The ancillary equipment and cable will be located on the side of the telephone pole and will add visual clutter to an historic streetscape.

Based on the above findings, I find that the proposed attachment will impact the city's historic resources. Therefore, I recommend that an alternative pole be selected to minimize impacts on the adjacent historic buildings and to be less visually conspicuous on this historic streetscape. If an alternative location cannot be used, then the attachments to the pole should be placed as high as possible and painted to match color of wood pole. The Historical Commission often requires property owners to paint vents and pipes in a matte finish to match color of building.

Google Streetview of 1 Brown Street in 2018 Before Current Restoration Work

Pole Num:	4916_BROWN ST	Pole Length / Class:	40 / 3	Code:	NESC	Structure Type:	Angle
Aux Data 1	Unset	Species:	SOUTHERN PINE	NESC Rule:	Rule 250B	Status	Guy Wires Adequate
Aux Data 2	Unset	Setting Depth (ft):	6.5	Construction Grade:	C	Pole Strength Factor:	0.85
Aux Data 3	Unset	G/L Circumference (in):	38.00	Loading District:	Heavy	Transverse Wind LF:	1.75
Aux Data 4	Unset	G/L Fiber Stress (psi):	8,000	Ice Thickness (in):	0.50	Wire Tension LF:	1.30
Aux Data 5	Unset	Allowable Stress (psi):	6,800	Wind Speed (mph):	39.53	Vertical LF:	1.90
Aux Data 6	Unset	Fiber Stress Ht. Reduc:	No	Wind Pressure (psf):	4.00		
Latitude:	0	Longitude:	0			Elevation:	0M



Pole Capacity Utilization (%)		Height (ft)	Wind Angle (deg)
Maximum	66.8	0.0	83.4
Groundline	66.8	0.0	84.1
Vertical	8.5	26.92	45.0

Pole Moments (ft-lb)		Load Angle (deg)	Wind Angle (deg)
Max Cap Util	63,389	82.3	83.4
Groundline	63,389	82.3	84.1
GL Allowable	98,453		

Guy System Component Summary				Load From Worst Wind Angle on Pole		Individual Maximum Load With Overload Applied	
Description	Lead Length (ft)	Lead Angle (deg)	Height (ft)	Nominal Capacity (%)	Wind Angle (deg)	Max* Load Capacity (%)	Wind Angle (deg)
Single Helix Anchor	10.0	180.0		27.6	83.4	32.8	10.0
12.5M (Down)			18.1	33.9	83.4	39.6	10.0
12.5M (Down)			32.3	15.4	83.4	19.0	10.0
Single Helix Anchor	8.0	270.0		29.2	83.4	32.1	84.8
12.5M (Sidewalk)			32.1	51.9	83.4	57.0	84.8
Sidewalk Strut	8.5	270.0	9.4	93.2	83.4	93.2	84.8
			System Capacity Summary:	Near Capacity		Near Capacity	

Groundline Load Summary - Reporting Angle Mode: Load - Reporting Angle: 82.3°

	Shear Load* (lbs)	Applied Load (%)	Bending Moment (ft-lb)	Applied Moment (%)	Pole Capacity (%)	Bending Stress (+/- psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Pole Capacity (%)
Powers	985	16.7	**24,527**	38.7	**24.9**	**1,924**	450	4	**1,928**	**28.4**
Comms	4,452	75.7	**76,812**	121.2	**78.0**	**6,026**	672	6	**6,031**	**88.7**
GuyBraces	231	3.9	**-41,430**	-65.4	**-42.1**	**-4,072**	15,801	138	**-3,934**	**-57.9**
Pole	190	3.2	**2,830**	4.5	**2.9**	**222**	2,005	17	**239**	**3.5**
Streetlights	24	0.4	**604**	1.0	**0.6**	**47**	86	1	**48**	**0.7**
Insulators	2	0.0	**45**	0.1	**0.1**	**4**	51	0	**4**	**0.1**
Pole Load	5,884	100.0	**63,389**	100.0	**64.4**	**4,151**	19,064	166	**4,317**	**63.5**
Pole Reserve Capacity			**35,064**		**35.6**	**2,649**			**2,483**	**36.5**

Load Summary by Owner - Reporting Angle Mode: Load - Reporting Angle: 82.3°

	Shear Load* (lbs)	Applied Load (%)	Bending Moment (ft-lb)	Applied Moment (%)	Pole Capacity (%)	Bending Stress (+/- psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Pole Capacity (%)
NGrid	1,218	20.7	**-16,859**	-26.6	**-17.1**	**-2,144**	16,264	142	**-2,003**	**-29.5**
Catv	2,222	37.8	**40,619**	64.1	**41.3**	**3,186**	270	2	**3,189**	**46.9**
Telco	2,230	37.9	**36,194**	57.1	**36.8**	**2,839**	439	4	**2,843**	**41.8**
Pole	190	3.2	**2,830**	4.5	**2.9**	**222**	2,005	17	**239**	**3.5**
Municipal	24	0.4	**604**	1.0	**0.6**	**47**	86	1	**48**	**0.7**
Totals:	5,884	100.0	**63,389**	100.0	**64.4**	**4,151**	19,064	166	**4,317**	**63.5**

Detailed Load Components:

Power		Owner	Height (ft)	Horiz. Offset (in)	Cable Diameter (in)	Sag at Max Temp (ft)	Cable Weight (lbs/ft)	Lead/Span Length (ft)	Span Angle (deg)	Wire Length (ft)	Tension (lbs)	Tension Moment* (ft-lb)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Primary	AAAC 123.3 KCM AZUSA	NGrid	34.16	3.66	0.3980	0.46	0.115	174.0	0.0	174.2	128	763	-5	2,387	3,145
Primary	AAAC 123.3 KCM AZUSA	NGrid	34.16	3.66	0.3980	0.04	0.115	60.0	115.0	60.0	128	4,789	-2	237	5,025
Secondary	TRIPLEX 1/0 10-5	NGrid	26.19	6.36	1.0300	3.66	0.399	174.0	0.0	174.2	500	2,283	117	2,656	5,056
Secondary	TRIPLEX 1/0 10-5	NGrid	26.19	6.36	1.0300	0.79	0.399	60.0	115.0	60.0	500	14,327	40	264	14,631
											Totals:	**22,162**	**151**	**5,544**	**27,857**

Comm		Owner	Height (ft)	Horiz. Offset (in)	Cable Diameter (in)	Sag at Max Temp (ft)	Cable Weight (lbs/ft)	Lead/Span Length (ft)	Span Angle (deg)	Wire Length (ft)	Tension (lbs)	Tension Moment* (ft-lb)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Overlashed Bundle	6.6M Strand .75 Catv	Catv	20.78	6.94	0.2500	1.01	0.121	174.0	0.0	174.0	1,663	6,022	8	1,589	7,620
CATV	CATV .75	Catv	20.74	6.94	0.8200		0.038	174.0	0.0	174.0			7	550	557
Overlashed Bundle	6.6M Strand .75 Catv	Catv	20.76	6.94	0.2500	0.06	0.121	60.0	115.0	60.0	1,663	37,750	-3	158	37,905
CATV	CATV .75	Catv	20.72	6.94	0.8200		0.038	60.0	115.0	60.0			-2	55	52
Overlashed Bundle	6.6M STRAND	Telco	18.06	7.10	0.2500	2.31	0.121	174.0	0.0	174.0	1,663	5,234	9	1,453	6,695
Telco	Telco	Telco	18.01	7.10	1.0000		0.700	174.0	0.0	174.0			16	549	565
Overlashed Bundle	6.6M STRAND	Telco	18.50	7.08	0.2500	0.27	0.121	60.0	115.0	60.0	1,663	33,652	-3	148	33,796
Telco	Telco	Telco	18.46	7.08	1.0000		0.700	60.0	115.0	60.0			-6	56	50
											Totals:	**82,658**	**26**	**4,557**	**87,241**

Streetlight		Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Height (in)	Unit Depth (in)	Unit Diameter (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Flood Light	Flood Light - 3 ft. Arm	Municipal	27.59	4.02	0.0	0.0	45.00	0.00	20.00	3.00	36.00	25	661	686
											Totals:	**25**	**661**	**686**

Insulator		Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Diameter (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Pin	Pin 7.5	NGrid	33.54	0.00	180.0	0.0	6.00	3.50	7.50	0	43	43
Spool	Spool Insulator	NGrid	26.19	0.00	90.0	0.0	1.00	2.50	2.12	0	7	7
Bolt	Three Bolt 0.75"	Catv	20.78	0.00	0.0	0.0	5.00	3.00	0.10	0	0	0
Bolt	Three Bolt 0.75"	Catv	20.76	0.00	180.0	180.0	5.00	3.00	0.10	0	0	0
Bolt	Three Bolt 1.0"	Telco	18.06	0.00	0.0	0.0	5.00	3.00	0.10	0	0	0
Bolt	Three Bolt 1.0"	Telco	18.50	0.00	180.0	180.0	5.00	3.00	0.10	0	0	0
									Totals:	**0**	**51**	**51**

Guy Wire and Brace		Owner	Attach Height (ft)	End Height (ft)	Lead/Span Length (ft)	Wire Diameter (in)	Percent Solid (%)	Lead Angle (deg)	Incline Angle (deg)	Wire Weight (lbs/ft)	Rest Length (ft)	Stretch Length (in)
12.5M	Down	NGrid	18.07	0.00	10.00	0.343	100.00	180.0	60.8	0.208	24.85	0.54
12.5M	Down	NGrid	32.32	0.00	10.00	0.343	100.00	180.0	72.5	0.208	38.48	0.38
12.5M	Sidewalk	NGrid	32.07	0.00	8.00	0.343	100.00	270.0	69.1	0.208	38.48	1.27

Guy Wire and Brace (Loads and Reactions)		Elastic Modulus (psi)	Rated Tensile Strength (lbs)	Guy Strength Factor	Allowable Tension (lbs)	Initial Tension (lbs)	Loaded Tension*[2] (lbs)	Maximum Tension[2] (lbs)	Applied Tension[3] (lbs)	Vertical Load (lbs)	Shear Load In Guy Dir (lbs)	Shear Load At Report Angle (lbs)	Moment at GL[3] (ft-lb)
12.5M	Down	2.30e+7	12,500	0.90	11,250	700	4,458	4,053	3,811	3,327	1,860	-249	-4,153
12.5M	Down	2.30e+7	12,500	0.90	11,250	700	2,140	1,945	1,731	1,651	521	-70	-1,660
12.5M	Sidewalk	2.30e+7	12,500	0.90	11,250	700	6,417	5,834	5,833	5,448	2,085	-2,067	-41,241
									Totals:	**10,425**	**4,466**	**-2,386**	**-47,055**

Anchor/Rod Load Summary	Owner	Rod Length AGL (in)	Lead Length (ft)	Lead Angle (deg)	Strength of Assembly (lbs)	Anchor/Rod Strength Factor	Allowable Load (lbs)	Max Load[2] (lbs)	Load at Pole MCU[3] (lbs)	Max Required Capacity[2] (%)
Single Helix Anchor	NGrid	18.00	10.00	180.0	20,000	1.00	20,000	6,563	5,513	32.8
Single Helix Anchor	NGrid	18.00	8.00	270.0	20,000	1.00	20,000	6,417	5,833	32.1

Pole Buckling

Buckling Constant	Buckling Column Height* (ft)	Buckling Section Height (% Buckling Col. Hgt.)	Buckling Section Diameter (in)	Minimum Buckling Diameter at GL (in)	Diameter at Tip (in)	Diameter at GL (in)	Modulus of Elasticity (psi)	Pole Density (pcf)	Ice Density (pcf)	Pole Tip Height (ft)	Buckling Load Capacity at Height (lbs)	Buckling Load Applied at Height (lbs)	Buckling Load Factor of Safety
0.71	26.94	34.76	10.76	6.52	7.32	12.10	2.13e+6	60.00	57.00	33.54	225,149	**2242.85**	**11.76**

verizon

2/7/202020
To: City of Salem
Transmitted via email
RE: Verizon Wireless Small Cell Sites

Dear City of Salem,

Verizon is installing additional wireless telecommunications facilities in order to meet the growing demand for Verizon Wireless service by residents, businesses, visitors, and emergency responders.

To ensure general public safety, it is important that you contact Verizon Wireless personnel at least 24 hours in advance should general maintenance need to be performed in areas of potential concern as marked on the next page of this document. This is required to comply with FCC guidelines and ensure the environment is safe for general maintenance workers who may require RF Safety & Awareness training. With notification, Verizon Wireless is able to evaluate appropriate actions needed relating to the antennas and proximity of the work location.

Thank you for your inquiry. Verizon has a process to deactivate power on small cells (regardless of whether the small cell is 4G or 5G) while work is being done on the pole (including joint use poles). The information needed to have a small cell powered down for work to occur on the pole (including contact numbers and pole identifiers) is provided at a safe distance from the small cell on the pole itself. Please contact Verizon Wireless personnel at least 24 hours in advance if you need to perform maintenance at that site. If you have any additional questions, our point of contact in that area is Luis Teves.

You also expressed concerns about the health effects of RF emissions from Verizon's network equipment. The Federal Communications Commission (FCC) has developed safety rules for human exposure to RF emissions in consultation with numerous other federal agencies, including the Environmental Protection Agency, the Food and Drug Administration, and the Occupational Safety and Health Administration. These rules can be found at 47 C.F.R § 1.1310. No matter which generation of technology we use, all Verizon equipment must comply with these safety requirements.

The FCC supported and adopted the standards after examining the RF research that scientists in the US and around the world conducted for decades. The research continues to this day, and agencies continue to monitor it. Based on that research, federal agencies have concluded that equipment that has been deployed in a manner that complies with the safety standards poses no known health risks. You can obtain further information about the safety of RF emissions from cell towers on the FCC's website, which you can access via this link: http://www.fcc.gov/oet/rfsafety/rf-faqs.html.

Thank you for reaching out to us regarding your concerns. We appreciate the chance to explain our activities regarding the wireless facility at issue. Questions related to compliance with federal regulations should be directed to VZWRFCompliance@verizonwireless.com. Please contact your local Verizon Wireless resource below if you have any additional questions.

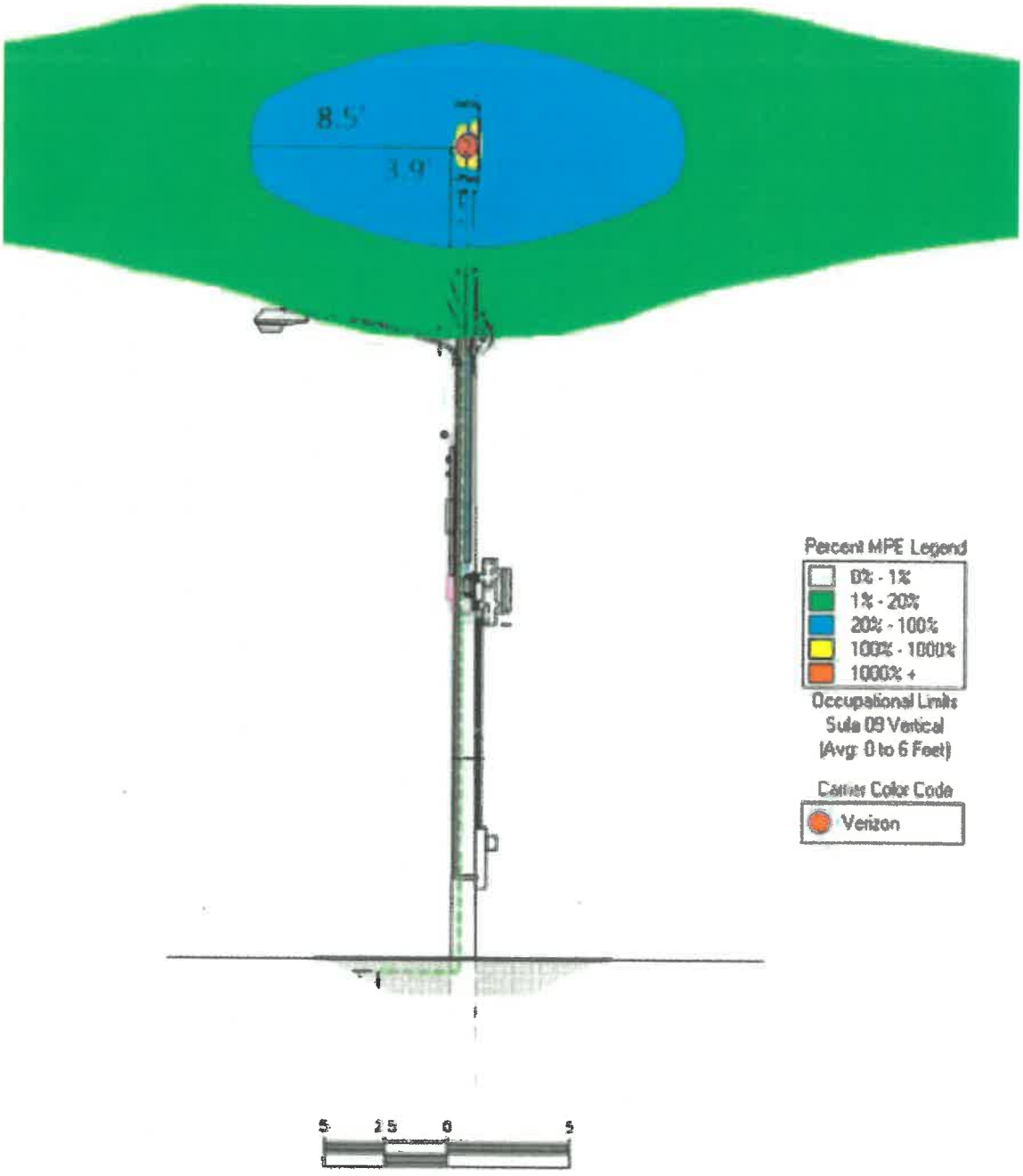
Contact Name	Contact Email	Contact Phone
Luis Teves	**Luis.Teves@VerizonWireles.com**	**508-479-3197**

Sincerely,

Michael Creamer
Sr Manager - RF Design
Verizon Wireless

Verizon Wireless (VZW) Radiofrequency (RF) Emissions Map

The following site layout represents a current snapshot in time of the predicted Verizon Wireless RF emissions from transmitting antennas on this facility. Contact Verizon Wireless should maintenance need to be performed in any non-green areas.



Color	% Occupational MPE	Instructions
	0 to 20	Safe In Relation to VZW. Contact Other Carriers Before Entering This Area
	20 to 100	Contact VZW Before Accessing This Area
	Greater Than 100	
	Greater Than 1000	

Property Owner Responsibilities (M.E.N.U)

RF exposure safety and the protection of every licensee's infrastructure are very important. Property owners and licensees have a shared responsibility in maintaining a safe and secure RF environment. Property owners can help in this significant endeavor by:

⇒ **M**aintaining all necessary wireless licensee contact information.

⇒ **E**nforcing restricted access (help maintain a Controlled Environment). **E**nsuring all building/maintenance personnel are aware that the potential for exposure exists, and follow all appropriate entry and safety procedures.

⇒ **N**otifying all licensees when any non-carrier requests access to any area with antennas **at least 24 hours in advance.**

⇒ **U**nderstanding that compliance with the FCC and OSHA can be achieved with RF Exposure levels above the applicable limit if the proper signage, physical/indicative barrier, and access restrictions are implemented. Commitment to compliance and willingness to cooperate are essential.

For General RF Safety & Awareness Questions
Verizon Wireless
E-mail: VZWRFCompliance@vzw.com
E-mail Subject: "ATTN: RF Compliance"

In The Event That Emergency Maintenance Is Required
24-Hour Network Operations Center:
1-800-264-6620

RF Safety & Awareness Training Contacts

Dtech Communications
(michelle@dtechcom.com.)

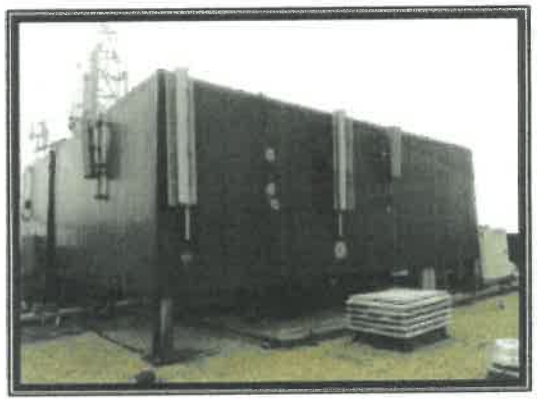
EBI Consulting
spenta@ebiconsulting.com

SiteSafe
(cbagley@sitesafe.com)

Waterford Consultants
Sbaier-anderson@waterfordconsultants.com

Radio Frequency (RF) Emissions

SAFETY & AWARENESS



Federal Compliance Requirements

The Federal Communications Commission (FCC) has established safety guidelines relating to RF exposure from cell sites. The FCC developed those standards, known as Maximum Permissible Exposure (MPE) limits, in consultation with numerous other federal agencies, including the Environmental Protection Agency, the Food and Drug Administration, and the Occupational Safety and Health Administration. The standards were developed by expert scientists and engineers after extensive reviews of the scientific literature related to RF biological effects. The FCC explains that its standards incorporate prudent margins of safety. The following represents an overview of the most applicable information:

Classifications for Exposure Limits

Occupational

Persons are "exposed as a consequence of their *employment*" and are "*fully aware* of the potential for exposure and can *exercise control* over their exposure".

General Population

Any persons that "*may not be made fully aware* of the potential for exposure or *cannot exercise control* over their exposure".

Those in this category do not have RF Safety & Awareness Training.

Ensuring Compliance With FCC Guidelines

Areas or portions of any transmitter site may be susceptible to high power densities that could cause personnel exposures in excess of the FCC guidelines.

Wireless Licensees are required by law to implement the following:

- **Restrict access** (lock doors/ladders)
- **Post notification signage on every access point** to increase awareness of the potential for exposure BEFORE one enters an area with antennas.
- **Place additional notification signage and visual indicators** in an area with antennas (beyond an access point) where RF exposure levels may start to exceed the FCC's limits.

Compliance Materials

Notification Signage

(Notice) RF Guidelines - Informs viewer of the basic safety guidelines for working in an RF Environment.

Information– Provides relevant contact information for any questions or requests.

(Blue) Notice - Informs viewer that beyond the sign, RF exposure levels may exceed the General Population MPE limit but will remain below the Occupational MPE limit.

(Yellow) Caution - Informs viewer that beyond the sign, RF exposure levels may exceed the General Population and Occupational MPE limit.

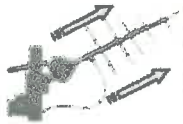
(Red) Warning - Informs viewer that beyond the sign, RF exposure levels may substantially exceed the General Population and Occupational MPE limit.

Indicative Barriers

In addition to physical barriers such as locked doors or ladders, wireless licensees may also be required to place indicative barriers as a means of visually demarcating an area where RF levels are expected to exceed the FCC's limits. **Examples of Indicative Barrier Materials:** plastic chains, buckets, reflective paint or plastic cones, fiberglass fences, and poles mounted in cinderblocks.

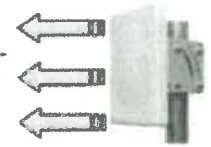
Antenna Safety

Antenna Types



Yagi - Antenna that radiates energy in one direction. RF energy has a narrow beam. **Walk behind or under this antenna.**

Panel - Antenna that radiates energy in one direction. RF energy beam can range from narrow to very wide. **Walk behind this antenna. Stay out of the general direction that the antenna is pointing.**



Whip - Antenna that radiates energy equally in all directions. **Maintain as much distance as possible from this antenna.**

Microwave - Antenna that radiates energy in one direction. RF energy has a narrow beam. **Walk under or behind this antenna.**

When In An Environment With Antennas:

⇒ Maintain at least a 3-foot clearance from all antennas. A 10-foot separation distance is preferred.

⇒ Never touch an antenna. Assume all are active.

⇒ Read and obey ALL signs on an access point.

⇒ Read and obey ALL signs in the environment with antennas.

⇒ Never walk past an indicative barrier without first confirming transmitter inactivity.

⇒ Never walk in front of or stand in front of an antenna whenever possible. Keep walking.

⇒ Contact all wireless licensees **at least 24 hours in advance** of scheduled maintenance.

SALEM_SC26_MA

CLUSTER: SALEM MA

UTILITY POLE #4916
13 WASHINGTON SQUARE (MA ROUTE 1A), POLE ON BROWN STREET
SALEM, MA 01970

PRESIDING POWER COMPANY
nationalgrid

SITE CONTROL POINT:
CENTER OF EXISTING UTILITY POLE #4916
N 42.523223° (42°-31'-23.60")
W 70.891235° (70°-53'-26.45")
APPROXIMATE GROUND ELEVATION = 20'± AMSL

LOCATION PLAN/AERIAL IMAGE (1 / L-1)
SCALE: 1" = 50'
0 50' 100' 150'

SHEET INDEX

DWG.	DESCRIPTION	REV.
L-1	LOCATION PLAN/AERIAL IMAGE	0
L-2	UTILITY POLE PHOTOGRAPH AND ELEVATION	0
L-3	ANTENNA & ANCILLARY EQUIPMENT DETAILS AND ONE-LINE DIAGRAM	0

verizon
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R.K. EXECUTIVE CENTRE
201 BOSTON POST ROAD WEST, SUITE 101
MARLBOROUGH, MA 01752
(508) 481-7400
www.chappellengineering.com

REVISIONS

NO.	DESCRIPTION	DATE
0	ISSUED FOR REVIEW	11/22/19

SITE NAME:
SALEM_SC26_MA
UTILITY POLE #4916
13 WASHINGTON SQUARE
(MA ROUTE 1A),
POLE ON BROWN STREET
SALEM, MA 01970

DRAWING TITLE:
LOCATION PLAN/
AERIAL IMAGE

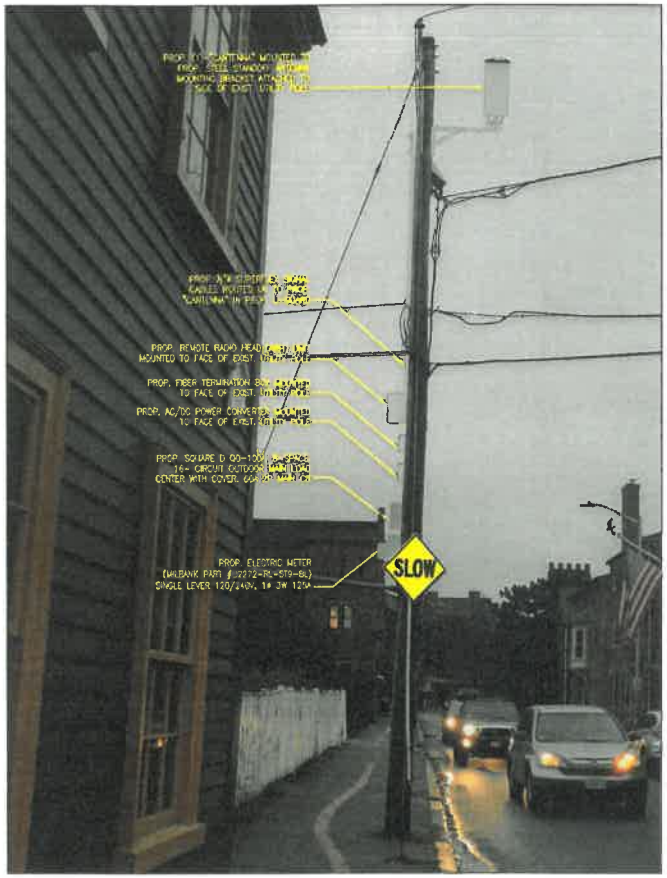
DRAWING NO:
L-1

LEASE EXHIBIT
NOT FOR CONSTRUCTION

SCALE:	DESIGNED BY: GBS	VZW LOCATOR CODE:
AS SHOWN	DRAWN BY: CMC	392088
CEA PROJECT NO.:	CHECKED BY: GBS	
1480.326	ORIGINAL ISSUE DATE: 11/22/19	

GENERAL NOTES:

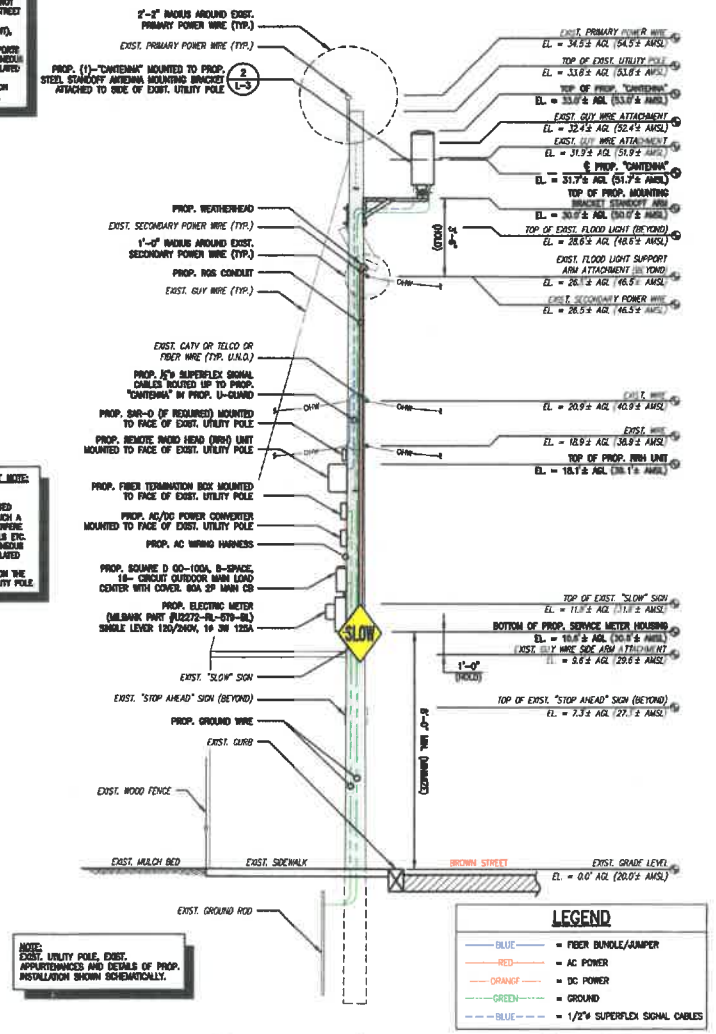
1. THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE AND ARE INTENDED TO PROVIDE GENERAL INFORMATION REGARDING THE LOCATION, SIZE AND ORIENTATION OF THE PROPOSED WIRELESS TELECOMMUNICATIONS EQUIPMENT INSTALLATION ON THE UTILITY POLE AND ARE NOT SPECIFICALLY INTENDED FOR CONSTRUCTION.
2. VERIZON WIRELESS SHALL PLACE WEATHER RESISTANT PHENOLIC PLACARDS ON UTILITY POLE AND ANCILLARY EQUIPMENT TO IDENTIFY EQUIPMENT OWNERSHIP & CONTACT INFORMATION TO BE UTILIZED IN THE CASE OF EMERGENCY.
3. AN ANALYSIS OF THE CAPACITY OF THE EXISTING UTILITY POLE TO SUPPORT THE PROPOSED LOADING HAS NOT BEEN COMPLETED BY CHAPPELL ENGINEERING ASSOCIATES, LLC. AND THUS, THESE DRAWINGS ARE SUBJECT TO CHANGE PENDING THE OUTCOME OF A STRUCTURAL ANALYSIS (TO BE PERFORMED BY OTHERS).
4. VERIZON WIRELESS' GENERAL CONTRACTOR SHALL EXTEND EFFORTS TO ENSURE THAT ALL PROPOSED EQUIPMENT MEETS THE REQUIREMENTS OF THE EXISTING UTILITY COMPANY OR COMPANIES CURRENTLY OCCUPYING THE UTILITY POLE AND THE 2017 NATIONAL ELECTRICAL SAFETY CODE.



UTILITY POLE #4916 PHOTOGRAPH (EXISTING CONDITIONS/SCHEMATIC RENDERING) (1 / L-2)
SCALE: NO SCALE

ANTENNA AND MOUNT NOTE: CONTRACTOR SHALL POSITION/ROTATE PROP. ANTENNA MOUNT/BRACKET IN SUCH A WAY SO AS TO NOT INTERFERE WITH EXIST. STREET LIGHT, PRIMARY POWER CROSSARM(S) (IF PRESENT), BRACKETS, BRACES, SECONDARY POWER SUPPORTS OR ANY OTHER MISCELLANEOUS APPURTENANCES AND RELATED SUPPORT BRACKETS ENCOUNTERED LOCATED ON THE EXIST. UTILITY POLE.

EQUIPMENT AND MOUNT NOTE: CONTRACTOR SHALL POSITION/ROTATE PROP. EQUIPMENT AND ASSOCIATED MOUNTS/BRACKETS IN SUCH A WAY SO AS TO NOT INTERFERE WITH EXIST. WIRES/PANELS ETC. OR ANY OTHER MISCELLANEOUS APPURTENANCES AND RELATED SUPPORT BRACKETS ENCOUNTERED LOCATED ON THE FACE OF THE EXIST. UTILITY POLE.



NOTE: EXIST. UTILITY POLE, EXIST. APPURTENANCES AND DETAILS OF PROP. INSTALLATION SHOWN SCHEMATICALLY.

LEGEND

- BLUE = FIBER BUNDLE/JUMPER
- RED = AC POWER
- ORANGE = DC POWER
- GREEN = GROUND
- BLUE = 1/2"ø SUPERFLEX SIGNAL CABLES

UTILITY POLE #4916 ELEVATION (PROPOSED CONDITIONS) (2 / L-2)
SCALE: 3/16" = 1'-0"
0 5'-4" 10'-8" 16'-0"

verizon
"Because Better Matters"

CHAPPELL ENGINEERING ASSOCIATES, LLC
Civil · Structural · Land Surveying
R.K. EXECUTIVE CENTRE
201 BOSTON POST ROAD WEST, SUITE 101
MARLBOROUGH, MA 01752
(508) 481-7400
www.chappellengineering.com

REVISIONS

NO.	DESCRIPTION	DATE
0	ISSUED FOR REVIEW	11/22/19

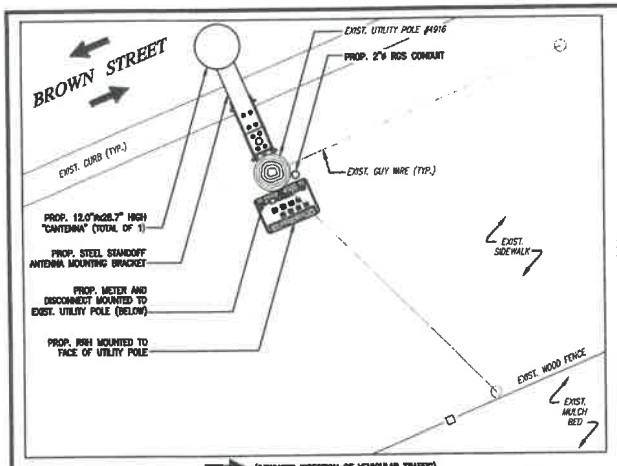
SITE NAME:
SALEM_SC26_MA
UTILITY POLE #4916
13 WASHINGTON SQUARE
(MA ROUTE 1A),
POLE ON BROWN STREET
SALEM, MA 01970

DRAWING TITLE:
UTILITY POLE PHOTOGRAPH AND ELEVATION

DRAWING NO:
L-2

LEASE EXHIBIT
NOT FOR CONSTRUCTION

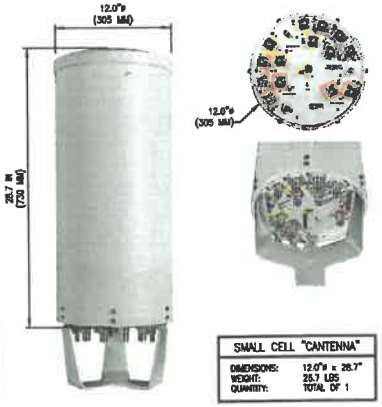
SCALE	DESIGNED BY: DRL	VZW LOCATION CODE
AS SHOWN	DRAWN BY: DRL	392089
CEA PROJECT NO.	CHECKED BY: DRL	
1480.328	ORIGINAL ISSUE DATE: 11/22/19	



EQUIPMENT AND ANTENNA ORIENTATION PLAN

1 L-3

SCALE: 3/8" = 1'-0"



SMALL CELL "CANTENNA"	
DIMENSIONS:	12.0"ø x 28.7"
WEIGHT:	28.7 LBS
QUANTITY:	TOTAL OF 1

TYPICAL "CANTENNA" SPECIFICATIONS

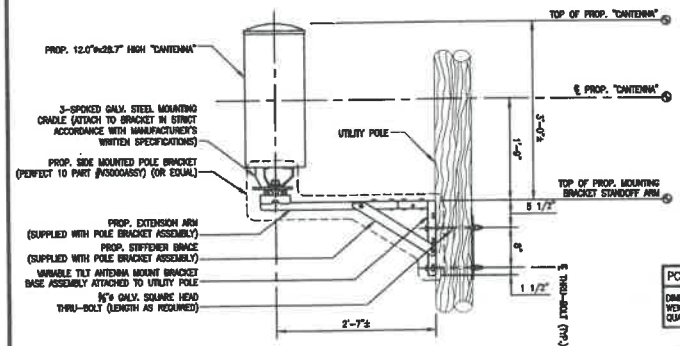
3 L-3

SCALE: N.T.S.

NOTES:
1.) CONFIRM DOWNTILT REQUIREMENTS (IF ANY) AND AZIMUTH SPECIFICATIONS WITH VERIZON WIRELESS RF ENGINEER AT TIME OF CONSTRUCTION.

2.) MOUNT SHALL BE INSTALLED IN SUCH A WAY TO ENSURE PLUMB INSTALLATION OF "CANTENNA".

3.) UTILITY POLE APPURTENANCES NOT SHOWN FOR CLARITY.



"CANTENNA" MOUNT DETAIL

2 L-3

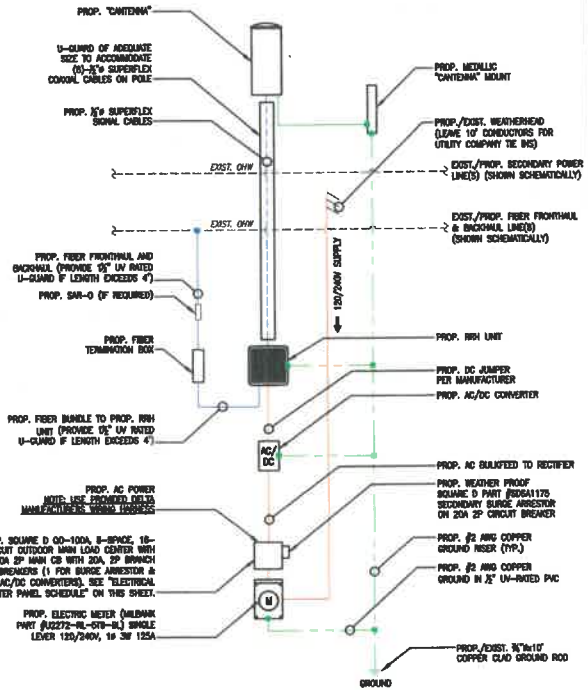
SCALE: 1/2" = 1'-0"

PCS-AWS (1900/2100 MHz) REMOTE RADIO HEAD UNIT	
DIMENSIONS:	15.0"H x 15.0"W x 10.0"D
WEIGHT:	84.4 LBS
QUANTITY:	TOTAL OF 1

TYPICAL REMOTE RADIO HEAD (RRH) UNIT DIMENSIONS

4 L-3

SCALE: N.T.S.



ONE-LINE DIAGRAM NOTES:
1) PROVIDE WEATHER TIGHT SEAL CONNECTORS ON ALL CONNECTIONS EACH SIDE OF ENCLOSURE HOUSING.

2) COORDINATE ANY FURTHER MISCELLANEOUS WIRING AND CONDUIT REQUIREMENTS WITH VERIZON WIRELESS AND ELECTRIC COMPANY.

LEGEND	
BLUE	= FIBER BUNDLE/JUMPER
RED	= AC POWER
ORANGE	= DC POWER
GREEN	= GROUND
BLUE	= 1/2"ø SUPERFLEX SIGNAL CABLES

FIBER/ELECTRICAL ONE-LINE DIAGRAM

5 L-3

SCALE: N.T.S.

verizon
"Because Better Matters"

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MARLBOROUGH, MA 01752
(508) 481-7400
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REVISIONS

NO.	DESCRIPTION	DATE
0	ISSUED FOR REVIEW	11/22/19

SITE NAME:
SALEM_SC26_MA
UTILITY POLE #4916
13 WASHINGTON SQUARE
(MA ROUTE 1A),
POLE ON BROWN STREET
SALEM, MA 01970

DRAWING TITLE:
ANTENNA & ANCILLARY EQUIPMENT DETAILS AND ONE-LINE DIAGRAM

DRAWING NO:
L-3

LEASE EXHIBIT
NOT FOR CONSTRUCTION

SCALE:	DESIGNED BY:	NEW LOCATION CODE:
AS SHOWN	DRAWN BY:	382089
CEA PROJECT NO.:	CHECKED BY:	
1480.328	ORIGINAL ISSUE DATE: 11/22/19	

City of Salem

In the year Two Thousand and Twenty

An Ordinance to amend an ordinance relative to Traffic

Be it ordained by the City Council of the City of Salem, as follows:

Section 1. Section 88 – Speed Zone Regulations of Article VIII be amended by repealing the following:

Valley Street – eastbound, beginning at the junction of Gallows Hill Road, thence easterly 0.15 miles at twenty-five (25) miles per hour, 0.18 miles at thirty-five (35) miles per hour, 0.18 miles at twenty-five (25) miles per hour, ending at the junction of Route 107, Highland Avenue; the total distance being 0.51 miles. (2/25/76 DPW 1019)

And replacing it with:

Valley Street – eastbound, beginning at the junction of Gallows Hill Road, thence easterly 0.15 miles at twenty-five (25) miles per hour, 0.18 miles at thirty-five (30) miles per hour, 0.18 miles at twenty-five (25) miles per hour, ending at the junction of Route 107, Highland Avenue; the total distance being 0.51 miles. (2/25/76 DPW 1019)

Section 2. Section 88 – Speed Zone Regulations of Article VIII be further amended by repealing the following:

Valley Street – west bound, beginning at the junction of Highland Avenue, Route 107, thence westerly, 0.18 miles at twenty-five (25) miles per hour, 0.18 miles at thirty-five (35) miles per hour, 0.15 miles at twenty-five (25) miles per hour, ending at the junction of Gallows Hill Road; the total distance being 0.51 miles. (2/25/75 DPW 1019)

And replacing it with:

Valley Street – west bound, beginning at the junction of Highland Avenue, Route 107, thence westerly, 0.18 miles at twenty-five (25) miles per hour, 0.18 miles at thirty-five (30) miles per hour, 0.15 miles at twenty-five (25) miles per hour, ending at the junction of Gallows Hill Road; the total distance being 0.51 miles. (2/25/75 DPW 1019)

Section 3. This Ordinance shall take effect as provided by City Charter.

In City Council March 26, 2020
Adopted for first passage

ATTEST:

ILENE SIMONS
CITY CLERK

CITY OF SALEM, MASSACHUSETTS

Kimberley Driscoll
Mayor

Office of the Mayor

March 26, 2020

Honorable Salem City Council
Salem City Hall
Salem, Massachusetts 01970

Ladies and Gentlemen of the City Council:

The enclosed Ordinance reduces the existing posted speed limit on a portion of Valley Street from 35MPH to 30MPH. We strongly believe the reduction in speed will improve safety for all roadway users and for the neighborhood.

Currently this portion of this roadway is governed by MassDOT's Special Speed Regulation Number 1019, adopted in 1976. Since that time, the area surrounding Valley Street has significantly changed and, as such, the speed limit should account for those changes. In 1976, the 35MPH stretch of Valley Street had ten residential units. Since that time the number of units has doubled. In addition, commercial development along Highland Avenue has grown since then, including the expansion of North Shore Medical Center.

All these changes have contributed to further altering conditions from when the speed limit was fixed and increasing volumes along this stretch of roadway. Ironically, at the current 35MPH, Valley Street has a higher posted speed than Highland Avenue, which is an urban principal arterial and has a posted speed limit of 30MPH.

Over the past few years efforts have been made to curtail speeds both city wide and along roadways like Valley Street, where residents have reported speeding. In 2017, Salem's City Council voted to adopt Section 17C of MGL Chapter 90 reducing the statutory speed from 30MPH to 25MPH. Along Valley Street, police have increased enforcement as well as purchased and installed radar feedback signs. City staff are also currently exploring other measures that could be implemented to help reduce vehicular speeds on this stretch of roadway.

Reducing posted speed limits has been found to be one of the most effective ways to reduce severe injury or death in the event of a crash involving a pedestrian. We believe a reduction in

speed would consider the multiple changes which have occurred since this speed limit was originally established as well as improve the safety for all users on this roadway. This request is fully supported by the community and City staff including the Ward Councillor, Chief of Police, and DPS Director.

Last year the City petitioned MassDOT to amend Special Speed Regulation Number 1019 to reduce the limit to 30MPH and MassDOT has agreed to this request. The final step in this process is a vote of the City Council. I recommend adoption of the enclosed Ordinance to enact this needed public safety measure. If you have any questions about this request, please feel free to contact David Kucharsky or Lieutenant David Tucker.

Very truly yours,

Kimberley Driscoll
Mayor
City of Salem

City of Salem, Massachusetts
Office of the City Council
City Hall

REQUEST FOR TRAFFIC ORDINANCE RECOMMENDATION

MEMO TO: Lt. David Tucker — Police Traffic Division

FROM: Councilor Flynn — DATE: March 24, 2020

In accordance with the Council Rule 32A, I hereby request your recommendation for the following Traffic Ordinance:

NAME OF STREET Valley Street

TYPE OF STREET CHANGE Speed Zone Regulations

DESCRIPTION OF AREA WHERE CHANGE IS REQUESTED Valley Street, speed limit in the center section of the street.

COUNCILLOR'S COMMENTS/EXPLANATION The statutory speed limit on Valley Street is currently 25 m.p.h. on both ends and 35 m.p.h. in the middle section. In an effort to increase safety, a traffic volume and speed study was conducted supporting the request of MassDOT to lower the center section speed limit to 30 m.p.h.

POLICE TRAFFIC DIVISION RECOMMENDATION

The Police Traffic Division hereby submits the following recommendation for the above request:

XX APPROVAL

_____ DENIAL

_____ TRIAL PERIOD

CHAPTER: 42 SECTION: 88 TITLE: Speed Zone Regulations

DESCRIPTION: East bound, beginning at the junction of Gallows Hill Road, thence easterly 0.15 miles at twenty -five (25) miles per hour, 0.18 miles at thirty (30) miles per hour, 0.18 miles at twenty-five (25) miles per hour, ending at the junction of Route 107, Highland Avenue; the total distance being 0.51 miles.

West bound, beginning at the junction of Highland Avenue, Route 107, thence westerly, 0.18 miles at twenty-five (25) miles per hour, 0.18 miles at thirty (30) miles per hour, 0.15 miles at twenty-five (25) miles per hour, ending at the junction of Gallows Hill Road; the total distance being 0.51 miles.

COMMENTS (IF ANY): _____

Lt. David Tucker

POLICE TRAFFIC DIVISION

RETURN THIS FORM TO THE CITY CLERK'S OFFICE

City of Salem Clerk's Office, 93 Washington St, Salem Massachusetts 01970

Charles D. Baker, Governor
Karyn E. Polito, Lieutenant Governor
Stephanie Pollack, Secretary & CEO
Jonathan L. Gulliver, Highway Administrator

massDOT
Massachusetts Department of Transportation
Highway Division

March 5, 2020

Honorable Kimberly Driscoll
Mayor
City of Salem
Salem City Hall
93 Washington Street
Salem, MA 01970

Dear Mayor Driscoll:

Attached are two copies of Special Speed Regulation No. 1019-A for the city way noted on the Regulation.

Please have two copies of each Regulation signed by the City Council, attested by the City Clerk and returned to the Massachusetts Department of Transportation, Highway Division, Traffic and Safety Engineering, 10 Park Plaza, Boston, Massachusetts 02116-3973, for further processing.

Sincerely,

Neil E. Boudreau
Assistant Administrator for Traffic and Safety

RFW/
Att.

Ten Park Plaza, Suite 4160, Boston, MA 02116
Tel: 857-368-4636, TTY: 857-368-0655
www.mass.gov/massdot

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION

CITY OF SALEM
SPECIAL SPEED REGULATION # 1019-A

Highway Location:	SALEM
Authority In Control:	CITY OF SALEM
Name of Highway (s):	VALLEY STREET

In accordance with M.G.L. c. 90, § 18, the following Special Speed Regulation is Hereby Adopted by the City Council of the City of Salem

Special Speed Regulation number 1019, dated February 25, 1975 is hereby amended as follows:

That the following speed limits are established at which motor vehicles may be operated in the areas described:

VALLEY STREET - WESTBOUND

By striking out the clause reading:
0.18 miles at 35 miles per hour

And inserting in place thereof:
0.18 miles at 30 miles per hour

VALLEY STREET - EASTBOUND

By striking out the clause reading:
0.18 miles at 35 miles per hour

And inserting in place thereof:
0.18 miles at 30 miles per hour

Operation of a motor vehicle at a rate of speed in excess of these limits shall be prima facie evidence that such speed is greater than is reasonable and proper.

The provisions of this regulation shall not, however, abrogate M.G.L. c. 90, § 14

Date of Passage:

_____ _____

_____ _____

_____ _____

_____
CITY COUNCIL

Attest_____
CITY CLERK

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION

SPECIAL SPEED REGULATION NO. 1019-A

The Massachusetts Department of Transportation does hereby certify that this regulation is consistent with the public interest.

Standard signs must be erected at the beginning of each zone.

REGISTRY OF MOTOR VEHICLES DIVISION

BY:_____
Registrar

HIGHWAY DIVISION

BY:_____
Traffic Engineer

DATE:

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION

CITY OF SALEM
SPECIAL SPEED REGULATION # 1019-A

Highway Location: SALEM

Authority In Control: CITY OF SALEM

Name of Highway (s): VALLEY STREET

In accordance with M.G.L. c. 90, § 18, the following Special Speed Regulation is Hereby Adopted by the City Council of the City of Salem

Special Speed Regulation number 1019, dated February 25, 1975 is hereby amended as follows:

That the following speed limits are established at which motor vehicles may be operated in the areas described:

VALLEY STREET - WESTBOUND

By striking out the clause reading:
0.18 miles at 35 miles per hour

And inserting in place thereof:
0.18 miles at 30 miles per hour

VALLEY STREET - EASTBOUND

By striking out the clause reading:
0.18 miles at 35 miles per hour

And inserting in place thereof:
0.18 miles at 30 miles per hour

Operation of a motor vehicle at a rate of speed in excess of these limits shall be prima facie evidence that such speed is greater than is reasonable and proper.

The provisions of this regulation shall not, however, abrogate M.G.L. c. 90, § 14

Date of Passage:

_____ _____

_____ _____

_____ _____

_____
CITY COUNCIL

Attest_____
CITY CLERK

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION

SPECIAL SPEED REGULATION NO. 1019-A

The Massachusetts Department of Transportation does hereby certify that this regulation is consistent with the public interest.

Standard signs must be erected at the beginning of each zone.

REGISTRY OF MOTOR VEHICLES DIVISION

BY:_____
Registrar

HIGHWAY DIVISION

BY:_____
Traffic Engineer

DATE:

CITY OF SALEM

In the year Two Thousand and Twenty

An Ordinance to amend an Ordinance relative to Traffic

Be it Ordained by the City Council of the City of Salem, as follows:

Section 1. Amending Chapter 42, Section 49 – "Obedience to Isolated Stop Signs" is hereby amended by adding the following:

Osborne Street, northeasterly bound on Osborne Street and Walter Street. Osborne Street, southwesterly bound traffic on Osborne St. at Walter St.

Section 2. This Ordinance shall take effect as provided by City Charter.

In City Council March 26th 2020
Adopted for first passage

ATTEST:

ILENE SIMONS
CITY CLERK

CITY OF SALEM

In the year Two Thousand and Twenty

An Ordinance to amend an Ordinance relative to Traffic

Be it Ordained by the City Council of the City of Salem, as follows:

Section 1. Amending Chapter 42, Section 49 – "Obedience to Isolated Stop Signs" is hereby amended by adding the following:

Walter Street, northwesterly bound traffic on Walter Street at Osborne Street. Walter Street, southeasterly bound traffic on Walter Street at Osborne Street

Section 2. This Ordinance shall take effect as provided by City Charter.

In City Council March 26, 2020
Adopted for first pasage

ATTEST:

ILENE SIMONS
CITY CLERK