Design Review Board

Official Agenda

city of greenville

AGENDA

DESIGN REVIEW BOARD – URBAN DESIGN PANEL
AGENDA
Regular Meeting
June 4th, 2020
4:00 PM
Webex Virtual Meeting

Public meetings will be hosted virtually online and can be accessed at greenvillesc.gov/meeting using the password meetnow. Instructions to access the meeting, and information regarding a remote viewing location, are included at the end of this notice.

A remote meeting viewing location has been set up at the Greenville Civic Center at 1 Exposition Drive in Room 102.

1. Call to Order
2. Roll Call
3. Welcome and Opening Remarks from the Chair
4. Approval of Minutes – May 7th, 2020
5. Call for Public Notice Affidavit from Applicants
6. Acceptance of Agenda
7. Conflict of Interest Statement
8. Call for Public Comment
9. Old Business (public hearing)
    A. None
10. New Business (public hearing)

A. CA 20-254

Application by ExteNet Systems for a CERTIFICATE OF APPROPRIATENESS for updates to an existing wireless telecommunication system in the right-of-way of the central business district, on existing utility and decorative street light poles.

Documents:

AGENDA PACKET - CA 20-254 - EXTENET SYSTEMS UPGRADE.PDF

. . . ..

11. Other Business (Not a Public Hearing)
    A. None

12. Advice and Comment (Not a Public Hearing)
    A. None

13. Informal Review (Not a Public Hearing
    A. None

14. Adjournment

You are invited to review documents relating to these applications before the public hearing. Application materials are posted online at http://www.greenvillesc.gov/drb. You may contact the Planning Office at (864) 467-4476 for more information. Application materials are subject to change.

You will have the opportunity to voice your comments at the public hearing. Each speaker is limited to 3 minutes. Repetitive statements should be avoided; individuals sharing similar concerns are encouraged to appoint a spokesperson to represent their group. Alternatively, you may submit written comments to: Planning & Development Office, PO Box 2207, Greenville, SC 29602, by fax at (864) 467-4510, or by email at planning@greenvillesc.gov.

Written comments must be received by 2PM Monday before the hearing in order to be given adequate time for consideration by the Board before the hearing. Comments received after 2PM Monday will be provided to the Board at the hearing. Please reference the application number and include your name and address on all correspondence. All comments will be made part of the public record.

In some cases the applicant may be required, as part of the application process, to hold a neighborhood meeting before the application is heard by the Board. Property owners within 500' of the application site would then be notified by mail. A property owner that directly abuts the proposed project or owners of 20% of parcels within 500' may also request a meeting. Contact the Planning and Development Office for further instructions.'

Webex Meeting Instructions

Steps for Online Access

1. Visit greenvillesc.gov/meeting. You can also go to greenvillesc.gov and click on ONLINE MEETING.
2. Join Event: Design Review Board Meeting – Urban Panel 6/4/2020

Enter your: First Name
Enter your: Last Name
Enter your: Email Address
Enter the event password: meetnow
Click: Join Now

Steps for Phone Access

1. Dial: +1-415-655-0002
2. Enter Access Code: 716 822 746

Remote Viewing Location

A remote meeting viewing location has been set up at the Greenville Civic Center at 1 Exposition Drive in Room 102.

The City seeks input from citizens while adhering to public health and safety guidelines. All attendees at the remote viewing location will be subject to a temperature screening with a touch-less forehead thermometer. Anyone with a temperature reading above 100 degrees Fahrenheit will not be admitted. Attendees will be required to wear a covering over their mouth and nose, unless it violates a religious tenant or belief or causes difficulty breathing.

Procedure for Public Comment during Meeting

1. The Design Review Board Chair will read through each agenda item and call for a list of names who wish to speak during public comment. The public shall communicate directly with the Planning Staff Liaison if they wish to speak on the specific agenda item.
2. The Planning Staff Liaison will take a list of names, which will be called in order at the time of the specific agenda item, to provide public comment.
3. The Planning Staff Liaison will communicate directly with the public during the public portion of each item to provide comments on the specific agenda item.
4. Each member of the public shall provide their comments when their name is called by the Planning Staff Liaison.
5. Each member of the public will have 3 minutes to speak on the specific agenda item. When speaking: Begin by clearly stating your name and address for the record. Please spell your name if it is prone to be misspelled. The 3-minute timer will start after you provide this information. Please do not repeat information already presented by someone else and avoid off-topic statements. Those who wish to share similar concerns are encouraged to appoint a spokesperson to speak on behalf of the group. Direct all comments and questions to the chairperson, who will respond or direct the question to the appropriate party for response.
6. The Planning Staff Liaison will continue through the list of names until all members of the public who wished to speak on the specific agenda item have had an opportunity.
7. Once all names are called and public comment provided, the public portion for that specific agenda item will be closed.

Planning Staff Report to
Design Review Board - Urban
May 29, 2020
for the June 4, 2020 Public Hearing

Docket Number:	**CA 20-254**
Applicant:	ExteNet Systems
Property Owner:	City of Greenville
Property Location:	MULTIPLE
Tax Map Number:	City of Greenville Right-of-Way
Zoning:	C-4, Central Business District
Proposal:	**CERTIFICATE OF APPROPRIATENESS FOR MODIFIED WIRELESS INFRASTRUCTURE**
Staff Recommendation:	**Approval**

Applicable Sections of the City of Greenville Code of Ordinances:

Sec. 19-4.3.2(G) – Wireless Communications Facility

Staff Analysis:

ExteNet Systems, a licensed telecommunications infrastructure company, proposes to upgrade an existing Small Cell Wireless Network, within the City of Greenville, to accommodate new 5G technology advancements. A total of nineteen (19) small cell node poles are located in downtown Greenville, most of which are collocated on Duke Energy street light poles, within the city right-of-way. Other telecommunications infrastructure is collocated on city-owned traffic and security camera/wi-fi poles. Wireless communications facilities located within the central business district shall be of a design approved by the Design Review Board. The DRB granted approval for the design of the original network in 2017 under file number CA 17-203.

The upgrades are proposed on three types of existing poles:

1. Metal Street Lamp (x17)
2. Wood Street Lamp (x1)
3. Traffic Signal (x1)

Small-cell wireless technology within Greenville falls under the standards of *Section 19-4.3(G) – Wireless Communications Facility.* Per sub-section (4), wireless antennas may be placed on existing utility poles, mounted in as unobtrusive a manner as technically feasible. This section also contains the following recommendations:

- *Pole-top antennas should not extend more than six feet above the utility pole.*
- *The antenna should be placed in a shroud at the top of the pole, with the shroud of the same circumference as the utility pole at the point of attachment.*

In order to accommodate the new technology, the applicant proposes to extend the heights of the existing pole top extensions. The current extensions are 2 feet 8 inches above the heights of the poles and would be increased to a total of 9 feet 3 ½ inches above the top of the poles (a total increase of approx. 6 ft. 7 inches). The current antenna diameter is 15 inches and would be increased to a diameter of 22 inches (an increase of 7 inches).

The antenna shrouds located on the decorative lamps, metal lamps, and traffic signal poles are proposed to be painted black to match the existing poles; the shroud on the wood pole is proposed to be painted light grey.

While the proposed antenna upgrades exceed the height and width recommendations contained within the Land Management Ordinance, staff finds that applicant has attempted to match the appearance of the existing poles to the greatest extent technically-feasible. Staff finds that alternative antenna placement, such as side or ground-mounted radios, would present a less-appealing aesthetic. As such, staff recommends **approval** of the proposed antenna upgrade designs.

Note: Final approval of the small-cell upgrades are subject to site-specific node licenses jointly issued by the administrator and the city engineer.

Applicable standards and guidelines follow below.

Design Guidelines for the Central Business District

PUB 12. – Utilities

12.5 – Mitigate the impact of surface-mounted utilities in the pedestrian realm by siting them in softscape areas, screening them with vegetation and avoiding areas where tree roots are located.

Land Management Ordinance

Section 19-4.3.2(G) – Wireless Communications Facility

[…]

(4) Building, utility pole and light pole mounted wireless communications facilities.

a) Stealth facilities permitted. Base stations that are stealth facilities may be placed inside any existing building or other existing structures (other than off-premises signs) provided that the placement does not alter the physical dimensions of the structure. Portions of base stations that are stealth facilities may be attached to the side of any building or other existing structures, other than a single-family residential units and off-premises signs. However, installation is not permitted where it would adversely affect a historically significant or environmentally sensitive structure or area, and is only permitted where other elements of the wireless communications facility can be appropriately concealed by placing those

elements on the rooftop, within the building, underground, or by some other means that conceals them from view. Antennas must be located at least 20 feet above ground level, and may not extend into any rights-of-way except as part of approved signage

b) *Placement on existing utility poles.*

i. Antennas associated with a wireless communications facility may be placed on an existing utility pole, colored to match or complement the color of the utility pole, and mounted in as unobtrusive a manner as technically feasible and incorporate concealment elements. Except where the utility prohibits it, the antenna should be placed in a shroud at the top of the pole, with the shroud of the same circumference as the utility pole at the point of attachment. Except for such designs as may be included in the design catalogue, pole-top antennas (including connectors) should not extend more than six feet above the existing utility pole. Where the antenna cannot be placed at the top of the pole, it may be placed in the communications space on a cross-arm parallel to and consistent with the placement of cross-arms on utility poles in the same corridor and with antennas and cross-arms sized and mounted to minimize their obtrusiveness. The volume of the antennas on any utility pole should not exceed three cubic feet in size.

ii. Accessory equipment may not be attached to the pole, or ground-mounted absent a showing that the equipment is required, and no other placement is feasible, or less intrusive.

iii. Other base station and permitted, pole-mounted accessory equipment shall be mounted in as unobtrusive a manner as technically feasible and incorporate concealment elements. Equipment should be flush-mounted to the pole, with all cabling neat and concealed. In no event shall any portion of the wireless communications facility be ground-mounted without the city's express approval, which approval may be conditioned on placing concealing the facilities in a manner appropriate to the location. Unless base station equipment is within the utility pole, in order to utilize concealment elements, the equipment must be designed so that it is not readily apparent from all angles of view, so that it is mounted at a height such that it is out of pedestrian sight lines, and so that the impact on adjoining properties is minimized.

iv. Neither the wireless communications facility, or the support structure shall interfere with pedestrian or vehicular movement or storage.

c) *Mounted on light poles.*

i. This section applies to light poles situated on private property that are not owned or controlled by the city. Other light poles require a license from the city, which license will specify the design permitted for particular light poles.

ii. Wireless communications facilities may be placed on existing light poles subject to the same conditions that apply to existing utility poles provided that:

1. The design and placement of all elements of the wireless communications facility is consistent with the design of the light pole to which it will be attached and;

2. The design and placement of all elements of the wireless communications facility will not adversely affect the overall design of the area within which the Light Pole is located.

3. The city must know who will own and control the light pole, and who is responsible for emergency responses and ensuring the safety of the light pole.

d) *Replacement.* For purposes of this section, if an existing utility or light pole must be replaced it may be replaced provided that it meets other applicable requirements of this section and:

i. In the case of the utility pole, the overall height of the pole, measured from ground level to the highest point on the wireless communications facility, does not increase by more than six feet, and the diameter measured at six feet from the butt, does not increase by more than two inches; and

ii. In the case of the light pole, its overall height, measured from ground level to the highest point on the wireless communications facility, does not increase by more than six feet, and the design, height and proportions remain consistent with design of the light pole that is being replaced.

(5) *Special rules for placement within the public rights-of-way.* In addition to the above requirements, the following rules apply to wireless communications facilities located within the public rights-of-way.

a) Applications for placement of wireless communications facilities must be submitted to the division of public works, to the attention of the city engineer and such applications may be decided administratively. If the city engineer determines that the installation complies with the requirements of any required franchise, and this ordinance, and has been appropriately designed for the existing and publically-available planned design of the corridor in which it is placed; or where applicant shows that denial would result in an effective prohibition within the meaning of 47 U.S.C. § 332(c)(7), or otherwise violates applicable law such that the City is required to issue a permit for placement, the application may be preliminarily approved, subject to appeal, and otherwise preliminarily denied or approved subject to conditions. Preliminary decisions become final unless appealed to the zoning board of appeals.

b) Preliminary decisions adverse to the applicant may be appealed to the zoning board of appeals within five business days of a preliminary decision, and in any case where there is a claim that denial will result in an effective prohibition within the meaning of 47 U.S.C. § 332(c)(7), or otherwise violates applicable law such that the City is required to issue a permit for placement, the zoning board of appeals shall hear and determine the matter, applying standards and following procedures that would be followed in issuing a special exception.

c) Approval shall be by way of an individual, site-specific node site license jointly issued by the administrator and the city engineer (or their designees). Denials shall be in writing, based upon substantial evidence in a written record.

d) With respect to any location within the central business district or a preservation overlay district with residential character, wireless communications facilities shall be of a design approved by the design review board.

e) Wireless communications facilities shall not be located above-ground in any location where the lines of the incumbent local exchange carrier are underground, unless co-located on an existing structure or an existing structure is removed and replaced with a new structure which is substantially similar in size and appearance to the structure that is being replaced.

f) Placement of wireless communications facilities in the public rights-of-way shall not result in an increase in the number of support structures located in the public rights-of-way as of the date of enactment of this ordinance with the exception of those towers permitted under section 19-4.3.2(G)(2) or new utility poles. Provided, in the case of the latter, there must be existing utility poles in the same right-of-way in the immediate vicinity and the applicant must demonstrate that co-location upon said existing utility poles is not feasible or would require a modification such that an additional utility pole would be less intrusive or safer. If an additional utility pole is permitted under this provision, it shall be similar in size and design to existing poles in the same right-of-way and in the immediate vicinity, and spaced appropriately to minimize intrusiveness and to avoid creating undue hazard to persons or property; and

g) Where above ground facilities are permitted under this section 19-4.3.2(G)(4)(e) and/or (f) and the above-ground facilities of the incumbent local exchange carrier are subsequently placed underground, all wireless communications facilities in the same right-of-way, in the same area shall be placed underground at the sole expense of the owner.

h) Placement of wireless communications facilities or support structures for wireless communications facilities, or any modification thereto, is not permitted where the city engineer determines that, due to insufficient capacity, safety, reliability, or engineering concerns, existing infrastructure is not adequate to support the same; or the placements or modifications will unduly interfere with other uses of the rights-of-way, or require construction that will be unduly disruptive.

city of greenville

APPLICATION FOR CERTIFICATE OF APPROPRIATENESS URBAN DESIGN PANEL

Contact Planning & Development:
(864) 467-4476

Office Use Only:
Application#_____ Fees Paid_____
Date Received_____ Accepted By_____
Date Complete_____ App Deny Conditions

APPLICANT/OWNER INFORMATION

*Indicates Required Field

	APPLICANT	PROPERTY OWNER
*Name:	ExteNet Systems, Inc./Eric Lovvorn	City of Greenville - Public ROW
*Title:	External Relations Director	
*Address:	3030 Warrenville Rd., Ste. 340, Lisle, IL 60532	
*Phone:	770-337-5760 (Eric Lovvorn mobile)	
*Email:	elovvorn@extenetsystems.com	

PROPERTY INFORMATION

*STREET ADDRESS City of Greenville - Public Right of Way

*TAX MAP #(S) N/A

*SPECIAL DISTRICT 4 of 19 nodes (nodes A, E, I, and J) are in the West End Historic Commercial District

DESCRIPTION OF REQUEST

To include scope of project and justification or response to specific guidelines and special conditions.

ExteNet Systems, Inc., a licensed telecommunications infrastructure company in the State of South Carolina, owns and operates a Small Cell Wireless Network in the City of Greenville under the terms and conditions of a Franchise and other agreements with the City of Greenville.

There are currently nineteen (19) Small Cell node poles in dowtown Greenville, most of which are collocated on Duke Energy Street Light poles with others collocated on city owned traffic and security camera/wifi poles.

ExteNet is requesting to extend the heights of the pole top extensions on these poles to accomodate new 5G antennas/radios required by it's leased customer, Verizon Wireless. The current pole top extensions are 2 feet 8 inches in height above the tops of the poles (antenna bracket shroud covers an additional 4 inches of the tops of the poles) and would be increased to a total of 9 feet 3 1/2 inches in height above the tops of the poles. Equipment on the tops of the poles would be enclosed in a stealth concealment shroud.

INSTRUCTIONS

1. Preliminary meeting with staff is required prior to application submittal.
2. All applications and fees (made payable to the City of Greenville) for Certificate of Appropriateness must be received by the Planning & Development office no later than 2:00 p.m. on the date reflected on the attached schedule.

A. URBAN DESIGN PANEL	Site plan review	$300.00
	Architectural review	$300.00
B. SIGNS		$150.00
C. APPLICATION FOR STAFF REVIEW		
Major (all site development activity, roof gardens, decks or accessory structures; or any project that requires consultation with a member of the DRB).		$100.00
Minor (color change; replacement of windows/doors; additions, deletions or replacement of awnings; re-roofing; and projects that do not involve structural alterations, increase/decrease in window/door area or removal of architectural features).		$ 50.00
D. INFORMAL REVIEW		
E. MODIFICATION TO AN APPROVED PROJECT		
Major (requires review by DRB)		½ original fee
Minor (requires review by staff)		$ 50.00
F. REVISIONS (multiple required revisions may be subject to additional fees).		

3. The staff will review the application for "sufficiency" pursuant to Section 19-2.2.6, Determination of Sufficiency and will contact the applicant to correct any deficiencies, which must be corrected prior to placing the application on the Design Review Board agenda.
4. If the application requires review by the Urban Design Panel, public hearing signs must be posted on the subject property at least 15 days (but not more than 18 days) prior to the scheduled hearing date.
5. You must attach one (1) complete set of scaled drawings of the property at an appropriate scale such as 1"=20' or ¼" = 1', etc. Although construction drawings are not required, applicants for final approval should be able to provide construction drawings at the Design Review Board's (DRB) request. The Board may request additional information at any time to fully understand the proposal. Items submitted to the Board become the property of the City and will not be returned.

SITE PLAN REVIEW

- Site Plan Drawings (indicating footprint of existing buildings, proposed building, proposed exterior elements, demolition of existing site features, floor plan, proposed exterior equipment, etc.).
- Massing Studies and Images (images shall be high resolution and should depict adjacent building, proposed building massing from various viewpoints, initial architectural details, photos of surroundings to review context, etc.).
- Model (physical or digital model that includes the surrounding context with massing only, no texture or articulation is required). ***The contextual model for the DRB boundary can be downloaded here: https://greenvillesc.sharefile.com/d-s4197849a61943358, and is provided as a .skp file. Data is updated monthly.***

ARCHITECTURAL REVIEW

- Elevation Drawings of all Exterior Sides (indicate proposed materials, existing grade and proposed grade, proposed mechanical equipment, outdoor lighting fixtures, landscape drawings, design and location of signage, removal of existing building elements, addition to existing building, a streetscape elevation of building adjacent to and across the street from the site, including the proposed building).
- Sections (include vertical dimensions in feet, building sections where significant changes occur in building volume, wall section for review of material relationships).
- Detail Drawings (include material and methods of each type of construction affecting the exterior appearance of the structure, samples, brochures and photographs of all exterior finishes, windows, fixtures, lighting and signage).
- Renderings (include perspective drawings, including views from pedestrian and public realm).
- Model (physical or digital model that includes the surrounding context and should include accurate scale, architectural detail to the extent that if describes the design intent, proposed textures and proposed signage).

For more detail on these submittal requirements, please refer to the **Greenville Downtown Design Guidelines**, adopted May 2017.

Please verify that all required information is reflected on the plan(s). Please submit one (1) paper copy and one (1) electronic version of the plan(s).

6. Please read carefully:

   The applicant and property owner affirm that all information submitted with this application, including any/all supplemental information, is true and correct to the best of their knowledge and they have provided full disclosure of the relevant facts.

   In addition, the applicant affirms that the applicant or someone acting on the applicant's behalf has made a reasonable effort to determine whether a deed or other document places one or more restrictions on the property that preclude or impede the intended use and has found no record of such a restriction.

   If the Planning & Development office, by separate inquiry, determines that such a restriction exists, it shall notify the applicant. If the applicant does not withdraw or modify the application in a timely manner or act to have the restriction terminated or waived, the Planning & Development office will indicate in its report to the Design Review Board that granting the requested change would not likely result in the benefit the applicant seeks.

7. To that end, the applicant hereby affirms that the tract or parcel of land subject of the attached application **is** ___ or **is not** ___ restricted by any recorded covenant that is contrary to, conflicts with or prohibits the requested activity.

*Signatures	
Applicant	Eric B. Lovvorn
Date	5-1-2020
Property Owner/Authorized Agent	
Date	
Public Hearing Information	
Public Hearing Signs	

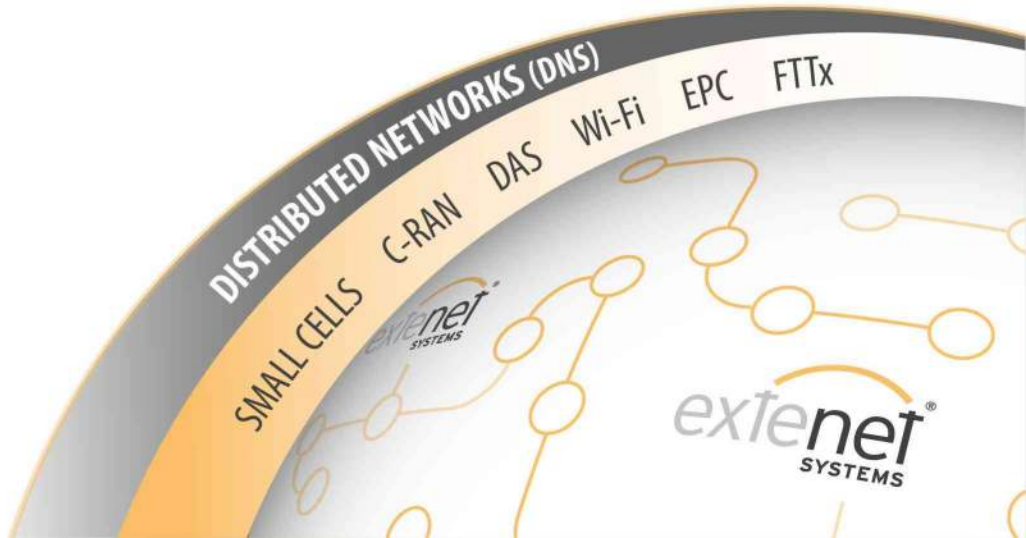
extenet SYSTEMS

Mobile Connectivity Everywhere

ExteNet Small Cell Network, Downtown Greenville, SC

Proposed 5G Node Pole Upgrades For Verizon Wireless

May 26th, 2020



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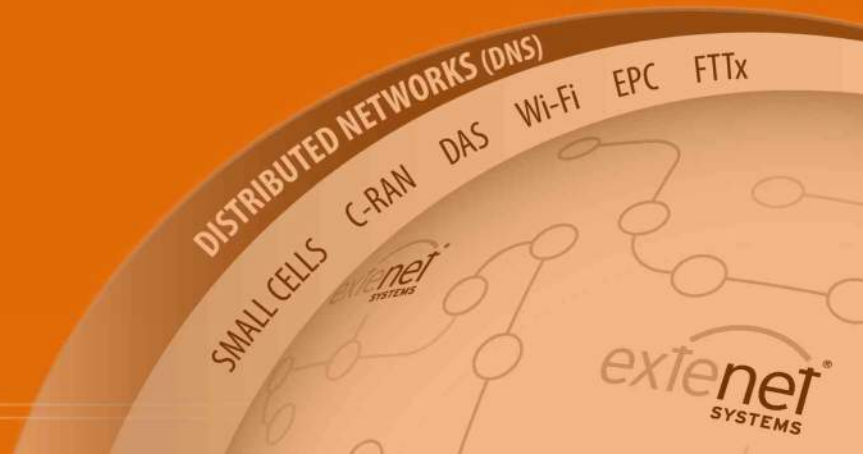
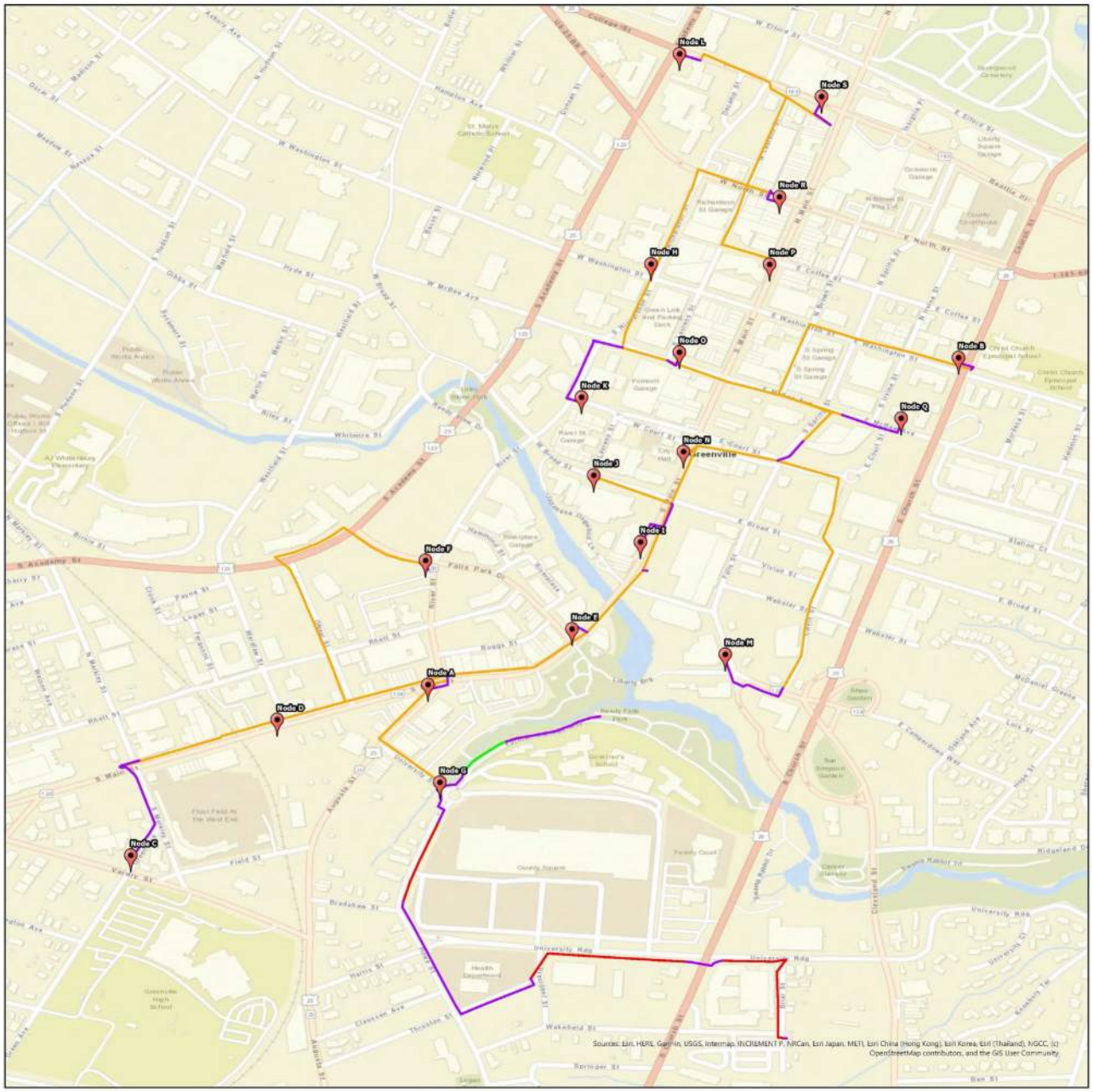
Existing Node Poles, Fiber Maps and Node Details





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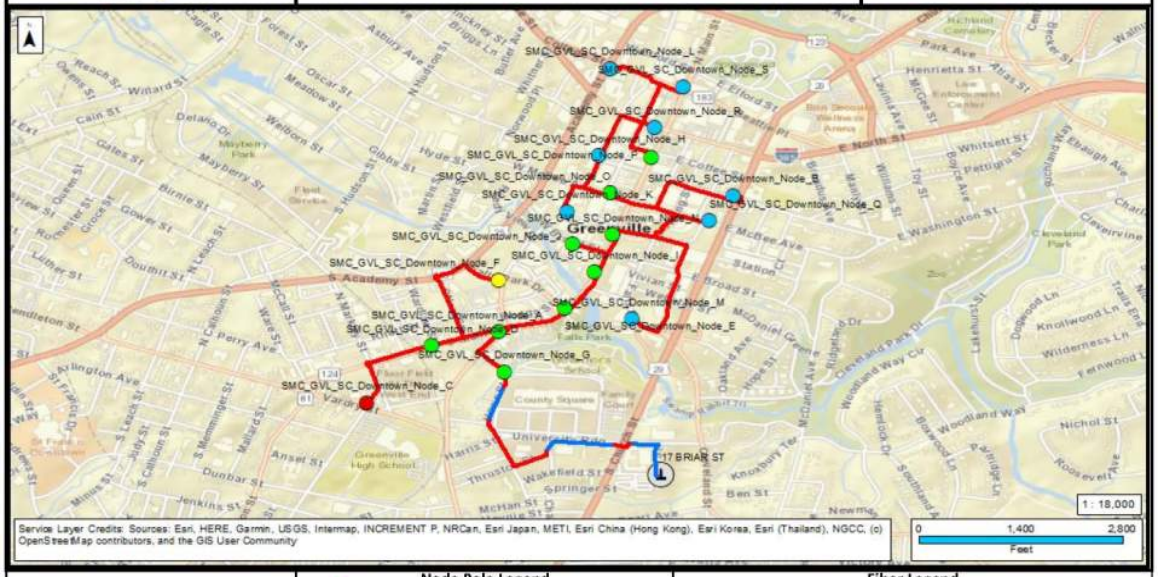
exteNet SYSTEMS Mobile Connectivity Everywhere

Composite Network Design and RF Coverage



			Node Pole Legend			Fiber Legend	
Project ID:	SE-SC-GREENVIL		Wood Pole	1 node		Aerial Fiber - New	0.42 mi
Project Name:	Greenville 5G Upgrade		Metal Street Light	8 nodes		Aerial Fiber - ExteNet Existing	0 mi
			Wood Street Light	0 nodes		Underground Fiber - New	5.33 mi
Hub Legend			Traffic Signal	1 nodes		Underground Fiber - ExteNet Existing	0 mi
	Dark Fiber Hub	0	Decorative Street Light	9 nodes		Underground Fiber - Leased Duct	0 mi
	Dark Fiber Node	0	Building Rooftop	0 nodes		Dark Fiber	0 mi
	Hub	1	Total Node Count:	0 nodes		Total Fiber Route	5.75 mi

Confidential and Proprietary

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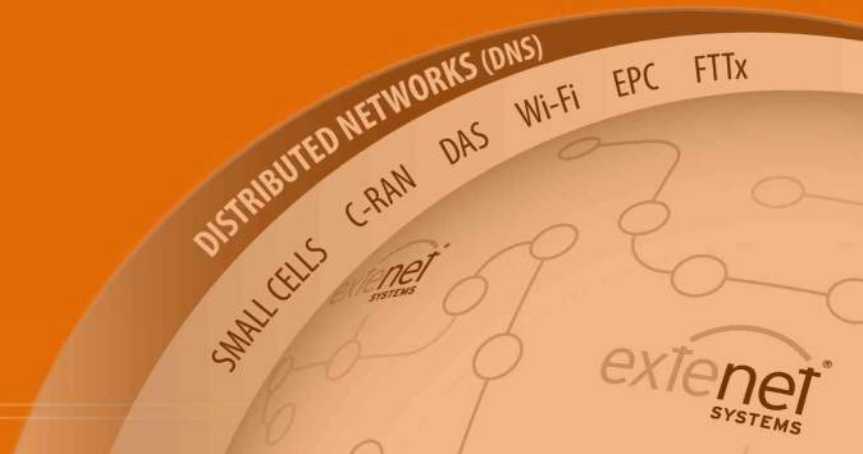
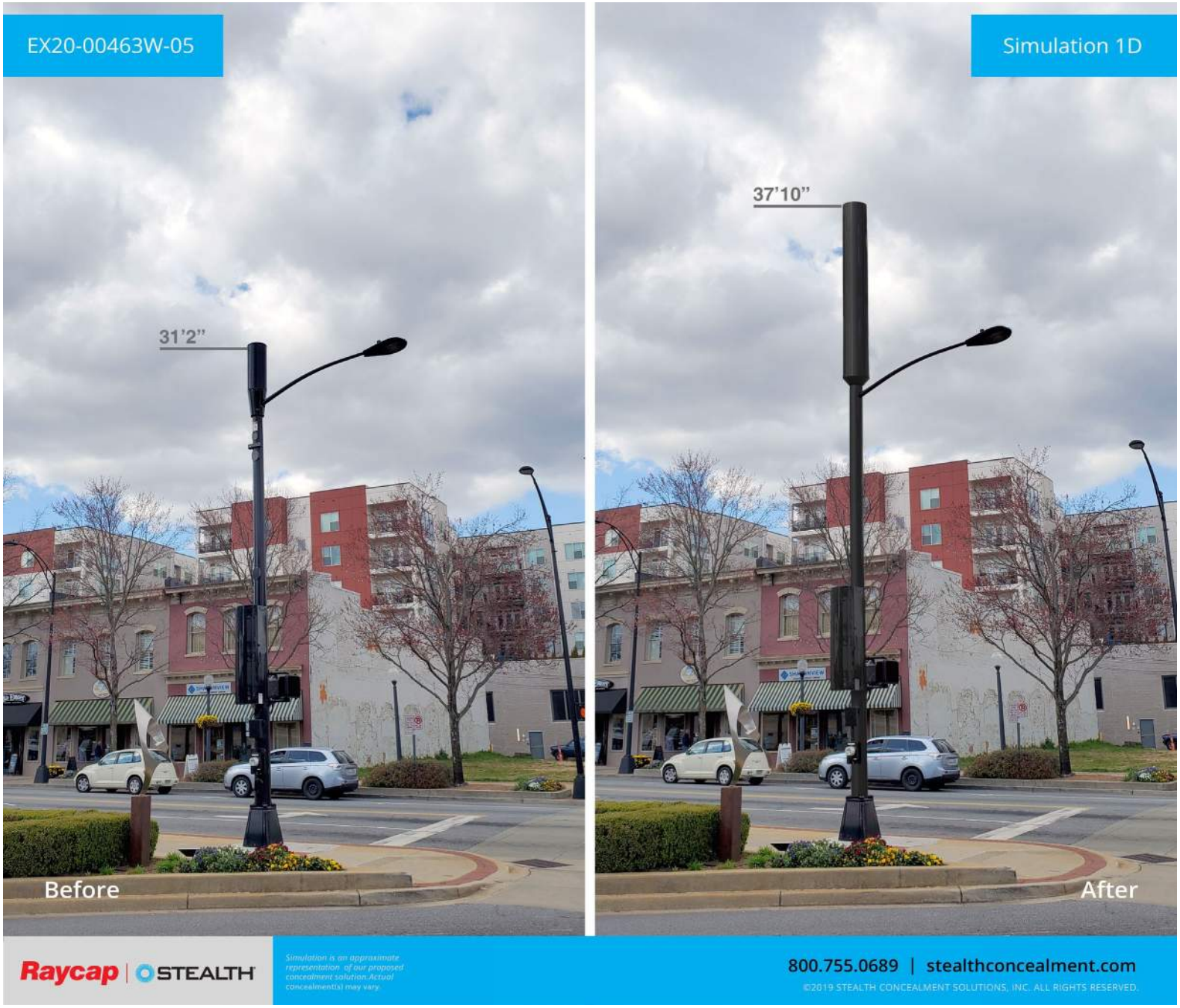
ExteNet Systems, Inc.
3030 Warrenville Rd, S340, Lisle IL, 60532
Phone: (630) 505-3800 Fax: (630) 577-1332

	C	D	E	F	G	L	N	R
1	PoleName	PoleType	PoleHeight (FT)	Latitude	Longitude	RADHeight (FT)	Pole Onwer	Address
2	SMC_GVL_SC_Downtown_Node_A	Valmont Street Light	28.667	34.844385	-82.404481	30.167	Duke Energy Carolinas, LLC	706 S Main St, Greenville, SC 29601
3	SMC_GVL_SC_Downtown_Node_B	Valmont Street Light	28.667	34.849864	-82.395596	30.167	Duke Energy Carolinas, LLC	8489 Church St, Greenville, SC 29601
4	SMC_GVL_SC_Downtown_Node_C	Wood Street Light	34	34.841536	-82.409446	31.0833	Duke Energy Carolinas, LLC	409 Green Ave, Greenville, SC 29601
5	SMC_GVL_SC_Downtown_Node_D	Valmont Camera Pole	28.667	34.843802	-82.40701	29.75	City of Greenville	900-900 S Main St, Greenville, South Carolina, 29601
6	SMC_GVL_SC_Downtown_Node_E	Valmont Street Light	28.667	34.845297	-82.402038	30.167	Duke Energy Carolinas, LLC	435 S Main St, Greenville, SC 29601
7	SMC_GVL_SC_Downtown_Node_F	Traffic Signal - Street Light	25.167	34.846404	-82.404446	31.25	City of Greenville	149 River St, Greenville, SC 29601
8	SMC_GVL_SC_Downtown_Node_G	ConcealFab node only	28.667	34.842709	-82.404235	29.75	ExteNet Systems, Inc.	14 University St, Greenville, SC 29601
9	SMC_GVL_SC_Downtown_Node_H	Valmont Street Light	28.667	34.851435	-82.400746	30.167	Duke Energy Carolinas, LLC	121 Richardson St, Greenville, SC 29601
10	SMC_GVL_SC_Downtown_Node_I	ConcealFab Street Light	28.667	34.84678092	-82.40090858	29.75	Duke Energy Carolinas, LLC	206 S. Main St, Greenville, South Carolina 29601
11	SMC_GVL_SC_Downtown_Node_J	ConcealFab Street Light	28.667	34.84787783	-82.40170397	29.75	Duke Energy Carolinas, LLC	101 W Broad St, Greenville, South Carolina, 29601
12	SMC_GVL_SC_Downtown_Node_K	Valmont Street Light (2 luminaire arms)	28.667	34.849219	-82.401947	29.75	Duke Energy Carolinas, LLC	100 W Court St, Greenville, SC 29601
13	SMC_GVL_SC_Downtown_Node_L	Valmont Street Light	28.667	34.854941	-82.400278	30.167	Duke Energy Carolinas, LLC	215 College St, Greenville, SC 29601
14	SMC_GVL_SC_Downtown_Node_M	Valmont Street Light	28.667	34.844888	-82.399473	30.167	Duke Energy Carolinas, LLC	101 E Camperdown Way, Greenville, SC 29601
15	SMC_GVL_SC_Downtown_Node_N	ConcealFab Street Light	28.667	34.84828474	-82.40019284	29.75	Duke Energy Carolinas, LLC	206 S Main St, Greenville, SC 29601
16	SMC_GVL_SC_Downtown_Node_O	ConcealFab Street Light	28.667	34.849945	-82.400278	30.167	Duke Energy Carolinas, LLC	22 W Mcbee Ave, Greenville, South Carolina, 29601
17	SMC_GVL_SC_Downtown_Node_P	ConcealFab Street Light	28.667	34.851364	-82.398758	29.75	Duke Energy Carolinas, LLC	103 N Main St, Greenville, South Carolina, 29601
18	SMC_GVL_SC_Downtown_Node_Q	Valmont Street Light	28.667	34.848819	-82.396574	29.75	Duke Energy Carolinas, LLC	307 E McBee Ave, Greenville, SC 29601
19	SMC_GVL_SC_Downtown_Node_R	Valmont Street Light	28.667	34.852545	-82.398633	29.75	Duke Energy Carolinas, LLC	1 W North St, Greenville, SC 29601
20	SMC_GVL_SC_Downtown_Node_S	Valmont Street Light	28.667	34.854211	-82.397533	30.167	Duke Energy Carolinas, LLC	330 Main St, Greenville, SC 29601

Photo Simulations for 5G Upgrades of Different Pole Types in Downtown Greenville

Slide 6: Valmont Street Light Pole
Slide 7: ConcealFab Node Pole
Slide 8: Valmont Pole (Double Luminaire Arms)
Slide 9: Traffic – Street Light Pole
Slide 10: Wood Street Light Pole





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EX20-00463W-05
30'9"
KEEP RIGHT
Before
Simulation 3E
37'5"
KEEP RIGHT
After
Raycap | STEALTH
Simulation is an approximate representation of our proposed concealment solution.Actual concealment(s) may vary.
800.755.0689 | stealthconcealment.com
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EX20-00463W-05
30'9"
Before
Simulation 4D
37'5"
After
Raycap | STEALTH
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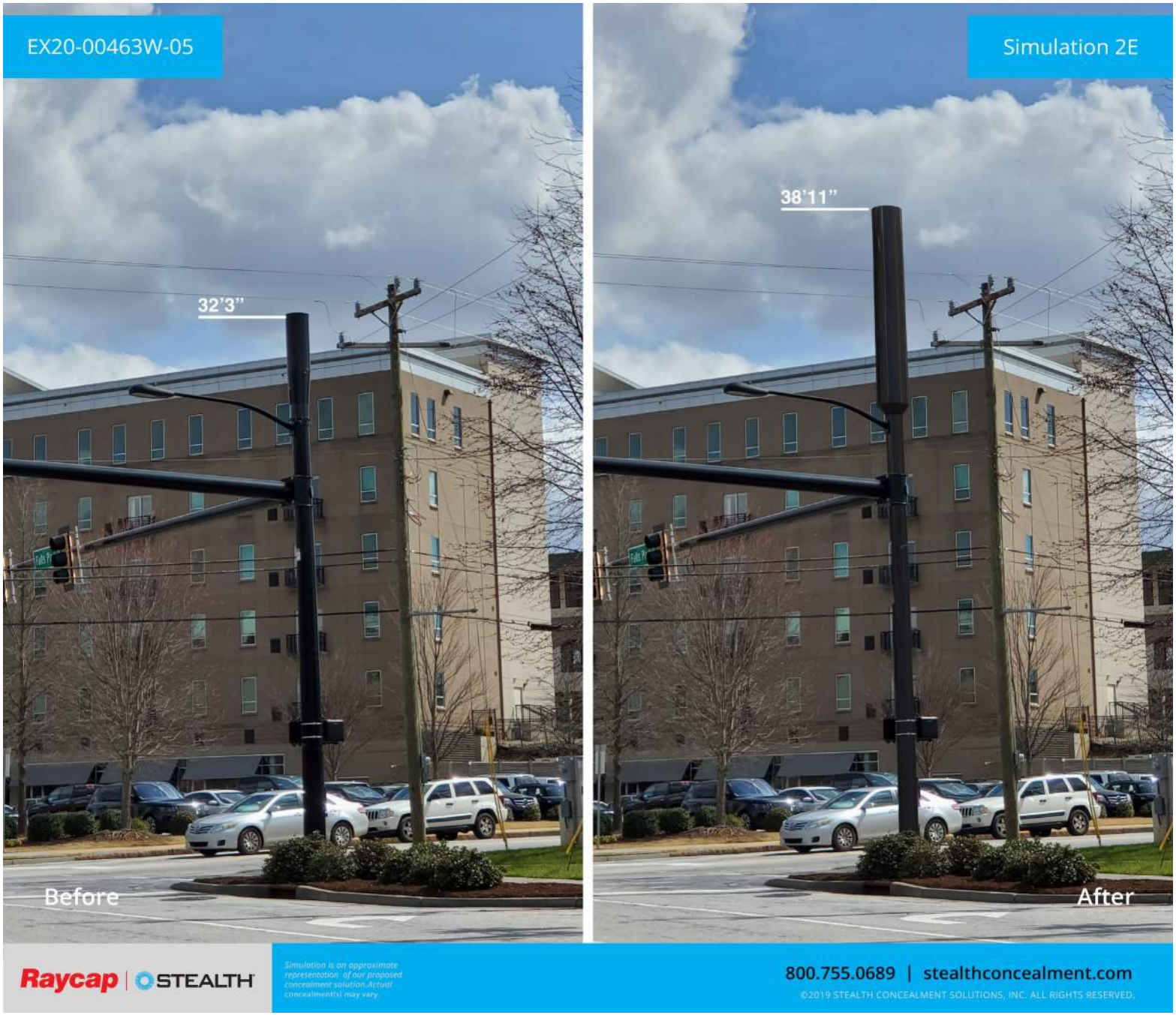

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EX20-00463W-05
34'
Before
Simulation 6E
40' 4"
Note: 3 feet to be removed from the top of pole.
After
Raycap | STEALTH
Simulation is an approximate representation of our proposed concealment solution. Actual concealment(s) may vary.
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5G Vision

Extreme throughput
multi-gigabits per second

Ultra-low latency
down to 1ms e2e latency

Uniform experience
with much more capacity

Enhanced Broadband | Massive IOT | Mission Critical Services

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5G Vision

Power efficient
Multi-year battery life

Low complexity
Low device and network cost

Long range
Deep coverage

Enhanced Broadband | Massive IOT | Mission Critical Services

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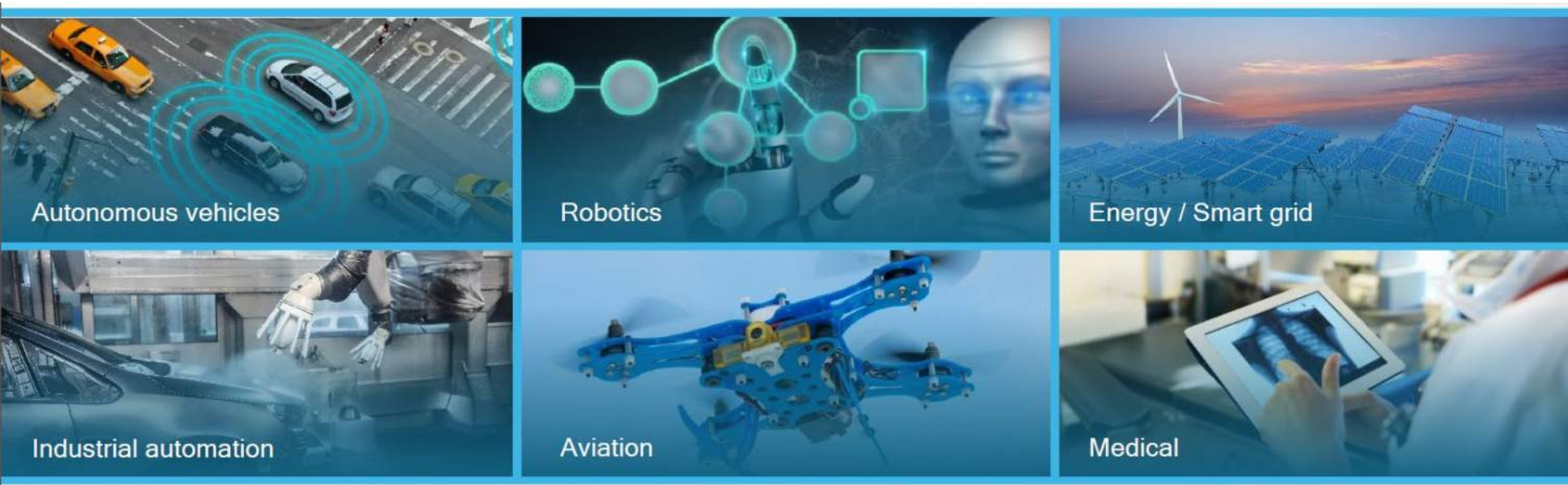
5G Vision



High reliability
Extremely low loss rate

Ultra-low latency
Down to 1ms e2e latency

High availability
Multiple links for failure tolerance & mobility

Enhanced Broadband | Massive IOT | Mission Critical Services

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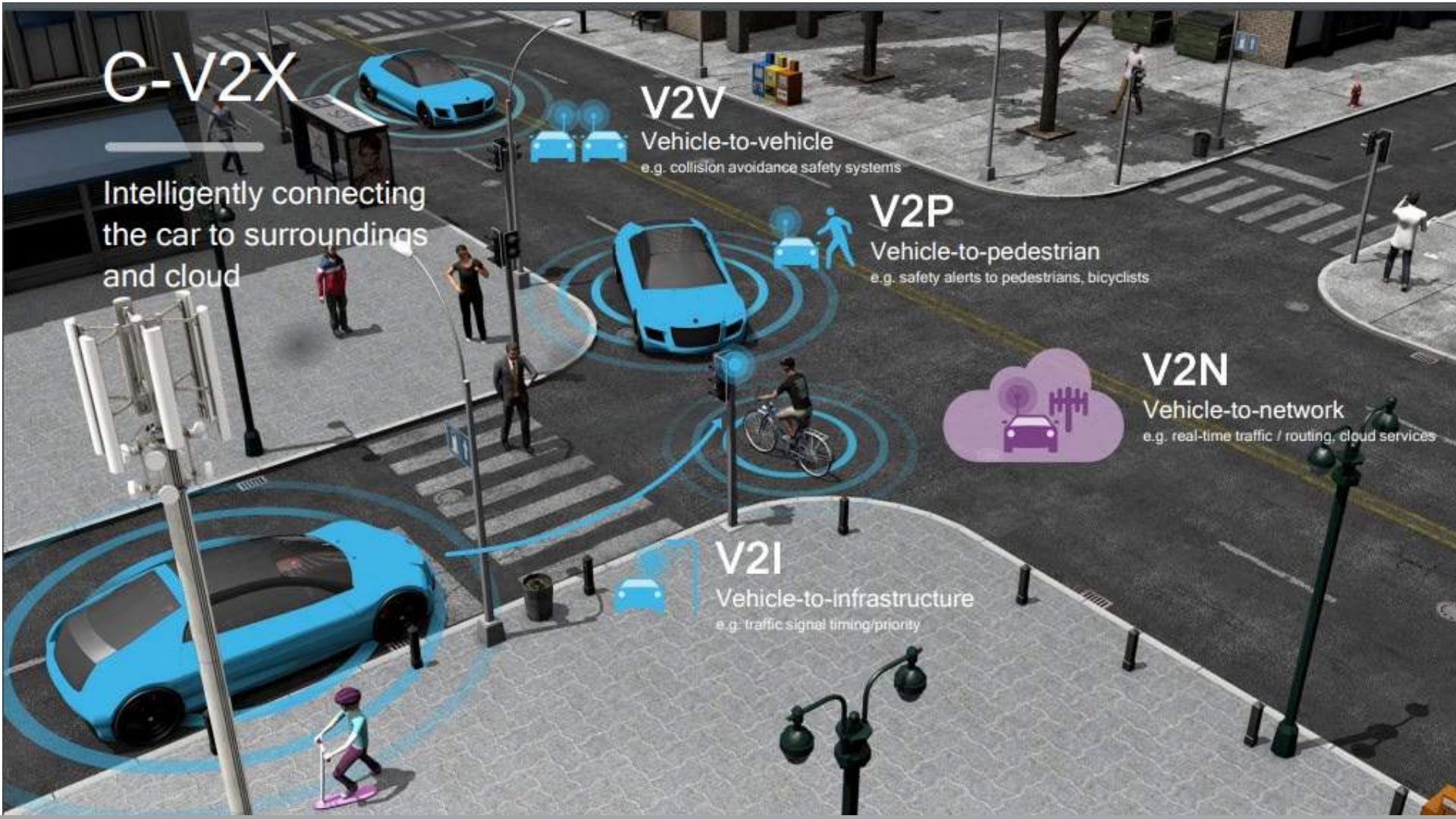
5G Applications – Outdoor Small Cell Network



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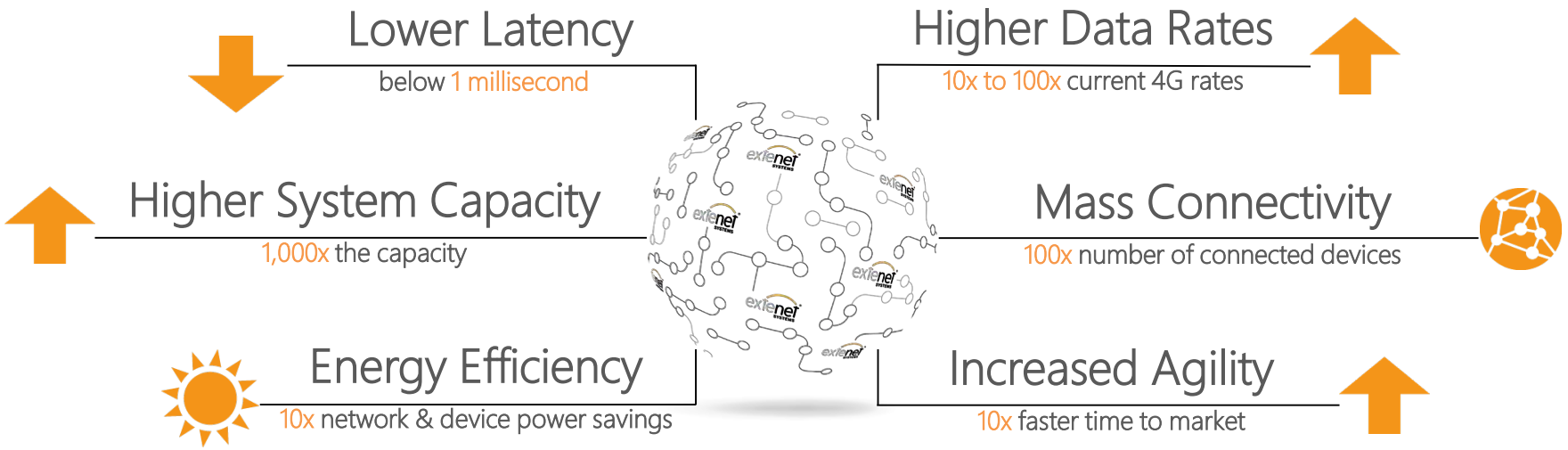
5G Vision – Network Requirements



"Extreme range of requirements!
Technology gain is not enough to address the needs"

Enhanced Broadband | Massive IOT | Mission Critical Services

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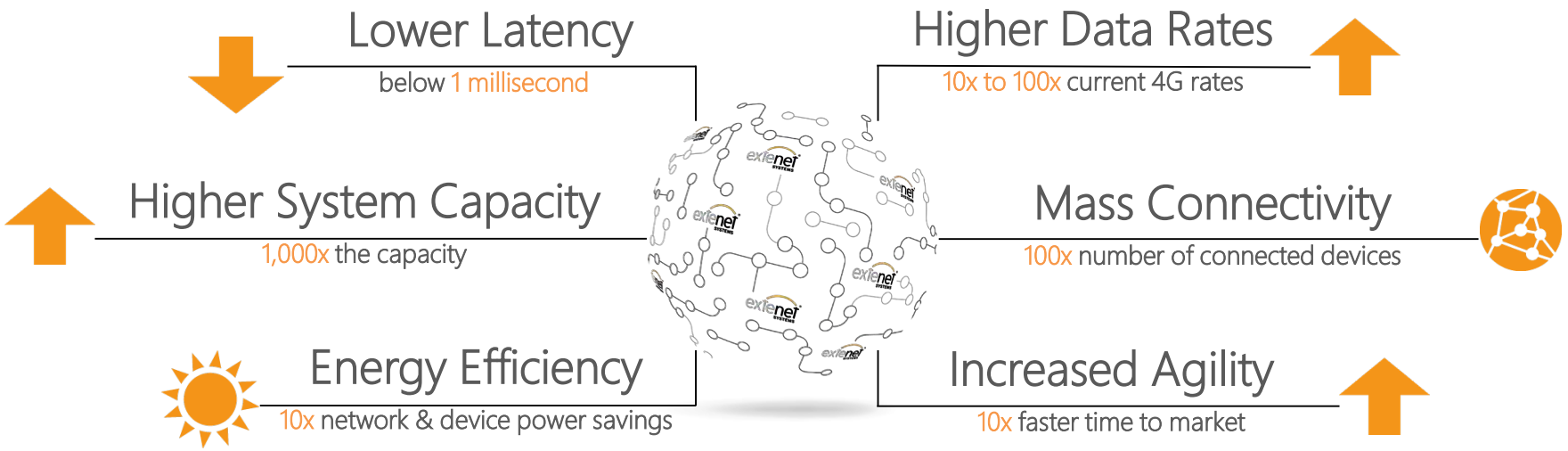
5G Network - Approach



Technology | Densification | Spectrum

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The leading provider of

Converged Communications Infrastructure and Services

in North America, creating long term value for our customers

Thank You!

extenet SYSTEMS

Planning Staff Report to
Design Review Board - Urban
April 26, 2017
for the May 4, 2017 Public Hearing

Docket Number: **CA 17-203**

Applicant: ExteNet Systems Inc.

Property Owner: Public ROW

Property Location: varies

Tax Map Number: NA

Proposal: **PROPOSED WIRELESS INFRASTRUCTURE**

Staff Recommendation:

Staff Analysis:

ExteNet Systems Inc., as a licensed telecommunications infrastructure company, is proposing to build a small cell wireless system in the public right of way through a franchise agreement with the City and an existing agreement with Duke Energy. This proposal will replace existing utility/street light pole infrastructure, as well as install new utility and decorative street light poles, within the public right of way at key locations throughout the Central Business District.

Design Guidelines for the Central Business District

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AP.8 Minimize the visual impacts of visual impacts of utility connections and service boxes.