Robinson+Cole

MEMORANDUM

To: Paul Ashworth, Senior Planner

From: Kenneth C. Baldwin, Esq.

Date: December 23, 2021

Subject: **Text Amendment Application - Commercial Wireless Service Facilities**

This memo is in response to your December 17, 2021 email requesting additional information about the proposed Text Amendment submitted by Cellco Partnership d/b/a Verizon Wireless ("Cellco"), to establish language regulating the installation of Commercial Wireless Service Facilities.

1. Provide a statement describing in detail why the proposed text amendment is necessary and how the existing regulations fail to provide for a necessary use.

In years past, Cellco has applied for and received Hartford zoning approvals to install roof-top "macro-cell" wireless facilities in Hartford pursuant to the provisions of Section 4.20.7 Accessory Utility Structures, Subsection A. - Antenna and Satellite Dish regulations. Among other things, this regulation allows for the installation of antennas on the roof or on the façade of a building; requires antennas and equipment to be setback from the edge of the roof; and requires antennas to be installed no higher than necessary to function properly.

According to the Connecticut Siting Council's Comprehensive List of (Non-Tower) Sites, there are more than sixty (60) of these roof-top or building-mounted commercial wireless facilities in the City of Hartford. *See* https://portal.ct.gov/CSC/Common-Elements/Common-Elements/Connecticut-Siting-Council---Disclaimer. Until recently, when the City adopted its Small Cell Node regulation, there were no other provisions dealing with non-tower wireless facilities.

Recently, Cellco began the permitting process to establish a building-mounted commercial wireless facility off West Boulevard. According to City Plan Commission staff, the provisions of Section 4.20.7.A. no longer apply to roof-top wireless facilities and recommended Cellco explore the City's recently adopted Small Cell Node ordinance, Section 4.20.7. Subsection F. of the Zoning Regulations. The differences, however, between a "small cell"

wireless facility and a "macro-cell" wireless facility are significant and, in our view, should be treated and regulated differently. Some of the important distinctions are described below.

Macro-Cell Facilities

All of the Cellco roof-top facilities in Hartford are, what the industry describes as "macro-cell" facilities. These facilities are identical to macro-cell facilities you might see installed at traditional tower sites around the City, except the building itself is the structure supporting the antennas. These macro-cell facilities typically involve the installation of 9 to as many as 15 panel type antennas. The antennas are usually configured in 3 sectors (with 3 to 5 antennas in each sector), so as to provide wireless service in all directions around the building. Cellco typically provides service in each of its licensed operating frequencies from these macro-cell facilities, including but not limited to 700 MHz, 850 MHz, 1900 MHz, 2100 MHz, 2800 MHz. Generally, a macro-cell facility will provide service to an area within a 1.0 to 1.5-mile radius around the building.

The panel antennas are typically between 4 feet and 8 feet tall and 12 inches to eighteen (18) inches wide, depending upon the frequencies being transmitted. Behind each antenna, Cellco installs one or more remote radio heads ("RRHs") which are generally 12 inches by 12 inches in size. Roof-mounted panel antennas and RRHs are typically supported by steel, ballast frame structures on the roof. Façade-mounted antennas are attached to the building by individual mounting pipes and brackets. RRHs for façade-mounted antennas may also be installed on the same pipe-mount or on a separate steel mounting frame located on the roof.

Radio equipment associated with macro-cell installations can be located on the roof of the building or on the ground adjacent to the building. In earlier years of network development, Cellco would install its radio equipment inside a climate-controlled shelter. Today, it is more common for Cellco to install 2 to 4 separate equipment cabinets, typically the size of a small refrigerator, located either on the roof or on the ground adjacent to the building. Back-up power to a macro-cell facility can be provided by a battery cabinet and a back-up generator.

Included in Attachment 1 are several photographs of existing roof-top macro-cell facilities. These photographs show the number of antennas and RRHs installed, cable interconnections, antenna mounting variations and an equipment shelter for these macro-cell facilities.

Small Cell Facilities

Cellco has installed hundreds of small cell nodes throughout the State of Connecticut, many of which are located in the City of Hartford. Small cell nodes typically consist of a single cannister antenna (12 to 16 inches tall and 12 inches in diameter) or a cluster of three smaller antennas (9.5 inches by 16.8 inches) attached to existing utility poles[1], on street lights or traffic signal poles or on buildings. Small cell node equipment can consist of a single RRH located on

[1] The attachment of small cell nodes to existing electric distribution poles is under the exclusive jurisdiction of the Public Utilities Regulatory Authority ("PURA") pursuant to Section 16-234 of the General Statutes. The process through which these installations are approved is described in PURA's decision in Docket No. 17-02-49.

the pole or included as a part of the antenna unit; one or two electrical boxes and an electric meter. Power and fiber connections to the small cell typically extend from existing service either on the utility pole or in the building.

Included in Attachment 2 are several photographs of small cell nodes that Cellco has installed in Connecticut and examples of other installations that use municipally-owned street lights as are contemplated in the City's small cell node ordinance. These appear to be the types of wireless facilities contemplated in Section 4.20.7.F. of the Zoning Regulations.

Small cell nodes are typically installed at lower overall heights, between 25 and 35 feet above the ground. As such their individual coverage footprints are very small, limited to about 1,000-foot radius around the pole. Small cell nodes generally serve one of two purposes. They either provide coverage in a small area that is unserved by the existing macro-cell network (discrete coverage gaps) or provide coverage and capacity relief in a specific high demand areas for Cellco's network.

Small Cell Node Ordinance

The City's recently adopted code provision in Section 4.20.7.F. describes "an antenna" (singular) and "an equipment box" (singular) as the key components of a small cell node. A small cell node may be located in a rear yard or other location not visible from the public right of way, on a building or on other City owned light poles or utility infrastructure. While we understand that a small cell node may be located on a building, the differences between a small cell node, as described in Section 4.20.7.F. and the macro-cell facility referenced above are significant and clearly describe two different types of wireless installations.

Our goal with the proposed text amendment is to fill the gap in the regulations for roof-top facilities that are not currently addressed by either the Small Cell Node provisions in 4.20.7.F. or the Antenna and Satellite Dish provisions of 4.20.7.A.

2. How is the proposed text amendment consistent with the City of Hartford Plan of Conservation & Development (POCD).

The POCD does not specifically address the provision of wireless service or the ability to provide wireless service in any particular location or on any particular structure in the City. What the proposed ordinance does, however, is increase the likelihood that advanced and improved wireless services will continue to be provided throughout the City of Hartford for years to come by making more structures in more locations available for the siting of wireless facilities. This, in turn, will help the City meet the important economic and public safety goals described in the POCD.

Economic and Public Safety Benefits

Having access to high speed wireless networks is critical to the economic growth of the City. Existing and new businesses in Hartford rely on highspeed broadband services and will not

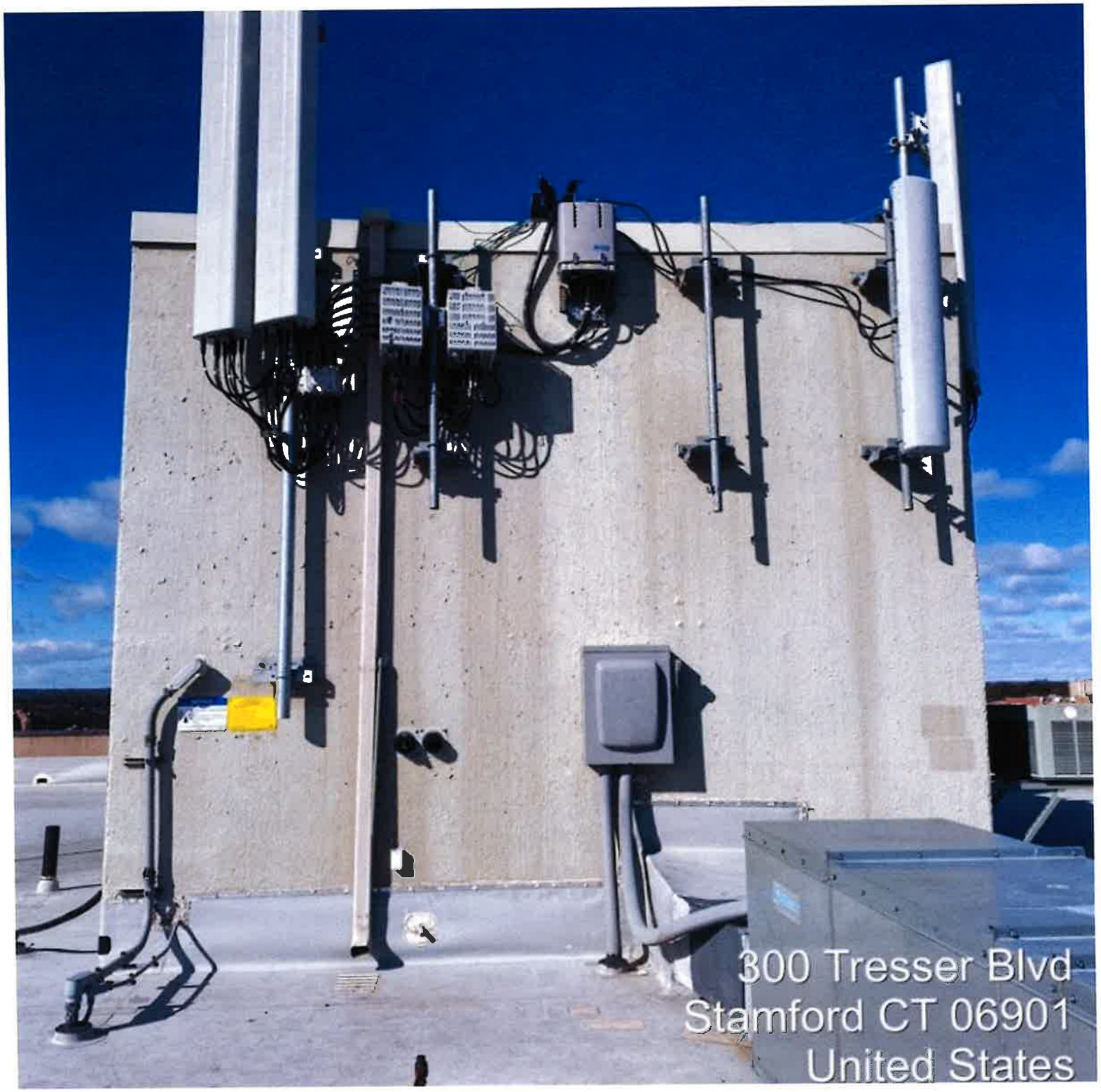
grow or relocate in areas where these wireless services are lacking or unavailable. In addition to businesses, first responders and City service providers rely more and more on wireless broadband connections so that they may continue to operate effectively and efficiently.

According to the Wireless Infrastructure Association, in cities like Hartford, access to high quality wireless networks can increase economic activity and reduce carbon footprints, traffic and pollution by enabling decentralized, remote work and schooling capabilities. According to the most recent federal survey of wireless substitution, about half of all Americans now have only cellular phones in their homes. More than two-thirds of all adults ages 25-34 are living in wireless-only households. With half of the population relying solely on mobile wireless networks for everyday communication, including 911 access, these networks are vital to the people of Hartford. Emergency weather warnings, Amber Alerts and other safety-oriented public announcements increasingly are disseminated via mobile networks because this can be done more quickly than with traditional methods and reach people who have opted out of a home landline phone service. Communities are also using new services like community Facebook pages to disseminate information and people are using their smartphones to access that material. All of these benefits, and many more are clearly consistent with the goals and policies of the Hartford POCD.

3. Do you have any visual representations of the types of antennas or installations that this amendment would allow for? Can you contrast this new installation type vs the small cell facility already allowed under certain circumstances by the regulations?

See the photograph included in Attachments 1 and 2 and the description of small cells and macro-cells in Section 1 above.


10.12.2020 16:34


300 Tresser Blvd
Stamford CT 06901
United States

10.12.2020 1

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Nov 02, 2020

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
2	**CONNECTICUT BOULEVARD**	**SOUTHEAST**	**+/- 300 FEET**

ALL-POINTS TECHNOLOGY CORPORATION

verizon

Centek Project # 20083.11

Simulation Photo # :	1 (Alpha)
GPS Coordinates (Photo):	41.80555 -72.24250
Distance to Antennas:	±2196 Feet
Orientation:	Looking South
Visibility:	Year Round

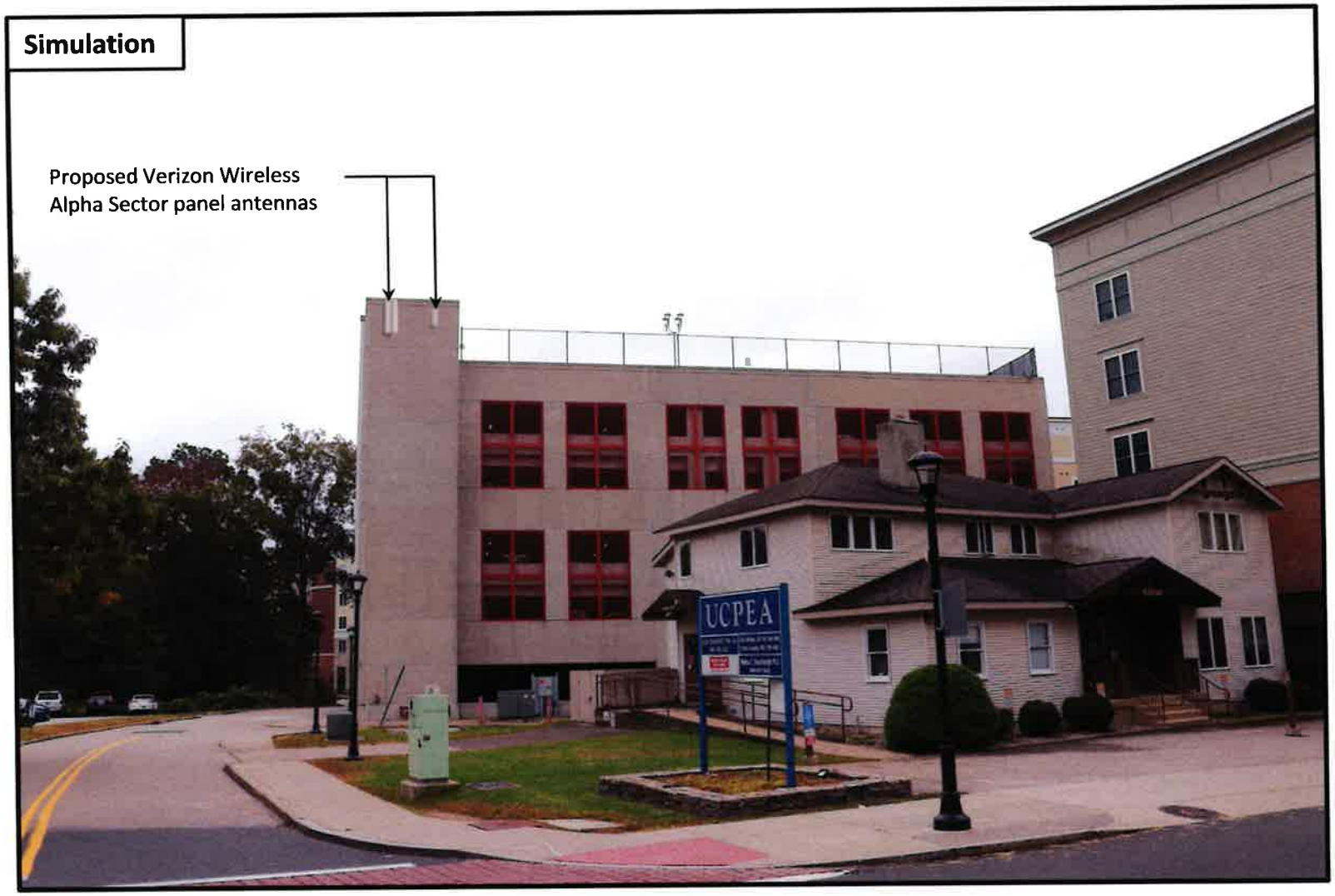
PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
1	**CHAPEL STREET**	**WEST**	**+/- 230 FEET**

ALL-POINTS TECHNOLOGY CORPORATION

verizon

Simulation



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GPS Coordinates (Photo):	41.80555 -72.24250
Distance to Antennas:	±2196 Feet
Orientation:	Looking South
Visibility:	Year Round

PROPOSED

PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
4	**SHERMAN'S ALLEY**	**EAST**	**+/- 270 FEET**

ALL-POINTS TECHNOLOGY CORPORATION

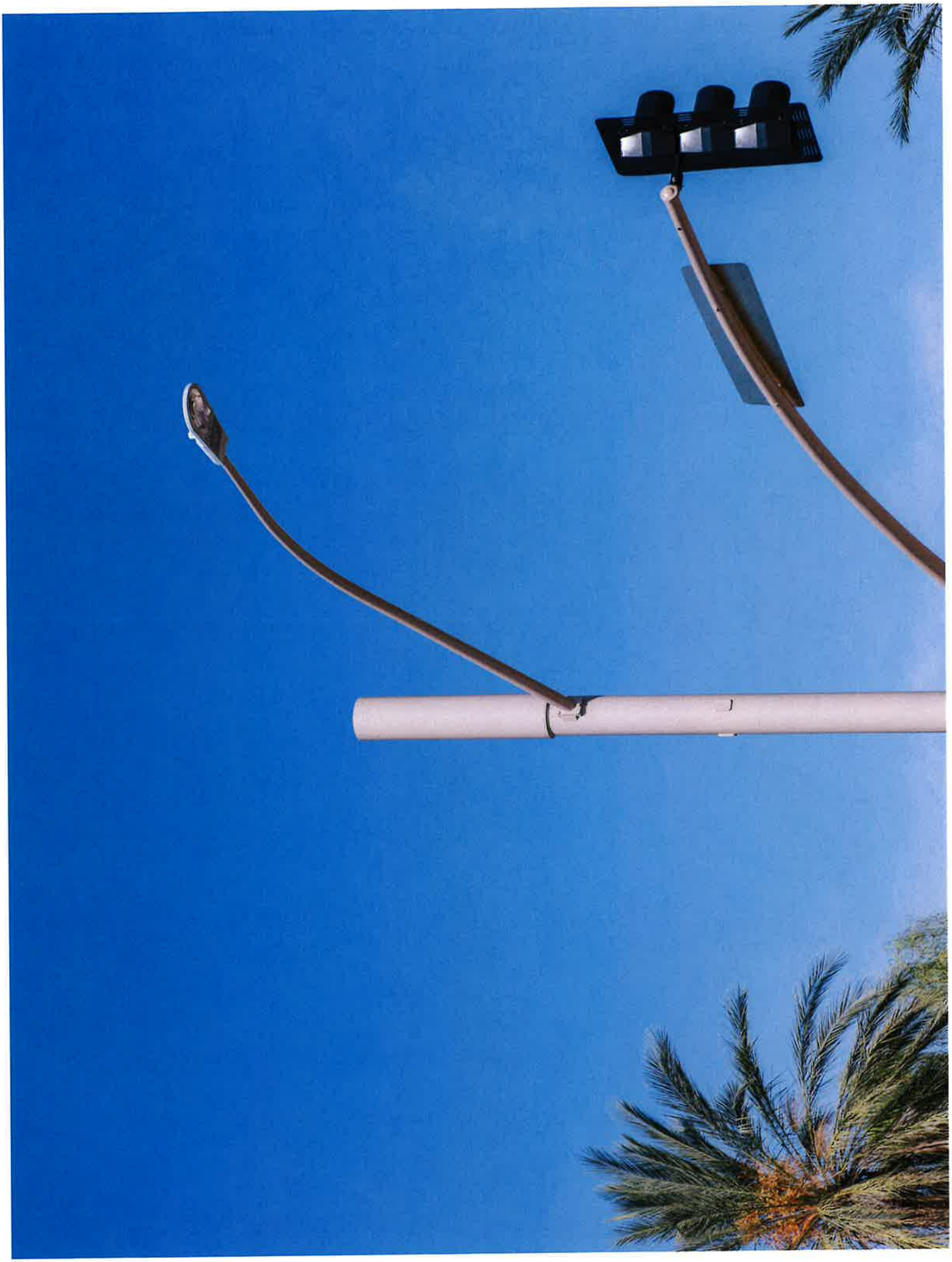
verizon

Cellco Partnership d/b/a Verizon Wireless
Connecticut Small Cell Wireless Installation

Attachment C
Side Mount Antenna


Altec


ONE WAY
S. BREVARD
NASCAR HALL OF FAME
ONLY
NASCAR

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