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April 15, 2022

VIA EMAIL

Chair Peter Vang
Vice Chair Brad Hardie
Commissioners David Criner,
Haley Wagner and Monica Diaz
Planning Commission
City of Fresno
2600 Fresno Street
Fresno, California 93721

Re: Verizon Wireless Response to Appeal of Application P21-06304
Telecommunications Facility, 640 R Street
Planning Commission Agenda, April 20, 2022

Dear Commissioners:

We write on behalf of Verizon Wireless to urge you to uphold the approval by the Planning and Development Director of a camouflaged wireless facility (the "Approved Facility") and to reject the appeal filed by the Huntington Park Condominium Village Board of Directors ("Appellants"). Designed to resemble a pine tree, the Approved Facility will provide reliable Verizon Wireless service to residents, workers and emergency personnel in the eastern Downtown Fresno area as well as residential and business areas east of Highway 41. As confirmed by the Director, the Approved Facility satisfies all requirements for approval, including the City's 2006 wireless policy and the recently-adopted interim policy. Appellants do not present any substantial evidence to warrant denial of the Approved Facility, as required by the federal Telecommunications Act. Further, because it will fill a significant gap in Verizon Wireless service, and there is no less intrusive feasible alternative, denial would violate the Telecommunications Act. We urge you to reject the appeal and approve the Approved Facility.

I. The Project

The Approved Facility has been thoughtfully designed to minimize any impact on the surrounding area. The Council District 3 Project Review Committee approved the proposal at its January 25, 2022 meeting.

Verizon Wireless proposes to conceal its panel antennas within an 80-foot freestanding facility camouflaged as a pine tree. The antennas will be concealed within

faux foliage and branches, and branches will extend beyond and above the antennas, providing a realistic crown. Antennas will be painted or covered with leaf socks for further concealment. The treepole base and associated network equipment will be placed within a 366-square foot concrete block enclosure, along with a standby generator to provide continued service during emergencies. Verizon Wireless will plant toyon and coffee berry bushes on three sides the enclosure to screen it from views along R Street. Utility connections serving the Approved Facility will be routed underground.

Photosimulations of the Approved Facility are attached as Exhibit A. Verizon Wireless's radio frequency exposure report verifies that the Approved Facility will comply with Federal Communications Commission ("FCC") exposure guidelines.

II. The Approved Facility Satisfies All Requirements for Approval.

As confirmed by the Director's decision, the Approved Facility satisfies all City requirements for approval, including *Policy and Procedure 33, Wireless Telecommunication Facilities* adopted in 2006 (the "2006 Wireless Policy") and the supplemental *Interim Policy and Procedure C-010* adopted in February 2022 (the "Interim Wireless Policy").

Wireless facilities are allowed in all zones within the City, and Verizon Wireless chose a property next to Highway 41 in a light industrial and office area. The 2006 Wireless Policy has long allowed camouflaged monopines, and the Interim Wireless Policy now requires new facilities to be "a mono-tree with collocation abilities." 2006 Wireless Policy, § 2(G); Interim Wireless Policy, p. 2.

The Approved Facility exceeds the required 100-yard setback from existing wireless facilities, as it is 105 yards from the uncamouflaged monopole facility west across R Street. 2006 Wireless Policy § 2(I). Its height will allow antennas to serve the significant gap in Verizon Wireless service in the vicinity, and to allow the faux branches above the antennas to provide camouflage. There will be additional space available on the treepole should another wireless carrier seek to collocate its antennas, as required by Interim Wireless Policy. This would minimize the number of new facilities in the area.

The Approved Facility also satisfies the findings for a conditional use permit. Fresno Code of Ordinances § 15-5306. Of note, radio frequency exposure from the Approved Facility will be well under the FCC's public limits, and the facility will be secure within the concrete block enclosure, posing no adverse impact to public health safety, or welfare. In fact, the Approved Facility will provide an important public benefit through improved connectivity for local residents, workers and emergency response personnel. Located in an outdoor storage area on a 0.55-acre parcel, next to an elevated freeway and over 400 feet distant from the condominiums to the northwest, the Approved Facility will pose no detriment to surrounding improvements. In sum, the Approved Facility satisfies all City requirements for approval.

III. The Appeal Raises No Substantial Evidence to Support a Denial.

Denial of a wireless facility application must be based on substantial evidence. 47 U.S.C. §332(c)(7)(B)(iii). As interpreted by federal courts, this means that a local government's decision to deny a wireless facility application must be based on requirements set forth in the local code and supported by evidence in the record. *See Metro PCS, Inc. v. City and County of San Francisco,* 400 F.3d 715, 725 (9th Cir. 2005) (denial of application must be "authorized by applicable local regulations and supported by a reasonable amount of evidence.") While a local government may regulate the placement of wireless facilities based on aesthetics, mere generalized concerns or opinions about aesthetics or compatibility with a neighborhood do not constitute substantial evidence upon which a local government can deny a permit. *See City of Rancho Palos Verdes v. Abrams*, 101 Cal. App. 4th 367, 381 (2002).

Appellants' objections to the Approved Facility are largely based on vague aesthetic concerns, and they raise several alternative locations. We respond to Appellants' objections below.

A. The Approved Facility Will Pose Minimal Visual Impact.

Appellants raise several objections to the aesthetics of the Approved Facility, calling it an "eyesore" for homeowners and motorists on Highway 41. The Huntington Park Condominium Village they represent, which is the closest residential development within the downtown area, is over 400 feet northwest of the Approved Facility. The condominium development is surrounded by established trees that would obscure views of the Approved Facility. Verizon Wireless chose the Approved Facility location because it is distant from residences.

At 80 feet tall, the Approved Facility will be similar in height to numerous established pine trees to the north along the subject property line and Highway 41, visible in the photosimulations attached as Exhibit A. These trees range up to 83 feet in height, as shown on the site survey attached as Exhibit B.

Verizon Wireless followed the City's long-standing policy, which encourages designs such as "monopines" in order "to ensure compatibility with the surrounding physical environment." 2006 Wireless Policy § 2(G). As noted above, the Planning & Development Director recently approved a supplemental interim policy which requests that new wireless facilities be designed as "mono-trees" suitable for collocation by multiple carriers. *See* Interim Wireless Policy, p. 2.

As City policies favor the monopine design, Appellants' subjective concerns over aesthetics and "blight" raise no contradiction with approval requirements. The project plans show ample branches that will conceal antennas as well as new landscaping around the equipment area. These design choices mitigate any visual impact. A condition of approval requires the Planning Department to approve the faux foliage "to ensure the tower will closely resemble a tree." *See* Notice of Granting Special Permit, Conditional

Use Permit Application No. P21-06304. These aesthetic measures are consistent with General Plan Goal 15, "Improve Fresno's visual image and enhance its form and function through urban design strategies and effective maintenance."

Appellant's aesthetic objections raise no contradiction with the City's policy guidance, and this ground for appeal must be rejected.

B. There is No Better Alternative for the Approved Facility.

Appellants raise six alternative locations for the Approved Facility, including a nearby City parking lot and five sites to the south. However, as explained in the Alternatives Analysis attached as Exhibit C, these alternatives are either within the required 100-yard setback from existing facilities, or they are infeasible or more intrusive than the Approved Facility.

Appellants also raise an alternate design for the Approved Facility, vaguely referencing an "obelisk" or a tower 20 feet shorter. The Director approved the monopine design on February 24, 2022, after issuing the Interim Wireless Policy on February 16 that requires new facilities to be such "mono-trees." While the Director may consider other designs on a case-by-case basis, Verizon Wireless offered no other option because the City has recently approved several other facilities with a mono-tree design, which is now the City's preference. An "obelisk" design would contradict the Director's approval.

To lower the Approved Facility height by 20 feet would accordingly lower Verizon Wireless's panel antenna centerline from 72 feet to 52 feet, and its microwave antenna centerline from 62 feet to 42 feet, significantly reducing coverage, as described in the Alternatives Analysis. It also would lower the antenna centerline for a future carrier's collocation antennas from 53 feet to only 33 feet, an unworkable height that would render collocation to be impractical in contradiction of the Interim Wireless Policy, which requires that new facilities be designed for collocation.

Appellants fail to identify a feasible, preferred alternative, so this ground for appeal must be rejected.

In sum, Appellants provide no evidence—let alone the substantial evidence required by federal law—to support a denial of the Approved Facility. In contrast, Verizon Wireless has provided substantial evidence to show that the Approved Facility complies with all City requirements for approval. The Commission should reject the appeal, and approve the Approved Facility.

IV. Denial Would Constitute an Unlawful Prohibition of Service.

A local government's denial of a wireless facility permit violates the "effective prohibition" clause of the federal Telecommunications Act if the wireless provider can show two things: (1) that it has a "significant gap" in service; and (2) that the proposed facility is the "least intrusive means," in relation to the land use values embodied in local

regulations, to address the gap. *See T-Mobile USA, Inc. v. City of Anacortes,* 572 F.3d 987 (9th Cir. 2009).

If a provider proves both elements, the local government *must* approve the facility, even if there is substantial evidence to deny the permit under local land use provisions (which there is not in this case). This is because the provider has met the requirements for federal preemption; i.e., denial of the permit would "have the effect of prohibiting the provision of personal wireless services." 47 U.S.C. § 332(c)(7)(B)(i)(II); *T-Mobile v. Anacortes,* 572 F.3d at 999.

A. Verizon Wireless Has Demonstrated a Significant Gap in Service.

As confirmed in the *Statement of Verizon Wireless RF Engineer Walt Kohls*, attached as Exhibit D, Verizon Wireless has identified a significant gap in its service in the eastern downtown Fresno area, extending to areas east of Highway 41. Reliable in-building service is lacking in office, business and residential areas on both sides of the highway, including apartment developments to the east. There is also a lack of reliable in-vehicle service along stretches of Highway 41 and local roadways. Distant facilities provide only weak service levels to much of the gap area. Further, accelerated growth in voice and data usage by Verizon Wireless customers has increased the demand on the existing Verizon Wireless facility downtown.

B. The Approved Facility is the Least Intrusive Means to Fill the Significant Gap in Service.

To address the significant gap, Verizon Wireless evaluated 17 specific alternatives, including the six locations raised by Appellants, as described in the Alternatives Analysis attached as Exhibit C. Other locations are too far away to serve the significant gap, lack landlord interest, are within the City's required setback from existing facilities, or would result in a more intrusive facility. In sum, the Alternatives Analysis confirms that the Approved Facility is the least intrusive feasible means to serve the significant gap.

For wireless carriers to establish a case for prohibition of service, federal law does not require that a proposed facility be the "only" alternative, but rather that no feasible alternative is less intrusive than a proposed facility. *See Metro PCS, Inc. v. San Francisco,* 400 F.3d at 734-35.

Verizon Wireless has identified a significant gap in service, and has shown that the Approved Facility is the least intrusive means to address it, based on the values expressed in City regulations. Under these circumstances, Verizon Wireless has established that denial of the Approved Facility would constitute an unlawful prohibition of service.

Conclusion

Verizon Wireless has worked diligently to identify the ideal location and design for a camouflaged wireless facility to serve a significant gap in service in eastern downtown Fresno and areas east of Highway 41. The Approved Facility complies with the City's Code and wireless policies, and it satisfies the findings for approval of a conditional use permit. Ensuring reliable Verizon Wireless service is essential for residents, workers, visitors and emergency response personnel. We strongly encourage you to affirm the Director's approval, and to reject the appeal.

Very truly yours,

Paul B. Albritton

cc: Douglas Sloan, Esq.
Rina Gonzales, Esq.
Steven Martinez
Ralph Kachadourian

Schedule of Exhibits

Exhibit A: Photosimulations
Exhibit B: Site Survey
Exhibit C: Alternatives Analysis
Exhibit D: Statement of Verizon Wireless Radio Frequency Design Engineer Walt Kohls

Exhibit A

verizon

DOWNTOWN FRESNO
PSL # 655464
662 R STREET
FRESNO, CA 93721

SAC WIRELESS
SAC AE DESIGN GROUP, INC.
9020 ACTIVITY ROAD
SAN DIEGO, CA 92126
www.sacw.com

PHOTOSIMULATION VIEWPOINT 1

NEW

EXISTING

DISCLAIMER: THIS PHOTOSIMULATION IS INTENDED AS A GRAPHICAL REPRESENTATION OF EXISTING AND PROPOSED SITE CONDITIONS BASED ON THE PROJECT / DRAWING PLANS. IT IS NOT INTENDED FOR CONSTRUCTION. ACTUAL, FINAL CONSTRUCTION MAY VARY

verizon

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PHOTOSIMULATION VIEWPOINT 2

NOTE:
NEW VERIZON WIRELESS EQUIPMENT LOCATED WITHIN NEW 16'-8" x 22'-0" CMU WALL ENCLOSURE W/ ANTI GRAFFITI PAINT & CHAIN-LINK ROOF (EQUIPMENT NOT VISIBLE IN CURRENT VIEW)

- **NEW OUTDOOR EQUIPMENT ON CONCRETE PAD**
- **NEW ELECTRICAL METER, TELCO BOX AND INTERSECT CABINET ON NEW H-FRAME**
- **NEW ICEBRIDGE W/ GPS ANTENNA**
- **NEW (2) RAYCAPS**
- **NEW 80'-0" HIGH MONOPINE**

verizon

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662 R STREET
FRESNO, CA 93721

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SAN DIEGO, CA 92126
www.sacw.com

PHOTOSIMULATION VIEWPOINT 3

NOTE:
NEW VERIZON WIRELESS EQUIPMENT LOCATED WITHIN NEW 16'-8" x 22'-0" CMU WALL ENCLOSURE W/ ANTI GRAFFITI PAINT & CHAIN-LINK ROOF (EQUIPMENT NOT VISIBLE IN CURRENT VIEW)

- **NEW OUTDOOR EQUIPMENT ON CONCRETE PAD**
- **NEW ELECTRICAL METER, TELCO BOX AND INTERSECT CABINET ON NEW H-FRAME**
- **NEW ICEBRIDGE W/ GPS ANTENNA**
- **NEW (2) RAYCAPS**
- **NEW 80'-0" HIGH MONOPINE**

Exhibit B

NOTES:

APN: 468-114-13 & 468-114-17
OWNER(S): HARRY D. MOORE & RUTH E. MOORE, TRUSTEES UNDER THE HARRY D. MOORE & RUTH E. MOORE REVOCABLE LIVING TRUST AGREEMENT

THIS DRAWING DOES NOT REPRESENT A BOUNDARY SURVEY OF ANY PARCEL OF LAND, NOR DOES IT IMPLY OR INFER THAT A BOUNDARY SURVEY WAS PERFORMED. THIS IS A SPECIALIZED TOPOGRAPHIC MAP WITH PROPERTY AND EASEMENTS BEING A GRAPHIC DEPICTION BASED ON INFORMATION GATHERED FROM VARIOUS SOURCES OF RECORD AND AVAILABLE MONUMENTATION. PROPERTY LINES AND LINES OF TITLE WERE NEITHER INVESTIGATED NOR SURVEYED AND SHALL BE CONSIDERED APPROXIMATE ONLY. NO PROPERTY MONUMENTS WERE SET.

THE EASEMENTS (IF ANY) THAT APPEAR ON THIS MAP HAVE BEEN PLOTTED BASED SOLELY ON INFORMATION CONTAINED IN THE PRELIMINARY TITLE REPORT BY: FIRST AMERICAN TITLE INSURANCE COMPANY, FILE NO. 6358299, DATED AUGUST 18, 2020. WITHIN SAID TITLE REPORT THERE ARE ELEVEN (11) EXCEPTIONS LISTED, TWO (2) OF WHICH ARE EASEMENTS AND NONE (0) OF WHICH CAN NOT BE PLOTTED.

THE UNDERGROUND UTILITIES (IF ANY) THAT APPEAR ON THIS MAP HAVE BEEN LOCATED AND MARKED ON THE SURFACE BY AN INDEPENDENT PRIVATE UNDERGROUND LOCATING SERVICE. THESE MARKINGS HAVE BEEN SURVEYED AND SHOWN HEREON. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED.

THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD RATE MAP FOR COMMUNITY NO. 060048, PANEL NO. 2110H, DATED FEBRUARY 18, 2009 SHOWS THAT THE LOCATION OF THIS SITE FALLS WITHIN ZONE "X", WHICH ARE AREAS OF 0.2% ANNUAL CHANCE FLOOD HAZARD; AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1' OR WITH DRAINAGE AREAS OF LESS THAN 1 SQUARE MILE.

THE LATITUDE AND LONGITUDE AT THE LOCATION AS SHOWN WAS DETERMINED BY GPS OBSERVATIONS.

LAT. 36° 44' 10.86" N. NAD 83
LONG. 119° 46' 40.78" W. NAD 83
ELEV. 293.3' NAVD 88 (BASIS OF DRAWING)

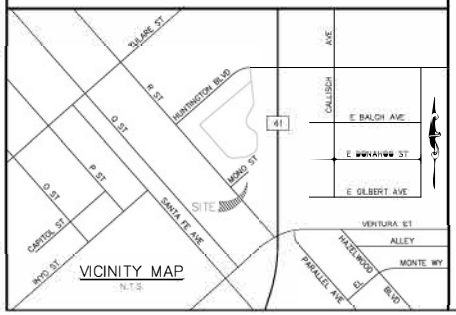
The information shown above meets or exceeds the requirements set forth in FAA order 8260.19d for 1-A accuracy (± 20' horizontally and ± 3' vertically). The horizontal datum (coordinates) are expressed as degrees, minutes and seconds, to the nearest hundredth of a second. The vertical datum (heights) are expressed in feet and decimals thereof and are determined to the nearest 0.1 foot.

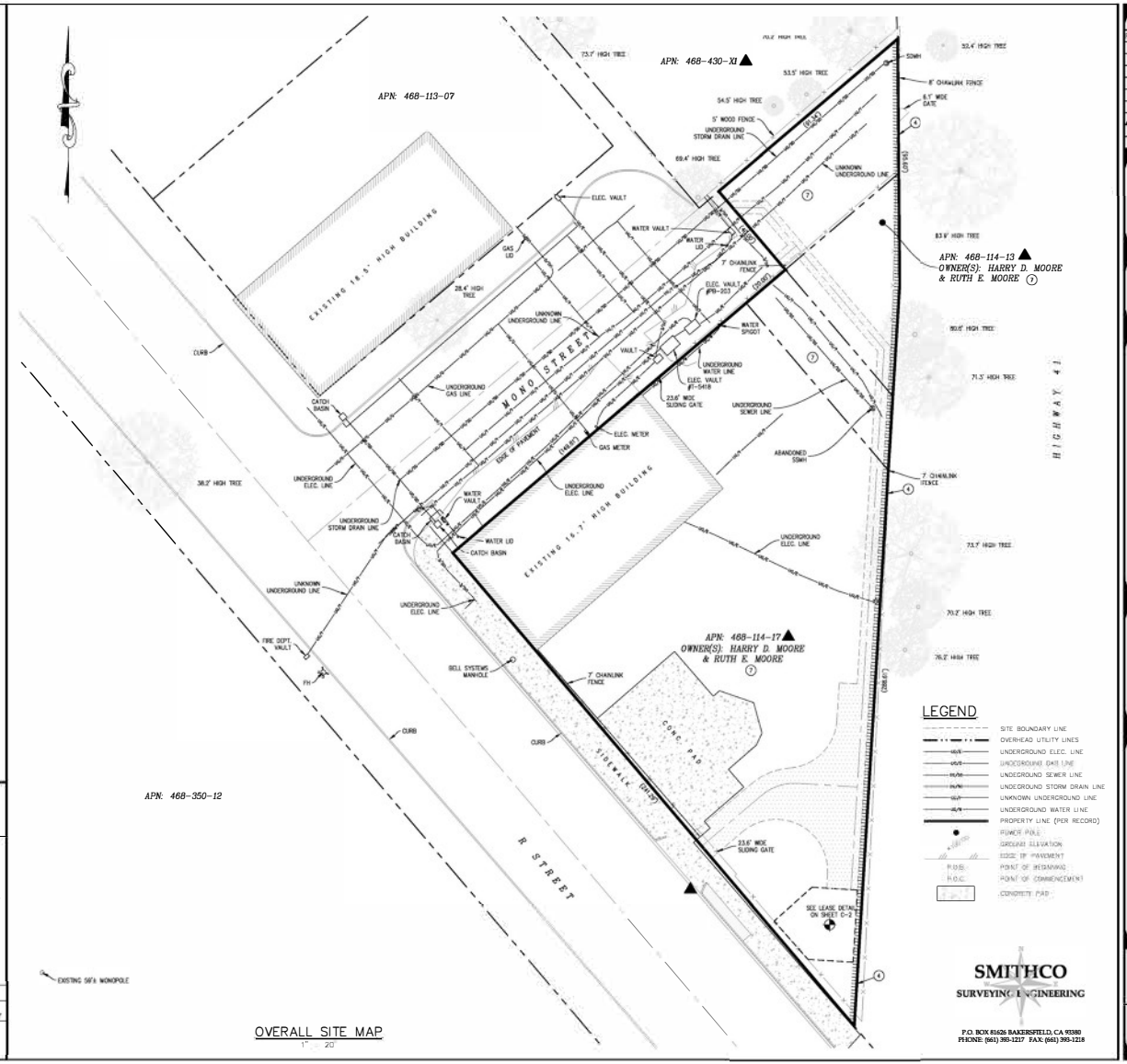
LESSOR'S PROPERTY LEGAL DESCRIPTION PER TITLE REPORT:

SEE SHEET C-3.

EASEMENT(S) PER TITLE REPORT:

SEE SHEET C-3.





OVERALL SITE MAP
1" = 20'

SMITHCO
SURVEYING & ENGINEERING
P.O. BOX 81626 BAKERSFIELD, CA 93380
PHONE: (661) 395-1217 FAX: (661) 395-1218

ISSUE STATUS

REV.	DATE	DESCRIPTION	BY
2	12/11/20	TITLE REVIEW	SL
3	03/01/21	UPDATE LEASE AREA	DA
4	09/14/21	UPDATE LEASE AREA	SL
5	09/15/21	REV. LEASE/ESMNTS	SL
6	09/22/21	ADD UTILITY ESMNT	SL
7	11/19/21	REV. ACCESS/UTILITY	SL
▲	02/11/22	REV. PLANING COMMENTS	SL

SMITHCO JOB NO.: 82-1420

SDC WIRELESS
A&E DESIGN GROUP, INC.
5015 SHOREHAM PLACE STE. 150
SAN DIEGO, CA 92122
619.736.3766

verizon
2785 MITCHELL DRIVE, BLDG. 9
WALNUT CREEK, CA 94598

655464
DOWNTOWN FRESNO

640 R STREET (C/T)▲
FRESNO, CA 93721

FRESNO COUNTY

SHEET TITLE:
SITE SURVEY
FOR EXAMINATION ONLY

C-1

Exhibit C

Alternatives Analysis

Downtown Fresno

640 R Street, Fresno

April 14, 2022

Summary of Site Evaluations
Conducted by Verizon Wireless

TABLE OF CONTENTS

I. Executive Summary

Verizon Wireless must fill a significant gap in service in the eastern downtown Fresno area and business and residential areas east of Highway 41. Based on the review of the 17 alternative sites set forth in the following analysis, Verizon Wireless believes that placing a new tower facility camouflaged as a pine tree next to Highway 41 (the "Proposed Facility") constitutes the least intrusive feasible alternative to serve the identified gap in network service based on the values expressed in City of Fresno regulations.

While City policies do not require an alternatives analysis for new wireless facilities, Verizon Wireless provides this analysis as a courtesy to confirm that the Proposed Facility is the least intrusive feasible alternative.

II. Significant Gap

There is a significant gap in Verizon Wireless network service in the downtown Fresno area. Reliable in-building service is lacking in an area roughly bounded by Santa Fe Avenue to the west, Divisadero Street and East Iowa Avenue to the north, South 4th Street to the east, South 1st Street to the southeast, and east Hamilton Avenue to the south. This area includes offices, business, and residential areas, with numerous condominium and apartment buildings both west and east of Highway 41. There is also a lack of reliable in-vehicle service in much of the area, including stretches of Highway 41 south of Tulare Street as well as local roadways. Distant facilities provide only weak dominant signal to much of the gap area. Further, accelerated growth in voice and data usage by Verizon Wireless customers has increased the demand on the existing Verizon Wireless facility downtown. (Collectively, the "Significant Gap")

The Significant Gap is described in detail in the *Statement of Verizon Wireless Radio Frequency Design Engineer Walt Kohls* (the "RF Engineer's Statement"). To remedy the Significant Gap, Verizon Wireless must place a new facility to ensure sufficient reliable network service.

III. Methodology

Once a significant gap has been determined, Verizon Wireless seeks to identify a location and design that will provide required network service through the "least intrusive means" based upon the values expressed by local regulations. In addition to seeking the least intrusive alternative, sites proposed by Verizon Wireless must be feasible. In this regard, Verizon Wireless reviews the available height, equipment space, radio frequency propagation, proximity to end users, access, environmental impacts and other critical factors such as a willing landlord in completing its site analysis.

City Permit Requirements

For all zoning districts, the Fresno Code of Ordinances defers to the City's policies regarding wireless facilities. Code § 15-2759(B); *Policy and Procedure No. 33, Wireless Telecommunication Facilities,* 2006 (the "2006 Wireless Policy"); *Interim Policy and*

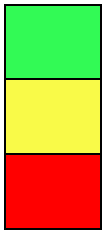
Procedure No. C-010, 2022 (the "Interim Wireless Policy"). New wireless facilities require a conditional use permit. 2006 Wireless Policy § 2(A). A new facility may not installed within 100 yards of an existing facility. 2006 Wireless Policy § 2(I). New facilities must be "mono-trees with collocation abilities," or designs approved by the Director. Interim Wireless Policy, p. 2.

Coverage Map Explanation

Coverage maps are provided to illustrate why certain alternatives cannot serve the Significant Gap. Coverage maps depict the anticipated level of signal, and therefore the projected LTE coverage provided by a wireless facility at a given location. The coverage maps have been prepared using the AWS frequency band. The AWS and PCS bands use similar frequencies and have similar propagation characteristics, as do new C-Band frequencies recently deployed by Verizon Wireless.

Referenced signal receive power (RSRP) is a measurement of signal level in decibel milliwatts (dBm), which is a negative number that decreases due to distance and other factors.

The AWS RSRP coverage thresholds are:



In-building >= -85 dBm. Green depicts good coverage that meets or exceeds thresholds for reliable network coverage in homes and vehicles.

In-vehicle >= -95 dBm. Yellow depicts reliable in-vehicle coverage only.

Outdoor >= -105 dBm. Red depicts reliable outdoor service only.

Unshaded areas do not receive reliable service levels.

IV. Analysis

Collocation Review

Verizon Wireless first looked for opportunities to collocate with existing wireless facilities in the greater vicinity around the gap area, identifying the following four existing facilities.

1. Crown R Street Facility
Address: 645 R Street
Zoning: DTG – Downtown General

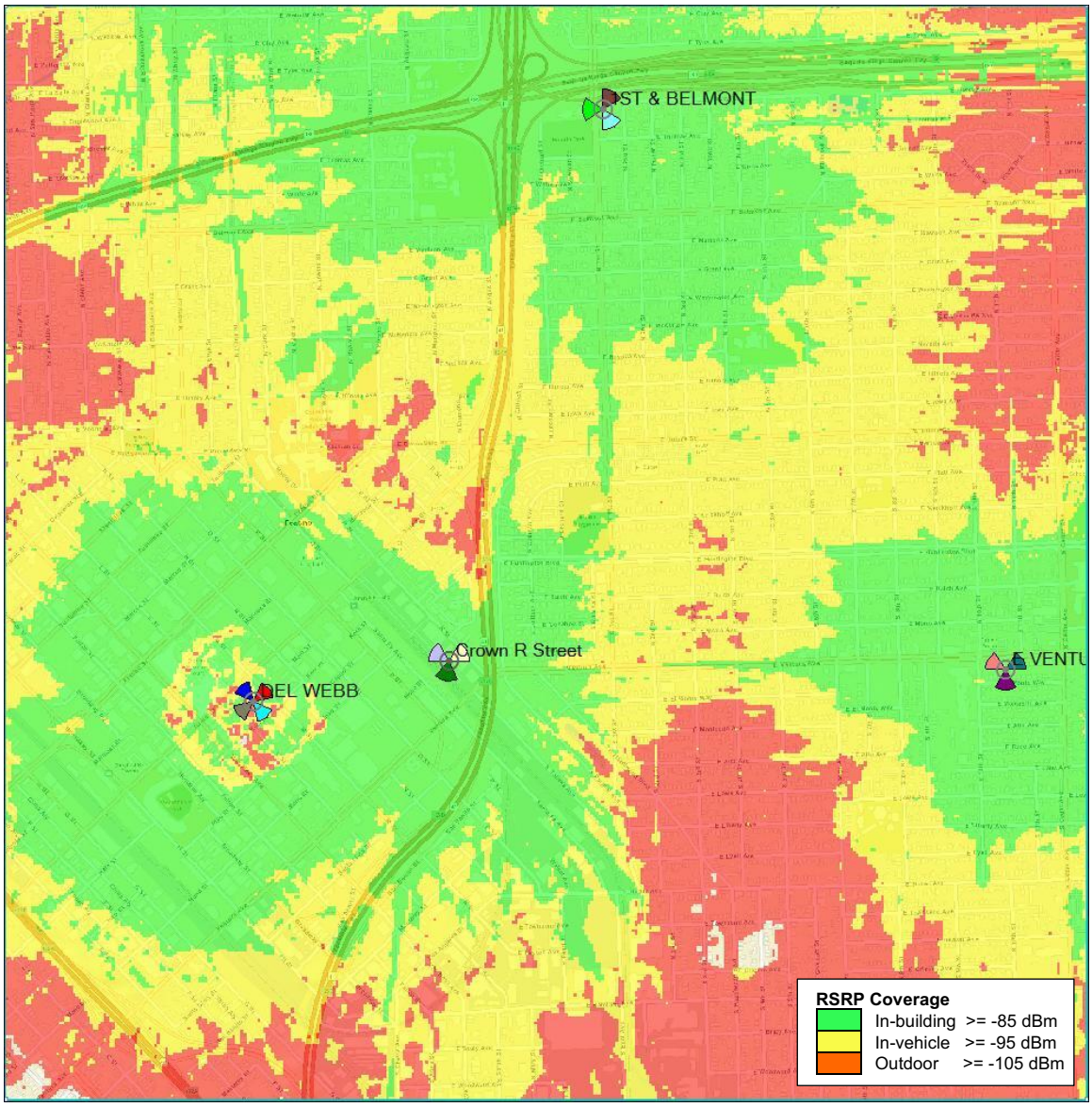
Verizon Wireless reviewed this approximately 56-foot slimline monopole located 105 yards west of the Proposed Facility, in the parking and loading area of a distribution business. The monopole supports panel antennas at the top, shown in the above photo, and in 2021 the City approved collocation of additional antennas for Dish Wireless with no increase in height. *See* File P21-05449. The additional ground space required for Verizon Wireless's network equipment and generator could interfere with parking or loading operations, whereas the Proposed Facility is located in an unused area of a property.

Along with the Dish antennas, this pole would have insufficient capacity for Verizon Wireless's additional equipment: nine panel antennas, a microwave antenna, and 12 radios. To locate below the new Dish antennas on this pole would require two antenna centerlines for Verizon Wireless, estimated at 42 feet and 37 feet.

Verizon Wireless RF engineers determined that antennas located at a 42-foot antenna centerline at this location cannot serve the Significant Gap. As shown in the following

coverage map, in-building coverage would be lacking in the northern area of the gap in business and residential areas around Tulare Street and adjacent streets near the Highway 41 interchange, as well as areas east beyond South 1th Street and south around East Hamilton Avenue. This is not a feasible alternative to the Proposed Facility.

Coverage at Crown R Street Facility
42-foot Antenna Centerline



2. Crown P Street Facility

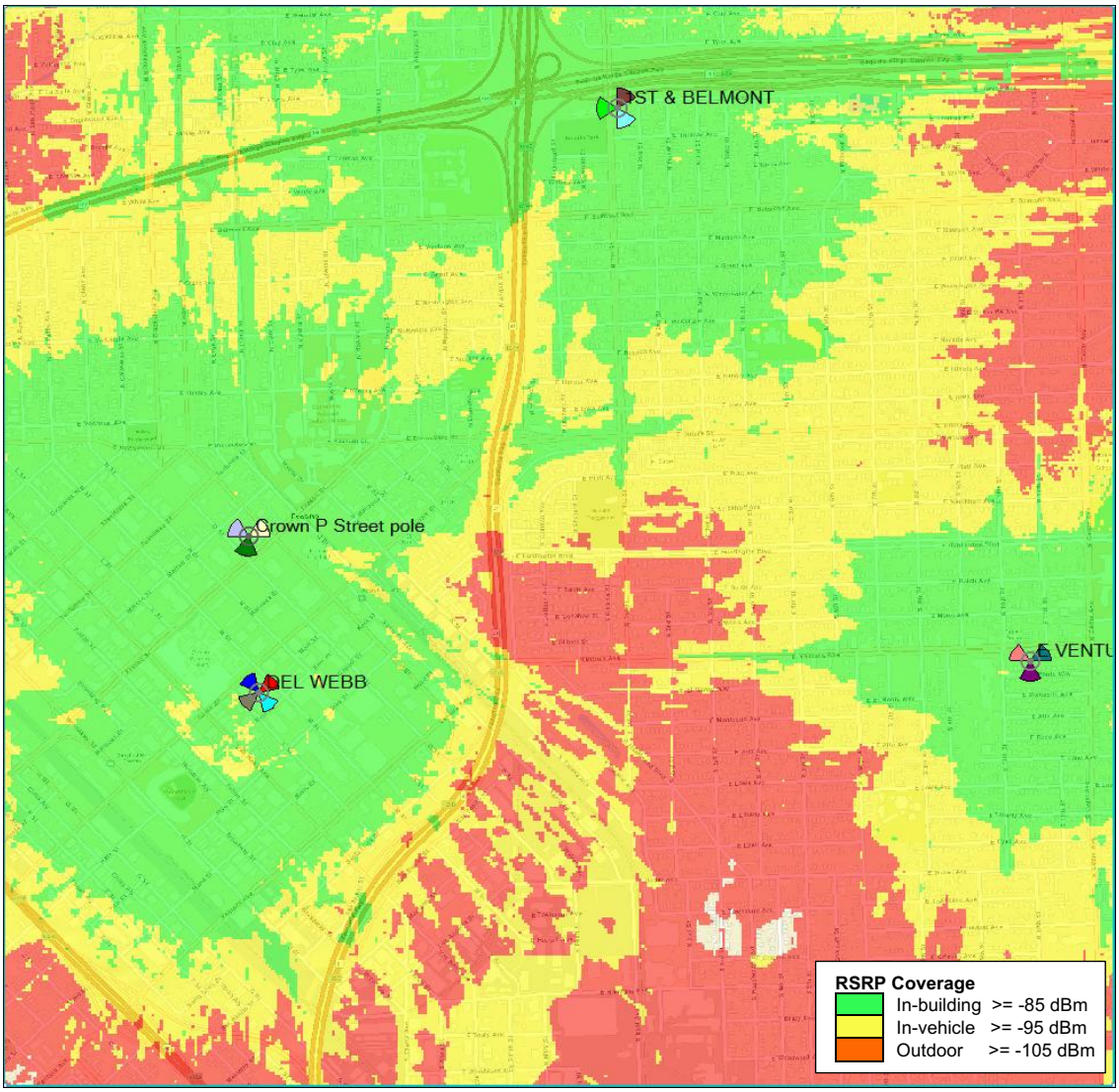
Address: 1221 P Street

Zoning: DTG – Downtown General

Verizon Wireless reviewed this concealed slimline monopole 0.6 miles northwest of the Proposed Facility. Verizon Wireless RF engineers determined that a facility at this location cannot serve the Significant Gap. As shown on the following coverage map, a facility at this location with the same 72-foot antenna centerline as the Proposed Facility could not serve the gap, and the available centerline on this Crown pole would be lower. In-building coverage would be entirely lacking in residential and industrial business areas east of Highway 41, as well as portions of the east Downtown Fresno area due west of the highway. There also would remain gaps in in-vehicle serve east of the Highway 41.

This location is also only 0.35 miles north of Verizon Wireless's existing Del Webb facility, and a facility here would duplicate much of its coverage while introducing a competing new signal that would compromise system performance for users near the two facilities. This would constitute inefficient network design. This is not a feasible alternative to the Proposed Facility.

Coverage at Crown P Street Facility
72-foot Antenna Centerline



3. SBA Facility

Address: 2045 East Belmont Avenue
Zoning: DTG – Downtown General

Verizon Wireless reviewed this slimline monopole facility 1.1 miles northwest of the Proposed Facility. Verizon Wireless RF engineers determined that a facility at this location cannot serve the Significant Gap. This is because it is even farther northwest away from the Proposed Facility than Yokomi Elementary (Alternative 9, pp. 19-20), where engineers determined that a facility with the same 72-foot antenna centerline as the Proposed Facility cannot serve the gap. The available antenna centerline on this SBA pole would be lower. This is not a feasible alternative to the Proposed Facility.

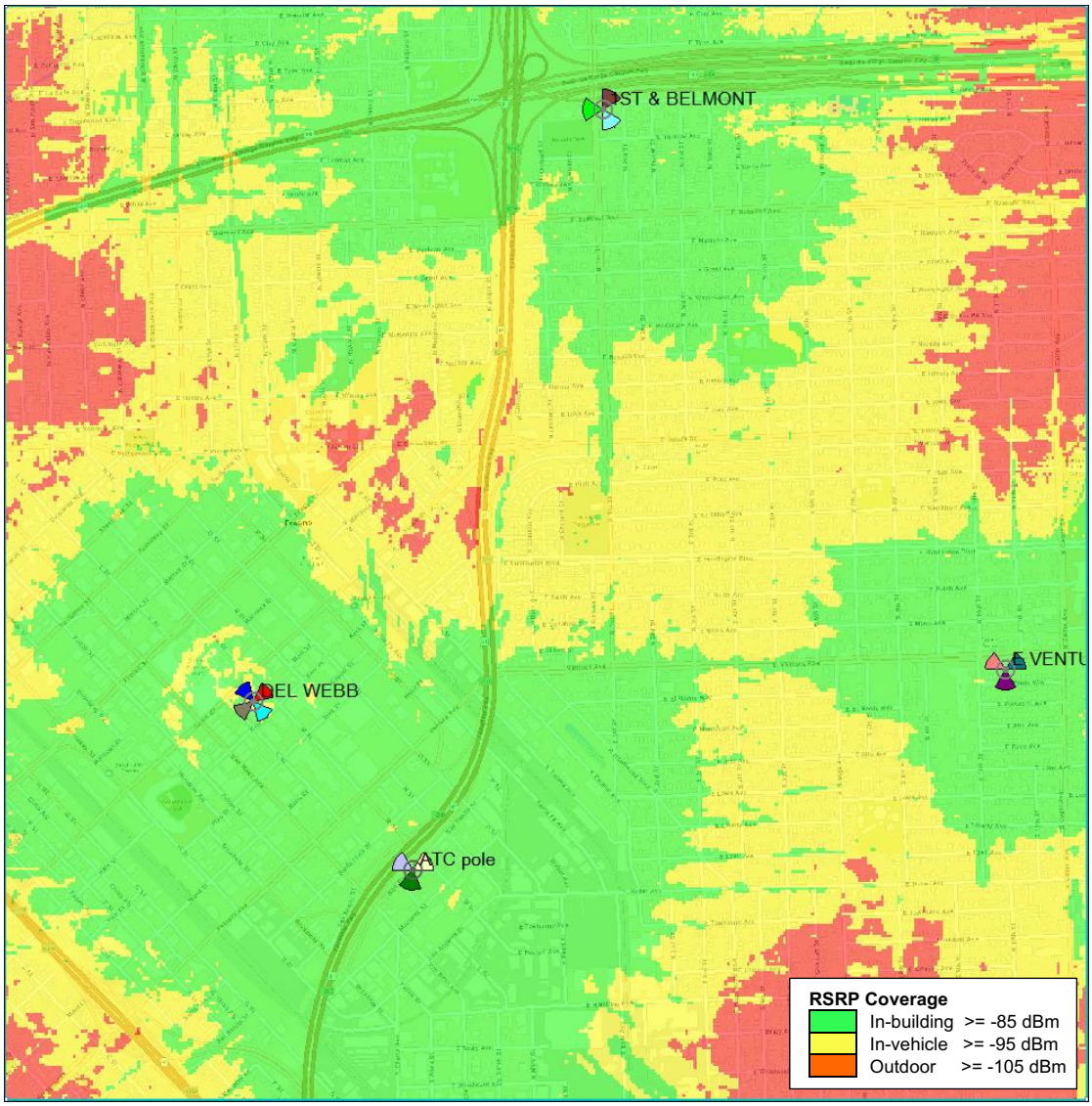
4. ATC Facility

Address: 337 M Street

Zoning: DTN – Downtown Neighborhood

Verizon Wireless reviewed this monopole facility 0.5 miles southwest of the Proposed Facility. The monopole did not support any antennas as of January 2022, the date of the above image. Verizon Wireless RF engineers determined that a facility at this location with the same 72-foot antenna centerline as the Proposed Facility cannot serve the Significant Gap. As shown on the following coverage map, in-building coverage would be almost entirely lacking in residential and business areas north of R Street and Ventura Avenue. This is not a feasible alternative to the Proposed Facility.

Coverage at ATC Facility, M Street
72-foot Antenna Centerline



New Facilities

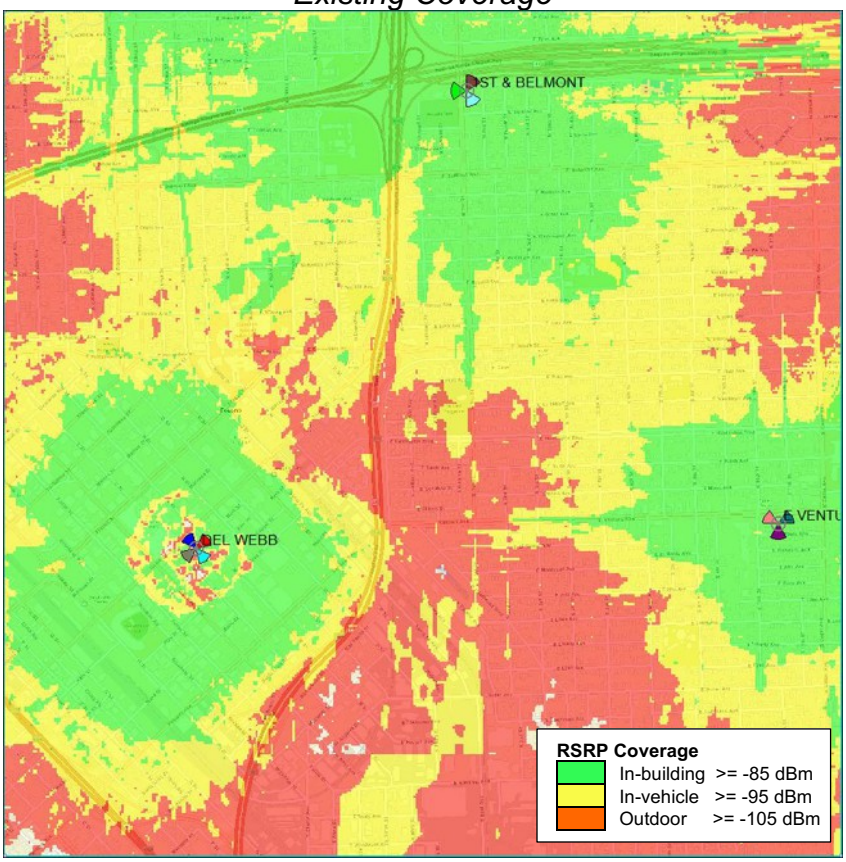
Verizon Wireless considered the following locations for construction of a new facility to serve the Significant Gap.

5. Proposed Facility
Address: 640 R Street
Zoning: DTN – Downtown Neighborhood

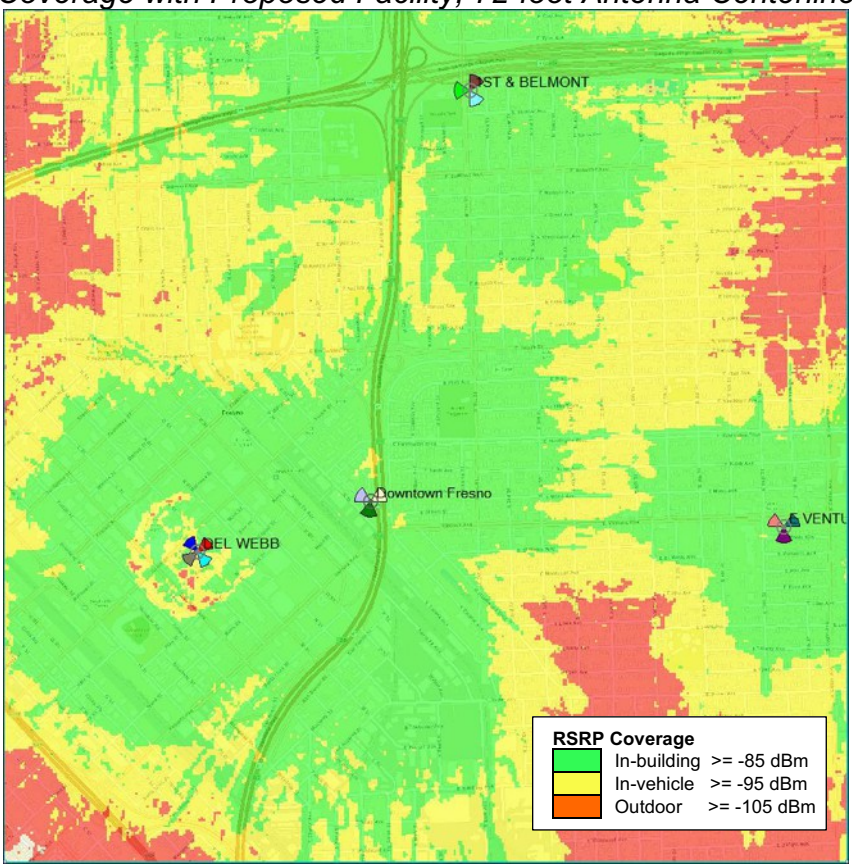
The Proposed Facility has been thoughtfully designed to minimize any impact to the adjacent community. Verizon Wireless proposes to conceal its panel antennas within an 80-foot freestanding facility camouflaged as a pine tree. The antennas will be concealed within faux foliage and branches, and branches will extend beyond and above the antennas, providing a realistic crown. Antennas will be painted or covered with leaf socks for further concealment, as appropriate. The treepole base and associated network equipment will be placed within a 366-square foot concrete block enclosure, along with a standby generator to provide continued service during emergencies. Verizon Wireless will plant toyon and coffee berry bushes on three sides the enclosure to screen it from views along R Street. Utility connections serving the Proposed Facility will be routed underground. The Proposed Facility will be similar in height to numerous established pine trees to the north along the subject property line and Highway 41, ranging up to 83 feet in height.

With panel antennas placed at a 72-foot centerline at this optimal location at the center of the gap area, the Proposed Facility will provide reliable Verizon Wireless service to the Significant Gap. As shown in the following coverage maps, the Proposed Facility will provide new reliable in-building and in-vehicle coverage to the eastern downtown Fresno area and business and residential areas east of Highway 41. The third map demonstrates how lowering the antenna centerline would reduce the coverage footprint, leaving the facility unable to serve the Significant Gap. An analysis comparing existing and proposed service is found in the RF Engineer's Statement. This is Verizon Wireless's preferred location and design for the Proposed Facility.

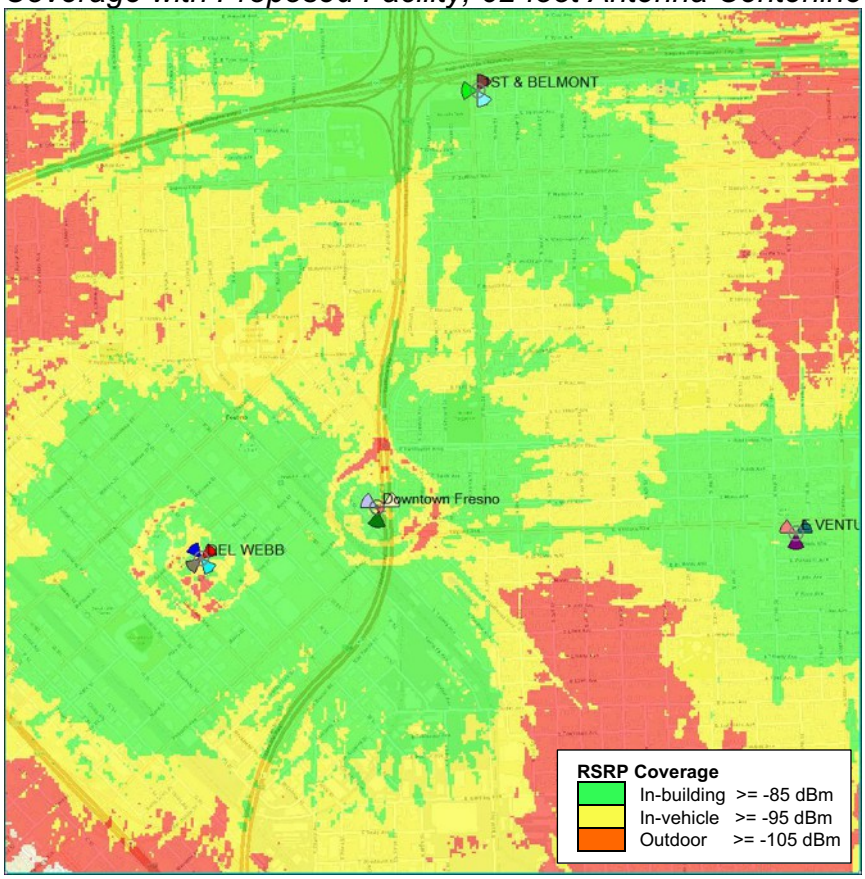
Existing Coverage



Coverage with Proposed Facility, 72-foot Antenna Centerline



Coverage with Proposed Facility, 62-foot Antenna Centerline

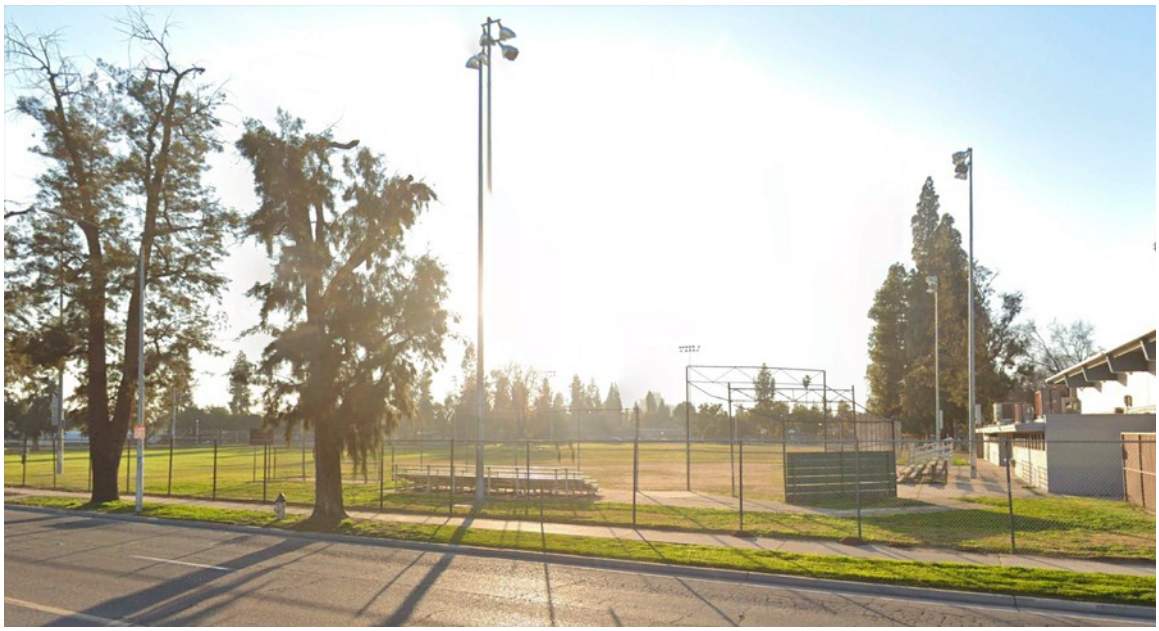


The above map shows the reduced coverage footprint of a shorter facility with the antenna centerline reduced from 72 to 62 feet. In-building coverage would be lacking in the northern area of the gap in business and residential areas around Tulare Street and adjacent streets near the Highway 41 interchange, as well as areas east around South 3rd Street and south around East Hamilton Avenue. Reducing the Proposed Facility's height is not a feasible option.

6. Holmes Playground

Address: 212 South 1st Street

Zoning: PR – Park & Recreation



Verizon Wireless considered this City of Fresno park located 0.3 miles northeast of the Proposed Facility. While the City initially expressed interest in leasing space for a wireless facility, the City ultimately declined because a new revenue-generating lease would require the City to return grant money to the state that was used to develop the park. Lacking a willing landlord, this is not a feasible alternative to the Proposed Facility.

7. Community Medical Center
Address: 2823 Fresno Street
Zoning: PI – Public & Institutional

Verizon Wireless considered this medical center and hospital 0.6 miles northwest of the Proposed Facility. The tallest building is the 10-story building at the south side of the complex. Antennas would likely need to be placed atop the 10-story building, otherwise this building would block signal from antennas on lower buildings to the north. There is a helipad and rooftop equipment on top of this 10-story building that could impede construction and maintenance of a wireless facility.

The Interim Wireless Policy references only one specific design that may be approved, a "mono-tree with collocation abilities" (such as the Proposed Facility). While while the Director may approve other designs on a case-by-case basis, building-mounted facilities are not mentioned.

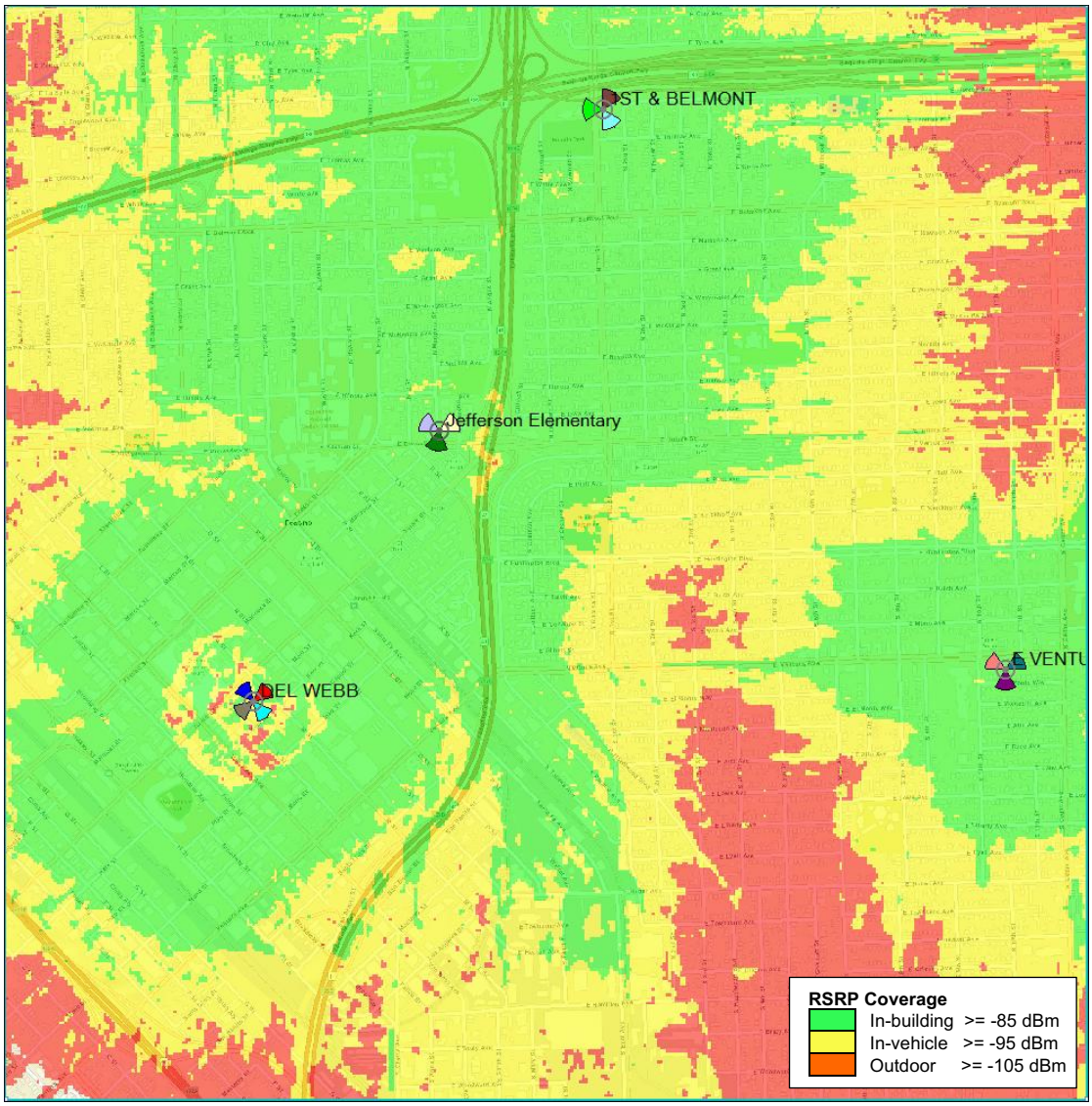
Verizon Wireless has been in continuous contact with medical center staff since 2020, but has been unable to generate interest in a facility at this location. Lacking landlord interest, this is not a feasible alternative to the Proposed Facility.

8. Jefferson Elementary

Address: 202 North Mariposa Street
Zoning: PI – Public & Institutional

Verizon Wireless considered this public school property 0.6 miles north of the Proposed Facility. Verizon Wireless RF engineers determined that a facility at this location with the same 72-foot antenna centerline as the Proposed Facility cannot serve the Significant Gap. As shown on the following coverage map, in-building coverage would be lacking east of South Orchard Street and in much of the business and industrial area south of Ventura Street both west and east of Highway 41. This is not a feasible alternative to the Proposed Facility.

Coverage at Jefferson Elementary School
72-foot Antenna Centerline

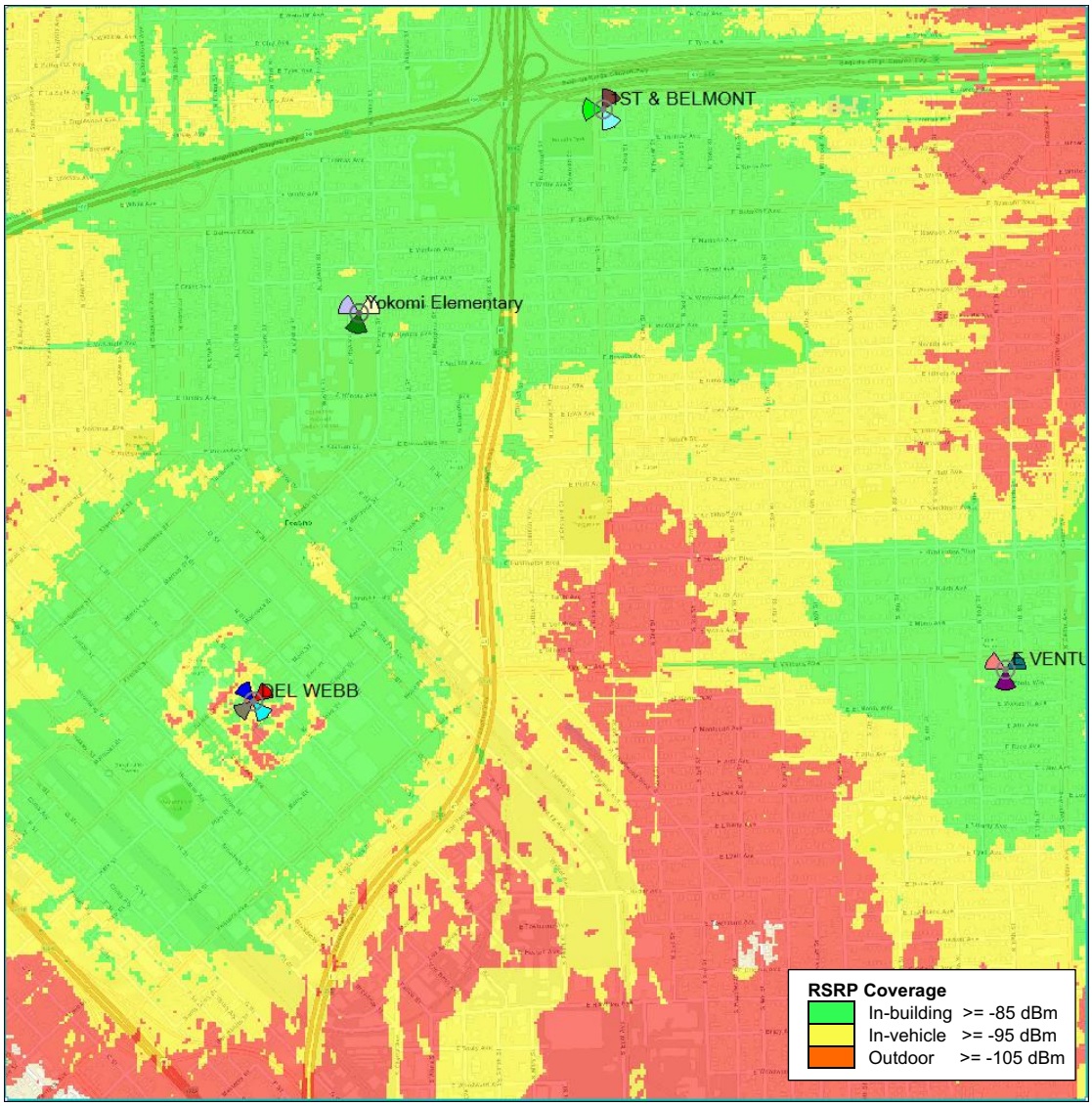


9. Yokomi Elementary

Address: 2323 East McKenzie Avenue
Zoning: PI – Public & Institutional

Verizon Wireless considered this public school property 0.8 miles northwest of the Proposed Facility. Verizon Wireless RF engineers determined that a facility at this location with the same 72-foot antenna centerline as the Proposed Facility cannot serve the Significant Gap. As shown on the following coverage map, in-building coverage would be entirely lacking in residential and industrial business areas east of Highway 41, as well as portions of the eastern Downtown Fresno area due west of the highway. There also would remain gaps in in-vehicle serve east of the Highway 41. This is not a feasible alternative to the Proposed Facility.

Coverage at Yokomi Elementary School
72-foot Antenna Centerline



10. Der Property

Address: 418 North Fresno Street
Zoning: NMX – Neighborhood Mixed Use

Verizon Wireless considered this small property 0.9 miles northwest of the Proposed Facility. Verizon Wireless RF engineers determined that a facility at this location cannot serve the Significant Gap. This is because it is even farther northwest away from the Proposed Facility than Yokomi Elementary (Alternative 9, pp. 19-20), where engineers determined that a facility with the same 72-foot antenna centerline as the Proposed Facility cannot serve the gap. This is not a feasible alternative to the Proposed Facility.

11. Veteran's Memorial Auditorium
Address: 2425 Fresno Street
Zoning: DTG – Downtown General

Verizon Wireless considered this City building 0.6 miles northwest of the Proposed Facility, which is listed on the National Register of Historic Places. The rear of the building is 70 feet tall and supports antennas for City use. Verizon Wireless RF engineers determined that a facility at this location, even with an antenna centerline of 72 feet, cannot serve the Significant Gap. This is because it is even farther northwest away from the Proposed Facility than the Crown P Street facility (Alternative 2, pp. 7-8), where engineers determined that a facility with the same 72-foot centerline as the Proposed Facility cannot serve the gap.

This location is also only 0.3 miles north of Verizon Wireless's existing Del Webb facility, and a facility here would duplicate much of its coverage while introducing a competing new signal that would compromise system performance for users near the two facilities. This would constitute inefficient network design.

This is not a feasible alternative to the Proposed Facility.

Locations Raised by Appellants

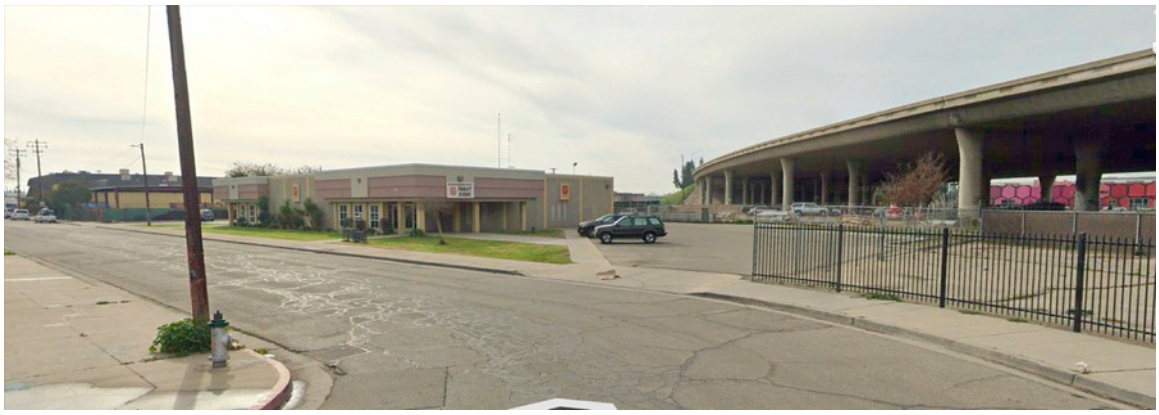
Appellants raised six alternative locations for the Proposed Facility, reviewed as follows.

12. City Promenade Parking Lot near Bitwise Building
Address: 2710 Tulare Street
Zoning: DTG – Downtown General

Appellants raised this City parking lot 300 feet west of the Proposed Facility, specifically mentioning the southern area of the lot near the Bitwise building. However, as shown on the map below (with the City parking lot outlined is blue), the area near the Bitwise building is within a 100-yard radius (orange circle) of the existing Crown R Street facility (Alternative 1). A new facility here would be prohibited per the 2006 Wireless Policy.

The northern portion of this parking lot is partly covered by a canopy, restricting space in this narrow lot that would be occupied by a new wireless equipment compound and required fire truck turnaround. An equipment area and turnaround would require removal of parking spaces used by City employees with metered public spots. This is not a feasible alternative to the Proposed Facility.

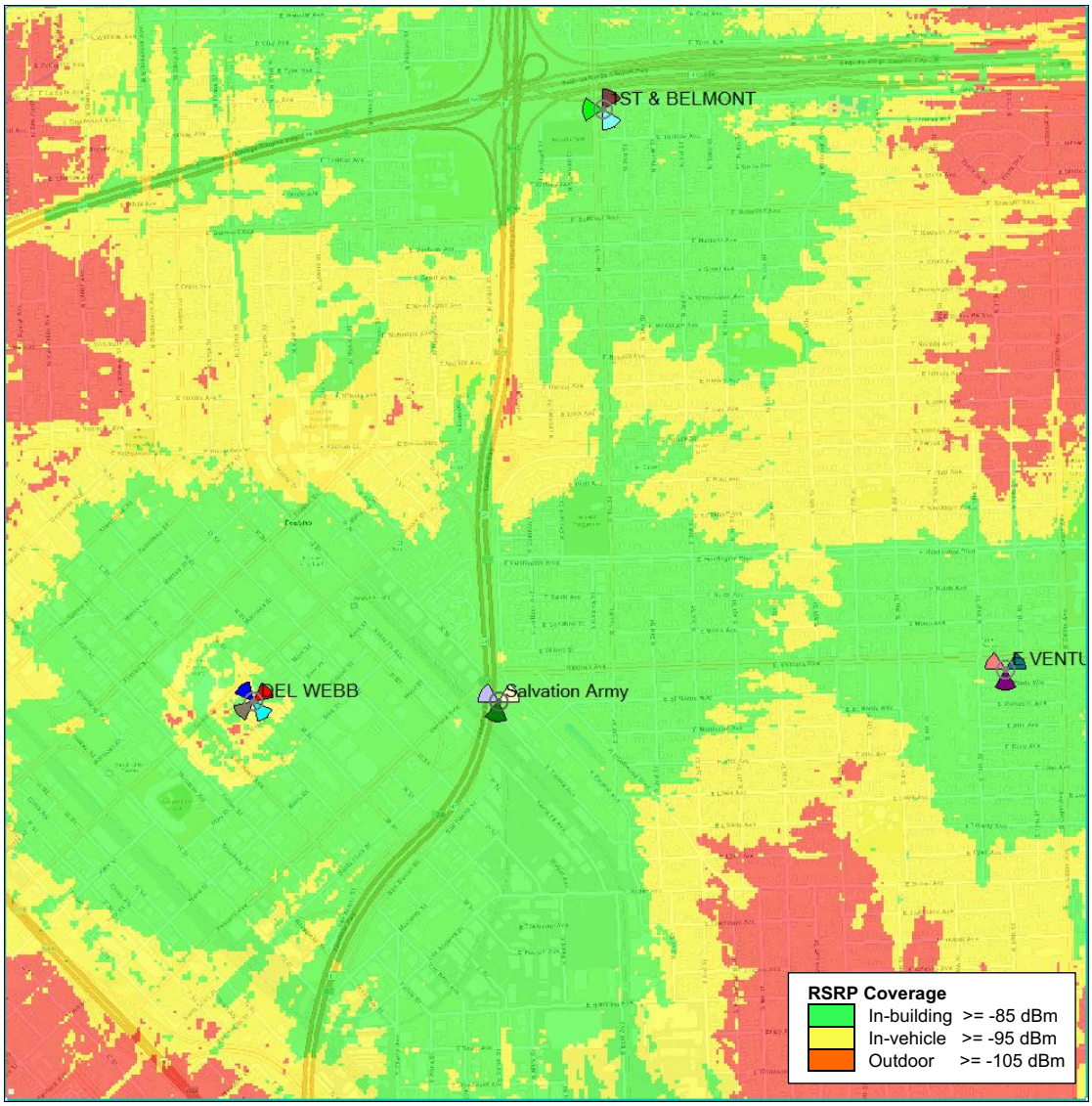
13. Salvation Army
Address: 710 South Parallel Avenue
Zoning: IL – Light Industrial



Appellants raised this the area around the Salvation Army, west of Parallel Avenue and South of Ventura Avenue, 0.1 miles southeast of the Proposed Facility. As apparent in the above photo, there are no tall trees around this property to allow a new monopine facility to blend with its surroundings. In contrast, the Proposed Facility is on a property lined with numerous established pine trees up to 83 feet in height.

Verizon Wireless engineers determined that a facility at this location with the same 72-foot antenna centerline as the Proposed Facility cannot serve the significant gap. As shown on the following coverage map, in-building coverage would be lacking in the northern area of the gap in business and residential areas around Tulare Street and adjacent streets near the Highway 41 interchange, including apartment complexes near North Angus Avenue. This is neither a less intrusive nor feasible alternative to the Proposed Facility.

Coverage at Salvation Army
72-foot Antenna Centerline



14. VAR Inc.

Address: 825 South Topeka Avenue
Zoning: IH – Heavy Industrial

Appellants raised this the area around the VAR Inc. building next to the Salvation Army, 0.15 miles southeast of the Proposed Facility. As apparent in the above photo, there are no tall trees on this property to allow a new monopine facility to blend with its surroundings. In contrast, the Proposed Facility is on a property lined with numerous established pine trees up to 83 feet in height.

Verizon Wireless engineers determined that a facility at this location with the same 72-foot antenna centerline as the Proposed Facility cannot serve the significant gap, as this is slightly farther away to the south than the Salvation Army where engineers determined that a facility cannot serve the gap (Alternative 13, pp. 24-25). This is neither a less intrusive nor feasible alternative to the Proposed Facility.

15. Bitwise Beehive

Address: 2600 Ventura Street
Zoning: DTG – Downtown General

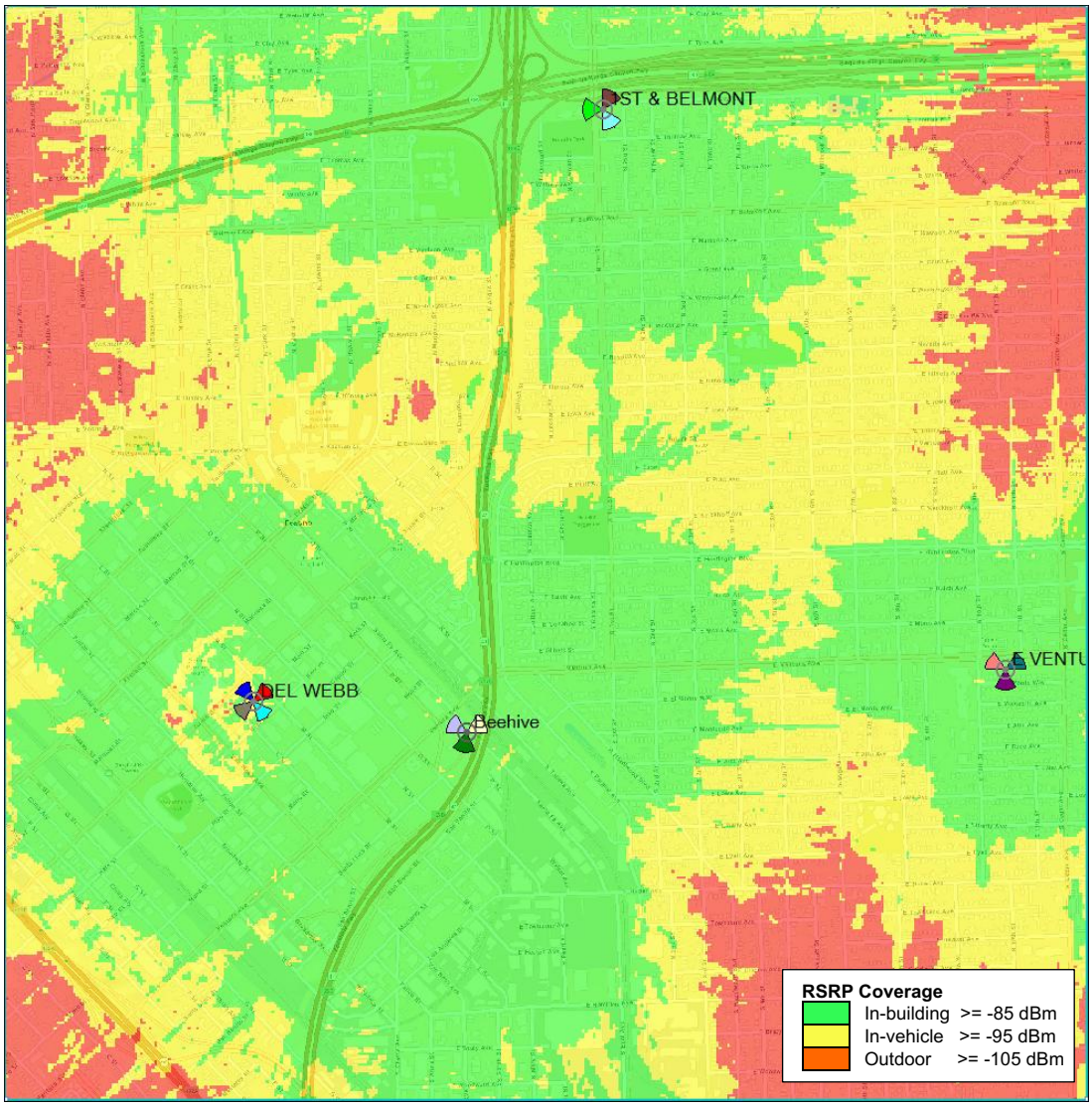
Appellants raised the area next to the Bitwise Hive building, just north of Highway 41, 0.15 miles south of the Proposed Facility. The parking lots due south and west of the building are very narrow, and it is likely infeasible to fit a wireless equipment compound and fire turnaround in these areas.

Verizon Wireless engineers determined that a facility at this location with the same 72-foot antenna centerline as the Proposed Facility cannot serve the significant gap. As shown on the following coverage map, in-building coverage would be lacking in the northern area of the gap in business and residential areas around Tulare Street and adjacent streets near the Highway 41 interchange, including apartment complexes near North Angus Avenue, and the Villa Borgata condominiums north of Huntington Boulevard.

Additionally, moving the facility this far south would compromise its ability to provide dominant signal to relieve demand on the existing Del Webb facility downtown. This is described under Alternative 16 below (pp. 29-31), which is adjacent to the Bitwise Beehive.

This is not a feasible alternative to the Proposed Facility.

Coverage at Bitwise Beehive
72-foot Antenna Centerline



16. Granite Central
Address: 523 P Street
Zoning: DTG – Downtown General

Appellants raised the area next to this granite distributorship near the O Street offramp, 0.2 miles southwest of the Proposed Facility. The area behind the building is very small, and it is likely infeasible for large fire trucks to safely access this area.

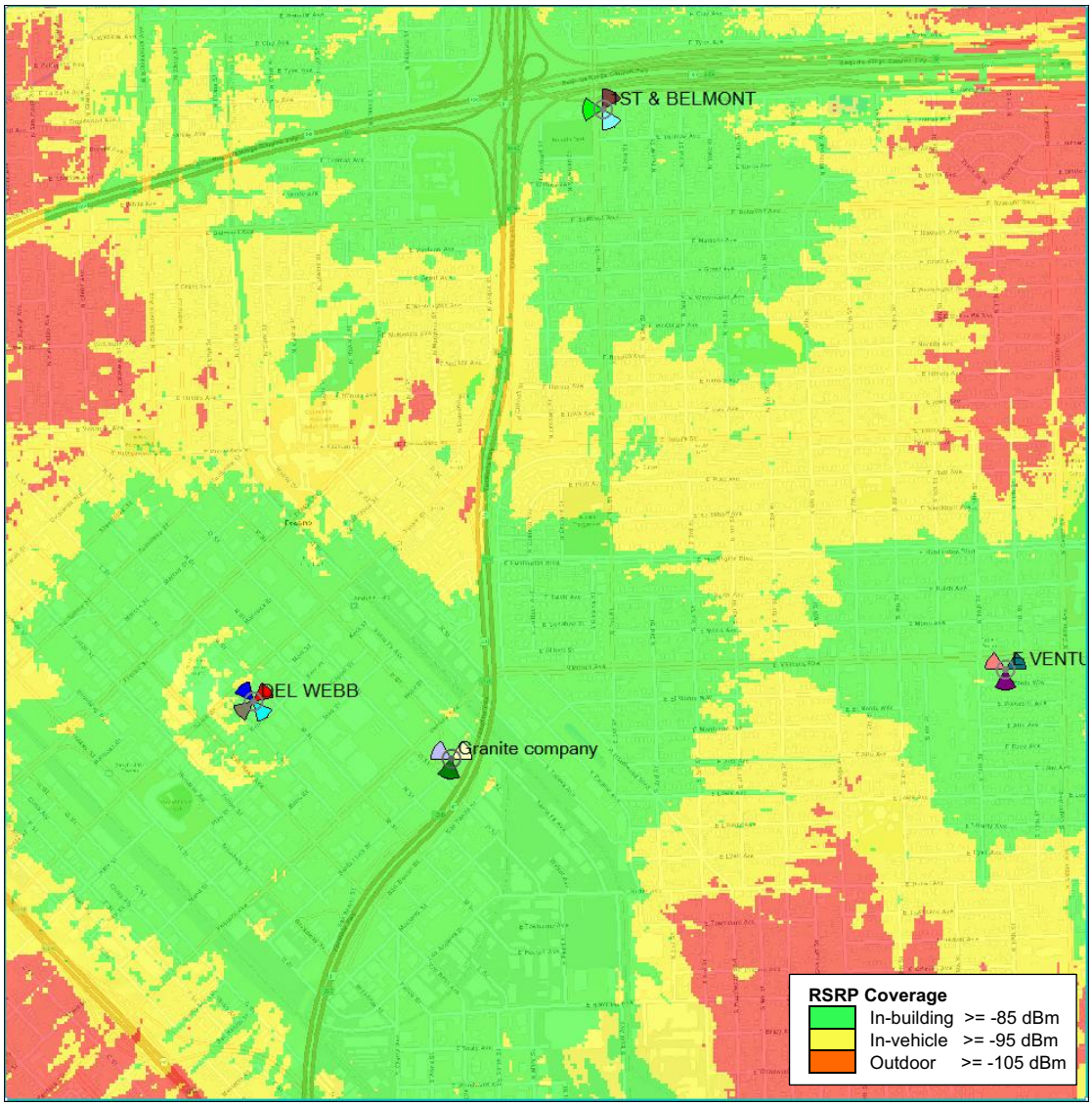
Verizon Wireless engineers determined that a facility at this location with the same 72-foot antenna centerline as the Proposed Facility cannot serve the significant gap. As shown on the following coverage map, in-building coverage would be lacking in the northern area of the gap in business and residential areas around Tulare Street and adjacent streets near the Highway 41 interchange, including apartment complexes near North Angus Avenue, and the Villa Borgata condominiums north of Huntington Boulevard.

Further, Verizon Wireless engineers determined that moving the facility this far south would compromise its ability to relieve the existing Del Webb facility downtown, which is experiencing significantly increasing demand as described in the RF Engineer's Statement.

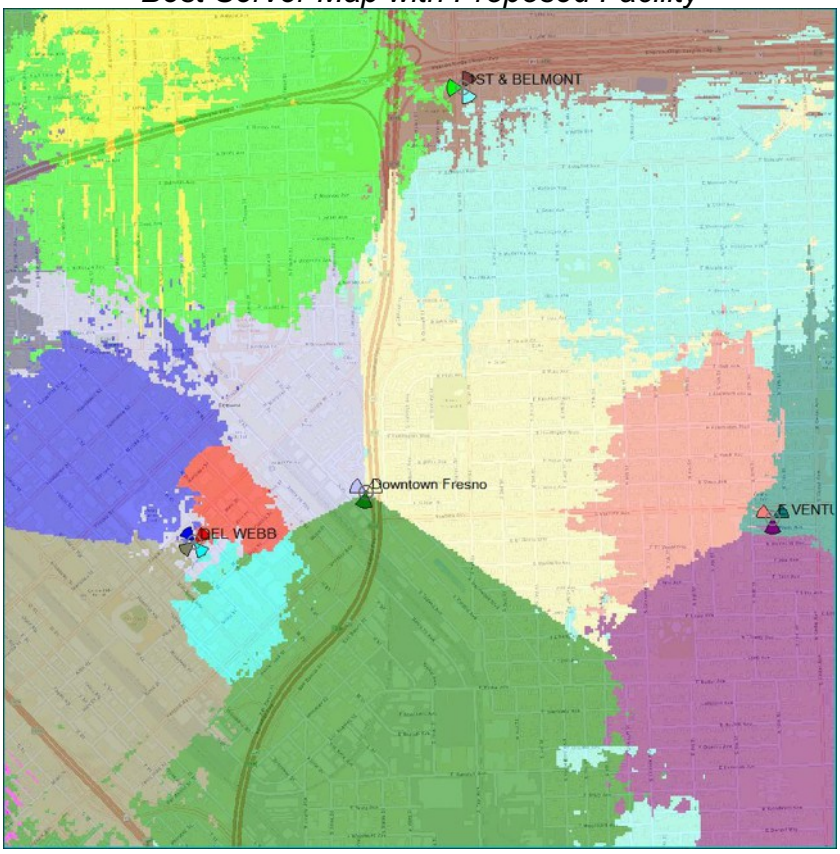
The best server plots below on Page 31 show the dominant signal of the Proposed Facility northwest-facing antenna sector in light purple, and the Del Webb facility northwest- and northeast-facing antenna sectors in dark purple and red. The first best server plot shows how the Proposed Facility can serve a large portion of downtown, including much of the Community Medical Center (currently served by the Del Webb facility). The second best server plot shows that moving the facility south to Granite Central would shift and reduce its dominant signal footprint, leaving the Del Webb facility to continue serving a large area, including the Community Medical Center. This also would lead to interference with the Del Webb facility southeast-facing antenna sector (shown in light blue).

This is not a feasible alternative to the Proposed Facility.

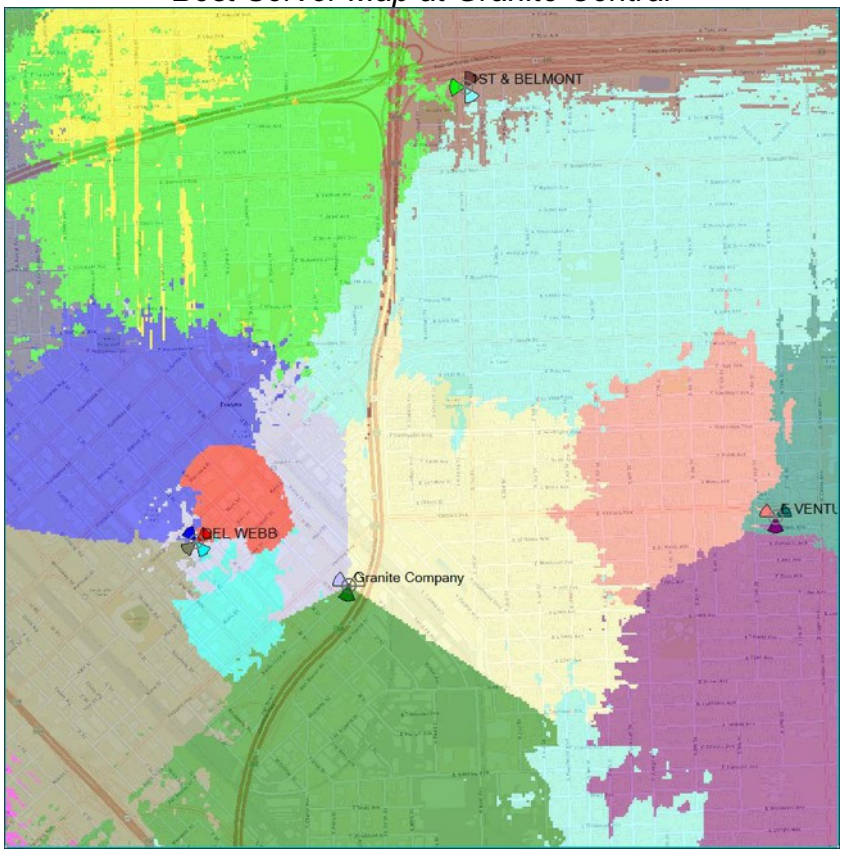
Coverage at Granite Central
72-foot Antenna Centerline



Best Server Map with Proposed Facility



Best Server Map at Granite Central



17. Holt Distributing

Address: 414 P Street
Zoning: DTG – Downtown General

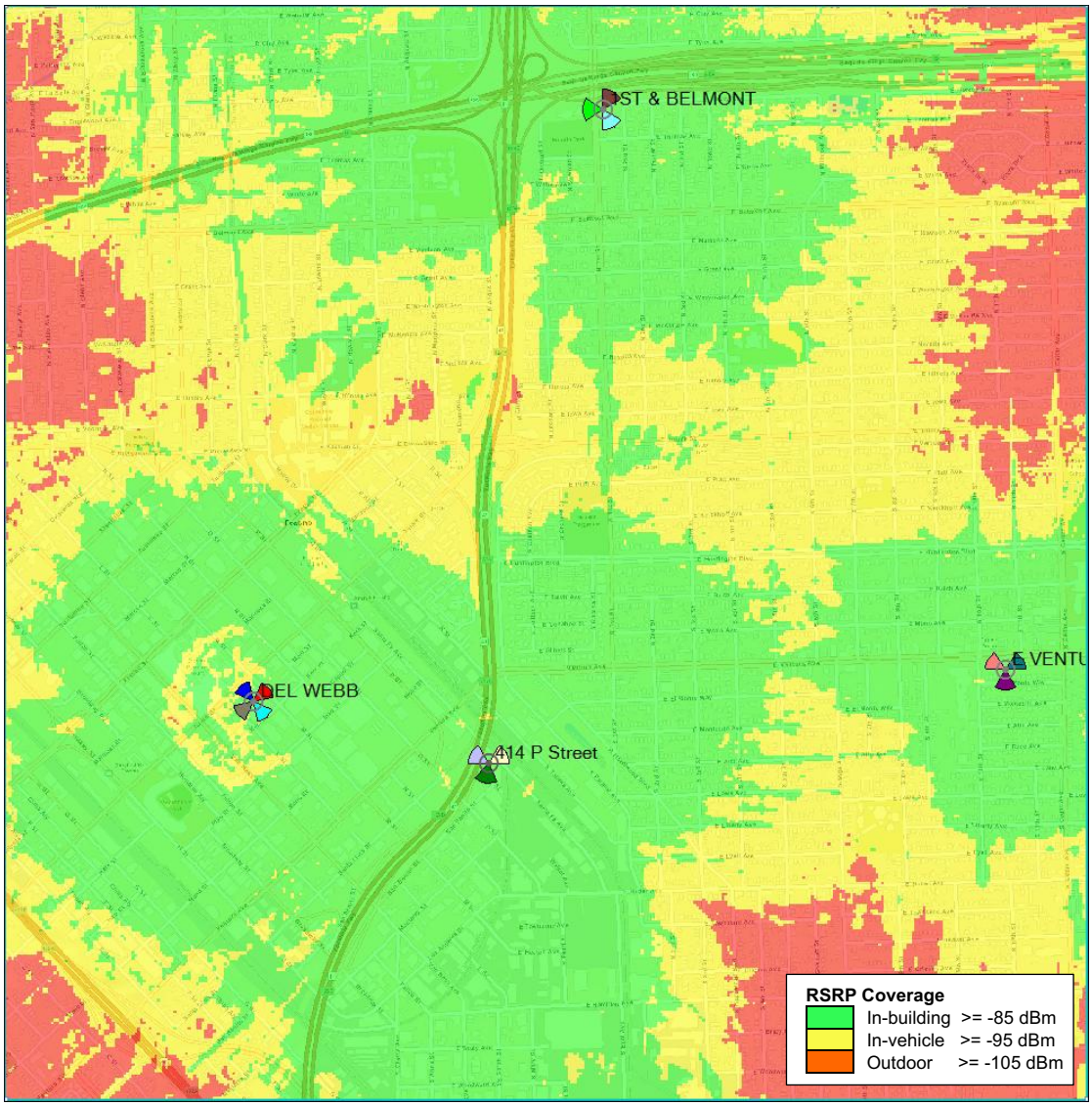
Appellants raised this the area next to this distributorship adjacent to Caltrans right-of-way, 0.25 miles south of the Proposed Facility. The unused space due north of the building is very narrow, and is likely infeasible to fit a wireless equipment compound and fire turnaround in this area.

Verizon Wireless engineers determined that a facility at this location with the same 72-foot antenna centerline as the Proposed Facility cannot serve the significant gap. As shown on the following coverage map, in-building coverage would be lacking in the northern area of the gap in business and residential areas around Tulare Street and adjacent streets near the Highway 41 interchange, including apartment complexes near North Angus Avenue, and the Villa Borgata condominiums north of Huntington Boulevard.

Additionally, moving the facility this far south would compromise its ability to provide dominant signal to relieve demand on the existing Del Webb facility downtown. This is described under Alternative 16 above (pp. 29-31), which is as far south of the Proposed Facility as Holt Distributing.

This is not a feasible alternative to the Proposed Facility.

Coverage at Holt Distributing
72-foot Antenna Centerline



V. Conclusion

Verizon Wireless has reviewed 17 alternative locations to fill the Significant Gap in service in the eastern downtown Fresno area and areas east of Highway 41. Based upon the values expressed in City of Fresno regulations, the Proposed Facility clearly constitutes the least intrusive feasible location for Verizon Wireless's new facility.


3. SBA Facility
10. Der Property
9. Yokomi Elementary
8. Jefferson Elementary
7. Community Medical Center
6. Holmes Playground
2. Crown P Street Facility
11. Veteran's Memorial Auditorium
12. City Parking Lot
5. Proposed Facility
1. Crown R Street Facility
Existing Verizon Del Webb Facility
13. Salvation Army
14. VAR Inc.
15. Beehive
16. Granite Central
17. Holt Distributing
4. ATC Facility
verizon
Downtown Fresno Facility
Alternative Site Locations

verizon
2785 Mitchell Drive
Walnut Creek, CA 94598

April 13, 2022

Exhibit D

To: City of Fresno Planning Commission

From: Walt Kohls, Radio Frequency Design Engineer
Verizon Wireless Network Engineering Department

Subject: Statement in Support of Verizon Wireless's Proposed Facility
640 R Street

Executive Summary

Verizon Wireless has identified a significant gap in service in the eastern downtown Fresno area and areas to the east of Highway 41. This area currently receives inadequate service coverage from the existing Del Webb facility 0.5 miles west of the proposed facility, the 1st & Belmont facility 1.25 miles north, and the East Ventura facility 1.2 miles east. There is no facility nearby to the south that provides appreciable service levels to the gap area.

Due to the distance from existing facilities and a lack of strong dominant signal, there is a gap in reliable service coverage and poor signal quality in the eastern downtown Fresno area and the business and residential areas east of Highway 41. Further, there is increasing demand on the existing Verizon Wireless Del Webb facility that currently serves much of the downtown area.

Within the Fresno area, the vast majority of Verizon Wireless's bandwidth is in the mid-band AWS, PCS, CBRS and C-Band frequencies, with a small amount in the low-band 700 and 850 MHz frequencies. Higher frequencies mean greater data capacity. However, the mid-band frequencies do not travel as far as low-band frequencies, and require sites closer together and closer to the end user to provide reliable LTE service. Verizon Wireless designs its networks to ensure that mid-band frequencies can provide adequate capacity as well as coverage.

I describe below the significant gap in coverage that Verizon Wireless seeks to remedy (the "Significant Gap"). To provide reliable coverage and strong dominant signal, the Significant Gap must be remedied through construction of a new facility camouflaged as a pine tree (the "Proposed Facility").

Verizon Wireless Bandwidth by Frequency Band – Fresno Area

Band	FCC Designation	Frequency Band	Bandwidth
700 MHz	UHF Low Band	700 MHz	10 MHz
850 MHz	Cellular	850 MHz	10 MHz
PCS	Personal Communications Service	1900 MHz	5 MHz
AWS	Advanced Wireless Service	2100 MHz	15 MHz
CBRS	Citizen's Band Radio	3550 MHz	30 MHz
C-Band	C-Band	3700 MHz	60 MHz

Verizon Wireless Services

Verizon Wireless provides personal wireless services, a category of "telecommunications services," which include voice services that allow users of mobile, handheld telephones to place and receive calls to other mobile and landline telephone users through the national, switched telephone network using conventional telephone numbers. This includes the ability of such users to connect to emergency personnel by dialing 911. Verizon Wireless's network also provides information services through its wireless facilities, which will include the Proposed Facility. These information services include wireless broadband, mobile data networks, and connection to the internet, which Verizon Wireless provides using the same infrastructure as its personal wireless services.

Coverage Gap

Verizon Wireless is experiencing a gap in its service coverage in eastern downtown Fresno and the area east of Highway 41. Reliable in-building service is lacking in an area roughly bounded by Santa Fe Avenue to the west, Divisadero Street and East Iowa Avenue to the north, South 4th Street to the east, South 1st Street to the southeast, and East Hamilton Avenue to the south. This area includes offices, business, and residential areas, with numerous condominium and apartment buildings both west and east of Highway 41.

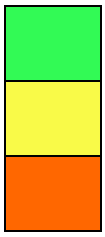
In this area, there is also a lack of reliable in-vehicle service extending along R Street north to East Illinois Avenue, and including areas east to South 3rd Street and south beyond East Hamilton Avenue. This includes a lack of in-vehicle service along stretches of Highway 41 south Tulare Street and extending south of East Hamilton Avenue, with 103,000 average daily vehicle trips. *See* Caltrans Traffic Volumes 2017. Numerous local streets also lack reliable in-vehicle service, including stretches of East Huntington Boulevard and Ventura Avenue east of Highway 41. There is also spotty in-vehicle service in the Community Medical Center complex, where there is significant demand from visitors and emergency personnel outdoors.

To remedy the Significant Gap, Verizon Wireless must place a new facility to ensure reliable network service. The Proposed Facility will provide new, reliable

in-building and in-vehicle coverage where lacking in the areas described above. The Proposed Facility will provide new reliable in-building coverage to an area of 1.46 square miles with a population of 6,190.

A graphic description of the coverage gap is shown on the following coverage map, followed by a map showing the improved coverage to be provided by the Proposed Facility. Maps have been prepared for the AWS frequency band. With similar frequencies, the AWS and PCS bands have similar propagation characteristics, as do C-Band frequencies recently deployed by Verizon Wireless.

Referenced signal receive power (RSRP) is a measurement of signal level in decibel milliwatts (dBm), which is a negative number that decreases due to distance and other factors. The RSRP coverage thresholds are:

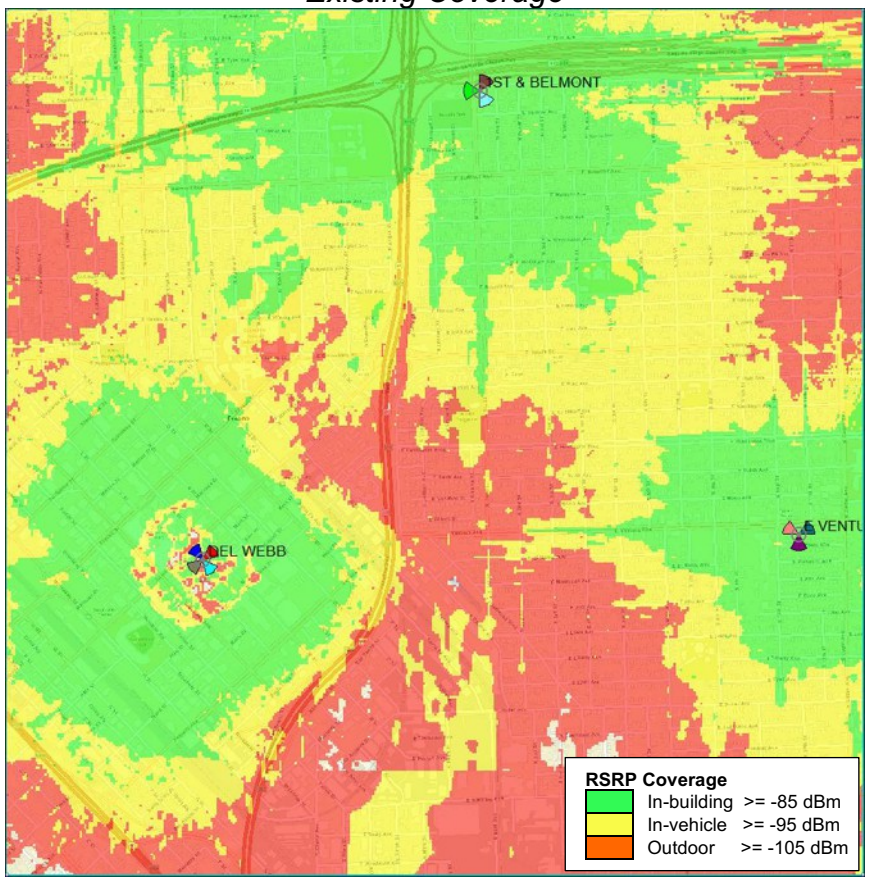


In-building >= -85 dBm. Green depicts good coverage that meets or exceeds thresholds for reliable network coverage in homes and vehicles.

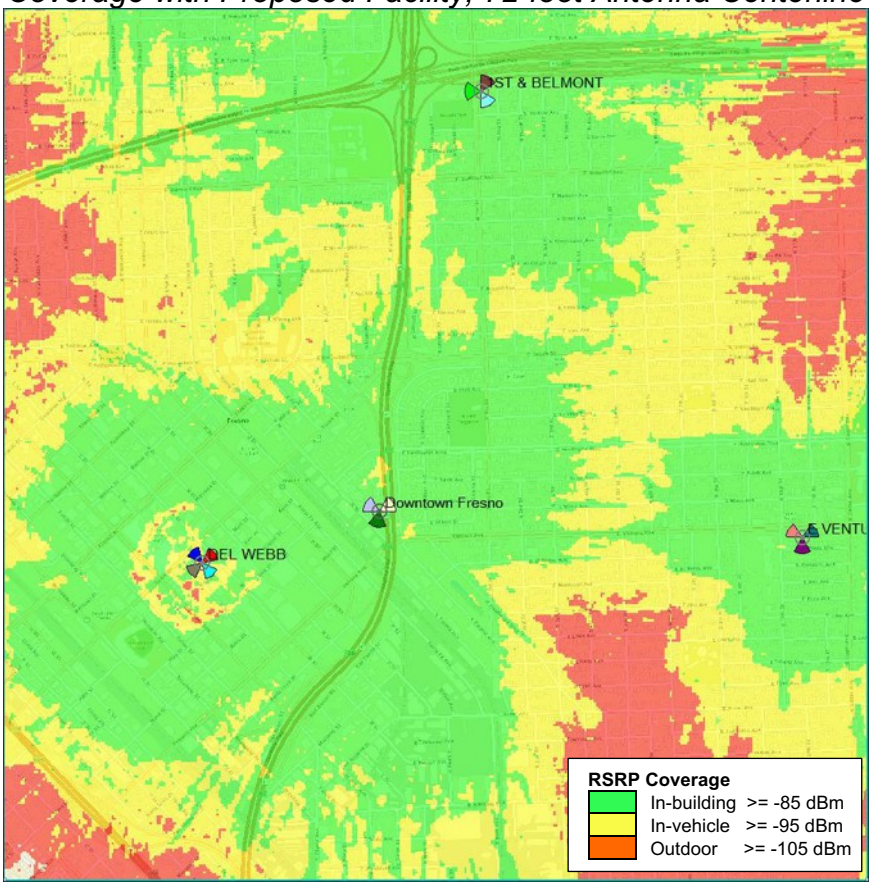
In-vehicle >= -95 dBm. Yellow depicts reliable in-vehicle coverage only.

Outdoor >= -105 dBm. Red depicts reliable outdoor service only.

Existing Coverage



Coverage with Proposed Facility, 72-foot Antenna Centerline



Dominant Signal

As described above, the identified gap area receives inadequate service from distant Verizon Wireless facilities that provide only weak dominant signal to the area. Dominant signal is the strongest signal from a particular Verizon Wireless facility that is received by a user's wireless device in area. This is apparent in the following best server maps, which depict the areas of dominant signal from each facility. Signal from each antenna sector of these facilities is shown in a different color. The maps are prepared using the AWS frequency band.

Although dominant, the signal from distant Verizon Wireless facilities is weak in much of gap area. Notably, the southeast-facing antenna sector of the 1st & Belmont facility 1.25 miles north of the Proposed Facility (shown in the lightest shade of blue) serves a very large area, including residential neighborhoods east and west of Highway 41 as well as the industrial business area east of Highway 41 and south of South Parallel Avenue.

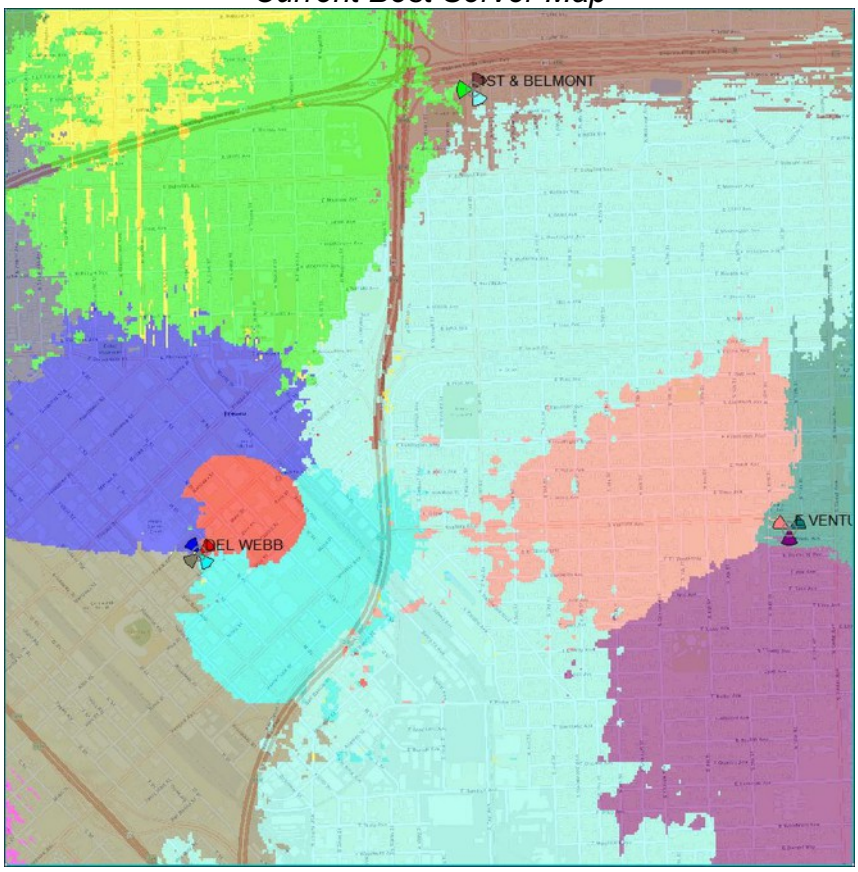
The Del Webb facility atop a 21-story building 0.5 miles west provides dominant signal to the west side of the gap area (shown in purple, red and blue). It has a limited coverage footprint because its elevated antennas are tilted downward to serve the surrounding area within downtown. The Del Webb facility is experiencing significant increased demand, as explained below.

At times of high traffic volume, the coverage area of the surrounding Verizon Wireless facilities shrinks to accommodate an increasing number of mobile devices closer to each facility. As a result, the coverage gap area expands and is exacerbated during times of high customer usage. The contraction of coverage during times of high usage has become more relevant as the demand for wireless services has increased rapidly over time. According to CTIA's *2021 Annual Survey Highlights*, mobile wireless data traffic more than doubled since 2016.

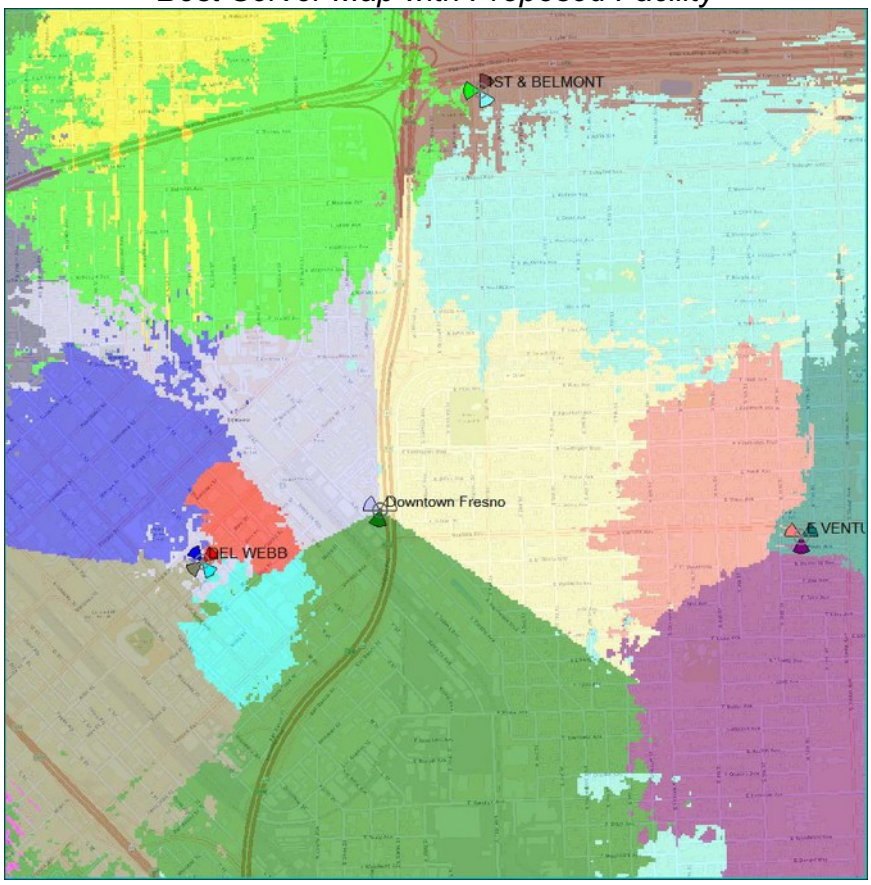
The lack of strong, reliable dominant signal degrades network performance, resulting in unreliable service, particularly during busy hours. This affects the reliability of Verizon Wireless service for residents, workers and visitors as well as for critical communications with emergency service personnel. According to the National Emergency Number Association, there are an estimated 240 million 911 calls each year nationwide, with 80 percent or more from wireless devices in many areas. In emergencies, first responder agencies increasingly rely on dependable Verizon Wireless service.

As shown on the second best server map, the Proposed Facility is strategically located to provide strong, new dominant signal to the gap area (shown in shades of light purple, tan and dark green). This will provide strong dominant signal to residential and industrial business areas currently served by the distant 1st & Belmont facility. It also will relieve the demand on the existing facilities so they can devote their resources to customers closer to their locations. This will improve signal quality and overall network performance in the greater vicinity.

Current Best Server Map



Best Server Map with Proposed Facility

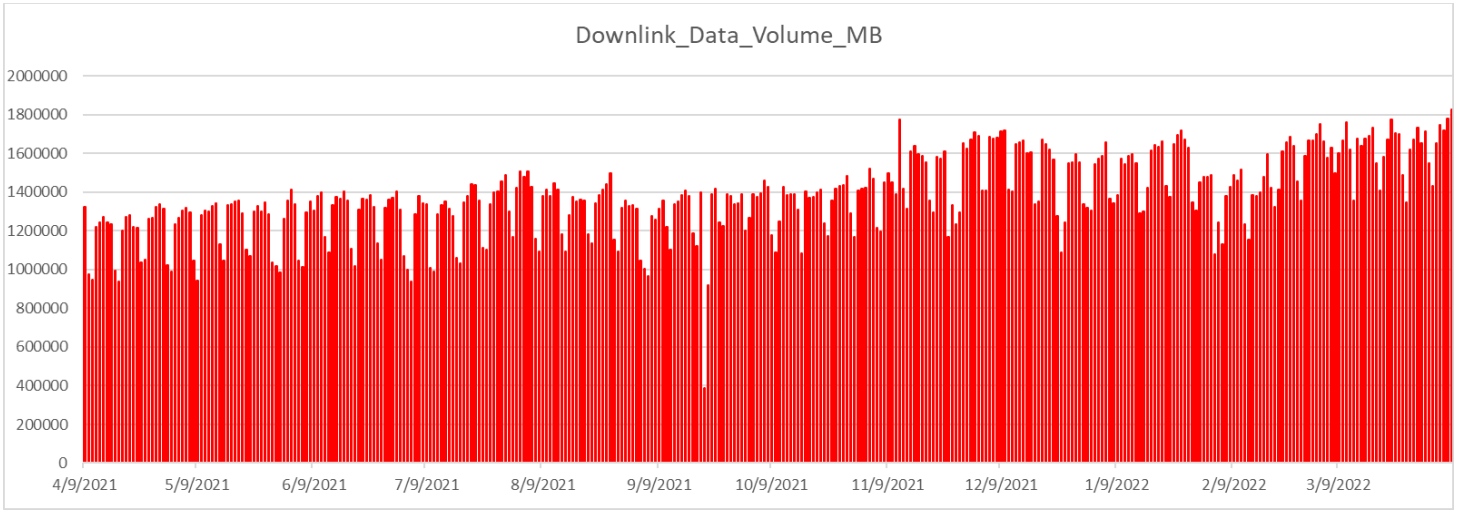


Increasing Demand

There is increasing demand on Verizon Wireless's only existing facility downtown, the Del Webb facility, which serves a portion of the gap area as shown on the best server maps above. The following charts show increased use of the Del Webb facility resources from early April 2021 through March 2022.

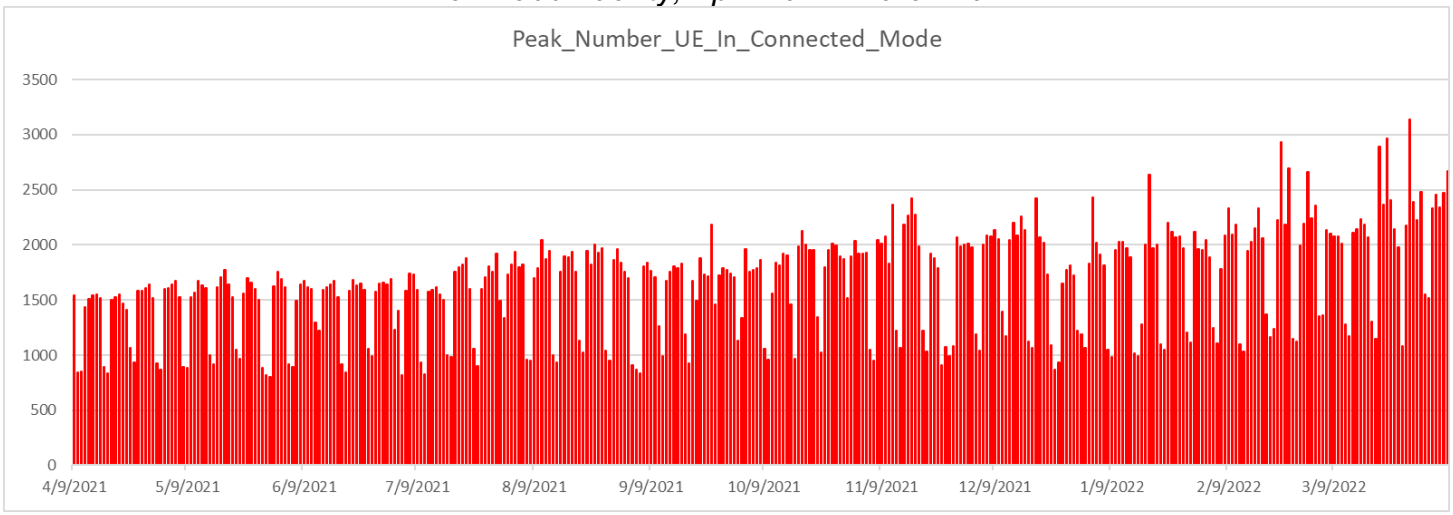
The first chart shows the hourly average downlink data volume for each day, expressed as megabytes (MB) per hour. The chart shows that the average data volume on weekdays increased approximately 40 percent from April 2021 to March 2022.

Hourly Average Downlink Data Volume
Del Webb Facility, April 2021–March 2022



The next chart shows the hourly average number of user devices connected to the Del Webb facility for each day. On weekdays, this increased approximately 60 percent from April 2021 to March 2022.

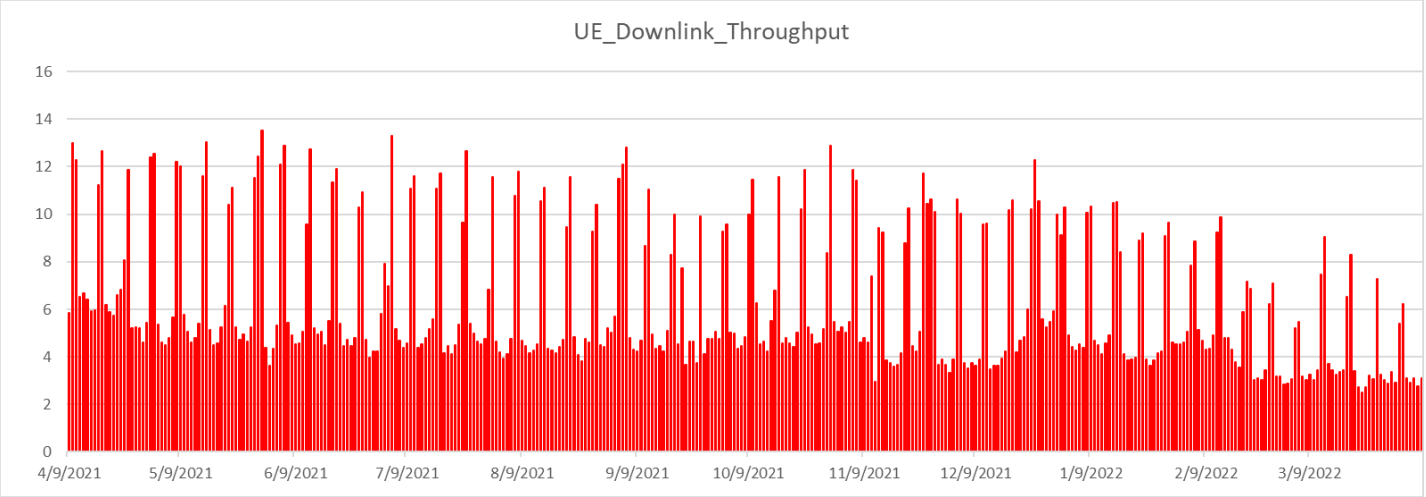
Hourly Average Number of Connected User Devices
Del Webb Facility, April 2021–March 2022



Because of the increase in data demand and the number of user devices connected to the Del Webb facility, the data throughput experienced by users correspondingly decreased.

This is demonstrated in the next chart, which shows the average downlink data throughput experienced by user devices for each day, expressed as megabits per second. On weekdays, the average throughput fell to less than half of previously-available service levels from April 2021 to March 2022.

Average Downlink Data Throughput for User Devices
Del Webb Facility, April 2021–March 2022



As noted, the Proposed Facility will provide strong, new dominant signal to the western portion of the gap area currently served by the Del Webb facility. This will allow the Del Webb facility to concentrate its data resources on users closer to its location and meet the increasing demand from users downtown. Without the Proposed Facility, the data throughput for users connected to the Del Webb Facility will continue to degrade.

Conclusion

As the Verizon Wireless network matures, the network must be supplemented with more sites closer to customers, in large measure due to the increase in usage of the network. New wireless technology requires facilities closer to customers, and this service cannot be provided adequately by the existing facilities that provide only weak signal to the gap area. These network challenges have led to the Significant Gap in Verizon Wireless coverage in the eastern downtown Fresno area and business and residential areas east of Highway 41. Verizon Wireless must deploy the Proposed Facility to provide reliable service to customers, and to avoid further degradation of its network in the area of the Significant Gap.

Please feel free to contact me with any questions or comments regarding Verizon Wireless's proposed facilities.

Respectfully submitted,

Walt Kohls

Walt Kohls
RF Design Engineer
Network Engineering Department
Verizon Wireless

My responsibilities include planning, design and implementation of improvements to network infrastructure to provide reliable service. I have been in the telecommunications industry for 30 years. I have eight years of experience in cellular RF network design. I received my Electronics Engineering degree from the Community College of the Air Force.