Culver CITY
PUBLIC WORKS DEPARTMENT
9770 Culver Boulevard, Culver City, California 90232

Yanni Demitri, PE, TE, MSCE
Public Works Director and
City Engineer

Mate Gaspar, P.E.
Engineering Services Manager

(310) 253-5600

FAX (310) 253-5626

May 3, 2023

Brad Ladua
Sure Site Consulting Group
200 Spectrum Drive, Suite 1700
Irvine, CA 92618
Email: b.ladua@sure-site.com

SUBJECT: Notice of Approval of Application for Crown Castle Small Cell CULVER_010 – 11317 Washington Place, Culver City Permit Number U22-0413

Dear Mr. Ladua:

Upon review of Crown Castle's application and supporting materials, we make the following findings:

1. Per the California Environmental Quality Act ("CEQA"), the State CEQA Guidelines, and the environmental regulations of the City above-referenced wireless facilities qualifiy as categorically exempt from CEQA pursuant to CEQA Guidelines § 15303(e), New Construction or Conversion of Small Structures;
2. The above-referenced wireless facilities are not detrimental to the public health, safety, and welfare;
3. These facilities comply with all applicable provisions of CCMC Section 11.20.065 and with all applicable design and development standards; and
4. These facilities meet applicable requirements and standards of state and federal law.

As a result, we approve Crown Castle's above-referenced application. This approval will be contingent upon Crown Castle complying with all conditions of the related Wireless Utilty Permit, which can be found here: Wireless Conditions .

Sincerely,

Sammy Romo, P.E.
Senior Civil Engineer

Crown Castle

Jurisdiction: CULVER CITY

Project Number:CA002_CLC_CULVER_010 - A

Pole ID: NO TAG

11317 WASHINGTON PL.
CULVER CITY, CA 90066
(34.007113, -118.416993)

PROJECT INFORMATION

JURISDICTION:	CULVER CITY
SITE LATITUDE:	34.007113
SITE LONGITUDE:	-118.416993
POLE OWNER:	CULVER CITY
NEAREST PARCEL:	4214-003-022
NEAREST ADDRESS:	11317 WASHINGTON PL. CULVER CITY, CA 90066
APPLICANT:	CROWN CASTLE 200 SPECTRUM CENTER DR, SUITE 1800 IRVINE, CA 92618

CONTACT INFORMATION

PROJECT MANAGER:
CROWN CASTLE
200 SPECTRUM CENTER DRIVE,
SUITE 1900
IRVINE, CA 92618
CONTACT: CAMERON DANCHO
PHONE: (951) 775-8688

A&E PROJECT MANAGER:
XD INDUSTRIES
25422 TRABUCO ROAD
SUITE 105-627
LAKE FOREST, CA 92630
CONTACT: RAUL SANCHEZ
PHONE: (714) 928-4935

CONSTRUCTION MANAGER:
CROWN CASTLE INTERNATIONAL
200 SPECTRUM CENTER DR, SUITE 1800
IRVINE, CA 92618
CONTACT: PAUL GALANTE
PHONE: (714) 931-4908

PROJECT CONSTRUCTION MANAGER:
CROWN CASTLE INTERNATIONAL:
CONTACT: JOHN HENRY LAMP
PHONE: (949) 910-1989

UTILITY RELATIONS SUPERVISOR:
CONTACT: MICHAEL BONAS
PHONE: (949) 813-6905

CODE COMPLIANCE

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

- 2019 CALIFORNIA BUILDING CODES, VOL. 1 & 2
- 2019 CALIFORNIA RESIDENTIAL CODE
- 2019 CALIFORNIA MECHANICAL CODE
- 2019 CALIFORNIA PLUMBING CODE
- 2019 CALIFORNIA ELECTRICAL CODE
- 2019 CALIFORNIA FIRE CODES

IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL

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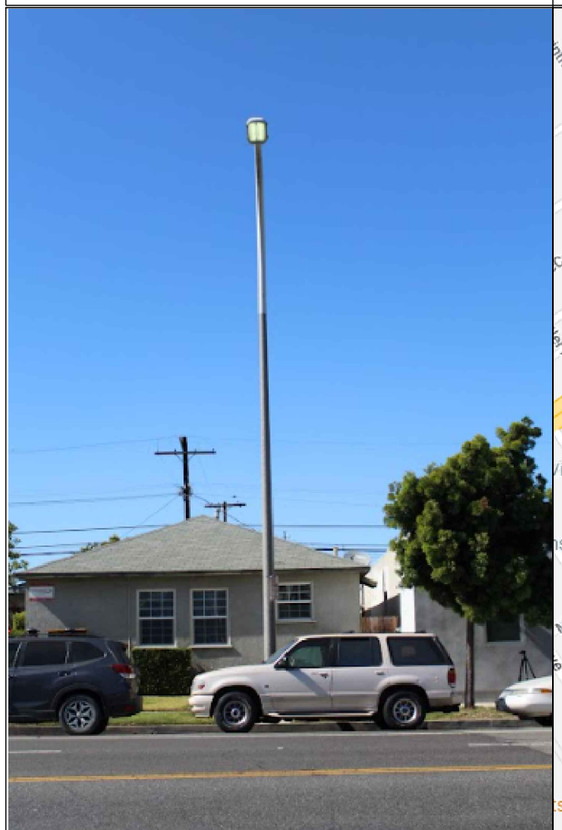
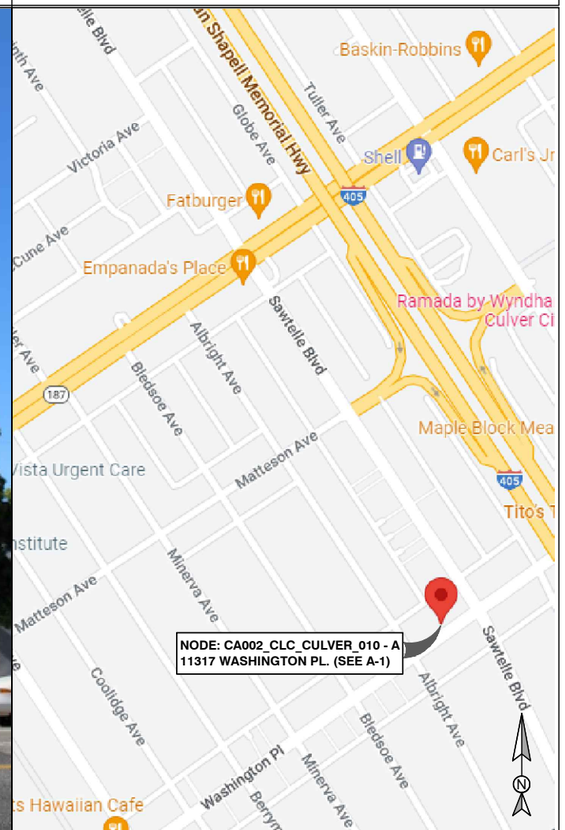
SITE EXHIBIT PHOTO



LOCATION MAP



NOT TO SCALE

DRAWING INDEX

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E-1	ELECTRICAL DETAILS
G-1	GROUNDING DETAILS
TCP-1	TRAFFIC CONTROL SIGNS & NOTES
TCP-2	TRAFFIC CONTROL PLAN

SCOPE OF WORK

INSTALLATION OF POWER SUPPLY FOR CROWN CASTLE TO INSTALL THE FOLLOWING:

EQUIPMENT TO BE INSTALLED:

- REMOVE (1) EXISTING CONCRETE STREET LIGHT POLE WITH FOUNDATION
- INSTALL (1) NEW CONCRETE STREET LIGHT POLE
- INSTALL (1) RADIO SHROUD ASSEMBLY
- INSTALL (3) INTEGRATED 5G ANTENNAS
- INSTALL (2) RF REQUIRED SIGNS
- INSTALL (1) 5/8"Ø X 8' GROUND ROD
- INSTALL (1) 24X36 HANDHOLE
- INSTALL (1) WTR BOX PLACED INSIDE PROPOSED HANDHOLE

REV:	DATE/BY:	REVISION DESCRIPTION
B	08/09/2022 JT	90% CDs FOR REVIEW
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1	01/17/2023 MG	PLAN CHECK COMMNETS

ENGINEER/CONSULTANT:

XD Industries
25422 TRABUCO ROAD
SUITE 105-627
LAKE FOREST CA 92630

CLIENT:

OWNER/DEVELOPER:
CROWN CASTLE
200 SPECTRUM CENTER DRIVE, 19TH FLOOR
IRVINE, CA 92618

STAMP:

REGISTERED PROFESSIONAL ENGINEER
CHRIS S. LEE
No.61054
EXP: 12/31/2024
CIVIL
STATE OF CALIFORNIA

ENGINEER: **CHRIS S. LEE**
PHONE: **949.468.9702** EMAIL: **CLEE@XD-IND.COM**
ANY REVISIONS TO PLANS DURING CONSTRUCTION MUST BE APPROVED BY ENGINEER OF RECORD

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CA002_CLC_CULVER_010 - A

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SHEET TITLE:
CROWN CASTLE
SMALL CELL SITE
CA002_CLC_CULVER_010 - A

DRAWING INFO

DRAWN BY:	CHECKED BY:
MG	RS

SHEET NUMBER:
T-1

01/17/2023 / CA002_CLC_CULVER_010 - A / U22-0413

EROSION AND SEDIMENT CONTROL NOTES:

TEMPORARY EROSION/SEDIMENT CONTROL, PRIOR TO COMPLETION OF FINAL IMPROVEMENTS, SHALL BE PERFORMED BY THE CONTRACTOR OR QUALIFIED PERSON AS INDICATED BELOW:

1. ALL REQUIREMENTS OF THE CITY OF LOS ANGELES "LAND DEVELOPMENT MANUAL, STORM WATER STANDARDS" MUST BE INCORPORATED INTO THE DESIGN AND CONSTRUCTION OF THE PROPOSED PUBLIC IMPROVEMENTS CONSISTENT WITH THE EROSION CONTROL PLAN AND/OR WATER POLLUTION CONTROL PLAN (WPCP), IF APPLICABLE.
2. FOR STORM DRAIN INLETS, PROVIDE A GRAVEL BAG SILT BASIN IMMEDIATELY UPSTREAM OF INLET AS INDICATED ON DETAILS.
3. THE CONTRACTOR OF QUALIFIED PERSON SHALL BE RESPONSIBLE FOR CLEANUP OF SILT AND MUD ON ADJACENT STREET(S) AND STORM DRAIN SYSTEM DUE TO CONSTRUCTION ACTIVITY.
4. THE CONTRACTOR SHALL REMOVE SILT AND DEBRIS AFTER EACH MAJOR RAINFALL.
5. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIMES DURING THE RAIN SEASON.
6. THE CONTRACTOR SHALL RESTORE ALL EROSION. SEDIMENT CONTROL DEVICES TO WORKING ORDER TO THE SATISFACTION OF THE CITY ENGINEER OR RESIDENT ENGINEER AFTER EACH RUN-OFF PRODUCING RAINFALL.
7. THE CONTRACTOR SHALL INSTALL ADDITIONAL EROSION/SEDIMENT CONTROL MEASURES AS MAY BE REQUIRED BY THE RESIDENT ENGINEER DUE TO UNFORESEEN CIRCUMSTANCES, WHICH MAY ARISE.
8. ALL EROSION/SEDIMENT CONTROL MEASURES PROVIDED PER THE APPROVED IMPROVEMENT PLAN SHALL BE INCORPORATED HERON. ALL EROSION/SEDIMENT CONTROL FOR INTERIM CONDITIONS SHALL BE DONE TO THE SATISFACTION OF THE RESIDENT ENGINEER.
9. ALL REMOVABLE PROTECTIVE DEVICES SHOWN SHALL BE IN PLACE AT THE END OF EACH WORKING DAY WHEN RAIN IS IMMINENT.
10. THE CONTRACTOR WILL ARRANGE FOR WEEKLY MEETINGS DURING OCTOBER 1ST TO APRIL 30TH FOR PROJECT TEAM (GENERAL CONTRACTOR, QUALIFIED PERSON, EROSION CONTROL SUBCONTRACTOR IF ANY, ENGINEER OF WORK, OWNER/DEVELOPER AND THE RESIDENT ENGINEER)
11. TO EVALUATE THE ADEQUACY OF THE EROSION/SEDIMENT CONTROL MEASURES AND OTHER RELATED CONSTRUCTION ACTIVITIES.

NOTES:

1. CONTRACTOR TO POTHOLE ALL UTILITY CROSSINGS.
2. CONTRACTOR TO PLACE SANDBAGS AROUND ANY/ALL STORM DRAIN INLETS TO PREVENT CONTAMINATED WATER.
3. SPOILS PILE WILL BE COVERED AND CONTAINED AND STREET WILL BE SWEPT AND CLEANED AS NEEDED.
4. CONTRACTOR REPAIR DAMAGED PUBLIC IMPROVEMENTS TO THE SATISFACTION OF THE CITY ENGINEER.
5. CURB & GUTTER TO BE PROTECTED IN PLACE, SIDEWALK TO BE REPLACED TO THE SATISFACTION OF THE CITY ENGINEER.
6. THE CONTRACTION SHALL RESTORE THE ROADWAY BACK TO ITS ORIGINAL CONDITION SATISFACTORY TO THE CITY ENGINEER INCLUDING, BUT NOT LIMITED TO PAVING, STRIPING, BIKE LANES, PAVEMENT LEGENDS, SIGNS, AND TRAFFIC LOOP DETECTORS.
7. SIDEWALK SHALL BE RESTORED/REPLACED PER CITY OF LOS ANGELES STANDARD DRAWINGS.
8. PEDESTRIAN RAMP WILL NOT BE DISTURBED. PEDESTRIAN RAMP WILL NOT BE DISTURBED.
9. TO OBTAIN A PERMIT TO ACCESS WATER FROM A FIRE HYDRANT, CONTACT THE CITY YARD AT (714) 741-5395.

ROW GROUND CONSTRUCTION NOTES:

1. GROUND CONSTRUCTION TO REMOVE/CLEAN ALL DEBRIS, NAILS, STAPLES, OR NON-USED VERTICALS OFF THE POLE.
2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH MUNICIPAL, COUNTY, STATE, FEDERAL, GO95 AND GO128 STANDARDS AND REGULATIONS.
3. CALL USA 48 HOURS PRIOR TO EXCAVATING AT (800) 277-2600 OR 811.
4. ALL LANDSCAPING TO BE RESTORED TO ORIGINAL CONDITION OR BETTER.
5. ALL EQUIPMENT TO BE BONDED.
6. METERING CABINET REQUIRES 36" CLEARANCE AT DOOR OPENING
7. CAULK CABINET BASE AT PAD.

NORMAL LOCATION OF UNDERGROUND UTILITIES NOTES:

1. LOCATION AND DEPTH OF EXISTING AND PROPOSED UTILITIES MUST BE PROVIDED BY THE SURVEYOR AND SHOWN ON ANY PLANS SUBMITTED TO THE DEPARTMENT OF PUBLIC WORKS FOR APPROVAL.
2. CHANGES MAY BE PERMITTED BY THE DEPARTMENT OF PUBLIC WORKS IN CASES OF CONFLICT FACILITIES.
3. CONFLICTS BETWEEN UTILITY OF COMPANIES FACILITIES, EXISTING AND PROPOSED, MUST BE MUTUALLY RESOLVED BY THE UTILITIES COMPANIES.
4. FOR COMMERCIAL SIDEWALKS, THE FIRE HYDRANT SHALL BE PLACED WITHIN THE SIDEWALK 1'-6" BEHIND FACE OF CURB.
5. MAXIMUM 2" DIAMETER GAS MAINS MAY BE PLACED IN JOINT UTILITIES TRENCH SUBJECT TO APPROVAL OF CITY ENGINEER (IN TRACTS).

CALIFORNIA STATE CODE COMPLIANCE:

ALL WORK AND MATERIALS SHALL BE PREFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUCTED TO PERMIT WORK NOT CONFORMING TO THESE CODES:

- 2019 CALIFORNIA ADMINISTRATIVE CODE (INCLUDING TITLES 24 & 25) 2019
- 2019 CALIFORNIA BUILDING CODES WHICH ADOPTS THE 2014 UBC, 2015 UMC, 2015 UPC AND THE 2014 NEC.
- BUILDING OFFICIALS & CODE ADMINISTRATORS (BOCA)
- 2019 CALIFORNIA MECHANICAL CODE
- ANSI/EIA-222-F LIFE SAFETY CODE NFPA-101
- 2019 CALIFORNIA PLUMBING CODE
- 2019 CALIFORNIA ELECTRICAL CODE
- CURRENT LOCAL BUILDING CODE
- CURRENT CITY/COUNTY ORDINANCES

ACCESSIBILITY REQUIREMENTS: FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS REQUIREMENTS DO NOT APPLY IN ACCORDANCE WITH THE 2019 CALIFORNIA BUILDING CODE.

FCC NOTE:
THIS WIRELESS COMMUNICATION FACILITY COMPLIES WITH FEDERAL STANDARDS FOR RADIO FREQUENCY IN ACCORDANCE WITH THE TELECOMMUNICATION ACT OF 1996 AND SUBSEQUENT AMENDMENTS AND ANY OTHER REQUIREMENTS IMPOSED BY STATE OR FEDERAL REGULATORY AGENCIES.

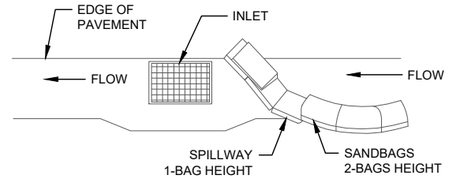
GENERAL NOTES:

1. ALL WORK SHALL CONFORM TO THE LATEST BOARD OF PUBLIC WORKS OF THE CITY OF SANTA ANA ADOPTED EDITION AND SUPPLEMENTS TO THE "GREENBOOK STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" AS MODIFIED BY THE CORRESPONDING ISSUE OF THE BROWN BOOK, THE LATEST EDITION OF THE BUREAU OF STREET LIGHTING SPECIAL SPECIFICATIONS", AND THE SPECIAL PROVISIONS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING THE CONDITION OF ALL EXISTING EQUIPMENT TO BE REUSED, MODIFIED OR RETURNED TO THE BUREAU OF STREET LIGHTING YARD.

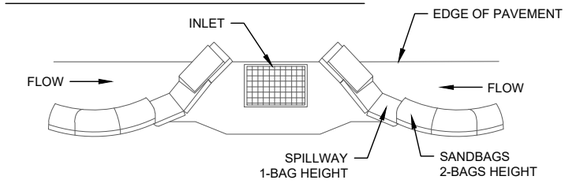
MULTIPLE CIRCUIT NOTES:

WIRE CONNECTORS - WIRE CONNECTORS SHALL BEAR THE UNDERWRITERS LABORATORY SEAL OF APPROVAL. THE INSTALLATION PROCEDURE, INCLUDING CONNECTOR SIZE AND CRIMPING TOOLS SHALL CONFORM TO THE MANUFACTURER'S RECOMMENDATIONS. GENERALLY, BULKY OR ODD SHAPE CONNECTORS, NARROW CONNECTORS WHICH MAY DAMAGE THE WIRE, OR TWIST-ON AND SPLIT-BOLT TYPE CONNECTORS WILL NOT BE ALLOWED. THE MECHANICAL PERFORMANCE OF THE CONNECTOR SHALL BE SUCH THAT NO FREE PLAY CAN BE OBSERVED AFTER THE CONNECTOR IS SUBJECTED TO A COMBINATION OF HAND-APPLIED TWISTS AND PULLS. A SOLID CROSS SECTION WILL ALSO BE REQUIRED WHEN THE CONNECTOR IS SUBJECT TO SAW CUTTING. ALL WIRE CONNECTORS SHALL HAVE A NOMINAL CROSS SECTION ARE EQUIVALENT TO THE AREA OF THE LARGEST CONDUCTOR CONNECTED.

STORM GRAIN INLET PROTECTION



TYPICAL PROTECTION FOR INLET WITH SINGLE FLOW DIRECTION



TYPICAL PROTECTION FOR INLET WITH OPPOSING FLOW DIRECTION

NOTES:

- INTENDED FOR SHORT-TERM USE.
- USE TO INHIBIT NON-STORM WATER FLOW.
- ALLOW FOR PROPER MAINTENANCE AND CLEANUP.
- BAGS MUST BE REMOVED AFTER ADJACENT OPERATION IS COMPLETED.
- NOT APPLICABLE IN AREAS WITH HIGH SILTS AND CLAYS WITHOUT FILTER FABRIC.

RETURN EXISTING STREET LIGHT TO CITY MAINTENANCE YARD

NOTES:

1. THE EXISTING STREETLIGHT SHALL BE FORWARDED TO THE CITY'S MAINTENANCE DIVISION
2. THE PUBLIC SIDEWALK SHALL ALWAYS BE OPEN AND ACCESSIBLE TO PEDESTRIANS
3. FULL CONCRETE PANELS SHALL BE REMOVED AND REPLACED AND SHALL BE TO THE SATISFACTION OF THE PUBLIC WORKS INSPECTOR.

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1	01/17/2023 MG	PLAN CHECK COMMNETS

ENGINEER/CONSULTANT:

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25422 TRABUCO ROAD
SUITE 105-627
LAKE FOREST CA 92630

CLIENT:

OWNER/DEVELOPER:

CROWN CASTLE
200 SPECTRUM CENTER DRIVE, 19TH FLOOR
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REGISTERED PROFESSIONAL ENGINEER
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EXP: 12/31/2024
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ENGINEER: **CHRIS S. LEE**
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GENERAL NOTES

DRAWING INFO

DRAWN BY:	CHECKED BY:
MG	RS

SHEET NUMBER:
T-2

01/17/2023 / CA002_CLC_CULVER_010 - A / U22-0413

GENERAL REQUIREMENT - UNDERGROUND UTILITY AVOIDANCE

- GENERAL CONTRACTOR IS RESPONSIBLE TO FOLLOW ALL FEDERAL & STATE STATUES AND REGULATIONS; INDUSTRY BEST PRACTICES; BUILDING AND FIRE CODES; GENERAL CONTRACTOR LICENSES; AND LOCAL LAWS, REGULATIONS & ORDINANCES IN THE EVENT A CONFLICT EXISTS BETWEEN THESE REGULATIONS AND THIS DOCUMENT, THE REGULATIONS SHALL CONTROL THE GENERAL CONTRACTORS ACTIONS.
- AT MINIMUM WHEN NOT IN CONFLICT WITH FEDERAL STATE AND LOCAL STATUES THE GENERAL CONTRACTOR SHALL FOLLOW THE "COMMON GROUND ALLIANCE (CGA) BEST PRACTICES VERSION 17.0 MANUAL OR LATEST - THE DEFINITIVE GUIDE FOR UNDERGROUND SAFETY & DAMAGE PREVENTION" RECOMMENDATIONS.
- GENERAL CONTRACTOR SHALL PREPARE AND EMERGENCY RESPONSE PLAN, INCLUDING APPROPRIATE CONTACT INFORMATION ONE CALL TICKET DETAILS AND IMMEDIATE CONTACTING DETAILS IN EVENT OF UNDERGROUND UTILITY DAMAGE IS AVAILABLE AT THE INSTALLATION SITE.
- GENERAL CONTRACTOR SHALL TAKE NECESSARY ,MEASURES TO ENSURE ALL ELECTRICAL STRIKE SYSTEMS ARE IN PLACE IF APPLICABLE AND HAS BRIEFED THE INSTALLATION CREW ON THE GENERAL CONTRACTORS ELECTRICAL AND GAS LINE STRIKE PROCEDURES EACH DAY PRIOR TO WORK COMMENCING.
- GENERAL CONTRACTOR SHALL WHITE LINE THE PROPOSED CONSTRUCTION ROUTE PRIOR TO CONTACTING THE UTILITY ONE-CALL SYSTEM.
- GENERAL CONTRACTOR SHALL IDENTIFY PRIOR TO WORK COMMENCEMENT A COMPETENT PERSON ON THE WORK CREW WHO IS CAPABLE OF IDENTIFYING HAZARDS AND HAS THE AUTHORIZATION TO TAKE PROMPT CORRECTIVE MEASURES, INCLUDING STOP WORKS AUTHORITY TO ELIMINATE THEM AND SHALL BE ON SITE AT ALL TIMES.
- GENERAL CONTRACTOR SHALL CONTACT THE ONE-CALL FACILITY FOR EXISTING UTILITY LOCATES AS REQUIRED BY LAW AND PRESERVE ALL MARKS UNTIL THE PROJECT IS COMPLETED AND REFRESH THE ONE CALL IF REQUIRED BY STATE OR JURISDICTIONAL REQUIREMENTS.
- FOR PROJECTS WITH HIGH PRIORITY UTILITIES OR ANY UNUSUAL OR COMPLEX CONSTRUCTION THE GENERAL CONTRACTOR SHALL ARRANGE FOR A PRE-EXCAVATION MEETING WITH THE AFFECTED UTILITIES AND OR THEIR DESIGNATED LOCATING COMPANY TO DISCUSS THE PROJECT. HIGH PRIORITY UTILITIES SHALL INCLUDE BUT NOT LIMITED TO HIGH PRESSURE GAS LINES, HIGH VOLTAGE ELECTRIC LINE MAJOR PIPELINES MAJOR WATER LINES AND HIGH CAPACITY FIBER OPTIC LINES.
- THE GENERAL CONTRACTOR SHALL ENSURE ANY UTILITIES IDENTIFIED FOR LOCATING WHICH ARE NOT MARKED ON THE GROUND HAVE PROVIDED POSITIVE CONFIRMATION NO CONFLICT EXISTS. IF THERE IS A LACK OF POSITIVE CONFIRMATION, THE GENERAL CONTRACTOR MUST RE-CALL THE ONE-CALL CENTER OR RELEVANT UTILITY DIRECTLY FOR CONFIRMATION.
- IN THE EVENT A UTILITY CANNOT BE LOCATED, WHERE POSITIVE CONFIRMATION IS NOT RECEIVED, OR WHERE THERE IS A LIKELIHOOD OF UNDOCUMENTED UTILITIES, SUCH AS PRIVATE INFRASTRUCTURE, THE GENERAL CONTRACTOR SHALL TAKE THE STEP OF SYSTEMATICALLY UTILIZING A GROUND PENETRATING RADAR (GPR) SYSTEM OR SIMILAR ADVANCED LOCATING TECHNOLOGY WITHIN THE TOLERANCE ZONE TO IDENTIFY AND DOCUMENT ANY UTILITIES WITHIN THE CONSTRUCTION ZONE. ANY UTILITY LOCATED USING GPR SHALL BE PROPERLY LOCATED AND EXPOSED AS OUTLINED WITHIN THIS STANDARD PRIOR TO DIGGING.
- THE GENERAL CONTRACTOR SHALL INSPECT THE AREA PRIOR TO INSTALLATION FOR ANY UNDERGROUND UTILITY INFRASTRUCTURE WHICH MAY HAVE BEEN MISSED BY SURVEYING THE CONSTRUCTION AREA AND SURROUNDING ENVIRONMENT FOR CLEANOUTS, SUNKEN AREAS, RISERS, OUTBUILDING, LIGHT POLES, METERS, UTILITY BOXES, PEDESTALS, MANHOLE COVERS, MARKERS. ETC. PARTICULAR ATTENTION SHOULD BE MADE TO IDENTIFY SERVICE FEEDS FROM BUILDINGS AND HOMES ARE MARKED.
- THE GENERAL CONTRACTOR SHALL CONTACT ANY UTILITY WHERE LOCATES ARE IN QUESTION AND/OR UNVERIFIED. NO ASSUMPTIONS SHOULD BE MADE ON LOCATION OR DEPTH OF EXISTING UTILITIES.
- THE GENERAL CONTRACTOR, AT MINIMUM, SHALL TAKE AND STORE A PHOTO SERIES TO BE SUBMITTED WITH THE CLOSE OUT PACKAGE OF ALL EXCAVATION AREAS ONCE LOCATES ARE COMPLETE AND PRIOR TO EXCAVATION.
- GENERAL CONTRACTOR SHALL MEET ALL FEDERAL, STATE AND LOCAL REGULATIONS REGARDING WORKER SAFETY AND TRAINING WHEN WORKING AROUND UNDERGROUND FACILITIES.
- GENERAL CONTRACTOR SHALL VISUALLY EXPOSE (POT-HOLE) ALL EXISTING UTILITIES CROSSING THE TOLERANCE ZONE AND SHALL POSITIVELY IDENTIFY THEIR LOCATION AND DEPTH USING APPROPRIATE TECHNIQUES WITHIN THE TOLERANCE ZONE.
- GENERAL CONTRACTOR SHALL VISUALLY EXPOSE (POT-HOLE) ALL EXISTING UTILITIES RUNNING PARALLEL WITH THE PROPOSED PATH AT THE APPROPRIATE INTERVALS WITHIN THE TOLERANCE ZONE AND APPROPRIATE BUFFER ZONE. UNLESS MORE STRINGENT REGULATIONS EXIST, THE GENERAL CONTRACTOR SHALL EXPOSE (POT-HOLE) AT MINIMUM ANY PARALLEL UTILITY WITHIN 3' OF THE TOLERANCE ZONE EVERY 25' AND ANY PARALLEL UTILITY BETWEEN 3' TO 5' OF THE TOLERANCE ZONE EVERY 100'.
- THE TOLERANCE ZONE SHALL BE A MINIMUM OF 30' BEYOND EACH SIDE OF THE INSTALLED PIPE, OR GREATER IF CODE REQUIRES.
- GENERAL CONTRACTOR SHALL USE A DRILL HEAD TRACKING DEVICE WHEN BORING AND TRACK THE DRILL HEAD AT A MINIMUM OF EVERY 5' OR AS REQUIRED BY CODE A LOG SHALL BE CREATED RECORDING THE LOCATION AND DEPTH AND SUBMITTED WITH THE GENERAL CONTRACTOR AS-BUILT PACKAGE.
- GENERAL CONTRACTOR SHALL ENSURE THESE REQUIREMENTS ARE ENFORCED WITH ALL SUB-CONTRACTORS RETAINED BY THE GENERAL CONTRACTOR.

Subsurface Utility Engineering (SUE) Utility Rating Impact Form

Project Name: __ CA002_CLC_CULVER_010-A **Date of Analysis:**__ 8/17/2022

Project Location: _ WASHINGTON PL & SAWTELLE BLVD. LOS ANGELES, CA **Analysis Done By:** _ XD INDUSTRIES

Project Scope: __ PROPOSED 120' OF TRENCH AND R&R 100 SQ. FT OF SIDEWALK TO PLACE POWER & FIBER CONDUITS, __ INSTALL A 24"X36" VAULT WITHIN THE PUBLIC RIGHT-OF -WAY

ID	Complexity Factor		Low Complexity		Medium Complexity		High Complexity
1	Utility Density	☐	Dense	☑	Denser	☐	Densest
2	Utility Type	☐	Less-Critical	☑	Sub-Critical	☐	Critical
3	Utility Pattern - Parallel Utilities	☐	Simple	☐	Medium	☑	Complex
4	Utility Pattern - Perpendicular Utilities	☐	Simple	☐	Medium	☑	Complex
5	Utility Material	☐	Rigid	☑	Flexible	☐	Brittle
6	Utility Access	☐	Easy	☑	Medium	☐	Restricted
7	Utility Age	☐	New	☐	Medium	☑	Old
8	Utility Record Quality	☑	Good	☐	Fair	☐	Poor
9	Excavation Depth (inches)	☑	Low	☐	Medium	☐	High
10	Excavation Method	☑	Method A	☐	Method B	☐	Method C
	Total	3		4		3	

SUE Impact Score 2

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CIVIL
STATE OF CALIFORNIA

ENGINEER: **CHRIS S. LEE**
PHONE: **949.468.9702** EMAIL: **CLEE@XD-IND.COM**

ANY REVISIONS TO PLANS DURING CONSTRUCTION MUST BE APPROVED BY ENGINEER OF RECORD

811 Know what's below. Call before you dig.
TOLL FREE: 1-800-227-2600 OR www.digalert.org

SITE INFO:

SITE NAME:
CA002_CLC_CULVER_010 - A

SITE ADDRESS:
11317 WASHINGTON PL.
CULVER CITY, CA 90066
LAT: 34.007113
LONG: -118.416993

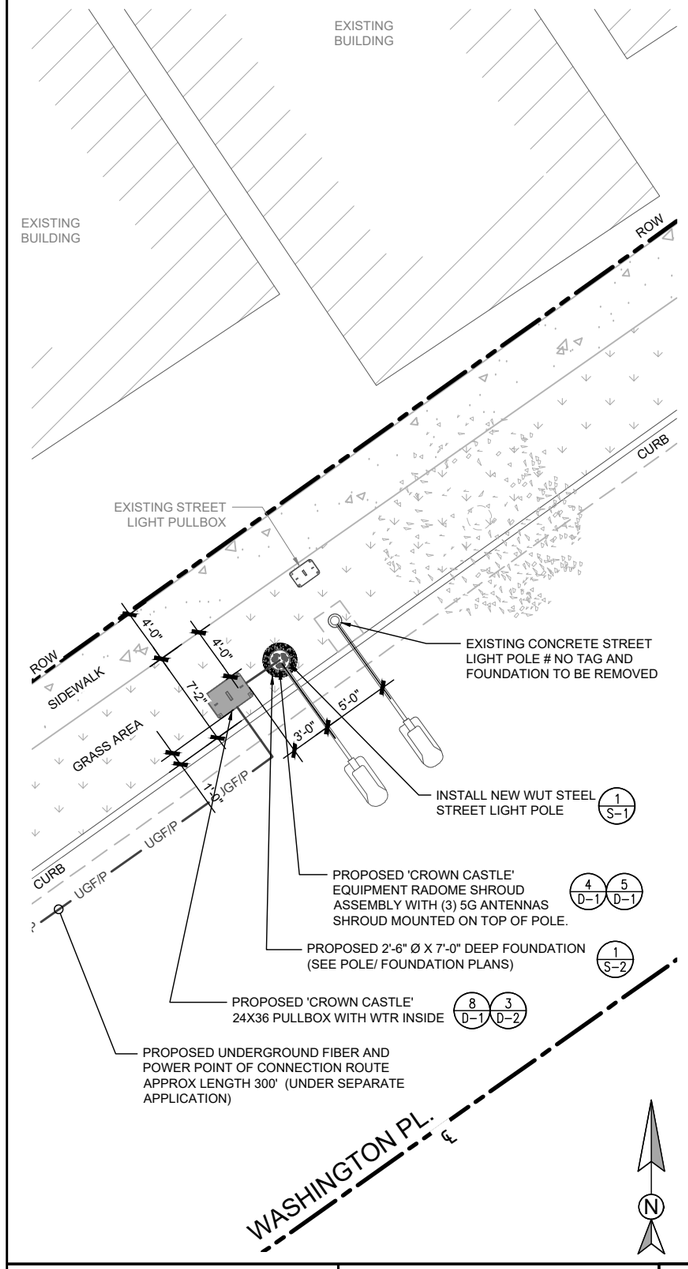
SHEET TITLE:
GENERAL REQUIREMENT U/G UTILITY AVOIDANCE

DRAWING INFO

DRAWN BY:	CHECKED BY:
MG	RS

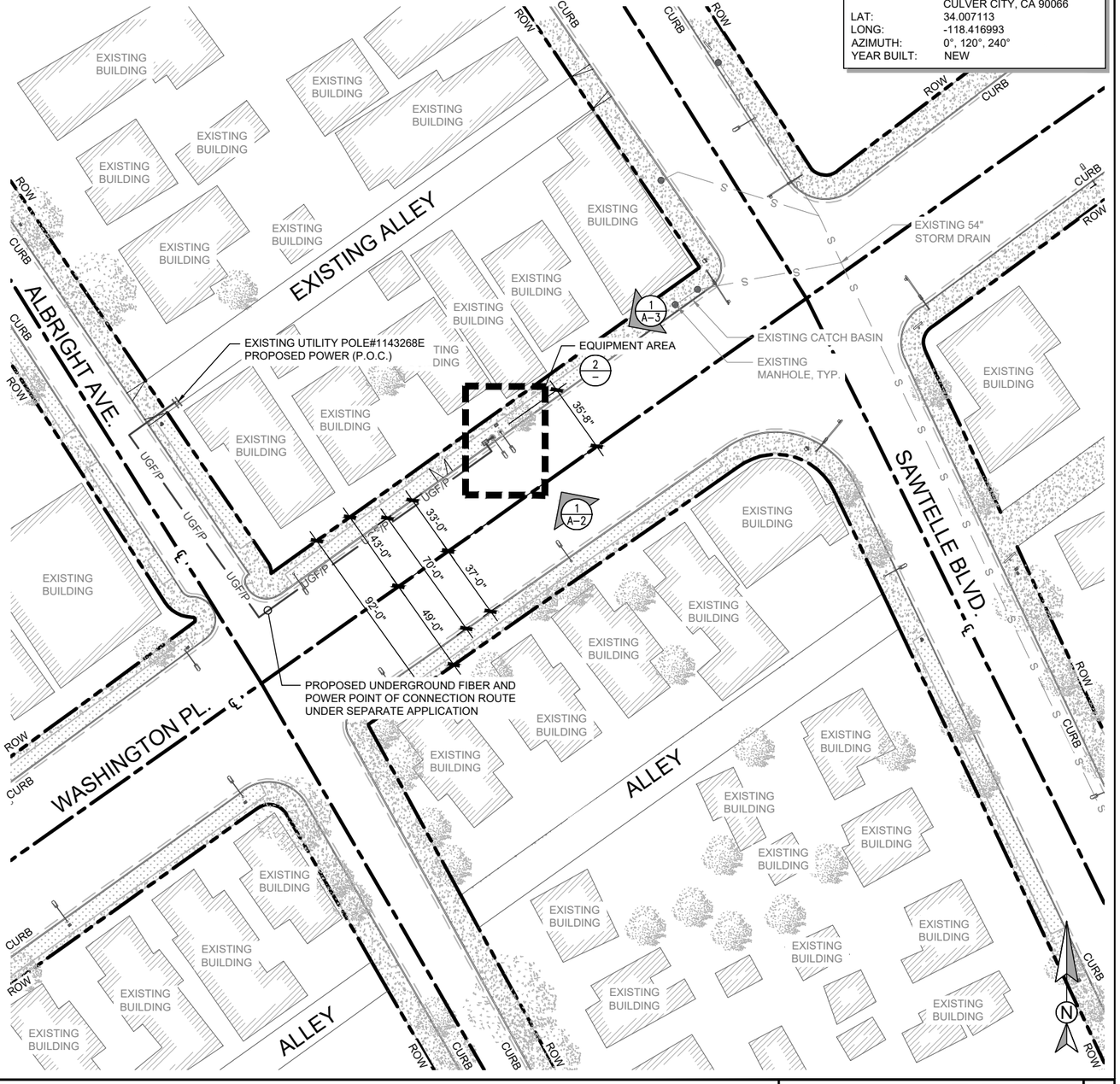
SHEET NUMBER:
T-3

01/17/2023/ CA002_CLC_CULVER_010 - A/U22-0413



ENLARGED SITE PLAN

24"x36" SCALE: 3/16" = 1'-0"
11"x17" SCALE: 3/32" = 1'-0"
4' 2' 0" 4'



SITE PLAN

24"x36" SCALE: 1/32" = 1'-0"
11"x17" SCALE: 1/16" = 1'-0"
32' 24' 16' 8' 0" 32'

SYM.	DESCRIPTION	SYM.	DESCRIPTION	SYM.	DESCRIPTION	SYM.	DESCRIPTION	SYM.	DESCRIPTION	SYM.	DESCRIPTION	SYM.	DESCRIPTION	SYM.	DESCRIPTION	SYM.	DESCRIPTION	SYM.	DESCRIPTION
○	TELEPHONE POLE	Ⓢ	STEEL POLE	●	RISER R+height		OVERHEAD GUY	N/A	CALLOUT / POLE NUMBER	Ⓒ	CAN / SPLICE ENCLOSURE		OVERHEAD FIBER OPTIC LINE		HUB		TOWER - LATTICE		BUILDING
×	POWER POLE	Ⓒ	CONCRETE POLE		ANCHOR		POLE TO POLE GUY		ABOVE GROUND PEDESTAL		CROWN OWNED UG		UG FIBER OPTIC LINE						
⊗	JOINT POLE	Ⓣ	POLE - TEMPORARY		QUEENS POST ANCHOR	NS	SPAN NOT STRANDED		17x30 VAULT		CROWN OWNED UG		FIBER JUMPER/TAIL		ANTENNAE		TOWER - MONOPOLE		
⊠	TRANSFORMER POLE	Ⓒ	CROWN CASTLE OWNED POLE		SIDEWALK ANCHOR		GROUND LOCATION		24x36 VAULT		CROWN OWNED UG	100'	FIBER SLACK						
⊠	JOINT TRANSFORMER POLE	Ⓣ	TRAFFIC SIGNAL POLE		ROCK ANCHOR		BOND LOCATION		MANHOLE - LEASED		STRUCTURE ATTACHED PIPE		FIBER COUNT		FIBER NODE/REMOTE EQUIPMENT		BRIDGE		
●	CATV POLE		LIGHT POLE		BUILDING ANCHOR		EXISTING STRAND		HANDHOLE - LEASED		CROWN LEASED UG	or	FIBER OPTIC SPLICE						

REV:	DATE/BY:	REVISION DESCRIPTION
B	08/09/2022 JT	90% CDs FOR REVIEW
C	08/17/2022 JT	90% CDs FOR REVIEW
D	08/31/2022 JT	90% CDs FOR REVIEW
E	09/09/2022 JT	90% CDs FOR REVIEW
1	01/17/2023 MG	PLAN CHECK COMMNETS

ENGINEER/CONSULTANT:

XD Industries
25422 TRABUCO ROAD
SUITE 105-627
LAKE FOREST CA 92630

CLIENT:

OWNER/DEVELOPER:
CROWN CASTLE
200 SPECTRUM CENTER DRIVE, 19TH FLOOR
IRVINE, CA 92618

STAMP:

REGISTERED PROFESSIONAL ENGINEER
CHRIS S. LEE
No.61054
EXP: 12/31/2024
CIVIL
STATE OF CALIFORNIA

ENGINEER: **CHRIS S. LEE**
PHONE: **949.468.9702** EMAIL: **CLEE@XD-IND.COM**

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CA002_CLC_CULVER_010 - A

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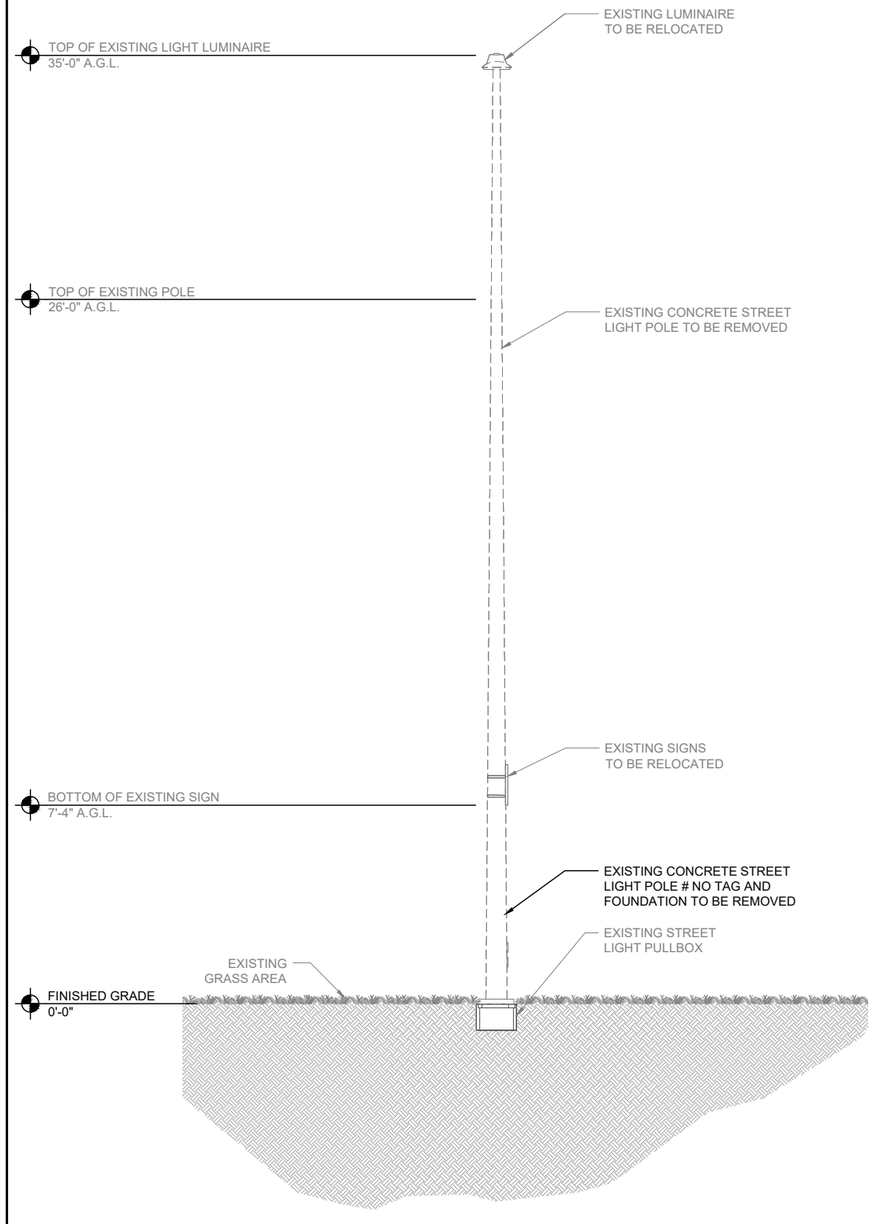
11317 WASHINGTON PL.
CULVER CITY, CA 90066
LAT: 34.007113
LONG: -118.416993

SHEET TITLE:
SITE PLAN & ENLARGED SITE PLAN

DRAWING INFO
DRAWN BY: MG
CHECKED BY: RS

SHEET NUMBER:
A-1

01/17/2023 / CA002_CLC_CULVER_010 - A / U22-0413

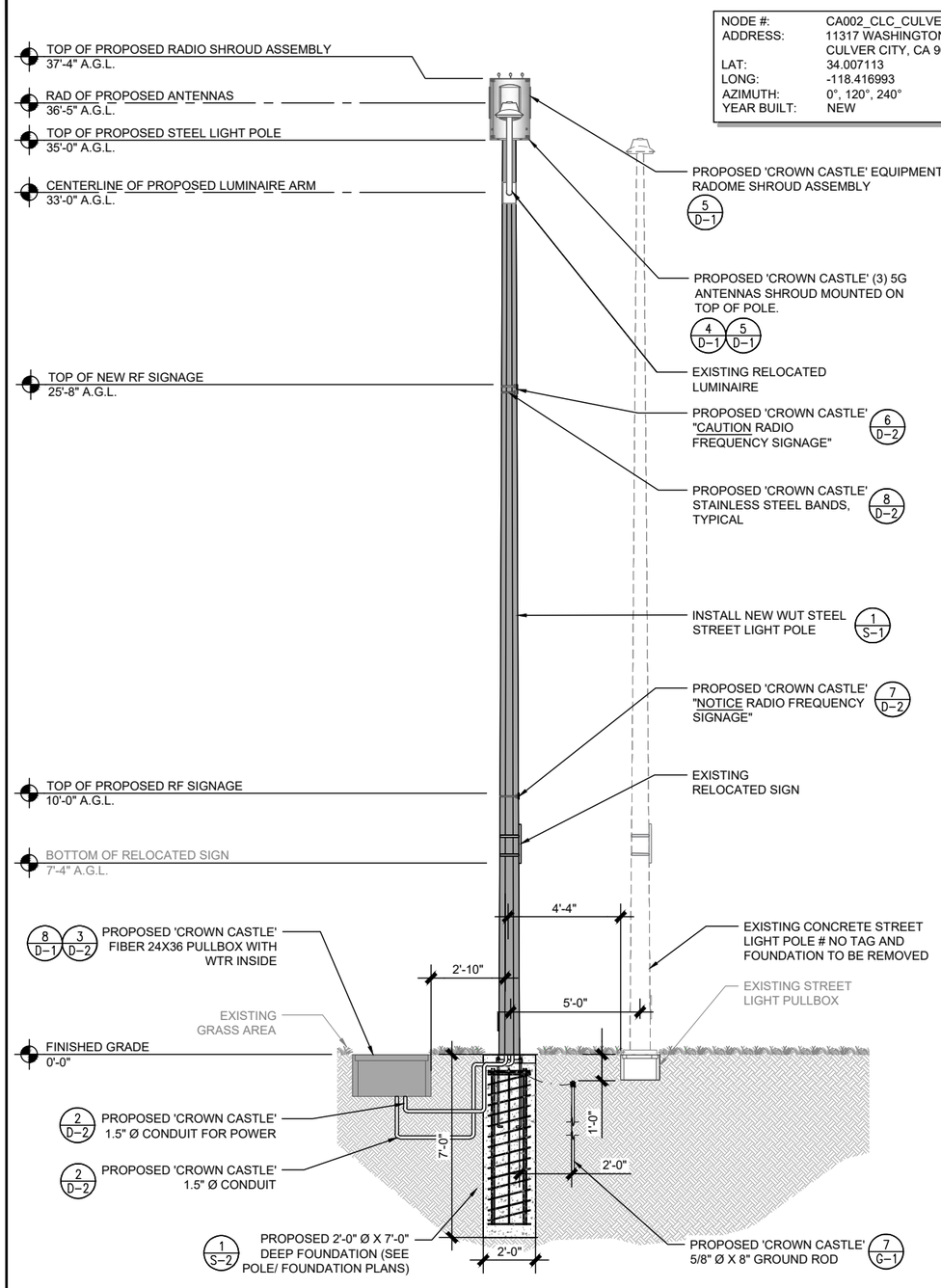


EXISTING ELEVATION LOOKING NORTH

24"x36" SCALE: 3/8" = 1'-0"
11"x17" SCALE: 3/16" = 1'-0"

2' 1' 0" 2'

2



PROPOSED ELEVATION LOOKING NORTH

24"x36" SCALE: 3/8" = 1'-0"
11"x17" SCALE: 3/16" = 1'-0"

2' 1' 0" 2'

1

REV:	DATE/BY:	REVISION DESCRIPTION
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1	01/17/2023 MG	PLAN CHECK COMMNETS

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XD Industries
25422 TRABUCO ROAD
SUITE 105-627
LAKE FOREST CA 92630

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IRVINE, CA 92618

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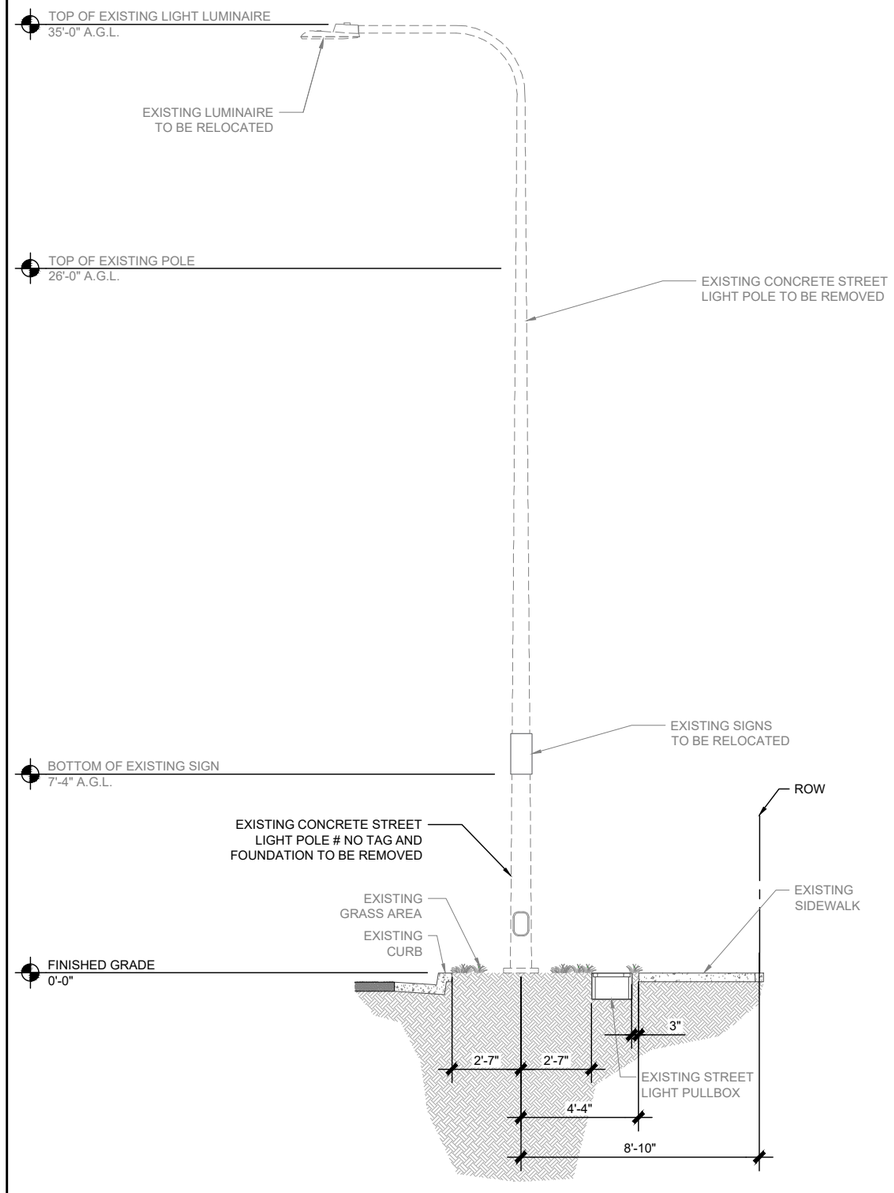
SHEET TITLE:
ELEVATIONS

DRAWING INFO

DRAWN BY:	CHECKED BY:
MG	RS

SHEET NUMBER:
A-2

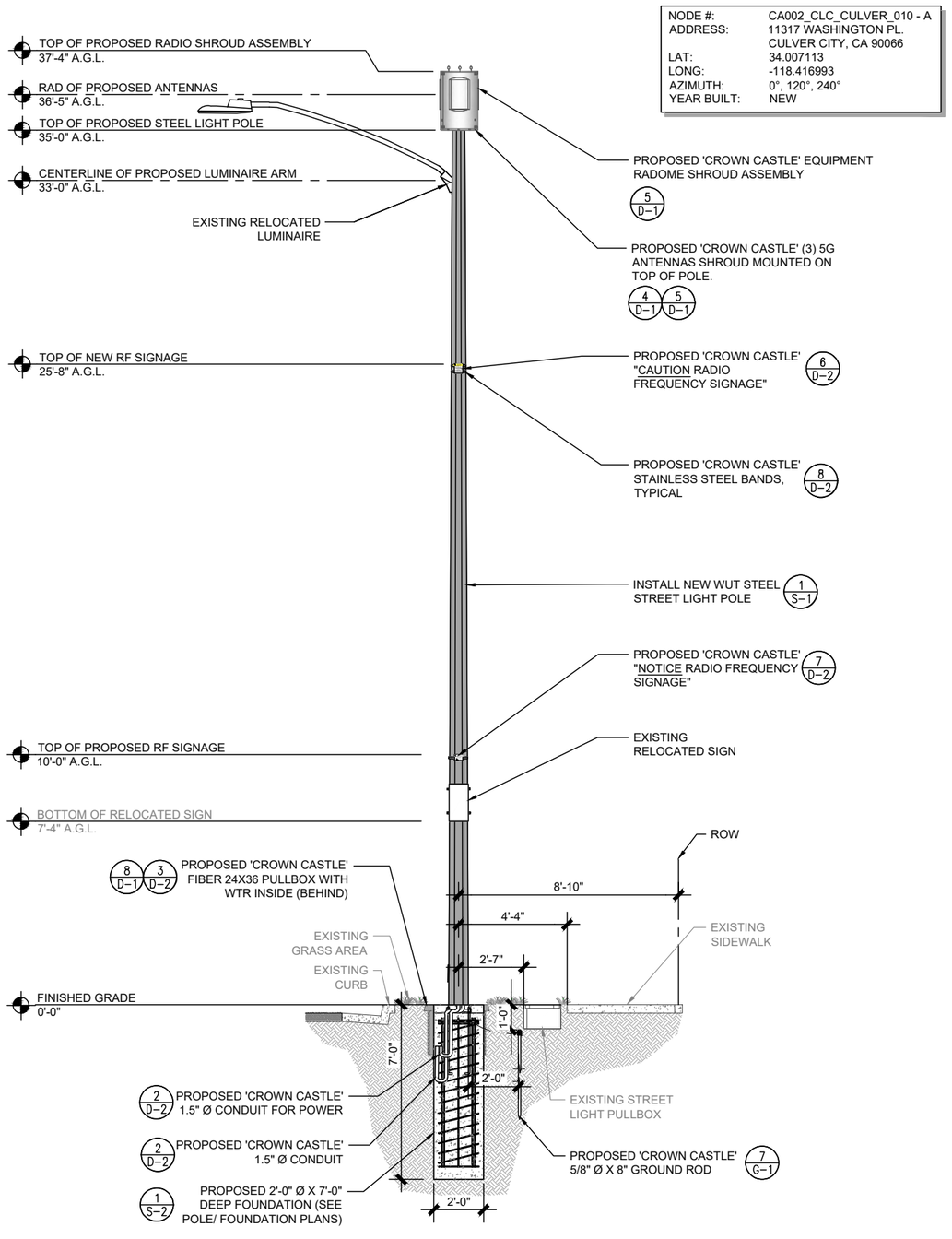
01/17/2023/ CA002_CLC_CULVER_010 - A/U22-0413



EXISTING ELEVATION LOOKING WEST

24"x36" SCALE: 3/8" = 1'-0"
11"x17" SCALE: 3/16" = 1'-0"
2' 1' 0" 2'

2



NODE #:	CA002_CLC_CULVER_010 - A
ADDRESS:	11317 WASHINGTON PL. CULVER CITY, CA 90066
LAT:	34.007113
LONG:	-118.416993
AZIMUTH:	0°, 120°, 240°
YEAR BUILT:	NEW

PROPOSED ELEVATION LOOKING WEST

24"x36" SCALE: 3/8" = 1'-0"
11"x17" SCALE: 3/16" = 1'-0"
2' 1' 0" 2'

1

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1	01/17/2023 MG	PLAN CHECK COMMNETS

ENGINEER/CONSULTANT:

XD Industries
25422 TRABUCO ROAD
SUITE 105-627
LAKE FOREST CA 92630

CLIENT:

OWNER/DEVELOPER:
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200 SPECTRUM CENTER DRIVE, 19TH FLOOR
IRVINE, CA 92618

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SHEET TITLE:
ELEVATIONS

DRAWING INFO

DRAWN BY:	CHECKED BY:
MG	RS

SHEET NUMBER:
A-3

01/17/2023/ CA002_CLC_CULVER_010 - A / U22-0413

EXISTING 2

PROPOSED 1

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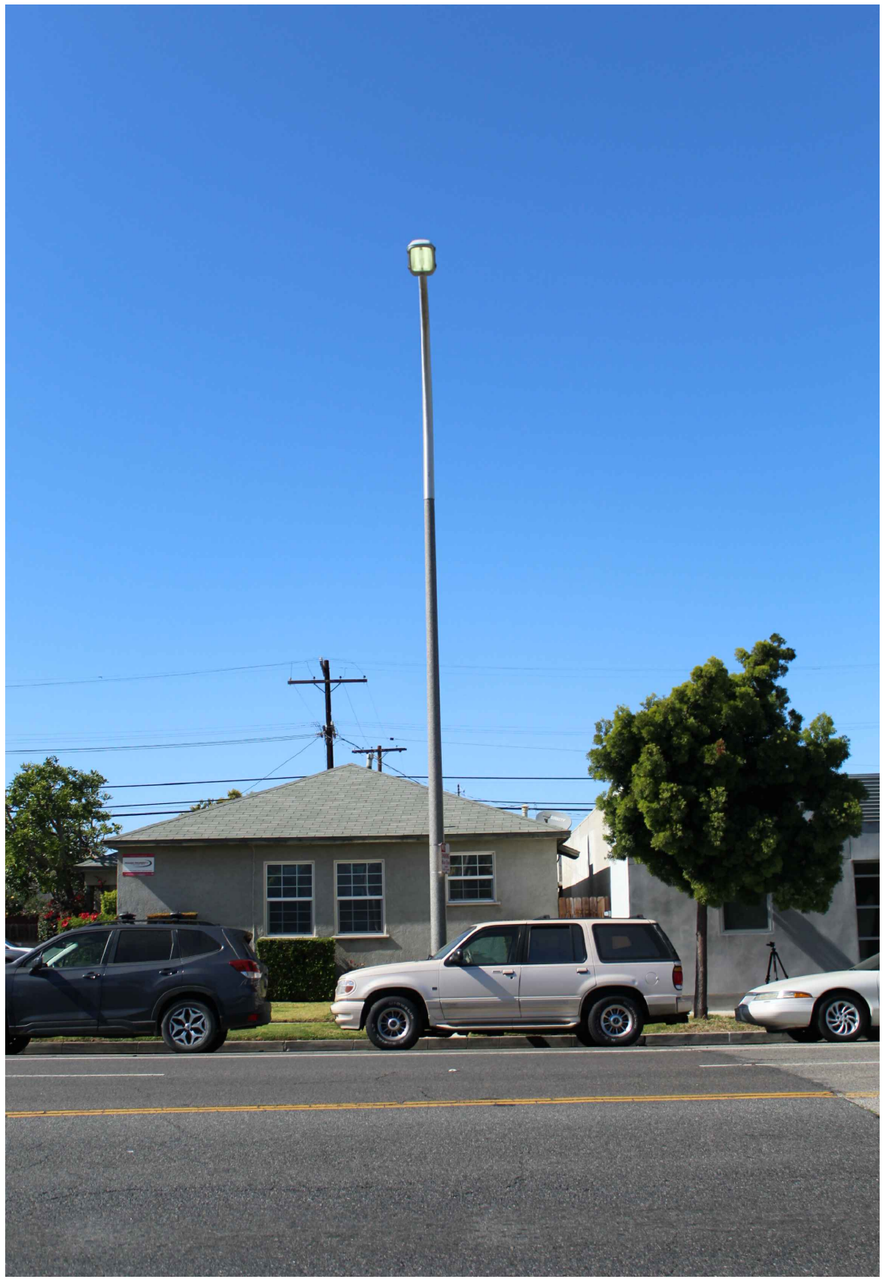
SHEET TITLE:
PHOTOSIMULATIONS

DRAWING INFO

DRAWN BY:	CHECKED BY:
MG	RS

SHEET NUMBER:
P-1

01/17/2023 / CA002_CLC_CULVER_010 - A / U22-0413



EXISTING | 2

PROPOSED | 1

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EXISTING 2

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MG	RS

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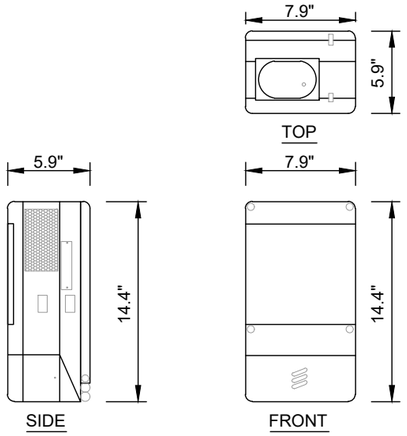
P-3

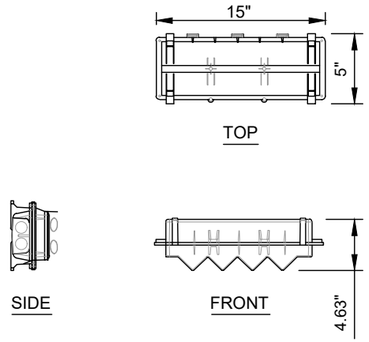
01/17/2023 / CA002_CLC_CULVER_010 - A / U22-0413

SPECIFICATIONS	
DIMENSIONS (HXWXD)	(14.4" x 7.9" x 5.9")
WEIGHT	31 LBS
MANUFACTURER	ERICSSON
MODEL	STREETMACRO 6705 (OR APPROVED EQUAL)



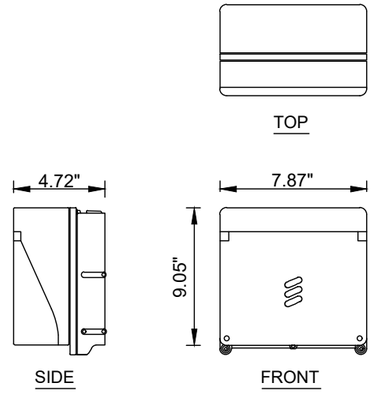
ANTENNA SPECS. 4

SPECIFICATIONS	
DIMENSIONS (HXWXD)	(5" x 15" x 4.63")
WEIGHT	N/A
MANUFACTURER	R&M USA INC.
MODEL	FTH-LCU-PGT-F12-1524 OR FTH-LCU-PGT-F12-3048 (OR APPROVED EQUAL)



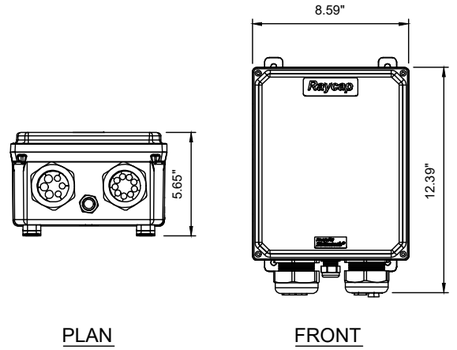
FIBER TAP SPECS. 3

SPECIFICATIONS	
DIMENSIONS (HXWXD)	(9.05" x 7.87" x 4.72")
WEIGHT	7.7 LBS
MANUFACTURER	ERICSSON
MODEL	FRONTHAUL 6387 (OR APPROVED EQUAL)



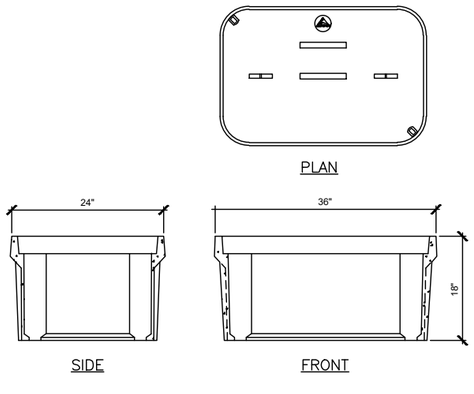
FRONTHAUL 6387 SOECS. 2

SPECIFICATIONS	
DIMENSIONS (HXWXD)	(12.39" x 8.59" x 5.65")
WEIGHT	8.0 LBS
MANUFACTURER	RAYCAP
MODEL	RSCAC-9556-PH-240



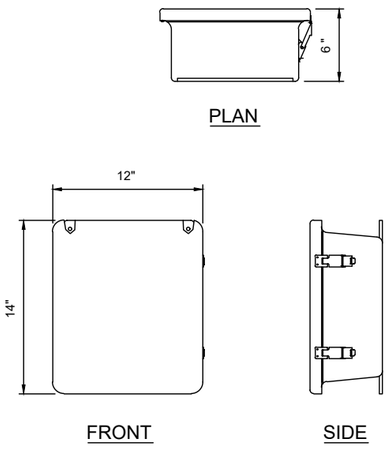
RAYCAP RSCAC-9556-PH-240 1

SPECIFICATIONS	
DIMENSIONS (WXHXD)	(24" X 36" X 18")
WEIGHT	293 LBS
MANUFACTURER	ARMORCAST
MODEL NO.	A6001974TAPCX18

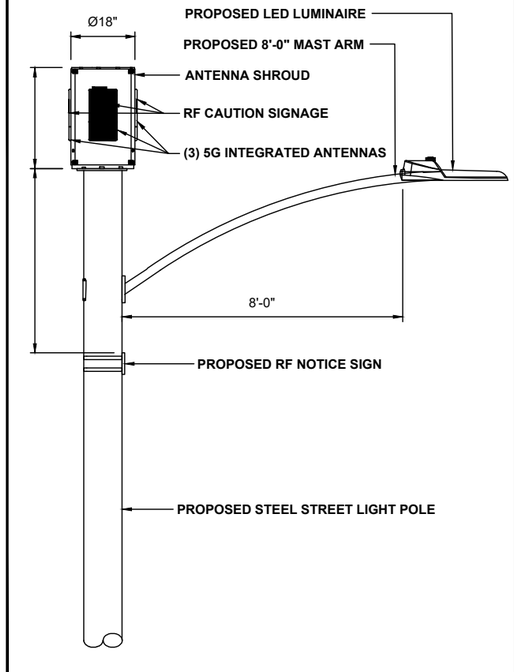


24" x 36" HANDHOLE 8

SPECIFICATIONS	
DIMENSIONS (HXWXD)	(14.0" x 12.0" x 6.0")
WEIGHT	N/A
MANUFACTURER	STAHLIN
MODEL	J1412HPL

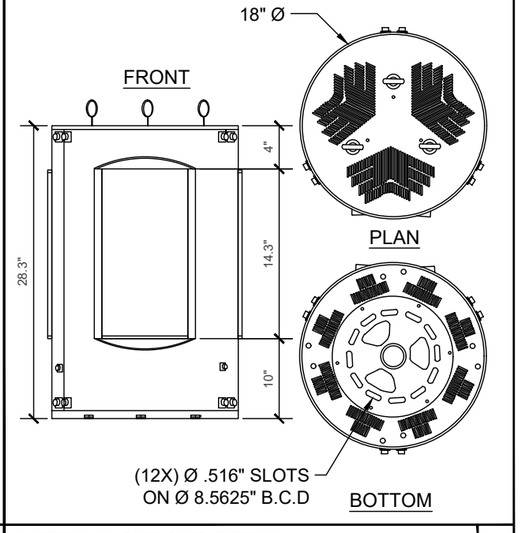


WTR 6P ENCLOSURE 7



TYPICAL ANTENNA SHROUD ASSEMBLY 6

SPECIFICATIONS	
DIMENSIONS (HXD)	28.3" x 18" Ø
WEIGHT (EMPTY)	APPROX. 61 LBS
WEIGHT (WITH EQUIPMENT)	APPROX. 134 LBS
MANUFACTURER	CHARLES
MODEL	SHRD5-2818



ANTENNA SHROUD DETAIL 5

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SHEET TITLE:
DETAILS

DRAWING INFO

DRAWN BY:	CHECKED BY:
MG	RS

SHEET NUMBER:
D-1

01/17/2023/ CA002_CLC_CULVER_010 - A/U22-0413

NOTICE

POLE WORKERS

There is an antenna operation
high on this pole. please follow
guidance on signs near the antenna
or call the number below

SITE ID # CA002_CLC_CULVER_010 - A

CROWN CASTLE 888-632-0931

RF NOTICE SIGN | 4

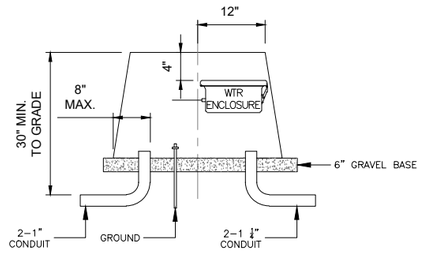
CAUTION

Keep Back 5 FT From this antenna, FCC RF Public Exposure Limits May Be Exceeded Within This Distance. Call 888-632-0931 for Instructions.
Qualified Workers:
FCC Occupational Limits May Be Exceeded Within This Distance

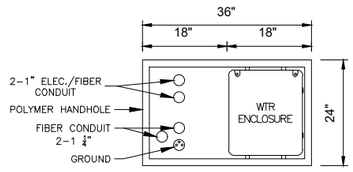
SITE ID # CA002_CLC_CULVER_010 - A

RF CAUTION SIGN | 3

NOTE:
ALL MOUNTING ATTACHMENTS FOR THE WTR ENCLOSURE SHALL BE THROUGH EXTERNAL MOUNTING FLANGES INTEGRAL WITH BOX

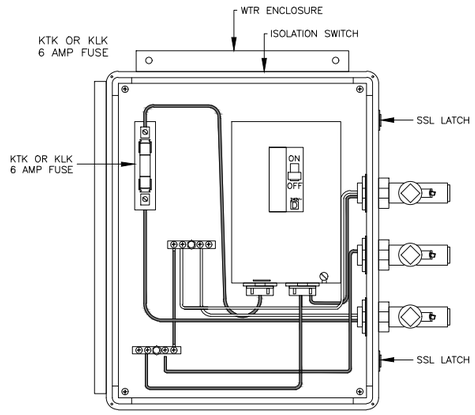


SIDE



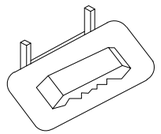
FRONT

CONNECTION HANDHOLE | 2



WTR FUSE BOX | 1

MANUFACTURER: BAND-IT-IDEX, INCORPORATED
MODEL: G43099
MATERIAL: 201 STAINLESS STEEL
WIDTH: 3/4 IN
THICKNESS: .044 IN
WEIGHT: 11.6 LBS
PACKAGE QUANTITY: 100' ROLL
AVERAGE BREAKING STRENGTH: 3300
USE WITH BUCKLE TYPE GIANT EAR-LOKT: G44099
WEBSITE: BAND-IT-IDEX.COM



GIANT BUCKLE EAR-LOCK STYLE

GIANT BAND

3/4" STAINLESS STEEL BAND MATERIAL | 8

NOT USED | 7

NOT USED | 6

NOT USED | 5

REV:	DATE/BY:	REVISION DESCRIPTION
B	08/09/2022 JT	90% CDs FOR REVIEW
C	08/17/2022 JT	90% CDs FOR REVIEW
D	08/31/2022 JT	90% CDs FOR REVIEW
E	09/09/2022 JT	90% CDs FOR REVIEW
1	01/17/2023 MG	PLAN CHECK COMMNETS

ENGINEER/CONSULTANT:

XD Industries
25422 TRABUCO ROAD
SUITE 105-627
LAKE FOREST CA 92630

CLIENT:

OWNER/DEVELOPER:
CROWN CASTLE
200 SPECTRUM CENTER DRIVE, 19TH FLOOR
IRVINE, CA 92618

STAMP:

REGISTERED PROFESSIONAL ENGINEER
CHRIS S. LEE
No. 61054
EXP: 12/31/2024
CIVIL
STATE OF CALIFORNIA

ENGINEER: **CHRIS S. LEE**
PHONE: **949.468.9702** EMAIL: **CLEE@XD-IND.COM**

ANY REVISIONS TO PLANS DURING CONSTRUCTION MUST BE APPROVED BY ENGINEER OF RECORD

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SITE INFO:

SITE NAME:
CA002_CLC_CULVER_010 - A

SITE ADDRESS:
11317 WASHINGTON PL.
CULVER CITY, CA 90066
LAT: 34.007113
LONG: -118.416993

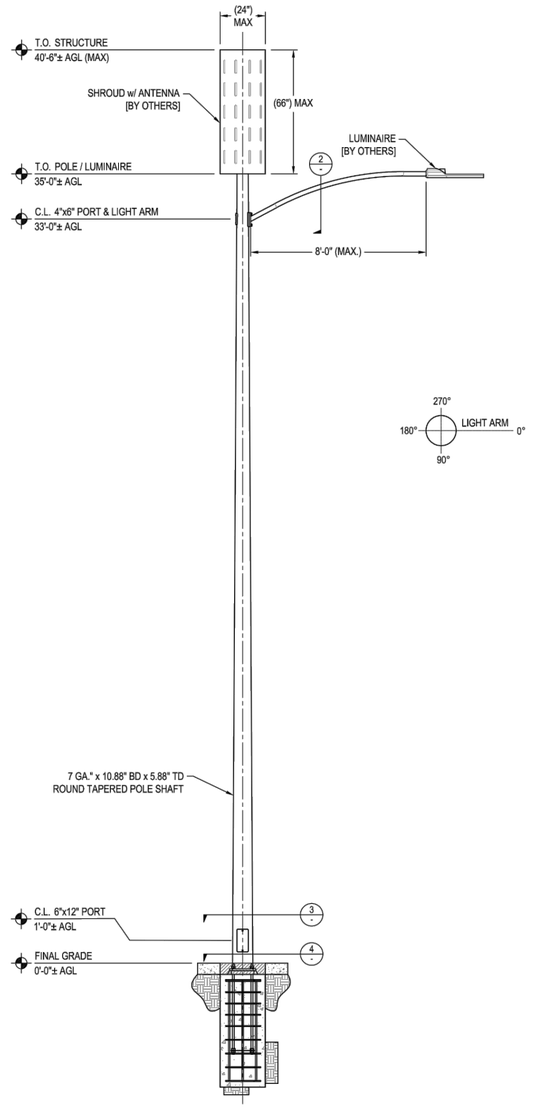
SHEET TITLE:
DETAILS

DRAWING INFO

DRAWN BY:	CHECKED BY:
MG	RS

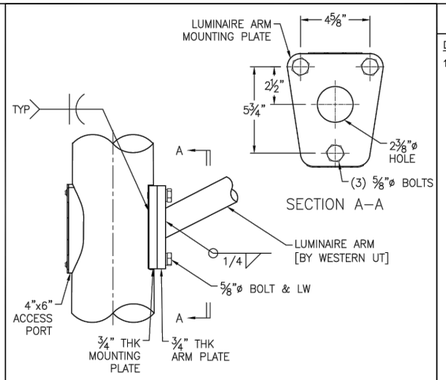
SHEET NUMBER:
D-2

01/17/2023 | CA002_CLC_CULVER_010 - A | U22-0413



POLE ELEVATION

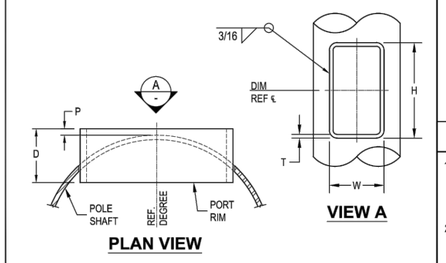
SCALE: 3/16" = 1'-0" | 1



LIGHT ARM CONNECTION

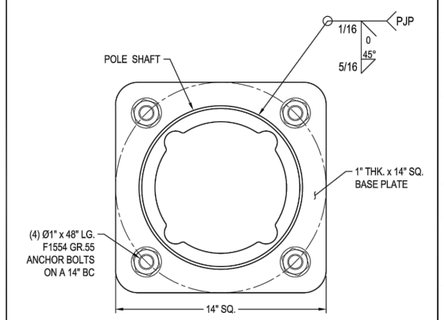
SCALE: NONE | 2

PORT SCHEDULE							
DIM REF ℄	W	H	D	T	P	QTY.	DEGREE
33'-0"	4"	6"	1 3/4"	1/4"	3/8"	1	180°
1'-0"	6"	12"	2"	1/4"	3/8"	1	90°



PORT DETAIL

SCALE: NONE | 3



BASE PLATE DETAIL

SCALE: 1 1/2" = 1'-0" | 4

GENERAL DESIGN NOTES:

DESIGN NOTES AND MATERIAL REQUIREMENTS:

1) THE DESIGN CRITERIA FOR THIS STRUCTURE IS AS FOLLOWS:

A) STANDARDS AND DESIGN CODES:

INDUSTRY STANDARD:	ANSI/TIA-222-H, 2019 CBC 1609.1.1 EXC. 5, & 2015 ASSHTO
STEEL MANUAL:	AISC 15TH EDITION
CONCRETE CODE:	ACI 318-14
WELDING CODE:	ANSI/AWS D1.1.15

B) DESIGN:

BWS (V):	94 MPH (3-SECOND GUST) PER ANSI/TIA-222-H & 2019 CBC, SECTION 1609.1.1, EXC. 5
RISK CATEGORY:	II
EXPOSURE CATEGORY:	C
TOPOGRAPHIC CATEGORY:	1
(V$_{ASD}$):	94 MPH (3-SECOND GUST) PER 2015 AASHTO LRFD LTS-1 w/2017 INTERIMS
ICE:	NOT REQ'D FOR THIS STRUCTURE PER ANNEX B
SOIL:	PER 2019 CBC, TABLE 1806.2, CLASS 5 MAT'L
SEISMIC:	PER 2019 CBC SECTION 1613, ASCE 7-16, SECTIONS 15.1.3 & 12.8

C) LOADING (MAX):
(1) 24" Ø X 66" TALL SHROUD WT. = 250 LBS., C.L. @ 38.5' ± AGL
(1) 9" TALL x 30" WIDE LUMINAIRE, WT = 35 LBS., C.L. @ 35' ± AGL
(1) 2 ⅜" x 8' LONG LUMINAIRE ARM, WT. = 65 LBS., C.L. @ 34' ± AGL

D) FACTORED BASE REACTIONS:

OVERTURNING MOMENT	=	18.0 FT-KIPS
BASE SHEAR	=	0.74 KIPS
BASE WEIGHT	=	1.38 KIPS

2) GENERAL STRUCTURAL NOTES:
A) ALL MATERIALS SHALL CONFORM TO THE FOLLOWING STANDARDS:

POLE SHAFT:	ASTM A595 GR. A
BASE PLATE:	ASTM A36
PORTS:	ASTM A500 GR.B (RECT. TUBE)
PLATES:	ASTM A36
WELDS:	E70XX ELECTRODES
STRUCTURAL BOLTS:	ASTM F3125 GR. A325
ANCHOR BOLTS:	ASTM F1554 GR. 55
REBAR:	ASTM A615 GR. 60

B) ALL WELDING TO BE PERFORMED BY WELDERS CERTIFIED IN ACCORDANCE WITH AWS D1.1. FIELD WELDING IS PROHIBITED.
C) ALL STRUCTURAL STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123.
D) ALL STRUCTURAL BOLTS SHALL BE TIGHTENED TO SNUG-TIGHT AS DEFINED BY AISC 15TH EDITION, PG. 16.2-51 PARAGRAPH 8.1

GENERAL NOTES:

1) CONTRACTOR SHALL FIELD VERIFY SITE OR LAYOUT RESTRICTIONS, SITE CONDITIONS, DIMENSIONS, AND ELEVATIONS BEFORE START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF WESTERN UT, INC. PRIOR TO BEGINNING PROJECT. ALL WORK SHALL BE PERFORMED USING ACCEPTED CONSTRUCTION PRACTICES.

2) NO FIELD MODIFICATIONS MAY BE MADE TO MONOPOLE WITHOUT THE EXPRESS WRITTEN CONSENT FROM THE ENGINEER OF RECORD. WESTERN UT, INC. AND ENGINEER OF RECORD ASSUME NO RSPONSIBILITY FOR THE STRUCTURE IF ALTERATIONS AND/OR ADDITIONS ARE MADE TO THE DESIGN AS SHOWN IN THESE DRAWINGS.

3) THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL COMPLY WITH ALL LOCAL CODES, REGULATIONS, AND ORDINANCES AS WELL AS STATE DEPARTMENT OF INDUSTRIAL REGULATIONS AND DIVISION OF INDUSTRIAL SAFETY (OSHA) REQUIREMENTS.

4) THE CONTRACTOR SHALL SUPERVISE AND DIRECT ALL WORK TO THE BEST OF HIS/HER ABILITY AND SKILL. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, PROCEDURES, AND SEQUENCES, AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.

5) THE CONTRACTOR SHALL VERIFY, COORDINATE, AND PROVIDE ALL NECESSARY BLOCKING, BACKING, FRAMING, HANGERS, OR OTHER SUPPORTS FOR ALL ITEMS REQUIRING SAME, WHETHER SHOWN OR NOT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY BRACING, SHORING, FORMWORK, ETC., AND SHALL CONFORM TO ALL NATIONAL, STATE, AND LOCAL ORDINANCES AND CODES, IN ORDER TO SAFELY EXECUTE ALL STAGES OF WORK TO COMPLETE THIS PROJECT.

6) IT IS THE INTENT OF THESE DRAWINGS TO SHOW THE COMPLETED INSTALLATION OF THE STRUCTURE SHOWN.

7) CONTRACTOR ASSUMES RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING THE SAFETY OF ALL PERSONS AND PROPERTY IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES. THIS REQUIREMENT APPLIES CONTINUOUSLY, AND IS NOT LIMITED TO NORMAL WORKING HOURS.

8) CONTRACTOR TO HOLD ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT.

9) IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN. THE CONTRACTOR IS FINANCIALLY RESPONSIBLE FOR REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED IN CONJUNCTION WITH THE EXECUTION OF WORK ON THIS PROJECT.

CONSULTANT
WESTERN UTILITY / TELECOM, INC.
5032 SALEM DALLAS HWY
SALEM, OR 97304
Ph: 503-587-0101 Fx: 503-316-1864
WesternUtilityTelecom.com

CLIENT: CROWN CASTLE

PROJECT: 35' TALL, ROUND TAPERED ANTENNA/LIGHT POLE

LOCATION: VARIOUS NODE LOCATIONS IN **CULVER CITY, CA** LOS ANGELES COUNTY

ISSUED FOR: PERMIT OR INSTALL

DW'N BY	CK'D BY	DATE
DVD	AWM	17DEC20

REVISIONS

REV.	CHANGES	DATE	BY
A	UPDATED PER REVIEW	22DEC20	JLH

ENGINEER SEAL

Dec. 22, 2020

SHEET TITLE: ELEVATION VIEW & STRUCTURAL DETAILS

WUT PROJECT NUMBER: **20-0375**

DRAWING NUMBER: **PD-002055**

PAGE NUMBER: **S-1**

REV:	DATE/BY:	REVISION DESCRIPTION
B	08/09/2022 JT	90% CDs FOR REVIEW
C	08/17/2022 JT	90% CDs FOR REVIEW
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1	01/17/2023 MG	PLAN CHECK COMMNETS

ENGINEER/CONSULTANT:
XD Industries
25422 TRABUCO ROAD
SUITE 105-627
LAKE FOREST CA 92630

CLIENT:
OWNER/DEVELOPER: CROWN CASTLE
200 SPECTRUM CENTER DRIVE, 19TH FLOOR
IRVINE, CA 92618

STAMP:

ENGINEER: **CHRIS S. LEE**
PHONE: **949.468.9702** EMAIL: **CLEE@XD-IND.COM**
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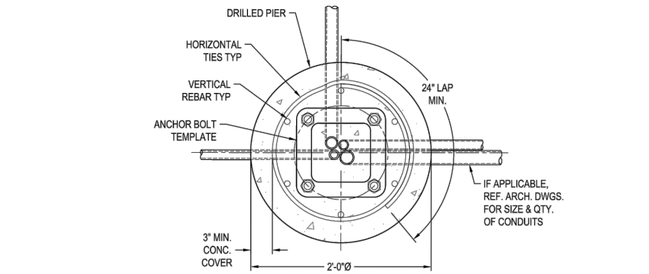
SITE NAME: CA002_CLC_CULVER_010 - A
SITE ADDRESS: 11317 WASHINGTON PL. CULVER CITY, CA 90066
LAT: 34.007113
LONG: -118.416993

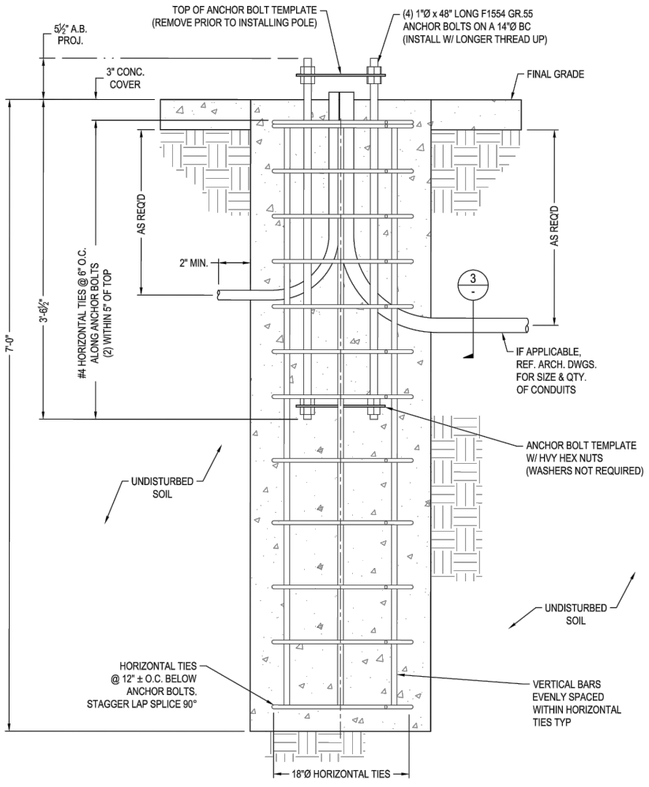
SHEET TITLE: POLE SPECIFICATION

DRAWING INFO
DRAWN BY: MG
CHECKED BY: RS

SHEET NUMBER: S-1

01/17/2023 / CA002_CLC_CULVER_010 - A / U22-0413

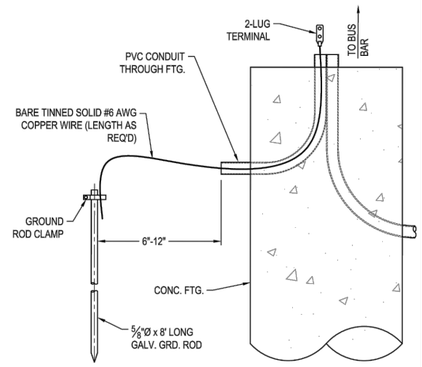




REBAR SCHEDULE					
DESCRIPTION	SIZE	QTY.	LENGTH	WEIGHT	OVERLAP
VERTICAL BARS	#6	6	6'-6"	59 LBS	N/A
HORIZONTAL TIES	#4	12	6'-10"	56 LBS	2'-0"

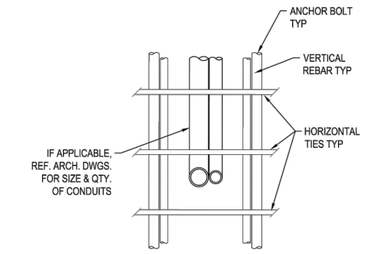
PIER ELEVATION

SCALE: 3/4" = 1'-0" | 1



GROUNDING KIT DETAIL

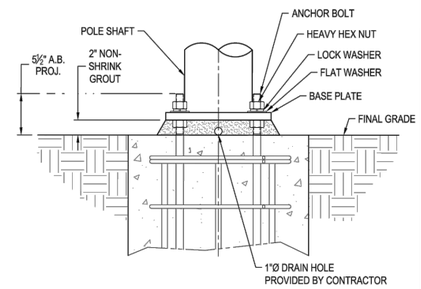
SCALE: NONE | 2



* ADJUST REBAR AS NEEDED TO ACCOMMODATE CONDUIT. SEE REINFORCEMENT SUMMARY FOR SIZE, QUANTITY AND LOCATION OF VERTICAL BARS AND HORIZONTAL TIES.

CONDUIT DETAIL @ PIER FACE

SCALE: 1" = 1'-0" | 3



* NON-SHRINK GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 6,000 PSI.

BASE PLATE SHALL NOT BE GROUTED UNTIL AFTER THE STRUCTURE HAS BEEN INSTALLED AND PLUMBED.

BASE GROUTING DETAIL

SCALE: 3/4" = 1'-0" | 4

GENERAL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR CHECKING AREA FOR UNDERGROUND FACILITIES PRIOR TO EXCAVATING ANY MATERIALS.
2. CONTRACTOR SHALL REFER TO SOILS REPORT (IF PROVIDED) FOR SITE CONDITIONS AND FURTHER CONSTRUCTION INFORMATION.
3. CONTRACTOR SHALL INSPECT AND REMOVE ALL DEBRIS FROM BOTTOM OF EXCAVATION.
4. CONTRACTOR SHALL VERIFY ANCHOR BOLT LAYOUT PRIOR TO, AND IMMEDIATELY AFTER PLACING CONCRETE. ANCHOR BOLT LAYOUT IS CRITICAL FOR MONOPOLE INSTALLATION.
5. CONTRACTOR SHALL USE AND PROVIDE DEFORMED REINFORCING BARS CONFORMING TO A615 GR.60 (60,000 PSI MIN. YIELD). CONTRACTOR SHALL USE STEEL WIRE TO HOLD REINFORCING BARS TOGETHER. IF WELDING REBAR IS PREFERRED, SUBSTITUTE USING A706 GR. 60 DEFORMED BARS.
6. CONTRACTOR SHALL USE AND PROVIDE CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI. CONCRETE SHALL USE 1" MAXIMUM STONE AGGREGATE. MIX DESIGN: 6½ SACKS OF CEMENT MINIMUM PER CUBIC YARD. 5" MINIMUM AND 7" CONCRETE SLUMP. MAXIMUM
7. CONCRETE SHALL BE CONSOLIDATED USING VIBRATORY METHODS THROUGHOUT DEPTH OF FOUNDATION. VIBRATING LOWER DEPTHS MAY BE ACCOMPLISHED BY TOUCHING REBAR CAGE WITH VIBRATOR.
8. CONTRACTOR SHOULD ANTICIPATE THE USE OF A FULL-LENGTH TEMPORARY CASING TO STABILIZE THE EXCAVATION. THE CASING SHALL BE WITHDRAWN DURING THE PLACEMENT OF CONCRETE IN THE EXCAVATED HOLE. CONCRETE SHALL BE PLACED USING CONVENTIONAL METHODS TO MINIMIZE SEGREGATION OF CONCRETE AND AGGREGATE. CONCRETE SHALL NOT FREE FALL MORE THAN 5 FT. CONCRETE MAY BE PLACED BELOW WATER USING TREMIE METHODS.
9. CONCRETE SHALL BE PLACED TO THE DEPTH INDICATED, AND THE ABOVE GRADE PORTION SHALL BE FORMED. THE REBAR CAGE, ANCHOR BOLTS, AND CONCRETE SHALL BE PLACED WITHIN 24 HOURS OF COMPLETING THE EXCAVATION. COLD JOINTS ARE NOT ALLOWED.
10. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ADEQUATE CONCRETE COVERAGE OVER REINFORCING BARS TO MINIMIZE CORROSION POTENTIAL. UNLESS OTHERWISE NOTED, CONTRACTOR SHALL USE 3" CONCRETE COVER OVER REBAR. TOP OF FOOTING SHALL BE TOWELED LEVEL AND SMOOTH.
11. DRILLED PIER FOUNDATION DESIGN PER 2019 CBC, TABLE 1806.2, CLASS 5 MATERIAL.
12. TOTAL VOLUME OF CONCRETE REQUIRED FOR THIS FOUNDATION IS APPROXIMATELY 0.8 CU. YDS.

FACTORED BASE REACTIONS

MOMENT	=	18.0 FT-KIPS
SHEAR	=	0.74 KIPS
VERTICAL	=	1.38 KIPS

SPECIAL INSPECTIONS

SPECIAL INSPECTION:
THE FOLLOWING ELEMENTS OF CONSTRUCTION SHALL REQUIRE SPECIAL INSPECTION PER 2019 CBC, SECTION 17.

ITEM	DESCRIPTION	INSPECTION BY	MATERIAL
1	ALLOWABLE PIER EXCAVATION LATERAL BEARING	SOILS ENGINEER	100 PSF/FT LATERAL
2	PIER CONSTRUCTION REINFORCING STEEL BAR SIZES AND INSTALLATION	SPECIAL INSPECTOR	ASTM A615 GR.60
3	ANCHOR BOLTS BOLT SIZE AND LENGTHS INSTALLATION	SPECIAL INSPECTOR	ASTM F1554 GR.55
4	CONCRETE TEST SPECIMENS	SPECIAL INSPECTOR	f'c = 4,000 PSI TYPE II CEMENT

CONSULTANT
WESTERN UTILITY / TELECOM, INC.
5032 SALEM DALLAS HWY
SALEM, OR 97304
Ph: 503-587-0101 Fx: 503-316-1864
WesternUtilityTelecom.com

CLIENT
CROWN CASTLE

PROJECT
35' TALL, ROUND TAPERED ANTENNA/LIGHT POLE

LOCATION
VARIOUS NODE LOCATIONS IN
CULVER CITY, CA
LOS ANGELES COUNTY

ISSUED FOR
PERMIT OR INSTALL

DW'N BY	CK'D BY	DATE
DVD	AWM	17DEC20

REVISIONS

REV.	CHANGES	DATE	BY
A	UPDATED PER REVIEW	22DEC20	JLH

ENGINEER SEAL

SHEET TITLE
PIER FOUNDATION INSTALLATION

WUT PROJECT NUMBER
20-0375

DRAWING NUMBER
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PAGE NUMBER
F-1

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25422 TRABUCO ROAD
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STAMP:

ENGINEER: **CHRIS S. LEE**
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SHEET TITLE:
FOUNDATION DETAILS

DRAWING INFO
DRAWN BY: MG
CHECKED BY: RS

SHEET NUMBER:
S-2

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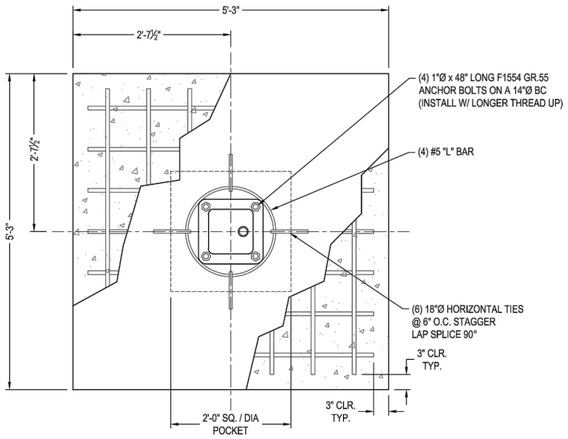
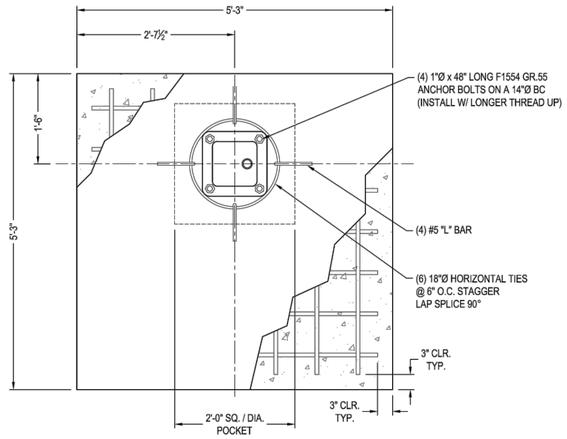


STANDARD CENTERED LAYOUT

OFFSET EVERY OTHER REBAR AS SHOWN. TYP. @ TOP & BOT. MAT [APPLIES TO BOTH LAYOUT STYLES]



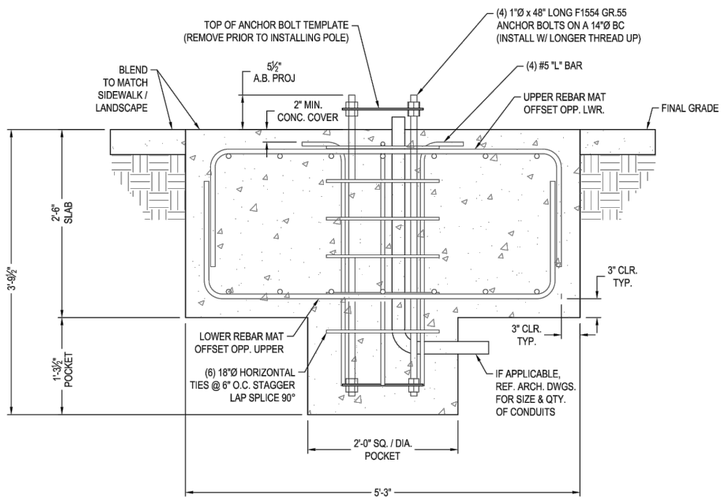
ALTERNATIVE OFFSET LAYOUT

GENERAL NOTES

1. CONTRACTOR IS RESPONSIBLE FOR CHECKING AREA FOR UNDERGROUND FACILITIES PRIOR TO EXCAVATING ANY MATERIALS.
2. CONTRACTOR SHALL INSPECT AND REMOVE ALL DEBRIS FROM BOTTOM OF EXCAVATION.
3. CONTRACTOR SHALL VERIFY ANCHOR BOLT LAYOUT PRIOR TO, AND IMMEDIATELY AFTER PLACING CONCRETE. ANCHOR BOLT LAYOUT IS CRITICAL FOR TOWER INSTALLATION. CONTRACTOR SHALL PROTECT ANCHOR BOLT THREADS DURING CONCRETE POUR BY USE OF TAPE OR OTHER METHOD.
4. CONTRACTOR SHALL USE AND PROVIDE DEFORMED REINFORCING BARS CONFORMING TO ASTM A615 GR. 60 (60,000 PSI MIN. YIELD). CONTRACTOR SHALL USE STEEL WIRE TO HOLD REINFORCING BARS TOGETHER. IF WELDING REBAR IS PREFERRED, SUBSTITUTE USING A706 GR. 60 DEFORMED BARS.
5. CONTRACTOR SHALL USE AND PROVIDE CONCRETE WITH A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI. CONCRETE SHALL USE 1" MAXIMUM STONE AGGREGATE. MIX DESIGN: 6½ SACKS OF CEMENT MINIMUM PER CUBIC YARD. 5" MINIMUM AND 7" MAXIMUM CONCRETE SLUMP.
6. CONTRACTOR SHALL PLACE CONCRETE AGAINST UNDISTURBED SOIL TO THE DEPTH INDICATED, AND SHALL FORM ABOVE GRADE PORTION OF FOUNDATION. IF WATER IS ENCOUNTERED, PUMPING WATER OUT AND AWAY FROM EXCAVATION IS PREFERRED. FOR HIGH RATES OF GROUND WATER SEEPAGE, PLACEMENT OF CONCRETE MAY BE PERFORMED USING CONVENTIONAL TREMIE METHODS.
7. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ADEQUATE CONCRETE COVERAGE OVER REINFORCING BARS TO MINIMIZE CORROSION POTENTIAL.
8. THE INTERFACE BETWEEN THE SLAB AND THE PIER CAP MAY BE POURED SEPARATELY. THE SLAB-TO-PIER INTERFACE SHALL BE ROUGHENED (WITH APPROXIMATELY 1" WIDE X 2" DEEP GROOVES) IN THE IMMEDIATE REGION OF THE PIER CAP REBAR. THE CONSTRUCTION JOINT SHALL BE SEALED WITH CONCRETE SEALER PRIOR TO BACKFILLING. NO OTHER COLD JOINTS ARE ALLOWED.
9. TOP OF PIER CAP SHALL BE TROWELLED LEVEL AND SMOOTH.
10. BACKFILL SHALL BE COMPACTED MATERIAL FROM EXCAVATION. BACKFILL SHALL BE COMPACTED IN HORIZONTAL LIFTS NOT GREATER THAN 9", AND SHALL BE COMPACTED USING MOTORIZED COMPACTION EFFORT.
11. SLAB FOUNDATION DESIGN BASED ON CODE PRESCRIBED: SOIL PER 2019 CBC, TABLE 1806.2 CLASS 5 MAT'L.
12. TOTAL VOLUME OF CONCRETE REQUIRED FOR THIS SLAB IS APPROXIMATELY 2.7 CU. YDS.

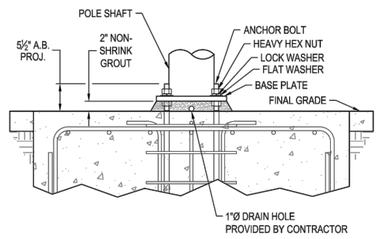
SLAB PLAN VIEWS

SCALE: 1/2" = 1'-0" — 1



SLAB ELEVATION VIEW

SCALE: 5/8" = 1'-0" — 2



* NON-SHRINK GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 6,000 PSI.

BASE PLATE SHALL NOT BE GROUTED UNTIL AFTER THE STRUCTURE HAS BEEN INSTALLED AND PLUMBED.

BASE GROUTING DETAIL

SCALE: 1/2" = 1'-0" — 3

FACTORED BASE REACTIONS

MOMENT	=	18.0 FT-KIPS
SHEAR	=	0.74 KIPS
VERTICAL	=	1.09 KIPS

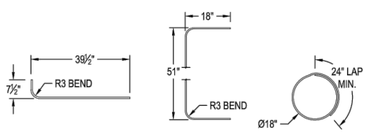
REINFORCEMENT REQUIREMENTS

TOP REBAR MAT:
(16) #6 A615 GR. 60 BARS (8) EACH WAY 4'-9" LONG W/ 18" ENDS, SPACED AT 8.2" O.C.

BOTTOM REBAR MAT:
(16) #6 A615 GR. 60 BARS (8) EACH WAY 4'-9" LONG W/ 18" ENDS, SPACED AT 8.2" O.C.

FORMED HORIZONTAL TIES:
(6) #4 A615 GR. 60 FORMED TIES, 18"Ø AS SHOWN SPACED AT 6" O.C.

FORMED "L" VERTICAL BARS:
(4) #5 A615 GR. 60 FORMED BARS, FORMED AS SHOWN EVENLY SPACED WITHIN HORIZONTAL TIES



"L" BAR MAT BAR HORIZ. TIE

REBAR DETAILS

SCALE: 1/4" = 1'-0" — 4

CONSULTANT
WESTERN UTILITY / TELECOM, INC.
5032 SALEM DALLAS HWY
SALEM, OR 97304
Ph: 503-587-0101 Fx: 503-316-1864
WesternUtilityTelecom.com

CLIENT: CROWN CASTLE

PROJECT: 35' TALL, ROUND TAPERED ANTENNA/LIGHT POLE

LOCATION: VARIOUS NODE LOCATIONS IN **CULVER CITY, CA** LOS ANGELES COUNTY

ISSUED FOR: PERMIT OR INSTALL

DW'N BY	CK'D BY	DATE
DVD	AWM	17DEC20

REVISIONS

REV.	CHANGES	DATE	BY
A	UPDATED PER REVIEW	22DEC20	JLH

ENGINEER SEAL

SHEET TITLE: ALTERNATE SLAB FOUNDATION INSTALLATION

WUT PROJECT NUMBER: **20-0375**

DRAWING NUMBER: **PD-002055**

PAGE NUMBER: **F-2**

REV:	DATE/BY:	REVISION DESCRIPTION
B	08/09/2022 JT	90% CDs FOR REVIEW
C	08/17/2022 JT	90% CDs FOR REVIEW
D	08/31/2022 JT	90% CDs FOR REVIEW
E	09/09/2022 JT	90% CDs FOR REVIEW
1	01/17/2023 MG	PLAN CHECK COMMNETS

ENGINEER/CONSULTANT:

XD Industries
25422 TRABUCO ROAD
SUITE 105-627
LAKE FOREST CA 92630

CLIENT:

OWNER/DEVELOPER: CROWN CASTLE
200 SPECTRUM CENTER DRIVE, 19TH FLOOR
IRVINE, CA 92618

STAMP:

ENGINEER: **CHRIS S. LEE**
PHONE: **949.468.9702** EMAIL: **CLEE@XD-IND.COM**
ANY REVISIONS TO PLANS DURING CONSTRUCTION MUST BE APPROVED BY ENGINEER OF RECORD

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SITE INFO:

SITE NAME: CA002_CLC_CULVER_010 - A

SITE ADDRESS:
11317 WASHINGTON PL.
CULVER CITY, CA 90066
LAT: 34.007113
LONG: -118.416993

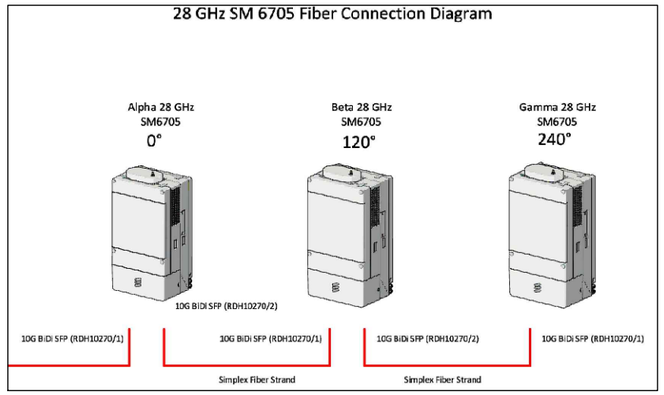
SHEET TITLE: FOUNDATION DETAILS

DRAWING INFO

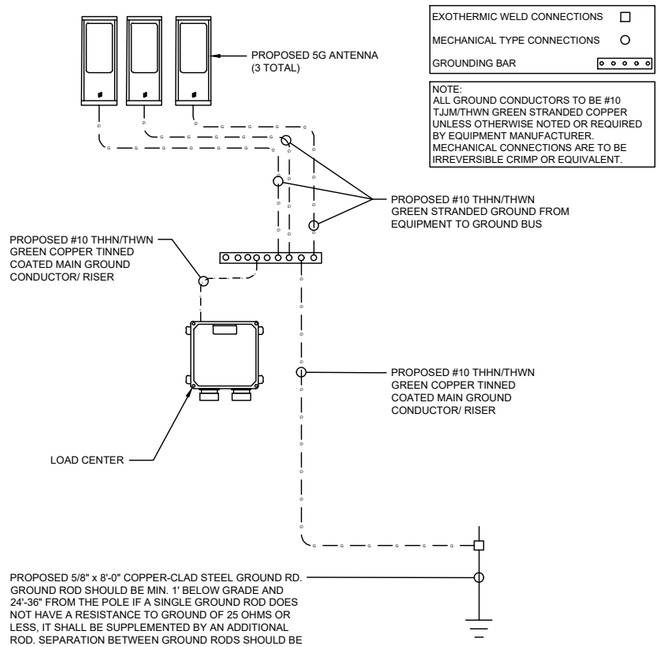
DRAWN BY:	CHECKED BY:
MG	RS

SHEET NUMBER: S-3

01/17/2023/ CA002_CLC_CULVER_010 - A / U22-0413



RF PLUMBING DIAGRAM | 3

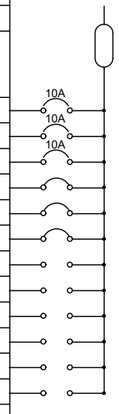


GROUNDING SCHEMATIC | 2

PANEL CIRCUIT AND LOAD SCHEDULE

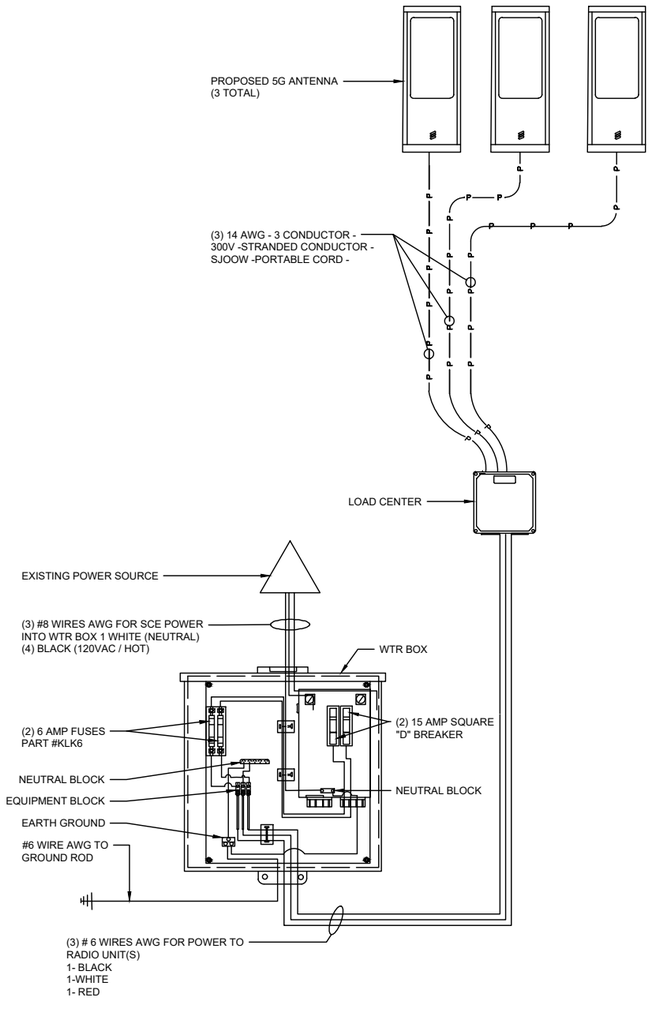
	LOAD DESCRIPTION	QTY	UNIT V.A.	TRIP	POLES	WIRE SIZE	K.A.I.C	WIRE TYPE
1	ERICSSON SM6705	1	500	10A	1	12		
2	ERICSSON SM6705	1	500	10A	1	12		
3	ERICSSON SM6705	1	500	10A	1	12		
4		1			1			
5		1			1			
6		1			1			
7		1			1			
8		1			1			
9		1			1			
10		1			1			
11		1			1			
12		1			1			
TOTAL NON-CONTINUOUS								
TOTAL KVA			1,500	VOLTAGE: 120/240 V			PHASE: 1	
TOTAL AMPS			12.5	MAIN LUG:			WIRES: 3	

TO RADIOS



LOAD SCHEDULE | 4

NOTE:
UTILITY DESIGN AND RUNS ARE PRELIMINARY. PENDING FINAL DESIGN FROM UTILITY PROVIDERS.



ONE-LINE DIAGRAM | 1

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ENGINEER/CONSULTANT:

XD Industries
25422 TRABUCO ROAD
SUITE 105-627
LAKE FOREST CA 92630

CLIENT:

OWNER/DEVELOPER:

CROWN CASTLE
200 SPECTRUM CENTER DRIVE, 19TH FLOOR
IRVINE, CA 92618

STAMP:

ENGINEER: **CHRIS S. LEE**
PHONE: **949.468.9702** EMAIL: **CLEE@XD-IND.COM**
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LAT: 34.007113
LONG: -118.416993

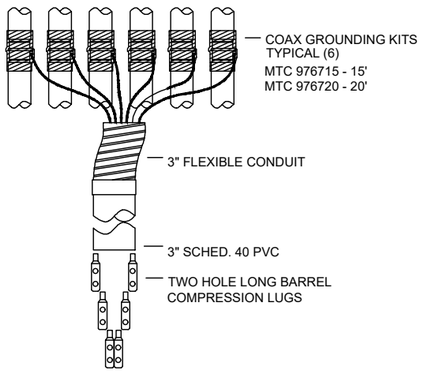
SHEET TITLE:
POLE SPECIFICATION

DRAWING INFO

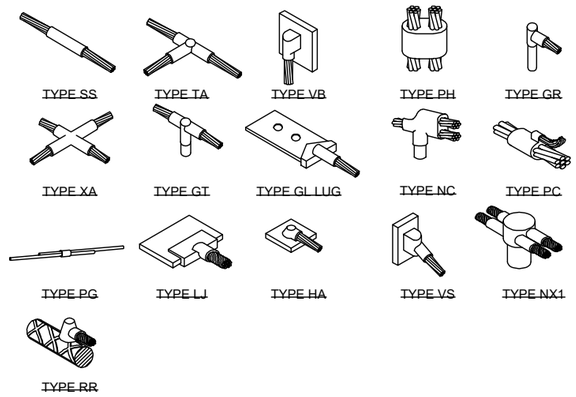
DRAWN BY:	CHECKED BY:
MG	RS

SHEET NUMBER:
E-1

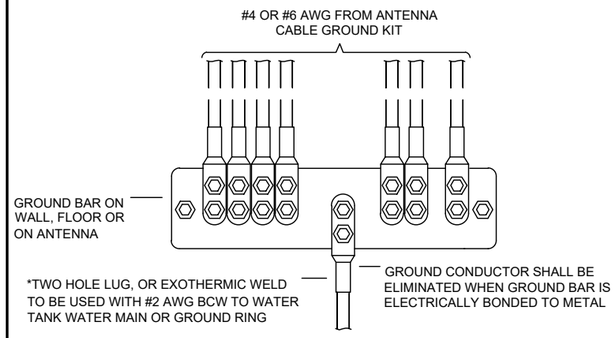
01/17/2023/ CA002_CLC_CULVER_010 - A / U22-0413



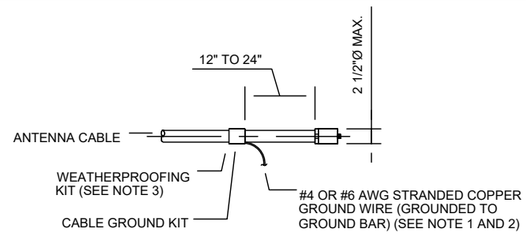
COAX GROUND KIT | 3



TYPICAL CADWELD TYPES | 2



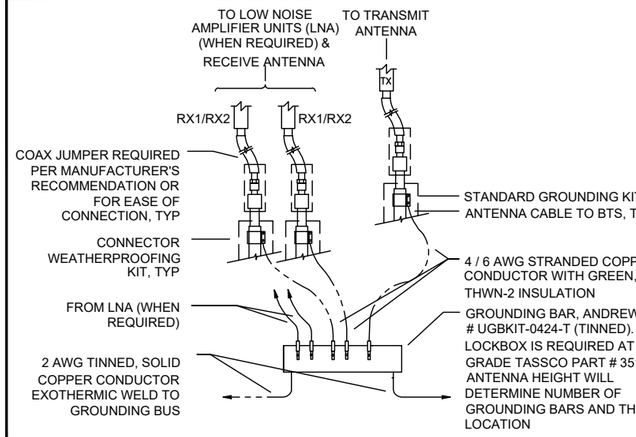
WIRE TO GROUND BAR CONNECTION | 1



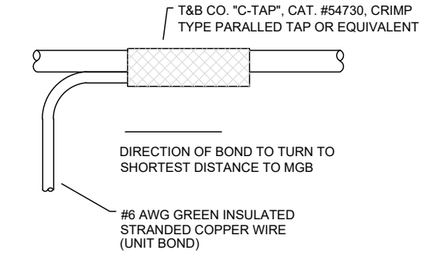
NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR
2. GROUNDING KIT SHALL BE ANDREW SUREGROUND TYPE KIT WITH TWO-HOLE LUG
3. WEATHER PROOFING SHALL BE ANDREW TWO-PART TAPE SUPPLIED WITH KIT. COLD SHRINK SHALL NOT BE USED

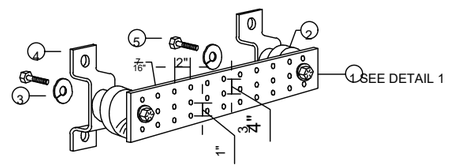
CABLE GROUND KIT | 6



GROUNDING BAR CONNECTION | 5



GROUNDING WIRE CONNECTION | 4

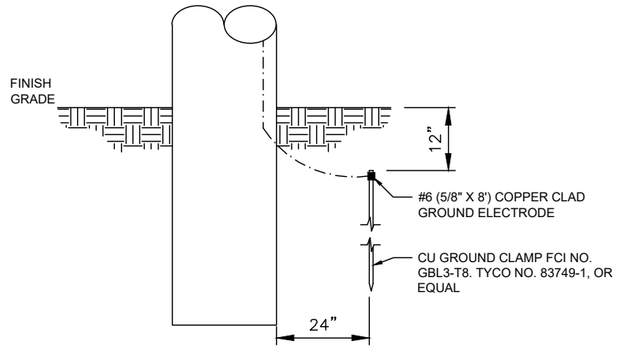


~~LEGEND:~~

1. COPPER GROUND BAR, 1/4"X 4"X 20", NEWTON INSTRUMENT CO. CAT. NO. B-6142 OR EQUAL. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION. (ACTUAL GROUND BAR SIZE WILL VARY BASED ON NUMBER OF GROUND CONNECTIONS)
2. INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4 OR EQUAL
3. 5/8" LOCKWASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8 OR EQUAL WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT NO. A-6056 OR EQUAL
4. 5/8-11 X 1" HHCS BOLTS, NEWTON INSTRUMENT CO. CAT NO. 3012-1 OR EQUAL
5. INSULATORS SHALL BE ELIMINATED WHEN BONDING DIRECTLY TO STRUCTURE. CONNECTION TO STRUCTURE SHALL BE PER MANUFACTURERS RECOMMENDATIONS

GROUND BAR | 9

NOT USED | 8



NOTE:
GROUND ROD INSTALLATION FOR UTILITY POLES
UTILITY POLE GROUND SHALL COMPLY WITH PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA GENERAL ORDER NO. 95 (SECTION 54.9, 92.4)

GROUND ROD | 7

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1	01/17/2023 MG	PLAN CHECK COMMNETS

ENGINEER/CONSULTANT:
XD Industries
25422 TRABUCO ROAD
SUITE 105-627
LAKE FOREST CA 92630

CLIENT:
OWNER/DEVELOPER:
CROWN CASTLE
200 SPECTRUM CENTER DRIVE, 19TH FLOOR
IRVINE, CA 92618

STAMP:

REGISTERED PROFESSIONAL ENGINEER
CHRIS S. LEE
No.61054
EXP: 12/31/2024
CIVIL
STATE OF CALIFORNIA

ENGINEER: **CHRIS S. LEE**
PHONE: **949.468.9702** EMAIL: **CLEE@XD-IND.COM**
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SITE ADDRESS:
11317 WASHINGTON PL.
CULVER CITY, CA 90066
LAT: 34.007113
LONG: -118.416993

SHEET TITLE:
GROUNDING DETAILS

DRAWING INFO

DRAWN BY:	CHECKED BY:
MG	RS

SHEET NUMBER:
G-1

01/17/2023 / CA002_CLC_CULVER_010 - A / U22-0413

TRAFFIC CONTROL PLANS GENERAL NOTES:

1. THE CONTRACTOR SHALL PROVIDE FOR ACCESS TO ALL ADJACENT PROPERTIES AND DRIVEWAYS AT ALL TIMES.
2. ALL SIGNS SHALL BE REFLECTORIZED AND STANDARD SIZE.
3. ALL TUBULAR DELINEATORS AND CONES SHALL BE 28" MINIMUM HEIGHT. REFLECTORIZED AND MAINTAINED ERECT IN THE INDICATED POSITION AT ALL TIMES, AND SHALL BE REPAIRED, REPLACED, OR CLEANED AS NECESSARY TO PRESERVE THEIR APPEARANCE AND CONTINUITY, AND SHALL INCLUDE A 12" HIGH-INTENSITY REFLECTORIZED SLEEVE, IF USED DURING NIGHT-TIME HOURS.
4. THE CONTRACTOR SHALL MAINTAIN, ON A CONTINUOUS BASIS, ALL SIGNS, DELINEATORS, BARRICADES, ETC., TO ENSURE PROPER FLOW AND SAFETY OF TRAFFIC DURING CONSTRUCTION.
5. THE CONTRACTOR SHALL HAVE ALL SIGNS, DELINEATORS, BARRICADES, ETC., PROPERLY INSTALLED PRIOR TO COMMENCING CONSTRUCTION.
6. ADDITIONAL TRAFFIC CONTROLS, TRAFFIC SIGNS, OR BARRICADING MAY BE REQUIRED IN THE FIELD. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PLACEMENT OF ANY ADDITIONAL DEVICES NECESSARY TO ASSURE SAFETY TO THE PUBLIC AT ALL TIMES DURING CONSTRUCTION.
7. MOVE DELINEATORS AND/OR CONES TO SIDEWALK DURING NON-WORKING HOURS. REMOVE BARRICADES ETC. FROM TRAVEL LANE.
8. REMOVE OR TURN OFF SIGNS DURING NON-WORK HOURS.

GENERAL NOTES:

1. CONTRACTOR SHALL CONTACT LADOT AT (213) 485-2298 A MINIMUM OF SEVEN (7) WORKING DAYS PRIOR TO CONSTRUCTION TO POST "TEMPORARY TOW AWAY NO STOPPING" SIGNS.
2. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVEWAYS AT ALL TIMES.
3. CONTRACTOR MUST SET UP/TEAR DOWN DAILY.
4. CONTRACTOR MUST COVER TRENCH WITH STEEL PLATES AFTER WORKING HOURS AND FEATHER THE EDGE WITH AC AT A SLOPE OF 12:1. PLACE ADVANCE WARNING SIGNS FOR STEEL PLATES.
5. NIGHT AND SUNDAY WORK REQUIRE APPROVAL FROM THE POLICE COMMISSION.
6. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES TO TRAFFIC SIGNAL EQUIPMENT.
7. DAILY SET UP AND TEAR DOWN OF LANE CLOSURE.
8. PLACE STEEL PLATES OVER OPEN TRENCH TO ALLOW ACCESS TO DRIVEWAYS
10. INSTALL TEMPORARY NO STOPPING SIGNS
11. IF LA BSL IS PERFORMING FOUNDATION REPLACEMENT, ONLY PHASE 3 IS NEEDED

PEDESTRIAN NOTES:

A DEDICATED INDIVIDUAL WILL BE ASSIGNED THE RESPONSIBILITY OF ESCORTING PEDESTRIANS THROUGH THE WORK AREA IN ACCORDANCE WITH THREE MAJOR CONSIDERATIONS.

1. PEDESTRIANS SHOULD NOT BE LED INTO DIRECT CONFLICT WITH WORK SITE VEHICLES, EQUIPMENT OR OPERATIONS.
2. PEDESTRIANS SHOULD NOT BE LED INTO DIRECT CONFLICT WITH MAINLINE TRAFFIC MOVING THROUGH OR AROUND THE WORK SITE.
3. PEDESTRIANS SHOULD BE PROVIDED WITH A REASONABLE SAFE, CONVENIENT AND ACCESSIBLE PATH THAT REPLICATES AS NEARLY AS PRACTICAL THE MOST DESIRABLE CHARACTERISTICS OF THE EXISTING SIDEWALK OR 5' MINIMUM FOOTPATH.

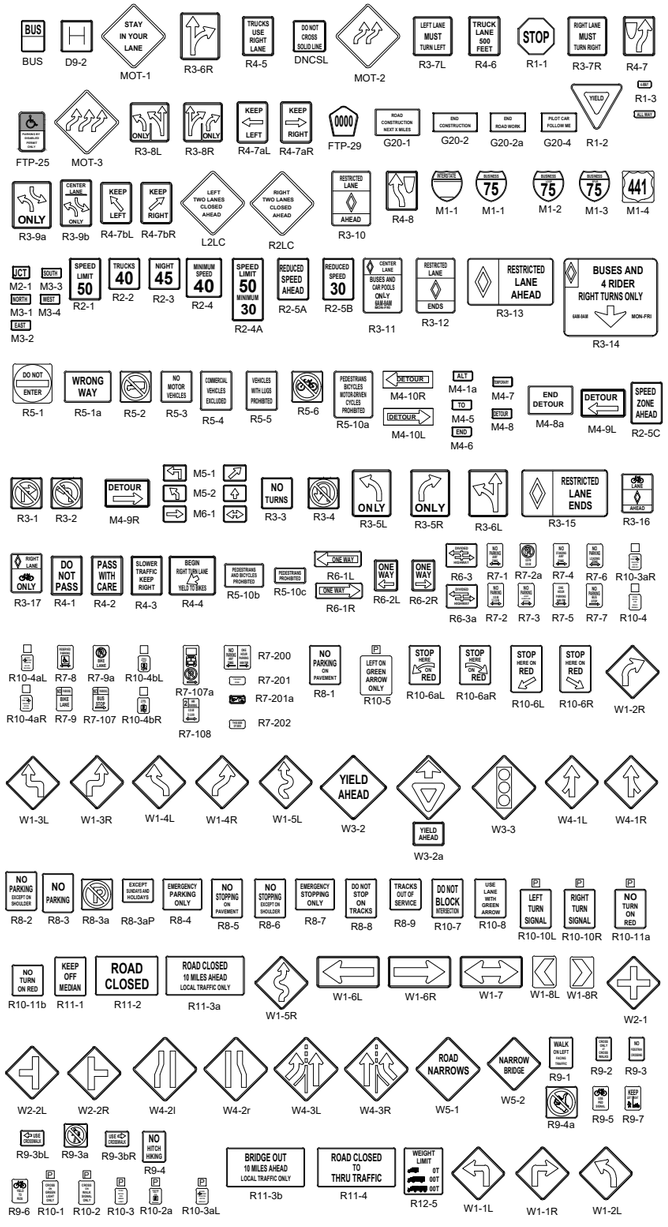
IF YOU DIG IN ANY STATE DIAL 811 FOR THE LOCAL "ONE CALL CENTER" - IT'S THE LAW

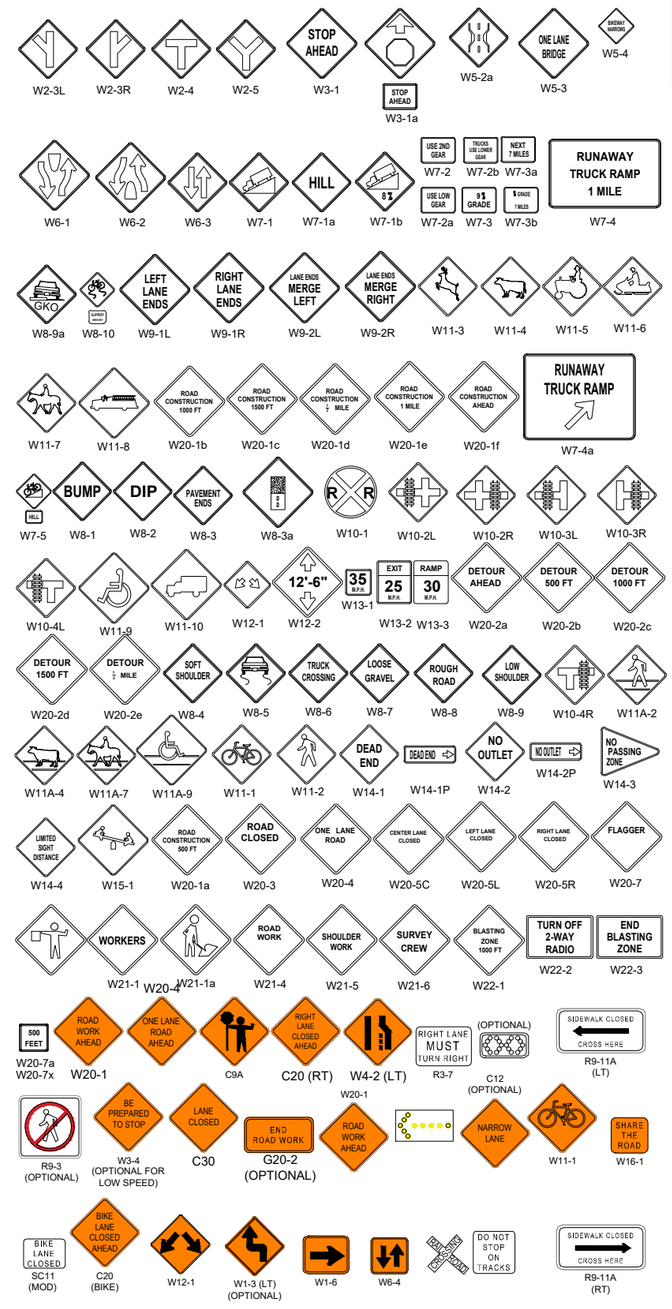
THE UTILITIES SHOWN HEREIN ARE FOR THE CONTRACTORS CONVENIENCE ONLY. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THESE PLANS. THE ENGINEER/SURVEYOR ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS SHOWN AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL THE UTILITIES WITHIN THE LIMITS OF THE WORK. ALL DAMAGE MADE TO THE EXISTING UTILITIES BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

MUTCD 2019 Sign Charts

Sheet 13 of 14 - Temporary Traffic Control Signs

This chart contains commonly used federal 2019 MUTCD sign, and is not meant to be used as a comprehensive sign chart or a stand-alone sign design tool. Otherwise, federal 2019 MUTCD sign designations are shown (formerly known as sign codes).





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25422 TRABUCO ROAD
SUITE 105-627
LAKE FOREST CA 92630

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OWNER/DEVELOPER:

CROWN CASTLE

200 SPECTRUM CENTER DRIVE, 19TH FLOOR
IRVINE, CA 92618

STAMP:

ENGINEER: **CHRIS S. LEE**
PHONE: **949.468.9702** EMAIL: **CLEE@XD-IND.COM**

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SITE ADDRESS:
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CULVER CITY, CA 90066
LAT: 34.007113
LONG: -118.416993

SHEET TITLE:
TRAFFIC CONTROL SIGNS & NOTES

DRAWING INFO

DRAWN BY: MG
CHECKED BY: RS

SHEET NUMBER:
TCP1

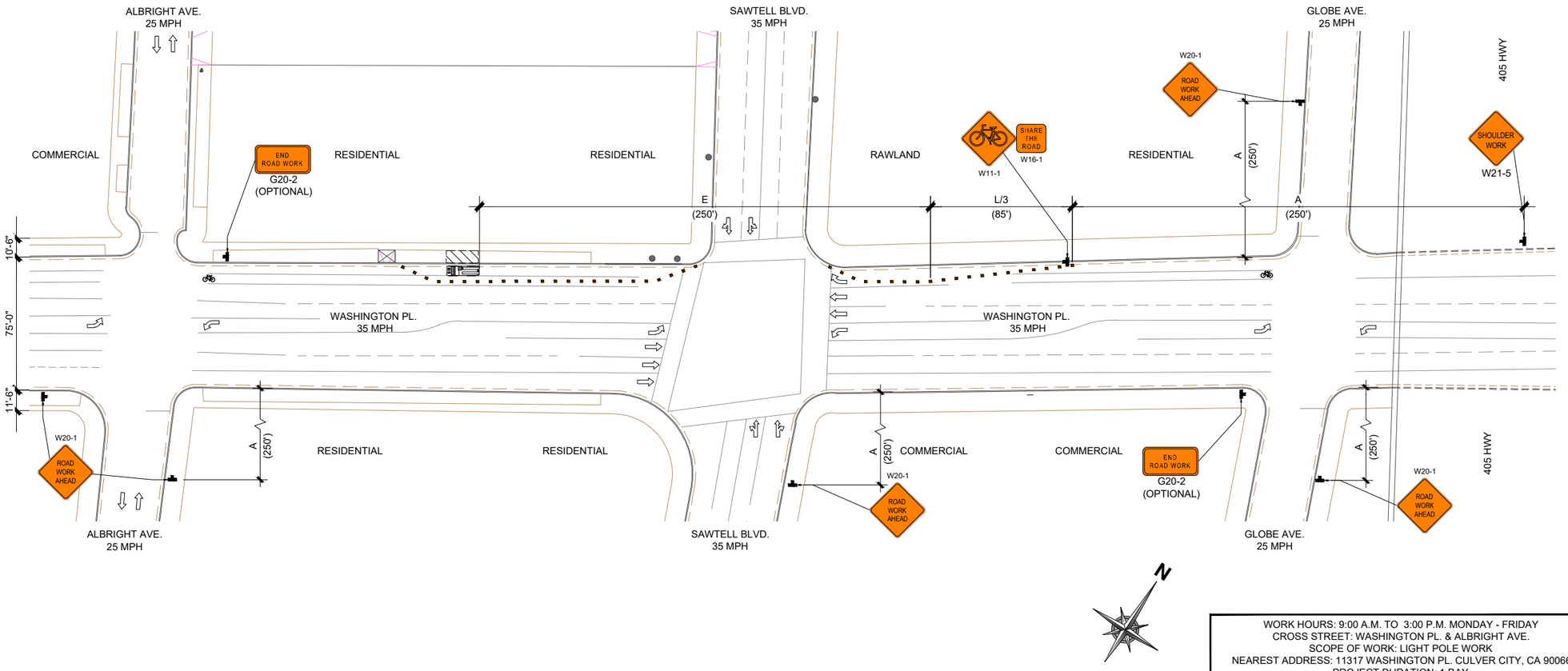
01/17/2023/ CA002_CLC_CULVER_010 - A / U22-0413

NOTES:

1. THE CONTRACTOR SHALL COORDINATE WITH TRANSPORTATION DEPARTMENT TO RELOCATE THE EXISTING BUS STOP IF NECESSARY AT LEAST 3 WEEKS IN ADVANCE. 310-253-5635.
2. LANE CLOSURES CAN ONLY OCCUR BETWEEN 9 AM TO 3 PM UNLESS OTHERWISE APPROVED BY THE PUBLIC WORKS DIRECTOR.
3. TRAFFIC CONTROL IS SUBJECT TO FIELD MODIFICATION TO THE SATISFACTION OF THE PUBLIC WORKS INSPECTOR.

NOTIFY PROPERTY OWNER(S) 72 HOURS PRIOR TO THE START OF WORK

MAINTAIN ACCESS TO DRIVEWAYS AT ALL TIMES



WORK HOURS: 9:00 A.M. TO 3:00 P.M. MONDAY - FRIDAY
CROSS STREET: WASHINGTON PL. & ALBRIGHT AVE.
SCOPE OF WORK: LIGHT POLE WORK
NEAREST ADDRESS: 11317 WASHINGTON PL. CULVER CITY, CA 90066
PROJECT DURATION: 1 DAY
WASHINGTON PL. USES:

USES WATCHBOOK 2019 PAGE: **30**

1 DAY PHASE

24"x36" SCALE: 1/32" = 1'-0"
11"x17" SCALE: 1/16" = 1'-0"

32' 24' 16' 8' 0" 32'

DRAWING INDEX

- = WORK AREA
- = TRAFFIC CONE
- = HIGH LEVEL WARNING DEVICE
- = PORTABLE SIGN
- = EXISTING SIGN
- = TYPE III BARRICADES
- = TYPE III BARRICADES W/SIGN
- = FLASHING ARROW BOARD
- = FLAGMAN
- = DIRECTION OF TRAFFIC FLOW
- = PORTABLE FLASHING BEACON
- = EXISTING DRIVEWAY
- = TYPE II BARRICADE
- r/c = EXISTING RED CURB
- = DOUBLE YELLOW LANE LINES
- = EXISTING STRIPING
- (S) = SIGNALIZED INTERSECTION
- = EXISTING LANE FLOW DIRECTION
- P.T.T.A.N.S.A.T.S. = POST TEMPORARY TOW AWAY NO STOPPING ANYTIME SIGNS
- P.T.T.A.N.S.A.T.S.O.S. = POST TEMPORARY TOW AWAY NO STOPPING ANYTIME SATURDAY ONLY SIGNS
- = SKID STEER LOADER
- = CONCRETE MIXER
- = SUPER DUMP TRUCK
- = WORK TRUCK
- = CRANE
- = BUCKET TRUCK

TEMPORARY TRAFFIC CONTROL PLAN DIMENSION GUIDELINES

SPEED	DIMENSION A/B/C ADVANCED WARNING SIGN SPACING	DIMENSION L MERGING TAPER LENGTH	DIMENSION L/2 SHIFTING TAPER LENGTH	DIMENSION L/3 MINIMUM SHOULDER TAPER	DIMENSION "E" BUFFER SPACE AND FLAGGER STATION STOPPING SIGHT DISTANCE			MAXIMUM CHANNELIZER TAPER SPACING	MAXIMUM CHANNELIZER TANGENT SPACING	MAXIMUM CHANNELIZER CONFLICT SPACING
MPH	FT	FT	FT	FT	FT (0%)	FT (-3%)	FT (-6%)	FT	FT	FT
25	100	125	65	45	155	160	165	25	50	12
30	250	180	90	60	200	205	215	30	60	15
35	250	245	125	85	250	260	275	35	70	17
40	250	320	160	110	305	315	335	40	80	20
45	350	540	270	180	360	380	400	45	90	22
50	350	600	300	200	425	450	475	50	100	25
55	500	660	330	220	495	520	555	50	100	25
60	500	720	360	240	570	600	640	50	100	25
65	500	780	390	260	645	685	730	50	100	25

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LAKE FOREST CA 92630

CLIENT:

OWNER/DEVELOPER:

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200 SPECTRUM CENTER DRIVE, 19TH FLOOR
IRVINE, CA 92618

STAMP:

REGISTERED PROFESSIONAL ENGINEER
CHRIS S. LEE
No.61054
EXP: 12/31/2024
CIVIL
STATE OF CALIFORNIA

ENGINEER: **CHRIS S. LEE**
PHONE: **949.468.9702** EMAIL: **CLEE@XD-IND.COM**

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DRAWING INFO

DRAWN BY: MG
CHECKED BY: RS

SHEET NUMBER:
TCP-2

01/17/2023 / CA002_CLC_CULVER_010 - A / U22-0413

Node **CA002_CLC_CULVER_010 - A** Primary & Alternate Candidates

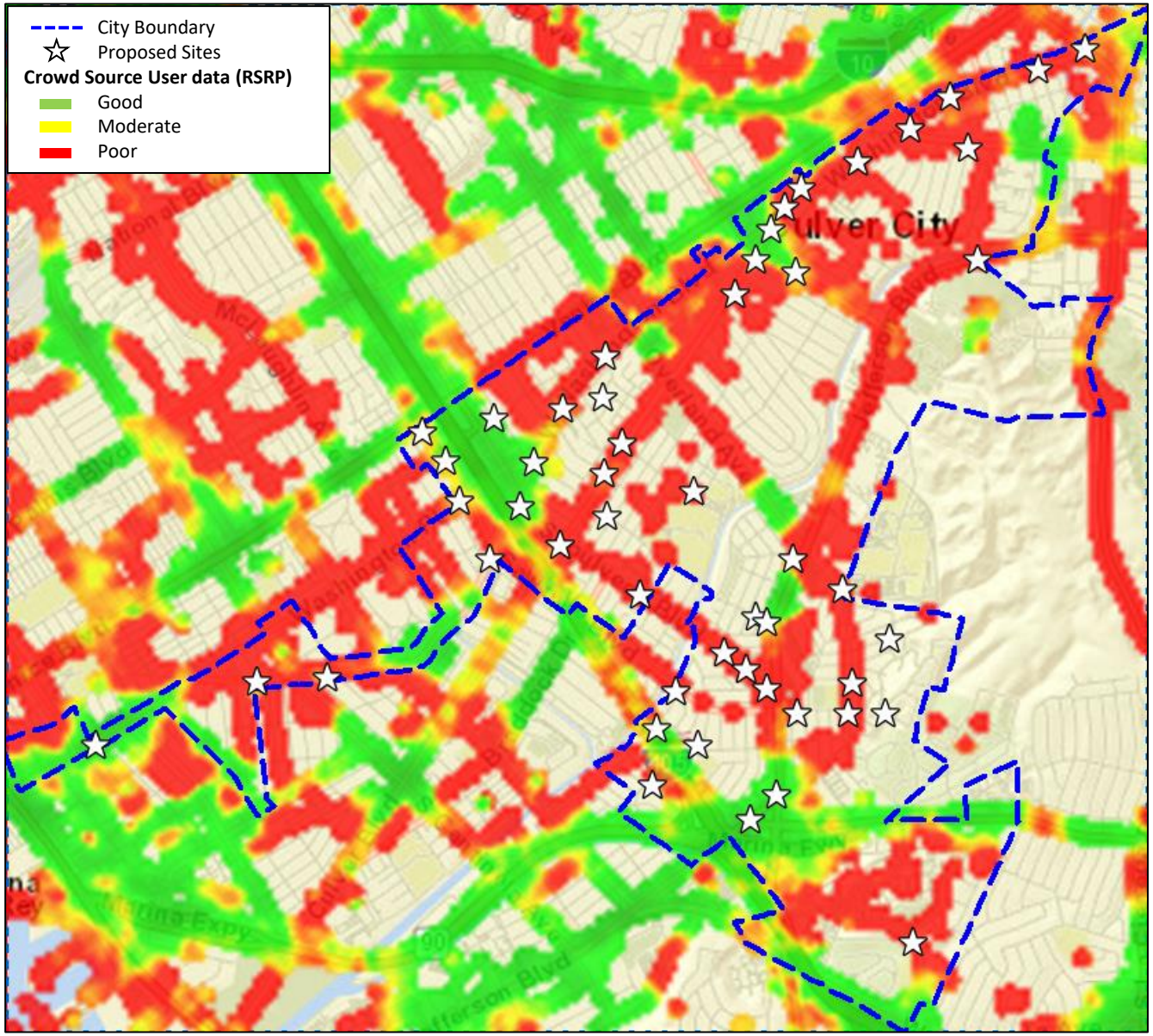
Coverage Objectives:

Improve Network Capacity and Coverage for customers in the area district defined by Washington Pl. between SawtelleAve. and Albright Ave.

Node ID	Candidate	Latitude	Longitude	Structure Type	Meet Coverage Objective	Comments
CA002_CLC_CULVER_010 - A	Primary	34.007115	-118.417000	SL	Yes	**Will meet** the coverage objectives
	Alternate 1	34.006949	-118.416873	SL	Yes	Will meet the coverage objectives, Pole is near a sewage drain
	Alternate 2	34.007316	-118.416644	Traffic Signal	Yes	Will meet the coverage objectives, Pole is a traffic signal, ADA ramp is close by
	Alternate 3	34.006906	-118.417328	SL	Yes	Will meet the coverage objectives

Node **CA002_CLC_CULVER_010 - A** Primary & Alternate Candidates

Crowd Source Mobile User data – Data from May 2022 through Oct 2022



Culver CITY
PUBLIC WORKS DEPARTMENT
Engineering Division

9770 CULVER BOULEVARD
CULVER CITY, CA 90232
PHONE (310) 253 - 5600
FAX (310) 253 - 5626

General Information and Checklist for Small Cell Wireless Telecommunication

Application Date: 11/21/2022

Job Address/Location: ROW Fronting 11317 Washington Pl, CULVER CITY, CA 90066

Description of Work: Installation of a Small Wireless Facility on a Replacement Streetlight

Working Days (required): 10

List of required documents:

- ☑ Location and Zoning Information
- ☑ Description of the Proposed Project
- ☐ Prior Approvals/Permits
- ☑ Map of Applicant's Existing Wireless Facilities and Coverage Assessment
- ☑ Site Plan
- ☐ Landscape Plan
- ☑ Site Photographs
- ☐ Visual Impact Analysis
- ☑ Structural Analysis
- ☑ Noise Study
- ☑ FCC Radio Frequency Standards
- ☐ Notice Letter
- ☑ Justification for Location/Collocation
- ☐ Waiver Request (if applicable)

Applicant: John Halminski on Behalf of Crown Castle Fiber LLC

Address: 200 Spectrum Center Drive Suite 1700, **City/Zip:** Irvine CA, 92328

Phone: 626.241.2117 **Email:** j.halminski@sure-site.com

Project Number: CA002_CLC_CULVER_010

DESCRIPTION

Streetlight / Utility Pole Number: SL-G5-04

Location / Coordinates: 34.007113°,-118.416993

Other notes:

EXCAVATION

☑ **Trenching** **Size of cut** See CD's for details

☐ **Potholing** **Depth of cut**

☐ **Bore Pit** **Total # of cuts**

Date Received by Staff:

EXPRESS MAPPING

4000 Barranca Pkwy #250
Irvine CA 92604
PHONE OR TEXT (949) 771-0051
orders@expressmapping.com

Certification of Preparation

The attached list includes the names and addresses of all property owners & occupants within 500' of the exterior boundaries of the following address/APN

Address: CA002_CLC_Culver_010-A

Latitude & Longitude: 34.007113, -118.416993

This information was obtained through First American Core Logic, a data source utilizing the county assessor rolls and other available sources. This information is generally deemed reliable, but is not guaranteed. Return of property addresses that are deemed undeliverable by the United States Postal Service is, therefore, a possibility.

Express Mapping. is not responsible for providing further investigation of said labels. Acceptance of this package acknowledges this fact.

Laura Emerson
_____

Laura Emerson
Express Mapping
orders@expressmapping.com

Date: 06/27/2022

Crown Castle
200 Spectrum Center Drive
Suite 1800
Irvine, CA 92618

11/21/2022

Sammy Romo
City of Culver City
Department of Public Works
9770 Culver Bvld
Culver City, CA 90232

Via electronic delivery

RE: Crown Castle application for installation of a Small Wireless Facility within the public ways of the Culver City; Crown Castle ID# CA002_CLC_CULVER_010

Dear Mr. Romo,

Crown Castle Fiber LLC ("Crown Castle") is submitting the accompanying complete application to install One Small Wireless Facility in the public right-of-way ("ROW"). Please be advised the Federal Communications Commission ("FCC") has adopted Rules that impact how the City must process this application. In addition, state law also limits your regulation of Crown Castle's access to the public rights of way.

Crown Castle's Deployment

Crown Castle provides telecommunications services to various customers, including wireless carriers. It does so via telecommunications networks installed in the public rights of way that integrate elements, including fiber optic cables as well as personal wireless services facilities, such as antennas and related equipment. The specific equipment sought to be installed by Crown Castle in this case is set forth in the accompanying permit application and meets the definition of Small Wireless Facility provided in the Code of Federal Regulation. [1]

Pursuant to the laws of California, Crown Castle has been granted a certificate of public convenience and necessity ("CPCN") by the California Public Utility Commission. As a result, Crown Castle must be granted access to the public rights of way in the same manner and on the same terms applicable to other certificated telecommunications providers and utilities. [2]

[1] See 47 CFR § 1.6002(l).
[2] See §253 of the Telecommunications Act of 1996.

Applicable Federal Regulations

Federal law and the FCC's rules implementing the law require that permit applications for the installation of Small Wireless Facilities be processed to a final decision by this local authority without undue delay. The applicable federal timeframe (the "Shot Clock period") to make a decision commences with the submission of an application.[3] Applications proposing the installation of Small Wireless Facilities on a preexisting structure "for the purpose of transmitting and/or receiving radio frequency signals for communications purposes"[4] are collocations, for which the applicable Shot Clock period to make a decision on is 90 days.[5]

A local authority must not merely take some action but must fully resolve an application within the applicable timeframe. This means the City must issue all permits required for construction to commence within the applicable Shot Clock period, absent permitted tolling.[6] Pursuant to FCC regulations, an application is deemed complete 10 days after the date of submission unless the authority provides written notice to the applicant that its application is incomplete.[7] If a local authority contends an application is incomplete (thereby tolling the Shot Clock period), within 10 days of submission, it must provide written notice specifying any items it claims are missing to make the application complete. Moreover, for each item alleged to be missing, a local authority must specify the code provision, ordinance, application instruction, or otherwise publicly-stated procedure requiring submission of the information.[8]

If a local authority properly complies with the above requirements regarding incompleteness, the Shot Clock period is tolled.[9] Once the Applicant submits the requested supplemental information, the Shot Clock period resets to 90 days and the local authority then has 10 days to identify which previously-requested items remain missing, if any.[10] However, the local authority cannot at that time request new information outside the scope of its original notice and "once the 10-day period passes, the period of review of the application may not thereafter be tolled for incompleteness."[11] Further, the Shot Clock period does not reset upon subsequent resubmissions.

Lastly, federal regulations place restrictions on the fees and costs state and local authorities may lawfully charge for communications infrastructure deployments. Fees for ROW access and "fees for the use of

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[3] *In the Matter of Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies, etc. Report and Order*, FCC 14-153, WT Docket No. 13-238, ¶ 258 (FCC Oct. 17, 2014) (the "Wireless Infrastructure Order").
[4] *Wireless Infrastructure Order*, at ¶ 178.
[5] *In the Matter of Accelerating Broadband Deployment by Removing Barriers to Infrastructure Investment*, FCC 18-133, WT Docket No. 17-79, ¶¶ 105, 140 (FCC Sept. 27, 2018) ("FCC Order 18-133").
[6] *See* FCC Order 18-133 at ¶¶ 132-134, 144. *See also, New Cingular Wireless PCS, LLC v. Town of Stoddard*, 2012 U.S. Dist. LEXIS 19453 *13-15 (D.N.H. Feb. 16, 2012) (finding a Shot Clock violation where a local government granted a rehearing on an application after the initial application review process had concluded and the Shot Clock had expired).
[7] See 47 CFR § 1.6003, *et seq*.
[8] *Id*.
[9] *Id*.
[10] *Id*.
[11] *Id*.

government property in the ROW, such as light poles, traffic lights, utility poles, and other similar property suitable for hosting Small Wireless Facilities, as well as application or review fees and similar fees imposed by a state or local government as part of their regulation of the deployment of Small Wireless Facilities inside and outside the ROW, violate Sections 253 or 332(c)(7) unless ... (1) the fees are a reasonable approximation of the state or local government's costs, (2) only objectively reasonable costs are factored into those fees, and (3) the fees are no higher than the fees charged to similarly-situated competitors in similar situations."[12]

Pursuant to federal regulations, the following fees are presumptively reasonable under Section 253 or Section 332(c)(7) of the Telecommunications Act:

(a) $500 for non-recurring fees, including a single up-front application that includes up to five Small Wireless Facilities, with an additional $100 for each Small Wireless Facility beyond five, or

(b) $1,000 for non-recurring fees for new structures (non-collocations) intended to support one or more Small Wireless Facilities; and

(c) $270 per Small Wireless Facility per year for all recurring fees, including any possible ROW access fee or fee for attachment to municipally-owned structures in the ROW.[13]

Crown Castle expressly reserves the right to challenge any fee in excess of the above safe harbor limits and which otherwise fails to conform to applicable laws and regulations.

Crown Castle's Applications

The Application Crown Castle submits with this letter proposes collocation and is therefore subject to the FCC 90-day Shot Clock period. As such, the Shot Clock period for the Application is scheduled to expire on **February 21st, 2023**. If the City contends that the Application is incomplete, it must issue a valid notice of incompleteness within 10 days of submittal. If no valid notice is issued, the Application will be deemed complete on **December 7, 2022** and the 90-day Shot Clock period will not toll, but continue to run until its expiration date on **February 21st, 2023.**

Crown Castle is committed to working with the City on this project. Please let us know how we can best assist the City in meeting its processing requirements in advance of the above deadlines. All written requests for additional information regarding may be sent to the following Crown Castle representative:

John Halminski – Network Real Estate Specialist – j.halminski@sure-site.com

[12] FCC 18-133 at ¶ 50.
[13] FCC 18-133 at ¶¶ 78-80.

We appreciate your attention to this matter.

Sincerely,

CROWN CASTLE FIBER LLC

John Halminski
Crown Castle
626.241.2117
j.halminski@sure-site.com

The CPCN was granted in the name of NTC Network, LLC ("NTC") by the California Public Utilities Commission's ("CPUC") Decision 99-06-083 on June 24, 1999 (Order starts on page 11 of the Decision PDF) and assigned the Utility Number U-6190-C.

NTC merged into Freedom Telecommunications LLC ("Freedom" - Utility Number U-7110-C) by way of a pro forma consolidation. NTC's Utility Number was transferred to Freedom as the surviving entity. The CPUC accepted NTC's Advice Letter No. 6 dated May 12, 2014 and Freedom's Advice Letter No. 4 dated May 12, 2014.

Freedom was merged into Crown Castle Fiber LLC ("Crown Castle Fiber") with Freedom's CPCN and Utility Number (U-6910-U) being transferred to Crown Castle Fiber – Freedom's Advice Letter No. 13 accepted on November 24, 2018

PUBLIC UTILITIES COMMISSION
505 Van Ness Avenue
San Francisco CA 94102-3298

Freedom Telecommunications, Llc
IEC (Corp ID 6190)
Status of Advice Letter 13
As of November 27, 2018

Subject: Pro Forma Consolidation including assumption of CPCN and Utility Number

Division Assigned: Telecommunications

Date Filed: 10-26-2018

Date to Calendar: 10-31-2018

Authorizing Documents: None

Disposition:	**Accepted**
Effective Date:	**11-24-2018**

Resolution Required: No

Resolution Number: None

Commission Meeting Date: None

CPUC Contact Information:
415-703-1565
TD_PAL_COORDINATOR@cpuc.ca.gov

AL Certificate Contact Information:
Tamar Finn
202-739-3000
tamar.finn@morganlewis.com

STATE OF CALIFORNIA **EDMUND G. BROWN JR.,** *Governor*

PUBLIC UTILITIES COMMISSION
505 Van Ness Avenue
San Francisco CA 94102-3298

To: Telecommunications Carrier Filing Advice Letter

From: Telecommunications Division PAL Coordinator

Subject: Your Advice Letter Filing

The Telecommunications Division of the California Public Utilities Commission has processed your recent Advice Letter (AL) filing and is returning an AL status certificate for your records.

The AL status certificate indicates:

Advice Letter Number
Name of Filer
CPUC Corporate ID number of Filer
Subject of Filing
Date Filed
Disposition of Filing (Accepted, Rejected, Withdrawn, etc.)
Effective Date of Filing
Other Miscellaneous Information (e.g., Resolution, if applicable, etc.)

The Telecommunications Division has made no changes to your copy of the Advice Letter Filing; please review your Advice Letter Filing with the information contained in the AL status certificate, and update your Advice Letter and tariff records accordingly.

All inquiries to the California Public Utilities Commission on the status of your Advice Letter Filing will be answered by Telecommunications Division staff based on the information contained in the Telecommunications Division's PAL database from which the AL status certificate is generated. If you have any questions on this matter please contact the:

Telecommunications Division PAL Coordinator at **(415) 703-1565**, or by e-mail to ***td_pal_coordinator@cpuc.ca.gov***

PUBLIC UTILITIES COMMISSION
505 Van Ness Avenue
San Francisco CA 94102-3298

Ntc Network, Inc
IEC (Corp ID 6190)
Status of Advice Letter 6
As of August 11, 2014

Subject: Pro Forma consilidation of NTC and Freedom Telecommunications, LLC (U-7110-C)

Division Assigned: Telecommunications

Date Filed: 05-13-2014

Date to Calendar: 05-16-2014

Authorizing Documents: None

Disposition:	**Accepted**
Effective Date:	**06-12-2014**

Resolution Required: No

Resolution Number: None

Commission Meeting Date: None

CPUC Contact Information:

415-703-1565
TD_PAL_COORDINATOR@cpuc.ca.gov

AL Certificate Contact Information:

Douglas Orvis
202-373-6000
douglas.orvis@bingham.com

PUBLIC UTILITIES COMMISSION
505 Van Ness Avenue
San Francisco CA 94102-3298

To: Telecommunications Carrier Filing Advice Letter

From: Telecommunications Division PAL Coordinator

Subject: Your Advice Letter Filing

The Telecommunications Division of the California Public Utilities Commission has processed your recent Advice Letter (AL) filing and is returning an AL status certificate for your records.

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Other Miscellaneous Information (e.g., Resolution, if applicable, etc.)

The Telecommunications Division has made no changes to your copy of the Advice Letter Filing; please review your Advice Letter Filing with the information contained in the AL status certificate, and update your Advice Letter and tariff records accordingly.

All inquiries to the California Public Utilities Commission on the status of your Advice Letter Filing will be answered by Telecommunications Division staff based on the information contained in the Telecommunications Division's PAL database from which the AL status certificate is generated. If you have any questions on this matter please contact the:

Telecommunications Division PAL Coordinator at **(415) 703-1565**, or by e-mail to ***td_pal_coordinator@cpuc.ca.gov***

Filed By	Advice Letter Number	Tier	Date Filed	Subject	Protested	Date Closed	Effective Date	Days Open	Disposition
Freedom Telecommunications, Inc.	4	1	5/13/2014	Pro Forma Consilidation of Freedom and NTC Network, LLC (U-6190-C)	No	08/11/14	05/13/14	90	Accepted

Mailed 6/24/99

Decision 99-06-083 June 24, 1999

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking on the Commission's Own Motion into Competition for Local Exchange Service.	Rulemaking 95-04-043 (Filed April 26, 1995)
Order Instituting Investigation on the Commission's Own Motion into Competition for Local Exchange Service.	Investigation 95-04-044 (Filed April 26, 1995) (Petition Nos. 132, 133, 134, 135, 136, 137,138, 139 140, and 142)

OPINION

By this decision, we grant the petitions for certificates of public convenience and necessity (CPCN) to operate as facilities-based competitive local carriers (CLCs) and to offer resold local exchange services within the territories of Pacific Bell (Pacific), GTE California Incorporated (GTEC), Roseville Telephone Company (RTC), and Citizens Telephone Company (CTC), for those petitioners as set forth in Appendix B of this decision, subject to the terms and conditions included herein. We also grant petitioners' requests for intrastate interLocal Access and Transport Areas (interLATA) and intraLATA authority on a statewide basis as designated in Appendix B.

I. Background

We initially established rules for entry of facilities-based CLCs in Decision (D.) 95-07-054. Under those procedures, we processed a group of candidates that filed petitions for CPCNs by September 1, 1995, and granted authority effective January 1, 1996, for qualifying CLCs to provide facilities-based competitive local

exchange service in the territories of Pacific and GTEC. We authorized CLCs seeking to provide resale-based services to begin operations on March 1, 1996. We further advised prospective entrants that any filings from nonqualifying CLCs, and any filing for CLC operating authority made after September 1, 1995, would be treated as standard applications and processed in the normal course of the Commission's business.

By D.96-12-020, effective January 1, 1997, we instituted quarterly processing cycles for granting CPCN authority for facilities-based CLCs in order to streamline the approval process for these particular carriers. Since we had been processing the environmental impact review required under the California Environmental Quality Act (CEQA) on a consolidated basis for groups of qualifying facilities-based CLCs, we concluded in D.96-12-020 that it would be more efficient and consistent to process other aspects of the CLC filings on a consolidated basis, as well. Accordingly, we directed that any CLC filing on or after January 1, 1997, for facilities-based CPCN authority was to make its filing in the form of a petition to be docketed in Investigation (I.) 95-04-044 that would be processed quarterly on a consolidated basis. CLCs seeking only resale authority continued to file individual applications.

On September 24, 1997, we adopted D.97-09-115 in which we extended the coverage of our adopted rules for local exchange competition to include the service territories of California's two midsized local exchange carriers (MSLECs), RTC and CTC. In that decision, we also authorized candidates seeking CLC CPCN authority within the MSLECs' territories to immediately begin making filings following the applicable entry rules previously adopted in D.95-07-054 and subsequent decisions. Specifically, requests for CLC CPCN authority for facilities-based service were to be filed in the form of a petition docketed in I.95-04-044, while resellers have sought authority through applications. In

D.98-01-055, we approved the first group of petitions for facilities-based CPCNs to offer local exchange service within the MSLEC territories.

In this decision, we approve CPCNs for those facilities-based CLCs which filed petitions during the first quarter of 1999 and satisfied all applicable rules for certification as established in Rulemaking (R.) 95-04-043. The Petitioners identified in Appendix B will be authorized to begin offering service upon the filing of tariffs and compliance with the terms and conditions set forth in this order.

II. CEQA Review

We have reviewed the petitions for compliance with CEQA. CEQA requires the Commission to assess the potential environmental impact of a project in order that adverse effects are avoided, alternatives are investigated, and environmental quality is restored or enhanced to the fullest extent possible. To achieve this objective, Rule 17.1 of the Commission's Rules requires the proponent of any project subject to Commission approval to submit with the petition for approval of such project a Proponent's Environmental Assessment (PEA). The PEA is used by the Commission to focus on any impacts of the project which may be of concern, and prepare the Commission's Initial Study to determine whether the project needs a Negative Declaration or an Environmental Impact Report (EIR).

Based on its assessment of the facilities-based petitions and PEAs, the Commission staff prepared a Negative Declaration and Initial Study generally describing the facilities-based Petitioners' projects and their potential environmental effects. The Negative Declaration prepared by the Commission staff is considered a Mitigated Negative Declaration (MND). This means that, although the initial study identified potentially significant impacts, revisions

which mitigate the impacts to a less than significant level have been agreed to by the Petitioners. (Pub. Res. Code § 21080(c)(2).)

A. Results of the Negative Declaration

On April 29, 1999, the Negative Declaration and Initial Study were sent to various city and county planning agencies, as well as public libraries throughout the state for review and comment by May 28, 1999. The Commission staff prepared a public notice which announced the preparation of the draft negative declaration, the locations where it was available for review, and the deadline for written comments. The public notice was advertised in newspapers throughout the state. The draft Negative Declaration was also submitted to the Governor's Office of Planning and Research where it was circulated to affected state agencies for review and comment.

Public comments on the draft Negative Declaration were reviewed and answered, as necessary. The Commission staff then finalized the MND covering all facilities-based CLC petitions listed in Appendix B. The finalized MND includes a list of mitigation measures with which the CLCs must comply as a condition of their CPCN authority. The MND includes a Mitigation Monitoring Plan to ensure that the mitigation measures are followed and implemented as intended. A copy of the MND is attached to this decision as Appendix D. We hereby approve the MND as finalized by staff. Concurrently with our approval of the MND, we grant the request of the Petitioners in Appendix B for CPCN authority subject to the terms and conditions set forth in our order below.

B. Required Payment of CEQA Deposit

Commission Decision 97-04-046 stipulates that all petitioners for CLC authority must submit with their filing an initial payment of $2000 to cover CEQA costs. The $2000 payment is used to cover the Commission's costs for

preparing and publishing the Mitigated Negative Declaration for each qualifying petitioner, as required by CEQA law. As of the date of this order, the Commission has received payment of the required $2000 deposit from each of the CLCs, as identified in Appendix B.

III. Review of CPCN Petitions

A. Overview

The CLC petitions have been reviewed for compliance with the certification-and-entry rules (Rules) adopted in Appendices A and B of D.95-07-054 and subsequent decisions in R.95-04-043/I.95-04-044. Consistent with our goal of promoting a competitive market as rapidly as possible, we are granting authority to all of the facilities-based CLCs that filed during the first quarter of 1999 and met the Rules. The Rules are intended to protect the public against unqualified or unscrupulous carriers, while also encouraging and easing the entry of CLC providers to promote the rapid growth of competition.

Petitioners had to demonstrate that they possessed the requisite managerial qualifications, technical competence, and financial resources to provide facilities-based local exchange service. Petitioners were also required to submit proposed tariffs which conform to the consumer protection rules set forth in Appendix B of D.95-07-054. In response to a notice of tariff deficiencies, the various petitioners submitted tariff corrections. Except for the outstanding deficiencies noted in Appendix C, the petitioners' proposed tariffs are found to be satisfactory with no deficiencies noted.

As prescribed in Rule 4.B.(1), prospective facilities-based CLCs must also show that they possess a minimum of $100,000 in cash or cash-equivalent resources, as defined in the Rules. In order to demonstrate that they possess the requisite financial resources, petitioners submitted copies of recent financial

statements. Because the financial statements contain commercially sensitive information, the petitioners filed motions for limited protective orders to restrict the financial statements and related documents containing commercially sensitive information from public disclosure pursuant to General Order (GO) 66-C. We grant those motions as prescribed in our order below.

Based upon our review, we conclude that each of the facilities-based Petitioners identified in Appendix B, has satisfactorily complied with our certification requirements for entry, including the consumer protection rules set forth in D.95-07-054, subject to correcting any tariff deficiencies in Appendix C, payment of the required CEQA deposit, and satisfying the additional conditions set forth in the ordering paragraphs below. Accordingly, we grant these Petitioners authority to offer facilities-based and resold local exchange service within the territories of Pacific and GTEC and, where requested, within the CTC and RTC territories. We also grant the statewide inter- and intraLATA authority as requested.

Pursuant to D.97-09-115, CLC resale authority within the RTC and CTC territories was authorized to become effective on or after April 1, 1998. As we stated in D.97-09-115, until the time that tariffed wholesale discount rates are adopted for RTC and CTC, individual CLCs certificated to resell local service within the CTC/RTC territories may enter into negotiations with each of the MSLECs to seek agreement on an interim wholesale discount rate. Disputes over the terms of resale arrangements may be submitted to the Commission for arbitration pursuant to the provisions of Section 252(b)(1) of the Telecommunication Act of 1996 and Commission Resolution ALJ-174.

B. Motion of DSLnet

DSLnet Communications, LLC ("DSLnet"), attempted to file a petition (# 142) for CLC local exchange authority on March 31, 1999, with the intention of being included in the Commission's quarterly "batch" review of such petitions filed during the first quarter of 1999. However, DSLnet subsequently learned that, due to certain confusion surrounding whether DSLnet's Petition was complete for purposes of the Commission's review, the Commission did not technically accept DSLnet's petition until April 13, 1999. As a result, it is now too late for DSLnet's Petition to be included in the Commission's quarterly review process for such petitions filed during the first quarter of 1999, at least to the extent DSLnet seeks facilities-based authority.

Nonetheless, in order to allow DSLnet to initiate competitive telecommunications service in California as soon as possible, DSLnet filed a motion on May 4, 1999, asking the Commission to: (1) immediately consider the portion of DSLnet's Petition seeking authority to resell local exchange telecommunications services, and (2) consider the portion of DSLnet's Petition seeking facilities-based authority in the Commission's quarterly review process for Petitions filed during the second quarter of 1999.

No party has objected to the motion of DSLnet. We consider the request of DSLnet for consideration of the resale portion of its petition in the current quarterly review to be reasonable, under the circumstances and shall grant it.

Due to the timing requirements relating to the Mitigated Negative Declaration, DSLnet's request for facilities-based authority cannot be considered during the current quarter, but shall be deferred to the subsequent quarterly review period.

IV. Compliance With Section 311

In compliance with Pub. Util. Code Section 311 (g)(2), this is an uncontested matter in which the decision grants the relief requested. Accordingly, pursuant to Pub. Util. Code Section 311(g)(2), the otherwise applicable 30-day period for public review and comment is being waived.

Findings of Fact

1. Nine petitioners filed requests during the first quarter of 1999 seeking a CPCN to provide competitive local exchange services in the territories of various California incumbent local exchange carriers as set forth in Appendix B.

2. An additional petitioner, DSLnet attempted to file during the first quarter, but the filing was not actually docketed until April 13, 1999. DSLnet subsequently filed an uncontested motion seeking to have its request for CLC resale authority to be considered as part of the first quarterly group of CLCs.

3. No protests to the CLC petitioners have been filed.

4. A hearing is not required.

5. By prior Commission decisions, we authorized competition in providing local exchange telecommunications service within the service territories of Pacific, GTEC, RTC, and CTC for carriers meeting specified criteria.

6. The Petitioners listed in Appendix B have demonstrated that each of them has a minimum of $100,000 in cash or cash equivalent reasonably liquid and readily available to meet its start-up expenses.

7. Petitioners' technical experience is demonstrated by supporting documentation which provides summary biographies of their key management personnel.

8. Except as noted in Appendix C, Petitioners have each submitted a complete draft of their initial tariff which complies with the requirements

established by the Commission, including prohibitions on unreasonable deposit requirements.

9. Commission D.97-04-046 stipulates that all petitioners for CLC authority must submit with their filing an initial payment of $2,000 to cover the Commission's costs for preparing and publishing the Mitigated Negative Declaration pursuant to CEQA.

10. Each of the CLCs, as identified in Appendix B, has submitted the required $2,000 CEQA deposit as of the date of this order.

11. By D.97-06-107, petitioners or applicants for CLC authority are exempt from Rule 18(b).

12. Exemption from the provisions of Pub. Util. Code §§ 816-830 has been granted to other nondominant carriers. (*See*, e.g., D.86-10-007 and D.88-12-076.)

13. The transfer or encumbrance of property of nondominant carriers has been exempted from the requirements of Pub. Util. Code § 851 whenever such transfer or encumbrance serves to secure debt. (*See* D.85-11-044.)

Conclusions of Law

1. Each of the Petitioners listed in Appendix B has the financial ability to provide the proposed services, and has made a reasonable showing of technical expertise in telecommunications.

2. Public convenience and necessity require the competitive local exchange services to be offered by Petitioners subject to the terms, conditions, and restrictions set forth below.

3. Each Petitioner is subject to:

   a. The current 0.0% surcharge applicable to all intrastate services except for those excluded by D.94-09-065, as modified by D.95-02-050, to fund the Universal Lifeline Telephone Service (Pub. Util. Code § 879; Resolution T-16245, December 3, 1998);

b. The current 0.192% surcharge applicable to all intrastate services except for those excluded by D.94-09-065, as modified by D.95-02-050, to fund the California Relay Service and Communications Devices Fund (Pub. Util. Code § 2881; Resolution T-16234; D.98-12-073, , December 17, 1998);

c. The user fee provided in Pub. Util. Code §§ 431-435, which is 0.11% of gross intrastate revenue for the 1998-1999 fiscal year (Resolution M-4789);

d. The current surcharge applicable to all intrastate services except for those excluded by D.94-09-065, as modified by D.95-02-050, to fund the California High Cost Fund-A (Pub. Util. Code § 739.30; D.96-10-066, pp. 3-4, App. B, Rule 1.C; Resolution T-16242 at 0.0% for 1999, December 3, 1998);

e. The current 3.8% surcharge applicable to all intrastate services except for those excluded by D.94-09-065, as modified by D.95-02-050, to fund the California High Cost Fund-B (D.96-10-066, p. 191, App. B, Rule 6.F., Resolution T-16244, December 3, 1998); and,

f. The current 0.05% surcharge applicable to all intrastate services except for those excluded by D.94-09-065, as modified by D.95-02-050, to fund the California Teleconnect Fund (D.96-10-066, p. 88, App. B, Rule 8.G, Resolution T-16165; August 1, 1998).

4. Petitioners should be exempted from Rule 18(b).

5. Petitioners should be exempted from Pub. Util. Code §§ 816-830.

6. Petitioners should be exempted from Pub. Util. Code § 851 when the transfer or encumbrance serves to secure debt.

7. Each of the Petitioners must agree to, and is required to, carry out any specific mitigation measures adopted in the Mitigated Negative Declaration (MND), attached as Appendix D, in compliance with CEQA.

8. With the incorporation of the specific mitigation measures in the final MND, the Petitioners' proposed projects will not have potentially significant adverse environmental impacts.

9. The Petitioners should be granted CPCNs subject to the terms, conditions, and restrictions set forth in the order below.

10. Any CLC which does not comply with our rules for local exchange competition adopted in R.95-04-043 shall be subject to sanctions including, but not limited to, revocation of its CLC certificate.

ORDER

IT IS ORDERED that:

1. A certificate of public convenience and necessity (CPCN), shall be granted to each of the Petitioners listed in Appendix B (Petitioners) to permit each of them to operate as a facilities-based provider of competitive local exchange telecommunications services, as a reseller of competitive local exchange telecommunications services within the service territories as noted in Appendix B and, as a statewide nondominant interexchange carrier (NDIEC), as noted in Appendix B, contingent on compliance with the terms identified in Appendix B and in the remainder of this order.

2. Each Petitioner shall file a written acceptance of the certificate granted in this proceeding prior to commencing service.

3. a. The Petitioners are authorized to file with this Commission tariff schedules for the provision of competitive local exchange, intraLATA (Local Access Transport Area) toll and intrastate interLATA services, as applicable. The Petitioners may not offer these services until tariffs are on file, and until any applicable deficiencies as noted in Appendix C have been corrected. Petitioners'

initial filing shall be made in accordance with General Order (GO) 96-A, excluding Sections IV, V, and VI, and shall be effective not less than one day after approval by the Telecommunications Division.

b. The Petitioners are competitive local carriers (CLCs). The effectiveness of each of their future tariffs is subject to the schedules set forth in Decision (D.) 95-07-054, Appendix A, § 4E.

A. "E. CLCs shall be subject to the following tariff and contract-filing, revision and service-pricing standards:

"(1) Uniform rate reductions for existing tariff services shall become effective on five (5) working days' notice to the Commission. Customer notification is not required for rate decreases.

"(2) Uniform major rate increases for existing tariff services shall become effective on thirty (30) days' notice to the Commission, and shall require bill inserts, or a message on the bill itself, or first class mail notice to customers at least 30 days in advance of the pending rate increase.

"(3) Uniform minor rate increases, as defined in D.95-07-054, shall become effective on not less than five (5) working days' notice to the Commission. Customer notification is not required for such minor rate increases.

"(4) Advice letter filing for new services and for all other types of tariff revisions, except changes in text not affecting rates or relocations of text in the tariff schedules, shall become effective on forty (40) days' notice to the Commission.

"(5) Advice letter filings revising the text or location of text material which do not result in an increase in any rate or charge shall become effective on not less than five (5) days' notice to the Commission.

"(6) Contracts shall be subject to GO 96-A rules for NDIECs, except interconnection contracts.

"(7) CLCs shall file tariffs in accordance with Public Utilities (Pub. Util.) Code Section 876."

4. The Petitioners may deviate from the following provisions of GO 96-A: (a) paragraph II.C.(1)(b), which requires consecutive sheet numbering and prohibits the reuse of sheet numbers, and (b) paragraph II.C.(4), which requires that "a separate sheet or series of sheets should be used for each rule." Tariff filings incorporating these deviations shall be subject to the approval of the Commission's Telecommunications Division. Tariff filings shall reflect all fees and surcharges to which Petitioners are subject, as described in Conclusion of Law 3. Petitioners are also exempt from GO 96-A Section II.G.(1) and (2) which require service of advice letters on competing and adjacent utilities, unless such utilities have specifically requested such service.

5. Each Petitioner shall file as part of its initial tariffs, after the effective date of this order and consistent with Ordering Paragraph 3, a service area map.

6. Prior to initiating service, each Petitioner shall provide the Commission's Consumer Services Division with the Petitioner's designated contact persons for purposes of resolving consumer complaints and the corresponding telephone numbers. This information shall be updated if the names or telephone numbers change or at least annually.

7. Where applicable, each Petitioner shall notify this Commission in writing of the date local exchange service is first rendered to the public within five days after service begins. The same procedure shall be followed for the authorized intraLATA and interLATA services, where applicable.

8. Each Petitioner shall keep its books and records in accordance with generally accepted accounting principles.

9. Petitioners shall each file an annual report, in compliance with GO 104-A, on a calendar-year basis using the information-request form developed by the Commission Staff and contained in Appendix A.

10. Petitioners shall ensure that its employees comply with the provisions of Pub. Util. Code § 2889.5 regarding solicitation of customers.

11. The certificate granted and the authority to render service under the rates, charges, and rules authorized will expire if not exercised within 12 months after the effective date of this order.

12. The corporate identification number assigned to each Petitioner, as set forth in Appendix B, shall be included in the caption of all original filings with this Commission, and in the titles of other pleadings filed in existing cases.

13. Within 60 days of the effective date of this order, each Petitioner shall comply with Pub. Util. Code § 708, Employee Identification Cards, reflecting its authority, and notify the Director of the Telecommunications Division in writing of its compliance.

14. Each Petitioner is exempted from the provisions of Pub. Util. Code §§ 816-830.

15. Each Petitioner is exempted from Pub. Util. Code § 851 for the transfer or encumbrance of property, whenever such transfer or encumbrance serves to secure debt.

16. If any Petitioner is 90 days or more late in filing an annual report or in remitting the fees listed in Conclusion of Law 4, Telecommunications Division shall prepare for Commission consideration a resolution that revokes that Petitioner's CPCN, unless that Petitioner has received written permission from Telecommunications Division to file or remit late.

17. The Final Mitigated Negative Declaration, including the Mitigation Monitoring Plan, attached as Appendix D of this decision is hereby approved and adopted.

18. Each of the Petitioners listed in Appendix B shall comply with the conditions and carry out the mitigation measures outlined in the adopted Mitigated Negative Declaration.

19. Each of the Petitioners shall provide the Director of the Commission's Energy Division with reports on compliance with the conditions and implementation of mitigation measures under the schedule outlined in the Mitigated Negative Declaration.

20. Petitioners shall comply with the consumer protection rules set forth in Appendix B of D.95-07-054.

21. Petitioners shall comply with the Commission's rules for local exchange competition in California that are set forth in Appendix C of D.95-12-056, including the requirement that CLCs shall place customer deposits in a protected, segregated, interest-bearing escrow account subject to Commission oversight.

22. Petitioners shall comply with the customer notification and education rules adopted in D.96-04-049 regarding the passage of calling party number.

23. Petitioners' respective motions for a limited protective order keeping designated documents containing financial and other operating information confidential are granted. Such documents will remain under seal for one year from today unless a petitioner makes a timely request for extension of confidential treatment of its documents by filing a separate motion with good cause shown.

24. The motion of DSLnet to have the resale portion of its CLC petition considered in the current quarterly cycle is granted.

25. The petitions listed in Appendix B are granted only as set forth above.

This order is effective today.

Dated June 24, 1999, at San Francisco, California.

RICHARD A. BILAS
President
HENRY M. DUQUE
JOSIAH L. NEEPER
JOEL Z. HYATT
CARL W. WOOD
Commissioners

Certified as a True Copy
of the Original

ASST. EXECUTIVE DIRECTOR, PUBLIC UTILITIES COMMISSION
STATE OF CALIFORNIA

APPENDIX A
Page 1 of 2

TO: ALL COMPETITIVE LOCAL CARRIERS AND INTEREXCHANGE TELEPHONE UTILITIES

Article 5 of the Public Utilities Code grants authority to the California Public Utilities Commission to require all public utilities doing business in California to file reports as specified by the Commission on the utilities' California operations.

A specific annual report form has not yet been prescribed for the California interexchange telephone utilities. However, you are hereby directed to submit an original and two copies of the information requested in Attachment A no later than March 31st of the year following the calendar year for which the annual report is submitted.

Address your report to:

California Public Utilities Commission
Auditing and Compliance Branch, Room 3251
505 Van Ness Avenue
San Francisco, CA 94102-3298

Failure to file this information on time may result in a penalty as provided for in §§ 2107 and 2108 of the Public Utilities Code.

If you have any question concerning this matter, please call (415) 703-1961.

APPENDIX A
Page 2 of 2

Information Requested of California Competitive Local Carriers and Interexchange Telephone Utilities.

To be filed with the California Public Utilities Commission, 505 Van Ness Avenue, Room 3251, San Francisco, CA 94102-3298, no later than March 31st of the year following the calendar year for which the annual report is submitted.

1. Exact legal name and U # of reporting utility.
2. Address.
3. Name, title, address, and telephone number of the person to be contacted concerning the reported information.
4. Name and title of the officer having custody of the general books of account and the address of the office where such books are kept.
5. Type of organization (e.g., corporation, partnership, sole proprietorship, etc.).

   If incorporated, specify:

   a. Date of filing articles of incorporation with the Secretary of State.

   b. State in which incorporated.
6. Commission decision number granting operating authority and the date of that decision.
7. Date operations were begun.
8. Description of other business activities in which the utility is engaged.
9. A list of all affiliated companies and their relationship to the utility. State if affiliate is a:

   a. Regulated public utility.

   b. Publicly held corporation.
10. Balance sheet as of December 31st of the year for which information is submitted.
11. Income statement for California operations for the calendar year for which information is submitted.

(END OF APPENDIX A)

APPENDIX B
Page 1 of 1

LISTING OF PETITIONERS GRANTED CPCN AUTHORITY

Name of Petitioner	Petition No.	Utility U-No.	Requested Authority Granted: Local Exchange[1] Facilities-based	Requested Authority Granted: Local Exchange[1] Resale	Requested Authority Granted: Statewide Inter/Intra-LATA
1. Eagle Communications of California, LLC	132	U-6182C	X	X	
2. US Data Highway Corp.[2],	133	U-6183C	X		
3. Seren Innovations, Inc. [2]	133	U-6184C	X	X	X
4. HTC Communications, LLC [2]	135	U-6185C	X	X	X
5. Network Plus, Inc.	136	U-6186C	X	X	X
6. Campuslink Communications Systems, Inc. [2]	137	U-6187C	X	X	X
7. XL Networks, Inc.	138	U-6188C	X	X	X
8. Triad Communications Corporation[2],	139	U-6189C	X	X	X
9. NTC Network, LLC[2]	140	U-6190C	X	X	X
10. DSLnet Communications, LLC [3]	142	U-6191C		X	

[1] Unless otherwise indicated, the authorized local exchange service territory of each CLC petitoner is limited to the ILEC service territories of Pacific, GTEC.

[2] The authorized local exchange territory for this carrier encompasses the ILEC service territories of Pacific, GTEC, RTC, and CTC.

[3] The facilities-based portion of the DSLnet petition shall be considered during the next quarterly review period.

APPENDIX C
LIST OF CLC Tariff Deficiencies

Eagle Communications, Pet. 132

Eagle Communications was to file a supplement to its petition as previously requested by the Telecommunications Staff to correct the many deficiencies to its tariffs. To date, it has not filed a supplement to correct the identified deficiencies. Eagle must file a revised set of tariffs that fully comply with D.95-07-054, D.95-12-056, D.95-12-057, D.96-04-049.

Network Plus – Pet. 136

Deficiencies in Network Plus's Proposed Tariffs

1. On each tariff sheet, (1) replace the phrase above the top horizontal line "Local Exchange Services" to "Competitive Local Carrier Tariff" and (2) add a vertical line on both the left and right margins.

2. Sheet No. 3, Preliminary Statement, 1.1, last paragraph. Replace the phrase "to resell local exchange telecommunications services within the State of California" to "*to provide facilities-based and resale local exchange services as a competitive local carrier in the service areas of Pacific Bell, GTEC, Citizens and Roseville Telephone Companies.*"

3. Sheet No. 13, Rule 1, Definitions. Include the definitions adopted in Decision 95-07-054 for: (1) Major Rate Increase, and (2) Minor Rate Increase.

4. Sheet No. 17, Rule 3, Customer Application for Service. Revise tariffs to fully comply with the provisions of Rule 2, Appendix B of Decision 95-07-054, (e.g., service initiation based on a written or oral agreement; confirmation letter

APPENDIX C
LIST OF CLC Tariff Deficiencies

5. briefly describing services, in case of an oral agreement; statement of terms/conditions for all new customers, etc.).

6. Sheet No. 18, Rule 5, Contracts and Agreements. Delete language re effectivity on five days' notice for "subsequent completed contracts." ***All*** contracts shall be subject to the 40-day notice until revised by the Commission.

7. Sheet No. 19. (1) Rule 6, Special Information Required on Forms. Revise tariff language to fully comply with the provisions of Rule 3 (A) and (B), Appendix B of Decision 95-07-054. (2) Rule 7, Establishment and Re-establishment of Credit. Include language on situations when deposits are not required. (See Rule 4, Appendix B of Decision 95-07-054.)

8. Sheet No. 20. (1) Rule 8, Advance Payments. Revise tariff language to indicate that advance payments shall be credited on the customer's first bill. (2) Deposits. Include language on the interest rate to be added to deposits. (See Rule 5, Appendix B of Decision 95-07-054.)

9. Sheet No. 21, Rule 9, Notices. (1) Revise tariff to indicate that cancellation of service by customers may be either verbal or written. (2) Include tariff language on rates and rate revisions and information on notices of discontinuance by a competitive local carrier. (See Rule 6, Appendix B of Decision 95-07-054.)

10. Sheet No. 22, Rule 10, Cancellation of Service by Company. Revise tariff to indicate that notice of discontinuance of service by a company for nonpayment of bills shall be provided in writing by first class mail to the customer not less than 7 calendar days prior to termination.

APPENDIX C
LIST OF CLC Tariff Deficiencies
Page 3 of 4

11. Sheet No. 25, Rule 16, Rendering and Payment of Bills. Note that a five-month back billing period for error files and one and one-half years back billing period for fraud are applicable only to interexchange service providers. Revise tariff accordingly. (See Decision 88-09-061.)

12. Sheet Nos. 27 through 31, Liability of the Company. Adopt either Pacific Bell's or GTEC's limitation of liability. The limitation of liability of these companies are appended to Decision 95-12-057.

13. Sheet 36, Rule 25, Additional Provisions, etc., Section D. Include language to indicate that deposits will be refunded ***with interest within 30 days*** after discontinuance of service or 12 months of service, whichever comes first.

14. Sheet 37, Rule 26, Additional Provisions, etc. Comply with the back billing provisions of Decision 88-09-061 for local exchange service providers.

15. Sheet 68, Custom Calling Services. Briefly describe each feature. Delete any reference to Caller ID service. This service can only be provided upon compliance with the customer notification and education rules adopted in Decision 96-04-049.

16. Sheet 72, Taxes and Surcharges. Update the applicable California surcharges. The current surcharges are: (1) Reimbursement Fee - 0.11%; (2) ULTS - 0.00%; (3) CHCF-A- 0.00%; (4) CHCF-B - 3.8%; (5) California Relay Service & Communications Devices Fund - 0.192%; (6) California Teleconnect Fund - 0.05%.

17. Include tariffs on: (1) Directories, (2) Non-published service, (3) Demarcation points, (4) Pro-rating of bills, (5) Change of service provider,

APPENDIX C
LIST OF CLC Tariff Deficiencies
Page 4 of 4

18. (6) Blocking of 976/900 calls, (7) Access to 911 by residential customers disconnected for nonpayment, (8) Switched access, (9) Number portability, (10) Privacy, (11) Universal Lifeline Telephone Service (ULTS) rates and income limitations, and (12) Sample forms. The forms may be filed with the company's initial tariff filing. (See Decision 95-07-054.)

NTC Network, LLC – Pet. 140

NTC has to file a full set of tariffs in compliance with D.95-07-054, etc.

(END OF APPENDIX C)

APPENDIX D

NEGATIVE DECLARATION (14)

Competitive Local Carriers' (CLCs)
Projects for Local Exchange Telecommunications Service throughout California.

The subject of this Negative Declaration are nine current petitions/applications for authorization to provide facilities based local telephone services. (See Appendix B).

The California Public Utilities Commission is the lead agency in approving these petitioners' intent to compete in the local exchange market. Additional approvals by other agencies may be required depending upon the scope and type of construction proposed by the petitioner (e.g. federal, other state agencies, and ministerial permits by local agencies).

Because the subject projects of the nine current petitioners are similar, with some modifications, to the projects proposed by the past petitioners, the Commission incorporates, in whole, Negative Declaration 13 for these nine petitions/applications, and will refer to the incorporated documents as "Negative Declaration 14" (Section 15150 of CEQA Guidelines). **The public comment period for the Draft Negative Declaration 14 begins on April 29, 1999 and expires on May 28, 1999.** Comments should be addressed to: John Boccio, Project Manager, California Public Utilities Commission, Energy Division, 505 Van Ness Avenue, San Francisco, CA 94102, Fax: (415) 703-2200, E-Mail: jbx@cpuc.ca.gov. For further information call Mr. Boccio at (415) 703-2641.

BACKGROUND

The California Public Utilities Commission's Decision 95-07-054 enables telecommunications companies to compete with local telephone companies in providing local exchange service. Previous to this decision, local telephone service was monopolized by a single utility per service territory. The Commission initially received 66 petitions from companies to provide competitive local telephone service throughout areas presently served by Pacific Bell and GTE California. The 66 petitioners included cable television companies, cellular (wireless) companies,[1] long-distance service providers, local telephone service providers, and various other telecommunication companies that specialize in transporting data.

Forty of the sixty-six petitions were for approval of facilities-based services, which means that the petitioners proposed to use their own facilities in providing local telephone service. The remaining 26 petitions were strictly for approval of resale-based services, meaning that telephone

1 Wireless companies covered in the Negative Declarations adopted by the Commission for entry in the local telephone market are also subject to Commission General Order (G.O. 159A). G.O. 159A delegates to local governments the authority to issue discretionary permits for the approval of proposed sites for wireless facilities. Commission adoption of the Negative Declarations is not intended to supersede or invalidate the requirements contained in General Order 159A.

service will be resold using another competitor's facilities. (Most of the facilities-based petitioners offer resale-based services as well.) The 40 facilities-based petitions indicated that physical modifications to existing facilities may be required, and construction of new facilities was a possibility in the long-term. The 26 resale-based petitions were strictly financial and billing arrangements that involved no construction and were therefore considered to be exempt from the California Environmental Quality Act (CEQA) (Public Resources Code Sections 21000 et seq.).

The Commission issued a draft Negative Declaration for the initial 40 facilities-based petitioners in October 1995. Comments on the draft Negative Declaration covered issues such as traffic congestion, public safety, cumulative impacts, aesthetic impacts, and physical wear on streets. These comments were addressed and the Negative Declaration was modified to some extent in response to the comments. In December 1995, Commission Decision D.95-12-057 adopted a final mitigated Negative Declaration finding that the proposed projects of the initial 40 facilities-based petitioners would not have potentially significant environmental effects with specified mitigation measures incorporated by the projects.

Following the adoption of D.95-12-057, the Commission received eight additional petitions for facilities-based services. The eight petitioners included cable television companies, resale-based providers approved by D.95-12-057, and other telecommunication companies. Following the public comment period, the Commission made minor modifications to the first Negative Declaration, and in September 1996, the Commission adopted the second Negative Declaration for these eight companies (D.96-09-072). (This Negative Declaration is sometimes referred to as "Negative Declaration II"). In January 1997, the Commission adopted a third Negative Declaration for eight more facilities-based petitioners. "Negative Declaration III" is virtually the same document as Negative Declaration II because the proposed projects of the eight petitioners were no different from the projects proposed by the two groups of petitioners that preceded them. Following the issuance of Negative Declaration III, ten subsequent Negative Declarations, Negative Declaration IV (D.97-04-011), Negative Declaration V (D.97-06-100), Negative Declaration VI (D.97-09-110), Negative Declaration VII (D97-12-084), Negative Declaration IX (D.98-03-066), Negative Declaration X (D. 98-06-067), Negative Declaration 11 (D.98-09-66), and Negative Declaration 12 (D.98-12-083) and Negative Declaration 13 (D.99-03-050) have been adopted by the Commission in granting authority to provide facilities based local telecommunication services under essentially the same circumstances. (Negative Declaration VIII addressed telecommunication companies petitioning to provide services in the Roseville Telephone Company and Citizens Telephone Company of California service areas only). Negative Declaration IV addressed nine petitioners, Negative Declaration V addressed six petitioners, Negative Declaration VI addressed eight petitioners Negative Declaration VII addressed five petitioners, Negative Declaration VIII addressed eleven petitioners, Negative Declaration IX addressed eleven petitioners, Negative Declaration X addressed, two petitioners and Negative Declaration 11 addressed eight petitioners and Negative Declaration 12 addressed twelve petitioners.

PROJECT DESCRIPTION

Following the adoption of Negative Declaration 13, the Commission received nine more petitions/applications for facilities-based services. These petitioners are the subject of this Negative Declaration. *(See Appendix B for a list of the current facilities-based petitioners.)*

Similar to the earlier petitioners, most of the current petitioners are initially targeting local telephone service for areas where their telecommunications infrastructure is already established, and therefore only minor construction is envisioned. Services provided will include but not be limited to voice, data, video, internet and other telecommunications services. The petitioners will need to make some modifications to their existing facilities; these modifications are minor in nature, the most common being the installation of a switch that connects potential customers to outside systems. Switch installation is necessary because customers receiving a particular type of service may not have access to local telephone networks. For example, customers receiving cable television service are presently unable to connect to local telephone networks because of the differences in modes of service. A switch installation by a cable television provider is one step that makes the connection possible. Switch installation is considered a minor modification because it typically involves a single installation within an existing central communication facility or building.

Besides the minor modifications, some of the companies are planning to install their own fiber optic cables to provide adequate service. Cables will be installed within existing utility underground conduits or ducts, or attached to utility poles with existing overhead lines whenever possible. Fiber optic cables are extremely thin, and existing conduits will likely be able to hold multiple cables. However, if existing conduits or poles are unable to accommodate additional cables, then new conduits or poles will need to be constructed by the petitioner. In this case, the petitioners will construct within existing utility rights-of-way. There is also the possibility that the petitioners may attempt to access other rights-of-way (such as roads) to construct additional conduits. Extension of existing rights-of-way into undisturbed areas is not likely, but a possibility.

The installation of fiber optic cables into underground conduits will vary in complexity depending upon the conditions of the surrounding area. For example, in urban, commercial areas, utility conduits can be accessible with minimal groundbreaking and installation simply requires stringing the cable through one end of the conduit and connecting it to the desired end. In this case, major excavation of the right-of-way is unnecessary. However, there may also be conditions where access to the conduit will require trenching and excavation.

Some of the petitioners have plans to construct service boxes or cabinets which contain batteries for the provision of power or emergency power. The dimensions of the boxes vary, but basically range from three to five feet in height. Depending upon the type of technology and facilities operated by the petitioner, smaller service boxes (approximately 3 inches in height) would be used for power supply and backup power. Those petitioners who have no plans to use such

boxes already have capable power and backup power within their existing facilities. The petitioners who will need such boxes, have committed to placing the boxes in existing buildings, or in underground vaults. If conditions do not permit building or underground installation, the petitioners would use small low-profile boxes that are landscaped and fenced.

While most of the petitioners will initially compete for customers in urban, commercial and residential zones where telecommunication infrastructure is already in place, some petitioners state their intention or right to compete on a state wide basis wherever competition is permitted. However it is unclear at this time if all areas will be affected by the projects because many petitioners are not specific where they intend to compete in the long-run.

ENVIRONMENTAL DETERMINATION

An Initial Study was prepared to assess the projects' potential effects on the environment, and the respective significance of those effects. Based on the Initial Study, the CLCs' projects for competitive local exchange service have the potential to cause significant adverse effects on the environment in the area of Land Use and Planning, Geological Resources, Water, Air Quality, Transportation and Circulation, Hazards, Noise, Public Services, Aesthetic and Cultural Resources. The projects will have less than a significant effect in other resource areas of the checklist. It should be noted that Findings 2 through 10 are for those projects which require work within existing utility rights-of-way for the purpose of modifying existing facilities or installing new facilities. Finding 1 is applicable for work outside of the existing utility rights-of-way.

In response to the Initial Study, the following specific measures should be incorporated into the projects to assure that they will not have any significant adverse effects on the environment. *(See Public Resources Code Section 21064.5.)*

As a general matter, many of the mitigation measures rely on compliance with local standards and the local ministerial permit process. Although local safety and aesthetic input is essential in minimizing the impact of the petitioner's construction, local jurisdictions cannot impose standards or permit requirements which would prevent petitioners from developing their service territories, or otherwise interfere with the statewide interest in competitive telecommunication service. Therefore, the petitioners' required compliance with local permit requirements is subject to this limitation.

The findings of the draft Negative Declaration were modified in response to comments filed during the public comment period from Negative Declarations II and IV. Changes are marked by *italics*.

1. The proposed projects could have potentially significant environmental effects for all environmental factors if a proposed project extends beyond the utility right-of-way into undisturbed areas or into other rights-of-way. ("Utility right-of-way" means any utility

right-of-way, not limited to only telecommunication utility right-of-way.) For the most part, the petitioners do not plan to conduct projects that are beyond the utility right-of-way. However, should this occur, the petitioner shall file a Petition to Modify its Certificate for Public Convenience and Necessity (CPCN). An appropriate environmental analysis of the impacts of these site specific activities shall be done.

2. The proposed projects will not have any significant effects on Population and Housing, Biological Resources, Energy and Mineral Resources, and Recreation if the proposed projects remain within existing utility right-of-way. There are no potential environmental effects in these areas, or adequate measures are incorporated into the projects to assure that significant effects will not occur.

3. The proposed projects could have potentially significant environmental effects on Geological Resources because possible upgrades or installations to underground conduits may induce erosion due to excavation, grading and fill. It is unclear as to how many times underground conduits may be accessed by the petitioners, but it is reasonable to assume that constant excavation by various providers could result in erosion in areas where soil containment is particularly unstable.

In order to mitigate any potential effects on geological resources, the petitioners shall comply with all local design, construction and safety standards by obtaining all applicable ministerial permits from the appropriate local agencies. In particular, erosion control plans shall be developed and implemented for areas identified as particularly unstable or susceptible to erosion. If more than one petitioner plans to excavate geologically sensitive areas, coordination of their plans shall be necessary to minimize the number and duration of disturbances.

4. The proposed projects could have potentially significant environmental effects on Water Resources because possible upgrades or installation to underground conduits may be in close proximity to underground or surface water sources. While the anticipated construction will generally occur within existing utility rights-of-way, the projects have the potential to impact nearby water sources if heavy excavation is required as the method of access to the conduits.

In order to mitigate any potential effects on water resources, the petitioners shall comply with all local design, construction and safety standards. This will include consultation with all appropriate local, state *and federal* water resource agencies for projects that are in close proximity to water resources, underground or surface. The petitioners shall comply with all applicable local, state *and federal* water resource regulations. Appropriate site specific mitigation plans shall be developed by the petitioners if the projects impact water quality, drainage, direction, flow or quantity. If there is more than one petitioner for a particular area that requires excavation, coordination plans shall be required to minimize the number and duration of disturbances.

5. The proposed projects could have potentially significant environmental effects on Air Quality because possible excavation efforts for underground conduits may result in vehicle emissions and airborne dust for the immediate areas of impact. This is especially foreseeable if more than one petitioner should attempt such work in the same locale. While the impact will be temporary, the emissions and dust could exceed air quality standards for the area.

The petitioners shall develop and implement appropriate dust control measures during excavation as recommended by the applicable air quality management district. The petitioners shall comply with all applicable air quality standards as established by the affected air quality management districts. If there is more than one petitioner for a particular area that requires excavation, coordination plans shall be required to minimize the number and duration of disturbances.

6. The proposed projects could have potentially significant environmental impacts on Transportation and Circulation and Public Services because uncoordinated efforts by the petitioners to install fiber optic cable could result in a cumulative impact of traffic congestion, insufficient parking and hazards or barriers for pedestrians. This is foreseeable if the competitors choose to compete in the same locality and desire to install their own cables. If the selected area is particularly dense with heavy vehicular or pedestrian traffic, the impacts could be enormous without sufficient control and coordination. Uncoordinated efforts may also adversely impact the quality and longevity of public street maintenance because numerous excavation activity depreciates the life of the surface pavement. *Impacts from trenching activity may occur in utility rights-of-way that contain other Public Services such as irrigation water lines.*

The petitioners[2] shall coordinate their efforts to install fiber optic cables or additional conduits so that the number of encroachments to the utility rights-of-way are minimized. These coordination efforts shall also include affected transportation and planning agencies to coordinate other projects unrelated to the petitioners' projects. *For example, review of a planning agency's Capital Improvement Plan (CIP) to identify impacted street projects would be an expected part of the coordination effort by the petitioner.* Besides coordinating their efforts, the petitioners shall abide by all local construction, maintenance and safety standards *(and state standards, if applicable)* by acquiring the necessary ministerial permits from the appropriate local agency *or CalTrans (if within a State right-of-way)*. Examples of these permits are excavation, encroachment and building permits. Appropriate construction start and end times, and dates if appropriate,

2 The petitioners discussed in this Negative Declaration shall coordinate with all CLCs including those listed in the first Negative Declaration adopted by the Commission (D.95-12-057) and all CLCs in future Negative Declarations. CLCs covered in the first Negative Declaration shall likewise be expected coordinate with those CLCs listed in this Negative Declaration or any subsequent one adopted by the Commission.

shall be employed to avoid peak traffic periods and to minimize disruption, especially if the petitioners' work encroaches upon transportation rights-of-way. *Petitioners shall consult with local agencies on appropriate restoration of public service facilities that are damaged by the construction and shall be responsible for such restoration.*

7. The proposed projects could have potentially significant hazard-related effects because uncoordinated construction efforts described above could potentially interfere with emergency response or evacuation plans. There is also potential for an increase in overhead lines and poles which carry hazard-related impacts.

The same mitigation plan as described in the previous section is applicable here as well, and shall be augmented by notice to and consultation with emergency response or evacuation agencies if the proposed project interferes with routes used for emergencies or evacuations. The coordination efforts shall include provisions so that emergency or evacuation plans are not hindered. If the projects result in an increase in overhead communication lines, the petitioner shall obtain the necessary ministerial permits to erect the necessary poles to support the lines. The Commission shall include these facilities as part of its overhead line regular inspections so that the requirements of G.O. 95 are met.

8. The proposed projects could have potentially significant environmental effects on Noise because it is possible some projects may require excavation or trenching. Although the effect is likely to be short-term, existing levels of noise could be exceeded.

If the petitioner requires excavation, trenching or other heavy construction activities which would produce significant noise impacts, the petitioner shall abide by all applicable local noise standards and shall inform surrounding property owners and occupants (particularly school districts, hospitals and the residential neighborhoods) of the day(s) when most construction noise would occur. Notice shall be given at least two weeks in advance of the construction.

9. The proposed projects could have potentially significant environmental effects on aesthetics because it is possible that additional lines on poles in utility rights-of-way could become excessive for a particular area. *Aesthetic impacts may also occur in utility rights-of-way that are landscaped.* Moreover, there is potential for an increase in above grade utility service boxes or cabinets which also carry aesthetic impacts.

Local aesthetic concerns shall be addressed by the petitioners for all facilities that are above-ground, in particular all types of service boxes or cabinets. The local land use or planning agency shall be consulted by the petitioner so that any site-specific aesthetic impacts are assessed and properly mitigated. *For example, this may include restoration of the landscaped utility rights-of-way.*

10. The proposed projects could have potentially significant environmental effects on

cultural resources because situations involving additional trenching may result in *disturbing known* or unanticipated archaeological or historical resources.

The petitioners shall conduct appropriate data research for known cultural resources in the proposed project area, and avoid such resources in designing and constructing the project. Should cultural resources be encountered during construction, all earthmoving activity which would adversely impact such resources shall be halted or altered so as to avoid such impacts, until the petitioner retains the service of a qualified archaeologist who will do the appropriate examination and analysis. The archeologist shall consult with appropriate federal, state and local agencies concerned with cultural resources, so that any potential impacts upon cultural resources are assessed and properly avoided or mitigated. The archeologist shall, in coordination with agencies, develop a plan for avoiding or mitigating any potential impacts upon those resources encountered.

In summary, the Mitigation Measures recommended in this environmental determination are:

A) All Environmental Factors: if a proposed project extends beyond the utility right-of-way into undisturbed areas or other right-of-way, the petitioner shall file a Petition to Modify its Certificate for Public Convenience and Necessity (CPCN). ("Utility right-of-way" means any utility right-of-way, not limited to only telecommunications utility right-of-way.) An appropriate environmental analysis of the impacts of these site specific activities shall be done.

If the projects remain within the utility right-of-way, the following Mitigation Measures are recommended:

B) General Cumulative Impacts: in the event that more than one petitioner seeks modifications or additions to a particular locality, the petitioners shall coordinate their plans with each other, and consult with affected local agencies so that any cumulative effects on the environment are minimized. These coordination efforts shall reduce the number and duration of disturbance to existing utility right-of-way. Regardless of the number of petitioners for a particular locality, the petitioner shall consult with, and abide by the standards established, by all applicable local agencies. Each petitioner shall file a quarterly report, one month prior to the beginning of each quarter, that summarizes the construction projects that are anticipated for the coming quarter. The summary will contain a description of the type of construction and the location for each project so that the local planning agencies can adequately coordinate multiple projects if necessary. The reports will also contain a summary of the petitioner's compliance with all Mitigation Measures for the projects listed. The quarterly reports will be filed with the local planning agencies where the projects are expected to take place and the Commission's Telecommunications Division. The Commission filing will be in the form of an informational advice letter. Subsequent quarterly reports shall also summarize the status

of the projects listed in previous quarterly report, until they are completed.

C) **Geological Resources**: the petitioners shall comply with all local design construction and safety standards by obtaining all applicable ministerial permits from the appropriate local agencies including the development and approval of erosion control plans. These shall be developed and implemented for areas identified as particularly unstable or susceptible to erosion. If more than one petitioner plans to excavate sensitive areas, coordination of their plans shall be necessary to minimize the number of disturbances. The petitioner's compliance with this Mitigation Measure shall be included in its quarterly report.

D) **Water Resources**: the petitioners shall consult with all appropriate local, state *and federal* water resource agencies for projects that are in close proximity to water resources, underground or surface. The petitioners shall comply with all applicable local, state *and federal* water resource regulations including the development of site-specific mitigation plans should the projects impact water quality, drainage, direction, flow or quantity. If there is more than one petitioner for a particular area that requires excavation, coordination plans shall be required to minimize the number of disturbances. The petitioner's compliance with this Mitigation Measure shall be included in its quarterly report.

E) **Air Quality**: the petitioners shall develop and implement appropriate dust control measures during excavation as recommended by the applicable air quality management district. The petitioners shall comply with all applicable air quality standards as established by the affected air quality management districts. If there is more than one petitioner for a particular area that requires excavation, coordination plans shall be required to minimize the number of disturbances. The petitioner's compliance with this Mitigation Measure shall be included in its quarterly report.

F) **Transportation and Circulation and Public Services**: the petitioners[3] shall coordinate their efforts to install fiber optic cables or additional conduits so that the number of disturbances to the utility rights-of-way are minimized. These coordination efforts shall include affected transportation and planning agencies to coordinate other projects unrelated to the petitioners' projects. *For example, review of a planning agency's Capital Improvement Plan (CIP) to identify impacted street projects would be an expected part of the coordination effort by the petitioner.* Besides coordinating their efforts, the petitioners shall abide by all local construction, maintenance and safety standards *(and state standards, if applicable)* by acquiring the necessary ministerial permits from the appropriate local agency *and/or CalTrans (if within State right-of-way)*. Examples of these permits are excavation, encroachment and building permits. Appropriate construction start and end times, and dates if appropriate, shall be employed

3 See Footnote #2.

to avoid peak traffic periods, especially if the petitioners' work encroaches upon transportation rights-of-way. Notice to the affected area (surrounding property owners and occupants) shall be given at least two weeks in advance of the construction. The notice will provide the time and dates of the proposed construction and discussion of potential impacts on traffic and circulation. *Petitioners shall consult with local agencies on appropriate restoration of public service facilities that are damaged by the construction and shall be responsible for such restoration.* The notice required for Mitigation Measures F and H shall be consolidated. The petitioner's compliance with this Mitigation Measure shall be included in its quarterly report.

G) Hazards: the petitioners shall use the Transportation and Circulation mitigation measure and augment it by informing and consulting with emergency response or evacuation agencies if the proposed project interferes with routes used for emergencies or evacuations. The coordination effort shall include provisions so that emergency or evacuation plans are not hindered. If the projects result in an increase in overhead communication lines, the petitioner shall obtain the necessary ministerial permits to erect the necessary poles to support the lines. The Commission shall include these facilities as part of its overhead line regular inspections so that the requirements of G.O. 95 are met. The petitioner's compliance with this Mitigation Measure shall be included in its quarterly report.

H) Noise: the petitioner shall abide by all applicable local noise standards and shall inform surrounding property owners and occupants, particularly school districts, hospitals and the residential neighborhoods, of the day(s) when most construction noise would occur if the petitioner plans excavation, trenching or other heavy construction activities which would cause any significant noise. Notice shall be given at least two weeks in advance of the construction. The notice required for Mitigation Measures F and H shall be consolidated. The petitioner's compliance with this Mitigation Measure shall be included in its quarterly report.

I) Aesthetics: All applicable local aesthetic standards will be addressed by the petitioners for all facilities that are above-ground, in particular all types of service boxes or cabinets. The local land use agency shall be consulted by the petitioner so that any site-specific aesthetic impacts are assessed and properly mitigated *by the petitioner. For example, this may include restoration of the landscaped utility rights-of-way.* Petitioner's compliance with this Mitigation Measure shall be included in its quarterly report.

J) Cultural Resources: *The petitioners shall conduct appropriate data research for known cultural resources in the proposed project area, and avoid such resources in designing and constructing the project.* Should cultural resources be encountered during construction, all earthmoving activity which would adversely impact such resources shall be halted or altered until the petitioner retains the service of a qualified archaeologist who will do the appropriate examination and analysis. The archaeologist will provide

proposals for any procedures to mitigate the impact upon those resources encountered. The treatment plan will be designed through coordination with the appropriate federal, state and local agencies. The petitioner's compliance with this Mitigation Measure shall be included in its quarterly report.

General Statement for all Mitigation Measures:

Although local safety and aesthetic input is essential in minimizing the impact of the petitioner's construction, local jurisdictions cannot impose standards or permit requirements which would prevent petitioners from developing their service territories, or otherwise interfere with the statewide interest in competitive telecommunication service. Therefore, the petitioners' required compliance with local permit requirements is subject to this limitation.

With the implementation of the mitigation measures listed in A) - J) above, the Commission should conclude that the proposed projects will not have one or more potentially significant environmental effects. The Commission should also adopt a Mitigation Monitoring Plan which will ensure that the Mitigation Measures listed above will be followed and implemented. The Mitigation Monitoring Plan is included with this Negative Declaration as Appendix C.

Paul Clanon for N. Walsh

Natalie Walsh, Program Manager
Analysis Branch
Energy Division

4-27-99

Date

INITIAL STUDY CHECKLIST

Environmental Factors Potentially Affected:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- ☒ Land Use and Planning
- ☐ Population and Housing
- ☒ Geological Problems
- ☒ Water
- ☒ Air Quality
- ☒ Transportation/Circulation
- ☐ Biological Resources
- ☐ Energy and Mineral Resources
- ☒ Hazards
- ☒ Noise
- ☒ Mandatory Findings of Significance
- ☒ Public Services
- ☒ Utilities and Service Systems
- ☒ Aesthetics
- ☒ Cultural Resources
- ☐ Recreation

Note: For construction outside of the utility rights-of-way, potential environmental impacts are too variable and uncertain to be specifically evaluated in this Initial Study, but are addressed in Environmental Determination 1 and Mitigation Measure (A) in the Negative Declaration.

Determination:

On the basis of this initial evaluation:

I find that the proposed projects COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared. ☐

I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the projects. A NEGATIVE DECLARATION will be prepared. ☒

I find that the proposed projects MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. ☐

I find that the proposed projects MAY have a significant effect(s) on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on an earlier analysis as described on attached sheets, if the effect is a "potentially significant impact" or "potentially significant unless mitigated." An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed. ☐

I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project. ☐

Paul Clanon. For N. Walsh
Signature

4-27-99
Date

Natalie Walsh
Printed Name

Program Manager
Analysis Branch
Energy Division
California Public Utilities Commission

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
I. LAND USE AND PLANNING. Would the proposal:				
a) Conflict with general plan designation or zoning?	☐	☒	☐	☐
b) Conflict with applicable environmental plans or policies adopted by agencies with jurisdiction over the project?	☐	☒	☐	☐
c) Be incompatible with existing land use in the vicinity?	☐	☒	☐	☐
d) Affect agricultural resources or operations (e.g. impacts to soils or farmlands, or impacts from incompatible land uses)?	☐	☒	☐	☐
e) Disrupt or divide the physical arrangement of an established community (including a low-income or minority community)?	☐	☒	☐	☐

The proposed projects are not anticipated to have any significant impacts on general or environmental plans, zoning, existing land usage, or agricultural resources. The projects are essentially modifications to existing facilities within established utility rights-of-way. Since these rights-of-way are already designed to be in compliance with zoning and land use plans, disruption of such plans are not foreseeable. In the event that the petitioners need to construct facilities that extend beyond the rights-of-way, see Mitigation Measure A in the Negative Declaration.

II. POPULATION AND HOUSING. Would the proposal:				
a) Cumulatively exceed official regional or local population projections?	☐	☐	☐	☒
b) Induce substantial growth in an area either directly or indirectly (e.g. through projects in an undeveloped area or extension of major infrastructure?	☐	☐	☐	☒
c) Displace existing housing, especially affordable housing?	☐	☐	☐	☒

The proposed projects will not have impacts upon population or housing. The purpose of the projects is to

introduce competition into the local telephone service market. Since competition will be generally statewide and not centered in one locale, it is not anticipated that the projects will have an effect on population projections or housing availability of any particular area. The areas that will not initially receive the competition are rural, less populated areas; it cannot be seen that the initial lack of competitive services in these areas will result in significant movements of people to areas where competition will be heavy.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
III. GEOLOGIC PROBLEMS. Would the proposal result in or expose people to potential impacts involving:				
a) Fault rupture?	☐	☐	☐	☒
b) Seismic ground shaking?	☐	☐	☐	☒
c) Seismic ground failure, including liquefaction?	☐	☐	☐	☒
d) Seiche, tsunami, or volcanic hazard?	☐	☐	☐	☒
e) Landslides or mudflows?	☐	☒	☐	☐
f) Erosion, changes in topography or unstable soil conditions from excavation, grading, or fill?	☐	☒	☐	☐
g) Subsidence of land?	☐	☐	☐	☒
h) Expansive soils?	☐	☐	☐	☒
i) Unique geologic or physical features?	☐	☐	☐	☒

The projects will be constructed within existing utility facilities or established utility rights-of-way and will therefore not expose people to new risks for any of these impacts, except possibly erosion. Should additional cable facilities require the installation of new or upgraded conduits, trenching, excavation, grading and fill could be required. For appropriate mitigation, see Mitigation Measures (B) and (C) for details in the Negative Declaration.

IV. WATER. Would the proposal result in:				
a) Changes in absorption rates, drainage patterns, or the rate and amount of surface runoff?	☐	☐	☐	☒
b) Exposure of people or property to water related hazards such as flooding?	☐	☐	☐	☒

		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
c)	Discharge into surface waters or other alteration of surface water quality (e.g. temperature, dissolved oxygen or turbidity)?	☐	☒	☐	☐
d)	Changes in the amount of surface water in any water body?	☐	☐	☐	☒
e)	Changes in currents, or the course or direction of water movements?	☐	☐	☐	☒
f)	Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations or through substantial loss of groundwater recharge capability?	☐	☒	☐	☐
g)	Altered direction or rate of flow of groundwater?	☐	☒	☐	☐
h)	Impacts to groundwater quality?	☐	☒	☐	☐
i)	Substantial reduction in the amount of groundwater otherwise available for public water supplies?	☐	☐	☐	☒

The projects will involve alterations to existing telecommunication facilities (underground conduits or overhead poles) but could expose additional risks if more than one petitioner decide to compete in the same locality. Efforts to install cables, or if necessary, new conduits, in utility rights-of-way that are in close proximity to an underground or surface water sources could carry significant effects for quality, flow, quantity, direction or drainage if done improperly and without coordination. See Mitigation Measures (B) and (D) in the Negative Declaration for details.

V. AIR QUALITY. Would the proposal:

a)	Violate any air quality standard or contribute to an existing or projected air quality violation?	☐	☒	☐	☐
b)	Expose sensitive receptors to pollutants?	☐	☒	☐	☐

		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
c)	Alter air movement, moisture, or temperature, or cause any change in climate?	☐	☐	☐	☒
d)	Create objectionable odors?	☐	☐	☐	☒

If the projects do not require excavation or trenching of underground conduits, they will not have an effect upon air quality, movement, temperature or climate. However, should the projects require such work and, if more than one petitioner decide to work in the same locale, there is potential for an increase in dust in the immediate area. See Mitigation Measures (B) and (E) in the Negative Declaration for details.

VI. TRANSPORTATION/CIRCULATION.

Would the proposal result in:

a)	Increased vehicle trips or traffic congestion?	☐	☒	☐	☐
b)	Hazards to safety from design features (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	☐	☒	☐	☐
c)	Inadequate emergency access or access to nearby uses?	☐	☒	☐	☐
d)	Insufficient parking capacity on-site or off-site?	☐	☒	☐	☐
e)	Hazards or barriers for pedestrians or bicyclists?	☐	☒	☐	☐
f)	Conflicts with adopted policies supporting alternative transportation (e.g. bus turnouts, bicycle racks)?	☐	☐	☐	☒
g)	Rail, waterborne or air traffic impacts?	☐	☒	☐	☐

The petitioners plan to modify existing utility conduits or poles within existing utility rights-of-way initially in urban, commercial zones and residential areas. Modification of these facilities by a single party does not present significant impacts upon traffic or circulation since the installation process is not expected to be lengthy. However, if more than one of the petitioners decide to compete in the same locality, their efforts to install their own cables will have a significant cumulative effect on circulation, especially in dense, urban commercial areas. As a result, increases in traffic congestion, insufficient parking, and hazards or barriers for pedestrian are possible. See Mitigation Measures (B) and (F) in the Negative Declaration for details.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. BIOLOGICAL RESOURCES. Would the proposal result in impacts to:				
a) Endangered, threatened, or rare species or their habitats (including but not limited to plants, fish, insects, animals, and birds)?	☐	☐	☐	☒
b) Locally designated species (e.g. heritage trees)?	☐	☐	☐	☒
c) Locally designated natural communities (e.g. oak forest, coastal habitat, etc.)?	☐	☐	☐	☒
d) Wetland habitat (e.g. marsh, riparian and vernal pool)?	☐	☐	☐	☒
e) Wildlife dispersal or migration corridors?	☐	☐	☐	☒

The projects will not affect any biological resources since all anticipated work will occur within existing utility facilities or established utility rights-of-way. Established utility rights-of-way are assumed to be outside of locally designated natural communities, habitats or migration corridors.

VIII. ENERGY AND MINERAL RESOURCES. Would the proposal result in:				
a) Conflict with adopted energy conservation plans?	☐	☐	☐	☒
b) Use non-renewable resources in a wasteful and inefficient manner?	☐	☐	☐	☒
c) Result in the loss of availability of a known mineral resource that would be of future value to the region and the residents of the State?	☐	☐	☐	☒

The projects will no impact upon mineral resources or the use of energy. The projects provide competitive telecommunication services that have no direct relationship to efficient energy use or mineral resources. The installation of additional fiber optic cables are within existing facilities or rights-of-way that are assumed to have adequate mitigation designs to avoid impacts on any mineral resources within proximity.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. HAZARDS. Would the proposal involve:				
a) A risk of accidental explosion or release of hazardous substances (including, but not limited to: oil, pesticides, chemicals or radiation)?	☐	☐	☐	☒
b) Possible interference with an emergency response plan or emergency evacuation plan?	☐	☒	☐	☐
c) The creation of any health hazard or potential health hazard?	☐	☐	☐	☒
d) Exposure of people to existing sources of potential health hazards?	☐	☐	☐	☒
e) Increased fire hazard in areas with flammable brush, grass, or trees?	☐	☐	☐	☒

The installation of fiber optic cables can be a quick, clean and simple procedure with little use of heavy machinery. However there may be situations where excavation and trenching of underground conduits is necessary if the conduits are not easily accessible. Should this occur, uncoordinated efforts by the petitioners in one concentrated area could potentially affect emergency response or evacuation plans for that locale. See Mitigation Measures (B) and (G) in the Negative Declaration for details. Once the project is completed, the additional cables do not represent any additional hazards to people nor do they increase the possibility of fires.

X. NOISE. Would the proposal result in:				
a) Increases in existing noise levels?	☐	☒	☐	☐
b) Exposure of people to severe noise levels?	☐	☒	☐	☐

The anticipated projects can be a quick and simple procedure, but in some cases could require heavy machinery or construction activity such as excavation, trenching, grading and refill. There is also the possibility that uncoordinated efforts by the petitioners in one locale could increase existing noise levels, if their activities involve the construction described. See Mitigation Measures (B) and (H) in the Negative Declaration for details.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XI. PUBLIC SERVICES. Would the proposal have an effect upon, or result in a need for new or altered government services in any of the following areas:				
a) Fire protection?	☐	☐	☐	☒
b) Police protection?	☐	☐	☐	☒
c) Schools?	☐	☐	☐	☒
d) Maintenance of public facilities, including roads?	☐	☒	☐	☐
e) Other government services?	☐	☐	☐	☒

The proposed projects will increase competition in the local telephone service. The construction associated with the projects have potential impacts on the maintenance of public streets and roads. Numerous disturbances to the street surfaces depreciates the quality and longevity of the pavement. Trenching projects may also impact other existing public service facilities (e.g. irrigation lines) in the utility rights-of-way. Mitigation Measure F addresses this impact.

XII. UTILITIES AND SERVICE SYSTEMS. Would the proposal result in a need for new systems or supplies, or substantial alterations to the following utilities:				
a) Power or natural gas?	☐	☐	☐	☒
b) Communication systems?	☐	☒	☐	☐
c) Local or regional water treatment or distribution facilities?	☐	☐	☐	☒
d) Sewer or septic tanks?	☐	☐	☐	☒
e) Storm water drainage?	☐	☐	☐	☒
f) Solid waste disposal?	☐	☐	☐	☒
g) Local or regional water supplies?	☐	☐	☐	☒

The proposed projects could substantially alter communication systems in the event that existing facilities are unable to accommodate all of the participants in the market. If this should occur, additional conduits or poles for telecommunication equipment will need to be inserted in existing utility rights-of-way or the petitioners may seek entry to other rights-of-way. If the petitioners are forced to construct outside of the existing utility rights-of-way,

Mitigation Measure A is applicable. For work within the rights-of-way, see Mitigation Measure B in the Negative Declaration.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. AESTHETICS. Would the proposal:				
a) Affect a scenic vista or scenic highway?	☐	☒	☐	☐
b) Have a demonstrated negative aesthetic effect?	☐	☒	☐	☐
c) Create light or glare?	☐	☐	☐	☒

The proposed projects will occur within utility rights of way that will be either be undergrounded or on existing poles. Undergrounded facilities will have no demonstrated negative aesthetic effects. *However, landscaped utility rights-of-way may be impacted by trenching activities.* Additional lines on the poles may be a concern, but the proposed cables are not easily discernible and will unlikely have a negative impact. The only scenario where an aesthetic effect can occur is if the number of competitors for a particular area become so heavy that the cables on the poles become excessive. There is potential for an increase in service boxes if the boxes cannot be installed within buildings or underground. Should this occur, the petitioners should follow Mitigation Measures (B) and (I) as described in the Negative Declaration.

XIV. CULTURAL RESOURCES. Would the proposal:				
a) Disturb paleontological resources?	☐	☒	☐	☐
b) Disturb archaeological resources?	☐	☒	☐	☐
c) Affect historical resources?	☐	☒	☐	☐
d) Have potential to cause a physical change which would affect unique ethnic cultural values?	☐	☒	☐	☐
e) Restrict existing religious or sacred uses within the potential impact area?	☐	☒	☐	☐

The projects will involve existing utility facilities or established rights-of-way that are assumed to be clear from any paleontological, historical or archaeological resources. However, some projects may require excavation or trenching of utility rights-of-way, or outside the rights-of-way. If *known or* unanticipated cultural resources are encountered during such work, then the Mitigation Measures (B) and (J) should be followed. See Negative Declaration for details.

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. RECREATION. Would the proposal:				
a) Increase the demand for neighborhood or regional parks or other recreational facilities?	☐	☐	☐	☒
b) Affect existing recreational opportunities?	☐	☐	☐	☒

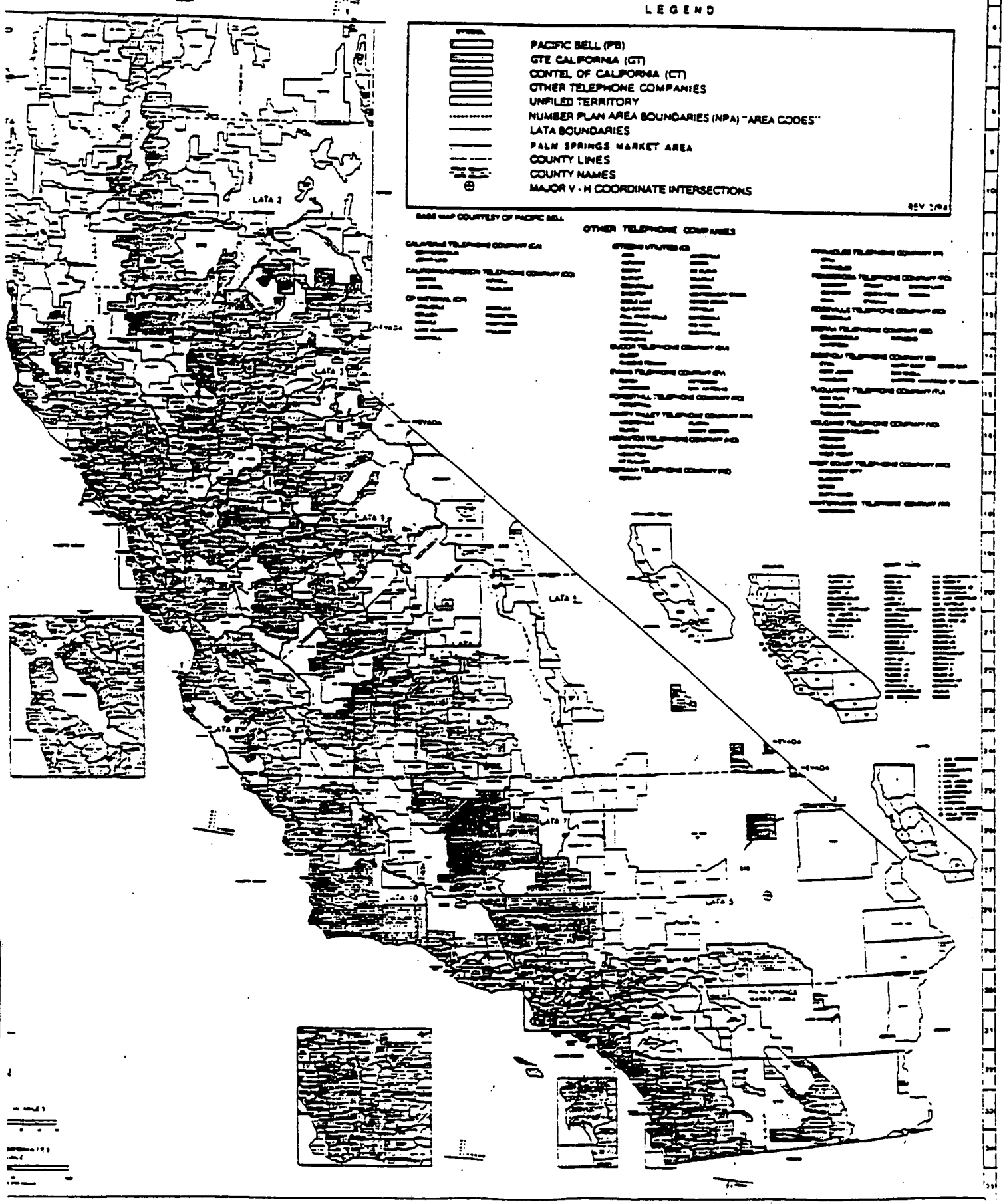
The projects will have no impact on recreational facilities or opportunities since these resources have no direction relationship to increased competition in local telephone services.

XVI. MANDATORY FINDINGS OF SIGNIFICANCE.				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	☒
b) Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?	☐	☐	☐	☒
c) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probably future projects.)	☐	☒	☐	☐
d) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

Appendix A

TELEPHONE EXCHANGE AREAS

CALIFORNIA PUBLIC UTILITIES COMMISSION



APPENDIX B

PROJECT SPONSORS AND ADDRESSES

1.	Eagle Communications of California, LLC I.95-04-044 (Pet 132)	60 East 56th Street New York, NY 10022
2.	US Data Highway Corp. I.95-04-044 (Pet. 133)	1113 Hopkins Way Pleasanton, CA 94566
3.	Seren Innovations, Inc. I.95-04-044 (Pet. 134)	15 South 5th Street, Suite 500 Minneapolis, MN 55402
4.	HTC Communications, LLC I.95-04-044 (Pet. 135)	2131 N. Lamer Street Burbank, CA 91504
5.	Network Plus, Inc. I.95-04-044 (Pet. 136)	234 Copeland Street Quincy, MA 02169
6.	Campuslink Communications Systems, Inc. I.95-04-044 (Pet. 137)	1530 Eisenhower Place Ann Arbor, MI 48108
7.	XL Networks, Inc. I.95-04-044 (Pet. 138)	909 Via Mirola Palos Verdes Estates, CA 90274
8.	Triad Communications Corporation I.95-04-044 (Pet. 139)	2420 Sand Hill Road Menlo, Park, CA 94025
9.	NTC Network, LLC I.95-04-044 (Pet. 140)	700 Wilshire Boulevard, 7th Floor Los Angeles, CA 90017

Appendix C

Mitigation Monitoring Plan

Competitive Local Carriers (CLCs)
Projects for Local Exchange Telecommunication Service throughout California

Introduction:

The purpose of this section is to describe the mitigation monitoring process for the CLCs' proposed projects and to describe the roles and responsibilities of government agencies in implementing and enforcing the selected mitigation measures.

California Public Utilities Commission (Commission):

The Public Utilities Code confers authority upon the Commission to regulate the terms of service and safety, practices and equipment of utilities subject to its jurisdiction. It is the standard practice of the Commission to require that mitigation measures stipulated as conditions of approval be implemented properly, monitored, and reported on. Section 21081.6 of the Public Utilities Code requires a public agency to adopt a reporting and monitoring program when it approves a project that is subject to the adoption of a mitigated negative declaration.

The purpose of a reporting and monitoring program is to ensure that measures adopted to mitigate or avoid significant environmental impacts are implemented. The Commission views the reporting and monitoring program as a working guide to facilitate not only the implementation of mitigation measures by the project proponents, but also the monitoring, compliance and reporting activities of the Commission and any monitors it may designate.

The Commission will address its responsibility under Public Resources Code Section 21081.6 when it takes action on the CLCs' petitions to provide local exchange telephone service. If the Commission adopts the Negative Declaration and approves the petitions, it will also adopt this Mitigation Monitoring Plan as an attachment to the Negative Declaration.

Project Description:

The Commission has authorized various companies to provide local exchange telephone service in competition with Pacific Bell, GTE California, Roseville Telephone Company and Citizens Telephone Company of California. The current petitioners notified the Commission of their intent to compete in the territories throughout California, all of which are facilities-based services meaning that they propose to use their own facilities to provide service.

Step 1: Disputes and complaints (including those of the public) shall be directed first to the Commission's designated Project Manager for resolution. The Project Manager will attempt to resolve the dispute.

Step 2: Should this informal process fail, the Commission Project Manager may initiate enforcement or compliance action to address deviation from the proposed project or adopted Mitigation Monitoring Program.

Step. 3: If a dispute or complaint regarding the implementation or evaluation of the Mitigation Monitoring Program or the Mitigation Measures cannot be resolved informally or through enforcement or compliance action by the Commission, any affected participant in the dispute or complaint may file a written "notice of dispute" with the Commission's Executive Director. This notice shall be filed in order to resolve the dispute in a timely manner, with copies concurrently served on other affected participants. Within 10 days of receipt, the Executive Director or designee(s) shall meet or confer with the filer and other affected participants for purposes of resolving the dispute. The Executive Director shall issue an Executive Resolution describing his decision, and serve it on the filer and the other participants.

Parties may also seek review by the Commission through existing procedures specified in the Commission's Rules of Practice and Procedure, although a good faith effort should first be made to use the foregoing procedure.

Mitigation Monitoring Program:

1. As discussed in Mitigation Measure B, the petitioners shall file a quarterly report which summarizes those projects which they intend to construct for the coming quarter. The report will contain a description of the project and its location, and a summary of the petitioner's compliance with the Mitigation Measures described in the Negative Declaration. The purpose of the report is to inform the local agencies of future projects so that coordination of projects among petitioners in the same locality can be done. The quarterly report shall be filed with the appropriate planning agency of the locality where the project(s) will occur. The report shall also be filed as an informational advice letter with the Commission's Telecommunications Division so that petitioner compliance with the Mitigation Measures are monitored..

In order to ensure that the Mitigation Measures are fulfilled, the Commission will make periodic reviews of the projects listed in quarterly reports. The projects will be generally chosen at random, although the Commission will review any project at its discretion. The reviews will follow-up with the local jurisdictions so that all applicable Mitigation Measures are addressed.

If any project is expected to go beyond the existing utility rights-of-way, that project will require a separate petition to modify the CPCN. The petitioner shall file the petition with the Commission and shall also inform the affected local agencies in writing. The local agencies are also responsible for informing the Commission of any project listed in the quarterly reports which may potentially go out of the existing utility right-of-way. As discussed in Mitigation Measure A, a complete environmental review of the project will be triggered under CEQA, with the Commission as the lead agency.

2. In the event that the petitioner and the local agency do not agree if a project results in work outside of the utility rights-of-way, the Commission will review the project and make the final determination. See **Dispute Resolution Process** discussed above.

3. For projects that are in the utility rights-of-way, the petitioners shall abide by all applicable local standards as discussed in the Mitigation Measures. If a petitioner fails to comply with local regulatory standards by either neglecting to obtain the necessary permits, or by neglecting to follow the conditions of the permits, the local agency shall notify the Commission and **Dispute Resolution Process** begins..

4. The Commission is the final arbiter for all unresolvable disputes between the local agencies and the petitioners. If the Commission finds that the petitioner has not complied with the Mitigation Measures in the Negative Declaration, it may halt and terminate the project.

Since many of the facilities-based petitioners are initially targeting local telephone service for areas where their telecommunications infrastructure is already established, very little construction is envisioned. However, there will be occasion where the petitioners will need to install fiber optic cable within existing utility underground conduits or attach cables to overhead lines. There is the possibility that existing utility conduits or poles will be unable to accommodate all the planned facilities, thereby forcing some petitioners to build or extend additional conduits into other rights-of-way, or into undisturbed areas. For more details on the project description please see **Project Description** in the Negative Declaration.

Roles and Responsibilities:

As the lead agency under the California Environmental Quality Act (CEQA), the Commission is required to monitor this project to ensure that the required mitigation measures are implemented. The Commission will be responsible for ensuring full compliance with the provisions of this monitoring program and has primary responsibility for implementation of the monitoring program. The purpose of this monitoring program is to document that the mitigation measures required by the Commission are implemented and that mitigated environmental impacts are reduced to insignificance or avoided outright.

Because of the geographic extent of the proposed projects, the Commission may delegate duties and responsibilities for monitoring to other environmental monitors or consultants as deemed necessary. For specific enforcement responsibilities of each mitigation measure, please refer to the Mitigation Monitoring Table attached to this plan.

The Commission has the ultimate authority to halt any construction, operation, or maintenance activity associated with the CLC's local telephone service projects if the activity is determined to be a deviation from the approved project or adopted mitigation measures. For details refer to the mitigation monitoring plan discussed below.

Mitigation Monitoring Table:

The table attached to this plan presents a compilation of the Mitigation Measures in the Negative Declaration. The purpose of the table is to provide the monitoring agencies with a single comprehensive list of mitigation measures, effectiveness criteria, the enforcing agencies, and timing.

Dispute Resolution Process:

The Mitigation Monitoring Plan is expected to reduce or eliminate many potential disputes. However, in the event that a dispute occurs, the following procedure will be observed:

Mitigation Monitoring Table

Impact	Mitigation Measure	Monitoring/Reporting Action	Effectiveness Criteria	Responsible Agency*	Timing
ALL FACTORS					
Extension or work beyond or outside of of the existing utility right-of-way into undisturbed areas.	A. Petitioner must file a Petition to modify its CPCN. An appropriate environmental study of the project is done.	Quarterly reports.	Any work outside of existing utility right-of-way is assessed through an environmental study.	CPUC	Before construction
CUMULATIVE EFFECTS					
Cumulative impacts due to multiple disturbances to a particular area.	B. Coordination efforts among the petitioners and the affected local agencies so that construction projects in the same location can be combined or simultaneous.	Quarterly reports.	The number and duration of disturbances to a particular area are minimized.	Local agencies.	Before construction
GEOLOGICAL RESOURCES					
Potential erosion due to excavation, grading and fill.	C. Petitioners shall comply with all local design, construction and safety standards through permit process. Erosion control plans for areas identified as susceptible to erosion.	Quarterly reports.	Erosion at the project areas is contained.	Local agencies.	Before and during contruction.
WATER RESOURCES					
Potential impact on water resouces, underground or surface due to excavation or grading work.	D. Petitioners shall consult with all appropriate water resource agencies for projects in close proximity to water resouces Appropriate mitigation plans shall be developed and compliance to all local and state water regulations is required.	Quarterly reports.	Impacts to water quality, drainage, flow, direction and quantity are averted.	Federal agencies Local agencies. Applicable state water resource agencies.	Before and during construction.

* The CPUC is ultimately responsible for compliance with the mitigation measures listed in this document, but shall defer the responsibility to federal, state and local agencies, unless otherwise designated.

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
HAZARDS					
Potential increase in overhead poles and communication lines.	G. Petitioner shall obtain all neces sary building permits for the poles. CPUC will inspect the overhead lines.	Quarterly reports.	Poles are built in compliance with local safety standards. Lines are inspected and maintained as safe.	CPUC Local agencies.	Before and during construction.
NOISE					
Noise standards for the area are exceeded due to construction.	H. All applicable noise standards shall be complied with by the petitioners. Petitioners shall notice the surrounding area of constructions dates and times.	Quarterly reports.	Noise from construction is kept to levels that do not exceed local standards.	Local agencies	Before and during construction.
AESTHETICS					
Service boxes or cabinets may be a visual blight. Landscaping in utility right-of-way may be impacted by trenching.	I. All applicable aesthetic standards will be met by petitioners for above-ground facilities, especially service cabinets. Consult with local agencies on proper restoration of landscaping.	Quarterly reports.	Cabinets are placed within existing buildings, underground, or in areas that are landscaped so that aesthetic impacts are minimized. Landscaping restored to original form.	Local agencies.	Before and during construction.
CULTURAL RESOURCES					
Cultural resources are encountered during construction; resources are damaged or moved.	J. All earthmoving that would impact the resources shall cease or be altered until the petitioner retains the service of an archaeologist who will propose mitigation. Thorough research done prior to construction to avoid known resources.	Quarterly reports.	Cultural resources that are encountered are not destroyed or adversely impacted.	Local, state and/or federal agencies.	Before and during construction.

(END OF APPENDIX D)

PROOF OF SERVICE BY MAIL

I, Lillian Li, declare:

I am over the age of 18 years, not a party to this proceeding, and am employed by the California Public Utilities Commission at 505 Van Ness Avenue, San Francisco, California.

On 6/24/99, I deposited in the mail at San Francisco, California, a copy of:

99-06-083
(DECISION NUMBER OR TYPE OF HEARING)

6/24/99
(DATE OF HEARING)

R98-04-043/I98-04-044
(APPLICATION/CASE/OII/OIR NUMBER)

in a sealed envelope, with postage prepaid, addressed to the last know address of each of the addressees in the attached list.

I declare under penalty of perjury that the foregoing is true and correct and that this declaration was executed on 6/24/99, at San Francisco, California.

Lillian Li*

*Signature
9/92

CA-21
6/24/99

R 95-04-043
I 95-04-044

DECISION: 99-06-083

MAIL DATE: 6/24/99

Copy of **" OPINION "** and order mailed to the following.

SEE ATTACHED LIST FOR APPEARANCES, STATE SERVICE

Count 245

6/18/99
lil

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Last updated on 18-JUN-1999 by: LIL
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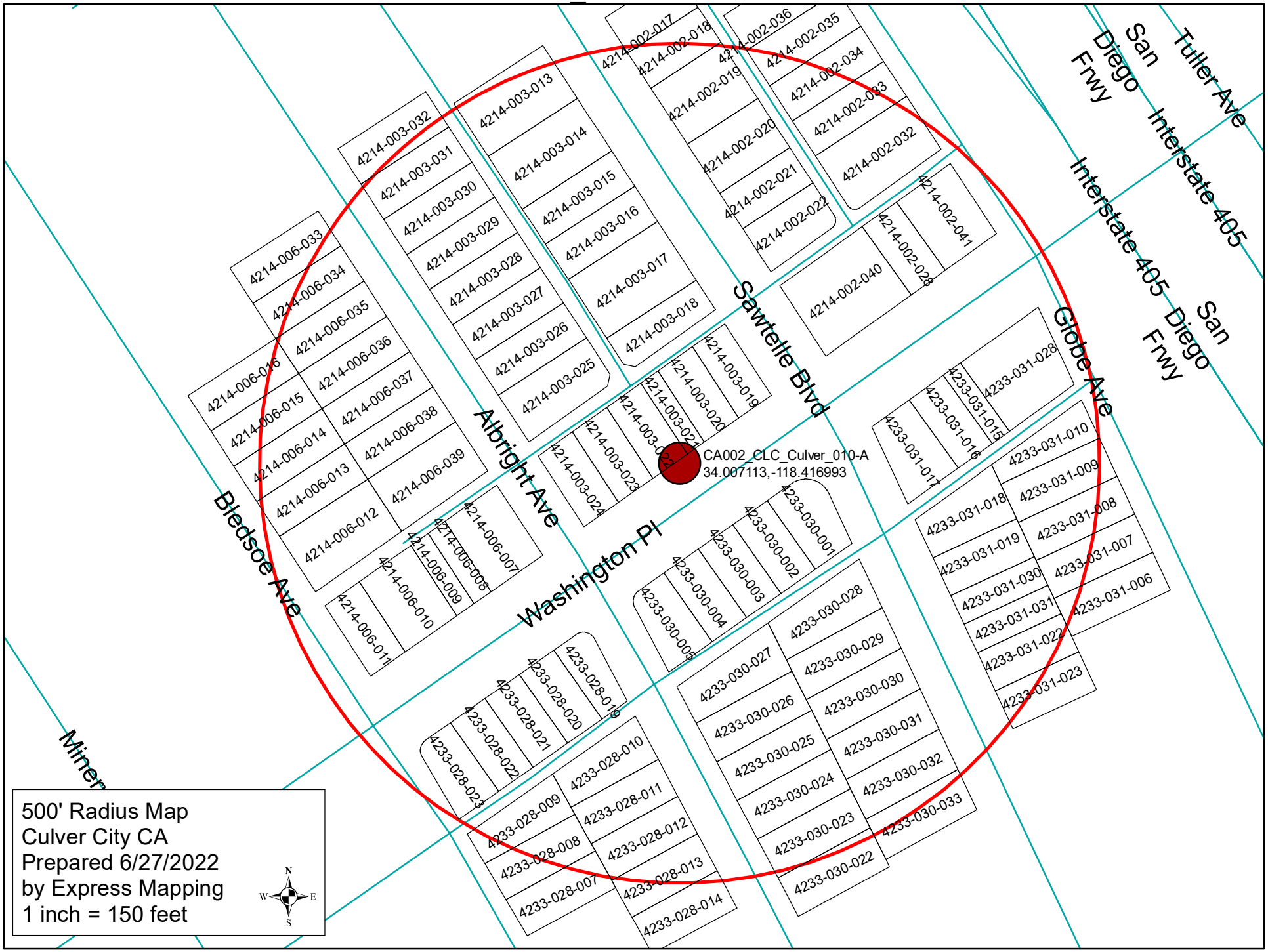
PLEASANTON CA 94566

CA002_CLC Culver 010-A



3. ALL OTHER APPLICATIONS: ***For all other types of applications***, the following must be provided:

a) Location and Zoning Information

i) Location of the project site, including the nearest registered address, the names of the two nearest cross streets, GPS coordinates, and the present zone designation of the project site.

Please see Construction Drawings.

ii) If the facility is proposed to be attached to an existing utility pole, provide the pole number. (To obtain a City-owned streetlight pole Facility ID number and to determine its small cell site status visit: Streetlight Inventory

SL-G5-04

iii) Applicant shall include signed documentation indicating that applicant is authorized by the owner of the support structure and/or real property to install and operate the proposed facility.

N/A The city owns this streetlight. Crown Castle has an agreement in place to use city streetlights for it's wireless facilities. Please see the attached agreement.

a) Description of the Proposed Project

A description of the proposed facility(ies), including whether the project is a new facility, a collocated facility, or a modification to an existing facility.

The proposed facility is a New Small Wireless facility to be collocated on a replacement streetlight pole.

ii) If the application is for a small cell facility, an explanation asserting all of the grounds why the proposed facility constitutes a small cell facility.

This application is for a Small Wireless Facility as it falls within the FCC's definition of a Small Wireless Facility

Per FCC 18-133

"*Small wireless facilities,* consistent with § 1.1312(e)(2), are facilities that meet each of the following conditions:
(1) The facilities—
(i) Are mounted on structures 50 feet or less in height including their antennas as defined in § 1.1320(d); or

(ii) Are mounted on structures no more than 10 percent taller than other adjacent structures; or
(iii) Do not extend existing structures on which they are located to a height of more than 50 feet or by more than 10 percent, whichever is greater;
(2) Each antenna associated with the deployment, excluding associated antenna equipment (as defined in the definition of "antenna" in § 1.1320(d)), is no more than three cubic feet in volume;
(3) All other wireless equipment associated with the structure, including the wireless equipment associated with the antenna and any pre-existing associated equipment on the structure, is no more than 28 cubic feet in volume;
(4) The facilities do not require antenna structure registration under part 17 of this chapter;
(5) The facilities are not located on Tribal lands, as defined under 36 CFR 800.16(x); and
(6) The facilities do not result in human exposure to radiofrequency radiation in excess of the applicable safety standards specified in § 1.1307(b).

iii) If a new facility, the applicant shall include an explanation of whether the new facility could and will be designed to accommodate future wireless facilities.

The facility can and will be redesigned to accommodate future wireless facilities if needed in the future.

iv) A list of all facilities and equipment proposed to be installed and the dimensions, weight, and manufacturer's specifications for each.

Please see attached Construction Drawings.

v) A written description of the concealment measures applicant proposes to use to aesthetically blend the facility to the immediate surroundings and to minimize its visual impact. This should include, but not be limited to, a description of proposed concealment techniques, sizing and placement of elements of the facility (including undergrounding proposed), measures proposed to limit visibility of the facility from residential dwelling units, and the textures and colors to be used in the concealment process. If none, so state.

Crown Castle is concealing the facility to the greatest extent possible by placing all possible radio equipment and wiring within the shroud at the top of the replacement

streetlight pole, in accordance with the city's preferred design for streetlights. The streetlight will be covered with concrete texturing to mirror the surrounding light poles. The shroud will be painted to match the streetlight pole. With the proposed shroud the facility will blend into the surrounding vertical infrastructure.

vi) A description of any ground disturbance necessary to complete the proposed project.

The concrete near the streetlight pole will be opened to allow for the replacement of the existing streetlight pole and the placement of a grounding rod for the site. Additionally, there will be trenching and the placement of 2 handholes and conduit in the sidewalk near the power source and trenching in the street and the placement of a hand hole in the parkway near the node pole. Once installation is complete, the street and sidewalk will be restored to its existing condition.

vii) A description of the site and any deployment outside the site necessary to complete the proposed project.

The proposed site location is an existing streetlight pole. An underground fiberoptic connection from Crown's existing fiber network already exists at the location. Outside of the immediate site location, we will be bringing in a power connection from an underground utility vault in the sidewalk to the northeast of the proposed location to power our facilities.

viii) A dimensioned map identifying and describing the distance to the nearest residential dwelling unit and any historical structure within 500 feet of the facility.

Please see attached Construction Drawings. There are no historical structures within 500 ft of the proposed facility.

ix) If a collocation, a description of why this installation qualifies as a collocation within the meaning of the FCC rules. Applicant must also provide the following:

We are proposing to attach to an existing structure that is being replaced to accommodate the additional weight of our equipment. Under Federal Law, this is a collocation. Please see the definition of a colocation from FCC 18-133 below.

"3. Collocations on Structures Not Previously Zoned for Wireless Use

64. The Commission takes this opportunity to clarify that for purposes of the Section 332 shot clocks, attachment of facilities to existing structures constitutes collocation, regardless of whether the structure or the location has previously been zoned

for wireless facilities. As the Commission stated in 2009, "an application is a request for collocation if it does not involve a 'substantial increase in the size of a tower' as defined in the Nationwide Programmatic Agreement (NPA) for the Collocation of Wireless Antennas." The definition of "[c]ollocation" in the NPA provides for the "mounting or installation of an antenna on an existing tower, *building or structure* for the purpose of transmitting and/or receiving radio frequency signals for communications purposes, *whether or not there is an existing antenna on the structure.*" The NPA's definition of collocation explicitly encompasses collocations on structures and buildings that have not yet been zoned for wireless use. To interpret the NPA any other way would be unduly narrow and there is no persuasive reason to accept a narrower interpretation. This is particularly true given that the NPA definition of collocation stands in direct contrast with the definition of collocation in the Spectrum Act, pursuant to which facilities only fall within the scope of an "eligible facilities request" if they are attached to towers or base stations that have already been zoned for wireless use."

(1) A description of all installation procedures and plans for the facility; And

Once this facility is approved, the concrete near the streetlight pole will be opened to allow for the installation of a new foundation and the replacement of the existing streetlight pole and the placement of a grounding rod for the site. Additionally, there will be trenching and the placement of 2 handholes and conduit in the sidewalk near the power source and trenching in the street and the placement of a hand hole in the parkway near the node pole. Once installation is complete, the street and sidewalk will be restored to its existing condition

(2) A description of all changes to be made to the existing structure, which description will, among other things, identify precisely what changes will be made to the supporting structure.

The streetlight pole will be replaced to accommodate the additional weight of the facilities.

C) Prior Approvals/Permits

i) If a wireless facility already exists on the site, provide the following:
(1) A copy of all approvals and/or permits for the tower or base station that is to be modified, and any subsequent modification permits, and of any required conditions (imposed by the City and/or third party) placed on the initial or subsequent permits.

N/A – a wireless facility does not already exists on the site.

(2) A showing that the facility, as modified, will be in compliance with existing conditions, whether or not it is in compliance with conditions as of the date of application. There must be a plan submitted for correction of any non-compliant condition.

N/A – a wireless facility does not already exists on the site.

d) Site Plan

Please see attached electronic copy of the Construction Drawings. Per Conversations with Sammy Romo, no hard copies are needed.

i) Six (6) copies of a facility site plan at a scale of 1"=20' or larger and including the following:
(1) A north-pointing arrow on each plan sheet;
(2) Title block with applicant's name, owner's name, and contact information;
(3) Depiction of the fully-constructed proposed facility;
(4) Dimensioned drawings with specifications for each element of the proposed facility, clearly describing the site and all structures and facilities at the site before and after installation or modification;
(5) Location of lot lines, streets (with street names), easements, and all structures and improvements, including accessory equipment, underground utilities and support structures, existing and proposed;
(6) Existing and proposed elevations of all facilities, equipment, support structures, appurtenances, and other related structures
(7) Slopes, contours, trees and other pertinent physical features of the site, existing and proposed;
(8) All exterior lighting on the site, existing and proposed;
(9) Location use and approximate distance from property lines of the nearest structures on all properties abutting the site; and

(10) The location of parking for maintenance personnel.

e) Landscape Plan

Crown Castle is not providing a Landscape Plan. No landscaped ground will be disturbed.

i) If any landscaped ground will be disturbed, six (6) copies of a landscape plan for the site, at a scale of 1/8"=1' or larger and including the following:
(1) Existing trees with trunk diameter over six inches (6") at four feet (4') above grade and/or fifteen feet (15') in overall height within fifty feet (50') of the proposed wireless communication facility;
(2) Species, diameter and condition of all such trees;
(3) Final disposition of all existing trees; and
(4) Species, location and sizes of trees and other vegetation proposed to be installed in conjunction with the wireless communication facility.

f) Site Photograph(s)

i) Current color photographs of the site and its surroundings.

Please see attached Photosimulations.

g) Visual Impact Analysis

i) A visual impact analysis, which shall include a before and after 360 degree photo simulation or similar technique, demonstrating, from all four primary directions (north, south, east, and west) the potential visual impacts of the proposed facility. Consideration shall be given to views from public areas as well as from private property. The analysis shall assess the cumulative impacts of the proposed wireless communication facility and other existing wireless facilities in the area, and shall identify and include all feasible mitigation measures consistent with the technological requirements of the proposed facility.

Please see attached Photosimulations. The site is minimally intrusive and was designed to comply with the city's design guidelines. Given that this location is a Small Wireless facility, no Visual Impact Analysis will be provided because we are not asking for a variance from the city's preferred design.

h) Noise

i) Operation of wireless facilities shall comply with the noise regulations set in Chapters 9.04 and 9.07 of the Code and the noise element of the General Plan. Demonstrate compliance by providing, among other relevant information, a description of the facilities and/or equipment within the applicant's project that are

expected to induce or generate noise, as well as anticipated noise levels of said facilities and/or equipment. For facilities that generate noise, please provide testing data for noise assuming maximum facility utilization and operational utilization (worst case) 10 feet from the source. Specify times and conditions during which noise generation will occur

This facility will comply with the City's Noise Ordinance. Please see attached Noise Study

i) FCC Radio Frequency Standards

i) A report signed by a California licensed professional engineer with expertise in radio communications facilities and the calculation of radio frequency emissions that affirms, under penalty of perjury, that the proposed installation will be compliant with the FCC's standards. The report must also contain the following:
(1) A description of each of the proposed antennas and all related fixtures, structures, appurtenances and apparatus, including the height above grade, volume in total cubic feet, materials, lighting, and the directionality of each antenna (e.g., omni, directional, etc.);
(2) The frequency, modulation and class of service;
(3) A clear identification of areas, both vertically and horizontally, where exposure levels will exceed FCC standards for general public and occupational exposures. Please note that applicant's analysis must show that it has appropriately taken cumulative exposures into account, and should show exposures based on "worst case" scenarios;
(4) A certification that the facility will comply with all applicable standards for radio frequency emissions, including cumulative effects, and a description of the manner in which the radio frequency emissions for the facility were calculated and the results of those calculations. Individual and cumulative emissions should be evaluated; and
(5) If the certification of the facility as currently installed, or as proposed to be modified, is subject to conditions designed to limit general public or occupational exposure, identify those conditions, and demonstrate that they have been satisfied, or describe when they will be satisfied.

Please see attached EME Report.

j) Structural Analysis

i) A report signed by a California licensed professional engineer qualified in structural engineering, containing the following:
(1) In the case of a wireless facility attached to existing infrastructure,

documentation of the ability of the structure to support the antennas, the proposed method of affixing the antennas and the precise point at which the antennas shall be mounted;
(2) In the case of a facility with a support structure (e.g. monopole), documentation that the structure is capable of supporting the antennas (and any other equipment to be attached to or supported by the support structure) and complies with applicable laws and codes, as well as the structure's capacity for additional collocated antennas, and the precise point at which the antennas shall be mounted; and

(3) A certification that the structure(s) on which the wireless facility (including all accessory equipment, such as radios, cabinets, etc.) will be placed can safely support the wireless facility; and that all elements of the wireless facility comply with applicable safety standards, including, without limitation, GO 95, 165, and 166.

The streetlight pole is being replaced to accommodate the weight of the additional equipment being added to the pole. Please see the streetlight pole plans integrated into the construction drawings. Please see attached Construction Drawings documenting the site's compliance with all applicable safety standards

k) Notice

i) Evidence that notice has been given consistent with Attachment 1 to all necessary parties. Notice will be posted and mailed upon resubmission of the NOI. This is to ensure that any changes requested by the NOI are included on the notice.

l) Justification for Location/Collocation

i) A justification as to why the applicant chose the location for the proposed wireless communication facility. Such justification shall include a written assessment of not less than two (2) alternative locations considered by the applicant and the reasons why said alternative locations were rejected as candidates.

This location is fronting major commercial property on a streetlight, both of which are the city's highest preference in location and pole type. As such we do not believe that an alternative analysis is needed.

ii) A written explanation of the applicant's investigation into collocating the proposed facility with an existing facility. Indicate whether collocation is or is not feasible and why.

Collocation with an existing Small Wireless facility is not feasible, because there are no other Small Wireless Facilities within the proposed service area.

m) Map of Applicant's Existing Wireless Facilities and Coverage Assessment

i) A map and narrative description of all existing wireless facility sites used by the applicant which are located within the City, and any wireless facility sites located outside of the City, but which provide coverage within any part of the City.

Please see the attached Alternative Site Analysis.

4. WAIVER REQUEST [if applicable]

a) If it is contended that the City is required by federal or state law to approve the facility, applicant must submit the information it relies upon to support that claim, identifying: (i) the legal standard it claims applies; (ii) the showings it relies upon for its claim; (iii) alternative legal standards that may apply that it claims to meet; and (iv) the showings it relies upon for those claims. Applicants are cautioned that, should they choose not to submit with respect to items (iii) and (iv), and the City believes that applicant misapplies or relies on the wrong legal standard, the waiver (and consequently the application) may be denied.

PART D: CERTIFICATION (ALL APPLICANTS)

I (we) hereby certify under penalty of perjury that (1) after diligent investigation, the information provided pursuant to this Application Form is true, accurate, and complete to the best of my (our) knowledge and belief; and (2) upon completion of the work proposed, the permitted personal wireless services facility will comply with all applicable laws, regulation, practices or other requirements under federal, state, or local law, including, but not limited to, building and electrical codes, the FCC's radio frequency emissions standards, and the requirements of the Americans with Disabilities Act.

/s/ John Halminski 10/11/2022

_____

Applicant's Signature Date

John Halminski

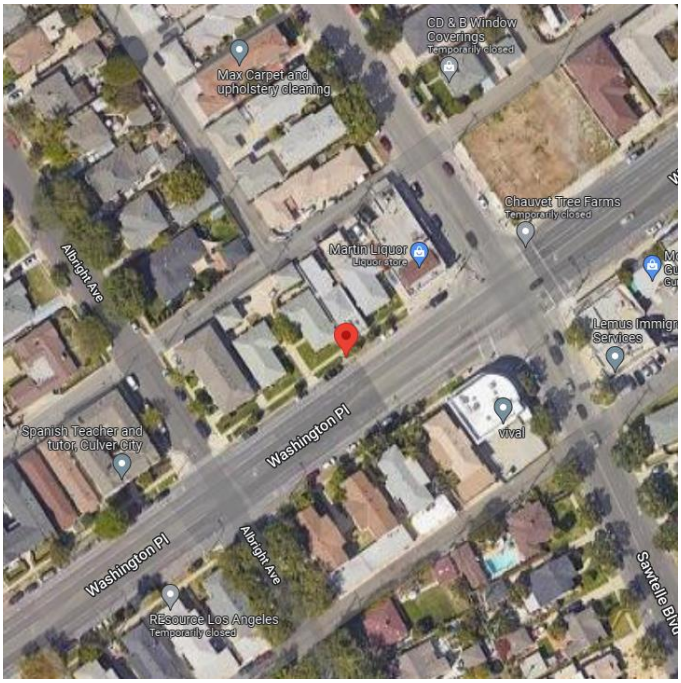
_____

Applicant's Printed Name

RF Emissions Compliance Report

SITE – CA002_CLC_CULVER_010 • 11317 Washington Pl, Culver City, CA 90066

Prepared For - Crown Castle, 200 Spectrum Center Drive. Irvine, CA - 92618



18 Morgan Suite 200
Irvine, CA 92618
www.mobilenet.net

Report Date: 10/19/2022

Certification

I certify that the attached RF exposure analysis and report for CA002_CLC_CULVER_010 located at 11317 Washington Pl, Culver City, CA 90066 is correct to the best of my knowledge, and all calculations, assumptions and conclusions are based on generally acceptable engineering practices.

Executive Summary

Crown Castle has contracted MobileNet Services to evaluate the Radiofrequency Electromagnetic Compliance of the proposed site below. Compliance is based on the Federal Communication Commission (FCC) Rules and Regulations for human exposure to electromagnetic fields.

Site Name: CA002_CLC_CULVER_010

Latitude: 34.007113°

Longitude: -118.416993°

Structure Type: Metal Streetlight Pole

Address: 11317 Washington Pl, Culver City, CA 90066

FCC RF Exposure Guidelines

The Federal Communications Commission (FCC) has provided standards (FCC 96-326) for RF exposure which are derived from recommendations of two expert organizations, the National Council on Radiation Protection and Measurements (NCRP) Section 17.4.5 Report No. 86 and the Institute of Electrical and Electronics Engineers (IEEE) Sections 4.2.1 and 4.2.2 C95.1-1992. The FCC consulted with the Environmental Protection Agency (EPA), the Food and Drug Administration (FDA), and the Occupational Safety and Health Administration (OSHA) and obtained their support for the guidelines that the FCC is using. The exposure guidelines incorporate prudent margins of safety.

The FCC has classified Radio Frequency (RF) exposure limits into two tiers - General Population or "Uncontrolled Environment" and Occupational or "Controlled Environment". These limits apply to accessible areas where workers or the general public may be exposed to RF electromagnetic fields. The General Public limits are generally five times more restrictive than the Occupational limit.

- *General Population/Uncontrolled* – Exposure limits apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.
- *Occupational/Controlled* – Exposure limits apply in situations in which persons are exposed as a consequence of their employment and are fully aware of the potential for exposure and can exercise control over their exposure.

Maximum Permissible Exposure (MPE) – FCC OET Bulletin 65 Table 1 of 47 C.F.R. § 1.1310

Frequency Range	Occupational Exposure Limit	Averaging Time	Public Exposure Limit	Averaging Time
30-300 MHz	1 mW/cm²	30 mins.	0.2 mW/cm²	6 mins.
300-1500 MHz	f/300 mW/cm²	30 mins.	f/1500 mW/cm²	6 mins.
1500-100,000 MHz	5 mW/cm²	30 mins.	1 mW/cm²	6 mins.

where f = frequency in MHz

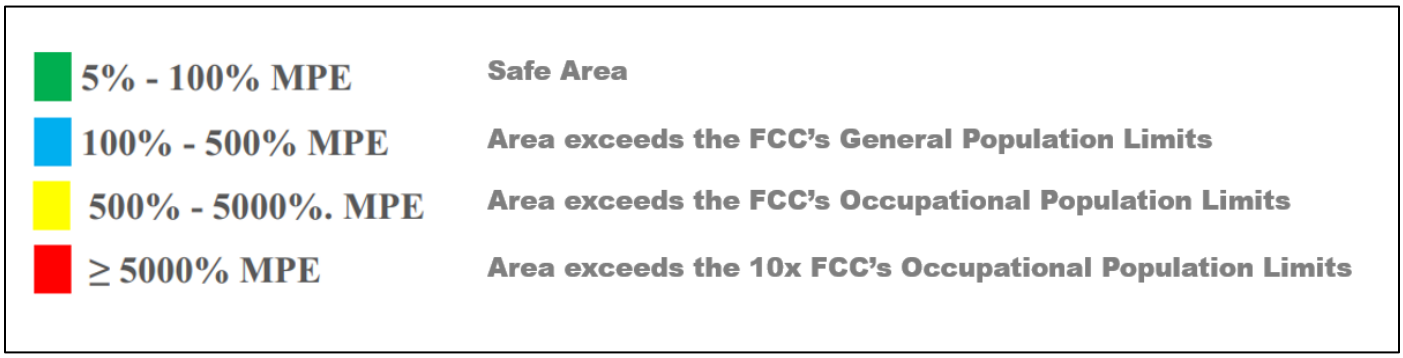
In situations where the predicted MPE exceeds the General Population threshold in an accessible area because of emissions from multiple transmitters, FCC licensees that contribute greater than 5% of the aggregate MPE share responsibility for mitigation per 47 C.F.R § 1.1307(b)(3).

Analysis

Based on the provided information from Crown Castle the proposed site will contain (3) 5G Antenna/Radio integrated units mounted atop a metal streetlight pole in the public right-of-way located in Culver City, CA. The predictive RF power density resulting from each transmitter at any location is expressed as a percentage of the FCC limit. It is assumed that all antenna specified channels are transmitting simultaneously, and that the radio transmitters are operating at maximum power. As predicted by RoofMaster™ the MPE values for both ground and antenna level are shown in the table below.

Maximum Permissible Exposure (MPE) at Ground/Generally Accessible Areas & Antenna Level

Reference Plane	Maximum Level: General Population (%)	Maximum Level: Occupational (%)
Ground Level	0.14	0.03
Antenna Level	368.21	73.64



From Figure 2 in the Elevation Detail Plots the following keep-back distances to the FCC limits can be determined as follows:

Distance to FCC 100% MPE Limits at the Antenna Level

- Vertical Stand-off Distance (General Population) 3.71 feet
- Vertical Stand-off Distance (Occupational Population) N/A
- Horizontal Stand-off Distance (General Population) 5.26 feet
- Horizontal Stand-off Distance (Occupational Population) N/A

Distance to FCC 100% MPE Limits at Ground Level

- Horizontal Stand-off Distance (General Population) N/A
- Horizontal Stand-off Distance (Occupational Population) N/A

Elevation Detail

Figure 1:Predicted MPE shown at the center of a 6-foot vertical space that a person could occupy at ground level

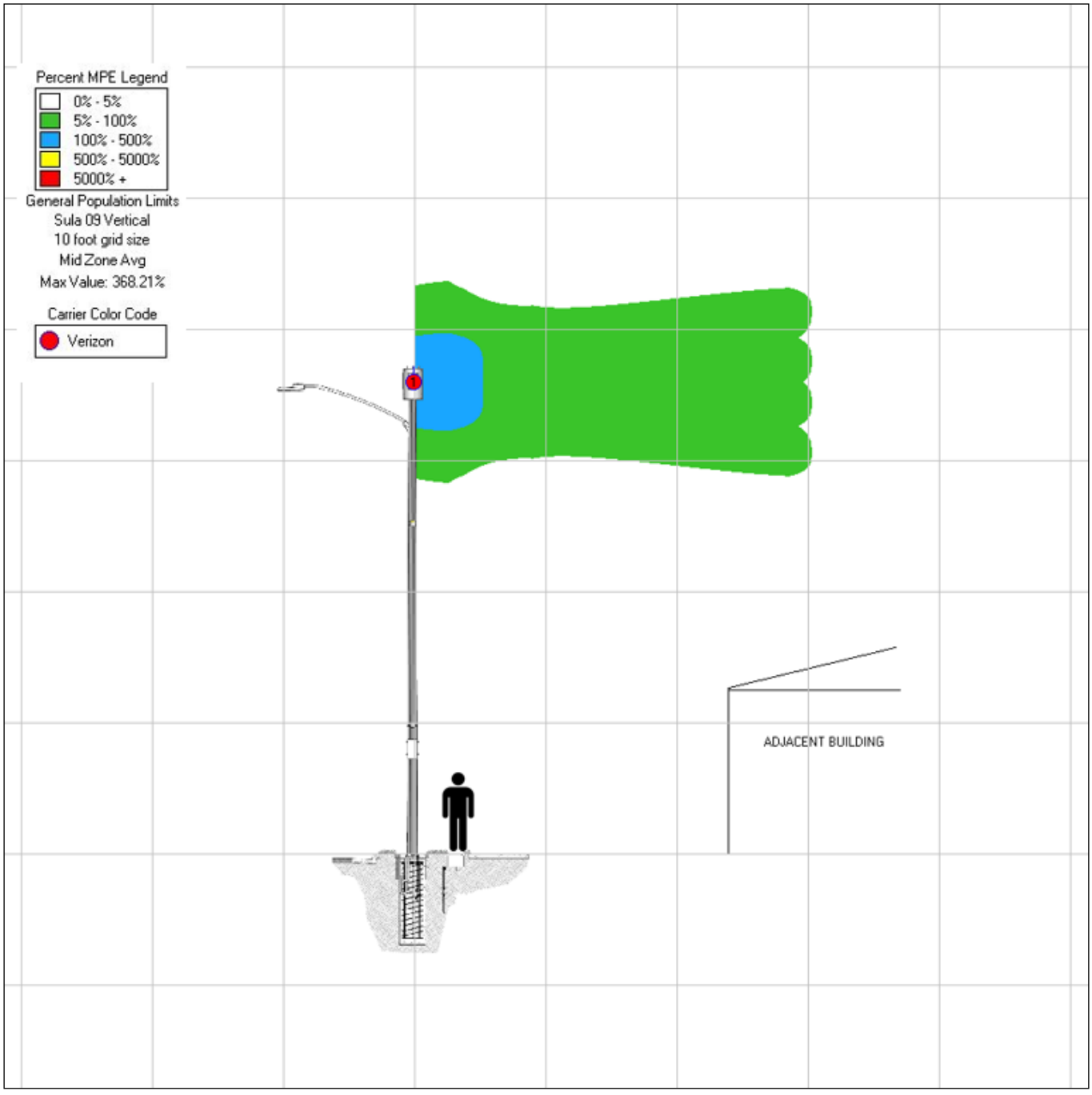


Figure 2: Enlarged view of Antenna Level MPE limits

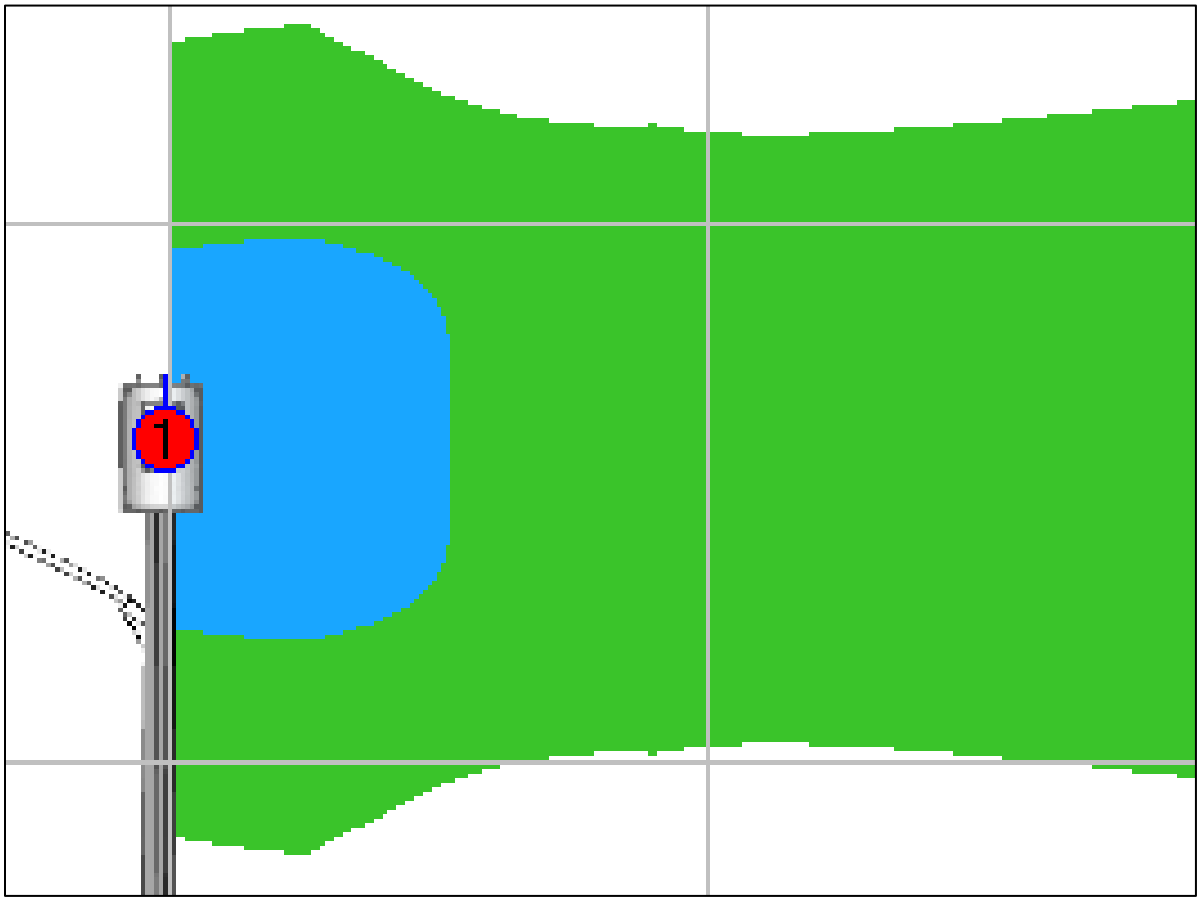


Figure 3: Top-Down View at Antenna Level MPE limits

Antenna Inventory

Antenna Number	Antenna ID	Operator	Antenna Mfg	Antenna Model	Freq (MHz)	Azimuth (deg)	Tilt (deg)	HBW (deg)	Aper (ft)	TPO (W)	Paths	Loss (db)	Antenna Gain (dbd)	EIRP (W)	RC AGL (ft)
1	1	Verizon	ERICSSON	SON SM6705 CM1 02.07.22 28GHz VZW	28000	0	0	4	1.3	0.3	4	0	26.14	809	36.4
2	2	Verizon	ERICSSON	SON SM6705 CM1 02.07.22 28GHz VZW	28000	120	0	4	1.3	0.3	4	0	26.14	809	36.4
3	3	Verizon	ERICSSON	SON SM6705 CM1 02.07.22 28GHz VZW	28000	240	0	4	1.3	0.3	4	0	26.14	809	36.4

Evaluation

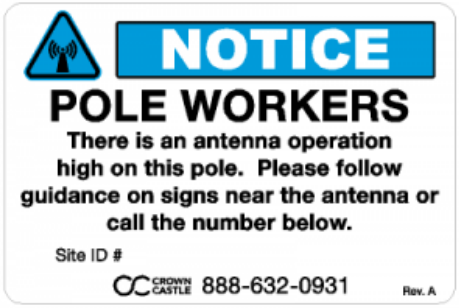
Ground Level - For any person standing at accessible areas such as the ground level, calculations resulted in exposure levels well below (< 1%) the FCCs General Population MPE limit.

Antenna Level – Any areas exceeding 100% of the General Population Limits are displayed as Blue. As seen in Figures 1 and 2 the FCC's general population limit maybe exceeded within 6ft of the antenna. Any personnel accessing the pole and working within the area exceeding 100% of the limit should coordinate with the wireless operator or work should be performed by personnel trained in proper RF safety. Any work on the pole where the area is displayed as either Green or shows no color does not exceeding hazardous exposure levels and requires no action to maintain a safe working environment.

RF Signage Recommendation

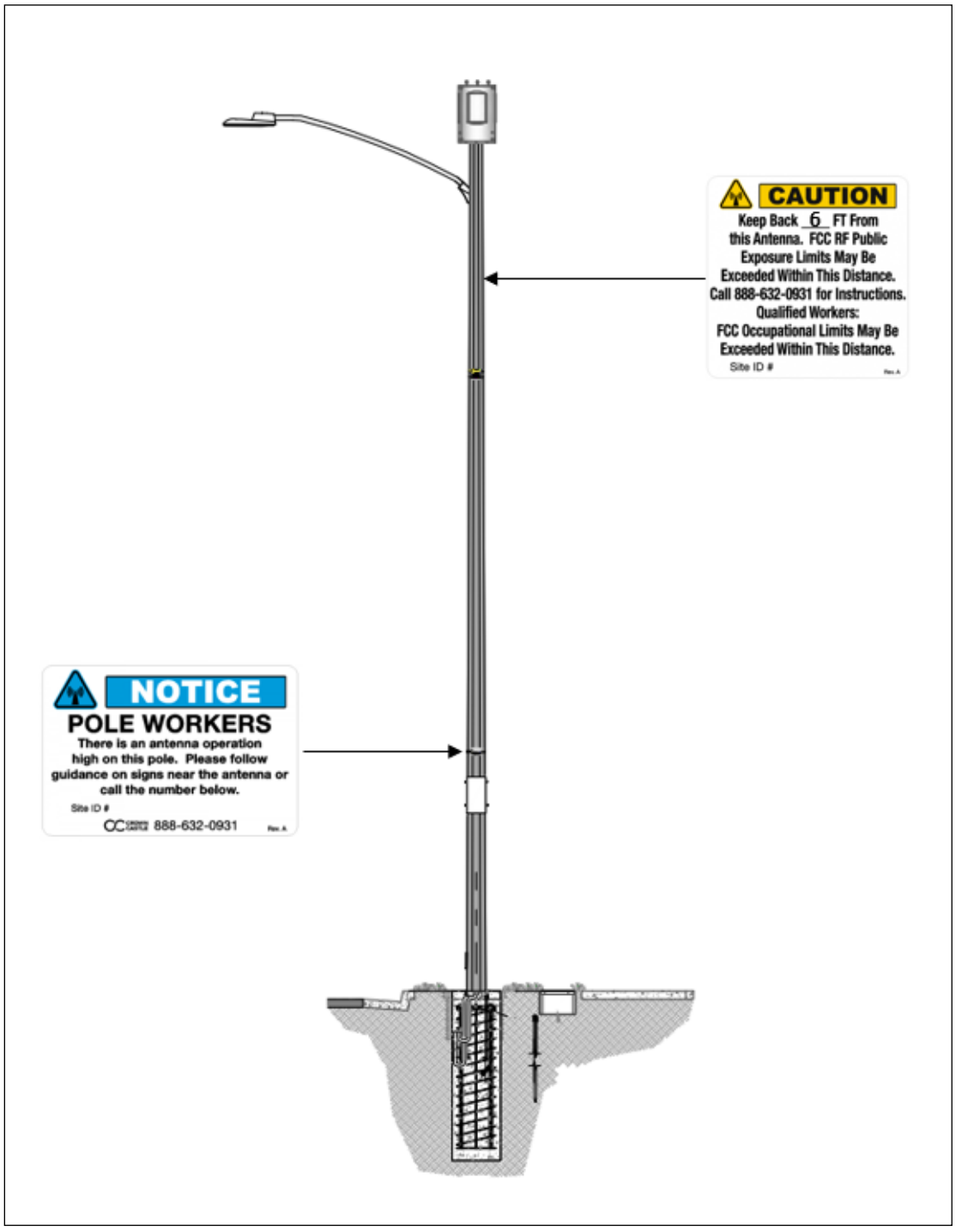
For the facility to be classified as Occupational/Controlled environment the following actions are recommended in accordance with the FCC's and Crown Castle's RF safety guidelines:

- Install NOTICE sign(s) near the bottom of the pole or on the shroud any time there is a zone near the antenna that exceeds the General Population limit. This sign should be mounted where it is easily visible to workers on the ground as they approach the pole. Recommend placing on pole about 7-9' from the ground level.



- Install CAUTION sign(s) on or near the antenna(s) with a Keep Back Distance of **6ft**. Keep Back distance must be filled in on the sign. This sign must be mounted on or just below the radiating antenna where it is visible to workers approaching the antenna in a lift or bucket truck. Recommend placing on pole at 29ft from ground level.

Figure 4: RF Signage Recommendation



Calculation Methodology

MobileNet Services has performed theoretical modeling using RoofMaster™ developed by Waterford Consultants, LLC to predict the overall maximum permissible exposure (MPE) possible at any particular location given the spatial orientation and operating parameters of multiple RF sources. The input data for the calculations is based upon information provided by the client.

RoofMaster™ predictive models comprise of the Far Field model as specified in OET-65 as well as use of the OET-65 Cylindrical Model (Sula09). These models utilize several operational specifications for different types of antennas to produce a plot of spatially averaged power densities that can be conveyed as a percentage of the applicable exposure limit.

The power density in the Far Field of an RF source is described by OET-65 Equation (4) as the following equation:

$$S = \frac{EIRP}{4 \cdot \pi \cdot R^2} \ (mW/cm^2),$$

where EIRP is the Effective Radiated Power relative to an isotropic antenna and R is the distance between the antenna and the point of study. At any location, the predicted power density in the Far Field is the spatial averaging of points within a 0-to-6-foot vertical space that a person would occupy.

The Near field power density is described by OET-65 Equation (20) is represented as the following equation:

$$S = \left(\frac{180}{\theta_{BW}}\right) \cdot \frac{100 \cdot P_{in}}{\pi \cdot R \cdot h} \ (mW/cm^2),$$

where P_{in} is the power input to the antenna, h is the aperture length and θ_{BW} is the beam width of the antenna in degrees.

Conclusion

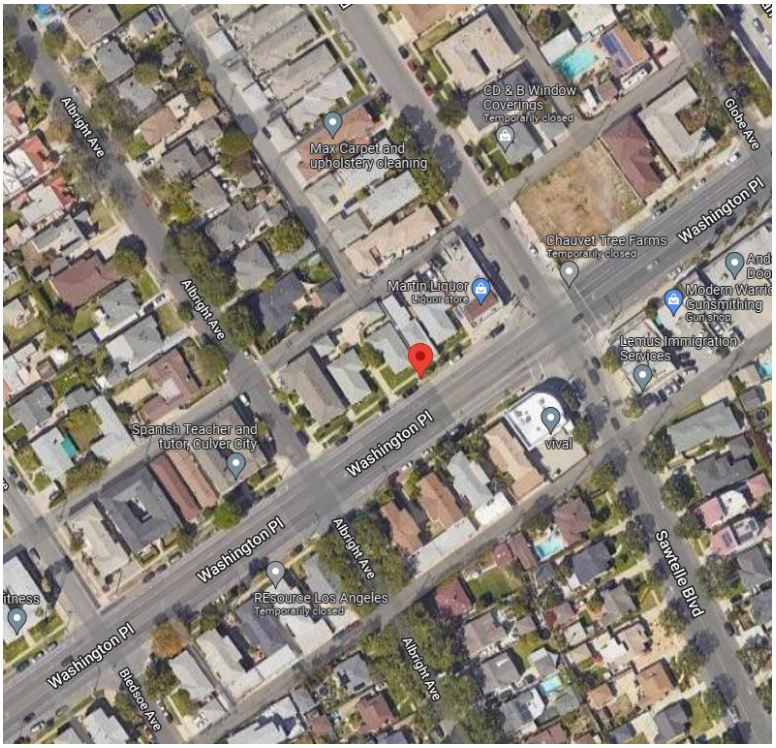
The proposed site will be **COMPLIANT** with the FCC guidelines limiting public exposure to RF energy. These limits apply for continuous exposures and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health. The RF exposure levels from the proposed site will be well below the maximum permissible levels and complies with Radiofrequency Radiation Exposure Limits of 47 C.F.R § 1.1307(b)(3) and 47 CFR § 1.1310.

MobileNet Services

Noise Study Report

SITE – CA002_CLC_CULVER_010 • 11317 Washington Pl. Culver City, CA 90066

Prepared For - Crown Castle, 200 Spectrum Center Drive. Irvine, CA - 92618



18 Morgan Suite 200
Irvine, CA 92618
www.mobilenet.net

Report Date: 10/19/2022

Executive Summary

Crown Castle has contracted MobileNet Services to evaluate the noise level compliancy of a proposed small cell site with that of the limits set forth by the municipality of Culver City, CA. Crown Castle proposes to install (3) Ericsson Streetmacro 6705 integrated 5G panel type antennas mounted atop a street light pole in the public right-of-way near 11317 Washington Pl. Culver City, CA 90066. Noise from the proposed operation of this site will comply with the City's appropriate noise limits/regulations.

Site Name: CA002_CLC_CULVER_010

Latitude: 34.007113°

Longitude: -118.416993°

Structure Type: Streetlight Pole

Address: 11317 Washington Pl. Culver City, CA 90066

Current Municipal Standards

The City of Culver City establishes guidelines pertaining to limits on maximum noise levels in the General Plan Noise Element Document. Table N.3 Interior and Exterior Noise Standards, shown below, defines Community Noise Equivalent Levels (CNEL) for different categories of land use. The proposed location of the site places it in an area zoned for industrial usage.

Table 1: Culver City General Plan Noise Element – Interior and Exterior Noise Standards

Proposed Land Use Categories		Design Standard CNEL	
Categories	**Uses**	**Interior**	**Exterior**
Residential	Single Family, Duplex,	45[a]	65
	Multiple Family	45	65
	Mobile Home	---	65[b]
Commercial Industrial Institutional	Hotel, Motel, Transient Lodging	45	65[c]
	Commercial Retail, Bank, Restaurant	55	–
	Office Building, Research and Development, Professional Offices, City Office Building	50	–
	Amphitheater, Concert Hall, Auditorium, Meeting Hall	45	–
	Gymnasium (Multipurpose)	50	–
	Sports Club	55	–
	Manufacturing, Warehousing, Wholesale, Utilities	65	–
	Movie Theatres	45	–
Institutional	Hospital, School Classroom	45	65
	Church, Library	45	–
Open Space	Parks	–	65

– No applicable standard.

[a] Noise level requirement with closed windows. Mechanical ventilation system or other means of natural ventilation shall be provided as of Chapter 12, Section 1205 of the 1974 Uniform Building Code.

[b] Exterior noise levels should be such that interior noise level will not exceed 45 decibels Community Noise Equivalent Level.

[c] Except those areas affected by aircraft noise.

Source: Culver City 1973, as amended (Noise Element)

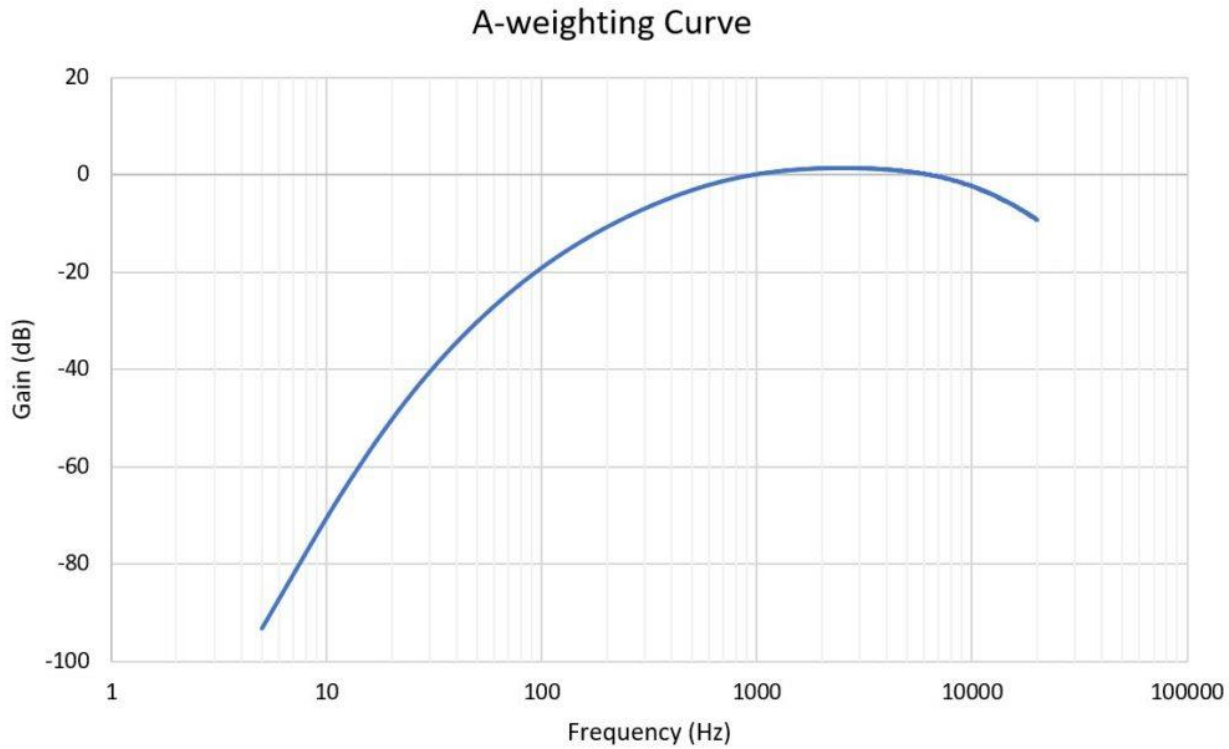
Fundamentals and Calculation Methodology

The amplitude of pressure waves generated by a sound source determines the loudness of that source. Sound pressure amplitude is measured in micro-Pascals (mPa). One mPa is approximately one hundred billionth (0.00000000001) of normal atmospheric pressure. Sound pressure amplitudes for different kinds of noise environments can range from less than 100 to 100,000,000 mPa. Because of this huge range of values, sound is rarely expressed in terms of mPa. Instead, a logarithmic scale is used to describe sound pressure level (SPL) in terms of decibels (dB). The threshold of hearing for young people is about 0 dB, which corresponds to 20 mPa.

However, the decibel scale alone does not adequately characterize how humans perceive noise.

Human hearing is limited in the range of audible frequencies as well as in the way it perceives the SPL in that range. In general, people are most sensitive to the frequency range of 1,000–8,000 Hz and perceive sounds within that range better than sounds of the same amplitude in higher or lower frequencies. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on the human sensitivity to those frequencies. Then, an "A-weighted" sound level (expressed in units of dBA) can be computed based on this information.

The A-weighting network approximates the frequency response of the average young ear when listening to most ordinary sounds. This frequency response (shown below) as defined by the International Standard IEC 61672:2003 is incorporated into most calibrated field test equipment used to measure noise level.



The table below describes typical A-weighted noise levels for various noise sources.

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	— 110 —	Rock band
Jet fly-over at 1000 feet		
	— 100 —	
Gas lawn mower at 3 feet		
	— 90 —	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	— 80 —	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawn mower, 100 feet	— 70 —	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	— 60 —	
		Large business office
Quiet urban daytime	— 50 —	Dishwasher next room
Quiet urban nighttime	— 40 —	Theater, large conference room (background)
Quiet suburban nighttime		
	— 30 —	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	— 20 —	
		Broadcast/recording studio
	— 10 —	
Lowest threshold of human hearing	— 0 —	Lowest threshold of human hearing

Source: Caltrans 2013.

Manufacturers of a variety of equipment such as but not limited to HVAC systems, power generators and telecommunication devices will usually test their products to determine the noise level at a particular known set distance. From this information provided by the manufacturers we can determine the corresponding sound pressure level at any distance such as nearby buildings and or property lines with the following formula:

$$SPL_2 = SPL_1 - 20\log\left({}^{r_2}/_{r_1}\right), \qquad \text{... (1)}$$

where SPL_1 is the noise level at distance r_1 and SPL_2 is the noise level at distance r_2.

Because decibels are logarithmic units, SPL cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3-dB increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dB higher than one source under the same conditions. Mathematically we can also calculate the addition of multiple sources by the following formula:

$$SPL_{\text{Total}} = 10\log\left[\, 10^{SPL_1/10} + 10^{SPL_2/10} + \, 10^{SPL_3/10} \ldots + 10^{SPL_N/10}\right], \qquad \text{... (2)}$$

where SPL_1 and SPL_N are the separate sound pressure level, and N is the total number of individual noise sources.

Proposed Equipment

Based on the information provided by Crown Castle the carrier plans to install (3) Streetmacro 6705 integrated 5G panel type antennas mounted atop a street light pole in the public right-of-way on the southern side of a commercial neighborhood zoned area near 11317 Washington Pl. Culver City, CA 90066. The nearest property line to the noise source is approximately 8 feet to the north.

Study Results

Per the manufacturers' specification sheet, the maximum noise level is as follows:

Equipment	Maximum Noise Level (dBA)	Reference Distance (meters)
Ericsson Streetmacro 6705	51*	1**

*Adjusted valued based on manufactured data to reflect the average yearly high temperature in Culver City of 78°F

** Assumed reference distance according to manufacturer's trend for other similarly listed products.

It is assumed that there no other stationary noise sources nearby. Therefore, the maximum calculated noise level for the combined continuous operation of the three installed remote radio units is 48dBA. This is below the City's most restrictive Exterior A-Weighted Noise Level of 65 dBA for exterior commercial neighborhood areas of Culver City.

Conclusion

From the analysis above and all provided information it is the believe that the operation of the Crown Castle small cell located at 11317 Washington Pl. Culver City, CA 90066 will comply with that City's requirements for limiting the emission of noise levels.

Certification

I certify that the attached Noise Study analysis and report for CA002_CLC_CULVER_010 located at 11317 Washington Pl. Culver City, CA 90066 is correct to the best of my knowledge, and all calculations, assumptions and conclusions are based on generally acceptable engineering practices.

WESTERN™
UTILITY / TELECOM, INC.

Structural Calculations
with Foundation Design

For A:

35' Tall, Tapered 8-Sharp Fluted Antenna Light Pole

Located At:

Various Nodes in Southern CA

Los Angeles County

Prepared for:

Crown Castle

DESIGN SUMMARY:

The calculations contained within this document represent customer specified antenna and equipment loading used to design the pole structure that is structurally adequate to accommodate the loading in accordance with all industry standards and local building codes.

Dated:
November 11, 2022
Revision A: Added Design Summary to Cover.

Western UT Project No.: 22-0170

5032 Salem-Dallas Highway NW, Salem, OR 97304
Phone: (503) 587-0101; Fax: (503) 316-1864
www.WesternUtilityTelecom.com

Table of Contents

PROFESSIONAL ENGINEER SEAL

I hereby certify that this structural design report was prepared by me, or under my direct supervision, and that I am a duly licensed Professional Engineer under the laws of the State of California.

Loading, Codes, and Materials

Design Loading:

Antenna(s): (1) - 18" Ø x 80" Tall Antenna/Shroud Assy, Wt. = 850 lbs., C.L. @ 38.5' ± AGL

(2) - LED Luminaire w/photocell, Wt. = 20 lbs., C.L. @ 35' ± AGL

(2) - 8' Long (Max.) Luminaire Arm, Wt. = 45 lbs., C.L. @ 32.5' ± AGL

(1) - Street Sign, Wt. = 30 lbs. C.L. @ 11' ± AGL

(1) - CCI RF Notice Sign, Wt. = 6 lbs. C.L. @ 9' ± AGL

Design Criteria:

Basic Wind Speed (V): 94 mph (3-Second Gust) Per ANSI/TIA-222-H & 2019 CBC, Section 1609.1.1, Exc. 5

Risk Category:	II	*Per Table 2-1*
Exposure Category:	C	*Per Section 2.6.5.1*
Topographic Category:	1	*Per Section 2.6.6.2*

Ice: Not required for this structure per Annex B

Seismic: Per 2019 CBC Section 1613 ASCE 7-16 Sections 15.1.3 & 12.8

Standards and Design Codes:

Industry Standards: ANSI/TIA 222-H & 2019 CBC

Concrete: ACI 318-14

Steel: AISC "Steel Construction Manual", 15th Edition

Welding: ANSI/AWS D1.1-15

Soil: Per 2019 CBC, Table1806.2, Class 5 Material

Materials:

Pole Shaft: ASTM A595 Gr. A (Minimum FY = 55 ksi)

Baseplate: ASTM A36

Ports: ASTM A500 Gr. B

Plates: ASTM A36

Welds: E70XX Electrodes

Structural Bolts: ASTM F3125 Gr. A325

Anchor Bolts: ASTM F1554 Gr. 55

Rebar: ASTM A615 Gr. 60

Coatings:

Galvanizing: ASTM A123

Wind Loading Calculations: Monopole Shaft

Reference: ANSI/TIA-222-H, Section 2.6.11.6

V =	94	mph (3-Second Gust Basic Wind Speed)
G_H =	1.10	Gust Response Factor - 1.10 for Poles
K_d =	0.95	Wind Direction Probability Factor
K_e =	1.00	Ground Elevation Factor
	II	:Risk Category
	C	:Exposure Category
	1	:Topographic Category

Velocity Pressure, $q_z = 0.00256 * K_z * K_{zt} * K_e * K_d * V^2$ ***Where:***

K_z = Velocity Pressure Exposure Coefficient, Section 2.6.5.2 and Table 2-4
K_{zt} = Topographic Factor, Section 2.6.6.2, Table 2-4 and 2-5
K_e = Ground Elevation Factor, Section 2.6.8
K_d = Wind Direction Probability Factor, Table 2-2
V = Basic Wind Speed, 3-Second Gust, mph

Section Wind Force, $F_{ST} = q_z * G_H * (EPA)_S$ ***Where:***

$(EPA)_S = C_f A_P$

Shaft Section Properties					Section Area				Wind Pressure							Wind Loading					
Average Section Elevation (Feet AGL)	Section Width (Point-to-Point) (inches)	Monopole Shaft Wall Thickness (inches)	Section Height (feet)	Section Elevation At Base (Feet)	Gross Section Area (Square Feet)	(mph - feet)	Force Coefficient	Effective Section Area (Square Feet)	Velocity Pressure Coefficient	Topographic Factor	Wind Direction Probability Factor	Ground Elevation Factor	Velocity Pressure (psf)	Gust Effect Factor	Applied Wind Pressure (psf)	Factored Section Base Wind Shear (kips)	Section Base Wind Moment (Foot-kips)	Factored Section Base Wind Moment (Foot-kips)	Factored Section Base Seismic Shear (kips)	Section Base Seismic Moment (Foot-kips)	Section Weight (kips)
Z	D_P	T_W	H	Z_{Base}	A_P	C	C_F	EPA_S	K_Z	K_{Zt}	K_d	K_e	q_Z	G_H	$q_Z G_H$	F_{ST}	$F_{ST} * Z$	$F_{ST} * Z$	$W_T * C_s$	$W_T * C_s * Z$	W_T
1.46	10.60	0.179	2.92	0.00	2.6	70.7	1.20	3.09	0.85	1.00	0.95	1.00	18.3	1.10	20.1	0.062	0.09	0.09	0.03	0.05	0.057
4.38	10.16	0.179	2.92	2.92	2.47	67.8	1.20	2.96	0.85	1.00	0.95	1.00	18.3	1.10	20.1	0.060	0.26	0.26	0.03	0.13	0.054
7.29	9.72	0.179	2.92	5.83	2.36	64.8	1.20	2.83	0.85	1.00	0.95	1.00	18.3	1.10	20.1	0.057	0.42	0.42	0.03	0.21	0.052
10.21	9.28	0.179	2.92	8.75	2.25	61.9	1.20	2.71	0.85	1.00	0.95	1.00	18.3	1.10	20.1	0.054	0.55	0.55	0.03	0.29	0.049
13.13	8.84	0.179	2.92	11.7	2.15	58.9	1.20	2.58	0.85	1.00	0.95	1.00	18.3	1.10	20.1	0.052	0.68	0.68	0.03	0.35	0.047
16.04	8.39	0.179	2.92	14.6	2.04	56.4	1.20	2.45	0.86	1.00	0.95	1.00	18.5	1.10	20.4	0.050	0.80	0.80	0.03	0.40	0.045
18.96	7.95	0.179	2.92	17.5	1.93	54.3	1.20	2.32	0.89	1.00	0.95	1.00	19.2	1.10	21.1	0.049	0.93	0.93	0.02	0.45	0.042
21.88	7.51	0.179	2.92	20.4	1.83	52.1	1.20	2.19	0.92	1.00	0.95	1.00	19.7	1.10	21.7	0.048	1.04	1.04	0.02	0.49	0.040
24.79	7.07	0.179	2.92	23.3	1.72	49.7	1.20	2.06	0.94	1.00	0.95	1.00	20.3	1.10	22.3	0.046	1.14	1.14	0.02	0.52	0.037
27.71	6.63	0.179	2.92	26.3	1.61	47.1	1.20	1.93	0.97	1.00	0.95	1.00	20.8	1.10	22.8	0.044	1.22	1.22	0.02	0.55	0.035
30.63	6.18	0.179	2.92	29.2	1.50	44.4	1.20	1.80	0.99	1.00	0.95	1.00	21.2	1.10	23.3	0.042	1.29	1.29	0.02	0.56	0.033
33.54	5.74	0.179	2.92	32.1	1.40	41.7	1.20	1.67	1.01	1.00	0.95	1.00	21.6	1.10	23.8	0.040	1.34	1.34	0.02	0.57	0.030
														Loading Summations:		**0.603**	**9.75**	**9.75**	**0.29**	**4.59**	**0.52**

Overall Length of Pole = 35.00 feet

Base Elevation of Pole = 0.00 feet (AGL)

Top of Steel Elevation = 35.00 feet (AGL)

Wind Loading Calculations - Sectorized Antennas and Mounts:

Description	CL Elevation (feet)	Offset from Shaft C.L. (in.)	Quantity Per Sector	Weight (lbs)	Height (inches)	Width (inches)	Depth (inches)	Shielding Factor K_a	C_a Calc (Normal)	C_a Calc (Transverse)	$(EPA)_N$ (ft^2)	$(EPA)_T$ (ft^2)	$(EPA)_A$ (ft^2)		Unfactored Wind Pressure (psf)	Factored V_{wind} (kips)	Factored Wind Torque (ft-kips)	Factored M_{wind} (ft-kips)	$V_{seismic}$ (kips)	Factored Seismic Torque (ft-kips)	Factored $M_{seismic}$ (ft-kips)	Factored Total Wt (kips)
Shear, Moment, and Weight Summations:																0.00	0.00	0.00	0.00	0.00	0.00	0.00

Factored Loads

Wind Loading Calculations - Miscellaneous Appurtenances:

Description	CL Elevation (feet)	Offset from Shaft C.L. (in.)	Quantity	Weight (lbs)	Shape Round (R) or Flat (F)	Height (inches)	Width (inches)	Area Factor	A_A (ft^2)	Aspect Ratio (Height / Width)	C	C_a	C_aA_A (ft^2)	ΣC_aA_A (ft^2)	Factored Wind Pressure (psf)	Factored V_{wind} (kips)	Factored Wind Torque (ft-kips)	Factored M_{wind} (ft-kips)	$V_{seismic}$ (kips)	Factored Seismic Torque (ft-kips)	Factored $M_{seismic}$ (ft-kips)	Factored Total Wt (kips)
18" Ø x 80" Tall Antenna/Shroud Ass	38.5	0.0	1	850.0	R	84.0	18.0	1.00	10.50	4.67	143	0.55	5.76	5.76	22.2	0.128	0.00	4.93	0.48	0.00	18.49	1.02
LED Luminaire w/photocell	35.0	0.0	2	20.0	F	6.4	22.1	1.00	0.98	3.45	N/A	1.24	1.22	2.44	21.8	0.053	0.00	1.86	0.02	0.00	0.79	0.05
8' Long (Max.) Luminaire Arm	32.5	0.0	2	45.0	R	2.4	96.0	1.00	1.58	40.42	752	0.60	0.95	1.90	21.5	0.041	0.00	1.33	0.05	0.00	1.65	0.11
Street Sign	11.0	20.0	1	30.0	F	9.0	36.0	1.00	2.25	4.00	N/A	1.27	2.85	2.85	18.3	0.052	0.09	0.57	0.02	0.03	0.19	0.04
CCI RF Notice Sign	9.0	2.0	1	6.0	F	9.0	9.0	1.00	0.56	1.00	N/A	1.20	0.68	0.68	18.3	0.012	0.00	0.11	0.00	0.00	0.03	0.01
Shear, Moment, and Weight Summations:																0.29	0.09	8.80	0.57	0.03	21.15	1.22

Factored Loads

Wind Loading Summary - Factored Base Reactions:

For Load Combination: 1.2D + 1.0W_o :

Design Base Moment, M_{base} = 19.9 ft-kips : $M_{Shaft} + M_{appurtenance} + M_{P\Delta}$

Design Base Shear, V_{base} = 0.89 kips : $V_{Shaft} + V_{Appurtenance}$

Design Base Torsion, T_{base} = 0.09 kips : $T_{Shaft} + T_{Appurtenance}$

Design Base Weight, WT_{base} = 1.85 kips : $Wt_{Shaft} + Wt_{Appurtenance}$

Seismic Loading Summary - Factored Base Reactions:

For Load Combination: 1.2D + 1.0E_v + 1.0 E_h :

Design Base Moment, M_{base} = 25.73 ft-kips : $M_{Shaft} + M_{appurtenance} + M_{P\Delta}$

Design Base Shear, V_{base} = 0.87 kips : $V_{Shaft} + V_{Appurtenance}$

Design Base Torsion, T_{base} = 0.03 ft-kips : $T_{Shaft} + T_{Appurtenance}$

Design Base Weight, WT_{base} = 2.36 kips : $Wt_{Shaft} + Wt_{Appurtenance}$

Wind Loading Calculations: Monopole Shaft

Reference: AASHTO LRFD-LTS-1, 2015 (w/ 2017 Interim Revs), Sec. 3

$V_{(ult)}$ =	110	mph (3-Second Gust)
G =	1.14	Gust Effect Factor, Section 3.8.6, Min. Value = 1.14
K_d =	0.95	Wind Direction Probability Factor
I =	1	Importance Factor
	II	:Risk Category
	C	:Exposure Category
	1	:Topographic Category
C_v =	1.0	:Wind Drag Coefficient (= 0.8 for the Extreme Limit State and 1.0 otherwise), Section 3.8.7

Design Wind Pressure, $P_z = 0.00256 * K_z * K_d * G * V^2$ ***Where:***

K_z = Velocity Pressure Exposure Coefficient, Section 3.8.4 and Eqn. 3.8.4-1
K_d = Wind Direction Probability Factor, Table 3.8.5-1
V = Basic Wind Speed, 3-Second Gust, mph

Section Wind Force, $F_{ST} = P_z * (EPA)_S$ ***Where:***

$(EPA)_S = C_d A_P$
C_d = Drag Coefficient, Section 3.8.7

Shaft Section Properties					Section Area				Wind Pressure							Wind Loading				
Average Section Elevation (Feet)	Section Pipe Diameter (inches)	Monopole Shaft Wall Thickness (inches)	Section Height (feet)	Section Elevation At Base (Feet)	Gross Section Area (Square Feet)	(mph - feet)	Drag Coefficient	Effective Section Area (Square Feet)	Velocity Pressure Coefficient		Wind Direction Probability Factor	Importance Factor	Velocity Pressure (psf)	Gust Effect Factor	Applied Wind Pressure (psf)	Section Base Wind Shear (kips)	Factored Section Base Wind Shear (kips)	Section Base Wind Moment (Foot-kips)	Factored Section Base Wind Moment (Foot-kips)	Section Weight (kips)
Z	D_P	T_W	H	Z_{Base}	A_P	Cv*V*d	C_d	EPA_S	K_Z		K_d	I	P_Z	G	P_ZG	F_{ST}	$1.0*F_{ST}$	$F_{ST} * Z$	$1.0*F_{ST}*Z$	W_T
1.46	10.60	0.179	2.92	0.00	2.58	97.2	1.20	3.09	0.85		0.95	1.00	25.0	1.14	28.5	0.088	0.088	0.13	0.13	0.06
4.38	10.16	0.179	2.92	2.92	2.47	93.1	1.20	2.96	0.85		0.95	1.00	25.0	1.14	28.5	0.085	0.085	0.37	0.37	0.05
7.29	9.72	0.179	2.92	5.8	2.36	89.1	1.20	2.83	0.85		0.95	1.00	25.0	1.14	28.5	0.081	0.081	0.59	0.59	0.05
10.21	9.28	0.179	2.92	8.8	2.25	85.0	1.20	2.71	0.85		0.95	1.00	25.0	1.14	28.5	0.077	0.077	0.79	0.79	0.05
13.13	8.84	0.179	2.92	11.7	2.15	81.0	1.20	2.58	0.85		0.95	1.00	25.0	1.14	28.5	0.073	0.073	0.96	0.96	0.05
16.04	8.39	0.179	2.92	14.6	2.04	76.9	1.20	2.45	0.86		0.95	1.00	25.3	1.14	28.9	0.071	0.071	1.13	1.13	0.04
18.96	7.95	0.179	2.92	17.5	1.93	72.9	1.20	2.32	0.89		0.95	1.00	26.2	1.14	29.9	0.069	0.069	1.32	1.32	0.04
21.88	7.51	0.179	2.92	20.4	1.83	68.8	1.20	2.19	0.92		0.95	1.00	27.0	1.14	30.8	0.068	0.068	1.48	1.48	0.04
24.79	7.07	0.179	2.92	23.3	1.72	64.8	1.20	2.06	0.94		0.95	1.00	27.8	1.14	31.7	0.065	0.065	1.62	1.62	0.04
27.71	6.63	0.179	2.92	26.3	1.61	60.7	1.20	1.93	0.97		0.95	1.00	28.4	1.14	32.4	0.063	0.063	1.74	1.74	0.04
30.63	6.18	0.179	2.92	29.2	1.50	56.7	1.20	1.80	0.99		0.95	1.00	29.0	1.14	33.1	0.060	0.060	1.83	1.83	0.03
33.54	5.74	0.179	2.92	32.1	1.40	52.6	1.20	1.67	1.01		0.95	1.00	29.6	1.14	33.7	0.056	0.056	1.89	1.89	0.03
															Loading Summations:	**0.86**	**0.86**	**13.84**	**13.84**	**0.52**

Overall Length of Pole = **35.00** **feet**
Base Elevation of Pole = **0.00** **feet (AGL)**
Top of Steel Elevation = **35.00** **feet (AGL)**

Deflection at Top of Pole = **15.57** **inches**
Sway at Top of Pole = **2.12** **degrees**
Moment Due to P-Δ Effects = **1.59** **ft-kips**

Wind Loading Calculations - Sectorized Antennas and Mounts:

Description	CL Elevation (feet)	Offset from Shaft C.L. (in.)	Quantity Per Sector	Weight (lbs)	Height (inches)	Width (inches)	Depth (inches)	Shielding Factor K_a	C_a Calc (Normal)	C_a Calc (Transverse)	$(EPA)_N$ (ft^2)	$(EPA)_T$ (ft^2)	$(EPA)_A$ (ft^2)		Wind Pressure (psf)	Factored Loads: Factored V_{wind} (kips)	Factored Torque (ft-kips)	Factored M_{wind} (ft-kips)	Factored Total Wt (kips)
Shear, Moment, and Weight Summations:																0.00	0.00	0.00	0.00

Wind Loading Calculations - Miscellaneous Appurtenances:

Description	CL Elevation (feet)	Offset from Shaft C.L. (in.)	Quantity	Weight (lbs)	Shape Round (R) or Flat (F)	Height (inches)	Width (inches)	Area Factor	A_A (ft^2)	Aspect Ratio (Height / Width)	C_vVd	Wind Drag Coefficient, C_d	C_dA_A (ft^2)	ΣC_dA_A (ft^2)	Wind Pressure (psf)	Factored Loads: Factored V_{wind} (kips)	Factored Torque (ft-kips)	Factored M_{wind} (ft-kips)	Factored Total Wt (kips)
18" Ø x 80" Tall Antenna/Shroud Assy	38.5	0.0	1	850	R	84.0	18.0	1.00	10.50	4.67	165	0.45	4.73	4.73	34.7	0.16	0.04	6.32	1.02
LED Luminaire w/photocell	35.0	0.0	2	20	F	6.4	22.1	1.00	0.98	3.45	N/A	1.20	1.18	2.36	34.0	0.08	0.02	2.81	0.05
8' Long (Max.) Luminaire Arm	32.5	0.0	2	45	R	2.4	96.0	1.00	1.58	40.42	880	0.45	0.71	1.43	33.5	0.05	0.06	1.55	0.11
Street Sign	11.0	20.0	1	30	F	9.0	36.0	1.00	2.25	4.00	N/A	1.20	2.70	2.70	28.5	0.08	0.13	0.85	0.04
CCI RF Notice Sign	9.0	2.0	1	6	F	9.0	9.0	1.00	0.56	1.00	N/A	1.19	0.67	0.67	28.5	0.02	0.00	0.17	0.01
Shear, Moment, and Weight Summations:																0.39	0.25	11.70	1.22

Wind Loading Summary - Factored Base Reactions:

Design Base Moment, M_{AASHTO} = 27.13 ft-kips
Design Base Shear, V_{AASHTO} = 1.24 kips
Design Base Torsion, T_{AASHTO} = 0.25 ft-kips
Design Base Weight, WT_{AASHTO} = 1.85 kips

Stress Check - Monopole Shaft / Access Ports

Access Port Information:

Port Width =	6.0	in.	Number of Ports =	1	
Port Height =	12.0	in.			
C.L. Port =	14.0	in. (Above Base Plate)			

Monopole Shaft Information:

Pole Diameter @ Port, D =	9.84	in.	Wall Slenderness Ratio, λ = D/t =	59.0	
Design Wall Thickness, t =	0.1667	in.	Plastic Design Slenderness Ratio, λ_p =	37.6	
Yield Stress, F_Y =	55.0	ksi	Limiting Slenderness Ratio, λ_{Max} =	400	
Distance to Extreme Fiber, C =	4.92	in.	Effective Section Modulus, S_{eff} =	13.38	in^3
Effective Yield Stress, F'_Y =	68.2	ksi	Effective Radius of Gyration, R_{eff} =	3.51	in.

MP Shaft Section Properties at Access Ports:

	Nominal Pipe Section:		***Reinforced Radio Port:***	***X - X Axis:***		***Y - Y Axis:***	
Mast Area, $A_{Nominal}$ =	5.34	in^2	Mast Area, A_{Reinf} =	3.87	in^2	3.87	in^2
Mom Of Inertia, $I_{Nominal}$ =	65.8	in^4	Mom Of Inertia, I_{Reinf} =	54.02	in^4	57.00	in^4
Port Yield Stress, F_Y =	46	ksi	Dist. to Extreme Fiber, C_x =	5.36	in.	5.51	in.

Design Flexural Strength:

			Effective Section Modulus, S_{eff} =	9.8	in^3
Compact Slenderness Ratio, λ_p =	37.6		**Section Is Non-Compact**		
Noncompact Slenderness Ratio, λ_r =	163		Nominal Flexural Strength, M_n =	**37.58**	ft-kips
Factored Moment, M_{BP} =	**25.7**	**ft-kips**	**Design Flexural Strength, $\phi_b M_n$ =**	**33.8**	***ft-kips (OK)***

Design Compressive Strength:

			Nominal Compressive Strength, $P_n = F'_Y * A_{Nominal}$ =	213	kips
Factored Weight, Wt_{BP} =	**2.36**	**kips**	**Design Compressive Strength, $\phi_c P_n$ =**	**191**	***kips (OK)***

Design Shear Strength:

F_{nv} =	33.0	ksi	Nominal Shear Strength, $V_n = F_{nv} * A_{Nominal}$ =	63.83	kips
Factored Shear, V_{BP} =	**0.89**	**kips**	**Design Shear Strength, $\phi_v V_n$ =**	**57.45**	***kips (OK)***

Design Torsional Strength:

F_{nt} =	33.00	ksi			
C_t =	25.88		Nominal Torsional Strength, Tn = 0.6 * Fy * Ct	**71**	ft-kips
Factored Torsion, T_{BP} =	**0.09**	**ft-kips**	**Design Torsional Strength, $\phi_t T_n$ =**	**67.62**	***kips (OK)***

Combined Flexure and Axial Force Check: (Section 4.8.2)

$$|P_u / \phi_c P_n| + |M_u / \phi_b M_n| + [\,|V_u / \phi_v V_n| + |T_u / \phi_r T_n|\,]^2 = 0.77 \quad < 1.00 \text{ OK}$$

Summary - Access Ports

Monopole Shaft:

USE: 10" Diameter @ Base Tapering to 5.1" Diameter @ Top
0.1793" wall (7 GA. Min.), 8-Sharp Flute ASTM A595 Gr. A (Minimum FY = 55 ksi) Monopole Shaft

Access Ports:

PORT DIMENSIONS								
PORT EL.	O.D.	WIDTH (W)	HT. (H)	DEPTH (D)	THKNS (T)	PROJ. (P)	QTY.	AZI.
25'-6"	-	4"	6"	1"	1/4"	3/8"	1	180˚
1'-6"	-	6"	12"	1 3/4"	1/4"	1/4"	1	180˚

Stress Check - Monopole Shaft @ Base

Monopole Shaft Information:

Pole Diameter @ Base, D_{Base} =	10.00	in.	Mast Area, $A_{Nominal}$ =	5.43	in^2
Nominal Wall Thickness, t =	0.1793	in.	Mom Of Inertia, $I_{Nominal}$ =	69.2	in^4
Distance to Extreme Fiber, C =	5.00	in.	Section Modulus, $S_{Modulus}$ =	13.8	in^3
Yield Stress, F_Y =	55.0	ksi	Plastic Section Modulus, $Z_{Modulus}$ =	15.6	in^3
Wall Slenderness Ratio, λ = D/t or b/t=	19.0		Average Radius of Gyration, $R_{Gyration}$ =	2.65	in.

AASHTO LRFD

Design Flexural Strength: Section 5.8

Compact Slenderness Ratio, λ_p =	25.7	**Use Plastic Design**	ϕ_b =	0.9	
Noncompact Slenderness Ratio, λ_r =	35				
Limiting Slenderness Ratio, λ_{Max} =	49	**(OK)**			
Nominal Flexural Strength, M_n =	71.5	ft-kips	Base Moment, M_{AASHTO} =	27.13	ft-kips
			Design Flexural Strength, $\phi_b M_n$ =	64.3	**ft-kips (OK)**

Design Compressive Strength: Section 5.10

Compact Slenderness Ratio, λ_p =	35		ϕ_c =	0.9	
kL/r (k = 2.1) =	333.0		Q =	1.000	
Euler's Buckling Stress = F_e =	2.58	ksi			
Critical Buckling Stress = F_{cr} =	2.26	ksi			
Nominal Compressive Strength = $P_n = F_{cr}*A_g$ =	12.3	kips	Base Weight, Wt_{Base} =	1.85	kips
			Design Compressive Strength = $\phi_c P_n = F_{cr}*A_g$ =	11.1	**kips (OK)**

Design Shear Strength: Section 5.11.2

Nominal Shear Stress Capacity = F_{nv} =	33.0	ksi	ϕ_v =	0.9	
Shear Area = A_v =	2.72	in^2			
Nominal Shear Strength = V_n =	89.7	kips	Applied Shear Load, V_{AASHTO} =	1.24	kips
			Design Shear Strength = $\phi_v V_n = F_{nv} * A_v$ =	80.7	**kips (OK)**

Design Torsion Strength: Section 5.11.3

Torsional Constant, C_t =	22.7	in	ϕ_t =	0.95	
Nominal Torsion Stress Capacity , F_{nt} =	33.00	ksi			
Nominal Torsion Strength, $T_n = F_{nt} * C_t$ =	62.3	kip-ft	Applied Torsion Load, T_{AASHTO} =	0.25	ft-kips
			Design Torsion Strength, $\phi_t T_n = F_{nt} * C_t$ =	59.2	**ft-kips (OK)**

Combined Force Interaction: Section 5.12.1

Mom Of Inertia @ T.O. Pole, I_T =	8.71	in^4	Mom Of Inertia @ B.O. Pole, I_B =	69.19	in^4
Factored Vertical Load, P_T =	1.22	kips	Factored Weight, D_P =	0.63	kips
$P_{equivalent} = (I_B/I_T)^{1/3}*P_T + 0.38*D_p$ =	2.67	kips	$P_{Euler\ bottom} = \pi^2*E*I_B/(k*L)^2$ =	25.46	kips
Coefficient for Amplification, B = B_2 =	1	≥ 1.0			

$$P_u / \phi_c P_n + B*M_u / \phi_b M_n + [\ |V_u / \phi_v V_n| + |T_u / \phi_r T_n|\ ]^2 = \quad 0.59 \quad \textbf{(OK)}$$

USE: 10" OD x 0.1793" wall, A53/A500 Gr B Monopole Shaft

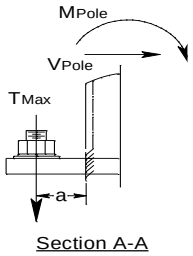
Anchor Bolt & Base Plate Data:

No. of Anchor Bolts, n =	4		Yield Strength, F_{y_AB} =	55.0	ksi	A.B. Gross Area, A_g =	0.79	in^2
AB Diameter, D_{AB} =	1.00	in.	Tensile Strength, F_{u_AB} =	75.0	ksi	A.B. Tensile Stress Area, A_n =	0.61	in^2
AB Circle, D_{BC} =	14.0	in.	Base Plate Width, W_{BP} =	14.0	in.	A.B. Plastic Modulus, Z_{ar} =	0.04	in^3
AB Length, L_{AB} =	48.0	in.	Pole Diameter, D_{pole} =	10.00	in.	Dist. Btwn Concr. & Lvl'g Nut, l_{ar} =	1.00	in.

Anchor Bolt Design Per ANSI/TIA 222-H, Section 4.9.9

Factored Base Reactions:

αM_{pole} =	25.73	ft-kips
αV_{pole} =	0.87	kips
αT_{pole} =	0.03	ft-kips
αWt_{pole} =	2.36	kips



Section A-A

Factored Compressive Force per bolt:

$P_{uc} = [4 * \alpha M_{Pole} / (n * D_{B.C.})] + \alpha Wt_{pole} / n$ = 22.6 kips

Factored Tensile Force per bolt:

$P_{ut} = [4 * \alpha M_{Pole} / (n * D_{B.C.})] - \alpha Wt_{pole} / n$ = 21.5 kips

Factored Shear Force per bolt:

$V_u = \alpha V_{pole} / n + \alpha T_{pole} / ((n * D_{BC}) / 2)$ = 0.23 kips

Anchor Bolt Moment

$M_{u\_ab} = 0.65 * V_u * l_{ar}$ = 0.15 in-kips

Design Anchor Bolt Strengths:

Design Tensile Strength, $\phi_t R_{nt\_AB} = \phi_t * F_{u\_AB} * A_n$ =	34.1	kips	$\phi_t = \phi_v$ =	0.75
Design Compressive Strength, $\phi_c R_{nc\_AB} = \phi_c * F_{y\_AB} * A_n$ =	33.3	kips	ϕ_c =	1.00
Design Shear Rupture Strength, $\phi_v R_{nv\_AB} = \phi_v * 0.5 * F_{u\_AB} * A_g$ =	22.1	kips		
Design Shear Yield Strength, $\phi_c R_{nvc\_AB} = \phi_c * 0.6 * F_{y\_AB} * A_n/2$ =	10.0	kips		
Design Flexural Strength, $\phi_f M_{n\_AB} = \phi_f * F_{y\_AB} * Z$ =	1.84	in-kips	ϕ_f =	0.90

Combined Shear & Tension Interaction Check: ***Anchor Rod Moment Interaction Equations N/A***

$[|P_{ut} / \phi_t R_{nt\_AB}|]^2 + [V_u / \phi_v R_{nv\_AB}]^2$ = 0.40 < 1.00 - (OK)

$|P_{uc} / \phi_c R_{nc\_AB}| + [V_u / \phi_c R_{nvc\_AB}]^2$ = 0.68 < 1.00 - (OK)

Base Plate Design Per ANSI/TIA 222-H, Section 4.7

Factored Base Plate Loading:

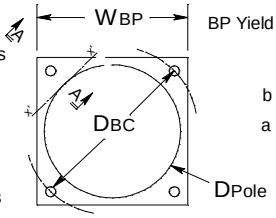
BP Bending, $M_{Plate} = P_{ut} * a$ = 42.9 in.-kips

Design Base Plate Bending Strength,

$\phi F_{B\_BP} = 0.90 * F_{y\_BP}$ = 32.4 ksi

Minimum Base Plate thickness:

$t_{min} = [4 * M_{plate} / (b * \phi F_{B\_BP})]^{1/2}$ = 0.735 inches



BP Yield Strength, F_{y_BP} = 36.0 ksi

b = length of x'-x' = 9.8 in.

a = $(D_{BC} - D_{Pole})/2$ = 2 in.

Failure across x'-x', modeled as fixed-end cantilevered beam.

Use: (4) - 1" Ø x 48" Long, Grade 55 Anchor Bolts on a 14" Ø B.C. **Structural Usage = 68.0%**

Use: 1" Thick by 14" Square, Grade 36 Base Plate **Structural Usage = 85.8%**

Base Plate-to-Pole Shaft weld Design:

Minimum weld size per ANSI/AWS d1.1, Table 5.8, Low-Hydrogen process = 1/8 inch

Upper Weld Size, w_t =	0.313	in.	Weld Tensile Strength, F_{weld} =	70.0	ksi (E70XX)
Lower Weld Size, w_b =	0.000	in.	Design Weld Strength, ϕF_w =	31.5	ksi

Distance to Centroid of Upper Weld, $L_{tw} = D_{pole}/2 + w_t/3$ = 5.10 inches

Distance to Centroid of Lower Weld, $L_{bw} = D_{pole}/2 - w_t/3$ = 5.00 inches

Section Modulus of Upper Weld, $S_{tw} = 0.707 * w_t * \pi * L_{tw}^2$ = 18.1 $in.^3$

Section Modulus of Lower Weld, $S_{lw} = 0.707 * w_b * \pi * L_{bw}^2$ = 0.0 $in.^3$

Total Weld Area, A_{weld} = 7.1 $in.^2$

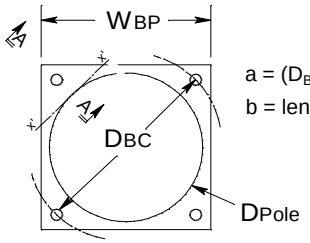
Required Weld Strength, $f_w = M_{pole}/\Sigma S_w + Wt_{pole}/A_{weld}$ = 18.34 ksi (OK)

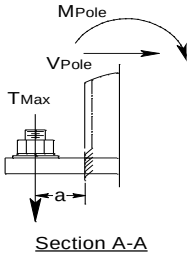
Use: Partial Penetration Weld 1/16" Beveled Weld with 5/16" Cover Fillet All Around

Anchor Bolt & Base Plate Analysis with Code Result:

Anchor Bolt & Base Plate Data:

No. of Anchor Bolts, n =	4		Weld Tensile Strength, F_{weld} =	70.0	ksi (E70XX)
AB Diameter, D_{AB} =	1.00	in.	Upper Weld Size, w_t =	0.313	in.
AB Circle, D_{BC} =	14.0	in.	Lower Weld Size, w_b =	0.313	in.
AB Length, L_{AB} =	48.0	in.			
Yield Strength, F_{y_AB} =	55.0	ksi	a = $(D_{BC} - D_{Pole})/2$ =	2	in.
Tensile Strength, F_{u_AB} =	75.0	ksi	b = length of x'-x' =	9.8	in.
A.B. Gross Area, A_g =	0.79	in^2			
Base Plate Width, W_{BP} =	14.0	in.			
BP Yield Strength, F_{y_BP} =	36.0	ksi			
Pole Diameter, D_{pole} =	10.00	in.			





Section A-A

AASHTO LTS-6, Section 5.16.3

Maximum Base Reactions:

αM_{pole} =	27.13	ft-kips	αT_{pole} =	0.25	ft-kips
αV_{pole} =	1.24	kips	αWt_{pole} =	1.85	kips

Maximum Tensile Stress per bolt:

$\alpha f_t = \{[4 * \alpha M_{Pole} / (n * D_{B.C.})] - \alpha Wt_{pole} / n\}$ = 22.8 kips

Maximum Shear Stress per bolt:

$\alpha f_v = (\alpha V_{pole} + 2 * \alpha T_{pole} / D_{BC}) / n$ = 0.42 kips

Design Anchor Bolt Tensile Stress:

ϕ_t = 0.75 $\quad \phi_t F_{t\_AB} = 0.75 * F_{u\_AB} * A_n$ = 33.1 kips

Design Anchor Bolt Shear Stress:

ϕ_v = 0.75 $\quad \phi_v F_{v\_AB} = 0.75 * 0.4 * F_{u\_AB} * A_g$ = 17.7 kips

Combined Shear & Tension Interaction Check:

$[(\alpha f_v / F_{v\_AB})^2 + (\alpha f_t / F_{t\_AB})^2]$ = **0.47** **< 1.00 - (OK)**

Base Plate:

Factored Base Plate Loading:

BP Bending, $M_{Plate} = \alpha f_t * a$ = 45.6 kips

Design Base Plate Bending Stress:

$\phi F_{b\_AB} = 0.9 * F_{y\_AB}$ = 32.4 in.-kips

Minimum Base Plate thickness:

ϕ = 0.90 $\quad t_{min} = [4 * M_{Plate} / (b * \phi F_{B\_BP})]^{1/2}$ = 0.758 inches

Use: (4) - 1" Ø Grade 55 Anchor Bolts on a 14" Ø B.C. **Structural Usage = 47.5%**

Use: 1" Thick by 14" Square, Grade 36 Base Plate **Structural Usage = 75.8%**

Base Plate-to-Pole Shaft weld Design:

Total Weld Area, A_{weld} = 13.9 $in.^2$

Minimum weld size per ANSI/AWS d1.1, Table 5.8, Low-Hydrogen process =	1/8	inch
Design Weld Strength, ϕF_w =	31.5	ksi
Distance to Centroid of Upper Weld, $L_{tw} = D_{pole}/2 + w_t/3$ =	5.10	inches
Distance to Centroid of Lower Weld, $L_{bw} = D_{pole}/2 - w_t/3$ =	4.90	inches
Section Modulus of Lower Weld, $S_{lw} = 0.707 * w_h * \pi * L_{hw}^2$ =	16.6	$in.^3$
Section Modulus of Upper Weld, $S_{tw} = 0.707 * w_t * \pi * L_{tw}^2$ =	18.1	$in.^3$

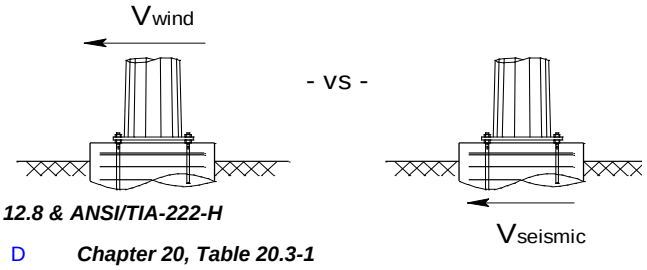
Required Weld Strength, $f_w = M_{pole}/\Sigma S_w + Wt_{pole}/A_{weld}$ = 9.51 ksi (OK)

Use: Partial Penetration Weld 1/16" Beveled Weld with 5/16" Cover Fillet All Around

Seismic Base Shear Calculations

Factored Base Reactions from Wind Loading:

M_{base} =	27.1	ft-kips
V_{base} =	1.24	kips
Wt_{base} =	1.85	kips



Seismic Parameters :

Per 2019 CBC Section 1613, ASCE 7-16 Sections 15.1.3 & 12.8 & ANSI/TIA-222-H

Site Classification =	D	***Chapter 20, Table 20.3-1***
Short-Period Spectral Acceleration, S_s =	2.113	g
1-Second Period Spectral Acceleration, S_1 =	0.757	g

Seismic Shear Factors:

I =	1.00	***Table 1.5-2***
R =	1.50	***Table 15.4-2***
T_L =	8	s, ***Annex B Fig. B-19***
F_a =	1.20	Values for S_1, S_s, F_a, and F_v obtained from ASCE 7 online Hazard Tool based on ASCE 7-16
F_v =	1.70	(Based on the location indicated above).

Location: Southern CA

Seismic Design Classifications:

Occupancy Category:	I	***I - IV, Table 1-1***
Seismic Design Category:	D	***A - F, Section 11.6***

Seismic Base Shear (Nominal Value) Sec. 2.7.7.1

$V = C_s * W =$ **1.73** **kips**

$C_s = S_{DS} / (R / I) =$ 1.127

$S_{DS} = (2 / 3) * S_{MS} =$ 1.690

$S_{MS} = S_S * F_a =$ 2.536

Seismic Base Shear (Need Not Exceed Value) Sec. 2.7.7.1 & Sec. 2.7.7.1.3.3

$V = C_s * W =$ **0.87** **kips**

$C_s \le S_{D1} / [T * (R / I)]$ (for $T \le T_L$), $\le S_{D1} * T_L * I / (T^2 * R)$ (for $T > T_L$) (for $S_1 \le 0.2g$, x 1.5) 0.565

$S_{D1} = (2 / 3) * S_{M1} =$ 0.858

$S_{M1} = S_1 * F_v =$ 1.287

$T = 1 / f_1 = 1 / (1 / (2\pi) * (3 * E * I_{avg} * g / (L_p * (W_u + 0.236 * W_L)))^{1/2}) =$ 1.52 Seconds

E =	29000	ksi	W_u=	0.817	kips
$I_{avg} = (I_{top}+I_{bot})/2$ =	37.25	in^4	W_L =	0.721	kips
L_p=	420	in	W_t =	1.54	kips
g =	386	in/s^2			

Seismic Base Shear (Minimum Value) Sec. 2.7.7.1

$V = C_s * W =$ **0.11** **kips**

$C_s = 0.044 * S_{DS} * I =$ 0.074 **≥ 0.03**

Seismic Base Shear (Minimum Value, $S_1 \ge 0.6g$) Sec. 2.7.7.1

$V = C_s * W =$ **0.62** **kips**

$C_s = 0.8 * S_1 / (R / I)] =$ 0.404

Vertical Seismic Load Effect Sec. 2.7.6

Total Seismic Vertical Load Effect = $E_v = 0.2*S_{DS} * W =$ ***0.52*** ***kips***

Total Seismic Shear = ***0.87*** ***kips***

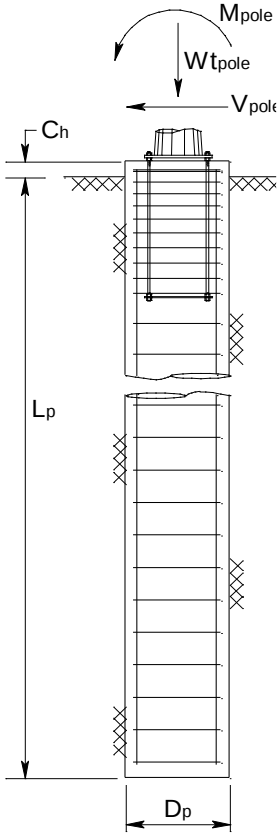
Total Wind Shear = ***1.24*** ***kips***

Design Base Shear is Governed by Wind Loading

Drilled Pier Foundation Design

Factored Monopole Base Reactions:

αM_{base} = Overturning Moment =	27.1	ft-kips
αV_{base} = Base Shear =	1.24	kips
αWt_{base} = Base Weight =	1.85	kips



Design Basis:

1. Ref. 2019 CBC Section 1807.3.2.1, Nonconstrained Condition

2. ACI 318-14 - Requirements for Reinforced Concrete.

3. Soil Design Values: Per 2019 CBC, Table1806.2, Class 5 Material

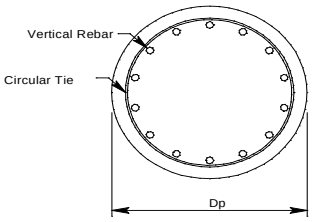
Soil Characteristics:

Based on 2019 CBC Soil Classification for Type:	5	(1 - 5)
ϕR_p = Nominal Lateral Bearing at 1' below grade =	150	psf/ft
d_{negl} = Depth of soil below grade neglected =	0.00	ft.

Drilled Pier Characteristics:

Minimum Diameter:

D_{templ} = OD of AB Template =	15.6	in.
S_b = Minimum AB and Rebar Separation =	0.75	in.
Concrete Cover = C_{cover} =	3.00	in.
$D_{p\_min} = D_{templ} + 2*(S_b + d_b + d_{ties} + C_{cover})$=	24.0	in.
Use D_p = Pier Diameter =	**24.0**	**in.**



Minimum Length/Depth:

C_h = Pier Projection AGL =	0.00	ft.
$S_1 = 2 * \phi R_p * (L_p - d_{negl}) / 3$ =	800	psf; Where $(L_p - d_{negl}) \leq 12$ ft.
$A = 2.34*V_{pole} / (S_1*D_p)$ =	1.82	
$L_{p\_min} = A/2 * [1 + (1 + 4.36*h/A)^{½}] + d_{negl}$ =	7.55	ft.
Use: L_p = Below Grade Pier Length =	**8.00**	**ft.**
L_{tot} = Total Length of Pier =	8.00	ft.
Total Volume of Concrete Required =	0.9	cu. yds.

Drilled Pier Foundation Design

Reinforcement:

Vertical Reinforcement Parameters:

Vertical Bar Size =	6		Tie Bar Size =	4	
Qty of Vertical Bars =	6		f'_c =	4.0	ksi
d_b = Diameter of Bar =	0.75	in.	f_y =	60.0	ksi

A_s = Total Area of Vert. Bars = 2.65 sq. in.

Pier Moment Capacity: Verify $M_{ult} \leq \emptyset M_n$

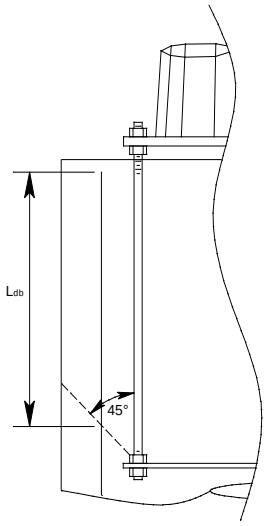
$M_{ult} = 1.3*[M_{pole}+V_{pole}*(L_p/3+d_{negl})]$ = 39.6 ft-kips

$\emptyset M_n$ = 99 ft-kips (OK)

$A_{smin} = 4*M_{ult} / \emptyset*f_y*N*D_p$ = 0.2443 sq. in.

$\rho_{prov} = A_s / (\pi/4 * D_p^2)$ = 0.0059

ρ_{min} = 0.0050 (OK)



Vertical Bar Development Length:

$L_{db} = [0.04*d_b*f_y / f'^{½}_c] * M_{ult} / \emptyset M_n$ = 11.38 in.

$L_{db\_prov'd}$ = 36.9 in. (OK)

Shear Reinforcement:

Factored Shear, $V_u = 1.4 * V_{pole}$ = 1.25 kips

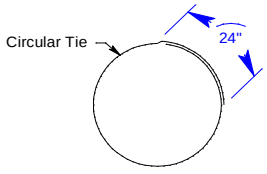
Horizontal Tie Shear Capacity, V_s = 76.8 kips ACI 318 Equation 22.5.10.5.3

Concrete Shear Capacity, V_c = 55.7 kips ACI 318 Table 22.5.5.1

Total Shear Capacity, $\emptyset V_c + \emptyset V_s$ = 99 kips (OK)

D_{tie} = Diameter of Tie = 18 " Ø

Reinforcement Summary:



Vertical Bars: 6 - #6 x 7.5 ft. Long A615 Gr. 60 Deformed Vertical Bars
Spaced evenly (approx. 8.1" o.c.) within Horizontal Ties

Horizontal Ties: 13 - #4 Horizontal Ties , 18 in. Diameter, with 24 in. lap
Spaced at 6" o.c. along the anchor bolts and 12" o.c. in remainder of pier

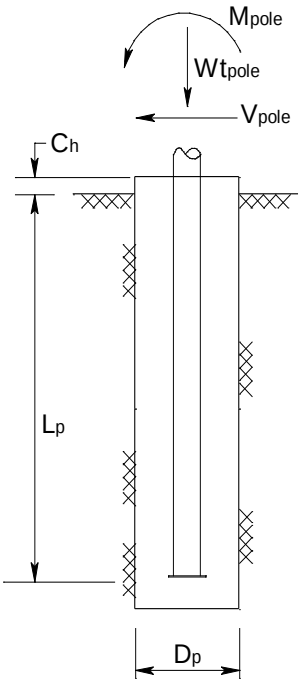
Rebar Weights:

Vertical Bars =	68	pounds
Horizontal Ties =	59	pounds
Horizontal Tie Length =	6' - 10"	

Optional Direct Burial Backfill Foundation Design

Factored Monopole Base Reactions:

M_{base}= Overturning Moment =	27.1	ft-kips
V_{base}= Base Shear =	1.24	kips
Wt_{pole} = Base Weight =	1.85	kips



Design Basis:

1. Ref. 2019 CBC IBC Section 1807.3.2.1, Nonconstrained Condition

2. ACI 318-14 - Requirements for Reinforced Concrete.

3. Soils Design: Per 2019 CBC, Table1806.2, Class 5 Material

Soil Characteristics:

Based on IBC Soil Classification for Type:	5	(1 - 5)
ϕR_p = Nominal Lateral Bearing at 1' below grade =	150	psf/ft
d_{negl} = Depth of soil below grade neglected =	0.00	ft.

Drilled Pier Characteristics:

Minimum Diameter:

D_{pole} =	10.75	in.
Minimum Cover = C_{cover} =	3.00	in.
$D_{p\_min} = D_{pole} + 2 * C_{cover}$ =	16.8	in.
Use D_p = Minimum Pier Diameter =	**18.0**	**in.**

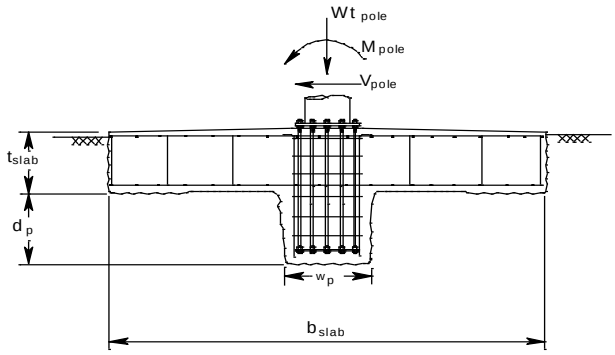
Minimum Length/Depth:

C_h = Embed Projection AGL =	0.00	ft.
$S_1 = 2 * \phi R_p * (L_p - d_{negl}) / 3$ =	1000	psf; Where $(L_p - d_{negl}) \leq 12$ ft.
$A = 2.34 * V_{pole} / (S_1 * D_p)$ =	1.94	
$L_{p\_min} = A/2 * [1 + (1 + 4.36*h/A)^{½}] + d_{negl}$ =	7.83	ft.
Use: L_p = Below Grade Pier Length =	**10.00**	**ft.**
L_{tot} = Total Length of Embed =	10.00	ft.
Total Volume of Concrete or Backfill Required =	0.42	cu. yds.

Alternative Slab Foundation Design

Factored Base Reactions:

Overturning Moment, αM_{pole} =	27.1	ft-kips
Base Shear, αV_{pole} =	1.24	kips
Base Weight, αWt_{pole} =	1.85	kips



Design Basis:

1. Soils investigation report performed by:
   Per 2019 CBC, Table1806.2, Class 5 Material
2. American Concrete Institute, ACI 318-14.

Design Parameters:

Slab Dimensions:

Slab Width, b_{slab} =	5.25	ft.	Pocket Width, w_p =	2.00	ft.
Slab Thickness, t_{slab} =	3.00	ft.	Weight of Slab, Wt_{slab} =	15.5	kips
Pocket Depth, d_p =	0.83	ft.	Volume of Concrete, Vol_{conc} =	3.2	cu yds

Nominal Soil Resistance Values: ***Resistance Factors:***

Bearing Resistance, R_{s_Brg} =	4,000	lbs/sq ft	Bearing Resistance Factor, ϕ_s =	0.75
Lateral Resistance, R_{s_Lat} =	300	lbs/sq ft/ft	Lateral Resistance Factor, ϕ_s =	0.75
Soil Density, γ_{soil} =	100	lbs/cu ft		

Slab Overturning Stability:

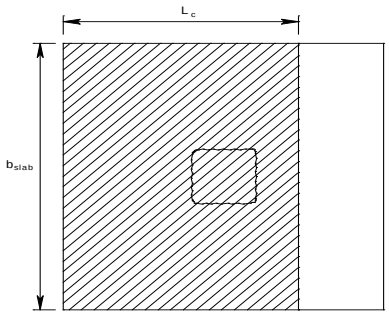
Moment Acting @ Toe of Slab:

αM_{toe} = OTM + V * t_{slab} = 31 ft-kips

Resisting Moment @ Toe of Slab:

$\phi M_R = (Wt_{pole} + Wt_{slab}) * (b_{slab} / 2)$ = 45 ft-kips

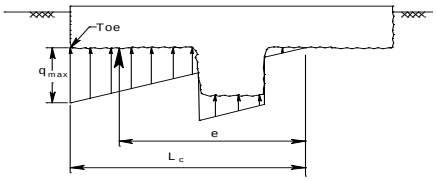
Overturning Factor of Safety = M_R / M_{toe} = 1.47 > 1.11 (OK)



Bearing Pressure Calculations:

Eccentricity, $e = M_{toe} / (Wt_{pole} + Wt_{slab})$ = 1.78 > 0.88 (OK)

Contact Length, $L_c = 3 * (b_{slab} / 2 - e)$ = 2.5 ft



Factored Gross Bearing:

$q_{max} = (Wt_{pole} + Wt_{slab}) / (½ * L_c * b_{slab})$ = 2.61 ksf/ft

Required Bearing Strength:

$q_{net} = q_{gross} - t_{slab} * \gamma_{soil}$ = 2.31 ksf/ft

Maximum Bearing Strength:

$\phi_s R_{s\_Brg}$ = 3.00 ksf (OK)

USE: 5.25 ft. Square x 3.00 ft. Thick Slab Min.

Slab Foundation Design (Cont.)

Slab Reinforcement Details:

Top mat rebar size:	6	Top mat Quantity:	8		f_y =	60.0	ksi
Bott. mat rebar size:	6	Bott. mat Quantity:	8		f'_c =	3.0	ksi
A_{s_top}=	3.5	in^2	A_{s_bott}=	3.5	in^2	d =	31.9	in

Check Minimum Horizontal Reinforcement Ratios:

$\rho_{min} = 200/f_y$ = 0.0033 Need More S $^3/_4\rho_{bal}$ = 0.0170 (OK)

$\rho_{temp/shrink}$ = 0.0018 (OK)

$\rho_{total\_prov'd} = (A_{s\_top} + A_{s\_bot}) / A_g$ = **0.0031** **NG**

Analysis of One-Way Beam Shear:

Pressure Slope = q_{max} / L_c = 1.030 klf

$L_{cant} = ½ * b_{slab}$ = 2.63 ft

$q' = q_{max} - (q_{max} / L_c) * L_{cant}$ = -0.096 ksf

Analysis of Cantilever Loads:

Factored Moment:

$\alpha M_u = [(q' * L_{cant}^2 * ½ + (q_{max} - q') * ½ * {}^2/_3 * L_{cant}^2) * b_{slab} + \alpha M_{pole}]$ = 31 ft-kips

Reinforcement Ratio of lower rebar mat:

$\rho_{bott} = A_{s\_bott} / (b_{slab} * t_{slab})$ = 0.0016 (OK)

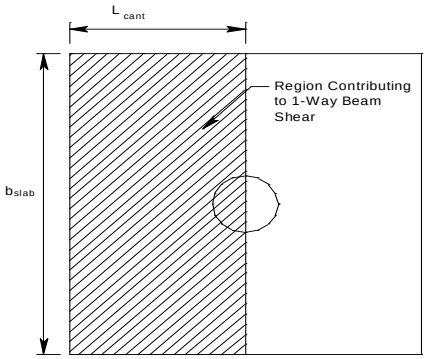
Nominal Moment Strength:

$\phi M_n = 0.9 * A_s * Fy * [d - (A_s * F_y) / (1.3 * f'_c * b_{slab})]$ = 493 ft-kips (OK)

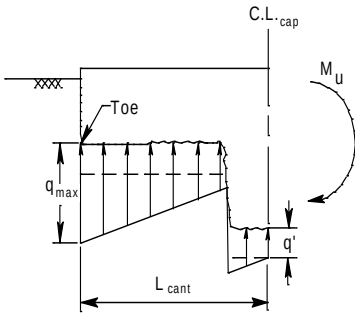
Factored Shear:

$\alpha V_u = [q' * L_{cant} + ½ * (q_{max} - q') * L_{cant}] * b_{slab}$ = 17 kips

Nominal Shear Strength of Concrete:



$\phi V_c = 0.75 * 2 * f'^{½}_c * b_{slab} * d$ = 165 kips (Vs not req'd)



Top Rebar Mat:

USE: #6 A615 Gr. 60 Bars 4.75 ft. long, Spaced at 8.2 in. c-c for top rebar mat

Bottom Rebar Mat:

USE: #6 A615 Gr. 60 Bars 4.75 ft. long, Spaced at 8.2 in. c-c for bottom rebar mat

Slab Foundation Design (Cont.)

Anchor Bolt Pocket Reinforcement Details:

Reinforcement Details:

L (Vertical) rebar size:	5	Quantity of Verticals:	4		A_{s_cap} =	1.23	sq in
Shear Tie rebar size:	4	Spacing of Ties, s =	6	in	A_{v_cap} =	0.39	sq in / tie
Pocket Width, w_p =	2.00	ft.	d' =	18.0	in		

Reinforcement Dimensions:

L-bar length = $L_{hb} = (C_h + t_{slab})$ - 6" = 40.0 in
Z-bar hook length = 12 * d_b = 7.50 in
Circular Shear Tie Size = C_s - 6" = 18.0 in

Minimum Reinforcement Ratios, $\rho = (A_{s\_total} / A_{g\_concr})$

$\rho_{min} = 200/f_y$ = 0.0033 (OK)
$\rho_{temp/shrink}$ = 0.0018 (OK)
$\frac{3}{4}\rho_{bal}$ = 0.0170 (OK)

Total Provided Reinforcement Ratio : $\rho_{total\_prov'd}$ = 0.0076 (A_{s_cap} / A_g)

Factored Moment in Pocket:

$\alpha M_u = V_{pole} * (t_{slab} + ½ * d_p)$ = 4 ft-kips

Nominal Moment Strength:

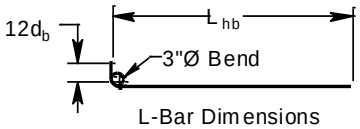
$\phi M_n = 0.9*(½*A_{s\_cap}*f_y*[d'-(A_{s\_cap}*f_y)/(1.3*f'_c*C_s)]+M_{n\_AB})$ = 48 ft-kips (OK)

Factored Shear in Pocket:

$V_u = V_{twr}$ = 1.2 kips

Nominal Shear Strength:

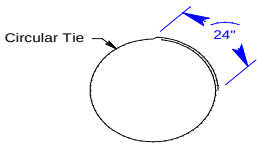
$\phi V_s = 0.75 * (A_{v\_cap} * f_y * d') / s$ = 53 kips (OK)



L-Bar Dimensions

Vertical Reinforcement for Pocket:

USE: 4 - # 5 L-bars 40 in. long, with a 7.5 in. long hook



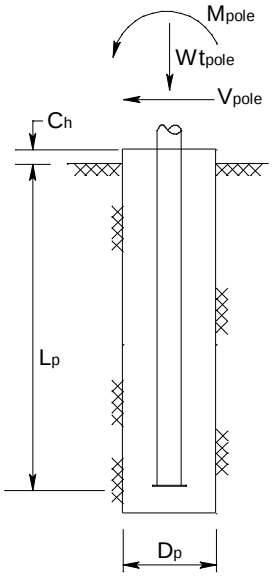
Anchor Bolt Confining Shear Reinforcement:

USE: 6 - # 4 Horizontal Ties 18 in. Ø, spaced at 6 in. on center

Optional Direct Burial Backfill Foundation Design

Factored Monopole Base Reactions:

M_{base}= Overturning Moment =	27.1	ft-kips
V_{base}= Base Shear =	1.24	kips
Wt_{pole} = Base Weight =	1.85	kips



Design Basis:

1. Ref. 2019 CBC Section 1807.3.2.2, Constrained Condition

2. ACI 318-14 - Requirements for Reinforced Concrete.

3. Soils Design: Per 2019 CBC, Table1806.2, Class 5 Material

Soil Characteristics:

Based on IBC Soil Classification for Type:	5	(1 - 5)
ϕR_p = Nominal Lateral Bearing at 1' below grade =	150	psf/ft
d_{negl} = Depth of soil below grade neglected =	1.00	ft.

Drilled Pier Characteristics:

Minimum Diameter:

D_{pole} =	10.75	in.
Minimum Cover = C_{cover} =	3.00	in.
$D_{p\_min} = D_{pole} + 2 * C_{cover}$ =	16.8	in.
Use D_p = Minimum Pier Diameter =	**18.0**	**in.**

Minimum Length/Depth:

C_h = Embed Projection AGL =	0.00	ft.
$S_3 = 2 * \phi R_p * (L_p - d_{negl})$ =	1500	psf; Where $(L_p - d_{negl}) \leq 12$ ft.
$L_{p\_min} = (4.25 * M_{pole} / (S_3 * b))^{½} + d_{negl}$ =	8.16	ft.
Use: L_p = Below Grade Pier Length =	**6.00**	**ft.**
L_{tot} = Total Length of Embed =	6.00	ft.
Total Volume of Concrete or Backfill Required =	0.25	cu. yds.

WESTERN™
UTILITY / TELECOM, INC.

Structural Calculations
with Foundation Design

For A:

35' Tall, Tapered Round Antenna Light Pole

Located At:

Various Nodes in Southern CA

Los Angeles County

Prepared for:

Crown Castle

DESIGN SUMMARY:

The calculations contained within this document represent customer specified antenna and equipment loading used to design the pole structure that is structurally adequate to accommodate the loading in accordance with all industry standards and local building codes.

Dated:
November 11, 2022
Revision A: Added Design Summary to Cover.

Western UT Project No.: 22-0170

5032 Salem-Dallas Highway NW, Salem, OR 97304
Phone: (503) 587-0101; Fax: (503) 316-1864
www.WesternUtilityTelecom.com

Table of Contents

PROFESSIONAL ENGINEER SEAL

I hereby certify that this structural design report was prepared by me, or under my direct supervision, and that I am a duly licensed Professional Engineer under the laws of the State of California.

Loading, Codes, and Materials

Design Loading:

Antenna(s): (1) - 18" Ø x 80" Tall Antenna/Shroud Assy, Wt. = 850 lbs., C.L. @ 38.5' ± AGL

(2) - LED Luminaire w/photocell, Wt. = 20 lbs., C.L. @ 35' ± AGL

(2) - 8' Long (Max.) Luminaire Arm, Wt. = 45 lbs., C.L. @ 32.5' ± AGL

(1) - Street Sign, Wt. = 30 lbs. C.L. @ 11' ± AGL

(1) - CCI RF Notice Sign, Wt. = 6 lbs. C.L. @ 9' ± AGL

Design Criteria:

Basic Wind Speed (V): 94 mph (3-Second Gust) Per ANSI/TIA-222-H & 2019 CBC, Section 1609.1.1, Exc. 5

Risk Category:	II	*Per Table 2-1*
Exposure Category:	C	*Per Section 2.6.5.1*
Topographic Category:	1	*Per Section 2.6.6.2*

Ice: Not required for this structure per Annex B

Seismic: Per 2019 CBC Section 1613 ASCE 7-16 Sections 15.1.3 & 12.8

Standards and Design Codes:

Industry Standards: ANSI/TIA 222-H & 2019 CBC

Concrete: ACI 318-14

Steel: AISC "Steel Construction Manual", 15th Edition

Welding: ANSI/AWS D1.1-15

Soil: Per 2019 CBC, Table1806.2, Class 5 Material

Materials:

Pole Shaft: ASTM A595 Gr. A or A1011 HLSA Gr. 55 (Minimum FY = 55 ksi)

Baseplate: ASTM A36

Ports: ASTM A500 Gr. B

Plates: ASTM A36

Welds: E70XX Electrodes

Structural Bolts: ASTM F3125 Gr. A325

Anchor Bolts: ASTM F1554 Gr. 55

Rebar: ASTM A615 Gr. 60

Coatings:

Galvanizing: ASTM A123

Wind Loading Calculations: Monopole Shaft

Reference: ANSI/TIA-222-H, Section 2.6.11.6

V =	94	mph (3-Second Gust Basic Wind Speed)
G_H =	1.10	Gust Response Factor - 1.10 for Poles
K_d =	0.95	Wind Direction Probability Factor
K_e =	1.00	Ground Elevation Factor
	II	:Risk Category
	C	:Exposure Category
	1	:Topographic Category

Velocity Pressure, $q_z = 0.00256 * K_z * K_{zt} * K_e * K_d * V^2$ ***Where:***

K_z = Velocity Pressure Exposure Coefficient, Section 2.6.5.2 and Table 2-4
K_{zt} = Topographic Factor, Section 2.6.6.2, Table 2-4 and 2-5
K_e = Ground Elevation Factor, Section 2.6.8
K_d = Wind Direction Probability Factor, Table 2-2
V = Basic Wind Speed, 3-Second Gust, mph

Section Wind Force, $F_{ST} = q_z * G_H * (EPA)_S$ ***Where:***

$(EPA)_S = C_f A_P$

Shaft Section Properties					Section Area				Wind Pressure							Wind Loading					
Average Section Elevation (Feet AGL)	Section Width (Point-to-Point) (inches)	Monopole Shaft Wall Thickness (inches)	Section Height (feet)	Section Elevation At Base (Feet)	Gross Section Area (Square Feet)	(mph - feet)	Force Coefficient	Effective Section Area (Square Feet)	Velocity Pressure Coefficient	Topographic Factor	Wind Direction Probability Factor	Ground Elevation Factor	Velocity Pressure (psf)	Gust Effect Factor	Applied Wind Pressure (psf)	Factored Section Base Wind Shear (kips)	Section Base Wind Moment (Foot-kips)	Factored Section Base Wind Moment (Foot-kips)	Factored Section Base Seismic Shear (kips)	Section Base Seismic Moment (Foot-kips)	Section Weight (kips)
Z	D_P	T_W	H	Z_{Base}	A_P	C	C_F	EPA_S	K_Z	K_{Zt}	K_d	K_e	q_Z	G_H	$q_Z G_H$	F_{ST}	$F_{ST} * Z$	$F_{ST} * Z$	$W_T * C_s$	$W_T * C_s * Z$	W_T
1.46	10.55	0.179	2.92	0.00	2.6	76.2	0.61	1.58	0.85	1.00	0.95	1.00	18.3	1.10	20.1	0.032	0.05	0.05	0.04	0.05	0.058
4.38	10.14	0.179	2.92	2.92	2.46	73.2	0.64	1.58	0.85	1.00	0.95	1.00	18.3	1.10	20.1	0.032	0.14	0.14	0.03	0.15	0.056
7.29	9.73	0.179	2.92	5.83	2.36	70.3	0.67	1.58	0.85	1.00	0.95	1.00	18.3	1.10	20.1	0.032	0.23	0.23	0.03	0.24	0.053
10.21	9.32	0.179	2.92	8.75	2.27	67.3	0.70	1.58	0.85	1.00	0.95	1.00	18.3	1.10	20.1	0.032	0.32	0.32	0.03	0.32	0.051
13.13	8.91	0.179	2.92	11.7	2.17	64.4	0.73	1.58	0.85	1.00	0.95	1.00	18.3	1.10	20.1	0.032	0.42	0.42	0.03	0.39	0.049
16.04	8.50	0.179	2.92	14.6	2.07	61.8	0.76	1.57	0.86	1.00	0.95	1.00	18.5	1.10	20.4	0.032	0.51	0.51	0.03	0.45	0.047
18.96	8.10	0.179	2.92	17.5	1.97	59.9	0.78	1.54	0.89	1.00	0.95	1.00	19.2	1.10	21.1	0.032	0.61	0.61	0.03	0.51	0.044
21.88	7.69	0.179	2.92	20.4	1.87	57.7	0.81	1.51	0.92	1.00	0.95	1.00	19.7	1.10	21.7	0.033	0.72	0.72	0.03	0.56	0.042
24.79	7.28	0.179	2.92	23.3	1.77	55.4	0.84	1.49	0.94	1.00	0.95	1.00	20.3	1.10	22.3	0.033	0.83	0.83	0.02	0.59	0.040
27.71	6.87	0.179	2.92	26.3	1.67	52.9	0.88	1.48	0.97	1.00	0.95	1.00	20.8	1.10	22.8	0.034	0.93	0.93	0.02	0.63	0.037
30.63	6.46	0.179	2.92	29.2	1.57	50.3	0.93	1.46	0.99	1.00	0.95	1.00	21.2	1.10	23.3	0.034	1.04	1.04	0.02	0.65	0.035
33.54	6.05	0.179	2.92	32.1	1.47	47.6	0.98	1.45	1.01	1.00	0.95	1.00	21.6	1.10	23.8	0.034	1.15	1.15	0.02	0.67	0.033
														Loading Summations:		**0.391**	**6.96**	**6.96**	**0.33**	**5.19**	**0.54**

Overall Length of Pole = 35.00 feet

Base Elevation of Pole = 0.00 feet (AGL)

Top of Steel Elevation = 35.00 feet (AGL)

Wind Loading Calculations - Sectorized Antennas and Mounts:

Description	CL Elevation (feet)	Offset from Shaft C.L. (in.)	Quantity Per Sector	Weight (lbs)	Height (inches)	Width (inches)	Depth (inches)	Shielding Factor K_a	C_a Calc (Normal)	C_a Calc (Transverse)	$(EPA)_N$ (ft^2)	$(EPA)_T$ (ft^2)	$(EPA)_A$ (ft^2)		Unfactored Wind Pressure (psf)	Factored V_{wind} (kips)	Factored Wind Torque (ft-kips)	Factored M_{wind} (ft-kips)	$V_{seismic}$ (kips)	Factored Seismic Torque (ft-kips)	Factored $M_{seismic}$ (ft-kips)	Factored Total Wt (kips)
Shear, Moment, and Weight Summations:																0.00	0.00	0.00	0.00	0.00	0.00	0.00

Wind Loading Calculations - Miscellaneous Appurtenances:

Description	CL Elevation (feet)	Offset from Shaft C.L. (in.)	Quantity	Weight (lbs)	Shape Round (R) or Flat (F)	Height (inches)	Width (inches)	Area Factor	A_A (ft^2)	Aspect Ratio (Height / Width)	C	C_a	C_aA_A (ft^2)	ΣC_aA_A (ft^2)	Factored Wind Pressure (psf)	Factored V_{wind} (kips)	Factored Wind Torque (ft-kips)	Factored M_{wind} (ft-kips)	$V_{seismic}$ (kips)	Factored Seismic Torque (ft-kips)	Factored $M_{seismic}$ (ft-kips)	Factored Total Wt (kips)
18" Ø x 80" Tall Antenna/Shroud Ass	38.5	0.0	1	850.0	R	84.0	18.0	1.00	10.50	4.67	143	0.55	5.76	5.76	22.2	0.128	0.00	4.93	0.51	0.00	19.78	1.02
LED Luminaire w/photocell	35.0	0.0	2	20.0	F	6.4	22.1	1.00	0.98	3.45	N/A	1.24	1.22	2.44	21.8	0.053	0.00	1.86	0.02	0.00	0.85	0.05
8' Long (Max.) Luminaire Arm	32.5	0.0	2	45.0	R	2.4	96.0	1.00	1.58	40.42	752	0.60	0.95	1.90	21.5	0.041	0.00	1.33	0.05	0.00	1.77	0.11
Street Sign	11.0	20.0	1	30.0	F	9.0	36.0	1.00	2.25	4.00	N/A	1.27	2.85	2.85	18.3	0.052	0.09	0.57	0.02	0.03	0.20	0.04
CCI RF Notice Sign	9.0	2.0	1	6.0	F	9.0	9.0	1.00	0.56	1.00	N/A	1.20	0.68	0.68	18.3	0.012	0.00	0.11	0.00	0.00	0.03	0.01
Shear, Moment, and Weight Summations:																0.29	0.09	8.80	0.61	0.03	22.63	1.22

Wind Loading Summary - Factored Base Reactions:

For Load Combination: 1.2D + 1.0W_o :

Design Base Moment, M_{base} = 16.7 ft-kips : $M_{Shaft} + M_{appurtenance} + M_{P\Delta}$

Design Base Shear, V_{base} = 0.68 kips : $V_{Shaft} + V_{Appurtenance}$

Design Base Torsion, T_{base} = 0.09 kips : $T_{Shaft} + T_{Appurtenance}$

Design Base Weight, WT_{base} = 1.87 kips : $Wt_{Shaft} + Wt_{Appurtenance}$

Seismic Loading Summary - Factored Base Reactions:

For Load Combination: 1.2D + 1.0E_v + 1.0 E_h :

Design Base Moment, M_{base} = 27.82 ft-kips : $M_{Shaft} + M_{appurtenance} + M_{P\Delta}$

Design Base Shear, V_{base} = 0.94 kips : $V_{Shaft} + V_{Appurtenance}$

Design Base Torsion, T_{base} = 0.03 ft-kips : $T_{Shaft} + T_{Appurtenance}$

Design Base Weight, WT_{base} = 2.40 kips : $Wt_{Shaft} + Wt_{Appurtenance}$

Wind Loading Calculations: Monopole Shaft

Reference: AASHTO LRFD-LTS-1, 2015 (w/ 2017 Interim Revs), Sec. 3

$V_{(ult)}$ =	110	mph (3-Second Gust)
G =	1.14	Gust Effect Factor, Section 3.8.6, Min. Value = 1.14
K_d =	0.95	Wind Direction Probability Factor
I =	1	Importance Factor
	II	:Risk Category
	C	:Exposure Category
	1	:Topographic Category
C_v =	1.0	:Wind Drag Coefficient (= 0.8 for the Extreme Limit State and 1.0 otherwise), Section 3.8.7

Design Wind Pressure, $P_z = 0.00256 * K_z * K_d * G * V^2$ ***Where:***

K_z = Velocity Pressure Exposure Coefficient, Section 3.8.4 and Eqn. 3.8.4-1
K_d = Wind Direction Probability Factor, Table 3.8.5-1
V = Basic Wind Speed, 3-Second Gust, mph

Section Wind Force, $F_{ST} = P_z * (EPA)_S$ ***Where:***

$(EPA)_S = C_d A_P$
C_d = Drag Coefficient, Section 3.8.7

Shaft Section Properties					Section Area				Wind Pressure							Wind Loading				
Average Section Elevation (Feet)	Section Pipe Diameter (inches)	Monopole Shaft Wall Thickness (inches)	Section Height (feet)	Section Elevation At Base (Feet)	Gross Section Area (Square Feet)	(mph - feet)	Drag Coefficient	Effective Section Area (Square Feet)	Velocity Pressure Coefficient		Wind Direction Probability Factor	Importance Factor	Velocity Pressure (psf)	Gust Effect Factor	Applied Wind Pressure (psf)	Section Base Wind Shear (kips)	Factored Section Base Wind Shear (kips)	Section Base Wind Moment (Foot-kips)	Factored Section Base Wind Moment (Foot-kips)	Section Weight (kips)
Z	D_P	T_W	H	Z_{Base}	A_P	Cv*V*d	C_d	EPA_S	K_Z		K_d	I	P_Z	G	P_ZG	F_{ST}	$1.0*F_{ST}$	$F_{ST} * Z$	$1.0*F_{ST}*Z$	W_T
1.46	10.55	0.179	2.92	0.00	2.56	96.7	0.45	1.15	0.85		0.95	1.00	25.0	1.14	28.5	0.033	0.033	0.05	0.05	0.06
4.38	10.14	0.179	2.92	2.92	2.46	92.9	0.45	1.11	0.85		0.95	1.00	25.0	1.14	28.5	0.032	0.032	0.14	0.14	0.06
7.29	9.73	0.179	2.92	5.8	2.36	89.2	0.45	1.06	0.85		0.95	1.00	25.0	1.14	28.5	0.030	0.030	0.22	0.22	0.05
10.21	9.32	0.179	2.92	8.8	2.27	85.4	0.45	1.02	0.85		0.95	1.00	25.0	1.14	28.5	0.029	0.029	0.30	0.30	0.05
13.13	8.91	0.179	2.92	11.7	2.17	81.7	0.45	0.97	0.85		0.95	1.00	25.0	1.14	28.5	0.028	0.028	0.36	0.36	0.05
16.04	8.50	0.179	2.92	14.6	2.07	78.0	0.45	0.93	0.86		0.95	1.00	25.3	1.14	28.9	0.027	0.027	0.43	0.43	0.05
18.96	8.10	0.179	2.92	17.5	1.97	74.2	0.48	0.94	0.89		0.95	1.00	26.2	1.14	29.9	0.028	0.028	0.53	0.53	0.04
21.88	7.69	0.179	2.92	20.4	1.87	70.5	0.51	0.95	0.92		0.95	1.00	27.0	1.14	30.8	0.029	0.029	0.64	0.64	0.04
24.79	7.28	0.179	2.92	23.3	1.77	66.7	0.55	0.97	0.94		0.95	1.00	27.8	1.14	31.7	0.031	0.031	0.76	0.76	0.04
27.71	6.87	0.179	2.92	26.3	1.67	63.0	0.59	0.99	0.97		0.95	1.00	28.4	1.14	32.4	0.032	0.032	0.89	0.89	0.04
30.63	6.46	0.179	2.92	29.2	1.57	59.2	0.64	1.01	0.99		0.95	1.00	29.0	1.14	33.1	0.033	0.033	1.02	1.02	0.04
33.54	6.05	0.179	2.92	32.1	1.47	55.5	0.70	1.03	1.01		0.95	1.00	29.6	1.14	33.7	0.035	0.035	1.16	1.16	0.03
															Loading Summations:	**0.37**	**0.37**	**6.50**	**6.50**	**0.54**

Overall Length of Pole = **35.00** **feet**
Base Elevation of Pole = **0.00** **feet (AGL)**
Top of Steel Elevation = **35.00** **feet (AGL)**

Deflection at Top of Pole = **10.76** **inches**
Sway at Top of Pole = **1.47** **degrees**
Moment Due to P-Δ Effects = **1.11** **ft-kips**

Wind Loading Calculations - Sectorized Antennas and Mounts:

Description	CL Elevation (feet)	Offset from Shaft C.L. (in.)	Quantity Per Sector	Weight (lbs)	Height (inches)	Width (inches)	Depth (inches)	Shielding Factor K_a	C_a Calc (Normal)	C_a Calc (Transverse)	$(EPA)_N$ (ft^2)	$(EPA)_T$ (ft^2)	$(EPA)_A$ (ft^2)		Wind Pressure (psf)	Factored Loads: Factored V_{wind} (kips)	Factored Torque (ft-kips)	Factored M_{wind} (ft-kips)	Factored Total Wt (kips)
Shear, Moment, and Weight Summations:																0.00	0.00	0.00	0.00

Wind Loading Calculations - Miscellaneous Appurtenances:

Description	CL Elevation (feet)	Offset from Shaft C.L. (in.)	Quantity	Weight (lbs)	Shape Round (R) or Flat (F)	Height (inches)	Width (inches)	Area Factor	A_A (ft^2)	Aspect Ratio (Height / Width)	C_vVd	Wind Drag Coefficient, C_d	C_dA_A (ft^2)	ΣC_dA_A (ft^2)	Wind Pressure (psf)	Factored Loads: Factored V_{wind} (kips)	Factored Torque (ft-kips)	Factored M_{wind} (ft-kips)	Factored Total Wt (kips)
18" Ø x 80" Tall Antenna/Shroud Assy	38.5	0.0	1	850	R	84.0	18.0	1.00	10.50	4.67	165	0.45	4.73	4.73	34.7	0.16	0.04	6.32	1.02
LED Luminaire w/photocell	35.0	0.0	2	20	F	6.4	22.1	1.00	0.98	3.45	N/A	1.20	1.18	2.36	34.0	0.08	0.02	2.81	0.05
8' Long (Max.) Luminaire Arm	32.5	0.0	2	45	R	2.4	96.0	1.00	1.58	40.42	880	0.45	0.71	1.43	33.5	0.05	0.06	1.55	0.11
Street Sign	11.0	20.0	1	30	F	9.0	36.0	1.00	2.25	4.00	N/A	1.20	2.70	2.70	28.5	0.08	0.13	0.85	0.04
CCI RF Notice Sign	9.0	2.0	1	6	F	9.0	9.0	1.00	0.56	1.00	N/A	1.19	0.67	0.67	28.5	0.02	0.00	0.17	0.01
Shear, Moment, and Weight Summations:																0.39	0.25	11.70	1.22

Wind Loading Summary - Factored Base Reactions:

Design Base Moment, M_{AASHTO} = 19.31 ft-kips
Design Base Shear, V_{AASHTO} = 0.75 kips
Design Base Torsion, T_{AASHTO} = 0.25 ft-kips
Design Base Weight, WT_{AASHTO} = 1.87 kips

Stress Check - Monopole Shaft / Access Ports

Access Port Information:

Port Width =	6.0	in.	Number of Ports =	1	
Port Height =	12.0	in.			
C.L. Port =	14.0	in. (Above Base Plate)			

Monopole Shaft Information:

Pole Diameter @ Port, D =	10.59	in.	Wall Slenderness Ratio, λ = D/t =	63.5	
Design Wall Thickness, t =	0.1667	in.	Plastic Design Slenderness Ratio, λ_p =	37.6	
Yield Stress, F_Y =	55.0	ksi	Limiting Slenderness Ratio, λ_{Max} =	400	
Distance to Extreme Fiber, C =	5.29	in.	Effective Section Modulus, S_{eff} =	13.95	in^3
Effective Yield Stress, F'_Y =	55.0	ksi	Effective Radius of Gyration, R_{eff} =	3.68	in.

MP Shaft Section Properties at Access Ports:

Nominal Pipe Section:			***Reinforced Radio Port:***	***X - X Axis:***		***Y - Y Axis:***	
Mast Area, $A_{Nominal}$ =	5.46	in^2	Mast Area, A_{Reinf} =	3.87	in^2	3.87	in^2
Mom Of Inertia, $I_{Nominal}$ =	73.8	in^4	Mom Of Inertia, I_{Reinf} =	54.02	in^4	57.00	in^4
Port Yield Stress, F_Y =	46	ksi	Dist. to Extreme Fiber, C_x =	5.36	in.	5.51	in.

Design Flexural Strength:

			Effective Section Modulus, S_{eff} =	9.8	in^3
Compact Slenderness Ratio, λ_p =	37.6		**Section Is Non-Compact**		
Noncompact Slenderness Ratio, λ_r =	163		Nominal Flexural Strength, M_n =	**37.58**	ft-kips
Factored Moment, M_{BP} =	**27.8**	**ft-kips**	**Design Flexural Strength, $\phi_b M_n$ =**	**33.8**	***ft-kips (OK)***

Design Compressive Strength:

			Nominal Compressive Strength, $P_n = F'_Y * A_{Nominal}$ =	213	kips
Factored Weight, Wt_{BP} =	**2.40**	**kips**	**Design Compressive Strength, $\phi_c P_n$ =**	**191**	***kips (OK)***

Design Shear Strength:

F_{nv} =	33.0	ksi	Nominal Shear Strength, $V_n = F_{nv} * A_{Nominal}$ =	63.83	kips
Factored Shear, V_{BP} =	**0.94**	**kips**	**Design Shear Strength, $\phi_v V_n$ =**	**57.45**	***kips (OK)***

Design Torsional Strength:

F_{nt} =	33.00	ksi			
C_t =	28.42		Nominal Torsional Strength, Tn = Fnt * Ct =	**78**	ft-kips
Factored Torsion, T_{BP} =	**0.09**	**ft-kips**	**Design Torsional Strength, $\phi_t T_n$ =**	**74.26**	***kips (OK)***

Combined Flexure and Axial Force Check: (Section 4.8.2)

$$|P_u / \phi_c P_n| + |M_u / \phi_b M_n| + [\,|V_u / \phi_v V_n| + |T_u / \phi_r T_n|\,]^2 = 0.84$$ **< 1.00 OK**

Summary - Access Ports

Monopole Shaft:

USE: 10.75" Diameter @ Base Tapering to 5.85" Diameter @ Top
0.1793" wall (7 GA. Min.), Tapered ASTM A595 Gr. A or A1011 HLSA Gr. 55 (Minimum FY = 55 ksi) Monopole Shaft

Access Ports:

PORT DIMENSIONS								
PORT EL.	O.D.	WIDTH (W)	HT. (H)	DEPTH (D)	THKNS (T)	PROJ. (P)	QTY.	AZI.
1'-6"	-	6"	12"	1 3/4"	1/4"	1/4"	1	180˚

Stress Check - Monopole Shaft @ Base

Monopole Shaft Information:

Pole Diameter @ Base, D_{Base} =	10.75	in.	Mast Area, $A_{Nominal}$ =	5.54	in^2
Nominal Wall Thickness, t =	0.1793	in.	Mom Of Inertia, $I_{Nominal}$ =	77.4	in^4
Distance to Extreme Fiber, C =	5.38	in.	Section Modulus, $S_{Modulus}$ =	14.4	in^3
Yield Stress, F_Y =	55.0	ksi	Plastic Section Modulus, $Z_{Modulus}$ =	18.1	in^3
Wall Slenderness Ratio, λ = D/t or b/t=	60.0		Average Radius of Gyration, $R_{Gyration}$ =	2.84	in.

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Design Flexural Strength: Section 5.8

Compact Slenderness Ratio, λ_p =	36.9	**Section Is Non-Compact**	ϕ_b =	0.9	
Noncompact Slenderness Ratio, λ_r =	163				
Limiting Slenderness Ratio, λ_{Max} =	237	**(OK)**			
Nominal Flexural Strength, M_n =	75.6	ft-kips	Base Moment, M_{AASHTO} =	19.31	ft-kips
			Design Flexural Strength, $\phi_b M_n$ =	68.0	**ft-kips (OK)**

Design Compressive Strength: Section 5.10

Compact Slenderness Ratio, λ_p =	58		ϕ_c =	0.9	
kL/r (k = 2.1) =	310.5		Q =	1.000	
Euler's Buckling Stress = F_e =	2.97	ksi			
Critical Buckling Stress = F_{cr} =	2.60	ksi			
Nominal Compressive Strength = $P_n = F_{cr}*A_g$ =	14.4	kips	Base Weight, Wt_{Base} =	1.87	kips
			Design Compressive Strength = $\phi_c P_n = F_{cr}*A_g$ =	13.0	**kips (OK)**

Design Shear Strength: Section 5.11.2

Nominal Shear Stress Capacity = F_{nv} =	33.0	ksi	ϕ_v =	0.9	
Shear Area = A_v =	2.77	in^2			
Nominal Shear Strength = V_n =	91.5	kips	Applied Shear Load, V_{AASHTO} =	0.75	kips
			Design Shear Strength = $\phi_v V_n = F_{nv} * A_v$ =	82.3	**kips (OK)**

Design Torsion Strength: Section 5.11.3

Torsional Constant, C_t =	31.5	in	ϕ_t =	0.95	
Nominal Torsion Stress Capacity , F_{nt} =	33.00	ksi			
Nominal Torsion Strength, $T_n = F_{nt} * C_t$ =	86.5	kip-ft	Applied Torsion Load, T_{AASHTO} =	0.25	ft-kips
			Design Torsion Strength, $\phi_t T_n = F_{nt} * C_t$ =	82.2	**ft-kips (OK)**

Combined Force Interaction: Section 5.12.1

Mom Of Inertia @ T.O. Pole, I_T =	11.95	in^4	Mom Of Inertia @ B.O. Pole, I_B =	77.37	in^4
Factored Vertical Load, P_T =	1.22	kips	Factored Weight, D_P =	0.65	kips
$P_{equivalent} = (I_B/I_T)^{1/3}*P_T + 0.38*D_p$ =	2.52	kips	$P_{Euler\ bottom} = \pi^2*E*I_B/(k*L)^2$ =	28.47	kips
Coefficient for Amplification, B = B_2 =	1	≥ 1.0			

$$P_u / \phi_c P_n + B*M_u / \phi_b M_n + [\ |V_u / \phi_v V_n| + |T_u / \phi_r T_n|\ ]^2 = \quad 0.43 \quad \textbf{(OK)}$$

USE: 10.75" OD x 0.1793" wall, A53/A500 Gr B Monopole Shaft

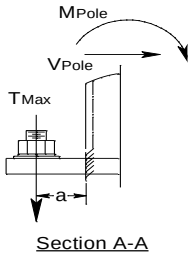
Anchor Bolt & Base Plate Data:

No. of Anchor Bolts, n =	4		Yield Strength, F_{y_AB} =	55.0	ksi	A.B. Gross Area, A_g =	0.79	in^2
AB Diameter, D_{AB} =	1.00	in.	Tensile Strength, F_{u_AB} =	75.0	ksi	A.B. Tensile Stress Area, A_n =	0.61	in^2
AB Circle, D_{BC} =	14.0	in.	Base Plate Width, W_{BP} =	14.0	in.	A.B. Plastic Modulus, Z_{ar} =	0.04	in^3
AB Length, L_{AB} =	48.0	in.	Pole Diameter, D_{pole} =	10.75	in.	Dist. Btwn Concr. & Lvl'g Nut, l_{ar} =	1.00	in.

Anchor Bolt Design Per ANSI/TIA 222-H, Section 4.9.9

Factored Base Reactions:

αM_{pole} =	27.82	ft-kips
αV_{pole} =	0.94	kips
αT_{pole} =	0.03	ft-kips
αWt_{pole} =	2.40	kips



Section A-A

Factored Compressive Force per bolt:

$P_{uc} = [4 * \alpha M_{Pole} / (n * D_{B.C.})] + \alpha Wt_{pole} / n$ = 24.4 kips

Factored Tensile Force per bolt:

$P_{ut} = [4 * \alpha M_{Pole} / (n * D_{B.C.})] - \alpha Wt_{pole} / n$ = 23.2 kips

Factored Shear Force per bolt:

$V_u = \alpha V_{pole} / n + \alpha T_{pole} / ((n * D_{BC}) / 2)$ = 0.25 kips

Anchor Bolt Moment

$M_{u\_ab} = 0.65 * V_u * l_{ar}$ = 0.16 in-kips

Design Anchor Bolt Strengths:

Design Tensile Strength, $\phi_t R_{nt\_AB} = \phi_t * F_{u\_AB} * A_n$ =	34.1	kips	$\phi_t = \phi_v$ =	0.75
Design Compressive Strength, $\phi_c R_{nc\_AB} = \phi_c * F_{y\_AB} * A_n$ =	33.3	kips	ϕ_c =	1.00
Design Shear Rupture Strength, $\phi_v R_{nv\_AB} = \phi_v * 0.5 * F_{u\_AB} * A_g$ =	22.1	kips		
Design Shear Yield Strength, $\phi_c R_{nvc\_AB} = \phi_c * 0.6 * F_{y\_AB} * A_n/2$ =	10.0	kips		
Design Flexural Strength, $\phi_f M_{n\_AB} = \phi_f * F_{y\_AB} * Z$ =	1.84	in-kips	ϕ_f =	0.90

Combined Shear & Tension Interaction Check: ***Anchor Rod Moment Interaction Equations N/A***

$[|P_{ut} / \emptyset_t R_{nt\_AB}|]^2 + [V_u / \emptyset_v R_{nv\_AB}]^2$ = **0.47** **< 1.00 - (OK)**

$|P_{uc} / \emptyset_c R_{nc\_AB}| + [V_u / \emptyset_c R_{nvc\_AB}]^2$ = **0.73** **< 1.00 - (OK)**

Base Plate Design Per ANSI/TIA 222-H, Section 4.7

Factored Base Plate Loading:

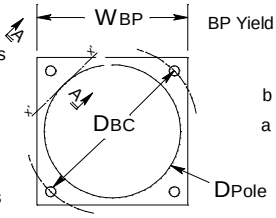
BP Bending, $M_{Plate} = P_{ut} * a$ = 37.8 in.-kips

Design Base Plate Bending Strength,

$\phi F_{B\_BP} = 0.90 * F_{y\_BP}$ = 32.4 ksi

Minimum Base Plate thickness:

$t_{min} = [4 * M_{plate} / (b * \phi F_{B\_BP})]^{1/2}$ = 0.718 inches



BP Yield Strength, F_{y_BP} = 36.0 ksi

b = length of x'-x' = 9 in.

a = $(D_{BC} - D_{Pole})/2$ = 1.63 in.

Failure across x'-x', modeled as fixed-end cantilevered beam.

Use: (4) - 1" Ø x 48" Long, Grade 55 Anchor Bolts on a 14" Ø B.C. **Structural Usage = 73.4%**

Use: 1" Thick by 14" Square, Grade 36 Base Plate **Structural Usage = 84.7%**

Base Plate-to-Pole Shaft weld Design:

Minimum weld size per ANSI/AWS d1.1, Table 5.8, Low-Hydrogen process = 1/8 inch

Upper Weld Size, w_t =	0.313	in.	Weld Tensile Strength, F_{weld} =	70.0	ksi (E70XX)
Lower Weld Size, w_b =	0.000	in.	Design Weld Strength, ϕF_w =	31.5	ksi

Distance to Centroid of Upper Weld, $L_{tw} = D_{pole}/2 + w_t/3$ = 5.48 inches

Distance to Centroid of Lower Weld, $L_{bw} = D_{pole}/2 - w_t/3$ = 5.38 inches

Section Modulus of Upper Weld, $S_{tw} = 0.707 * w_t * \pi * L_{tw}^2$ = 20.8 $in.^3$

Section Modulus of Lower Weld, $S_{lw} = 0.707 * w_b * \pi * L_{bw}^2$ = 0.0 $in.^3$

Total Weld Area, A_{weld} = 7.6 $in.^2$

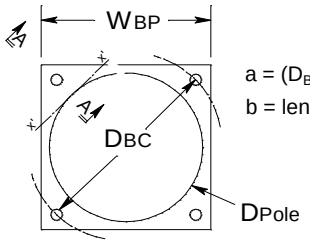
Required Weld Strength, $f_w = M_{pole}/\Sigma S_w + Wt_{pole}/A_{weld}$ = 16.33 ksi (OK)

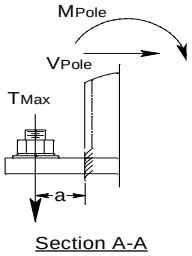
Use: Partial Penetration Weld 1/16" Beveled Weld with 5/16" Cover Fillet All Around

Anchor Bolt & Base Plate Analysis with Code Result:

Anchor Bolt & Base Plate Data:

No. of Anchor Bolts, n =	4		Weld Tensile Strength, F_{weld} =	70.0	ksi (E70XX)
AB Diameter, D_{AB} =	1.00	in.	Upper Weld Size, w_t =	0.313	in.
AB Circle, D_{BC} =	14.0	in.	Lower Weld Size, w_b =	0.313	in.
AB Length, L_{AB} =	48.0	in.			
Yield Strength, F_{y_AB} =	55.0	ksi	a = $(D_{BC} - D_{Pole})/2$ =	1.63	in.
Tensile Strength, F_{u_AB} =	75.0	ksi	b = length of x'-x' =	9	in.
A.B. Gross Area, A_g =	0.79	in^2			
Base Plate Width, W_{BP} =	14.0	in.			
BP Yield Strength, F_{y_BP} =	36.0	ksi			
Pole Diameter, D_{pole} =	10.75	in.			





Section A-A

AASHTO LTS-6, Section 5.16.3

Maximum Base Reactions:

αM_{pole} =	19.31	ft-kips	αT_{pole} =	0.25	ft-kips
αV_{pole} =	0.94	kips	αWt_{pole} =	1.87	kips

Maximum Tensile Stress per bolt:

$\alpha f_t = \{[4 * \alpha M_{Pole} / (n * D_{B.C.})] - \alpha Wt_{pole} / n\}$ = 16.1 kips

Maximum Shear Stress per bolt:

$\alpha f_v = (\alpha V_{pole} + 2 * \alpha T_{pole} / D_{BC}) / n$ = 0.34 kips

Design Anchor Bolt Tensile Stress:

ϕ_t = 0.75 $\quad \phi_t F_{t\_AB} = 0.75 * F_{u\_AB} * A_n$ = 33.1 kips

Design Anchor Bolt Shear Stress:

ϕ_v = 0.75 $\quad \phi_v F_{v\_AB} = 0.75 * 0.4 * F_{u\_AB} * A_g$ = 17.7 kips

Combined Shear & Tension Interaction Check:

$[(\alpha f_v / F_{v\_AB})^2 + (\alpha f_t / F_{t\_AB})^2]$ = **0.24** **< 1.00 - (OK)**

Base Plate:

Factored Base Plate Loading:

BP Bending, $M_{Plate} = \alpha f_t * a$ = 26.1 kips

Design Base Plate Bending Stress:

$\phi F_{b\_AB} = 0.9 * F_{y\_AB}$ = 32.4 in.-kips

Minimum Base Plate thickness:

ϕ = 0.90 $\quad t_{min} = [4 * M_{Plate} / (b * \phi F_{B\_BP})]^{1/2}$ = 0.597 inches

Use: (4) - 1" Ø Grade 55 Anchor Bolts on a 14" Ø B.C. **Structural Usage = 23.6%**

Use: 1" Thick by 14" Square, Grade 36 Base Plate **Structural Usage = 59.7%**

Base Plate-to-Pole Shaft weld Design:

Total Weld Area, A_{weld} = 14.9 $in.^2$

Minimum weld size per ANSI/AWS d1.1, Table 5.8, Low-Hydrogen process =	1/8	inch
Design Weld Strength, ϕF_w =	31.5	ksi
Distance to Centroid of Upper Weld, $L_{tw} = D_{pole}/2 + w_t/3$ =	5.48	inches
Distance to Centroid of Lower Weld, $L_{bw} = D_{pole}/2 - w_t/3$ =	5.27	inches
Section Modulus of Lower Weld, $S_{lw} = 0.707 * w_h * \pi * L_{hw}^2$ =	19.3	$in.^3$
Section Modulus of Upper Weld, $S_{tw} = 0.707 * w_t * \pi * L_{tw}^2$ =	20.8	$in.^3$

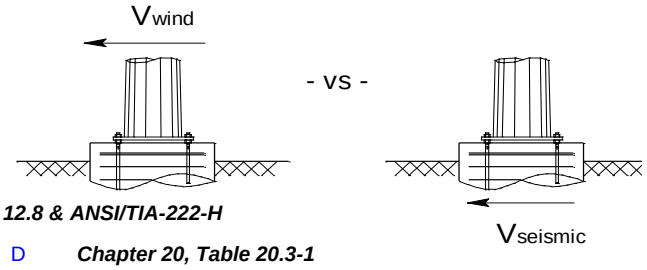
Required Weld Strength, $f_w = M_{pole}/\Sigma S_w + Wt_{pole}/A_{weld}$ = 5.90 ksi (OK)

Use: Partial Penetration Weld 1/16" Beveled Weld with 5/16" Cover Fillet All Around

Seismic Base Shear Calculations

Factored Base Reactions from Wind Loading:

M_{base} =	19.3	ft-kips
V_{base} =	0.75	kips
Wt_{base} =	1.87	kips



Seismic Parameters :

Per 2019 CBC Section 1613, ASCE 7-16 Sections 15.1.3 & 12.8 & ANSI/TIA-222-H

Site Classification =	D		***Chapter 20, Table 20.3-1***
Short-Period Spectral Acceleration, S_s =	2.113	g	
1-Second Period Spectral Acceleration, S_1 =	0.757	g	

Seismic Shear Factors:

I =	1.00	***Table 1.5-2***	Location: Southern CA
R =	1.50	***Table 15.4-2***	
T_L =	8	s, ***Annex B Fig. B-19***	
F_a =	1.20	Values for S_1, S_s, F_a, and F_v obtained from ASCE 7 online Hazard Tool based on ASCE 7-16	
F_v =	1.70	(Based on the location indicated above).	

Seismic Design Classifications:

Occupancy Category:	I	***I - IV, Table 1-1***
Seismic Design Category:	D	***A - F, Section 11.6***

Seismic Base Shear (Nominal Value) Sec. 2.7.7.1

$V = C_s * W =$ **1.76** **kips**

$C_s = S_{DS} / (R / I) =$ 1.127

$S_{DS} = (2 / 3) * S_{MS} =$ 1.690

$S_{MS} = S_S * F_a =$ 2.536

Seismic Base Shear (Need Not Exceed Value) Sec. 2.7.7.1 & Sec. 2.7.7.1.3.3

$V = C_s * W =$ **0.94** **kips**

$C_s \le S_{D1} / [T * (R / I)]$ (for $T \le T_L$), $\le S_{D1} * T_L * I / (T^2 * R)$ (for $T > T_L$) (for $S_1 \le 0.2g$, x 1.5) 0.604

$S_{D1} = (2 / 3) * S_{M1} =$ 0.858

$S_{M1} = S_1 * F_v =$ 1.287

$T = 1 / f_1 = 1 / (1 / (2\pi) * (3 * E * I_{avg} * g / (L_p * (W_u + 0.236 * W_L)))^{1/2}) =$ 1.42 Seconds

E =	29000	ksi	W_u=	0.817	kips
$I_{avg} = (I_{top}+I_{bot})/2$ =	42.90	in^4	W_L =	0.744	kips
L_p=	420	in	W_t =	1.56	kips
g =	386	in/s^2			

Seismic Base Shear (Minimum Value) Sec. 2.7.7.1

$V = C_s * W =$ **0.12** **kips**

$C_s = 0.044 * S_{DS} * I =$ 0.074 **≥ 0.03**

Seismic Base Shear (Minimum Value, S_1 ≥ 0.6g) Sec. 2.7.7.1

$V = C_s * W =$ **0.63** **kips**

$C_s = 0.8 * S_1 / (R / I)] =$ 0.404

Vertical Seismic Load Effect Sec. 2.7.6

Total Seismic Vertical Load Effect = $E_v = 0.2*S_{DS} * W =$ ***0.53*** ***kips***

Total Seismic Shear = ***0.94*** ***kips***

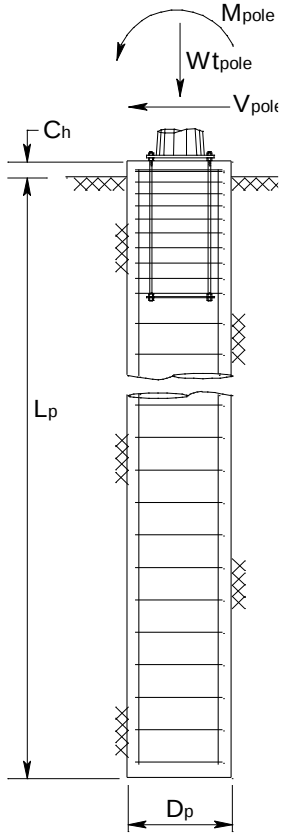
Total Wind Shear = ***0.75*** ***kips***

Design Base Shear is Governed by Seismic Loading

Drilled Pier Foundation Design

Factored Monopole Base Reactions:

αM_{base} = Overturning Moment =	27.8	ft-kips
αV_{base} = Base Shear =	0.94	kips
αWt_{base} = Base Weight =	2.40	kips



Design Basis:

1. Ref. 2019 CBC Section 1807.3.2.1, Nonconstrained Condition

2. ACI 318-14 - Requirements for Reinforced Concrete.

3. Soil Design Values: Per 2019 CBC, Table1806.2, Class 5 Material

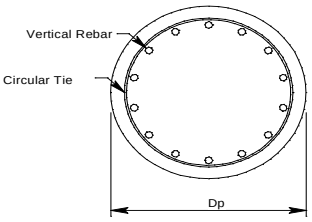
Soil Characteristics:

Based on 2019 CBC Soil Classification for Type:	5	(1 - 5)
ϕR_p = Nominal Lateral Bearing at 1' below grade =	150	psf/ft
d_{negl} = Depth of soil below grade neglected =	0.00	ft.

Drilled Pier Characteristics:

Minimum Diameter:

D_{templ} = OD of AB Template =	15.6	in.
S_b = Minimum AB and Rebar Separation =	0.75	in.
Concrete Cover = C_{cover} =	3.00	in.
$D_{p\_min} = D_{templ} + 2*(S_b + d_b + d_{ties} + C_{cover})$=	24.0	in.
Use D_p = Pier Diameter =	**24.0**	**in.**



Minimum Length/Depth:

C_h = Pier Projection AGL =	0.00	ft.
$S_1 = 2 * \phi R_p * (L_p - d_{negl}) / 3$ =	800	psf; Where $(L_p - d_{negl}) \leq 12$ ft.
$A = 2.34*V_{pole} / (S_1*D_p)$ =	1.38	
$L_{p\_min} = A/2 * [1 + (1 + 4.36*h/A)^{½}] + d_{negl}$ =	7.38	ft.
Use: L_p = Below Grade Pier Length =	**8.00**	**ft.**
L_{tot} = Total Length of Pier =	8.00	ft.
Total Volume of Concrete Required =	0.9	cu. yds.

Drilled Pier Foundation Design

Reinforcement:

Vertical Reinforcement Parameters:

Vertical Bar Size =	6		Tie Bar Size =	4	
Qty of Vertical Bars =	6		f'_c =	4.0	ksi
d_b = Diameter of Bar =	0.75	in.	f_y =	60.0	ksi

A_s = Total Area of Vert. Bars = 2.65 sq. in.

Pier Moment Capacity: Verify $M_{ult} \leq \emptyset M_n$

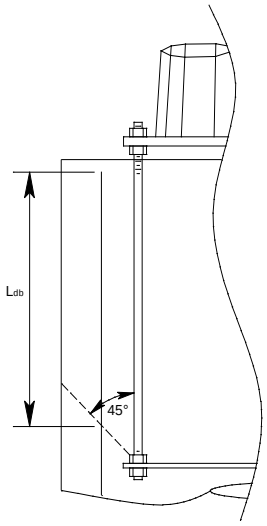
$M_{ult} = 1.3*[M_{pole}+V_{pole}*(L_p/3+d_{negl})]$ = 39.4 ft-kips

$\emptyset M_n$ = 99 ft-kips (OK)

$A_{smin} = 4*M_{ult} / \emptyset*f_y*N*D_p$ = 0.2434 sq. in.

$\rho_{prov} = A_s / (\pi/4 * D_p^2)$ = 0.0059

ρ_{min} = 0.0050 (OK)



Vertical Bar Development Length:

$L_{db} = [0.04*d_b*f_y / f'^{½}_c] * M_{ult} / \emptyset M_n$ = 11.34 in.

$L_{db\_prov'd}$ = 36.9 in. (OK)

Shear Reinforcement:

Factored Shear, $V_u = 1.4 * V_{pole}$ = 0.95 kips

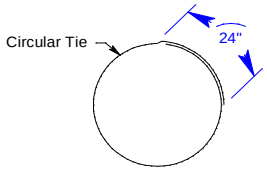
Horizontal Tie Shear Capacity, V_s = 76.8 kips ACI 318 Equation 22.5.10.5.3

Concrete Shear Capacity, V_c = 55.6 kips ACI 318 Table 22.5.5.1

Total Shear Capacity, $\emptyset V_c + \emptyset V_s$ = 99 kips (OK)

D_{tie} = Diameter of Tie = 18 " Ø

Reinforcement Summary:



Vertical Bars: 6 - #6 x 7.5 ft. Long A615 Gr. 60 Deformed Vertical Bars
Spaced evenly (approx. 8.1" o.c.) within Horizontal Ties

Horizontal Ties: 13 - #4 Horizontal Ties , 18 in. Diameter, with 24 in. lap
Spaced at 6" o.c. along the anchor bolts and 12" o.c. in remainder of pier

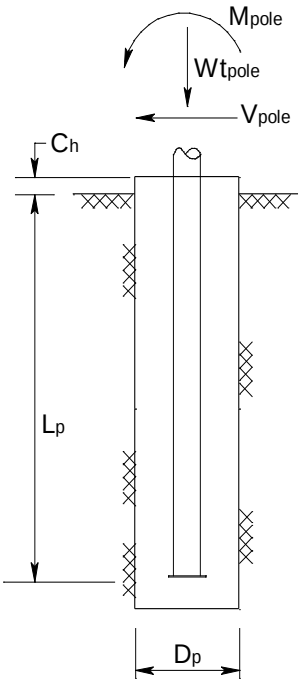
Rebar Weights:

Vertical Bars =	68	pounds
Horizontal Ties =	59	pounds
Horizontal Tie Length =	6' - 10"	

Optional Direct Burial Backfill Foundation Design

Factored Monopole Base Reactions:

M_{base}= Overturning Moment =	27.8	ft-kips
V_{base}= Base Shear =	0.94	kips
Wt_{pole} = Base Weight =	2.40	kips



Design Basis:

1. Ref. 2019 CBC IBC Section 1807.3.2.1, Nonconstrained Condition

2. ACI 318-14 - Requirements for Reinforced Concrete.

3. Soils Design: Per 2019 CBC, Table1806.2, Class 5 Material

Soil Characteristics:

Based on IBC Soil Classification for Type:	5	(1 - 5)
ϕR_p = Nominal Lateral Bearing at 1' below grade =	150	psf/ft
d_{negl} = Depth of soil below grade neglected =	0.00	ft.

Drilled Pier Characteristics:

Minimum Diameter:

D_{pole} =	10.75	in.
Minimum Cover = C_{cover} =	3.00	in.
$D_{p\_min} = D_{pole} + 2 * C_{cover}$ =	16.8	in.
Use D_p = Minimum Pier Diameter =	**18.0**	**in.**

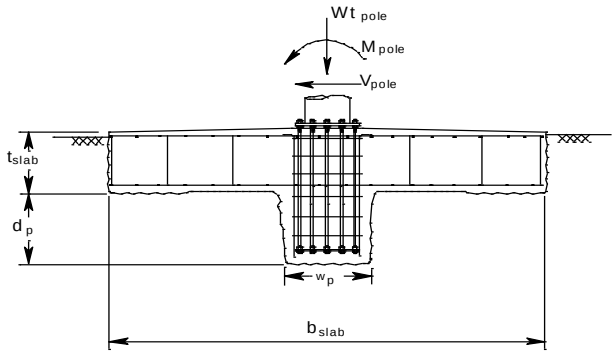
Minimum Length/Depth:

C_h = Embed Projection AGL =	0.00	ft.
$S_1 = 2 * \phi R_p * (L_p - d_{negl}) / 3$ =	1000	psf; Where $(L_p - d_{negl}) \leq 12$ ft.
$A = 2.34 * V_{pole} / (S_1 * D_p)$ =	1.47	
$L_{p\_min} = A/2 * [1 + (1 + 4.36*h/A)^{½}] + d_{negl}$ =	7.65	ft.
Use: L_p = Below Grade Pier Length =	**10.00**	**ft.**
L_{tot} = Total Length of Embed =	10.00	ft.
Total Volume of Concrete or Backfill Required =	0.42	cu. yds.

Alternative Slab Foundation Design

Factored Base Reactions:

Overturning Moment, αM_{pole} =	27.8	ft-kips
Base Shear, αV_{pole} =	0.94	kips
Base Weight, αWt_{pole} =	2.40	kips



Design Basis:

1. Soils investigation report performed by:
   Per 2019 CBC, Table1806.2, Class 5 Material
2. American Concrete Institute, ACI 318-14.

Design Parameters:

Slab Dimensions:

Slab Width, b_{slab} =	5.25	ft.	Pocket Width, w_p =	2.00	ft.
Slab Thickness, t_{slab} =	3.00	ft.	Weight of Slab, Wt_{slab} =	15.5	kips
Pocket Depth, d_p =	0.83	ft.	Volume of Concrete, Vol_{conc} =	3.2	cu yds

Nominal Soil Resistance Values: ***Resistance Factors:***

Bearing Resistance, R_{s_Brg} =	4,000	lbs/sq ft	Bearing Resistance Factor, ϕ_s =	0.75
Lateral Resistance, R_{s_Lat} =	300	lbs/sq ft/ft	Lateral Resistance Factor, ϕ_s =	0.75
Soil Density, γ_{soil} =	100	lbs/cu ft		

Slab Overturning Stability:

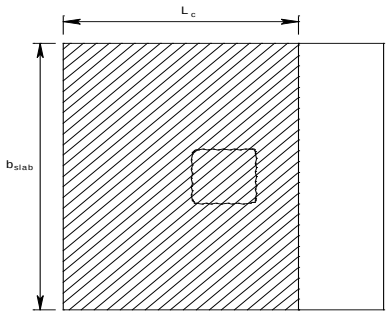
Moment Acting @ Toe of Slab:

αM_{toe} = OTM + V * t_{slab} = 31 ft-kips

Resisting Moment @ Toe of Slab:

$\phi M_R = (Wt_{pole} + Wt_{slab}) * (b_{slab} / 2)$ = 47 ft-kips

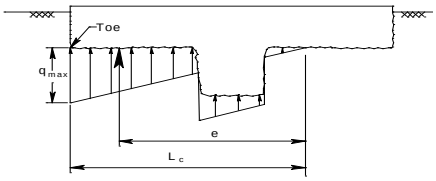
Overturning Factor of Safety = M_R / M_{toe} = 1.53 > 1.11 (OK)



Bearing Pressure Calculations:

Eccentricity, $e = M_{toe} / (Wt_{pole} + Wt_{slab})$ = 1.71 > 0.88 (OK)

Contact Length, $L_c = 3 * (b_{slab} / 2 - e)$ = 2.7 ft



Factored Gross Bearing:

$q_{max} = (Wt_{pole} + Wt_{slab}) / (½ * L_c * b_{slab})$ = 2.49 ksf/ft

Required Bearing Strength:

$q_{net} = q_{gross} - t_{slab} * \gamma_{soil}$ = 2.19 ksf/ft

Maximum Bearing Strength:

$\phi_s R_{s\_Brg}$ = 3.00 ksf (OK)

USE: 5.25 ft. Square x 3.00 ft. Thick Slab Min.

Slab Foundation Design (Cont.)

Slab Reinforcement Details:

Top mat rebar size:	6	Top mat Quantity:	8		f_y =	60.0	ksi
Bott. mat rebar size:	6	Bott. mat Quantity:	8		f'_c =	3.0	ksi
A_{s_top}=	3.5	in^2	A_{s_bott}=	3.5	in^2	d =	31.9	in

Check Minimum Horizontal Reinforcement Ratios:

$\rho_{min} = 200/f_y$ = 0.0033 Need More S $^3/_4\rho_{bal}$ = 0.0170 (OK)

$\rho_{temp/shrink}$ = 0.0018 (OK)

$\rho_{total\_prov'd} = (A_{s\_top} + A_{s\_bot}) / A_g$ = **0.0031** **NG**

Analysis of One-Way Beam Shear:

Pressure Slope = q_{max} / L_c = 0.911 klf

$L_{cant} = ½ * b_{slab}$ = 2.63 ft

$q' = q_{max} - (q_{max} / L_c) * L_{cant}$ = 0.100 ksf

Analysis of Cantilever Loads:

Factored Moment:

$\alpha M_u = [(q' * L_{cant}^2 * ½ + (q_{max} - q') * ½ * {}^2/_3 * L_{cant}^2) * b_{slab} + \alpha M_{pole}]$ = 31 ft-kips

Reinforcement Ratio of lower rebar mat:

$\rho_{bott} = A_{s\_bott} / (b_{slab} * t_{slab})$ = 0.0016 (OK)

Nominal Moment Strength:

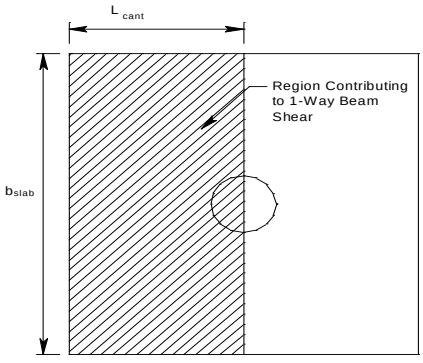
$\phi M_n = 0.9 * A_s * Fy * [d - (A_s * F_y) / (1.3 * f'_c * b_{slab})]$ = 493 ft-kips (OK)

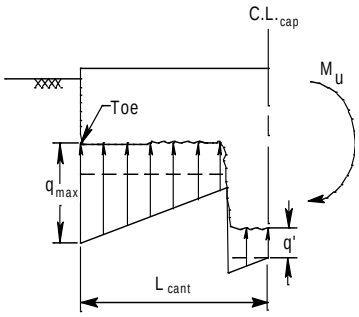
Factored Shear:

$\alpha V_u = [q' * L_{cant} + ½ * (q_{max} - q') * L_{cant}] * b_{slab}$ = 18 kips

Nominal Shear Strength of Concrete:

$\phi V_c = 0.75 * 2 * f'^{½}_c * b_{slab} * d$ = 165 kips (Vs not req'd)





Top Rebar Mat:

USE: #6 A615 Gr. 60 Bars 4.75 ft. long, Spaced at 8.2 in. c-c for top rebar mat

Bottom Rebar Mat:

USE: #6 A615 Gr. 60 Bars 4.75 ft. long, Spaced at 8.2 in. c-c for bottom rebar mat

Slab Foundation Design (Cont.)

Anchor Bolt Pocket Reinforcement Details:

Reinforcement Details:

L (Vertical) rebar size:	5	Quantity of Verticals:	4		A_{s_cap} =	1.23	sq in
Shear Tie rebar size:	4	Spacing of Ties, s =	6	in	A_{v_cap} =	0.39	sq in / tie
Pocket Width, w_p =	2.00	ft.	d' =	18.0	in		

Reinforcement Dimensions:

L-bar length = $L_{hb} = (C_h + t_{slab})$ - 6" = 40.0 in
Z-bar hook length = 12 * d_b = 7.50 in
Circular Shear Tie Size = C_s - 6" = 18.0 in

Minimum Reinforcement Ratios, $\rho = (A_{s\_total} / A_{g\_concr})$

$\rho_{min} = 200/f_y$ = 0.0033 (OK)
$\rho_{temp/shrink}$ = 0.0018 (OK)
$\frac{3}{4}\rho_{bal}$ = 0.0170 (OK)

Total Provided Reinforcement Ratio : $\rho_{total\_prov'd}$ = 0.0076 (A_{s_cap} / A_g)

Factored Moment in Pocket:

$\alpha M_u = V_{pole} * (t_{slab} + ½ * d_p)$ = 3 ft-kips

Nominal Moment Strength:

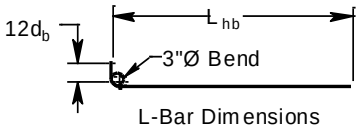
$\phi M_n = 0.9*(½*A_{s\_cap}*f_y*[d'-(A_{s\_cap}*f_y)/(1.3*f'_c*C_s)]+M_{n\_AB})$ = 48 ft-kips (OK)

Factored Shear in Pocket:

$V_u = V_{twr}$ = 0.9 kips

Nominal Shear Strength:

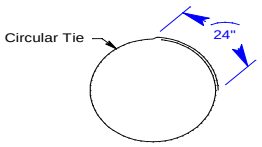
$\phi V_s = 0.75 * (A_{v\_cap} * f_y * d') / s$ = 53 kips (OK)



L-Bar Dimensions

Vertical Reinforcement for Pocket:

USE: 4 - # 5 L-bars 40 in. long, with a 7.5 in. long hook



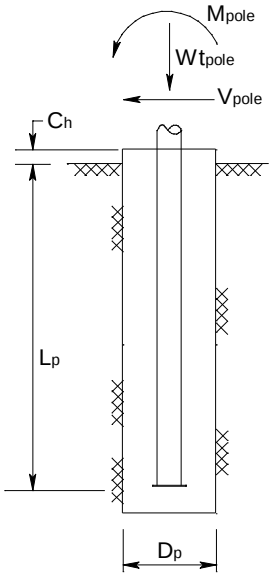
Anchor Bolt Confining Shear Reinforcement:

USE: 6 - # 4 Horizontal Ties 18 in. Ø, spaced at 6 in. on center

Optional Direct Burial Backfill Foundation Design

Factored Monopole Base Reactions:

M_{base}= Overturning Moment = 27.8 ft-kips
V_{base}= Base Shear = 0.94 kips
Wt_{pole} = Base Weight = 1.87 kips



Design Basis:

1. Ref. 2019 CBC Section 1807.3.2.2, Constrained Condition
2. ACI 318-14 - Requirements for Reinforced Concrete.
3. Soils Design: Per 2019 CBC, Table1806.2, Class 5 Material

Soil Characteristics:

Based on IBC Soil Classification for Type: 5 (1 - 5)
ϕR_p = Nominal Lateral Bearing at 1' below grade = 150 psf/ft
d_{negl} = Depth of soil below grade neglected = 1.00 ft.

Drilled Pier Characteristics:

Minimum Diameter:

D_{pole} = 10.75 in.
Minimum Cover = C_{cover} = 3.00 in.
$D_{p\_min} = D_{pole} + 2 * C_{cover}$ = 16.8 in.
Use D_p = Minimum Pier Diameter = 18.0 in.

Minimum Length/Depth:

C_h = Embed Projection AGL = 0.00 ft.
$S_3 = 2 * \phi R_p * (L_p - d_{negl})$ = 1500 psf; Where $(L_p - d_{negl}) \leq 12$ ft.

$L_{p\_min} = (4.25 * M_{pole} / (S_3 * b))^{½} + d_{negl}$ = 8.25 ft.
Use: L_p = Below Grade Pier Length = 6.00 ft.
L_{tot} = Total Length of Embed = 6.00 ft.
Total Volume of Concrete or Backfill Required = 0.25 cu. yds.

PUBLIC WORKS DEPARTMENT

APPLICATION FORM FOR A WIRELESS UTILITY PERMIT TO PLACE FACILITIES IN THE PUBLIC RIGHT-OF-WAY

INSTRUCTIONS:

Persons applying for a wireless encroachment permit under the City of Culver City Municipal Code (the "Code") for the installation and operation of wireless facilities in the public right-of-way must fill out this application form and submit two (2) physical copies (with all necessary information and documentation) and one electronic copy (with all necessary information and documentation) on a flash drive. All application materials should be submitted in person to the following location:

City of Culver City – Department of Public Works/Engineering Division
9770 Culver Blvd.
Culver City, CA 90232

Applications and resubmittals may only be submitted on Mondays and Tuesdays between 8:00 am and 4:00 pm. Please make an appointment to submit your application by calling 310-253-5600.

For additional information regarding application requirements and all other requirements, please review Chapter 11.20 and Section 11.20.065 of the Code and visit the Public Works Telecommunications Utility Permit webpage at: www.culvercity.org/wireless. For questions, contact the Department of Public Works/Engineering Division at 310-253-5600. If your response to a question includes attachments, label the attachments with exhibit numbers that reflect the Part and Question number to which the exhibit corresponds. As examples: for information requested in Part A, Question 5.a), label the corresponding exhibit as "Exhibit A(5)(a)"; for information requested in Part C, Question 2.a).i, label the corresponding exhibit as "Exhibit C(2)(a)(i)".

PART A: BASIC INFORMATION (ALL APPLICANTS)

1. Contact Information

a) The applicant shall submit and maintain current at all times basic contact information set forth below. The applicant shall notify City of any changes to any of this information within fifteen (15) calendar days following any such change. This information shall include the following:

i) The identity, including name, company, address, email, and telephone number of the applicant: John Halminski on behalf of Crown Castle Fiber LLC
200 Spectrum Center Drive, Suite 1700, Irvine CA 92328
_____;

ii) The identity, including name, address, email, and telephone number of the owner of the proposed wireless facility, including official identification numbers and FCC certifications and, if different from the owner, the identity of the person or entity responsible for operating the proposed wireless facility: Crown Castle Fiber LLC is responsible for owning and operating the proposed wireless facility
_____
_____
_____;

iii) If the owner of the structure on which the proposed wireless facility would be installed is different than (ii) above, the identity, including name, address, email, and telephone number of the owner of the structure:
City of Culver City Engineering Department
_____
_____
_____;

iv) Name, address, email, and telephone number of a local contact person for emergencies: Crown Castle 24/7 Network Operations Center (888) 632-0931 or NOC@CrownCastle.com
_____
_____.

2. Purpose of Wireless Facility

Is the proposed wireless communications facility to be used for the provision of "personal wireless services" as defined by 47 U.S.C. Section 332(c)(7)(C)(i) on a sole or comingled basis?

☐ No. Specify the type(s) of wireless communications services to be provided using the proposed facility: _____.

☒ Yes. Specify the type(s) of personal wireless services: Cellular Communications
_____.

3. Type of Application

Please check the applicable box(es) and provide the information required below as an attachment to this Application, along with a written explanation identifying the facts relied upon to support the claimed treatment.

☐ Eligible Facilities Requests. Applicant asserts that the application qualifies as an "eligible facilities request" (EFR) (as defined in 47 CFR § 1.6100(b)(3), or any successor provision). Applicant shall submit the information required in the Application Requirements Part C, Section 1 below. ***The applicable FCC shot clock is sixty (60) days.***

☒ Collocation – Small Cell Facility (Existing Structure). Applicant asserts that the application is being submitted for approval of a Collocation of a Small Wireless Facility, that is, the proposed facility both meets the definition of "small wireless facility" and is a "collocation" (both as defined by 47 C.F.R. § 1.6002). Replacements of existing structures are not ""collocations". Applicant shall submit the information required in Part B and the Application Requirements Part C, Section 3 below. ***The applicable FCC shot clock is sixty (60) days.***

☐ Small Cell Facility (New Structure). Applicant asserts that the application is being submitted for approval to deploy a Small Wireless Facility (as defined by 47 C.F.R. § 1.6002(l)) involving placement of a new structure. Replacements of existing structures are considered new structures. Applicant shall submit the information required in Part B and the Application Requirements Part C, Section 3 below. ***The applicable FCC shot clock is ninety (90) days.***

☐ Other Wireless Facility Expressly Permitted by State or Federal Law to be in the ROW. Applicant asserts that the application is being submitted for approval of a type of wireless services facility that applicable state or federal laws expressly permit to be in the City's public rights-of-way. If you checked this box, please attach an explanation of the basis for your assertion, including citations to supporting law, and state what FCC shot clock you assert applies to this application, if any. Submit the information required in the Application Requirements Part C, Section 3 below. Also, complete Part B if you answered yes to Part A, Question 2.

☐ Permit Renewal. Applicant asserts that the application is being submitted for a renewal of an existing wireless encroachment permit or predecessor permit. If you checked this box, please submit a copy of the original permit, any prior renewals or extensions thereof, and the information required in the Application Requirements Section Part C(2) below.

Also check the following Waiver Request box if applicable to your application.

☐ Waiver Request. Applicant asserts that its application includes a waiver request. Applicant shall include a request for a waiver, as set forth in Section 11.20.065(F)(5) of the Code, and any additional information required in the Application Requirements Part C, Section 4 below. A request for waiver may be submitted at a later time if it is determined that the proposed facility, as originally submitted, will not meet the requirements and restrictions of the Code.

4. Application Fees

Applicant shall pay all applicable fees in the amounts established by the current fee schedule. In the event applicant has pre-paid all or a portion of applicable fees, please include a copy of the receipt from that transaction.

5. Franchises, Authorizations and Licenses

To have a complete application, the applicant must have: (a) authorization to use the public rights-of-way; (b) licenses to provide proposed services; and (c) authorization to use the proposed structure.

a) Does applicant have an existing franchise or other authorization to place wireless facilities in the public rights-of-way?
☐ No.
If no, the application will be considered incomplete.
☒ Yes.
If yes, explain source of applicant's right to use the public rights-of-way and submit related documentation.

b) Has applicant obtained all applicable licenses or other authorizations to provide the services proposed in connection with the application, whether required by the Federal Communications Commission, California Public Utilities Commission, or any other agency with authority over the proposed services.
☐ No.
☒ Yes.

If yes, submit related documentation such as FCC licenses or authorizations, a certificate of public convenience and necessity or a wireless identification registration (WIR) from the California Public Utilities Commission.

c) Is proposed wireless facility to be attached to a structure owned or controlled by a party other than the owner of the proposed wireless facility?
☐ No.
☒ Yes.

If yes, identify the owner as one of the following:

☒ The City.
☐ Other: _____(insert name).

If you selected Other, provide a copy of the authorization or license to use the structure.

If you selected the City, select one of the following:

☐ I have a General Terms and Conditions master license or other agreement with the City for use of the facility. [If you check this box, provide the document.]
☐ I have no license or other agreement, but I am applying/have applied for one. [If you check this box, the application for a license or agreement must be provided, along with payment or proof of payment of required fees.]
☐ I have no license or other agreement, and have not applied for a license or other agreement. By checking this box and signing below, you acknowledge and agree that the wireless encroachment permit that is the subject of this application is not a substitute for a license or other agreement to use any City facility, that such license or agreement must be separately applied for and that this wireless encroachment permit application will remain incomplete until the necessary license or other agreement has been approved by the City.

Agreed: _____

PART B: PERSONAL WIRELESS SERVICES FACILITIES (RESPOND IF APPLICABLE)

1. Based on the work proposed in connection with this project, identify any and all additional permits, approvals, or agreements ("Ancillary Permissions") you contend must be issued (absent agreement) by the time the City must take action on this wireless application. It is the applicant's responsibility to review Code, city policies and all state and federal regulations (including, but not limited to, FCC regulations) applicable to the deployment of this wireless facility and to thereby identify all Ancillary Permissions that will be needed before this project can be deployed. The applicant's failure to conduct a thorough investigation and to identify all required Ancillary Permissions may be grounds for denying this application or for declaring it incomplete. For example, if the proposed wireless facility would be placed on a structure where historical review would be required, the applicant must identify the required historic review permit(s) here. Please identify all Ancillary Permissions that you contend will be required for your wireless project:

    a) ___ Fiber Utility Permit
    b) ___ Building Permit
    c) ___ Electrical Permit

d) ___ Traffic Control Permit
e) ___ Excavation Permit
f) ___ Historical Review Permit
g) ___ Other Permit(s). Identify: _____

Alternatively, rather than identifying all Ancillary Permissions above, you may agree as follows by signing below: "I agree that, should this wireless application be granted, or granted subject to conditions, no work may be undertaken on the applied-for wireless facility until any required Ancillary Permissions which are not identified above have been applied for and obtained."

Agreed: _____

2. Please provide an attachment that identifies any Ancillary Permissions you identified in response to "1." (above) and, with respect to each of those Ancillary Permissions, include the following completed checklist:
   - ☐ I have the required permit. [If you check this box, attach the required permit.]
   - ☐ I don't have this permit, but I am applying or have applied for one. [If you check this box, the application and all fees or proof of payment of all such fees must be provided.]

PART C: DETAILED APPLICATION REQUIREMENTS (RESPOND TO RELEVANT SECTIONS)

The information required to be included in your application is dependent upon whether it is an eligible facilities request, a renewal of an existing permit, or any other application type. Please reference the appropriate section below for your application type to read a detailed list of its requirements. Additionally, regardless of the application type, each applicant must demonstrate their adherence to the *Design and Development Standards for Wireless Facilities in the Public Rights-of-Way* that are adopted by Resolution of the City Council pursuant to Chapter 11.20.065.D.1 of the Code.

1. **ELIGIBLE FACILITIES REQUESTS:** ***For an application asserted to be an eligible facilities request***, the application must provide the following information:

   a) Location and Zoning Information

   i) Location of the project site, including the nearest registered address, the names of the two nearest cross streets, GPS coordinates, and the present zone designation of the project site.
   ii) If the facility is proposed to be attached to an existing pole, provide the pole number. (To obtain a City-owned streetlight pole Facility ID number and to determine its small cell site status visit: Streetlight Inventory

iii) Applicant shall include signed documentation indicating that applicant is the owner or is authorized by the owner of the structure and/or property to install and operate the proposed facility.

b) Description of the Proposed Project

i) A description of the proposed facility(ies), including whether the project is a collocated facility or the replacement, removal, or modification of an existing facility.
ii) A detailed explanation as to why applicant asserts that the facility constitutes an eligible facilities request, including reference to and analysis of applicable FCC rules as they pertain to the proposed facility.
iii) A list of all facilities and equipment proposed to be installed and the dimensions, weight, and manufacturer's specifications for each.
iv) A description of the concealment elements, if any, associated with the facilities as they will be modified, including but not limited to painting, and shielding as modified. The showing should be sufficient to demonstrate that the modifications will not defeat any existing concealment elements. If there will be no concealment elements, so state.
v) A description of any ground disturbance necessary to complete the proposed project.
vi) A description of the site and any deployment outside the site necessary to complete the proposed project.
vii) If a collocation, a description of why this installation qualifies as a collocation within the meaning of the FCC rules.
viii) A description of all changes made to the facility from the date of the original installation (whether or not approved) and a description of the changes in height since January 22, 2012.
ix) A description of all changes to be made to the existing base station and/or tower, including, among other things, identifying precisely what changes will be made to the supporting structure.

c) Prior Approvals/Permits

i) A copy of all approvals and/or permits for the tower or base station that is to be modified, and any subsequent modification approvals and/or permits, and of any required conditions (imposed by the City and/or third party) placed on the initial or subsequent approvals and/or permits.
ii) A showing that the facility, as modified, will be in compliance with existing conditions of the underlying approval(s)/permit(s), whether or not it is in compliance with conditions as of the date of application. There must be a plan submitted for correction of any non-compliant condition.

d) Site Plan

i) Three (3) copies of a facility site plan, at a scale of 1"=20' or larger, and including the following:
   (1) A north-pointing arrow on each plan sheet;
   (2) Title block with applicant's name, owner's name, and contact information;
   (3) Depiction of the fully-constructed proposed facility;
   (4) Location of lot lines, streets (with street names), easements, and all structures and improvements, including accessory equipment, underground utilities and support structures, existing and proposed;
   (5) Existing and proposed elevations of all facilities, equipment, support structures, appurtenances, and other related structures;
   (6) Slopes, contours, trees and other pertinent physical features of the site, existing and proposed;
   (7) All exterior lighting on the site, existing and proposed;
   (8) As to the nearest structure located on any properties abutting the site on which you are proposing to install your wireless facility, the location and use of that structure as well as the distance from that structure to the property line of the site on which you are proposing to install your wireless facility; and
   (9) The location of parking for maintenance personnel.

e) Site Photograph(s)

i) Current color photographs of the site and its surroundings.

f) Visual Impact Analysis

i) A visual impact analysis, which shall include photomontage, photo simulation or similar technique, demonstrating, from all four primary directions (north, south, east, and west) the potential visual impacts of the proposed facility. Consideration shall be given to views from public areas as well as from private property.

g) Noise

i) Operation of wireless facilities shall comply with the noise regulations set in Chapters 9.04 and 9.07 of the Code and the noise element of the General Plan. Demonstrate compliance by providing, among other relevant information, a description of the facilities and/or equipment within the applicant's project that are expected to induce or generate noise, as well as anticipated noise levels of said facilities and/or equipment. For facilities that generate noise, please provide testing data for noise assuming maximum facility utilization and operational utilization (worst

case) 10 feet from the source. Specify times and conditions during which noise generation will occur.

h) FCC Radio Frequency Standards

i) A report signed by a California licensed professional engineer, with expertise in radio communications facilities and the calculation of radio frequency emissions, that affirms, under penalty of perjury, that the proposed installation will be compliant with the FCC's standards. The report must also contain the following:
   (1) A description of each of the proposed antennas and all related fixtures, structures, appurtenances and apparatus, including the height above grade, volume in total cubic feet, materials, lighting, and the directionality of each antenna (e.g., omni, directional, etc.);
   (2) The frequency, modulation and class of service;
   (3) A clear identification of areas, both vertically and horizontally, where exposure levels will exceed FCC standards for general public and occupational exposures. Please note that applicant's analysis must show that it has appropriately taken cumulative exposures into account, and should show exposures based on "worst case" scenarios;
   (4) A certification that the facility will comply with all applicable standards for radio frequency emissions, including cumulative effects, and a description of the manner in which the radio frequency emissions for the facility were calculated and the results of those calculations. Individual and cumulative emissions should be evaluated; and
   (5) If the certification of the facility as currently installed, or as proposed to be modified, is subject to conditions designed to limit general public or occupational exposure, identify those conditions, and demonstrate that they have been satisfied, or describe when they will be satisfied.

i) Structural Analysis

i) A report signed by a California licensed professional engineer qualified in structural engineering, containing the following:
   (1) In the case of a wireless facility attached to existing infrastructure, documentation of the ability of the structure to support the antennas, the proposed method of affixing the antennas and the precise point at which the antennas shall be mounted;
   (2) In the case of a facility with a support structure (e.g. monopole), documentation demonstrating: 1) that the structure is capable of supporting the antennas (and any other equipment to be attached to or supported by the support structure); 2) that the structure complies

with applicable laws and codes; 3) the structure's capacity for additional collocated antennas; 4) the precise point at which the antennas shall be mounted; and

(3) A certification that the structure(s) on which the wireless facility (including all accessory equipment, such as radios, cabinets, etc.) will be placed can safely support the wireless facility; and that all elements of the wireless facility comply with applicable safety standards, including, without limitation, GO 95, 165, and 166.

j) Notice

i) Evidence that notice has been given consistent with Attachment 1 to all necessary parties.

2. RENEWAL REQUESTS: ***For a renewal of an existing permit***, the application must provide the following information:

a) Location and Zoning Information

i) Location of the project site, including the nearest registered address, the names of the two nearest cross streets, GPS coordinates, and the current zone designation of the project site.
ii) If the existing facility is attached to a pole, provide the pole number. (To obtain a City-owned streetlight pole Facility ID number and to determine its small cell site status visit: Streetlight Inventory
iii) Applicant shall include signed documentation indicating that applicant is authorized by the owner of the support structure and/or real property to continue operating the facility.

b) Description of the Project for Renewal

i) A description of the existing facility(ies).
ii) A list of all facilities and equipment currently installed and the dimensions, weight, and manufacturer's specifications for each.
iii) A written description of the concealment measures applicant is using to aesthetically blend the facility to the immediate surroundings and to minimize its visual impact. This should include, but not be limited to, a description of concealment techniques, sizing and placement of elements of the facility (including undergrounding), measures to limit visibility of the facility from residential dwelling units, and the textures and colors used in the concealment process. If none, so state.
iv) A description of the site and any deployment outside the site.
v) A description of all changes made to the facility from the date of the original installation (whether or not approved) and a description of the changes in height since January 22, 2012.

c) Prior Approvals/Permits

i) A copy of all approvals and/or permits for the tower or base station and any subsequent modification approvals and/or permits, and of any required conditions (imposed by the City and/or third party) placed on the initial or subsequent approvals and/or permits.
ii) A showing that the facility is in compliance with existing conditions of the underlying approval(s)/permit(s). If the facility is not in compliance with conditions as of the date of application, there must be a plan submitted for correction of any non-compliance condition.

d) Facility Plan and Photograph(s)

i) Three (3) copies of the existing facility plan at a scale of 1”=20’ or larger and including a north-pointing arrow on each sheet and title block with applicant’s name, owner’s name, and contact information.
ii) Current color photographs of the facility and its surroundings.

e) Visual Impact Analysis

i) A visual impact analysis, which shall include photographs, demonstrating from all four primary directions (north, south, east, and west) the visual impacts of the existing facility. Consideration shall be given to views from public areas as well as from private property.

f) Noise

i) Operation of wireless facilities shall comply with the noise regulations set in Chapters 9.04 and 9.07 of the Code and the noise element of the General Plan. Demonstrate continued compliance by providing, among other relevant information, a description of the facilities and/or equipment within the applicant’s project that induce or generate noise, as well as the noise levels of said facilities and/or equipment. For facilities that generate noise, please provide testing data for noise assuming maximum facility utilization and operational utilization (worst case) 10 feet from the source. Specify times and conditions during which noise generation will occur.

g) FCC Radio Frequency Standards

i) A report signed by a California licensed professional engineer with expertise in radio communications facilities and the calculation of radio frequency emissions that affirms, under penalty of perjury, that the existing facility is compliant with the FCC’s standards. The report must also contain the following:

(1) A description of each of the antennas and all related fixtures, structures, appurtenances and apparatus, including the height above grade, volume in total cubic feet, materials, lighting, and the directionality of each antenna (e.g., omni, directional, etc.);
(2) The frequency, modulation and class of service;
(3) A clear identification of areas, both vertically and horizontally, where exposure levels exceed FCC standards for general public and occupational exposures. Please note that applicant's analysis must show that it has appropriately taken cumulative exposures into account, and should show exposures based on "worst case" scenarios;
(4) A certification that the facility is in compliance with all applicable standards for radio frequency emissions, including cumulative effects, and a description of the manner in which the radio frequency emissions for the facility were calculated and the results of those calculations. Individual and cumulative emissions should be evaluated; and
(5) If the certification of the facility as currently installed is subject to conditions designed to limit general public or occupational exposure, identify those conditions, and demonstrate that they have been satisfied, or describe when they will be satisfied.

h) Structural Analysis

i) A report signed by a California licensed professional engineer qualified in structural engineering, containing the following:
(1) In the case of a wireless facility attached to existing infrastructure, documentation of the ability of the structure to continue to support the antennas and any required maintenance;
(2) In the case of a facility with a support structure (e.g. monopole), documentation that the structure is capable of continuing to support the antennas (and any other equipment attached to or supported by the support structure) and complies with applicable laws and codes, as well as the structure's capacity for additional collocated antennas; and
(3) A certification that the structure(s) on which the wireless facility (including all accessory equipment, such as radios, cabinets, etc.) is placed can continue to safely support the wireless facility; and that all elements of the wireless facility comply with applicable safety standards, including, without limitation, GO 95, 165, and 166.

i) Notice

i) Evidence that notice has been given consistent with Attachment 1 to all necessary parties.

3. **ALL OTHER APPLICATIONS:** ***For all other types of applications***, the following must be provided:

a) Location and Zoning Information

i) Location of the project site, including the nearest registered address, the names of the two nearest cross streets, GPS coordinates, and the present zone designation of the project site.
ii) If the facility is proposed to be attached to an existing utility pole, provide the pole number. (To obtain a City-owned streetlight pole Facility ID number and to determine its small cell site status visit: Streetlight Inventory
iii) Applicant shall include signed documentation indicating that applicant is authorized by the owner of the support structure and/or real property to install and operate the proposed facility.

b) Description of the Proposed Project

i) A description of the proposed facility(ies), including whether the project is a new facility, a collocated facility, or a modification to an existing facility.
ii) If the application is for a small cell facility, an explanation asserting all of the grounds why the proposed facility constitutes a small cell facility.
iii) If a new facility, the applicant shall include an explanation of whether the new facility could and will be designed to accommodate future wireless facilities.
iv) A list of all facilities and equipment proposed to be installed and the dimensions, weight, and manufacturer's specifications for each.
v) A written description of the concealment measures applicant proposes to use to aesthetically blend the facility to the immediate surroundings and to minimize its visual impact. This should include, but not be limited to, a description of proposed concealment techniques, sizing and placement of elements of the facility (including undergrounding proposed), measures proposed to limit visibility of the facility from residential dwelling units, and the textures and colors to be used in the concealment process. If none, so state.
vi) A description of any ground disturbance necessary to complete the proposed project.
vii) A description of the site and any deployment outside the site necessary to complete the proposed project.
viii) If a collocation, a description of why this installation qualifies as a collocation within the meaning of the FCC rules. Applicant must also provide the following:
    (1) A description of all installation procedures and plans for the facility; and

(2) A description of all changes to be made to the existing structure, which description will, among other things, identify precisely what changes will be made to the supporting structure.

c) Prior Approvals/Permits

i) If a wireless facility already exists on the site, provide the following:
   (1) A copy of all approvals and/or permits for the tower or base station that is to be modified, and any subsequent modification approvals and/or permits, and of any required conditions (imposed by the City and/or third party) placed on the initial or subsequent approvals and/or permits.
   (2) A showing that the facility, as modified, will be in compliance with existing conditions, whether or not it is in compliance with conditions as of the date of application. There must be a plan submitted for correction of any non-compliant condition.

d) Site Plan

i) Three (3) copies of a facility site plan at a scale of 1”=20’ or larger and including the following:
   (1) A north-pointing arrow on each plan sheet;
   (2) Title block with applicant’s name, owner’s name, and contact information;
   (3) Depiction of the fully-constructed proposed facility;
   (4) Location of lot lines, streets (with street names), easements, and all structures and improvements, including accessory equipment, underground utilities and support structures, existing and proposed;
   (5) Existing and proposed elevations of all facilities, equipment, support structures, appurtenances, and other related structures
   (6) Slopes, contours, trees and other pertinent physical features of the site, existing and proposed;
   (7) All exterior lighting on the site, existing and proposed;
   (8) Location use and approximate distance from property lines of the nearest structures on all properties abutting the site; and
   (9) The location of parking for maintenance personnel.

e) Landscape Plan

i) If any landscaped ground will be disturbed, three (3) copies of a landscape plan for the site, at a scale of 1/8”=1’ or larger, and including the following:
   (1) Existing trees within fifty feet (50’) of the proposed wireless communication facility;
   (2) Species, diameter and condition of all such trees;

(3) Final disposition of all existing trees; and
(4) Species, location and sizes of trees and other vegetation proposed to be installed in conjunction with the wireless communication facility.

f) Site Photograph(s)

i) Current color photographs of the site and its surroundings.

g) Visual Impact Analysis

i) A visual impact analysis, which shall include photomontage, photo simulation or similar technique, demonstrating, from all four primary directions (north, south, east, and west) the potential visual impacts of the proposed facility. Consideration shall be given to views from public areas as well as from private property. The analysis shall assess the cumulative impacts of the proposed wireless communication facility and other existing wireless facilities in the area, and shall identify and include all feasible mitigation measures consistent with the technological requirements of the proposed facility.

h) Noise

i) Operation of wireless facilities shall comply with the noise regulations set in Chapters 9.04 and 9.07 of the Code and the noise element of the General Plan. Demonstrate compliance by providing, among other relevant information, a description of the facilities and/or equipment within the applicant's project that are expected to induce or generate noise, as well as anticipated noise levels of said facilities and/or equipment. For facilities that generate noise, please provide testing data for noise assuming maximum facility utilization and operational utilization (worst case) 10 feet from the source. Specify times and conditions during which noise generation will occur.

i) FCC Radio Frequency Standards

i) A report signed by a California licensed professional engineer with expertise in radio communications facilities and the calculation of radio frequency emissions that affirms, under penalty of perjury, that the proposed installation will be compliant with the FCC's standards. The report must also contain the following:
(1) A description of each of the proposed antennas and all related fixtures, structures, appurtenances and apparatus, including the height above grade, volume in total cubic feet, materials, lighting, and the directionality of each antenna (e.g., omni, directional, etc.);

(2) The frequency, modulation and class of service;
(3) A clear identification of areas, both vertically and horizontally, where exposure levels will exceed FCC standards for general public and occupational exposures. Please note that applicant's analysis must show that it has appropriately taken cumulative exposures into account, and should show exposures based on "worst case" scenarios;
(4) A certification that the facility will comply with all applicable standards for radio frequency emissions, including cumulative effects, and a description of the manner in which the radio frequency emissions for the facility were calculated and the results of those calculations. Individual and cumulative emissions should be evaluated; and
(5) If the certification of the facility as currently installed, or as proposed to be modified, is subject to conditions designed to limit general public or occupational exposure, identify those conditions, and demonstrate that they have been satisfied, or describe when they will be satisfied.

j) Structural Analysis

i) A report signed by a California licensed professional engineer qualified in structural engineering, containing the following:
(1) In the case of a wireless facility attached to existing infrastructure, documentation of the ability of the structure to support the antennas, the proposed method of affixing the antennas and the precise point at which the antennas shall be mounted;
(2) In the case of a facility with a support structure (e.g. monopole), documentation that the structure is capable of supporting the antennas (and any other equipment to be attached to or supported by the support structure) and complies with applicable laws and codes, as well as the structure's capacity for additional collocated antennas, and the precise point at which the antennas shall be mounted; and
(3) A certification that the structure(s) on which the wireless facility (including all accessory equipment, such as radios, cabinets, etc.) will be placed can safely support the wireless facility; and that all elements of the wireless facility comply with applicable safety standards, including, without limitation, GO 95, 165, and 166.

k) Notice

i) Evidence that notice has been given consistent with Attachment 1 to all necessary parties.

l) Justification for Location/Collocation

i) A justification as to why the applicant chose the location for the proposed wireless communication facility. Such justification shall include a written assessment of not less than two (2) alternative locations considered by the applicant and the reasons why said alternative locations were rejected as candidates.
ii) A written explanation of the applicant's investigation into collocating the proposed facility with an existing facility. Indicate whether collocation is or is not feasible and why.

m) Map of Applicant's Existing Wireless Facilities and Coverage Assessment

i) A map and narrative description of all existing wireless facility sites used by the applicant which are located within the City, and any wireless facility sites located outside of the City but which provide coverage within any part of the City.

4. WAIVER REQUEST [if applicable]

a) If it is contended that the City is required by federal or state law to approve the facility, applicant must submit the information it relies upon to support that claim, identifying: (i) the legal standard it claims applies; (ii) the showings it relies upon for its claim; (iii) alternative legal standards that may apply that it claims to meet; and (iv) the showings it relies upon for those claims. Applicants are cautioned that, should they choose not to submit with respect to items (iii) and (iv), and the City believes that applicant misapplies or relies on the wrong legal standard, the waiver (and consequently the application) may be denied.

PART D: CERTIFICATION (ALL APPLICANTS)

I (we) hereby certify under penalty of perjury that (1) after diligent investigation, the information provided pursuant to this Application Form is true, accurate, and complete to the best of my (our) knowledge and belief; and (2) upon completion of the work proposed, the permitted personal wireless services facility will comply with all applicable laws, regulation, practices or other requirements under federal, state, or local law, including, but not limited to, building and electrical codes, the FCC's radio frequency emissions standards, and the requirements of the Americans with Disabilities Act.

_____

Applicant's Signature Date

_____

Applicant's Printed Name

Attachment 1

All applicants for Wireless Encroachment Permits shall comply with the following notice requirements:

1. Notice of the applicant's pending application shall be mailed, by the applicant to the businesses and residences within a 500 foot radius of each of the proposed wireless facilities.
2. The contents of the mailed notice shall include, at a minimum:
    a. A description of the location of each proposed wireless facility with sufficient specificity to allow notice recipients to be able to locate the involved location without requiring any additional information
    b. Photo simulations of the proposed installation
    c. The manner in which additional information may be obtained
    d. Any other information deemed necessary by the Director of Public Works or his/her designee
3. The applicant shall also post the notice in compliance with the following specifications:
    a. In a conspicuous place at the location of the proposed wireless facility
    b. Be 12 square feet in sign area
    c. A minimum of 4 feet in height from the ground level with a maximum height of 8 feet
    d. Not be illuminated
    e. Include the name and telephone number of the applicant
    f. Include the telephone number of the Public Works Department
    g. Contain only lettering whose size, style and color have been approved by the Director of Public Works
    h. Include photo simulations of the proposed wireless facility
    i. Remain in place until completion of construction and final approval by the City
    j. Be removed, by the applicant, no later than 10 days after completion of construction and final approval of the project by Culver City
4. Submit to the Director of Public Works an affidavit verifying that the applicant has mailed and posted notices in full compliance with these notice requirements.