



# County of Fresno

DEPARTMENT OF PUBLIC WORKS AND PLANNING  
STEVEN E. WHITE, DIRECTOR

## Planning Commission Staff Report Agenda Item No. 5 October 27, 2022

**SUBJECT:** Unclassified Conditional Use Permit Application No. 3741 and Initial Study No. 8229

Allow the installation of a new 135-foot tall self-support lattice tower with up to twelve (12) panel antennas, (15) remote radio units (RRUs), and (3) surge suppressors on a 4.19-acre parcel within the AE-20 (Exclusive Agricultural, 20-acre minimum parcel size) Zone District. As part of this installation there will be a new equipment enclosure that will accommodate the radio cabinets and backup generator adjacent to this tower. Lease area anticipated to be 875 square feet.

**LOCATION:** The subject parcels are located on the east side of N. Biola Ave., 180-feet south of H St., fronting south from the unincorporated community of Biola (APNs: 016-300-03s, 016-300-21s, 016-300-23s) (4500 N. Biola Ave.) (Sup. Dist. 1).

**OWNER:** Fermin M. Campos

**APPLICANT:** Tom Johnson (TSJ Consulting Inc.)

**STAFF CONTACT:** Elliot Racusin, Planner  
(559) 600-4245

David Randall, Senior Planner  
(559) 600-4052

### RECOMMENDATION:

- Adopt the Mitigated Negative Declaration based on Initial Study (IS) No. 8229; and
- Approve Unclassified Conditional Use Permit No. 3741 with recommended Findings and Conditions; and
- Direct the Secretary to prepare a Resolution documenting the Commission's action.

**EXHIBITS:**

1. Mitigation Monitoring, Conditions of Approval and Project Notes
2. Location Map
3. Existing Zoning Map
4. Existing Land Use Map
5. Site Plans & Elevations
6. Applicant's Operational Statement/ Alternative Site Analysis
7. Summary of Initial Study Application No. 8229
8. Radio Frequency Interference Analysis

**SITE DEVELOPMENT AND OPERATIONAL INFORMATION:**

<b>Criteria</b>	<b>Existing</b>	<b>Proposed</b>
General Plan Designation	Agricultural	No Change
Zoning	AE-20	No Change
Parcel Size	4.19-acres	No Change
Project Site	N/A	875 square feet of leased area
Structural Improvements	N/A	135-foot lattice tower and equipment closest
Nearest Residence	420-feet north of proposed tower	No Change
Surrounding Development	Single- Family Residence	N/A
Operational Features	N/A	Unmanned Wireless Telecommunications Facility
Employees	N/A	At least one maintenance visit per month
Customers	N/A	N/A
Traffic Trips	Residential Traffic	Residential Traffic and on maintenance visit per month

<b>Criteria</b>	<b>Existing</b>	<b>Proposed</b>
Lighting	Residential Lighting	Hooded motion activated lights
Hours of Operation	N/A	Unmanned telecommunications facility will be in operation 24 hours per day, seven days per week, year-round

**EXISTING VIOLATION (Y/N) AND NATURE OF VIOLATION: N**

**ENVIRONMENTAL ANALYSIS:**

Initial Study No. 8229 was prepared for the project by County Staff in conformance with the provisions of the California Environmental Quality Act (CEQA). Based on the Initial Study, staff has determined that a Mitigated Negative Declaration is appropriate. A summary of the Initial Study is included as Exhibit 7.

Notice of Intent of Mitigated Negative Declaration publication date: June 17, 2022.

**PUBLIC NOTICE:**

Notices were sent to 58 property owners within 600 feet of the subject parcel, exceeding the minimum notification requirements prescribed by the California Government Code and County Zoning Ordinance.

**PROCEDURAL CONSIDERATIONS:**

An Unclassified Conditional Use Permit may be approved only if four Findings specified in the Fresno County Zoning Ordinance, Section 873-F are made by the Planning Commission. The decision of the Planning Commission on an Unclassified Conditional Use Permit No. 3741 Application is final, unless appealed to the Board of Supervisors within 15 days of the Commission's action.

**BACKGROUND INFORMATION:**

The applicant requests for the installation of a new 135-foot tall self-support lattice tower with up to twelve (12) panel antennas, (15) remote radio units (RRUs), and (3) surge suppressors on a 4.19-acre parcel According to the Applicants Operational statement, the intent of the project is to expand service coverage and provide enhanced wireless services.

At its hearing of August 11, 2022, the Commission considered the Staff Report and testimony.

A motion was made by Commissioner Ewell and seconded by Commissioner Arabian continue the hearing to October 27, 2022 to allow the Applicant the opportunity to determine if colocation on the adjacent cell tower operated by the North Central Fire Protection District is feasible.

A third-party engineer (EBI Consulting) was requested to provide a radio frequency interference (RFI) analysis which was performed on the determine if the proposed additional tower would interfere with any frequencies used (Exhibit 8).

The analysis concluded there were no transmitter noise interference problems that would interfere with the existing tower.

Regarding colocation, it was determined the existing tower would not physically withstand the proposed equipment as per AT&T standards. Therefore, a new tower is needed for wireless broadband services.

Previous opponents to the project, North Central Fire Department stated they “would be supportive (of the project based on) third party analysis ensuring that the new structure will not interfere or obstruct operations on our public safety needs.”

***Finding 1: That the site of the proposed use is adequate in size and shape to accommodate said use and all yards, spaces, walls and fences, parking, loading, landscaping, and other features required by this Division, to adjust said use with land and uses in the neighborhood.***

	<b>Current Standard:</b>	<b>Proposed Operation:</b>	<b>Is Standard Met (y/n)</b>
Setbacks	AE-20  Front: 35 feet  Side: 20 feet Rear: 20 feet	AE-20  Front:+ 35 feet  Side: +30 feet Rear: +20 feet	Y
Parking	No Requirement	No Requirement	Y
Lot Coverage	No Requirement	No Requirement	Y
Space Between Buildings	No Requirement	No Requirement	Y
Wall Requirements	No Requirement	No Requirement	Y
Septic Replacement Area	N/A	N/A	Y
Water Well Separation	Septic Tank: 100 feet  Disposal Field: 100 feet  Seepage pot: 150 feet	No Change	Y

**Reviewing Agency/Department Comments Regarding Site Adequacy:**

No comments specific to the adequacy of the site were expressed by reviewing Agencies or Departments.

**Finding 1 Analysis:**

The proposed telecommunications tower meets all setback requirements of the AE-20

(Exclusive Agricultural) Zone District. The proposed cell tower exceeds required setbacks.

**Recommended Conditions of Approval:**

None.

**Finding 1 Conclusion:**

Finding 1 can be made as the proposed use is adequate in size and shape to accommodate the proposed use.

***Finding 2:*** *That the site for the proposed use relates to streets and highways adequate in width and pavement type to carry the quantity and kind of traffic generated by the proposed use.*

		Existing Conditions	Proposed Operation
Private Road	No	<p>Biola Avenue is a County maintained road classified as a local road with an existing 80 feet of road right-of-way and an ultimate right-of-way of 60 feet per the Fresno County General Plan. Total pavement width is 21.1 feet with dirt shoulders, ADT is 300 VPD, and PCI is 71.4. Roadway is in fair condition.</p> <p>H Avenue is a County maintained road classified as a local road with an existing 70 feet of prescriptive road right-of-way and an ultimate right-of-way of 60 feet per the Fresno County General Plan. Total pavement width is 23.5 feet with dirt shoulders, ADT is 200 VPD, and PCI is 85.6. Roadway is in good condition.</p>	No Change
Traffic Trips		Residential Traffic	Residential traffic and two one-way trips once a month
Traffic Impact Study (TIS) Prepared	No	N/A	No significant increase in traffic expected
Road Improvements Required		N/A	None required

**Reviewing Agency/Department Comments Regarding Adequacy of Streets and Highways:**

No comments specific to the adequacy of streets and highways were expressed by reviewing Agencies or Departments.

**Finding 2 Analysis:**

One round trip (two one-way trips) per month will occur once the proposed tower is constructed. The tower will be accessed via an existing private driveway. No reviewing County agency expressed concerns regarding impacts on County-maintained roads. Based on the existing nature and similar proposed use, staff believes that the roads to service the operation at the project site will remain adequate to accommodate the proposed use.

**Recommended Conditions of Approval:**

*See recommended Conditions of Approval attached as Exhibit 1.*

**Finding 2 Conclusion:**

Finding 2 can be made based on the above information, the existing roadways are adequate to accommodate the proposed use.

***Finding 3:*** *That the proposed use will have no adverse effect on abutting property and surrounding neighborhood or the permitted use thereof.*

**Surrounding Parcels**

	Size:	Use:	Zoning:	Nearest Residence:
North	1.25-acres	Light Manufacturing	M-1	N/A
South/West	126.16-acres	Orchards	AE-20	N/A
East	2.04-acres	Heavy Industrial	M-3	N/A

**Reviewing Agency/Department Comments:**

No comments specific to land use compatibility were expressed by reviewing Agencies or Departments.

**Finding 3 Analysis:**

The project site is located on a portion of disturbed land surrounded by agricultural crops and light manufacturing and heavy industrial manufacturing. The nearest residence is approximately 360 feet to the north. With adherence to the Mitigation Measures imposed, staff believes that the tower will have less than significant impact on the aesthetics of the surrounding properties.

All lighting for the project will be hooded and directed downward so as not to shine on public roads or surrounding properties.

**Recommended Conditions of Approval:**

*See recommended Conditions of Approval attached as Exhibit 1.*

**Finding 3 Conclusion:**

Finding 3 can be made based on the above information that the proposal will not have an adverse effect upon surrounding properties.

**Finding 4: That the proposed development is consistent with the General Plan.**

<b>Relevant Policies:</b>	<b>Consistency/Considerations:</b>
<p><b>Policy PF-J.4:</b>  <i>The County shall require compliance with the Wireless Communications Guidelines for siting of communication towers in unincorporated areas of the County.</i></p>	<p>Staff acknowledges that the applicant has provided satisfactory supplemental project information in accordance with the County’s Wireless Communications Guidelines.</p>

**Reviewing Agency Comments:**

No comments specific to General Plan Policy were expressed by reviewing Agencies or Departments.

**Finding 4 Analysis:**

General Plan Policy PF-J.4 requires compliance with the Wireless Communications Guidelines, which address several concerns related to the development of cell towers, including site placement, colocation opportunities, and alternative site locations. The applicant indicates the proposal will expand capacity and coverage for the surrounding area.

County Wireless Communication Guidelines require that the towers should be sited to minimize aesthetic impact to adjacent homesites on surrounding properties. Based on the site plans submitted by the Applicant, the proposed tower is set back approximately over 250 feet from the front property line and approximately 184 feet from the closest side property line.

The proposed unmanned telecommunications tower complies with the Fresno County Wireless Communications Guidelines and will have a less than significant effect on the surrounding environment.

**Recommended Conditions of Approval:**

*See recommended Conditions of Approval attached as Exhibit 1.*

**Finding 4 Conclusion:**

Finding 4 can be made based on the above information, and with adherence to the Mitigations Measures, Conditions and Projects Notes. Staff believes that the proposed Unclassified Conditional Use Permit will not have an adverse effect upon surrounding properties and is consistent with the General Plan.

**Finding 5:    *That the conditions stated in the resolution are deemed necessary to protect the public health, safety, and general welfare.***

The Conditions of Approval for this project, included as Exhibit 1 are based upon comments and recommendations received from reviewing agencies and departments. Finding 1 addresses the adequacy of the subject parcel and determines whether the parcel is of sufficient size to accommodate the proposed use. Potential impacts to adjacent roadways were analyzed under Finding 2, impacts to surrounding property under Finding 3. Finding 4 addresses the project's consistency with the General Plan, which guides the development of the County through conformance with the applicable goals and policies contained in the individual elements. The recommended Mitigation Measures under CEQA, Conditions of Approval and Project Notes are all considered mandatory conditions of approval upon adoption of the Mitigated Negative Declaration and approval of the Classified Conditional Use Permit for this project.

**Finding 5 Conclusion:**

Finding 5 can be made based on staff's analysis, the conditions stated in the resolution are deemed necessary to protect the public health, safety, and general welfare.

**PUBLIC COMMENT:**

*No public comment was received as of the date of preparation of this report.*

**SUMMARY CONCLUSION:**

Staff believes that the proposed unmanned telecommunication tower is consistent with the Fresno County General Plan and will not have any significant impacts on the surrounding properties.

**SUMMARY RECOMMENDATION:**

Based on the factors cited in the analysis, all the required Findings for granting the Unclassified Conditional Use Permit can be made. Staff therefore recommends adoption of the Mitigated Negative Declaration prepared based on Initial Study Application No. 8229, and approval of Unclassified Conditional Use Permit No. 3741, subject to the recommended mitigation measures and Conditions of Approval.



## **PLANNING COMMISSION MOTIONS:**

### **Recommended Motion** (Approval Action)

- Move to adopt the Mitigated Negative Declaration prepared for Initial Study Application No. 8229; and
- Move to determine the required Findings can be made based on the information in the staff report and move to approve Unclassified Conditional Use Permit No. 3741, subject to the Mitigation Measures, Conditions of Approval and Project Notes listed in Exhibit 1; and
- Direct the Secretary to prepare a Resolution documenting the Commission's action.

### **Alternative Motion** (Denial Action)

- Move to determine that the required Findings cannot be made (state basis for not making the Findings) and move to deny Unclassified Conditional Use Permit No. 3741; and
- Direct the Secretary to prepare a Resolution documenting the Commission's action.

### **Mitigation Measures, Recommended Conditions of Approval and Project Notes:**

See attached Exhibit 1.

ER:jp

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EXHIBIT 1

**Mitigation Monitoring and Reporting Program  
Initial Study Application No. 8229 and Unclassified Conditional Use Permit Application No. 3741  
(Including Conditions of Approval and Project Notes)**

Mitigation Measures					
Mitigation Measure No.*	Impact	Mitigation Measure Language	Implementation Responsibility	Monitoring Responsibility	Time Span
1.	Cultural Resources	In the event that cultural resources are unearthed during ground-disturbing activities, all work shall be halted in the area of the find. An Archeologist shall be called to evaluate the findings and make any necessary mitigation recommendations. If human remains are unearthed during ground-disturbing activities, no further disturbance is to occur until the Fresno County Sheriff-Coroner has made the necessary findings as to origin and disposition. All normal evidence procedures should be followed by photos, reports, video, etc. If such remains are determined to be Native American, the Sheriff-Coroner must notify the Native American Commission within 24 hours.	Applicant	Applicant/PW&P	During ground-disturbing activities
Conditions of Approval					
1.	Development of the property shall be in accordance with the Site Plan, Elevations and Operational Statement approved by the commission.				
2.	The approval shall expire in the event that use of the tower ceases for a period in excess of two years. At such time the tower and related facilities shall be removed and lease the area shall be restored as nearly as practical to its original conditions. This stipulation shall be recorded as a Covenant running with the land  Note: This Department will prepare the Covenant upon receipt of the standard processing fee, which is currently \$243.50				
3.	Prior to the issuance of permits, evidence shall be submitted showing that a provision is included in the signed lease agreement that reserves co-location opportunities. The applicant shall all subsequent lease agreements to include this provision indefinitely.				

\*MITIGATION MEASURE – Measure specifically applied to the project to mitigate potential adverse environmental effects identified in the environmental document.  
Conditions of Approval reference recommended Conditions for the project.

**Notes**

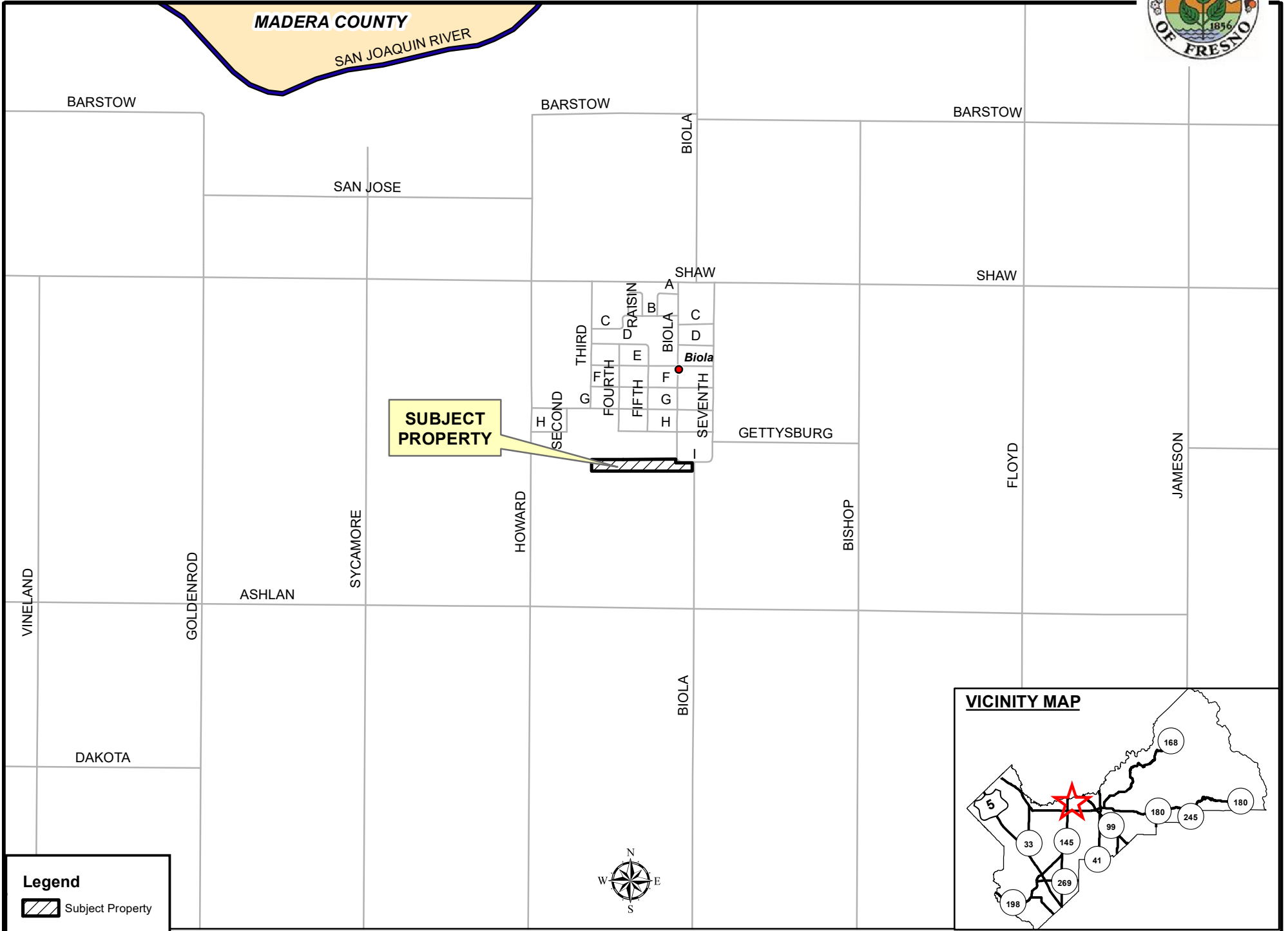
The following Notes reference mandatory requirements of Fresno County or other Agencies and are provided as information to the project Applicant.

1.	Facilities that use and/or store hazardous materials and/or hazardous wastes shall meet the requirements set forth in the California Health and Safety Code (HSC), Division 20, Chapter 6.95, and the California Code of Regulations (CCR), Title 22, Division 4.5. Any business that handles a hazardous material or hazardous waste may be required to submit a Hazardous Materials Business Plan pursuant to the California Health and Safety Code (HSC), Division 20, Chapter 6.95, Section 25507 ( <a href="http://cers.calepa.ca.gov/">http://cers.calepa.ca.gov/</a> ). Contact the Fresno County Hazmat Compliance Program at (559) 600-3271 for more information.
2.	Should any underground storage tank(s) be found during the project, the applicant shall apply for and secure an Underground Storage Tank Removal Permit from the Fresno County Department of Public Health, Environmental Health Division. Contact the Fresno County Hazmat Compliance Program at (559) 600-3271 for more information.
3.	As a measure to protect ground water, all water wells and/or septic systems that exist or have been abandoned within the project area should be properly destroyed by an appropriately licensed contractor.
4.	Any work done within the right-of-way to construct a new driveway or improve an existing driveway will require an Encroachment Permit from the Road Maintenance and Operations Division.
5.	All hazardous waste shall be handled in accordance with requirements set forth in the California Code of Regulations (CCR), Title 22, Division 4.5. This Division discusses proper labeling, storage and handling of hazardous wastes.
6.	The proposed construction project has the potential to expose nearby residents to elevated noise levels. The proposed diesel emergency generator may result in significant short-term localized noise impacts due to intermittent use/maintenance. Equipment shall be maintained according to manufacturers' specifications, and noise-generating equipment equipped with mufflers. Consideration should be given to Fresno County Noise Ordinance and the City of Orange Cove municipal code.
7.	All proposed improvements including fences/gates entrances exceeding 7 feet in height will require building permits.
8.	Project/Development will be subject to the requirements of the current Fire Code and Building Code when a building permit or certificate of occupancy is sought.

EXHIBIT 1 Page 2

UCUP 3741

# LOCATION MAP



**SUBJECT PROPERTY**

**Legend**

 Subject Property

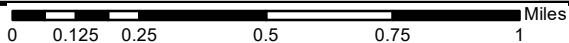
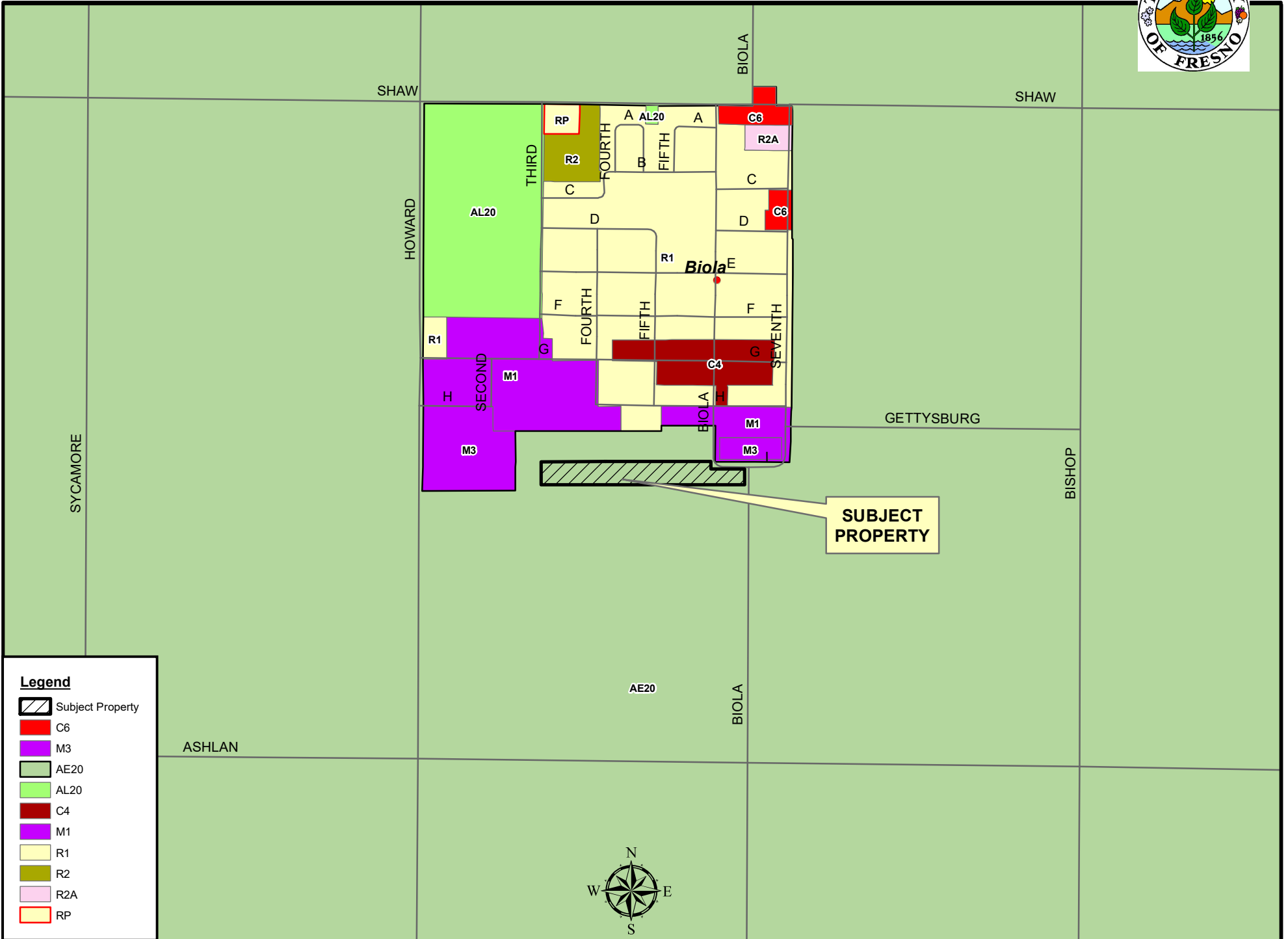


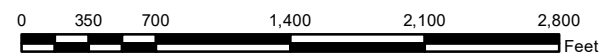


EXHIBIT 3  
**EXISTING ZONING MAP**



**Legend**

- Subject Property
- C6
- M3
- AE20
- AL20
- C4
- M1
- R1
- R2
- R2A
- RP

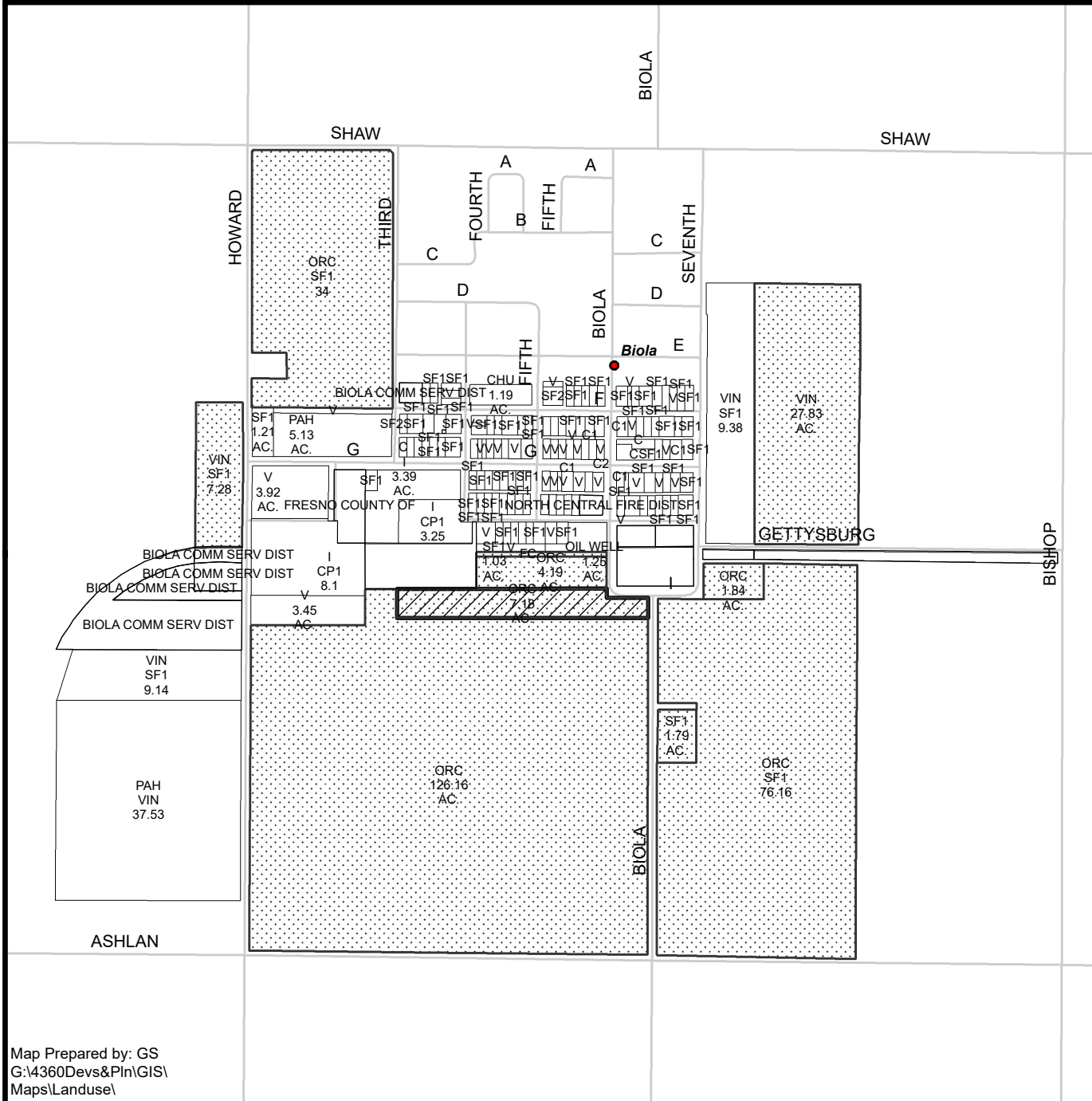






# EXISTING LAND USE MAP

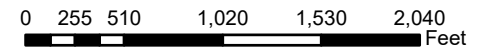
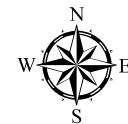
UCUP 3741



LEGEND	
AP1	- APARTMENT
C	- COMMERCIAL
C#	- COMMERCIAL
CHU	- CHURCH
CP#	- OFFICE COMM./PROF
FC	- FIELD CROP
I	- INDUSTRIAL
ORC	- ORCHARD
PAH	- PACKING HOUSE
SF#	- SINGLE FAMILY RESIDENCE
V	- VACANT
VIN	- VINEYARD

LEGEND:

-  Subject Property
-  Ag Contract Land



Department of Public Works and Planning  
Development Services Division

Map Prepared by: GS  
G:\4360Devs&Pln\GIS\Maps\Landuse\



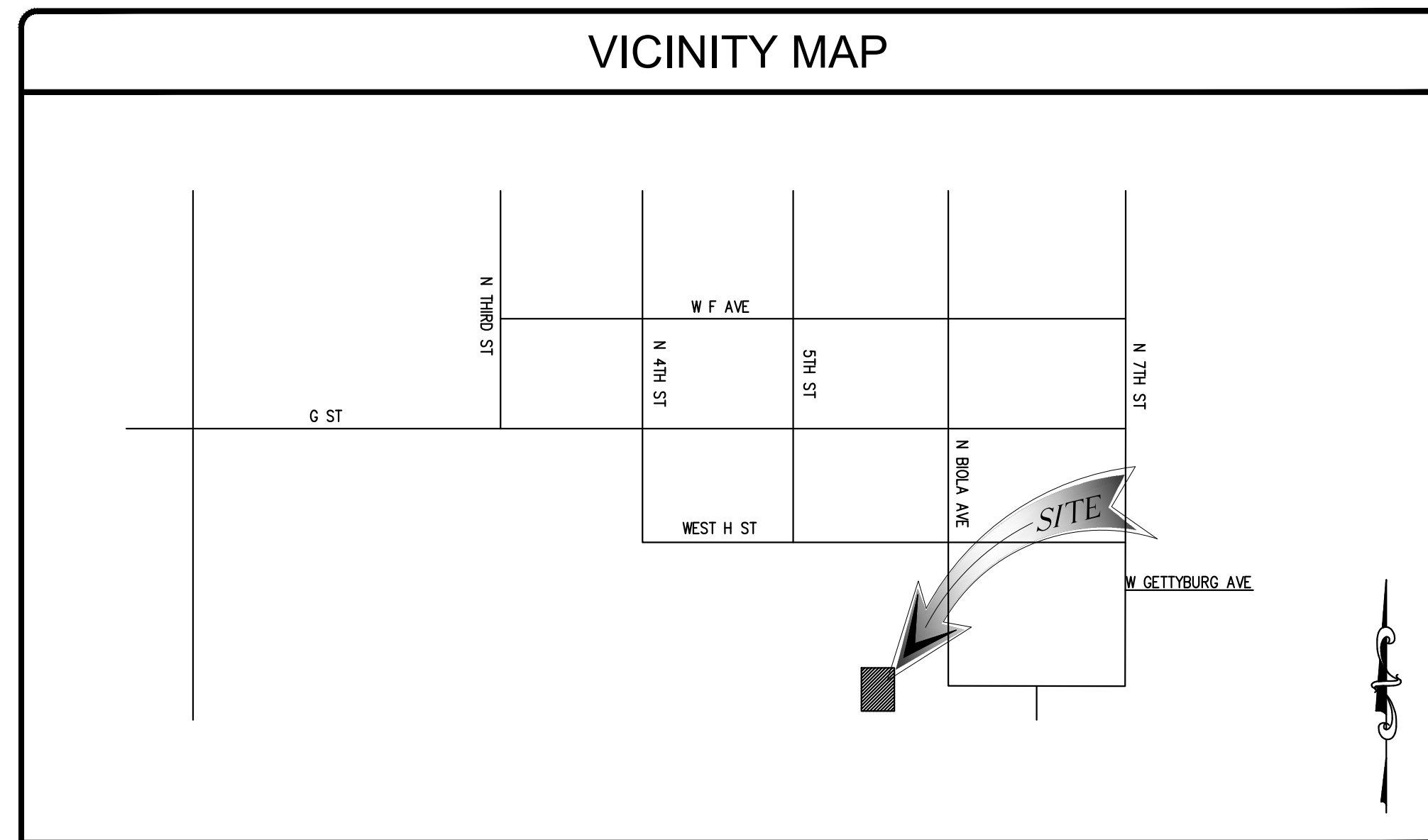
# EXHIBIT 5



## CVL02502 - CAMPOS FAMILY FARMS

4500 NORTH BIOLA AVE.  
FRESNO, CA 93723

SITE INFORMATION	
SITE ADDRESS:	4500 NORTH BIOLA AVE. FRESNO, CA 93723
LATITUDE (NAD 83):	36° 47' 58.96" N 36.799711°
LONGITUDE (NAD 83):	120° 01' 02.54" N -120.017372°
GROUND ELEVATION:	251.0 FEET AMSL
JURISDICTION:	FRESNO COUNTY
PROPERTY OWNER:	CAMPOS FAMILY FARMS LLC. 4726 W. JACQUELYN AVE FRESNO, CA 93722
ZONING:	AE20
PARCEL/MAP NUMBER:	016-300-23S, 016-300-21S, 016-300-03S
STRUCTURE TYPE:	LATTICE TOWER
STRUCTURE HEIGHT:	135'-0" (AGL)
POWER SUPPLIER:	PG&E



DRAWING INDEX	
T-1	TITLE SHEET
C-1	SITE SURVEY
C-2	SITE PLAN
A-1	SITE PLAN
A-2	ENLARGED SITE PLAN
A-3	EQUIPMENT, ANTENNA LAYOUTS AND ANTENNA SCHEDULE
A-4	ELEVATIONS
A-5	ELEVATIONS
E-1	PRELIM ELECTRICAL DESIGN

DRAWING SCALE	
THESE DRAWINGS ARE SCALED TO FULL SIZE AT 24"X36" AND HALF SIZE AT 11"X17". CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE DESIGNER / ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR MATERIAL ORDERS OR BE RESPONSIBLE FOR THE SAME. CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICE TO PREVENT STORM WATER POLLUTION DURING CONSTRUCTION.	

SCOPE OF WORK	
THIS PROJECT CONSISTS OF THE INSTALLATION OF A NEW AT&T WIRELESS ANTENNA FACILITY:	
SCOPE OF WORK:	
<b>EQUIPMENT AREA</b>	
<ul style="list-style-type: none"> <li>INSTALL NEW EQUIPMENT SHELTER AND 30KW STANDBY BACK UP GENERATOR</li> <li>INSTALL NEW FIBER AND DC CABLES TO NEW ANTENNAS</li> <li>INSTALL NEW SPD CABINET ON SHELTER</li> <li>INSTALL ASSOCIATED UTILITY CABINETS AND H-FRAME</li> <li>INSTALL (1) NEW GPS ANTENNA</li> <li>INSTALL 28'X35' CHAINLINK EQUIPMENT ENCLOSURE</li> <li>INSTALL 135' NEW TALL LATTICE TOWER</li> </ul>	
<b>ANTENNA AREA</b>	
<ul style="list-style-type: none"> <li>INSTALL (15) NEW PANEL ANTENNAS</li> <li>INSTALL (15) NEW RRUS</li> <li>INSTALL (4) NEW DC-9 SURGE PROTECTORS</li> <li>INSTALL (1) NEW MW DISH</li> <li>INSTALL (1) NEW GPS ANTENNA</li> </ul>	
<b>LEASE AREA:</b>	
EQUIPMENT AND ANTENNA AREA: 980 SF	

PROJECT TEAM	
APPLICANT:	AT&T MOBILITY 5001 EXECUTIVE PARKWAY SAN RAMON, CA 94583
PROJECT MANAGEMENT FIRM:	QUALTEK WIRELESS 575 LENNON LANE, SUITE 125 WALNUT CREEK, CA 94598 CONTACT: BEN FOUST PHONE: (925) 266-1882 EMAIL: bfoust@qualtekwireless.com
RF ENGINEER:	AT&T MOBILITY 5001 EXECUTIVE PARKWAY SAN RAMON, CA 94583 CONTACT: JAKE BALUYUT PHONE: (569) 454-5694 EMAIL: jb7714@att.com
CONSTRUCTION MANAGER:	QUALTEK WIRELESS 575 LENNON LANE, SUITE 125 WALNUT CREEK, CA 94598 CONTACT: JOSHUA ROBERSON PHONE: (949) 505-4225 EMAIL: jroberson@qualtekwireless.com
SITE ACQ/ZONING MANAGER:	TSJ CONSULTING INC. 27128 PASEO ESPADA #A-1521 SAN JUAN CAPISTRANO, CA. 92675 CONTACT: TOM JOHNSON PHONE: (925) 785-3727 EMAIL: tom@tsjconsultinginc.com
A/E MANAGER:	TSJ CONSULTING INC. 27128 PASEO ESPADA #A-1521 SAN JUAN CAPISTRANO, CA. 92675 CONTACT: DAN CONNELL PHONE: (949) 306-4644 EMAIL: dan@tsjconsultinginc.com

DIRECTIONS	
DIRECTIONS FROM AT&T SAN RAMON OFFICE:	
<ol style="list-style-type: none"> <li>HEAD SOUTHWEST. TURN RIGHT. TURN LEFT TOWARD EXECUTIVE PKWY.</li> <li>TURN RIGHT TOWARD EXECUTIVE PKWY. TURN RIGHT ONTO EXECUTIVE PKWY.</li> <li>TURN RIGHT ONTO CAMINO RAMON.</li> <li>USE THE RIGHT 2 LANES TO TURN RIGHT ONTO BOLLINGER CANYON RD.</li> <li>USE THE RIGHT LANE TO MERGE ONTO I-680 S VIA THE RAMP TO SAN JOSE</li> <li>MERGE ONTO I-680 S</li> <li>USE THE RIGHT 2 LANES TO TAKE EXIT 30A TO MERGE ONTO I-580 E TOWARD STOCKTON</li> <li>KEEP LEFT TO STAY ON I-580 E</li> <li>KEEP LEFT TO CONTINUE ON I-205 E, FOLLOW SIGNS FOR INTERSTATE 205/TRACY/STOCKTON</li> <li>MERGE ONTO I-5 N</li> <li>USE THE RIGHT 2 LANES TO TAKE EXIT 461 FOR CA-120 TOWARD MANTECA/SONORA</li> <li>CONTINUE ONTO CA-120 E</li> <li>TAKE EXIT 3 FOR AIRPORT WAY TOWARD SHARPE DEPOT</li> <li>TURN RIGHT ONTO AIRPORT WAY</li> <li>DESTINATION WILL BE ON THE RIGHT</li> </ol>	

CODE COMPLIANCE	
ALL WORK AND MATERIALS SHALL BE PERFORMED 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 CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING CODES.	
<ul style="list-style-type: none"> <li>2019 CALIFORNIA BUILDING CODE</li> <li>2019 CALIFORNIA TITLE 24</li> <li>2019 CALIFORNIA FIRE CODE</li> <li>2019 CALIFORNIA ENERGY CODE</li> <li>2019 CALIFORNIA MECHANICAL CODE</li> <li>TIA/EIA-222-H OR LATEST EDITION</li> </ul>	

CONSULTANT	 TSJ CONSULTING INC. 27128 PASEO ESPADA, #A-1521 SAN JUAN CAPISTRANO, CA 92675																
APPLICANT																	
SITE INFORMATION	CVL02502 CAMPOS FAMILY FARMS 4500 NORTH BIOLA AVE. FRESNO, CA 93723																
DESIGN RECORD	<table border="1"> <thead> <tr> <th colspan="4">REVISIONS</th> </tr> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>03/13/22</td> <td>100% ZD</td> <td>DC</td> </tr> <tr> <td>0</td> <td>10/21/21</td> <td>90% ZD</td> <td>LE</td> </tr> </tbody> </table>	REVISIONS				REV	DATE	DESCRIPTION	BY	1	03/13/22	100% ZD	DC	0	10/21/21	90% ZD	LE
REVISIONS																	
REV	DATE	DESCRIPTION	BY														
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0	10/21/21	90% ZD	LE														
PROFESSIONAL STAMP																	
SHEET TITLE	TITLE SHEET																
SHEET	T-1																

EXHIBIT 5

**NOTES**

APN: 016-300-23S, 016-300-21S, 016-300-03S  
 OWNER: CAMPOS FAMILY FARMS, LLC, A CALIFORNIA LIMITED LIABILITY COMPANY

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

THE EASEMENTS (IF ANY) THAT APPEAR ON THIS MAP HAVE BEEN PLOTTED BASED SOLELY ON INFORMATION CONTAINED IN THE REPORT OF TITLE BY: FIDELITY NATIONAL TITLE COMPANY, ORDER NO. 35954702, DATED NOVEMBER 23, 2021, WITHIN SAID TITLE REPORT THERE ARE TWENTY (20) EXCEPTIONS LISTED, NONE (0) OF WHICH IS AN EASEMENT AND NONE (0) OF WHICH CAN NOT BE PLOTTED.

THE UNDERGROUND UTILITIES (IF ANY) THAT APPEAR ON THIS MAP HAVE BEEN LOCATED BY FIELD OBSERVATION. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES STATE THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE.

THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD RATE MAP FOR COMMUNITY NO. 065029, PANEL NO. 1525H, DATED FEBRUARY 18, 2009, SHOWS THAT THE LOCATION OF THIS SITE FALLS WITHIN ZONE 'X' AREAS OF 0.2% ANNUAL CHANCE FLOODPLAIN.

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

LAT. 36° 47' 58.96" N NAD 83 (36.799711°)  
 LONG. 120° 01' 02.54" W NAD 83 (-120.017372°)  
 ELEV. 251.0' NAVD 88 (BASIS OF DRAWING)

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

**LEGAL DESCRIPTION:**

BEING FRESNO COUNTY ASSESSOR'S PARCEL NUMBER 016-300-03S, A PORTION OF THE FOLLOWING DESCRIBED PROPERTY:

THE SOUTHWEST QUARTER OF SECTION 16, TOWNSHIP 13 SOUTH, RANGE 18 EAST, MOUNT DIABLO BASE AND MERIDIAN, ACCORDING TO THE OFFICIAL PLAT THEREOF, FRESNO COUNTY RECORDS.

EXCEPTING THEREFROM THOSE PORTIONS THEREOF DESCRIBED AS FOLLOWS:

THE NORTH ONE-HALF OF LOT "R" IN BLOCK 52, THE 30 FEET OF ABANDONED ROAD ADJACENT THERETO ON THE WEST, THE NORTH ONE-HALF OF LOT "R" IN BLOCK 53, ALL OF BLOCK 54 AND THAT PORTION OF THIRD STREET ADJACENT TO SAID LOT "R" IN BLOCK 53 AND SAID LOT "R" IN BLOCK 52, ALSO THAT PORTION OF "I" STREET LYING EAST OF THE WEST LINE OF SIXTH STREET AND THAT PORTION OF SIXTH STREET LYING NORTH OF THE NORTH LINE OF "I" STREET, ALL ACCORDING TO THE MAP OF BIOLA AND THE MAP OF BIOLA ACRES, RECORDED IN BOOK 8, PAGES 32 AND 33, RESPECTIVELY, OF RECORD OF SURVEYS, FRESNO COUNTY RECORDS.

ALSO EXCEPTING THEREFROM BEGINNING AT THE SOUTHWEST CORNER OF LOT "R" IN SAID BLOCK 52; THENCE SOUTH 0° 01' 00" WEST ALONG THE EAST LINE OF HOWARD ROAD PARALLEL WITH AND 30 FEET EAST OF THE WEST LINE OF SAID SECTION 16, 450.00 FEET; THENCE SOUTH 89° 36' 11" EAST AND PARALLEL WITH THE SOUTH LINE OF SAID LOT "R", 750.67 FEET; THENCE NORTH 0° 01' 00" EAST AND PARALLEL WITH THE WEST LINE OF SECTION 16, 450.00 FEET TO THE SOUTH LINE OF LOT "R"; THENCE NORTH 89° 36' 11" WEST ALONG THE SOUTH LINE OF LOT "R" 750.67 FEET TO THE POINT OF BEGINNING.

ALSO EXCEPTING THEREFROM ONE-HALF INTEREST IN ALL OIL, GAS AND OTHER HYDROCARBON SUBSTANCES THEREIN OR THEREUNDER.

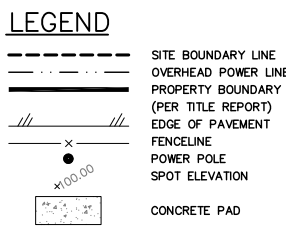
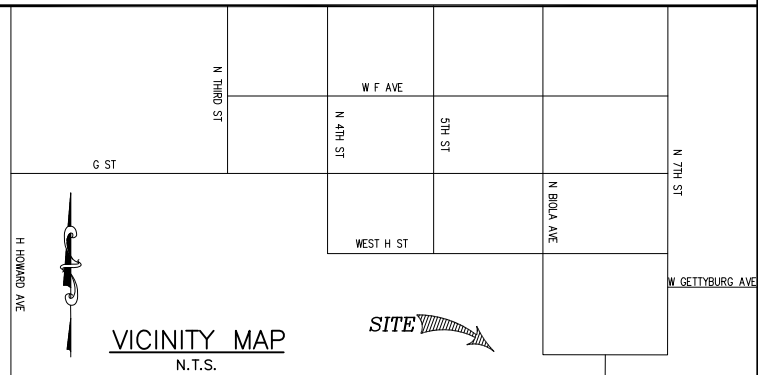
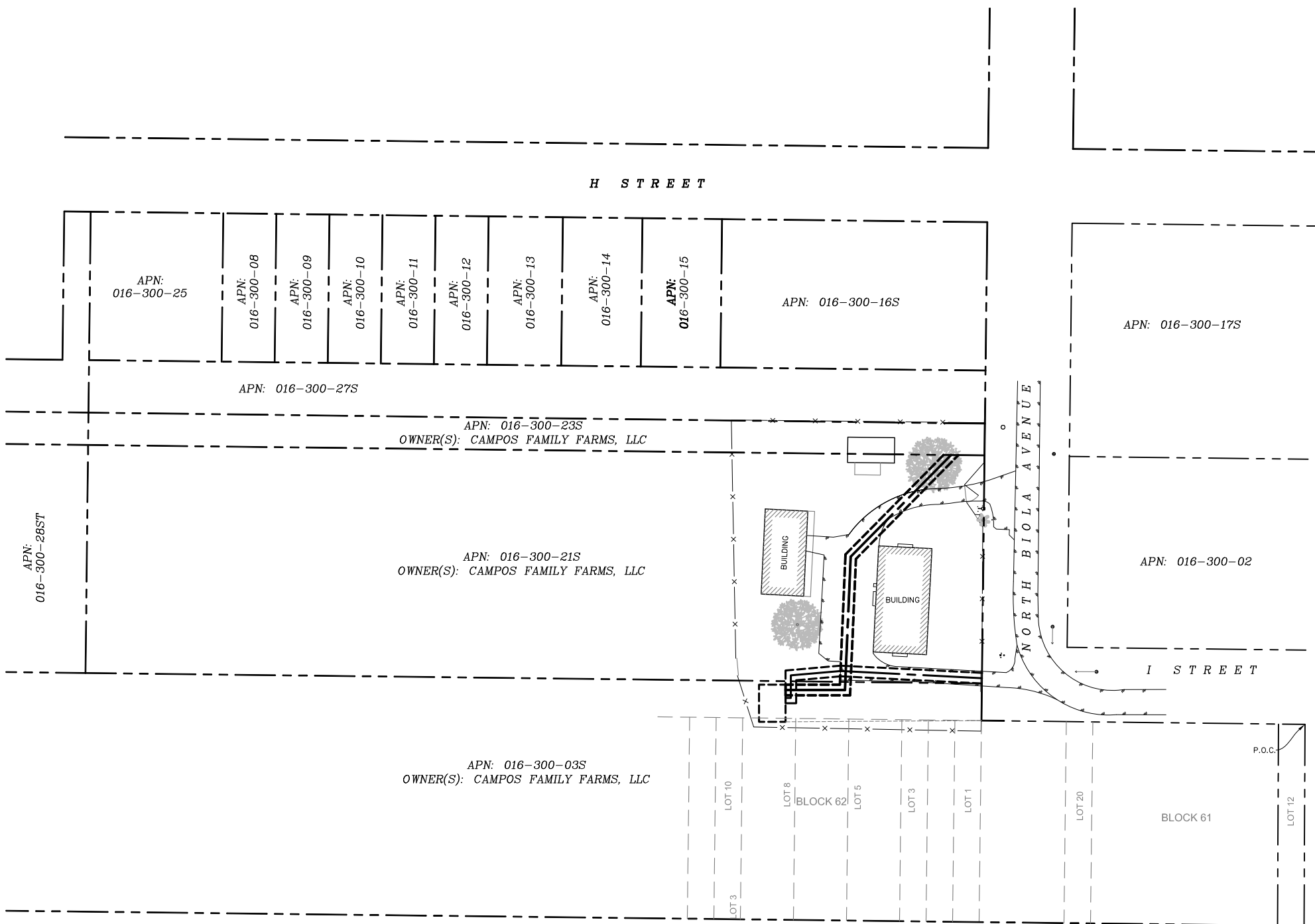
ALSO EXCEPTING THEREFROM THAT PORTION OF SAID LAND AS CONDEMNED BY BIOLA COMMUNITY SERVICES DISTRICT, IN THAT CERTAIN AMENDED FINAL ORDER OF CONDEMNATION, A CERTIFIED COPY OF WHICH RECORDED OCTOBER 24, 2003 AS INSTRUMENT NO. 2003-0258342, FRESNO COUNTY OFFICIAL RECORDS.

AND BEING A PORTION OF THE SAME PROPERTY CONVEYED TO CAMPOS FAMILY FARMS, LLC, A CALIFORNIA LIMITED LIABILITY COMPANY FROM GEORGE J. SALWASSER AND CHARLOTTE ELLEN SALWASSER, AS DEBTOR IN POSSESSION IN CHAPTER 11 CASE NO. 15-10705-B-11F OF THE UNITED STATES BANKRUPTCY COURT OF THE EASTERN DISTRICT OF CALIFORNIA, FRESNO DIVISION BY GRANT DEED DATED MAY 26, 2015 AND RECORDED MAY 29, 2015 IN INSTRUMENT NO. 2015-0066992-00.

TAX PARCEL NO. 016-300-03S

**EASEMENT(S) PER TITLE REPORT:**

NONE



**EXHIBIT 5 Page 2** OVERALL SITE MAP  
 1" = 60'



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SPACE RESERVED FOR PROFESSIONAL SEAL

REVISION			
NO.	DESCRIPTION	BY	DATE
0	PRELIM. ISSUE	LA	09/30/21
1	REVISION	EJ	10/23/21
2	TITLE REVIEWED	DL	11/24/21
3	REVISION	CJ	03/09/22
4			
5			
6			
7			

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DRAWN BY: LA  
 CHECKED BY: DA  
 DATE DRAWN: 09/30/21  
 SMITHCO JOB #: 56-1271

**SITE NAME**  
 CVL02502  
 CAMPOS FAMILY FARMS  
 RAW LAND

**SITE ADDRESS**  
 4500 NORTH BIOLA AVE.  
 FRESNO, CA 93723  
 FRESNO COUNTY

**SHEET TITLE**  
 SITE SURVEY

FOR EXAMINATION ONLY  
**SHEET**

C-1

EXHIBIT 5 Page 2

**PROPOSED EQUIPMENT LEASE AREA DESCRIPTION:**

BEING A PORTION OF THE SOUTHWEST QUARTER OF SECTION 16, TOWNSHIP 13 SOUTH, RANGE 18 EAST, MOUNT DIABLO MERIDIAN, IN THE COUNTY OF FRESNO, STATE OF CALIFORNIA, SAID PORTION BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEASTERLY MOST CORNER OF LOT 12 OF BLOCK 61 AS SHOWN ON MAP ENTITLED "RECORD OF SURVEY FOR BIOLA COMMUNITY SERVICE DISTRICT", FILED IN RECORD OF SURVEY BOOK 48, PAGE 22, RECORDS OF FRESNO COUNTY RECORDER OFFICE, THENCE ALONG THE NORTH LINE OF SAID LOT, N 89°19'54" W, A DISTANCE OF 305.00 FEET; THENCE LEAVING SAID NORTH LINE, S 89°39'13" W, A DISTANCE OF 184.66 FEET TO THE POINT OF BEGINNING;

- COURSE 1) THENCE S 90°00'00" W, A DISTANCE OF 25.00 FEET;
- COURSE 2) THENCE N 00°00'00" E, A DISTANCE OF 35.00 FEET;
- COURSE 3) THENCE N 90°00'00" E, A DISTANCE OF 25.00 FEET;
- COURSE 4) THENCE S 00°00'00" E, A DISTANCE OF 5.00 FEET TO POINT 'A';
- COURSE 5) THENCE CONTINUING S 00°00'00" E, A DISTANCE OF 7.50 FEET TO POINT 'B';
- COURSE 6) THENCE CONTINUING S 00°00'00" E, A DISTANCE OF 22.50 FEET TO THE POINT OF BEGINNING.

CONTAINING 875 SQUARE FEET, MORE OR LESS.

**PROPOSED ACCESS EASEMENT DESCRIPTION:**

BEING A PORTION THE SOUTHWEST QUARTER OF SECTION 16, TOWNSHIP 13 SOUTH, RANGE 18 EAST, MOUNT DIABLO MERIDIAN, IN THE COUNTY OF FRESNO, STATE OF CALIFORNIA, SAID PORTION BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

A 10.00 FOOT WIDE STRIP OF LAND, LYING 5.00 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:

BEGINNING AT THE HEREINBEFORE DESCRIBED POINT 'B';

- COURSE 1) THENCE N 90°00'00" E, A DISTANCE OF 5.00 FEET;
- COURSE 2) THENCE N 00°00'00" W, A DISTANCE OF 21.28 FEET;
- COURSE 3) THENCE N 84°59'35" E, A DISTANCE OF 47.21 FEET;
- COURSE 4) THENCE S 87°04'54" E, A DISTANCE OF 133.27 FEET TO THE WEST RIGHT-OF-WAY LINE OF NORTH BIOLA AVENUE AND THE TERMINUS OF THIS DESCRIPTION.

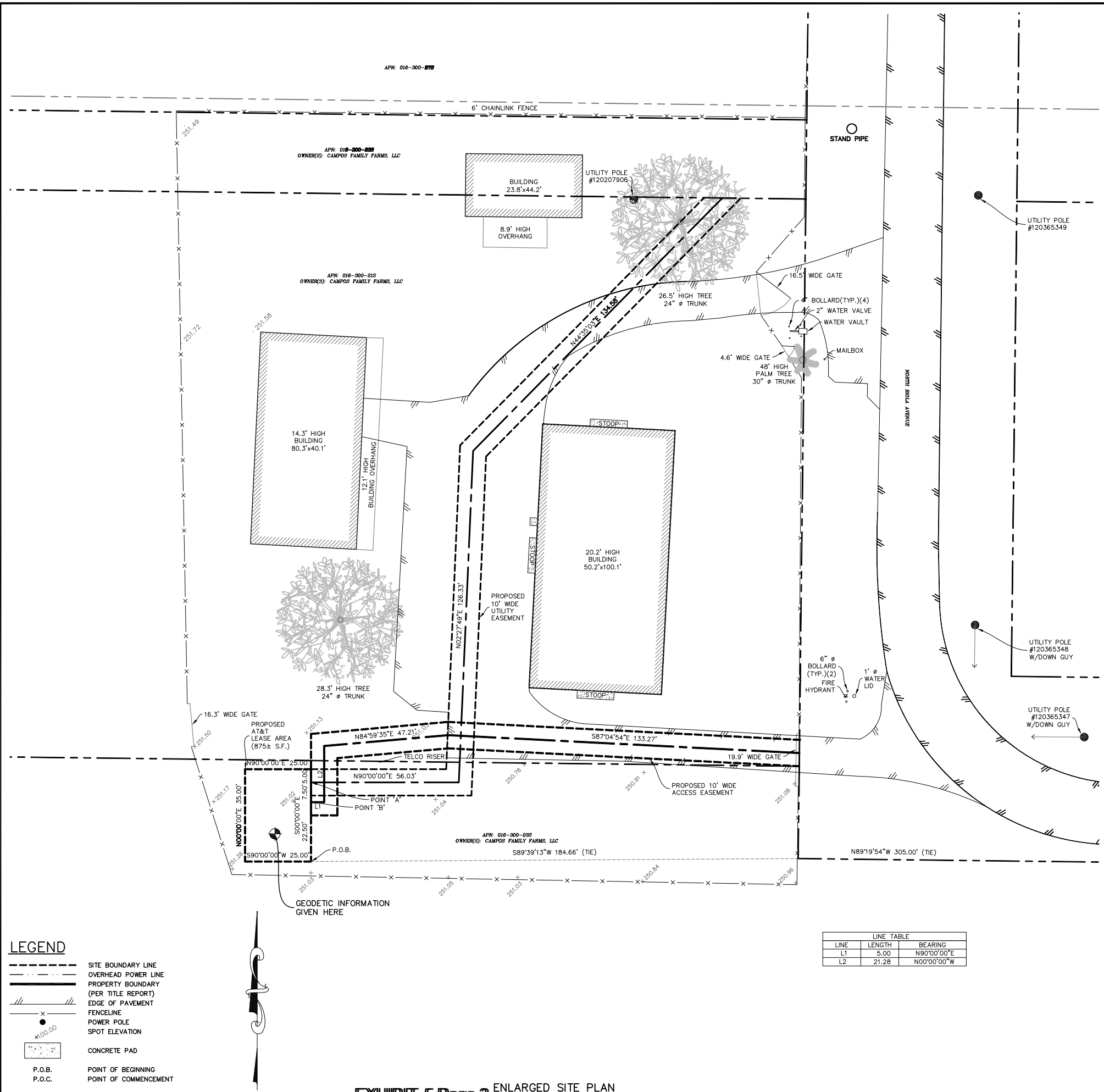
**PROPOSED UTILITY EASEMENT DESCRIPTION:**

BEING A PORTION OF MAP OF SECTION 16, TOWNSHIP 13 SOUTH, RANGE 18 EAST, MOUNT DIABLO MERIDIAN, IN THE COUNTY OF FRESNO, STATE OF CALIFORNIA, SAID PORTION BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

A 10.00 FOOT WIDE STRIP OF LAND, LYING 5.00 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:

BEGINNING AT THE HEREINBEFORE DESCRIBED POINT 'A';

- COURSE 1) THENCE N 90°00'00" E, A DISTANCE OF 56.03 FEET;
- COURSE 2) THENCE N 02°27'49" E, A DISTANCE OF 126.33 FEET;
- COURSE 3) THENCE N 44°35'03" E, A DISTANCE OF 134.58 FEET TO THE TERMINUS OF THIS DESCRIPTION.



**LEGEND**

- SITE BOUNDARY LINE
- OVERHEAD POWER LINE
- PROPERTY BOUNDARY (PER TITLE REPORT)
- EDGE OF PAVEMENT
- FENCELINE
- POWER POLE
- SPOT ELEVATION
- CONCRETE PAD
- P.O.B. POINT OF BEGINNING
- P.O.C. POINT OF COMMENCEMENT

**LINE TABLE**

LINE	LENGTH	BEARING
L1	5.00	N90°00'00"E
L2	21.28	N00°00'00"W

**EXHIBIT 5 Page 3 ENLARGED SITE PLAN**  
1" = 20'



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SPACE RESERVED FOR PROFESSIONAL SEAL

**REVISION**

NO.	DESCRIPTION	BY	DATE
1	PRELIM. ISSUE	LA	09/30/21
2	REVISION	EJ	10/23/21
3	TITLE REVIEWED	DL	11/24/21
4	REVISION	CJ	03/09/22
5			
6			

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DRAWN BY: LA  
 CHECKED BY: DA  
 DATE DRAWN: 09/30/21  
 SMITHCO JOB #: 56-1271

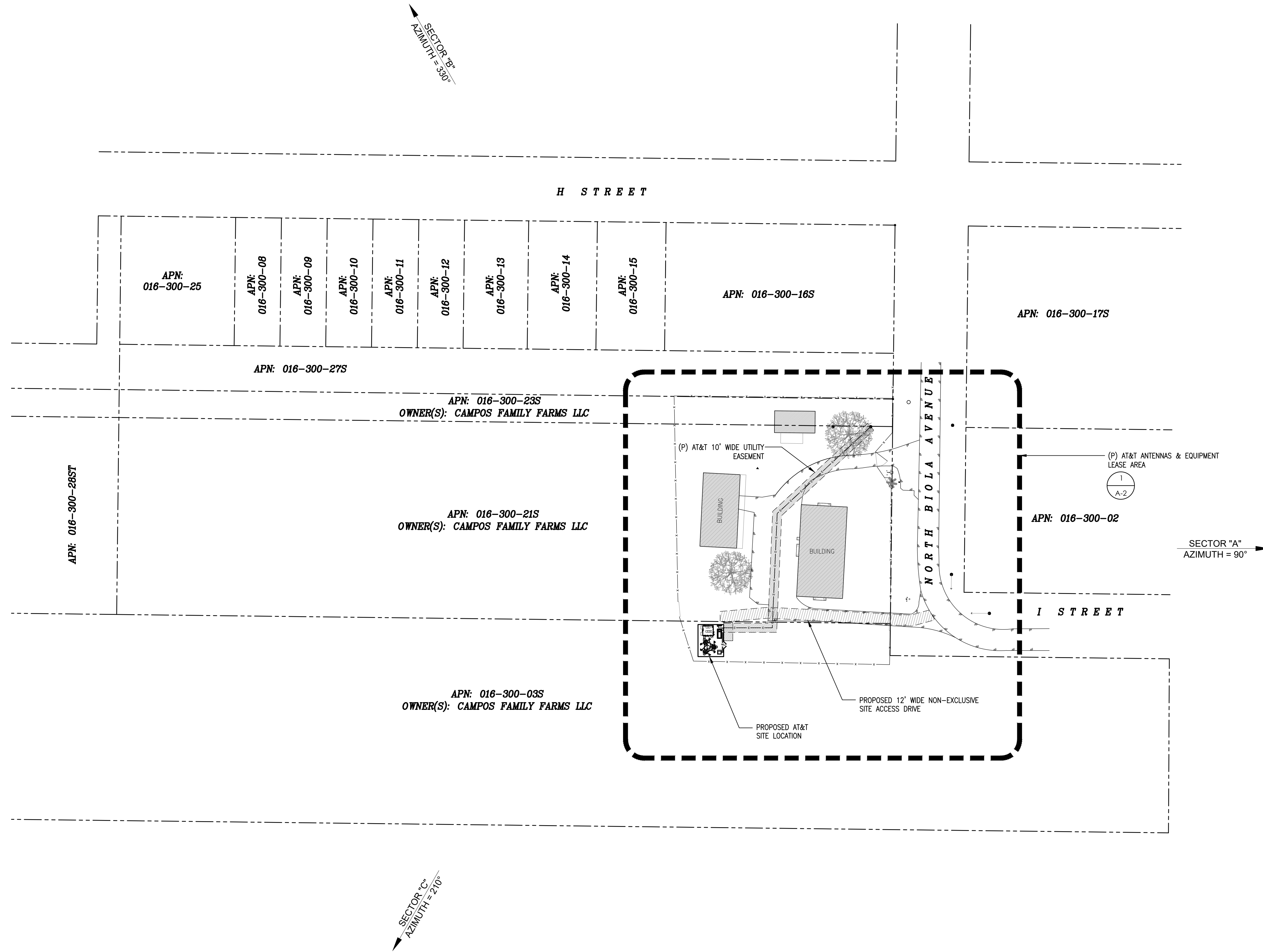
**SITE NAME**  
 CVL02502  
 CAMPOS FAMILY FARMS  
 RAW LAND

**SITE ADDRESS**  
 4500 NORTH BIOLA AVE.  
 FRESNO, CA 93723  
 FRESNO COUNTY

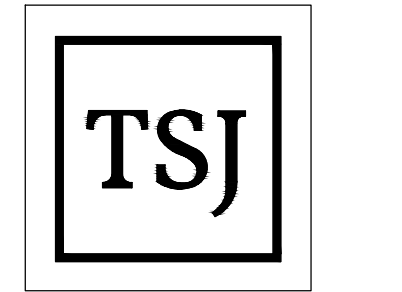
**SHEET TITLE**  
 SITE SURVEY

FOR EXAMINATION ONLY  
**SHEET**

EXHIBIT 5 Page 3



CONSULTANT



TSJ CONSULTING INC.  
27128 PASEO ESPADA, #A-1521  
SAN JUAN CAPISTRANO, CA 92675

APPLICANT



SITE INFORMATION

**CVL02502**  
CAMPOS FAMILY FARMS  
4500 NORTH BIOLA AVE.  
FRESNO, CA 93723

DESIGN RECORD

REVISIONS

REV	DATE	DESCRIPTION	BY
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0	10/21/21	90% ZD	LE

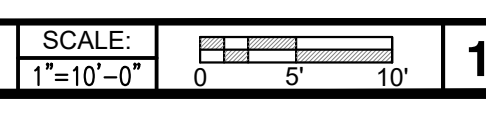
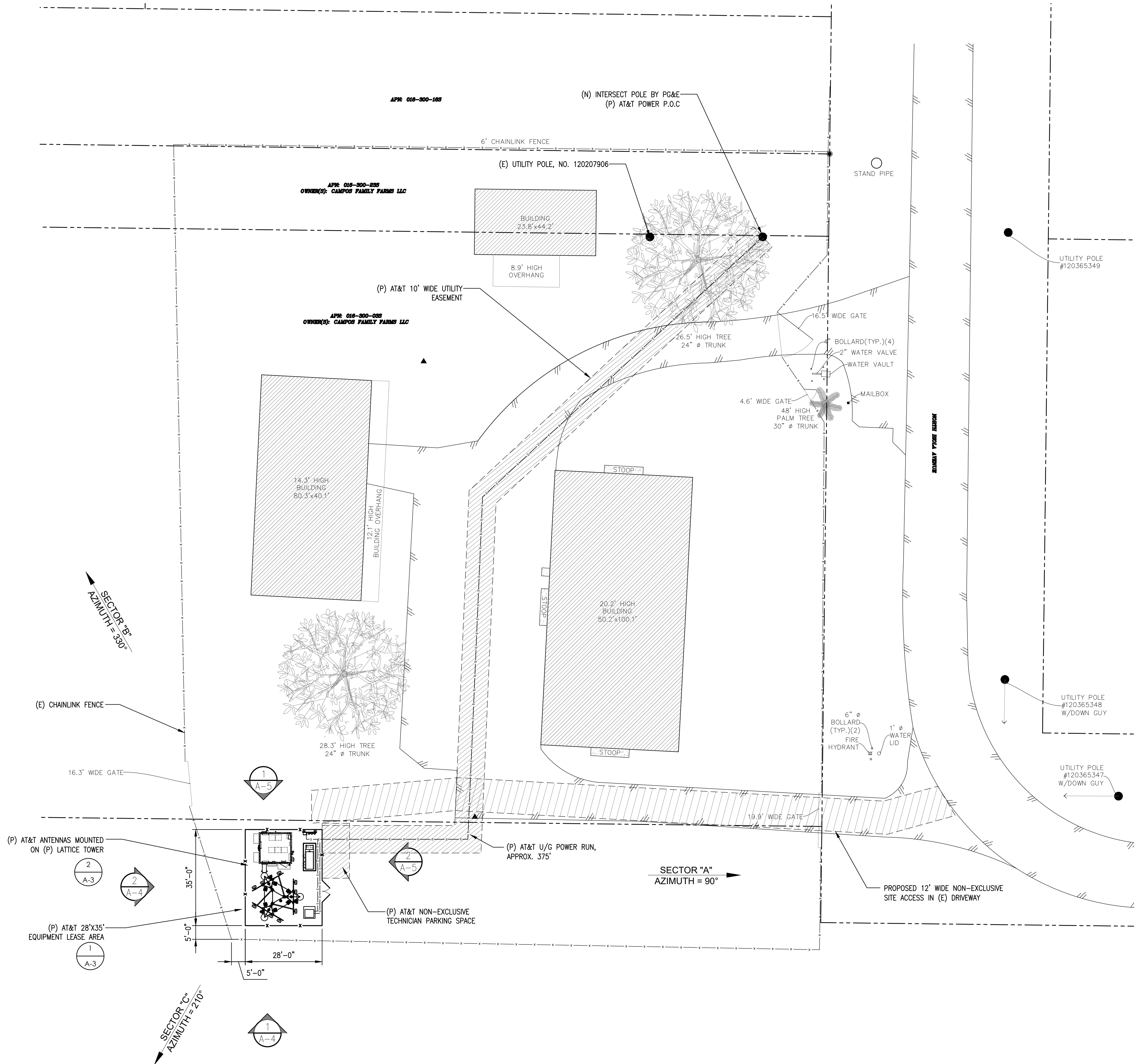
PROFESSIONAL STAMP

SHEET TITLE

SITE PLAN

SHEET

A-1



CONSULTANT

TSJ CONSULTING INC.  
27128 PASEO ESPADA, #A-1521  
SAN JUAN CAPISTRANO, CA 92675

APPLICANT

SITE INFORMATION

**CVL02502**  
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FRESNO, CA 93723

DESIGN RECORD

REV	DATE	DESCRIPTION	BY
1	03/13/22	100% ZD	DC
0	10/21/21	90% ZD	LE

PROFESSIONAL STAMP

SHEET TITLE

**ENLARGED SITE PLAN**

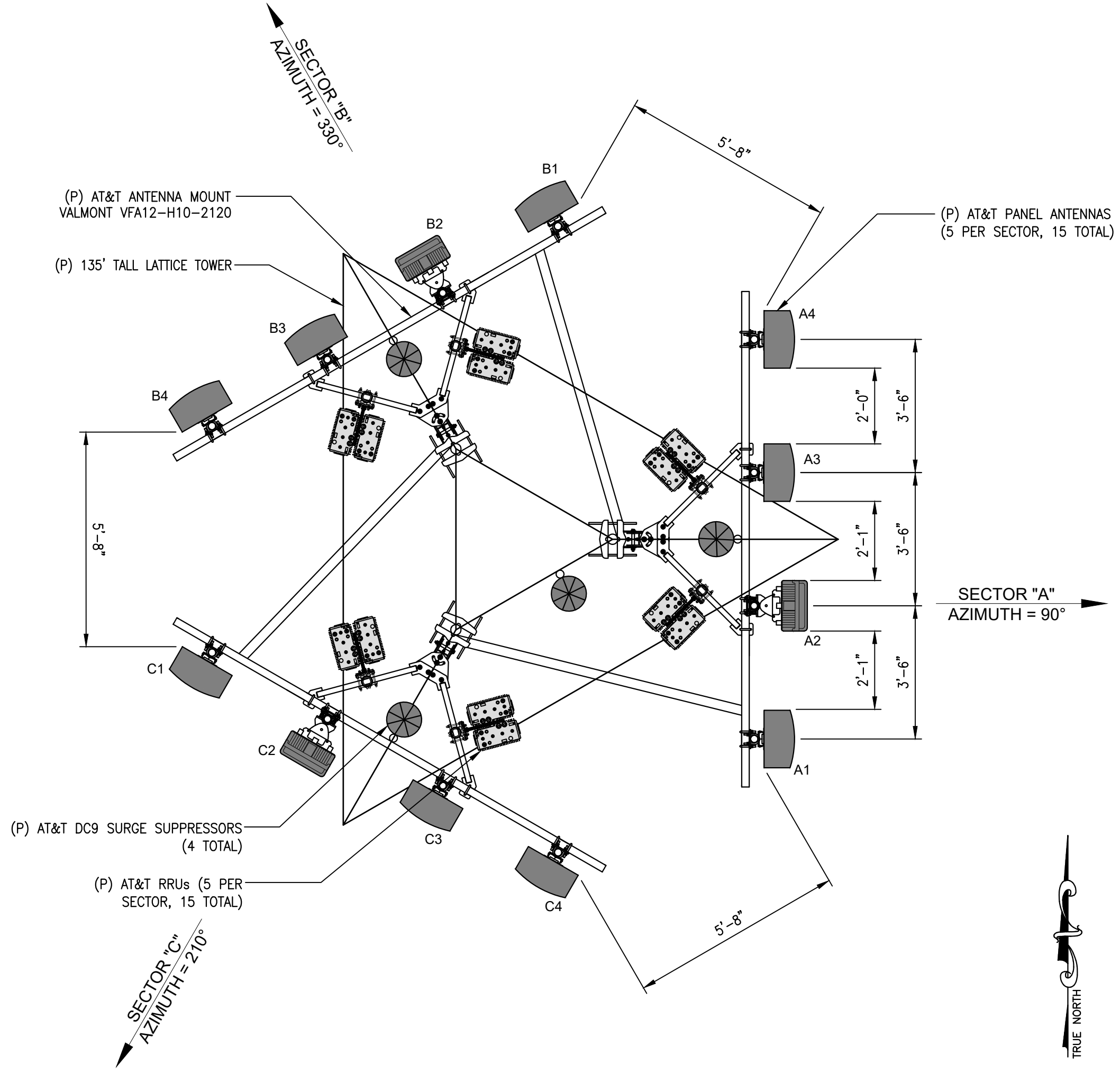
SHEET

**A-2**

SECTOR	ANTENNA MODEL	AZIMUTH	RAD CENTER (A.G.L.)	RRU MODEL	FIBER/DC LENGTH	COAX JUMPER LENGTH	DC FEEDS
A	A1	90°	131'-0"	(1) 4449 B5/B12 (1) 4415 B25	TRUNK1 75M	±8'-0"	3
	A2	90°	131'-0"	-	TRUNK1 75M	±8'-0"	2
	A3	90°	131'-0"	(1) 4478 B14 (1) 8843 B2/B66A	TRUNK1 75M	±8'-0"	3
	A4	90°	131'-0"	(1) 4415 B30	TRUNK2 75M	±8'-0"	1
B	B1	330°	131'-0"	(1) 4449 B5/B12 (1) 4415 B25	TRUNK3 75M	±8'-0"	3
	B2	330°	131'-0"	-	TRUNK3 75M	±8'-0"	2
	B3	330°	131'-0"	(1) 4478 B14 (1) 8843 B2/B66A	TRUNK3 75M	±8'-0"	3
	B4	330°	131'-0"	(1) 4415 B30	TRUNK2 75M	±8'-0"	1
C	C1	210°	131'-0"	(1) 4449 B5/B12 (1) 4415 B25	TRUNK4 75M	±8'-0"	3
	C2	210°	131'-0"	-	TRUNK4 75M	±8'-0"	2
	C3	210°	131'-0"	(1) 4478 B14 (1) 8843 B2/B66A	TRUNK4 75M	±8'-0"	3
	C4	210°	131'-0"	(1) 4415 B30	TRUNK2 75M	±8'-0"	1
TOTALS	(15) ANTENNAS			(15) RRUS	4 DC TRUNKS		27 DC FEEDS

**ANTENNA RF SCHEDULE** PER RFDS DATED 11/24/2021  
ALL ANTENNAS AND EQUIPMENT SHOWN IS PRELIMINARY AND SUBJECT TO CHANGE

3

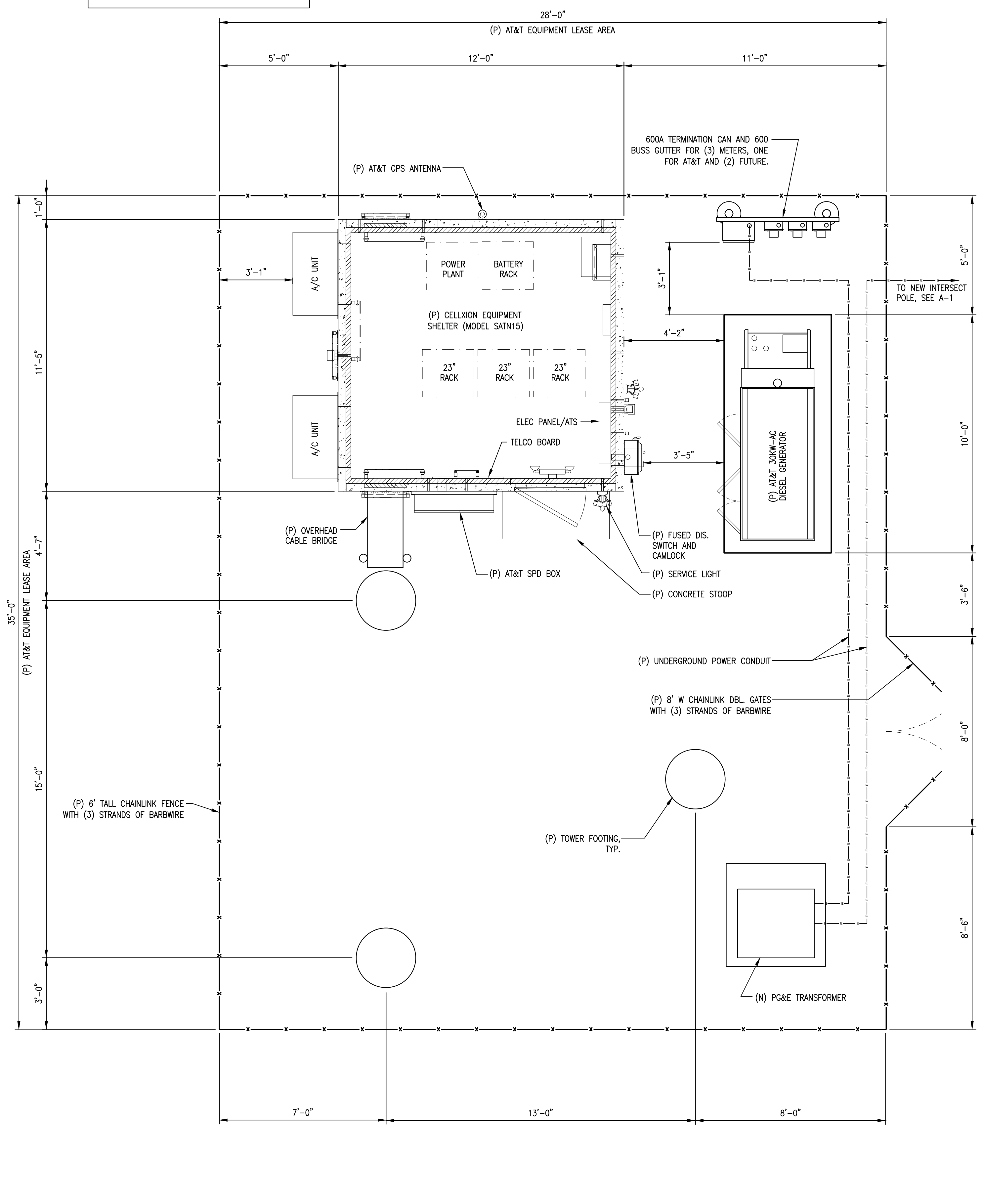


**ANTENNA LAYOUT**

SCALE: 3/8"=1'-0" 0 1 2 3

2

NOTE:  
PROPOSED ANTENNAS, RRU'S NOT SHOWN FOR CLARITY



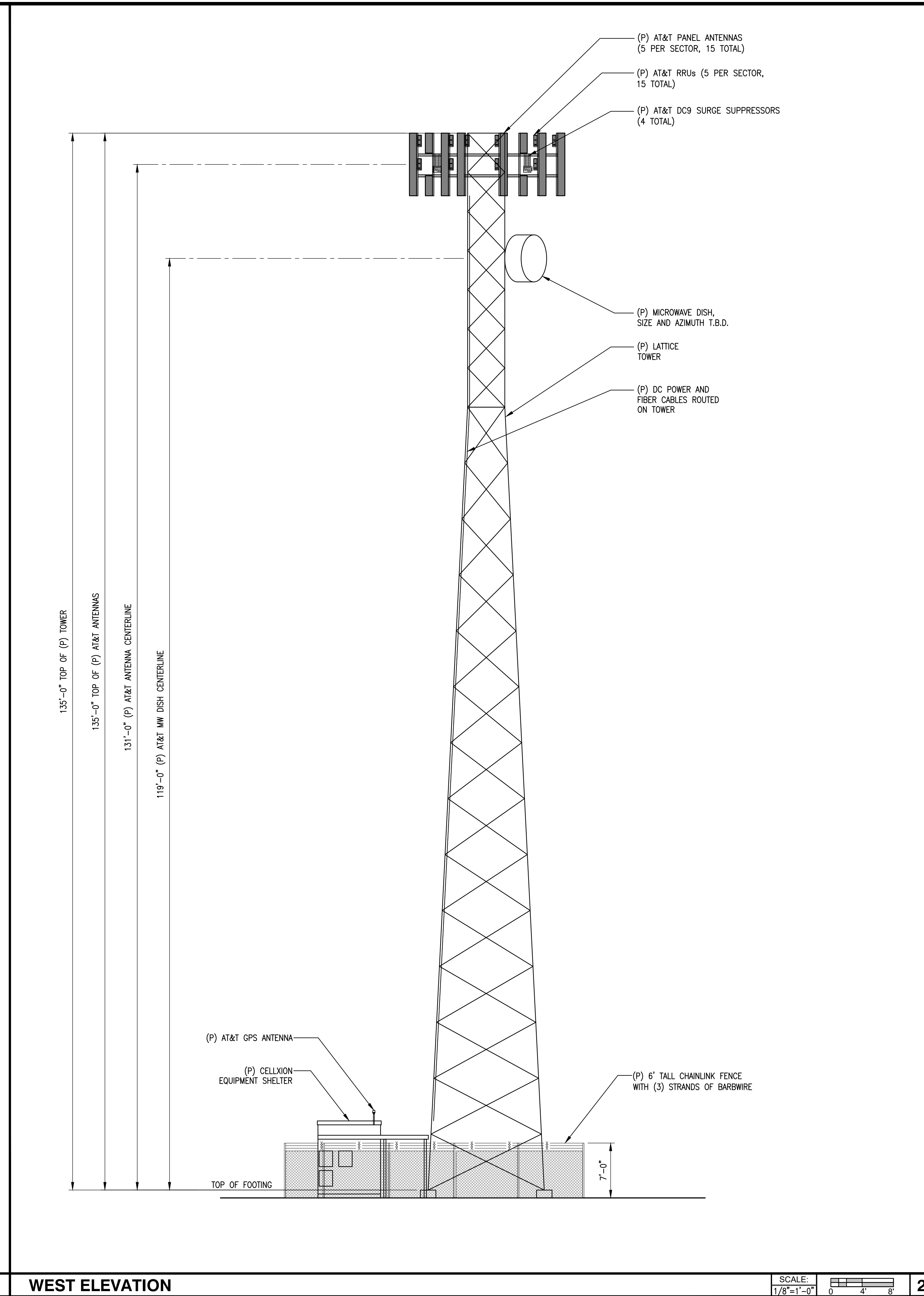
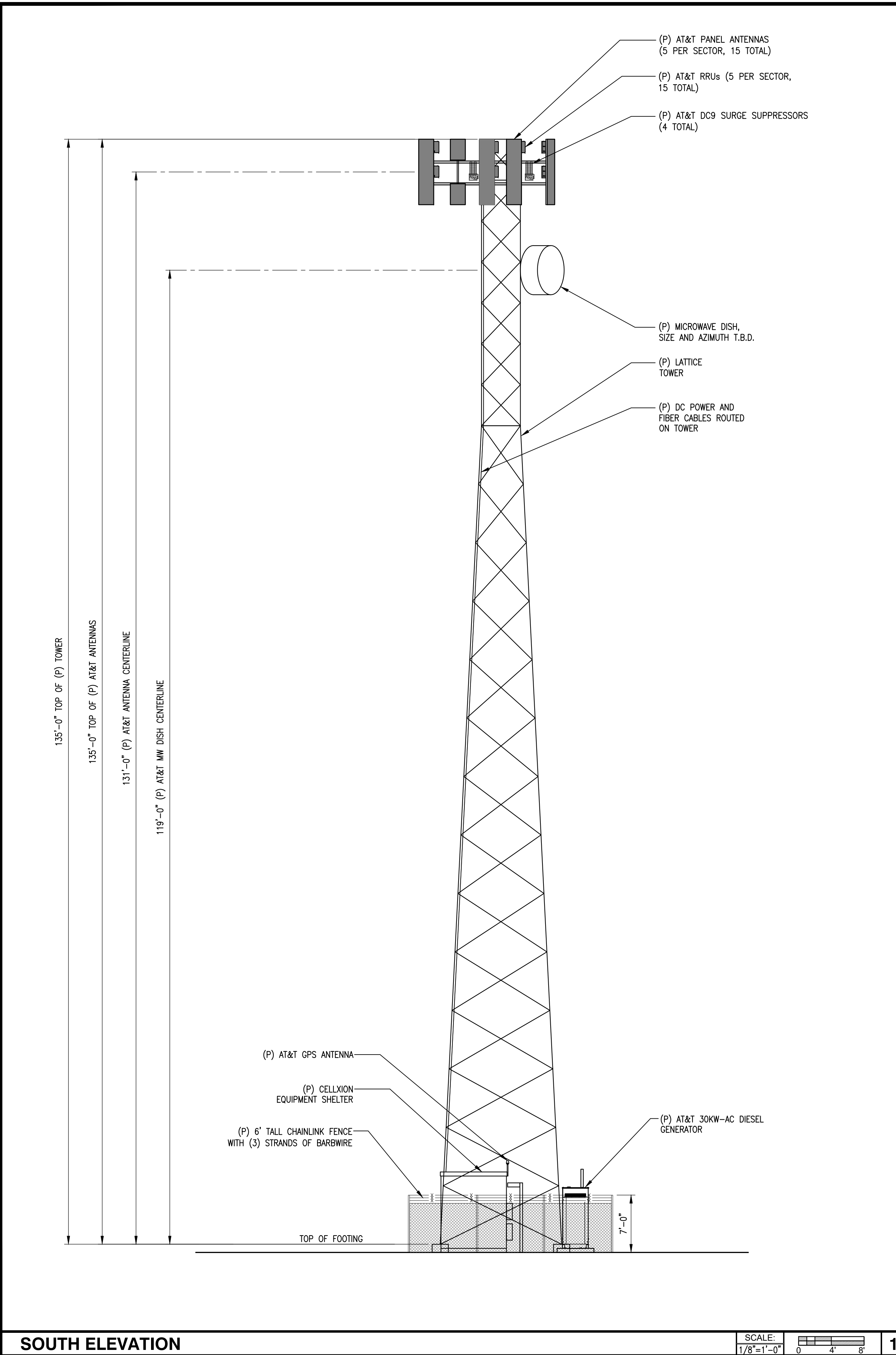
**EQUIPMENT LAYOUT**

SCALE: 3/8"=1'-0" 0 1 2 3

1

CONSULTANT	 TSJ CONSULTING INC. 27128 PASEO ESPADA, #A-1521 SAN JUAN CAPISTRANO, CA 92675																
APPLICANT																	
SITE INFORMATION	<b>CVL02502</b> CAMPOS FAMILY FARMS 4500 NORTH BIOLA AVE. FRESNO, CA 93723																
DESIGN RECORD	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4">REVISIONS</th> </tr> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>03/13/22</td> <td>100% ZD</td> <td>DC</td> </tr> <tr> <td>0</td> <td>10/21/21</td> <td>90% ZD</td> <td>LE</td> </tr> </tbody> </table>	REVISIONS				REV	DATE	DESCRIPTION	BY	1	03/13/22	100% ZD	DC	0	10/21/21	90% ZD	LE
REVISIONS																	
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0	10/21/21	90% ZD	LE														
PROFESSIONAL STAMP	<div style="border: 1px solid black; width: 100%; height: 100%;"></div>																
SHEET TITLE	<b>EQUIPMENT, ANTENNA LAYOUTS AND ANTENNA SCHEDULE</b>																
SHEET	<b>A-3</b>																



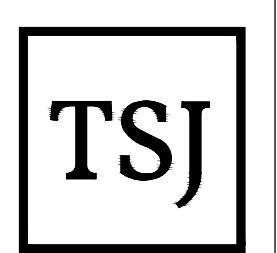



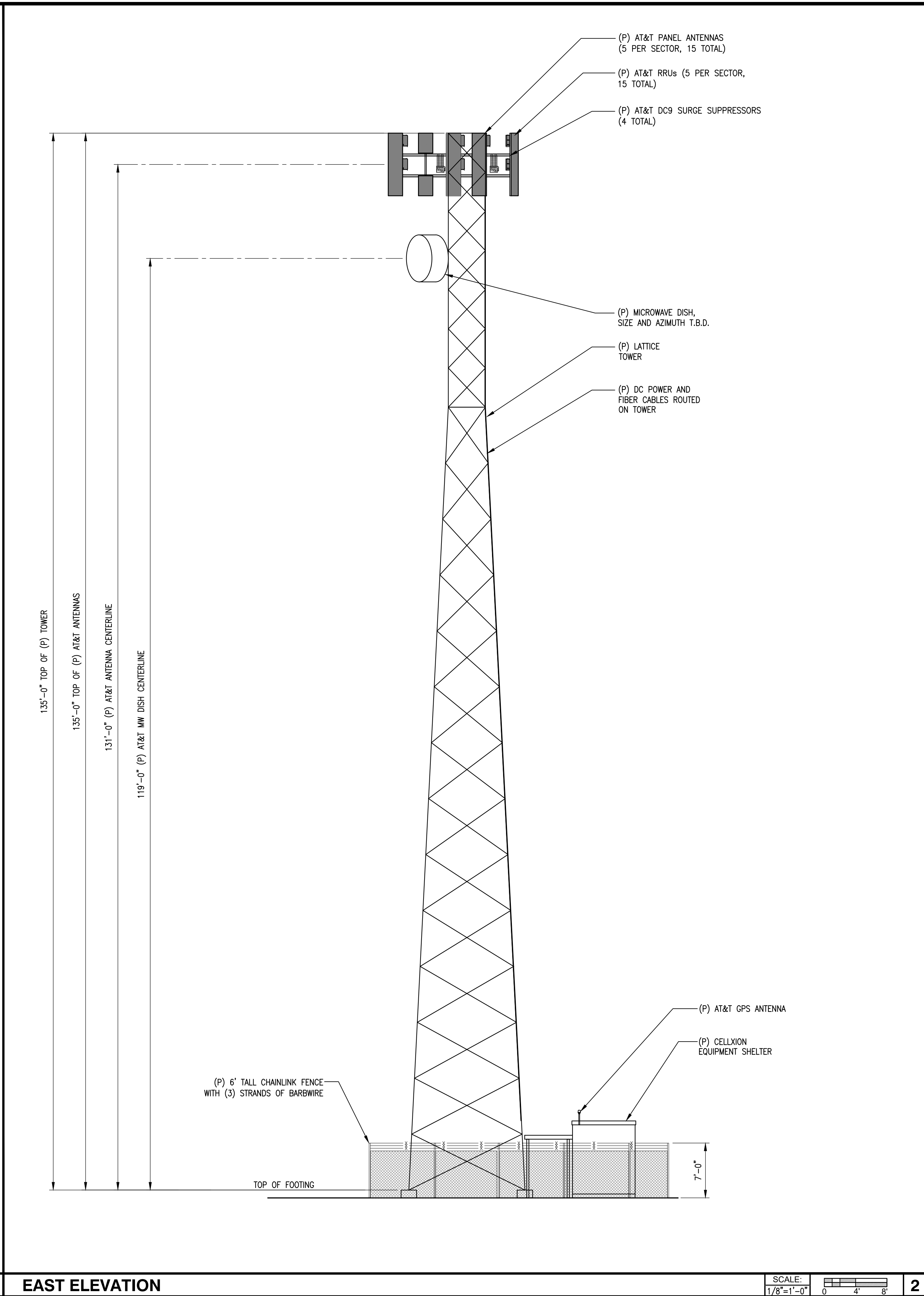
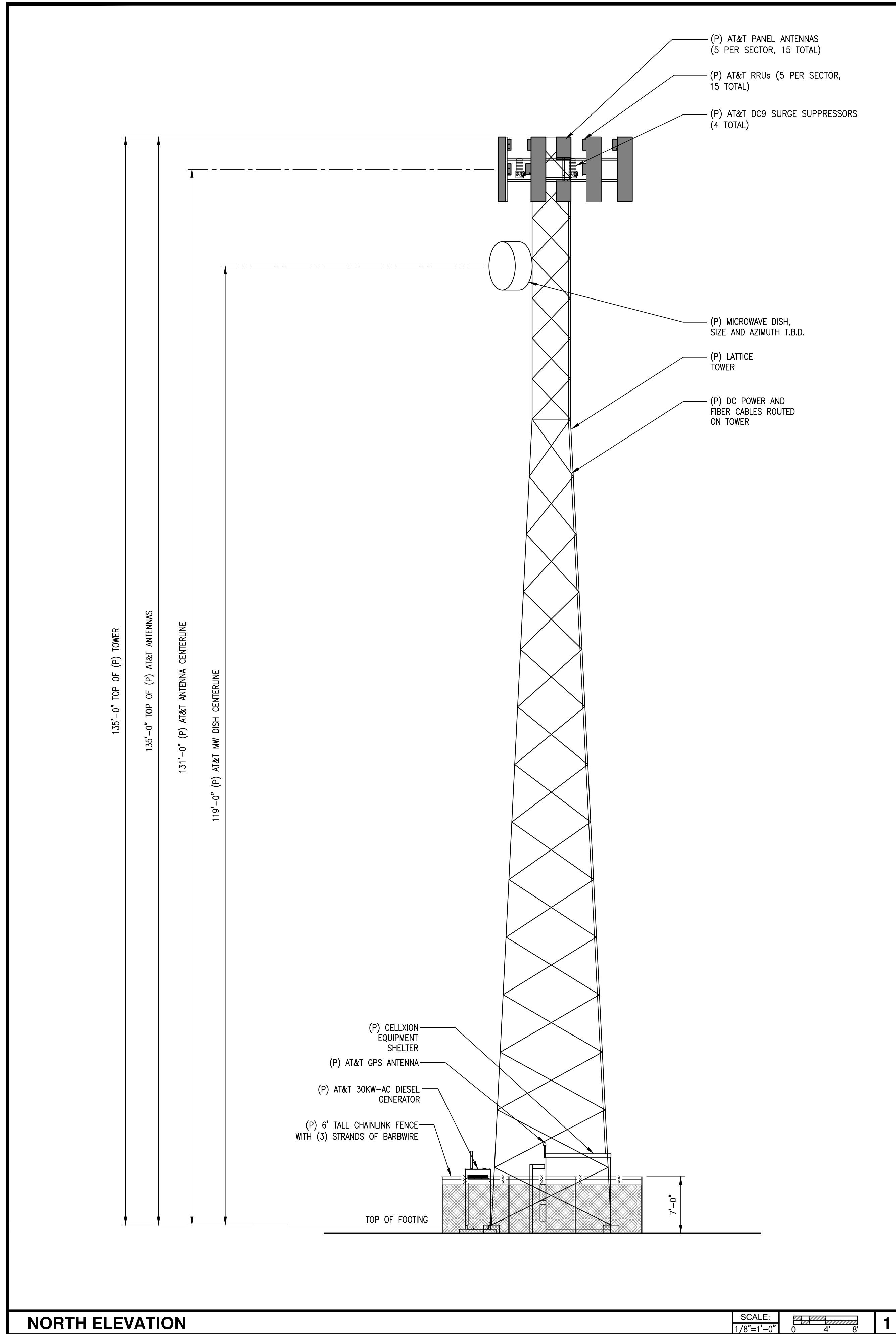
**SOUTH ELEVATION**

SCALE: 1/8"=1'-0" 0 4 8 **1**

**WEST ELEVATION**

SCALE: 1/8"=1'-0" 0 4 8 **2**

CONSULTANT	 <b>TSJ</b> TSJ CONSULTING INC. 27128 PASEO ESPADA, #A-1521 SAN JUAN CAPISTRANO, CA 92675																
APPLICANT																	
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REVISIONS																	
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PROFESSIONAL STAMP																	
SHEET TITLE	<b>ELEVATIONS</b>																
SHEET	<b>A-4</b>																



NORTH ELEVATION

SCALE: 1/8"=1'-0" 0 4' 8' 1

EAST ELEVATION

SCALE: 1/8"=1'-0" 0 4' 8' 2

CONSULTANT

TSJ CONSULTING INC.  
27128 PASEO ESPADA, #A-1521  
SAN JUAN CAPISTRANO, CA 92675

APPLICANT

SITE INFORMATION

**CVL02502**  
CAMPOS FAMILY FARMS  
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PROFESSIONAL STAMP

SHEET TITLE

ELEVATIONS

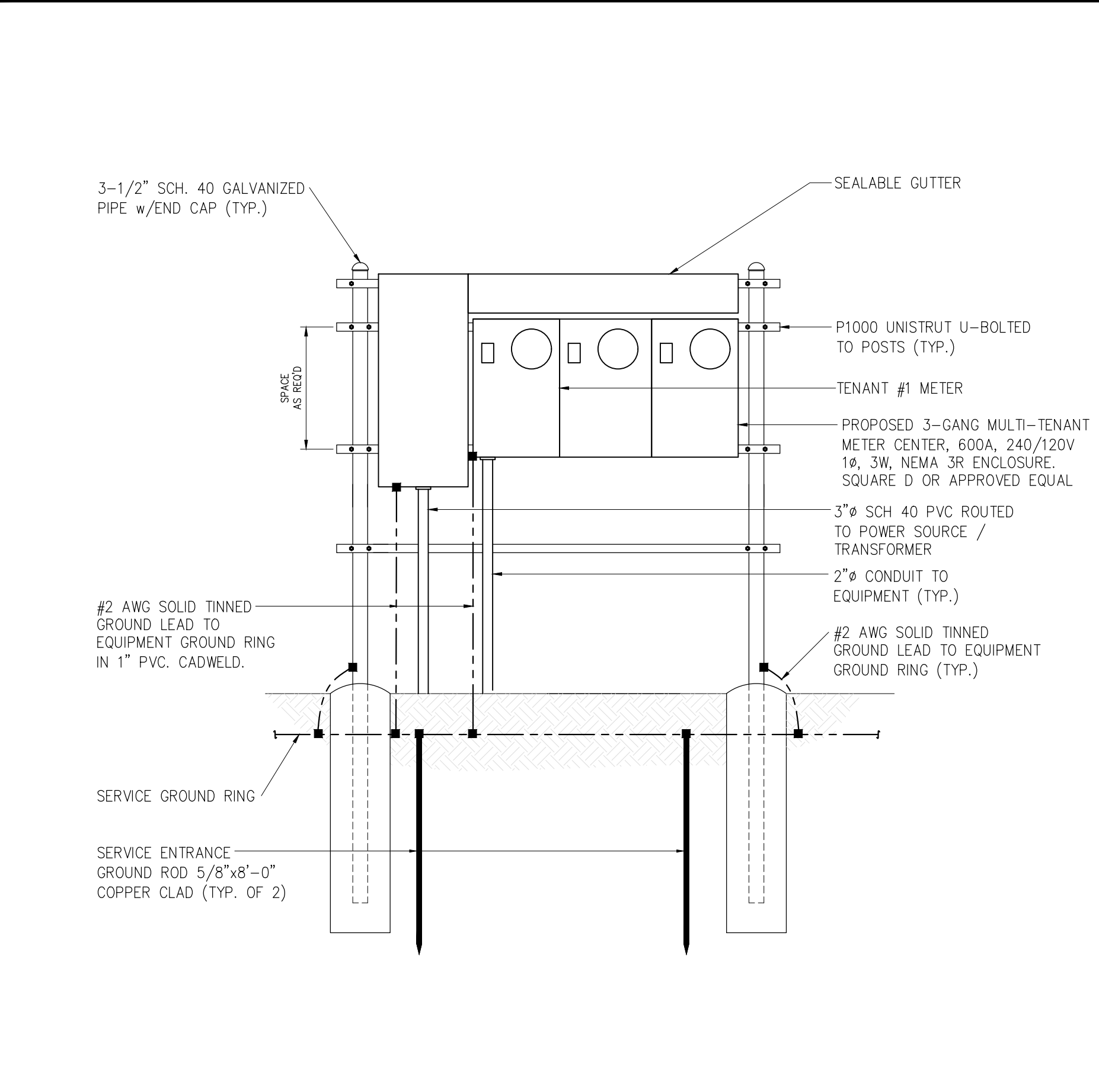
SHEET

A-5

PANEL 'A' SCHEDULE											
120/240V, 1 PHASE, 3W 200A BUS, 42 KAIC					INTERSECT # INTERSECT #PTLC-ATS-3S-12200-CL_ATT 200A MAIN BKR (COMMERCIAL PWR) 42 KAIC SERIES RATED UL LISTED SERVICE ENTRANCE EQUIPMENT						
MAIN BREAKER RATING (A): 200					SYSTEM VOLTAGE (V): 240						
DESCRIPTION	VA	ctnc	BKR	POSN	L1	L2	POSN	BKR	ctnc	VA	DESCRIPTION
RECTIFIER #1/2	2100	NC	30	1	2150	2	15	C	50	150	SMOKE DETECTOR
	2100	NC	30	3	2250	4	20	C	150	150	LIGHTING
RECTIFIER #3/4	2100	NC	30	5	2820	6	20	NC	720	720	CONV OUTLETS
	2100	NC	30	7	2250	8	15	NC	150	150	EMERGENCY LTG
RECTIFIER #5/6	2100	NC	30	9	3844	10	40	NC	1744	1744	HVAC #1
	2100	NC	30	11	3844	12	40	NC	1744	1744	
RECTIFIER #7/8	2100	NC	30	13	2595	14	15	NC	495	495	FCU #1
	2100	NC	30	15	2595	16	15	NC	495	495	
SPARE			30	17	-	18	40	NC	0	0	HVAC #2 (NOTE 2)
			30	19	-	20	15	NC	0	0	
SPARE			30	21	-	22	15	NC	0	0	FCU #2 (NOTE 2)
			30	23	-	24	15	NC	0	0	
SPARE			30	25	180	26	15	NC	180	180	G.F.I. (W.P.)
			30	27	480	28	20	NC	480	480	
SPACE				29	600	30	20	NC	600	600	GENERATOR HEATER
PHASE TOTALS (VA):					12,189	11,419					
CURRENT PER PHASE (A):					102	95	Amperes/phase cannot exceed main breaker rating				
PANEL TOTAL (VA):					30256		Legend: c = continuous, nc = non-continuous				
PANEL CAPACITY (KVA):					48.0		CONNECTED LOAD (KVA): 24.6				
PANEL LOADING (100% non-cont. load) (KVA):					23.4						
PANEL LOADING (125% continuous load) (KVA):					0.3						
PANEL LOADING (TOTAL) (KVA):					23.7						
SPARE CAPACITY (KVA):					16.3						

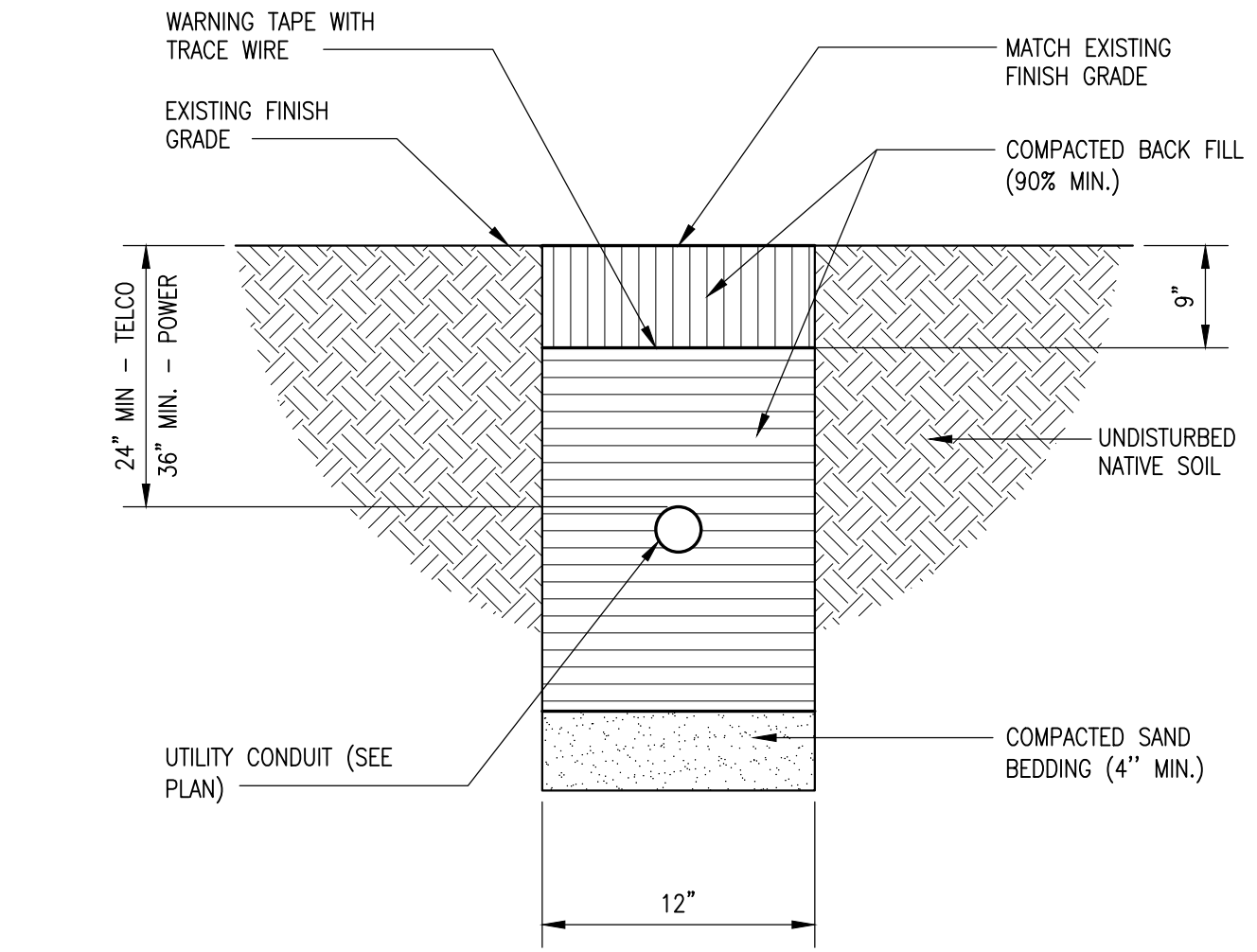
PANEL SCHEDULE

NO SCALE 4



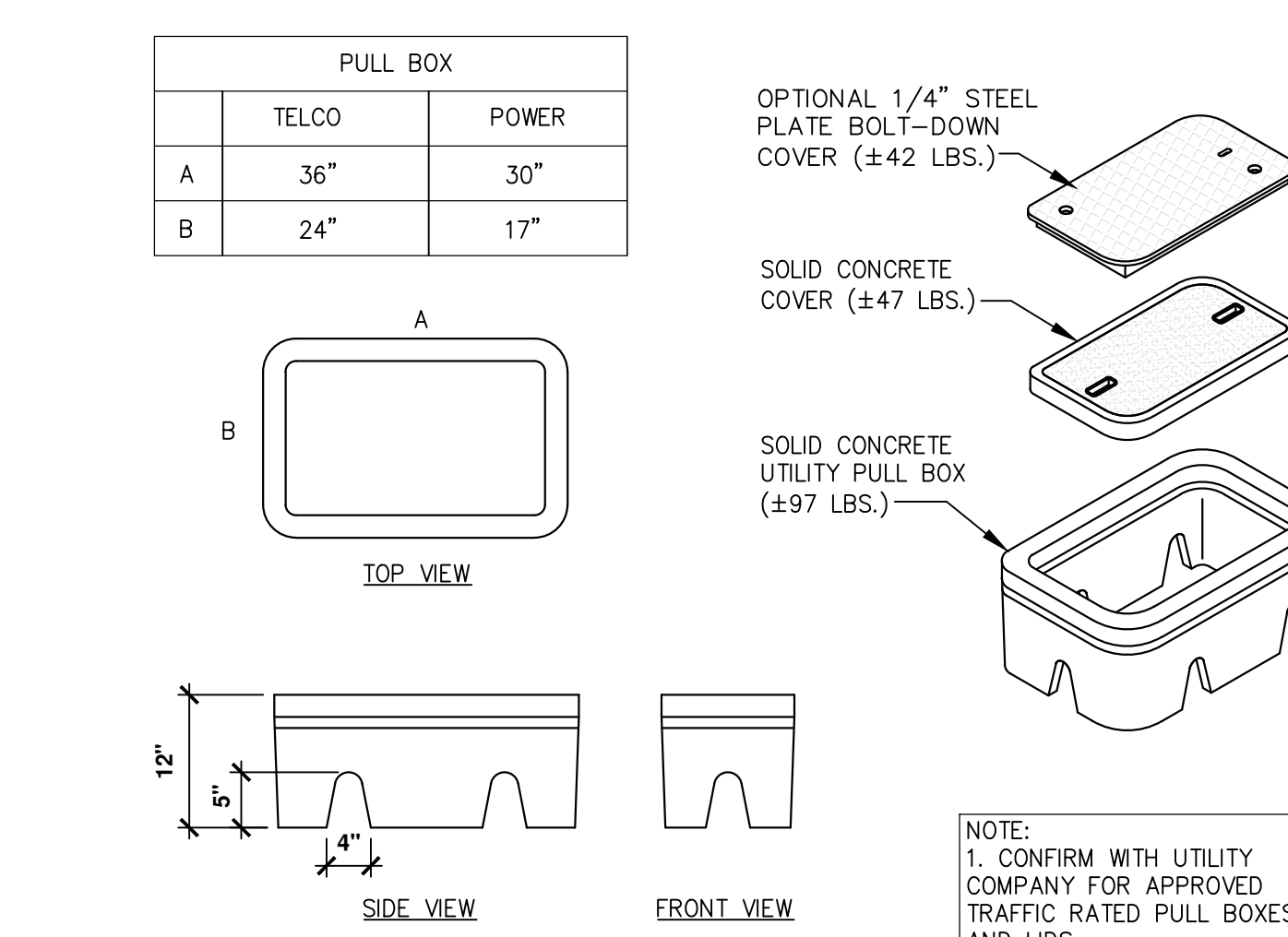
MULTI METER H-FRAME

NO SCALE 5



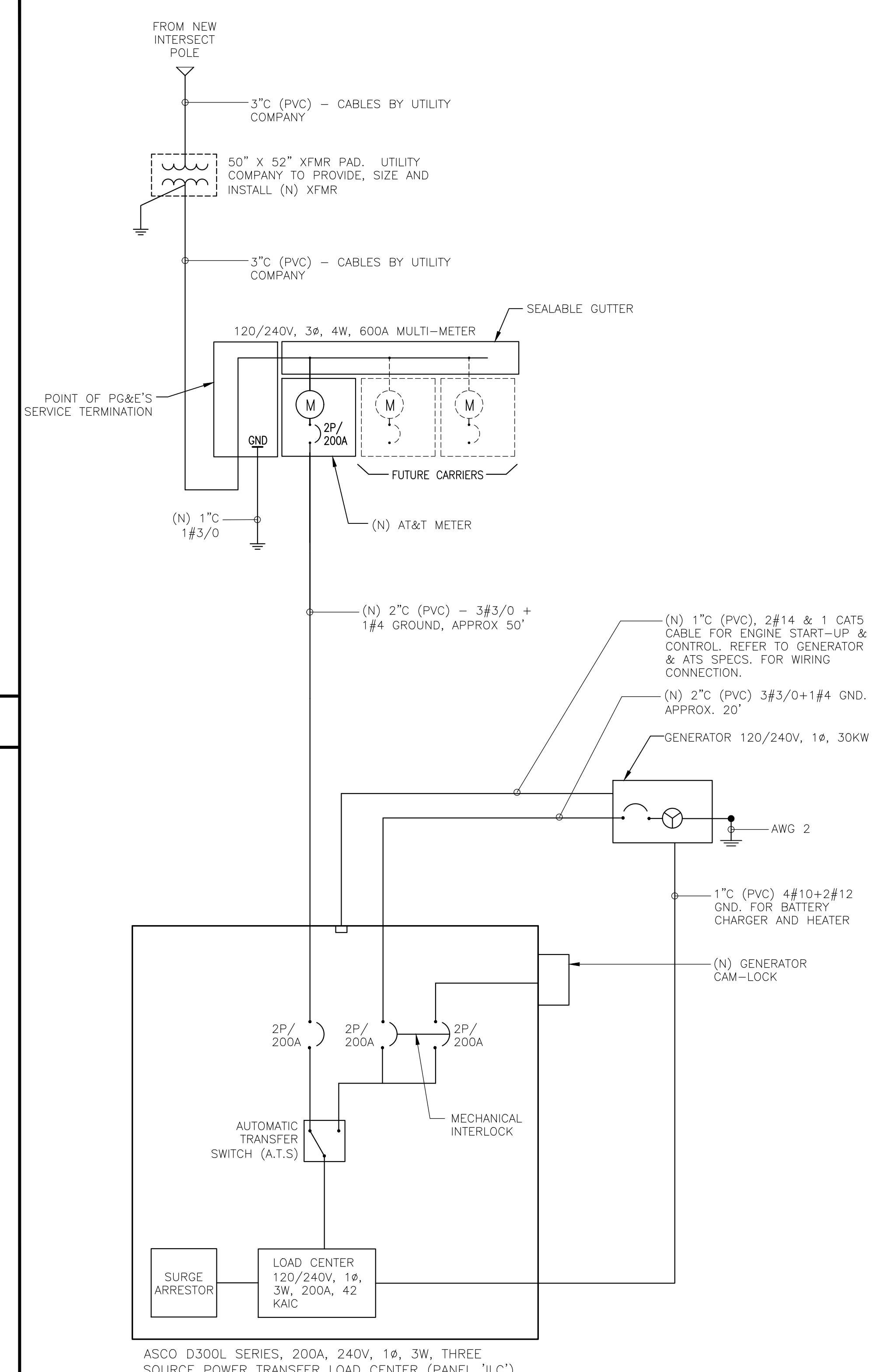
TRENCH DETAIL

NO SCALE 2



PULL BOX DETAIL

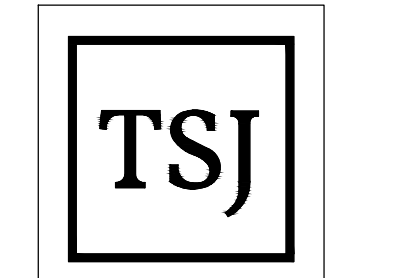
NO SCALE 3



PRELIM SINGLE LINE DIAGRAM

NO SCALE 1

CONSULTANT



TSJ CONSULTING INC.  
27128 PASEO ESPADA, #A-1521  
SAN JUAN CAPISTRANO, CA 92675

APPLICANT



SITE INFORMATION

**CVL02502**  
CAMPOS FAMILY FARMS  
4500 NORTH BIOLA AVE.  
FRESNO, CA 93723

DESIGN RECORD

REVISIONS			
REV	DATE	DESCRIPTION	BY
1	03/13/22	100% ZD	DC
0	10/21/21	90% ZD	LE

PROFESSIONAL STAMP

SHEET TITLE

PRELIMINARY ELECTRICAL DESIGN

SHEET

E-1



# Wireless Telecommunication Facility

**SITE:**

**AT&T Site CVL02502  
Campos Family Farms**



**Address:**

**4500 N. Biola Ave  
Fresno, Ca. 93723**

**REPRESENTATIVE:**

*Tom Johnson  
TSJ Consulting Inc.  
27128 Paseo Espada #A-1521  
San Juan Capistrano, CA. 92675  
Phone: 925-785-3727  
tom@tsjconsultinginc.com*

**Introduction:**

New Cingular Wireless PCS, LLC, d/b/a AT&T Mobility (“AT&T”) is a registered public utility, licensed and regulated by the California Public Utilities Commission and the Federal Communications Commission (“FCC”). As a public utility, AT&T Mobility is mandated by the FCC to provide wireless communication services throughout California. AT&T is dedicated to providing customers with wireless technology designed to enrich their lives as their mobility is increasing. AT&T’s vision is to simplify the wireless experience for its consumer and business customers by offering easy-to-understand, affordable rate plans and excellent customer service. AT&T is bringing next-generation wireless data products - from corporate e-mail to downloadable ringtones - to customers nationwide through its advanced networks. The network performance goals include providing the best quality, lowest level of blocking, easy access to the network and continuous drop-free connections.

AT&T's wireless network is based on LTE technology. These technologies are wireless communication standards that require reusing specific frequencies across defined frequency bands. Due to the need for frequency reuse, LTE require numerous sites to provide customers with suitable signal strength to deliver services. These sites are typically built on existing buildings, lattice towers and freestanding poles in order to provide a network of sites that provide seamless coverage over an area.

In addition to these 4G wireless service gap issues; AT&T is in the process of deploying its 5G LTE service in the County of Fresno with the goal of providing the most advanced personal wireless experience available to residents of the Cities. AT&T holds a license with the FCC and has a responsibility to utilize this spectrum to provide personal wireless services in the City. 4G LTE is capable of delivering speeds up to 10 times faster than industry-average 3G speeds. LTE and 5G technology also offers lower latency, or the processing time it takes to move data through a network, such as how long it takes to start downloading a webpage or file once you’ve sent the request. Lower latency helps to improve the quality of personal wireless services. What's more, LTE uses spectrum more efficiently than other technologies, creating more space to carry data traffic and services and to deliver a better overall network experience.

Efforts are currently underway in the County to establish the required infrastructure. AT&T is currently seeking the review and approval of a Conditional Use Permit to allow the construction, operation, and maintenance of an unmanned wireless telecommunications facility in this AE20 zoned property (“Proposed Facility”).

**Background:**

AT&T serves millions of voice and data customers across the United States. Wireless communications continue to change the future of telecommunications with easy-to-use, lightweight and highly mobile communications devices including: smartphones, tablets, e-readers and notebook computers. Wireless communications provide voice, e-mail, texting and high-speed Internet access capabilities for customer's communications needs virtually anywhere and at any time.

The wireless network being developed by AT&T uses state of the art digital technology. The benefits include call privacy and security, improved voice quality, high-speed data, texting, video conferencing, visual voicemail, and an expanded menu of affordable products and services for personal and professional communications needs.

The Proposed Facility will enhance the area's public safety infrastructure by providing wireless communication services to the surrounding neighborhood and local community. The general public, police, fire fighters, and other emergency personnel rely heavily on wireless communications for fast and dependable communications at all times, but especially during natural disasters or other emergencies, such as earthquakes and fires.

Like other carriers in the industry, AT&T is working diligently to respond to the customer demand for mobile services, by expanding services to its customers from where they have historically used mobile phones, while traveling in the vehicle at their offices to where they are demanding more and more service in the residential communities, in-building coverage in their homes.

AT&T is requesting the review and the approval of a permit to allow the construction, operation, and maintenance of an unmanned wireless telecommunications facility ("WTF"). The project is proposed to close a significant service coverage gap and enhance personal wireless services in the area surrounding the site. AT&T's service coverage area in the city must be improved to handle the growing number of voice calls and wireless data usage. To remain competitive, AT&T must improve services in the areas where consumers are increasingly using their phones and data services.

**The project consists of:**

Installation of up to twelve (12) panel antennas which will be located on a new 135' tall self-support lattice tower. Also proposed are (15) remote radio units (RRUs), and (3) surge suppressors. As part of this installation there will be a new equipment enclosure that will accommodate the radio cabinets and backup generator adjacent to this tower. The subject site is also located in a large agricultural development.

Once constructed and operational, the Proposed Facility will provide 24-hour service to customers seven (7) days a week. Apart from initial construction activity, an AT&T technician will service the facility on a periodic basis. It is reasonable to expect that routine maintenance/inspection of the facility will occur about once a month during normal working hours. Beyond this intermittent service, AT&T requires 24-hour access

to the Proposed Facility to ensure that technical support is immediately available if and when warranted.

### **Overview of Site Design/Location Criteria**

The network of AT&T cell sites throughout the region is “location dependent,” meaning that there is a necessary and logical interrelationship between each proposed site. Eliminating or relocating a single cell site can lead to gaps in the system and prohibit AT&T from providing uninterrupted or reliable service to customers in a defined coverage area. Further, the elimination or relocation of a cell site will most often have a “domino” effect on other cell site locations and necessitate significant design changes or modifications to the network.

In identifying the proposed location, AT&T network deployment personnel have selected the Proposed Facility because it meets the technical objectives of RF engineering and provides the best site option with regard to other key criteria including, but not limited to, accessibility, utility connections, zoning compatibility, minimal or no visual impact, liability and risk assessment, site acquisition, maintenance and construction costs.

### **Description of Coverage Area**

AT&T’s objective in locating a WCF at this site is to provide improved in-building and in-transit wireless coverage. The Proposed Facility is needed to close a significant service coverage gap in personal wireless service and provide improved coverage in this dense business district.

### **Site Development Standards and General Plan**

The location, size, design, and operating characteristics of the Proposed Facility will not create unusual noise, traffic or other conditions or situations that may be objectionable, detrimental or incompatible with the surrounding land uses. The proposed use is consistent with this finding in that:

The proposed equipment associated with the telecommunication structure operates quietly or virtually noise free.

The equipment does not emit fumes, smoke, or odors that could be considered objectionable.

The Proposed Facility will be unmanned and only requires periodic maintenance, which equates to approximately one trip per month. The Proposed Facility will not result in conditions or circumstances contrary to the public health, safety and the general welfare. The proposed use is consistent with this finding in that:

Unlike other land uses, which can be spatially determined through the General Plan or other land use plans, the location of WTFs are based on technical requirements such as



network design criteria, service area, elevations, topography, heights of nearby structures, alignment with neighboring sites and customer demand.

The Proposed Facility will be unmanned, have no impact on circulation systems, and generate no noise, odor, smoke, or any other adverse impacts to adjacent land uses. The proposed facility will allow commuters and residents within the coverage area wireless access to the rapidly expanding communications infrastructure by providing voice and data transmission services not currently available. The installation of antenna sectors and transmission equipment will not result in any material changes to the character of the local community. This Proposed Facility will operate in full compliance with applicable state and federal laws, including the Telecommunications Act of 1996.

### **Regulating Agencies**

AT&T is regulated by the FCC and is authorized to operate in the frequencies established for PCS operators. AT&T's WTFs operate at the lowest possible power levels and are well below established standards used by the FCC for safe human exposure to radio frequency electromagnetic fields. These standards have been tested and proved safe by the American National standards Institute (ANSI) and the Institute of Electrical and Electronics Engineers (IEEE). As explained in the RF engineering analysis provided by Hammett & Edison, Inc., Consulting Engineers, submitted with this Application, the Proposed Facility will operate well within all applicable FCC public exposure limits.

### **Alternative Analysis**

- 1) Fire Station #23 located at 4555 N. Biola Road.
  - a. Assessment was that this parcel does not have adequate space to accommodate the footprint needed for AT&T. This is a small community fire station with very limited space on the property the ground space needed.
- 2) Biola Community Service District water facility located off West H Street.
  - a. This property was ruled as not viable due to upcoming development plans for a further water retention basin by the water district.

Operational Statement:

1. **Nature of the operation--what do you propose to do? Describe in detail.**
  - a. Response: This is a new wireless communications facility that will operate to provide enhanced communications for AT&T in the immediate area.
2. **Operational time limits:**
  - a. Response: this facility will operate 24/7
3. **Number of customers or visitors:**
  - a. Response: The facility will have monthly visits by a technician to review the site.
4. **Number of employees:**
  - a. Response: 1 technician will visit the site monthly.
5. **Service and delivery vehicles:**
  - a. Response: Light duty truck will be used.
6. **Access to the site:**
  - a. Response: 24/7 via public road onto private dirt road.
7. **Number of parking spaces for employees, customers, and service/delivery vehicles.**
  - a. Response: N/A
8. **Are any goods to be sold on-site? If so, are these goods grown or produced on-site or at some other location? Explain.**
  - a. Response: N/A
9. **What equipment is used? If appropriate, provide pictures or brochure.**
  - a. Response: Please see spec sheets for radios and antennas.
10. **What supplies or materials are used and how are they stored?**
  - a. Response: N/A
11. **Does the use cause an unsightly appearance?**
  - a. Response: N/A
12. **List any solid or liquid wastes to be produced.**
  - a. Response: N/A
13. **Estimated volume of water to be used (gallons per day). Source of water?**
  - a. Response: N/A
14. **Describe any proposed advertising including size, appearance, and placement.**
  - a. Response: N/A
15. **Will existing buildings be used or will new buildings be constructed?**
  - a. Response: As part of the communications facility installation, this will involve a new self-support lattice tower with a ground based equipment shelter and back up diesel generator.
16. **Explain which buildings or what portion of buildings will be used in the operation.**
  - a. Response: N/A
17. **Will any outdoor lighting or an outdoor sound amplification system be used?**
  - a. Response: N/A
18. **Landscaping or fencing proposed?**
  - a. Response: There will be a perimeter chain link around the site compound.
19. **Any other information that will provide a clear understanding of the project or operation.**
  - a. Response: N/A

Fresno County Wireless Communication Guidelines:

1. **Submit detailed information to justify the need for the tower site (e.g. network design, search ring, specific site selection criteria).**
  - a. *Response:* Included in the submittal package.
2. **Submit 18 color copies of service coverage maps and other necessary graphics that demonstrate the need for the proposed tower site.**
  - a. *Response:* Color copies of service coverage maps and necessary graphics have been included in the submittal package.
3. **Identify the location of any existing or approved future tower within a five-mile radius of the proposed site. Include information regarding the operator/owner of the tower, and the tower height.**
  - a. *Response:* The only other "future" tower we are aware of is this current application.
4. **Submit information including correspondence which documents efforts to negotiate "co-location" on existing towers and other existing structures in the area.**
  - a. *Response:* N/A
5. **Submit detailed information documenting consideration of any alternative sites (other than existing towers).**
  - a. *Response:* This has been provided.
6. **Provide documentation that provisions are included in your lease agreement that reserves "co-location" opportunities for other service providers.**
  - a. *Response:* The lease has colocation opportunities.
7. **Depict on the site plan the area available within the tower site to accommodate other future equipment buildings/towers.**
  - a. *Response:* The site plan has area agreed to by the landlord and AT&T for future equipment.
8. **Identify the distance and location of the nearest residence(s) within one-quarter mile from the proposed tower site.**
  - a. *Response:* Residential houses under one-quarter mile.
9. **Identify the location of any airstrip or airport within a five-mile radius of the proposed tower site.**
  - a. *Response:* None found in five-mile radius.
10. **Tower sites proposed in rural agricultural areas must include information relevant to the siting criteria and requirements found in item No. 7 of the "Guidelines" handout.**
  - a. *Response:* Tower will not impede farming operations.
11. **Tower sites proposed within one-half mile of the boundary of the Cities of Fresno and Clovis must give consideration to City-adopted Guidelines (see attached Guidelines presently utilized by the City of Fresno).**
  - a. *Response:* N/A
12. **Tower sites proposed adjacent to roads classified as major roads on the Circulation Element of the General Plan and other aesthetically sensitive areas (e.g. river bottom, existing/planned residential areas) must include information regarding measures taken to minimize aesthetic impacts (e.g. substantial setback from major road, trees, stealth tower design, slim-line monopole).**
  - a. *Response:* Cell tower is proposed next to a local road in a rural zoning (A20), and setbacks have been met to protect aesthetics.
13. **Identify total number of existing towers in Fresno County.**
  - a. *Response:* N/A
14. **Identify total number of existing tower sites on which co-location has occurred with other communication carriers.**

a. Response: N/A

**15. Indicate total number of tower sites planned for location in Fresno County.**

a. Response: Only one planned at the moment with this current application.

Please feel free to contact me if you have any questions.

Regards,

Tom Johnson  
TSJ Consulting Inc.  
925-785-3727  
tom@tsjconsultinginc.com



# County of Fresno

DEPARTMENT OF PUBLIC WORKS AND PLANNING  
STEVEN E. WHITE, DIRECTOR

## EVALUATION OF ENVIRONMENTAL IMPACTS

- APPLICANT:** Tom Johnson
- APPLICATION NOS.:** Initial Study Application No. 8229 and Unclassified Conditional Use Permit Application No. 3741
- DESCRIPTION:** Allow the installation of a new 135' tall self-support lattice tower with up to twelve (12) panel antennas, (15) remote radio units (RRUs), and (3) surge suppressors on a 4.19-acre parcel within the AE-20 (Exclusive Agricultural, 20-acre minimum parcel size) Zone District. As part of this installation there will be a new equipment enclosure that will accommodate the radio cabinets and backup generator adjacent to this tower. Lease area anticipated to be 875 square feet.
- LOCATION:** The subject parcels are located on the east side of N. Biola Ave., 180-feet south of H St., fronting south from the unincorporated community of Biola. (APNs: 016-300-03s, 016-300-21s, 016-300-23s). (4500 N. Biola Ave.) (Sup. Dist. 1)

### AESTHETICS

Except as provided in Public Resources Code Section 21099, would the project:

- A. Have a substantial adverse effect on a scenic vista; or
- B. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

**FINDING:** NO IMPACT:

The project anticipates the placement of new 135' tall self-support lattice tower with up to twelve (12) panel antennas, (15) remote radio units (RRUs), and (3) surge suppressors on a 4.19-acre parcel within the AE-20 (Exclusive Agricultural, 20-acre minimum parcel size) Zone District. Per Figure OS-2 of the Fresno County General Plan, there are no scenic roadways fronting the project site. The development of the permanent tower will be placed within an already disturbed area and would not be

impacted by the project. Therefore, the project will not have a substantial adverse effect on a scenic vista or scenic resource.

- C. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

FINDING: LESS THAN SIGNIFICANT IMPACT:

The project site is located in a predominately agricultural area with rural residences located throughout the region. The unincorporated community of Biola fronts the proposed tower from the north. The placement and construction of the project would create a new communications tower on the project site that would change the existing visual character, however, this change is not expected to result in a significant impact where public views and the existing visual character would be substantially degraded.

- D. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

FINDING: LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED:

Per the Applicant's Operational Statement, the project would utilize a Federal Aviation Administration (FAA) approved lighting system for safety purposes where a red strobe light would operate during nighttime hours and a white strobe light would operate during daytime hours. The project does not anticipate the use of outdoor lighting, however in the event that outdoor lighting is installed, mitigation measures related to the design and orientation of the lighting shall be implemented to ensure that no new source of substantial light would adversely affect day or nighttime views of the area.

\* **Mitigation Measure(s)**

1. *All outdoor lighting shall be hooded and directed downwards so as not to shine on adjacent properties or public right-of-way.*

## II. AGRICULTURAL AND FORESTRY RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology in Forest Protocols adopted by the California Air Resources Board. Would the project:

- A. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

FINDING: NO IMPACT:

Per the 2016 Fresno County Important Farmland Map, the subject parcel is designated "D" Urban and Built-Up Land. Therefore, the project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

- B. Conflict with existing zoning for agricultural use, or a Williamson Act Contract?

FINDING: NO IMPACT:

The subject parcel is zoned AE-20 (Exclusive Agricultural, 20-acre minimum parcel size). The subject parcel is not subject to a Williamson Act Contract. The project will not conflict with the existing zoning for agricultural use and would not conflict with the Williamson Act Contract.

- C. Conflict with existing zoning for forest land, timberland, or timberland zoned Timberland Production; or

- D. Result in the loss of forest land or conversion of forest land to non-forest use?

FINDING: NO IMPACT:

The project site is not located on land zoned for forest land, timberland or timberland zoned Timberland Production and would not result in the loss or conversion of forest land.

- E. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

FINDING: NO IMPACT:

The project intends to place a temporary tower and construct a permanent tower for communication purposes. The footprint of the permanent tower is small and would not result in the off-site conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.

### III. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:

- A. Conflict with or obstruct implementation of the applicable Air Quality Plan; or
- B. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

FINDING: LESS THAN SIGNIFICANT IMPACT:

The project has been routed to the San Joaquin Valley Air Pollution Control District (SJVAPCD) for review and comment. The SJVAPCD did not express concern with the project to indicate that the project would result in a conflict with an applicable Air Quality Plan or result in cumulatively considerable net increase of any criteria pollutant. Project construction is anticipated to result in minor temporary increases in criteria pollutants, however, the minor increases resulting from construction are not anticipated to result in a significant impact.

Per the Applicant's Operational Statement, the use of a backup generator is proposed in the event that the main electrical supply is interrupted. The use of a generator would result in an increase in criteria pollutants. This increase is anticipated to be temporary solution only when the main electrical supply is interrupted and would return to normal operation when the main electrical supply is restored. Therefore, although the use of the generator would result in the generation of criteria pollutants, this generation is not expected to be long-term or in an occasional use where a cumulatively considerable net increase of criteria pollutants would occur. The backup generator is only expected to be used during a time where the main electrical supply is interrupted, which is seen as not happening on an occasional basis.

- C. Expose sensitive receptors to substantial pollutant concentrations; or
- D. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

FINDING: LESS THAN SIGNIFICANT IMPACT:

As noted, the project anticipates the use of a backup generator in the event that the main electrical supply is interrupted. The backup generator is proposed to be located within the footprint of the communications facility. Emissions resulting from the use of the generator will result in noise and pollutant concentrations. The nearest sensitive receptor is located approximately 300 feet north of the location of the communication facility. The generator is not expected to only run when the main electrical supply is interrupted and be turned off when electrical supply is restored. In consideration of the limited use of the generator and proximity of the site to sensitive receptors, the project is not anticipated to result in substantial pollutant concentrations or adverse emissions and will have a less than significant impact.

#### IV. BIOLOGICAL RESOURCES

Would the project:



- A. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

FINDING: NO IMPACT:

Per the California Natural Diversity Database, there are no reported occurrences of a special-status species encompassing the project site or located in vicinity of the project site.

Portions of the project site are already developed with a maintenance yard that is utilized by the County of Fresno. Additional human disturbance related to the existing agricultural operations and existing paved right-of-way provide further signs that occupation of the site by a special-status species is highly unlikely. The California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) did not express concern with the project to indicate impacts to special-status species. Therefore, development of the project is not expected to negatively impact through habitat modification as the site is not occupied or has not significant habitat for special-status species.

- B. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service; or
- C. Have a substantial adverse effect on state or federally-protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

FINDING: NO IMPACT:

According to the National Wetlands Inventory mapper web application, the project site does not contain wetlands. The project will not be located or affect any wetlands. No riparian habitat or other sensitive natural community was identified on the project site.

- D. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

FINDING: NO IMPACT:

The project intends to construct a microwave tower and communications shelter on the subject parcel. The project does not cut off movement of the site for any wildlife resident. No migratory wildlife corridor or native wildlife nursery site was identified on the project site.

- E. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- F. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state Habitat Conservation Plan?

FINDING: NO IMPACT:

Reviewing Agencies and Departments did not identify a local policy or ordinance adopted for the protection of a biological resource that would be in conflict with the project proposal. No Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or state Habitat Conservation Plans were identified as being in conflict with the project proposal.

V. CULTURAL RESOURCES

Would the project:

- A. Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5; or
- B. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5; or
- C. Disturb any human remains, including those interred outside of formal cemeteries?

FINDING: LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED:

The project intends to develop a microwave tower and communications facility on land that has already be disturbed through the development of right-of-way and the existing County-maintenance yard. No reviewing Agencies and Departments express concern with the project to indicate that a cultural or historical resource is present on the site and would be affected by the project proposal. However, a mitigation measure will be implemented in the event that a cultural resource is identified during ground-disturbing activities related to project development.

\* **Mitigation Measure(s)**

1. *In the event that cultural resources are unearthed during ground-disturbing activities, all work shall be halted in the area of the find. An Archeologist shall be called to evaluate the findings and make any necessary mitigation recommendations. If human remains are unearthed during ground-disturbing activities, no further disturbance is to occur until the Fresno County Sheriff-Coroner has made the necessary findings as to origin and disposition. All normal evidence procedures should be followed by photos, reports, video, etc. If such remains are determined to be Native American, the Sheriff-Coroner must notify the Native American Commission within 24 hours.*

## VI. ENERGY

Would the project:

- A. Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
- B. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

FINDING: NO IMPACT:

The project will be built to current building code standards which would take into consideration applicable energy efficiency standards. The project construction and operation would not result in a potentially significant impact due to wasteful, inefficient, or unnecessary consumption of energy resources. No state or local plan for renewable energy or energy efficiency was identified during Agency and Department review.

## VII. GEOLOGY AND SOILS

Would the project:

- A. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - 1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

FINDING: NO IMPACT:

According to Figure 9-2 of the Fresno County General Plan Background Report and the California Department of Conservation Earthquake Hazard Zone Application (EQ Zapp), the project is not located on a known earthquake fault zone.

- 2. Strong seismic ground shaking?
- 3. Seismic-related ground failure, including liquefaction?

FINDING: NO IMPACT:

Per Figure 9-5 of the Fresno County General Plan Background Report (FCGPBR), the project site is located on land designated as having a 40%-60% chance of reaching peak horizontal ground acceleration assuming a 10% probability of a seismic hazard in 50 years. In considering the lower chance of reaching peak horizontal ground acceleration and mandatory compliance of the development with the California Building

Code, there is minimal adverse risks associated with the project related to strong seismic ground shaking or seismic-related ground failure.

4. Landslides?

FINDING: NO IMPACT:

Figure 9-6 of the FCGPBR indicates that the project site is not located in a moderate or high landslide hazard area.

B. Result in substantial soil erosion or loss of topsoil?

FINDING: NO IMPACT:

The project would result in the development of the site where impervious surface would be added, and a loss of topsoil would occur. The subject site is relatively flat with small changes in elevation occurring eastward towards the Kings River. The project would not result in a loss of topsoil or soil erosion where a significant risk of loss, injury, or death would occur.

C. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

FINDING: NO IMPACT:

No geologic unit or unstable soil was identified on the project site.

C. Be located on expansive soil as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

FINDING: NO IMPACT:

Per Figure 7-1 of the Fresno County General Plan Background Report (FCGPBR), the project site is not located on soils exhibiting moderately high to high expansion potential.

D. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water; or

E. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

FINDING: NO IMPACT:

The project does not propose the development or use of a septic system or alternative waste water disposal system. There were no unique paleontological resource or unique geologic feature identified on the project site.

## VIII. GREENHOUSE GAS EMISSIONS

Would the project:

- A. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- B. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

FINDING: LESS THAN SIGNIFICANT IMPACT:

Project construction is expected to generate greenhouse gas emissions. Long-term project operation is expected to rely on existing electrical infrastructure and not produce greenhouse gas emissions that may have a significant impact on the environment. In the event that a interruption of electricity to the site occurs, a backup generator is proposed to be installed so that the facility may continue to operate. Use of the generator would result in greenhouse gas emissions, however, the use of the generator is not anticipated to be for long-term use and would be discontinued when electrical services are restored. Therefore, in anticipation of construction emissions and potential use of the backup generator, these instances would not result a significant generation of greenhouse gas emission where a significant impact would occur. Reviewing Agencies and Departments did not express concern with the project to indicate that a conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases exists as a result of the project.

## VIII. HAZARDS AND HAZARDOUS MATERIALS

Would the project:

- A. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; or
- B. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

FINDING: NO IMPACT:

The project proposes to develop a microwave tower and communications shelter on the subject site. Operation of the tower does not anticipate the use of a hazardous material or production of a hazardous waste. The only likely material to be on hand would be fuel for the backup generator, however, the use of this fuel would not require large enough quantities where a significant hazard to the public would occur. Storage and

handling of fuel for a backup generator is subject to state and local regulations and would not result in a significant hazard to the public. As the backup generator and associated fuel is expected to run only during times when the main power supply is interrupted which is not likely to occur, the project will not cause a significant hazard.

- C. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

FINDING: NO IMPACT:

The project site is not located within one-quarter mile of an existing or proposed school. For reference, Biola-Pershing Elementary is located approximately 0.45-miles north of the site. As noted, the project is not anticipating use of the backup generator and associated fuel and would not emit hazardous emissions within one-quarter mile of a school.

- D. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

FINDING: NO IMPACT:

According to the NEPAAssist Database, the project site is not located on a listed hazardous materials site and the project would not result or create a significant hazard to the public or the environment.

- E. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

FINDING: NO IMPACT:

The project site is not located within two miles of a public airport or public use airport.

- F. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or

- G. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

FINDING: NO IMPACT:

Reviewing Agencies and Departments did not identify any conflict with the project and any adopted emergency response plan or emergency evacuation plan. Additionally, no concerns were expressed that the project would result in a significant risk of loss, injury, or death involving wildland fires.

## X. HYDROLOGY AND WATER QUALITY

Would the project:

- A. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality; or
- B. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

FINDING: NO IMPACT:

The project proposes to construct an unmanned communications facility consisting of a microwave tower and communications shelter. The use is anticipated to be unmanned and operated remotely. The project does not propose the use of water resources and would not violate water quality standards, waste discharge requirements or substantially degrade surface or ground water quality. With the project not utilizing water supplies, no impact to groundwater supplies or groundwater recharge would occur.

- C. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on or off site?
  - 1. Result in substantial erosion or siltation on- or off-site;
  - 2. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?
  - 3. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

FINDING: NO IMPACT:

The project anticipates the development of a new tower and equipment shelter. The most substantial addition of impervious surface would be the equipment shelter which is proposed to be a 40-foot by 15-foot structure. The proposed facility is located on relatively flat land and does not anticipate substantial erosion or siltation events occurring as a result of the project. Surface runoff is anticipated to be kept onsite per County of Fresno standards and is not expected to result in flooding on- or offsite. Reviewing Agencies and Departments did not express concern with the project to indicate that the project would result in runoff water contributions that would exceed the capacity of existing or planned stormwater drainage systems or provide additional sources of polluted runoff.

- 4. Impede or redirect flood flows?

FINDING: NO IMPACT:

According to FEMA FIRM Panel C2680H, the project site is not located within a flood hazard area and therefore would not impede or redirect flood flows.

- D. In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

FINDING: NO IMPACT:

As noted, the project site is not located within a flood hazard area and would not increase the risk of release of pollutants due to project inundation. Additionally, the project site is not located near a body of water where a tsunami or seiche risk is prevalent.

- E. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

FINDING: NO IMPACT:

The project does not anticipate the use of water resources and would not contribute to a degradation of water quality. Reviewing Agencies and Departments did not express concern with the project in regard a conflict with a water quality control plan or sustainable groundwater management plan.

## XI. LAND USE AND PLANNING

Would the project:

- A. Physically divide an established community?

FINDING: NO IMPACT:

The project anticipates placement of a temporary tower and construction of a permanent tower. The project will not physically divide an established community.

- B. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

FINDING: NO IMPACT:

There were no land use plans, policies, or regulations for the purpose of avoiding or mitigating an environmental effect identified in the Fresno County General Plan as being in conflict with the project proposal.



## XII. MINERAL RESOURCES

Would the project:

- A. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; or
- B. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local General Plan, Specific Plan or other land use plan?

FINDING: NO IMPACT:

Figure 7-7 and 7-8 of the Fresno County General Plan Background Report (FCGPBR) depicts mineral resource locations and principal mineral producing locations within the County of Fresno. The project site is not located on or near an identified mineral resource or mineral producing site.

## XIII. NOISE

Would the project result in:

- A. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; or
- B. Generation of excessive ground-borne vibration or ground-borne noise levels?

FINDING: LESS THAN SIGNIFICANT IMPACT:

The project involves the construction and operation of a microwave tower and associated communications equipment. Noise levels and vibrations associated with the project are not expected to result in significant impacts. The proposed backup generator would result in an increase noise levels and vibration, however, in consideration of the nature of use related to the backup generator, the noise level increase is not anticipated to result in significant impacts on sensitive receptors in vicinity of the project site. As noted, the backup generator is anticipated to be utilized when the main power source for the tower is interrupted. This situation is not expected to occur in regular intervals where an impact on sensitive receptors would be significant.

- C. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels; or

FINDING: NO IMPACT:

The project site is not located within two miles of a public airport or public use airport. The project site is not located in an airport land use plan.

#### XIV. POPULATION AND HOUSING

Would the project:

- A. Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?; or
- B. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

FINDING: NO IMPACT:

The project proposes to develop a site already utilized for a maintenance yard. The project will not induce unplanned population growth in the area. The project would not displace a substantial number of people or housing.

#### XV. PUBLIC SERVICES

Would the project:

- A. Result in substantial adverse physical impacts associated with the provision of new or physically-altered governmental facilities, or the need for new or physically-altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services?
  - 1. Fire protection;
  - 2. Police protection;
  - 3. Schools;
  - 4. Parks; or
  - 5. Other public facilities?

FINDING: NO IMPACT:

Reviewing agencies and departments did not provide concerns regarding the project where additional governmental facilities or alteration to existing governmental facilities are needed. The Fresno County Fire Protection District provided comments referencing Fire Code requirements when a building permit is issued for the project.

## XVI. RECREATION

Would the project:

- A. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
- B. Include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

FINDING: NO IMPACT:

The project intends to develop a microwave tower and communications shelter. The use is intended to be unmanned with maintenance work being the only time where employees would be present. Therefore, the project is not expected to increase the use of existing neighborhood and regional parks and does not include the construction or expansion of recreational facilities.

## XVI. TRANSPORTATION

Would the project:

- A. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities; or
- B. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

FINDING: NO IMPACT:

Per the Applicant's Operational Statement, there are two employees that access the existing maintenance yard. The project does anticipate the occasional maintenance trip for the facility; however, the volume of maintenance trips is not expected to result in impacts related to vehicle miles traveled or any County-adopted program, plan, ordinance, or policy addressing the circulation system. Reviewing Agencies and Departments did not express concern with the project in terms of a transportation impact resulting from the project.

- C. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?; or
- D. Result in inadequate emergency access?

FINDING: NO IMPACT:

Reviewing Agencies and Departments did not express concern with the project design or access to indicate that a hazard due to design features or inadequate emergency access will result from the project.

## XVIII. TRIBAL CULTURAL RESOURCES

Would the project:

- A. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:
1. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
  2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

FINDING: LESS THAN SIGNIFICANT IMPACT WITH MITIGATION INCORPORATED:

Participating California Native American Tribes were notified of the project proposal and given the opportunity to enter into consultation with the County of Fresno in addressing potential tribal cultural resources occurring on the project site. No notified California Native American Tribe expressed concern with the project and did not enter into consultation. The subject parcel has been previously disturbed. No reviewing Agency or Department provided comments to indicate that a listed or eligible historical resource is located on the project site. A Mitigation Measure will be implemented to establish procedure for the addressing of a tribal cultural resource, should it be identified during ground disturbing activities related to the project.

\* **Mitigation Measure(s)**

1. *See Section V. Cultural Resources Mitigation Measure #1*

## XIX. UTILITIES AND SERVICE SYSTEMS

Would the project:

- A. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

FINDING: NO IMPACT:

The project proposes to construct a new telecommunication facility consisting of a microwave tower and communications equipment shelter. Reviewing Agencies and Departments did not identify any significant environmental effects as a result of the project.

- B. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

FINDING: NO IMPACT:

The project intends to develop an unmanned telecommunication facility. The proposed use would not utilize water resources for the operation and would not have an impact on water supplies.

- C. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

FINDING: NO IMPACT:

The project does not propose the development of a wastewater treatment system and would not have employees onsite where wastewater generation would occur. Therefore, the project does not necessitate a wastewater treatment provider.

- D. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; or
- E. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

FINDING: NO IMPACT:

Reviewing Agencies and Departments did not provide comments to indicate that the project would result in solid waste generation in excess of State or local standards, or result in a conflict with federal, state, and local management and reduction statutes and regulations related to solid waste.

## XX. WILDFIRE

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

- A. Substantially impair an adopted emergency response plan or emergency evacuation plan, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects; or
- B. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire; or
- C. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; or
- D. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

FINDING: NO IMPACT:

As depicted in the 2007 Fresno County Fire Hazard Severity Zones in LRA Map, produced by the California Department of Forestry and Fire Protection, the project site is not located within a very high fire hazard severity zone or within a State Responsibility Area (SRA).

## XXI. MANDATORY FINDINGS OF SIGNIFICANCE

Would the project:

- A. Have the potential to substantially 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, substantially 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?

FINDING: NO IMPACT:

The subject site has been determined to be previously disturbed and occupied with human activity. The project does not have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a wildlife species and would not cause a wildlife population to drop below self-sustaining levels.

- B. 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 probable future projects)?

FINDING: LESS THAN SIGNIFICANT IMPACT:

It has been determined that the project would result in impacts to Aesthetics, Cultural Resources, and Tribal Cultural Resources. These impacts were determined to be less than significant with the implementation of mitigation measures. With the implementation of mitigation measures, the project is not anticipated to result in a cumulative considerable impact and would result in a less than significant impact regarding the identified section.

- C. Have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?

FINDING: NO IMPACT:

The project has been determined to not result in substantial adverse effect on human beings.

## **CONCLUSION/SUMMARY**

Based upon the Initial Study prepared for 8229 Unclassified Conditional Use Permit Application No. 3741, staff has concluded that the project will not/will have a significant effect on the environment. It has been determined that there would be no impacts to Hydrology, Land Use Planning, Mineral Resources, Population and Housing, Public Services, Recreation, Transportation, and Utilities and Service Systems.

Potential impacts related to Aesthetics, Agricultural and Forestry, Biological Resources, Energy, Geology and Soils, Green House Gas Emissions, Hazards and Hazardous Materials, Noise, Wildfire, and Mandatory Findings of Significance have been determined to be less than significant.

Potential impacts relating to Cultural Resources have determined to be less than significant with mitigation.

A Mitigated Negative Declaration/Negative Declaration is recommended and is subject to approval by the decision-making body. The Initial Study is available for review at 2220 Tulare Street, Suite A, street level, located on the southwest corner of Tulare and "M" Street, Fresno, California.

ER

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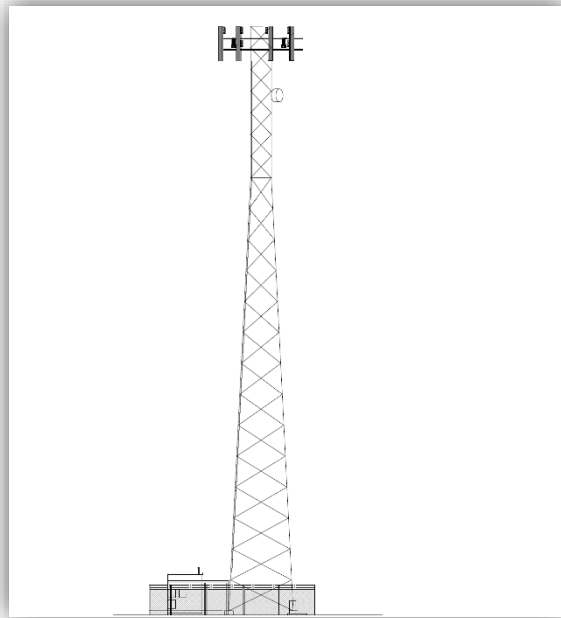
## CO-LOCATION INTERFERENCE ANALYSIS REPORT

### AT&T

CVL02502 – Campos Family Farms  
4500 North Biola Avenue  
Fresno, CA 93723

Delivered: October 13, 2022

EBI Project Number: 6222006166



Prepared by:  
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sealed 13oct2022



## Table of Contents

<b>1.0</b>	<b>Executive Summary</b> .....	<b>1</b>
<b>2.0</b>	<b>Site Description</b> .....	<b>2</b>
2.1	Communications Systems .....	3
2.2	Antenna Systems.....	3
<b>3.0</b>	<b>Transmitter Frequencies</b> .....	<b>4</b>
<b>4.0</b>	<b>Receiver Frequencies</b> .....	<b>5</b>
<b>5.0</b>	<b>Transmitter Noise Analysis</b> .....	<b>6</b>
<b>6.0</b>	<b>Receiver Desensitization Analysis</b> .....	<b>8</b>
<b>7.0</b>	<b>Intermodulation Interference Analysis</b> .....	<b>10</b>
7.1	Transmitter Generated Intermodulation Analysis.....	12
7.2	Receiver Generated Intermodulation Analysis.....	13
<b>8.0</b>	<b>Transmitter Harmonic Output Interference Analysis</b> .....	<b>14</b>
<b>9.0</b>	<b>Transmitter Spurious Output Interference Analysis</b> .....	<b>15</b>
<b>10.0</b>	<b>Summary &amp; Limitations</b> .....	<b>16</b>

## 1.0 Executive Summary

This report presents a radio frequency interference (RFI) analysis which was performed on the **AT&T CVL02502 - Campos Family Farm (Fresno CA)** site. The RFI analysis consists of transmitter noise, receiver desensitization, intermodulation, harmonic and transmitter spurious output interference. The report consists of Sections that provide details of the communications site, antenna systems, operational frequencies and each interference analysis mode.

A summary of the interference analysis results is depicted in the following Table.

<b>Interference Analysis Mode</b>	<b>Type Mix</b>	<b>Status</b>	<b>Summary</b>	<b>Worst-Case Margin (dB)</b>
Transmitter Noise	N/A	Passed	No Interference was predicted	<b>17.3</b>
Receiver Desensitization	N/A	Passed	No Interference was predicted	<b>48.7</b>
Transmitter Intermodulation	1 Tx	Passed	No Interference was predicted	N/A
Transmitter Intermodulation	2 Tx	Passed	No Interference was predicted	N/A
Transmitter Intermodulation	3 Tx	Passed	No Interference was predicted	N/A
Transmitter Intermodulation	4 Tx	Passed	No Interference was predicted	N/A
Transmitter Intermodulation	5 Tx	Passed	No Interference was predicted	N/A
Receiver Intermodulation	1 Tx	Passed	No Interference was predicted	N/A
Receiver Intermodulation	2 Tx	Passed	No Interference was predicted	N/A
Receiver Intermodulation	3 Tx	Passed	No Interference was predicted	N/A
Receiver Intermodulation	4 Tx	Passed	No Interference was predicted	N/A
Receiver Intermodulation	5 Tx	Passed	No Interference was predicted	N/A
Transmitter Harmonics	N/A	Passed	No Interference was predicted	N/A
Transmitter Spurious Output	N/A	Passed	No Interference was predicted	N/A

The analysis was performed with the setup options depicted in the Table below.

<b>Analysis</b>	<b>Description</b>
Receiver Performance	Receiver Sensitivity Threshold
Receiver Bandwidth	Receiver Dependent
Antenna Patterns Considered	Yes
Measured Antenna Isolation Data	No
Filters/Multicouplers Considered	Yes
Number of Simultaneous Transmitters Mixed	5
Highest Intermodulation Order Tested	7
Condense Intermodulation Hit Quantity	Yes - 1000/Order
TX IM Bandwidth Multiplication	No
Tx/Rx Systems Excluded	None
Site File Name	AT&T CVL02502 - Campos Family Farm (Fresno CA).dta
Report File Name	AT&T CVL02502 - Campos Family Farm (Fresno CA).docx
WirelessSiteRFI Software Version	10.1.18

## 2.0 Site Description

The communication systems located at this site are described in this section as well as the configuration of the antenna systems.

The site parameters are:

**Site Name:** AT&T CVL02502 - Campos Family Farm (Fresno CA)

**Site Description:** Monopole Facility

**Address:** 4500 North Biola Avenue, Fresno, CA 93723

**Latitude:** 36.799711 N

**Longitude:** -120.017372 W

**Elevation:** 251 feet AMSL

**Notes:** This analysis was performed between the proposed **AT&T** radio systems to be installed on the subject monopole facility located at **4500 North Biola Avenue** in Fresno, CA and radio systems located at the **North Central Biola Fire Station** located at **4555 North Biola Avenue**. Data was provided for two microwave links between the **Biola Fire Station** and end points at the **County Plaza** and **Kerman Fire Station** sites. There was also one high band VHF radio systems licensed at the **North Central Biola Fire Station** per a query of the FCC's active license database. These radio systems are included in this analysis. There was no additional data provided for any additional radio systems on the nearby **Biola Fire Station** site.

The proposed tower for the **AT&T** radio systems is located approximately **600 feet** from the existing **Biola Fire Station** tower at a bearing of 186 degrees from true north. The proposed tower will be located approximately **310 feet** outside of the microwave path between **Biola Fire Station** and the **Kerman Fire Station** which has a path bearing of **213.18 degrees** from the Biola Fire Station.

## 2.1 Communications Systems

System	Provider	Technology	Frequency Band
1	AT&T	LTE	700 MHz Band
2	AT&T	5G	850 MHz - Cellular Band
3	AT&T	LTE / Band 14	700 MHz Band (Band 14)
4	AT&T	LTE	1900 MHz PCS
5	AT&T	LTE	1900 MHz PCS
6	AT&T	LTE	2100 MHz AWS
7	AT&T MW	Microwave	18 GHz Microwave
8	Biola FS to County Plaza MW	Microwave	5 GHz Microwave
9	Biola FS to Kerman FS MW	Microwave	11 GHz Microwave
10	Biola FS - VHF (KMA206)	FM Land Mobile	150 - 174 MHz - Land Mobile

## 2.2 Antenna Systems

Ant #	Mfg	Antenna Model	Gain (dBd)	Hgt (ft)	Orient (deg)	Sector	Ant Use	Transmission Line Type	Line Loss (/100')	Line Length (ft)
1	Quintel	QD868-3D	12.32	131	90	A	Dplx	1/2 in. Foam	0.5	10
2	Quintel	QD868-3D	12.32	131	210	B	Dplx	1/2 in. Foam	0.5	10
3	Quintel	QD868-3D	12.32	131	330	C	Dplx	1/2 in. Foam	0.5	10
4	Quintel	QD8612-2	13.59	131	90	A	Dplx	1/2 in. Foam	0.5	10
5	Quintel	QD8612-2	13.59	131	210	B	Dplx	1/2 in. Foam	0.5	10
6	Quintel	QD8612-2	13.59	131	330	C	Dplx	1/2 in. Foam	0.5	10
7	RFS	SCX3-190-BB	36.5	119	319.23	C	Dplx	1/2 in. Foam	0.5	10
8	RFS	UXA 6 – 59C RF	36.55	89.7	109.59	A	Dplx	Elliptical WG	1.5	120
9	RFS	SC3-W100B	36.15	129	213.17	A	Dplx	Elliptical WG	0.5	159
10	Celwave	PD200	5.6	100	0	A	Tx/Rx	1-5/8 in. Foam	0.28	130

### 3.0 Transmitter Frequencies

Freq #	Ant #	Provider	Model	Technology	Channel Label	ID	Frequency (MHz)	Power (Watts)	BW (KHz)
1	1	AT&T	Ericsson	LTE	1	A	740.000000	80	10000
2	2	AT&T	Ericsson	LTE	1	B	740.000000	80	10000
3	3	AT&T	Ericsson	LTE	1	C	740.000000	80	10000
4	1	AT&T	Ericsson	LTE / 5G	2	D	875.000000	160	10000
5	2	AT&T	Ericsson	LTE / 5G	2	E	875.000000	160	10000
6	3	AT&T	Ericsson	LTE / 5G	2	F	875.000000	160	10000
7	4	AT&T	Ericsson	LTE	1	AE	763.000000	80	10000
8	5	AT&T	Ericsson	LTE	1	AF	763.000000	80	10000
9	6	AT&T	Ericsson	LTE	1	AG	763.000000	80	10000
10	4	AT&T	Ericsson	LTE	1	AH	1937.500000	120	10000
11	5	AT&T	Ericsson	LTE	1	AI	1937.500000	120	10000
12	6	AT&T	Ericsson	LTE	1	AJ	1937.500000	120	10000
13	4	AT&T	Ericsson	LTE	1	AK	1937.500000	120	10000
14	5	AT&T	Ericsson	LTE	1	AL	1937.500000	120	10000
15	6	AT&T	Ericsson	LTE	1	AM	1937.500000	120	10000
16	4	AT&T	Ericsson	LTE	1	AN	2132.500000	120	5000
17	5	AT&T	Ericsson	LTE	1	AO	2132.500000	120	5000
18	6	AT&T	Ericsson	LTE	1	AP	2132.500000	120	5000
19	7	AT&T MW	Other	Microwave	ATT_MW1	AT	18250.000000	.06	5000
20	8	Biola FS to County Plaza MW	Other	Microwave	MW1	AQ	6152.750000	.63	5000
21	9	Biola FS to Kerman FS MW	Other	Microwave	MW2	AR	11525.000000	.63	5000
22	10	Biola FS - VHF (KMA206)	Ericsson	FM Land Mobile	3	AS	154.897500	25	11.2

### 4.0 Receiver Frequencies

Freq #	Ant #	Provider	Model	Technology	Channel Label	ID	Frequency (MHz)	Sen (dBm)	BW (KHz)
1	1	AT&T	Ericsson	LTE	1	A	710.000000	-110	10000
2	2	AT&T	Ericsson	LTE	1	B	710.000000	-110	10000
3	3	AT&T	Ericsson	LTE	1	C	710.000000	-110	10000
4	1	AT&T	Ericsson	LTE / 5G	2	D	830.000000	-110	10000
5	2	AT&T	Ericsson	LTE / 5G	2	E	830.000000	-110	10000
6	3	AT&T	Ericsson	LTE / 5G	2	F	830.000000	-110	10000
7	4	AT&T	Ericsson	LTE	1	AE	793.000000	-110	10000
8	5	AT&T	Ericsson	LTE	1	AF	793.000000	-110	10000
9	6	AT&T	Ericsson	LTE	1	AG	793.000000	-110	10000
10	4	AT&T	Ericsson	LTE	1	AH	1857.500000	-110	10000
11	5	AT&T	Ericsson	LTE	1	AI	1857.500000	-110	10000
12	6	AT&T	Ericsson	LTE	1	AJ	1857.500000	-110	10000
13	4	AT&T	Ericsson	LTE	1	AK	1857.500000	-110	10000
14	5	AT&T	Ericsson	LTE	1	AL	1857.500000	-110	10000
15	6	AT&T	Ericsson	LTE	1	AM	1857.500000	-110	10000
16	4	AT&T	Ericsson	LTE	1	AN	1732.500000	-110	5000
17	5	AT&T	Ericsson	LTE	1	AO	1732.500000	-110	5000
18	6	AT&T	Ericsson	LTE	1	AP	1732.500000	-110	5000
19	7	AT&T MW	Other	Microwave	ATT_MW1	AT	18750.000000	-84	5000
20	8	Biola FS to County Plaza MW	Other	Microwave	MW1	AQ	6404.790000	-72	5000
21	9	Biola FS to Kerman FS MW	Other	Microwave	MW2	AR	11035.000000	-83	5000
22	10	Biola FS - VHF (KMA206)	Ericsson	FM Land Mobile	3	AS	154.897500	-116	15

### 5.0 Transmitter Noise Analysis

Transmitter noise interference occurs because a transmitter radiates energy on its operating frequency as well as frequencies above and below the assigned frequency. The energy that is radiated above and below the assigned frequency is known as sideband noise energy and extends for several megahertz on either side of the operating frequency. This undesired noise energy can fall within the passband of a nearby receiver even if the receiver's operating frequency is several megahertz away. The transmitter noise appears as "on-channel" noise interference and cannot be filtered out at the receiver. It is on the receiver's operating frequency and competes with the desired signal, which in effect, degrades the operational performance.

The analysis predicts each transmitter's noise signal level present at the input of each receiver. It takes into account the transmitter's noise characteristics, frequency separation, power output, transmission line losses, filters, duplexers, combiners, isolators, multi-couplers and other RF devices that are present in both systems. Additionally, the analysis considers the antenna separation space loss, horizontal and vertical gain components of the antennas as well as how they are mounted on the structure. The gain components are derived from antenna pattern data published by each manufacturer.

The analysis determines how much isolation is required, if any, to prevent receiver performance degradation caused by transmitter noise interference. The Table below depicts the results of this analysis. For each receiver, the transmitter that has the worst-case impact is displayed. The Signal Margin represents the margin in dB, before the receiver's performance is degraded. A negative number indicates that the performance is degraded and the value indicates how much additional isolation is required to prevent receiver performance degradation.

Receiver Provider	Receive Channel	Receive Frequency (MHz)	Transmitter Provider	Transmit Channel	Transmit Frequency (MHz)	Attn Required (dB)	Attn Provided (dB)	Signal Margin (dB)
AT&T	1	710.000000	AT&T	1	740.000000	45	80.3	35.3
AT&T	1	710.000000	AT&T	1	740.000000	45	79.5	34.5
AT&T	1	710.000000	AT&T	1	740.000000	45	79.5	34.5
AT&T	2	830.000000	AT&T	2	875.000000	51.6	79.2	27.6
AT&T	2	830.000000	AT&T	2	875.000000	51.6	79.2	27.6
AT&T	2	830.000000	AT&T	2	875.000000	51.6	79.2	27.6
AT&T	1	793.000000	AT&T	1	763.000000	55.3	72.6	17.3
AT&T	1	793.000000	AT&T	1	763.000000	55.3	72.6	17.3
AT&T	1	793.000000	AT&T	1	763.000000	55.3	72.6	17.3
AT&T	1	1857.500000	AT&T	1	1937.500000	53.4	91.6	38.2
AT&T	1	1857.500000	AT&T	1	1937.500000	53.4	91.6	38.2
AT&T	1	1857.500000	AT&T	1	1937.500000	53.4	91.6	38.2
AT&T	1	1857.500000	AT&T	1	1937.500000	53.4	91.6	38.2
AT&T	1	1857.500000	AT&T	1	1937.500000	53.4	91.6	38.2
AT&T	1	1857.500000	AT&T	1	1937.500000	53.4	91.6	38.2
AT&T	1	1732.500000	AT&T	1	1937.500000	53.4	131.7	78.3
AT&T	1	1732.500000	AT&T	1	1937.500000	53.4	131.7	78.3
AT&T	1	1732.500000	AT&T	1	1937.500000	53.4	131.7	78.3
AT&T MW	ATT_MW1	18750.000000	AT&T MW	ATT_MW 1	18250.000000	5.6	100.8	95.2



**AT&T CVL02502 - Campos Family Farm (Fresno CA)**

Biola FS to County Plaza MW	MW1	6404.790000	Biola FS to County Plaza MW	MW1	6152.750000	7.4	100.8	93.4
Biola FS to Kerman FS MW	MW2	11035.000000	Biola FS to Kerman FS MW	MW2	11525.000000	3.6	100.8	97.2

**Analysis Results:** No transmitter noise interference problems were predicted that were determined to be system performance limiting to any operators analyzed in this report. All calculations yielded results that determined, based upon the listed configurations, that there was adequate isolation between all analyzed transmitters and receivers either through physical separation, antenna broadcast pattern gain roll off or filtering and isolation devices considered to be part of the standard transmitter / receiver configuration deployed by the equipment manufacturers listed as part of this analysis.

## 6.0 Receiver Desensitization Analysis

Receiver desensitization interference occurs when an undesired signal from a nearby "off-frequency" transmitter is sufficiently close to a receiver's operating frequency. The signal may get through the RF selectivity of the receiver. If this undesired signal is of sufficient amplitude, the receiver's critical voltage and current levels are altered and the performance of the receiver is degraded at its operating frequency. The gain of the receiver is reduced, thereby reducing the performance of the receiver.

A transmitter can be operating several megahertz away from the receiver frequency and/or its antenna can be located several thousand feet from the receiver's antenna and still cause interference.

The analysis predicts each transmitter's signal level present at the input of each receiver. It takes into account the transmitter's power output, frequency separation, transmission line losses, filters, duplexers, combiners, isolators, multi-couplers and other RF devices that are present in both systems. Additionally, the analysis considers the antenna separation space loss, horizontal and vertical gain components of the antennas as well as how they are mounted on the structure. The gain components are derived from antenna pattern data published by each manufacturer.

The analysis determines how much isolation is required, if any, to prevent receiver performance degradation caused by receiver desensitization interference. The Table below depicts the results of this analysis. For each receiver, the transmitter that has the worst-case impact is displayed. The Signal Margin represents the margin in dB, before the receiver's performance is degraded. A negative number indicates that the performance is degraded and the value indicates how much additional isolation is required to prevent receiver performance degradation.

Receiver Provider	Receive Channel	Receive Frequency (MHz)	Transmitter Provider	Transmit Channel	Transmit Frequency (MHz)	Attn Required (dB)	Attn Provided (dB)	Signal Margin (dB)
AT&T	1	710.000000	AT&T	1	740.000000	13	155.6	142.6
AT&T	1	710.000000	AT&T	1	740.000000	13	72.6	59.6
AT&T	1	710.000000	AT&T	1	740.000000	13	72.6	59.6
AT&T	2	830.000000	AT&T	2	875.000000	23.6	72.3	48.7
AT&T	2	830.000000	AT&T	2	875.000000	23.6	72.3	48.7
AT&T	2	830.000000	AT&T	2	875.000000	23.6	72.3	48.7
AT&T	1	793.000000	AT&T	1	763.000000	19.3	79.5	60.2
AT&T	1	793.000000	AT&T	1	763.000000	19.3	79.5	60.2
AT&T	1	793.000000	AT&T	1	763.000000	19.3	79.5	60.2
AT&T	1	1857.500000	AT&T	1	1937.500000	17.8	89.2	71.4
AT&T	1	1857.500000	AT&T	1	1937.500000	17.8	89.2	71.4
AT&T	1	1857.500000	AT&T	1	1937.500000	17.8	89.2	71.4
AT&T	1	1857.500000	AT&T	1	1937.500000	17.8	89.2	71.4
AT&T	1	1857.500000	AT&T	1	1937.500000	17.8	89.2	71.4
AT&T	1	1732.500000	AT&T	1	1937.500000	17.8	129.3	111.5
AT&T	1	1732.500000	AT&T	1	1937.500000	17.8	129.3	111.5
AT&T	1	1732.500000	AT&T	1	1937.500000	17.8	129.3	111.5
AT&T MW	ATT_MW1	18750.000000	AT&T MW	ATT_MW1	18250.000000	41.2	100.8	59.6

## AT&T CVL02502 - Campos Family Farm (Fresno CA)

Biola FS to County Plaza MW	MW1	6404.790000	Biola FS to County Plaza MW	MW1	6152.750000	43	100.8	57.8
Biola FS to Kerman FS MW	MW2	11035.000000	Biola FS to Kerman FS MW	MW2	11525.000000	32	100.8	68.8

**Analysis Results:** No receiver desensitization interference problems were predicted that were determined to be system performance limiting to any operators analyzed in this report. All calculations yielded results that determined, based upon the listed configurations, that there was adequate isolation between all analyzed transmitters and receivers either through physical separation, antenna broadcast pattern gain roll off or filtering and isolation devices considered to be part of the standard transmitter / receiver configuration deployed by the equipment manufacturers listed as part of this analysis.

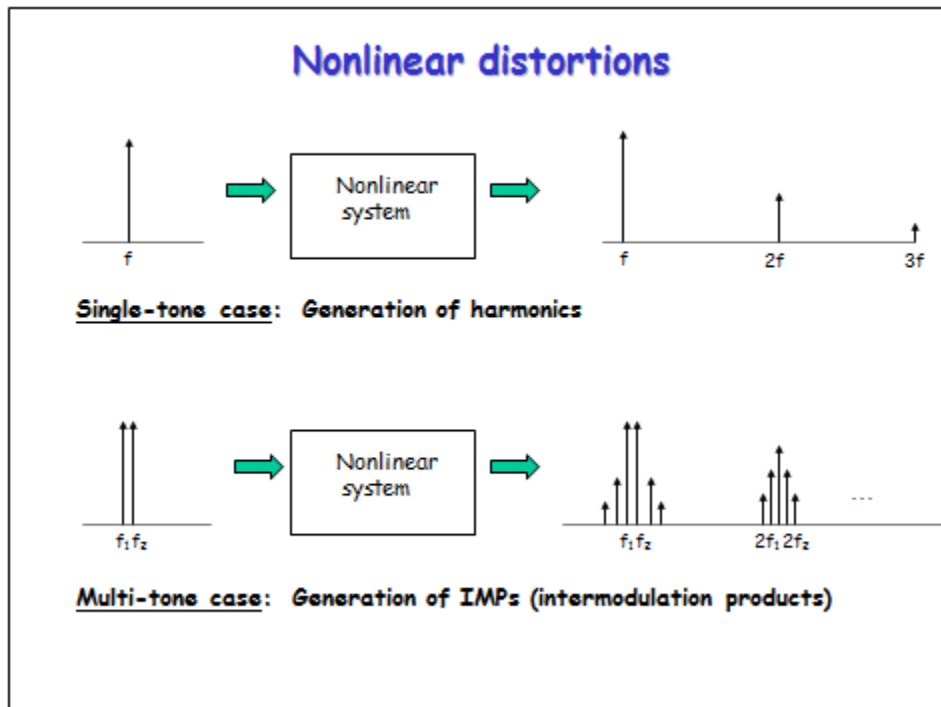
## 7.0 Intermodulation Interference Analysis

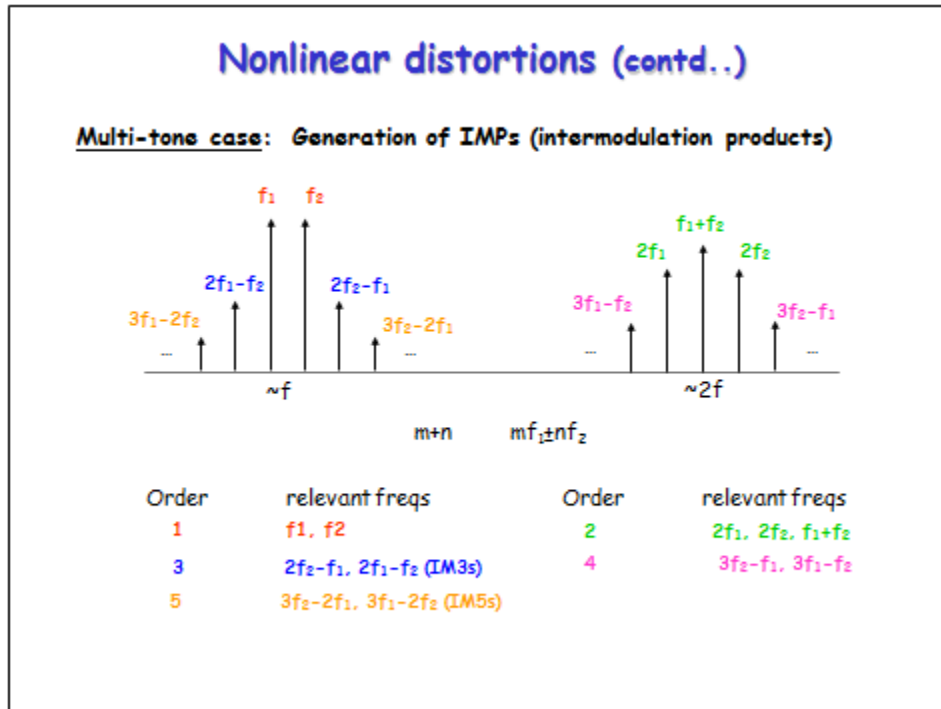
There are three basic categories of Intermodulation (IM) interference. They are receiver produced, transmitter produced, and "other" radiated IM. Transmitter produced IM is the result of one or more transmitters impressing a signal in the non-linear final output stage circuitry of another transmitter, usually via antenna coupling. The IM product frequency is then re-radiated from the transmitter's antenna. Receiver produced IM is the result of two or more transmitter signals mixing in a receiver RF amplifier or mixer stage when operating in a non-linear range.

"Other" radiated IM is the result of transmitter signals mixing in other non-linear junctions. These junctions are usually metallic, such as rusty bolts on a tower, dissimilar metallic junctions, or other non-linear metallic junctions in the area. IM products can also be caused by non-linearity in the transmission system such as antenna, transmission line, or connectors.

Communication sites with co-located transmitters, usually have RF coupling between each transmitter and antenna system. This results in the signals of each transmitter entering the nonlinear final output (PA) circuitry of the other transmitters. When intermodulation (IM) products are created in the output circuitry and they fall within the passband of the final amplifier, the IM products are re-radiated and may interfere with receivers at the same site or at other nearby sites. Additionally, these strong transmitter signals may directly enter a receiver and drive the RF amplifier into a nonlinear operation, or if not filtered effectively by the receiver input circuitry, these signals could mix in the nonlinear circuitry of the receiver front-end or mixer, creating IM products directly in the receiver.

The frequencies of IM mixing are known as nonlinear distortions. The images below depict how these IM products are derived when passing through a nonlinear junction/system.





Below are the mathematical formulae for common IM products. IM products are classified by their "order" (2nd, 3rd, 4th, ...Nth). Some of the more common forms of mixing are illustrated in the following examples. Note that the "A", "B", and "C" designations are the mixing frequencies. The numerical number assigned to the letter designation indicates the harmonic relationship of the frequency. Thus, 2A means the 2nd harmonic of frequency A.

<u>Order</u>	<u>Mixing Formulae</u>
First	$A=B, A=C, \text{ etc.}$
Second	$A \pm B, A \pm C, \text{ etc.}$
Third	$A + B - C, A \pm 2B, 2A \pm B, \text{ etc.}$
Fourth	$A \pm 3B, 2A \pm 2B, 3A \pm B, \text{ etc.}$
Fifth	$A \pm 4B, 2A \pm 3B, 3A \pm 2B, 4A \pm B, \text{ etc.}$
Sixth	$A \pm 3B \pm 2C, 2A \pm 2B \pm 2C, 3A \pm 2B \pm C, \text{ etc.}$
Seventh	$A \pm 6B, 2A \pm 5B, 3A \pm 4B, 4A \pm 3B, 5A \pm 2B, \text{ etc.}$
Eighth	$A \pm 7B, 2A \pm 6B, 3A \pm 5B, 4A \pm 4B, 5A \pm 3B, 6A \pm 2B, \text{ etc.}$
Ninth	$A \pm 8B, 2A \pm 7B, 3A \pm 6B, 4A \pm 5B, 5A \pm 4B, 6A \pm 3B, \text{ etc.}$

The above IM product formulae are just a few of the many possible combinations. When there are four frequencies involved at one time, the mixing possibilities increase tremendously. Not all of the mixing possibilities are significant in creating interference signals. Some fall "out-of-band" of the receiver and the higher order IM products are usually weaker in signal strength.

**7.1 Transmitter Generated Intermodulation Analysis**

Intermodulation in transmitters occurs when a signal from another transmitter is impressed on the nonlinear final output stage circuitry, usually via antenna coupling. The power level of the IM product is determined by the power level of the incoming extraneous signal from another transmitter and by a conversion loss factor. The conversion loss factor takes into account the mixing efficiency of the transmitter's final output stage. Conversion loss differs with transmitter design, adjustment, frequency separation of the source signals, and with the order of the IM product.

The analysis calculates all possible IM product frequencies that could potentially interfere with receivers at the communications site based on each receiver's individual bandwidth. It then predicts each IM signal level present at the input of each affected receiver. For each IM frequency, the analysis considers all possible sources of IM generation in the transmitters. For example, if there are four transmitters involve, the analysis will calculate the IM signal level that would be generated in each transmitter. For this example, that would be four possible mixing conditions.

The analysis takes into account the transmitter's power output, modulation bandwidth, conversion losses, transmission line losses, filters, duplexers, combiners, isolators, multi-couplers and other RF devices that are present in each system. Additionally, the analysis considers the antenna separation space loss, horizontal and vertical gain components of the antennas as well as how they are mounted on the structure. The gain components are derived from antenna pattern data published by each manufacturer.

The analysis determines how much isolation is required to prevent receiver performance degradation for each IM interference signal that occurs. Receivers experiencing transmitter generated intermodulation interference are depicted in the following Table.

Tx 1 Source Mix Tx		Tx 2 Source		TX 3 Source		Tx 4 Source		Tx 5 Source		Intermod Hit		Affected Receiver		Attn Need (dB)
ID	Freq (MHz)	ID	Freq (MHz)	ID	Freq (MHz)	ID	Freq (MHz)	ID	Freq (MHz)	Freq (MHz)	Ord	ID	Freq (MHz)	
None														

**Analysis Results:** The above table lists any transmitter generated IM product that is determined to have potential to noticeably degrade the system performance to any receive systems analyzed as part of this study. Based upon the listed configurations for transmitters, receivers, antenna models, antenna patterns and equipment filtering and isolation specifications it has been determined that no transmitter generated intermodulation interference problems were predicted that have the potential to be system performance limiting to any receivers analyzed in this report. While there are thousands of potential IM product combinations based upon the large number of transmitters located at this facility, all potential products produced yielded values that were below the limit where any noticeable degradation to system performance would be experienced.

**7.2 Receiver Generated Intermodulation Analysis**

Within a receiver, when two or more strong off-channel signals enter and mix in the receiver and one of the IM product frequencies created coincides with the receiver operating frequency, potential interference results. This internal IM mixing process takes place in the receiver's RF amplifier when it operates in a nonlinear range and/or in the first mixer, which, of course, has been designed to operate as a nonlinear device.

Receivers have a similar conversion loss type factor and receiver performance is commonly described in terms of conversion loss with respect to the 2A - B type products. Here, conversion loss is the ratio of a specified level of A and B to the level of the resulting IM product, when the product is viewed as an equivalent on-channel signal. Receiver conversion loss varies with input levels, AGC action, and product order.

The analysis calculates all possible IM product frequencies that could potentially interfere with receivers at the communications site based on each receiver's individual bandwidth. It then predicts each IM signal level present at the input of each affected receiver. For each IM frequency, the analysis considers that the IM signal is generated directly in the receiver.

The analysis takes into account the transmitter's power output, modulation bandwidth, conversion losses, transmission line losses, filters, duplexers, combiners, isolators, multi-couplers and other RF devices that are present in each system. Additionally, the analysis considers the antenna separation space loss, horizontal and vertical gain components of the antennas as well as how they are mounted on the structure. The gain components are derived from antenna pattern data published by each manufacturer.

The analysis determines how much isolation is required to prevent receiver performance degradation for each IM interference signal that occurs. Receivers experiencing receiver generated intermodulation interference are depicted in the following Table.

Tx 1 Source		Tx 2 Source		TX 3 Source		Tx 4 Source		Tx 5 Source		Intermod Hit		Affected Receiver		Attn Need (dB)
ID	Freq (MHz)	ID	Freq (MHz)	ID	Freq (MHz)	ID	Freq (MHz)	ID	Freq (MHz)	Freq (MHz)	Ord	ID	Freq (MHz)	
None														

**Analysis Results:** The above table lists any receiver generated IM product that is determined to have potential to noticeably degrade the system performance to any receive systems analyzed as part of this study. Based upon the listed configurations for transmitters, receivers, antenna models, antenna patterns and equipment filtering and isolation specifications it has been determined that no receiver generated intermodulation interference problems were predicted that have the potential to be system performance limiting to any operators analyzed in this report.

### 8.0 Transmitter Harmonic Output Interference Analysis

Transmitter harmonic interference is due to non-linear characteristics in a transmitter. The harmonics are typically created due to frequency multipliers and the non-linear design of the final output stage of the transmitter. If the harmonic signal falls within the passband of a nearby receiver and the signal level is of sufficient amplitude, it can degrade the performance of the receiver.

The analysis takes into account the transmitter’s harmonic characteristics, output level, transmission line losses, filters, duplexers, combiners, isolators, multi-couplers and other RF devices that are present in each system. Additionally, the analysis considers the antenna separation space loss, horizontal and vertical gain components of the antennas as well as how they are mounted on the structure. The gain components are derived from antenna pattern data published by each manufacturer.

The analysis determines how much isolation is required to prevent receiver performance degradation for any harmonics that fall within a receiver’s passband. Receivers experiencing transmitter harmonic interference are depicted in the following Table.

Transmitter		Harmonic		Affected Receiver		Attn Needed (dB)
ID	Frequency (MHz)	Frequency (MHz)	Order	ID	Frequency (MHz)	
None						

**Analysis Results:** No transmitter generated harmonic interference problems were predicted that have the potential to be system performance limiting to any operators analyzed in this report. The calculations to determine harmful out of band harmonics assumed that proper bandpass filtering was utilized to severely reduce these harmonics to levels below those that could be system performance limiting to any receivers analyzed as part of this analysis.



## 9.0 Transmitter Spurious Output Interference Analysis

Transmitter spurious output interference can be attributed to many different factors in a transmitter. The generation of spurious frequencies could be due to non-linear characteristics in a transmitter or possibly the physical placement of components and unwanted coupling. If a spurious signal falls within the passband of a nearby receiver and the signal level is of sufficient amplitude, it can degrade the performance of the receiver.

The analysis takes into account a transmitter’s spurious output specification, output levels, transmission line losses, filters, duplexers, combiners, isolators, multi-couplers and other RF devices that are present in each system. Additionally, the analysis considers the antenna separation space loss, horizontal and vertical gain components of the antennas as well as how they are mounted on the structure. The gain components are derived from antenna pattern data published by each manufacturer.

The analysis determines how much isolation is required to prevent receiver performance degradation for any transmitter spurious signals that fall within a receiver’s passband. Receivers experiencing transmitter spurious output interference are depicted in the following Table.

Transmitter		Affected Receiver		Attn Needed (dB)
ID	Frequency (MHz)	ID	Frequency (MHz)	
None				

**Analysis Results:** No transmitter generated spurious emission interference problems were predicted that have the potential to be system performance limiting to any operators analyzed in this report. The calculations to determine harmful off channel emissions assumed that proper bandpass filtering was utilized to severely reduce these products to levels below those that could be system performance limiting to any receivers analyzed as part of this analysis.

## 10.0 Summary & Limitations

Based upon the data received regarding the proposed radio equipment to be utilized by **AT&T** and the existing radio systems located at the **North Central – Biola Fire Station**, there should not be any negative impact to the performance of any radio systems proposed or existing detailed in this report from the proposed **AT&T** installation based upon calculations performed utilizing the radio configurations described in this report.

This analysis was performed solely based upon radio configuration data provided by **AT&T** the **City of Biola** as well as the FCC's active license database. In certain instances, where assumptions were required, industry standard values were utilized for variables such as transmission power levels, filter response curves, combining schemes and other configuration variables if not provided by the parties listed above. The scope of this study was limited to radio systems present in this report exclusively. It does not take into account emissions from additional surrounding radio sources.

As identified in the various sections of this report, the potential is present for certain forms of interference to exist. However, based upon the supplied and assumed radio system configurations, the isolation provided by physical separation, Antenna pattern gain roll off, filtering variables and isolation devices appears adequate to allow these radio systems to co-exist as outlined in the drawings and configuration documents provided by **AT&T** the **City of Biola**.

This analysis was also performed assuming that all radio equipment including lines and antennas are performing to manufacturers specifications. Each system was analyzed assuming proper filtering was used to maintain compliance with all FCC licenses and reduce out of band emissions.