

PLANNING & COMMUNITY DEVELOPMENT

TO: El Paso County Planning Commission
Thomas Bailey, Chair

FROM: Joseph Letke, Planner II
Lupe Packman, Engineer I
Meggan Herington, AICP, Executive Director

RE: Project File Number: VA242
Project Name: South Powers Boulevard CMRS Tower Variance of Use
Parcel Number: 5500000015

OWNER:	REPRESENTATIVE:
State of Colorado C/O Division of Purchasing David S. Rodenberg 1127 Sherman Street STE 300 Denver, CO 80203	T-Mobile West LLC C/O Kenneth Trujillo 4751 Fox Street Denver, CO 80216

Commissioner District: 4

Planning Commission Hearing Date:	7/18/2024
Board of County Commissioners Hearing Date:	8/8/2024

EXECUTIVE SUMMARY

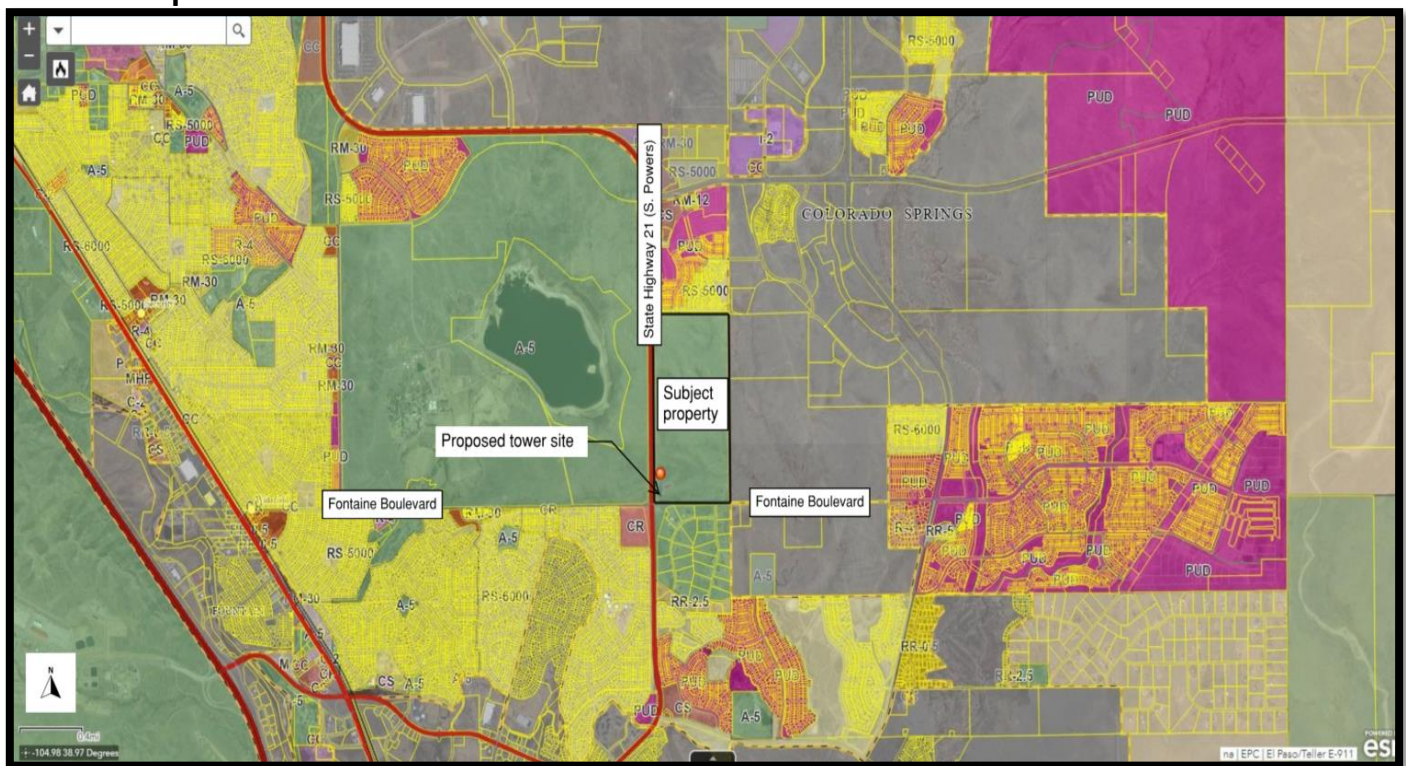
A request by T-Mobile West LLC for approval of a Variance of Use to allow a temporary freestanding CMRS Facility (Commercial Mobile Radio Service) (or cell tower) in the A-5 (Agricultural) zone district. The vacant property is located at the northeast corner of State Highway 21 and Fontaine Boulevard, is owned by the State of Colorado, and is 320 acres in size.

T-Mobile received imminent termination of their current leased CMRS facility located on top of a water tank owned by the Security Water and Sanitation District. With a limited timeframe to find a new location and to prevent loss of cellular service, T-Mobile contacted the State of Colorado for an expedited lease agreement to establish a temporary cell tower on the subject property. On June 16th, 2024, T-Mobile was granted a temporary use permit to establish the temporary CMRS facility on the site.

T-Mobile is currently seeking a Variance of Use to place a temporary CMRS facility on the subject property for two (2) years while they continue the search for a permanent CMRS site location. This request includes a 60-foot structure height allowance when 30 feet is the required dimensional standard.

The model of CMRS facility is specifically designed to be easily removed and shall be located on the southwest corner of the lot. The 60-foot tall CMRS facility shall be setback 70 feet from the west property line (Powers Boulevard) and 100 feet from the south property line (Fontaine Boulevard). The CMRS facility shall be located approximately 500 feet from the closest residential property line. If approved the applicant must apply for and receive Site Development Plan approval.

Site Map



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A. WAIVERS AND AUTHORIZATION

Waiver(s): There are no waivers associated with this request.

Authorization to Sign: There are no documents associated with this application that require signing.

B. APPROVAL CRITERIA

Pursuant to Section 5.3.4 of the Land Development Code (As Amended), the Planning Commission and Board of County Commissioners may consider the following criteria in approving a Variance of Use:

- The strict application of any of the provisions of this Code would result in peculiar and exceptional practical difficulties or undue hardship.
- The proposed use is compatible with the surrounding area, harmonious with the character of the neighborhood, not detrimental to the surrounding area, not detrimental to the future development of the area, and not detrimental to the health, safety, or welfare of the inhabitants of the area and County;
- The proposed use will be able to meet air, water, odor or noise standards established by County, State or federal regulations during construction and upon completion of the project;
- The proposed use will comply with all applicable requirements of this Code and all applicable County, State and federal regulations except those portions varied by this action;
- The proposed use will not adversely affect wildlife or wetlands;
- The applicant has addressed all off-site impacts;
- The site plan for the proposed variance of use will provide for adequate parking, traffic circulation, open space, fencing, screening, and landscaping; and/or
- Sewer, water, storm water drainage, fire protection, police protection, and roads will be available and adequate to serve the needs of the proposed variance of use as designed and proposed.

C. LOCATION

North:	RS-6000 (Residential Suburban)	Residential
South:	A-5 (Agricultural)	Residential
East:	A-5 (Agricultural)	Vacant
West:	City of Colorado Springs	Vacant

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D. BACKGROUND

The subject vacant property is zoned A-5 (Agricultural), which does not permit a freestanding CMRS facility as a principal use. If the Variance of Use is approved, the tower would be permitted on a temporary basis of two years after approval.

The request is being made due to recent termination of a leased CMRS facility located on a water tank owned by the Security Water and Sanitation District. T-Mobile was not able to find an immediate permanent location for their CMRS facility and was not able to co-locate the cellular facility. To maintain cellular service in the Security-Widefield region, T-Mobile is requesting the temporary tower as a two-year stop gap while they search for a new, permanent location.

On June 16th, 2024, T-Mobile was granted a temporary use permit to establish the temporary tower on the site. The purpose of this temporary use permit was to ensure T-Mobile service was not interrupted while the applicant goes through the Variance of Use application process.

The model of tower being proposed is specifically designed to be easily removed and will be located on the southwest corner of the lot. The 60-foot tower shall be setback 70 feet from the west property line (Powers Boulevard) and 100 feet from the south property line (Fontaine Boulevard).

The property is owned by the State Land Board and held within a trust for the benefit of K-12 education across the State of Colorado. Due to strong public and private partnerships, T-Mobile was able to expedite the pending lease agreement due to the property being owned by the State of Colorado.

The property is located in an area of the County that is adjacent to the incorporated boundaries of the City of Colorado Springs and it is located within the Commercial Airport Overlay District. The City of Colorado Springs Airport Advisory Commission has reviewed this application and stated it has no objections, the Federal Aviation Administration (FAA) provided a determination letter of no hazard, and Peterson Space Force Base has reviewed the application and stated they do not have any comments or concerns at this time.

If the Variance of Use is approved, the applicant will be required to submit and receive approval of a Site Development Plan. The Site Development Plan will need to be substantially consistent with the site plan provided with the Variance of Use application and provide a more detailed depiction of the proposed use.

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E. ANALYSIS

1. Land Development Code and Zoning Analysis

Pursuant to Table 5-1 of the Land Development Code, a CMRS Facility, Freestanding, is not a permitted principal use in the A-5 zoning district. The A-5 zoning district does permit for a Stealth Tower CMRS facility as a Special Use, however the applicant does not intend for the proposed temporary CMRS facility to be permanently placed on this site.

The Land Development Code defines "CMRS Facility, Freestanding" as:

"A CMRS facility that consists of a stand-alone support structure, such as a tower or monopole, and antennae and accessory equipment."

A CMRS Facility, Freestanding, is permitted with Special Use approval in the A-35 (Agricultural), CC (Commercial Community), CR (Commercial Regional), CS (Commercial Service), I-2 (Industrial), and I-3 (Industrial).

The allowable structure height in the A-5 zoning district is 30 feet. The request includes a 60-foot height allowance. The CMRS facility will be located approximately 500 feet from the closest residential property line.

The applicant must submit a Site Development Plan which meets all requirements listed in Chapter 5.2.19 of the Land Development Code.

F. MASTER PLAN ANALYSIS

1. Your El Paso County Master Plan

a. Placetype Character: Suburban Residential

Suburban Residential is characterized by predominantly residential areas with mostly single-family detached housing. This placetype can also include limited single-family attached and multifamily housing, provided such development is not the dominant development type and is supportive of and compatible with the overall single-family character of the area. The Suburban Residential placetype generally supports accessory dwelling units. This placetype often deviates from the traditional grid pattern of streets and contains a more curvilinear pattern.

Although primarily a residential area, this placetype includes limited retail and service uses, typically located at major intersections or along perimeter streets. Utilities, such

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as water and wastewater services are consolidated and shared by clusters of developments, dependent on the subdivision or area of the County.

Some County suburban areas may be difficult to distinguish from suburban development within city limits. Examples of the Suburban Residential placetype in El Paso County are Security, Widefield, Woodmen Hills, and similar areas in Falcon.

Recommended Land Uses:

Primary

- *Single-Family Detached Residential with lots sizes smaller than 2.5 acres per lot, up to 5 units per acre*

Supporting

- *Single-family Attached*
- *Multifamily Residential*
- *Parks/Open Space*
- *Commercial Retail*
- *Commercial Service*
- *Institutional*

Analysis:

The property is located within the Suburban Residential placetype. The Suburban Residential placetype is composed of the County's traditional residential neighborhoods with supporting commercial uses. Relevant goals and objectives are as follows:

Goal LU2: "Coordinate context-sensitive annexation and growth strategies with municipalities."

Goal LU3: "Encourage a range of development types to support a variety of land uses."

A Site Development Plan is required to be submitted and approved prior to issuance of a building permit for the property. The Site Development Plan will be required to meet the development standards of the Land Development Code, not limited to buffering, landscape, lighting, drainage, and parking.



b. Area of Change Designation: New Development

These areas will be significantly transformed as new development takes place on lands currently largely designated as undeveloped or agricultural areas. Undeveloped portions of the County that are adjacent to a built out area will be developed to match the character of that adjacent development or to a different supporting or otherwise complementary one such as an employment hub or business park adjacent to an urban neighborhood.

Analysis:

Approval of the Variance of Use will allow for a temporary, Freestanding, CMRS Facility. As stated above, the facility will be removed after two (2) years unless an extension is approved by Planning and Community Development Department. Relevant goals and objectives are as follows:

Goal RT3. Specific Strategies: *Utilize the findings and recommendations from the 2019 Broadband Strategic Plan to help expand cellular service and Wi-Fi coverage throughout the region to eliminate dead spots and enhance safety, GPS navigation, and sharing of experiences on social networks.*

c. Key Area Influences: Colorado Springs Airport/Peterson Air Force Base

Colorado Springs Airport is the second largest in the State of Colorado with continually rising passenger totals and activity. Currently, large amounts of land adjacent to the airport are primed for commercial and industrial development, in part due to the establishment of a Commercial Aeronautical Zone (CAZ). The Board of County Commissioners approved the CAZ to attract local businesses and spur development on the available land. The County should continue to prioritize nonresidential growth in this area to help expand the Employment Center in unincorporated El Paso County. Employment Centers not only provide additional job opportunities for County residents but it expands the County's tax base, providing more opportunities to address other County issues such as upgrades to infrastructure, expansion of services and development of new roadways. Peterson Air Force Base also utilizes the Colorado Springs Airport for military flight operations and hosts various military activities critical to national security. The County should also coordinate future development adjacent and within the Colorado Springs Airport Accident Potential Zone (APZ) and within the Peterson Air Force Base buffer area with the Airport and the Base to ensure growth does



not negatively impact the primary functions of Peterson Air Force Base or the Airport. Coordination with Colorado Springs Airport should also be considered, as necessary.

Analysis:

The property is located within the Colorado Springs Airport/Peterson Air Force key area of influence. The City of Colorado Springs Airport Advisory Committee Commission has reviewed this application and stated it has no objections. The application was reviewed by the Federal Aviation Administration (FAA) who provided a determination letter of no hazard. Peterson Space Force Base has reviewed this application and stated they do not have any comments or concerns at this time.

d. Other Implications: Telecommunications

Create Public-Private Partnerships to Extend Broadband

The County recognizes the importance of improving broadband access for underserved El Paso County residents. Real broadband service throughout the County will drive social and economic benefits for businesses, residents, and the public sectors. The creation of effective public-private partnerships will enable the County to target the use of scarce resources such as staff time and County budget to the areas in which the highest potential impact can occur.

Be Proactive in Working with Public and Private Sectors

Because telecommunications services are deployed relatively rapidly, it is important for the County to have existing strategic plans and existing relationships with the private sector. The County should consider creating a working group with these providers that would meet quarterly to discuss issues of interest to both the County and their private partners.

3. Other Master Plan Elements

The El Paso County Wildlife Habitat Descriptors (1996) identifies the parcels as having a high wildlife impact potential. Colorado Parks and Wildlife (CPW) and El Paso County Conservation District were each sent a referral. Both agencies have no outstanding comments.

The Master Plan for Mineral Extraction (1996) identifies no significant resources in the area of the subject parcels. A mineral rights certification was prepared by the



applicant indicating that, upon researching the records of El Paso County, no severed mineral rights exist.

G. PHYSICAL SITE CHARACTERISTICS

1. Hazards

No hazards have been initially identified. Site hazards will be reviewed thoroughly during the Site Development Plan review phase which will be required if the Variance of Use is approved.

2. Floodplain

The property is not located within a floodplain as determined by FEMA Flood Insurance Rate Map panel numbers 08041C0340G and 08041C0768G, effective December 7, 2018. The property is in Zone "X" which is an area of minimal flood hazard determined to be outside the 500-year flood zone.

3. Drainage and Erosion

The property is located within the Jimmy Camp Creek Drainage Basin (FOFO2000) and Big Johnson Drainage Basin (FOFO2600). Drainage and bridge fees are not assessed with Variance of Use requests.

A Grading and Erosion Control plan and Final Drainage Report are not required with Variance of Use requests. Per the applicant's Letter of Intent, the proposed Variance of Use application will not adversely impact adjacent properties or existing stormwater runoff patterns.

4. Transportation

The property obtains access from Fontaine Boulevard. Fontaine Boulevard is an El Paso County owned and maintained roadway classified as a minor arterial. The property is required to obtain driveway access permits for each driveway access. The applicant will not be generating more than 100 Average Daily Trips (ADT); therefore, a traffic impact study was not required.

The El Paso County 2016 Major Transportation Corridors Plan Update does not depict roadway improvements in the immediate vicinity. The property will be subject to the El Paso County Road Impact Fee program (Resolution No. 19-471), as amended.



H. SERVICES

1. Water

There will be no water on-site.

2. Sanitation

There will be no wastewater facilities on-site.

3. Emergency Services

The property is within the Security Fire Protection District who had no objections to the Variance of Use application.

4. Utilities

Mountain View Electric will provide electricity.

5. Parks/Trails

Land dedication and fees in lieu of park land dedication are not required for a Variance of Use application.

6. Schools

Land dedication and fees in lieu of school land dedication are not required for a Variance of Use Application.

I. APPLICABLE RESOLUTIONS

See attached resolution.

J. STATUS OF MAJOR ISSUES

There are no major issues.

K. RECOMMENDED CONDITIONS AND NOTATIONS

Should the Planning Commission and Board of County Commissioners find that the request meets the criteria for approval outlined in Section 5.3.4 of the El Paso County Land Development Code (As Amended), staff recommends the following conditions and notations:

CONDITIONS

1. Variance of Use approval shall be limited to two (2) years post approval date. Unless an extension is approved by the Planning and Community Development Department.

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2. Site Development Plan shall be submitted to El Paso County Planning and Community Development within thirty (30) days of approval.

NOTATIONS

1. Variance of Use approval includes conditions of approval and the accompanying site plan and elevation drawings. No substantial expansion, enlargement, intensification, or modification shall be allowed except upon reevaluation and public hearing as specified in the El Paso County Land Development Code.
2. Variance of Use approval includes a 60-foot height allowance within the A-5 zoning district.
3. The Board of County Commissioners may consider revocation and/or suspension if zoning regulations and/or Variance of Use conditions/standards are being violated, preceded by notice and public hearing.

L. PUBLIC COMMENT AND NOTICE

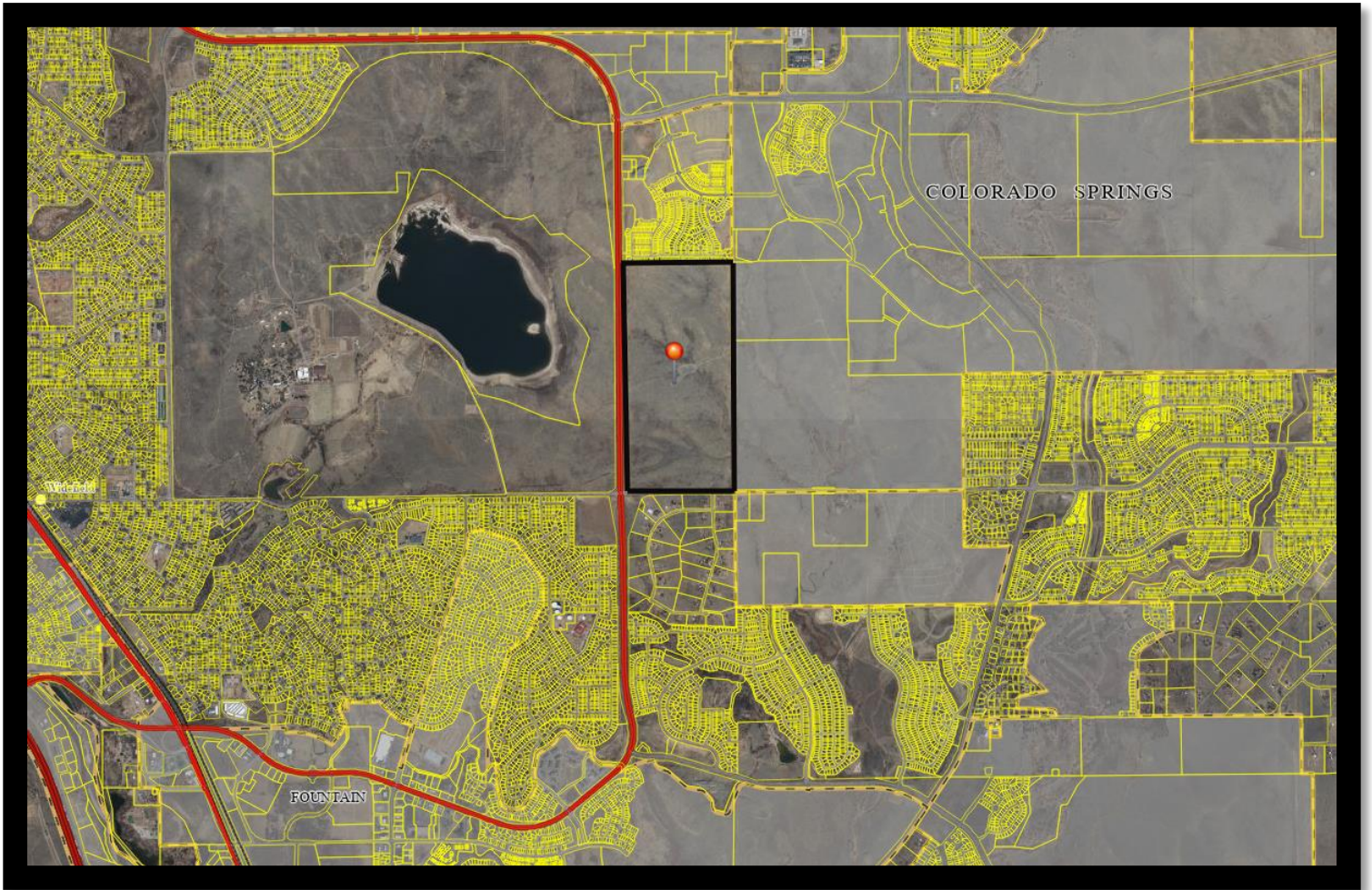
The Planning and Community Development Department notified five (5) adjoining property owners on July 3, 2024, for the Planning Commission and Board of County Commissioners meetings. Responses will be provided at the hearing.

M. ATTACHMENTS

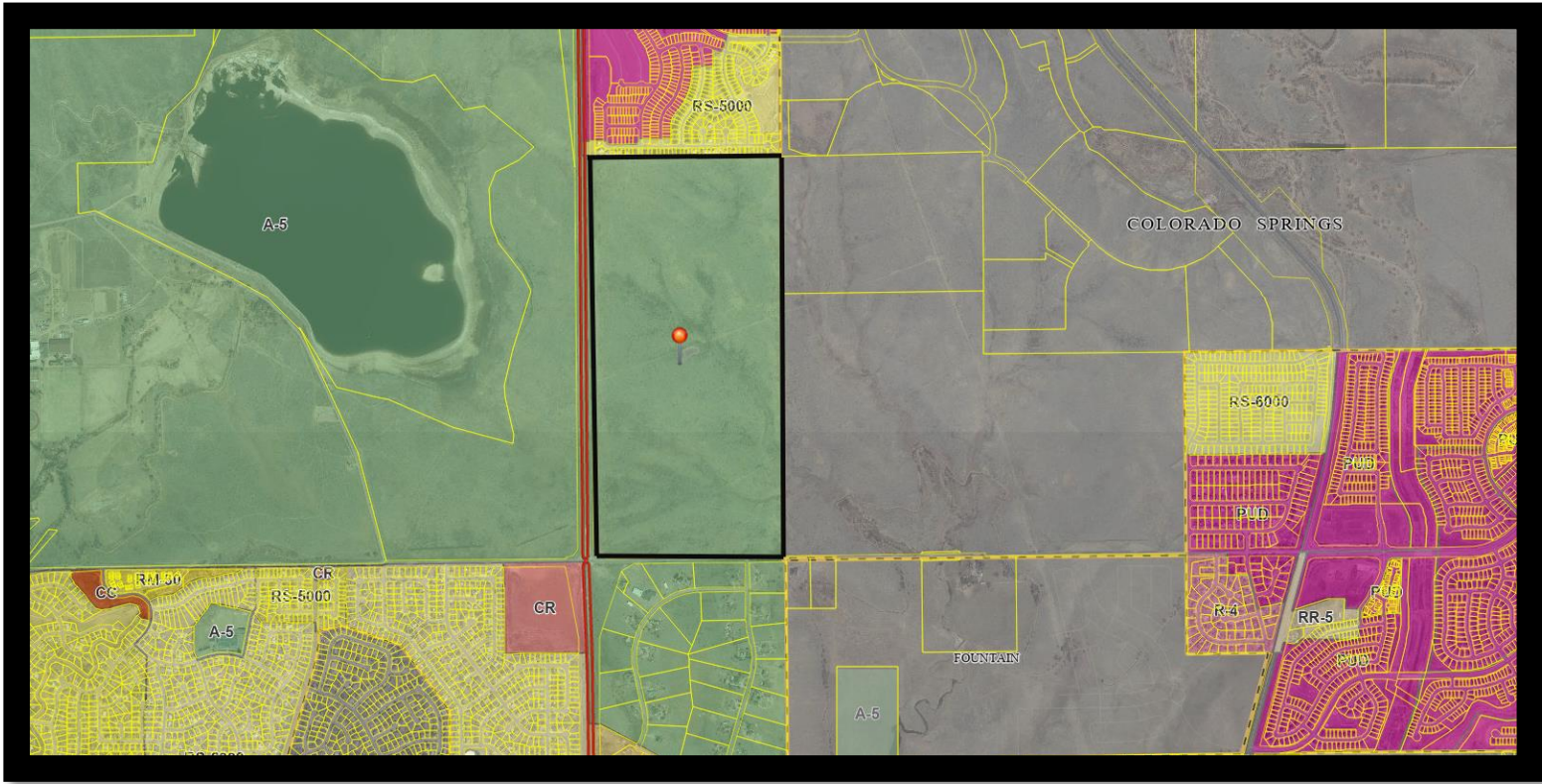
Map Series
Letter of Intent
Site Plan
COS Airport Advisory Commission Comments
FAA Determination of No Hazard
Peterson Space Force Base Comments
State Land Board Letter of Authorization
Draft Resolution



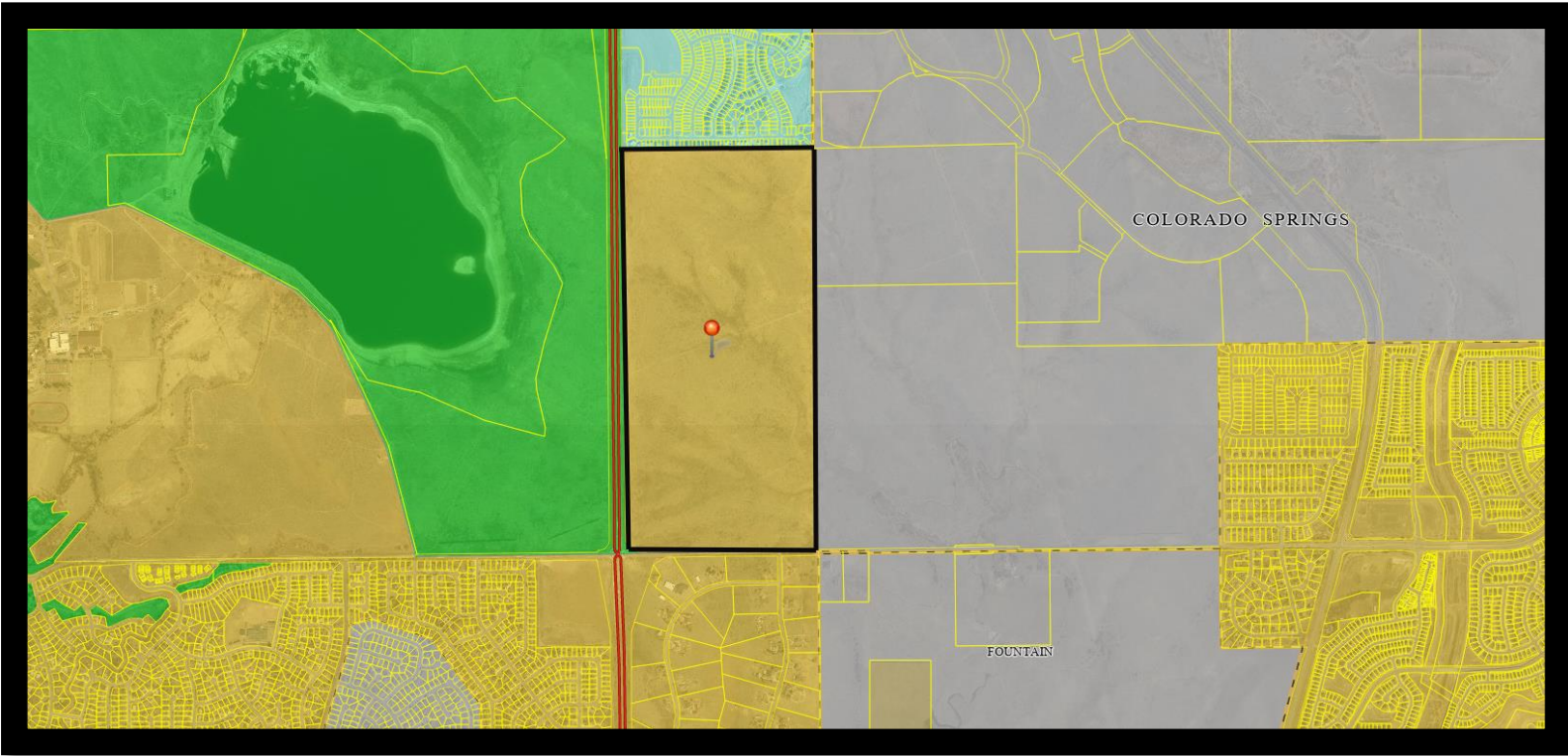
Map Exhibit #1: Aerial









Map Exhibit #2: Zoning



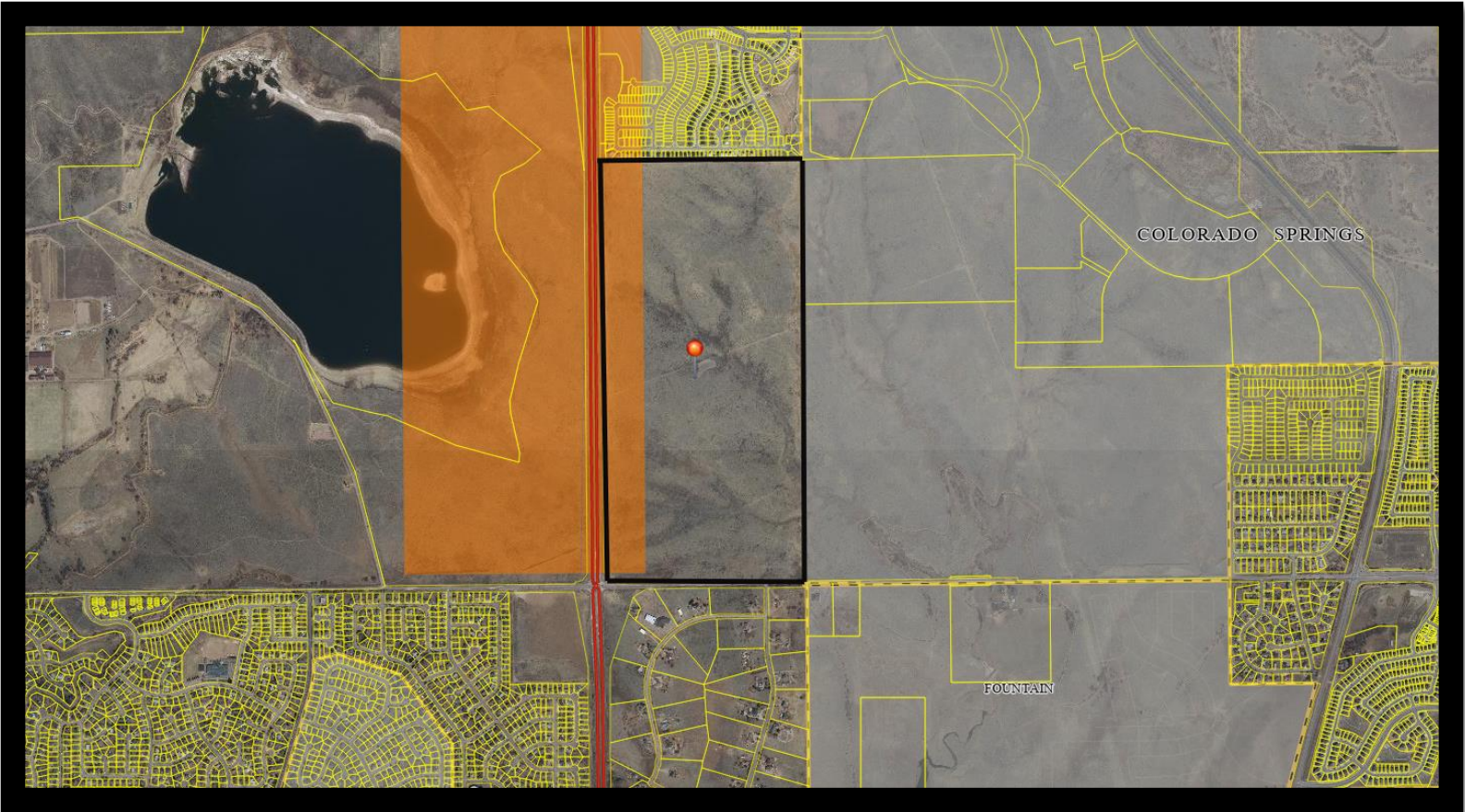
Map Exhibit #3: Placetype



Legend

-  Rural
-  Large-Lot Residential
-  Suburban Residential
-  Urban Residential
-  Rural Center
-  Regional Center

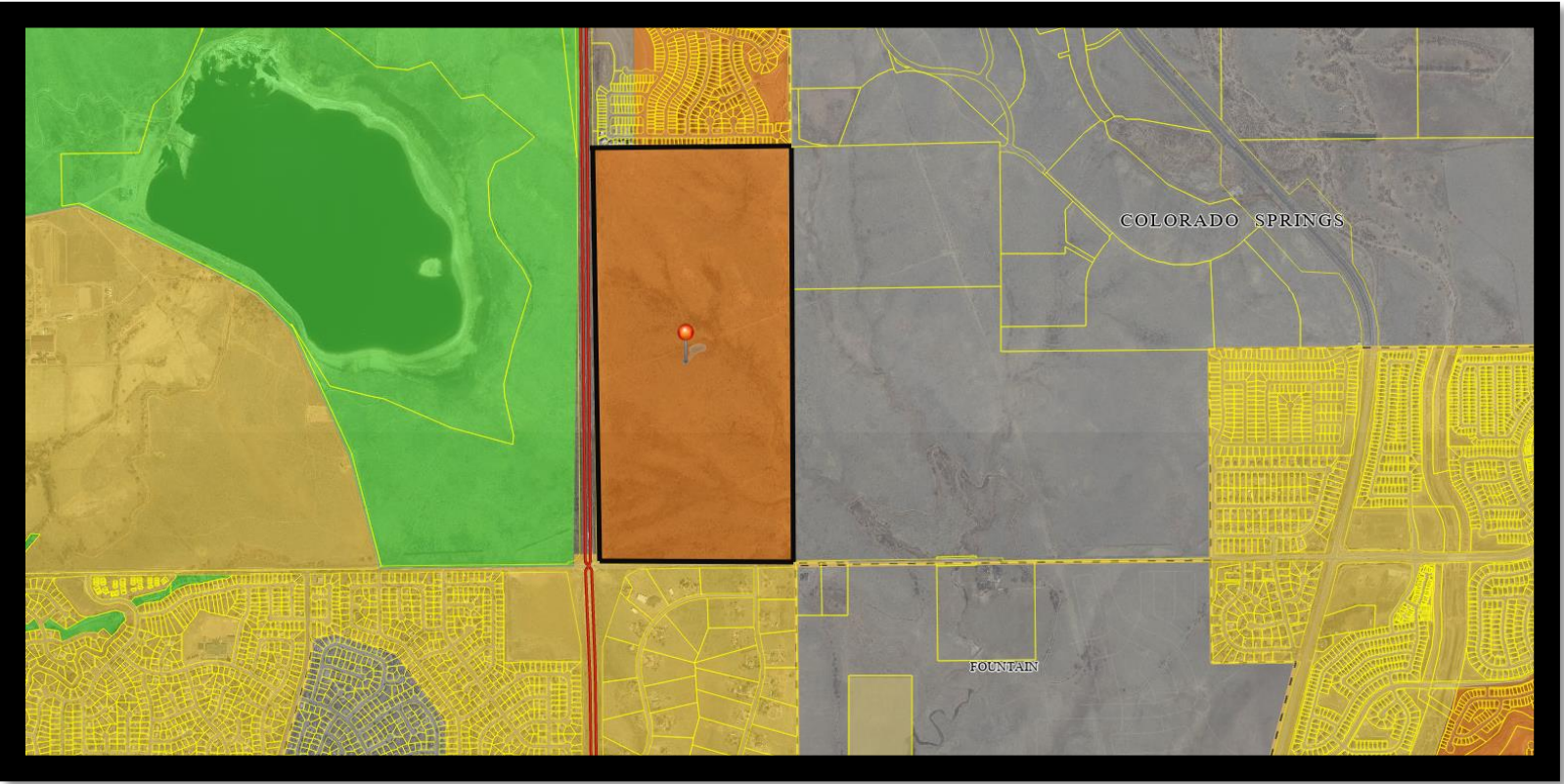
Map Exhibit #4: Key Areas Of Influence



Legend

- Military Installations
- Potential Areas for Annexation
- Enclaves or Near Enclaves
- Small Towns & Rural Communities
- Fountain Creek Watershed Flood Control & Greenway District
- Forested Area
- Pikes Peak Influence Area
- Tri-Lakes Area
- Colorado Springs Airport/Peterson Field
- Uncommon Natural Resources

Map Exhibit #5: Area of Change



Legend

- Protected/Conservation Area
- Minimal Change: Undeveloped
- Minimal Change: Developed
- New Development
- Transition



4751 Fox St. Denver, CO 80216

Letter of Intent
For a Variance of Use Application

To: El Paso County
Planning and Community
Development

From: Kenneth Trujillo – Agent for T-Mobile – Applicant
4751 Fox St. Denver CO 80216
719-205-9370
Ken@uci2.net

Subject: DN02728A - T-Mobile Temporary Tower

Date: 5/16/2024

Location: S Powers Blvd and Fontaine Blvd

Address: No address assigned at the time of this submission
Latitude: 38.738106° Longitude: -104.682031°

Parcel #: 5500000015

Zoning: A-5 (Agricultural) CAD-O

Valuation: \$40,000.00

Owner: State of Colorado
David Rodenberg – Tower Site Manager - Owner
P 303.866.3454 ext. 3328
1127 Sherman Street Suite 300, Denver, CO 80203
david.rodenberg@state.co.us

PCD File: VA242

Below in **black** is the applicable code in regard to our CMRS project. Also below in **red** are our responses to this code.

5.2.19. Commercial Mobile Radio Service Facility (CMRS) Facilities

(A) General.

(1) **Purpose.** The purposes of this Section are:

- To facilitate the provision of wireless telecommunication services, including personal wireless services, throughout the unincorporated area of El Paso County;
- To allow the location of commercial mobile radio service facilities (CMRS facilities) in El Paso County subject to certain standards;
- To encourage co-location of CMRS facilities; and

- To prevent unreasonable discrimination among providers of functionally equivalent services. **Acknowledged.**

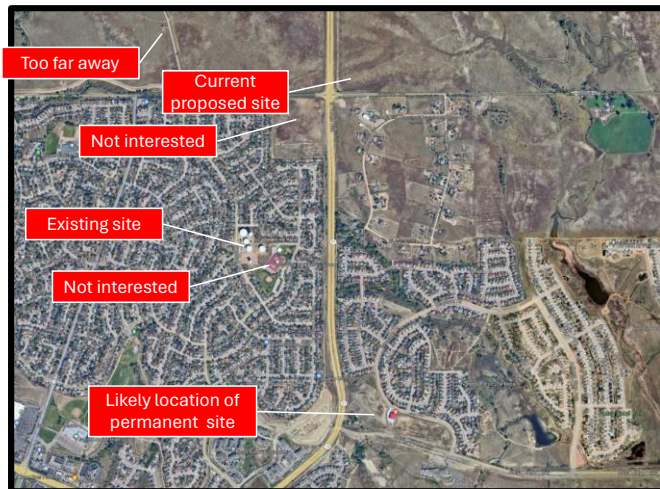
(2) **Applicability.** The standards in this Section apply to all **CMRS** facilities located, constructed or modified after the effective date of this Code. **Acknowledged.**

(3) **Relationship to Other Provisions.** A **CMRS** facility shall comply with all applicable provisions of this Code. Where a conflict exists between the requirements of this Section and another applicable standard in this Code, the most restrictive standard shall control. Where a conflict exists between the requirements of this Section and another applicable State or Federal standard the State or Federal standards shall control. **Acknowledged.**

(B) General Standards.

(1) **Co-Location.** Co-location of **CMRS** facilities is encouraged when feasible to minimize the number of **CMRS** facility sites. To further the goal of co-location:

- An applicant for a new freestanding **CMRS** facility shall demonstrate that a good faith effort has been made to co-locate on existing **CMRS** facilities. The applicant shall demonstrate that due to physical constraints, or economic or technological infeasibility, no such location or co-location is available. The applicant shall also demonstrate that contact has been made with the owners of all suitable structures within the search area of the proposed site and was denied permission to locate its **CMRS** facility on those structures; This application is the result of the current T-Mobile site going away. **There were no existing **CMRS** facilities in the immediate area that could be colocated to that would replace the existing site's coverage. As you can see in the below map, this area is highly residential with no tall buildings or existing towers in the immediate area. We started by checking the Horizon Tower located to the North at 38.740949° -104.693662°. However, this tower is too far away from the neighborhoods that is set to lose their cellular coverage. This tower would not provide us with the coverage we are about to lose. Because this tower is too far to the Northeast it would only cover the Northeast side of the neighborhood leaving many residents without replacement coverage. We tried to collocate at the neighboring Widefield School District School Sunrise Elementary School on the existing internet pole. However, the school district did not want to lease to us and was not interested in a deal. There was interest in a deal at the Security Fire Dept station #4 property. This is a potential site for a tower in the future but at this time we are still doing preliminary research on this parcel. This fire dept is also much further South and would also require variances to its use like this property. As you can see in the below map, there are no other eligible facilities or commercial / industrial properties to attach to. T-Mobile has a great relationship with the State of Colorado and to expedite the leasing of this emergency temp site we went to this empty field that has the most setbacks from houses and seems like the most favorable choice for temporary tower.**



- If a telecommunications competitor attempts to co-locate a **CMRS** facility on an existing or approved **CMRS** facility or location, and the parties cannot reach an agreement, the County may require a third-party technical study to be completed at the expense of both parties to determine the feasibility of co-location; and **There were no existing **CMRS** facilities in the immediate area that could be collocated to that would replace the existing site's coverage.**

- All facilities shall be designed and constructed to allow for co-location of a minimum of 2 users except for a small cell **CMRS**, pole mounted **CMRS**, or those otherwise specifically exempted by the BOCC. **This tower will be a temporary tower. This will be a pole mounted CMRS and will be just for T-Mobile's use. It is highly unlikely that another carrier would want to collocate at a temporary location such as this one. However, in the highly unlikely event that a carrier would want to collocate, we would support it.**

(2) **Compliance with FCC Standards.** At the request of the PCD Director, which request shall occur no more than once per year, **CMRS** facility owners and operators shall certify that:

- The **CMRS** facility complies with the current FCC regulations prohibiting localized interference with reception of television and radio broadcasts; and **T-Mobile only broadcasts on spectrum licensed by the FCC and will not interfere with the reception of television and radio broadcasts**
- The **CMRS** facility complies with the current FCC standards for cumulative field measurements of radio frequency power densities and electromagnetic fields.

In adopting this requirement, the County is not attempting to regulate radio frequency power densities or electromagnetic fields, which regulation is controlled by the FCC. **This site will adhere to all FCC regulations and guidelines. T-Mobile will operate only on licensed FCC spectrum and will operate its equipment within all FCC standards for cumulative field measurements of radio frequency power densities and electromagnetic fields.**

(3) **Abandonment and Expiration.** If the CMRS facility ceases operation for any reason for a period of one year:

- The CMRS facility shall be removed within 6 months of the expiration; and

This is a temporary site and it will only be in use for up to two years. This model of temporary tower is specifically designed to be easily removed at the end of its usefulness. Once a permanent location is developed, this tower will be removed and the area will be restored to its current undeveloped state.

- Any permit or approval authorizing the CMRS facility shall be considered expired. At the end of the temporary tower's usefulness, we will remove the tower and we acknowledge that the temporary tower's permits will then be expired.

(4) **Application Approval or Denial.** In considering an application for a CMRS facility, the County shall base its decision as to the approval or denial of the application on whether the proposed CMRS facility meets the design standards set forth in this Section and any approval criteria associated with the applicable application or review process. Acknowledged.

(5) **Accessory Equipment for a CMRS Facility.** All accessory equipment for a CMRS Facility shall be 100% screened from view. All equipment shelters shall be located within the lease area for the CMRS facility. No equipment storage shelter shall exceed 15 feet in height. Equipment storage shelters shall be grouped as closely together as practical, so as to minimize impact on adjoining properties. The total area of all accessory equipment, including equipment storage shelters, shall not exceed 400 square feet per CMRS facility, except for a small cell facility where 17 square feet shall be the maximum allowed. The accessory equipment for this tower will be shielded from view by a 6' tall slated chain-link fence. All equipment will be housed within the fenced in lease area. None of the accessory equipment will exceed 15 feet. The equipment is grouped as closely as possible given the clearance needed for the generator. The footprint of the equipment is 8'x8'. The footprint of the Tower base will be 32'x32'. The Generator will be 14'x5'.

(6) **Standards for Freestanding CMRS Facilities.**

(a) **Tower/Structure Removal Agreement.** Prior to commencing construction of a new freestanding CMRS facility or any alteration of an existing freestanding CMRS facility, a Tower/Structure Removal Agreement shall be signed by the owner of the property and filed for recording with the Clerk and Recorder. Acknowledged. This will be a temporary tower that is designed to be removed easily.

(b) **Financial Assurance Required.** Prior to commencing construction of a new freestanding CMRS facility or any alteration of an existing freestanding CMRS facility, the owner of a freestanding CMRS facility shall be required to provide the County with adequate financial assurance to cover removal of the facility if abandoned. The form of financial assurance shall be approved by the PCD Director. New financial assurance will be required

prior approval of alteration of an existing freestanding CMRS facility and when the ownership of the lease or facility changes hands. Acknowledged. This will be a temporary tower that is designed to be removed easily.

(c) Minimum Setbacks for Freestanding CMRS Facilities.

(i) Located Within 250 Feet of Residential Zoning District. A freestanding CMRS facility located within 250 feet of any property zoned for residential use shall be set back from any residential property line one foot of distance for every foot of facility height (as measured from grade elevation), plus an additional 10 feet. This 60' tall temporary tower will be set back 70' from the West property line (Powers Blvd) and 100' from the South property line (Fountaine Blvd). There are no residential properties that directly touch this parcel but to the south are properties on the South side of Fountaine Blvd.

(ii) Located Over 250 Feet from Residential Zoning District. A freestanding CMRS facility located greater than 250 feet from property zoned for residential use shall meet the minimum setback requirements for structures and structures of the underlying zoning district and located in a manner to contain any freefall or icefall on the same property. N/A

(d) Maximum Height for Freestanding CMRS Facilities. A freestanding CMRS facility, including antennae, shall not exceed the maximum structure height limit in the zoning district unless otherwise specifically authorized as a part of the special use or variance of use approval. Any tower that exceeds 200 feet shall require FAA approval prior to approval of a special use or variance of use. This property's zoning is A-5: Agricultural (5 acres) this tower will meet all set back requirements of one foot of setbacks for one foot of height plus ten feet. This 60' tower will be below the 200' FAA limit in this section of code.

(e) Administrative Special Use or Variance of Use Amendment. The PCD Director may administratively amend the special use or variance of use approval for a minor modification to the CMRS facility provided the modifications do not constitute a Substantial Change. A modification constitutes a Substantial Change if:

(i) It increases the height of the tower by more than 10% or by the height of one additional antenna array with separation from the nearest existing antenna not to exceed twenty feet, whichever is greater; for other eligible support structures, it increases the height of the structure by more than 10% or more than ten feet, whichever is greater. Changes in height should be measured from the original support structure in cases where deployments are or will be separated horizontally, such as on buildings' rooftops; in other circumstances, changes in height should be measured from the dimensions of the tower or base station, inclusive of originally approved appurtenances and any modifications that were approved prior to the passage of the Spectrum Act; N/A

(ii) It involves adding an appurtenance to the body of the tower that would protrude from the edge of the tower more than twenty feet, or more than the width of the tower structure at the level of the appurtenance, whichever is greater; for other eligible support structures, it

involves adding an appurtenance to the body of the structure that would protrude from the edge of the structure by more than six feet; N/A

(iii) For any eligible support structure, it involves installation of more than the standard number of new equipment cabinets for the technology involved, but not to exceed four cabinets; or, for base stations, it involves installation of any new equipment cabinets on the ground if there are no pre-existing ground cabinets associated with the structure, or else involves installation of ground cabinets that are more than 10% larger in height or overall volume than any other ground cabinets associated with the structure; This is not an eligible support structure

(iv) It entails any excavation or deployment outside the current site; This is not an existing site and the only excavation will be some leveling of the tower location.

(v) It would defeat the concealment elements of the eligible support structure; or This is not an existing site

(vi) It does not comply with conditions associated with the siting approval of the construction or modification of the eligible support structure or base station equipment, provided however that this limitation does not apply to any modification that is non-compliant only in a manner that would not exceed the thresholds identified in the Middle Class Tax Relief Act of 2012. This is not an existing site.

(f) **Design Standards for Freestanding CMRS Facilities.** A freestanding CMRS facility shall adhere to the following design standards to minimize impacts:

(i) Compatible with Surrounding Area. A freestanding CMRS facility shall be designed to be compatible with surrounding buildings and structures and existing or planned uses in the area, subject to any applicable FAA regulations. This temporary tower will ensure the surrounding buildings and structures continue to get the T-Mobile services they depend on. All FAA regulations will be adhered to.

(ii) Existing Vegetation. Existing land forms, vegetation and structures shall be used to screen the facility from view and blend in with the surrounding environment, to the extent practicable. Existing vegetation shall be preserved or enhanced, where feasible. There is only one tree on this very large property and it will not be disturbed by this temporary project. The very large parcel is just sticker bushes and local grass.

(iii) No Lighting. The facility antennae shall not be lighted unless required by the FAA and authorized by the permit or approval. No lighting is being proposed.

(iv) Dangerous Equipment and Attractive Nuisance. Any equipment that could be dangerous to persons or wildlife shall be adequately fenced. The attractive nuisance potential shall be minimized through fencing and methods to discourage unauthorized climbing. The T-Mobile

equipment will be screened by a slated fence. Barbed wire is proposed to discourage unauthorized climbing.

(v) Dish Diameter Limited. The diameter of a microwave dish antenna shall not exceed 4 feet. The proposed microwave DISH will be 2' in diameter.

(g) **Photo Simulations Required.** Photo Simulations are to be provided for any new freestanding CMRS facility or for a Substantial Change to an existing freestanding CMRS facility. The Photo Simulations shall illustrate a minimum of three different views of what the site will look like once the antennae and associated equipment have been installed. Photos and Photo Simulations should show the "existing" and "proposed" conditions. These photo sims have been included in this package.

(7) **Stealth CMRS Facility Design Standards.** A stealth CMRS facility shall meet the same design standards and maximum height allowance as a freestanding CMRS facility. This temporary tower will not be a stealth tower.

T-Mobile is requesting a variance on the strict enforcement of the below

The property 5500000015 is located within the Agricultural (A-5) zoning district which does not permit free standing CRMS towers as a principal use. The only way to gain land use approval would be through a variance of use application. Despite the tower being temporary we would still require full land use and site development plan approval.

This land has not yet been developed and has no principle use identified. As a result, this temporary tower has defaulted to this 320 acre parcel's primary use. This is somewhat unusual that a parcel's primary use would be for a temporary tower and we would like to request a variance to this determination. It is unusual that a property of this size has no current identified use but this is the rare situation that we find ourselves in. We would like El Paso County to consider allowing a temporary tower as an accessory use on this property while we work to develop a new replacement tower in the area.

The reason T-Mobile is requesting a 60' tower at this location is to replace the coverage that is set to be lost when our current antennas are taken down at the end of this month. T-Mobile's current antennas are attached to the Widefield Water Tank. This structure is a very large water tank and T-Mobile's antennas currently are set at 85' on the water tank. T-Mobile's surrounding network was developed with this site's tall coverage as a centerpiece of its

coverage in the Widefield Community. All other surrounding T-Mobile sites were based on there being a tall tower (water tank) in the middle of this community.



For this emergency replacement site, we need to replace this site with a tall 60' tower to replace the coverage the community is about to lose. This temporary tower will not be permanent and is just a stop gap while we find a permanent suitable replacement. The strict application of the provisions of the height limitations would result in exceptional practical difficulties and undue hardship. Limiting this temporary tower's height below 60' would only replace about half of the covered neighborhood with the coverage they depend on. There are no other tall structures in this area that we could easily replace this site's coverage and this tower is one of the most critical and most used sites in T-Mobile's network. We are seeking a variance to allow this tower and height at this location as we work with El Paso county on an alternate site in the area. This temporary location would have the least impact on the surrounding properties, have the most set backs form other properties, and would allow for the community to continue using the network they depend on while a permanent location is developed. This current undeveloped field has no close neighbors that it would block any views and the additional height will not affect the character of the area. However, the height will be crucial for allowing the existing wireless and internet users access to our network.



In the initial review we were asked to explain how this variance of use would be consistent with the El Paso County Master Plan. Below is the master plan language and we feel that this project is consistent with the objectives listed below.

Telecommunications

Broadband services, including digital subscriber line (DSL), cable, or fiber, generally are widely available in and around Colorado Springs and in Front Range communities along the I-25 corridor. Broadband service is sparser in the eastern part of the County, but is available in some areas, particularly in the more

densely developed communities. Terrestrial fixed or terrestrial mobile wireless services are available across most of the County. Cellular service from major carriers is widely available in and around Colorado Springs, including the Cimarron Hills, Fountain, and Manitou Springs areas, and along the I-25 corridor. In the eastern part of the County, cellular service is more limited, with the primary coverage areas along Highway 24. Out of a total of over 235,000 occupied housing units in the County, approximately 97 percent had telephone service, while the remaining three percent (approximately 6,400 housing units) had neither landline nor cellular telephone service.

Residents and businesses in more rural areas and areas with lower population density are generally served by fixed wireless, cellular, or DSL. These technologies underperform the standard of service for broadband. In order to address underserved areas, the County should develop assets that align to a strategic plan and make them available through partnerships with the private sector.

These assets are often referred to as “broadband currency” because they can be brought to the table and used to assist other governmental functions and leverage private sector participation. The County does not have current policies or a formal basis in which to identify, purchase, lease, or share assets like fiber optic cable, conduits, building/tower sites, etc. The 2019 Broadband Strategic Plan for El Paso County recommended the following strategic recommendations to improve broadband access throughout the County.

We agree with all of the above and the need for continuous coverage and reliable coverage has never been as important as it is today. The stats provided in the above Master Plan paragraph show just how important our services are to the community. This project will allow us to continue providing this critical service and meet El Paso County’s strategic goals to allow for service and expand service when we find a new site.

Create Public-Private Partnerships to Extend Broadband

The County recognizes the importance of improving broadband access for underserved El Paso County residents. Real broadband service throughout the County will drive social and economic benefits for businesses, residents, and the public sectors. The creation of effective public-private partnerships will enable the County to target the use of scarce resources such as staff time and County budget to the areas in which the highest potential impact can occur.

We are seeking El Paso County’s approval on this project that will allow this community to continue its internet and cellular services. We are seeking to work as partners for this project as well as work together to identify a permanent replacement site that will work for T-Mobile and El Paso County. We believe that working together on a permanent site will build a partnership that will allow for coverage throughout the county and this expanding community specifically. We seek approval of this temporary site and continued discussion on a permanent site.

Be Proactive in Working with Public and Private Sectors

Because telecommunications services are deployed relatively rapidly, it is important for the County to have existing strategic plans and existing relationships with the private sector. The County should consider creating a working group with these providers that would meet quarterly to discuss issues of interest to both the County and their private partners.

Telecom services are deployed rapidly and we often have emergency situations like this one in which we need to act quickly. When networks have critical sites like this one set to come down, we need to replace them quickly. Often times, codes are not written to consider these types of emergency replacement situations. We seek understanding on this and approval of this variance. We would love if there were strategic plans in place for emergency situations such as this one. We are willing to meet with the county and have working groups to discuss how to support emergency relocation projects. Wireless services and internet are as critical as the traditional utilities we think of and we cannot have lapses in coverage. We

would like a proactive approach to planning for these types of situations but in the meantime we seek leniency for a temporary site at this location.

Align Projects to Mutual Needs

The County should create key Targeted Improvement Zones and additional projects that can improve services for underserved populations. This would serve as a continuation of the 2019 Broadband Strategic Plan to identify paths in which the deployment of fiber and conduit can create a platform for future private-sector service enhancement.

T-Mobile must cover every part of El Paso County per their requirements with the FCC. This community is no different and we seek to continue our high-quality coverage of the community with our temporary tower and align our current and future project with El Paso County's goals.

Identify, Champion & Provide Resources to Implement

One of the most crucial recommendations, is to create a structure of both resources and an internal organization structure to sustainably execute this plan. The implementation champion(s) need not be a technology professional but must be someone who has a strong grasp of the value to the County of implementing this study's recommendations. Importantly, due to the need for cooperation by multiple functions within the County's structure, these champions must not only have a passion for the initiative, but also have the authority and the political capital to influence across County departments in order to drive successful outcomes

We agree with this goal. Hiring telecommunication professionals would be a big help to most jurisdictions in understanding our needs. Site identification and development takes a lot of technical knowledge about telecom. We are happy to provide input to El Paso County should they hire a champion to support telecommunication growth. We hope that a champion is hired to help develop flexible codes that allow telecom to develop their networks quickly and responsibly to meet the needs of the community. We want to provide wireless services to the community so that community members of the Widefield District are successful in their daily lives at home, at work, and at play. Sometimes the codes are too restrictive from the view point of telecommunication companies and working with a telecommunication champion is a great way to find middle ground on the codes.

For all of the reasons listed above, we believe that this variance of use is generally consistent with the intent of the Master Plan telecommunications goals. The Master Plan seeks to encourage partnership, expanded coverage, and flexibility. This project does need additional approvals but we hope that El Paso County can work with us on this temporary site to allow for this critical service to continue.

A detailed analysis summarizing how the request complies with each of the following Criteria of Approval in Chapter 5 of the Land Development Code:

The strict application of any of the provisions of this Code would result in peculiar and exceptional practical difficulties or undue hardship

Processing this strictly as a primary use rather than an accessory use would drastically hurt T-Mobile's ability to continue providing service to the surrounding area that depends on this service. This unimproved property is a great location to continue T-Mobile's service in the area while a more permanent location can be identified and developed. This property has the most amount of setbacks from other uses and is a great location for a temporary tower that will not affect the nearby properties. It is out of the way and not breaking up any views or

imposing on a nearby property. The strict application of any of the provisions in this code would lead us to a site that would be less favorable than this site and create gaps in service to the community.

The proposed use is compatible with the surrounding area, harmonious with the character of the neighborhood, not detrimental to the surrounding area, not detrimental to the future development of the area, and not detrimental to the health, safety, or welfare of the inhabitants of the area and County

T-Mobile has been providing great wireless services to this community for years from the water tanks. The surrounding community depends on T-Mobile's services and internet. This cell site will operate under all safety measures set forth by the FCC and FDA. This temporary site will operate no different than the site that has been in operation for years on the water tank.

The proposed use will be able to meet air, water, odor or noise standards established by County, State or federal regulations during construction and upon completion of the project

T-Mobile's project will be able to meet air, water, odor or noise standards established by County, State or federal regulations through out this project.

The proposed use will not adversely affect wildlife or wetlands

This temporary project will not affect wildlife or disturb the ground. This is a temporary tower that will not have a permanent foundation. The lands is not a wetland. This temporary tower's footprint will not affect the nearby wildlife in any way. During the intital review of this application District Wildlife Manager Philip Gurule of Colorado Parks and Wildlife (CPW) wrote provide the following confirmation. "Based both on the location and type of action being proposed, CPW believes impacts to the wildlife resource to be negligible. We appreciate being given the opportunity to comment. Please feel free to contact District Wildlife Manager Philip Gurule at 719-828-4960 should you have any questions or require additional information." This property is located within the "4 - High" wildlife impact potential area; however, our project takes up a very small footprint and will not impede wildlife movement or maker any permanent changes to the surrounding grasslands.

The applicant has addressed all off-site impacts

This site will not have any off site impacts to the surrounding community.

The site plan for the proposed variance of use will provide for adequate parking, traffic circulation, open space, fencing, screening, and landscaping.

This unmanned cell site will not need any parking and will not adversely affect nearby traffic. This privately owned large parcel is currently unimproved and this very small project will not affect any open space available to the public. No access to the public is currently available on

this land owned by the State of Colorado. The project will be fenced by a slated chain-link fence. The fence will screen the ground equipment. No alterations to the existing landscaping is being proposed. Upon the development of a permanent tower in the area, this temp tower will be removed and the area will be restored to its current state. This site will be constructed in about a week in which 4-5 tech trucks will enter the site and set up the temporary tower. During the construction, the work will be done on the parcel and we will not be parking on the road. When the tower is up and operational it will be unmanned and not have any traffic increases/impacts as a result of it being installed. We likely would have one tech visit the site about two times a week while it becomes operational. Once it is up and running there will be minimal if any visits to the site.

Sewer, water, storm water drainage, fire protection, police protection, and roads will be available and adequate to serve the needs of the proposed variance of use as designed and proposed

This tower will not affect sewer, water, or storm water drainage infrastructure. Cell towers do not utilize water or sewage. No underground work is being proposed with this project.

This temporary tower will be critical in ensuring that the 911 services that fire protection and police protection rely on will not be disturbed. Many T-Mobile customers rely on T-Mobile's services and 911 accessibility for fire protection and police protection.

This property is in the Commercial Airport Overlay District. UCI2 Construction Services LLC has reached out to Colorado Springs Airport and determined what they need for approval of the project. Colorado Springs Airport is requesting an FAA determination of no hazard via the 7460-1 Filing process. On 4-11-2024, an FAA application was submitted to the FAA under application 2024-ANM-2285-OE. This FAA application is routing in the FAA's system. We will obtain a FAA determination of hazard and no issues are expected. This process is a six week process and we are hoping that this variance of use can be approved with this FAA approval forthcoming. The frequencies we are deploying are no different than the ones currently broadcasting from the water tank. As soon as the FAA determination of no hazard is provided, we will attach it to this application. Proof of submittal is attached.

Respectfully,

Kenneth Trujillo

Site Acquisitions / Project Manager

4751 Fox St. Denver, CO 80216

719-205-9370 / Ken@uci2.net





**FOUNTAIN CELL / S POWERS BLVD CMRS
TOWER VARIANCE OF USE
DN02728A**

**S POWERS BLVD
& FONTAINE BLVD**

TEMPORARY
LIGHT SITE



990 SOUTH BROADWAY, DENVER, CO 80209

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SITE NAME:
FOUNTAIN CELL

SITE ID:
DN02728A

S POWERS BLVD
& FONTAINE BLVD
EL PASO COUNTY

REV:	DATE:	DESCRIPTION:	BY:
A	01/12/24	PRELIMINARY	MEM
B	04/09/24	CITY COMMENTS	SMV

Uci2
CONSTRUCTION SERVICES, LLC
4751 FOX STREET, DENVER, CO 80216

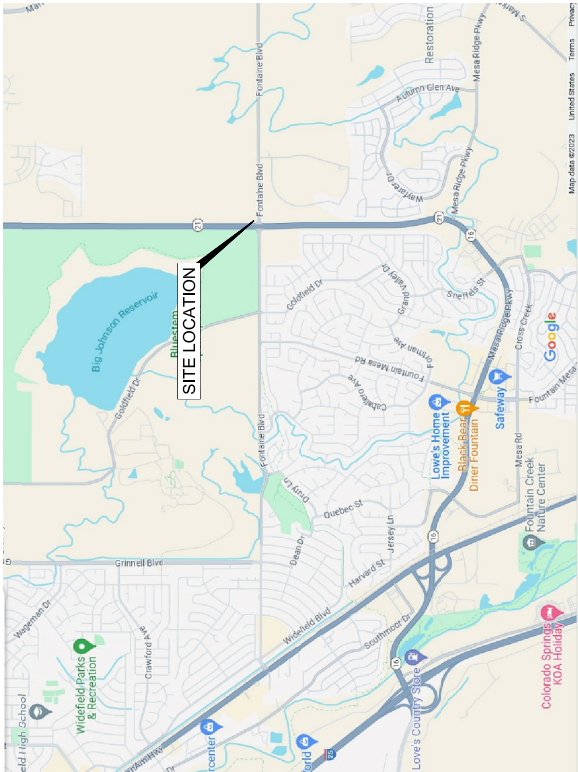
ALL SCALES ARE SET FOR 11"x17" SHEET

DRAWN BY:	CHK BY:	APV BY:
MEM	ML	TA

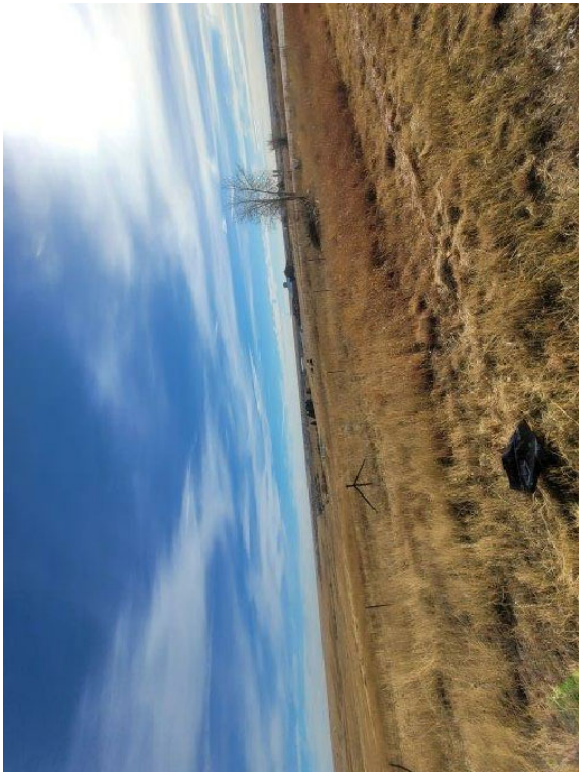
TITLE SHEET

11

SCOPE OF WORK		PROJECT CONTACTS		DRAWING INDEX
CONSTRUCTION OF A NEW "NON-INHABITABLE" T-MOBILE TELECOMMUNICATIONS SITE		OWNER CONTACT: DAVID S. RODENBERG 1127 SHERMAN ST. STE 300 DENVER, CO 80203 303.866.3454 EXT. 3328 DAVID.RODENBERG@STATE.CO.US		T1 TITLE SHEET
-INSTALL (N) T-MOBILE ARE AFS 600 / 60' TALL HYDRAULIC BALLAST POLE		APPLICANT: T-MOBILE WEST LLC 990 SOUTH BROADWAY DENVER, CO 80209 303.313.6923		GN1 GENERAL NOTES
-INSTALL (N) PORTABLE 70KVA GENERATOR	GN2 GENERAL NOTES			
-INSTALL (N) PORTABLE CHAIN LINK FENCE	A1.0 OVERALL SITE PLAN			
-INSTALL (N) T-MOBILE (MEP8-4S) 8'X8' STEEL PLATFORM	A2.0 ENLARGED SITE PLAN			
-INSTALL (N) T-MOBILE SSC 600A CABINET	A3.0 ANTENNA AND EQUIPMENT PLAN			
-INSTALL (N) T-MOBILE BATTERY CABINET	A4.0 ELEVATION			
-INSTALL (3) (N) FFV4-65C-R3-V1 ANTENNAS. (1) PER SECTOR	A5.1 ANTENNA AND EQUIPMENT SCHEDULES			
-INSTALL (3) AHFI1, (3) AHL0B, (2) AHLZL, (1) ASIA, (1) ASIL, (3) ABIA, (3) ABIL, (1) ABIO, (2) ABIA	A5.2 ANTENNA PLAN			
-INSTALL (2) TOWER JUNCTION BOXES	A6.0 SAFETY PLAN			
-INSTALL (1) MICROWAVE DISH & (2) ODUS, (1) IDU, (1) (N) FIBER CABLE & (1) (N) DC POWER CABLE	A7.0 EQUIPMENT DETAILS			
SITE INFORMATION		T-MOBILE CONSTRUCTION MANAGER 990 SOUTH BROADWAY DENVER, CO 80209 CHRIS MILLER CHRIS.MILLER@T-MOBILE.COM		A8.0 EQUIPMENT DETAILS
SITE TYPE: STRUCTURE NON-BUILDING		SITE ACQUISITION: UCI² CONSTRUCTION SERVICES 4751 FOX STREET DENVER, CO 80216 ANNIE MACKIEWICZ 303.601.7241		A9.0 EQUIPMENT DETAILS
SITE NAME: FOUNTAIN CELL / S POWERS BLVD CMRS TOWER VARIANCE OF USE				A10.0 EQUIPMENT DETAILS
SITE NUMBER: DN02728A				A11.0 EQUIPMENT DETAILS
SITE ADDRESS: S POWERS BLVD & FONTAINE BLVD				A12.0 EQUIPMENT DETAILS
PARCEL NUMBER: 5500000015				A13.0 EQUIPMENT DETAILS
LEGAL DESCRIPTION: THE WEST HALF OF SECTION 16, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF EL PASO, STATE OF COLORADO				A14.0 EQUIPMENT DETAILS
PARCEL/LOT SIZE: 320 ACRES				
EXISTING LAND USE & ZONING: UNDEVELOPED PROPERTY / A-5				
PROPOSED LAND USE & ZONING: TEMPORARY CELL TOWER /A-5				
RFDs DATE: 11/30/23				
CODE COMPLIANCE		ENGINEER UCI² CONSTRUCTION SERVICES 4751 FOX STREET DENVER, CO 80216 RYAN GUERRERO RYANG@UCI2.NET		
ALL WORK SHALL BE PERFORMED AND MATERIALS 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 THESE CODES.		PLANNING AND COMMUNITY DEVELOPMENT DIRECTOR APPROVAL BLOCK		
GOVERNING CODES, AS APPLICABLE: 2021 IBC 2020 NEC 2018 IPC 2021 IECC 2021 IMC 2023 PPRBC				
A.D.A. COMPLIANCE: NOT REQUIRED PER IBC 1103.2.9.				
OSHA COMPLIANCE: ANSI A10.48: FALL PROTECTION AND SAFETY STANDARDS				



SITE PHOTO

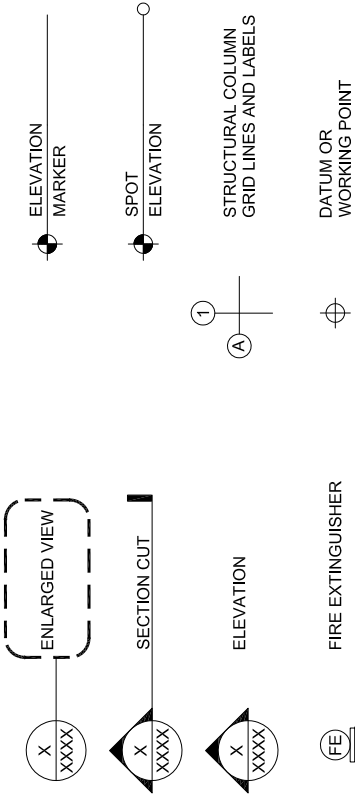


DRIVING DIRECTIONS

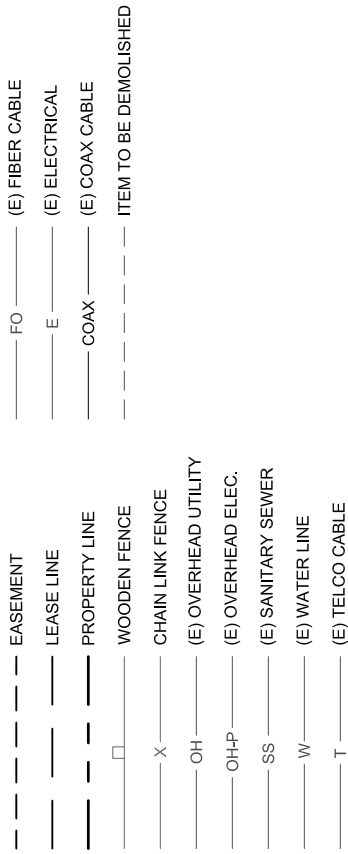
FROM 990 SOUTH BROADWAY DENVER, CO: TAKE I-25 SOUTH TO COLORADO SPRINGS. TAKE
EXIT 132A TO MERGE ONTO CO-16 E/MESA RIDGE PKWY CONTINUE ONTO CO-21 N. DRIVE
300' PAST FONTAINE BLVD. SITE IS ON THE RIGHT.

@ ° ø	AT CENTERLINE DEGREES DIAMETER	ILC INT.	INTEGRATED LOAD CENTER INTERIOR
A/C APPROX. ARCH. A.F.F. A.F.G. A.T.S AWS	AIR CONDITIONER APPROXIMATE ARCHITECTURAL ABOVE FINISH FLOOR ABOVE FINISH GRADE AUTOMATIC TRANSFER SWITCH ADVANCED WIRELESS SYSTEM	L.F. MAX. MECH. MFRGR. MGB MIN MSDS MTL. MTS N.T.S. O.C. O.D. OVP PCS RAD. R.O. RRU SHTG. SIM. SPEC. S.S. STL. STRUCT. T.C. TELCO T.O. TYP. U.G. U.N.O. VERT. V.I.F. W/	LINEAR FEET MAXIMUM MECHANICAL MANUFACTURER MAIN GROUND BAR MINIMUM MATERIAL SAFETY DATA SHEET METAL MANUAL TRANSFER SWITCH NOT TO SCALE ON CENTER OUTSIDE DIAMETER OVER VOLTAGE PROTECTION PERSONAL COMMUNICATIONS SERVICE RADIUS ROUGH OPENING REMOTE RADIO UNIT SHEATHING SIMILAR SPECIFICATION STAINLESS STEEL STEEL STRUCTURAL TEMPERATURE CONTROL TELECOMMUNICATIONS TOP OF TYPICAL UNDERGROUND UNLESS NOTED OTHERWISE VERTICAL VERIFY IN FIELD WITH
BBU BCM BLDG. B.O.	BATTERY BACK UP BASE CHANNEL ELEMENT MODULE BUILDING BOTTOM OF		
CLG. COL. CONC.	CEILING COLUMN CONCRETE		
DBL. DIA. DIM. DISC. DN. DWG.	DOUBLE DIAMETER DIMENSION DISCONNECT DOWN DRAWING		
(E) EA. ELEV. ELEC. EQ. EXT.	EXISTING EACH ELEVATION ELECTRICAL EQUAL EXTERIOR		
F.O. FIN. FLOOR FUT.	FIRE EXTINGUISHER FINISH FLOOR FUTURE		
GA. GALV. GEN. GPS GWB.	GAUGE GALVANIZED GENERATOR GLOBAL POSITIONING SYSTEM GYPSUM WALLBOARD		
H.M. HORZ. HR. HT.	HOLLOW METAL HORIZONTAL HOUR HEIGHT		

ABBREVIATIONS



SYMBOLS



LINE TYPES

GENERAL CONSTRUCTION NOTES

- CODE COMPLIANCE
- THE FACILITY IS AN UNOCCUPIED WIRELESS FACILITY. EQUIPMENT ROOMS ARE NOT MANNED, ARE NOT HABITABLE, AND DO NOT REQUIRE POTABLE WATER, SEWER CONNECTIONS OR A.D.A. ACCESS ACCOMMODATIONS.
 - ALL WORK PERFORMED AND MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE STANDARDS, CODES, ORDINANCES, RULES, REGULATIONS, ORDINANCES, AND MANUFACTURER'S RECOMMENDATIONS. WHEN TWO OR MORE ARE IN CONFLICT, THE MOST STRINGENT PROVISION SHALL BE FOLLOWED.
 - CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. WHERE LICENSING IS REQUIRED, CONTRACTOR SHALL OBTAIN ALL REQUIRED LICENSES PRIOR TO BEGINNING WORK.
 - MECHANICAL AND ELECTRICAL SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
 - CONTRACTOR TO COORDINATE WITH LOCAL JURISDICTION FOR ANY CODE RELATED QUESTIONS. ALL JURISDICTION REQUIRED CHANGES ARE THE RESPONSIBILITY OF THE CONTRACTOR.

GENERAL CONDITIONS

- DO NOT SCALE DRAWINGS.
- THESE DESIGN DOCUMENTS ARE DIAGRAMMATIC IN NATURE AND ARE INTENDED TO SHOW FINAL CONDITIONS. UNLESS NOTED OTHERWISE.
- THE CONTRACTORS SHALL USE DIMENSIONS SHOWN ON THE DRAWINGS AND ACTUAL FIELD MEASUREMENTS. NOTIFY THE AE PROJECT MANAGER IF ANY DISCREPANCIES ARE FOUND PRIOR TO PROCEEDING WITH WORK.
- EXTERIOR DIMENSIONS ARE TO FACES OF EXTERIOR WALLS.
- DIMENSIONS ON PLANS ARE TO FINISH FACES OR CENTERLINES OF COLUMNS UNLESS NOTED OTHERWISE.
- DIMENSIONS TO DOOR OPENINGS ARE TO R.O. IN MASONRY & CONCRETE AND TO JAMB OPENING IN STUDWALLS. VERIFY DOOR SIZE W/ SCHEDULE.
- DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK.
- REPRESENTATIONS OF TRUE NORTH, OTHER THAN THOSE FOUND ON THE PLOT OF SURVEY DRAWING, SHALL NOT BE USED TO IDENTIFY OR ESTABLISH THE BEARING OF TRUE NORTH AT THE SITE. THE CONTRACTOR SHALL RELY SOLELY ON THE PLOT OF SURVEY DRAWING AND ANY SURVEYOR'S MARKINGS AT THE SITE FOR THE ESTABLISHMENT OF TRUE NORTH, AND SHALL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH THE WORK IF ANY DISCREPANCY IS FOUND BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND THE TRUE NORTH ORIENTATION AS DEPICTED ON THE PLAT OF SURVEY. THE CONTRACTOR SHALL ASSUME SOLE LIABILITY FOR ANY FAILURE TO NOTIFY THE ARCHITECT/ENGINEER.
- EVERY EFFORT HAS BEEN MADE BY THE ARCHITECT / ENGINEERS TO PROVIDE ACCURATE AND COMPLETE DESIGN DOCUMENTS THOUGH MINOR ERRORS AND OMISSIONS MAYBE CONTAINED WITHIN THE DOCUMENTS. THESE SHALL NOT EXCUSE THE CONTRACTOR FROM PROVIDING AN ACCURATE PROPOSAL AND COMPLETING THE PROJECT IN ACCORDANCE WITH THE INTENT OF THE DESIGN DOCUMENTS.
- IT IS THE EXPRESS INTENT OF THE PARTIES INVOLVED IN THIS PROJECT THAT THE CONTRACTOR OR SUBCONTRACTOR OR INDEPENDENT CONTRACTOR OR THEIR RESPECTIVE EMPLOYEES SHALL EXCULPATE THE ARCHITECT, THE ENGINEER, THE CONSTRUCTION MANAGER, THE OWNER, AND THEIR AGENTS, FROM ANY LIABILITY WHATSOEVER AND HOLD THEM HARMLESS AGAINST LOSS, DAMAGES, LIABILITY OR ANY EXPENSE ARISING IN ANY MATTER FROM A WRONGFUL OR NEGLIGENT ACT, OR FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, OR FROM THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR FAILURE TO CONFORM TO THE STATE SCAFFOLDING ACT IN CONNECTION WITH THE WORK.

CONTRACTOR'S RESPONSIBILITIES

- PRIOR TO THE SUBMISSION OF A BID, THE CONTRACTOR SHALL VISIT THE JOB SITE, REVIEW ALL DESIGN DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS, CONFIRMING THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING ANY DISCREPANCIES BETWEEN ACTUAL CONDITIONS AND DESIGN DOCUMENTS, NOTIFYING THE CONSTRUCTION MANAGER AND ARCHITECT/ENGINEER OF SUCH, AND SHALL OBTAIN WRITTEN CLARIFICATION PRIOR TO BEGINNING THE WORK.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE EXACT EXTENT OF WORK, COORDINATION, DEMOLITION, TEMPORARY CONSTRUCTION, TEMPORARY FACILITIES, UTILITIES, ETC., NECESSARY TO COMPLETE THEIR PROJECT AS INDICATED IN THE CONTRACT DOCUMENTS. WHILE REVIEWING THE DESIGN DOCUMENTS, THE CONTRACTOR SHALL IDENTIFY ANY ITEMS WHERE THE DESIGN INTENT IS UNCLEAR AND OBTAIN WRITTEN CLARIFICATIONS PRIOR TO FURNISHING A BID. THE CONTRACTOR SHALL RECEIVE, IN WRITING, AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS. ANY REQUEST FOR ALTERATIONS TO THE DESIGN INTENT SHALL BE PROVIDED IN WRITING FOR REVIEW AND APPROVAL.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE MOST RECENT DESIGN DOCUMENTS AND ENSURING THEY ARE DISTRIBUTED AND ARE FOLLOWED BY ALL PERSONNEL INVOLVED IN THE PROJECT.
- CONTRACTOR SHALL OBTAIN WRITTEN AUTHORIZATION FROM THE CARRIER PRIOR TO PURCHASING ANY MATERIALS OR STARTING ANY WORK.
- CONTRACTOR SHALL, EXCEPT AS SPECIFICALLY AGREED OTHERWISE, PROVIDE ALL NECESSARY MATERIALS, LABOR AND EQUIPMENT TO COMPLETE THE INSTALLATION AS DESCRIBED IN DESIGN DOCUMENTS. CONTRACTOR TO CLARIFY PROVIDED MATERIALS PRIOR TO FURNISHING A BID.
- ALL FURNISHED MATERIALS SHALL MEET CARRIER SPECIFICATIONS AND MINIMUM REQUIREMENTS FOR THE PROJECT. ANY SUBSTITUTIONS SHALL BE APPROVED IN WRITING BY CARRIER CONSTRUCTION MANAGER PRIOR TO PURCHASE AND INSTALLATION.
- THE GENERAL CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK, USING THE BEST SKILLS AND ATTENTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES AND MATERIALS; AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT INCLUDING CONTACT AND COORDINATION WITH THE CONSTRUCTION FIELD ENGINEER AND WITH THE LANDLORD'S AUTHORIZED REPRESENTATIVE, COORDINATING ACCESS, AND COMPLIANCE WITH ANY REQUIREMENTS IMPOSED BY THE LANDLORD.
- CONTRACTOR TO PROVIDE CLOSE OUT PACKAGE WITH ALL TEST RESULTS, SETTING SCREEN SHOTS, RELEVANT CATALOGS / CUT SHEETS, INSTRUCTION SHEETS AND A SET OF RED-LINED AS-BUILT DRAWINGS PRIOR TO FINAL BILLING.

CONDITION OF SITE

- CONTRACTOR SHALL MAKE PROVISIONS TO PROTECT EXISTING SITE FINISHES AS MUCH AS POSSIBLE. ANY IMPACT TO SITE AND SURROUNDINGS SHALL BE MITIGATED AND CONTRACTOR SHALL RETURN SITE TO PRE-CONSTRUCTION CONDITIONS.
- WORK AREA SHALL BE KEPT FREE OF DEBRIS ACCUMULATION. KEEP WORK AREAS NEAT AND ORDERLY AS MUCH AS POSSIBLE. MEANS OF EGRESS SHALL BE KEPT CLEAR AT ALL TIMES.
- ALL DEMOLISHED AND UNUSED MATERIALS SHALL BE REMOVED FROM SITE AND TRACKED ASSETS LOGGED AND RETURNED TO CARRIER FOR DISPOSAL OR REUSE. CONTRACTOR TO KEEP THE SITE CLEAN, FREE OF HAZARDS, PROPERLY DISPOSE OF ALL RUBBISH, AND REMOVE TRASH AND REFUSE DAILY. BURY NOTHING ON SITE. NO SOLID WASTE RECEPTACLE WILL BE SITED.

SITE WORK

- CONTRACTOR TO VERIFY STATE REQUIREMENTS FOR UTILITY LOCATION SERVICES AND EXCAVATION CONTRACTOR SHALL NOTIFY STATE OR LOCAL NOTIFICATION CENTER AS REQUIRED PRIOR TO ANY SITE DISTURBANCES.
- REASONABLE EFFORTS HAVE BEEN MADE TO IDENTIFY EXISTING UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING ALL UTILITIES, SHOWN OR NOT, AND PROTECTING THEM FROM DAMAGE. EXCAVATION CONTRACTOR TO OBTAIN REQUIRED LOCATES PRIOR TO STARTING WORK.
- CONTRACTOR SHALL PROTECT ALL SITE FINISHES AND IMPROVEMENTS AND RETURN ALL TO PRE WORK CONDITION. IF EXTERIOR SITE IMPROVEMENTS ARE REQUIRED, CONTRACTOR TO INSTALL AND MAINTAIN DRAINAGE / RUNOFF MITIGATION MEASURES THROUGH OUT THE PROJECT AND REVEGETATE AREA TO RETURN IT TO ORIGINAL CONDITIONS.
- GRUB AND DISPOSE OF ALL ORGANIC MATERIAL PRIOR NO FILL OR EARTHWORK TO OCCUR WITH ON OR WITH FROZEN MATERIAL

STRUCTURAL NOTES

- GENERAL CONDITIONS
 - NO STRUCTURAL ALTERATIONS ARE TO BE MADE TO THE FACILITY UNLESS SPECIFICALLY NOTED.
 - ALL STRUCTURAL SHOP DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR WRITTEN APPROVAL PRIOR TO FABRICATION.
- CONCRETE AND MASONRY
 - ALL CONCRETE WORK SHALL CONFORM WITH ACI. 318 OR LATEST. DETAIL REINFORCING IN CONFORMANCE WITH ACI. SP66 LATEST.
 - NO SPLICES OF REINFORCEMENT SHALL BE MADE EXCEPT AS DETAILED OR AUTHORIZED BY THE STRUCTURAL ENGINEER. LAP SPLICES WHERE PERMITTED SHALL BE A MINIMUM OF 30 BAR DIAMETERS.
 - PROVIDE ALL ACCESSORIES NECESSARY TO SUPPORT REINFORCING AT POSITIONS SHOW ON DRAWINGS.
 - WIRE FABRIC REINFORCEMENT MUST LAP ONE FULL MESH AT SIDE AND END LAPS SHALL BE TIED TOGETHER.
 - CURE AFTER FINISHING CONCRETE. KEEP MOIST FOR 7 DAYS AFTER POURING.
 - COMPACT STRUCTURAL FILL 95% PROCTOR DENSITY PRIOR TO PLACING CONCRETE UNDER SLABS.
 - 1/4" CHAMFER ON ALL CORNERS AND EDGES.
 - ALL CONCRETE SHALL BE PORTLAND, TYPE 1 CEMENT WITH A MINIMUM OF 28 DAY STRENGTH OF 3000 PSI, 4" SLUMP AND A MINIMUM AIR ENTRAPMENT OF 4%.
 - ALL REINFORCING STEEL SHALL BE GRADE 60. ALL REINFORCING MESH SHALL CONFORM TO ASTM A 185.
 - CONTRACTOR TO OBTAIN X-RAY OR GPR (IF APPLICABLE) OF ANY CONCRETE OR MASONRY STRUCTURES, IDENTIFYING ALL EMBEDMENT PRIOR TO CUTTING, DRILLING OR OTHER ACTIVITY WHICH COULD CAUSE DAMAGE. AVOID ALL EMBEDMENT. OBTAIN APPROVAL FROM STRUCTURAL ENGINEER PRIOR TO IMPACTING ANY STRUCTURAL FACILITIES.

STRUCTURAL STEEL

- CHANNELS, ANGLES AND PLATES SHALL BE ASTM A36 MATERIAL. UNLESS NOTED OTHERWISE:
 - SQUARE AND RECTANGULAR TUBE STEEL HSS SECTIONS SHALL BE ASTM A500, GRADE B (Fy = 46 ksi) MATERIAL.
 - ROUND PIPE SECTIONS SHALL BE ASTM A53, GRADE B (Fy =35 ksi) MATERIAL.
 - DESIGN, FABRICATION, AND ERECTION SHALL BE IN ACCORDANCE WITH THE "AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", WITH COMMENTARY AND THE "CODE OF STANDARD PRACTICE".
 - ALL STEEL SHALL HAVE ONE COAT OF SHOP PRIMER. DO NOT PAINT AREAS WITHIN 3" OF BOLTS, WELDS OR HEADED STUDS.
 - ALL OUTDOOR STEEL ITEMS SHALL BE HOT DIPPED GALVANIZED PER ASTM A123.
 - BOLTS SHALL BE HIGH STRENGTH BOLTS, A325, CONFORMING TO ASTM SPECIFICATIONS. ALL CONNECTIONS SHALL HAVE A MINIMUM OF 2 BOLTS.
 - WELDING SHALL BE CONDUCTED BY CERTIFIED WELDERS AND SHALL CONFORM TO THE AWS CODES FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION.
 - WELDS SHALL BE MADE USING E70XX ELECTRODES AND SHALL BE 3/16" MINIMUM UNLESS OTHERWISE NOTED.
 - WELDING SHALL BE PERFORMED IN ACCORDANCE WITH A WELDED PROCEDURE SPECIFICATION (WPS) AS PER AWS D1.1, D1.3 AND D1.4.
 - ONLY PRE-QUALIFIED WELDING PROCEDURES SHALL BE USED.
 - UNLESS SPECIFICALLY ADDRESSED IN THE SPECIFICATIONS OR THE DETAILS, ALL STEEL ITEMS PERMANENTLY EXPOSED TO EARTH OR WEATHER SHALL BE CORROSION-RESISTANT BY GALVANIZING OR BY THE USE OF STAINLESS STEEL.
 - ALL FIELD WELDS ON GALVANIZED MATERIAL SHALL BE BRUSH-COATED WITH A ZINC-RICH PAINT MINIMUM OF (2) 3/8" DIAMETER FLATHEAD FRP SCREWS PER MEMBER.
 - ANY DAMAGED GALVANIZING OR PAINT TO BE FIELD REPAIRED WITH "COLD-GALV" OR APPROPRIATE PAINT UNDER CONDITIONS APPROVED BY PRODUCT MANUFACTURER.
- FIBER REINFORCED PLASTICS
 - ALL FRP MATERIAL SHALL BE EXTREN SERIES 500 OR EQUIVALENT. PRODUCED BY THE PULTRUSION METHOD.
 - ALL ADHESIVE RESIN SHALL BE PLEXUS METHACRYLATE OR AN EQUIVALENT ADHESIVE RESIN THAT IS COMPATIBLE WITH THE RESIN MATRIX USED IN THE STRUCTURAL SHAPES.
 - ALL FRP CONNECTIONS SHALL BE FULLY-BONDED AT EACH SIDE WITH A 1/4" PLATE AND A MINIMUM OF (2) 3/8" DIAMETER FLATHEAD FRP SCREWS PER MEMBER.
 - ISOPLAST NUTS AND BOLTS SHALL BE TIGHTENED TO A SNUG-TIGHT FIT PLUS AN ADDITIONAL 1/2 TURN, PRIOR TO BEING LOCKED WITH EPOXY.
 - ALL PANELS / SHEATHING SHALL BE FULLY BONDED WITH 3/8" FLATHEAD FRP SCREWS AT 12" O.C.
 - ALL FIELD CUT AND DRILLED EDGES, HOLES AND ABRASIONS SHALL BE SEALED WITH A CATALYZED EPOXY RESIN COMPATIBLE WITH THE MANUFACTURER'S ORIGINAL RESIN.



990 SOUTH BROADWAY, DENVER, CO 80209

PROJECT INFORMATION:

SITE NAME:	FOUNTAIN CELL
SITE ID:	DN02728A
	S POWERS BLVD & FONTAINE BLVD EL PASO COUNTY

REV:	DATE:	DESCRIPTION:	BY:
A	01/12/24	PRELIMINARY	MEM
B	04/09/24	CITY COMMENTS	SMV

PLANS PREPARED BY:



4751 FOX STREET, DENVER, CO 80216

LICENSURE NO:

ALL SCALES ARE SET FOR 11"x17" SHEET

DRAWN BY:	CHK BY:	APV BY:
MEM	ML	TA

SHEET TITLE:

GENERAL NOTES

SHEET NUMBER:

GN1

WEATHER PROOFING

1.

ALL EXTERIOR WALL OPENINGS, FLASHING, COUNTERFLASHING AND EXPANSION JOINTS SHALL BE CONSTRUCTED IN SUCH A MANNER AS TO MAKE IT WEATHERPROOF.

2.

THE JUNCTION OF THE ROOF AND VERTICAL SURFACES SHALL BE FLASHED AND COUNTERFLASHED IN A MANNER TO MAKE THEM WEATHERPROOF.

3.

PROVIDE FOR ALL TEMPORARY WEATHERPROOFING DURING THE COURSE OF WORK TO ASSURE PROTECTION AND FULL OPERATION OF THE EXISTING FACILITY.

DOORS, VENTS, AND WINDOWS

1.

ALL EGRESS DOORS SHALL BE ABLE TO BE OPENED FROM THE INSIDE WITHOUT USE OF KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT. ALL EXIT SIGNS SHALL HAVE LETTERS SIX INCHES HIGH MINIMUM, AND SHALL CONFORM WITH APPLICABLE CODES. REFER TO FLOOR PLANS FOR EXIT SIGN LOCATIONS.

2.

INSTALL PER MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS AND RECOMMENDATIONS, WHERE DETAILED, PROVIDE ALL ADDITIONAL MATERIALS SHOWN OR NOTED. VERIFY ALL OPENING SIZES, BOTH NEW AND EXISTING PRIOR TO ORDERING. PROVIDE SPACE FOR FLASHING AS DETAILED. PROVIDE GALVANIC ISOLATION BETWEEN DISSIMILAR MATERIALS.

FINISHES

1.

PAIN

T ALL PAINTABLE ITEMS ATTACHED TO WALLS, CEILING, OR COLUMNS EXCEPT DUCTWORK AND FLEXIBLE AND/OR MOVABLE PARTS. CONCEAL ALL PIPE AND CONDUIT WHERE WALL FURRING IS PROVIDED. PRIME ALL MATERIALS WITH MATERIAL COMPATIBLE WITH SUBSTRATE. SEE FINISH SCHEDULE AND FINISH NOTES.

2.

OFFSET

STUDS WHERE NEEDED, SO THE FINISH WALL SURFACES WILL BE FLUSH.

3.

PROVIDE

GALVANIC ISOLATION BETWEEN DISSIMILAR METALS.

4.

CEILING

SUSPENSION SYSTEMS SHALL BE STABILIZED AGAINST LATERAL MOVEMENT IN ACCORDANCE WITH THE REQUIREMENTS OF THE IBC, GOVERNING EDITION.

5.

CEILING

HEIGHTS ARE FROM CONCRETE FLOOR SLAB TO GRID AT ACOUSTICAL TILE CEILING, OR FINISH AT HARD CEILING.

6.

ALL

INTERIOR WOOD BLOCKING SHALL BE FIRE TREATED.

EQUIPMENT

1.

THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.

2.

VERIFY ALL EQUIPMENT MOUNTING DIMENSIONS PER MANUFACTURER DRAWINGS.

3.

PROVIDE SOLID BLOCKING FOR ALL WALL MOUNTED FIXTURES, DEVICES & EQUIPMENT. COORD. W/ ALL DIVISIONS OF THE SPECIFICATIONS TO VERIFY LOCATION REQUIRED.

4.

CONTRACTOR SHALL PROVIDE SEISMIC BRACING AND SUPPORT ALL EQUIPMENT AND MATERIALS PROVIDED.

FIRESTOPPING

1.

FIRESTOPPING SHALL BE PROVIDED BY A SINGLE CONTRACTOR FOR ALL TRADES USING A SINGLE MANUFACTURER'S PRODUCTS (3M OR HILTI).

2.

ALL RECESSED PANELS MOUNTED IN FIRE RATED WALLS SHALL BE OF FIRE RATED CONSTRUCTION TO MATCH RATING OF WALL. (I.E. TRAP PRIMERS, F.E. CABINETS, ETC.)

PC Report Packet

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ELECTRICAL NOTES

1.

THESE PLANS ARE DIAGRAMMATIC ONLY, AND NOT TO BE SCALED.

2.

ELECTRICAL CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION, CONSTRUCTION TOOLS, TRANSPORTATION, ETC. FOR A COMPLETE AND PROPERLY OPERATIVE SYSTEM ENERGIZED THROUGHOUT AND AS INDICATED ON DRAWINGS, AS SPECIFIED HEREIN AND/OR AS OTHERWISE REQUIRED.

3.

ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN PERFECT CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE OR GROUP OF EQUIPMENT. MATERIALS SHALL BE LISTED AND APPROVED BY UNDER-WRITER'S LABORATORY AND SHALL BEAR THE INSPECTION LABEL "J" WHERE SUBJECT TO SUCH APPROVAL MATERIALS SHALL MEET WITH APPROVAL OF THE DIVISION OF INDUSTRIAL SAFETY AND ALL GOVERNING BODIES HAVING JURISDICTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA AND NBFU.

4.

ALL CONDUIT INSTALLED SHALL BE SURFACE MOUNTED UNLESS OTHERWISE NOTED.

5.

ELECTRICAL CONTRACTOR SHALL CARRY OUT THE WORK WITH ACCORDANCE WITH ALL GOVERNING STATE, COUNTY, LOCAL CODES AND O.S.H.A.

6.

ELECTRICAL CONTRACTOR SHALL SECURE ALL NECESSARY ELECTRICAL PERMITS, AND PAY ALL REQUIRED FEES.

7.

COMPLETE JOB SHALL BE GUARANTEED FOR A PERIOD OF NO LESS THAN ONE YEAR AFTER THE DATE OF JOB COMPLETION. ANY WORK, MATERIAL, OR EQUIPMENT FOUND, TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE ELECTRICAL CONTRACTOR.

8.

ALL INSTALLATIONS TO MAINTAIN REQUIRED CLEARANCES

9.

CONTRACTOR TO SIZE CONDUCTORS PER NEC AND CARRIER REQUIREMENTS AND UPSIZE AS REQUIRED TO MINIMIZE VOLTAGE DROP.

10.

CONTRACTOR TO SIZE CONDUIT PER NEC

11.

ALL CONDUIT ONLY (C.O.) SHALL HAVE A PULL WIRE OR ROPE, AND TRUE TAPE.

12.

PROVIDE THE OWNER WITH ONE SET OF COMPLETE DIMENSIONS AND CIRCUITS, WITHIN 10 WORKING DAYS OF PROJECT COMPLETION. ELECTRICAL "AS BUILT" DRAWINGS, SHOWING ACTUAL LOCATION OF CONDUITS.

13.

ALL BROCHURES, OPERATING MANUALS, CATALOGS, SHOP DRAWINGS, ETC. SHALL BE TURNED OVER TO PROJECT MANAGER AT JOB COMPLETION.

14.

USE T-TAP CONNECTIONS ON ALL MULTI-CIRCUITS WITH COMMON NEUTRAL CONDUCTOR FOR LIGHTING FIXTURE. ALL CONDUCTORS SHALL BE COPPER.

15.

ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING RATING NOT LESS THAN THE MAXIMUM SHORT -CIRCUIT CURRENT TO WHICH THEY MAY BE SUBJECTED, AND A MINIMUM OF 10,000 A.I.C.

16.

PATCH, REPAIR, AND PAINT ANY AREA THAT HAS BEEN DAMAGED IN THE COURSE OF THE ELECTRICAL WORK.

17.

IN DRILLING HOLES INTO CONCRETE (WHETHER FOR FASTENING OR ANCHORING PURPOSES OR PENETRATIONS THROUGH THE FLOOR FOR CONDUIT RUNS, PIPE RUNS, ETC.) IT MUST BE CLEARLY UNDERSTOOD THAT TENDONS AND RE-BARS WILL NOT BE DRILLED INTO, CUT, OR DAMAGED UNDER ANY CIRCUMSTANCES.

18.

LOCATION OF TENDONS AND RE-BARS ARE NOT DEFINITELY KNOWN AND THEREFORE MUST BE SEARCHED FOR BY APPROPRIATE METHODS AND EQUIPMENT VIA X-RAY, OR OTHER DEVICES THAT CAN ACCURATELY LOCATE THE REINFORCING STEEL TENDONS.

19.

PENETRATIONS IN FIRE RATED WALLS SHALL BE FIRE STOPPED IN ACCORDANCE WITH APPLICABLE LOCAL BUILDING CODES. USING U.L. RATED MATERIALS.

20.

ELECTRICAL CONTRACTOR IS TO COORDINATE WITH UTILITY COMPANY FOR CONNECTION OF TEMPORARY AND PERMANENT POWER TO THE SITE. THE TEMPORARY POWER AND ALL HOOK-UP COSTS SHALL BE PAID BY THE CONTRACTOR.

21.

ELECTRICAL CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND/OR CATALOG CUT-SHEETS ON ALL NON-SPECIFIED ORIGINAL MATERIALS AND EQUIPMENT, TO PROJECT MANAGER PRIOR TO COMMENCEMENT OF THE WORK.

22.

UPON COMPLETION OF WORK, CONDUCT CONTINUITY AND SHORT CIRCUIT, AS WELL AS, GROUNDING TEST, GROUNDING TEST SHALL BE PERFORMED BY INDEPENDENT TESTING AGENCY, WITH WRITTEN REPORT SUBMITTED TO THE PROJECT MANAGER FOR REVIEW AND APPROVAL.

23.

CLEAN PREMISES DAILY OF ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK PREMISES IN A COMPLETE AND UNDAMAGED CONDITION.

24.

ALL EXTERIOR WALL PENETRATIONS SHALL BE SEALED WITH POLYSEAM SEALANT.

25.

ALL #2 TINNED BARE COPPER DOWNLEADS TO BE PROTECTED BY 1/2" P.V.C. PIPE AND SECURED. COMPRESSION FITTINGS TO BE USED ON ALL CONDUITS (NO SET SCREWS).

27.

ALL #6 STRANDED COPPER WITH GREEN INSULATION TO BE ATTACHED WITH CRIMPED DOUBLE LUG, ATTACHED WITH NUTS, BOLTS AND STAR WASHERS TYPICAL AND NO-OX GREASE BETWEEN LUG AND BUS BAR.

28.

ALL ABOVE GROUND CONDUIT SHALL BE RIGID GALVANIZED CONDUIT WITH WEATHERPROOF FITTINGS.

29.

THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED BY ALL APPLICABLE CODES.

GROUNDING

1.

ALL METALLIC PARTS OF ELECTRICAL EQUIPMENT WHICH DO NOT CARRY CURRENT SHALL BE GROUNDED IN ACCORDANCE WITH THE REQUIREMENTS OF THE BUILDING MANUFACTURER, CARRIER'S AND LANDLORD'S GROUNDING AND BONDING STANDARDS, AND THE NATIONAL ELECTRICAL CODE.

2.

PROVIDE ELECTRICAL GROUNDING AND BONDING SYSTEM INDICATED WITH ASSEMBLY OF MATERIALS, INCLUDING GROUNDING ELECTRODES, BONDING JUMPERS AND ADDITIONAL ACCESSORIES AS REQUIRED FOR A COMPLETE INSTALLATION.

3.

ALL GROUNDING CONDUCTORS SHALL PROVIDE A STRAIGHT DOWNWARD PATH TO GROUND WITH GRADUAL BEND AS REQUIRED. GROUNDING CONDUCTORS SHALL NOT BE LOOPEO OR SHARPLY BENT. ROUTE GROUNDING CONNECTIONS AND CONDUCTORS TO GROUND IN THE SHORTEST AND STRAIGHTEST PATHS POSSIBLE TO MINIMIZE TRANSIENT VOLTAGE RISES.

4.

IN BUILDINGS AND/OR NEW TOWERS GREATER THAN 75 FEET IN HEIGHT AND WHERE THE MAIN GROUNDING CONDUCTORS ARE REQUIRED TO BE ROUTED TO GRADE, THE CONTRACTOR SHALL ROUTE TWO GROUNDING CONDUCTORS FROM THE ROOFTOPS, OR TOWER'S GROUND RING, TO THE EXISTING GROUNDING SYSTEM. THE GROUNDING CONDUCTORS SHALL NOT BE SMALLER THAN #2 AWG COPPER. ROOFTOP GROUND RING SHALL BE BONDED TO THE EXISTING GROUNDING SYSTEM. THE BUILDING STEEL COLUMNS, LIGHTNING PROTECTION SYSTEM, AND BUILDING MAIN WATER LINE (FERROUS OR NONFERROUS METAL PIPING ONLY).

5.

TIGHTEN GROUNDING AND BONDING CONNECTORS, INCLUDING SCREWS AND BOLTS, IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED TORQUE TIGHTENING VALUES FOR CONNECTORS AND BOLTS. WHERE MANUFACTURER'S TORQUING REQUIREMENTS ARE NOT AVAILABLE, TIGHTEN CONNECTIONS TO COMPLY WITH TIGHTENING TORQUE VALUES SPECIFIED IN UL TO ASSURE PERMANENT AND EFFECTIVE GROUNDING. CONTRACTOR SHALL VERIFY THE LOCATIONS OF GROUNDING TIE-IN-POINTS TO THE EXISTING

Mobile®

990 SOUTH BROADWAY, DENVER, CO 80209

PROJECT INFORMATION:

SITE NAME:
FOUNTAIN CELL

SITE ID:
DN02728A

S POWERS BLVD
& FONTAINE BLVD
EL PASO COUNTY

REV:

DATE:

DESCRIPTION:

BY:

A

01/12/24

PRELIMINARY

MEM

B

04/09/24

CITY COMMENTS

SMV

PLANS PREPARED BY:

UOI

CONSTRUCTION SERVICES, LLC

4751 FOX STREET, DENVER, CO 80216

LICENSURE NO:

ALL SCALES ARE SET FOR 11"x17" SHEET

DRAWN BY:

CHK BY:

APV BY:

MEM

ML

TA

SHEET TITLE:

GENERAL
NOTES

SHEET NUMBER:

GN2

6.

ALL UNDERGROUND GROUNDING CONNECTIONS SHALL BE MADE BY THE GROUNDING SYSTEM. EXOTHERMIC WELD PROCESS AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

7.

ALL GROUNDING CONNECTIONS SHALL BE INSPECTED FOR TIGHTNESS. EXOTHERMIC WELDED CONNECTIONS SHALL BE APPROVED BY THE INSPECTOR HAVING JURISDICTION BEFORE BEING PERMANENTLY CONCEALED.

8.

APPLY CORROSION-RESISTANCE FINISH TO FIELD CONNECTIONS AND PLACES WHERE FACTORY APPLIED PROTECTIVE COATINGS HAVE BEEN DESTROYED.

9.

A SEPARATE, CONTINUOUS, INSULATED EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED IN ALL FEEDER AND BRANCH CIRCUITS.

10.

BOND ALL INSULATED GROUNDING BUSHINGS WITH A BARE 6 AWG GROUNDING CONDUCTOR TO A GROUND BUS.

11.

DIRECT BURIED GROUNDING CONDUCTORS SHALL BE INSTALLED AT A NOMINAL DEPTH OF 36" MINIMUM BELOW GRADE, OR 6" BELOW THE FROST LINE, USE THE GREATER OF THE TWO DISTANCES.

12.

ALL GROUNDING CONDUCTORS EMBEDDED IN OR PENETRATING CONCRETE SHALL BE INSTALLED IN SCHEDULE 40 PVC CONDUIT.

13.

THE INSTALLATION OF A CHEMICAL ELECTROLYTIC GROUNDING SYSTEM IS NOT PERMITTED UNLESS SPECIFICALLY NOTED.

14.

DRIVE GROUND RODS UNTIL TOPS ARE A MINIMUM DISTANCE OF 36" DEPTH OR 6" BELOW FROST LINE, USING THE GREATER OF THE TWO DISTANCES.

15.

IF COAX ON THE ICE BRIDGE IS MORE THAN 6 FT. FROM THE GROUND BAR AT THE BASE OF THE TOWER, A SECOND GROUND BAR WILL BE NEEDED AT THE END OF THE ICE BRIDGE, TO GROUND THE COAX CABLE GROUNDING KITS AND IN-LINE ARRESTORS

16.

CONTRACTOR SHALL REPAIR, AND/OR REPLACE, EXISTING GROUNDING SYSTEM COMPONENTS DAMAGED DURING CONSTRUCTION AT THE CONTRACTORS EXPENSE.

17.

EXTERIOR GROUND RINGS SHALL BE TESTED AND SHALL HAVE A RESISTANCE TO EARTH OF 5 OHMS OR LESS. IF NOT NOTIFY ENGINEER.

COMMUNICATIONS

GENERAL CABLING

1.

ALL INSTALLED CABLES SHALL HAVE SHEATHS (RISER / PLENUM / OUTDOOR / UV RESISTANT) APPROPRIATE FOR THE MOST RESTRICTIVE ENVIRONMENT WHICH THEY WILL TRAVERSE.

2.

ALL CABLING TO BE SUPPORTED AND LACED PER NEC, LOCAL REQUIREMENTS AND TO MEET CARRIER SPECIFICATIONS.

3.

MAINTAIN REQUIRED SEPARATION BETWEEN CONDUCTORS AND OTHER CABLES AS PRESCRIBED BY CARRIER SPECIFICATIONS AND BEST PRACTICES.

4.

ALL FIRE, SMOKE OR DRAFT BARRIERS SHALL BE REPAIRED SUCH THAT THEY MAINTAIN THEIR INTENDED / REQUIRED RATINGS.

5.

PLANS ARE NOT TO BE SCALED. USE DIMENSION CALL-OUTS FOR ESTIMATES. CABLE LENGTHS ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY ALL LENGTHS PRIOR TO ORDERING.

FIBER OPTICS

6.

VERIFY SINGLE-MODE OR MULTI-MODE AND CONNECTOR TYPE

7.

ALL CABLES AND CONNECTORS TO BE PRE-APPROVED, OR AN EXCEPTION OBTAINED PRIOR TO PURCHASE AND INSTALLATION

8.

ALL FIBER STRANDS SHALL BE FUSION SPLICED THROUGHOUT OUT THE LENGTH OF THE RUN AND BE TERMINATED AT EACH END OF TRUNK UNLESS SPECIFICALLY NOTED.

9.

IF TERMINATIONS TO BE LANDED IN A BULKHEAD OR COILED AND PROTECTED IN A SPLICE CASE IF BULKHEAD IS SPACE CONSTRAINED.

10.

ALL SPLICES TO BE FUSION TYPE AND INDIVIDUAL SPLICES SHALL HAVE A LOSS OF LESS THAN 0.1 dB. ANY SPLICES WITH HIGHER LOSSES TO BE REMADE.

11.

ALL FIBERS TO BE TESTED WITH OTDR AND POWER METER. OTDR AND OPTICAL LOSS REPORT PROVIDED IN CLOSEOUT PACKAGE

12.

ALL FIBER CABLING TO BE INSTALLED IN PROTECTIVE CABLE MANAGEMENT SYSTEMS, DUCT OR BE ARMORED CABLE WHERE TRAVERSING SHARED SPACE.

COAX AND ANTENNAS

13.

ALL ANTENNA MOUNTS SHALL BE INSTALLED IN ACCORDANCE WITH ANSI/TIA-222 AND APPLICABLE LOCAL CODES

14.

ALL COAX TO BE INSTALLED PER CARRIER SPECIFICATIONS, SUPPORTED AT A MINIMUM OF EVERY 4'-0" IN PROPERLY SIZED BLOCKS OR OTHER COAX SUPPORTS U.N.O.

15.

ALL COAX TRAVERSING EXTERIOR WALLS SHALL BE PROTECTED ON INTERIOR SIDE WITH LIGHTNING SURGE SUPPRESSOR GROUNDED TO BUILDING GROUNDING SYSTEM OR STEEL (NOT LIGHTNING PROTECTION SYSTEM), PROVIDE COAX GROUND KIT AT ANTENNA AND AS REQUIRED BY CARRIER.

16.

ALL COAX TERMINATIONS SHALL BE LOW PIM AND APPROVED BY CARRIER.

17.

MAINTAIN MINIMUM BEND RADIUS AND SUPPORT CABLE AS NEEDED TO PROTECT CABLES FROM SAGGING, KINKING OR BEING CAUGHT.

18.

ALL COAX TO BE SWEEP (DTF & RETURN LOSS) AND PIM TESTED WITH PASSING REPORTS PROVIDED TO CARRIER.

19.

PROVIDE 50 OHM LOAD ON ALL UNUSED PORTS.

20.

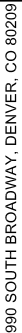
WATERPROOF ALL EXTERIOR CONNECTIONS AND ANY OTHER CONNECTIONS EXPOSED TO MOISTURE OR CONDENSING ENVIRONMENTS WITH SELF-AMALGAMATING BUTYL TAPE WITH MINIMUM 1/2" OVERLAP.

21.

TORQUE ALL CONNECTIONS TO MANUFACTURER SPECIFICATIONS WITH APPROPRIATE TORQUE WRENCH.

22.

MOUNT GPS ANTENNA ON 1-1/4" SCH. 40 STEEL OR STAINLESS STEEL WITH BURNDY GROUNDING CLAMP THIN 2" OF VERTICAL.



PROJECT INFORMATION:

SITE NAME:

FOUNTAIN CELL

SITE ID:

DN02728A

S POWERS BLVD

& FONTAINE BLVD

EL PASO COUNTY

[illegible]

PLANS PREPARED BY:



CONSTRUCTION SERVICES, LLC

LICENSE NO:

ALL SCALES ARE SET FOR 11"x17" SHEET

DRAWN BY: CHK BY: APV BY:

AWN BY: CHK BY:

MEM	MI	TA
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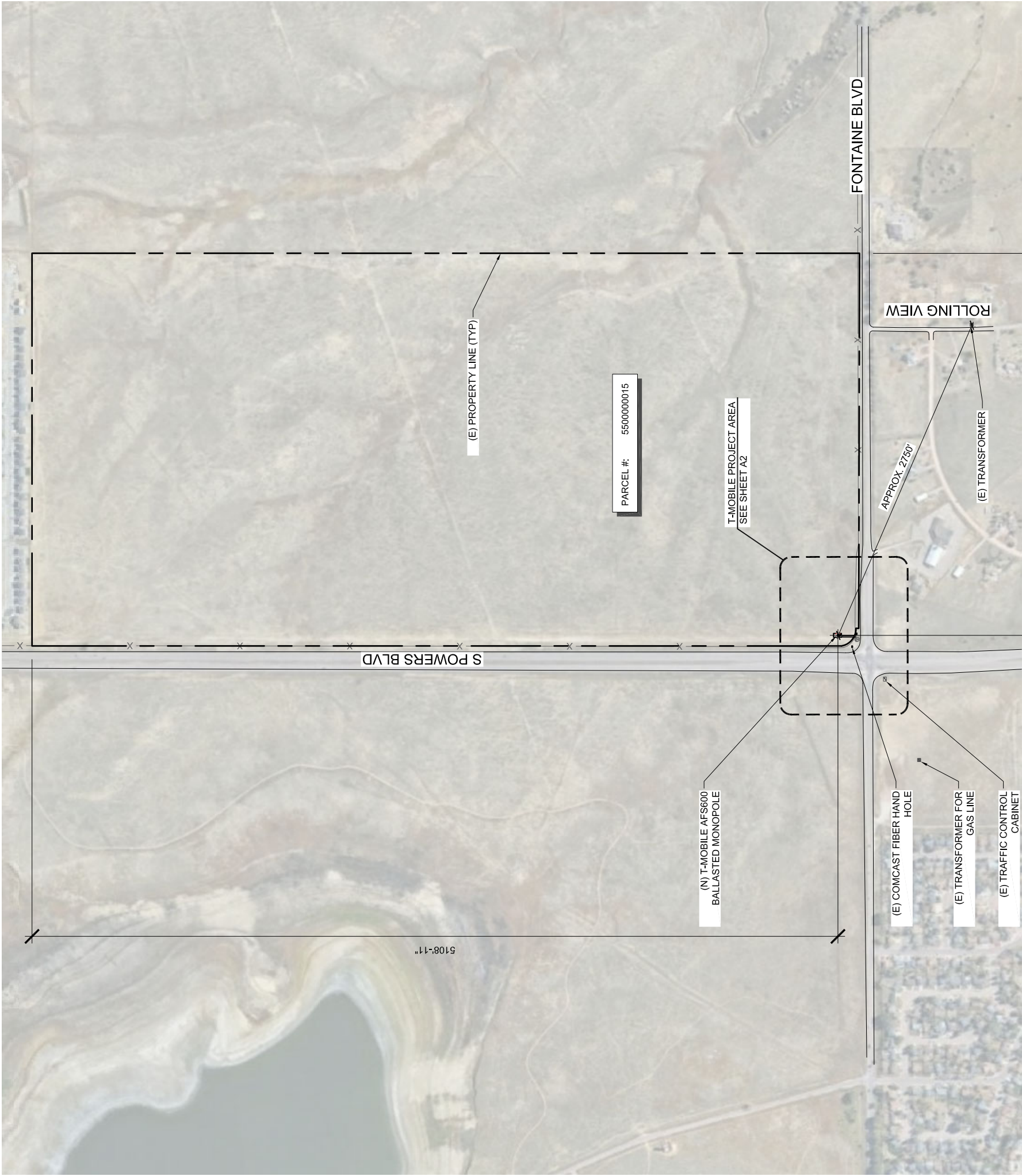
MEM	MI
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SHEET TITLE:

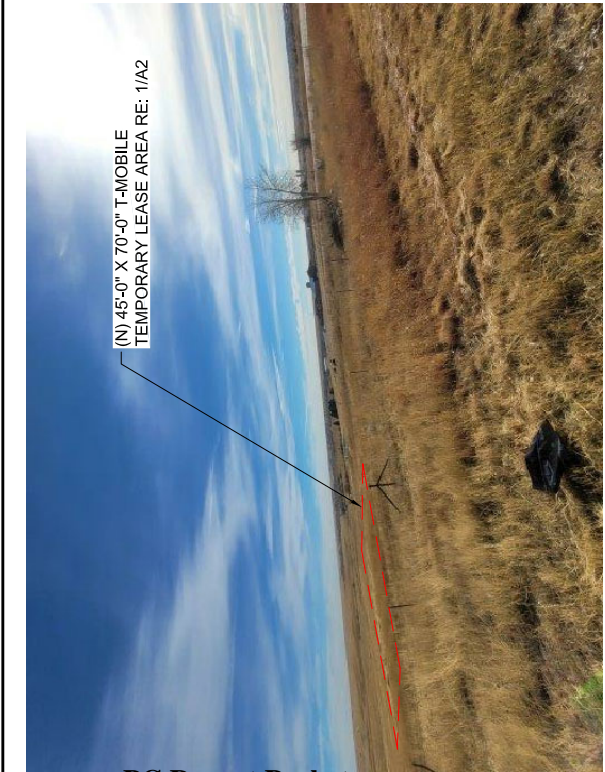
OVERALL SITE PLAN

SHEET NUMBER:

A1.0



SCALE: 1" = 700'-0"

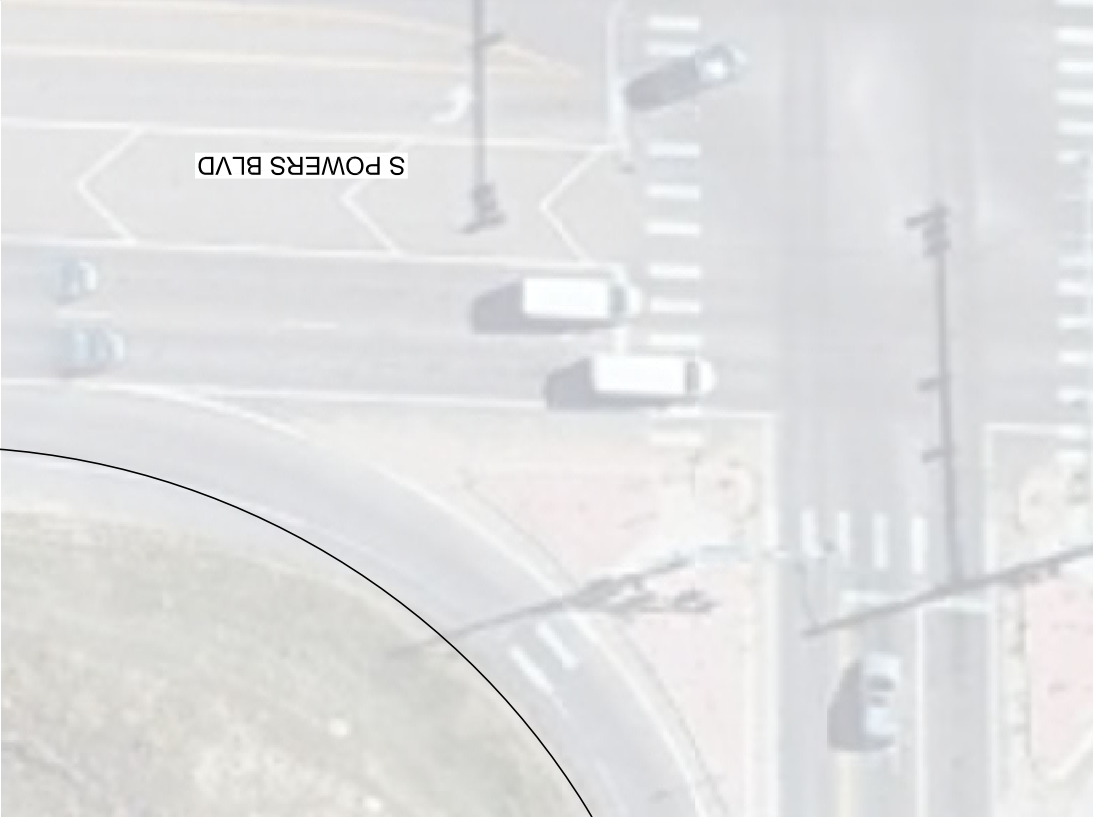


PC Report Packet
Page 33 of 55

2 LEASE AREA PHOTO

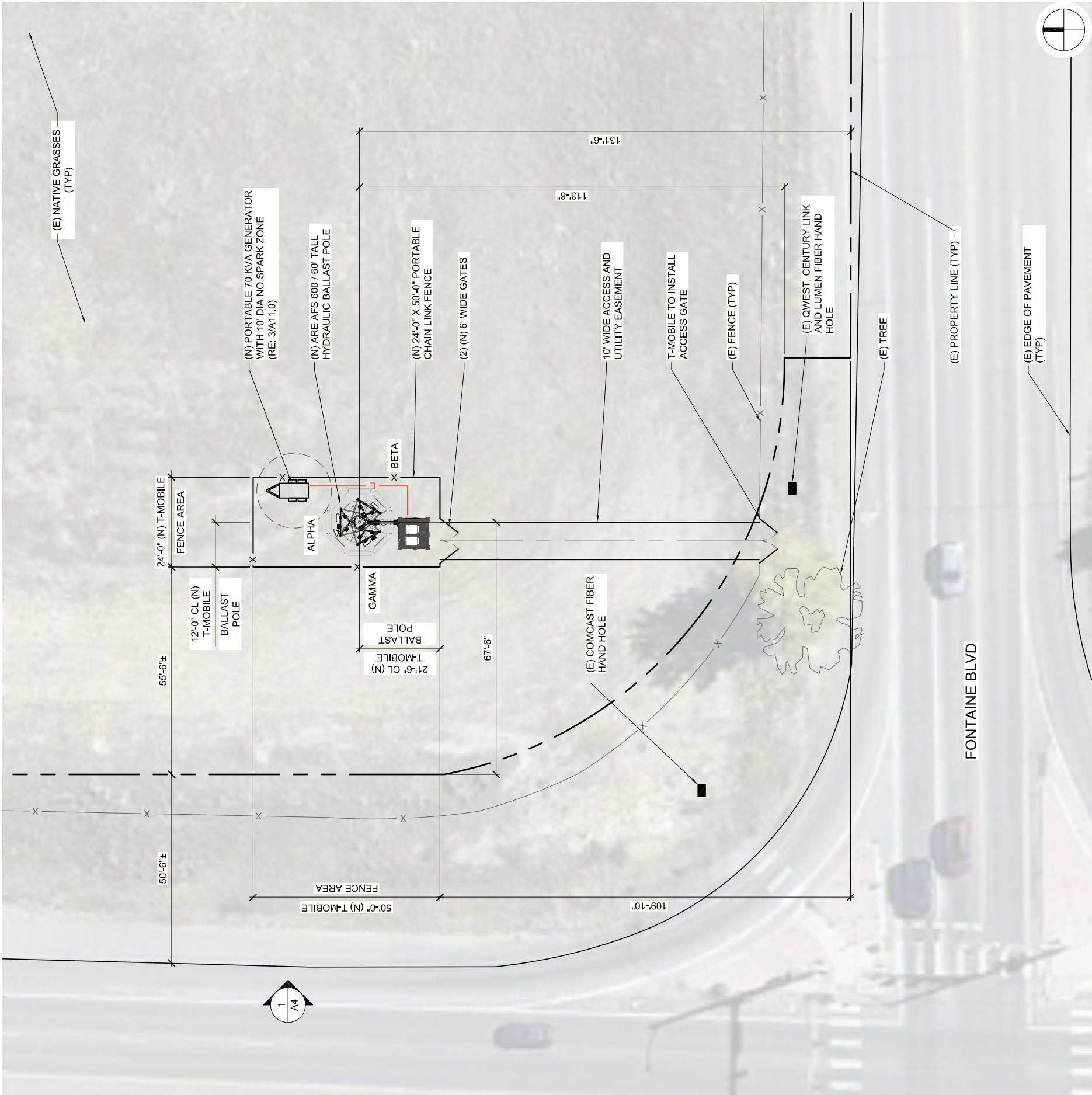
N.T.S.

NOTE:
ACTUAL GROUND SURVEY WAS NOT PERFORMED FOR THIS SITE. THE SITE PLAN WAS
DERIVED FROM PROVIDED DRAWINGS AND PHOTOS, GIS DATA, AND AERIAL IMAGES.



1 ENLARGED SITE PLAN

SCALE: AS NOTED



PROJECT INFORMATION:

SITE NAME:
FOUNTAIN CELL
SITE ID:
DN02728A
S POWERS BLVD
& FONTAINE BLVD
EL PASO COUNTY

REV:	DATE:	DESCRIPTION:	BY:
A	01/12/24	PRELIMINARY	MEM
B	04/09/24	CITY COMMENTS	SMV

PLANS PREPARED BY:



LICENSURE NO:

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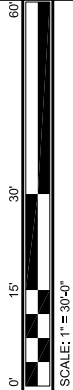
DRAWN BY:	CHK BY:	APV BY:
MEM	ML	TA

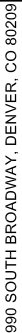
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ENLARGED
SITE PLAN

SHEET NUMBER:

A2.0





PROJECT INFORMATION:

SITE NAME:

SITE ID:

DN02728A

S POWERS BLVD
& FONTAINE BLVD
EL PASO COUNTY

REV:	DATE:	DESCRIPTION:	BY:
A	01/12/24	PRELIMINARY	MEM
B	04/09/24	CITY COMMENTS	SMV

PLANS PREPARED BY:



LICENSE NO:

ALL SCALES ARE SET FOR 11"x17" SHEET

DRAWN BY: CHK BY: APV BY:

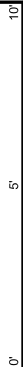
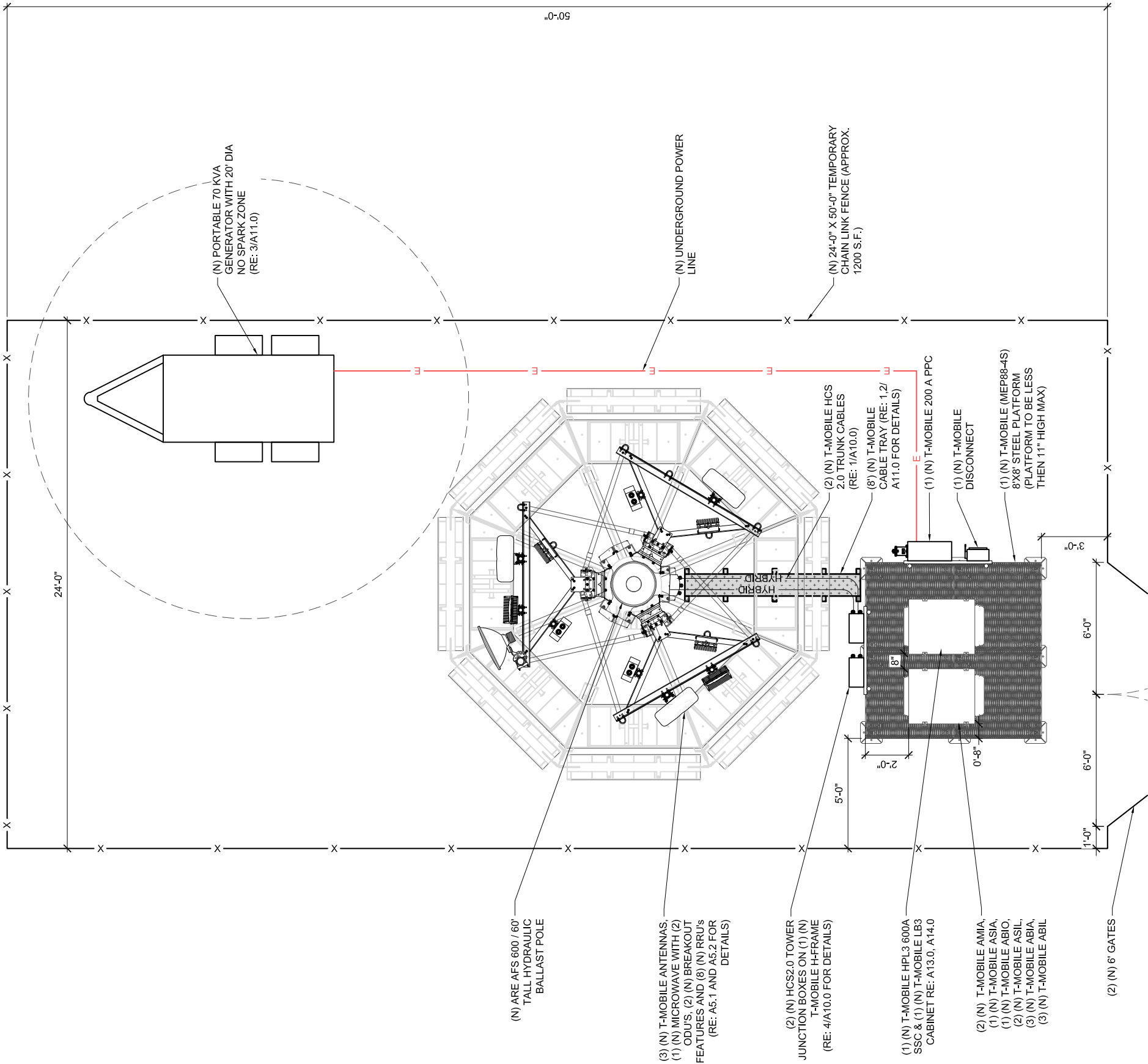
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90	0.00	0.00	0.00
9			

SHEET TITLE:

EQUIPMENT PLAN

SHEET NUMBER:

A3.0



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

ANTENNA NOTES:

1. ANTENNA CONTRACTOR SHALL ENSURE THAT ALL ANTENNA MOUNTING PIPES ARE PLUMB.

2. FEEDLINE LENGTHS INDICATED ARE APPROXIMATE.

3. ANTENNA COAXIAL FEEDERS & ANTENNA JUMPERS SHALL BE COLOR CODED PER T-MOBILE REQUIREMENTS.

4. IN ADDITION TO THE COLOR CODE, THE FOLLOWING ANTENNA SECTOR COLOR STRIPE SHALL BE ADDED TO EACH ANTENNA SECTOR FEEDLINE & JUMPER.

5. SEE SHEET A_ FOR DETAILS

6. MULTI PORT ANTENNAS: TERMINATE UNUSED ANTENNA PORTS WITH CONNECTOR CAP & WEATHERPROOF THOROUGHLY. JUMPERS FROM TMAs MUST TERMINATE TO OPPOSITE POLARIZATIONS IN EACH SECTOR.

7. CONTRACTOR MUST FOLLOW ALL MANUFACTURERS' RECOMMENDATIONS REGARDING THE INSTALLATION OF FEEDLINES, CONNECTORS, AND ANTENNAS.

8. MINIMUM BEND RADIUS:

LDF4-50A (1/2" HARD LINE) = 5"

FSJ4-50B (1/2" SUPER FLEX) = 1 1/4"

AVA5-50A (7/8" HARD LINE) = 10"

AVA7-50A (1-5/8" HARD LINE) = 15"

LDF7-50A (1-5/8" HARD LINE) = 20"

9. CONTRACTOR SHALL RECORD THE SERIAL #, SECTOR, AND POSITION OF EACH ACTUATOR INSTALLED AT THE ANTENNAS AND PROVIDE THE INFORMATION TO T-MOBILE.

10. WEATHERPROOF ALL ANTENNA CONNECTORS WITH SELF AMALGAMATING TAPE.

11. ANTENNA CONTRACTOR SHALL PERFORM A "TAPE DROP" MEASUREMENT TO CONFIRM/ VALIDATE ANTENNA CENTERLINE (ACL) HEIGHT. CONTRACTOR SHALL SUBMIT A COMPLETED HEIGHT VERIFICATION FORM TO THE CONSTRUCTION MANAGER.

12. ALL FIBER RUNS CONTAINED IN ONE COMMSCOPE HYBRID DC-FIBER CABLE (MODEL# HCS 2.0 TRUNK CABLE 12#6AWG24 SM FIBER PR) FROM LOWER JUNCTION BOX TO UPPER JUNCTION BOX. HYBRID CABLE SHALL BE COLOR CODED PER T-MOBILE REQUIREMENTS.

1

ANTENNA NOTES

T-Mobile

990 SOUTH BROADWAY, DENVER, CO 80209

PROJECT INFORMATION:

SITE NAME:
FOUNTAIN CELL

SITE ID:
DN02728A

S POWERS BLVD
& FONTAINE BLVD
EL PASO COUNTY

REV:

DATE:

DESCRIPTION:

BY:

A	01/12/24	PRELIMINARY	MEM
B	04/09/24	CITY COMMENTS	SMV

PLANS PREPARED BY:

UOI

2

CONSTRUCTION SERVICES, LLC

4751 FOX STREET, DENVER, CO 80216

LICENSURE NO:

ALL SCALES ARE SET FOR 11"x17" SHEET

DRAWN BY:CHK BY:APV BY:

MEMMLTA

SHEET TITLE:

ANTENNA AND EQUIPMENT SCHEDULES

SHEET NUMBER:

A5.1

ANTENNA KEY

STATUS	ANTENNA NUMBER	AZIMUTH	ANTENNA CENTERLINE AGL	ANTENNA VENDOR	MODEL NUMBER	BEAM WIDTH	MECH. DOWN TILT	ELEC. DOWN TILT	TECH.	FEEDER	
										(QTY) SIZE	COLOR CODE
(N)	A1	0	56'-0"	COMMSCOPE	FFV4-65C-R3-V1	65°	0°	6° / 3°	N600/L700/L600/N2500 /N1900/L1900/L2100/N N2100(DARK)	(8) 1/2" COAX CABLES FOR EACH ANTENNA	RED STRIPE
(N)	B1	130°	56'-0"	COMMSCOPE	FFV4-65C-R3-V1	65°	0°	6° / 3°	N600/L700/L600/N2500 /N1900/L1900/L2100/N 2100(DARK)	(8) 1/2" COAX CABLES FOR EACH ANTENNA	BLUE STRIPE
(N)	C1	230°	56'-0"	COMMSCOPE	FFV4-65C-R3-V1	65°	0°	6° / 3°	N600/L700/L600/N2500 /N1900/L1900/L2100/N 2100(DARK)	(8) 1/2" COAX CABLES FOR EACH ANTENNA	WHITE STRIPE
(N)	M1	26.22°	60'-0"	ANDREW	VHLP2-11WA	-	-	-	BACKHAUL	80' ARMORED LC/LC FO CABLE	

TOWER EQUIPMENT KEY

STATUS	LOCATION	VENDOR	EQUIPMENT	MODEL NUMBER	TECH.	QTY.
(N)	TOWER	CERAGON	MICROWAVE	FRUD	-	1
(N)	TOWER	NOKIA	FIBER BREAKOUT	HCS 2.0 FIBER BREAKOUT FEATURE	-	1
(N)	H-FRAME	NOKIA	RRU	AZHL	N2500	2
(N)	H-FRAME	NOKIA	RRU	AHFII	L1900 / L2100 N1900/N2100 (DARK)	3
(N)	H-FRAME	NOKIA	RRU	AHLOB	N600/L600/L700	3

EQUIPMENT FEEDLINE KEY

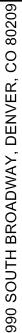
STATUS	LOCATION	VENDOR	EQUIPMENT	MODEL NUMBER	TECH.	QTY.
(N)	-	COMMSCOPE	HYBRID TRUNK CABLE	15' HCS 2.0 HYBRID TRUNK CABLE 12#6AWG24-SM-FIBER-PR	-	2
(N)	-	COMMSCOPE	HYBRID JUMPER	15' HCS 2.0 JUMPER CABLE 2#6AWG-2-PR-AIRSCALE	-	8
(N)	-	COMMSCOPE	MICROWAVE	80' ARMORED LC/LC FO CABLE 80' 2X14 AWG OUTDOOR DC CABLE	-	1

NOTES:

- INFORMATION PER RFDS DATED: 11/30/23

- CONTRACTOR TO REFER TO MOST RECENT RFDS BY T-MOBILE PRIOR TO COMMENCING WORK.

- REFER TO SHEETS A8 FOR ANTENNA SPECIFICATIONS.



PROJECT INFORMATION:

SITE NAME:
FOUNTAIN CELL

DN02728A

S POWERS BLVD
& FONTAINE BLVD
EL PASO COUNTY

REV:	DATE:	DESCRIPTION:	BY:
A	01/12/24	PRELIMINARY	MEM
B	04/09/24	CITY COMMENTS	SMV

PLANS PREPARED BY:



CONSTRUCTION SERVICES, LLC
4751 FOX STREET, DENVER, CO 80216

LICENSE NO:

ALL SCALES ARE SET FOR 11"x17" SHEET

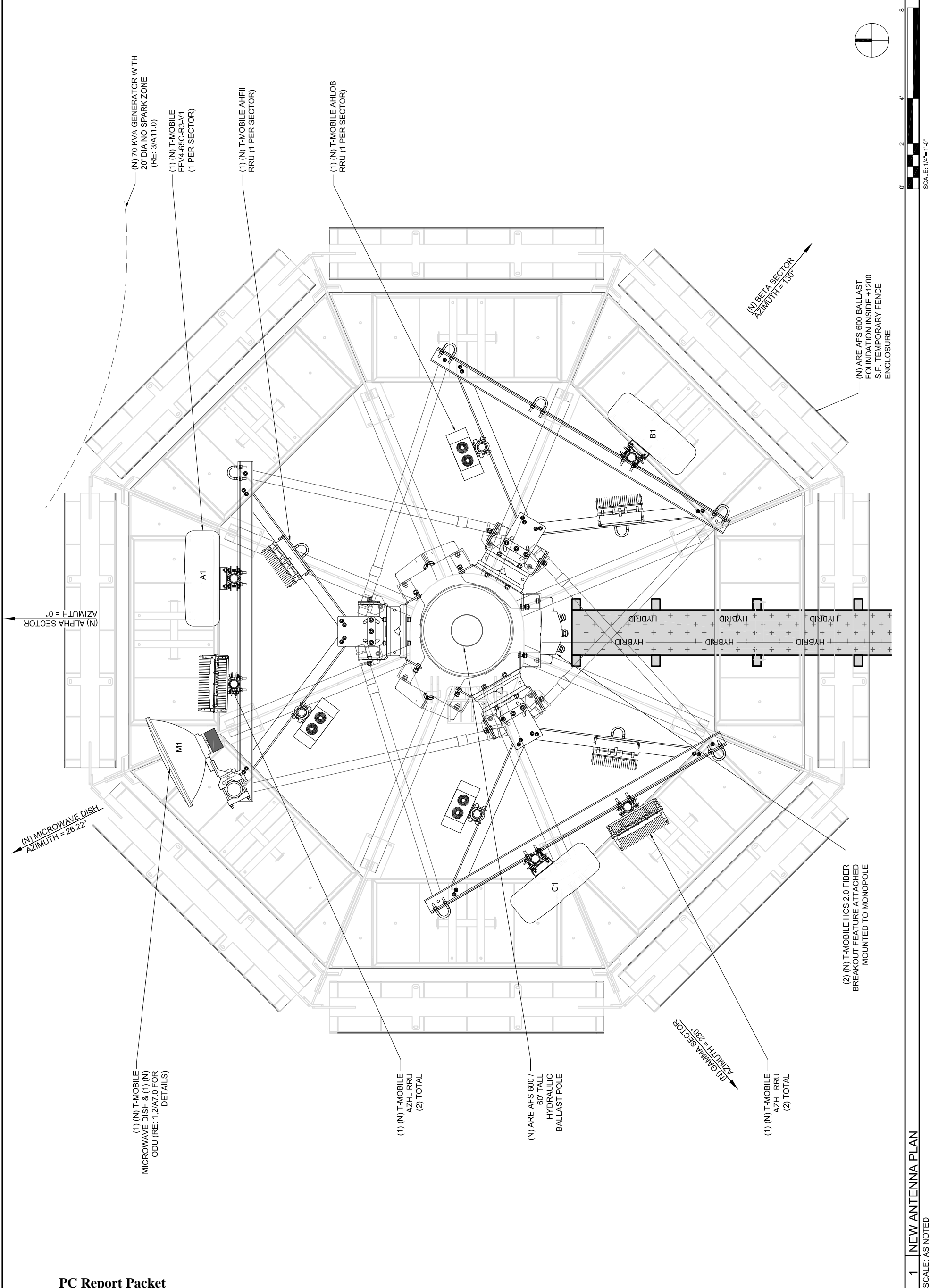
DRAWN BY:	CHK BY:	APV BY:
MEM	ML	TA

SHEET TITLE:

ANTENNA PLAN



SHEET NUMBER:

A5.2



NOTE:
THIS SITE MEETS OSHA COMPLIANCE FOR FIELD OPERATIONS TO ACCESS BT'S EQUIPMENT ON THE GROUND. ALPHA, BETA, & GAMMA SECTOR RADIOS AND ANTENNA'S ARE ACCESSIBLE BY TOWER CREW ONLY.

GC NOTE: ALL HOLES LARGER THAN 2"x2" ARE REQUIRED TO BE COVERED BY THE GC WITH A STEEL PLATE.

LEGEND	
	6' UNPROTECTED WALK ZONE
	3' SAFETY PATH TO EQUIPMENT



PROJECT INFORMATION:

SITE NAME:
FOUNTAIN CELL

SITE ID:
DN02728A

S POWERS BLVD
& FONTAINE BLVD
EL PASO COUNTY

REV:	DATE:	DESCRIPTION:	BY:
A	01/12/24	PRELIMINARY	MEM
B	04/09/24	CITY COMMENTS	SMV

PLANS PREPARED BY:



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CONSTRUCTION SERVICES, LLC
4751 FOX STREET, DENVER, CO 80216

LICENSURE NO:

ALL SCALES ARE SET FOR 11"x17" SHEET

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CHK BY: ML

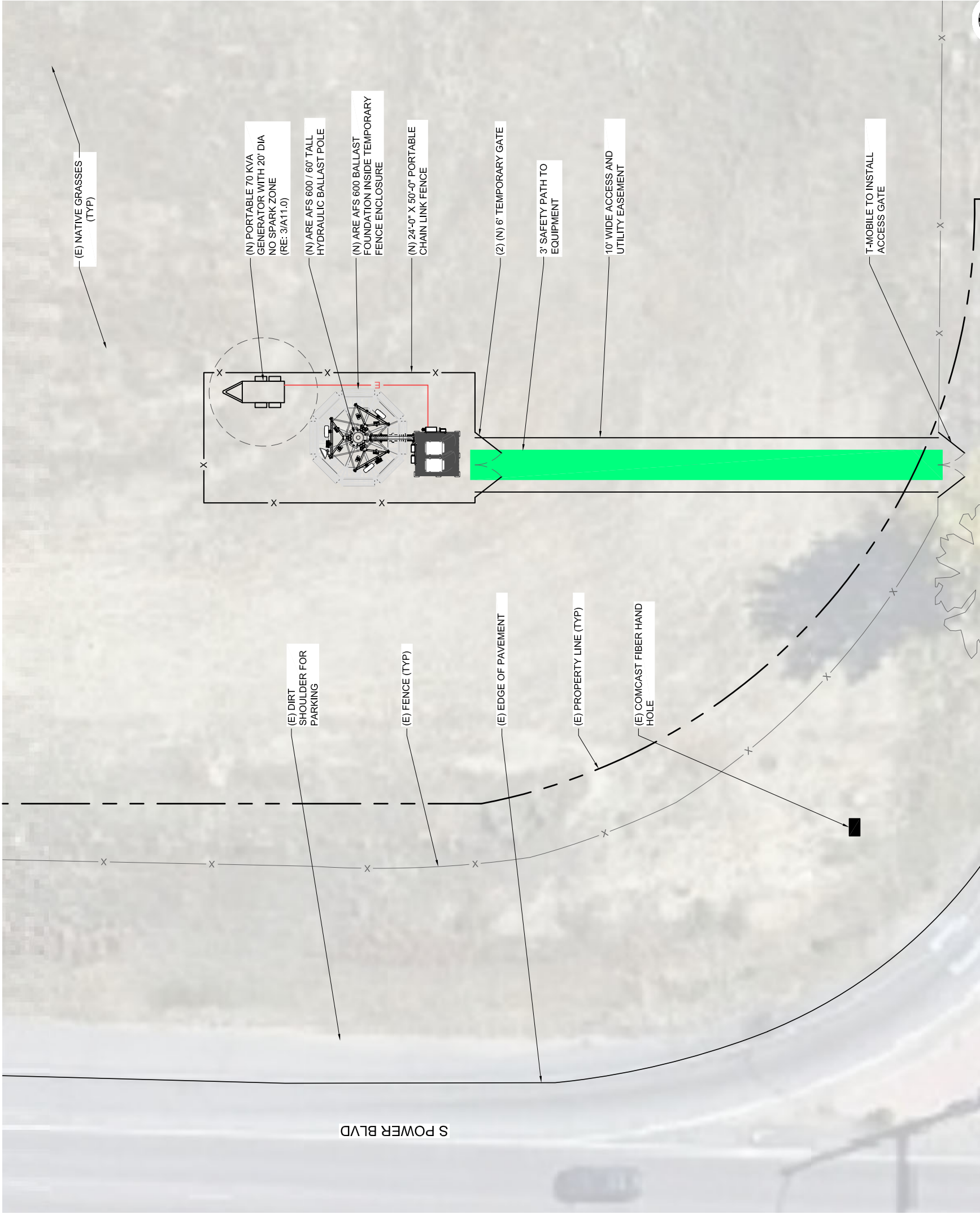
APV BY: TA

SHEET TITLE:

**SAFETY
PLAN**

SHEET NUMBER:

A6.0



SCALE: 1" = 20'-0"



CERAGON ODU RFU-D		
DIMENSIONS		WEIGHT
9"H, 9.2"W, 3.9"D		14.3 LBS

1 | ODU SPECIFICATIONS

SCALE: N.T.S.



CERAGON IDU IP-20A		
DIMENSIONS		WEIGHT
(1RU) 1.75"H, 17.5"W, 9.6"D		11.3 LBS

2 | IDU SPECIFICATIONS

SCALE: N.T.S.

VHLP2-11W/A



0.6 m | 2 ft ValuLine® High Performance Low Profile Antenna, single-polarized, 10,000–11,700 GHz

Product Classification

Product Type

Microwave antenna

Product Brand

ValuLine®

General Specifications

Antenna Type

VHLP - ValuLine® High Performance Low Profile Antenna, single-polarized

Polarization

Single

Side Struts, Included

0

Side Struts, Optional

0

Dimensions

Diameter, nominal

0.6 m | 2 ft

Electrical Specifications

Operating Frequency Band

10,000 – 11,700 GHz

Gain, Low Band

33.7 dBi

Gain, Mid Band

34.5 dBi

Gain, Top Band

35.2 dBi

Bore-site Cross Polarization Discrimination (XPD)

30 dB

Front-to-Back Ratio

61 dB

Beamwidth, Horizontal

3.3 °

Beamwidth, Vertical

3.3 °

Return Loss

17.7 dB

VSWR

1.3

Radiation Pattern Envelope Reference (RPE)

7200A | 7201A

Page 1 of 5

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COMMScope®

3 | ANTENNA SPECIFICATIONS

SCALE: N.T.S.



990 SOUTH BROADWAY, DENVER, CO 80209

PROJECT INFORMATION:

SITE NAME:
FOUNTAIN CELL

SITE ID:
DN02728A

S POWERS BLVD
& FONTAINE BLVD
EL PASO COUNTY

REV:	DATE:	DESCRIPTION:	BY:
A	01/12/24	PRELIMINARY	MEM
B	04/09/24	CITY COMMENTS	SMV

PLANS PREPARED BY:



CONSTRUCTION SERVICES, LLC
4751 FOX STREET, DENVER, CO 80216

LICENSURE NO:

ALL SCALES ARE SET FOR 11"x17" SHEET

DRAWN BY:	CHK BY:	APV BY:
MEM	ML	TA

SHEET TITLE:

EQUIPMENT
DETAILS

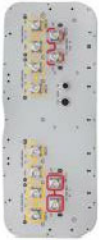
SHEET NUMBER:

A7.0

FFV4-65C-R3-V1

CommsScope—Proprietary and Confidential. Preliminary specifications are for illustrative purposes only and will be updated prior to publication.

12-port sector antenna, 4x 617-894 and 8x 1695-2690 MHz, 65° HPBW, 3x RET



Electrical Specifications

Frequency Band, MHz	617-698	698-894	1695-1880	1850-1990	1920-2200	2300-2500	2500-2690
Gain, dBi	15.7	16.3	17.7	18.1	18.6	18.7	19.2
Beamwidth, Horizontal, degrees	64	62	62	61	61	60	60
Beamwidth, Vertical, degrees	10.4	8.6	5.6	5.3	5.0	4.3	4.0
Beam Tilt, degrees	2-13	2-13	2-12	2-12	2-12	2-12	2-12
USLS (First Lobe), dB	18	17	19	18	20	19	19
Front-to-Back Ratio at 180°, dB	29	32	33	31	30	30	31
Isolation. Cross Polarization, dB	25	25	25	25	25	25	25
Isolation, Inter-band, dB	28	28	28	28	28	28	28
VSWR Return Loss, dB	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0	1.5 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-150	-153	-153	-153	-153	-153	-153
Input Power per Port at 50°C, maximum, watts	250	250	200	200	200	200	150
Polarization	±45°	±45°	±45°	±45°	±45°	±45°	±45°
Impedance	50 ohm	50 ohm	50 ohm	50 ohm	50 ohm	50 ohm	50 ohm

Electrical Specifications, BASTA*

Frequency Band, MHz	617-698	698-894	1695-1880	1850-1990	1920-2200	2300-2500	2500-2690
Gain by all Beam Tilts, average, dBi	15.5	15.8	17.3	17.7	18.0	18.3	18.6
Gain by all Beam Tilts Tolerance, dB	±0.4	±0.5	±0.5	±0.5	±0.6	±0.6	±0.7
Gain by Beam Tilt, average, dBi	2 ° 15.3 7 ° 15.6 13 ° 15.5	2 ° 15.7 7 ° 16.0 13 ° 15.6	2 ° 17.2 6 ° 17.4 12 ° 17.2	2 ° 17.6 6 ° 17.8 12 ° 17.6	2 ° 17.7 6 ° 18.1 12 ° 18.1	2 ° 18.2 6 ° 18.6 12 ° 18.1	2 ° 18.4 6 ° 18.8 12 ° 18.3
Beamwidth, Horizontal Tolerance, degrees	±3	±5	±4.4	±4.8	±5.7	±6.9	±10
Beamwidth, Vertical Tolerance, degrees	±0.6	±1.1	±0.3	±0.3	±0.4	±0.3	±0.2
USLS, beampeak to 20° above beampeak, dB	18	13	13	14	16	15	14
Front-to-Back Total Power at 180° ± 30°, dB	22	22	27	26	24	25	24
CPR at Boresight, dB	17	16	20	20	18	16	16
CPR at Sector, dB	9	8	6	5	4	5	7

* CommScope® supports NGMN recommendations on Base Station Antenna Standards (BASTA). To learn more about the benefits of BASTA, [download the Whitepaper Time to Raise the Bar on BSAs.](#)

page 1 of 4
June 17, 2019

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1 ANTENNA SPECIFICATIONS

SCALE: N.T.S.

FFV4-65C-R3-V1

General Specifications

Operating Frequency Band	1695 – 2690 MHz 617 – 894 MHz
Antenna Type	Sector
Band	Multiband
Performance Note	Outdoor usage
Total Input Power, maximum	900 W @ 50 °C

Mechanical Specifications

RF Connector Quantity, total	12
RF Connector Quantity, low band	4
RF Connector Quantity, high band	8
RF Connector Interface	4.3-10 Female
Color	Light gray
Grounding Type	RF connector inner conductor and body grounded to reflector and mounting bracket
Radiator Material	Aluminum Low loss circuit board
Radome Material	Fiberglass, UV resistant
Reflector Material	Aluminum
RF Connector Location	Bottom
Wind Loading, frontal	1055.0 N @ 150 km/h 237.2 lbf @ 150 km/h
Wind Loading, lateral	355.0 N @ 150 km/h 79.8 lbf @ 150 km/h
Wind Loading, maximum	1433.0 N @ 150 km/h 322.2 lbf @ 150 km/h
Wind Speed, maximum	241 km/h 150 mph

Dimensions

Length	2437.0 mm 95.9 in
Width	640.0 mm 25.2 in
Depth	235.0 mm 9.3 in
Net Weight, without mounting kit	59.8 kg 131.8 lb

Remote Electrical Tilt (RET) Information

Input Voltage	10-30 Vdc
Internal RET	High band (2) Low band (1)
Power Consumption, idle state, maximum	1 W
Power Consumption, normal conditions, maximum	10 W
Protocol	3GPP/ AISG 2.0 (Single RET)
RET Interface	8-pin DIN Female 8-pin DIN Male

page 3 of 4
June 17, 2019

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990 SOUTH BROADWAY, DENVER, CO 80209

PROJECT INFORMATION:

SITE NAME:	FOUNTAIN CELL
SITE ID:	DN02728A
	S POWERS BLVD & FONTAINE BLVD EL PASO COUNTY

REV:	DATE:	DESCRIPTION:	BY:
A	01/12/24	PRELIMINARY	MEM
B	04/09/24	CITY COMMENTS	SMV

PLANS PREPARED BY:



4751 FOX STREET, DENVER, CO 80216

LICENSURE NO:

ALL SCALES ARE SET FOR 11"x17" SHEET

DRAWN BY:	CHK BY:	APV BY:
MEM	ML	TA

SHEET TITLE:

EQUIPMENT
DETAILS

SHEET NUMBER:

A8.0

AHLOB AirScale RRH 4T4R B71/85 320W

Preliminary Specifications

Specification	Details
Standard	3GPP compliant, FCC/ISED, FDD-LTE, NR
Band / Frequency range	Band 71: RX 663 MHz– 698 MHz, TX 617 MHz– 652 MHz Band 85: RX 698 MHz– 716 MHz, TX 728 MHz– 746 MHz
Max. supported modulation	256QAM UL / 1024 QAM DL
Number of TX/RX paths	4T4R
Instantaneous bandwidth IBW	Full Band
Occupied bandwidth OBW	Full Band
Max. output power per TRX	4x80W shared between B71 and B85
Core Dimensions (mm) W x H x D	350 x 64.5 x 130
Envelope Dimensions (mm) W x H x D	370 x 67.6 x 160 (Not to Exceed)
Volume	30 l
Weight	<37.5 Kg
Supply voltage / Connector type	DC -48 V / -40.5 V to -60 V / 2 pole connector
Power consumption	ETSI 24hr Average: 765W 100% RF Loading: 1314W
Antenna ports	4 x 4.3-10
Optical ports	2 x 3F28 Ports, CPRI 9.8 Gbps (Rate 7)
Other interfaces / Connector type	RET RS485, AISG 3.0, EAC MDR26
Operational temperature range	-40 °C ... +55 °C
Cooling	Forced air convection
Installation options	Pole, wall, Rail
Ingress / Surge protection	IP65, DC Power Port: 20 kA 8/20 µs
Ext B30 Notch Filter	Integrated in the Radio

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Confidential

AirScale Triple Band RRH Benefits

- Up to 4x80W shared between B71 and B85
- Up to 1024 QAM DL capable hardware
- Up to 2xSFP28 Ports
- Integrated PIM Cancellation



Product Code: 475910A

NOKIA

T-Mobile

990 SOUTH BROADWAY, DENVER, CO 80209

PROJECT INFORMATION:

SITE NAME:
FOUNTAIN CELL
SITE ID:
DN02728A
S POWERS BLVD
& FONTAINE BLVD
EL PASO COUNTY

REV:

DATE:

DESCRIPTION:

BY:

A	01/12/24	PRELIMINARY	MEM
B	04/09/24	CITY COMMENTS	SMV

PLANS PREPARED BY:

UOI²

CONSTRUCTION SERVICES, LLC
4751 FOX STREET, DENVER, CO 80216

LICENSURE NO:

ALL SCALES ARE SET FOR 11"x17" SHEET

DRAWN BY:

CHK BY:

APV BY:

MEM

ML

TA

SHEET TITLE:

EQUIPMENT
DETAILS

SHEET NUMBER:

A9.0

AHFII AirScale RRH 4T4R B25/66 480W

Specification	Details
Standard	3GPP compliant, FDD-LTE, NR, GSM, WCDMA
Band / Frequency range	Band 25: RX 1850 MHz– 1915 MHz, TX 1930 MHz– 1995 MHz Band 66: RX 1710 MHz– 1780 MHz, TX 2110 MHz– 2200 MHz
Max. supported modulation	256QAM UL / 1024 QAM DL
Number of TX/RX paths	4T4R
Instantaneous bandwidth IBW	Full Band
Occupied bandwidth OBW	OBW B25 65MHz (UL/DL), B66 70MHz (UL) 90MHz (DL)
Max. output power per TRX	4x80W in any band while 4x40W in other band
Core Dimensions (mm) W x H x D	350 x 64.5 x 120
Envelope Dimensions (mm) W x H x D	370 x 67.6 x 150 (Not to exceed)
Volume	<25 l
Weight	<32.5 kg
Supply voltage / Connector type	DC -40.5 V ... -60 V / 2 pole connector
Power consumption	100% RF Loading: 1869 W 24hr weighted: 1103 W
Antenna ports	4 x 4.3-10
Optical ports	3 x SF28 Ports CPRI 9.8 Gbps (Rate 7)
Other interfaces / Connector type	RET RS485, AISG 3.0, EAC MDR26
Operational temperature range	-40 C ... +55 C
Cooling	Forced Convection (fans)
Installation options	Pole, wall, rail
Ingress / Surge protection	IP65, DC Power Port: 20 kA 8/20 µs

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AZHL AirScale RRH 8T8R B41 320W

Technical data

Specification	Details
Standard	3GPP compliant, TD
Band / Frequency range	N41/B41 2496 – 2650MHz
Max. supported modulation	256 QAM
Number of TX/RX paths	8T / 8R
Instantaneous bandwidth IBW	194 MHz
Occupied bandwidth OBW	190 MHz
Max. output power per TRX	40 W / TRX (320 W total)
Dimensions	350 mm (H) x 395 mm (W) x 190 mm (D)
Volume	26.3 l
Weight	23 kg (without mounting bracket)
Supply voltage / Connector type	DC -36 V ... -60 V / 2 pole connector
Power consumption	559 W typical (75% DL duty cycle, ETSI 24H Average) 1140 W max (75% DL duty cycle, 100% RF load)
Antenna ports, Calibration port	8 x 4.3-10, 1 x 4.3-10
ALD Control Interfaces	Control AISG2.0/3.0,
Optical ports	2 x SFP28, 9.8G CPRI, 10/25GE eCPRI (Octis Boot)
Other interfaces / Connector type	External Alarms / MDR26,
Operational temperature range	-40 °C ... +55 °C
Cooling	Natural convection cooling
Installation options	Pole, Wall, Rack
Ingress / Surge protection	IP65, DC-port Class II +/- 5kA
Supported RAT	TD-LTE, NR

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2 AHFII RRU SPECIFICATIONS

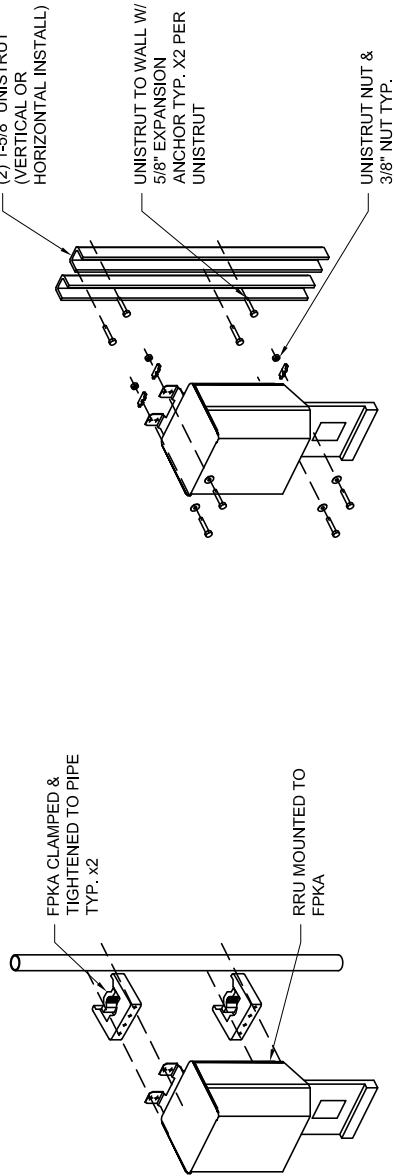
SCALE: N.T.S.

4 RRU SPECIFICATIONS (AZHL)

SCALE: N.T.S.

1 AHLOB RRU SPECIFICATIONS

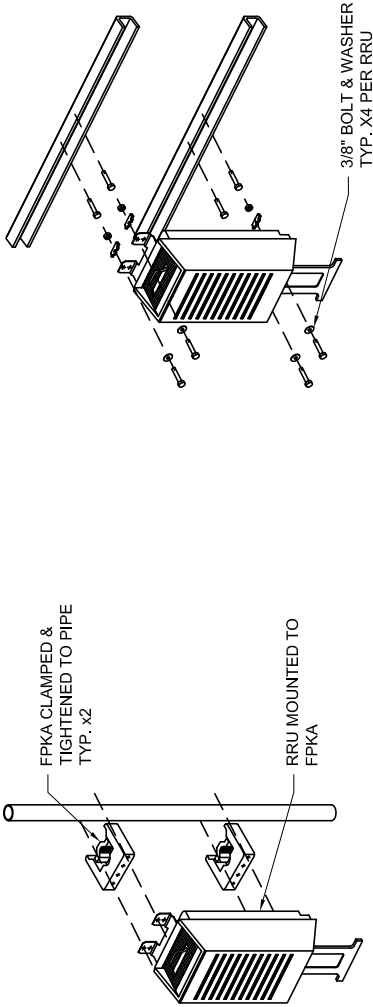
SCALE: N.T.S.



PIPE MOUNTED

3 RRU MOUNTING DETAIL

SCALE: N.T.S.



UNISTRUT MOUNTED

PROJECT INFORMATION:
SITE NAME:
FOUNTAIN CELL
SITE ID:
DN02728A
S POWERS BLVD
& FONTAINE BLVD
EL PASO COUNTY

REV:	DATE:	DESCRIPTION:	BY:
A	01/12/24	PRELIMINARY	MEM
B	04/09/24	CITY COMMENTS	SMV

PLANS PREPARED BY:



CONSTRUCTION SERVICES, LLC
4751 FOX STREET, DENVER, CO 80216

LICENSURE NO:

ALL SCALES ARE SET FOR 11"x17" SHEET

DRAWN BY: MEM

CHK BY: ML

APV BY: TA

SHEET TITLE:

EQUIPMENT
DETAILS

SHEET NUMBER:

A13.0



Specifications

Model HPL3 (HP-Large 3 Power Cabinet)

1. General	Aluminum enclosure
Dimensions	30 x 72 x 34.6 in. (762 x 1829x 879mm),
(W x H x D)	Depth with Door/Hatch: 44.7 in. (1136mm)
Weight	~595 lbs (~270kg) (without customer equipment or batteries)
Total Equipment space	30RU

Internal rack dimension	Horizontal rack:	19" x 27RU
	Vertical rack:	19" x 3RU
Power System space:	23" x 12RU	

Mounting options	Pad-mount, plinth option
Finish	Polyester Power Paint (Tan)
Safety	UL Listed , IEC / EN 60950

2. Environment	-40°C to +50°C (-40°F to +122°F) with solar load. IP 55 designed to GR-487
Operating temperature	
Protection class	
Acoustics	65dBA @5000W heat load , 70dBA @ 6000W
Humidity (relative)	95%, non-condensing (Max.)

3. Thermal Management	Direct Air Cooling, 6000W capacity, 5°C delta T
Cooling Equipment:	
Heating Equipment:	Forced air heating (2) 1000W AC heaters

4. Equipment	Knock-out plate on each upper side wall / Additional knockouts on sides
Cable entry	(1) 3" conduit hole with hole plug
Door latch	3 point latching, 5/16 nut driver tool, pad-locking capability

Primary ground	10 double-hole 3/4"-20 threaded holes on 5/8" center ground bar
Lifting Ears	4 Lifting Tabs
Plinth	Optional 6" plinth available
AC Load Center:	240V split phase, dual feed / (1) 200A + (1)100A 208V 3-phase, single feed / (1) 200A

AC Surge Protection for each breaker feed	GFCI Receptacle 120V
Temp Probes	(6 form-C) Alarm Termination block
Standard equipment	605A/ 54V (336kW) redundant Power System with DIN rail distribution: 12 rectifier positions (3x55A DPR3000 rectifiers included) 48 poles for load (2x10A, 3x50A, and 6x100A bad breakers included) 16 poles for battery (2) SB350 / (2) SB175 Battery connections (3) SB350 Generator connections

Front Door:	(6) DC powered centrifugal fans with (3) MERV-13 filters, (GORE option) Clogged Filter alarm pressure switch Door intrusion alarm (2) 1000W AC powered heaters LED interior cabinet light
-------------	---

Rear Hatch:	Exhaust vent with (3) MERV-13 filters, (GORE option)
5. Ordering information	
Cabinet	ESOA600-HCU01 HP-Large 3 600A Power / Equipment Cabinet
Rectifier	ESR-48/60A A-T 48V / 56A 3000W, 96.4%, CAN communication
Controller (Spare)	TPS1020028AU17 Orion TOUCH Controller
Plinth, 6"	37993318816900-S Plinth for V1/V2, HPL2, HPL3, LB2 and LB3

*All specifications are subject to change without prior notice



HP-Large 3 Power Cabinet

Product Features

Compact design for equipment & power:

- 30RU supports 3 radios and transport equipment
- 600A @ -48V power system
- Slimline high efficiency rectifier
- ORION Touch screen Controller
- Rear Access Hatch

Direct air-cooling solution, 6000W capacity, 5°C delta T

Easy slide-in filter replacement

Connects with:

- SB3, 2-string battery cabinet
- LB3, 4-string battery cabinet
- V2, Expansion equipment and battery cabinet

Designed to GR-487 specifications

www.deltawww.com



PROJECT INFORMATION:
SITE NAME:
FOUNTAIN CELL
SITE ID:
DN02728A
S POWERS BLVD
& FONTAINE BLVD
EL PASO COUNTY

REV:	DATE:	DESCRIPTION:	BY:
A	01/12/24	PRELIMINARY	MEM
B	04/09/24	CITY COMMENTS	SMV

PLANS PREPARED BY:

UOI²

CONSTRUCTION SERVICES, LLC
4751 FOX STREET, DENVER, CO 80216

LICENSURE NO:

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MEM	ML	TA

SHEET TITLE:

EQUIPMENT
DETAILS

SHEET NUMBER:

A14.0



Specifications

Model	LB3 (Large Battery 3 Cabinet)
1. General	
Construction	Aluminum enclosure
Dimensions (W x H x D)	30 x 72 x 35 in. (381 x 1829x 889mm).
Weight	Depth with Door: 41.2 in. (1047mm) ~540 lbs (~245kg) (without batteries)
Internal rack dimension	4 battery trays to support up to 4 strings 210Ah batteries
Mounting options	Pad-mount, plinth option
Finish	Polyester Power Paint (Tan)
Safety	UL Listed .IEC / EN 60950
2. Environment	
Operating temperature	-40° C to +50° C (-40°F to +122° F) with solar load
Protection class	IP55 designed to GR-487
Acoustics	85dBA
Humidity (relative)	95%, non-condensing (Max.)
3. Thermal Management	
Cooling Equipment:	Direct Air Cooling
Heating Equipment:	Forced air heating (1) 1000W AC heaters
4. Equipment	
Cable entry	Knock-out plate on each upper side wall
Door latch	Additional knockouts each side 3 point latching, 5/16 nut driver tool, pad-locking capability
Primary ground	10 double-hole 1/2"-20 threaded holes on 5/8" center ground bar
Lifting Ears	4 Lifting Tabs
Plinth	Optional 6" plinth available AC Load Center: 30A heater breaker Left or Right side AC entry options AC Surge Protection (option) DC Load Center: 600A bulk feed bus bar (4) 200A bolt in battery breakers (4) 2-hole lug landings.(2 output/2 input from second battery cabinet) Temp Probes Battery Trays: (4) battery trays (4) -48V battery sirings (210Ah max each) Connection kit: (1) DC 10A Breaker supplied (install onto HPL3 Power Cabinet) LED interior cabinet light (2) DC powered Axial fans with (1) F5 Filters Door intrusion alarm (1) 1000W AC powered heaters
5. Ordering information	
Front Door:	
Cabinet	ESOF015-ECV04 Large Battery 3 (LB3) Cabinet
Plinth, 6"	37993318816900-S Plinth for V1/V2, HPL2, HPL3, LB2 and LB3

*All specifications are subject to change without prior notice.



Large Battery 3 Cabinet

Product Features

Compact design for battery strings:

- Direct air cooling solution
- Supports four strings of -48V VRLA batteries up to 210Ah
- 600A rated bus bar with 200A breaker per string
- Bulk Input / Output with ability to daisy chain cabinets
- Front to Front Air Flow
- Corrosion resistant aluminum construction
- Powder coated high gloss finish
- Designed to meet GR-487

www.deltaww.com



This was presented to the AAC on 4/24/2024 with no objections to the below.

This item will be presented to the Airport Advisory Commission on 4/27/2024 with the following comments:

Airport staff recommends no objection with the following conditions:

- Avigation Easement: An avigation easement is requested or provide proof of previous recording (book/page or reception number). Add avigation easement note to plat.
- Accident Potential Zone 2: The proposed residential development is outside the Accident Potential Zone 2 (APZ-2) subzone of the Commercial Airport Overlay District. Commercial and office use are permitted within APZ-2. Residential is prohibited in APZ-2.
- FAA Form 7460-1: Based on elevation data and distance to runway, the applicant will need to file Federal Aviation Administration (FAA) Form 7460-1 "Notice of Proposed Construction or Alteration" for any new vertical development at this site, including temporary construction equipment, and provide FAA documentation to the Airport before the commencement of construction activities; FAA's website.
(<https://oeaaa.faa.gov/oeaaa/external/portal.jsp>).
- FAA Form 7460-1 Frequency Review: The applicant is to file an airspace evaluation case with the FAA for the purposes of a frequency review/analysis and provide confirmation of approval from FAA to Airport prior to the commencement of construction activities; FAA's website
(<https://oeaaa.faa.gov/oeaaa/external/portal.jsp>).

Wireless broadband networks in the 3700-3980 MHz bands: FAA Special Airworthiness Information Bulletin (SAIB) regarding Risk of Potential Adverse Effects on Radio Altimeters:

<https://www.federalregister.gov/documents/2023/01/11/2023-00420/airworthiness-directives-transport-and-commuter-category-airplanes>

The following are the instructions on obtaining an Avigation Easement:

1. Refer to your title work and/or the existing plat(s) to see if there is an existing avigation easement.
2. If nothing is existing, the City would prefer that you dedicate the avigation easement via your re/plat. Please ask your Planner or refer to Planning's checklist for that dedication language.
3. If you are not re/platting, and to grant the City a new required avigation easement by separate instrument, please refer to Real Estate Services' website at [coloradosprings.gov/Departments/Real Estate Services](https://coloradosprings.gov/Departments/RealEstateServices), Required Easements, for a current Public Application Form and Instructions regarding the process. For questions, contact Barbara Reinardy, 719-385-5601, or Barbara.Reinardy@coloradosprings.gov.
To submit your paperwork (hand delivery or US Mail): 30 S. Nevada Ave., Ste. 502, Colorado Springs, CO 80903. Please allow 3-4 weeks for processing.



Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2024-ANM-2285-OE

Issued Date: 06/11/2024

Kenneth Trujillo
UCI2 Construction Services, LLC
4751 Fox Street
Denver, CO 80216

****DETERMINATION OF NO HAZARD TO AIR NAVIGATION FOR TEMPORARY STRUCTURE****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Monopole FOUNTAIN CELL
Location:	Colorado Springs, CO
Latitude:	38-44-16.32N NAD 83
Longitude:	104-40-55.79W
Heights:	5891 feet site elevation (SE) 61 feet above ground level (AGL) 5952 feet above mean sea level (AMSL)

This aeronautical study revealed that the temporary structure does not exceed obstruction standards and would not be a hazard to air navigation provided the condition(s), if any, in this letter is (are) met:

****SEE ATTACHMENT FOR ADDITIONAL CONDITION(S) OR INFORMATION****

This determination does not constitute authority to transmit on the frequency(ies) identified in this study. The proponent is required to obtain a formal frequency transmit license from the Federal Communications Commission (FCC) or National Telecommunications and Information Administration (NTIA), prior to on-air operations of these frequency(ies).

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, will void this determination. Any future construction or alteration, including increase to heights, power or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of a structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination did not include an evaluation of the permanent structure associated with the use of this temporary structure. If the permanent structure will exceed Title 14 of the Code of Federal Regulations, part 77.9, a separate aeronautical study and FAA determination is required.

This determination concerns the effect of this temporary structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Aviation Administration Flight Procedures Office if the structure is subject to the issuance of a Notice To Air Missions (NOTAM).

If we can be of further assistance, please contact Steven Landry, at (404) 305-6249, or Steven.L-ctr.Landry@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2024-ANM-2285-OE.

Signature Control No: 618759277-624070167

(TMP)

Eric F Johnston

Manager, Obstruction Evaluation Group

Proposal: To construct and/or operate a(n) Monopole to a height of 61 feet above ground level, 5952 feet above mean sea level.

Location: The structure will be located 4.17 nautical miles south of COS Airport reference point.

Part 77 Obstruction Standard(s) Exceeded and Aeronautical Impacts, if any:

Aeronautical study revealed that the temporary structure will not exceed any Part 77 obstruction standard. Aeronautical study confirmed that the temporary structure will have no effect on any existing or proposed arrival, departure or en route instrument/visual flight rules (IFR/VFR) operations or procedures. Additionally, aeronautical study confirmed that the temporary structure will have no physical or electromagnetic effect on the operation of air navigation and communications facilities and will not impact any airspace and routes used by the military. Based on this aeronautical study, the FAA finds that the temporary structure will have no adverse effect on air navigation and will not impact any aeronautical operations or procedures.

Based on this aeronautical study, the structure would not constitute a substantial adverse effect on aeronautical operations or procedures because it will be temporary. The temporary structure would not be considered a hazard to air navigation provided all of the conditions specified in this determination are strictly met.

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 .

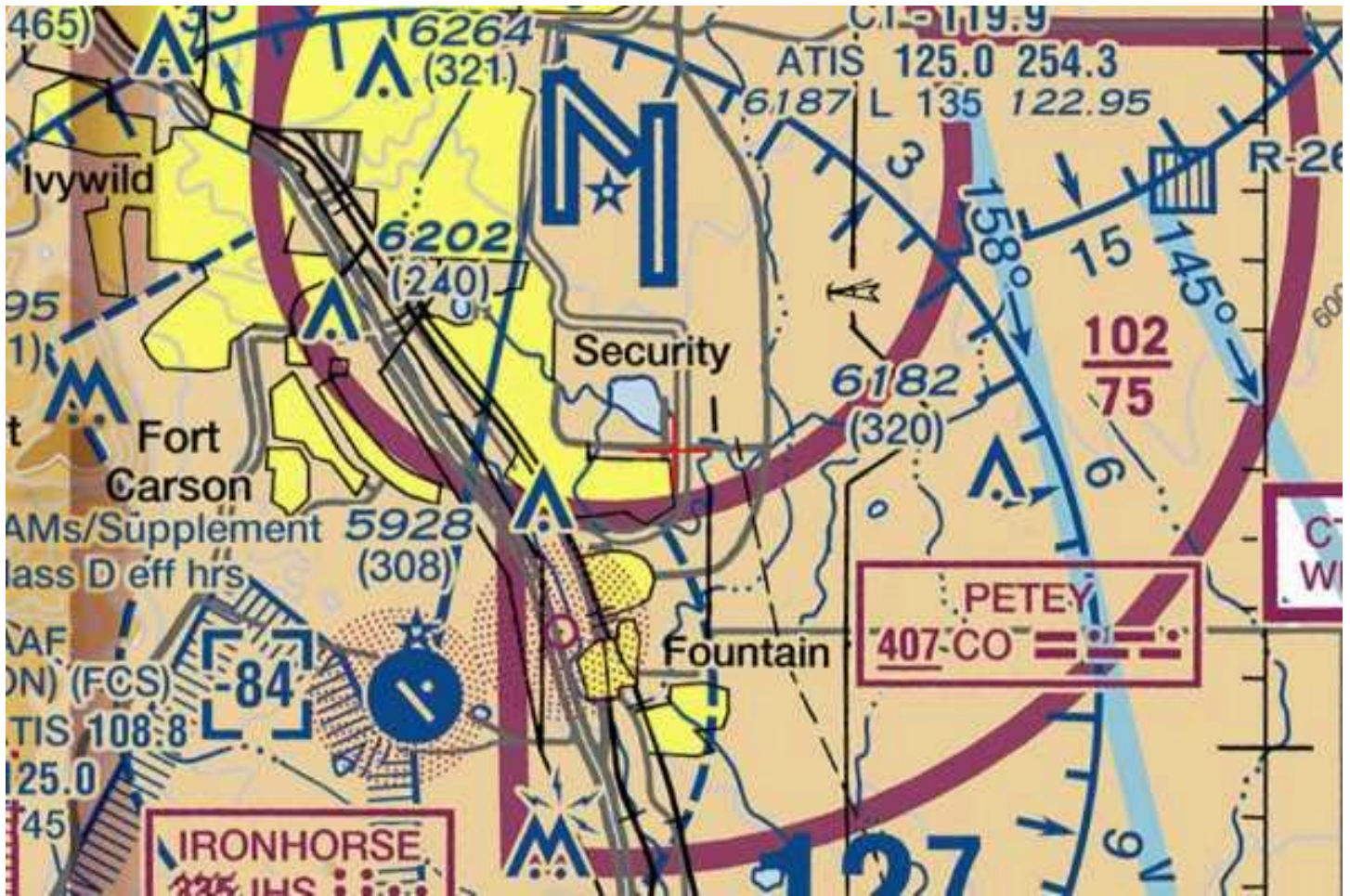
It is required that the manager of CITY OF COLORADO SPRINGS MUNI, (719) 550-1900 be notified at least 3 business days prior to the temporary structure being erected and again when the structure is removed from the site.

It is required that the manager of CITY OF COLORADO SPRINGS MUNI AIR TRAFFIC CONTROL, (719) 380-6700 be notified at least 3 business days prior to the temporary structure being erected and again when the structure is removed from the site. Additionally, please provide contact information for the onsite operator in the event that Air Traffic Control requires the temporary structure to be lowered immediately.

This determination expires on 12/11/2025 unless extended, revised, or terminated by the issuing office.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.





Joe Letke

From: DUKES, ELIZABETH A CIV USSF SpOC 21 CES/CENB <elizabeth.dukes.4@spaceforce.mil>
Sent: Monday, June 24, 2024 6:42 PM
To: Joe Letke
Subject: RE: S Powers Blvd CMRS Tower Variance of Use VA242

CAUTION: This email originated from outside the El Paso County technology network. Do not click links or open attachments unless you recognize the sender and know the content is safe. Please call IT Customer Support at 520-6355 if you are unsure of the integrity of this message.

Mr. Letke,

I am sorry I am late on reviewing the temporary T-Mobile commercial tower. After a thorough review, PSFB does not have any comments or concerns at this moment.

Thank you!

Beth Dukes
Community Planner
21 CES/CENB
580 Goodfellow St
Peterson SFB, CO 80914
DSN: 834-1708
COMM: 719-556-1708

From: Joe Letke <JoeLetke@elpasoco.com>
Sent: Monday, June 24, 2024 11:46 AM
To: DUKES, ELIZABETH A CIV USSF SpOC 21 CES/CENB <elizabeth.dukes.4@spaceforce.mil>
Subject: [Non-DoD Source] S Powers Blvd CMRS Tower Variance of Use VA242

You don't often get email from joeletke@elpasoco.com. [Learn why this is important](#)

Good morning,

On April 2, 2024, I sent Peterson SFB a agency review request for a variance of use land use application. The variance of use would permit for a temporary T-mobile commercial tower at the northeast intersection of S. Powers and Fontaine Blvd.

<https://property.spatalest.com/co/elpaso/#/property/5500000015>

As of today June 24, 2024, we have not received comments. I am reaching out to double check if Peterson SFB would like to comment on this land use application request before this item goes to Planning Commission July 18th and final approval by the Board of County Commissioners August 8th.

Thank you for your time,



Joe Letke

Planner II

Planning & Community Development

El Paso County, Colorado

719.520.7964 (Office)

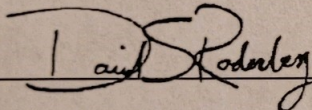
Hours: Monday-Thursday 7:00 am- 5:30 pm

<https://planningdevelopment.elpasoco.com/>

The State of Colorado)
)S.S.
County of Denver)

I, David S. Rodenberg of the Colorado State Land Board, MAKE OATH AND SAY THAT:

1. I, David Rodenberg, tower site manager for the Colorado State Land Board attest that for purposes of making applications to El Paso and Pikes Peak Regional Building Dept. for the variance of use zoning permits/building permits on El Paso County Parcel 5500000015 (the SWSW of section 16 township 15 south range 65 west) at S Powers Blvd and Fontaine Blvd, Colorado Springs, CO that the Colorado State Land Board is working in partnership with T-Mobile West LLC on a temporary cell tower project. This cell project is related to a lease between T-Mobile West LLC and the Colorado State Land Board (Lease no. 116501). The Colorado State Land Board has full knowledge of the cell tower permit applications. T-Mobile West LLC and its agents at UCI2 Construction Services LLC and have permission to apply for permits to install a temporary tower on our property at Parcel 5500000015. The Colorado State Land Board authorizes T-Mobile West LLC to enter into a CMRS facility removal agreement with El Paso County and has the right to enter the property to install and remove the tower when it is no longer needed.

Signed: 

Name: David S. Rodenberg, Tower Site Program Manager for the Colorado State Land Board

SUBSCRIBED AND SWORN TO)

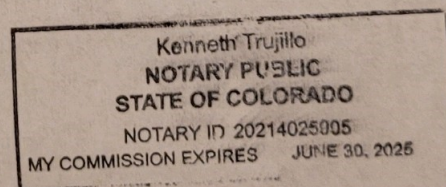
BEFORE ME, on the)

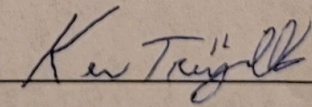
Date: 5-8-2024)

Kenneth Trujillo)

NOTARY PUBLIC)

My Commission expires: June 30, 2025)




Applicant

VARIANCE OF USE (RECOMMEND APPROVAL)

_____ moved that the following Resolution be adopted:

BEFORE THE PLANNING COMMISSION

OF THE COUNTY OF EL PASO

STATE OF COLORADO

RESOLUTION NO. VA242

S POWERS BLVD CMRS TOWER VARIANCE OF USE

WHEREAS, T-Mobile West LLC did file an application with the El Paso County Planning and Community Development Department for approval of a Variance of Use to allow a CMRS Facility, Freestanding within the A-5 (Agricultural) zoning district for property in the unincorporated area of El Paso County as described in Exhibit A, which is attached hereto and incorporated herein by reference; and

WHEREAS, a public hearing was held by this Commission on July 18, 2024; and

WHEREAS, based on the evidence, testimony, exhibits, consideration of the Master Plan for the unincorporated area of the County, presentation and comments of the El Paso County Planning and Community Development Department and other County representatives, comments of public officials and agencies, comments from all interested persons, comments by the general public, and comments by the El Paso County Planning Commission members during the hearing, this Commission finds as follows:

1. The application was properly submitted for consideration by the Planning Commission;
2. Proper posting, publication, and public notice were provided as required by law for the hearing before the Planning Commission;
3. The hearing before the Planning Commission was extensive and complete, that all pertinent facts, matters, and issues were submitted and that all interested persons and the general public were heard at that hearing;
4. All exhibits were received into evidence;
5. The proposed land use does not permit the use of an area containing a commercial mineral deposit in a manner which would interfere with the present or future extraction of such deposit by an extractor;

6. All data, surveys, analyses, studies, plans, and designs as are required by the State of Colorado and El Paso County have been submitted, reviewed, and found to meet all sound planning and engineering requirements of the El Paso County subdivision regulations; and
7. For the above-stated and other reasons, the proposed Variance of Use is in the best interest of the health, safety, morals, convenience, order, prosperity, and welfare of the citizens of El Paso County.

WHEREAS, when approving a Variance of Use, the Planning Commission and Board of County Commissioners may consider criteria found in Section 5.3.4.C of the El Paso County Land Development Code ("Code") (as amended):

1. The strict application of any of the provisions of the Code would result in peculiar and exceptional practical difficulties or undue hardship;
2. The Variance of Use is generally consistent with the applicable Master Plan;
3. The proposed use is compatible with the surrounding area, harmonious with the character of the neighborhood, not detrimental to the surrounding area, not detrimental to the future development of the area, and not detrimental to the health, safety, or welfare of the inhabitants of the area and County;
4. The proposed use will be able to meet air, water, odor or noise standards established by County, State, or Federal regulations during construction and upon completion of the project;
5. The proposed use will comply with all applicable requirements of the Code and all applicable County, State, and Federal regulations except those portions varied by this action;
6. The proposed use will not adversely affect wildlife or wetlands;
7. The applicant has addressed all off-site impacts;
8. The site plan for the proposed Variance of Use will provide for adequate parking, traffic circulation, open space, fencing, screening, and landscaping; and/or
9. Sewer, water, storm water drainage, fire protection, police protection, and roads will be available and adequate to serve the needs of the proposed Variance of Use as designed and proposed.

NOW, THEREFORE, BE IT RESOLVED, the El Paso County Planning Commission recommends that the petition of T-Mobile West LLC for approval of a Variance of Use to allow a CMRS Facility, Freestanding within the A-5 (Agricultural) zoning district be approved by the Board of County Commissioners with the following conditions and notations:

CONDITIONS

- 1. Variance of use approval shall be limited to two (2) years post Board of County Commissioners approval date.
- 2. Site Development Plan shall be submitted to El Paso County Planning and Community Development within thirty (30) days of approval.

NOTATIONS

- 1. Variance of Use approval includes conditions of approval and the accompanying site plan and elevation drawings. No substantial expansion, enlargement, intensification, or modification shall be allowed except upon reevaluation and public hearing as specified in the El Paso County Land Development Code.
- 2. Variance of Use approval includes a 60-foot height allowance within the A-5 zoning district.
- 3. The Board of County Commissioners may consider revocation and/or suspension if zoning regulations and/or Variance of Use conditions/standards are being violated, preceded by notice and public hearing.

AND BE IT FURTHER RESOLVED that this Resolution and the recommendations contained herein be forwarded to the El Paso County Board of County Commissioners for its consideration.

_____ seconded the adoption of the foregoing Resolution.

The roll having been called, the vote was as follows: (circle one)

Thomas Bailey	aye / no / non-voting / recused / absent
Sarah Brittain Jack	aye / no / non-voting / recused / absent
Jim Byers	aye / no / non-voting / recused / absent
Jay Carlson	aye / no / non-voting / recused / absent
Becky Fuller	aye / no / non-voting / recused / absent
Jeffrey Markewich	aye / no / non-voting / recused / absent
Brandy Merriam	aye / no / non-voting / recused / absent
Bryce Schuettpelz	aye / no / non-voting / recused / absent
Wayne Smith	aye / no / non-voting / recused / absent
Tim Trowbridge	aye / no / non-voting / recused / absent
Christopher Whitney	aye / no / non-voting / recused / absent

The Resolution was adopted by a vote of ____ to ____ by the El Paso County Planning Commission, State of Colorado.

DONE THIS 18th day of July 2024 at Colorado Springs, Colorado.

EL PASO COUNTY PLANNING COMMISSION

By: _____
Chair

EXHIBIT A

Legal Description

The West Half of Section 16, Township 15 South, Range 65 West of the 6th Principal meridian, County of El Paso, State of Colorado.

Exhibit B
Map Exhibit

