

FIRST AMENDMENT TO LICENSE AGREEMENT

THIS FIRST AMENDMENT TO LICENSE AGREEMENT (the “First Amendment”) is made effective this ____ day of _____, 2024 (“Effective Date”), by and between CITY OF POMONA, a California charter city (hereinafter referred to as “Licensor”) and CCTM1 LLC, a Delaware limited liability company (hereinafter referred to as “Licensee”).

RECITALS

WHEREAS, Licensor, as successor-in-interest to original lessor Gene Stalians, Trustee of the Gene Stalians 1989 Trust for the benefit of Gene Stalians and SBC Tower Holdings LLC, a Delaware limited liability company, successor in interest to Pacific Bell Mobile Services, a California corporation, are parties to that certain Communications Site Lease Agreement dated October 10, 1995, which inter alia permits Licensee’s use and occupancy of the original 136.5 square foot premises therein defined (“Original Premises”) and will expire forever with no further renewal terms on July 8, 2026 (“Original Lease”).

WHEREAS, Licensor and Licensee entered into a License Agreement dated June 21, 2019 (the “License”) whereby Licensee leased certain real property, together with access and utility easements, located in Los Angeles County, California from Licensor (the “Premises”), all located within certain real property owned by Licensor (“Licensor’s Property”).

WHEREAS, in accordance with Section 21 of the License, the License is subject to the Original Lease until terminated or expired with respect to the Original Premises alone.

WHEREAS, the Premises may be used for the purpose of constructing, maintaining and operating a communications facility, including tower structures, equipment shelters, cabinets, meter boards, utilities, antennas, equipment, any related improvements and structures and uses incidental thereto.

WHEREAS, the License has a thirty-one (31) year term that commenced on June 21, 2019 and expires forever with no renewal options available on June 20, 2050.

WHEREAS, Licensee seeks to sublicense a portion of the Premises to Dish Wireless, LLC (“Dish”), having a primary place of business of 9601 S Meridian Blvd, Englewood, CO 80112, in order to allow Dish to collocate its facilities for the provision of wireless communications services upon the Premises.

WHEREAS, Licensee and Dish have entered into that certain Site License Agreement which permits Dish’s use and occupancy of the Premises and Licensee’s Facilities (“Dish Sublicense”).

WHEREAS, Licensor and Licensee desire to amend the License to permit Licensee’s expansion of the Premises, modification to Licensee’s Facilities, and Licensee’s sublicense to Dish, among other changes on the terms and conditions contained herein.

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are acknowledged, Licensor and Licensee agree as follows:

1. Recitals; Defined Terms. The parties acknowledge the accuracy of the foregoing recitals. Any capitalized terms not defined herein shall have the meanings ascribed to them in the License.

2. Notice to Sublicense. In accordance with Section 16 of the License, Licensee hereby provides notice to Licensors of the Dish Sublicense for its use of a portion of the Premises, as expanded, for purposes of installation, maintenance and replacement of equipment, antennas, cables, fiber, and related accessories on the Premises ("Dish Facilities") for the operation of a wireless communications facility thereon.

3. First Additional Premises. Licensors and Licensee hereby acknowledge and agree that Licensee has partially exercised the Expansion Option set forth in Section 1(b) of the License. Accordingly, Licensors and Licensee agree that the Premises is hereby expanded in size to include an additional seventy-two (72) square foot parcel of real property adjacent to the existing Premises at a location more particularly described on Exhibit A attached hereto and shown on the Site Plan attached hereto as Exhibit B (the "First Additional Premises"). The Premises, as expanded by the First Additional Premises, is described on Exhibit A attached hereto. Licensors and Licensee agree that the Expansion Option remains in full force and effect as to the remaining four hundred twenty-eight (428) square feet granted thereby. Notwithstanding anything to the contrary in this First Amendment, Licensee is not relinquishing any rights to any lease or licensed area, access easements, and/or utility easements that it possesses prior to the date of this First Amendment.

4. Modification of Premises. As of the Effective Date of this First Amendment, the Premises shall consist of the Original Premises in addition to the First Additional Premises, as more particularly described in Exhibit B attached hereto and incorporated herein.

5. Consent to Modification of Licensee's Facilities. As of the Effective Date of this First Amendment, Licensors consent to Licensee's proposed modification of Licensee's Facilities as specifically described and depicted in Exhibit C.

6. Sublicense Fee. In consideration of the First Additional Premises, Licensee shall pay to Licensors the Future Sublicense Fee consisting of fifty percent (50%) of all recurring rental, license or similar payments actually received by Licensee from such Dish within thirty (30) days after receipt of said payments by Licensee in accordance with Section 1(c) of the License.

7. Right to Return the First Additional Premises. In the event the Dish Sublicense has terminated or expired, Licensee shall have the option, upon thirty (30) days prior written notice to Licensors, in its sole and absolute discretion, to return the First Additional Premises to the Licensors and to terminate the license of the same by removing all improvements from the First Additional Premises and returning same to its condition as of the Effective Date of this First Amendment, ordinary wear and tear excepted (the "Return of the First Additional Premises"). Effective upon Licensors's reasonable confirmation in writing that Licensee has successfully removed all improvements from the First Additional Premises, any Future Sublicense Fee associated with the First Additional Premises shall no longer be due and payable.

8. Operation of the Dish Facilities. Licensee and Dish shall be solely responsible for the maintenance and operation of the Dish Facilities in a safe manner and condition. Licensee hereby acknowledges and agrees that as of the Effective Date of this First Amendment,

the Dish Facilities shall be considered a portion of Licensee's Facilities, and shall be subject to the requirements of the Original Lease, License, this First Amendment, and all other applicable laws.

9. Governmental Approvals. All parties acknowledge that Licensor, in executing this First Amendment, is acting only in its proprietary capacity as the owner of Licensor's Property and Premises, and not in any regulatory fashion. Licensee shall not consider this First Amendment as approval of any applicable permits, licenses or other governmental approvals required for the construction or operation needed for the use described herein. Any required permits or approvals for the Dish Facilities shall be obtained by Licensee or Dish at Dish's or Licensee's sole expense. Furthermore, it is understood and agreed that Licensee's and Dish's ability to install the Dish Facilities is contingent upon its obtaining, prior to construction of the Dish Facilities, all of the certificates, permits, authorizations, and other approvals that may be required by any federal, state, or local authorities (collectively, the "Governmental Approvals"; individually, a "Governmental Approval"). Licensor shall bear no responsibility or liability under the License and this First Amendment for Licensee's or Dish's inability to make use of the Premises for the Dish Facilities due to a failure to obtain any required permit, authorization, or approval.

10. Administration Fee. Within fourteen (14) days following the Effective Date, Licensee will tender to Licensor a one-time administrative fee in the amount of two thousand five hundred dollars (\$2,500) for the purposes of processing this First Amendment.

11. Representations, Warranties and Covenants of Licensor. Licensor represents, warrants and covenants to Licensee that Licensor is duly authorized to and has the full power and authority to enter into this First Amendment and to perform all of Licensor's obligations under the License as amended hereby.

12. Representations, Warranties and Covenants of Licensee. Licensee represents, warrants and covenants to Licensor that Licensee is duly authorized to and has the full power and authority to enter into this First Amendment and to perform all of Licensee's obligations under the License as amended hereby.

13. Counterparts. This First Amendment may be executed in separate and multiple counterparts, each of which shall be deemed an original but all of which taken together shall be deemed to constitute one and the same instrument.

14. Remainder of License Unaffected. In all other respects, the remainder of the License shall remain in full force and effect. Any portion of the License that is inconsistent with this First Amendment is hereby amended to be consistent.

15. Recordation. Licensee, at its cost and expense, shall have the right to record a memorandum of this First Amendment, in a form approved in writing in advance by Licensor in the official records of Los Angeles County, California at any time following the execution of this First Amendment by all parties hereto.

[Signature pages follow]

Licensor and Licensee have caused this First Amendment to be duly executed on the day and year first written above.

LICENSOR:

CITY OF POMONA, a California charter city

By: _____

Print Name: _____

Title: _____

Licensor affirms that this First Amendment
was approved at a duly noticed public
meeting held on _____ 2024

[Licensee Execution Page Follows]

This First Amendment is executed by Licensee as of the date first written above.

LICENSEE:

CCTM1 LLC, a Delaware limited liability
company

By: _____

Print Name: _____

Title: _____

Exhibit A
(Legal Description of Premises as Expanded and First Additional Premises)

[see attached]

EXHIBIT "A"

EC1-2024

ACCESS & UTILITY EASEMENT 1

LEGAL DESCRIPTION

A PORTION OF LOT 2 OF TRACT 63, IN THE CITY OF POMONA, COUNTY OF LOS ANGELES, CALIFORNIA, AS SHOWN ON A MAP RECORDED IN BOOK 13, PAGE 86, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHEAST CORNER OF SAID LOT 2, THENCE ALONG THE EASTERLY LINE THEREOF, SOUTH 01° 51' 12" EAST, A DISTANCE OF 200.53 FEET TO THE BEGINNING OF A NON TANGENT CURVE CONCAVE TO THE NORTHEAST WITH A RADIUS OF 44.00 FEET;
THENCE ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 40° 48' 46", AN ARC DISTANCE OF 31.34 FEET, A CHORD BEARING OF NORTH 22° 04' 03" WEST, A CHORD DISTANCE OF 30.68 FEET TO A TANGENT LINE;
THENCE NORTH 01° 39' 40" WEST, A DISTANCE OF 171.72 FEET TO THE SOUTHERLY PUBLIC RIGHT OF WAY OF MISSION BOULEVARD;
THENCE ALONG SAID RIGHT OF WAY, NORTH 88° 00' 24" EAST, A DISTANCE OF 10.03 FEET TO THE POINT OF BEGINNING;

CONTAINING 1,981 SQUARE FEET OR 0.0455 ACRES OF LAND MORE OR LESS.

SUBJECT TO COVENANTS, CONDITIONS, RESERVATIONS, RESTRICTIONS, RIGHTS OF WAY, AND EASEMENTS OF RECORD, IF ANY.

EXHIBIT "B" IS ATTACHED, AND MADE A PART HEREOF.

PREPARED BY ME OR UNDER MY SUPERVISION

DATED __-__-24

JOSHUA L. VUKODER R.L.S. #8281 EXP. 12-31-25

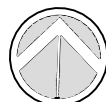
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NORTH

Drawn By: WFC

Scale: N/A

Date: 4-10-24

Reviewed By: JLV

Revised: 6-21-24

Job No. 5202203214

Sheet 1 of 4

EXHIBIT "A"

EC1-2024

ACCESS & UTILITY EASEMENT 2

LEGAL DESCRIPTION

A PORTION OF LOT 3 OF TRACT 63, IN THE CITY OF POMONA, COUNTY OF LOS ANGELES, CALIFORNIA, AS SHOWN ON A MAP RECORDED IN BOOK 13, PAGE 86, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF LOT 3, THENCE ALONG THE SOUTHERLY PUBLIC RIGHT OF WAY OF MISSION BOULEVARD, NORTH 88° 09' 53" EAST, A DISTANCE OF 3.97 FEET;
THENCE DEPARTING SAID RIGHT OF WAY, SOUTH 01° 32' 46" EAST, A DISTANCE OF 110.87 FEET TO A POINT;
THENCE SOUTH 00° 19' 48" EAST, A DISTANCE OF 6.50 FEET TO A POINT;
THENCE SOUTH 00° 39' 03" EAST, A DISTANCE OF 13.87 FEET TO A POINT;
THENCE SOUTH 02° 04' 04" EAST, A DISTANCE OF 40.76 FEET TO THE BEGINNING OF A TANGENT CURVE CONCAVE NORTHEASTERLY, WITH A RADIUS OF 30.00 FEET;
THENCE ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 89° 31' 31", AN ARC DISTANCE OF 46.88 FEET, A CHORD BEARING OF SOUTH 46° 49' 49" EAST, A CHORD DISTANCE OF 42.25 FEET TO A TANGENT LINE;
THENCE NORTH 88° 24' 26" EAST, A DISTANCE OF 113.08 FEET TO THE BEGINNING OF A TANGENT CURVE CONCAVE TO THE NORTHWEST WITH A RADIUS OF 23.00 FEET;
THENCE ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 90° 17' 39", AN ARC DISTANCE OF 36.25 FEET, A CHORD BEARING OF NORTH 43° 15' 36" EAST, A CHORD DISTANCE OF 32.61 FEET TO A TANGENT LINE;
THENCE NORTH 01° 53' 14" WEST, A DISTANCE OF 179.33 FEET TO A POINT ON THE SOUTHERLY PUBLIC RIGHT OF WAY OF MISSION BOULEVARD;
THENCE ALONG SAID RIGHT OF WAY, NORTH 88° 09' 53" EAST, A DISTANCE OF 14.00 FEET;
THENCE DEPARTING SAID RIGHT OF WAY, SOUTH 01° 53' 14" EAST, A DISTANCE OF 179.32 FEET TO THE BEGINNING OF A TANGENT CURVE CONCAVE TO THE NORTHWEST WITH A RADIUS OF 37.00 FEET;
THENCE ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 90° 17' 39", AN ARC DISTANCE OF 58.31 FEET, A CHORD BEARING OF SOUTH 43° 15' 36" WEST, A CHORD DISTANCE OF 52.46 FEET TO A TANGENT LINE;
THENCE SOUTH 88° 24' 26" WEST, A DISTANCE OF 112.75 FEET TO THE BEGINNING OF A TANGENT CURVE CONCAVE TO THE NORTHEAST WITH A RADIUS OF 44.00 FEET;
THENCE ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 49° 07' 08", AN ARC DISTANCE OF 37.72 FEET, A CHORD BEARING OF NORTH 67° 02' 00" WEST, A CHORD DISTANCE OF 36.58 FEET TO A NON TANGENT LINE;
THENCE NORTH 01° 51' 12" WEST, A DISTANCE OF 200.53 FEET TO THE POINT OF BEGINNING;

CONTAINING 5,937 SQUARE FEET OR 0.1363 ACRES OF LAND MORE OR LESS.

SUBJECT TO COVENANTS, CONDITIONS, RESERVATIONS, RESTRICTIONS, RIGHTS OF WAY, AND EASEMENTS OF RECORD, IF ANY.

EXHIBIT "B" IS ATTACHED, AND MADE A PART HEREOF.

PREPARED BY ME OR UNDER MY SUPERVISION

DATED __-__-24

JOSHUA L. VUKODER R.L.S. #8281 EXP. 12-31-25

Bock & Clark Corporation an NV5 Company

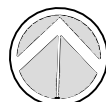


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NORTH

Drawn By: WFC

Scale: N/A

Date: 4-10-24

Reviewed By: JLV

Revised: 6-21-24

Job No. 5202203214

Sheet 2 of 4

EXHIBIT "A"

EC1-2024

EXISTING TOWER EASEMENT AREA

LEGAL DESCRIPTION

A PORTION OF LOT 3 OF TRACT 63, IN THE CITY OF POMONA, COUNTY OF LOS ANGELES, CALIFORNIA, AS SHOWN ON A MAP RECORDED IN BOOK 13, PAGE 86, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF LOT 3, THENCE SOUTH 01° 51' 12" EAST, ALONG THE WESTERLY PROPERTY LINE, A DISTANCE OF 117.28 FEET TO A POINT;
THENCE NORTH 89° 40' 12" EAST, DEPARTING SAID PROPERTY LINE, A DISTANCE OF 3.21 FEET TO THE POINT OF BEGINNING;

THENCE NORTH 89° 40' 12" EAST, A DISTANCE OF 24.36 FEET;
THENCE SOUTH 24° 17' 05" WEST, A DISTANCE OF 15.87 FEET;
THENCE NORTH 88° 32' 09" WEST, A DISTANCE OF 17.68 FEET;
THENCE NORTH 00° 39' 03" WEST, A DISTANCE OF 13.87 TO THE POINT OF BEGINNING;

CONTAINING 298 SQUARE FEET OR 0.007 ACRES OF LAND MORE OR LESS.

SUBJECT TO COVENANTS, CONDITIONS, RESERVATIONS, RESTRICTIONS, RIGHTS OF WAY, AND EASEMENTS OF RECORD, IF ANY.

EXHIBIT "B" IS ATTACHED, AND MADE A PART HEREOF.

PREPARED BY ME OR UNDER MY SUPERVISION

DATED __-__-24

JOSHUA L. VUKODER R.L.S. #8281 EXP. 12-31-25

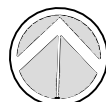
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NORTH

Drawn By: WFC

Scale: N/A

Date: 4-10-24

Reviewed By: JLV

Revised: 6-21-24

Job No. 5202203214

Sheet 3 of 4

EXHIBIT "A"

EC1-2024

ADDITIONAL TOWER EASEMENT AREA

LEGAL DESCRIPTION

A PORTION OF LOT 3 OF TRACT 63, IN THE CITY OF POMONA, COUNTY OF LOS ANGELES, CALIFORNIA, AS SHOWN ON A MAP RECORDED IN BOOK 13, PAGE 86, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY, AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHWEST CORNER OF LOT 3, THENCE SOUTH 01° 51' 12" EAST, ALONG THE WESTERLY PROPERTY LINE, A DISTANCE OF 117.28 FEET TO A POINT;
THENCE NORTH 89° 40' 12" EAST, DEPARTING SAID PROPERTY LINE, A DISTANCE OF 3.21 FEET TO THE POINT OF BEGINNING;

THENCE NORTH 00° 19' 48" WEST, A DISTANCE OF 6.50 FEET;
THENCE NORTH 89° 40' 12" EAST, A DISTANCE OF 11.00 FEET;
THENCE SOUTH 00° 19' 48" EAST, A DISTANCE OF 6.50 FEET;
THENCE SOUTH 89° 40' 12" WEST, A DISTANCE OF 11.00 FEET TO THE POINT OF BEGINNING;

CONTAINING 72 SQUARE FEET OR 0.0017 ACRES OF LAND MORE OR LESS.

SUBJECT TO COVENANTS, CONDITIONS, RESERVATIONS, RESTRICTIONS, RIGHTS OF WAY, AND EASEMENTS OF RECORD, IF ANY.

EXHIBIT "B" IS ATTACHED, AND MADE A PART HEREOF.

PREPARED BY ME OR UNDER MY SUPERVISION

DATED __-__-24

JOSHUA L. VUKODER R.L.S. #8281 EXP. 12-31-25

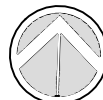
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NORTH

Drawn By: WFC

Scale: N/A

Date: 4-10-24

Reviewed By: JLV

Revised: 6-21-24

Job No. 5202203214

Sheet 4 of 4

Exhibit B
(Site Plan)

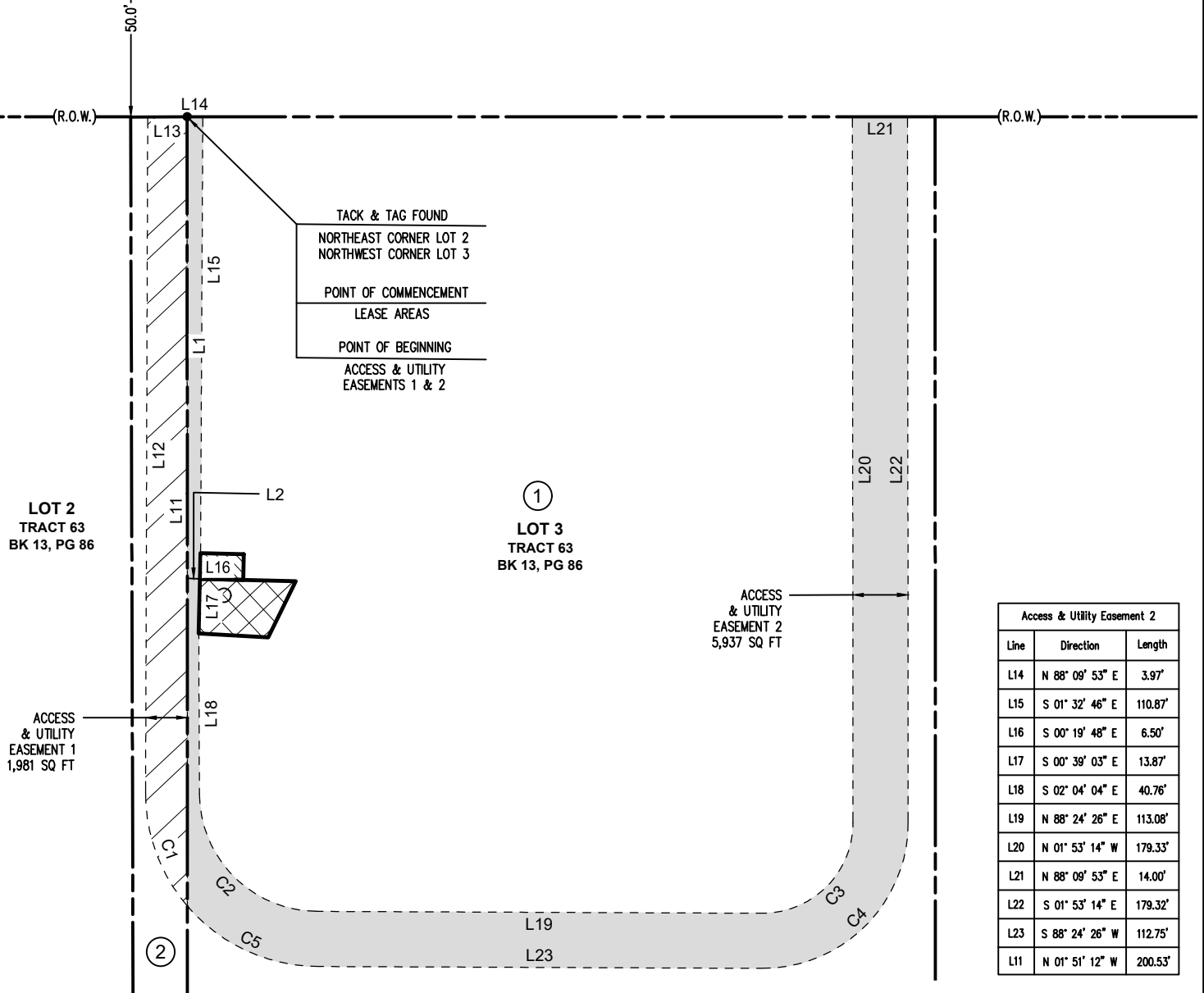
[see attached]

EXHIBIT "B"

EC1-2024

MISSION BLVD.

(100' Public R.O.W.)



LOT 2
TRACT 63
BK 13, PG 86

①
LOT 3
TRACT 63
BK 13, PG 86

ACCESS
& UTILITY
EASEMENT 1
1,981 SQ FT

ACCESS
& UTILITY
EASEMENT 2
5,937 SQ FT

Access & Utility Easement 2		
Line	Direction	Length
L14	N 88° 09' 53" E	3.97'
L15	S 01° 32' 46" E	110.87'
L16	S 00° 19' 48" E	6.50'
L17	S 00° 39' 03" E	13.87'
L18	S 02° 04' 04" E	40.76'
L19	N 88° 24' 26" E	113.08'
L20	N 01° 53' 14" W	179.33'
L21	N 88° 09' 53" E	14.00'
L22	S 01° 53' 14" E	179.32'
L23	S 88° 24' 26" W	112.75'
L11	N 01° 51' 12" W	200.53'

Access & Utility Easement 1		
Line	Direction	Length
L11	S 01° 51' 12" E	200.53'
L12	N 01° 39' 40" W	171.72'
L13	N 88° 00' 24" E	10.03'

Access & Utility Easement 1				
Curve	Delta	Radius	Length	Chord Bearing & Distance
C1	40° 48' 46"	44.00'	31.34'	N 22° 04' 03" W 30.68'

Existing & Additional Tower Easement Areas		
Line	Direction	Length
L1	S 01° 51' 12" E	117.28'
L2	N 89° 40' 12" E	3.21'

Access & Utility Easement 2				
Curve	Delta	Radius	Length	Chord Bearing & Distance
C2	89° 31' 31"	30.00'	46.88'	S 46° 49' 49" E 42.25'
C3	90° 17' 39"	23.00'	36.25'	N 43° 15' 36" E 32.61'
C4	90° 17' 39"	37.00'	58.31'	S 43° 15' 36" W 52.46'
C5	49° 07' 08"	44.00'	37.72'	N 67° 02' 00" W 36.58'

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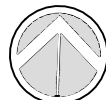


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NORTH

Drawn By: WFC

Date: 3-7-24

Revised: 6-21-24

Job No. 5202203214

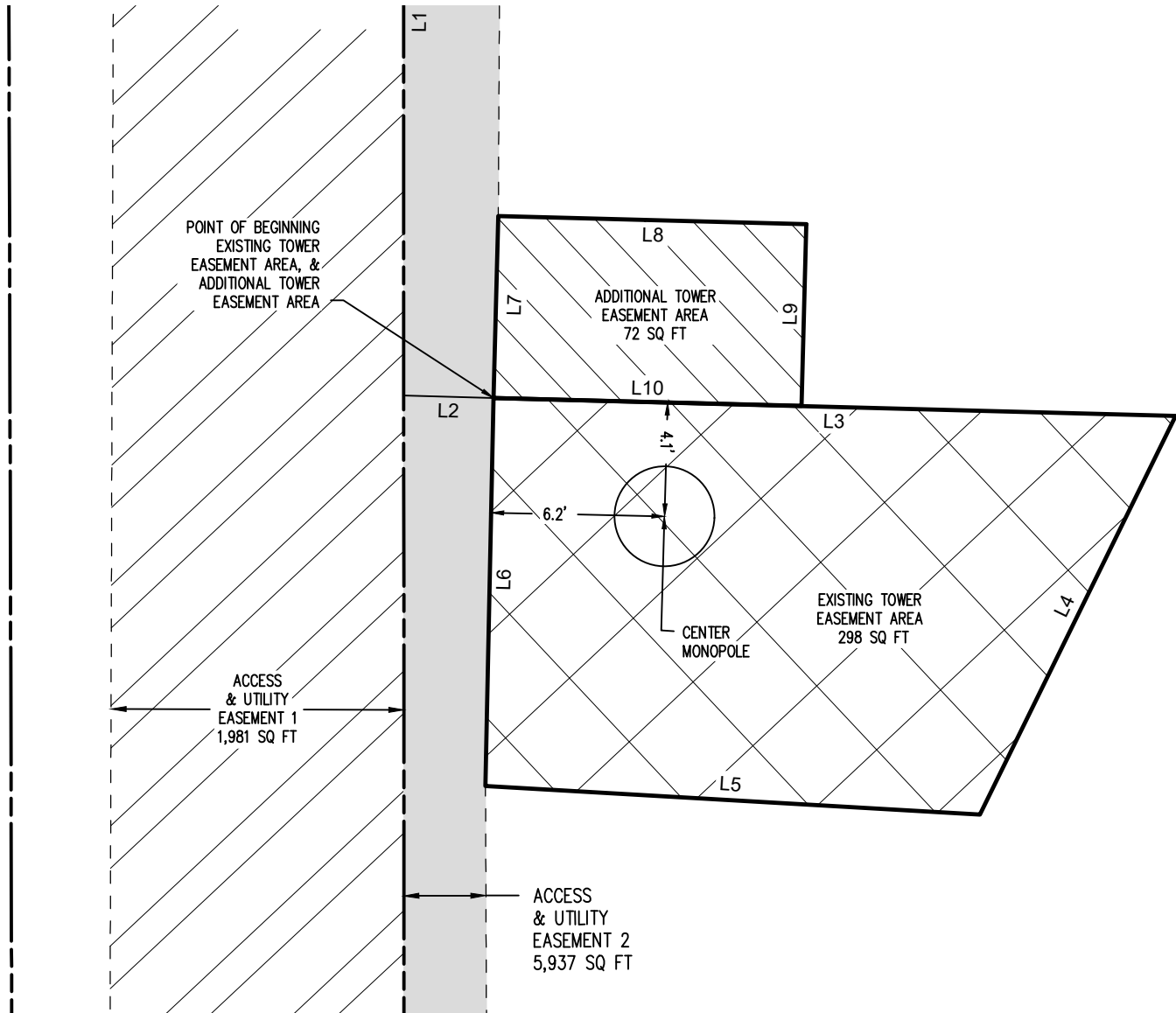
Scale: 1" = 40'

Reviewed By: JLV

Sheet 1 of 2

EXHIBIT "B"

EC1-2024



LEGEND

- EXISTING TOWER EASEMENT AREA (1) - APN: 8327-014-906
- ADDITIONAL TOWER EASEMENT AREA (2) - APN: 8327-014-906
- ACCESS & UTILITY EASEMENT 1
- ACCESS & UTILITY EASEMENT 2
- CENTERLINE
- RIGHT OF WAY LINE
- PROPERTY LINE

Existing Tower Easement Area		
Line	Direction	Length
L1	S 01° 51' 12" E	117.28'
L2	N 89° 40' 12" E	3.21'
L3	N 89° 40' 12" E	24.36'
L4	S 24° 17' 05" W	15.87'
L5	N 88° 32' 09" W	17.68'
L6	N 00° 39' 03" W	13.87'

Additional Tower Easement Area		
Line	Direction	Length
L1	S 01° 51' 12" E	117.28'
L2	N 89° 40' 12" E	3.21'
L7	N 00° 19' 48" W	6.50'
L8	N 89° 40' 12" E	11.00'
L9	S 00° 19' 48" E	6.50'
L10	S 89° 40' 12" W	11.00'

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NORTH

Drawn By: WFC

Date: 3-7-24

Revised: 6-21-24

Job No. 5202203214

Scale: 1" = 6'

Reviewed By: JLV

Sheet 2 of 2

EXHIBIT C
(Construction Drawings)

[see attached]



DISH WIRELESS L.L.C. SITE ID:

LSSNA00032A

DISH WIRELESS L.L.C. SITE NAME:

N/A

DISH WIRELESS L.L.C. SITE ADDRESS:

1400 E MISSION BLVD

POMONA, CA 91766

DISH WIRELESS L.L.C. METER ADDRESS:

1400 1/2 E. MISSION BLVD

POMONA, CA 91766

CALIFORNIA - CODE COMPLIANCE

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:

CODE TYPE	CODE
BUILDING	2022 CALIFORNIA BUILDING CODE (CBC)/2021 IBC
MECHANICAL	2022 CALIFORNIA MECHANICAL CODE (CMC)/2021 UMC
ELECTRICAL	2022 CALIFORNIA ELECTRICAL CODE (CEC)/2020 NEC

CITY OF POMONA, CALIFORNIA
SUPPLEMENT 26: AUGUST 30, 2021
CODIFIED THROUGH ORDINANCE NO. 4300, ADOPTED MARCH 1, 2021. (SUPP. NO. 26)

SHEET INDEX

SHEET NO.	SHEET TITLE
T-1	TITLE SHEET
LS-1	LAND SURVEY (BY OTHERS)
A-1.1	OVERALL AND ENLARGED SITE PLAN
A-1.2	SITE PLAN WITH EXISTING STRUCTURE LOCATES
A-2.1	EXISTING AND PROPOSED ELEVATIONS
A-2.2	ANTENNA LAYOUT AND SCHEDULE
A-3	EQUIPMENT SLAB AND H-FRAME DETAILS
A-4	EQUIPMENT DETAILS
A-5	EQUIPMENT DETAILS
A-6	EQUIPMENT DETAILS
E-1	ELECTRICAL/FIBER ROUTE PLAN AND NOTES
E-2	ELECTRICAL DETAILS
E-3	ELECTRICAL ONE-LINE & PANEL SCHEDULE
G-1	GROUNDING PLANS AND NOTES
G-2	GROUNDING DETAILS
G-3	GROUNDING DETAILS
RF-1	RF CABLE COLOR CODES
GN-1	LEGEND AND ABBREVIATIONS
GN-2	RF SIGNAGE
GN-3	GENERAL NOTES
GN-4	GENERAL NOTES
GN-5	GENERAL NOTES

JURISDICTIONAL NOTE:
CONSTRUCTION WASTE SHALL BE RECYCLED PER A CONSTRUCTION WASTE MANAGEMENT PLAN COMPLIANT WITH C6BSC SECTION 5.408.1. RECYCLE AND/OR SALVAGE FOR REUSE A MINIMUM OF 65% OF THE NONHAZARDOUS CONSTRUCTION AND DEMOLITION WASTE. A CONSTRUCTION WASTE MANAGEMENT PLAN WILL BE COMPLETED PRIOR TO FINAL INSPECTION.

JURISDICTIONAL NOTE:
IT IS THE OWNER'S AND THE CONTRACTOR'S RESPONSIBILITY TO REPAIR ALL DAMAGE TO THE EXISTING PUBLIC IMPROVEMENTS DUE TO THE PROPOSED CONSTRUCTION ACTIVITIES AND TO ADDRESS ALL REPAIRS REQUESTED BY THE PUBLIC WORKS INSPECTOR BASED ON THE INSPECTOR'S REVIEW OF THE CURRENT CONDITION OF THE SAID PUBLIC IMPROVEMENTS.

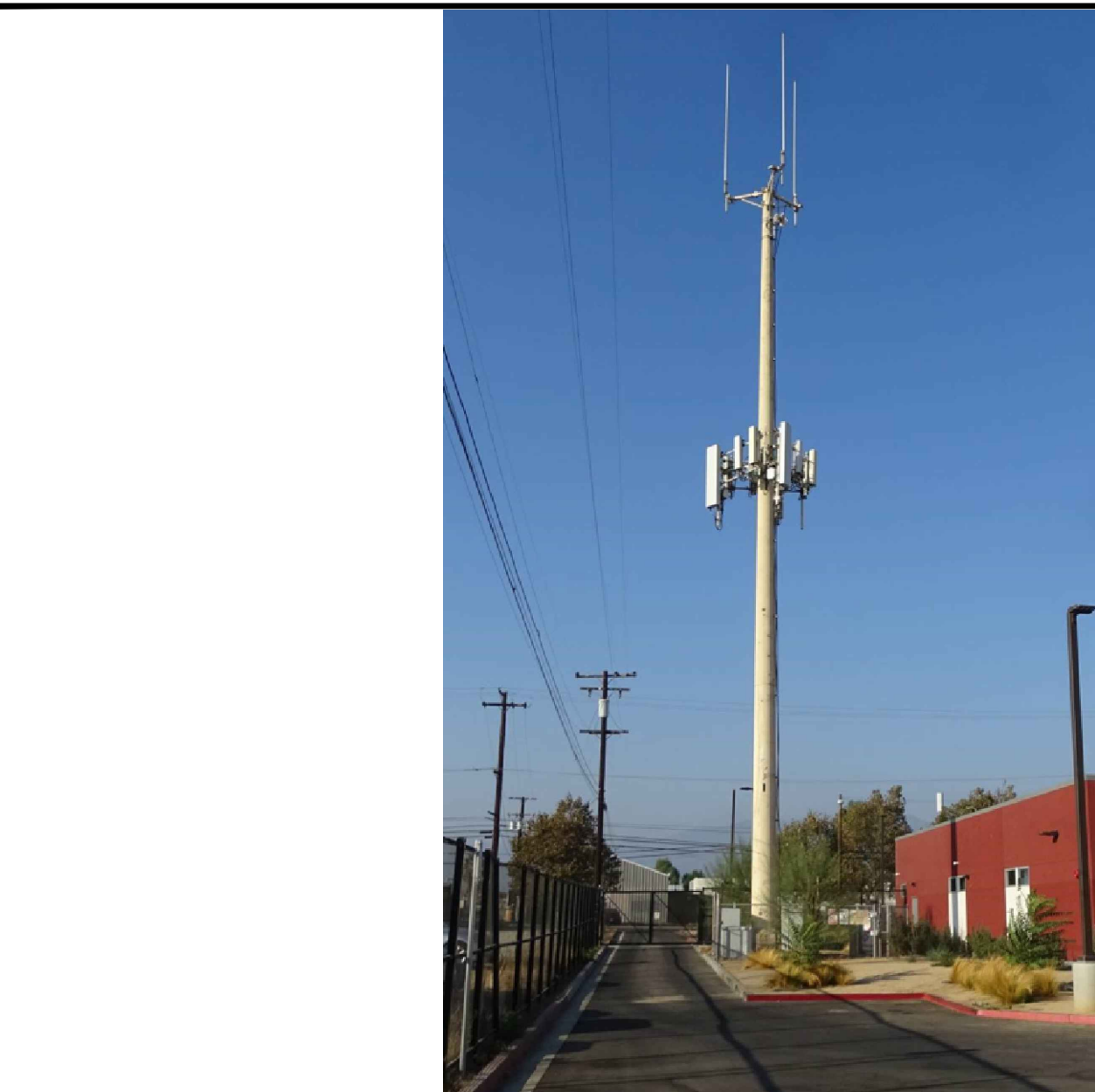
SCOPE OF WORK

THIS IS NOT AN ALL INCLUSIVE LIST. CONTRACTOR SHALL UTILIZE SPECIFIED EQUIPMENT PART OR ENGINEER APPROVED EQUIVALENT. CONTRACTOR SHALL VERIFY ALL NEEDED EQUIPMENT TO PROVIDE A FUNCTIONAL SITE. THE PROJECT GENERALLY CONSISTS OF THE FOLLOWING:

- TOWER SCOPE OF WORK:
- INSTALL (3) 8' PROPOSED PANEL ANTENNAS (1 PER SECTOR)
 - INSTALL (1) PROPOSED ANTENNA MOUNT KIT (3 SECTORS) (ONE COMMSCOPE MC-K6MHDX-9-96 KIT)
 - INSTALL PROPOSED JUMPERS
 - INSTALL (6) PROPOSED RRHs (2 PER SECTOR)
 - INSTALL (1) PROPOSED OVER VOLTAGE PROTECTION DEVICE (OVP)
 - INSTALL (1) PROPOSED HYBRID CABLE

- GROUND SCOPE OF WORK:
- REPLACE ALL EXISTING CHAIN-LINK WITH PROPOSED 8'-0" TALL WROUGHT IRON FENCE W/ FAUX BUSH SCREENING
 - INSTALL PROPOSED 8'-0" TALL WROUGHT IRON FENCE COMPOUND EXPANSION W/ SCREENING FAUX BUSH
 - EXISTING UTILITY H-FRAME TO BE REMOVED
 - INSTALL (1) PROPOSED CONCRETE SLAB WITH FOOTERS
 - INSTALL (1) PROPOSED PPC CABINET
 - INSTALL (1) PROPOSED EQUIPMENT CABINET
 - INSTALL (1) PROPOSED POWER CONDUIT
 - INSTALL (1) PROPOSED TELCO CONDUIT
 - INSTALL (1) PROPOSED TELCO-FIBER BOX
 - INSTALL (1) PROPOSED GPS UNIT
 - INSTALL (1) PROPOSED FIBER NID (IF REQUIRED)
 - INSTALL (1) PROPOSED 200A METER/DISCONNECT PEDESTAL

SITE PHOTO



UNDERGROUND SERVICE ALERT
UTILITY NOTIFICATION CENTER OF CALIFORNIA
(800) 422-4133
WWW.CALIFORNIA811.ORG

CALL 2-14 WORKING DAYS UTILITY NOTIFICATION PRIOR TO CONSTRUCTION



GENERAL NOTES

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE. NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.

11"x17" PLOT WILL BE HALF SCALE UNLESS OTHERWISE NOTED

CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS, AND CONDITIONS ON THE JOB SITE, AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK.

SITE INFORMATION

PROPERTY OWNER:	CITY OF POMONA
ADDRESS:	505 S GARVEY AVENUE POMONA, CA 91766
TOWER TYPE:	MONOPOLE
TOWER CO SITE ID:	828491
TOWER APP NUMBER:	555475
COUNTY:	LOS ANGELES
LATITUDE (NAD 83):	34° 03' 18.64" N 34.055178
LONGITUDE (NAD 83):	117° 43' 41.58" W -117.728217
ZONING JURISDICTION:	CITY OF POMONA
ZONING DISTRICT:	INDUSTRIAL
PARCEL NUMBER:	8327-014-906
OCCUPANCY GROUP:	U
CONSTRUCTION TYPE:	II-B
POWER COMPANY:	SOUTHERN CALIFORNIA EDISON
TELEPHONE COMPANY:	VERIZON

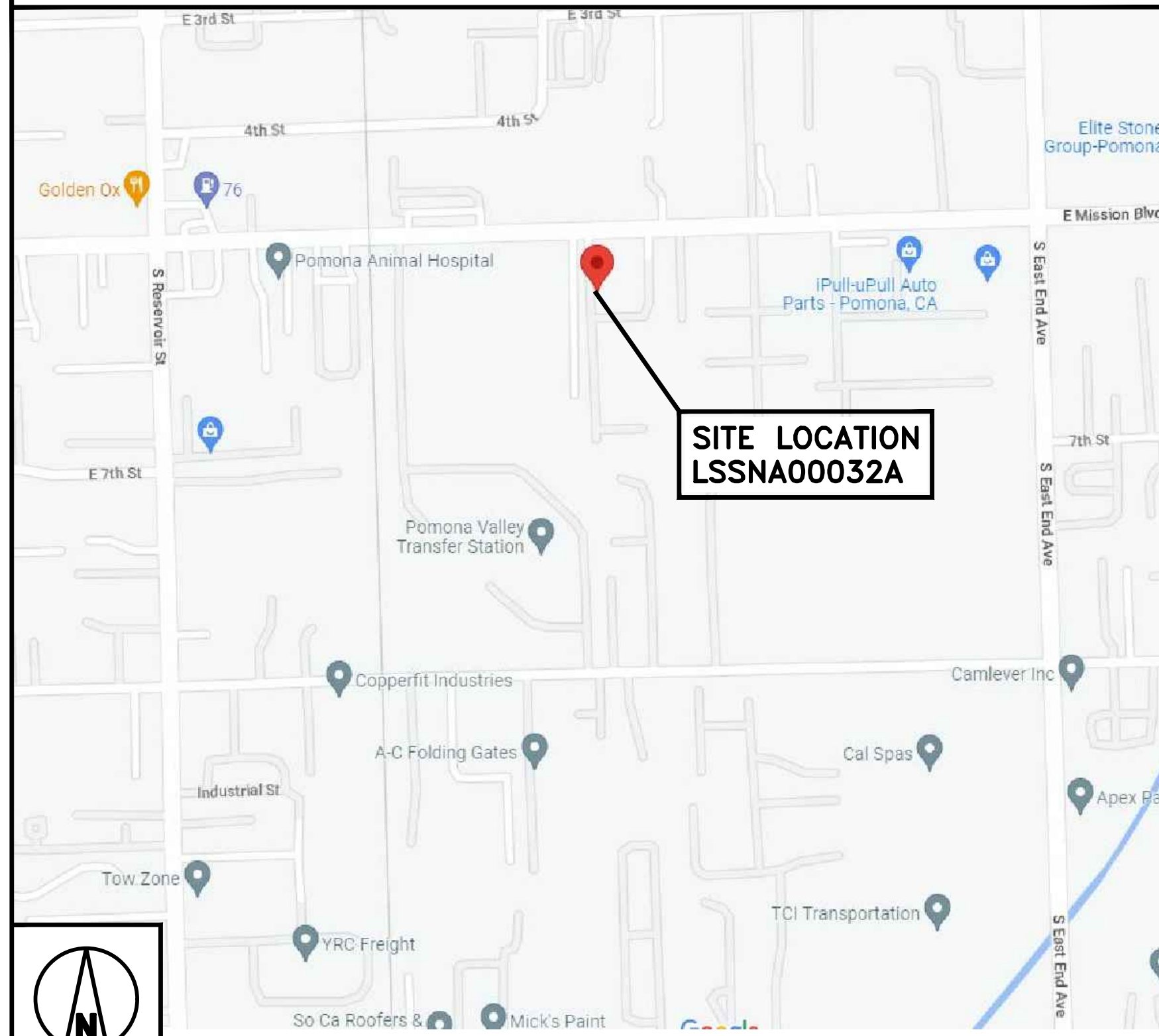
PROJECT DIRECTORY

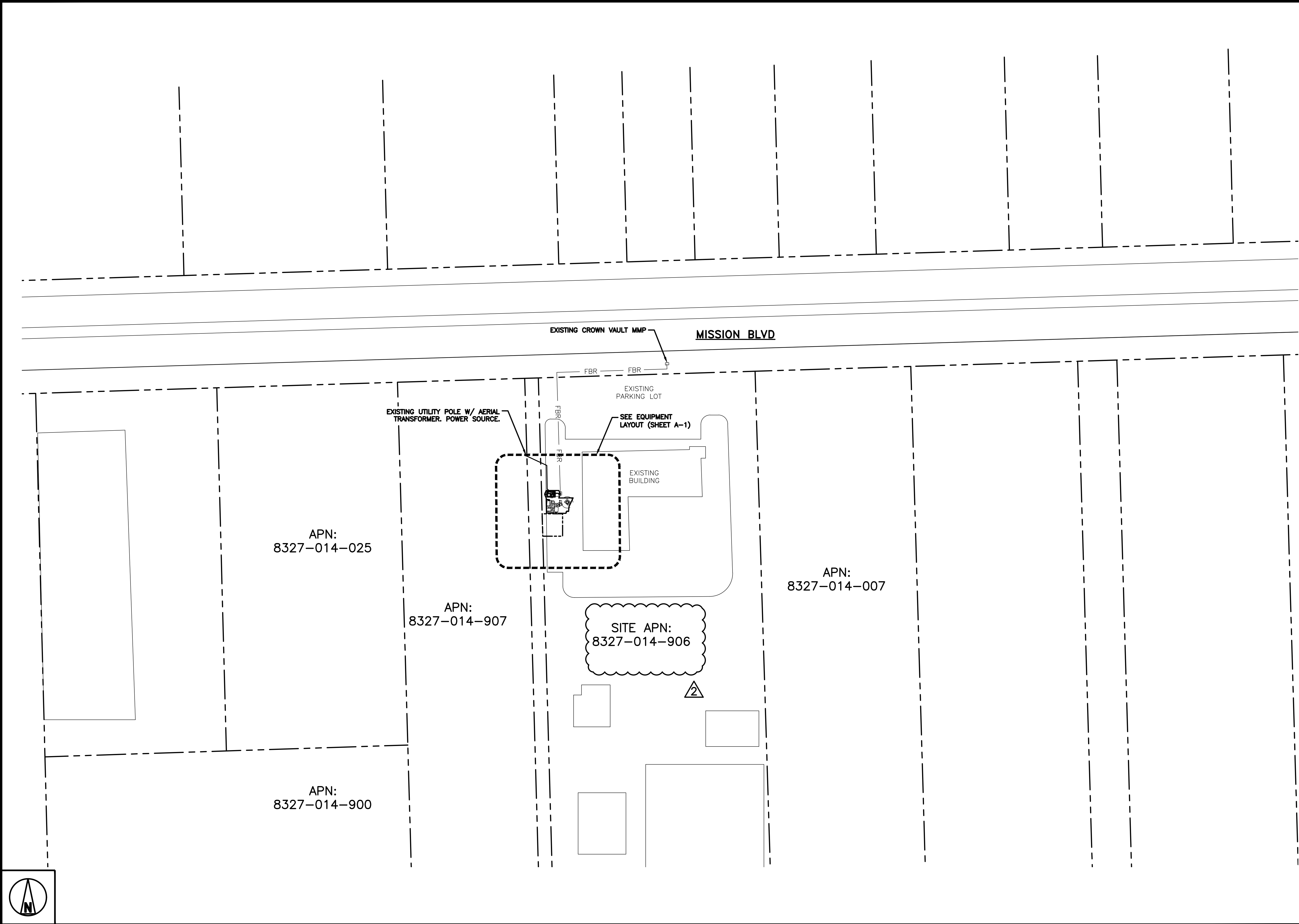
APPLICANT:	DISH WIRELESS L.L.C. 5701 SOUTH SANTA FE DRIVE LITTLETON, CO 80120
TOWER OWNER:	CROWN CASTLE USA, INC. 2000 CORPORATE DRIVE CANONSBURG, PA 15317 877.486.9377
SITE DESIGNER:	POD 11490 BLUEGRASS PARKWAY LOUISVILLE, KY 40299 (502) 437-5252
SITE ACQUISITION:	GEORGE SIPEK GEORGE.SIPEK.CONTRACTOR@CROWNCASTLE.COM
CONSTRUCTION MANAGER:	JEFF ROGERS JEFF.ROGERS@DISH.COM
RF ENGINEER:	SALVADOR RUIZ SALVADOR.RUIZ@DISH.COM

DIRECTIONS

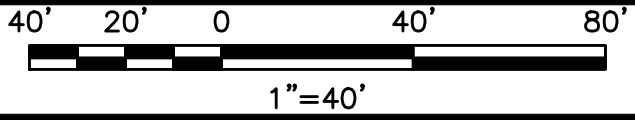
DIRECTIONS FROM DISH WIRELESS L.L.C. DISTRICT OFFICE AT 16812 ARMSTRONG AVE., SUITE 200 IRVINE, CA 92606:
HEAD NORTHEAST ON ARMSTRONG AVE TOWARD DEERE AVE, TURN LEFT ONTO BARRANCA PKWY, ROAD NAME CHANGES TO E DYER RD, TAKE THE RAMP ON THE RIGHT FOR CA-55 NORTH AND HEAD TOWARD RIVERSIDE, AT EXIT 10B, HEAD RIGHT ON THE RAMP FOR I-5 NORTH TOWARD SANTA ANA, AT EXIT 107A, HEAD RIGHT ON THE RAMP FOR CA-57 NORTH TOWARD POMONA, KEEP LEFT TO GET ONTO CA-60 E, AT EXIT 30, HEAD ON THE RAMP RIGHT AND FOLLOW SIGNS FOR RESERVOIR S, TURN LEFT ONTO S RESERVOIR ST, THEN IMMEDIATELY TURN RIGHT ONTO E MISSION BLVD, TURN RIGHT, ARRIVE AT DESTINATION. THE LAST INTERSECTION BEFORE YOUR DESTINATION IS E MISSION BLVD.

VICINITY MAP





SITE SURVEY



5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120



11490 BLUEGRASS PKWY
LOUISVILLE, KY 40299



09/14/2023

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DRAWN BY: CHECKED BY: APPROVED BY:

AJM EEW MEP

RFDS REV #: 2

CONSTRUCTION DOCUMENTS

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	07/17/2023	ISSUED FOR CONSTRUCTION
	08/23/2023	ISSUED FOR CONSTRUCTION
	08/13/2023	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER

828491

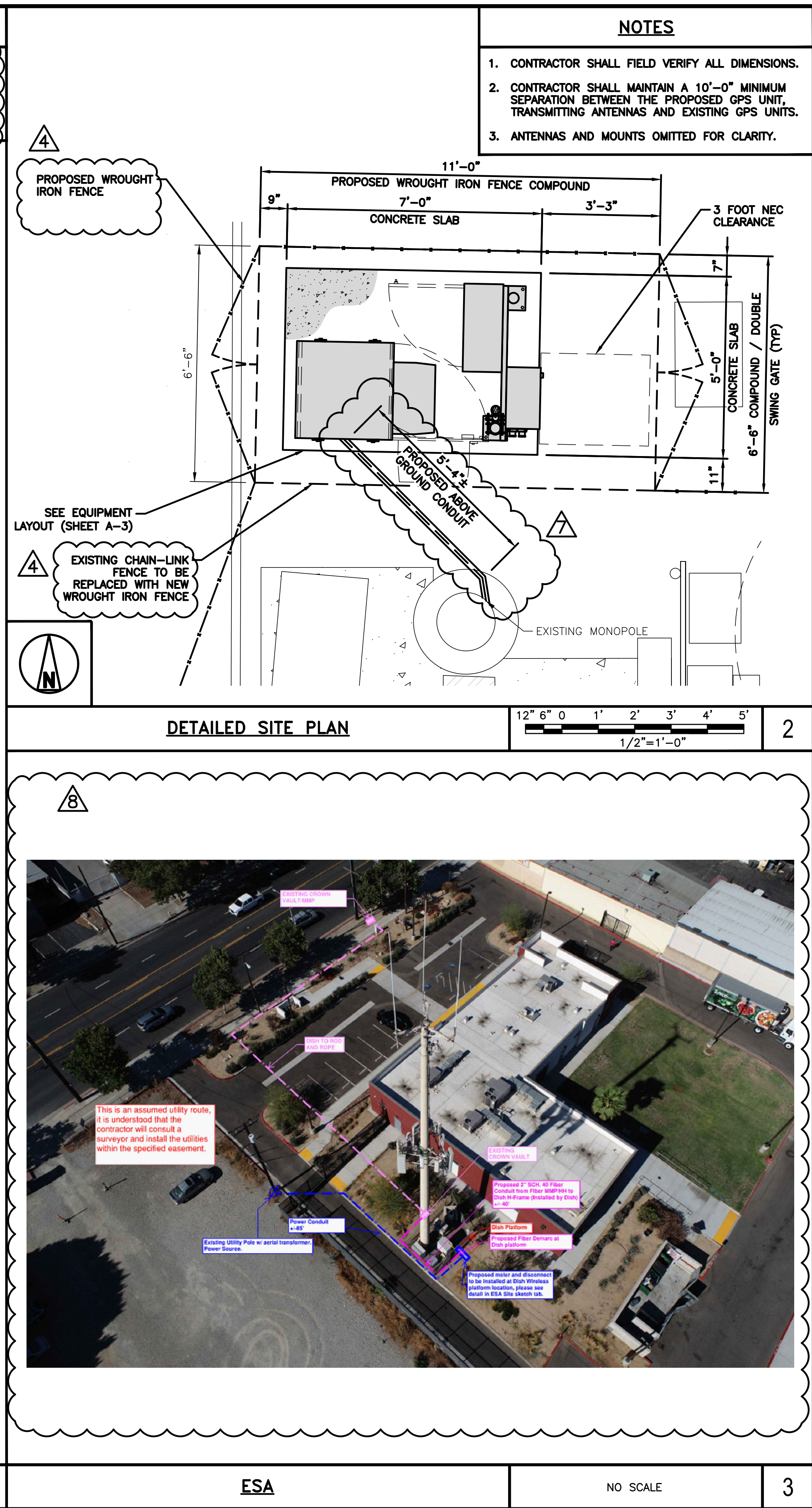
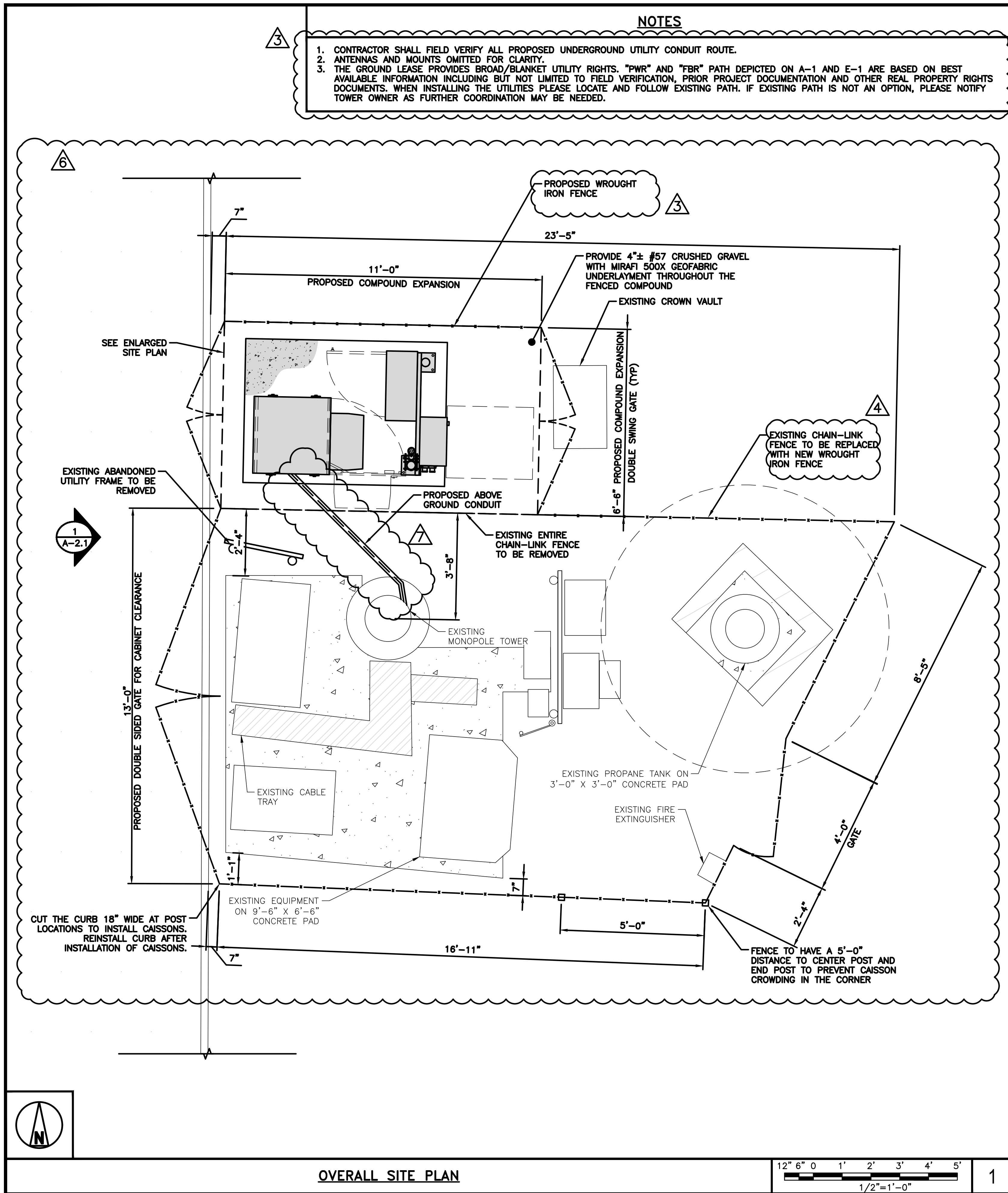
DISH WIRELESS L.L.C.
PROJECT INFORMATION



LSSNA00032A
1400 E MISSION BLVD
POMONA, CA 91766

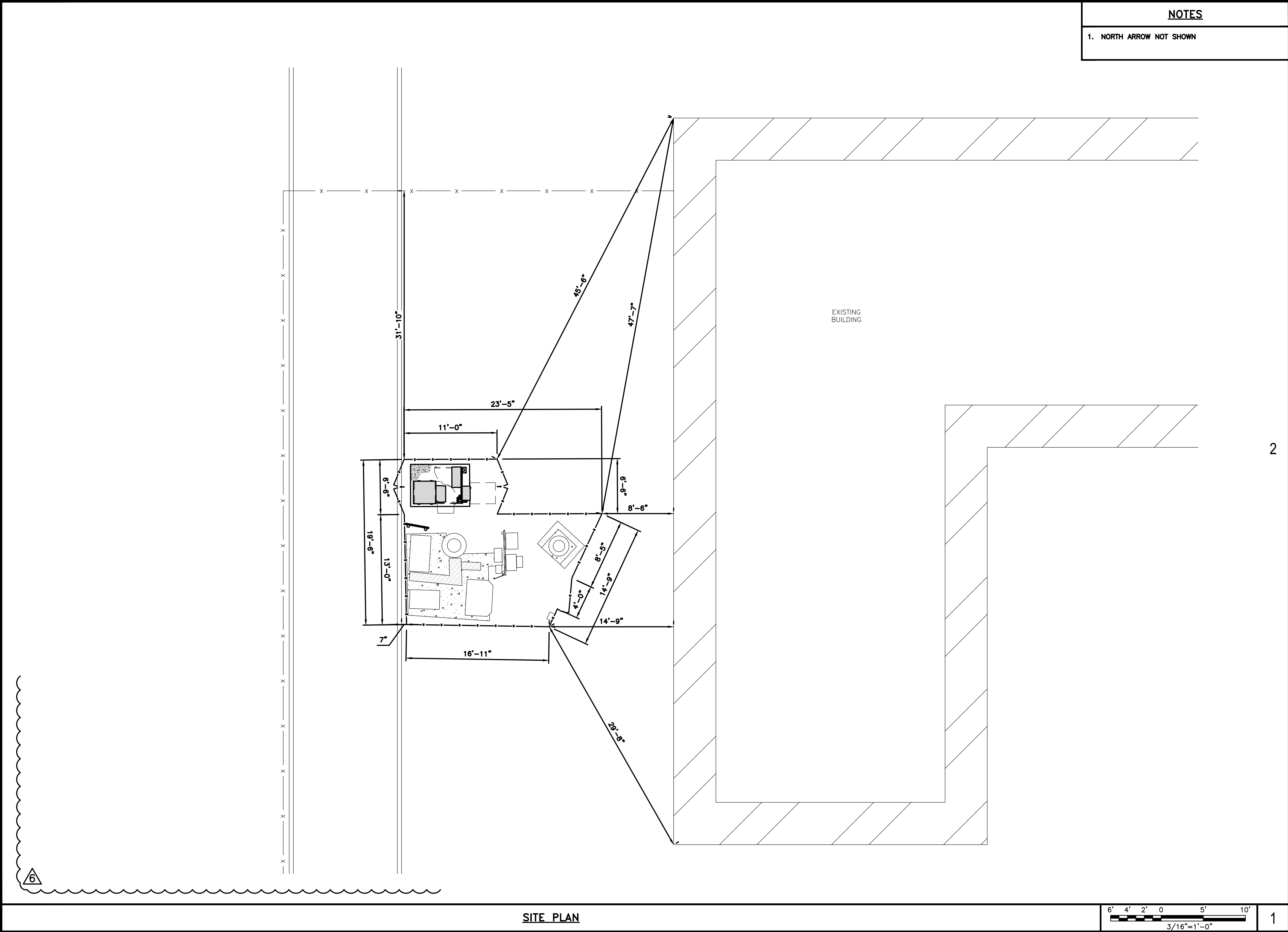
SHEET TITLE
SITE SURVEY

SHEET NUMBER

LS-1



<h1 style="margin: 0;">dish</h1> <p style="margin: 0; font-weight: bold; font-size: 1.2em;">wireless.</p> <p style="margin: 10px 0 0 0;">5701 SOUTH SANTA FE DRIVE LITTLETON, CO 80120</p>		
 <div style="display: inline-block; vertical-align: middle;"><h2 style="margin: 0;">POD</h2><p style="margin: 0; font-weight: bold;">POWER OF DESIGN</p><p style="margin: 10px 0 0 0;">11490 BLUEGRASS PKWY LOUISVILLE, KY 40299</p></div>		
<div style="display: flex; align-items: center; justify-content: center;"><div style="margin-right: 10px;"></div><div style="border: 2px solid black; border-radius: 50%; padding: 10px; text-align: center;"><p style="margin: 0; font-size: 0.8em;">LICENSED PROFESSIONAL ENGINEER</p><p style="margin: 0; font-size: 0.8em;">MARK EDWARD PATTERSON</p><p style="margin: 0; font-size: 0.8em;">C 89604</p><p style="margin: 0; font-size: 0.8em;">EXP. 3/31/25</p><p style="margin: 0; font-size: 0.8em;">CIVIL</p><p style="margin: 0; font-size: 0.8em;">STATE OF CALIFORNIA</p></div></div> <p style="margin-top: 10px;">09/14/2023</p>		
<p style="margin: 0; font-size: 0.8em;">IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.</p>		
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AJM	EEW	MEP
RFDS REV #:		2
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▲	08/23/2023	ISSUED FOR CONSTRUCTION
▲	09/13/2023	ISSUED FOR CONSTRUCTION
A&E PROJECT NUMBER		
828491		
DISH WIRELESS L.L.C. PROJECT INFORMATION		
LSSNA00032A 1400 E MISSION BLVD POMONA, CA 91766		
SHEET TITLE		
OVERALL AND ENLARGED SITE PLAN		
SHEET NUMBER		
A-1		



5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

POWER OF DESIGN
11490 BLUEGRASS PKWY
LOUISVILLE, KY 40299

09/14/2023

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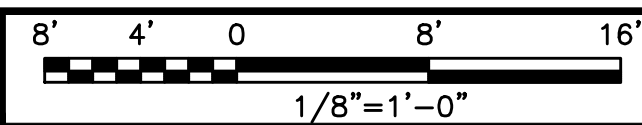
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POMONA, CA 91766

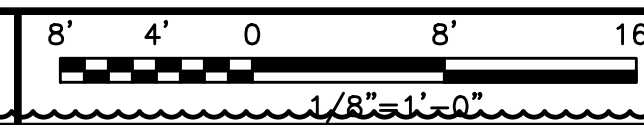
SHEET TITLE
SITE PLAN WITH EXISTING
STRUCTURE LOCATES

SHEET NUMBER
A-1.2

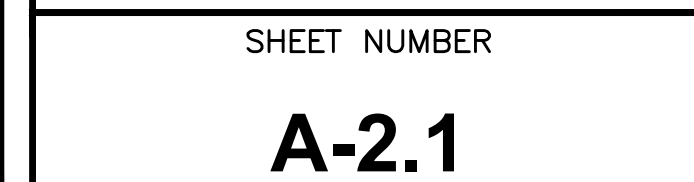
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1

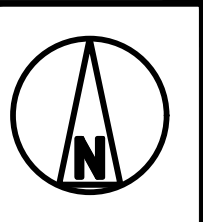
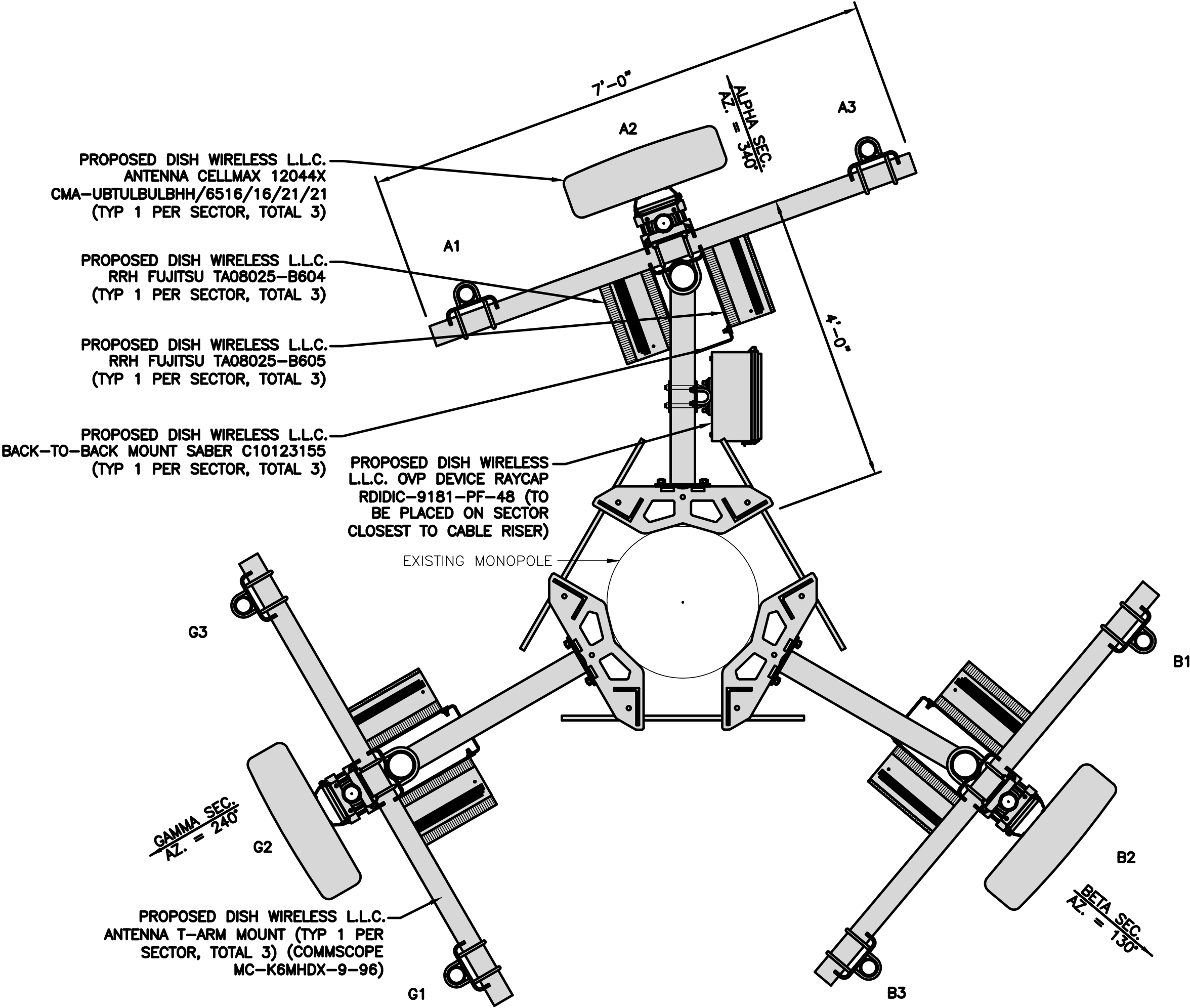


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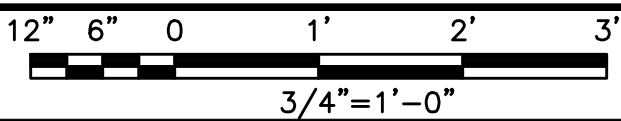


NOTES

1. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
2. FOR ANTENNA SPECIFICATIONS REFER TO ANTENNA SCHEDULE AND FINAL CONSTRUCTION RFDS FOR ALL RF DETAILS
3. PROPOSED TOWER MOUNTED EQUIPMENT SHALL BE PAINTED TO MATCH EXISTING TOWER.



ANTENNA LAYOUT



1

SECTOR POS.	ANTENNA							RRH		OVP	TRANSMISSION CABLE
	EXISTING OR PROPOSED	MANUFACTURER -- MODEL NUMBER (SIZE HxWxD)	AZ.	RAD CENTER	MECH. TILT	ELEC. TILT	ANT. TECH.	MANUFACTURER -- MODEL NUMBER	RRH TECH.	MANUFACTURER MODEL	FEED LINE TYPE AND LENGTH
A1	---	---	---	---	---	---	---	---	---	RAYCAP RDIDC-9181-PF-48	(1) HIGH-CAPACITY HYBRID CABLE (105' LONG)
A2	PROPOSED	CELLMAX -- 12044x CMA-UBTULBULBHH/6516/16/21/21 (72.4"x26.7"x7.7")	340°	75'-0"	0°	---	NR	FUJITSU -- TA08025-B604 FUJITSU -- TA08025-B605	MULTI BAND		
A3	---	---	---	---	---	---	---	---	---		
B1	---	---	---	---	---	---	---	---	---	SHARED W/ALPHA	SHARED W/ALPHA
B2	PROPOSED	CELLMAX -- 12044x CMA-UBTULBULBHH/6516/16/21/21 (72.4"x26.7"x7.7")	130°	75'-0"	0°	---	NR	FUJITSU -- TA08025-B604 FUJITSU -- TA08025-B605	MULTI BAND		
B3	---	---	---	---	---	---	---	---	---		
G1	---	---	---	---	---	---	---	---	---	SHARED W/ALPHA	SHARED W/ALPHA
G2	PROPOSED	CELLMAX -- 12044x CMA-UBTULBULBHH/6516/16/21/21 (72.4"x26.7"x7.7")	240°	75'-0"	0°	---	NR	FUJITSU -- TA08025-B604 FUJITSU -- TA08025-B605	MULTI BAND		
G3	---	---	---	---	---	---	---	---	---		

- NOTES
1. CONTRACTOR TO REFER TO FINAL CONSTRUCTION RFDS FOR ALL RF DETAILS.
2. ANTENNA AND RRH MODELS MAY CHANCE DUE TO EQUIPMENT AVAILABILITY. ALL EQUIPMENT CHANGES MUST BE APPROVED AND REMAIN IN COMPLIANCE WITH THE PROPOSED DESIGN AND STRUCTURAL ANALYSES.

*SEE LATEST DISH RFDS FOR AZIMUTH INFORMATION AT TIME OF BUILD

ANTENNA SCHEDULE

NO SCALE

2



5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120



11490 BLUEGRASS PKWY
LOUISVILLE, KY 40299



09/14/2023

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A&E PROJECT NUMBER

828491

DISH WIRELESS L.L.C.
PROJECT INFORMATION

LSSNA00032A
1400 E MISSION BLVD
POMONA, CA 91766

SHEET TITLE
ANTENNA LAYOUT
AND SCHEDULE

SHEET NUMBER

A-2.2

CHARLES INDUSTRY HVAC
CUBE-PM63915IN4

DIMENSIONS (HxWxD)	74"x32"x32"
POWER PLANT	-48VDC ABB/600W
TOTAL WEIGHT (EMPTY)	383 lbs

PLAN

BACK

SIDE

FRONT

CABINET DETAIL

NO SCALE

1

RAYCAP PPC
RDIAC-2465-P-240-MTS

ENCLOSURE DIMENSIONS (HxWxD):	39"x22.855"x12.593
WEIGHT:	80 lbs
OPERATING AC VOLTAGE	240/120 1 PHASE 3W+G

TOP

BACK

SIDE

FRONT

SIDE

POWER PROTECTION CABINET
(PPC) DETAIL

NO SCALE

2

EATON B-LINE CMP4121MC-1
PEDESTAL

ENCLOSURE DIM (HxWxD)	54"x15"x17.5"
VOLTAGE / PHASE	120/240V / 1PH
MAIN AMPERE RATING	200A
WEIGHT	TBD

FRONT

RIGHT SIDE

TOP

PEDESTAL DETAIL

NO SCALE

3

CHARLES INDUSTRY
LT-97-002422 PLINTH KIT

DIMENSIONS (HxWxD):	6"x 32"x 32"
---------------------	--------------

NOTE: GASKET AND MOUNTING HARDWARE INCLUDED

PLAN

FRONT/BACK

SIDE

CABINET DETAIL

NO SCALE

4

ZAYO 5RU (LEFT SWING DOOR)
FIBER NID ENCLOSURE

DIMENSIONS (HxWxD)	36.1"x29"x12.9"
WEIGHT	85 lbs

BOTTOM

BACK

SIDE

FRONT

FIBER NID ENCLOSURE DETAIL

NO SCALE

5

CHARLES CFIT-PF2020DSH1
FIBER TELCO ENCLOSURE

ENCLOSURE DIMS (HxWxD)	20"x20"x9"
ENCLOSURE WEIGHT	20 lbs
MOUNTING	WALL
COMPLIANCE	TYPE 4

FRONT

SIDE

BACK

FRONT

FIBER TELCO ENCLOSURE DETAIL

NO SCALE

6

NOT USED

NO SCALE

7

NOT USED

NO SCALE

8

NOT USED

NO SCALE

9

5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

POWER OF DESIGN
11490 BLUEGRASS PKWY
LOUISVILLE, KY 40299

09/14/2023

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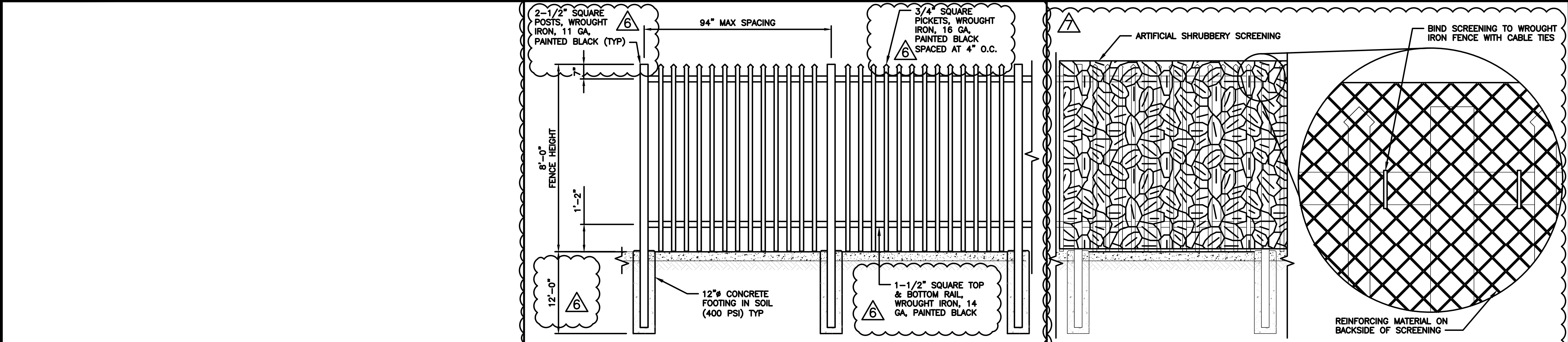
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PROJECT INFORMATION
LSSNA00032A
1400 E MISSION BLVD
POMONA, CA 91766

SHEET TITLE
EQUIPMENT DETAILS

SHEET NUMBER
A-4



TYPICAL WROUGHT IRON FENCE ELEVATION DETAIL

NO SCALE

2

WROUGHT IRON FENCE SCREENING

NO SCALE

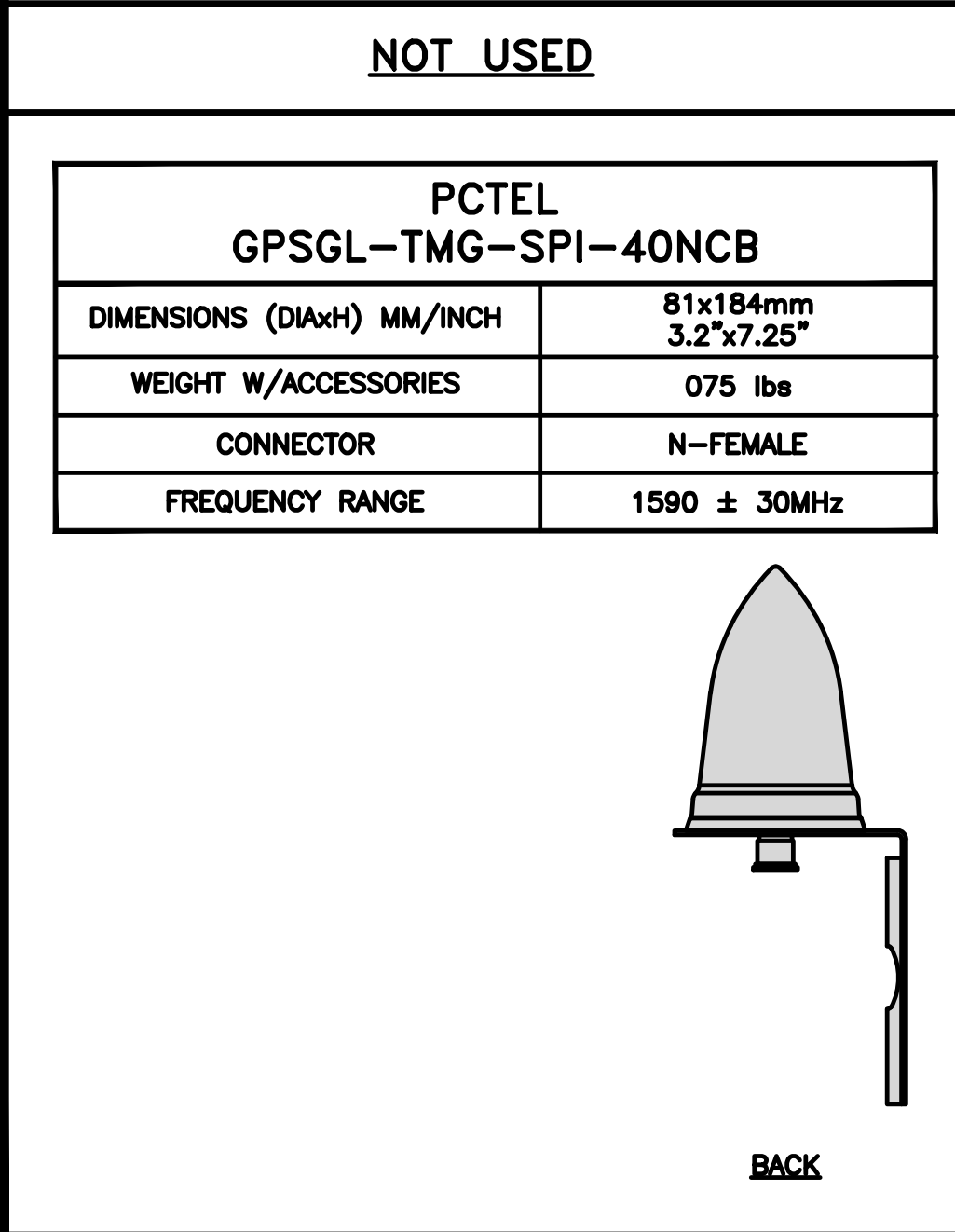
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TYPICAL WROUGHT IRON GATE ELEVATION DETAIL

NO SCALE

4



GPS DETAIL

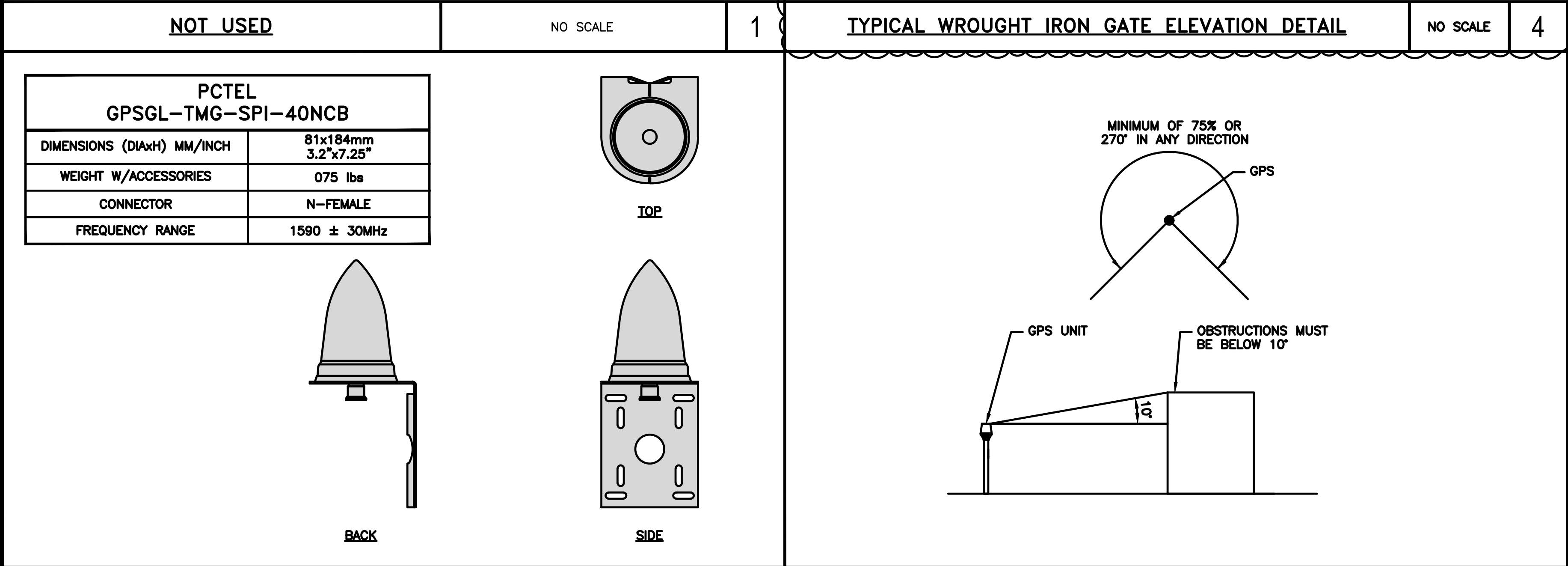
NO SCALE

6

GPS MINIMUM SKY VIEW REQUIREMENTS

NO SCALE

7



NOT USED

NO SCALE

8



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LITTLETON, CO 80120



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DOCUMENTS

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PROJECT INFORMATION
LSSNA00032A
1400 E MISSION BLVD
POMONA, CA 91766

SHEET TITLE
EQUIPMENT DETAILS

SHEET NUMBER

A-5

FUJITSU DUAL BAND
TA08025-B604

DIMENSIONS (HxWxD)	14.9"x15.7"x7.8"
WEIGHT	63.9 lbs
CONNECTOR TYPE	4.3-10 RF CONNECTOR
POWER SUPPLY	DC -58~-36V

PLAN

BACK

SIDE

FRONT

FUJITSU TRIPLE BAND
TA08025-B605

DIMENSIONS (HxWxD)	14.9"x15.7"x9"
WEIGHT	74.95 lbs
CONNECTOR TYPE	4.3-10 RF CONNECTOR
POWER SUPPLY	DC -58~-36V

PLAN

BACK

SIDE

FRONT

SABRE DOUBLE Z-BRACKET
C10123155

DIMENSIONS (HxWxD) (1 BRACKET)	5"x20"x1-13/16"
WEIGHT (FULL ASSEMBLY)	35.79 lbs
PACKAGE QUANTITY	4

#DESCRIPTION

1PLATE, CHANNEL BRACKET

2RRH Z BRACKET, 3/16"

3THREADED ROD ASSEMBLY 1/2"x12"

NOTE:
OR DISH WIRELESS L.L.C.
APPROVED EQUIVALENT

1

2

3

REMOTE RADIO HEAD DETAIL (RRH)

NO SCALE

1

RAYCAP RDIDC-9181-PF-48
DC SURGE PROTECTION (OVP)

DIMENSIONS (HxWxD)	18.98"x14.39"x8.15"
WEIGHT	21.82 LBS

PLAN

SIDE

BACK

FRONT

CELLMAX 12044x
CMA-UBTULBULBHH/6516/16/21/21

DIMENSIONS (HxWxD)(MM/IN)	1840x680x196 72.4"x26.7"x7.7"
CONNECTORS	8 x 4.3-10 FEMALE
WEIGHT (kg/lb)	48/105
WEIGHT WITH BRACKETS (kg/lb)	53/116

PLAN

SIDE

FRONT

RRH MOUNT DETAIL

NO SCALE

3

CU12PSM6P4XXX
(4 AWG CONDUCTORS)

CU12PSM9P6XXX
(6 AWG CONDUCTORS)

CU12PSM9P8XXX
(8 AWG CONDUCTORS)

ANTENNA BRACKET DETAIL

NO SCALE

7

CELLMAX ANTENNA BRACKET

ANTENNAS	12044x / 12045x
BRACKET PART #	CA325482 / CA325484
TILT BRACKET WEIGHT	6.61 lbs

NOTE:
OR DISH Wireless L.L.C.
APPROVED EQUIVALENT

ANTENNA DETAIL

NO SCALE

5

COMMSCOPE XP-2040
CROSSOVER PLATE

DIMENSIONS (HxW)	10"x12"
WEIGHT	11 LBS

PLAN PLATE

SIDE PLATE

PLAN U-BOLT

SIDE U-BOLT

ANTENNA PLATFORM
(NOT INCLUDED)

ANTENNA PIPE MOUNT
(NOT INCLUDED)

CROSSOVER PLATE

OPTION OF EITHER
SQUARE OR CIRCULAR
U-BOLT

CABLES UNLIMITED HYBRID CABLE
MINIMUM BEND RADIUSES

NO SCALE

6

COMMSCOPE
MC-K6MHDX-9-96

FACE WIDTH	7'-0"
WEIGHT	1203.31 lbs
NOTE: 15" TO 50" O.D.	

ANTENNA PIPE

FACE PIPE

7'-0"

40"

8'-0"

RRH/OVP MOUNT DETAIL

NO SCALE

8

RRH/OVP MOUNT DETAIL

NO SCALE

8

T-ARM MOUNT DETAIL

NO SCALE

9

T-ARM MOUNT DETAIL

NO SCALE

9

dish
wireless.

5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

POD
POWER OF DESIGN

11490 BLUEGRASS PKWY
LOUISVILLE, KY 40299

09/14/2023

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CHECKED BY: EEW

APPROVED BY: MEP

RFDS REV #: 2

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8	09/13/2023	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER

828491

DISH WIRELESS L.L.C.
PROJECT INFORMATION

LSSNA00032A
1400 E MISSION BLVD
POMONA, CA 91766

SHEET TITLE

EQUIPMENT DETAILS

SHEET NUMBER

A-6

			<div><div>TRENCHING NOTES</div><div><div>1. CONTRACTOR SHALL RESTORE THE TRENCH TO ITS ORIGINAL CONDITIONS BY EITHER SEEDING OR SODDING GRASS AREAS, OR REPLACING ASPHALT OR CONCRETE AREAS TO ITS ORIGINAL CROSS SECTION.</div><div>2. ALL CONDUITS SHALL BE INSTALLED IN COMPLIANCE WITH THE CURRENT NATIONAL ELECTRIC CODE (NEC) OR AS REQUIRED BY THE LOCAL JURISDICTION, WHICHEVER IS THE MOST STRINGENT.</div></div></div> <div><div>SEE TRENCHING NOTE 1</div><div>T-CUT TRENCH 12"-18"</div><div>SAWCUT OR COLD PLANE 1' MIN. FROM TRENCH CUTS</div><div>SAWCUT OR COLD PLANE 1' MIN. FROM TRENCH CUTS</div><div>BACKFILL PER SITE WORK SPECIFICATIONS (SEE GENERAL NOTES)</div><div>2'-0"</div><div>1'-0"</div><div>36"</div><div>UTILITY WARNING TAPE</div><div>SAND BEDDING PER SITE WORK SPECIFICATIONS</div></div>	<div><div>DISH WIRELESS L.L.C. PROVIDES 12AWG WIRE (6' TAIL)</div><div>PROPOSED DISH WIRELESS L.L.C. UNISTRUT</div><div>PROPOSED DISH WIRELESS L.L.C. 10 AMP DISTRIBUTION BREAKER</div><div>PROPOSED DISH WIRELESS L.L.C. 12 AWG WIRE</div><div>PROPOSED DISH WIRELESS L.L.C. 1-1/2" POWER FROM CABINET</div><div>DISH WIRELESS L.L.C. INSTALLS 1-1/2" CONDUITS FOR POWER AND FIBER TO CABINET</div><div>DISH WIRELESS L.L.C. FIBER DISTRIBUTION PANEL</div><div>PROPOSED DISH WIRELESS L.L.C. TELCO FIBER ENCLOSURE</div><div>DISH WIRELESS L.L.C. FIBER JUMPER TO CABINET WILL NEED TO BE TERMINATED BY FIBER PROVIDER ON OTHER SIDE OF BULKHEAD/LC TO LC CONNECTOR WHERE CIRCUIT IS TERMINATED.</div><div>PROPOSED FIBER PROVIDER FIBER LATERAL FROM RIGHT OF WAY TO STREET, TERMINATED TO FDP</div><div>PROPOSED DISH WIRELESS L.L.C. 1-1/2" FIBER TO CABINET</div><div>PROPOSED DISH WIRELESS L.L.C. 2" CONDUIT FROM COMMERCIAL FIBER VAULT</div></div>				
NOT USED	NO SCALE	1	TYPICAL UNDERGROUND TRENCH DETAIL	NO SCALE	2	DARK TELCO BOX – INTERIOR WIRING LAYOUT	NO SCALE	3
<div><div>PROPOSED DISH WIRELESS L.L.C. UNISTRUT</div><div>PROPOSED FIBER PROVIDER 1-1/4" FLEX CONDUITS</div><div>FIBER PROVIDER TO TERMINATE POWER TO FIBER PROVIDER NID</div><div>PROPOSED DISH WIRELESS L.L.C. 12 AWG WIRE (6' TAIL)</div><div>PROPOSED DISH WIRELESS L.L.C. 10 AMP DISTRIBUTION BREAKER</div><div>PROPOSED DISH WIRELESS L.L.C. 12 AWG WIRE</div><div>PROPOSED DISH WIRELESS L.L.C. 1-1/2" POWER FROM CABINET</div><div>NOTE: FIBER PROVIDER WILL NEED TO PROVIDE AN ADDITIONAL 5FT UNISTRUT, 2 U-BOLTS WITH 4 NUTS, IN THE EVENT THE BRACKET SPACING DOESN'T LINE UP WITH CURRENT SPACING BELOW</div><div>FIBER PROVIDER TO PUNCH TOP OF TELCO BOX OF NID ENCLOSURE AND INSTALL 1-1/4" LIQUID TIGHT CONNECTORS, UL LISTED, NYLON MATERIAL, WITH O-RING GASKET</div><div>FIBER PROVIDER TO INSTALL 1-1/4" FLEX CONDUITS BETWEEN FDP TELCO BOX & NID</div><div>PROPOSED DISH WIRELESS L.L.C. TELCO FIBER ENCLOSURE</div><div>PROPOSED DISH WIRELESS L.L.C. 1-1/2" FIBER TO CABINET</div><div>PROPOSED DISH WIRELESS L.L.C. 2" CONDUIT FROM COMMERCIAL FIBER VAULT</div><div>PROPOSED FIBER PROVIDER NID, IF REQUIRED</div><div>IN</div><div>IN</div><div>OUT</div><div>IN</div><div>IN</div><div>OUT</div></div>								
LIT TELCO BOX – INTERIOR WIRING LAYOUT (OPTIONAL)	NO SCALE	4	NOT USED	NO SCALE	5	NOT USED	NO SCALE	6
NOT USED	NO SCALE	7	NOT USED	NO SCALE	8	NOT USED	NO SCALE	9

dish

wireless.

5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

POD

POWER OF DESIGN

11490 BLUEGRASS PKWY
LOUISVILLE, KY 40299

11490

WARD

PALESON

C 89604

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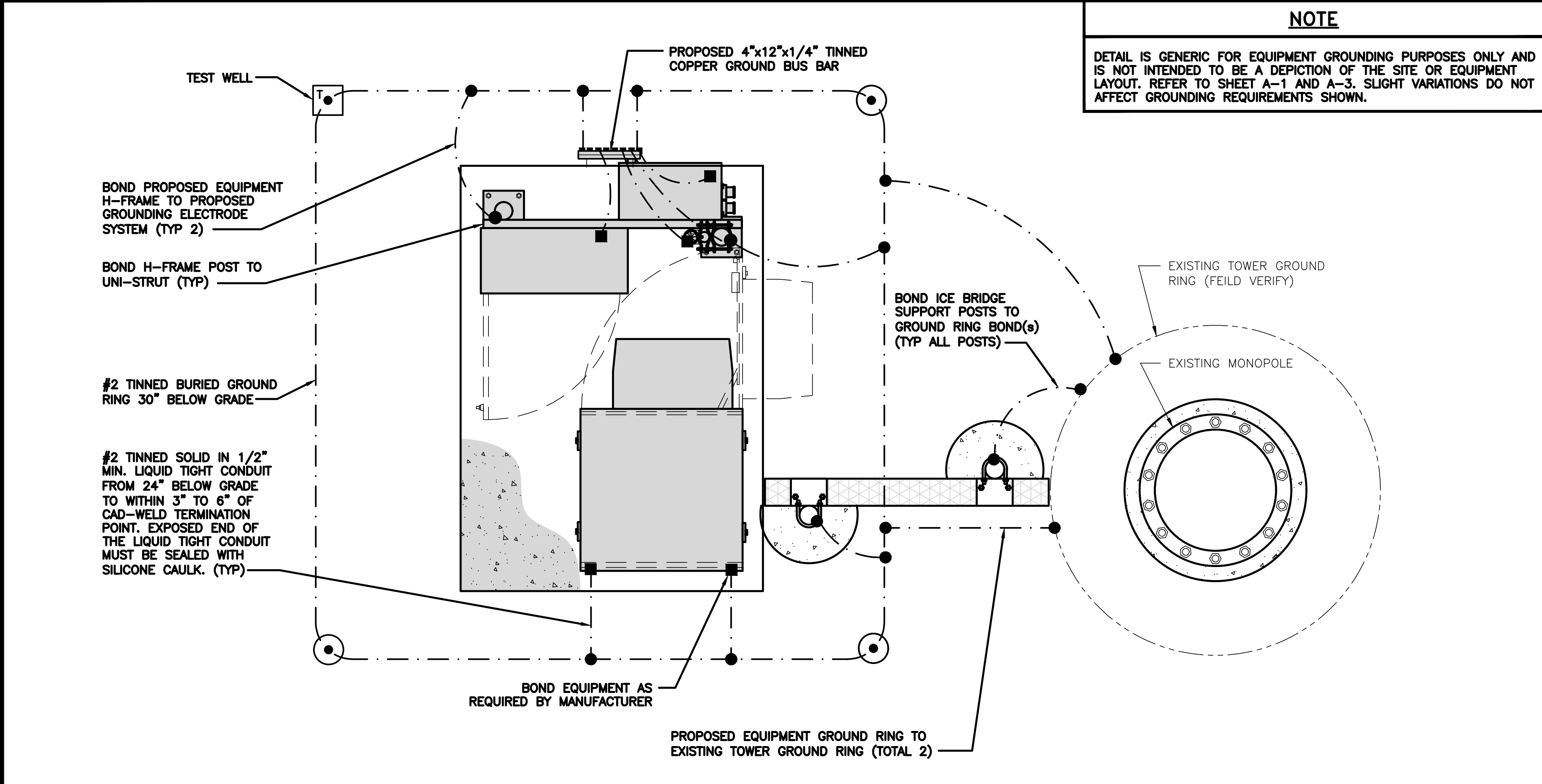
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828491

DISH WIRELESS L.L.C.
PROJECT INFORMATION
LSSNA00032A
1400 E MISSION BLVD
POMONA, CA 91766

SHEET TITLE
ELECTRICAL
DETAILS

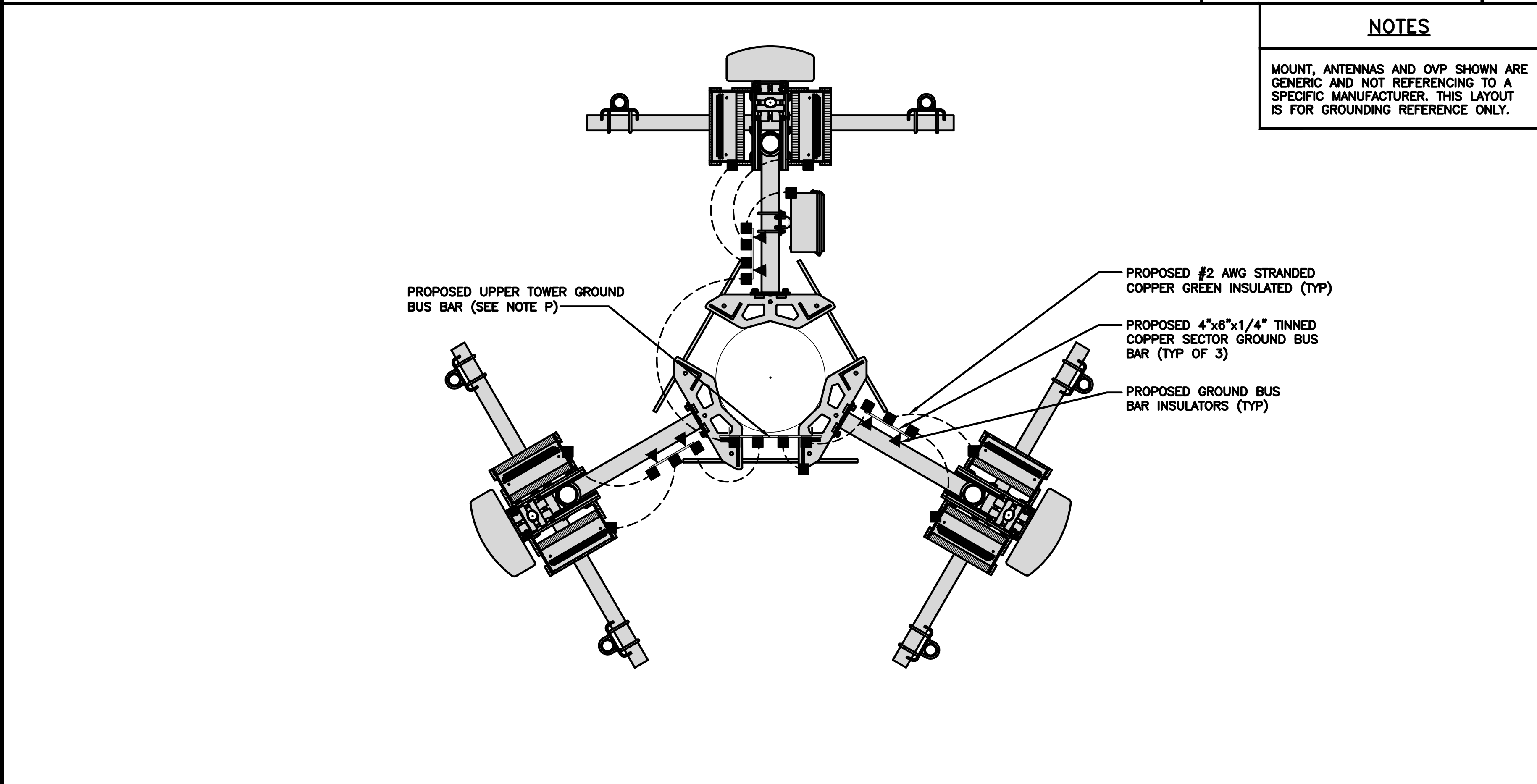
SHEET NUMBER
E-2



TYPICAL EQUIPMENT GROUNDING PLAN

NO SCALE

1



TYPICAL ANTENNA GROUNDING PLAN

NO SCALE

2

<p>● EXOTHERMIC CONNECTION</p> <p>■ MECHANICAL CONNECTION</p> <p>— GROUND BUS BAR</p> <p>○ GROUND ROD</p> <p>□ T TEST GROUND ROD WITH INSPECTION SLEEVE</p> <p>----- #2 AWG STRANDED & INSULATED</p> <p>- - - - - #2 AWG SOLID COPPER TINNED</p>	
<p>GROUNDING LEGEND</p>	
<p>1. GROUNDING IS SHOWN DIAGRAMMATICALLY ONLY.</p> <p>2. CONTRACTOR SHALL GROUND ALL EQUIPMENT AS A COMPLETE SYSTEM. GROUNDING SHALL BE IN COMPLIANCE WITH NEC SECTION 250 AND DISH WIRELESS L.L.C. GROUNDING AND BONDING REQUIREMENTS AND MANUFACTURER'S SPECIFICATIONS.</p> <p>3. ALL GROUND CONDUCTORS SHALL BE COPPER; NO ALUMINUM CONDUCTORS SHALL BE USED.</p>	
<p>GROUNDING KEY NOTES</p>	
<p>(A) EXTERIOR GROUND RING: #2 TINNED, BURIED AT A DEPTH OF AT LEAST 30 INCHES BELOW GRADE, OR 6 INCHES BELOW THE FROST LINE AND APPROXIMATELY 24 INCHES FROM THE EXTERIOR WALL OR FOOTING.</p> <p>(B) TOWER GROUND RING: THE GROUND RING SYSTEM SHALL BE INSTALLED AROUND AN ANTENNA TOWER'S LEGS, AND/OR GUY ANCHORS, WHERE SEPARATE SYSTEMS HAVE BEEN PROVIDED FOR THE TOWER AND THE BUILDING. AT LEAST TWO BONDS SHALL BE MADE BETWEEN THE TOWER RING GROUND SYSTEM AND THE BUILDING RING GROUND SYSTEM USING MINIMUM #2 AWG SOLID COPPER CONDUCTORS.</p> <p>(C) INTERIOR GROUND RING: #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTOR EXTENDED AROUND THE PERIMETER OF THE EQUIPMENT AREA. ALL NON-TELECOMMUNICATIONS RELATED METALLIC OBJECTS FOUND WITHIN A SITE SHALL BE GROUNDED TO THE INTERIOR GROUND RING WITH #2 AWG STRANDED GREEN INSULATED CONDUCTOR.</p> <p>(D) BOND TO INTERIOR GROUND RING: #2 AWG SOLID TINNED COPPER WIRE PRIMARY BONDS SHALL BE PROVIDED AT LEAST AT FOUR POINTS ON THE INTERIOR GROUND RING, LOCATED AT THE CORNERS OF THE BUILDING.</p> <p>(E) GROUND ROD: UL LISTED COPPER CLAD STEEL. MINIMUM 5/8" DIAMETER BY EIGHT FEET LONG GROUND ROD. GROUND RODS SHALL BE INSTALLED WITH INSPECTION SLEEVES. GROUND RODS SHALL BE DRIVEN TO THE DEPTH OF GROUND RING CONDUCTOR.</p> <p>(F) CELL REFERENCE GROUND BAR: POINT OF GROUND REFERENCE FOR ALL COMMUNICATIONS EQUIPMENT FRAMES. ALL BONDS ARE MADE WITH #2 AWG UNLESS NOTED OTHERWISE STRANDED GREEN INSULATED COPPER CONDUCTORS. BOND TO GROUND RING WITH (2) #2 SOLID TINNED COPPER CONDUCTORS.</p> <p>(G) HATCH PLATE GROUND BAR: BOND TO THE INTERIOR GROUND RING WITH TWO #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTORS. WHEN A HATCH-PLATE AND A CELL REFERENCE GROUND BAR ARE BOTH PRESENT, THE CRGB MUST BE CONNECTED TO THE HATCH-PLATE AND TO THE INTERIOR GROUND RING USING (2) TWO #2 AWG STRANDED GREEN INSULATED COPPER CONDUCTORS EACH.</p> <p>(H) EXTERIOR CABLE ENTRY PORT GROUND BARS: LOCATED AT THE ENTRANCE TO THE CELL SITE BUILDING. BOND TO GROUND RING WITH A #2 AWG SOLID TINNED COPPER CONDUCTORS WITH AN EXOTHERMIC WELD AND INSPECTION SLEEVE.</p> <p>(I) TELCO GROUND BAR: BOND TO BOTH CELL REFERENCE GROUND BAR OR EXTERIOR GROUND RING.</p> <p>(J) FRAME BONDING: THE BONDING POINT FOR TELECOM EQUIPMENT FRAMES SHALL BE THE GROUND BUS THAT IS NOT ISOLATED FROM THE EQUIPMENTS METAL FRAMEWORK.</p> <p>(K) INTERIOR UNIT BONDS: METAL FRAMES, CABINETS AND INDIVIDUAL METALLIC UNITS LOCATED WITH THE AREA OF THE INTERIOR GROUND RING REQUIRE A #2 AWG STRANDED GREEN INSULATED COPPER BOND TO THE INTERIOR GROUND RING.</p> <p>(L) FENCE AND GATE GROUNDING: METAL FENCES WITHIN 7 FEET OF THE EXTERIOR GROUND RING OR OBJECTS BONDED TO THE EXTERIOR GROUND RING SHALL BE BONDED TO THE GROUND RING WITH A #2 AWG SOLID TINNED COPPER CONDUCTOR AT AN INTERVAL NOT EXCEEDING 25 FEET. BONDS SHALL BE MADE AT EACH GATE POST AND ACROSS GATE OPENINGS.</p> <p>(M) EXTERIOR UNIT BONDS: METALLIC OBJECTS, EXTERNAL TO OR MOUNTED TO THE BUILDING, SHALL BE BONDED TO THE EXTERIOR GROUND RING. USING #2 TINNED SOLID COPPER WIRE</p> <p>(N) ICE BRIDGE SUPPORTS: EACH ICE BRIDGE LEG SHALL BE BONDED TO THE GROUND RING WITH #2 AWG BARE TINNED COPPER CONDUCTOR. PROVIDE EXOTHERMIC WELDS AT BOTH THE ICE BRIDGE LEG AND BURIED GROUND RING.</p> <p>(O) REFER TO DISH WIRELESS L.L.C. GROUNDING NOTES.</p> <p>(P) TOWER TOP COLLECTOR BUS BAR IS TO BE MECHANICALLY BONDED TO PROPOSED ANTENNA MOUNT COLLAR.</p>	
<p>GROUNDING KEY NOTES</p>	

NO SCALE

3



5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120



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A&E PROJECT NUMBER

828491

DISH WIRELESS L.L.C.
PROJECT INFORMATION

LSSNA00032A
1400 E MISSION BLVD
POMONA, CA 91766

SHEET TITLE
GROUNDING PLANS
AND NOTES

SHEET NUMBER

G-1

<div>1. EXOTHERMIC WELD (2) TWO, #2 AWG BARE TINNED SOLID COPPER CONDUCTORS TO GROUND BAR, ROUTE CONDUCTORS TO BURIED GROUND RING AND PROVIDE PARALLEL EXOTHERMIC WELD.</div> <div>2. ALL EXTERIOR GROUNDING HARDWARE SHALL BE STAINLESS STEEL 3/8" DIAMETER OR LARGER. ALL HARDWARE 18-8 STAINLESS STEEL INCLUDING LOCK WASHERS, COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING.</div> <div>3. FOR GROUND BOND TO STEEL ONLY: COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING.</div> <div>4. DO NOT INSTALL CABLE GROUNDING KIT AT A BEND AND ALWAYS DIRECT GROUND CONDUCTOR DOWN TO GROUNDING BUS.</div> <div>5. NUT & WASHER SHALL BE PLACED ON THE FRONT SIDE OF THE GROUND BAR AND BOLTED ON THE BACK SIDE.</div> <div>6. ALL GROUNDING PARTS AND EQUIPMENT TO BE SUPPLIED AND INSTALLED BY CONTRACTOR.</div> <div>7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ADDITIONAL GROUND BAR AS REQUIRED.</div> <div>9. ENSURE THE WIRE INSULATION TERMINATION IS WITHIN 1/8" OF THE BARREL (NO SHINERS).</div>			<div><div>EXTERNAL TOOTHED</div><div>CLOSED BARREL, FOR ALL EXTERIOR TWO-HOLE CONNECTORS</div><div>BLACK HEAT SHRINK UV RATED</div><div>CONDUCTOR INSULATION TO BUTT UP AGAINST THE CONNECTOR BARREL</div><div>3/8" DIA x1 1/2"</div><div>S/S NUT</div><div>S/S LOCK WASHER</div><div>S/S FLAT WASHER</div><div>S/S FLAT WASHER</div><div>S/S FLAT WASHER</div><div>S/S BOLT (1 OF 2)</div><div>1/16" MINIMUM SPACING</div><div>TINNED COPPER GROUNDING BAR</div></div>			<div><div>EXTERNAL TOOTHED</div><div>INSPECTION WINDOW IN BARREL, REQUIRED FOR ALL INTERIOR TWO-HOLE CONNECTORS</div><div>CLEAR HEAT SHRINK</div><div>CONDUCTOR INSULATION TO BUTT UP AGAINST THE CONNECTOR BARREL</div><div>3/8" DIA x1 1/2"</div><div>S/S NUT</div><div>S/S LOCK WASHER</div><div>S/S FLAT WASHER</div><div>S/S FLAT WASHER</div><div>S/S FLAT WASHER</div><div>S/S BOLT (1 OF 2)</div><div>1/16" MINIMUM SPACING</div><div>TINNED COPPER GROUNDING BAR</div></div>		
TYPICAL GROUNDING NOTES	NO SCALE	1	TYPICAL EXTERIOR TWO HOLE LUG	NO SCALE	2	TYPICAL INTERIOR TWO HOLE LUG	NO SCALE	3
<div><div>NOTE: MINIMUM OF 3 THREADS TO BE VISIBLE (TYP)</div><div>S/S BOLT (TYP)</div><div>S/S SPLIT WASHER (TYP)</div><div>S/S FLAT WASHER (TYP)</div><div>2 HOLE LONG BARREL TINNED SOLID COPPER LUG (TYP)</div><div>TIN COATED SOLID COPPER BUS BAR</div><div>S/S FLAT WASHER (TYP)</div><div>S/S NUT (TYP)</div><div>CHERRY INSULATOR INSTALLED IF REQUIRED</div></div>								
LUG DETAIL	NO SCALE	4	NOT USED	NO SCALE	5	NOT USED	NO SCALE	6
NOT USED	NO SCALE	7	NOT USED	NO SCALE	8	NOT USED	NO SCALE	9

dish

wireless.

5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120

POD

POWER OF DESIGN

11490 BLUEGRASS PKWY
LOUISVILLE, KY 40299

WARD PATTERSON

C 89604

EXP 3/31/25

CIVIL

STATE OF CALIFORNIA

09/14/2023

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PROJECT INFORMATION
LSSNA00032A
1400 E MISSION BLVD
POMONA, CA 91766


SHEET TITLE
GROUNDING DETAILS

SHEET NUMBER
G-3


RF JUMPER COLOR CODING												
3/4" TAPE WIDTHS WITH 3/4" SPACING												
LOW-BAND RRH – (600MHz N71 BASEBAND) + (850MHz N26 BAND) + (700MHz N29 BAND) – OPTIONAL PER MARKET	ALPHA RRH				BETA RRH				GAMMA RRH			
	PORT 1 + SLANT	PORT 2 – SLANT	PORT 3 + SLANT	PORT 4 – SLANT	PORT 1 + SLANT	PORT 2 – SLANT	PORT 3 + SLANT	PORT 4 – SLANT	PORT 1 + SLANT	PORT 2 – SLANT	PORT 3 + SLANT	PORT 4 – SLANT
	RED	RED	RED	RED	BLUE	BLUE	BLUE	BLUE	GREEN	GREEN	GREEN	GREEN
	ORANGE	ORANGE	RED	RED	ORANGE	ORANGE	BLUE	BLUE	ORANGE	ORANGE	GREEN	GREEN
		WHITE (-) PORT	ORANGE	ORANGE		WHITE (-) PORT	ORANGE	ORANGE		WHITE (-) PORT	ORANGE	ORANGE
ADD FREQUENCY COLOR TO SECTOR BAND (CBRS WILL USE YELLOW BANDS)												
MID-BAND RRH – (AWS BANDS N66+N70)	RED	RED	RED	RED	BLUE	BLUE	BLUE	BLUE	GREEN	GREEN	GREEN	GREEN
	PURPLE	PURPLE	RED	RED	PURPLE	PURPLE	BLUE	BLUE	PURPLE	PURPLE	GREEN	GREEN
		WHITE (-) PORT	PURPLE	PURPLE		WHITE (-) PORT	PURPLE	PURPLE		WHITE (-) PORT	PURPLE	PURPLE
				WHITE (-) PORT				WHITE (-) PORT				WHITE (-) PORT
ADD FREQUENCY COLOR TO SECTOR BAND (CBRS WILL USE YELLOW BANDS)												
HYBRID/DISCREET CABLES	EXAMPLE 1			EXAMPLE 2			EXAMPLE 3					
	RED	RED	RED	RED	RED	RED	RED	RED				
	BLUE	BLUE	BLUE	BLUE	BLUE	BLUE	ORANGE	ORANGE				
	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN	PURPLE	PURPLE				
	ORANGE	ORANGE	ORANGE	ORANGE	ORANGE	ORANGE						
INCLUDE SECTOR BANDS BEING SUPPORTED ALONG WITH FREQUENCY BANDS												
EXAMPLE 1 – HYBRID, OR DISCREET, SUPPORTS ALL SECTORS, BOTH LOW-BANDS AND MID-BANDS												
EXAMPLE 2 – HYBRID, OR DISCREET, SUPPORTS CBRS ONLY, ALL SECTORS												
FIBER JUMPERS TO RRHs	LOW BAND RRH			HIGH BAND RRH			LOW BAND RRH			HIGH BAND RRH		
	RED	RED	RED	RED	RED	RED	BLUE	BLUE	BLUE	BLUE	GREEN	GREEN
					PURPLE	PURPLE		PURPLE	PURPLE		PURPLE	PURPLE
POWER CABLES TO RRHs	LOW BAND RRH			HIGH BAND RRH			LOW BAND RRH			HIGH BAND RRH		
	RED	RED	RED	RED	RED	RED	BLUE	BLUE	BLUE	BLUE	GREEN	GREEN
					PURPLE	PURPLE		PURPLE	PURPLE		PURPLE	PURPLE
RET MOTORS AT ANTENNAS	ANTENNA 1 LOW BAND/ "IN"		ANTENNA 1 HIGH BAND/ "IN"		ANTENNA 1 LOW BAND/ "IN"		ANTENNA 1 HIGH BAND/ "IN"		ANTENNA 1 LOW BAND/ "IN"		ANTENNA 1 HIGH BAND/ "IN"	
	RED	RED	RED	RED	RED	RED	BLUE	BLUE	BLUE	BLUE	GREEN	GREEN
				PURPLE	PURPLE	PURPLE		PURPLE	PURPLE		PURPLE	PURPLE
MICROWAVE RADIO LINKS	FORWARD AZIMUTH OF 0–120 DEGREES				FORWARD AZIMUTH OF 120–240 DEGREES				FORWARD AZIMUTH OF 240–360 DEGREES			
	PRIMARY		SECONDARY		PRIMARY		SECONDARY		PRIMARY		SECONDARY	
	WHITE	WHITE	WHITE	WHITE	WHITE	WHITE	WHITE	WHITE	WHITE	WHITE	WHITE	WHITE
	RED	RED	RED	WHITE	BLUE	BLUE	WHITE	WHITE	GREEN	GREEN	WHITE	GREEN
	WHITE	RED	WHITE	WHITE	WHITE	WHITE	BLUE	WHITE	WHITE	WHITE	GREEN	WHITE
LINKS WILL HAVE A 1.5–2 INCH WHITE WRAP WITH THE AZIMUTH COLOR OVERLAPPING IN THE MIDDLE. ADD ADDITIONAL SECTOR COLOR BANDS FOR EACH ADDITIONAL MW RADIO.												
MICROWAVE CABLES WILL REQUIRE P-TOUCH LABELS INSIDE THE CABINET TO IDENTIFY THE LOCAL AND REMOTE SITE ID'S												

RF CABLE COLOR CODES	NO SCALE	1
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LOW BANDS (N71+N26) OPTIONAL – (N29)		AWS (N66+N70+H–BLOCK)	
ORANGE		PURPLE	
CBRS TECH (3 GHz)		NEGATIVE SLANT PORT ON ANT/RRH	
YELLOW		WHITE	
ALPHA SECTOR		BETA SECTOR	
RED		BLUE	
		GAMMA SECTOR	
		GREEN	
<u>COLOR IDENTIFIER</u>		NO SCALE	2
<div>NOTE: THE RF DESIGN OR ANY ASSOCIATED INFORMATION ON THIS SHEET HAS BEEN PREPARED AND DESIGNED BY OTHERS. POWER OF DESIGN GROUP DID <u>NOT</u> DESIGN OR PREPARE ANY RF.</div>			
<u>NOT USED</u>		NO SCALE	3
<u>NOT USED</u>		NO SCALE	4



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▲	09/13/2023	ISSUED FOR CONSTRUCTION

A&E PROJECT NUMBER

828491

DISH WIRELESS L.L.C.
PROJECT INFORMATION

LSSNA00032A
1400 E MISSION BLVD
POMONA, CA 91766

SHEET TITLE

RF
CABLE COLOR CODES

SHEET NUMBER

RF-1

EXOTHERMIC CONNECTION		AB	ANCHOR BOLT	IN	INCH
MECHANICAL CONNECTION		ABV	ABOVE	INT	INTERIOR
CHEMICAL ELECTROLYTIC GROUNDING SYSTEM		AC	ALTERNATING CURRENT	LB(S)	POUND(S)
TEST CHEMICAL ELECTROLYTIC GROUNDING SYSTEM		ADDL	ADDITIONAL	LF	LINEAR FEET
EXOTHERMIC WITH INSPECTION SLEEVE		AFF	ABOVE FINISHED FLOOR	LTE	LONG TERM EVOLUTION
GROUNDING BAR		AGL	ABOVE FINISHED GRADE	MAS	MASONRY
GROUND ROD		AIC	ABOVE GROUND LEVEL	MAX	MAXIMUM
TEST GROUND ROD WITH INSPECTION SLEEVE		ALUM	ALUMINUM	MCL	MOUNT CENTER LINE
SINGLE POLE SWITCH		ALT	ALTERNATE	MB	MACHINE BOLT
DUPLEX RECEPTACLE		ANT	ANTENNA	MECH	MECHANICAL
DUPLEX GFCI RECEPTACLE		APPROX	APPROXIMATE	MFR	MANUFACTURER
FLUORESCENT LIGHTING FIXTURE (2) TWO LAMPS 48-T8		ARCH	ARCHITECTURAL	MGB	MASTER GROUND BAR
SMOKE DETECTION (DC)		ATS	AUTOMATIC TRANSFER SWITCH	MIN	MINIMUM
EMERGENCY LIGHTING (DC)		AWG	AMERICAN WIRE GAUGE	MISC	MISCELLANEOUS
SECURITY LIGHT W/PHOTOCELL LITHONIA ALXW LED-1-25A400/51K-SR4-120-PE-DBBTXD		BATT	BATTERY	MTL	METAL
CHAIN LINK FENCE		BLDG	BUILDING	MTS	MANUAL TRANSFER SWITCH
WOOD/WROUGHT IRON FENCE		BLK	BLOCK	MW	MICROWAVE
WALL STRUCTURE		BLKG	BLOCKING	NEC	NATIONAL ELECTRIC CODE
LEASE AREA		BM	BEAM	NM	NEWTON METERS
PROPERTY LINE (PL)		BTC	BARE TINNED COPPER CONDUCTOR	NO.	NUMBER
SETBACKS		BOF	BOTTOM OF FOOTING	#	NUMBER
ICE BRIDGE		CAB	CABINET	NTS	NOT TO SCALE
CABLE TRAY		CANT	CANTILEVERED	OC	ON-CENTER
WATER LINE		CHG	CHARGING	OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
UNDERGROUND POWER		CLG	CEILING	OPNG	OPENING
UNDERGROUND TELCO		CLR	CLEAR	P/C	PRECAST CONCRETE
OVERHEAD POWER		COL	COLUMN	PCS	PERSONAL COMMUNICATION SERVICES
OVERHEAD TELCO		COMM	COMMON	PCU	PRIMARY CONTROL UNIT
UNDERGROUND TELCO/POWER		CONC	CONCRETE	PRC	PRIMARY RADIO CABINET
ABOVE GROUND POWER		CONSTR	CONSTRUCTION	PP	POLARIZING PRESERVING
ABOVE GROUND TELCO		DBL	DOUBLE	PSF	POUNDS PER SQUARE FOOT
ABOVE GROUND TELCO/POWER		DC	DIRECT CURRENT	PSI	POUNDS PER SQUARE INCH
WORKPOINT		DEPT	DEPARTMENT	PT	PRESSURE TREATED
SECTION REFERENCE		DF	DOUGLAS FIR	PWR	POWER CABINET
DETAIL REFERENCE		DIA	DIAMETER	QTY	QUANTITY
		DIAG	DIAGONAL	RAD	RADIUS
		DIM	DIMENSION	RECT	RECTIFIER
		DWG	DRAWING	REF	REFERENCE
		DWL	DOWEL	REINF	REINFORCEMENT
		EA	EACH	REQ'D	REQUIRED
		EC	ELECTRICAL CONDUCTOR	RET	REMOTE ELECTRIC TILT
		EL	ELEVATION	RF	RADIO FREQUENCY
		ELEC	ELECTRICAL	RMC	RIGID METALLIC CONDUIT
		EMT	ELECTRICAL METALLIC TUBING	RRH	REMOTE RADIO HEAD
		ENG	ENGINEER	RRU	REMOTE RADIO UNIT
		EQ	EQUAL	RWY	RACEWAY
		EXP	EXPANSION	SCH	SCHEDULE
		EXT	EXTERIOR	SHT	SHEET
		EW	EACH WAY	SIAD	SMART INTEGRATED ACCESS DEVICE
		FAB	FABRICATION	SIM	SIMILAR
		FF	FINISH FLOOR	SPEC	SPECIFICATION
		FG	FINISH GRADE	SQ	SQUARE
		FIF	FACILITY INTERFACE FRAME	SS	STAINLESS STEEL
		FIN	FINISH(ED)	STD	STANDARD
		FLR	FLOOR	STL	STEEL
		FDN	FOUNDATION	TEMP	TEMPORARY
		FOC	FACE OF CONCRETE	THK	THICKNESS
		FOM	FACE OF MASONRY	TMA	TOWER MOUNTED AMPLIFIER
		FOS	FACE OF STUD	TN	TOE NAIL
		FOW	FACE OF WALL	TOA	TOP OF ANTENNA
		FS	FINISH SURFACE	TOC	TOP OF CURB
		FT	FOOT	TOF	TOP OF FOUNDATION
		FTG	FOOTING	TOP	TOP OF PLATE (PARAPET)
		GA	GAUGE	TOS	TOP OF STEEL
		GEN	GENERATOR	TOW	TOP OF WALL
		GFCI	GROUND FAULT CIRCUIT INTERRUPTER	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSION
		GLB	GLUE LAMINATED BEAM	TYP	TYPICAL
		GLV	GALVANIZED	UG	UNDERGROUND
		GPS	GLOBAL POSITIONING SYSTEM	UL	UNDERWRITERS LABORATORY
		GND	GROUND	UNO	UNLESS NOTED OTHERWISE
		GSM	GLOBAL SYSTEM FOR MOBILE	UMTS	UNIVERSAL MOBILE TELECOMMUNICATIONS SYSTEM
		HDG	HOT DIPPED GALVANIZED	UPS	UNINTERRUPTIBLE POWER SYSTEM (DC POWER PLANT)
		HDR	HEADER	VIF	VERIFIED IN FIELD
		HGR	HANGER	W	WIDE
		HVAC	HEAT/VENTILATION/AIR CONDITIONING	W/	WITH
		HT	HEIGHT	WD	WOOD
		IGR	INTERIOR GROUND RING	WP	WEATHERPROOF
				WT	WEIGHT

LEGEND

ABBREVIATIONS



5701 SOUTH SANTA FE DRIVE
LITTLETON, CO 80120



11490 BLUEGRASS PKWY
LOUISVILLE, KY 40299



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DRAWN BY: CHECKED BY: APPROVED BY:

AJM

EEW

MEP

RFDS REV #: 2

CONSTRUCTION
DOCUMENTS

SUBMITTALS

REV	DATE	DESCRIPTION
	01/17/2023	ISSUED FOR CONSTRUCTION
	03/06/2023	ISSUED FOR CONSTRUCTION
	04/04/2023	ISSUED FOR CONSTRUCTION
	04/14/2023	ISSUED FOR CONSTRUCTION
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SHEET TITLE
LEGEND AND
ABBREVIATIONS

SHEET NUMBER

GN-1

SIGN TYPES		
TYPE	COLOR	COLOR CODE PURPOSE
INFORMATION	GREEN	"INFORMATIONAL SIGN" TO NOTIFY OTHERS OF SITE OWNERSHIP & CONTACT NUMBER AND POTENTIAL RF EXPOSURE.
NOTICE	BLUE	"NOTICE BEYOND THIS POINT" RF FIELDS BEYOND THIS POINT MAY EXCEED THE FCC GENERAL PUBLIC EXPOSURE LIMIT. OBEY ALL POSTED SIGNS AND SITE GUIDELINES FOR WORKING IN RF ENVIRONMENTS. IN ACCORDANCE WITH FEDERAL COMMUNICATIONS COMMISSION RULES ON RADIO FREQUENCY EMISSIONS 47 CFR-1.1307(b)
CAUTION	YELLOW	"CAUTION BEYOND THIS POINT" RF FIELDS BEYOND THIS POINT MAY EXCEED THE FCC GENERAL PUBLIC EXPOSURE LIMIT. OBEY ALL POSTED SIGNS AND SITE GUIDELINES FOR WORKING IN RF ENVIRONMENTS. IN ACCORDANCE WITH FEDERAL COMMUNICATIONS COMMISSION RULES ON RADIO FREQUENCY EMISSIONS 47 CFR-1.1307(b)
WARNING	ORANGE/RED	"WARNING BEYOND THIS POINT" RF FIELDS AT THIS SITE EXCEED FCC RULES FOR HUMAN EXPOSURE. FAILURE TO OBEY ALL POSTED SIGNS AND SITE GUIDELINES FOR WORKING IN RF ENVIRONMENTS COULD RESULT IN SERIOUS INJURY. IN ACCORDANCE WITH FEDERAL COMMUNICATIONS COMMISSION RULES ON RADIO FREQUENCY EMISSIONS 47 CFR-1.1307(b)

SIGN PLACEMENT:

- RF SIGNAGE PLACEMENT SHALL FOLLOW THE RECOMMENDATIONS OF AN EXISTING EME REPORT, CREATED BY A THIRD PARTY PREVIOUSLY AUTHORIZED BY DISH Wireless L.L.C.
- INFORMATION SIGN (GREEN) SHALL BE LOCATED ON EXISTING DISH Wireless L.L.C EQUIPMENT.
 - A) IF THE INFORMATION SIGN IS A STICKER, IT SHALL BE PLACED ON EXISTING DISH Wireless L.L.C EQUIPMENT CABINET.
 - B) IF THE INFORMATION SIGN IS A METAL SIGN IT SHALL BE PLACED ON EXISTING DISH Wireless L.L.C H-FRAME WITH A SECURE ATTACH METHOD.
- IF EME REPORT IS NOT AVAILABLE AT THE TIME OF CREATION OF CONSTRUCTION DOCUMENTS; PLEASE CONTACT DISH Wireless L.L.C. CONSTRUCTION MANAGER FOR FURTHER INSTRUCTION ON HOW TO PROCEED.

NOTES:

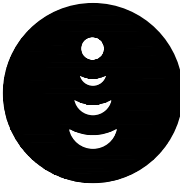
1. FOR DISH Wireless L.L.C. LOGO, SEE DISH Wireless L.L.C. DESIGN SPECIFICATIONS (PROVIDED BY DISH Wireless L.L.C.)
2. SITE ID SHALL BE APPLIED TO SIGNS USING "LASER ENGRAVING" OR ANY OTHER WEATHER RESISTANT METHOD (DISH Wireless L.L.C. APPROVAL REQUIRED)
3. TEXT FOR SIGNAGE SHALL INDICATE CORRECT SITE NAME AND NUMBER AS PER DISH Wireless L.L.C. CONSTRUCTION MANAGER RECOMMENDATIONS.
4. CABINET/SHELTER MOUNTING APPLICATION REQUIRES ANOTHER PLATE APPLIED TO THE FACE OF THE CABINET WITH WATER PROOF POLYURETHANE ADHESIVE
5. ALL SIGNS WILL BE SECURED WITH EITHER STAINLESS STEEL ZIP TIES OR STAINLESS STEEL TECH SCREWS
6. ALL SIGNS TO BE 8.5"x11" AND MADE WITH 0.04" OF ALUMINUM MATERIAL

INFORMATION

This is an access point to an area with transmitting antennas.

Obey all signs and barriers beyond this point.
Call the DISH Wireless L.L.C. NOC at 1-866-624-6874

Site ID: LSSNA00032A



THIS SIGN IS FOR REFERENCE PURPOSES ONLY

NOTICE



Transmitting Antenna(s)

Radio frequency fields beyond this point MAY **EXCEED** the FCC Occupational exposure limit.

Obey all posted signs and site guidelines for working in radio frequency environments.

Call the DISH Wireless L.L.C. NOC at 1-866-624-6874 prior to working beyond this point.

Site ID: LSSNA00032A



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CAUTION



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DISH WIRELESS L.L.C. PROJECT INFORMATION
LSSNA00032A 1400 E MISSION BLVD POMONA, CA 91766

SHEET TITLE
RF SIGNAGE

SHEET NUMBER
GN-2

SITE ACTIVITY REQUIREMENTS:

1. NOTICE TO PROCEED – NO WORK SHALL COMMENCE PRIOR TO CONTRACTOR RECEIVING A WRITTEN NOTICE TO PROCEED (NTP) AND THE ISSUANCE OF A PURCHASE ORDER. PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE DISH WIRELESS L.L.C. AND TOWER OWNER NOC & THE DISH WIRELESS L.L.C. AND TOWER OWNER CONSTRUCTION MANAGER.
2. "LOOK UP" – DISH WIRELESS L.L.C. AND TOWER OWNER SAFETY CLIMB REQUIREMENT:

THE INTEGRITY OF THE SAFETY CLIMB AND ALL COMPONENTS OF THE CLIMBING FACILITY SHALL BE CONSIDERED DURING ALL STAGES OF DESIGN, INSTALLATION, AND INSPECTION. TOWER MODIFICATION, MOUNT REINFORCEMENTS, AND/OR EQUIPMENT INSTALLATIONS SHALL NOT COMPROMISE THE INTEGRITY OR FUNCTIONAL USE OF THE SAFETY CLIMB OR ANY COMPONENTS OF THE CLIMBING FACILITY ON THE STRUCTURE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: PINCHING OF THE WIRE ROPE, BENDING OF THE WIRE ROPE FROM ITS SUPPORTS, DIRECT CONTACT OR CLOSE PROXIMITY TO THE WIRE ROPE WHICH MAY CAUSE FRICTIONAL WEAR, IMPACT TO THE ANCHORAGE POINTS IN ANY WAY, OR TO IMPEDE/BLOCK ITS INTENDED USE. ANY COMPROMISED SAFETY CLIMB, INCLUDING EXISTING CONDITIONS MUST BE TAGGED OUT AND REPORTED TO YOUR DISH WIRELESS L.L.C. AND DISH WIRELESS L.L.C. AND TOWER OWNER POC OR CALL THE NOC TO GENERATE A SAFETY CLIMB MAINTENANCE AND CONTRACTOR NOTICE TICKET.
3. PRIOR TO THE START OF CONSTRUCTION, ALL REQUIRED JURISDICTIONAL PERMITS SHALL BE OBTAINED. THIS INCLUDES, BUT IS NOT LIMITED TO, BUILDING, ELECTRICAL, MECHANICAL, FIRE, FLOOD ZONE, ENVIRONMENTAL, AND ZONING. AFTER ONSITE ACTIVITIES AND CONSTRUCTION ARE COMPLETED, ALL REQUIRED PERMITS SHALL BE SATISFIED AND CLOSED OUT ACCORDING TO LOCAL JURISDICTIONAL REQUIREMENTS.
4. ALL CONSTRUCTION MEANS AND METHODS; INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN, AND SHALL MEET ANSI/ASSE A10.48 (LATEST EDITION); FEDERAL, STATE, AND LOCAL REGULATIONS; AND ANY APPLICABLE INDUSTRY CONSENSUS STANDARDS RELATED TO THE CONSTRUCTION ACTIVITIES BEING PERFORMED. ALL RIGGING PLANS SHALL ADHERE TO ANSI/ASSE A10.48 (LATEST EDITION) AND DISH WIRELESS L.L.C. AND TOWER OWNER STANDARDS, INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION, TO CERTIFY THE SUPPORTING STRUCTURE(S) IN ACCORDANCE WITH ANSI/TIA–322 (LATEST EDITION).
5. ALL SITE WORK TO COMPLY WITH DISH WIRELESS L.L.C. AND TOWER OWNER INSTALLATION STANDARDS FOR CONSTRUCTION ACTIVITIES ON DISH WIRELESS L.L.C. AND TOWER OWNER TOWER SITE AND LATEST VERSION OF ANSI/TIA–1019–A–2012 "STANDARD FOR INSTALLATION, ALTERATION, AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS."
6. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY DISH WIRELESS L.L.C. AND TOWER OWNER PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
7. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
8. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
9. THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES INCLUDING PRIVATE LOCATES SERVICES PRIOR TO THE START OF CONSTRUCTION.
10. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION E) CONSTRUCTION SAFETY PROCEDURES.
11. ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND DISH PROJECT SPECIFICATIONS, LATEST APPROVED REVISION.
12. CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH AT THE COMPLETION OF THE WORK. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
13. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF DISH WIRELESS L.L.C. AND TOWER OWNER, AND/OR LOCAL UTILITIES.
14. THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE REQUIRED BY LOCAL JURISDICTION AND SIGNAGE REQUIRED ON INDIVIDUAL PIECES OF EQUIPMENT, ROOMS, AND SHELTERS.
15. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE CARRIER'S EQUIPMENT AND TOWER AREAS.
16. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
17. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION AS SPECIFIED ON THE CONSTRUCTION DRAWINGS AND/OR PROJECT SPECIFICATIONS.
18. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
19. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
20. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS AND RADIOS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
21. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.
22. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.

GENERAL NOTES:

- 1.FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:

CONTRACTOR:GENERAL CONTRACTOR RESPONSIBLE FOR CONSTRUCTION

CARRIER:DISH WIRELESS L.L.C.

TOWER OWNER:TOWER OWNER
2. THESE DRAWINGS HAVE BEEN PREPARED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE ENGINEERS IN THIS OR SIMILAR LOCALITIES. IT IS ASSUMED THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR AND/OR WORKPEOPLE WHO HAVE A WORKING KNOWLEDGE OF THE APPLICABLE CODE STANDARDS AND REQUIREMENTS AND OF INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION OR ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR MISCELLANEOUS WORK NOT EXPLICITLY SHOWN.
3. THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE MEANS OR METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY FOR PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, FORMWORK, SHORING, ETC. SITE VISITS BY THE ENGINEER OR HIS REPRESENTATIVE WILL NOT INCLUDE INSPECTION OF THESE ITEMS AND IS FOR STRUCTURAL OBSERVATION OF THE FINISHED STRUCTURE ONLY.
4. NOTES AND DETAILS IN THE CONSTRUCTION DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT, AND/OR AS PROVIDED FOR IN THE CONTRACT DOCUMENTS. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL NOTES, AND SPECIFICATIONS, THE GREATER, MORE STRICT REQUIREMENTS, SHALL GOVERN. IF FURTHER CLARIFICATION IS REQUIRED CONTACT THE ENGINEER OF RECORD.
5. SUBSTANTIAL EFFORT HAS BEEN MADE TO PROVIDE ACCURATE DIMENSIONS AND MEASUREMENTS ON THE DRAWINGS TO ASSIST IN THE FABRICATION AND/OR PLACEMENT OF CONSTRUCTION ELEMENTS BUT IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE DIMENSIONS, MEASUREMENTS, AND/OR CLEARANCES SHOWN IN THE CONSTRUCTION DRAWINGS PRIOR TO FABRICATION OR CUTTING OF ANY NEW OR EXISTING CONSTRUCTION ELEMENTS. IF IT IS DETERMINED THAT THERE ARE DISCREPANCIES AND/OR CONFLICTS WITH THE CONSTRUCTION DRAWINGS THE ENGINEER OF RECORD IS TO BE NOTIFIED AS SOON AS POSSIBLE.
6. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CARRIER POC AND TOWER OWNER.
7. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
8. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
9. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER’S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
10. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CARRIER AND TOWER OWNER PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
11. CONTRACTOR IS TO PERFORM A SITE INVESTIGATION, BEFORE SUBMITTING BIDS, TO DETERMINE THE BEST ROUTING OF ALL CONDUITS FOR POWER, AND TELCO AND FOR GROUNDING CABLES AS SHOWN IN THE POWER, TELCO, AND GROUNDING PLAN DRAWINGS.
12. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR’S EXPENSE TO THE SATISFACTION OF DISH WIRELESS L.L.C. AND TOWER OWNER
13. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER’S DESIGNATED LOCATION.
14. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.



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A&E PROJECT NUMBER
828491

DISH WIRELESS L.L.C. PROJECT INFORMATION
LSSNA00032A 1400 E MISSION BLVD POMONA, CA 91766

SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-3

CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
2. UNLESS NOTED OTHERWISE, SOIL BEARING PRESSURE USED FOR DESIGN OF SLABS AND FOUNDATIONS IS ASSUMED TO BE 1000 psf.
3. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'c) OF 3000 psi AT 28 DAYS, UNLESS NOTED OTHERWISE. NO MORE THAN 90 MINUTES SHALL ELAPSE FROM BATCH TIME TO TIME OF PLACEMENT UNLESS APPROVED BY THE ENGINEER OF RECORD. TEMPERATURE OF CONCRETE SHALL NOT EXCEED 90f AT TIME OF PLACEMENT.
4. CONCRETE EXPOSED TO FREEZE-THAW CYCLES SHALL CONTAIN AIR ENTRAINING ADMIXTURES. AMOUNT OF AIR ENTRAINMENT TO BE BASED ON SIZE OF AGGREGATE AND F3 CLASS EXPOSURE (VERY SEVERE). CEMENT USED TO BE TYPE II PORTLAND CEMENT WITH A MAXIMUM WATER-TO-CEMENT RATIO (W/C) OF 0.45.
5. ALL STEEL REINFORCING SHALL CONFORM TO ASTM A615. ALL WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A185. ALL SPLICES SHALL BE CLASS "B" TENSION SPLICES, UNLESS NOTED OTHERWISE. ALL HOOKS SHALL BE STANDARD 90 DEGREE HOOKS, UNLESS NOTED OTHERWISE. YIELD STRENGTH (Fy) OF STANDARD DEFORMED BARS ARE AS FOLLOWS:

#4 BARS AND SMALLER 40 ksi

#5 BARS AND LARGER 60 ksi

6. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:

- CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3"

• CONCRETE EXPOSED TO EARTH OR WEATHER:

• #6 BARS AND LARGER 2"

• #5 BARS AND SMALLER 1-1/2"

• CONCRETE NOT EXPOSED TO EARTH OR WEATHER:

• SLAB AND WALLS 3/4"

• BEAMS AND COLUMNS 1-1/2"

7. A TOOLED EDGE OR A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNLESS NOTED OTHERWISE, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

ELECTRICAL INSTALLATION NOTES:

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES/ORDINANCES.
2. CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED AND TRIP HAZARDS ARE ELIMINATED.
3. WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC.
4. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC.
- 4.1. ALL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OF APPROVAL, AND SHALL CONFORM TO REQUIREMENT OF THE NATIONAL ELECTRICAL CODE.
- 4.2. ALL OVERCURRENT DEVICES SHALL HAVE AN INTERRUPTING CURRENT RATING THAT SHALL BE GREATER THAN THE SHORT CIRCUIT CURRENT TO WHICH THEY ARE SUBJECTED, 22,000 AIC MINIMUM. VERIFY AVAILABLE SHORT CIRCUIT CURRENT DOES NOT EXCEED THE RATING OF ELECTRICAL EQUIPMENT IN ACCORDANCE WITH ARTICLE 110.24 NEC OR THE MOST CURRENT ADOPTED CODE PRE THE GOVERNING JURISDICTION.
5. EACH END OF EVERY POWER PHASE CONDUCTOR, GROUNDING CONDUCTOR, AND TELCO CONDUCTOR OR CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2" PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA.
6. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH LAMICOID TAGS SHOWING THEIR RATED VOLTAGE, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING AND BRANCH CIRCUIT ID NUMBERS (i.e. PANEL BOARD AND CIRCUIT ID'S).
7. PANEL BOARDS (ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.
8. TIE WRAPS ARE NOT ALLOWED.
9. ALL POWER AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE COPPER CONDUCTOR (#14 OR LARGER) WITH TYPE THHW, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.
10. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE COPPER CONDUCTOR (#6 OR LARGER) WITH TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.
11. POWER AND CONTROL WIRING IN FLEXIBLE CORD SHALL BE MULTI-CONDUCTOR, TYPE SOOW CORD (#14 OR LARGER) UNLESS OTHERWISE SPECIFIED.
12. POWER AND CONTROL WIRING FOR USE IN CABLE TRAY SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#14 OR LARGER), WITH TYPE THHW, THWN, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-2 INSULATION UNLESS OTHERWISE SPECIFIED.
13. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRE NUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRE NUTS SHALL BE RATED FOR OPERATION NOT LESS THAN 75° C (90° C IF AVAILABLE).
14. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
15. ELECTRICAL METALLIC TUBING (EMT), INTERMEDIATE METAL CONDUIT (IMC), OR RIGID METAL CONDUIT (RMC) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.

16. ELECTRICAL METALLIC TUBING (EMT) OR METAL-CLAD CABLE (MC) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
17. SCHEDULE 40 PVC UNDERGROUND ON STRAIGHTS AND SCHEDULE 80 PVC FOR ALL ELBOWS/90s AND ALL APPROVED ABOVE GRADE PVC CONDUIT.
18. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
19. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SET SCREW FITTINGS ARE NOT ACCEPTABLE.
20. CABINETS, BOXES AND WIRE WAYS SHALL BE LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND THE NEC.
21. WIREWAYS SHALL BE METAL WITH AN ENAMEL FINISH AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARDS (WIREMOLD SPECMATE WIREWAY).
22. SLOTTED WIRING DUCT SHALL BE PVC AND INCLUDE COVER (PANDUIT TYPE E OR EQUAL).
23. CONDUITS SHALL BE FASTENED SECURELY IN PLACE WITH APPROVED NON-PERFORATED STRAPS AND HANGERS. EXPLOSIVE DEVICES (i.e. POWDER-ACTUATED) FOR ATTACHING HANGERS TO STRUCTURE WILL NOT BE PERMITTED. CLOSELY FOLLOW THE LINES OF THE STRUCTURE, MAINTAIN CLOSE PROXIMITY TO THE STRUCTURE AND KEEP CONDUITS IN TIGHT ENVELOPES. CHANGES IN DIRECTION TO ROUTE AROUND OBSTACLES SHALL BE MADE WITH CONDUIT OUTLET BODIES. CONDUIT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. PARALLEL AND PERPENDICULAR TO STRUCTURE WALL AND CEILING LINES. ALL CONDUIT SHALL BE FISHED TO CLEAR OBSTRUCTIONS. ENDS OF CONDUITS SHALL BE TEMPORARILY CAPPED FLUSH TO FINISH GRADE TO PREVENT CONCRETE, PLASTER OR DIRT FROM ENTERING. CONDUITS SHALL BE RIGIDLY CLAMPED TO BOXES BY GALVANIZED MALLEABLE IRON BUSHING ON INSIDE AND GALVANIZED MALLEABLE IRON LOCKNUT ON OUTSIDE AND INSIDE.
24. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL. SHALL MEET OR EXCEED UL 50 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND NEMA 3 (OR BETTER) FOR EXTERIOR LOCATIONS.
25. METAL RECEPTACLE, SWITCH AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
26. NONMETALLIC RECEPTACLE, SWITCH AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2 (NEWEST REVISION) AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
27. THE CONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CARRIER AND/OR DISH WIRELESS L.L.C. AND TOWER OWNER BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
28. THE CONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD LIFE AND PROPERTY.
29. INSTALL LAMICOID LABEL ON THE METER CENTER TO SHOW "DISH WIRELESS L.L.C.".
30. ALL EMPTY/SPARE CONDUITS THAT ARE INSTALLED ARE TO HAVE A METERED MULE TAPE PULL CORD INSTALLED.



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AJM

EEW

MEP

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SHEET TITLE

GENERAL NOTES

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GN-4

GROUNDING NOTES:

1. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION AND AC POWER GES's) SHALL BE BONDED TOGETHER AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
2. THE CONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS, THE CONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
3. THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT AND PROVIDE TESTING RESULTS.
4. METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
5. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
6. EACH CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, #6 STRANDED COPPER OR LARGER FOR INDOOR BTS; #2 BARE SOLID TINNED COPPER FOR OUTDOOR BTS.
7. CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED BACK TO BACK CONNECTIONS ON OPPOSITE SIDE OF THE GROUND BUS ARE PERMITTED.
8. ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING SHALL BE #2 SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
11. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
12. ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR AND EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
13. COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.
14. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
15. APPROVED ANTIOXIDANT COATINGS (i.e. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
16. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
17. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
18. BOND ALL METALLIC OBJECTS WITHIN 6 ft OF MAIN GROUND RING WITH (1) #2 BARE SOLID TINNED COPPER GROUND CONDUCTOR.
19. GROUND CONDUCTORS USED FOR THE FACILITY GROUNDING AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON-METALLIC MATERIAL SUCH AS PVC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (i.e., NONMETALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.
20. ALL GROUNDS THAT TRANSITION FROM BELOW GRADE TO ABOVE GRADE MUST BE #2 BARE SOLID TINNED COPPER IN 3/4" NON-METALLIC, FLEXIBLE CONDUIT FROM 24" BELOW GRADE TO WITHIN 3" TO 6" OF CAD-WELD TERMINATION POINT. THE EXPOSED END OF THE CONDUIT MUST BE SEALED WITH SILICONE CAULK. (ADD TRANSITIONING GROUND STANDARD DETAIL AS WELL).
21. BUILDINGS WHERE THE MAIN GROUNDING CONDUCTORS ARE REQUIRED TO BE ROUTED TO GRADE, THE CONTRACTOR SHALL ROUTE TWO GROUNDING CONDUCTORS FROM THE ROOFTOP, TOWERS, AND WATER TOWERS GROUNDING RING, TO THE EXISTING GROUNDING SYSTEM, THE GROUNDING CONDUCTORS SHALL NOT BE SMALLER THAN 2/0 COPPER. ROOFTOP GROUNDING 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). DO NOT ATTACH GROUNDING TO FIRE SPRINKLER SYSTEM PIPES.



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