



**REVIEW BY FORT BEND COUNTY
COMMISSIONERS COURT**

**Fort Bend County
Engineering Department**
301 Jackson Suite 401
Richmond, Texas 77469
281.633.7500
Permits@fortbendcountytexas.gov



Right of Way Permit



Commercial Driveway Permit

Permit No: 2016-10745

Applicant: Crown Castle NG Central LLC/Shift Companies

Job Location Site: North of S.E.C of Seven Meadows Pkwy & Windhurst, KATY, TX 77494

Bond No. [REDACTED] **Date of Bond:** 5/12/2014 **Amount:** \$50,000.00

The above applicant came to make use of certain Fort Bend County property subject to, "The Order Regulating the Laying, Construction, Maintenance, and Repair of Buried Cables, Conduits, and Pole Lines, In, Under, Across or Along Roads, Streets, Highways, and Drainage Ditches in Fort Bend County, Texas, Under the Jurisdiction of the Commissioners Court of Fort Bend County, Texas," as passed by the Commissioners Court of Fort Bend County, Texas, of the Minutes of the Commissioners Court of Fort Bend County, Texas, to the extent that such order is not inconsistent with Chapter 181, Vernon's Texas Statutes and Codes Annotated.

Notes:

1. Evidence of review by the Commissioners Court must be kept on the job site and failure to do so constitutes grounds for job shutdown.
2. Written notices are required:
 - a. 48 hours in advance of construction start up, and
 - b. When construction is completed and ready for final inspection, submit notification to Permit Administrator thru MyGovernmentOnline.org portal.
3. This permit expires one (1) year from date of permit if construction has not commenced.

On this 13th day of December, 2016, Upon Motion of Commissioner Meyers, seconded by Commissioner Patterson, duly put and carried, it is ORDERED, ADJUDGED AND DECREED that said notice of said above purpose is hereby acknowledged by the Commissioners Court of Fort Bend County, Texas, and that said notice be placed on record according to the regulation order thereof.

Signature

Presented to Commissioners Court and approved.

By:

Charles O. Ay

for

County Engineer

Date Recorded 12-21-16

Comm. Court No. 13M

N/A

Clerk of Commissioners Court

By:

Drainage District Engineer/Manager

By:

Jinda Wilho
Deputy



**PERMIT APPLICATION REVIEW FORM FOR
CABLE, CONDUIT, AND POLE LINE ACTIVITY
IN FORT BEND COUNTY**

**Fort Bend County
Engineering Department**
301 Jackson Suite 401
Richmond, Texas 77469
281.633.7500
Permits@fortbendcountytx.gov

- ☒ **Right of Way Permit**
☐ **Commercial Driveway Permit**

Permit No: 2016-10745

The following "Notice of Proposed Cable, Conduit, and/or Pole Line activity in Fort Bend County" and accompanying attachments have been reviewed and the notice conforms to appropriate regulations set by Commissioner's Court of Fort Bend County, Texas.

(1) COMPLETE APPLICATION FORM:

- ☒ a. Name of road, street, and/or drainage ditch affected.
☒ b. Vicinity map showing course of directions
☒ c. Plans and specifications

(2) BOND:

- ☐ County Attorney, approval when applicable.
- ☒ Perpetual bond currently posted. Bond No: [REDACTED] Amount: \$50,000.00
- ☐ Performance bond submitted. Bond No: _____ Amount: _____
- ☐ Cashier's Check Check No: _____ Amount: _____

(3) DRAINAGE DISTRICT APPROVAL (WHEN APPLICABLE):

Drainage District Approval

Date

We have reviewed this project and agree it meets minimum requirements.

Charles O. Ay

Permit Administrator

12/6/16

Date



November 28, 2016

Carmen Escobar, CFM
Permit Administrator
Fort Bend County Engineering
301 Jackson St, Richmond, TX 77469

**RE: Cinco Ranch Traffic Control Plan
- Shift Project #160614**

Carmen,

Per our conversation on the phone, the work we are doing in the ROW will not require any road closures. There is no TCP required, the contractor will take adequate measure to ensure they are not impeding the public way.

Please let me know if you need anything else.

Thank you,

A handwritten signature in black ink, appearing to read "Chris Myers".

Chris Myers
Principal
SHIFT Companies



PROJECT NAME: CINCO RANCH EXPANSION
 PROJECT ADDRESS: SEVEN MEADOWS PKWY & WINDHURST RD
 PROJECT TYPE: BLACK DECORATIVE SLIMLINE POLE
 HUB AREA: CINCO RANCH - HGCW
 NODE #(s): **CCR-24**
 COORDINATES: LAT: 29.70863, LONG: -95.783279

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FORT BEND COUNTY ENGINEER

ENGINEER: *Paul J. Starylo, P.E.*
for Richard W. Starylo, P.E.

DATE: 11/1/16

THESE SIGNATURES ARE VOID IF CONSTRUCTION HAS NOT COMMENCED IN (1) YEAR FROM DATE OF APPROVAL

APPROVED: *[Signature]*

Developer: Coordinator

DATE: 11/1/16

TEAM MEMBERS REVIEW	REVIEWED/DATE
R.F. ENGINEERING	
PRODUCT MANAGEMENT	
NETWORK REAL ESTATE TEAM	
UTILITY TEAM	
IMPLEMENTATION	
OPERATIONS	

OVERALL NODE LOCATION MAP



PROJECT TEAM	
ARCHITECT	OWNER INFO
Company: SHIFT CONSULTING	Company: CROWN CASTLE
Address: 7333 E. MONTE VISTA RD. SCOTTSDALE, AZ 85257	Address: 1220 AUGUSTA DR. HOUSTON, TX 77057
Phone Number: 480.264.0829	Phone #: 817.449.3113
Fax Number: 480.264.0163	Email: BARRY.CAMPALU@CROWNCASTLE.COM
Contact: CHRIS MYERS	Contact: BARRY CAMPALU
STRUCTURAL	RF ENGINEER
Company: T.B.D.	Company: CROWN CASTLE
Address:	Address: 1220 AUGUSTA DR. HOUSTON, TX 77057
Phone Number:	Phone Number:
Fax Number:	Fax Number:
Contact:	Contact:
FIBER ENGINEERING	
Company: TDC2	
Address: 710 EAST PARK BLVD. SUITE 110 PLANO, TX 75074	
Phone: 972.423.6080	
Email: scott@tdc2.com	
Contact: SCOTT CRUM	

PROJECT SUMMARY	
PROJECT NAME: CINCO RANCH EXPANSION	APPLICANT: CROWN CASTLE 1220 AUGUSTA DR. HOUSTON, TX 77057 CONTACT: BARRY CAMPALU
PROJECT AREA: CINCO RANCH - HGCW	CODES: 2009 INTERNATIONAL BUILDING CODE (IBC) 2009 INTERNATIONAL ENERGY CONSERVATION CODE (IECC) 2008 NATIONAL ELECTRICAL CODE (NEC) 2008 NATIONAL ELECTRICAL SAFETY CODE (NESC)
JURISDICTION: FORT BEND COUNTY ENGINEERING DEPT. 1124 BLUME RD. ROSENBERG, TX 77471 PH: 281.633.7500 CONTACT: JOHNNY ORTEGA	PLUMBING REQUIREMENTS: FACILITY HAS NO PLUMBING.
HANDICAPPED REQUIREMENTS: -FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION -HANDICAPPED ACCESS REQUIREMENTS ARE NOT REQUIRED.	POWER COMPANY: CENTERPOINT ENERGY 5431 HIGHWAY BLVD KATY, TX 77494 PH: 281.520.6275 CONTACT: KEN CORTEZ

PROJECT DESCRIPTION

CROWN CASTLE PROPOSES TO PROVIDE AN ENHANCED RESIDENTIAL WIRELESS COMMUNICATIONS SYSTEM FOR THE KATY, TEXAS AREA. THE SYSTEM WILL IMPROVE CELLULAR COMMUNICATIONS AND INCREASE CALL CAPACITY. THE NETWORK AND ASSOCIATED EQUIPMENT HAVE BEEN DESIGNED TO MINIMIZE VISUAL IMPACTS IN URBAN SETTINGS. THE PROPOSED SYSTEM WILL PROVIDE A CELLULAR NETWORK THAT CAN BE UTILIZED SIMULTANEOUSLY BY DIFFERENT LICENSED TELECOMMUNICATIONS COMPANIES.

A SUBJECT NODE WILL CONSIST OF NEW METAL SLIMLINE POLE. THEY WILL HAVE GROUND MOUNTED RADIO EQUIPMENT INSIDE A CABINET WITH A METER AND DISCONNECT ATTACHED. THERE WILL ALSO BE POLE TOP ANTENNAS CONCEALED IN SHROUDS.



CROWN CASTLE
 800 E. JOHN CARPENTER Pkwy.
 SUITE 300
 IRVING, TX 75062

RECORD DRAWINGS (ISSUE DATE: 10/18/16)

RECORD DRAWING DRAFTING ONLY



Shift Companies, LLC
 7301 E. WINDY HILLS BLVD
 SCOTTSDALE, ARIZONA 85217
 PH: 480.354.0000
 FAX: 480.354.0003

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RELEASE	
DATE	SUBMITTAL
6/28/16	1ST CITY SUBMITTAL
10/18/16	2ND CITY SUBMITTAL

REVISIONS	
NO.	DATE
10/18/16	CITY COMMENTS

PROJECT NAME

CINCO RANCH EXPANSION

NODE ADDRESS

CINCO RANCH - HGCW

NODE #:**CCR-24**

SEVEN MEADOWS PKWY & WINDHURST RD

HUB AREA

CINCO RANCH - HGCW

SHIFT JOB NUMBER

150602

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T1.1

1 OF 14

PLOT SCALE: 1:1 @ 24"X36"; 1:2 @ 11"X17"

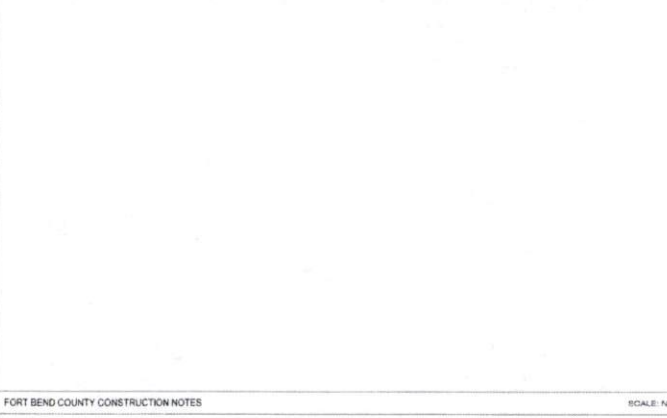
- PART 2 - EXECUTION**
- 2.1 EXECUTION**
- A. Release (1) main ground from the antenna mounting bracket at the top of the pole, to the main ground bus bar (TMGB) (location defined below). Main vertical ground shall consist of a # 2 solid bare copper cable. Bare ground shall be protected by a PVC U-bolts to the top of the pole and secured every 2' with corrosion resistant (copper galvanized) straps. **#2 solid bare copper cable is highly susceptible to theft and may be a bit excessive to run to top of pole. #2 cable is recommended by CCA. An #8 cheaper and more likely to be stolen. Buss Bars may also be too costly to make them less susceptible to theft.**
- B. Provide (1) main ground bus bar (TMGB) (location defined below) to a ground rod at the pole base. Main ground bus bar shall consist of a # 2 solid bare copper cable. Main ground shall be protected by a PVC U-bolts to the bottom of the pole and secured every 2' with corrosion resistant (copper galvanized) straps. Ground rod shall be 6" in depth minimum and copper clad.
- C. Ground rod shall be protected by a PVC U-bolts with respect to depth and distance from wood pole.
- D. Ground rod shall be secured minimum of 6" below grade.
- E. # 2 ground shall be attached evenly to the ground rod via Cast Wash.
- F. Main ground vertical shall be attached directly to a ground bus bar (TMGB) mounted to the face of the utility pole. Method of contact shall be a solid solder lug (solder) to the main ground bus (TMGB) on the left to top rod depending on the position of the TMGB.
- G. Main ground vertical to the antenna mounting bracket shall be attached directly to the Antenna Bracket via a self tapping bolt or screw. A washer must be added to the this side or pole to avoid damage to the top while maintaining a secure bond.
- H. TMGB shall be mounted above the Channel cabinet below the 80% planned directly to the wood pole structure.
- I. All pole mounted devices, including but not limited to Antenna Mounts and antenna mounting brackets, cabinets shall be connected to the TMGB with #12 copper braided cable. All cables and ground in steel.
- J. All pole mounted devices, including but not limited to Antenna Mounts and antenna mounting brackets, cabinets shall be connected to the TMGB using compression type, 2 inch compression lugs.
- K. All pole mounted devices, including but not limited to Antenna Mounts and antenna mounting brackets, cabinets shall be connected to the TMGB using compression type, 2 inch compression lugs.
- L. All pole mounted devices, including but not limited to Antenna Mounts and antenna mounting brackets, cabinets shall be connected to the TMGB using compression type, 2 inch compression lugs.
- M. All pole mounted devices, including but not limited to Antenna Mounts and antenna mounting brackets, cabinets shall be connected to the TMGB using compression type, 2 inch compression lugs.
- N. All pole mounted devices, including but not limited to Antenna Mounts and antenna mounting brackets, cabinets shall be connected to the TMGB using compression type, 2 inch compression lugs.
- O. All pole mounted devices, including but not limited to Antenna Mounts and antenna mounting brackets, cabinets shall be connected to the TMGB using compression type, 2 inch compression lugs.
- P. All pole mounted devices, including but not limited to Antenna Mounts and antenna mounting brackets, cabinets shall be connected to the TMGB using compression type, 2 inch compression lugs.
- Q. All pole mounted devices, including but not limited to Antenna Mounts and antenna mounting brackets, cabinets shall be connected to the TMGB using compression type, 2 inch compression lugs.
- R. All pole mounted devices, including but not limited to Antenna Mounts and antenna mounting brackets, cabinets shall be connected to the TMGB using compression type, 2 inch compression lugs.
- S. All pole mounted devices, including but not limited to Antenna Mounts and antenna mounting brackets, cabinets shall be connected to the TMGB using compression type, 2 inch compression lugs.
- T. All pole mounted devices, including but not limited to Antenna Mounts and antenna mounting brackets, cabinets shall be connected to the TMGB using compression type, 2 inch compression lugs.
- U. All pole mounted devices, including but not limited to Antenna Mounts and antenna mounting brackets, cabinets shall be connected to the TMGB using compression type, 2 inch compression lugs.
- V. All pole mounted devices, including but not limited to Antenna Mounts and antenna mounting brackets, cabinets shall be connected to the TMGB using compression type, 2 inch compression lugs.
- W. All pole mounted devices, including but not limited to Antenna Mounts and antenna mounting brackets, cabinets shall be connected to the TMGB using compression type, 2 inch compression lugs.
- X. All pole mounted devices, including but not limited to Antenna Mounts and antenna mounting brackets, cabinets shall be connected to the TMGB using compression type, 2 inch compression lugs.
- Y. All pole mounted devices, including but not limited to Antenna Mounts and antenna mounting brackets, cabinets shall be connected to the TMGB using compression type, 2 inch compression lugs.
- Z. All pole mounted devices, including but not limited to Antenna Mounts and antenna mounting brackets, cabinets shall be connected to the TMGB using compression type, 2 inch compression lugs.

- PART 3 - TESTING AND DOCUMENTATION**
- 3.1 TESTING**
- A. Release to ground or required for acceptance. If 5 Ohms cannot be met with above requirements, additional ground rods will be added to the field and 5 Ohms is achieved.
- 3.2 DOCUMENTATION**
- A. Photos of the work are required as well as test results in formal document format. Submit result of test to CC Construction Manager prior to final walkthrough. Submit all photos and test with detailed package per Section 017700 - General Procedures and Required Documents.

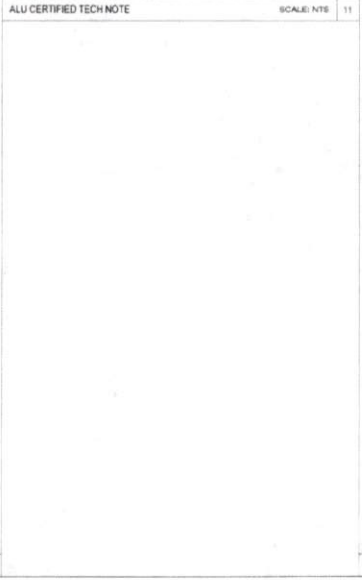
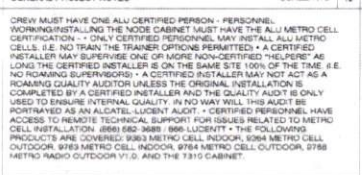
- GROUNDING SPECIFICATIONS**
- SCALE: NTS 6
- GENERAL PROJECT NOTES**
- SCALE: NTS 10
1. PORT BEND COUNTY MUST BE NOTIFIED TO THE PRE-CONSTRUCTION MEETING.
2. CONTRACTOR SHALL NOTIFY PORT BEND COUNTY ENGINEERING DEPARTMENT 48 HOURS PRIOR TO COMMENCING CONSTRUCTION AND 48 HOURS BEFORE ANY CONSTRUCTION ACTIVITY WITHIN THE LIMITS OF THE PAVING AT CONSTRUCTION@PORTBENDCOUNTYTX.GOV
3. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FROM PORT BEND COUNTY PRIOR TO COMMENCING CONSTRUCTION OF ANY IMPROVEMENTS WITHIN COUNTY ROAD RIGHT OF WAY.
4. ALL PAVING IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH PORT BEND COUNTY "RULES, REGULATIONS AND REQUIREMENTS" RELATING TO THE APPROVAL AND ACCEPTANCE OF IMPROVEMENTS IN SUBDIVISIONS AS CURRENTLY AMENDED.
5. ALL ROAD WIDTHS, CURB RADI AND CURB ALIGNMENT SHOWN INDICATES BACK OF CURB.
6. A CONTINUOUS LONGITUDINAL REINFORCING BAR SHALL BE USED IN THE CURBS.
7. ALL CONCRETE PAVEMENT SHALL BE 5 1/2" BACK CEMENT WITH A MINIMUM COMPRESSIVE STRENGTH OF 3600 PSI AT 28 DAYS. TRANSVERSE EXPANSION JOINTS SHALL BE INSTALLED AT EACH CURB RETURN AND AT A MINIMUM SPACING OF 80 FEET.
8. ALL WEATHER ACCESS TO ALL EXISTING STREETS AND DRIVEWAYS SHALL BE MAINTAINED AT ALL TIMES.
9. 4" X 12" REINFORCED CONCRETE CURB SHALL BE PLACED IN FRONT OF SINGLE FAMILY LOTS ONLY. ALL OTHER AREAS SHALL BE 6" REINFORCED CONCRETE CURB.
10. AT ALL INTERSECTION LOCATIONS, TYPE T RAMPAS SHALL BE PLACED IN ACCORDANCE WITH TYPICAL PRE-12A STANDARD DETAIL SHEET, A.D.A. HANDICAP RAMPAS SHALL BE INSTALLED WITH STREET PAVING AT ALL INTERSECTIONS AND COMPLY WITH CURRENT A.D.A. REGULATIONS.
11. CURB HEADERS ARE REQUIRED AT CURB CONNECTIONS TO HANDICAP RAMPAS WITH NO CONSTRUCTION JUNT WITHIN 5' OF RAMPAS.
12. ALL INTERSECTIONS UTILIZING TRAFFIC CONTROL MEASURES SHALL HAVE A.C.A. WHEEL CHAIR RAMPAS INSTALLED.
13. GUIDELINES ARE SET FORTH IN THE TEXAS "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" ON UNIFORMITY AMENDED. SHALL BE OBSERVED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE FLAGMEN, STOPWAS, STOPPING AND WARNING DEVICES, ETC., DURING CONSTRUCTION - BOTH DAY AND NIGHT.
14. ALL 8 1/2" STOP SIGNS SHALL BE 30"X30" WITH DAMAGED GRACE SHEETING PER TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
15. STREET NAME SIGNAGE SHALL BE ON A 9" HIGH SIGN PLAT BLADE WITH REFLECTIVE GREEN BACKGROUND. STREET NAMES SHALL BE UPPER AND LOWERCASE LETTERING WITH UPPER CASE LETTERS OF 1" MINIMUM AND LOWERCASE LETTERS OF 3/4" MINIMUM. THE LETTERS SHALL BE REFLECTIVE WHITE. STREET NAME SIGNS SHALL BE MOUNTED ON STOP SIGN POST.
16. A BLUE DOUBLE REFLECTORIZED BUTTON SHALL BE PLACED AT ALL FIRE HYDRANT LOCATIONS. THE BUTTON SHALL BE PLACED 12 INCHES OFF OF THE CENTERLINE OF THE STREET ON THE SAME SIDE AS THE HYDRANT.

NOTE: PORT BEND COUNTY MUST SUPERSEDE ANY CONFLICTING NOTES.

INSECTIONS, THE PROJECT AND ALL PARTS THEREOF SHALL BE SUBJECT TO INSPECTION FROM TIME TO TIME BY INSPECTORS DESIGNATED BY PORT BEND COUNTY. NO SUCH INSPECTIONS SHALL RELIEVE THE CONTRACTOR OF ANY OF ITS OBLIGATIONS HEREUNDER. NEITHER FAILURE TO INSPECT NOR FAILURE TO DISCOVER OR RECTIFY ANY OF THE WORK AS NOT IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS, REQUIREMENTS AND SPECIFICATIONS OF PORT BEND COUNTY OR ANY PROVISION OF THIS PROJECT SHALL BE CONSIDERED TO IMPLY AN ACCEPTANCE OF SUCH WORK OR TO RELIEVE THE CONTRACTOR OF ANY OF ITS OBLIGATIONS HEREUNDER.



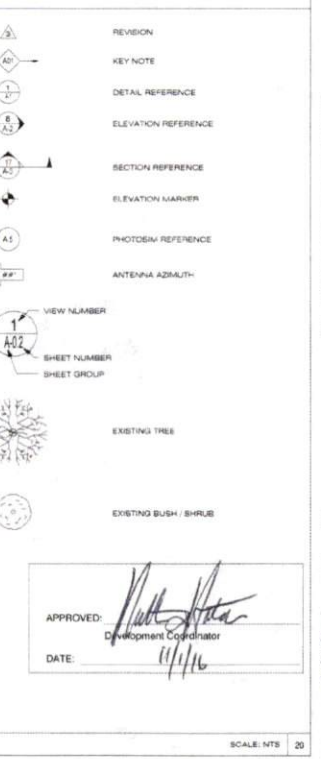
1. RIGHT-OF-WAY USE PERMIT SHALL BE OBTAINED BY CONTRACTOR PRIOR TO COMMENCING WORK.
2. A UTILITY LOCATE IS REQUIRED FOR ALL PROJECTS.
3. CROSSING OF EXISTING UTILITIES SHALL BE COORDINATED BY CONTRACTOR.
4. ALL WORK TO BE CONDUCTED IN CITY RIGHT OF WAY, U.A.D.
5. ALL DISTURBED LANDSCAPING SHALL BE REPLACED TO SIMILAR EXISTING CONDITION.
6. ALL SURFACE REPAIRS SHALL BE TO CITY SPECIFICATIONS.
7. ANY SIDEWALK CLOSURES SHALL BE COORDINATED WITH THE CITY AND PROPER SIGNAGE WILL BE PLACED.
8. TEMPORARY LIGHTING WILL BE COORDINATED WITH CITY AND PROVIDED WHENEVER EXISTING LIGHTING IS REMOVED OR UNAVAILABLE AS REQUIRED.
9. NO MATERIALS OR EQUIPMENT SHALL BE STORED ON PRIVATE PROPERTY OR BLOCK ACCESS TO PRIVATE PROPERTY.
10. OPEN EXCAVATIONS SHALL BE PROPERLY GUARDED AND SIGNED. NO OPEN EXCAVATIONS WILL BE LEFT ACCESSIBLE TO THE PUBLIC.
11. CLEANUP OF THE WORK AREA WILL BE COMPLETED EACH EVENING AND THE PROJECT AREA WILL BE RETURNED TO EXISTING CONDITION AT THE COMPLETION OF CONSTRUCTION AT EACH NODE LOCATION.
12. ALL WORK TO COMPLY WITH OSHA AND CITY GUIDELINES.
13. CONTRACTOR WILL BE RESPONSIBLE FOR LOCATING PRIVATE IRRIGATION PRIOR TO EXCAVATION. CONTRACTOR WILL REPAIR OR REROUTE IRRIGATION IN ROW AS NECESSARY.
14. THE CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE AND REPLACE AT THEIR COST ANY AND ALL DAMAGED PAVEMENT, SIDEWALK, CURB AND GUTTER OUTSIDE THE PAY LIMIT. DAMAGE DUE TO THEIR ACTIVITIES ON THE PROJECT THIS INCLUDES, BUT IS NOT LIMITED TO THE REMOVAL AND REPLACEMENT OF NEWLY CRACKED, THE REMOVAL AND REPLACEMENT OF EXISTING CRACKS WHERE THE CRACKS HAVE BEEN ENLARGED DUE TO THE CONTRACTOR'S OPERATIONS. THE REMOVAL AND REPLACEMENT OF DEFORMED PAVEMENT, CURB AND GUTTER, SIDEWALK, ETC., ALL SAW CUTS USED FOR THE REMOVAL OF THESE ITEMS SHALL BE PERPENDICULAR AND PARALLEL TO THE CENTERLINE CONTROLLING THAT ITEM, OR AT THE DISCRETION OF THE CITY INSPECTOR.
15. THE VAULTS INSTALLED IN CONFORMANCE WITH THE INDIVIDUAL ANTENNA NODES SHALL BE FLUSH WITH THE GROUND.



- A/C ADJ. AIR CONDITIONING
- ADJ. AFF. ABOVE FLOOR
- AMB. APPROX. ABOVE NEAR SEA LEVEL
- AVG. APPROX. APPROXIMATELY
- B/CW BLDG. BARE COPPER WIRE
- BLD. BLDG. BUILDING
- BLK. BLOCK
- BOB. BOTTOM OF BLOCK
- B/S. BUILDING STANDARD
- CLG. CEILING
- CLR. CLEAR
- CONC. CONCRETE
- CONST. CONSTRUCTION
- CONT. CONTIGUOUS
- CO. COMPANY
- DBL. DOUBLE
- DIA. DIAMETER
- DM. DOWN
- DTL. DETAIL
- DWG. DRAWING
- E. EAST
- EA. EACH
- EL. ELEVATION
- EL. ELEV. ELECTRICAL
- SPB. ELECTRICAL PULL BOX
- EQ. EQUAL
- EQUIP. EQUIPMENT
- EV. EACH WAY
- EXT. EXTERIOR
- FIN. FINISH
- FL. FLOOR
- FT. FOOT, FEET
- GA. GAUGE
- GALV. GALVANIZED
- GC. GENERAL CONTRACTOR
- GLB. GLUE LAMINATED BEAM
- GRND. GROUND
- GWB. GYPSUM WALL BOARD
- HORIZ. HORIZONTAL
- HR. HOUR
- HT. HEATING, VENTING AND AIR CONDITIONING
- IBC. INTERNATIONAL BUILDING CODE
- ID. INSIDE DIA.
- IN. INCH
- INFO. INFORMATION
- INT. INTERIOR
- LBBS. LBS.
- LF. LINEAR FEET
- MECH. MECHANICAL
- MTL. METAL
- MFR. MANUFACTURER
- SACR. MANAGER
- MAN. MAN
- MISC. MISCELLANEOUS
- N. NORTH
- NA. NOT APPLICABLE
- ND. NOT IN CONTRACT
- NTS. NOT TO SCALE
- ON CENTER. ON CENTER
- OUTSIDE DIAMETER. OUTSIDE DIAMETER
- OPENING. OPENING
- OPPOSITE. OPPOSITE
- PLY. PROPERTY LINE
- PLY. PLYWOOD
- PAR. PAR
- PROJ. PROJECT
- PROP. PROPERTY
- PT. PRESSURE TREATED
- RFP. REQUIRED
- REFD. ROOM
- RM. ROOM
- ROUGH OPENING. ROUGH OPENING
- RIGHT-OF-WAY. RIGHT-OF-WAY
- ROW. RIGHT-OF-WAY
- RX. RECEIVE SIGNAL



- S. SCHEDULE
- SF. SQUARE FEET
- SHT. SHEET
- SM. SPECIFICATION
- SQ. SQUARE
- SS. SANITARY SEWER
- STL. STEEL
- STR. STRUCTURAL
- SUSP. SUSPENDED
- SY. SQUARE YARD
- THRU. THROUGH
- TND. TYPICAL
- TOP OF. TOP OF
- TOP OF BLOCK. TOP OF BLOCK
- TOP OF CONCRETE. TOP OF CONCRETE
- TOP OF MASONRY. TOP OF MASONRY
- TUBE STEEL. TUBE STEEL
- TX. TRANSMIT SIGNAL
- TYP. TYPICAL
- UNDERGROUND. UNDERGROUND
- UNDERWRITERS LAB. UNDERWRITERS LAB
- UNIV. UNIVERSAL
- UNO. UNLESS NOTED OTHERWISE
- VERT. VERTICAL
- VP. VERT. IN FIELD
- VTL. VERT. IN FIELD
- W. WEST
- WTH. WITH
- WYOW. WITHOUT
- WY. WORKING POINT
- WTR. WATER



CROWN CASTLE

17171 KENNETH AVE
COTTAGEVILLE, ARIZONA 85501
PH: 916.344.0001
WWW.CROWNCASTLE.COM

RECORD DRAWINGS ISSUE DATE: 10/18/16

SHIFT

Shift Companies, LLC
17171 KENNETH AVE
COTTAGEVILLE, ARIZONA 85501
PH: 916.344.0001
WWW.SHIFT.COM

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RELEASE	
DATE	SUBMITTAL
5/2/16	1ST CITY SUBMITTAL
10/18/16	2ND CITY SUBMITTAL

REVISIONS		
NO.	DATE	COMMENT
1	10/18/16	CITY COMMENTS

PROJECT NAME
CINCO RANCH EXPANSION

HUB AREA
CINCO RANCH - HGCW

SHEET JOB NUMBER
150602

DRAWN BY
RA

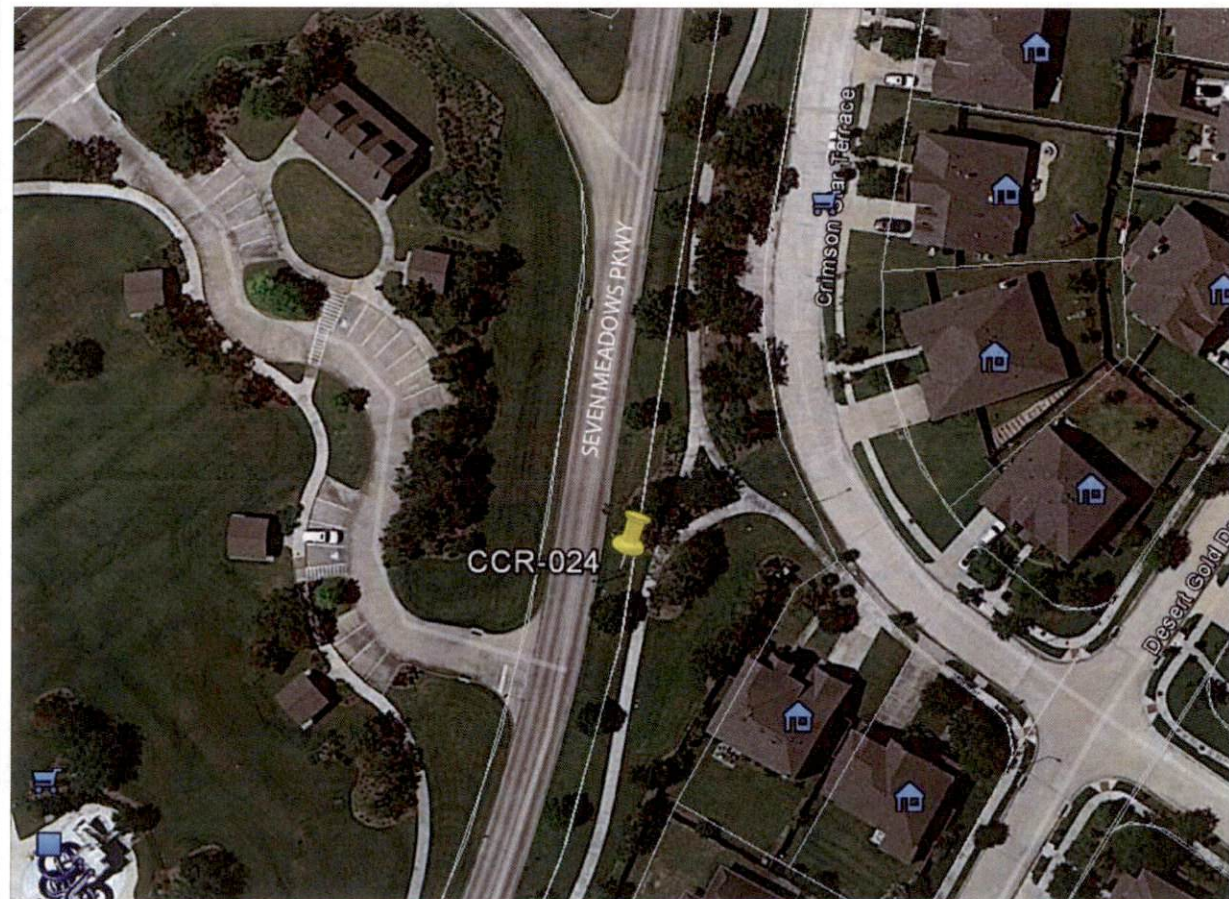
CHECKED BY
CM

SHEET TITLE
GENERAL NOTES

ABBREVIATIONS AND SYMBOLS

SHEET NUMBER	PAGE
T1.2	2 OF 14

PLOT SCALE: 1:1 @ 24"x36"; 1:2 @ 11"x17"



NODE AERIAL PLAN

SUBJECT POLE: CCR-24

GPS COORDINATES:

LAT: 28.70853

LONG: -95.753279

POLE TYPE: BLACK DECORATIVE SUNLINE POLE

POLE ID #

UPPER ANTENNA RAD CENTER: 32' - 0" A.F.G.

LOWER ANTENNA RAD CENTER: 30' - 0" A.F.G.

APPROVED: *[Signature]*

Development Coordinator

DATE: 11/1/16



CROWN CASTLE
600 E. JOHN CARPENTER PKWY.
SUITE 300
IRVING, TX 75062

RECORD DRAWINGS (ISSUE DATE): 10/18/16



SNR Companies, LLC
7211 N. 15TH AVE. SUITE 200
SCOTTSDALE, ARIZONA 85257
PH: 480.334.2671
FAX: 480.334.2555

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RELEASE	
DATE	SUBMITTAL
5/25/16	1ST CITY SUBMITTAL
10/18/16	2ND CITY SUBMITTAL

REVISIONS		
NO.	DATE	COMMENT
	10/18/16	CITY COMMENTS

PROJECT NAME
CINCO RANCH EXPANSION

NODE ADDRESS

NODE #:CCR-24
SEVEN MEADOWS PKWY
& WINDHURST RD

HUB AREA
CINCO RANCH - HGCW

SHIFT JOB NUMBER
150602

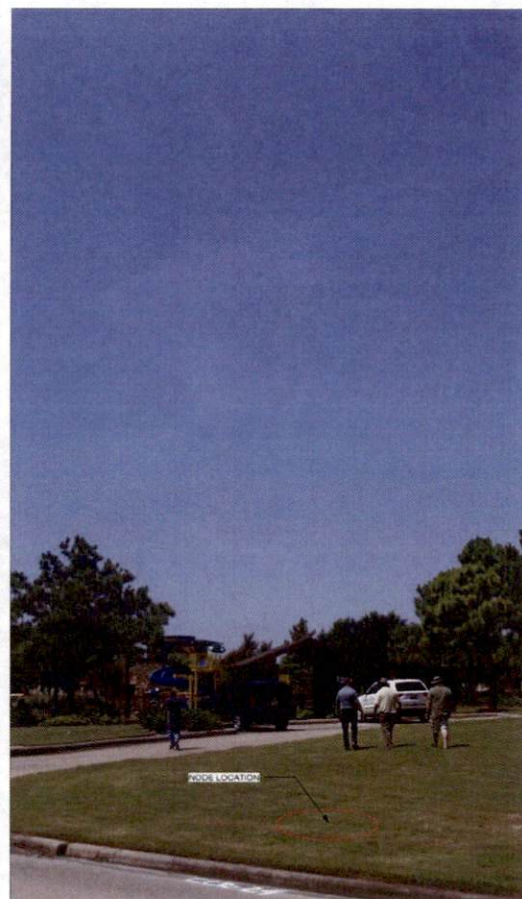
IN HOUSE
DRAWN BY: RA
CHECKED BY: LM

SHEET TITLE
AERIAL

SHEET NUMBER
A1.0

PAGE
4 OF 14

PLOT SCALE: 1" = 24' (HORIZ); 1" = 11' (VERT)



SITE PHOTO (EXISTING)

N.T.S.

PLAN CHECK #

CASE #

KEYNOTE	KEYNOTE LEGEND DESCRIPTION	DETAIL
A01	PROPOSED CROWN CASTLE OMNI ANTENNA	18(D) 1
A02	PROPOSED CROWN CASTLE 2" U.G. CONDUIT (APPROXIMATE LOCATION, F.V.)	24(D) 1
A03	PROPOSED CROWN CASTLE REMOTE RADIO UNIT INSIDE EQUIPMENT CABINET	18(D) 1
A04	PROPOSED NEW METAL SLIMLINE POLE	25(D) 1
A05	PROPOSED CROWN CASTLE UNDERGROUND CONC. FIBER CABLE	55(D) 2
A06	PROPOSED CROWN CASTLE NODE IDENTIFICATION SIGNAGE	55(D) 2
A07	PROPOSED CROWN CASTLE EQUIPMENT CABINET	18(D) 1
A08	PROPOSED CROWN CASTLE PIER FOUNDATION	12(D) 1
A09	PROPOSED ELECTRICAL HAND HOLE	

KEYNOTE	KEYNOTE LEGEND DESCRIPTION	DETAIL
E01	PROPOSED POWER METER MOUNTED TO EQUIPMENT CABINET (ESTIMATED PANEL AND DISCONNECT)	18(D) 1
U01	PROPOSED 2" CROWN CASTLE U.G. POWER CONDUIT (APPROXIMATE LOCATION, F.V.)	24(D) 1 & 24(D) 2
U02	PROPOSED CROWN CASTLE 2" U.G. FIBER CONDUIT BY OTHERS (APPROXIMATE LOCATION, F.V.)	24(D) 1 & 24(D) 2



NOTES:
1. ANY DAMAGE TO EXISTING CURB, SIDEWALK AND ROADWAY DURING CONSTRUCTION TO BE REPAIRED OR REPLACED. EXISTING VEGETATION DAMAGED IN CONSTRUCTION TO BE REPLACED BY SAME SPECIES.

GENERAL NOTES
1. PAINT PROPOSED GROUND EQUIPMENT A NATURAL EARTH COLOR OR AS APPROVED BY CITY.
2. CONTRACTOR TO FIELD LOCATE EXIST. UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.
3. EX. LANDSCAPE PLANTINGS AND DECORATIVE HANDSCAPES DISTURBED OR DESTROYED AS A RESULT OF CONSTRUCTION SHALL BE REPLACED WITH A LIKE SIZE AND SPECIES.
4. CONTRACTOR TO HAND LOCATE EX. IRRIGATION PRIOR TO EXCAVATION.
5. SITE PLAN IS A DIAGRAMMATIC REPRESENTATION ONLY. VERIFY ALL DIMENSIONS.
6. VERIFY ALL PROPERTY LINE INFORMATION WITH AVAILABLE R.O.D. DATA.
7. EXIST. UTILITY LOCATIONS SHOWN ON PLANS ARE APPROXIMATE ONLY (AS PROVIDED BY LOCAL UTILITIES).

SUBJECT POLE:	CCR-24
GPS COORDINATES:	
LAT:	29.73863
LONG:	95.783279
POLE TYPE:	BLACK DECORATIVE SLIMLINE POLE
POLE #:	
UPPER ANTENNA RAD CENTER:	30' - 0" A.P.G.
LOWER ANTENNA RAD CENTER:	30' - 0" A.P.G.
SUBJECT POLE IS LOCATED IN:	FORT BEND COUNTY R.O.D.
APPROVED:	<i>[Signature]</i> Development Coordinator
DATE:	11/11/16



CROWN CASTLE
800 E. JOHN CAMPENTER Fwy.
SUITE 300
IRVING, TX 75062

RECORD DRAWINGS ISSUE DATE: 10/14/16



Shift Companies, LLC
13311 WEDGE WITH ADOPT
SCOTTSDALE, ARIZONA 85257
PH: 480.264.2621
FAX: 480.264.2625

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RELEASE	SUBMITTAL
DATE	
6/23/16	1ST CITY SUBMITTAL
11/16/16	2ND CITY SUBMITTAL

REVISIONS	DATE	COMMENT
NO.		
1	10/18/16	CITY COMMENTS

PROJECT NAME
CINCO RANCH EXPANSION

NODE ADDRESS

NODE #:CCR-24

**SEVEN MEADOWS PKWY
& WINDHURST RD**

HUB AREA

CINCO RANCH - HGCW

SHIFT JOB NUMBER IN HOUSE

150602 DRAWN BY: RA CHECKED BY: CM

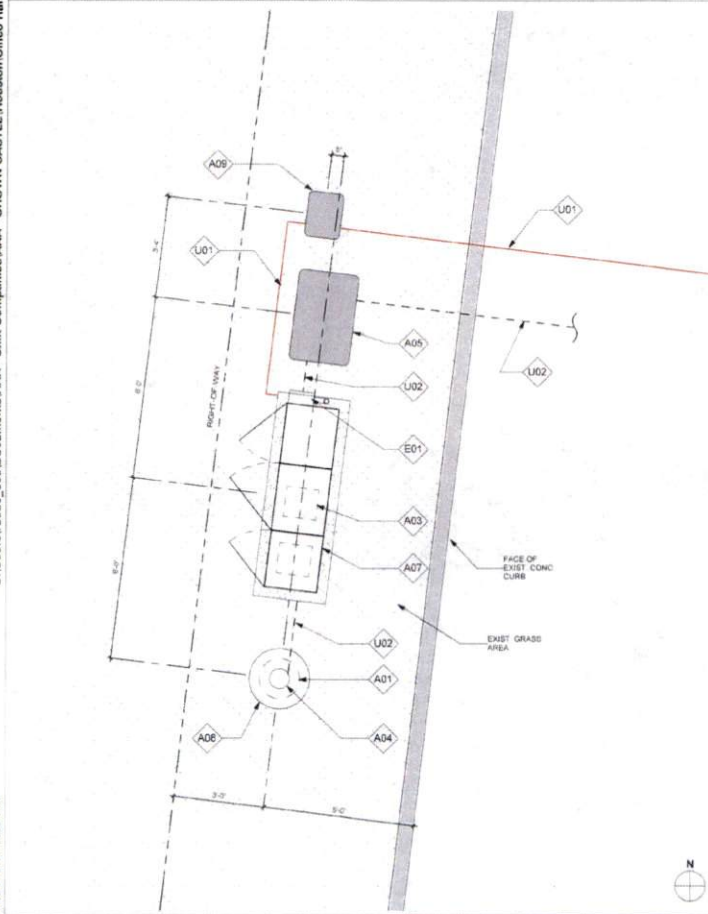
SHEET TITLE

**SITE PLAN, EQUIPMENT
AND ANTENNA PLAN**

SHEET NUMBER PAGE

A1.1 5 OF 14

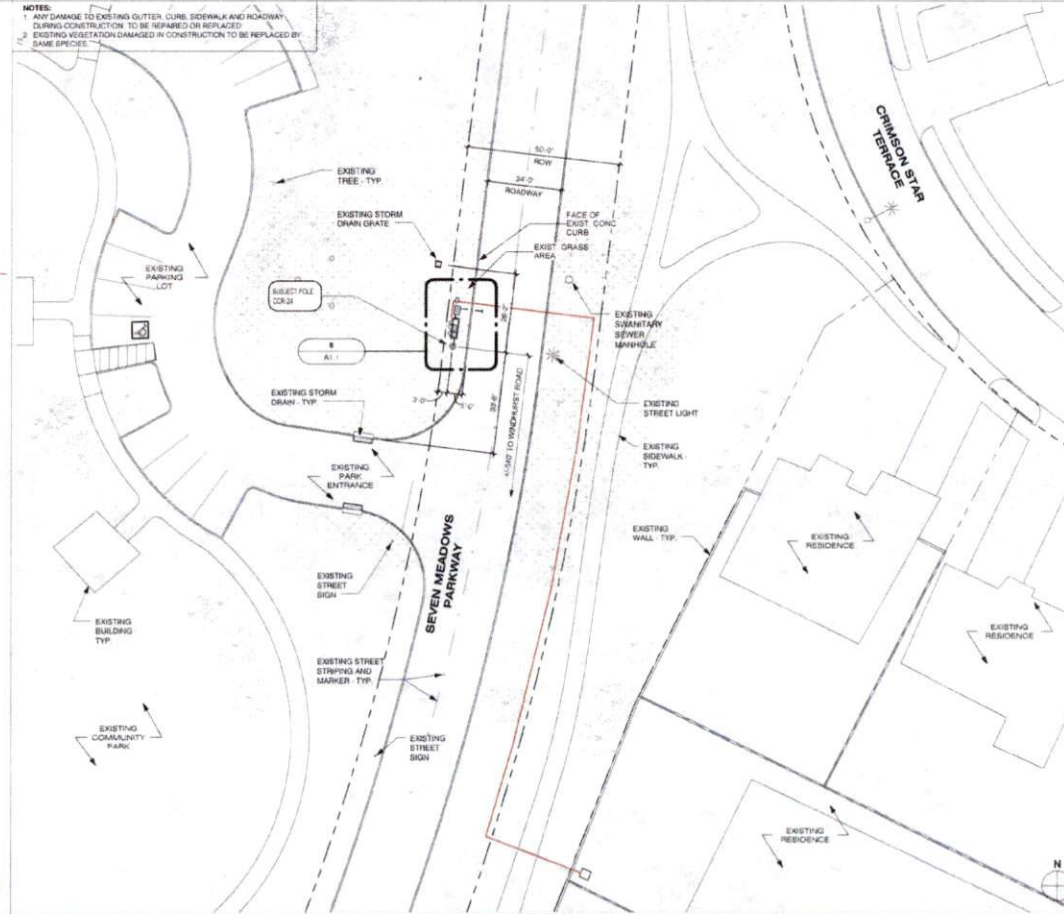
PLOT SCALE: 1/1" @ 24"x36"; 1/2" @ 11"x17"



EQUIPMENT AND ANTENNA PLAN

1/2" = 1'-0"

8 OVERALL SITE PLAN



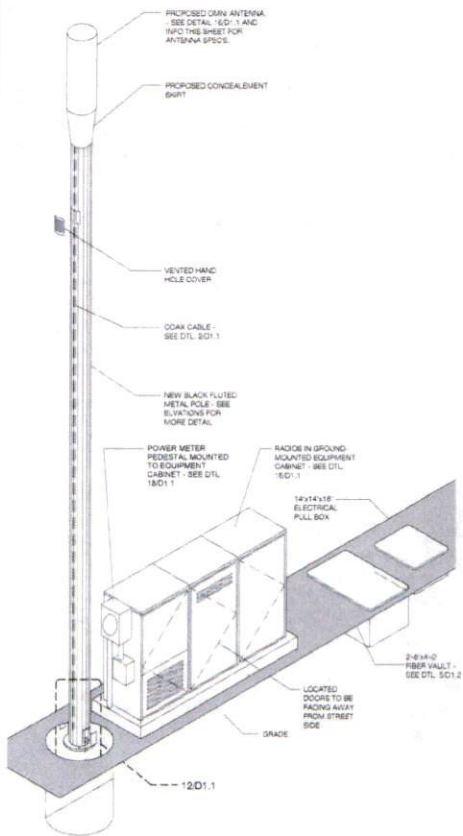
1" = 20'-0"

20

PLAN CHECK #

CASE #

NOTE:
ISO IS SCHEMATIC IN NATURE. FIBER VAULT, POWER METER PEDESTAL
AND GROUND-MOUNTED RADIO EQUIPMENT PEDESTAL CAN BE
RECONFIGURED TO SUIT PROJECT LOCATION



METAL POLE ISOMETRIC

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

KEYNOTE LEGEND		
KEYNOTE	DESCRIPTION	DETAIL NUMBER
A01	PROPOSED CROWN CASTLE OMNI ANTENNA	1501.1
A02	PROPOSED CROWN CASTLE 2" U.S. CONDUIT APPROXIMATE LOCATION, P.V.	2001.1
A03	PROPOSED CROWN CASTLE REMOTE RADIO UNITS NEESE EQUIPMENT CABINET	1401.1
A04	PROPOSED NEW METAL SLABLINE POLE	2001.1
A05	PROPOSED CROWN CASTLE UNDERGROUND CONC. FIBER VAULT	1501.2
A06	PROPOSED CROWN CASTLE NODE IDENTIFICATION BOARDS	1001.2
A07	PROPOSED CROWN CASTLE EQUIPMENT CABINET	1501.1
A08	PROPOSED CROWN CASTLE POLE FOUNDATION	1201.1
A09	PROPOSED ELECTRICAL HAND HOLE	
E01	PROPOSED POWER METER MOUNTED TO EQUIPMENT CABINET (DISTRIBUTED PANEL AND DISCONNECT)	1501.1

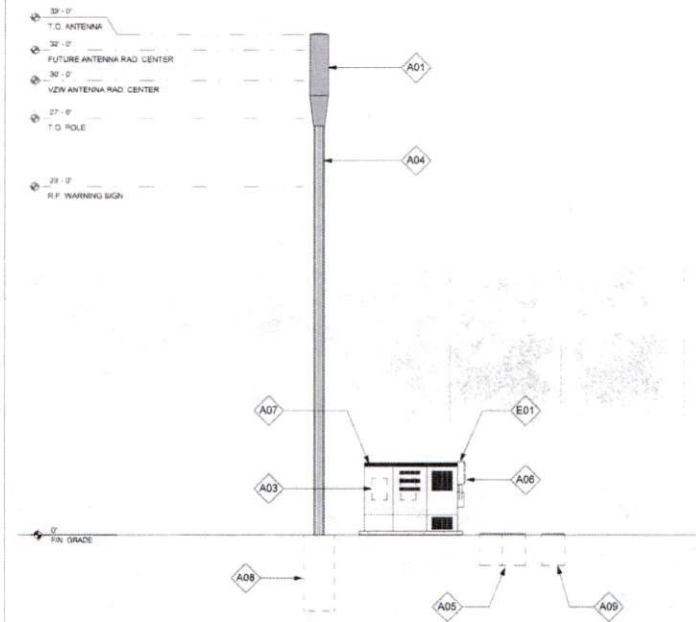
MODEL: AIRPANEL - 20010000 OF 0405
LENGTH: 48"
WIDTH: 14'-0" DIA.
DEPTH: NA
WEIGHT: 35.1 LBS

PROPOSED PANEL ANTENNA SPECS

PROPOSED POLE WIDTH: 8'-0"
PROPOSED POLE HEIGHT: 32'-0"
17'-0" ANTENNA AND
1'-0" ANTENNA MOUNT

POLE INFO

APPROVED: *[Signature]*
Development Coordinator
DATE: 11/1/16



POLE ELEVATION (PROPOSED)

SCALE: 1/4" = 1'-0" 20



CROWN CASTLE
800 E. JOHN CARPENTER PKWY
SUITE 300
IRVING, TX 75062

RECORD DRAWINGS (ISSUE DATE): 10/16/16



Shift Companies, LLC
1331 L. ROTH RD. SUITE 100
SCOTTSDALE, ARIZONA 85257
P: 480.349.8000
F: 480.349.8001

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6/23/16	1ST CITY SUBMITTAL
10/18/16	2ND CITY SUBMITTAL

REVISIONS		
NO.	DATE	COMMENT
	10/18/16	CITY COMMENTS

PROJECT NAME
CINCO RANCH EXPANSION

NODE ADDRESS

NODE #:CCR-24

SEVEN MEADOWS PKWY
& WINDHURST RD

HUB AREA

CINCO RANCH - HGCW

SHIFT JOB NUMBER

150602

DRAWN BY: NA

CHECKED BY: CM

SHEET TITLE

POLE ELEVATION,
PROPOSED

SHEET NUMBER

A1.2

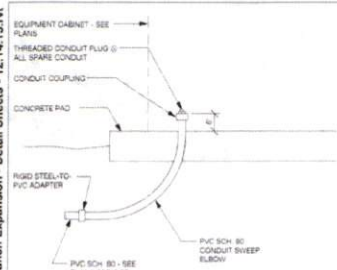
PAGE

6 OF 14

PLOT SCALE: 1:1 @ 24"x36"; 1/2 @ 11"x17"

PLAN CHECK #

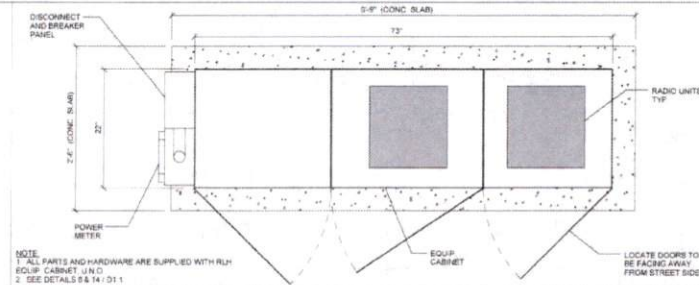
CAGE #



EQUIPMENT CABINET STUB UP DTL

SCALE N.T.S.

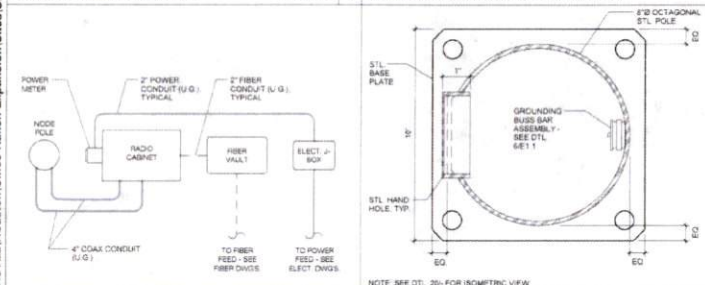
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METER / BBU / RADIO EQUIPMENT CABINET PLAN

SCALE N.T.S.

9



CONDUIT ROUTE

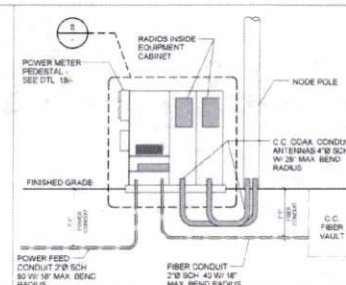
SCALE N.T.S.

2

PLAN VIEW @ POLE

SCALE N.T.S.

6



CONDUIT AND POWER RISER DIAGRAM

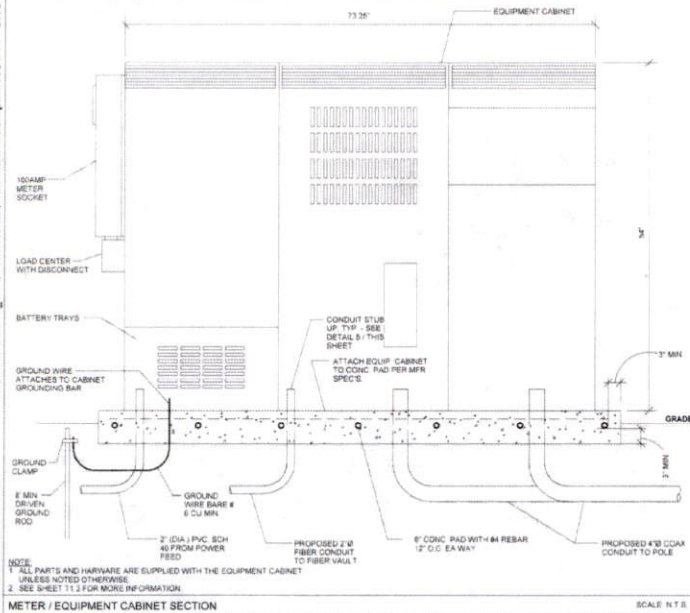
SCALE N.T.S.

10

EQUIPMENT CABINET WITH METER ISOMETRIC

SCALE N.T.S.

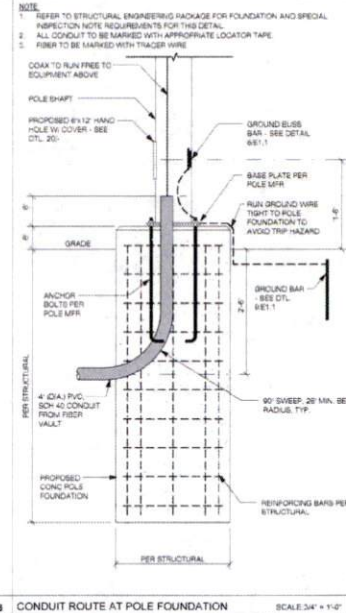
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METER / EQUIPMENT CABINET SECTION

SCALE N.T.S.

8



CONDUIT ROUTE AT POLE FOUNDATION

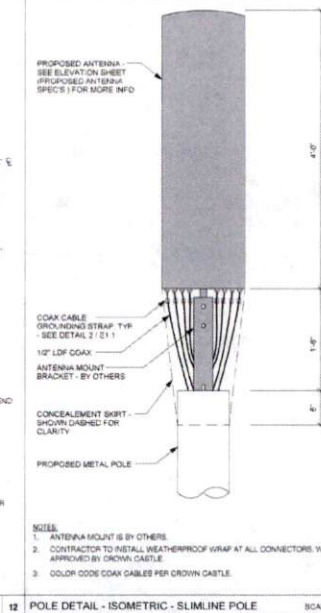
SCALE N.T.S.

12

POLE DETAIL - ISOMETRIC - SLIMLINE POLE

SCALE N.T.S.

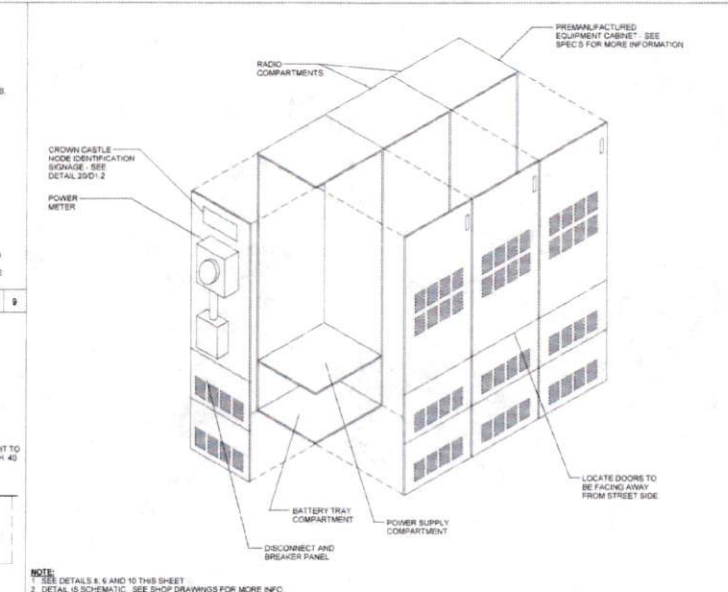
16



POLE DETAIL - ISOMETRIC - SLIMLINE POLE

SCALE N.T.S.

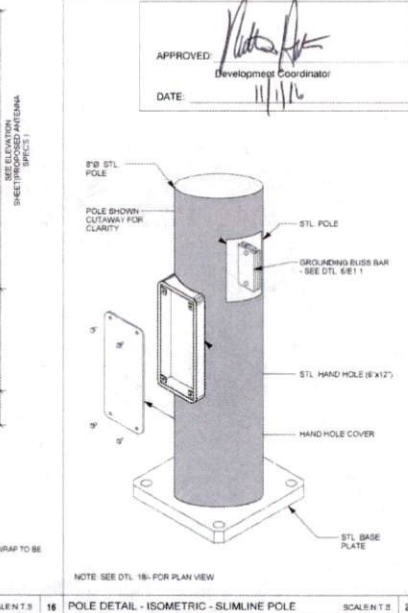
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EQUIPMENT CABINET WITH METER ISOMETRIC

SCALE N.T.S.

18



POLE DETAIL - ISOMETRIC - SLIMLINE POLE

SCALE N.T.S.

20



CROWN CASTLE
600 E. JOHN CARPENTER Pkwy
SUITE 200
IRVING, TX 75062

RECORD DRAWING ISSUE DATE: 10.18.16

SHIFT

Shift Companies, LLC
1301 E. NORTH WILSON BLVD
SCOTTSDALE, ARIZONA 85257
PH: 480.440.0000
FAX: 480.440.0001

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6.03.16	1ST CITY SUBMITTAL
10.18.16	2ND CITY SUBMITTAL

REVISIONS		
NO.	DATE	COMMENT
	10.18.16	CITY COMMENTS

PROJECT NAME
CINCO RANCH EXPANSION

HUB AREA
CINCO RANCH - HGCW

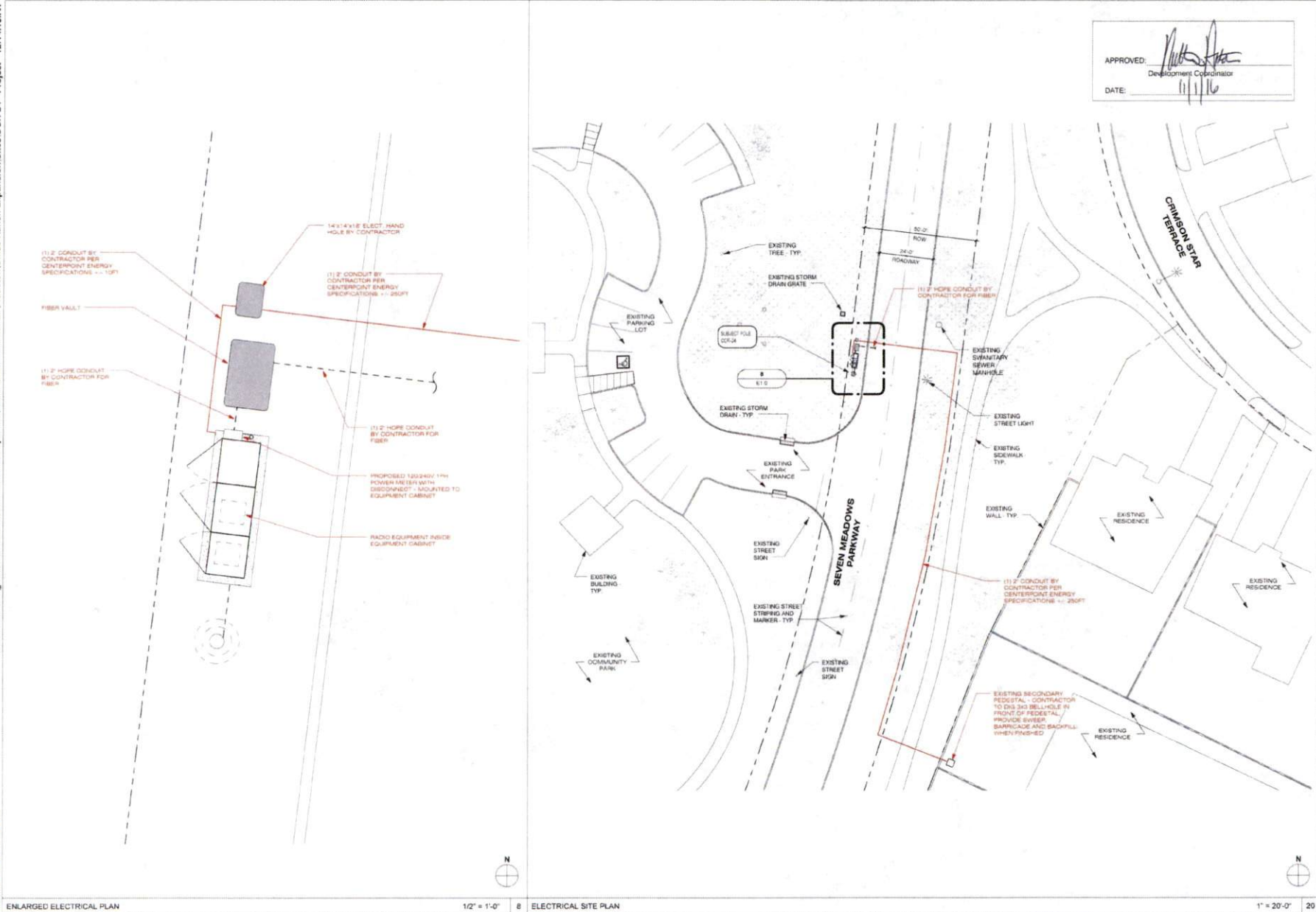
SHIFT JOB NUMBER
150602

SHEET TITLE
CONSTRUCTION DETAILS

SHEET NUMBER
D1.1

PAGE
7 OF 14

PLOT SCALE: 1/16" @ 24" X 36"; 1/32" @ 11" X 17"



APPROVED: *[Signature]*
Development Coordinator
DATE: 11/1/16

CROWN CASTLE
CROWN CASTLE
800 E. JOHN CARPENTER PAV.
SUITE 300
IRVING, TX 75062

RECORD DRAWINGS ISSUE DATE: 10/18/16

SHIFT
Shift Companies, LLC
1317 E. 43RD STREET, SUITE 200
FORTSMITH, ARIZONA 85707
PH: 480.244.2671
WWW.SHIFT.COM

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REVISIONS		
NO.	DATE	COMMENT
	10/18/16	CITY COMMENTS

PROJECT NAME
CINCO RANCH EXPANSION

NODE ADDRESS

NODE #CCR-24
SEVEN MEADOWS PKWY & WINDHURST RD

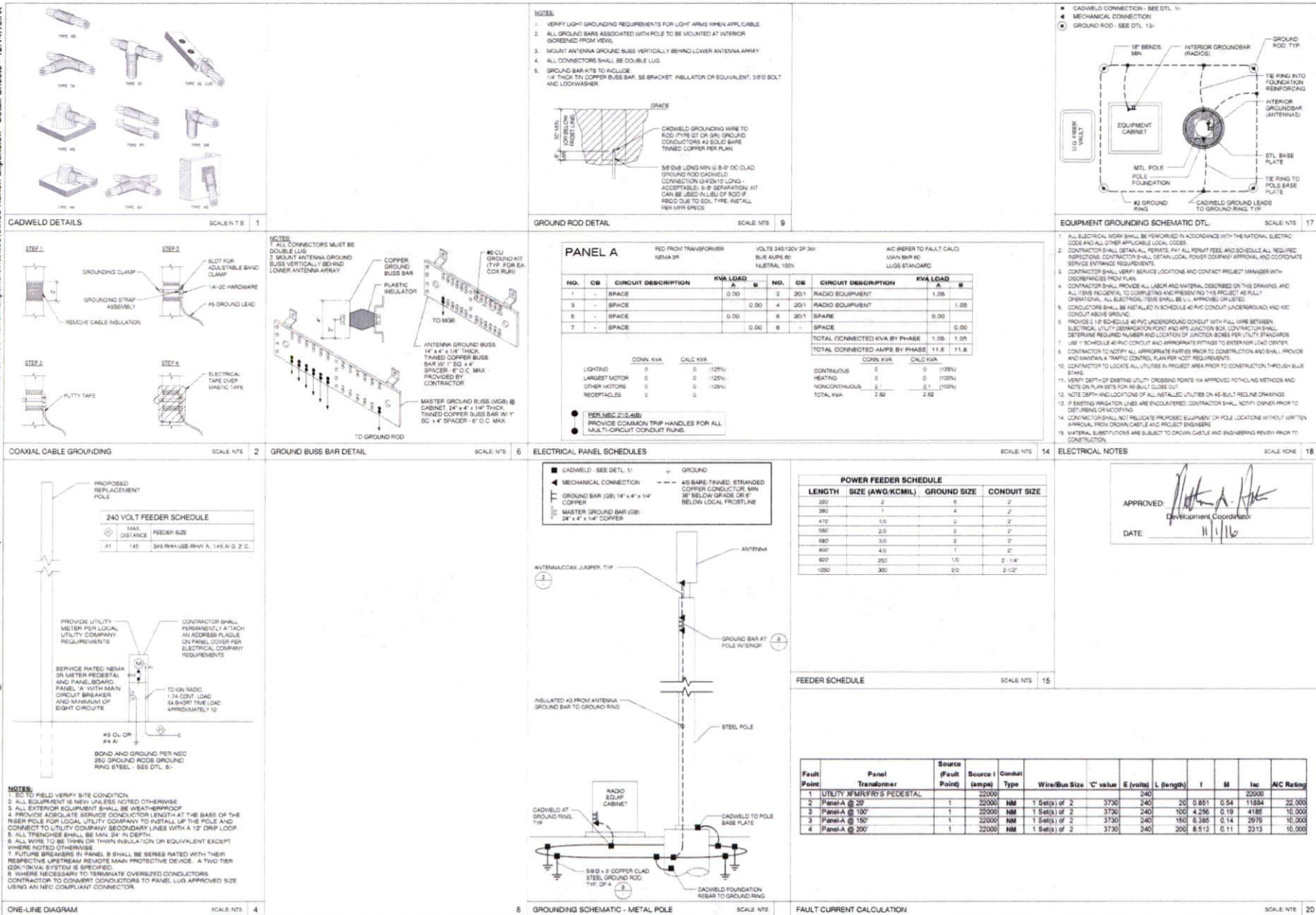
HUB AREA
CINCO RANCH - HGCW
SHIFT JOB NUMBER
150602
DRAWN BY: RA
CHECKED BY: CM

SHEET TITLE
ELECTRICAL PLANS

SHEET NUMBER	PAGE
E1.0	9 OF 14
PLOT SCALE: 1" @ 24'x35'; 1/2" @ 11'x17'	

PLAN CHECK #

CASE #



RELEASE	DATE	SUBMITTAL
	6/10/16	1ST CITY SUBMITTAL
	10/16/16	2ND CITY SUBMITTAL

REVISIONS	NO.	DATE	COMMENT
	1	10/16/16	CITY COMMENTS

PROJECT NAME
CINCO RANCH EXPANSION

HUB AREA
CINCO RANCH - HGCW

SHEET JOB NUMBER
150602

SHEET TITLE
ELECTRICAL DETAILS

SHEET NUMBER
E1.1

PAGE
10 OF 14

PLOT SCALE: 1" @ 24'x36'; 1/2" @ 11'x17'