

HISTORIC AND DESIGN REVIEW COMMISSION

October 03, 2018

HDRC CASE NO: 2018-485
COMMON NAME: 744 DONALDSON - ROW
ZONING: UZROW, H
CITY COUNCIL DIST.: 7
DISTRICT: Monticello Park Historic District
APPLICANT: Michael Lockwood/Mobilitie LLC
OWNER: City of San Antonio
TYPE OF WORK: Antenna Upgrades
APPLICATION RECEIVED: September 12, 2018
60-DAY REVIEW: November 11, 2018
REQUEST:

The applicant is requesting a Certificate of Appropriateness for approval to install a new network node pole in the right-of-way at 744 Donaldson.

APPLICABLE CITATIONS:

Appendix A. - Right-of-way network node design manual.

Division V. Additional Aesthetic Requirements In Design Districts

a. Applicability.

1. The requirements of Division IV of this Manual shall apply to network node installations in the ROW within all city parks, as well as in the ROW within, or directly abutting property within, Design Districts as defined herein.
2. For purposes of Texas Local Government Code Chapter 284 and this manual, the following types of districts shall be considered Design Districts with Decorative Poles:
 - A. Downtown 'D'
 - B. Historic 'H', 'HS', 'HE' or 'HL', including properties within historic districts and individual properties designated as Historic Landmarks
 - C. River Improvement Overlay 'RIO'
 - D. Neighborhood Conservation 'NCD'
 - E. Corridor Improvement Overlay
 - F. Viewshed Protection 'VP' and Mission Protection 'MPOD'
 - G. Airport/Military Airport Overlay 'AHOD/MAHOD'
 - H. Form-Based Zoning District 'FBZD'

The above list is intended for information purposes only, is not intended to be exhaustive, and is subject to amendment.

3. The Design Districts listed above may be further subdivided by neighborhood, area, or other division. Where specific requirements apply within sub-districts, such requirements may be elaborated in this Manual.
4. Where conflicts exist between this Manual and other district-specific or sub-district-specific Design Manuals, the more stringent requirements shall control.

b. Design District Aesthetic Requirements.

In addition to the design requirements in Division III of this Manual, the following aesthetic requirements shall apply in Design Districts:

1. New node support poles in districts designated as Design Districts in this Manual shall be placed within ten feet of interior lot lines.
2. In no event shall new node support poles be placed in front of the front façade of primary structures on any property designated as Historic or within fifteen hundred (1500) feet of the brass monument viewshed marker in front of a structure designated by the United Nations as a UNESCO World Heritage site.
3. Network nodes, node support poles, and related equipment shall require camouflage or concealment measures to

mitigate the impact or improve the aesthetics of the installation, as determined by the Historic Preservation Officer based on the unique circumstances of the design district or impacted property.

- A. New network nodes mounted to existing poles shall be low profile and flush mounted to the greatest extent feasible. Network nodes must be painted to match the support pole or structure on which they are mounted.
- B. The installation of new node support poles is discouraged in Historic Districts, Downtown "D", River Improvement Overlay Districts, Viewshed Protection and Mission Protection Overlay Districts. The Historic Preservation Officer may require concealment of the support pole in the form of aesthetically appropriate street lamps, site elements, district signage, or other stealth methods. The color of any new support pole or concealment solution shall be determined by the Historic Preservation Officer based on site specific conditions.
 - i. New node support poles must generally be located at commercial corners and intersections.
 - ii. New node support poles must be separated from other node support poles or existing poles by a distance of 250 feet.
 - iii. Where a separation requirement cannot be met, network nodes are preferred to be mounted to existing poles or installed with a stealth method.
 - iv. The height of new node support poles should not exceed the established predominant height of other poles and historic site elements located within 500 feet of the proposed installation.
 - v. New node support poles must be painted and not exceed 8" in diameter at the widest portion of the pole.
- C. Ground-mounted equipment must be integrated into the overall design of an installation, camouflaged or concealed based on site specific conditions, and positioned to mitigate visual or physical obstructions to nearby historic features as recommended by the Historic Preservation Officer.

c. Decorative Poles.

In accordance with Chapter 284, installation or attachment of wireless communications equipment, including antennas, network nodes, transport facilities, and related equipment is prohibited on all decorative streetlight poles in Design Districts.

FINDINGS:

- a. The applicant has proposed to install a new network node pole in the public right-of-way, adjacent to the side sidewalk at 744 Donaldson. The proposed location is located within the Monticello Park Historic District, at the front corner of the property at 740 Donaldson, and across the street from Jefferson High School.
- b. On a site visit conducted on August 27, 2018, staff found that a new network pole was installed in the right-of-way at 744 Donaldson prior to the issuance of a Certificate of Appropriateness. The applicant submitted a request to be heard by the HDRC on September 12, 2018. Staff notes that the installed pole features a wider top-mounted antenna cabinet than the proposed pole in the submitted documents; the following findings apply to both iterations of the network poles.
- c. LOCATION – Per the Additional Aesthetic Requirements in Design Districts 3B., the installation of new node support poles is discouraged in Historic Districts, the Downtown "D" Business District, River Improvement Overlay Districts, Viewshed Protection Overlays and Mission Protection Overlay Districts. Staff finds that options to relocate the pole outside of the historic district and away from individual historic sites should be explored. Additionally, Aesthetic Requirements 3.B.i. notes that new node support poles must generally be located at commercial corners and intersections and 3.B.ii notes that new node support poles must be separated from other node support poles or existing poles by a distance of 250 feet. Staff finds that existing poles are located within a 250-foot radius and that relocation or collocations should also be further explored.
- d. DESIGN - If the applicant provides evidence supporting the necessity of a new pole in the specific proposed location, per Aesthetic Requirements 3.B.iii, network nodes are preferred to be mounted to existing poles or installed with a stealth method. Additionally, the Historic Preservation Officer may require concealment of the support pole in the form of aesthetically appropriate street lamps, site elements, district signage, or other stealth methods. Staff finds that stealth options should be explored.
- e. HEIGHT – The proposed pole features 30 feet in height. Staff finds that the proposed height is consistent with Additional Aesthetic Requirements 3.iv. noting that new poles should not exceed the established predominant height of other poles and historic site elements located within 500 feet of the proposed installation.

- f. **FINISH/DIAMETER** – The proposed pole features an unpainted steel finish and has a general diameter of 10 inches at the base. Staff finds that the proposed form is inconsistent with the Aesthetic Requirements 3.v noting that new node support poles must be painted and not exceed 8 inches in diameter at the widest portion of the pole.

RECOMMENDATION:

Staff does not recommend approval of the proposed new network node pole. Staff recommends the applicant explore options to relocate the pole away from design districts and individual historic sites or to collocate on existing poles. If the applicant provides evidence supporting the necessity of a new pole in the specific proposed location, then a stealth approach should be explored and submitted for review. The pole that was installed prior to approval should be removed.

CASE COMMENT:

On a site visit conducted on August 27, 2018, staff found that a new network pole was installed in the right-of-way at 744 Donaldson prior to the issuance of a Certificate of Appropriateness.

CASE MANAGER:

Huy Pham



744 DONALDSON - ROW

Powered by ArcGIS Server

Printed: Sep 26, 2018

The City of San Antonio does not guarantee the accuracy, adequacy, completeness or usefulness of any information. The City does not warrant the completeness, timeliness, or positional, thematic, and attribute accuracy of the GIS data. The GIS data, cartographic products, and associated applications are not legal representations of the depicted data. Information shown on these maps is derived from public records that are constantly undergoing revision. Under no circumstances should GIS-derived products be used for final design purposes. The City provides this information on an "as is" basis without warranty of any kind, express or implied, including but not limited to warranties of merchantability or fitness for a particular purpose, and assumes no responsibility for anyone's use of the information.



Mexican Church

Alexander Hamilton Dr

Alexander Hamilton Dr

Manor Dr

Imera Iglesia
Autista Mexicana

Meredith Dr

La Promesa
Christian Academy

Ferro Family and
Cosmetic Dentistry

Grace Presbyterian
Church

Senisa Dr

Manor Dr

W Gramercy Pl

Wilson Blvd

Wilson Blvd

W Gramercy Pl

W Gramercy Pl

Google

Thomas Jefferson
High School

Jefferson United
Dona Methodist Church

744 Donaldson Avenue

Donaldson Ave

Donaldson Ave

W Gramercy Pl

W Gramercy Pl

Mary Louise Dr

mil3 Eagle Corporation

Furr Dr

RGR Run Gear Run

Shearer Blvd

Shearer Blvd

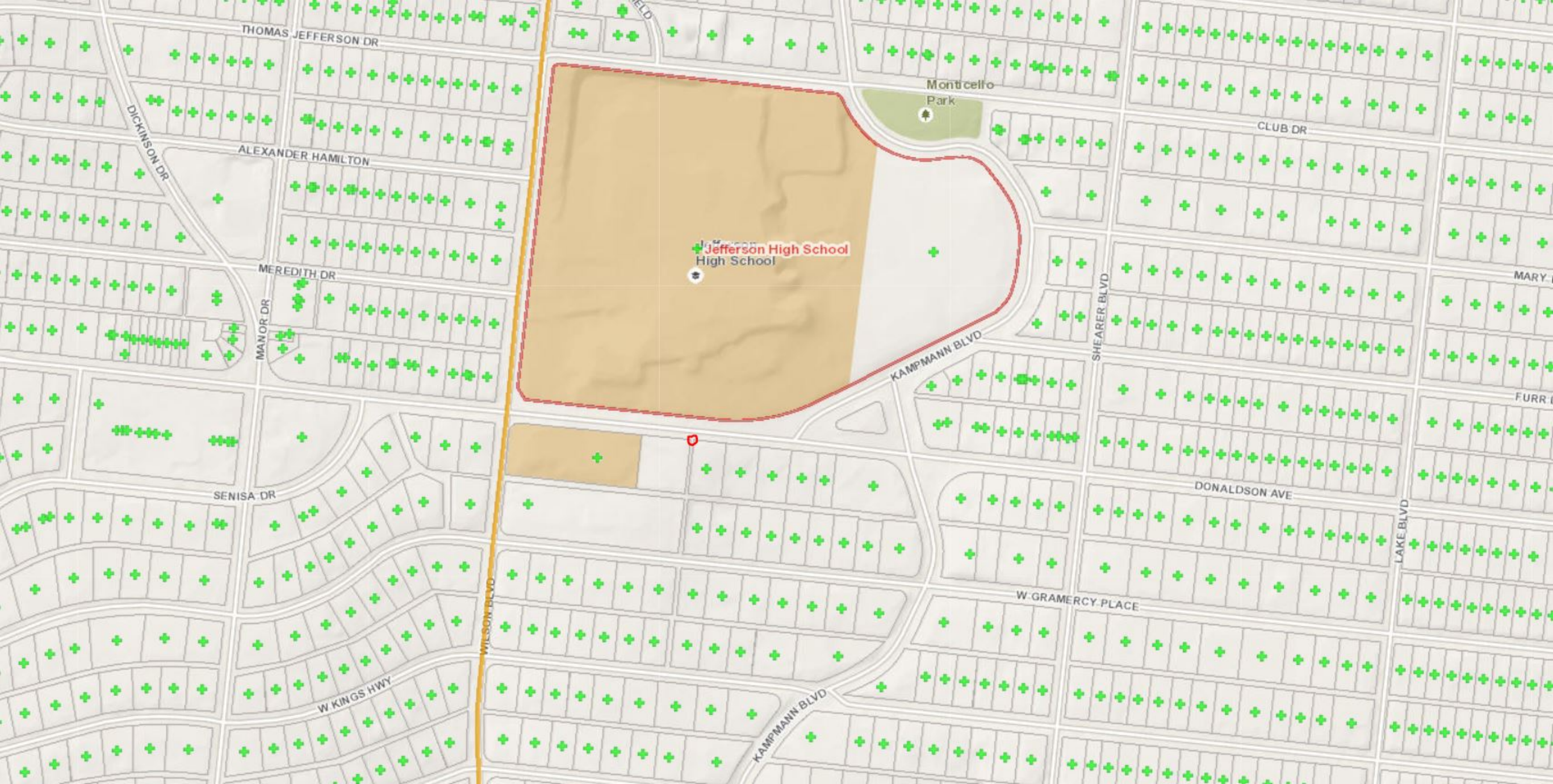
Shearer Blvd

Shearer Blvd

Kampmann Blvd

Kampmann Blvd

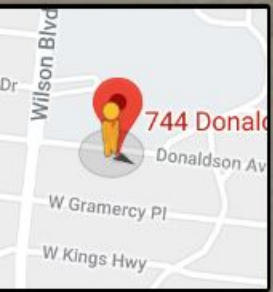
Kampmann Blvd





Donaldson Opp. Thomas Jefferso...
San Antonio, TX 78201
29.463798, -98.538763





740 Donaldson Ave

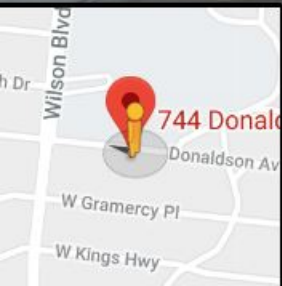
San Antonio, Texas



Google, Inc.



Street View - Nov 2017



Google







mobilitie

LAND USE
PERMIT

PROJECT NO:

DRAWN BY:

CHECKED BY:

A	01-30-17	FOR CLIENT REVIEW

1/30/17

IT IS A VIOLATION OF THE LAW FOR ANY
PERSON, UNLESS THEY ARE ACTING UNDER THE
DIRECTION OF A LICENSED PROFESSIONAL
ENGINEER, TO ALTER THIS DOCUMENT

SHEET TITLE
PHOTOSIM

SHEET NUMBER
PS-1

PROJECT NO:	ER600201
DRAWN BY:	A. TELLO
CHECKED BY:	C.FAIRCLOTH

A	06.28.17	FOR REVIEW

STATE OF TEXAS

RICARDO RODRIGUEZ

100246

PROFESSIONAL ENGINEER

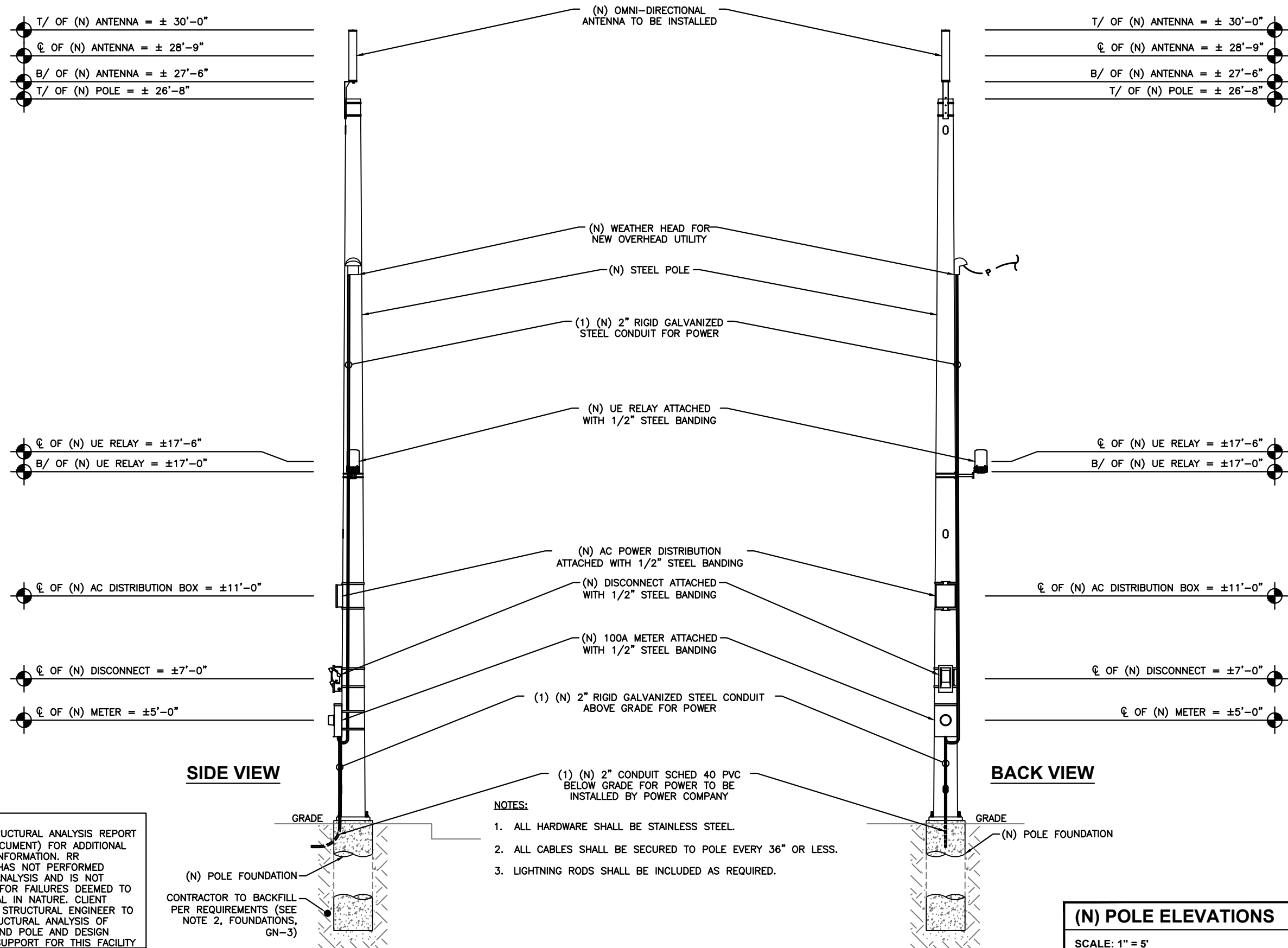
07/03/2017

IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT

SHEET TITLE

SHEET NUMBER

EV-1



NOTE:
REFER TO STRUCTURAL ANALYSIS REPORT
(SEPARATE DOCUMENT) FOR ADDITIONAL
STRUCTURAL INFORMATION. RR
ENGINEERING HAS NOT PERFORMED
STRUCTURAL ANALYSIS AND IS NOT
RESPONSIBLE FOR FAILURES DEEMED TO
BE STRUCTURAL IN NATURE. CLIENT
SHALL RETAIN STRUCTURAL ENGINEER TO
PERFORM STRUCTURAL ANALYSIS OF
FOUNDATION AND POLE AND DESIGN
STRUCTURAL SUPPORT FOR THIS FACILITY

(N) POLE FOUNDATION-
CONTRACTOR TO BACKFILL-
PER REQUIREMENTS (SEE
NOTE 2, FOUNDATIONS,
GN-3)

NOTES:

1. ALL HARDWARE SHALL BE STAINLESS STEEL.
2. ALL CABLES SHALL BE SECURED TO POLE EVERY 36" OR LESS.
3. LIGHTNING RODS SHALL BE INCLUDED AS REQUIRED.

(N) POLE ELEVATIONS

SCALE: 1" = 5'

1

CITY, STATE, ZIP:
SAN ANTONIO, TX 78201



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

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

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 OF EFFECT ON DRAINAGE; NO SANITARY SEWER SERVICE, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.

SITE INFORMATION

SITE ID:	9TXB008724
CASCADE ID:	SA90XSI14C
LATITUDE:	29.463788
LONGITUDE:	-98.538734
CROSS STREET:	DONALDSON AVE. & KAMPMANN BLVD.
CITY, STATE, ZIP:	SAN ANTONIO, TX 78201
COUNTY:	BEXAR COUNTY
JURISDICTION:	CITY OF SAN ANTONIO
PROPERTY OWNER:	PUBLIC RIGHT-OF-WAY
APPLICANT:	MOBILITIE, LLC 3475 PIEDMONT ROAD NE; SUITE 1000 ATLANTA, GEORGIA 30305 PHONE: (312) 638-5400

ENGINEER

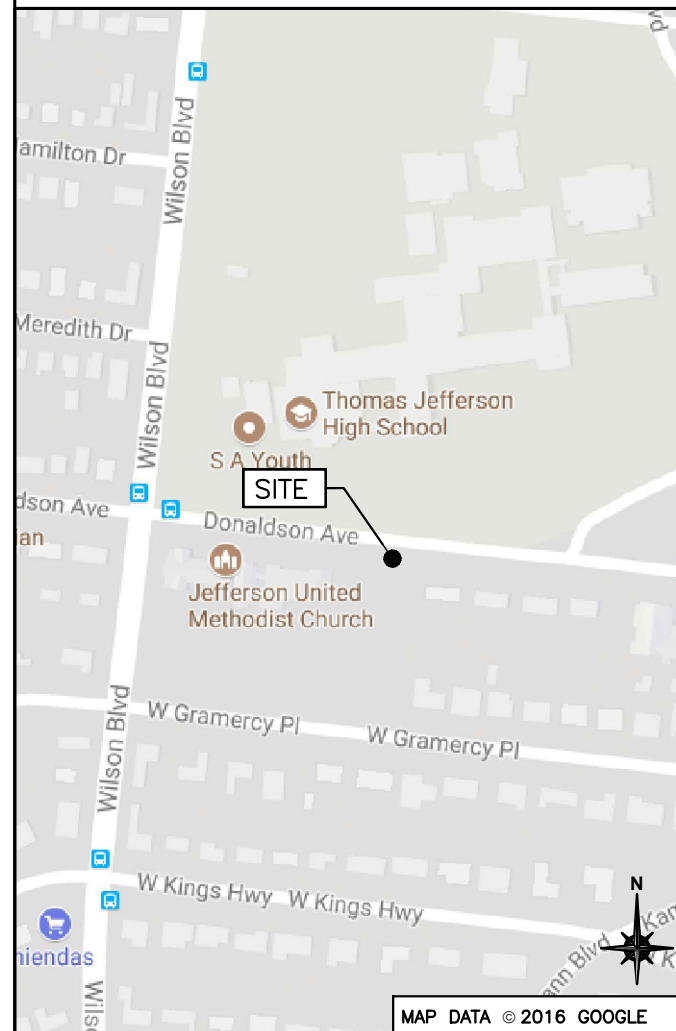
RR Engineering, LLC 5380 W. 34th Street (Ste 182) Houston, Texas 77092	Ricardo Rodriguez, P.E. Firm No. F-15400 TBPE No. 100246
--	--

DO NOT SCALE DRAWINGS

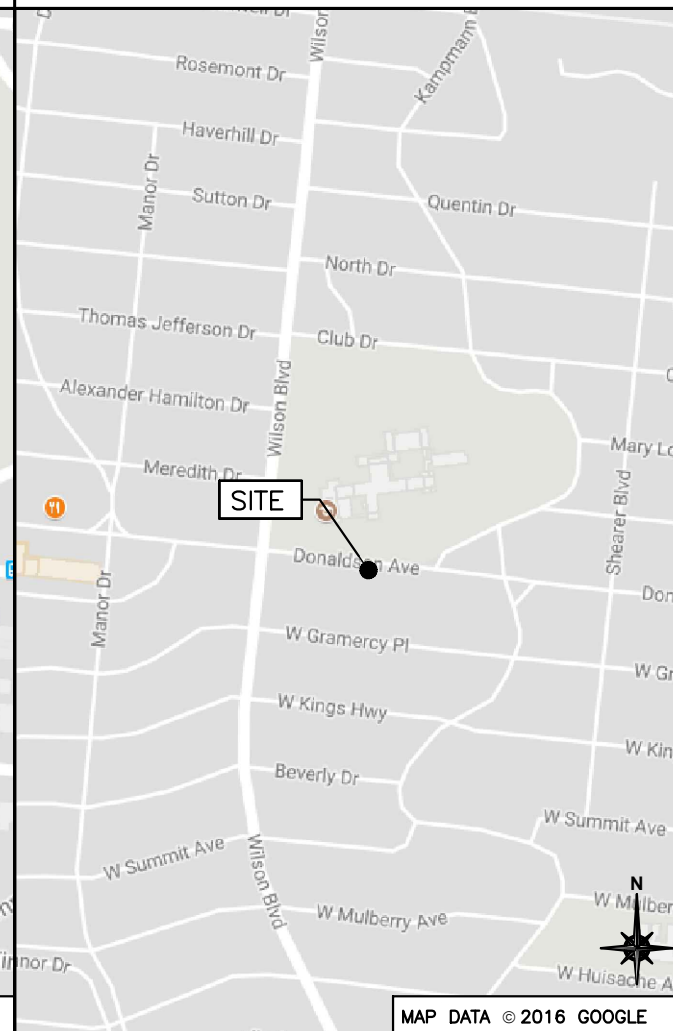
CONTRACTORS SHALL VERIFY ALL PLANS, (E) DIMENSIONS & FIELD CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES A MINIMUM OF 48 HOURS BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

LOCATION MAPS

VICINITY MAP



REGIONAL MAP



PROJECT DESCRIPTION

END USER PROPOSES TO INSTALL EQUIPMENT ON A NEW STEEL POLE WITHIN AN EXISTING RIGHT-OF-WAY. THE SCOPE WILL CONSIST OF THE FOLLOWING:

- INSTALL A NEW STEEL UTILITY POLE WITH PROPOSED BACKHAUL TRANSPORT EQUIPMENT

CODES

INTERNATIONAL BUILDING CODE
NATIONAL ELECTRICAL SAFETY CODE
TIA/EIA-222-G-2 OR LATEST EDITION
LOCAL BUILDING/PLANNING CODE
MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) - CURRENT EDITION

DRAWING INDEX

[illegible]

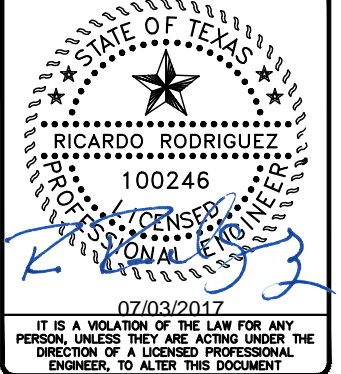
3475 PIEDMONT ROAD NE
SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 638-5400

LAND USE PERMIT

PROJECT NO:	ER600201
DRAWN BY:	A. TELLO
CHECKED BY:	C.FAIRCLOTH

A	06.28.17	FOR REVIEW

TBPE FIRM: F-15400



SA90XSI14C
9TXB008724
DONALDSON AVE. &
KAMPMANN BLVD.
SAN ANTONIO, TX 78201
UTILITY POLE

SHEET TITLE

TITLE SHEET

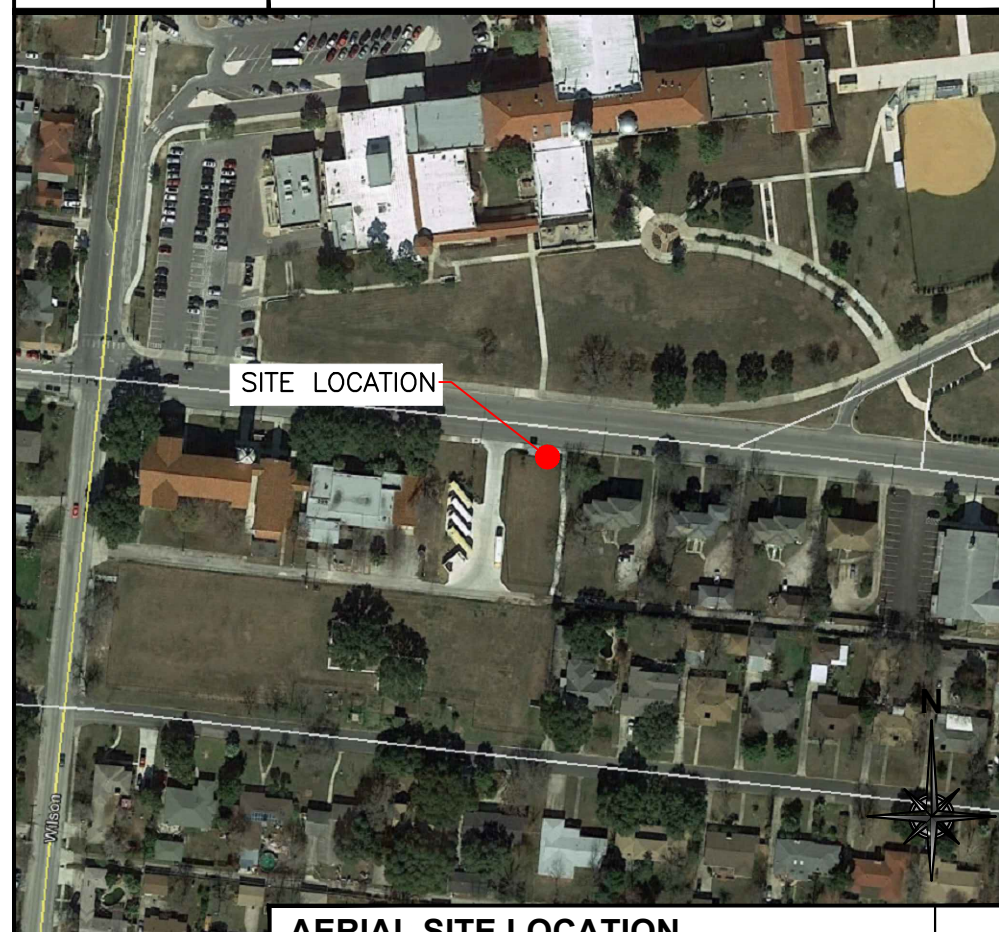
SHEET NUMBER

T-1



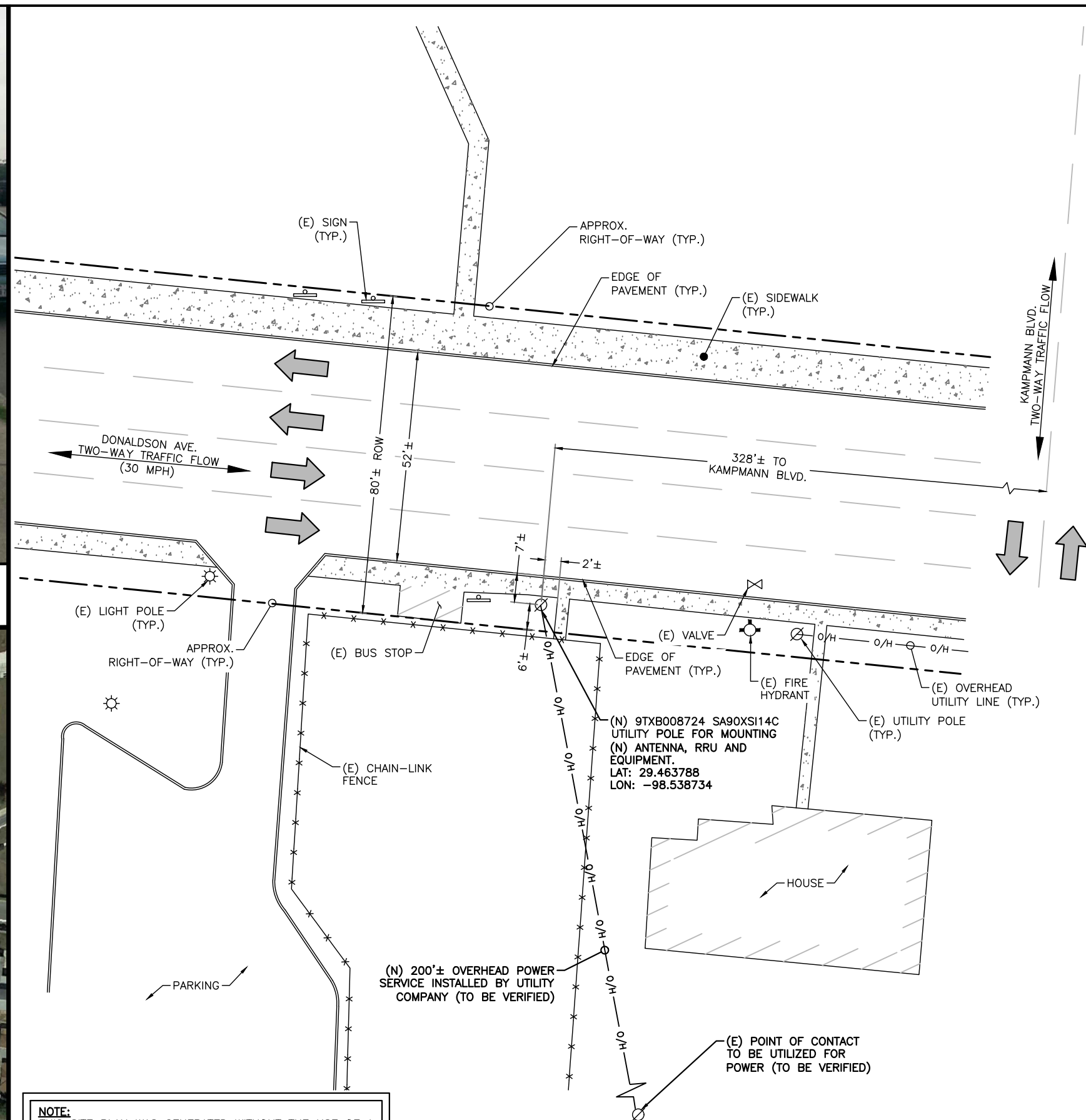
EXHIBIT PHOTO

SCALE: NOT TO SCALE



AERIAL SITE LOCATION

SCALE: NOT TO SCALE



ENLARGED SITE PLAN

SCALE: 1" = 30'-0" (1" = 15'-0" ON 22"x34" SHEET)

3475 PIEDMONT ROAD NE
SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 638-5400

LAND USE
PERMIT

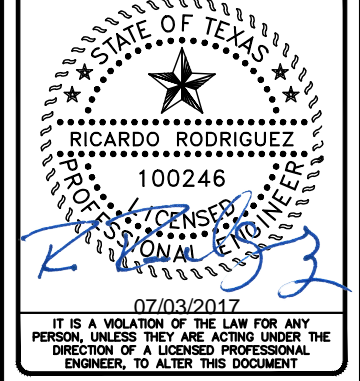
PROJECT NO:	ER600201
-------------	----------

DRAWN BY: **A. TELLO**

CHECKED BY: C.FAIRCLOTH

A	06.28.17	FOR REVIEW

TBPE FIRM: F-15400

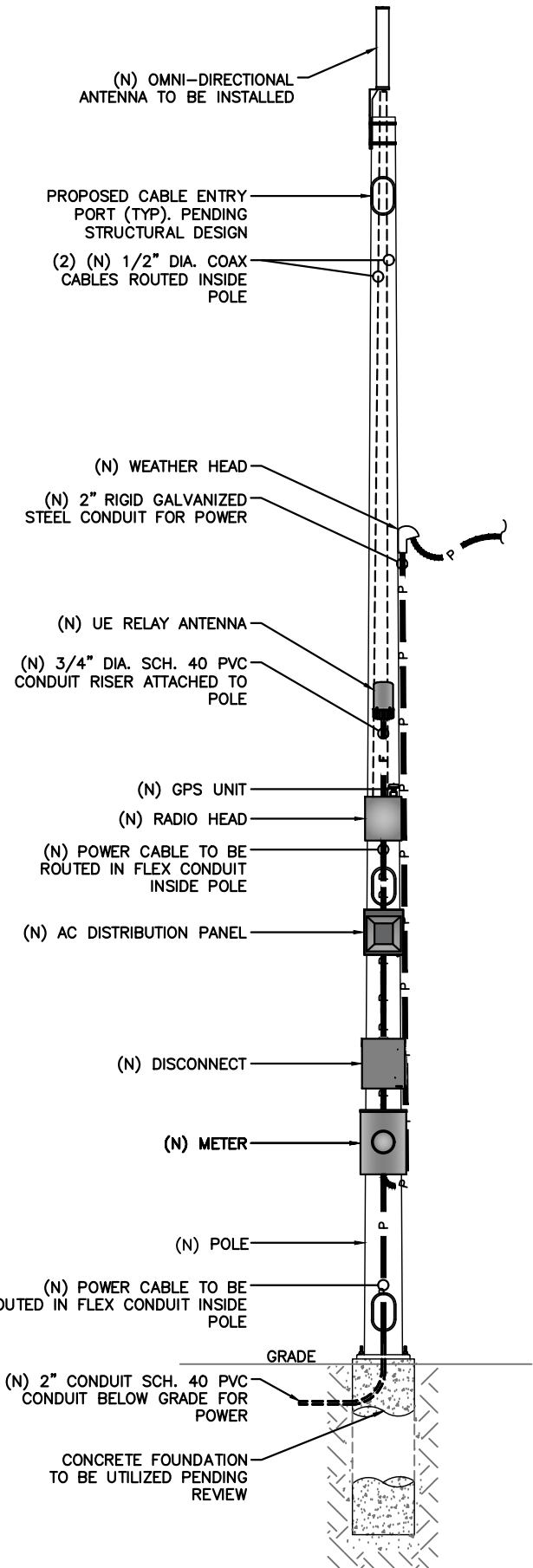


SA90XSI14C
9TXB008724
DONALDSON AVE. &
KAMPMANN BLVD.
SAN ANTONIO, TX 78201
UTILITY POLE

SHEET TITLE
EXHIBIT PHOTO & SITE PLAN

SHEET NUMBER
SP-1

NOTE:
(E) POLE MOUNTED EQUIPMENT
NOT SHOWN FOR CLARITY.



NOTE:
CABLING DIAGRAM IS FOR CLARITY OF
CABLE ROUTE AND TERMINATION ONLY.
CONTRACTOR SHALL INSTALL CABLES
WITH MINIMAL VISUAL IMPACT ON (N)
STEEL POLE. SEE ELEVATION DRAWING
FOR EQUIPMENT AND ANTENNA
LOCATIONS.

CABLING NOTES:

- A) WOOD, CONCRETE AND EXISTING METALLIC POLES
I) FROM GRADE LINE TO 11'-0" ABOVE GRADE, ALL
CABLES/CONDUCTORS EXCEPT GROUNDING CONDUCTOR
MUST RUN IN RIGID GALVANIZED STEEL CONDUIT (RGS)
II) GROUNDING CONDUCTORS IN EXPOSED LOCATIONS
MUST BE INSTALLED IN PVC.
III) IN EARTH INSTALL PVC CONDUIT FOR BACKHAUL
AND ELECTRICAL SERVICE. TRANSITION TO RGS AT
GRADE LINE.
IV) ABOVE 11'-0" ALL CABLES (POWER, ETHERNET,
COAXIAL) MUST RUN IN PVC UTILITY POLE RISER.
(1) AT MAJOR EQUIPMENT, EXTEND UTILITY DUCT
IMMEDIATELY ADJACENT TO THE EQUIPMENT. INSTALL
CABLES IN THE UTILITY POLE RISER CREATING
CABLE DRIP LOOPS NOT LESS THAN THE CABLE
BENDING RADIUS.
(2) INSIDE THE UTILITY POLE RISER, UTILIZE 1/2"
COAX BLOCKS WITH LAG SCREWS TO SUPPORT
COAX, RADIO AND MW POWER, RF COAX, AND
ETHERNET CABLES TO WITHIN 12" OF THE
EQUIPMENT BEING SERVED AND ON INTERVALS NOT
TO EXCEED 4'.
V) FOR UNDERGROUND HFC/PUBLIC BACKHAUL, ROUTE
ETHERNET CABLE IN CONDUIT UP THE POLE AND
ENTER THE UTILITY POLE RISER. SEAL EXPOSED END
OF CONDUIT WITH A CABLE TERMINATION FITTING.
VI) BY APPROVAL IN SELECT CASES LIQUID-TIGHT
FLEXIBLE METALLIC CONDUIT (LFMC) MAY BE USED IN
LENGTHS NOT TO EXCEED 36" TO EXTEND THE
ELECTRICAL SERVICE CONDUIT TO THE AC
DISTRIBUTION BOX. EXAMPLE: UTILITY-REQUIRED
DISCONNECT ON POLE W/ AC DISTRIBUTION BOX ON
OPPOSITE SIDE OF POLE. NOT REQUIRED FOR COAX.
B) NEW METALLIC POLES
I) PROCURE NEW POLES WITH SUITABLE HAND HOLES
SUCH THAT HAND HOLES EXIST AT ALL EQUIPMENT
LOCATIONS.
II) WHERE REQUIRED, INSTALL POLE BASE SUCH THAT THE
ELECTRICAL FEED AND BACKHAUL (IF UNDERGROUND)
CIRCUIT ENTER THE POLE THROUGH THE POLE BASE.

PLUMBING DIAGRAM

SCALE: NOT TO SCALE

1

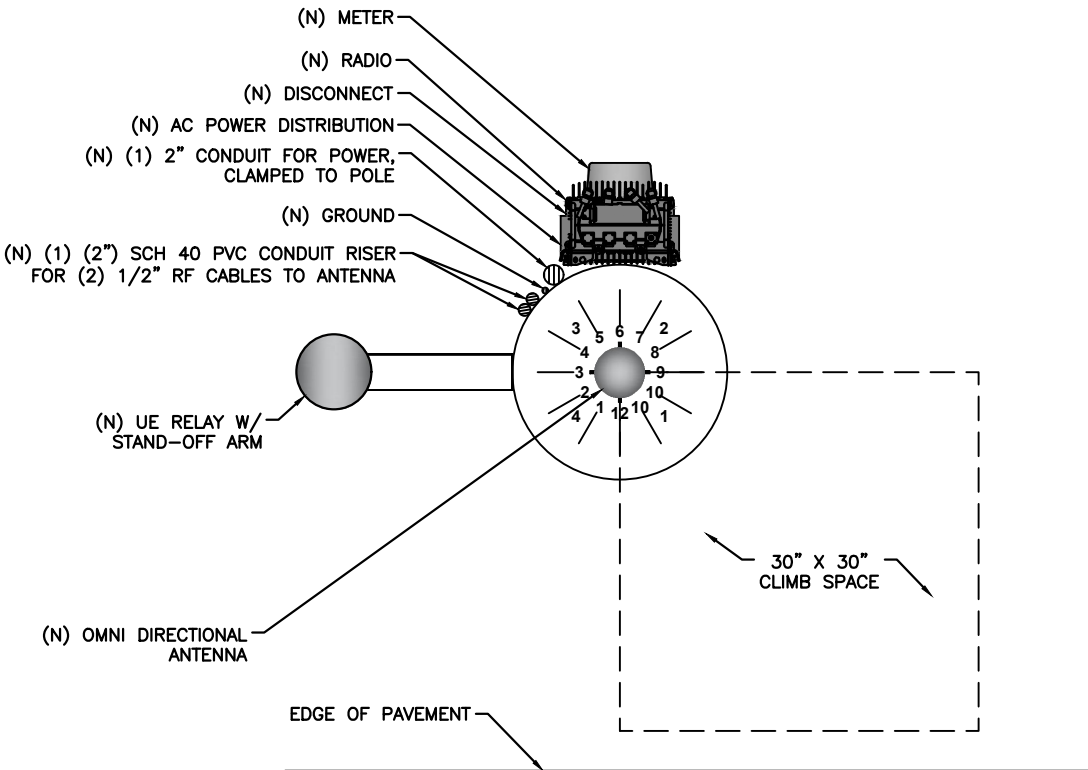
BILL OF MATERIALS							
QTY.	DESCRIPTION	MANUFACTURER	MODEL NUMBER	AZIMUTH	CABLE	DIMENSIONS (HxWxD)	WEIGHT
1	ANTENNA	ALPHA WIRELESS	AW3477-S	TBD	14'±	30.7" X 4.7" DIAMETER	7 LBS
1	UE RELAY	AIRSPAN	iR460-SPB-ST-1-P-0	TBD	3'±	13" X 7" DIAMETER	8.8 LBS
-	-	-	-	-	-	-	-
1	GPS	TALLYSMAN	TW3012	-	-	0.8" X 2.6" DIAMETER	0.3 LBS
1	RADIO	AIRSPAN	AH4000	-	3'±	20.3" X 10.3" X 8.3"	42 LBS
-	-	-	-	-	-	-	-
1	AC DISTRIBUTION PANEL	TRANSECTOR	1101-1207-1012	-	1'±	12" X 12" X 4"	17 LBS
1	NEMA TYPE-3R DISCONNECT	SIEMENS	GF222NR	-	1'±	15.45" X 8.7" X 5.95"	14 LBS
1	METER SOCKET	MILBANK	U4801-XL-5T9	-	211'±	19" X 13" X 4.84"	21 LBS

RFDS REVISION TYPE: NOT FINAL
RFDS REVISION NUMBER: N/A
RFDS REVISION TIMESTAMP: N/A

BILL OF MATERIALS

SCALE: NOT TO SCALE

2



RISER ORIENTATION DIAGRAM

SCALE: NOT TO SCALE

3

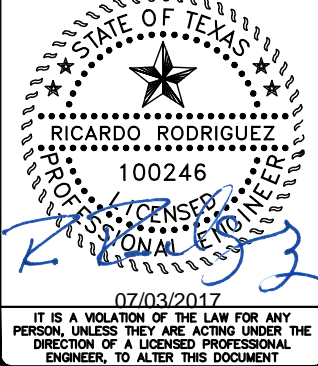
mobilitie
intelligent infrastructure

3475 PIEDMONT ROAD NE
SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 638-5400

LAND USE
PERMIT

PROJECT NO: ER600201
DRAWN BY: A. TELLO
CHECKED BY: C.FAIRCLOTH

TBPE FIRM: F-15400

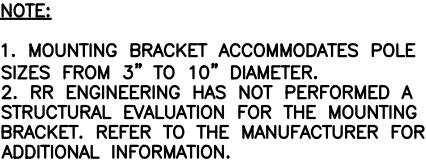


SA90XS14C
9TXB008724
DONALDSON AVE. &
KAMPMANN BLVD.
SAN ANTONIO, TX 78201
UTILITY POLE

SHEET TITLE
PLUMBING & RISER DIAGRAM

SHEET NUMBER

PL-1



EQUIPMENT MOUNTING DETAIL

1

SCALE: NOT TO SCALE

ANTENNA MOUNTING DETAIL

3

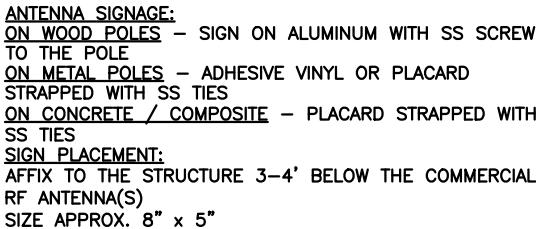
SCALE: NOT TO SCALE



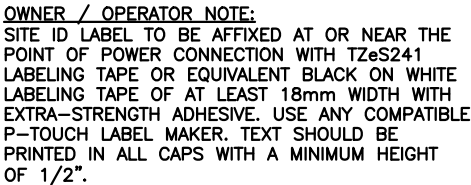
CABLE MOUNTING DETAIL

SCALE: NOT TO SCALE

2



ANTENNA SIGNAGE

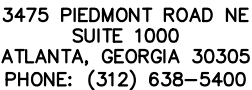


EMERGENCY CONTACT SIGN

POLE MOUNTED SIGNS

SCALE: NOT TO SCALE

4



LAND USE PERMIT

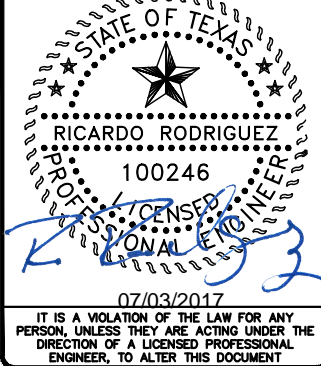
PROJECT NO: ER600201

DRAWN BY: A. TELLO

CHECKED BY: C.FAIRCLOTH

A	06.28.17	FOR REVIEW

TBPE FIRM: F-15400



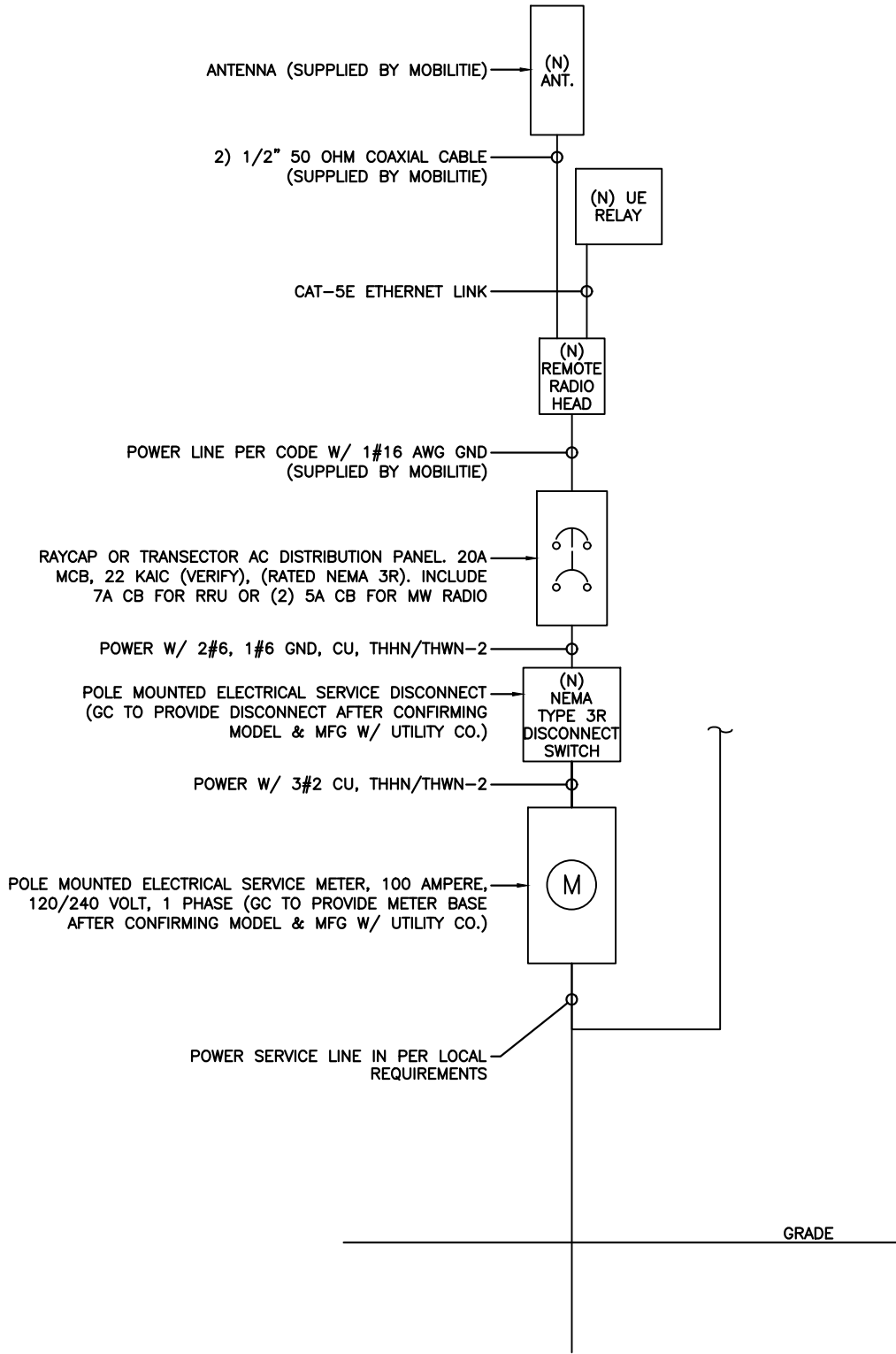
SA90XSI14C
9TXB008724
DONALDSON AVE. &
KAMPMANN BLVD.
SAN ANTONIO, TX 78201
UTILITY POLE

SHEET TITLE

EQUIPMENT DETAILS

SHEET NUMBER

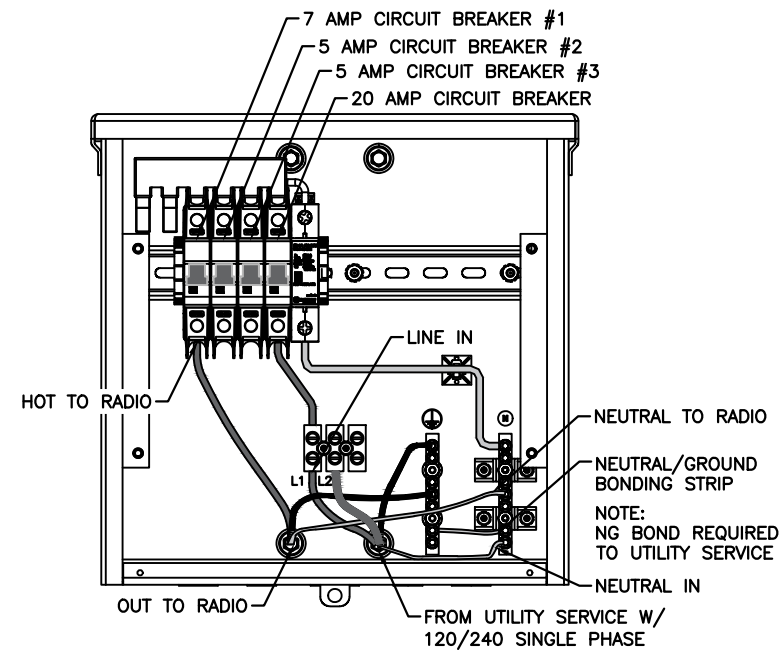
EQ-2



ONE-LINE DIAGRAM

SCALE: NOT TO SCALE

1



TRANSECTOR EXPORT
AC DISTRIBUTION BOX

BREAKER SCHEDULE

SCALE: NOT TO SCALE

2

NOTES:

1. NOMINAL POWER IS CALCULATED AS 80% OF OEM DOCUMENTED MAXIMUM POWER.
2. CALCULATIONS FOR UE W/ NOKIA DO NOT NEED TO INCLUDE THE POWER FOR THE UE ANTENNA AS IT IS INCLUDED IN THE MAX POWER FIGURE. CALCULATIONS FOR UE W/ AIRSPAN MUST INCLUDE UE AS IT IS NOT INCLUDED
3. KVA IS CALCULATED FROM THE CONSUMPTION VALUE ASSUMING A PF=1. MAXIMUM POWER WAS USED FOR KVA. WHERE MAXIMUM WAS NOTED BY THE OEM THE QUOTED FIGURE WAS USED. WHERE AVERAGE/NOMINAL POWER WAS NOTED BY THE OEM MAXIMUM POWER WAS CALCULATED BY INCREASING AVERAGE/NOMINAL POWER BY A FACTOR OF 50%

Airspan Scenario 2 AH4000 High Power Radio and UE Backhaul

Unit	Sub Description	Max Power (W)	Max Current (A)	KVA	kWh/Yr
AirHarmony 4000	LTE Base Station	540	4.50	0.54	4730.4
Airspan IR460	UE Relay	N/A	N/A	N/A	N/A
Total		540	4.50	0.54	4730.4

LOAD CALCULATIONS

SCALE: NOT TO SCALE

3

mobilitie
intelligent infrastructure

3475 PIEDMONT ROAD NE
SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 638-5400

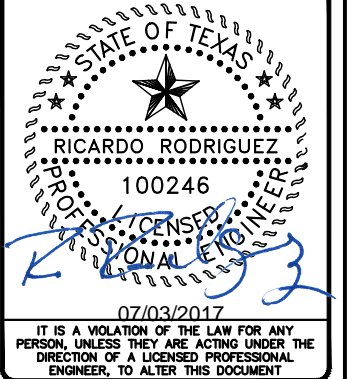
LAND USE
PERMIT

PROJECT NO: ER600201

DRAWN BY: A. TELLO

CHECKED BY: C.FAIRCLOTH

TBPE FIRM: F-15400



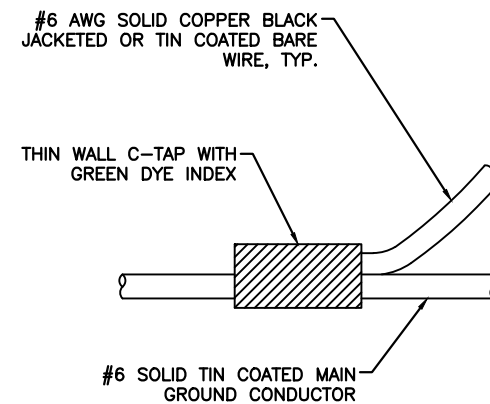
SA90XS14C
9TXB008724
DONALDSON AVE. &
KAMPMANN BLVD.
SAN ANTONIO, TX 78201
UTILITY POLE

SHEET TITLE
ELECTRICAL DETAILS

SHEET NUMBER

E-1

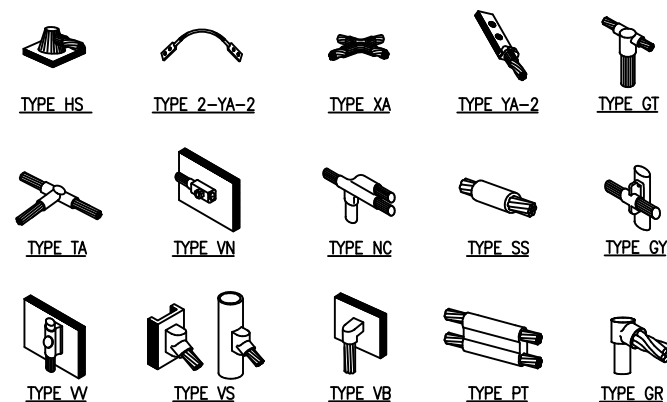
NOTE:
CONTRACTOR TO SURROUND COMPLETED
CONNECTION WITH HEAT-SHRINK TUBING TO
ENSURE WEATHER PROOF CONNECTION



C-TAP DETAIL

SCALE: NOT TO SCALE

1



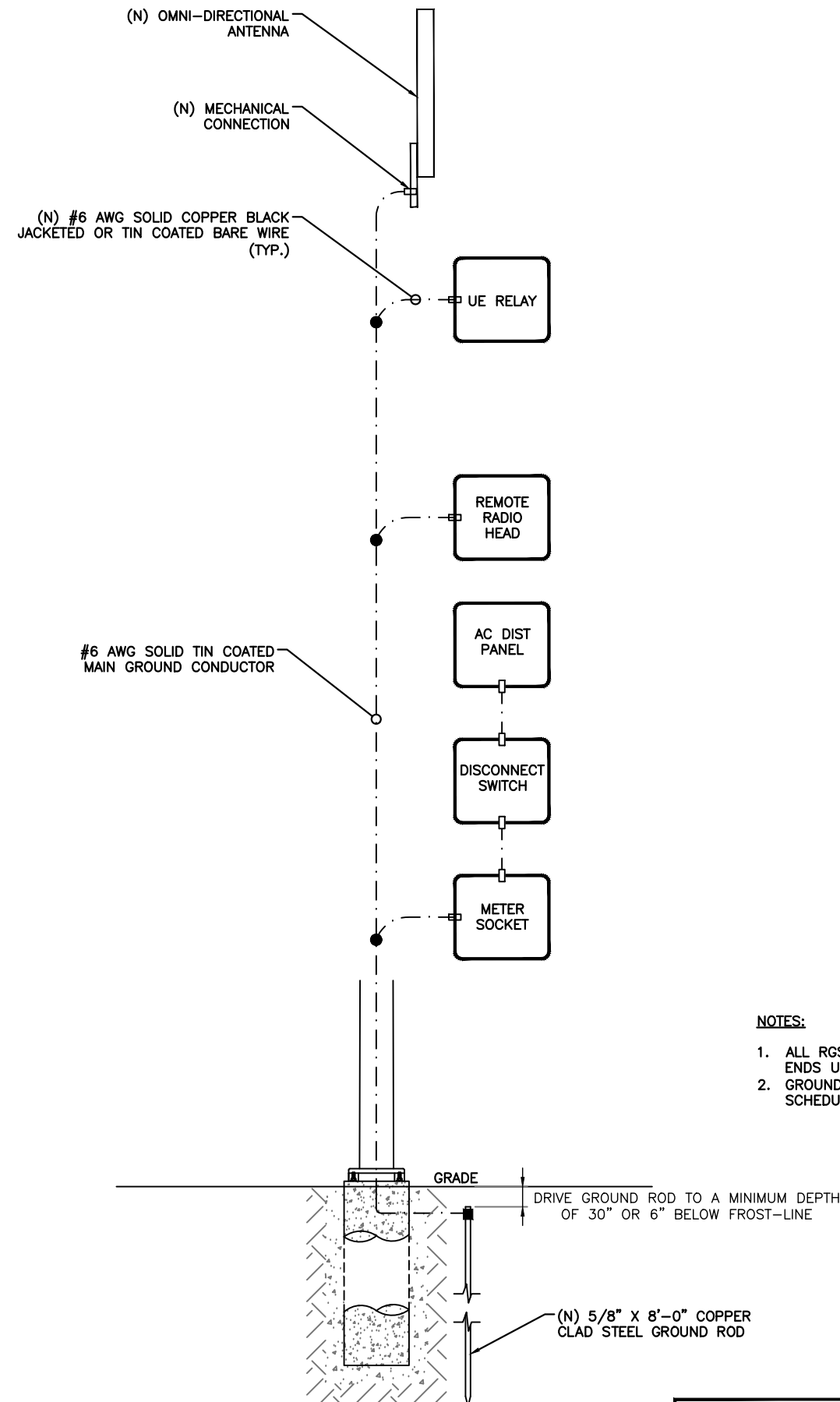
NOTE:

ERICO EXOTHERMIC "MOLD TYPES" SHOWN HERE ARE EXAMPLES. CONSULT WITH PROJECT MANAGER FOR SPECIFIC MOLDS TO BE USED FOR THIS PROJECT.

WELD CONNECTION DETAILS

SCALE: NOT TO SCALE

2



GROUNDING RISER DIAGRAM

SCALE: NOT TO SCALE

3

LEGEND

- CADWELD CONNECTION
- MECHANICAL CONNECTION
- COMPRESSION CONNECTION

NOTE:
GROUNDING RISER FOR DIAGRAMMATIC
PURPOSES ONLY. SEE ELEVATION DRAWING
FOR EQUIPMENT AND ANTENNA LOCATIONS.



3475 PIEDMONT ROAD NE
SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 638-5400

LAND USE PERMIT

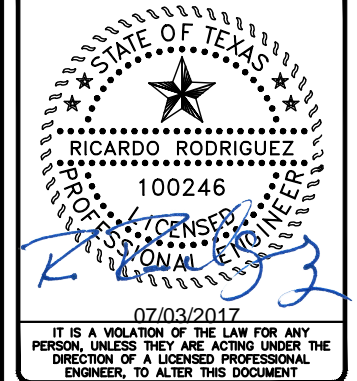
PROJECT NO:	ER600201
-------------	----------

DRAWN BY: A. TELLO

CHECKED BY: C.FAIRCLOTH

A	06.28.17	FOR REVIEW

TBPE FIRM: F-15400



SA90XS114C
9TXB008724
DONALDSON AVE. &
KAMPMANN BLVD.
SAN ANTONIO, TX 78201
UTILITY POLE

SHEET TITLE

GROUNDING DETAILS

SHEET NUMBER

G-1

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN & CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.

- SLUMP - 4" MIN. / 6" MAX.
AIR ENTRAINMENT - 2% TO 3% BY VOLUME

CLASSES OF CONCRETE

CLASS	28 DAY STRENGTH (PSI)	MAX. WATER/CEMENT RATIO	PLACEMENT LOCATION	
TYPE 1	3000	0.55	ALL LOCATIONS	NORMAL WEIGHT

- THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS OTHERWISE NOTED ON DRAWINGS:

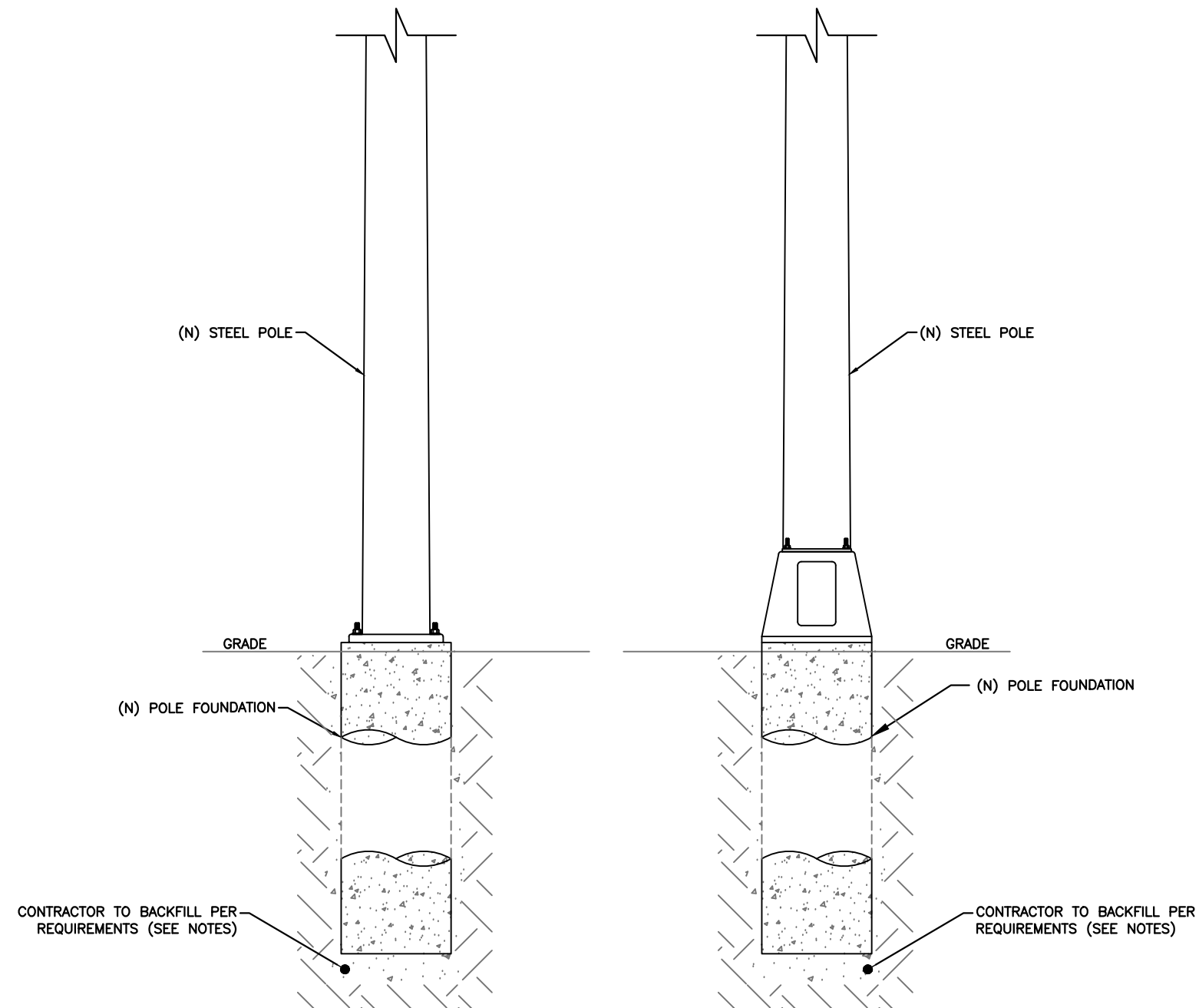
CONCRETE CAST AGAINST EARTH.....3"
CONCRETE EXPOSED TO EARTH OR WEATHER

#6 AND LARGER.....2"
#5 AND SMALLER & W.W.F.....1-1/2"

5. MAXIMUM COARSE AGGREGATE SIZE SHALL BE 3/4".
6. INSTALLATION OF CONCRETE ANCHORS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN SPECIFICATIONS. THE ANCHOR BOLTS, DOWEL, OR RODS SHALL CONFORM TO THE ANCHOR MANUFACTURER'S SPECIFICATIONS FOR MATERIAL STRENGTH, EMBEDMENT DEPTH, SPACING, AND EDGE DISTANCE OR AS DETAILED ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETE. EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET/REDHEAD, HILTI OR APPROVED EQUAL. IF THE MANUFACTURER'S SPECIFICATIONS AND DETAILS ARE FOUND TO CONFLICT WITH THAT SHOWN HEREIN, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
7. MECHANICAL VIBRATION IS REQUIRED ON ALL SLABS TO REDUCE THE HONEYCOMB EFFECT UNLESS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER.
8. THE CONTRACTOR SHALL VERIFY ALL ELECTRICAL CONDUIT SIZES AND PENETRATION LOCATION PRIOR TO POURING THE SLAB. REFER TO SHELTER MANUFACTURER'S SPECIFICATIONS FOR ADDITIONAL INFORMATION.
9. ALLOWABLE SOIL PRESSURE = 2500 PSF (ASSUMED).

NOTE:
SEE GN-3 FOUNDATION, EXCAVATION AND BACKFILL FOR
ADDITIONAL NOTES.

NOTE:
REFER TO STRUCTURAL ANALYSIS REPORT (SEPARATE DOCUMENT) FOR ADDITIONAL STRUCTURAL INFORMATION. RR ENGINEERING HAS NOT PERFORMED STRUCTURAL ANALYSIS AND IS NOT RESPONSIBLE FOR FAILURES DEEMED TO BE STRUCTURAL IN NATURE. CLIENT SHALL RETAIN STRUCTURAL ENGINEER TO PERFORM STRUCTURAL ANALYSIS OF FOUNDATION AND POLE AND DESIGN STRUCTURAL SUPPORT FOR THIS FACILITY



POLE FOUNDATION DETAILS

SCALE: NOT TO SCALE

1



3475 PIEDMONT ROAD NE
SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 638-5400

LAND USE PERMIT

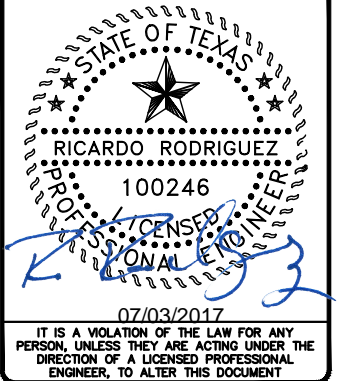
PROJECT NO: ER600201

DRAWN BY: A. TELLO

CHECKED BY: C.FAIRCLOTH

A	06.28.17	FOR REVIEW

TBPE FIRM: F-15400



SA90XSI14C
9TXB008724
DONALDSON AVE. &
KAMPMANN BLVD.
SAN ANTONIO, TX 78201
UTILITY POLE

SHEET TITLE

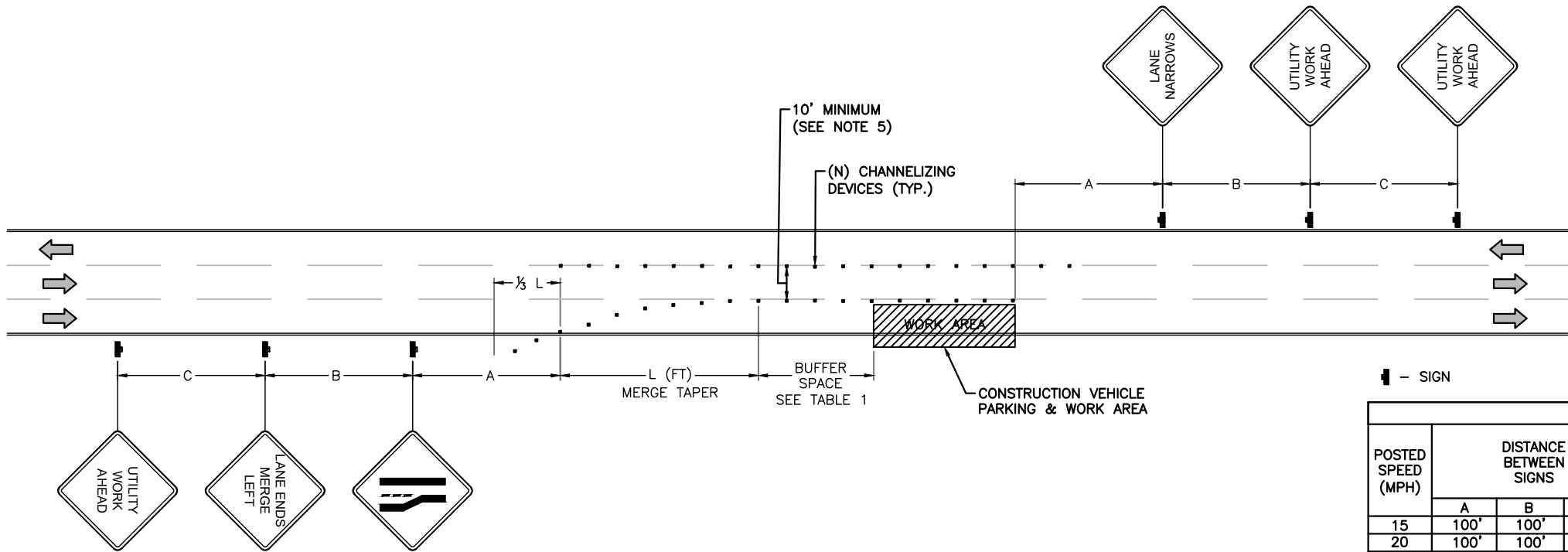
POLE FOUNDATION DETAILS

SHEET NUMBER

S-1

PLAN NOTES:

1. PLANS DEPICTED ARE GENERAL GUIDELINES FOR TEMPORARY VEHICULAR TRAFFIC CONTROL PLANS (TCP) TO INCLUDE PEDESTRIAN AND WORKER SAFETY. CONTRACTOR IS REQUIRED TO HAVE PREPARED A SITE-SPECIFIC TCP FOR REVIEW AND APPROVAL BY THE HIGHWAY AUTHORITY HAVING JURISDICTION. IF REQUIRED, THE FIRM PREPARING THE TCP SHALL BE AUTHORIZED OR CERTIFIED BY THE AUTHORITY HAVING JURISDICTION.
2. EXTEND CHANNELIZATION DEVICES INTO SHOULDER WHERE APPLICABLE.
3. DISTANCES AS INDICATED IN TABLE 1 SHOULD BE INCREASED FOR CONDITIONS THAT WOULD AFFECT STOPPING. DISTANCE SUCH AS DOWNGRADES OR LIMITED SIGHT DISTANCES. DISTANCES CAN BE DECREASED FOR LOW-SPEED (RESIDENTIAL) AREAS WITH APPROVAL BY THE AUTHORITY HAVING JURISDICTION. NIGHT-TIME WORK IS PROHIBITED UNLESS IT IS REQUIRED AS A CONDITION OF APPROVAL BY THE HIGHWAY AND LOCAL AUTHORITY HAVING JURISDICTION.
4. SHOULDER TAPERS SHOULD BE 1/3 OF THE ON-STREET TAPER LENGTH.
5. MAINTAIN A MINIMUM LANE WIDTH OF 10'.



CONSTRUCTION ACTIVITY SCHEDULE										
ACTIVITY DESCRIPTION	APPROXIMATE ACTIVITY DURATION (DAYS)									
	0	1	2	3	4	5	6	7	8	9
MOBILIZATION, INSTALLATION OF EROSION, SEDIMENTATION CONTROL MEASURES										
TOWER FOUNDATION EXCAVATION, CONSTRUCTION & CURING										
TOWER ERECTION, INSTALLATION & GROUNDING RELATED WORK										
MAIN SERVICE UTILITY WORK										
EQUIPMENT AND ANTENNA INSTALLATION, UTILITY & GROUNDING CONNECTIONS										
FINAL GRADING, AREA RESTORATION & MISCELLANEOUS DETAILS										
TEMPORARY EROSION, SEDIMENTATION CONTROL REMOVAL & FINAL CLEANUP										

TABLE 1					
POSTED SPEED (MPH)	DISTANCE BETWEEN SIGNS			TAPER	BUFFER
	A	B	C	L (SEE NOTE)	
15	100'	100'	100'	45'	100'
20	100'	100'	100'	80'	115'
25	100'	100'	100'	125'	155'
30	200'	200'	200'	180'	200'
35	200'	200'	200'	245'	250'
40	350'	350'	350'	320'	305'
45	350'	350'	350'	540'	360'
50	500'	500'	500'	600'	425'
55	500'	500'	500'	660'	495'
60	500'	500'	500'	720'	570'
65	500'	500'	500'	780'	645'

NOTES:

A) DISTANCES IN FEET UNLESS OTHERWISE NOTED.

B) CONTRACTOR TO VERIFY (E) SPEED LIMIT.

C) DISTANCES SHOWN ARE NOT VALID FOR LIMITED ACCESS HIGHWAYS. CONSULT STATE DOT MANUAL FOR DISTANCES.

D) ADJUST DISTANCES TO COMPLY WITH REQUIREMENT OF THE STATE OR LOCAL HIGHWAY AUTHORITY HAVING JURISDICTION. SEE NOTE 1, SHEET TC-2.

E) TAPER LENGTHS SHOWN BASED ON 12' LANE WIDTH. SEE NOTE 18, SHEET TC-2.

VEHICULAR TRAFFIC CONTROL PLAN - LANE MERGE

SCALE: NOT TO SCALE

1

mobilitie
intelligent infrastructure

3475 PIEDMONT ROAD NE
SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 638-5400

LAND USE
PERMIT

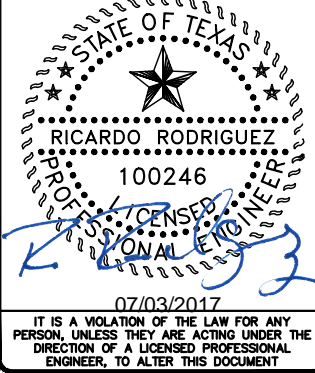
PROJECT NO: ER600201

DRAWN BY: A. TELLO

CHECKED BY: C.FAIRCLOTH

A 06.28.17 FOR REVIEW

TBPE FIRM: F-15400



SA90XSI14C
9TXB008724
DONALDSON AVE. &
KAMPMANN BLVD.
SAN ANTONIO, TX 78201
UTILITY POLE

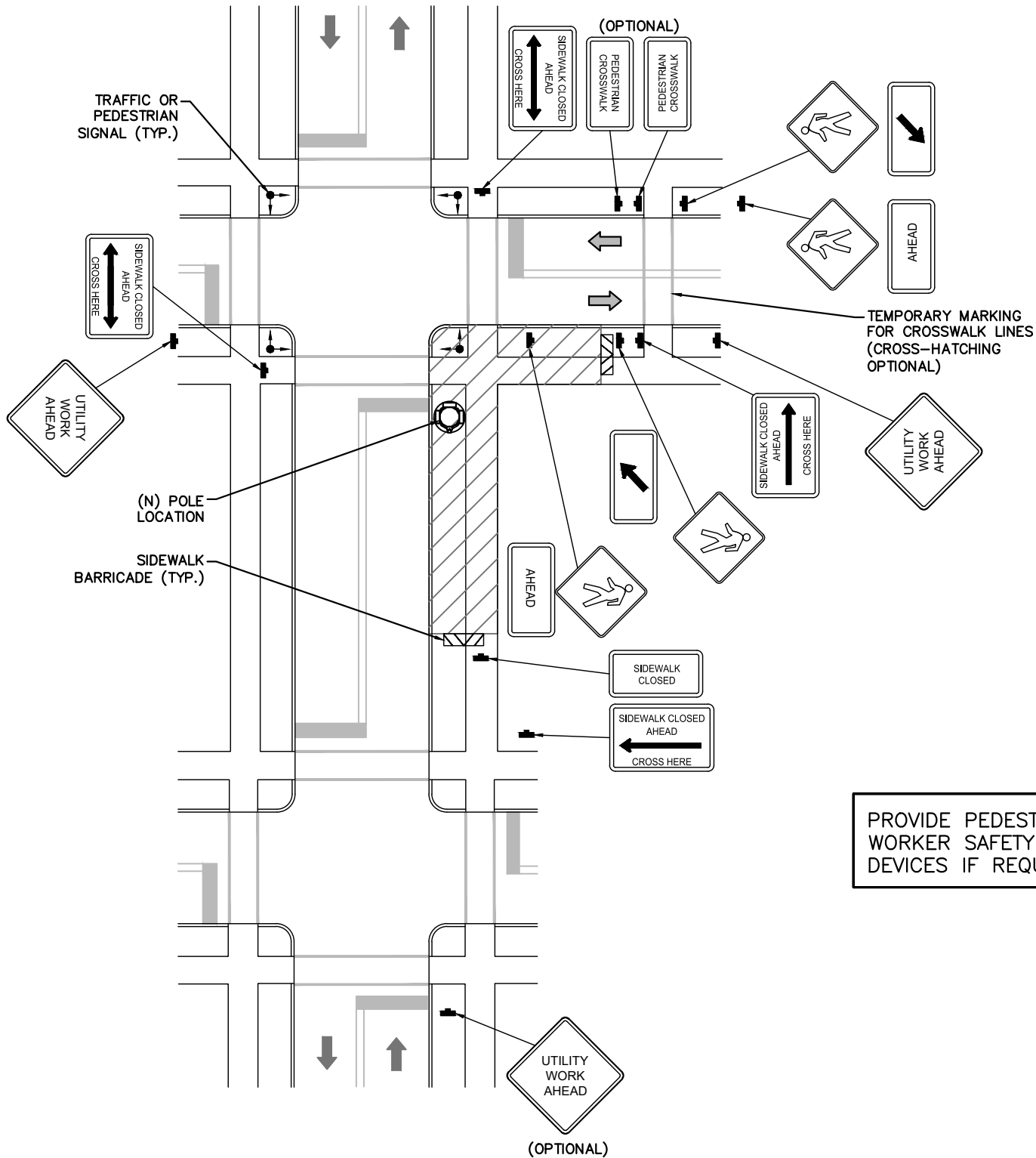
SHEET TITLE
VEHICULAR TRAFFIC
CONTROL PLAN

SHEET NUMBER

TC-1

TRAFFIC CONTROL GENERAL NOTES

1. ALL TEMPORARY TRAFFIC CONTROL SIGNAGE, LAYOUTS AND PROCEDURES SHALL COMPLY WITH LOCAL JURISDICTIONAL REQUIREMENTS AND MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION, WHICHEVER IS MORE STRINGENT.
2. PRIOR TO ANY ROAD CONSTRUCTION, TRAFFIC CONTROL SIGNS AND DEVICES SHALL BE IN PLACE.
3. TRAFFIC CONTROL DEVICES FOR LANE CLOSURES INCLUDING SIGNS, CONES, BARRICADES, ETC. SHALL BE PLACED AS SHOWN ON PLANS. SIGNS SHALL NOT BE PLACED WITHOUT ACTUAL LANE CLOSURES AND SHALL BE IMMEDIATELY REMOVED UPON REMOVAL OF THE CLOSURES.
4. SELECTION, PLACEMENT, MAINTENANCE, AND PROTECTION OF TRAFFIC, PEDESTRIANS, AND WORKERS SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) – PART VI "TEMPORARY TRAFFIC CONTROL", AND LOCAL JURISDICTIONAL REQUIREMENTS UNLESS OTHERWISE NOTED IN THE PLANS AND SPECIFICATIONS, AND SHALL BE APPROVED BY THE APPROPRIATE HIGHWAY AUTHORITY HAVING JURISDICTION.
5. ADVANCE WARNING SIGNS, DISTANCES, AND TAPER LENGTHS MAY BE EXTENDED TO ADJUST FOR REDUCED VISIBILITY DUE TO HORIZONTAL AND VERTICAL CURVATURE OF THE ROADWAY AND FOR ACTUAL TRAFFIC SPEEDS IF IN EXCESS OF POSTED SPEED LIMITS.
6. TAPERS SHALL BE LOCATED TO MAXIMIZE THE VISIBILITY OF THEIR TOTAL LENGTH.
7. CONFLICTING OR NON-OPERATING SIGNAL INDICATIONS ON THE (E) TRAFFIC SIGNAL SYSTEMS SHALL BE BAGGED OR COVERED.
8. ALL (E) ROAD SIGNS, PAVEMENT MARKINGS AND/OR PLOWABLE PAVEMENT REFLECTORS WHICH CONFLICT WITH THE (N) TRAFFIC CONTROL PLAN SHALL BE COVERED, REMOVED, OR RELOCATED. ALL TRAFFIC CONTROL DEVICES SHALL BE RESTORED TO MATCH PRE-CONSTRUCTION CONDITION AFTER COMPLETION OF WORK.
9. CONTRACTOR SHALL CONTACT LOCAL AUTHORITY HAVING HIGHWAY JURISDICTION AND PROVIDE ADDITIONAL "FLAGMEN" OR POLICE SUPERVISION, IF REQUIRED.
10. ALL EXCAVATED AREAS WITHIN OR ADJACENT TO THE ROADWAY SHALL BE BACKFILLED AND PLACED ON A MINIMUM 6H:1V SLOPE PRIOR TO END OF EACH WORK DAY. OTHER EXCAVATED AREAS WITHIN THE CLEAR ZONE ARE TO BE EITHER BACKFILLED OR PRECAST CONCRETE CURB BARRIER CONSTRUCTION BARRIER SET TEMPORARILY IN PLACE TO SHIELD VEHICULAR AND PEDESTRIAN TRAFFIC.
11. WHERE DICTATED BY LOCAL CONDITIONS, THE CONTRACTOR SHALL MAKE PROVISIONS FOR MAINTAINING PEDESTRIAN AND WORKER CROSSING LOCATIONS IN ACCORDANCE WITH ALL APPLICABLE CODES AND OSHA REQUIREMENTS.
12. CONSTRUCTION ZONE SPEED LIMIT IF REDUCED FROM POSTED LIMITS SHALL BE IN ACCORDANCE WITH MUTCD AND WILL BE DETERMINED BY THE AUTHORITY HAVING JURISDICTION.
13. THERE SHALL BE NO WORKERS, EQUIPMENT, OR OTHER VEHICLES IN THE BUFFER SPACE OR THE ROLL AHEAD SPACE.
14. DRIVEWAYS AND/OR SIDE STREETS ENTERING THE ROADWAY AFTER THE FIRST ADVANCE WARNING SIGN SHALL BE PROVIDED WITH AT LEAST ONE W20-1 SIGN (ROAD WORK AHEAD) AS A MINIMUM.
15. CONES MAY BE SUBSTITUTED FOR DRUMS AND INSTALLED UPON THE APPROVAL OF THE AUTHORITY HAVING JURISDICTION PROVIDED THEY COMPLY WITH MUTCD.
16. THE SPACING BETWEEN CONES, TUBULAR MARKERS, VERTICAL PANELS, DRUMS, AND BARRICADES SHOULD NOT EXCEED A DISTANCE IN FEET EQUAL TO 1.0 TIMES THE SPEED LIMIT IN MPH WHEN USED FOR TAPER CHANNELIZATION, AND A DISTANCE IN FEET EQUAL TO 2.0 TIMES THE SPEED LIMIT IN MPH WHEN USED FOR TANGENT CHANNELIZATION.
17. WHEN CHANNELIZATION DEVICES HAVE THE POTENTIAL OF LEADING VEHICULAR TRAFFIC OUT OF THE INTENDED VEHICULAR TRAFFIC SPACE, THE CHANNELIZATION DEVICES SHOULD BE EXTENDED A DISTANCE IN FEET OF 2.0 TIMES THE SPEED LIMIT IN MPH BEYOND THE DOWNSTREAM END OF THE TRANSITION AREA.
18. TAPER LENGTHS ARE CALCULATED AS FOLLOWS:
 $L = WS^2/60$ (40 MPH AND HIGHER) OR $L2 = WS$ (OVER 40 MPH),
WHERE W= OFFSET WIDTH (FT), S= TRAFFIC SPEED (MPH).



TYPICAL PEDESTRIAN / WORKER SAFETY PLAN

SCALE: NOT TO SCALE

1

mobilitie
intelligent infrastructure

3475 PIEDMONT ROAD NE
SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 638-5400

LAND USE
PERMIT

PROJECT NO: ER600201

DRAWN BY: A. TELLO

CHECKED BY: C.FAIRCLOTH

A 06.28.17 FOR REVIEW

TBPE FIRM: F-15400



IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT

SA90XS14C
9TXB008724
DONALDSON AVE. &
KAMPMANN BLVD.
SAN ANTONIO, TX 78201
UTILITY POLE

SHEET TITLE
PEDESTRIAN SAFETY PLAN

SHEET NUMBER

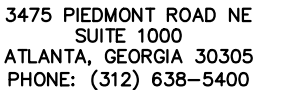
TC-2

1. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE LOCAL BUILDING CODE, THE LATEST ADOPTED EDITION AND ALL OTHER APPLICABLE CODES AND ORDINANCES.
2. CONTRACTOR SHALL CONSTRUCT SITE IN ACCORDANCE WITH THESE DRAWINGS AND LATEST MOBILITE CONSTRUCTION STANDARDS. THE SPECIFICATION IS THE RULING DOCUMENT AND ANY DISCREPANCIES BETWEEN THE SPECIFICATION AND THE CONSTRUCTION DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER OR MOBILITE CM PRIOR TO THE COMMENCEMENT OF WORK.
3. CONTRACTOR SHALL VISIT THE JOB SITE AND SHALL FAMILIARIZE THEMSELVES WITH ALL CONDITIONS AFFECTING THE (N) WORK AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED, AS SHOWN, PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER OR MOBILITE CM PRIOR TO THE COMMENCEMENT OF WORK. NO COMPENSATION WILL BE AWARDED BASED ON CLAIM OF LACK OF KNOWLEDGE OF FIELD CONDITIONS.
4. IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. CONTRACTOR IS REQUIRED TO FURNISH AND INSTALL ANY/ALL ITEMS FOR A COMPLETE AND FULLY FUNCTIONAL SYSTEM SUBJECT ONLY TO OWNER-SUPPLIED ITEMS. CONTRACTOR SHALL PROVIDE ANY/ALL REQUIREMENTS FOR THE EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
5. PLANS ARE NOT TO BE SCALED. THESE PLANS ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY UNLESS OTHERWISE NOTED. THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT AND APPURTENANCES, AND LABOR NECESSARY TO EFFECT ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS. OWNER PROVIDED AND CONTRACTOR INSTALLED MATERIALS WILL INCLUDE THE FOLLOWING, UNLESS NOTED OTHERWISE:
 - A) TRANSMITTER
 - B) UHF ANTENNA AND MOUNTING BRACKETS, GPS UNIT AND KU BACKHAUL
 - C) UHF COAX AND HANGERS
 - D) INTEGRATED LOAD CENTER
6. DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS OTHERWISE NOTED. SPACING BETWEEN EQUIPMENT IS REQUIRED CLEARANCE. THEREFORE, IT IS CRITICAL TO FIELD VERIFY DIMENSIONS. SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, (E) CONDITIONS AND/OR DESIGN INTENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPORTING ANY DISCREPANCIES TO THE ATTENTION OF THE MOBILITE CM, IN WRITING, PRIOR TO THE COMMENCEMENT OF WORK.
7. DETAILS PROVIDED ARE FOR THE PURPOSE OF SHOWING DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR SITE CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK.
8. CONTRACTOR SHALL PAY FOR APPLICABLE PERMITS, FEES, INSPECTIONS AND TESTING. CONTRACTOR IS TO OBTAIN PERMITS AND APPROVED SUBMITTALS PRIOR TO ORDERING MATERIALS AND THE COMMENCEMENT OF WORK.
9. THE TERM "PROVIDE" USED IN CONSTRUCTION DOCUMENTS AND SPECIFICATIONS, INDICATES THAT THE CONTRACTOR SHALL FURNISH AND INSTALL.
10. CONTRACTOR SHALL RECEIVE CLARIFICATION IN WRITING, AND SHALL RECEIVE IN WRITING AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEMS NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.
11. CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK USING ACCEPTED INDUSTRY-STANDARD SKILLS AND ATTENTION. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER CONTRACT, UNLESS OTHERWISE NOTED.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE WORK AREA, ADJACENT AREAS AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT. WORK SHALL CONFORM TO ALL OSHA REQUIREMENTS.
13. CONTRACTOR SHALL COORDINATE THEIR WORK WITH THE MOBILITE CM AND SCHEDULE THEIR ACTIVITIES AND WORKING HOURS IN ACCORDANCE WITH THE REQUIREMENTS.

- ELECTRICAL NOTES:**

1. ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL ANY/ALL ELECTRICAL WORK INDICATED. ANY/ALL CONSTRUCTION SHALL BE IN ACCORDANCE W/DRAWINGS AND ANY/ALL APPLICABLE SPECIFICATIONS. IF ANY PROBLEMS ARE ENCOUNTERED BY COMPLYING WITH THESE REQUIREMENTS, CONTRACTOR SHALL NOTIFY MOBILITE CM AS SOON AS POSSIBLE, AFTER THE DISCOVERY OF THE PROBLEMS, AND SHALL NOT PROCEED WITH THAT PORTION OF WORK, UNTIL THE MOBILITE CM HAS DIRECTED THE CORRECTIVE ACTIONS TO BE TAKEN.

2. ELECTRICAL CONTRACTOR SHALL VISIT THE JOB SITE AND FAMILIARIZE THEMSELVES WITH ANY/ALL CONDITIONS AFFECTING ELECTRICAL AND COMMUNICATION INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF. ALL (E) CONDITIONS OF ELECTRICAL EQUIP., ETC., THAT ARE PART OF THE FINAL SYSTEM, SHALL BE VERIFIED BY THE CONTRACTOR, PRIOR TO THE SUBMITTING OF THEIR BID. FAILURE TO COMPLY WITH THIS PARAGRAPH WILL IN NO WAY RELIEVE CONTRACTOR OF PERFORMING ALL WORK NECESSARY FOR A COMPLETE AND WORKING SYSTEM.
3. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NEC, ALL CODES AND ORDINANCES OF THE LOCAL JURISDICTION, AND POWER & TELEPHONE COMPANIES HAVING JURISDICTION AND SHALL INCLUDE BUT ARE NOT BE LIMITED TO:
 - A) UL - UNDERWRITERS LABORATORIES
 - B) NEC - NATIONAL ELECTRICAL CODE
 - C) NEMA - NATIONAL ELECTRICAL MANUFACTURERS ASSOC.
 - D) OSHA - OCCUPATIONAL SAFETY AND HEALTH ACT
 - E) SBC - STANDARD BUILDING CODE
 - F) NFPA - NATIONAL FIRE PROTECTION AGENCY
 - G) ANSI - AMERICAN NATIONAL STANDARDS INSTITUTE
 - H) IEEE - INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
 - I) ASTM - AMERICAN SOCIETY FOR TESTING MATERIALS
4. REFER TO SITE PLANS AND ELEVATIONS FOR EXACT LOCATIONS OF ALL EQUIPMENT, AND CONFIRM WITH MOBILITE CM ANY SIZES AND LOCATIONS WHEN NEEDED.
5. (E) SERVICES: CONTRACTOR SHALL NOT INTERRUPT (E) SERVICES WITHOUT WRITTEN PERMISSION OF THE OWNER.
6. CONTRACTOR SHALL CONFIRM WITH LOCAL UTILITY COMPANY ANY/ALL REQUIREMENTS SUCH AS THE: LUG SIZE RESTRICTIONS, CONDUIT ENTRY, SIZE OF TRANSFORMERS, SCHEDULED DOWNTIME FOR THE OWNERS' CONFIRMATION, ETC... ANY/ALL CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE MOBILITE CM, PRIOR TO BEGINNING ANY WORK.
7. MINIMUM WIRE SIZE SHALL BE #12 AWG, NOT INCLUDING CONTROL WIRING, UNLESS NOTED OTHERWISE. ALL CONDUCTORS SHALL BE COPPER WITH THWN INSULATION, UNLESS OTHERWISE NOTED.
8. OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, CAST ALLOY WITH THREADED HUBS IN WET/DAMP LOCATIONS AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS.
9. IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF THE CONSTRUCTION. CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS FOR THE EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
10. ELECTRICAL SYSTEM SHALL BE AS COMPLETELY AND EFFECTIVELY GROUNDED, AS REQUIRED BY SPECIFICATIONS, SET FORTH BY APPLICANT.
11. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS, WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY FUNCTIONAL AND SHALL BE APPROVED BY THE MOBILITE CM AND LOCAL JURISDICTION. ANY DEFICIENCIES SHALL BE CORRECTED BY AN ELECTRICAL CONTRACTOR AT THE SOLE COST OF THE CONTRACTOR.
12. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.



LAND USE PERMIT

CHECKED BY: C.FAIRCLOTH

A	06.28.17	FOR REVIEW

STATE OF TEXAS

RICARDO RODRIGUEZ

100246

PROFESSIONAL ENGINEER

07/03/2017

IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT

SA90XSI14C
9TXB008724
DONALDSON AVE. &
KAMPMANN BLVD.
SAN ANTONIO, TX 78201
UTILITY POLE

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

GN-1

ELECTRICAL NOTES CONT'D

13. THE CORRECTION OF ANY DEFECTS SHALL BE COMPLETED BY THE CONTRACTOR WITHOUT ANY ADDITIONAL CHARGE AND SHALL INCLUDE THE REPLACEMENT OR THE REPAIR OF ANY OTHER PHASE OF THE INSTALLATION, WHICH MAY HAVE BEEN DAMAGED THEREIN.
14. CONTRACTOR SHALL PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WIRES, BOXES, COVER PLATES AND DEVICES FOR ALL OUTLETS AS INDICATED.
15. DITCHING AND BACK FILL: CONTRACTOR SHALL PROVIDE FOR ALL UNDERGROUND INSTALLED CONDUIT AND/OR CABLES INCLUDING EXCAVATION AND BACKFILLING AND COMPACTION. REFER TO NOTES AND REQUIREMENTS 'EXCAVATION, AND BACKFILLING.
16. MATERIALS, PRODUCTS AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND SHALL APPEAR ON THE LIST OF U.L. APPROVED ITEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF THE NEC, NEMA AND IECE.
17. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OR MANUFACTURER'S CATALOG INFORMATION OF ANY/ALL EQUIPMENT AND ALL OTHER ELECTRICAL ITEMS FOR APPROVAL BY THE MOBILITE CM PRIOR TO INSTALLATION.
18. ANY CUTTING OR PATCHING DEEMED NECESSARY FOR ELECTRICAL WORK IS THE ELECTRICAL CONTRACTORS RESPONSIBILITY AND SHALL BE INCLUDED IN THE COST FOR WORK AND PERFORMED TO THE SATISFACTION OF THE MOBILITE CM UPON FINAL ACCEPTANCE.
19. THE ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELS WITH ONLY TYPEWRITTEN DIRECTORIES. ALL ELECTRICAL WIRING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
20. DISCONNECT SWITCHES SHALL BE UL-RATED, H.P. RATED HEAVY-DUTY, QUICK-MAKE AND QUICK-BREAK ENCLOSURES, AS REQUIRED BY EXPOSURE TYPE.
21. ALL CONNECTIONS SHALL BE MADE WITH A PROTECTIVE COATING OF AN ANTI-OXIDE COMPOUND KNOWN AS "NO-OXIDE A" BY DEARBORNE CHEMICAL CO. COAT ALL WIRE SURFACES BEFORE CONNECTING. EXPOSED COPPER SURFACES, INCLUDING GROUND BARS, SHALL BE TREATED - NO SUBSTITUTIONS.
22. RACEWAYS: CONDUIT SHALL BE SCHEDULE 80 PVC MEETING OR EXCEEDING NEMA TC2 - 1990. CONTRACTOR SHALL PLUG AND CAP EACH END OF SPARE AND EMPTY CONDUITS AND PROVIDE TWO SEPARATE PULL STRINGS - 200 LBS TEST POLYETHYLENE CORD. ALL CONDUIT BENDS SHALL BE A MINIMUM OF 2 FT. RADIUS. RGS CONDUITS WHEN SPECIFIED, SHALL MEET UL-6 FOR GALVANIZED STEEL. ALL FITTINGS SHALL BE SUITABLE FOR USE WITH THREADED RIGID CONDUIT. COAT ALL THREADS WITH 'BRITE ZINC' OR 'COLD GALV'.
23. SUPPORT OF ALL ELECTRICAL WORK SHALL BE AS REQUIRED BY NEC.
24. CONDUCTORS: CONTRACTOR SHALL USE 98% CONDUCTIVITY COPPER WITH TYPE THWN INSULATION, UNLESS OTHERWISE NOTED, 600 VOLT, COLOR CODED. USE SOLID CONDUCTORS FOR WIRE UP TO AND INCLUDING NO. 8 AWG. USE STRANDED CONDUCTORS FOR WIRE ABOVE NO. 8 AWG.
25. CONNECTORS FOR POWER CONDUCTORS: CONTRACTOR SHALL USE PRESSURE TYPE INSULATED TWIST-ON CONNECTORS FOR NO. 10 AWG AND SMALLER. USE SOLDERLESS MECHANICAL TERMINAL LUGS FOR NO. 8 AWG AND LARGER.
26. SERVICE: AS SPECIFIED ON THE DRAWINGS. OWNER OR OWNER'S AGENT WILL APPLY FOR POWER. ALL PROVISIONS FOR TEMPORARY POWER WILL BE OBTAINED BY THE CONTRACTOR.
27. TELEPHONE OR FIBER SERVICE: CONTRACTOR SHALL PROVIDE EMPTY CONDUITS WITH PULL STRINGS AS INDICATED ON DRAWINGS.
28. ELECTRICAL AND TELCO/FIBER RACEWAYS TO BE BURIED A MINIMUM DEPTH OF 30", UNLESS OTHERWISE NOTED.
29. CONTRACTOR SHALL PLACE 6" WIDE DETECTABLE WARNING TAPE AT A DEPTH OF 6" BELOW GROUND AND DIRECTLY ABOVE ELECTRICAL AND TELCO SERVICE CONDUITS. CAUTIONS TAPE TO READ "CAUTION BURIED ELECTRIC" OR "BURIED TELECOM".
30. ALL BOLTS SHALL BE 3-16 STAINLESS STEEL

GROUNDING NOTES:

1. ALL HARDWARE SHALL BE 3-16 STAINLESS STEEL, INCLUDING LOCK WASHERS. COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND, AS SPECIFIED, BEFORE MATING. ALL HARDWARE SHALL BE STAINLESS STEEL 3/8 INCH DIAMETER OR SIZED TO MATCH COMPONENTS OR LOG SIZE.
2. FOR GROUND BOND TO STEEL ONLY: INSERT A CADMIUM FLAT WASHER BETWEEN LUG AND STEEL, COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING.
3. ALL STEEL CONDUIT SHALL BE BONDED AT BOTH ENDS WITH GROUNDING BUSHING.
4. ALL ELECTRICAL AND GROUNDING AT THE POLE SITE SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE (NEC), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 780 (LATEST EDITION), AND MANUFACTURER.
5. ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL GROUNDING INSTALLATION AND CONSTRUCTION MAY VARY DUE TO SITE SPECIFIC CONDITIONS.
6. GROUND ALL ANTENNA BASES, FRAMES, CABLE RUNS, AND OTHER METALLIC COMPONENTS USING #6 GROUND WIRES. FOLLOW ANTENNA AND BTS MANUFACTURER'S PRACTICES FOR GROUNDING REQUIREMENTS.
7. ALL GROUND CONNECTIONS SHALL BE #6 AWG, UNLESS OTHERWISE NOTED. USE SOLID COPPER, BLACK JACKETED WIRE ON NON WOOD POLES AND SOLID TINNED COPPER, BARE (NO JACKET) WIRES ON WOOD POLES. BLACK WIRES WILL USE A SINGLE STRIPE OF GREEN ELECTRICAL TAPE WITHING 12" OF THE CONNECTION POINTS TO IDENTIFY AS GROUNDING WIRE.
8. NOTIFY ARCHITECT/ENGINEER IF THERE ARE ANY DIFFICULTIES INSTALLING GROUNDING SYSTEM DUE TO SITE SOIL CONDITIONS.
9. ALL HORIZONTALLY RUN GROUNDING CONDUCTORS SHALL BE INSTALLED A MINIMUM OF 30" BELOW GRADE/ 6" BELOW FROST-LINE IN TRENCH, UNLESS OTHERWISE NOTED. BACK FILL SHALL BE COMPACTED AS REQUIRED BY ARCHITECT/ENGINEER.
10. ALL GROUND CONDUCTORS SHALL BE RUN AS STRAIGHT AND SHORT AS POSSIBLE, WITH A MINIMUM 12" BENDING RADIUS NOT LESS THAN 90 DEGREES.
11. ACCEPTABLE CONNECTIONS FOR GROUNDING SYSTEM SHALL BE:
 - A. BURNDY, HY-GRADE U.L. LISTED CONNECTORS FOR OUTDOOR USE OR AS APPROVED BY APPLICANT PROJECT MANAGER.
 - B. CADWELD, EXOTHERMIC WELDS (WELDED CONNECTIONS).
 - C. ONE (1) OR (2) HOLES TINNED COPPER COMPRESSION (LONG BARREL) FITTINGS.
12. ALL CRIMPED CONNECTIONS SHALL HAVE EMBOSSED MANUFACTURER'S DIEMARK VISIBLE AT THE CRIMP (RESULTING FROM USE OF PROPER CRIMPING DEVICES) AND WEATHER-PROOFED WITH HEAT SHRINK.
13. ALL CONNECTION HARDWARE SHALL BE TYPE 3-16 STAINLESS STEEL (NOT ATTRACTED TO MAGNETS).
14. ELECTRICAL SERVICE EQUIPMENT GROUNDING SHALL COMPLY WITH NEC, ARTICLE 250-82 AND SHALL BOND ALL (E) AND NEW GROUNDING ELECTRODES. NEW GROUNDING ELECTRODE SHALL INCLUDE BUT NOT LIMITED TO GROUND RODS.

TESTING AND EQUIPMENT TURN UP REQUIREMENTS:

1. RF CABLE, DATA CABLE, RADIO EQUIPMENT AND BACK HAUL EQUIPMENT TESTING WILL COMPLY WITH CURRENT INDUSTRY STANDARDS AND OR THOSE STANDARDS OF THE EQUIPMENT MANUFACTURER OR PROVIDED TO THE CONTRACTOR PRIOR TO TESTING.
2. CONTRACTOR WILL USE THE APPROPRIATE CALIBRATED TESTING EQUIPMENT IN THE TESTING OF RF CABLE, DATA CABLE, RADIO EQUIPMENT AND BACK HAUL EQUIPMENT THAT MEET INDUSTRY STANDARDS OF THE MANUFACTURER OR THOSE STANDARDS PROVIDED TO THE CONTRACTOR PRIOR TO TESTING.

3. CONTRACTOR TO VERIFY AND RECORD ALL TEST RESULTS AND PROVIDE THESE RESULTS WITHIN THE FINAL CLOSE OUT PACKAGE.
4. ALL PERSONNEL INVOLVED IN THE TESTING OF RF CABLE, DATA CABLE, RADIO EQUIPMENT AND BACK HAUL EQUIPMENT WILL BE REQUIRED TO HAVE BEEN TRAINED AND OR CERTIFIED IN THE PROPER TESTING OF RF CABLE, DATA CABLE, RADIO EQUIPMENT AND BACK HAUL EQUIPMENT.
5. ALL TEST RESULTS SHALL BE TIME STAMPED, RECORDED AND PRESENTED PRIOR TO ENERGIZING AND TURN UP OF ANY EQUIPMENT.
6. GPS EQUIPMENT (WHEN REQUIRED) IS NOT TO BE TESTED OR ATTACHED TO ANY CABLING DURING TESTING, DOING SO WILL DAMAGE THE GPS UNIT.
7. PRIOR TO TESTING IF THE CONTRACTOR HAS ANY QUESTIONS ABOUT THE TESTING PROCEDURES THEY ARE TO CALL AND OBTAIN ASSISTANCE FROM A QUALIFIED DESIGNATED TESTING REPRESENTATIVE.
8. EQUIPMENT IS NOT TO BE ENERGIZED UNTIL ALL TESTING HAS BEEN COMPLETED, APPROVED AND THE APPROPRIATE AUTHORITY HAS BEEN NOTIFIED AND GIVES APPROVAL TO ENERGIZE THE EQUIPMENT.

SITE WORK NOTES:

1. DO NOT EXCAVATE OR DISTURB BEYOND THE PROPERTY LINES OR LEASE LINES, UNLESS OTHERWISE NOTED.
2. SIZE, LOCATION AND TYPE OF ANY UNDERGROUND UTILITIES OR IMPROVEMENTS SHALL BE ACCURATELY NOTED AND PLACED ON AS-BUILT DRAWINGS BY GENERAL CONTRACTOR AND ISSUED TO ARCHITECT/ENGINEER AT COMPLETION OF PROJECT.
3. ALL (E) UTILITIES, FACILITIES, CONDITIONS AND THEIR DIMENSIONS SHOWN ON PLANS HAVE BEEN PLOTTED FROM AVAILABLE RECORDS. THE ENGINEER AND OWNER ASSUME NO RESPONSIBILITY WHATSOEVER AS TO THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN ON THE PLANS OR THE MANNER OF THEIR REMOVAL OR ADJUSTMENT. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL (E) UTILITIES AND FACILITIES PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL ALSO OBTAIN FROM EACH UTILITY COMPANY DETAILED INFORMATION RELATIVE TO WORKING SCHEDULES AND METHODS OF REMOVING OR ADJUSTING (E) UTILITIES.
4. CONTRACTOR SHALL VERIFY ALL (E) UTILITIES BOTH HORIZONTALLY AND VERTICALLY PRIOR TO START OF CONSTRUCTION. ANY DISCREPANCIES OR DOUBTS AS TO THE INTERPRETATION OF PLANS SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT/ENGINEER OR MOBILITY CM FOR RESOLUTION AND INSTRUCTION, AND NO FURTHER WORK SHALL BE PERFORMED UNTIL THE DISCREPANCY IS CHECKED AND CORRECTED BY THE ARCHITECT/ENGINEER. FAILURE TO SECURE SUCH INSTRUCTION MEANS CONTRACTOR WILL HAVE WORKED AT THEIR OWN RISK AND EXPENSE. CONTRACTOR SHALL CALL LOCAL UTILITY LOCATE HOT LINE, SUCH AS 811, FOR UTILITY LOCATIONS A MINIMUM OF 48 HOURS PRIOR TO START OF CONSTRUCTION.
5. ALL NEW AND (E) UTILITY STRUCTURES ON SITE AND IN AREAS TO BE DISTURBED BY CONSTRUCTION SHALL BE ADJUSTED TO FINISH ELEVATIONS PRIOR TO FINAL INSPECTION OF WORK. ANY COST RELATED TO ADJUSTING (E) STRUCTURES SHALL BE BORNE SOLELY BY THE CONTRACTOR.
6. GRADING OF THE SITE WORK AREA IS TO BE SMOOTH AND CONTINUOUS IN SLOPE AND IS TO FEATHER INTO (E) GRADES AT THE GRADING LIMITS.
7. ALL TEMPORARY EXCAVATIONS FOR THE INSTALLATION OF FOUNDATIONS, UTILITIES, ETC., SHALL BE PROPERLY LAID BACK OR BRACED IN ACCORDANCE WITH CORRECT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REQUIREMENTS.



3475 PIEDMONT ROAD NE
SUITE 1000
ATLANTA, GEORGIA 30305
PHONE: (312) 638-5400

LAND USE PERMIT

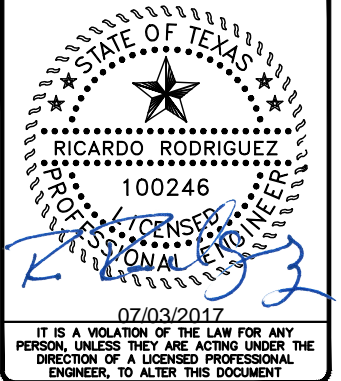
PROJECT NO: ER600201

DRAWN BY: A. TELLO

CHECKED BY: C.FAIRCLOTH

A	06.28.17	FOR REVIEW

TBPE FIRM: F-15400



SA90XSI14C
9TXB008724
DONALDSON AVE. &
KAMPMANN BLVD.
SAN ANTONIO, TX 78201
UTILITY POLE

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

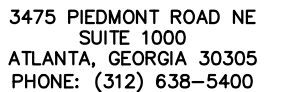
GN-2

8. STRUCTURAL FILLS SUPPORTING PAVEMENTS SHALL BE COMPACTED TO 95% OF MAXIMUM STANDARD PROCTOR DRY DENSITY, UNLESS OTHERWISE NOTED.
9. NEW GRADES NOT IN BUILDING AND DRIVEWAY IMPROVEMENT AREA TO BE ACHIEVED BY FILLING WITH APPROVED CLEAN FILL AND COMPACTED TO 95% OF STANDARD PROCTOR DENSITY.
10. ALL FILL SHALL BE PLACED IN UNIFORM LIFTS. THE LIFTS THICKNESS SHOULD NOT EXCEED THAT WHICH CAN BE PROPERLY COMPACTED THROUGHOUT ITS ENTIRE DEPTH WITH THE EQUIPMENT AVAILABLE.
11. ANY FILLS PLACED ON (E) SLOPES THAT ARE STEEPER THAN 10 HORIZONTAL TO 1 VERTICAL SHALL BE PROPERLY BENCHED INTO THE (E) SLOPE AS DIRECTED BY A GEOTECHNICAL ENGINEER.
12. CONTRACTOR SHALL CLEAN ENTIRE SITE AFTER CONSTRUCTION SUCH THAT NO DEBRIS, PAPER, TRASH, WEEDS, BRUSH, EXCESS FILL, OR ANY OTHER DEPOSITS WILL REMAIN. ALL MATERIALS COLLECTED DURING CLEANING OPERATIONS SHALL BE DISPOSED OF OFF-SITE BY THE GENERAL CONTRACTOR.
13. ALL TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH THE IMPROVEMENTS SHALL BE PROTECTED BY THE GENERAL CONTRACTOR.
14. ALL SITE WORK SHALL BE CAREFULLY COORDINATED BY GENERAL CONTRACTOR WITH LOCAL UTILITY COMPANY, TELEPHONE COMPANY, AND ANY OTHER UTILITY COMPANIES HAVING JURISDICTION OVER THIS LOCATION.

1. ALL WORK PERFORMED SHALL BE DONE IN ACCORDANCE WITH ISSUED PERMITS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYMENT OF FINES AND PROPER CLEAN UP FOR AREAS IN VIOLATION.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROLS DURING CONSTRUCTION FOR PROTECTION OF ADJACENT PROPERTIES, ROADWAYS AND WATERWAYS. ALL EROSION AND SEDIMENTATION CONTROLS SHALL BE MAINTAINED IN PLACE THROUGH FINAL JURISDICTIONAL INSPECTION & RELEASE OF SITE.
3. CONTRACTOR SHALL INSTALL/CONSTRUCT ALL NECESSARY SEDIMENT/SILT CONTROL FENCING AND PROTECTIVE MEASURES AS REQUIRED BY THE LOCAL JURISDICTION WITHIN THE LIMITS OF SITE DISTURBANCE PRIOR TO CONSTRUCTION.
4. NO SEDIMENT SHALL BE ALLOWED TO EXIT THE PROPERTY. THE CONTRACTOR IS RESPONSIBLE FOR TAKING ADEQUATE MEASURES FOR CONTROLLING EROSION. ADDITIONAL SEDIMENT CONTROL FENCING MAY BE REQUIRED IN ANY AREAS SUBJECT TO EROSION.
5. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING POSITIVE DRAINAGE ON THE SITE AT ALL TIMES WITH SILT AND EROSION CONTROL MEASURES MAINTAINED ON THE DOWNSTREAM SIDE OF SITE DRAINAGE. ANY DAMAGE TO ADJACENT PROPERTY AS A RESULT OF EROSION WILL BE CORRECTED AT THE CONTRACTORS EXPENSE.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY INSPECTIONS AND ANY REPAIRS OF ALL SEDIMENT CONTROL MEASURES INCLUDING SEDIMENT REMOVAL AS NECESSARY.
7. CLEARING OF VEGETATION AND TREE REMOVAL SHALL BE ONLY AS PERMITTED AND BE HELD TO A MINIMUM. ONLY TREES NECESSARY FOR CONSTRUCTION OF THE FACILITIES SHALL BE REMOVED.
8. SEEDING AND MULCHING AND/OR SODDING OF THE SITE WILL BE ACCOMPLISHED AS SOON AS POSSIBLE AFTER COMPLETION OF THE PROJECT FACILITIES AFFECTING LAND DISTURBANCE.
9. CONTRACTOR SHALL PROVIDE ALL EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED BY LOCAL, COUNTY AND STATE CODES AND ORDINANCES TO PROTECT EMBANKMENTS FROM SOIL LOSS AND TO PREVENT ACCUMULATION OF SOIL AND SILT IN STREAMS AND DRAINAGE PATHS LEAVING THE CONSTRUCTION AREA. THIS MAY INCLUDE, BUT IS NOT LIMITED TO SUCH MEASURES AS SILT FENCES, STRAW BALE SEDIMENT BARRIERS, AND CHECK DAMS.
10. RIP RAP OF SIZES INDICATED SHALL CONSIST OF CLEAN, HARD, SOUND, DURABLE, UNIFORM IN QUALITY STONE FREE OF ANY DETRIMENTAL QUANTITY OF SOFT, FRIABLE, THIN, ELONGATED OR LAMINATED PIECES, DISINTEGRATED MATERIAL, ORGANIC MATTER, OIL, ALKALI, OR OTHER DELETERIOUS SUBSTANCES.

1. ALL FINAL GRADED SLOPES SHALL BE A MAXIMUM OF 3 HORIZONTAL TO 1 VERTICAL, UNLESS OTHERWISE NOTED.
2. BACKFILL OF THE POLES SHALL BE PERFORMED BASED ON THE WATER TABLE. FLOWABLE FILL MIXTURES PURCHASED FROM CONCRETE PLANTS WILL BE USED INSTEAD OF FOAM IN WATER TABLE AREAS.
 - A: NORMAL SOILS ORDER OF PREFERENCE - FOAM, FLOWABLE FILL, CONCRETE, COMPACTED AGGREGATES
 - B: HIGH WATER TABLE SOILS ORDER OF PREFERENCES - FLOWABLE FILL, CONCRETE, COMPACTED AGGREGATES.
3. ALL EXCAVATIONS PREPARED FOR PLACEMENT OF CONCRETE SHALL BE OF UNDISTURBED SOILS, SUBSTANTIALLY HORIZONTAL AND FREE FROM ANY LOOSE, UNSUITABLE MATERIAL OR FROZEN SOILS, AND WITHOUT THE PRESENCE OF POUNDING WATER. DEWATERING FOR EXCESS GROUND WATER SHALL BE PROVIDED WHEN REQUIRED. COMPACTION OF SOILS UNDER CONCRETE PAD FOUNDATIONS SHALL NOT BE LESS THAN 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY FOR THE SOIL IN ACCORDANCE WITH ASTM D1557.
4. CONCRETE FOUNDATIONS SHALL NOT BE PLACED ON ORGANIC OR UNSUITABLE MATERIAL. IF ADEQUATE BEARING CAPACITY IS NOT ACHIEVED AT THE DESIGNED EXCAVATION DEPTH, THE UNSATISFACTORY SOIL SHALL BE EXCAVATED TO ITS FULL DEPTH AND EITHER BE REPLACED WITH MECHANICALLY COMPACTED GRANULAR MATERIAL OR THE EXCAVATION SHALL BE FILLED WITH CONCRETE OF THE SAME TYPE SPECIFIED FOR THE FOUNDATION. CRUSHED LIME STONE #57 MAY BE USED TO STABILIZE THE BOTTOM OF THE EXCAVATION. ANY STONE SUB BASE MATERIAL, IF USED, SHALL NOT SUBSTITUTE FOR REQUIRED THICKNESS OF CONCRETE.
5. ALL EXCAVATIONS SHALL BE CLEAN OF UNSUITABLE MATERIAL SUCH AS VEGETATION, TRASH, DEBRIS, AND SO FORTH PRIOR TO BACK FILLING. BACK FILL SHALL CONSIST OF APPROVED MATERIALS SUCH AS EARTH, LOAM, SANDY CLAY, SAND AND GRAVEL, OR SOFT SHALE, FREE FROM CLODS OR LARGE STONES OVER 2 1/2" MAX DIMENSIONS. ALL BACK FILL SHALL BE PLACED IN COMPACTED LAYERS.
6. ALL FILL MATERIALS AND FOUNDATION BACK FILL SHALL BE PLACED IN MAXIMUM 6" THICK LIFTS BEFORE COMPACTION. EACH LIFT SHALL BE WETTED IF REQUIRED AND COMPACTION TO NOT LESS THAN 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY FOR SOIL IN ACCORDANCE WITH ASTM D1557.
7. NEWLY PLACED CONCRETE FOUNDATIONS SHALL CURE A MINIMUM OF 72 HRS PRIOR TO BACK FILLING.
8. FINISHED GRADING SHALL BE SLOPED TO PROVIDE POSITIVE DRAINAGE AND PREVENT STANDING WATER. THE FINAL (FINISH) ELEVATION OF SLAB FOUNDATIONS SHALL SLOPE AWAY IN ALL DIRECTIONS FROM THE CENTER. FINISH GRADE OF CONCRETE PADS SHALL BE A MAXIMUM OF 4 INCHES ABOVE FINAL FINISH GRADE ELEVATIONS. PROVIDE SURFACE FILL GRAVEL TO ESTABLISH SPECIFIED ELEVATIONS WHERE REQUIRED.
9. NEWLY GRADED GRAVEL SURFACE AREAS TO RECEIVE GRAVEL SHALL BE COVERED WITH GEOTEXTILE FABRIC TYPE: TYPAR-3401 AS MANUFACTURED BY TYPAR GEOSYNTHETICS OR AN APPROVED EQUIVALENT, SHOWN ON PLANS. THE GEOTEXTILE FABRIC SHALL BE BLACK IN COLOR TO CONTROL THE RECURRENCE OF VEGETATIVE GROWTH AND EXTEND TO WITHIN 1 FOOT OUTSIDE THE SITE FENCING OR ELECTRICAL GROUNDING SYSTEM PERIMETER WHICH EVER IS GREATER. ALL FABRIC SHALL BE COVERED WITH A MINIMUM OF 4" DEEP COMPACTED STONE OR GRAVEL AS SPECIFIED. I.E. FDOT TYPE NO. 57 FOR FENCED COMPOUND; FDOT TYPE NO. 67 FOR ACCESS DRIVE AREA, UNLESS OTHERWISE NOTED.
10. IN ALL AREAS TO RECEIVE FILL: REMOVE ALL VEGETATION, TOPSOIL, DEBRIS, WET AND UNSATISFACTORY SOIL MATERIALS, OBSTRUCTIONS, AND DELETERIOUS MATERIALS FROM GROUND SURFACE. PLOW STRIP OR BREAK UP SLOPED SURFACES STEEPER THAN 1 VERTICAL TO 4 HORIZONTAL SUCH THAT FILL MATERIAL WILL BIND WITH (E)/PREPARED SOIL SURFACE.
11. WHEN SUB GRADE OR PREPARED GROUND SURFACE HAS A DENSITY LESS THAN THAT REQUIRED FOR THE FILL MATERIAL, SCARIFY THE GROUND SURFACE TO DEPTH REQUIRED, PULVERIZE, MOISTURE-CONDITION AND/OR AERATE THE SOILS AND RECOMPACT TO THE REQUIRED DENSITY PRIOR TO PLACEMENT OF FILLS.

17. ALL SUITABLE BORROW MATERIAL FOR BACK FILL OF THE SITE SHALL BE INCLUDED IN THE BID. EXCESS TOPSOIL AND UNSUITABLE MATERIAL SHALL BE DISPOSED OF OFF SITE AT LOCATIONS APPROVED BY GOVERNING AGENCIES AT NO ADDITIONAL COST TO THE CONTRACT.



PROJECT NO:	ER600201
DRAWN BY:	A. TELLO
CHECKED BY:	C.FAIRCLOTH

A	06.28.17	FOR REVIEW

STATE OF TEXAS

RICARDO RODRIGUEZ

100246

EXPIRED

07/03/2017

PROFESSIONAL ENGINEER

IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS THE PERSON ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT

GN-3